



Installation and operating instructions

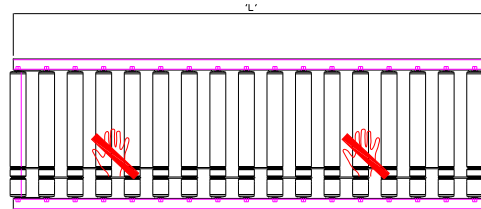
Gravity roller conveyors

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. Along with minimum recommended PPE.

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

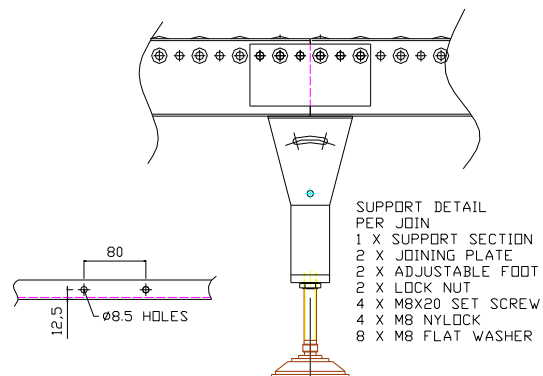


DENOTES AREA OF RESIDUAL RISK



NOTE:

CUSTOMER RESPONSIBILITY TO PROVIDE ASSESSMENTS & GUARDS TO ELIMINATE AREAS OF RESIDUAL RISK PRIOR OPERATION - AMEK RECOMMENDS CUSTOMER CARRY OUT A RISK ASSESSMENT, TRAINS STAFF AND PRODUCE A SAFE SYSTEM OF WORK



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

Operators

Operators have been instructed in the operation and cleaning of the drive roll conveyor

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.

Service / Maintenance personnel

Service personnel must be competent and familiar with the equipment.

NOTE: Always isolate equipment prior to carrying out service and maintenance work.

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 jewelry
- 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.

HAIR NETS



Spaceguard recommends all staff with long hair working around conveyor equipment to wear hair nets. Specific type should depend on application, please take suitable advice 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

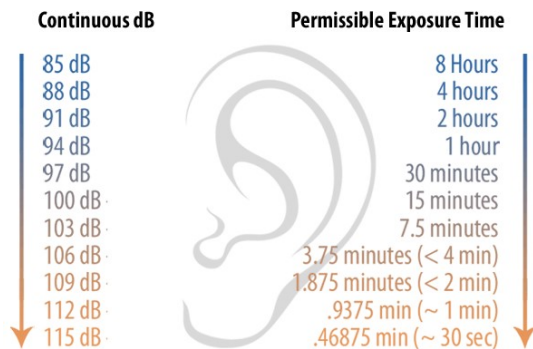


For reduction of upto 25db

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



Green Light: Solid - Power on
 Green Light - Flashing - Drive roll running
 Red light - Fault - Seek qualified personnel to investigate
 No Lights - Fault - Seek qualified personnel to investigate



Additional safety

For additional operator safety, If the drive roll is stalled through user error for additional safety a MCB is fitted in local panels. If a roller is not turning and drive card lights are not illuminated. A **competent person** should check and reset if necessary this item.

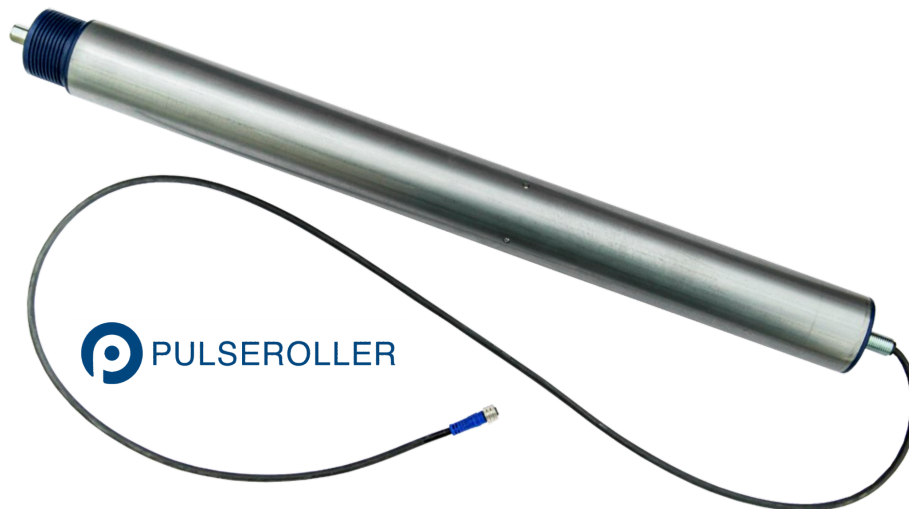
Position of the DIP switch SPEED on the				Speed of the gear ratio for RollerDrive EC5000 AI								
A	B	C	D	9:1	13:1	18:1	21:1	30:1	42:1	49:1	78:1	108:1
on	on	on	on	2,01	1,39	1,00	0,86	0,60	0,43	0,37	0,23	0,17
on	on	on	off	1,87	1,29	0,93	0,80	0,56	0,40	0,34	0,22	0,16
on	on	off	on	1,73	1,20	0,87	0,74	0,52	0,37	0,32	0,20	0,14
on	on	off	off	1,60	1,10	0,80	0,68	0,48	0,34	0,29	0,18	0,13
on	off	on	on	1,46	1,01	0,73	0,63	0,44	0,31	0,27	0,17	0,12
on	off	on	off	1,32	0,91	0,66	0,57	0,40	0,28	0,24	0,15	0,11
on	off	off	on	1,18	0,82	0,59	0,51	0,36	0,25	0,22	0,14	0,10
on	off	off	off	1,05	0,72	0,52	0,45	0,31	0,22	0,19	0,12	0,09
off	on	on	on	0,91	0,63	0,46	0,39	0,27	0,20	0,17	0,11	0,08
off	on	on	off	0,77	0,54	0,39	0,33	0,23	0,17	0,14	0,09	0,06
off	on	off	on	0,64	0,44	0,32	0,27	0,19	0,14	0,12	0,07	0,05
off	on	off	off	0,50	0,35	0,25	0,21	0,15	0,11	0,09	0,06	0,04
off	off	on	on	0,36	0,25	0,18	0,15	0,11	0,08	0,07	0,04	0,03
off	off	on	off	0,22	0,16	0,11	0,10	0,07	0,05	0,04	0,03	0,02
off	off	off	on	0,09 ¹⁾	0,06 ¹⁾	0,04 ¹⁾	0,04 ¹⁾	0,03 ¹⁾	0,02 ¹⁾	0,02 ¹⁾	0,01 ¹⁾	0,01 ¹⁾
off	off	off	off	Corresponding to the signals on the inputs SPEED A, B, C								

Nominal values at an ambient temperature of 20 °C

¹⁾ Due to tolerances and / or voltage drop on cables, it is possible that the RollerDrive does not turn with this setting. In this case, the next higher setting and thus speed or a control with free speed selection (MultiControl) must be selected.

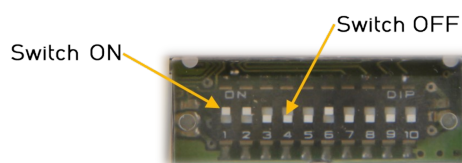
For the full manual on this product

<https://www.interroll.com/products-solutions/product/drivecontrol-20/>



Senergy-Ai motorized drive rollers feature a combination of speed and power allowing them to be used in lower speed, heavy-duty applications such as pallet handling, as well as for high-speed carton or tote handling.

Senergy MDRs operate at a low 40 dba, quieter than a typical conversation. They utilize a safe and effective 24VDC power supply and consume up to **70% less energy** than alternatives.



For the full manual on this product

https://www.pulseroller.com/controls/drivecards/eqube_ai/#



The SPEED DIP Switch works in conjunction with the CONFIG DIP Switch #1.
CONFIG DIP Switch#1 switches between the high speed range and the low speed

No.	CONFIG SW 1	SPEED SW 4	SPEED SW 3	SPEED SW 2	SPEED SW 1	ECO Mode Motor RPM	BOOST Mode Motor RPM	ECO/BOOST PWM %	ECO Mode Speed Out Hz	BOOST Mode Speed Out Hz
1	OFF	OFF	OFF	OFF	OFF	0-10V Analog				
2	OFF	OFF	OFF	OFF	ON	580	580	25.00%	24.2	24.2
3	OFF	OFF	OFF	ON	OFF	800	800	27.50%	33.3	33.3
4	OFF	OFF	OFF	ON	ON	1000	1000	30.00%	41.7	41.7
5	OFF	OFF	ON	OFF	OFF	1200	1200	32.50%	50.0	50.0
6	OFF	OFF	ON	OFF	ON	1400	1400	35.00%	58.3	58.3
7	OFF	OFF	ON	ON	OFF	1600	1600	37.50%	66.7	66.7
8	OFF	OFF	ON	ON	ON	1800	1800	40.00%	75.0	75.0
9	OFF	ON	OFF	OFF	OFF	2000	1900	42.50%	83.3	79.2
10	OFF	ON	OFF	OFF	ON	2200	2000	45.00%	91.7	83.3
11	OFF	ON	OFF	ON	OFF	2400	2100	47.50%	100.0	87.5
12	OFF	ON	OFF	ON	ON	2600	2200	50.00%	108.3	91.7
13	OFF	ON	ON	OFF	OFF	2800	2300	52.50%	116.7	95.8
14	OFF	ON	ON	OFF	ON	3000	2400	55.00%	125.0	100.0
15	OFF	ON	ON	ON	OFF	3200	2500	57.50%	133.3	104.2
16	OFF	ON	ON	ON	ON	3400	2600	60.00%	141.7	108.3
17	ON	OFF	OFF	OFF	OFF	3600	2700	62.50%	150.0	112.5
18	ON	OFF	OFF	OFF	ON	3800	2800	65.00%	158.3	116.7
19	ON	OFF	OFF	ON	OFF	4000	2900	67.50%	166.7	120.8
20	ON	OFF	OFF	ON	ON	4200	3000	70.00%	175.0	125.0
21	ON	OFF	ON	OFF	OFF	4400	3100	72.50%	183.3	129.2
22	ON	OFF	ON	OFF	ON	4600	3200	75.00%	191.7	133.3
23	ON	OFF	ON	ON	OFF	4800	3300	77.50%	200.0	137.5
24	ON	OFF	ON	ON	ON	5000	3400	80.00%	208.3	141.7

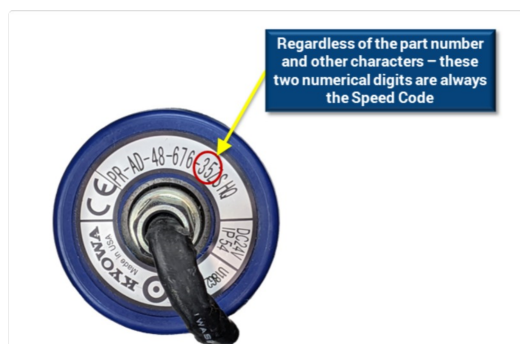
25	ON	ON	OFF	OFF	OFF	5100	3500	82.50%	212.5	145.8
26	ON	ON	OFF	OFF	ON	5200	3600	85.00%	216.7	150.0
27	ON	ON	OFF	ON	OFF	5300	3700	87.50%	220.8	154.2
28	ON	ON	OFF	ON	ON	5400	3800	90.00%	225.0	158.3
29	ON	ON	ON	OFF	OFF	5500	3900	92.50%	229.2	162.5
30	ON	ON	ON	OFF	ON	5600	4000	95.00%	233.3	166.7
31	ON	ON	ON	ON	OFF	5700	4100	97.50%	237.5	170.8
32	ON	ON	ON	ON	ON	5800	4200	100.00%	242.0	175.0

Speed Calculation

To determine the speed of the roller, you must **know the diameter** of your roller tube and the **gear reduction ratio** of the motor roller in order to calculate the speed based upon the Motor RPM you have selected with SPEED DIP Switches 1 thru 4 and CONFIG DIP Switch 1.

Speed Code and Gear Ratio Table

The **Speed Code** for any Pulseroller is a 2 digit number found on the label at the cable end of the unit.



The formula for calculating the speed in m/s is:

$$\text{Speed (in meters/second)} = \left[\frac{\text{Motor RPM}}{\text{Gear Reduction}} \right] \times \pi \times \left[\frac{\text{Tube Diameter (in meters)}}{60} \right]$$

Speed Code	Gear Reduction Ratio
10	66.978 : 1
15	45 : 1
20	32.94 : 1
25	27 : 1
35	18.3 : 1
45	15 : 1
60	10.98 : 1
75	9 : 1
95	6.818 : 1
125	5 : 1
175	3.66 : 1
215	3 : 1

The manual describes the DriveControl 20/54 as it is delivered

In addition to this manual, special contractual agreements and technical documents apply to special versions.

- ▶ For trouble-free, safe operation and warranty claims, read the Roller and card manufacturers manual first and follow the instructions.
- ▶ Keep a copy of the manual near to the Conveyor for reference.
- ▶ Pass the manual on to any subsequent operator or occupant.
- ▶ **NOTICE! The manufacturer does not accept any liability for faults or defects due to non-observance of this manual and the roller manufacturers manual.**
- ▶ If you have any questions after reading the operating instructions, seek advice and clarify prior to using

Warning notices in this manual

The warning notices refer to risks which may arise while usage the DriveControl 20/54. They are available in four danger levels identified by the signal word:

Signal word	Meaning
DANGER	Identifies a danger with high risk that can lead to death or serious injury if it is not avoided.
WARNING	Identifies a danger with medium risk that can lead to death or serious injury if it is not avoided.
CAUTION	Identifies a danger with low risk that can lead to minor or medium injury if it is not avoided.
NOTICE	Identifies a danger that can lead to property damages.



Additional dangers for 24V Driveroll conveyors

Bodily injury

Operators

Operators should have safety training prior to using the conveyor. This should include use of PPE information and suitable action over moving parts, covering loose clothing, jewellery and long hair.

Maintenance personnel

Only suitably qualified and competent personnel to carry out maintenance work on this equipment.

Electricity

The drive roll input voltage is 24V DC - No other voltage should be supplied to the drive cards or motor. Do not use any other manufacturers drive card or motors with this equipment. Only perform electrical work with the power off.

Working environment

Ensure the work area is free from obstruction, all the operators have had relevant safety training and warning signs and information displayed.

Faults during operation

Regularly inspect the conveyor for visible damage

If smoke is noticed, Isolate conveyor and contact qualified personnel immediately to find source.

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.

Conveyor Maintenance Schedule + Spares requirements

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

- Roller conveyor 24V conveyor
- 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 blue ink, appearing to be "NE" followed by a long horizontal stroke.

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

- Roller conveyor - 24V
- Serial numbers between: 10616 - 15000

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 black ink, consisting of stylized, overlapping letters that appear to be 'AL'.

On behalf of Spaceguard limited

Director