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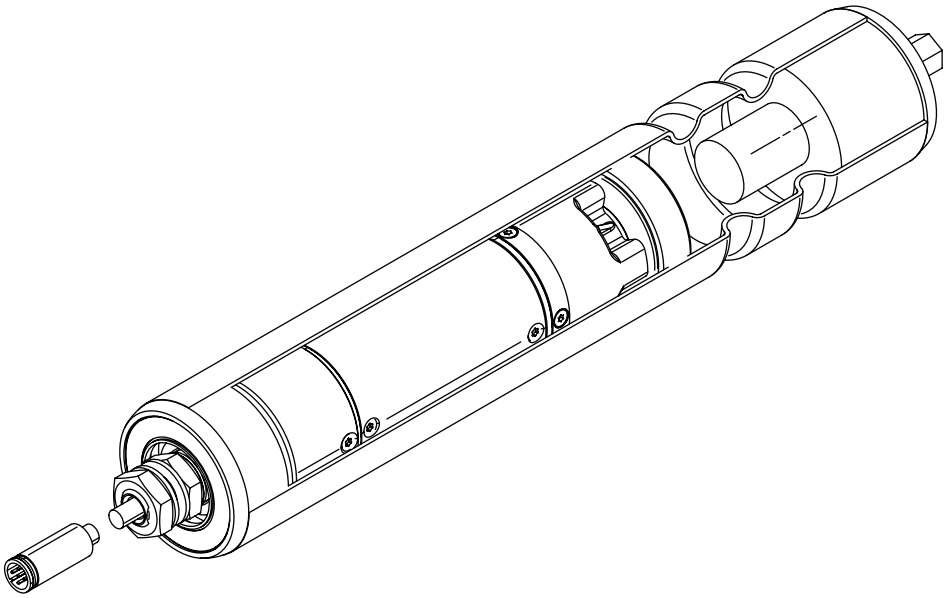

User Manual

Interroll RollerDrive

EC300

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Original language

Table of contents

Introduction

Handling of the user manual

Content of the manual

This manual contains important advice, notes and information about the RollerDrive EC300 in all phases of its lifecycle:
- Transport, assembly and commissioning
- Safe operation, maintenance and troubleshooting, disposal
- Accessories

Validity of the manual

The manual describes the RollerDrive EC300 as it is delivered by Interroll.

Special application designs require validation from Interroll and additional technical instructions.

The manual is part of the product

- ➢ For trouble-free, safe operation and warranty claims, read the manual and follow the instructions before handling the RollerDrive EC300.
- ➢ Keep the manual near to the RollerDrive EC300.
- ➢ Pass the manual on to any subsequent operator or occupant of the RollerDrive EC300.
- ➢ Interroll does not accept any liability for malfunctions or defects due to non-observance of this manual.
- ➢ If you have any questions after reading the user manual, feel free to contact our customer service. See the last page for contact information.

Warning notices in this manual

The warning notices in this document refer to risks which may arise during usage of the RollerDrive EC300. For relevant warning notices, *see "Safety", page 4* and the warning notices at the beginning of each chapter.

There are three categories of danger. The following signal words are used in the document as required:
- Danger
- Warning
- Caution

Signal word	Meaning
Danger	Indicates a hazardous situation which, if not avoided, will result in death or serious injury.
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, may result in minor or moderate injury.

Structure of warning notices

DANGER

Nature and source of the hazard
Possible consequence of non-observance

➢ Information about how to avoid the hazard.

Introduction

Further symbols

NOTICE

This symbol identifies possible material damage.
➢ Information about how to avoid the damage.

This symbol displays safety instructions.

This symbol marks useful and important information.

➢ This symbol marks the steps that have to be carried out.

Safety

General safety instructions

The RollerDrive EC300 is designed according to the technical state of the art and is reliable in operation, once distributed. However, risks may still arise.

- Risks of physical injury to the user or bystanders.
- Adverse effects of the RollerDrive and other material.

Disregarding the warning notices in this manual may lead to serious injury.

- ➢ Always read the entire operating and safety instructions before starting to work with the RollerDrive and follow the information contained therein in full.
- ➢ Only instructed and qualified persons may work with the RollerDrive.
- ➢ Always keep the user manual at hand when working at the RollerDrive so you can consult it quickly if required.
- ➢ Always comply with relevant national safety regulations.
- ➢ If you have any questions after reading the operation manual, feel free to contact our customer service. See the last page for contact information.

Intended use

The RollerDrive EC300 may only be used for industrial applications and in an industrial environment to convey goods such as parts, cartons, totes or boxes. It must be integrated in a conveyor module or a conveying system. Any other use is considered inappropriate.

Use of the RollerDrive EC300 is only allowed in the areas described under product information.

Any changes that affect the safety of the product are not allowed.

The RollerDrive EC300 may only be used within the given operation limits.

Unintended use

The RollerDrive EC300 may not be used to transport persons, bulk cargo or small parts.

The RollerDrive is not intended for use under impact or shock loads.

Applications not according to the intended use of the RollerDrive EC300 require approval from Interroll.

Qualified persons

Qualified persons are persons who read and understand the manual and, taking national regulations into account, can competently execute incidental work.

Only instructed and qualified persons may work with the RollerDrive, taking the following into account:

- the relevant manuals and diagrams,
- the warning and safety instructions in this manual,
- the system specific regulations and requirements,
- national or local regulations and requirements for safety and accident prevention.

Safety

Risks

The following list informs you about the various types of danger or damage that may occur while working with the RollerDrive EC300.

Persons

- Maintenance or repair work must only be executed by authorized and qualified persons in accordance with the applicable regulations.
- Before turning on the RollerDrive, ensure that no unauthorized persons are near the conveyor.

Electricity

- Only perform installation and maintenance work after you have switched off the power. Ensure that the RollerDrive cannot be turned on accidentally.

Rotating parts

- Keep fingers and hair away from the torque transmission between rollers.
- Tie up long hair.
- Do not wear loose clothing.
- Remove jewellery such as bracelets or wristbands.

Working environment

- Do not use the RollerDrive in explosive atmospheres.
- Remove equipment or material which is not required from the workspace.
- Always wear safety shoes.
- Clearly specify and monitor the way goods are placed on the conveyor.

Avoiding malfunctions in operation

- Regularly check the RollerDrive for visible damage.
- In case of fumes, unusual noise or blocked or damaged goods, stop the RollerDrive at once and ensure that the RollerDrive cannot be started accidentally.
- Contact qualified personnel immediately to find the source the malfunction.
- Do not step on the RollerDrive during operation.

Maintenance

- As the product is maintenance free, you only need to check regularly for visible damages, unusual noise and that the screws and nuts are still tightened.
- Do not open the RollerDrive.

Accidental motor starts

- Use caution while installing or maintaining the RollerDrive, or while it is under error conditions, since it may start accidently.

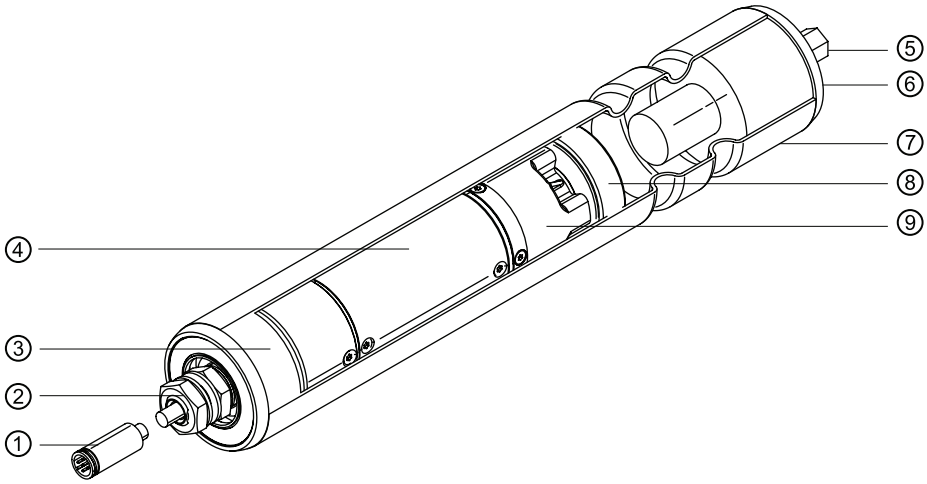
Interfaces

By assembling the RollerDrive in a conveyor module, potential hazards may occur. These are not part of this manual and have to be analyzed during the design, installation and startup of the conveyor module.

- After assembling the RollerDrive in a conveyor module, check the whole system for a new potential dangerous spot before turning on the conveyor.

Product information

Components



① Motor plug with cable
② Motor cartridge shaft
③ Fixed bearing housing assembly
④ Motor
⑤ Idler cartridge shaft
⑥ Idler bearing housing assembly
⑦ Tube
⑧ Non-slip drive
⑨ Gearbox

Product information

Product description

The RollerDrive EC300, a completely self-contained electronically powered roller, replaces external components such as motors and gearboxes that require frequent maintenance.

The RollerDrive EC300 can be used in dusty and/or moist environments due to its protection class IP54.

The RollerDrive EC300 is powered by a brushless electronically commutated 24 VDC motor with an integrated 4 quadrant motor control. This control system guarantees a constant speed over the whole load range and a constant torque over all selectable speed settings.

Overload protection devices

There are several overload protection devices installed:

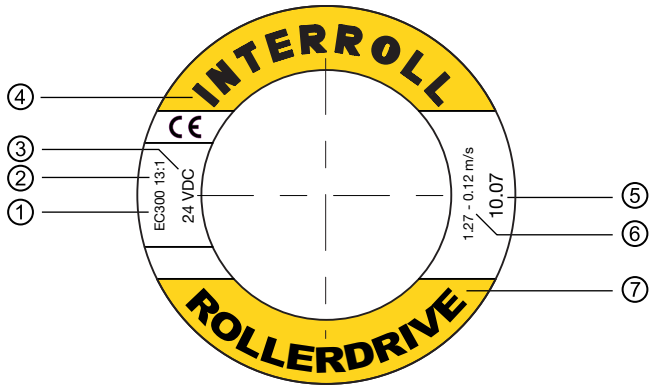
- **Stall timing device:** If the RollerDrive EC300 is stalled while there is a run command, the motor tries to restart ten times each three seconds for one second. If stall continues after these ten attemps, a failure signal is set and the RollerDrive tries to restart with a 60:1 cycle (restart for one second every 60 seconds) until the stall is removed. The RollerDrive will not be damaged by operating in a stall time device mode for long periods of time. If the RollerDrive is running at chosen speed again, or the run command is withdrawn, the failure signal will be cancelled.
- **Slow run:** If there is a speed deviation of +/- 20% from the chosen value for more than 10 seconds, the motor will be switched off and the failure signal will be set. The RollerDrive EC300 will try to start again after 60 seconds. If the RollerDrive is running at chosen speed again or the run command is withdrawn, the failure signal will be cancelled.
- **Temperature monitor:** The motor and electronic assemblies are temperature controlled. If the temperature is too high, the incline of the accelerating ramps will be reduced and the motor will go back to nominal current. This reduces the heat in the motor.

If suitably applied, the roller can be installed in the conveyor with the required controls and then left alone for the life of the product.

Product information

RollerDrive label

The specifications on the RollerDrive label are used to identify the RollerDrive. This is required to use the RollerDrive EC300 as intended.



① Type of RollerDrive
② Gear ratio
③ Nominal voltage
④ Manufacturer
⑤ Date of production
⑥ Speedrange
⑦ Product name

Product identification

To identify a RollerDrive, the following information is required. You may enter the values of your RollerDrive in the last column.

Information	Possible value	Own value
RollerDrive label	Motor type Gear ratio	RollerDrive EC300
Tube diameter	50 mm	
Tube material	Zinc-plated, aluminum or stainless steel (with or without sleeves)	
Roller length	RL_{US} or RL_{EU} (*see "RL definition", page 13*)	
Roller transmission	*see "Groove locations", page 15*	
Idler shaft	Spring-loaded or floating (*see "Dimensions of idler cartridges", page 14*)	

Product information

Technical data

Nominal voltage	24 VDC
Voltage range	18 - 28 VDC
No load current	0.4 A
Maximum continuous current	EC300 (7.85:1): 4.0 A EC300 (13:1): 3.5 A
Maximum peak current	5.5 A
Mechanical Performance	EC300 (7.85:1): 52 W EC300 (13:1): 44 W
System Efficiency (Drive)	54 %
Maximum ripple from power supply	3 %
Noise emission (mounted)	50 dB(A)
Lifetime under nominal conditions	20000 h
Maximum Start/Stop per minute	EC300 (7.85:1): 20 EC300 (13:1): 33
Protection classification	IP54
Ambient temperature for operation	0 °C to 40 °C (32 °F to 104 °F)
Ambient temperature for transport and storage	-20 °C to 75 °C (-4 °F to 167 °F)
Ambient temperature changes	max. 1 °K/min; 3 h; two cycles according to IEC 68-2-14
Ambient humidity	max. 90% not condensing
Installation altitude above sea level	max. 1000 m (max. 3300 ft)

- UL approval is not required for RollerDrive products as they operate under a recommended maximum voltage of 30 VDC. The RollerDrive EC300 is recognized as an UL Class II product.
- Mechanical performance, performance data and performance charts are on basis of 20 °C (68 °F).

Performance data

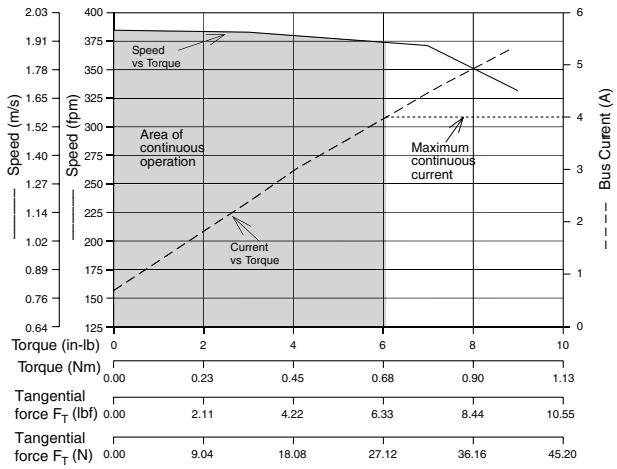
Gear ratio	7.85:1	13:1
Nominal torque	0.70 Nm (6.20 lbf-in)	0.90 Nm (7.97 lbf-in)
Peak torque	1.0 Nm (8.9 lbf-in)	1.6 Nm (14.2 lbf-in)
Speed range	1.02 to 2.0 m/s (201 to 394 ft/min)	0.12 to 1.27 m/s (23 to 249 ft/min)
Nominal load [1)]	50 kg (110 lb)	65 kg (143 lb)

[1)] Maximum static load per Roller not more than 40 kg (88 lb). Data refer to continuous operation under maximum load (S1-operation).

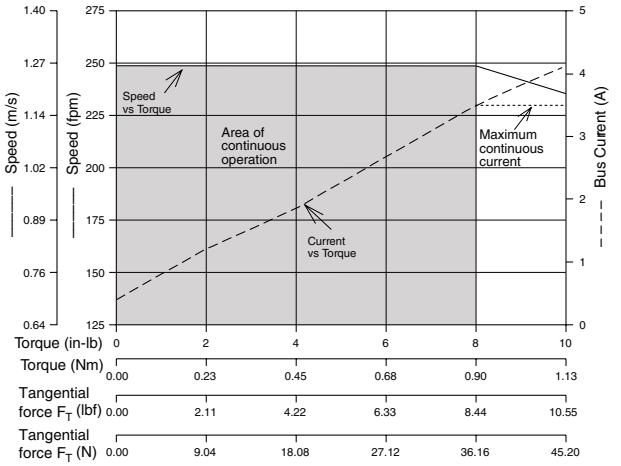
Product information

Performance charts

EC300 (7.85:1)



EC300 (13:1)



DriveControls for the RollerDrive EC300

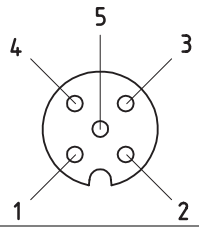
Interroll recommends using the RollerDrive EC300 in combination with the corresponding Interroll DriveControl.

RollerDrive	Corresponding DriveControl
RollerDrive EC300 (7.85:1)	DC-EC300 (7.85:1)
RollerDrive EC300 (13:1)	DC-EC200/EC300 (13:1)
RollerDrive EC300 (7.85:1) RollerDrive EC300 (13:1)	Z-Card EC

For DriveControl details, see the corresponding operation manual, catalogs or publications on www.interroll.com.

Product information

Motor plug



Pin	Color	Function	Value
1	brown	Power input from power supply (+)	Nominal: 24 VDC Range: 18 to 28 VDC
2	white	Rotation direction, seen from cable end of the RollerDrive	Low U < 0.8 V = ccw High U > 2.4 V = cw
3	blue	Ground for power and signal (-)	Ground
4	black	Failure output	Low = no failure High = failure
5	gray	Speed/start signal analog	see table below

Speed/start signal analog (Pin 5)		
Gear ratio	7.85:1	13:1
Range	0 to 24 VDC	0 to 24 VDC
Stop (brake)	0 to 2 VDC	0 to 2 VDC
Speed	2 VDC to 8.6 VDC	2 VDC to 5 VDC
Max. speed	8.6 VDC to 24 VDC	5 VDC to 24 VDC
(also *see "Speed settings", page 12*)		

In case the RollerDrive is not directly connected to the refering DriveControl or the Interroll extension cable, connect the motor plug by use of a Lumberg Fixcon Coupling 5-FKT.

NOTICE

Pins 1 and 3 are not protected against incorrect polarity connection.
Damage to the motor.

➢ Ensure the correct polarity.

Product information

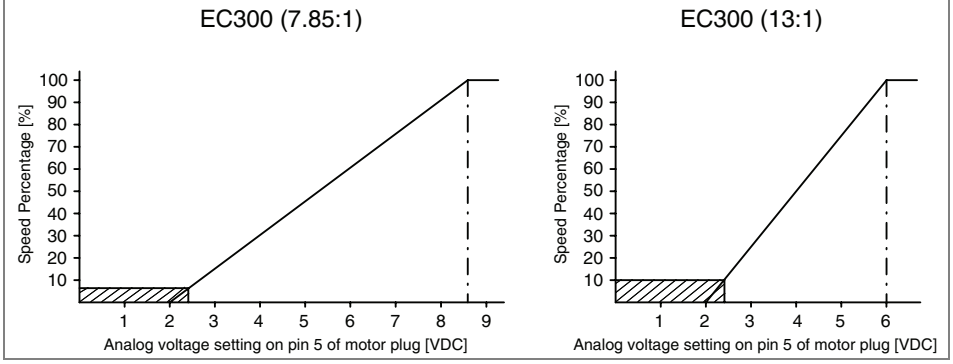
Speed settings

If you do not use the recommended DriveControl (*see "DriveControls for the RollerDrive EC300", page 10*), you may change the speed of the RollerDrive EC300 by altering the voltage on pin 5 of the motor plug.

NOTICE

Input voltage of Pin 5 at motor plug is not polarity-proof
Damage to the RollerDrive

➢ Ensure the correct polarity.



In the hatched area the RollerDrive does not run within the specified tolerance of ± 5 %.

Rotary switch speed setting at DriveControl	EC300 (7.85:1)		EC300 (13:1)	
	Voltage setting on pin 5 [VDC]	Speed of transport [m/s (ft/min)] ± 5 %	Voltage setting on pin 5 [VDC]	Speed of transport [m/s (ft/min)] ± 5 %
0/8	8.6 to 24	2.0 (394)	6 to 24	1.23 (242.1)
1/9	8.3	1.83 (360)	5.03	0.92 (181.1)
2/A	7.75	1.68 (330)	4.0	0.68 (133.9)
3/B	7.31	1.55 (305)	3.75	0.52 (102.4)
4/C	6.3	1.27 (250)	3.30	0.38 (74.8)
5/D	6.0	1.17 (230)	2.93	0.27 (53.1)
6/E	5.75	1.08 (212)	2.68	0.19 (37.4)
7/F	5.5	1.02 (200)	2.44	0.12 (23.6)

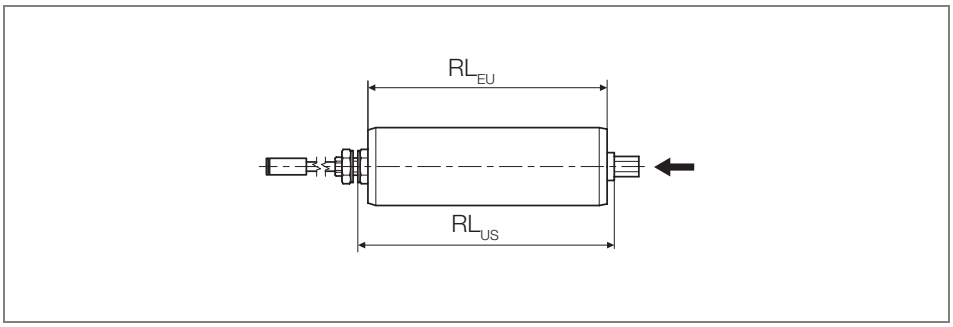
Product information

RL definition

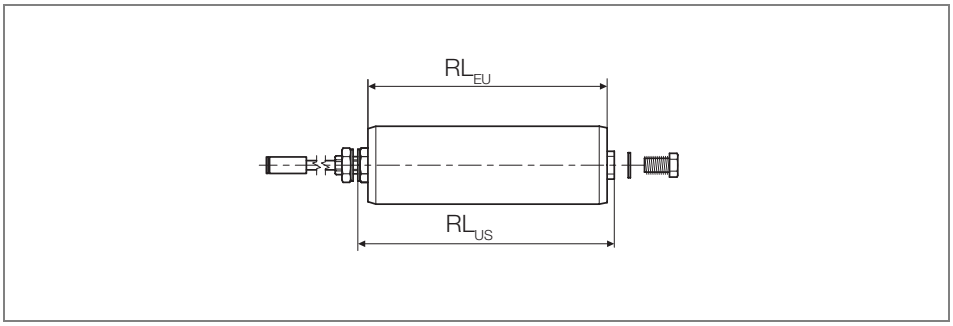
There are two definitions of the roller length RL:

- RL_{EU} is mainly used in Europe and Asia
- RL_{US} is mainly used in North and South America

Spring loaded 11 mm (0.44 in) hex

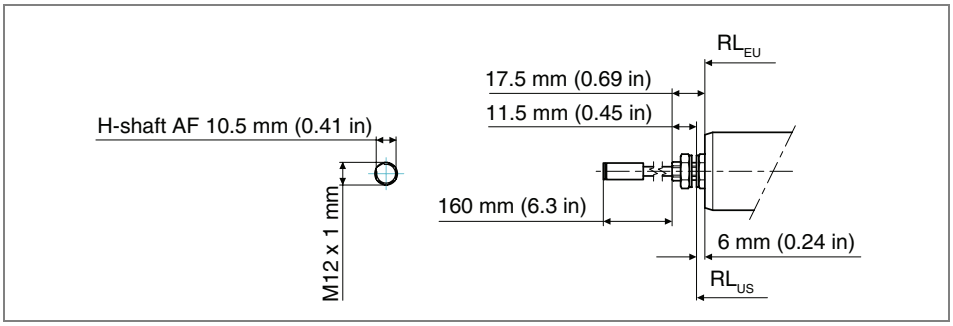


Female threaded M8 (FTM8), floating



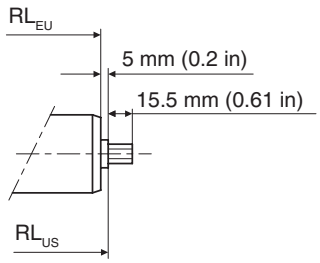
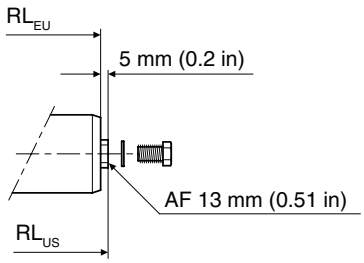
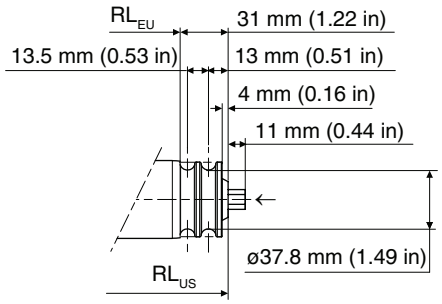
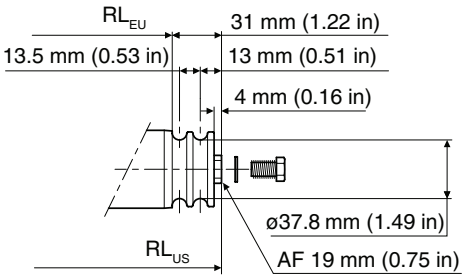
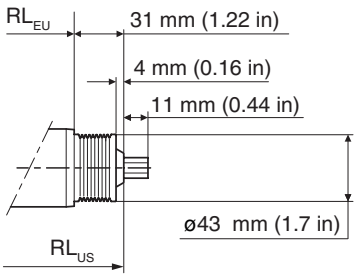
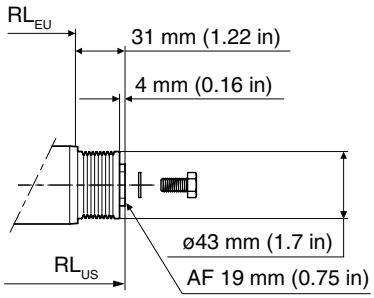
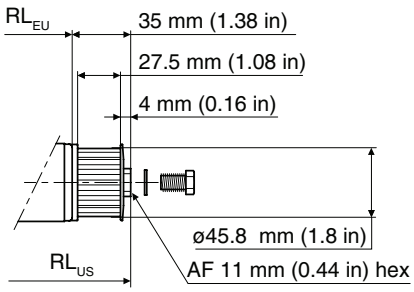
Dimensions of the motor shaft

Standard configuration



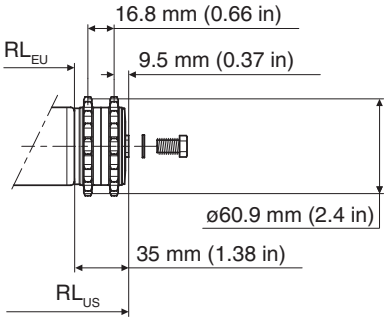
Product information

Dimensions of idler cartridges

	11 mm (0.44 in) hex, spring-loaded	Female threaded M8 (FTM8), floating
Straight		
O-ring hub		
Multi-rib hub		
Timing belt hub		Poly-Chain GT; 8 mm pitch; 18 teeth 

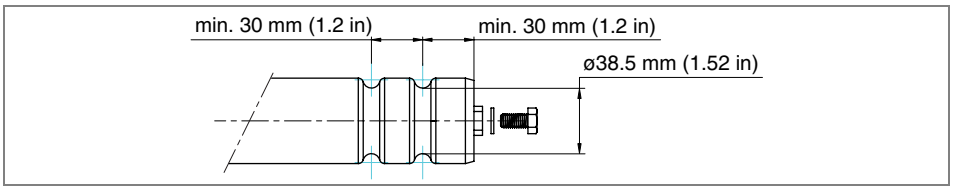
Product information

	11 mm (0.44 in) hex, spring-loaded	Female threaded M8 (FTM8), floating
Roller chain hub		11 mm (0.44 in) hex shaft; 3/8 in pitch; 20 teeth

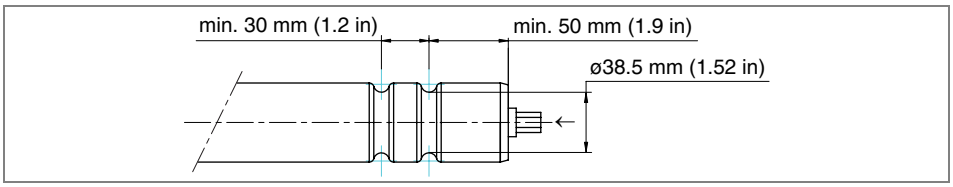


Groove locations

FTM8, floating, single bearing



Spring-loaded hex, double bearing



Other tube groove locations possible.

Conical RollerDrives

Conical RollerDrives are only available in three versions:

- Without roll-to-roll transmission (no grooves)
- With grooved tubes [RL_{EU} = B/F - 11 mm (0.44 in) / RL_{US} = B/F - 3 mm (0.12 in)]
- With O-ring hub [RL_{EU} = B/F - 37 mm (1.46 in) / RL_{US} = B/F - 3 mm (0.12 in)]

B/F: Width **b**etween the conveyor **f**rames

Due to the conical sleeves they are only available in certain standard lengths.

For conical RollerDrives there must be a 1.8° angle compensation on the motor end to avoid bending forces on the RollerDrive.

For details contact Interroll, see the catalogs or refer to publications at www.interroll.com.

Transport and storage

Transport

- Each RollerDrive is covered at its ends with end-protectors.

⚠ CAUTION

Risk of injury due to improper transport

➢ Transport may only be carried out by qualified and authorized persons.
➢ Observe the following notices.

➢ Do not stack pallets.
➢ Check the fixation of the RollerDrives before transport.
➢ Avoid hard shocks during transport.
➢ Check each RollerDrive visually for damage after transport.
➢ In case of damage, take photos of the damaged parts.
➢ To maintain the warranty, report any damage caused by transport instantly to the transport company and Interroll.
➢ Do not transfer the RollerDrives between warm and cold environments. This may cause condensing water.

Storage

⚠ CAUTION

Risk of injury due to improper storage

➢ Do not stack pallets.
➢ Do not stack more than four carton boxes.

With IP66 RollerDrives, due to the sealing, condensing water inside the RollerDrive may cause corrosion.

➢ Check each RollerDrive for damage after storage.

Assembly

Warning notices concerning assembly

⚠ CAUTION

Rotating parts and accidental motor starts
Risk of pinched fingers

- ➢ Do not insert fingers between the RollerDrive and the O-ring belt, multi-rib belt or roller chain.
- ➢ Install a protection device (such as a guard plate) to prevent fingers from getting trapped in the O-ring belt, multi-rib belt or roller chain.
- ➢ Install an appropriate warning on the conveyor.

NOTICE

Risk of damage leading to failure or shortened life expectancy of the RollerDrive

- ➢ Observe the following notices.

- ➢ Do not drop or mishandle the RollerDrive to avoid internal damage.
- ➢ Check each RollerDrive visually for damage before assembly.
- ➢ Do not hold, carry, or support the RollerDrive by the wires extending out of the mounting shaft to avoid damage to the internal solder joints.
- ➢ Do not force the RollerDrive when inserting it into the conveyor frame. It should fit easily into the holes in the frame.
- ➢ Ensure that the proper torque (see assembly instructions) is applied to the RollerDrive hex nut to prevent the shaft spinning in the frame and the wires twisting.
- ➢ Do not twist the motor cable.

Assembly

Warning notices concerning the electrical installation

NOTICE

Risk of damage to the motor and/or the wires of the RollerDrive

➢ Observe the following notices.

- ➢ The electrical installation may only be executed by qualified and authorized persons.
- ➢ Disconnect the power before installing, removing or rewiring the RollerDrive.
- ➢ Do not apply AC current to the RollerDrive or DriveControl device at any time as this will cause irreparable damage.
- ➢ Do not apply too much stress to the connector pins. Bending the wires at the connector and forcing the star washer over them can cause damage to the insulation of the wires, which could result in failure of the RollerDrive.
- ➢ Ensure that the RollerDrive, the DriveControl and the 24 VDC power source are properly earthed through the frame or supporting structure in which the RollerDrive and the DriveControl are installed. Failure to do so could cause the buildup of static electricity or ground loops and can cause the motor or DriveControl to malfunction or fail prematurely.
- ➢ Do not bend the motor cable at the motor shaft. Leave a minimum of 12 mm (0.5 in) of excess cable for stress relief. (Minimum motor cable bend radius 5x cable diameter.)
- ➢ Do not spin the RollerDrive manually, as this generates an induction voltage which could damage the DriveControl.

Setting up a roller conveyor

A roller conveyor usually consists of conveyor zones. Each zone is composed of one RollerDrive and several idler rollers which are driven by the RollerDrive. The idler rollers can be linked using either flat belts, timing belts, O-ring belts, multi-rib belts or roller chains. The number of idler rollers in each zone depends on the application.

➢ Before installing the RollerDrive, define the position of the conveyor zone within the conveyor and the position of the RollerDrive within the conveyor zone.

Locate the RollerDrive near the center of the zone or the center of gravity of the object being conveyed to improve the transmission of the force between RollerDrive and goods.

Assembly

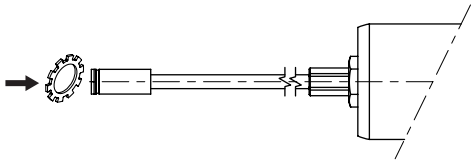
Inserting the RollerDrive EC300 in the conveyor frame

Inserting the motor shaft

➢ Remove the shipping tube from the RollerDrive/harness assembly.

Use caution when cutting the tie-wrap from the harness. Do not cut any of the sleeving or wires on the assembly.

➢ Place a first star washer on the motor shaft.



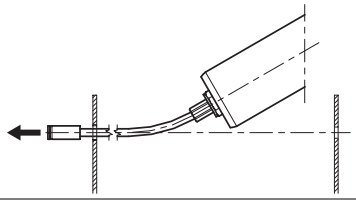
➢ Pass the motor cable through the 11 mm (0.44 in) hex hole in the conveyor frame and insert the motor shaft into the hex hole.

NOTICE

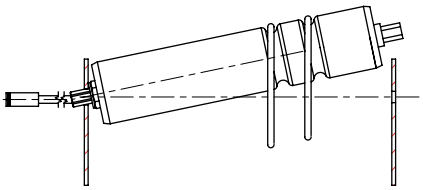
Internal damage of the RollerDrive due to improper handling

➢ Do not install the securing hardware at this time.

➢ Do not bend the motor cable at the motor shaft. Leave a minimum of 12 mm (0.5 in) of excess cable for stress relief.



➢ Place one or two standard 4 mm, max. 5 mm (3/16 in) O-rings or RollerDrive belts (if used) on the idler end of the RollerDrive.



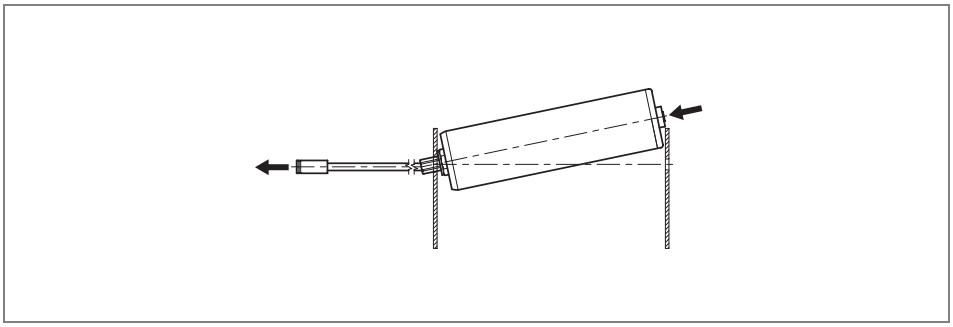
Assembly

Inserting the idler shaft

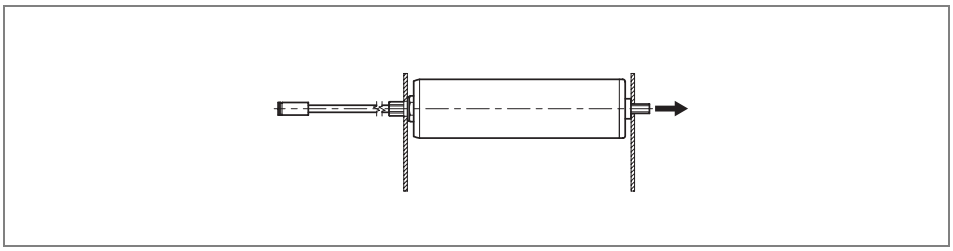
How the idler shaft is inserted in the conveyor frame depends on the idler shaft option. The easiest installation option is the spring-loaded shaft option.

Inserting the spring-loaded idler shaft

➢ Push the spring-loaded idler shaft inwards and align the shaft with the hole in the frame.

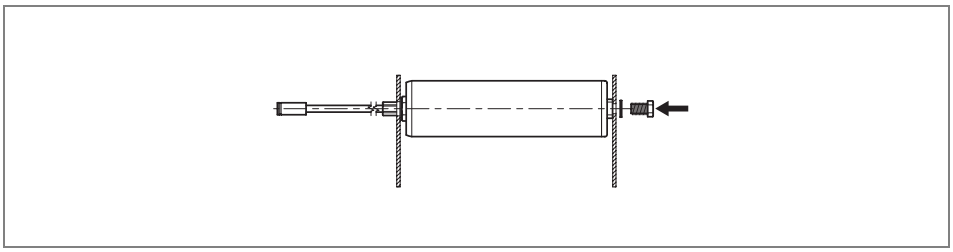


➢ Release the idler shaft and allow it to pop into the hole in the frame.



Inserting the FTM8 idler shaft

➢ Place a split lock washer onto a M8x20 bolt.
➢ Align the RollerDrive with the hole in the frame and thread the M8 bolt and split lock washer into the shaft. Use a wrench to prevent the idler shaft from turning (width across flats AF 13 mm or AF 19 mm, depending on the idler type, *see "Groove locations", page 15*).



➢ Use a torque wrench to tighten the bolt with 20 Nm (177 in-lbf) until the split washer is completely compressed.

For information about assembling the idler rollers, see the corresponding manuals or information at www.interroll.com.

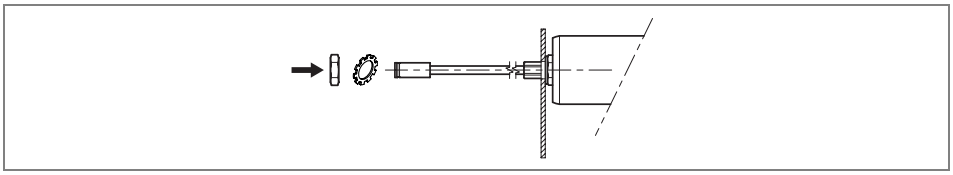
Assembly

Securing the RollerDrive in the conveyor frame

There is a nut and a washer on the shaft next to the tube. This inner nut has been preassembled and secured in the correct position.

Do not adjust the inner nut and washer.

- Prevent the inner nut from rotating with a flattened wrench AF 19 mm.
- Slip a second star washer and a hex nut over the motor cable and screw it onto the threaded motor shaft. Ensure that star washers are mounted on both sides of the profile.

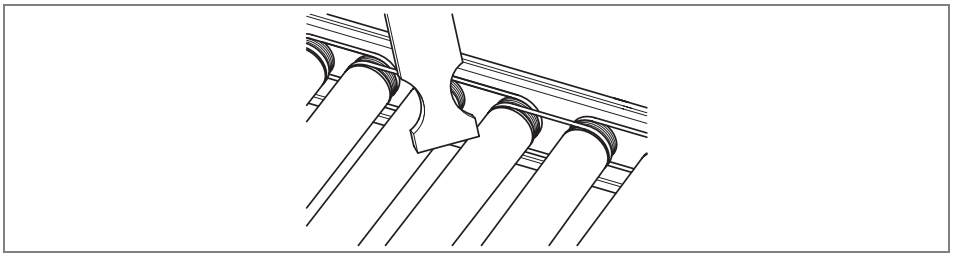


- Use a torque wrench to tighten this outer nut with 35 Nm (308 in-lbf) while ensuring that the inner nut is not rotating.

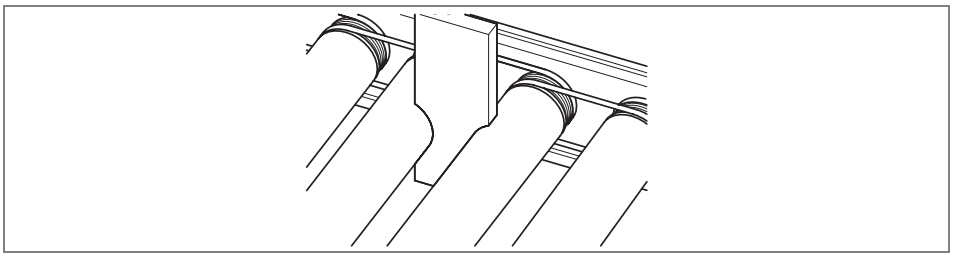
To prevent bending forces on conical RollerDrives, an angular compensation on the motor end is needed.

Mounting tool

For mounting the multi-rib belt, you may want to build a mounting tool as shown in the figure below.



- Place the mounting tool between two rollers to reduce the gap between the adjacent rollers.



The dimensions of the mounting tool depend on the roller pitch and the roller tube diameter.

Assembly

Electrical installation

- If you use the recommended DriveControl (*see "DriveControls for the RollerDrive EC300", page 10*), connect the motor plug to the DriveControl.
- If you do not use the DriveControl, connect your control to the pins of the motor plug (for the pin definition *see "Motor plug", page 11*)

Initial startup and operation

Initial startup

Inspections before initial startup

- Ensure that no objects are in contact with rotating or moving parts.
- Ensure that all bolts are tightened according to the specifications.
- Ensure that no additional dangerous areas arise due to interfaces to other components.
- Ensure that the wiring is in accordance with the specification and legal directives.
- Check all protection devices.
- Ensure that no bystanders are in dangerous areas around the conveyor.

For information about startup, see the manual for the DriveControl or your control.

Operation

⚠ CAUTION

Rotating parts and accidental starts
Risk of pinched fingers

- Do not insert fingers between the RollerDrive and the O-ring belt, multi-rib belt or roller chain.
- Do not remove the protection device.
- Keep fingers, hair and loose clothing away from the RollerDrive.

NOTICE

Damage to the motor or the control due to induction

- Do not push items along the roller conveyor by hand.
- Do not spin the RollerDrive manually.

Inspections before every startup

- Check the RollerDrive for visible damage.
- Check all protection devices.
- Ensure that no bystanders are in dangerous areas around the conveyor.
- Clearly specify and monitor the way goods are placed on the conveyor.
- Ensure that the RollerDrive is not blocked.

Ambient operating conditions *see "Technical data", page 9*

Procedure in case of accident or malfunction

- Stop the conveyor at once and ensure that it cannot be started accidentally.
- In case of an accident: Provide first aid and make an emergency call.
- Inform the responsible person.
- Have the malfunction repaired by qualified persons.
- Start the conveyor only after this has been approved by qualified persons.

Maintenance and cleaning

Warning notices concerning maintenance and cleaning

⚠ CAUTION

Risk of injury due to improper handling or accidental motor starts

- ➢ Maintenance work and cleaning may only be executed by qualified and authorized persons.
- ➢ Only perform maintenance work after switching off the power. Ensure that the RollerDrive cannot be turned on accidentally.
- ➢ Set up signs indicating maintenance work.

Maintenance

Checking the RollerDrive

If the RollerDrive is not secured as specified in the installation instructions (*see "Assembly", page 17*), it may rotate in the hole in the conveyor frame. This will result in the roller leads becoming twisted and eventually severed.

- ➢ Monthly check the RollerDrive for visible damage.
- ➢ Annually ensure that the roller shaft is secured properly in the conveyor frame.

Replacing a RollerDrive

If a RollerDrive is damaged or broken down, it has to be replaced.

- ➢ Install a new RollerDrive (*see "Abandonment", page 26* and *see "Inserting the RollerDrive EC300 in the conveyor frame", page 19*).

Cleaning

Increased surface friction reduces the roller speed since more power is used to overcome the resistance. Therefore, in a dirty environment, periodic cleaning will ensure good contact with the goods and reduce friction.

- ➢ Remove foreign material from the roller with standard cleaners.
- ➢ Do not use sharp-edged tools to clean the roller.

Troubleshooting

Error search

⚠ CAUTION

Risk of injury due to accidental motor starts

- ➢ Error search may only be executed by qualified and authorized persons.
- ➢ Only perform error search after switching off the power. Ensure that the RollerDrive cannot be turned on accidentally.
- ➢ Use caution while searching the error.

Symptom	Possible cause	Help
RollerDrive is not operating.	No power supply	Check 24 VDC power supply.
	Plugs not connected properly	Check cable connection.
RollerDrive is rotating in the wrong direction or at the wrong speed.	Wrong DriveControl setting at speed and direction rotary switch	Change setting on DriveControl.
	Wrong voltage at speed setting pin (if the RollerDrive is not operated with the recommended Interroll DriveControl)	Check the voltage of the speed setting pins at the motor plug.
Abnormal noise coming out of the RollerDrive.	Motor or gearbox is damaged.	Replace RollerDrive.
Interrupted RollerDrive operation	Damaged motor cable	Check motor cable for damages. If motor cables are damaged, replace RollerDrive.
	RollerDrive overload	*see "Overload protection devices", page 7*

Abandonment and disposal

Abandonment

⚠ CAUTION

Risk of injury due to improper handling

- ➢ Abandonment may only be executed by qualified and authorized persons.
- ➢ Only abandon the RollerDrive after switching off the power. Ensure that the RollerDrive cannot be turned on accidentally.

- ➢ Disconnect the motor cable from the control.
- ➢ Unscrew the outer nut at the threaded motor shaft.
- ➢ If the RollerDrive has a spring-loaded idler shaft, push the idler shaft inwards.
- ➢ If the RollerDrive has a FTM8 idler shaft, unscrew the bolt at the idler shaft.
- ➢ Extract the RollerDrive from the conveyor frame.

Disposal

The operator is responsible for the proper disposal of the RollerDrive. In doing so, industry-specific and local provisions must be observed for the disposal of the RollerDrive and its packaging.

Appendix

Accessories

Belts

Part	Characteristics
Toothed belt	• Gates Poly-Chain GT or similar: pitch 8 mm (0.31 in) • Toothed belt width: 11.2 mm (0.44 in) • Hub with 18 teeth
Round belt	• Belts of 4 mm (0.16 in) and max. 5 mm (0.20 in) diameter
Multi-rib belt	• Drive head with 9 grooves for flexible V-ribbed belts • PJ form, ISO 9981, DIN 7867 • Pitch 2.34 mm (0.09 in) • Belts with a max. of 4 ribs

DriveControls

Part	Part #
DC-EC200/EC300 (13:1) for RollerDrive EC300 (13:1)	89QU
DC-EC300 (7.85:1) for RollerDrive EC300 (7.85:1)	89QV
Z-Card EC Easy	89Z2
Z-Card EC Full	89Z3

Wiring accessories

Part	Characteristics	Part #
Power supply	230 V / 150 W / 24 VDC	89NT
Extension cable RollerDrive - DriveControl	Length 1600 mm	89VK
Extension cable RollerDrive - Z-Card EC	Length 1000 mm Length 2000 mm	89VE 89VF

Appendix

Manufacturer's declaration

in terms of the EC-Machine Directive 98/37/EC and its amendment 98/79/EC, Annex II B

The manufacturer:

Interroll Corporation

3000 Corporate Drive

Wilmington, NC 28405

hereby declares with sole responsibility that the product range

- RollerDrive Type EC300

is not a ready-to-use assembly in terms of the EC-Machine Directive and therefore does not fully comply with the requirements of this directive. It must not be put into service until the machinery into which it is to be incorporated has been declared to conform with the provisions of the Machine Directive.

Applied EC Directives:

Machine Directive 98/37/EC and its amendment 98/79/EC

Low Voltage Directive 2006/95/EC

EMC Directive 2004/108/EC

RoHS Directive 2002/95/EC

Applied harmonized norms:

EN ISO 12100 Part1 and Part2

Wilmington, November 7th 2007

Richard Keely

(VP of Manufacturing)

(This declaration can be obtained at www.interroll.com, if needed.)

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