Inspired by Excellence

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Need Something Different?
Conveline sales team will provide you complete solution for your specific custom application.

IN/NOV/2021

24V DC PRODUCTS

Roller Motor & Roller Control Card

www.conveline.com

RM50 24V DC ROLLER MOTOR

The Conveline Roller motor RM50 is an Economical, High torque, High-performance Brushless 24V DC motor roller.

RM50 Features

- Various Drive Options
- Tapered Rollers also available
- Optional Polyurethane sleeving
- Safe low voltage
- Wide range of speeds

RM50 Benefits

- Fast Return on Investment
- No Maintenance
- Low energy consumption
- Total cost of ownership
- Less time of installation
- Roller Motor extension cable

How to order

Please create a reference number with the following configurator.

RM - [ ] - [ ] - [ ] - [ ] - [ ] H - [ ] - W - L

ROLLER MOTOR
MOTOR TYPE
24 = 24V DC

FIXED SHAFT
KT = S/S THREADED SHAFT

MOTOR SPEED RATIO
9 = 9:1 RATIO,
12 = 12:1 RATIO,
16 = 16:1 RATIO,
18 = 18:1 RATIO
24 = 24:1 RATIO,
36 = 36:1 RATIO,
48 = 48:1 RATIO,
54 = 54:1 RATIO
64 = 64:1 RATIO,
96 = 96:1 RATIO,

AVAILABLE STANDARD TUBE GROUPS

TUBE TYPE	FINISH
SHN	STEEL ZINC PLATED
KHN	STAINLESS STEEL
SHS	STEEL WITH PU SLEEVE
SHT	STEEL WITH TAPER SLEEVE

DRIVE TYPE

G	GRAVITY (PLAIN TYPE)
P	POLY VEE BELT PULLEY
OT	TUBE GROOVED "O" RING TYPE
OP	POLYAMIDE "O" RING TYPE
S	DUAL SPROCKET (08B14T)
T	TIMING BELT TYPE

HEX SHAFT

IDLER SHAFT
11 = MS 11MM HEX SPRING-LOADED
11K = SS 11MM HEX SPRING-LOADED
SN8 = MS FEMALE THREAD M8X15
KN8 = SS FEMALE THREAD M8X15

TECHANICAL SPECIFICATIONS

Pipe Dia.	50x1.5 mm
Pipe Material	Mild Steel, Stainless Steel
Motor Shaft	Stainless Steel, 11mm Hex, Thread M12x1
Nominal Voltage	20-25 VDC
No Load Current	0.5 A
Max. Continues Current	2 A
Max. Start Current	5 A
Mechanical Performance	50 W
Noise Level	55 DB*
Min. Roller Length	270 mm (Depending on Application)
Max. No. of Start/Stop per Min.	30
Life time under nominal condition	20000
Protection Class	IP54
Ambient Temp. in Operation	0 – 40 degree
Air Humidity	5 – 85%
Features, Performance data and Mechanical performance apply to an ambient temp. of 20 degree.	
*Value can change according to installation Conditions.	

RM50 Roller Motor Performance

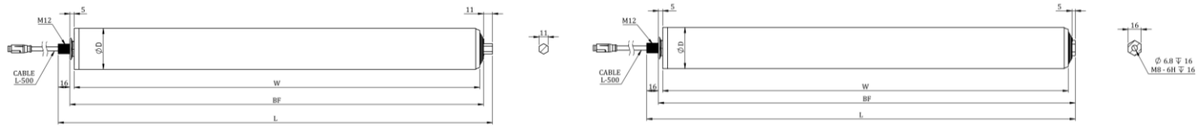
Gear Ratio	Speed Range (m/s)	Speed Range (m/min)	Nominal Torque (Nm)	Starting Torque (Nm)	Holding Torque (Nm)
9:1	1.95	117	0.47	1.20	0.36
12:1	1.48	88.8	0.64	1.56	0.48
16:1	1.11	66.6	0.84	1.98	0.64
18:1	0.97	58.2	0.94	2.21	0.72
24:1	0.74	44.5	1.25	2.95	0.96
36:1	0.50	30	1.85	4.40	1.44
48:1	0.37	22.2	2.47	5.90	1.92
54:1	0.33	19.8	2.77	6.63	2.12
64:1	0.28	17.0	3.30	7.95	2.56
96:1	0.18	10.8	4.88	11.75	3.84

RM50 Load Capacity

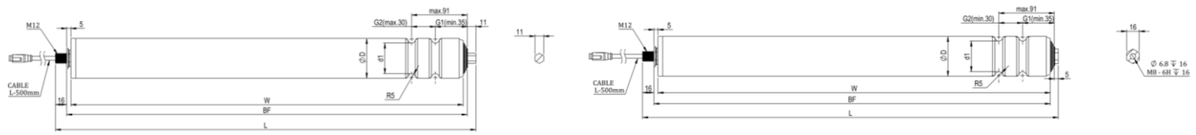
Length up to 1000mm without drive pulley (Straight type)	1100 N
Length from 1100mm to 1300mm without drive pulley (Straight type)	600 N
Max. Load capacity per roller with drive. Pulley (poly V, O ring, Timing belt, etc.), length up to 1300mm	350 N

Roller Motor Dimensions

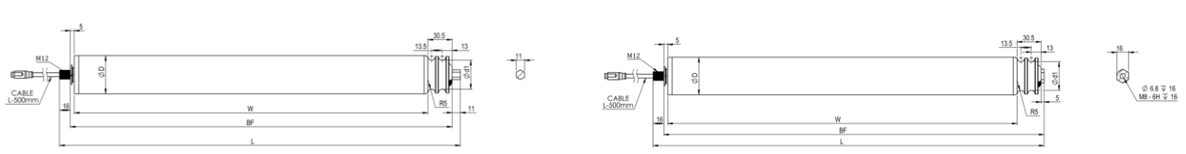
Without Drive – Gravity Straight Roller Motor



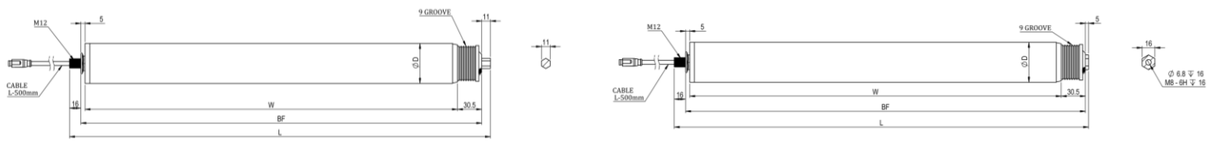
Pipe Groove Roller Motor



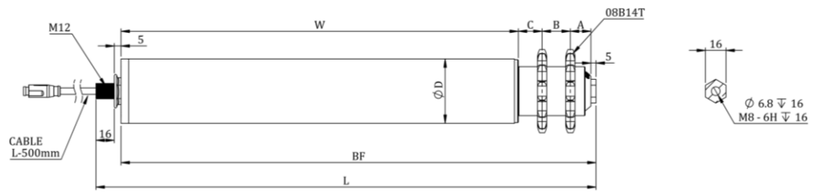
O Ring Groove Roller Motor



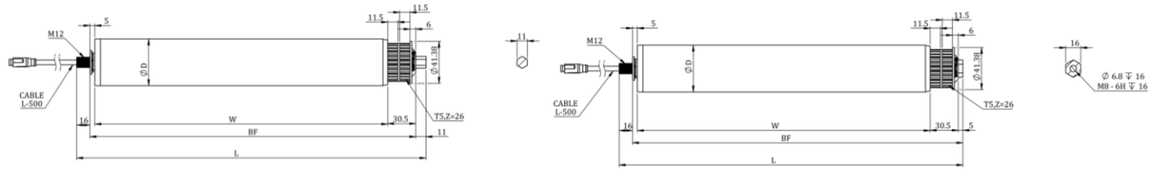
Poly Vee belt Roller Motor



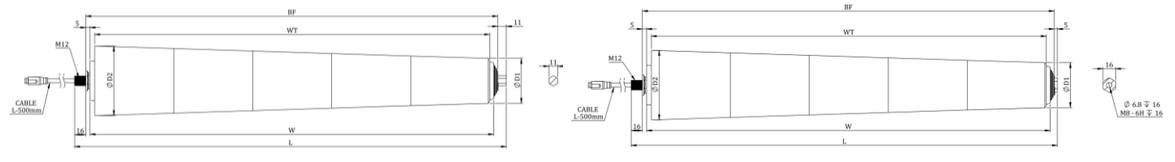
Dual Sprocket Roller Motor



Timing Belt Roller Motor



Tapered Sleeve Roller Motor



Roller Motor Options and Accessories

Roller Sleeves

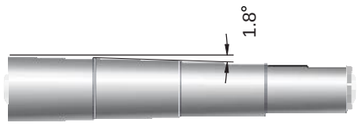
Roller Motor and Idler roller pipes can be fitted with PVC or Polyurethane Sleeves.

	PVC Sleeve	Polyurethane Sleeve
Color	Gray	Orange
Wall Thickness (mm)	2	3

Sleeves increase the surface friction of Roller motor and allow them to be used in incline or decline applications. Sleeves also reduce noise and provide a softer surface to help protect sensitive goods while being conveyed.

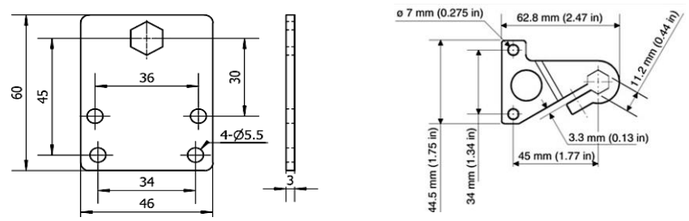
Curve Sleeves

Conveline tapered rollers are constructed by pressing tapered sleeves onto an ordinary Roller motor or idler roller. Mounting holes must be located lower in the outer radius frame to compensate for the 1.8° pitch of the sleeves.



Anti-Spin bracket for Roller Motor

When you use a non-threaded hex shaft on motor side an anti-spin bracket is necessary. This prevents the Motor drive from rotating in the conveyor frame. Anti-spin brackets are available in two following options.



Roller Motor mounting bracket dimensions

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RC20 ROLLER CONTROL CARD

The Conveline RC20 Roller control is simple control for the Roller Motor RM50. It contains no logic (e.g. Zero pressure accumulation – ZPA) and requires external signals for operation.

To set the direction or rotation, start and breaking ramp and the speed in 15 increments, DIP switches can be great used. Digital Inputs and outputs serves as interface to a higher-level control. Signals allow adjusting the direction of rotation and speed in seven different increments.

Application Area:
1. Control of roller motor RM50 in applications without start – stop operation
2. Application with PLC but without fieldbus.

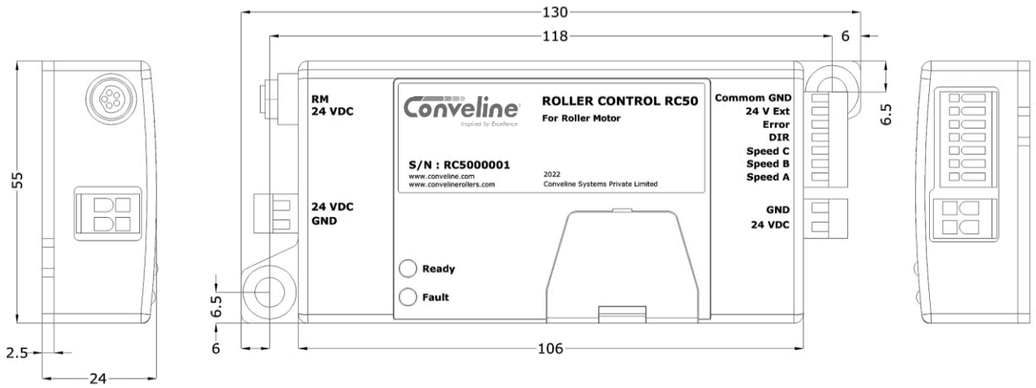
RC50 Features

- Speed setting (DIP switches 15x, Digital input 7x)
- Selection of direction of rotation (via. DIP switches or digital input)
- Error signal output
- Status display with LED

The Control card is powered by a brushless 24V DC motor integrated into a conveyor roller to save space.

CONVELINE RC20
ROLLER CONTROL CARD

Dimensions



Technical Data RC50

Rated Voltage	24V DC
Voltage Range	20 – 25 V DC
Fuse	Present, Non-replaceable
Protection Classification	IP20
Ambient temperature in operation	0 to 40 Degree
Power Supply	Fine - wired, 1.5 mm^2
Input/Output (I/O)	Fine – wired, 0.08 to 0.5 mm^2