MRx50
for container conveyor technology

With integrated Motor Controller for efficient, compact and powerful conveying solutions

Application / area of application

Reliable drive solutions for applications in general cargo conveying technology under normal environmental conditions. Designed for the safe and efficient transport of boxes, containers and workpiece carriers, the drives impress with their versatile application options in different conveying concepts.

They are particularly suitable for line conveyors and compact belt conveyors as well as for zero-pressure accumulation conveyor technology systems where a consistent material flow is crucial.

In addition, the drives can be easily integrated into shuttle systems, as load-carrying devices in AGVs, alignment conveyor segments and transfer routes and flexibly support the implementation of branches and distribution structures within complex conveyor systems.

Thanks to their robust design and high adaptability, they represent an economical and powerful solution for modern intralogistics processes.

Features

- Available as a direct drive (without gearbox) and in a version with gearbox
- Brushless Drive technology
- Integrated Motor Controller for compact and efficient system solutions
- Voltage ranges for 24 VDC and 48 VDC
- Easy system integration via standardized I/O and CAN interfaces
- Low wear and designed to be maintenance-free



MRD50 *Gearless direct drive*

The gearless design enables particularly direct and efficient power transmission while simultaneously reducing energy loss. By eliminating mechanical transmission components, noise, wear and maintenance are significantly minimized. It is designed for applications with a **throughput of up to 1400 parcels per hour**, an average parcel weight of 30 kg and a maximum **parcel weight of 50 kg**.

Technical data

		MRD50-AA	MRD50-AB	MRD50-AC	MRD50-AD	MRD50-BA	MRD50-BB	MRD50-BC	MRD50-BD
Rated voltage	VDC	24	24	24	24	48	48	48	48
Rated power (S1)	W	27	40	42	55	28	40	44	77
Speed	m/s	0 - 1.0	0 - 1.0	0 - 2.0	0 - 2.0	0 - 1.0	0 - 1.0	0 - 2.0	0 - 2.0
Nominal torque (S1)	Nm	0.68	1.00	0.52	0.68	0.70	1.01	0.55	0.96
Maximum torque	Nm	1.70	3.40	2.00	2.40	1.80	3.60	1.85	2.90
Rated current	ADC	2.0	2.7	2.4	3.1	1.0	1.4	1.6	2.1
Maximum current *	ADC	5.8	9.3	11.6	9.9	4.6	4.9	6.0	7.7

* Current limitation possible when operating with motor module

MRG50 *Drives with gears*

The geared design enables a powerful design for higher load requirements and dynamic conveying processes. It is designed for applications with a **throughput of up to 2,100 parcels per hour**, an average weight of 35 kg and a maximum parcel weight of **70 kg**.

		MRG50-AB09	MRG50-AB13	MRG50-AB18	MRG50-AB30	MRG50-AB49	MRG50-AB78
Rated voltage	VDC	24	24	24	24	24	24
Rated power (S1)	W	58	58	58	58	58	58
Speed	m/s	0 - 2.0	0 - 1.38	0 - 1.0	0 - 0.6	0 - 0.37	0 - 0.23
Nominal torque (S1)	Nm	0.72	1.04	1.44	2.4	3.92	6.24
Maximum torque	Nm	2.0	2.89	4.0	6.67	10.89	17.33
Rated current	ADC	3.3	3.3	3.3	3.3	3.3	3.3
Maximum current *	ADC	10	10	10	10	10	10

		MRG50-BB09	MRG50-BB13	MRG50-BB18	MRG50-BB30	MRG50-BB49	MRG50-BB78
Rated voltage	VDC	48	48	48	48	48	48
Rated power (S1)	W	70	70	70	70	70	70
Speed	m/s	0 - 2.0	0 - 1.38	0 - 1.0	0 - 0.6	0 - 0.37	0 - 0.23
Nominal torque (S1)	Nm	0.88	1.26	1.75	2.92	4.76	6.86
Maximum torque	Nm	2.00	2.89	4.00	6.67	10.89	17.33
Rated current	ADC	1.87	1.87	1.87	1.87	1.87	1.87
Maximum current *	ADC	5.1	5.1	5.1	5.1	5.1	5.1

* Current limitation possible when operating with motor module

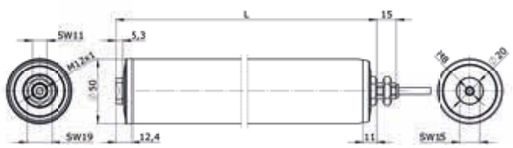
	Configuration
Interfaces	I/O or CAN
Maximum noise level - gearless	< 49 dB(A), application dependent
Maximum noise level - with gearbox	< 54 dB(A), application dependent
Length of motor cable	500 mm
Tube dimensions	Ø 50 x 1.5 mm
Tube material *	Galvanized steel or stainless steel
Tube options*	PVC sleeve / PU sleeve
Ambient temperature *	0 °C ... 40 °C
Protection class *	IP54

* other versions on request

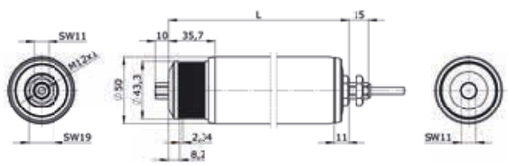
Electrical interfaces

Pin	I/O version	CAN version	Presentation
1	Supply voltage (24 V/48 V)	Supply voltage (24 V/48 V)	 M8 B-coded 5-pin/male
2	Direction of rotation	CAN-HIGH	
3	Ground	Ground	
4	Error output / start-stop	CAN-LOW	
5	Speed setpoint	n.c.	

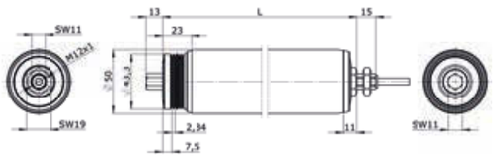
Mechanical versions



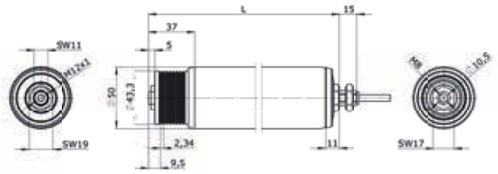
Smooth with M8 internal thread



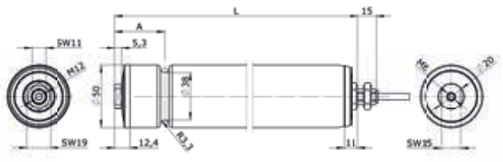
Poly-V, 9-ribbed with spring-loaded axle



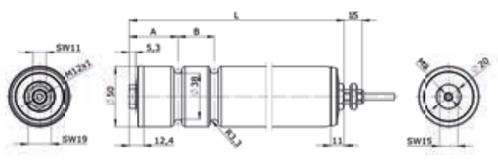
Poly-V, 2x2 with hexagonal axle



Poly-V, 9-ribbed with through axle

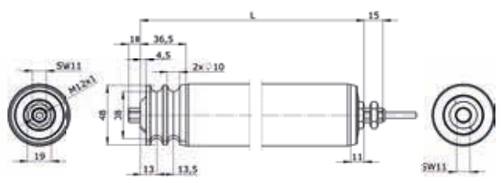


Single groove with M8 internal thread

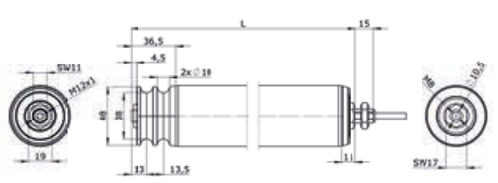


Double groove with M8 internal thread

Variable	Single groove [mm]	Double groove [mm]
A	40.5	40.5
B	-	30
L	clamping length	



Round belt with hexagonal spring axle

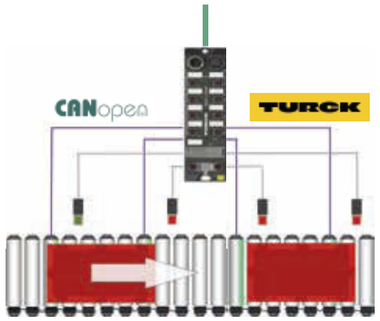


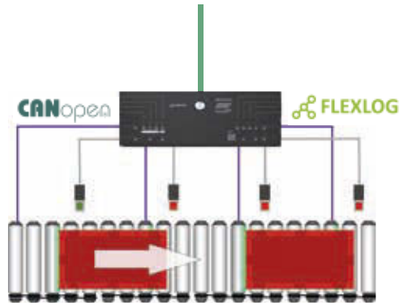
Round belt with M8 internal thread can be plugged in

Easy system integration

Our motorized rollers can be seamlessly integrated into common industry standards (Profinet, Ethernet/IP, ...) via standardized interfaces. The integration is quick, flexible and without much effort.

Easy integration into automation solutions via the **CAN interface integrated directly into the motor roller**.





Easy integration into automation solutions via the **I/O interface integrated directly into the motor roller.**

