

Motor driven rollers



345 ... 1500 mm



Motor driven rollers - innovative, energy-efficient, and powerful

Lenze gearless motor driven rollers are the driving force in intralogistics and offer sustainable solutions for material flow. They optimize processes and enable efficient workflows.

Typical application fields

- Roller conveyors in warehouses
- Feed conveyors in packaging technology
- And many more

Features

- Innovative gearless motor design
- The drive unit is directly integrated into the motor driven roller
- Energy efficiency and sustainability
- Reduced number of variants

The benefits for you

- High competitiveness and cost savings
- Less wiring
- More flexibility in operation and maintenance
- Long product service life
- Easy installation
- Reduces complexity and offers modularity

Features at a glance

Powerful



The compact design of the motor driven roller results in a high power density: A rated power of 57 W at 24 V or 115 W at 48 V ensures powerful drives.

High efficiency



The motor driven rollers have a very high degree of efficiency. Their design is optimized to minimize friction losses in the drives.

Savings of up to 15 % compared to previous solutions are possible.

Quiet operation



The future-oriented design of a motor driven roller based on the Vernier principle results in noise-optimized operation.

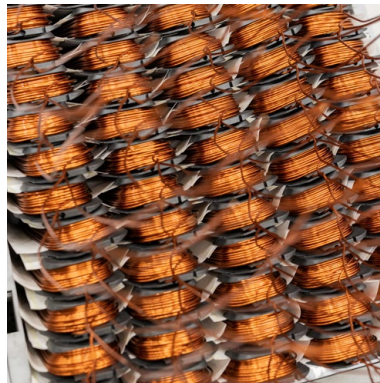
Modern, quiet and sustainable.

Minimum variance



The integrated gearbox reduces the variance. Complexity is reduced while flexibility is increased - it could hardly be more innovative.

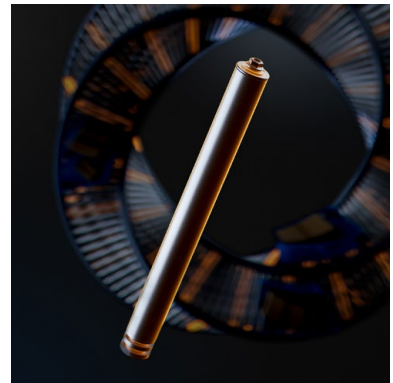
24 V or 48 V



Voltage can be supplied directly via the wiring bus.

The motor driven roller can easily be supplied with 24 V DC or 48 V DC.

Innovative



Innovative functions for a safe operation. Two examples:

Easy engineering and reduced system cost by integrating the motor driven roller directly into the machine.

Thanks to the use of the DC motor, the drive has an optimum energy balance.

Robust components for the roller conveyor

Intralogistics solutions in warehouses or distribution centers benefit from the use of motor driven rollers in conveyor systems. The gearless motor driven roller is used in a wide variety of roller conveyors.

Depending on the application and control logic, an analog motor driven roller with different coatings is available. With tube lengths of 345 ... 1500 mm, the motor driven roller can be easily integrated into the conveyor line. Various tube designs allow the motor driven roller to blend in perfectly with the roller conveyor.



o450 analog motor driven roller

The o450 analog motor driven roller with 24 V or 48 V connection is a real pacemaker for your application and accelerates up to a rated speed of 1.5 m/s with a rated torque of 1.35 Nm. The innovative permanent magnet motor represents a new type of drive concept. It can be used to successfully implement roller conveyors, accumulating roller conveyors, and dynamic sorters.

Technical data

Supply voltage	24 V	48 V
Rated torque	1.35 Nm	1.35 Nm
Max. torque	3.1 Nm	4.0 Nm
Rated speed	1.5 m/s	1.5 m/s
Max. speed	3.0 m/s	3.0 m/s
Tube diameter	50 mm	50 mm
Tube installation lengths	345 ... 1500 mm	345 ... 1500 mm

Highlights

- The very high efficiency minimizes energy costs.
- External rotor - based on the Vernier principle - ensures a low-noise transport of loads.
- Brushless permanent magnet motor with high performance ensures significantly faster goods transportation.
- Few variants and tube lengths from 345 ... 1500 mm allow direct integration into the conveyor line.
- They can be integrated into the system using standard plug & play control units.



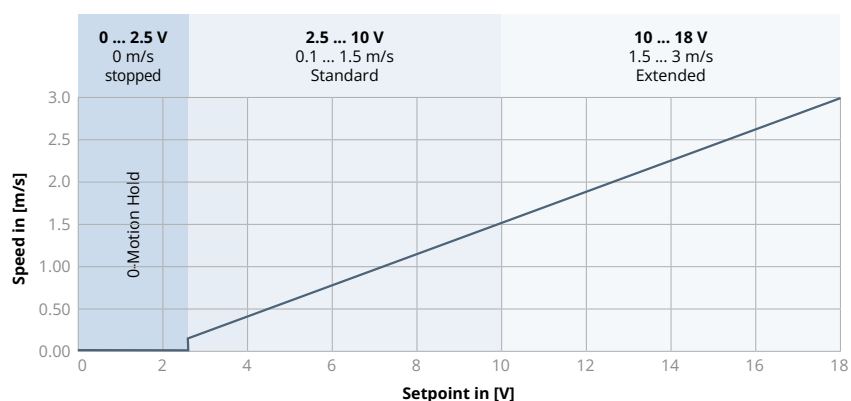
Technical data

Operational behavior

The motor driven roller has a very constant torque behavior.

The speed of the motor driven roller is controlled as standard via the upstream control system using a 0 ... 10 V setpoint value. As shown in the characteristic curve below, the operational behavior is very constant over the entire setpoint range.

But the o450 motor driven roller offers much more than conventional motor driven rollers. An extended speed range from 1.5 ... 3 m/s is available as an additional control range with a setpoint of 10 ... 18 V with the same operational behavior.



If the setpoint is below 2.5 V, the motor driven roller is held at a standstill via the "0-Motion Hold" function with rated torque.



Options

	Drive head	Tube design	
Without drive head			Steel, zinc-coated
V-ribbed belt, PJ profile			Steel, PVC-coated 2 mm
Round belt, steel, 1 bead			Steel, PVC-coated 3 mm
Round belt, steel, 2 beads			Steel, PVC-coated 5 mm
Round belt, plastic, 2 beads			Steel, rubber-coated
Toothed belt, Poly Chain			Steel, PU-coated

Conical	Drive head	Tube design	
V-ribbed belt, PJ profile			Steel, zinc-coated with conical sleeve
Round belt, steel, 2 beads			Steel, zinc-coated with conical sleeve
Round belt, plastic, 2 beads			Steel, zinc-coated with conical sleeve

Axis design		
Ø 50 mm min. 345 mm		Ø 50 mm max. 1500 mm
11 mm hexagon, spring-loaded		M12 x 1 mm
Inner thread M8 x 15 Wrench size WS 12		Pin assignment

PIN		
1	+ U [DC]	24 V / 48 V
2	Digital input	CW/CCW rotation
3	- U[DC]	0 V / GND
4	Digital output	Error message
5	Analog input	Setpoint 0 ... 10 (18) V

o450 analog motor driven roller, 11 mm axis

Drive head	Tube design	Axis design	min tube lengths [mm]
Without	Steel, zinc-coated	11 mm hexagon	345
Without	Steel, PVC-coated 2 mm	11 mm hexagon	345
Without	Steel, PVC-coated 3 mm	11 mm hexagon	345
Without	Steel, PVC-coated 5 mm	11 mm hexagon	345
Without	Steel, rubber-coated	11 mm hexagon	345
Without	Steel, PU-coated	11 mm hexagon	345

Drive head	Tube design	Axis design	min tube lengths [mm]
V-ribbed belt, PJ profile	Steel, zinc-coated	11 mm hexagon	345
V-ribbed belt, PJ profile	Steel, PVC-coated 2 mm	11 mm hexagon	345
V-ribbed belt, PJ profile	Steel, PVC-coated 3 mm	11 mm hexagon	345
V-ribbed belt, PJ profile	Steel, PVC-coated 5 mm	11 mm hexagon	345
V-ribbed belt, PJ profile	Steel, rubber-coated	11 mm hexagon	345
V-ribbed belt, PJ profile	Steel, PU-coated	11 mm hexagon	345

Drive head	Tube design	Axis design	min tube lengths [mm]
Round belt, steel, 1 bead	Steel, zinc-coated	11 mm hexagon	345
Round belt, steel, 1 bead	Steel, PVC-coated 2 mm	11 mm hexagon	345
Round belt, steel, 1 bead	Steel, PVC-coated 3 mm	11 mm hexagon	345
Round belt, steel, 1 bead	Steel, PVC-coated 5 mm	11 mm hexagon	345
Round belt, steel, 1 bead	Steel, rubber-coated	11 mm hexagon	345
Round belt, steel, 1 bead	Steel, PU-coated	11 mm hexagon	345

Drive head	Tube design	Axis design	min tube lengths [mm]
Round belt, steel, 2 beads	Steel, zinc-coated	11 mm hexagon	345
Round belt, steel, 2 beads	Steel, PVC-coated 2 mm	11 mm hexagon	345
Round belt, steel, 2 beads	Steel, PVC-coated 3 mm	11 mm hexagon	345
Round belt, steel, 2 beads	Steel, PVC-coated 5 mm	11 mm hexagon	345
Round belt, steel, 2 beads	Steel, rubber-coated	11 mm hexagon	345
Round belt, steel, 2 beads	Steel, PU-coated	11 mm hexagon	345

Drive head	Tube design	Axis design	min tube lengths [mm]
Round belt, plastic, 2 beads	Steel, zinc-coated	11 mm hexagon	345
Round belt, plastic, 2 beads	Steel, PVC-coated 2 mm	11 mm hexagon	345
Round belt, plastic, 2 beads	Steel, PVC-coated 3 mm	11 mm hexagon	345
Round belt, plastic, 2 beads	Steel, PVC-coated 5 mm	11 mm hexagon	345
Round belt, plastic, 2 beads	Steel, rubber-coated	11 mm hexagon	345
Round belt, plastic, 2 beads	Steel, PU-coated	11 mm hexagon	345

Drive head	Tube design	Axis design	min tube lengths [mm]
Toothed belt, Poly Chain	Steel, zinc-coated	11 mm hexagon	345
Toothed belt, Poly Chain	Steel, PVC-coated 2 mm	11 mm hexagon	345
Toothed belt, Poly Chain	Steel, PVC-coated 3 mm	11 mm hexagon	345
Toothed belt, Poly Chain	Steel, PVC-coated 5 mm	11 mm hexagon	345
Toothed belt, Poly Chain	Steel, rubber-coated	11 mm hexagon	345
Toothed belt, Poly Chain	Steel, PU-coated	11 mm hexagon	345

o450 analog motor driven roller, conical tube design, 11 mm axis

Drive head	Tube design	Axis design	min tube lengths [mm]
V-ribbed belt, PJ profile	Steel, zinc-coated with conical sleeve	11 mm hexagon	345
Round belt, steel, 2 beads	Steel, zinc-coated with conical sleeve	11 mm hexagon	345
Round belt, plastic, 2 beads	Steel, zinc-coated with conical sleeve	11 mm hexagon	345

Options

Further tube lengths

Tube design	
Steel, zinc-coated	400 mm, 500 mm, 600 mm, 700 mm, 800 mm, 1000 mm, 1200 mm, 1400 mm, 1500 mm
Steel, PVC-coated 2 mm	400 mm, 500 mm, 600 mm, 700 mm, 800 mm, 1000 mm, 1200 mm, 1400 mm, 1500 mm
Steel, PVC-coated 3 mm	400 mm, 500 mm, 600 mm, 700 mm, 800 mm, 1000 mm, 1200 mm, 1400 mm, 1500 mm
Steel, PVC-coated 5 mm	400 mm, 500 mm, 600 mm, 700 mm, 800 mm, 1000 mm, 1200 mm, 1400 mm, 1500 mm
Steel, rubber-coated	400 mm, 500 mm, 600 mm, 700 mm, 800 mm, 1000 mm, 1200 mm, 1400 mm, 1500 mm
Steel, PU-coated	400 mm, 500 mm, 600 mm, 700 mm, 800 mm, 1000 mm, 1200 mm, 1400 mm, 1500 mm

Accessories o450

Machine connection

Torque plate	Straight 0 ... 5°
	Angled 5 ... 15°

o450 analog motor driven roller, 14 mm axis

Drive head	Tube design	Axis design	min tube lengths [mm]
Without	Steel, zinc-coated	14 mm SW12	345
Without	Steel, PVC-coated 2 mm	14 mm SW12	345
Without	Steel, PVC-coated 3 mm	14 mm SW12	345
Without	Steel, PVC-coated 5 mm	14 mm SW12	345
Without	Steel, rubber-coated	14 mm SW12	345
Without	Steel, PU-coated	14 mm SW12	345

Drive head	Tube design	Axis design	min tube lengths [mm]
V-ribbed belt, PJ profile	Steel, zinc-coated	14 mm SW12	345
V-ribbed belt, PJ profile	Steel, PVC-coated 2 mm	14 mm SW12	345
V-ribbed belt, PJ profile	Steel, PVC-coated 3 mm	14 mm SW12	345
V-ribbed belt, PJ profile	Steel, PVC-coated 5 mm	14 mm SW12	345
V-ribbed belt, PJ profile	Steel, rubber-coated	14 mm SW12	345
V-ribbed belt, PJ profile	Steel, PU-coated	14 mm SW12	345

Drive head	Tube design	Axis design	min tube lengths [mm]
Round belt, steel, 1 bead	Steel, zinc-coated	14 mm SW12	345
Round belt, steel, 1 bead	Steel, PVC-coated 2 mm	14 mm SW12	345
Round belt, steel, 1 bead	Steel, PVC-coated 3 mm	14 mm SW12	345
Round belt, steel, 1 bead	Steel, PVC-coated 5 mm	14 mm SW12	345
Round belt, steel, 1 bead	Steel, rubber-coated	14 mm SW12	345
Round belt, steel, 1 bead	Steel, PU-coated	14 mm SW12	345

Drive head	Tube design	Axis design	min tube lengths [mm]
Round belt, steel, 2 beads	Steel, zinc-coated	14 mm SW12	345
Round belt, steel, 2 beads	Steel, PVC-coated 2 mm	14 mm SW12	345
Round belt, steel, 2 beads	Steel, PVC-coated 3 mm	14 mm SW12	345
Round belt, steel, 2 beads	Steel, PVC-coated 5 mm	14 mm SW12	345
Round belt, steel, 2 beads	Steel, rubber-coated	14 mm SW12	345
Round belt, steel, 2 beads	Steel, PU-coated	14 mm SW12	345

Drive head	Tube design	Axis design	min tube lengths [mm]
Round belt, plastic, 2 beads	Steel, zinc-coated	14 mm SW12	345
Round belt, plastic, 2 beads	Steel, PVC-coated 2 mm	14 mm SW12	345
Round belt, plastic, 2 beads	Steel, PVC-coated 3 mm	14 mm SW12	345
Round belt, plastic, 2 beads	Steel, PVC-coated 5 mm	14 mm SW12	345
Round belt, plastic, 2 beads	Steel, rubber-coated	14 mm SW12	345
Round belt, plastic, 2 beads	Steel, PU-coated	14 mm SW12	345

Drive head	Tube design	Axis design	min tube lengths [mm]
Toothed belt, Poly Chain	Steel, zinc-coated	14 mm SW12	345
Toothed belt, Poly Chain	Steel, PVC-coated 2 mm	14 mm SW12	345
Toothed belt, Poly Chain	Steel, PVC-coated 3 mm	14 mm SW12	345
Toothed belt, Poly Chain	Steel, PVC-coated 5 mm	14 mm SW12	345
Toothed belt, Poly Chain	Steel, rubber-coated	14 mm SW12	345
Toothed belt, Poly Chain	Steel, PU-coated	14 mm SW12	345

o450 analog motor driven roller, conical tube design, 14 mm axis

Drive head	Tube design	Axis design	min tube lengths [mm]
V-ribbed belt, PJ profile	Steel, zinc-coated with conical sleeve	14 mm SW12	345
Round belt, steel, 2 beads	Steel, zinc-coated with conical sleeve	14 mm SW12	345
Round belt, plastic, 2 beads	Steel, zinc-coated with conical sleeve	14 mm SW12	345

Options

Further tube lengths

Tube design	
Steel, zinc-coated	400 mm, 500 mm, 600 mm, 700 mm, 800 mm, 1000 mm, 1200 mm, 1400 mm, 1500 mm
Steel, PVC-coated 2 mm	400 mm, 500 mm, 600 mm, 700 mm, 800 mm, 1000 mm, 1200 mm, 1400 mm, 1500 mm
Steel, PVC-coated 3 mm	400 mm, 500 mm, 600 mm, 700 mm, 800 mm, 1000 mm, 1200 mm, 1400 mm, 1500 mm
Steel, PVC-coated 5 mm	400 mm, 500 mm, 600 mm, 700 mm, 800 mm, 1000 mm, 1200 mm, 1400 mm, 1500 mm
Steel, rubber-coated	400 mm, 500 mm, 600 mm, 700 mm, 800 mm, 1000 mm, 1200 mm, 1400 mm, 1500 mm
Steel, PU-coated	400 mm, 500 mm, 600 mm, 700 mm, 800 mm, 1000 mm, 1200 mm, 1400 mm, 1500 mm

Accessories o450

Machine connection

Torque plate	
	Straight 0 ... 5°
	Angled 5 ... 15°

