



致力于智能输配送领域发展，成为核心驱动部件全球供应商
Committed to the development of intelligent transportation and delivery,
to become a global supplier of core drive components.

Roller Motor Product Specification

Committed to the development of intelligent transportation and delivery
To become a global supplier of core drive components



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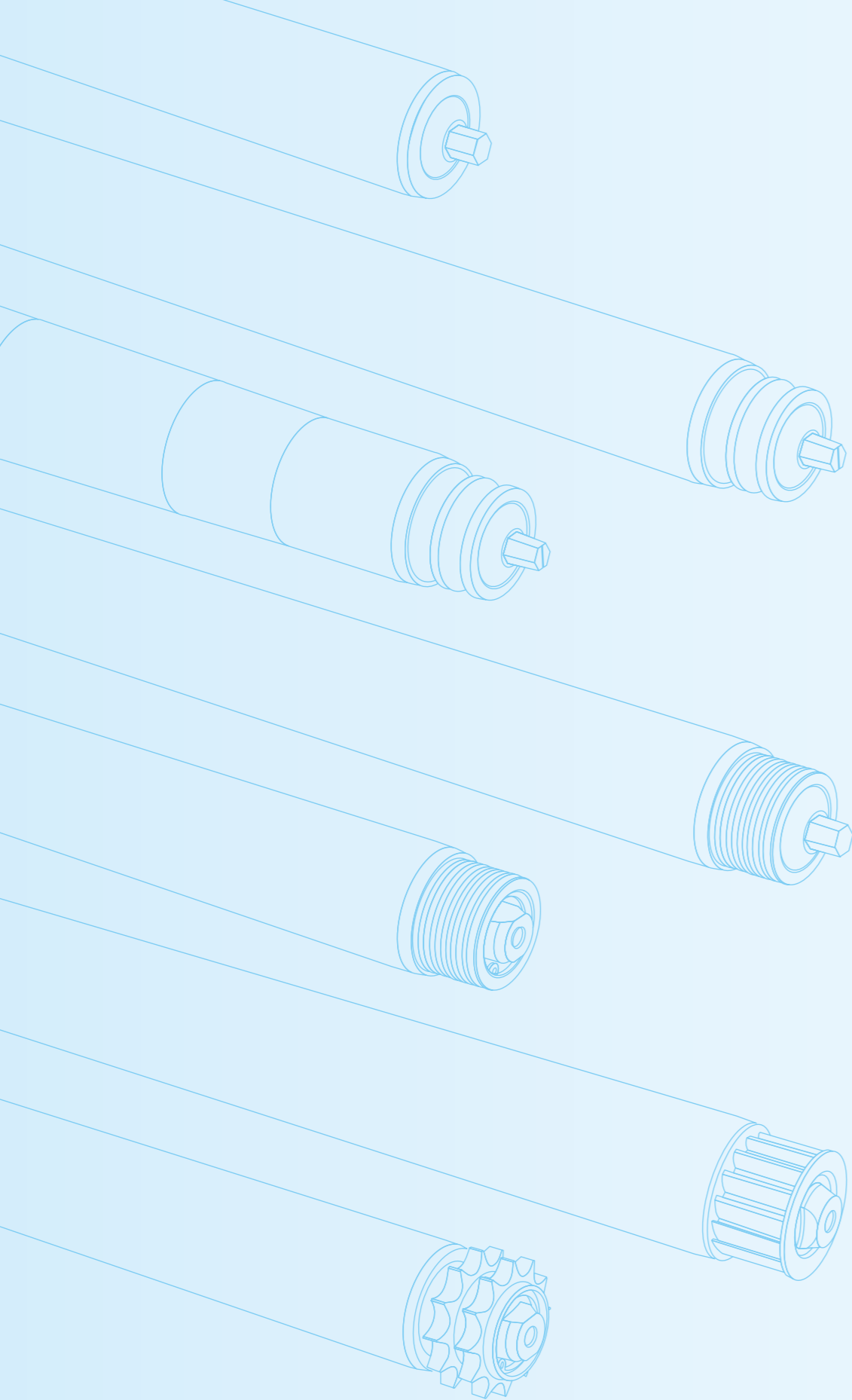
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Product Index

Product	Volts (V)		Power (W)				Diameter (mm)					IP	ULT
	24	48	35	50	80	200	50	60	76	80	89		
Roller Motor	●	●	●	●	●	-	●	-	-	-	-	IP66	-
Straight-line Conveying	●	●	●	●	●	-	●	-	-	-	-	-	●
	●	●	●	●	●	-	●	-	-	-	-	●	-
	●	●	-	-	●	-	-	●	-	-	-	-	-
	●	●	-	-	●	-	-	●	-	-	-	-	●
	-	●	-	-	-	●	-	-	●	●	●	-	-
	-	●	-	-	-	●	-	-	●	●	●	-	●
	-	●	-	-	-	●	-	-	●	●	●	-	●
Curvilinear Conveying	●	●	●	●	●	-	●	-	-	-	-	-	-
	●	●	-	●	●	●	●	-	-	-	-	-	●
Drum Motor	●	●	-	●	●	-	●	-	-	-	-	-	●
Drive Controller													
IO (50/60)	●	●	●	●	●	-	●	●	-	-	-		
IO (76/80/89)	-	●	-	-	-	●	-	-	●	●	●		
● Support - Developing													

Company Profile



Shenzhen Zhaowei Machinery & Electronics Co., Ltd is a micro-drive system manufacturer that designs, develops and manufactures precision transmission systems. ZHAOWEI was listed on the Shenzhen Stock Exchange in 2020. Headquartered in the beautiful coastal city of Shenzhen, we have established branches and offices in Dongguan, Suzhou, Hong Kong, Germany, Shanghai, and the United States, strategically expanding our global presence.

Suzhou Zhaowei Industrial Technology Co., Ltd. is a subsidiary of ZHAOWEI. It is committed to the field of intelligent transportation, providing customers with cost-effective electric drum modules. The company focuses on the R&D, design, and production of the core drive parts of intelligent transportation, specializes in the independent development of the entire industry chain. ZHAOWEI industrial electric drum solutions mainly serve the automated transportation of goods in e-commerce, airports, pharmaceuticals, factories and other fields, aiming to improve operational efficiency and reduce logistics costs.



National Enterprise Technology Center



Individual Championship for National Manufacturing Industry



China Grand Awards for Industry Commendation Award



China Patent Award Outstanding Award

Quality Management System

- ZHAOWEI's management system is a core part of the company's operations. From product design and development to all stages of production, all employees at ZHAOWEI strictly adhere to the ISO management system.
- We are committed to managing product risks and improving product reliability in challenging environments.
- Our mission is to provide customers with innovative products that meet their needs.

Product Certification:



Awards and Honors

500+

Intellectual property applied

150+

Patent for invention applied

42+

Software copyright

72+

Enterprise trademark

24+

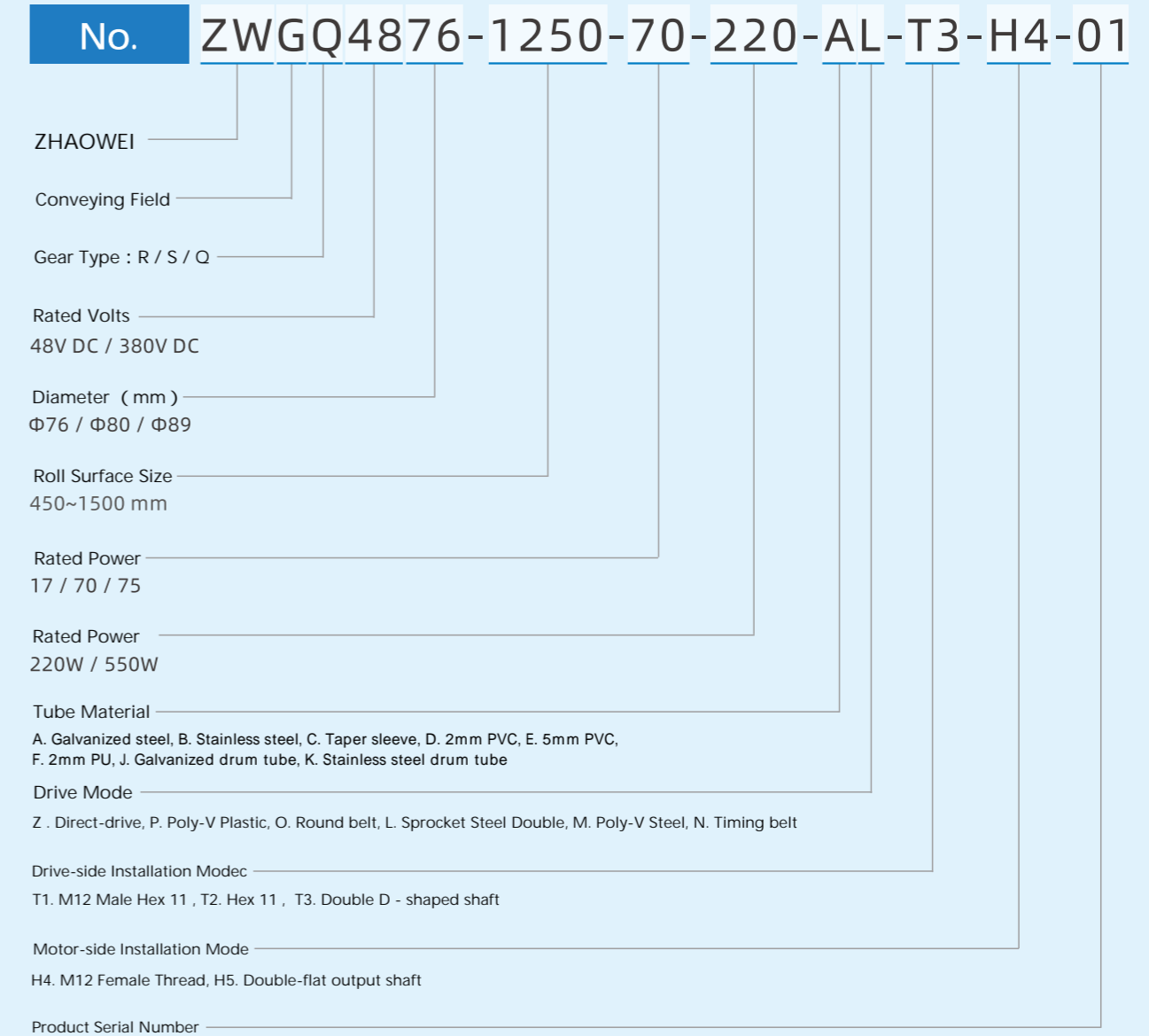
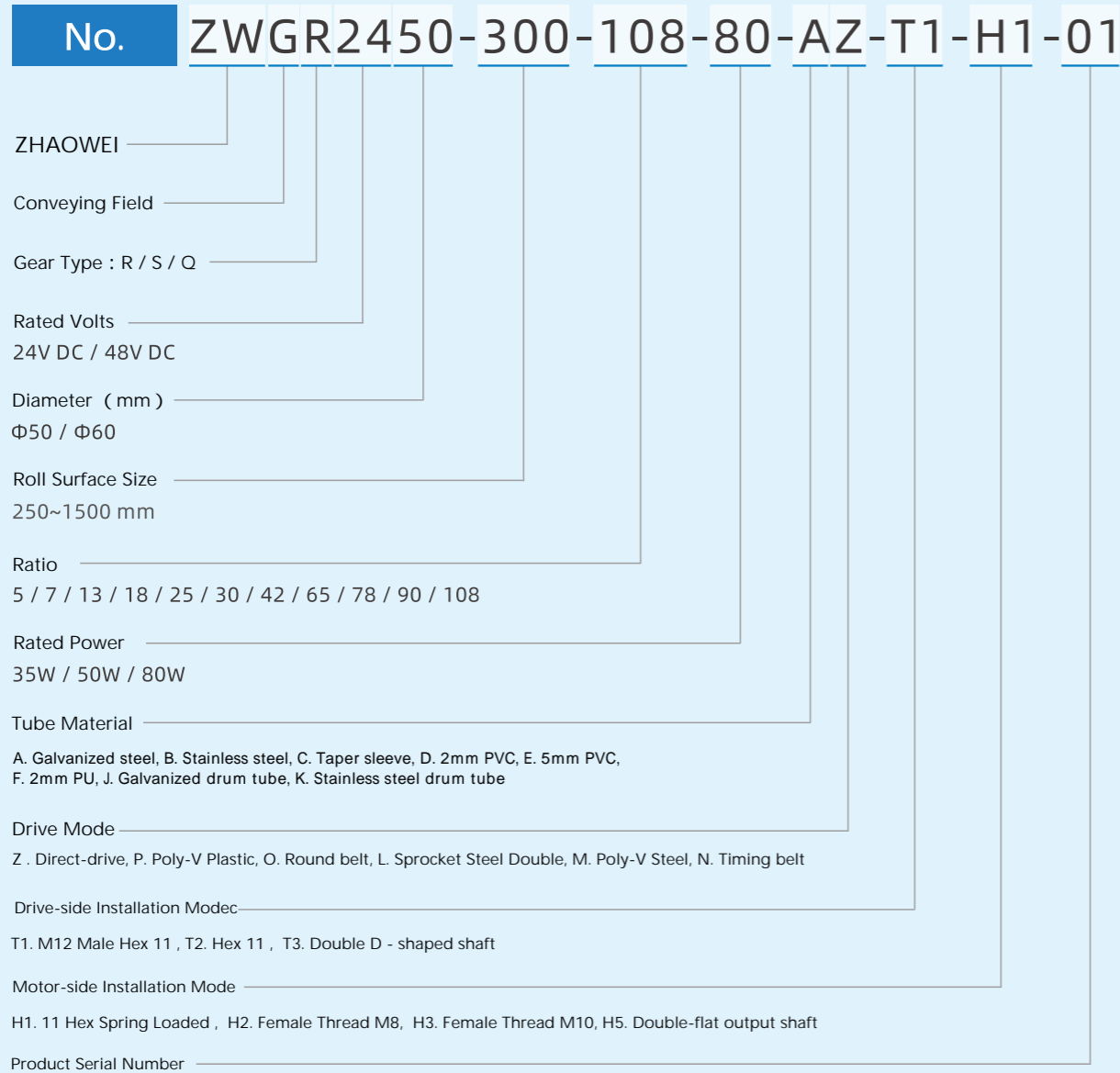
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- | | | |
|--|--|--|
| 01 National Enterprise Technology Center | 02 Individual Championship for National Manufacturing Industry | 03 The Second Prize for National Scientific and Technological Progress |
| 04 The First Prize for Scientific and Technological Progress of Guangdong Province | 05 Preponderant Enterprise of National Intellectual Property Rights | 06 Special Award for China Machinery Industry Science and Technology |
| 07 Shenzhen Engineering and Technology Research Center | 08 Key Robot Enterprise of Guangdong Province | 09 China Patent Award (Outstanding Award) |
| 10 China Grand Awards for Industry (Commendation Award) | 11 Enterprise of Cultivation for Strategic Emerging Industry of Guangdong Province | 12 Gold Award for China Good Design |



Roller Motor Model Number Description



E : ZWGR2450-520-18-80-BP-T1-H1-01

ZWG : ZHAOWEI Roller Motor, R : Powder Metallurgy Gears , 24 : 24V DC, 50 : 50mm diameters, 520 : RL Roll surface length, 18 : Ratio 18, 80 : Rated Output Power 80W, B : Stainless Steel Tube , P : Ploy-V Plastic , T1 : Drive-side Installation Mode-M12 male hex , H1: Motor-side Installation Mode-11 Hex Spring Loaded

E : ZWGR4876-1250-17-220-BL-T3-H4-01

ZWG : ZHAOWEI Roller Motor, Q : High Quality , 48 : 48V DC , 76 : 76mm diameters , 1250 : RL Roll surface length , 17 : Ratio 17, 220 : Rated Power 220W , B : Stainless Steel Tube , L : Sprocket Steel Double, T3 : Drive-side Installation Mode-Double-flat output shaft , H4 : Motor-side Installation Mode-M12 Female Thread



Conveyor Line Roller Motor

Intelligent Conveying Solutions

ZHAOWEI Group has launched a new roller motor platform ZWG, using self-developed high-performance gearboxes, micro-motors and controllers to bring customers stable and efficient roller motor solutions. Moreover, Zhaowei E&M integrates R&D, design and sales, which effectively address your conveying needs.



Conveyor Line Roller Motor

Zhaowei Industry is a global manufacturer of advanced transmission product components, specializing in the research and development as well as production of miniature and small electric rollers and precision reducers. ZWG products contribute to the transformation and upgrading of the internal logistics and production automation of enterprises.



Drive Controller

ZWG offers a wide range of drive controllers to satisfy customers' diverse application scenarios.

High-load Conveying

ZWG Roller Motor Series products adopt self-developed steel tube expansion structure

- 50mm metal tensioning structure >150 N.m
- 60mm metal tensioning structure >180 N.m
- 76/80/89mm metal tensioning structure >300 N.m

Chinese Utility Model Patent Number: ZL2023202977237

Installation and Control

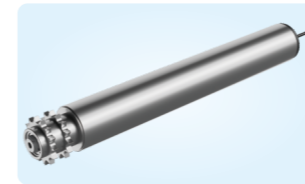
- Diversity and flexibility, widely compatible with common conveyor lines.
- All-in-one integration. Easy to assemble & disassemble.

Efficiency Conveying

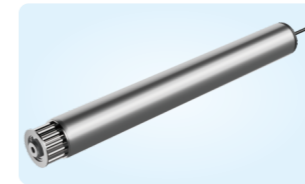
- Inner gear parts of the gear box are processed by high-precision technology, and the unipolar efficiency reaches more than 97%.
- Roller Motor efficiency is achieved at a leading global level.
- More power options: 10W - 250W
- Motor design life improved: from 20K+ hours to 30K+ hours.

Overview of the Conveyor Line Roller Motor Series

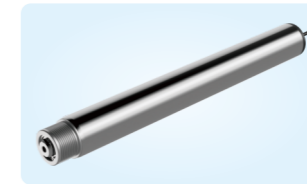
Roller Motor



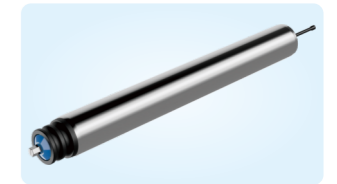
50mm dia, cylindrical, Sprocket
Temp range: 0~40 / -30~0
Page 07



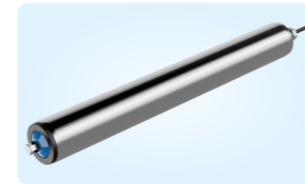
50mm dia, cylindrical, Timing belt
Temp range: 0~40 / -30~0
Page 07



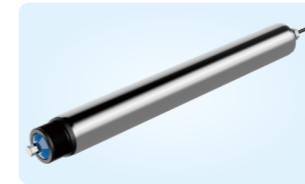
50mm dia, cylindrical, Poly-V steel
Temp range: 0~40 / -30~0
Page 07



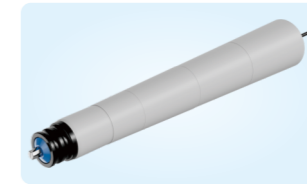
50mm dia, cylindrical, Round belt
Temp range: 0~40 / -30~0
Page 07



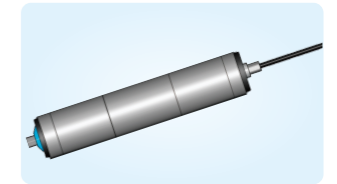
50mm dia, cylindrical, Direct-drive
Temp range: 0~40 / -30~0
Page 07



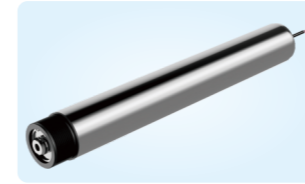
50mm dia, cylindrical, Poly-V plastic
Temp range: 0~40 / -30~0
Page 07



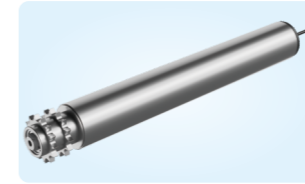
50mm dia, conic, Timing belt
Temp range: 0~40 / -30~0
Page 07



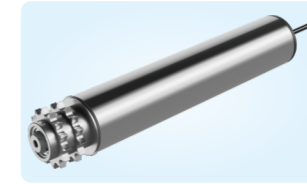
50mm dia, drum, Hex spring loaded
Temp range: 0~40 / -30~0
Page 11



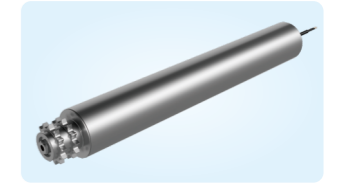
60mm dia, cylindrical, Poly-V plastic
Temp range: 0~40 / -30~0
Page 13



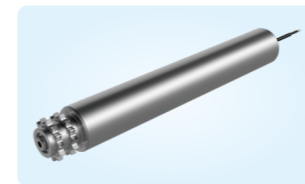
60mm dia, cylindrical, Sprocket
Temp range: 0~40 / -30~0
Page 13



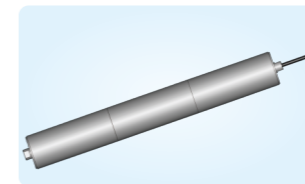
76mm dia, cylindrical, Sprocket
Temp range: 0~40 / -30~0
Page 15



80mm dia, cylindrical, Sprocket
Temp range: 0~40 / -30~0
Page 15

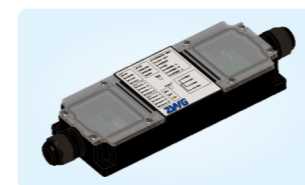


89mm dia, cylindrical, Sprocket
Temp range: 0~40 / -30~0
Page 15

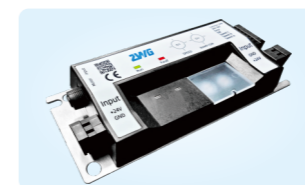


80mm dia, drum, Hex spring loaded
Temp range: 0~40 / -30~0
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Drive Controller



Drive Control
Page 17



Drive Control (IP20)
Page 17



Drive Control (IP66)
Page 17



Bus Interface
Page 17

Φ 50 mm Roller Motor Series



Applications

For box conveyor lines such as cartons, bins, platens or tires. Suitable for linear conveyors, small belt conveyors, especially zero pressure accumulation conveyors. Also for shuttle systems, mating conveyor sections or transplanters with other conveyors.

Performance Benefits

Energy-saving and Efficiency : Based on the outstanding overall design, the efficiency of the whole machine is higher than that of competing products.

Flexibility and Diversity : Supports regular Poly-V, round belt and timing belt or sprockets. the motor and gearbox are optimized and upgraded with 11 speed ratios to be available to satisfy more application scenarios.

Quiet : Achieve a noise level (50dB) lower than that of competing products (55dB), ensuring the quietness and stability at the usage site.

Basic Parameter

Rated Voltage	24V			48V		
Rated Current	2.2	3.1	4.5	1.1	1.5	2.3
Start-up Current	5.5	7.8	11.3	2.8	3.8	5.8
Rated Power	35	50	80	35	50	80
Maximum Noise	50dB					
Cable Length	500mm(Supports extension cables up to 2M)					
IP Level	IP54 / IP66					
Tube Materials	Galvanized Steel, Stainless Steel					
Tube Size	50x1.5mm					
Shaft Mode	M12 male thread hex , Hex 11					
Temp Range	-30 to +55					

Φ 50mm Roller Motor Performance Options Table

80 W

Speed Code	Ratio	Rated Output RPM (rpm)	Rated Output Speed (m/s)	Rated Output Turque (N.m)	Start-up Turque (N.m)	Payload (μ=0.05)KG
S1	5	1380	3.61	0.60	1.49	30
S2	7	986	2.58	0.84	2.09	40
S3	13	531	1.39	1.55	3.88	75
S4	18	383	1.00	2.10	5.24	100
S5	25	276	0.72	2.91	7.28	140
S6	30	230	0.60	3.49	8.73	170
S7	42	164	0.43	4.89	12.22	240
S8	65	106	0.28	7.35	14.71	360
S9	78	88	0.23	8.85	17.70	430
S10	90	77	0.20	10.21	18.00	500
S11	108	64	0.17	12.26	18.00	600

50 W

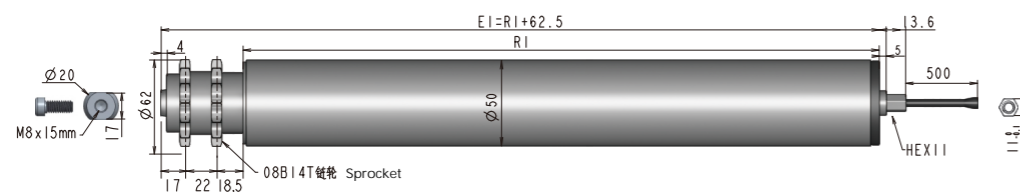
Speed Code	Ratio	Rated Output RPM (rpm)	Rated Output Speed (m/s)	Rated Output Turque (N.m)	Start-up Turque (N.m)	Payload (μ=0.05)KG
S1	5	1380	3.61	0.36	0.90	20
S2	7	986	2.58	0.49	1.23	30
S3	13	531	1.39	0.91	2.28	50
S4	18	383	1.00	1.27	3.18	70
S5	25	276	0.72	1.76	4.40	100
S6	30	230	0.60	2.13	5.33	115
S7	42	164	0.43	2.96	7.40	160
S8	65	106	0.28	4.58	11.45	250
S9	78	88	0.23	5.07	12.68	275
S10	90	77	0.20	5.89	14.73	320
S11	108	64	0.17	7.07	17.68	385

35 W

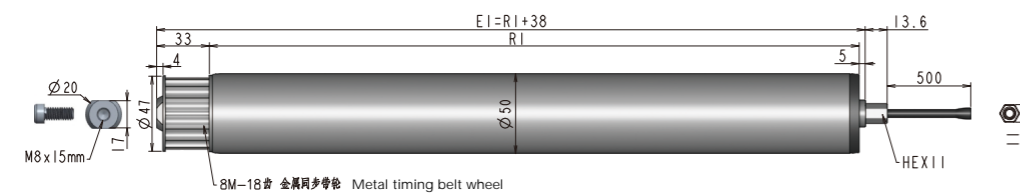
Speed Code	Ratio	Rated Output RPM (rpm)	Rated Output Speed (m/s)	Rated Output Torque (N.m)	Start-up Torque (N.m)	Payload ($\mu=0.05$)KG
S1	5	1380	3.61	0.26	0.65	10
S2	7	986	2.58	0.34	0.85	15
S3	13	531	1.39	0.64	1.60	35
S4	18	383	1.00	0.89	2.23	50
S5	25	276	0.72	1.24	3.10	70
S6	30	230	0.60	1.49	3.73	80
S7	42	164	0.43	2.07	5.18	110
S8	65	106	0.28	2.95	7.38	160
S9	78	88	0.23	3.55	8.88	200
S10	90	77	0.20	4.10	10.25	220
S11	108	64	0.17	4.95	12.38	270

Φ50mm Series External Dimensions

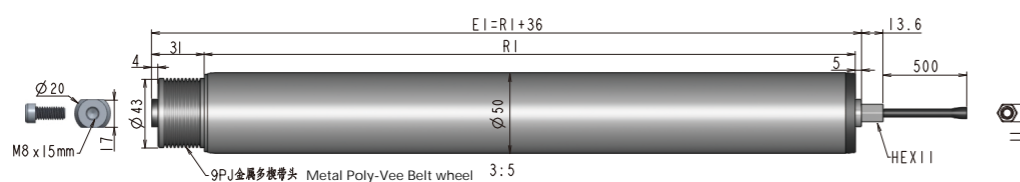
L: Sprocket Double



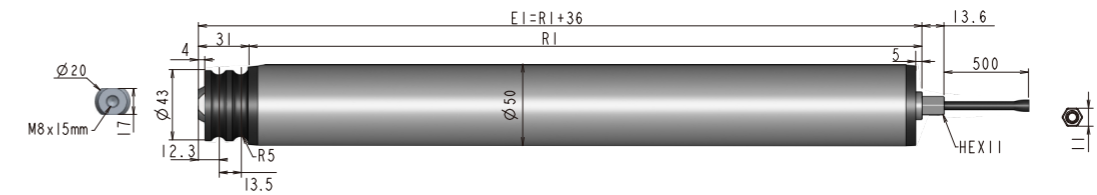
N: Timing Belt



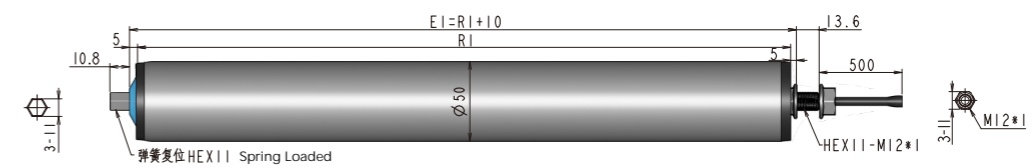
M: Poly-Vee Steel



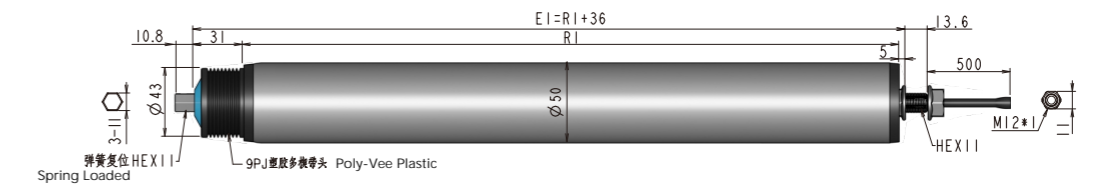
O: Round Belt



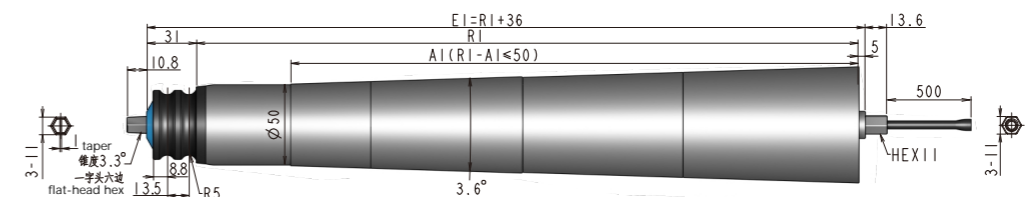
Z: Direct-Drive Hex Spring Loaded



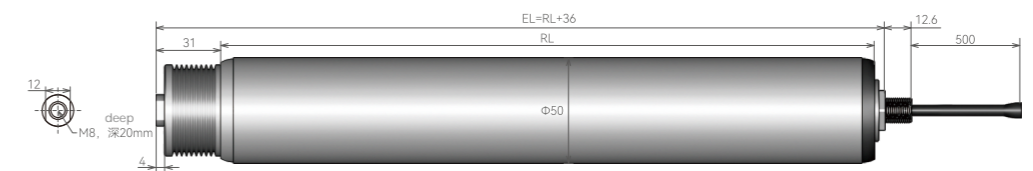
P: Poly-Vee Plastic



Tapered:



IP66:



Tapered Reference Dimensions

Tapered length	300	350	400	450	500	550	600	650	700	750	800	850	900	950	1000
Minimum Dia	52.5	55.6	52.5	55.6	52.5	55.6	52.5	55.6	52.5	55.6	52.5	55.6	52.5	55.6	52.5
Maximum Dia	71.2	77.6	77.6	84.0	84.0	90.4	90.4	96.8	96.8	103.2	103.2	109.9	109.9	116.0	116.0

Φ50mm Drum Motor Series



Applications

Application for small and medium-sized belt conveyors with 50-diameter drum Roller Motor. Flexible and efficient in bulk lines with irregular sizes of goods.

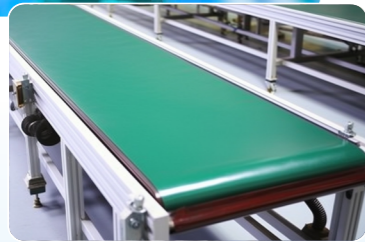
Performance Benefits

Energy-saving and Efficiency : Based on the outstanding overall design, the efficiency of the whole machine is higher than that of competing products.

Drum : Drum-shaped steel tube design ensures belt tension and friction for precise and stable conveying.

Flexibility : Motor and gearbox are optimized and upgraded with 11 speed ratios to be available to satisfy more application scenarios.

Quiet : Achieve a noise level (50dB) lower than that of competing products (55dB), ensuring the quietness and stability at the usage site.



Basic Parameter

Rated Voltage	24V			48V		
Rated Current	2.2	3.1	4.5	1.1	1.5	2.3
Start-up Current	5.5	7.8	11.3	2.8	3.8	5.8
Rated Power	35	50	80	35	50	80
Maximum Noise	50dB					
Cable Length	500mm(Supports extension cables up to 2M)					
IP Level	IP54/IP66					
Tube Materials	Galvanized Steel, Stainless Steel					
Tube Size	φ52x2.5mm					
Shaft Mode	M12 male thread hex , Hex 11					
Temp Range	-30 to +55					

Φ50mm Drum Motor Performance Options Table

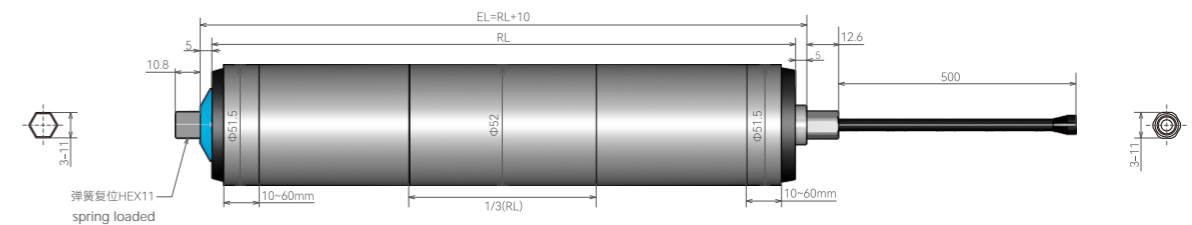
80 W

Speed Code	Ratio	Rated Output RPM (rpm)	Rated Output Speed (m/s)	Rated Output Torque (N.m)	Start-up Torque (N.m)
S1	5	1380	3.75	0.56	1.39
S2	7	986	2.68	0.84	2.09
S3	13	531	1.45	1.55	3.88
S4	18	383	1.04	2.01	5.01
S5	25	276	0.75	2.91	7.28
S6	30	230	0.62	3.49	8.36
S7	42	164	0.45	4.89	12.22
S8	65	106	0.29	7.35	18.05
S9	78	88	0.24	8.85	17.7
S10	90	76	0.21	10.03	25.07
S11	108	63	0.18	12.03	30.09

50 W

Speed Code	Ratio	Rated Output RPM (rpm)	Rated Output Speed (m/s)	Rated Output Torque (N.m)	Start-up Torque (N.m)
S1	5	1380	3.75	0.36	0.9
S2	7	986	2.68	0.49	1.23
S3	13	531	1.45	0.91	2.28
S4	18	383	1.04	1.27	3.18
S5	25	276	0.75	1.76	4.4
S6	30	230	0.62	2.13	5.33
S7	42	164	0.45	2.96	7.4
S8	65	106	0.29	4.58	11.45
S9	78	88	0.24	5.07	12.68
S10	90	76	0.21	5.89	14.73
S11	108	63	0.18	7.07	17.68

Φ50mm Drum Motor Dimension



Φ60mm Roller Motor Series



Applications

Medium sized pallet conveyor with up to 600KG load. Industry excellence in white goods, truck tires, EV, and other areas of the industry.

Performance Benefits

Energy-saving and Efficiency : Based on the outstanding overall design, the efficiency of the whole machine is higher than that of competing products.

Similar Designs : From the same platform as the ZWG 50mm Roller Motor, both 50mm and 60mm series can be controlled by the same type of controller.

Flexibility and Diversity : Supports regular Poly-V, round belt and timing belt or sprockets. the motor and gearbox are optimized and upgraded with 11 speed ratios to be available to satisfy more application scenarios.

Quiet : Achieve a noise level (50dB) lower than that of competing products (55dB), ensuring the quietness and stability at the usage site.

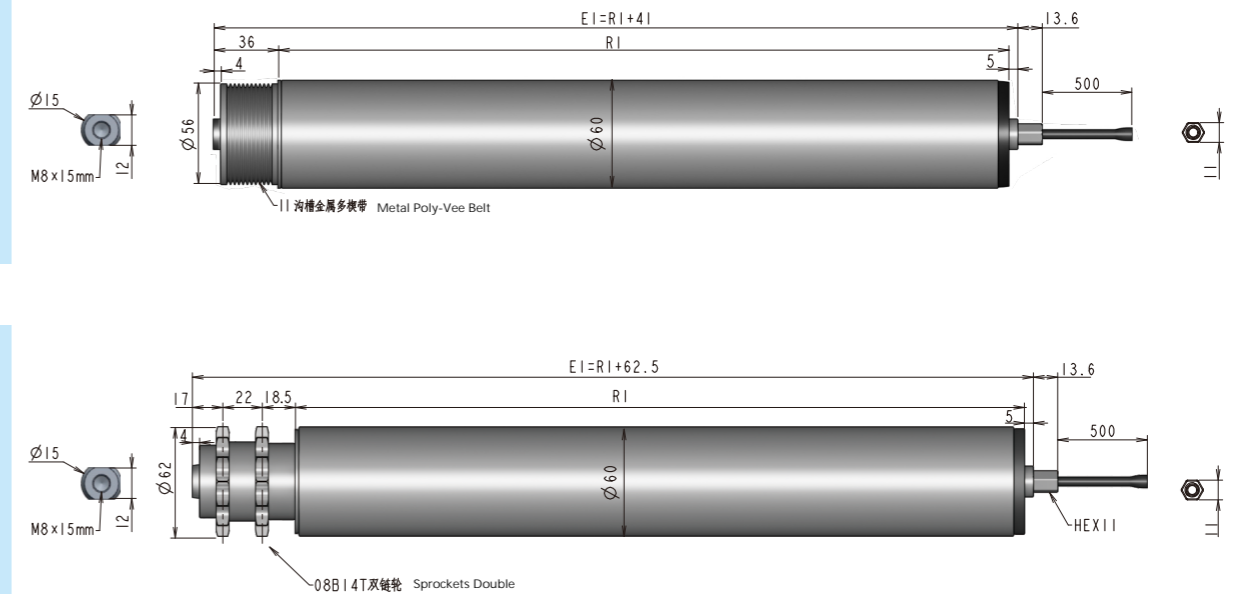
Basic Parameter

Rated Voltage	24V			48V		
Rated Current	2.2	3.1	4.5	1.1	1.5	2.3
Start-up Current	5.5	7.8	11.3	2.8	3.8	5.8
Rated Power	35	50	80	35	50	80
Maximum Noise	50dB					
Cable Length	500mm(Supports extension cables up to 2M)					
IP Level	IP54/IP66					
Tube Materials	Galvanized Steel, Stainless Steel					
Tube Size	φ50x1.5mm					
Shaft Mode	M12 male thread hex , Hex 11					
Temp Range	-30 to +55					

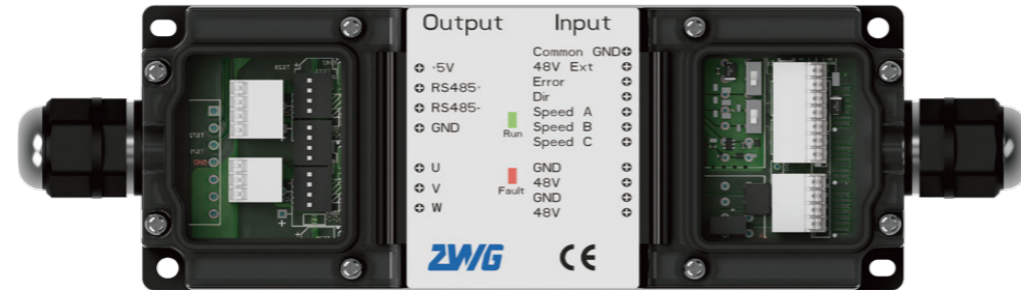
Φ60mm Roller Motor Performance Options Table

Speed Code	Ratio	Rated Output RPM (rpm)	Rated Output Speed (m/s)	Rated Output Torque (N.m)	Start-up Torque (N.m)	Payload (μ=0.05)KG
S1	5	1380	4.34	0.60	1.49	30
S2	7	986	3.10	0.84	2.09	40
S3	13	531	1.67	1.55	3.88	70
S4	18	383	1.20	2.10	5.24	100
S5	25	276	0.87	2.91	7.28	140
S6	30	230	0.72	3.49	8.73	165
S7	42	164	0.52	4.89	12.22	230
S8	65	106	0.33	7.35	14.71	350
S9	78	88	0.28	8.85	17.70	420
S10	90	77	0.24	10.21	18.00	500
S11	108	64	0.20	12.26	18.00	600

Φ60mm Roller Motor Dimension



Φ76/80/89mm Drive Control

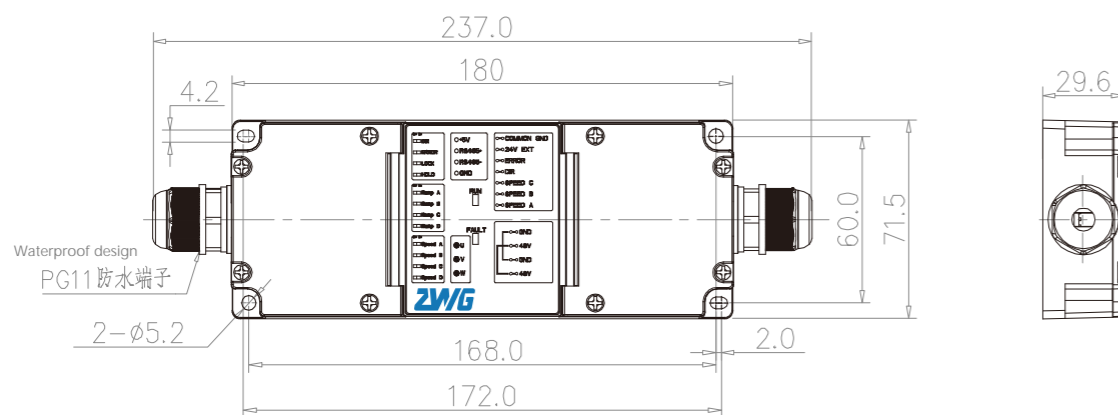


I/O controller, DIP code switches for setting the direction of rotation, 16 clock different start/stop ramps and 15 levels of speed gears. Digital inputs and outputs are provided to act as an interface to higher level controls and can accept external PLC control signals.

Function

1. Speed Setting (DIP switch - 15 gears, IO input - 7 gears)
2. Rotation Direction Control (DIP switch/ IO Input)
3. Acceleration and Braking Ramp Adjustment
4. LED Light Status Indicator
5. Braking Resistor
6. E-brake activation
7. PNP and NPN switching
8. Digital and analog switching

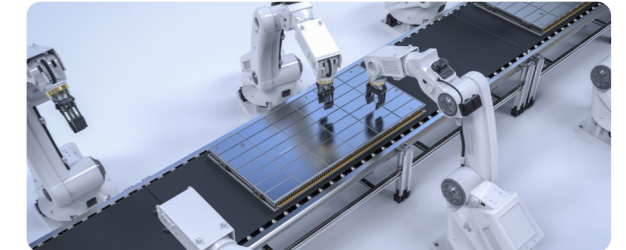
Φ 76 / 80 / 89 Drive Control Dimension



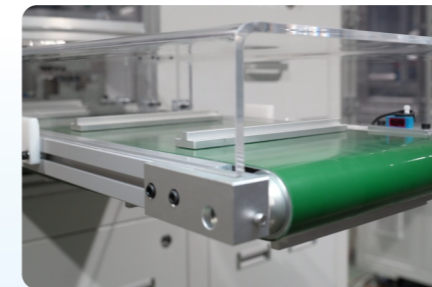
Φ80mm Drum Motor Series

Applications

Application for large and medium-sized belt conveyors with 80-diameter drum Roller Motor. Flexible and efficient in bulk lines with irregular sizes of goods.



Performance Benefits



Energy-saving and Efficiency : Based on the outstanding overall design, the efficiency of the whole machine is higher than that of competing products.

Drum : Drum-shaped steel tube design ensures belt tension and friction for precise and stable conveying.

Flexibility : Motor and gearbox are optimized and upgraded with 11 speed ratios to be available to satisfy more application scenarios.

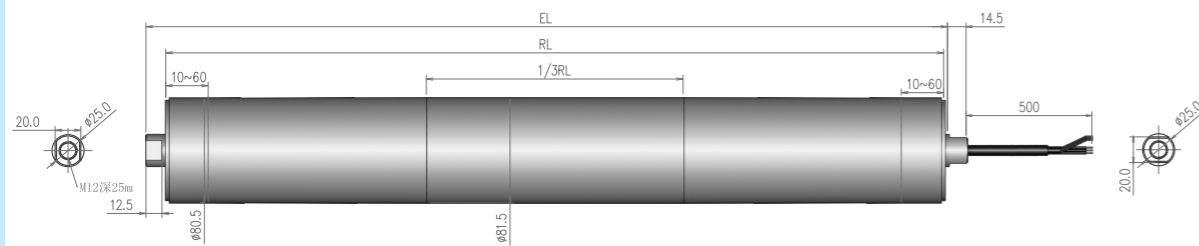
Quiet : Achieve a noise level (50dB) lower than that of competing products (55dB), ensuring the quietness and stability at the usage site.

Rated Voltage	48V
Rated Current	6
Start-up Current	15.0
Rated Power	220
Maximum Noise	50dB
Cable Length	500mm(Supports extension cables up to 2M)
IP Level	IP54/IP66
Tube Materials	Galvanized Steel, Stainless Steel, Carbon Steel Chrome Plated
Tube Size	φ81.5x3.75mm
Shaft Mode	Double-flat output shaft (25 x 20)
Temp Range	-30 to +55

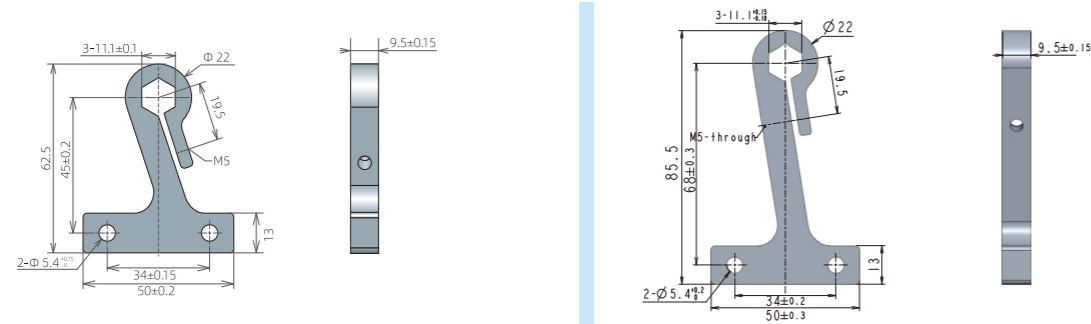
Φ80 Drum Motor Performance Options Table

Speed Code	Ratio	Rated Output RPM (rpm)	Rated Output Speed (m/s)	Rated Output Torque (N.m)	Start-up Torque (N.m)
S1	17	265	1.11	7.86	19.66
S2	70	64	0.27	31.58	47.36

Φ80 Drum Motor Dimension



Fixed accessories Dimension



Drive Control 50/60 IO Version

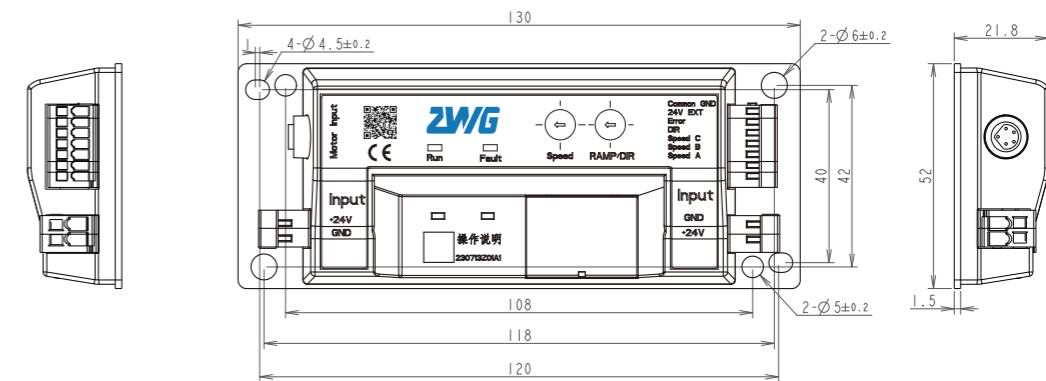
I/O controller, 2 rotary code switches for setting the direction of rotation and 8 different start/stop ramps and 15 levels of speed gears. Digital inputs and outputs are also provided to interface with higher level controls and to accept signals from external PLC controls.



Function

1. Speed Setting (RCS switch - 15 gears, IO input - 7 gears)
2. Rotation Direction Control (Rotary code switch/ IO Input)
3. Acceleration and Braking Ramp Adjustment
4. LED Light Status Indicator
5. Braking Resistor
6. RS485 Communication Support
7. PNP and NPN switching
8. Digital and analog switching

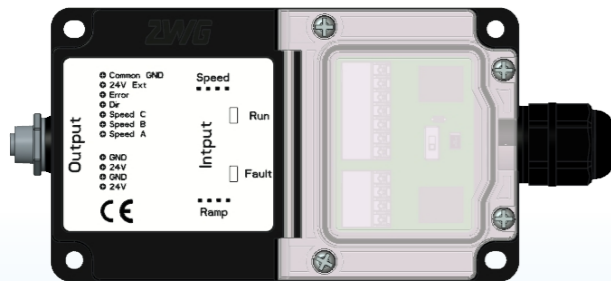
Drive Control Dimension



Basic Parameters

Item	Specification
Drive Type	Internal (50/60 Roller Motor), External (76/80/89 Roller Motor)
Rated Input Voltage	Rated Voltage 24V: 18 ~ 29.6V DC
	Rated Voltage 48V: 45 ~ 54.6V DC
Drive Communication Mode	I/O
Temp Range	0 ~ +55
Humidity Range	< 85%

IP54 Drive Control



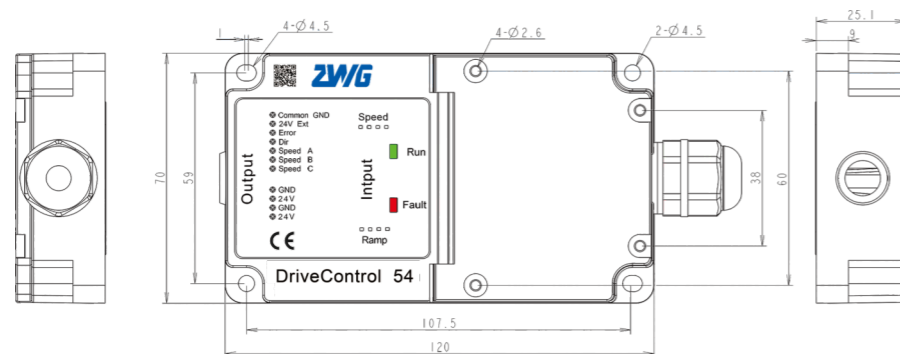
I/O Controller. 2 DIP switches can be used to set the direction of rotation and 8 different start/stop ramps and 15 levels of speed. Digital inputs and outputs are also provided to serve as an interface to higher level controls and can accept signals from external PLC controls.

IP54 Protection Class, meeting the requirements of stable operation in humid and ultra-low-temperature freezing environments.

Function

1. Speed Setting (DIP switch - 15 gears, IO input - 7 gears)
2. Rotation Direction Control (DIP switch/ IO Input)
3. Acceleration and Braking Ramp Adjustment
4. LED Light Status Indicator
5. Braking Resistor

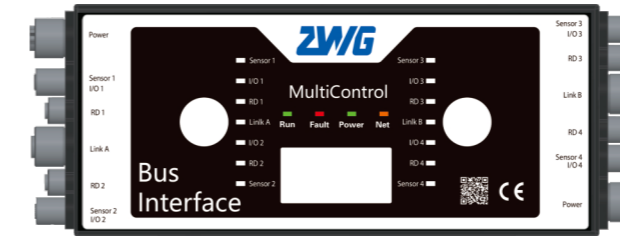
Drive Control Dimension



Basic Parameters

Item	Specification
Rated Input Voltage	Rated Voltage 24V: 18.~ 29.6V DC
	Rated Voltage 48V: 45 ~ 54.6V DC
Drive Communication Mode	I/O
IP Protection Class	IP54
Maximum Altitude	1000M
Temp Range	-40 ~ +55
Humidity Range	< 85%
Power Cable	1.5 Square millimetre
I/O Control Cable	0.08 ~ 0.5 Square millimetre

Bus Interface



Bus Interface are available in several versions supporting PROFINET, EtherCAT and CANOPEN.

Power is supplied to the Bus Interface and Roller Motor independently of each other. Each of the 4 Roller Motors can be independently controlled off or in different operating states while maintaining bus communication with sensors activation.

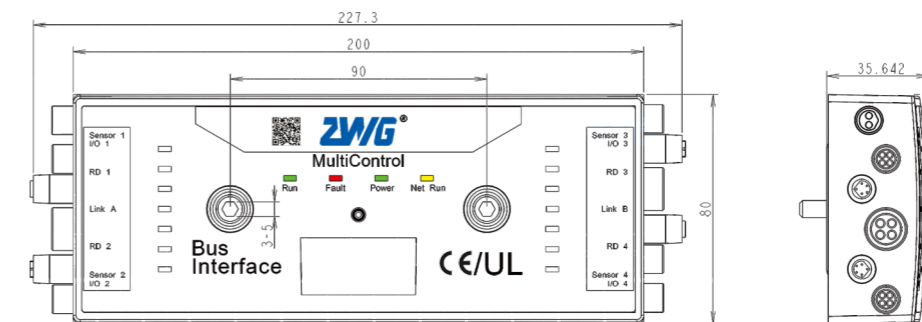
Addressing and naming of sensors and Roller Motor can be done through PLC software. Serial addressing and naming of new Bus Interfaces using the Teach-In Tool.

Function

Easy Operation - one control card can be used for various types of networks such as PROFINET and EtherCat (simply by switching bus protocols).

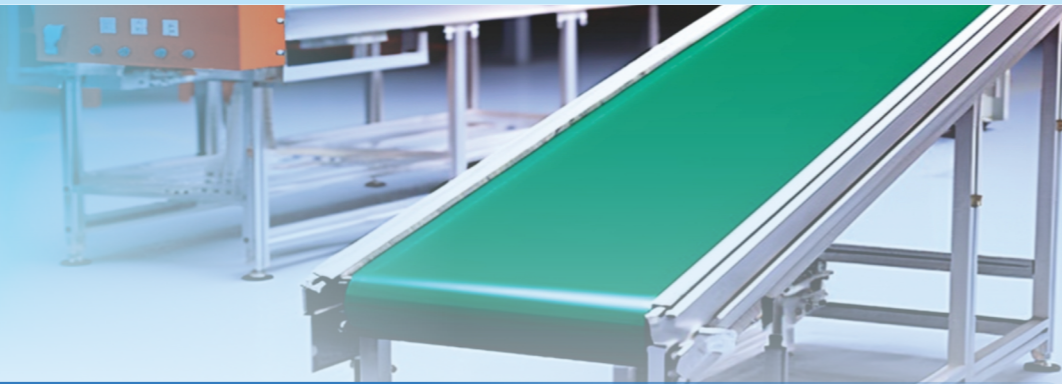
1. Separate power supply for Roller Motor
2. Easy usage and exchange, no addressing configuration.
3. LED Light Status Indicator for all function.
4. Integrated logic for zero-pressure accumulation conveyance.
5. Configuration via PLC, Web and the following tools:
 - Control of the Roller Motor's speed, direction of rotation, and start/stop ramp.
 - Configuration of Sensor and Timer Properties.
 - Error signal handling
 - Logic (single/sequential release)
6. Limit voltage through braking chopper.
7. Variable processing image is used to optimize the amount of data transferred between Bus Interface and PLC.
8. Functional grounding connection of the shielding layer of the communication line.
9. Reverse polarity protection for voltage supply.
10. Short-circuit protection design for output and output voltage supply.

Bus Interface Dimension



Basic Parameters

Item	Specification
Rated Input Voltage	24V: 18~26.5V DC
Drive Communication Mode	IO
IP Protection Class	IP54
Maximum Altitude	1000 m
Temp Range	-40 ~ 55°C
Humidity Range	< 85%
Power Cable	1.5mm ²
I/O Control Cable	0.08 - 0.5 mm ²



ZWG Belt Conveyor Roller Motor Series

Product Overview

ZWG Belt Conveyor Belt Roller Motor is a new generation of Roller Motor with built-in integration of brushless DC motor, gearbox and electronic control system.

Compared with the traditional geared motors used in belt lines, ZWG products have the advantages of simple structure, easy disassembly and assembly, free speed regulation, energy saving and high efficiency. Based on 50mm Roller Motor platform, ZWG supports different roller surface materials (rubberized, rubber-coated, knurled, tapered) to meet different project application scenarios. 300/400/500 standard lengths can meet the needs of most lines, widely used in packaging industry, assembly line, automation industry and other scenarios.

Product Functions

Speed Adjustment

- The rotating speed can be adjusted via the I/O interface.
- The external speed adjustment button enables 20 levels of speed adjustment.

Constant Speed Drive

The constant speed drive function can be achieved under the rated load.

Direction Adjustment

Direction adjustment can be controlled through a PLC or wired control for forward and reverse rotation.

Closed-loop Control

Closed-loop control of the rotating speed can achieve more stable output speed.

Product Protection

Overload protection can be achieved through built-in controls.

Product Overview

1. Parameters

Power Supply Voltage: 24 V
 PWM Frequency: 20 K
 Maximum Continuous Output Current: 3 A
 Peak Current: 5 A
 Operating Temperature: -40 ~ 85°C

2. Communication

Analog Interface: 5-24 V
 Communication Protocol: custom Logic

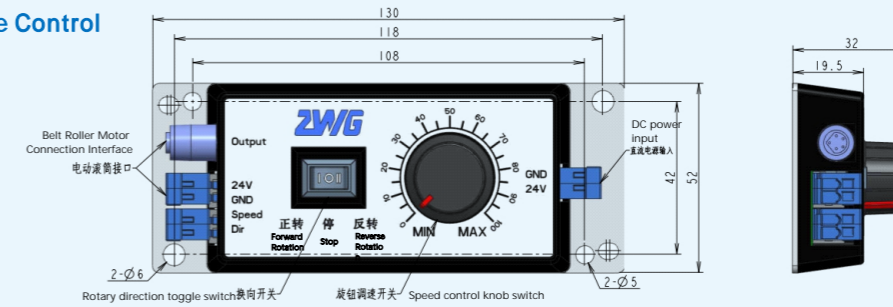
3. Basic Functions

Support 3 hall sensor
 Support for using Magnetic Encoder: N/A

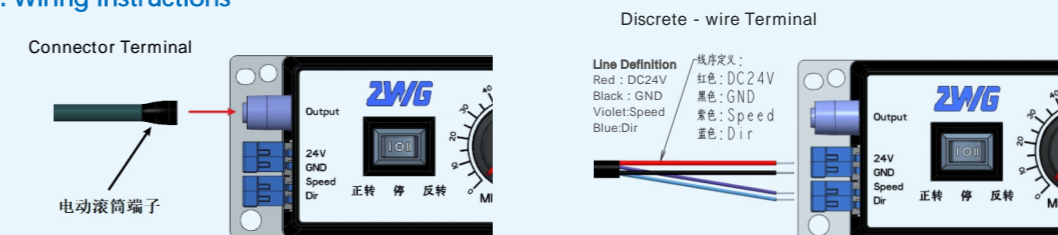
4. Functional Scope

Operating Mode: speed and current can be controlled through settings
 Fault Protection: undervoltage, overvoltage, overcurrent, and stalled rotation
 Supported Motor Type: BLDC motor

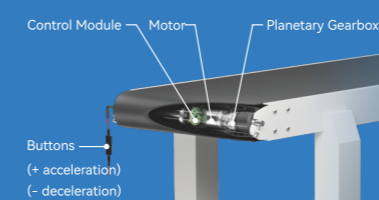
5. Drive Control



6. Wiring Instructions



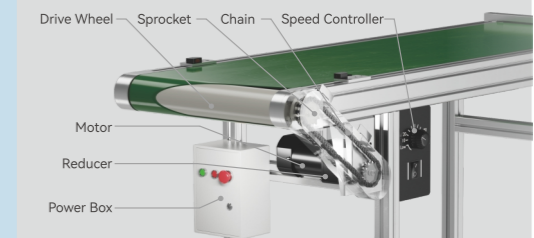
ZWG Belt Conveyor Roller Motor



- Compact Mechanism**
ZHAOWEI Drum Motor adopts an integrated mechanism, integrating the control module into the drum.
- Easy Installation**
Can be used with fixed brackets at both ends; Good sealing performance.
- Stepless Speed Regulation**
Speed control can be connected for coordinated operation with automated equipment.
- High Efficiency**
62%~70%. 24% higher efficiency than traditional speed control motors (under the same load conditions)



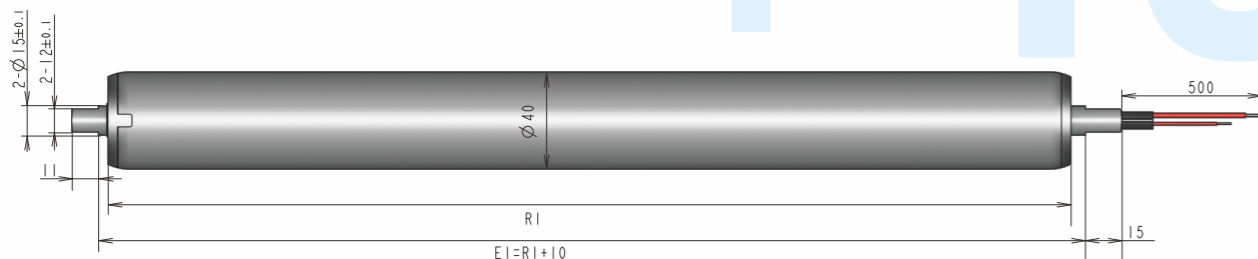
Traditional Speed Control Motor



- Complex Mechanism**
Assembled from a large motor, gearbox, chain wheel, passive drum, protective cover, speed controller, and power supply.
- Complex Installation**
The product occupies a significant space with a bulky size, making assembly and debugging of multiple components challenging and not conducive to operation.
- Stepwise Speed Control**
The drive settings are complex with four-speed steps: 20 Hz low speed, 30 Hz medium speed, 40 Hz high speed, and 50 Hz customizable
- Low Efficiency**
45%~50%. Low precision within the multiple transmission components, leading to low efficiency.

Φ40mm Series

Φ40



Parameters:

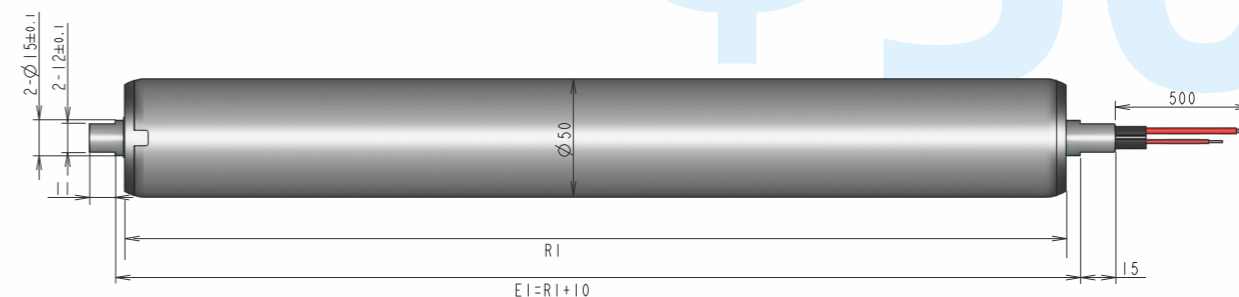
Rated Voltage : 24V
 Rated Current : 1.3A
 Starting Current: 3A
 Rated Output: 25W
 Maximum Decibel Level: 50dB
 Cable Length: 500mm

Protection Level: IP54
 Galvanized Steel Pipe
 Size of the Pipe: 40x1mm
 Double D Steering Shaft
 Operating Temperature: 0°C~40°C/-30°C~0°C

Models	Length (mm)	Gear Ratio	Output (W)	Rated Torque (N.m)	Rated Speed (rpm)	Starting Torque (N.m)	Starting Load (Kg)	Starting Current (A)	Rated Linear Velocity of the Pulley(m/min)
ZWGA2440-0300-006-25-AZ-T3-H4-01	300	6	25	0.2	783	0.6	3	≤3	98
ZWGA2440-0300-016-25-AZ-T3-H4-01		16	25	0.6	294	1.6	8	≤3	37
ZWGA2440-0300-036-25-AZ-T3-H4-01		36	25	1.4	131	3.5	17	≤3	16
ZWGA2440-0300-064-25-AZ-T3-H4-01		64	25	2	73	5.2	25	≤3	9
ZWGA2440-0300-096-25-AZ-T3-H4-01		96	25	3.1	49	7.8	38	≤3	6
ZWGA2440-0300-156-25-AZ-T3-H4-01		156	25	5	30	13	62	≤3	3.8
ZWGA2440-0400-006-25-AZ-T3-H4-01		400	6	25	0.2	783	0.6	3	≤3
ZWGA2440-0400-016-25-AZ-T3-H4-01	16		25	0.6	294	1.6	8	≤3	37
ZWGA2440-0400-036-25-AZ-T3-H4-01	36		25	1.4	131	3.5	17	≤3	16
ZWGA2440-0400-064-25-AZ-T3-H4-01	64		25	2	73	5.2	25	≤3	9
ZWGA2440-0400-096-25-AZ-T3-H4-01	96		25	3.1	49	7.8	38	≤3	6
ZWGA2440-0400-156-25-AZ-T3-H4-01	156		25	5	30	13	62	≤3	3.8
ZWGA2440-0500-006-25-AZ-T3-H4-01	500		6	25	0.2	783	0.6	3	≤3
ZWGA2440-0500-016-25-AZ-T3-H4-01		16	25	0.6	294	1.6	8	≤3	37
ZWGA2440-0500-036-25-AZ-T3-H4-01		36	25	1.4	131	3.5	17	≤3	16
ZWGA2440-0500-064-25-AZ-T3-H4-01		64	25	2	73	5.2	25	≤3	9
ZWGA2440-0500-096-25-AZ-T3-H4-01		96	25	3.1	49	7.8	38	≤3	6
ZWGA2440-0500-156-25-AZ-T3-H4-01		156	25	5	30	13	62	≤3	3.8

Φ50mm Series

Φ50



Parameters:

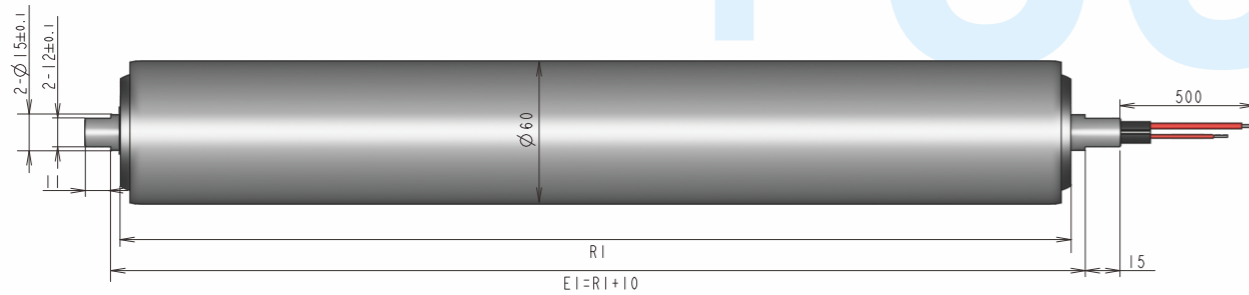
Rated Voltage : 24V
 Rated Current : 2.1A
 Starting Current: 5A
 Rated Output: 35W
 Maximum Decibel Level: 50dB
 Cable Length: 500mm
 Protection Level: IP54

Galvanized Steel Pipe
 Size of the Pipe: 50x1.5mm
 Rubber Lagging Type: 2 mm/ 5 mm PVC Rubber Sleeve;
 2 mm PU Rubber Sleeve (TAB)
 Conical Drum: standard drum (plastic sleeve cone)
 Double D Steering Shaft
 Operating Temperature: 0°C~40°C/-30°C~0°C

Models	Length (mm)	Gear Ratio	Output (W)	Rated Torque (N.m)	Rated Speed (rpm)	Starting Torque (N.m)	Starting Load (Kg)	Starting Current (A)	Rated Linear Velocity of the Pulley(m/min)
ZWGA2450-0300-006-35-AZ-T3-H4-01	300	6	35	0.3	873	1	4	≤5	137
ZWGA2450-0300-017-35-AZ-T3-H4-01		17	35	0.8	291	2	10	≤5	45
ZWGA2450-0300-034-35-AZ-T3-H4-01		34	35	1.7	146	4	20	≤5	22
ZWGA2450-0300-072-35-AZ-T3-H4-01		72	35	3.3	69	8	38	≤5	10
ZWGA2450-0300-102-35-AZ-T3-H4-01		102	35	4.6	49	12	53	≤5	7
ZWGA2450-0300-145-35-AZ-T3-H4-01		145	35	6.6	34	17	75	≤5	5
ZWGA2450-0400-006-35-AZ-T3-H4-01		400	6	35	0.3	873	1	4	≤5
ZWGA2450-0400-017-35-AZ-T3-H4-01	17		35	0.8	291	2	10	≤5	45
ZWGA2450-0400-034-35-AZ-T3-H4-01	34		35	1.7	146	4	20	≤5	22
ZWGA2450-0400-072-35-AZ-T3-H4-01	72		35	3.3	69	8	38	≤5	10
ZWGA2450-0400-102-35-AZ-T3-H4-01	102		35	4.6	49	12	53	≤5	7
ZWGA2450-0400-145-35-AZ-T3-H4-01	145		35	6.6	34	17	75	≤5	5
ZWGA2450-0500-006-35-AZ-T3-H4-01	500		6	35	0.3	873	1	4	≤5
ZWGA2450-0500-017-35-AZ-T3-H4-01		17	35	0.8	291	2	10	≤5	45
ZWGA2450-0500-034-35-AZ-T3-H4-01		34	35	1.7	146	4	20	≤5	22
ZWGA2450-0500-072-35-AZ-T3-H4-01		72	35	3.3	69	8	38	≤5	10
ZWGA2450-0500-102-35-AZ-T3-H4-01		102	35	4.6	49	12	53	≤5	7
ZWGA2450-0500-145-35-AZ-T3-H4-01		145	35	6.6	34	17	75	≤5	5

Φ60mm Series

Φ60



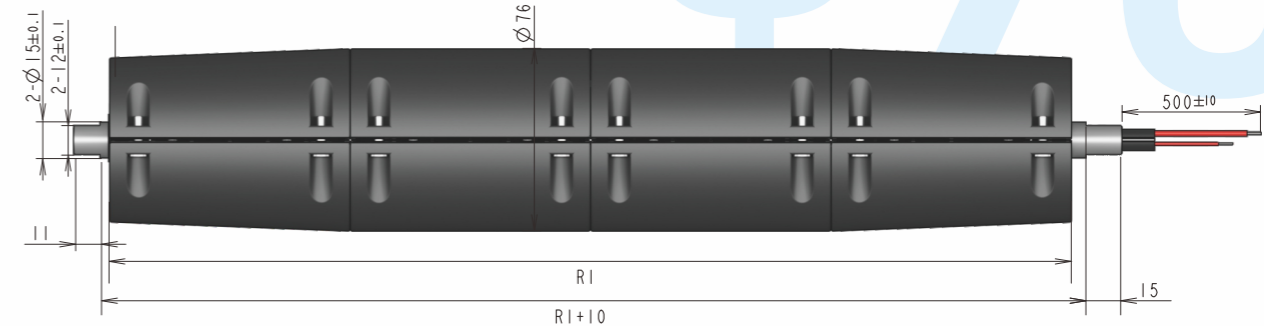
Parameters:

- Rated Voltage : 24V
- Rated Current : 2.1A
- Starting Current: 5A
- Rated Output: 35W
- Maximum Decibel Level: 50dB
- Cable Length: 500mm
- Protection Level: IP54
- Galvanized Steel Pipe
- Size of the Pipe: 50x1.5mm
- Rubber Lagging Type: 2 mm/ 5 mm PVC Rubber Sleeve;
2 mm PU Rubber Sleeve (TAB)
- Conical Drum: standard drum (plastic sleeve cone)
- Double D Steering Shaft
- Operating Temperature: 0°C~40°C/-30°C~0°C

Models	Length (mm)	Gear Ratio	Output (W)	Rated Torque (N.m)	Rated Speed (rpm)	Starting Torque (N.m)	Starting Load (Kg)	Starting Current (A)	Rated Linear Velocity of the Pulley(m/min)
ZWGA2450-0300-006-35-DZ-T3-H4-01	300	6	35	0.3	873	1	3	≤5	165
ZWGA2450-0300-017-35-DZ-T3-H4-01		17	35	0.8	291	2	8	≤5	55
ZWGA2450-0300-034-35-DZ-T3-H4-01		34	35	1.7	146	4	16	≤5	27.5
ZWGA2450-0300-072-35-DZ-T3-H4-01		72	35	3.3	69	8	31	≤5	13
ZWGA2450-0300-102-35-DZ-T3-H4-01		102	35	4.6	49	12	44	≤5	9
ZWGA2450-0300-145-35-DZ-T3-H4-01		145	35	6.6	34	17	63	≤5	6.5
ZWGA2450-0400-006-35-DZ-T3-H4-01		400	6	35	0.3	873	1	3	≤5
ZWGA2450-0400-017-35-DZ-T3-H4-01	17		35	0.8	291	2	8	≤5	55
ZWGA2450-0400-034-35-DZ-T3-H4-01	34		35	1.7	146	4	16	≤5	27.5
ZWGA2450-0400-072-35-DZ-T3-H4-01	72		35	3.3	69	8	31	≤5	13
ZWGA2450-0400-102-35-DZ-T3-H4-01	102		35	4.6	49	12	44	≤5	9
ZWGA2450-0400-145-35-DZ-T3-H4-01	145		35	6.6	34	17	63	≤5	6.5
ZWGA2450-0500-006-35-DZ-T3-H4-01	500		6	35	0.3	873	1	3	≤5
ZWGA2450-0500-017-35-DZ-T3-H4-01		17	35	0.8	291	2	8	≤5	55
ZWGA2450-0500-034-35-DZ-T3-H4-01		34	35	1.7	146	4	16	≤5	27.5
ZWGA2450-0500-072-35-DZ-T3-H4-01		72	35	3.3	69	8	31	≤5	13
ZWGA2450-0500-102-35-DZ-T3-H4-01		102	35	4.6	49	12	44	≤5	9
ZWGA2450-0500-145-35-DZ-T3-H4-01		145	35	6.6	34	17	63	≤5	6.5

Φ76mm Series

Φ76



Parameters:

- Rated Voltage : 24V
- Rated Current : 2.1A
- Starting Current: 5A
- Rated Output: 35W
- Maximum Decibel Level: 50dB
- Cable Length: 500mm
- Protection Level: IP54
- Galvanized Steel Pipe
- Size of the Pipe: 50x1.5mm
- Rubber Lagging Type: 2 mm/ 5 mm PVC Rubber Sleeve;
2 mm PU Rubber Sleeve (TAB)
- Conical Drum: standard drum (plastic sleeve cone)
- Double D Steering Shaft
- Operating Temperature: 0°C~40°C/-30°C~0°C

Models	Length (mm)	Gear Ratio	Output (W)	Rated Torque (N.m)	Rated Speed (rpm)	Starting Torque (N.m)	Starting Load (Kg)	Starting Current (A)	Rated Linear Velocity of the Pulley(m/min)
ZWGA2450-0300-006-35-EZ-T3-H4-01	300	6	35	0.3	873	1	3	≤5	208
ZWGA2450-0300-017-35-EZ-T3-H4-01		17	35	0.8	291	2	6	≤5	70
ZWGA2450-0300-034-35-EZ-T3-H4-01		34	35	1.7	146	4	13	≤5	35
ZWGA2450-0300-072-35-EZ-T3-H4-01		72	35	3.3	69	8	25	≤5	16.5
ZWGA2450-0300-102-35-EZ-T3-H4-01		102	35	4.6	49	12	35	≤5	12
ZWGA2450-0300-145-35-EZ-T3-H4-01		145	35	6.6	34	17	49	≤5	8
ZWGA2450-0400-006-35-EZ-T3-H4-01		400	6	35	0.3	873	1	3	≤5
ZWGA2450-0400-017-35-EZ-T3-H4-01	17		35	0.8	291	2	6	≤5	70
ZWGA2450-0400-034-35-EZ-T3-H4-01	34		35	1.7	146	4	13	≤5	35
ZWGA2450-0400-072-35-EZ-T3-H4-01	72		35	3.3	69	8	25	≤5	16.5
ZWGA2450-0400-102-35-EZ-T3-H4-01	102		35	4.6	49	12	35	≤5	12
ZWGA2450-0400-145-35-EZ-T3-H4-01	145		35	6.6	34	17	49	≤5	8
ZWGA2450-0500-006-35-EZ-T3-H4-01	500		6	35	0.3	873	1	3	≤5
ZWGA2450-0500-017-35-EZ-T3-H4-01		17	35	0.8	291	2	6	≤5	70
ZWGA2450-0500-034-35-EZ-T3-H4-01		34	35	1.7	146	4	13	≤5	35
ZWGA2450-0500-072-35-EZ-T3-H4-01		72	35	3.3	69	8	25	≤5	16.5
ZWGA2450-0500-102-35-EZ-T3-H4-01		102	35	4.6	49	12	35	≤5	12
ZWGA2450-0500-145-35-EZ-T3-H4-01		145	35	6.6	34	17	49	≤5	8