



Drum Motor Roller

ORIGINALITY CASTING PRECISION TRANSMISSION PRODUCTS



Suzhou Zhisong Mould Co., Ltd

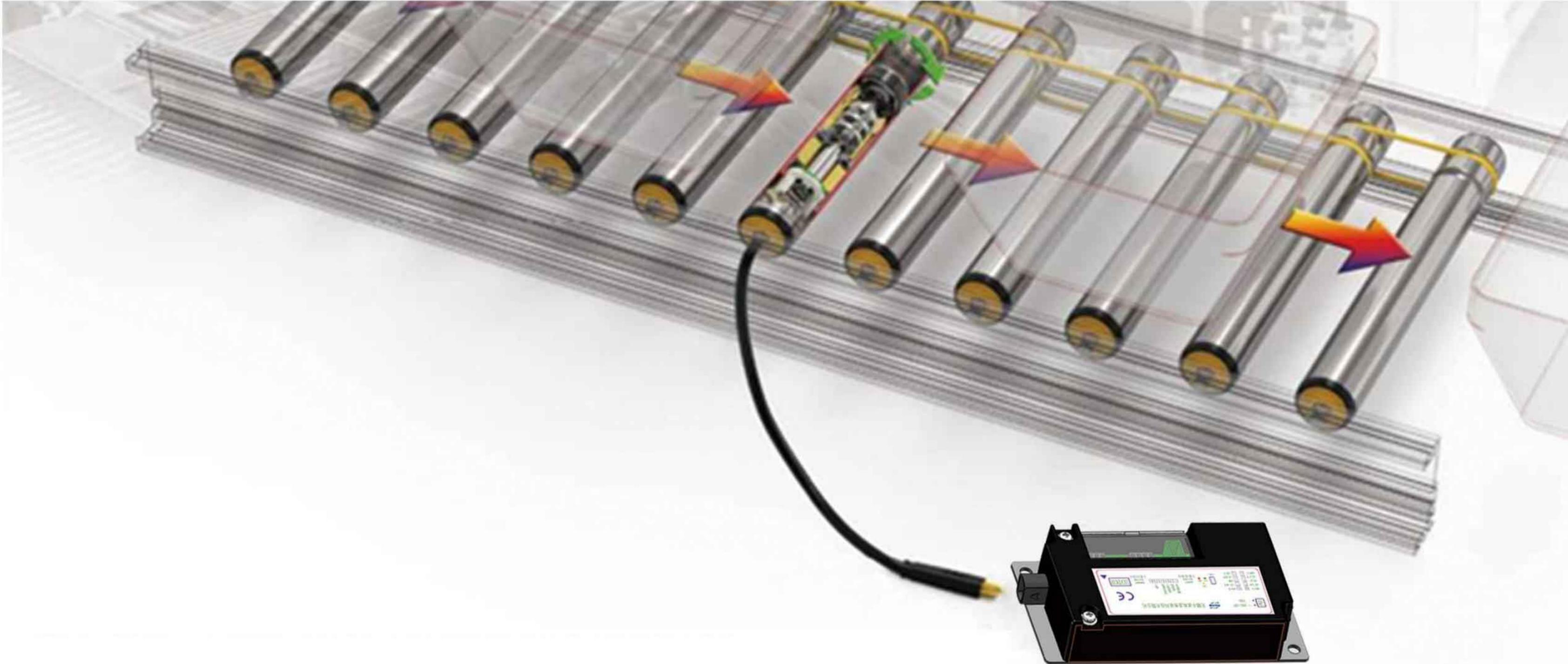


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Product Catalogue

What is Motor Drive Roller?



Introduction

The Motor Drive Roller(MDR) is a roller with its own power after integrating the motor, the gear reducer, and the sensor, and installing them reasonably inside the steel pipe.

Therefore, the conveying system does not need to consider motors, chains, intermediate shafts or other auxiliary drive components, and does not require bulky gearboxes.

It only needs to install the MDR on the frame, and it can run directly after being connected to the power supply.

This makes the conveying system more concise, intelligent, beautiful, safe and reliable.

Products are widely used in: food processing, pharmaceutical production, electronic assembly, airport logistics, express sorting and other industries, meeting the diverse automation needs of different industries.

About Us

Suzhou Zhisong Mold Co., Ltd. (SZ-ROLLER) is a professional enterprise specializing in the production, sales, R&D and after-sales service of electric rollers, and can also provide OEM services. SZ-ROLLER enjoys a high reputation in product quality, technology, credit and service in the industry. The company has passed ISO9001 quality system certification, CE certification and high-tech product certification.

Timely response, excellent quality, and fast delivery have won us the favor of customers in Southeast Asia, Europe and the United States.

SZ-ROLLER's Products include: AC/DC Motor Drive Roller, drum motor, Idler roller, bearing housing, roller end caps othetc.

The diameters of Motor Driver Roller include:

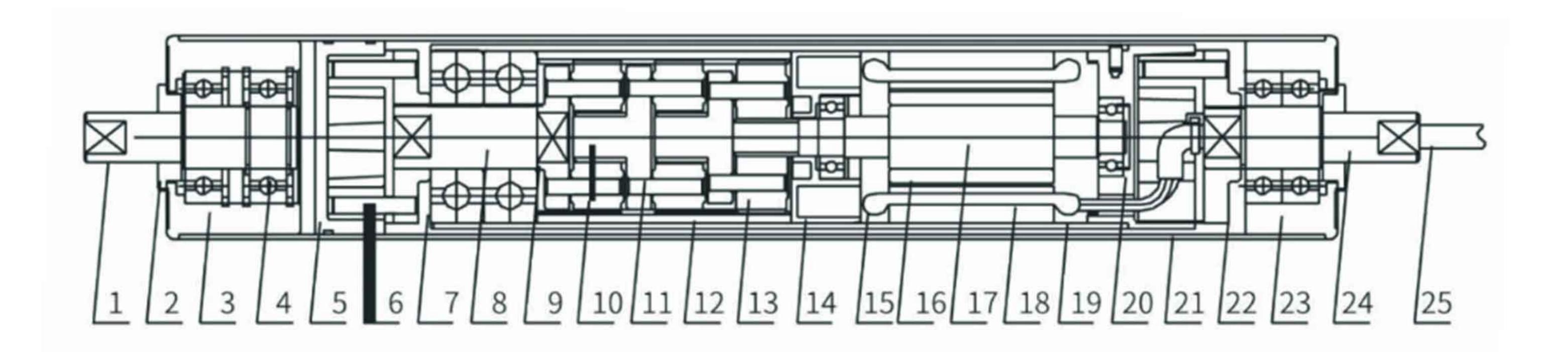
Ø38,Ø50,Ø60, Ø67,Ø76,Ø82,Ø113,Ø138,Ø165,Ø216.

Drum motor is mainly used for belt conveyor of food processing, airport and station security services. and logistics sorting industries.



电滚筒的特性说明 CHARACTERISTIC DESCRIPTION OF MOTOR DRIVE ROLLER

Motor Drive Roller Internal Structure Diagram



Part List

- 1. Carbon steel rear axle
- 2. Dust cover
- 3. Die-cast aluminum motor cover
- 4. Bearings
- 5. Cylinder connection seat
- 6. Cylinder connection assembly
- 7. Bearings
- 8. Gearbox output shaft
- 9. Gearbox output rack
- 10. Metal sun gear
- 11. Planetary pin
- 12. Internal gear ring
- 13. Metal planetary gear

- 14. Motor front cover
- 15. Motor stator coil
- 16. RuFeB magnet steel
- 17. Gear motor rotor
- 18. Motor stator core
- 19. Motor case
- 20. Die-cast aluminum motor front cover
- 21. Roller steel pipe
- 22 Connection flange
- 23. Die-cast aluminum front cover
- 24. Carbon steel front axle
- 25. Wire

Catalogue Basic introduction.

This article will introduce the Three Series MDR.

DGAC series,:

- 1. Using AC220V/380V Voltage
- 2. Plug and play, cost-effective.

HX series:

- 1. Using DC 24/48V safety voltage.
- 2. Equipped with controller. torque is large, and speed can be adjusted.
- 3.It's suitable for light and heavy load conveyor lines which makes it has a wide range of applications.

DD series:

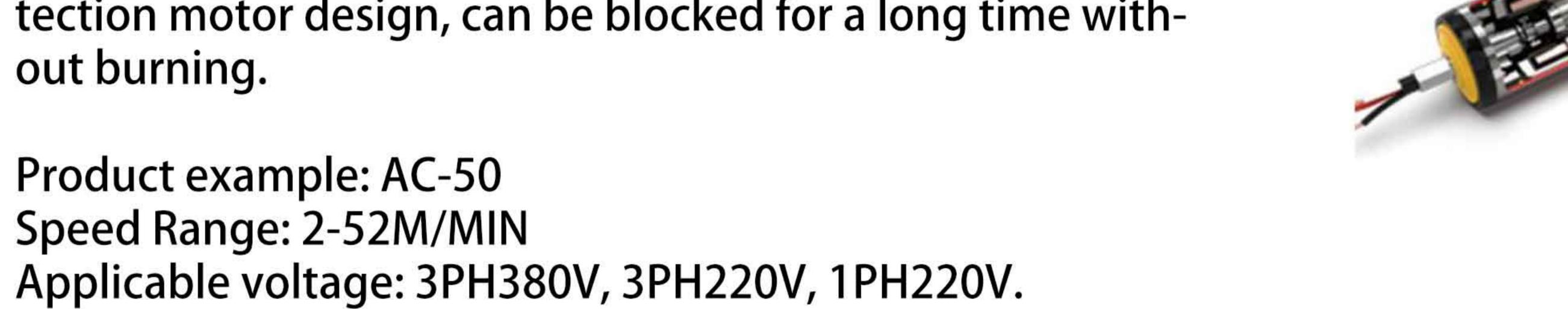
- 1.Using DC48V voltage,
- 2.Sevro/Hall Controller directly drives the roller. The reduction ratio is 1:1 which makes roller rotate extremely fast.
- 3. Suitable for express sorting machines.



AC 220V/380V Product Features Description

DGAC-SERIES Asynchronous gear reduction MDR

This typr MDR has built-in AC asynchronous gear reduction motor, suitable for low speed and light load. Winding protection motor design, can be blocked for a long time without burning.



The Roller supports multiple linkage methods.

Material, Length can be customized.

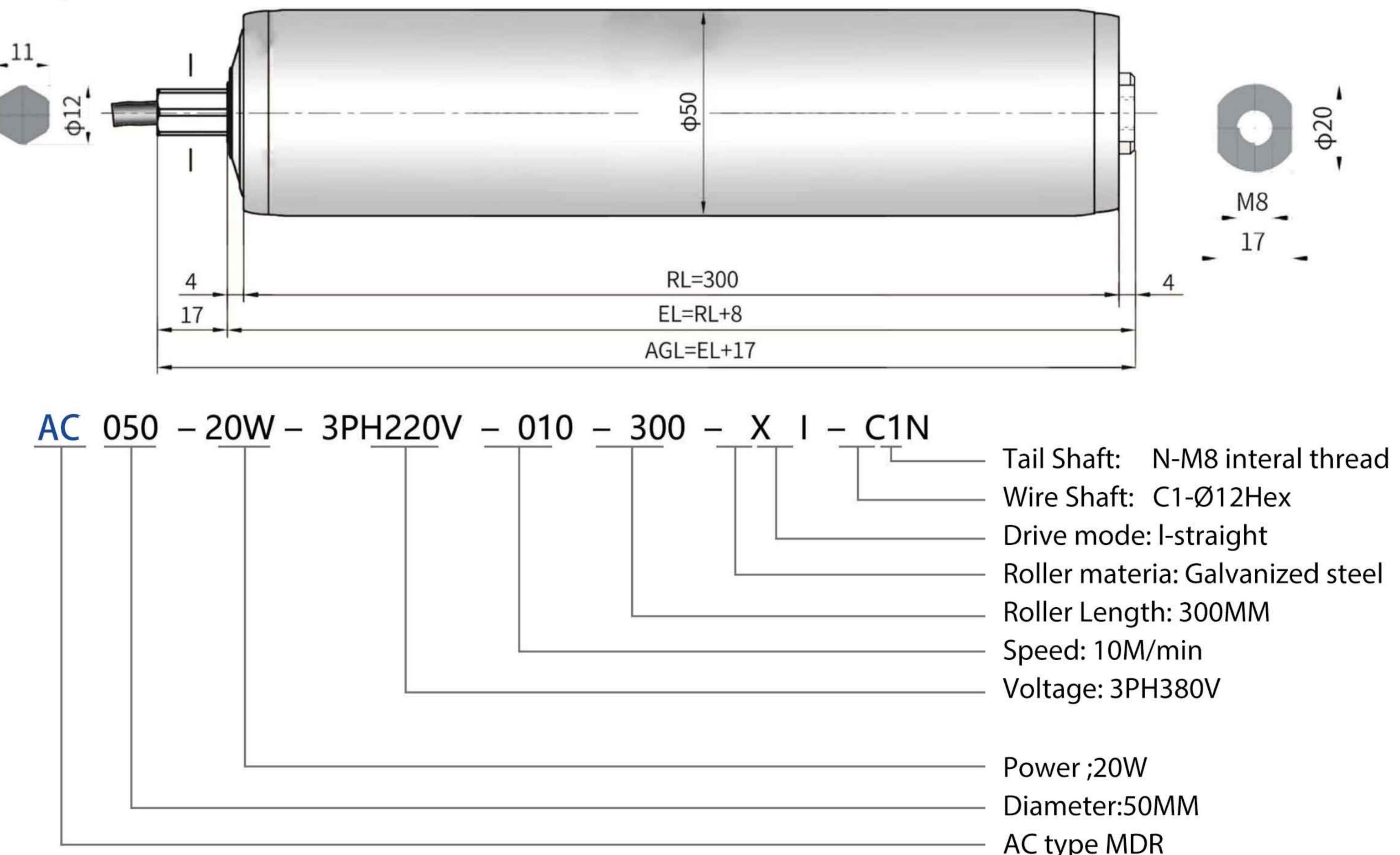
Simple and convenient installation, it can be used after power on directly.

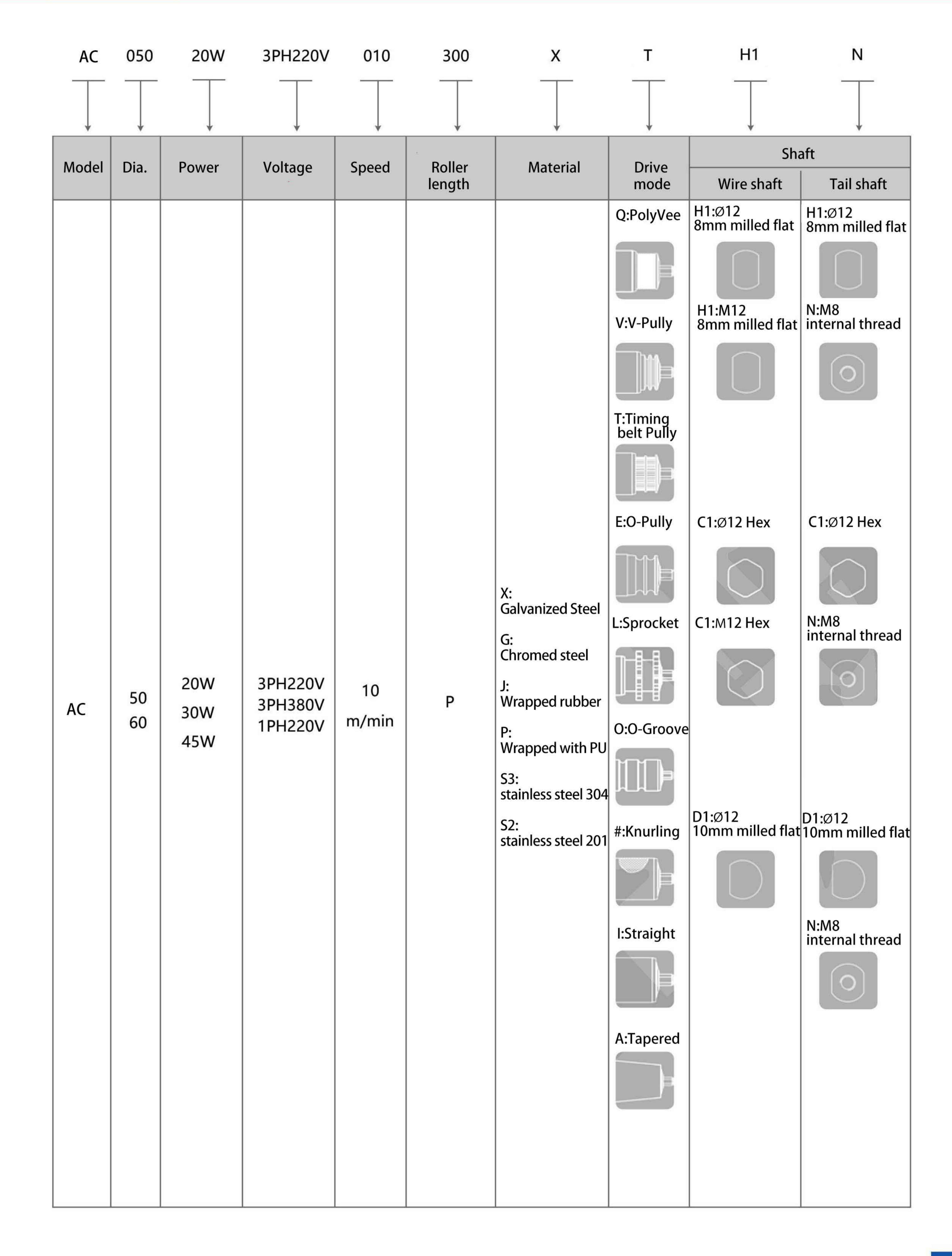
Under 3PH220V, 25H-65HZ can be adjusted by frequency



Sample Mode

converter.





AC50-MDR Characteristics Table

					Standa	rd type		Heavy type				
					Stanua	Ти сурс						
		Rated speed speed range 15%-100%)	3PH2		_	wer: 22W ower:8W		220V 380V	Input Power: 33W Output Power:13W		
Speed				Torque N.m		Tracti	on N	Torqu	e N.m	Traction N		
	M/min Reduction ratio R/min		Rated	Start	Rated	Start	Rated	Start	Rated	Start		
4	4.2	46.7	26.8	2.24	4.48	89.6	179.2	3.36	6.72	134.4	268.8	
6	5.3	37.0	33.8	1.78	3.56	71.1	142.2	2.67	5.34	106.7	213.3	
7	6.7	29.4	42.5	1.41	2.82	56.4	112.8	2.12	4.23	84.6	169.2	
9	8.4	23.3	53.6	1.12	2.24	44.8	89.6	1.68	3.36	67.2	134.4	
11	10.6	37.0	67.5	1.78	3.56	71.1	142.2	2.67	5.34	106.7	213.3	
14	13.4	29.4	85.1	1.41	2.82	56.4	112.8	2.12	4.23	84.6	169.2	
16	15.1	13.0	96.5	0.62	1.24	24.9	49.8	0.93	1.86	37.4	74.7	
17	16.8	23.3	107.2	1.12	2.24	44.8	89.6	1.68	3.36	67.2	134.4	
20	19.1	10.3	121.5	0.49	0.98	19.7	39.4	0.74	1.47	29.6	59.1	
24	24.0	8.2	153.1	0.39	0.78	15.7	31.4	0.59	1.17	23.6	47.1	
31	30.3	13.0	192.9	0.62	1.24	24.9	49.8	0.93	1.86	37.4	74.7	
39	38.2	10.3	243.1	0.49	0.98	19.7	39.4	0.74	1.47	29.6	59.1	
49	48.1	8.2	306.3	0.39	0.78	15.7	31.4	0.59	1.17	23.6	47.1	

3-stage gear reduction

2-stage gear reduction

AC60-MDR Characteristics Table

					Standa	rd type		Heavy type			
Smood		Rated speed (speed range) 15%-100%)	3PH2 3PH2			wer:30W ower:8W	3PH2 3PH3		Input Power: 45W Output Power:13W	
Speed	Speed			Torque N.m		Tracti	ion N	Torqu	e N.m	Traction N	
	M/min Reduction ratio R/min		R/min	Rated	Start	Rated	Start	Rated	Start	Rated	Start
2	2.14	105.9	11.3	11.12	22.24	370.6	741.2	16.68	33.36	555.9	1111.8
4	3.78	59.9	20.0	629.00	12.58	209.5	419.0	9.44	18.87	314.3	628.5
6	6.19	36.5	32.8	3.84	7.68	127.9	255.8	5.76	11.52	191.9	383.7
8	8.24	27.5	43.7	288.00	5.76	961.0	192.2	4.32	8.64	144.2	288.3
10	10.13	22.3	53.7	2.34	4.68	782.0	156.4	3.51	7.02	117.3	234.6
14	13.79	16.4	73.2	1.72	3.44	57.4	114.8	2.58	5.16	86.1	172.2
17	16.98	13.3	90.1	1.40	2.80	46.6	93.2	2.10	42.00	69.9	139.8
21	20.88	10.8	110.1	1.14	2.20	37.9	75.8	1.71	3.42	56.9	113.7
25.5	22.59	10.0	119.9	1.05	2.10	35.0	70.0	1.58	3.15	52.5	105.0
28	27.79	8.1	119.9	0.85	1.70	28.5	57.0	1.28	2.55	42.8	85.5
30	30.06	75.0	159.5	0.79	1.58	26.3	52.6	1.19	2.37	39.5	78.9
42	41.76	10.8	221.5	1.14	2.28	37.9	75.8	1.71	3.42	56.9	113.7
55.5	55.57	8.1	294.8	0.85	1.70	28.5	57.0	1.28	2.55	42.8	85.5
60	60.13	7.5	319.0	0.79	1.58	26.3	52.6	1.19	2.37	39.5	78.9

4-stage gear reduction

3-stage gear reduction

2-stage gear reduction

 $[\]times 1.1 \text{ N} = 0.1 \text{ kgf}. 1 \text{ N}.\text{m} = 0.1 \text{ kgf}.\text{m};$

^{※ 2}、The values in this characteristic table are for reference only;

^{≥ 3.} Constant speed closed-loop control, under no-load or rated load, the speed is consistent.

DC 24V/48V Product Features Description

HX-SERIES DC brushless Mtor Drive Roller,

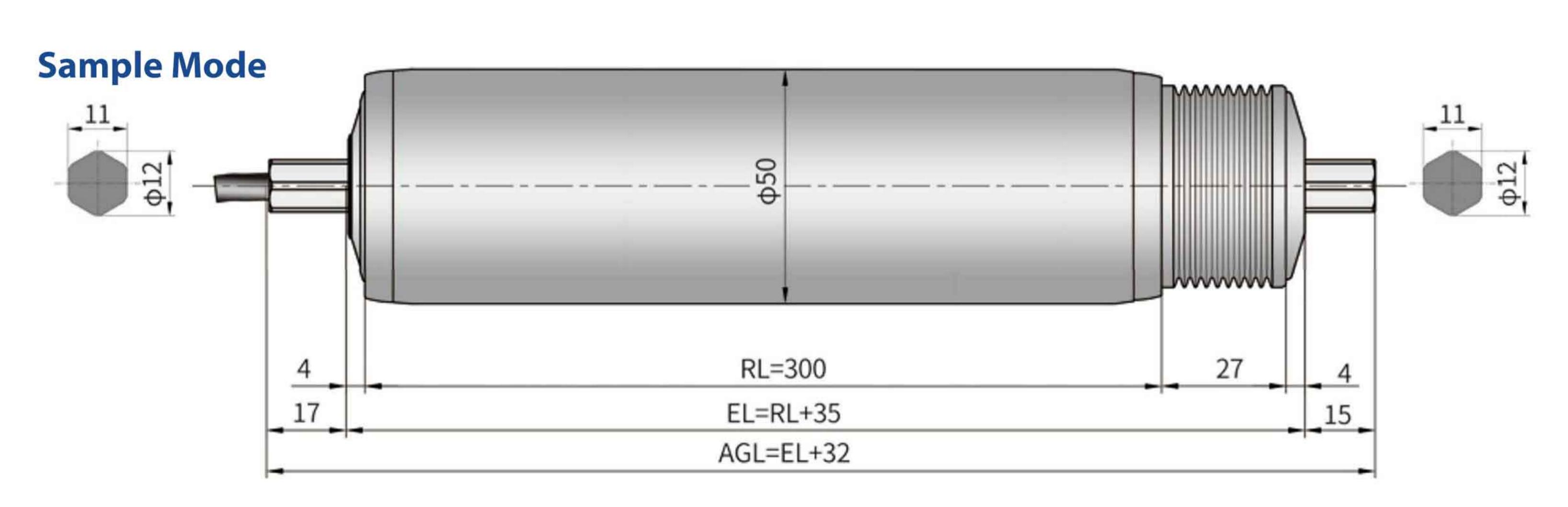
This product has a built-in high-efficiency and energy-saving DC brushless gear reducer motor, Large output torque, suitable for medium and light loads.

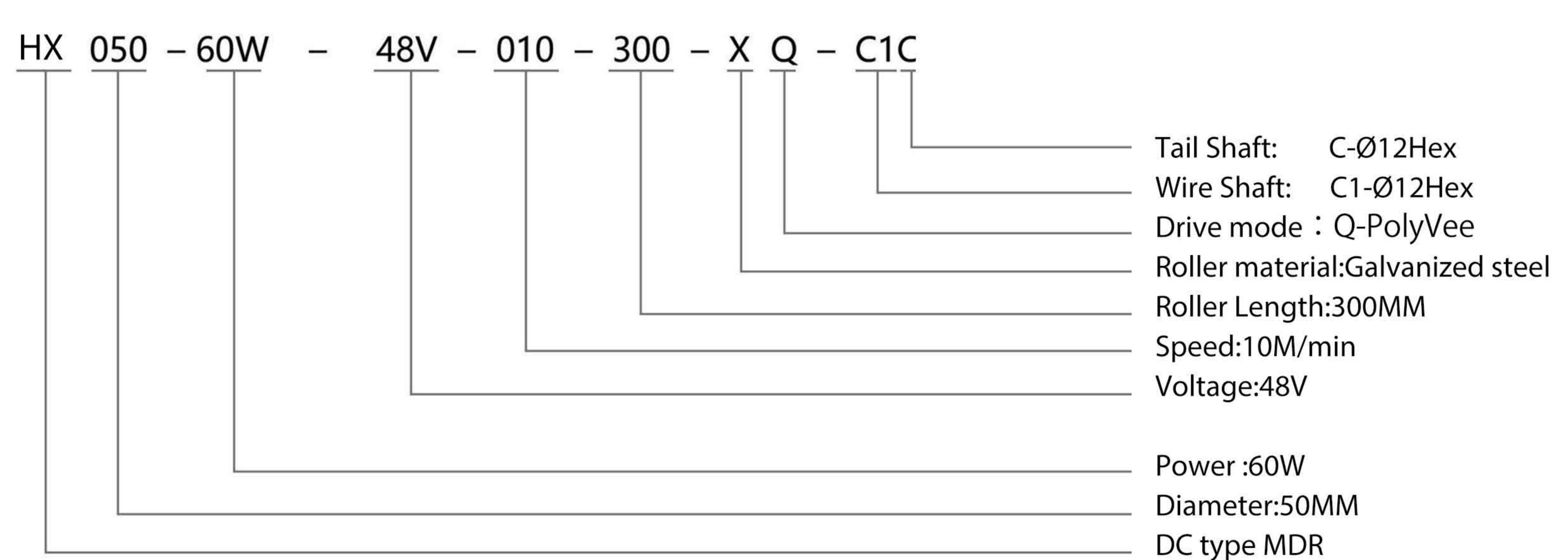
Product Example:HX-50 Safety voltage: DC 24V/48V, Speed: 1-300m/min. Speed range: 15%-100%

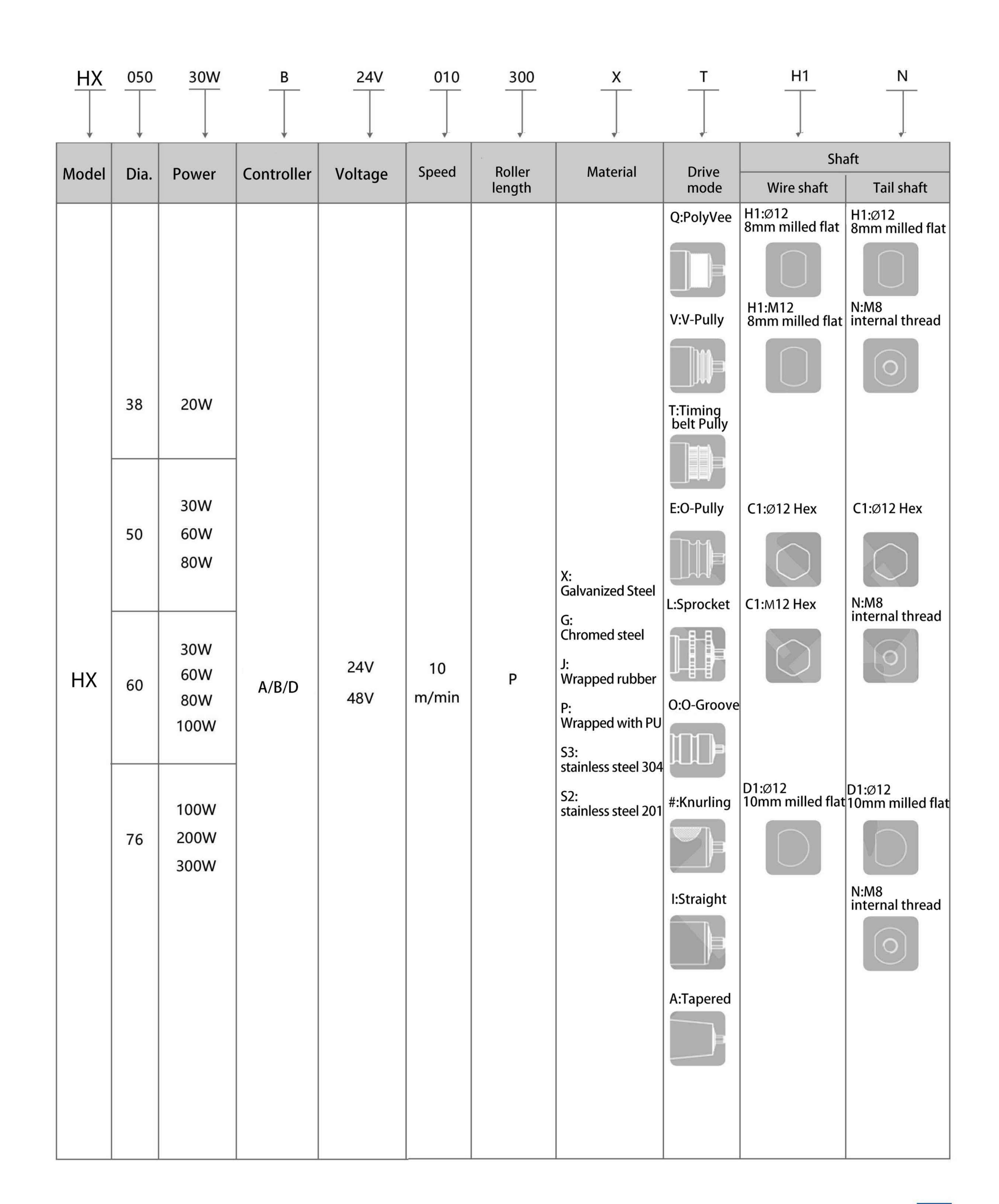


Roller material, length, drive mode can be customized. Easy to install and realize intelligent control.











DC 24V/48V MOTOR DRIVE ROLLER

	HX50-MDR Characteristics Table															
					Light Version				Standard Version				Heavy Version			
	Rated speed (speed range) 48V Input Power: 50W Output Power:30W		24V Input Power: 80W 48V Output Power:60W					Input Power: 120W Output Power:80W								
Speed				Torqu	e N.m	N.m Traction N		Torque N.m		Traction N		Torque N.m		Traction N		
	M/min	Reduction ratio	R/min	Rated	Start	Rated	Start	Rated	Start	Rated	Start	Rated	Start	Rated	Start	
8	7.85	72.0	50.0	5.8	17.3	230.4	691.2	12.1	36.2	517.0	1588.0	19.2	55.1	923.0	2728.5	
10.	10.47	54.0	66.7	4.3	13.0	172.7	518.2	9.5	30.5	403.0	1235.0	15.0	44.5	720.0	2101.0	
12	11.78	48.0	75.0	3.8	11.5	153.5	460.6	7.7	23.0	307.1	921.2	10.3	30.7	409.5	1228.3	
16	15.70	36.0	100.0	2.9	8.6	115.2	345.6	5.8	17.3	230.4	691.2	7.7	23.1	307.2	921.6	
21	20.93	27.0	133.3	2.2	6.5	6.4	259.2	4.3	13.0	172.8	518.5	5.7	17.3	230.4	691.3	
25	25.33	22.3	161.3	1.8	5.4	71.4	214.2	3.6	10.7	142.8	428.4	4.8	14.3	190.4	571.2	
47	47.10	12.0	300.0	1.0	2.9	38.4	115.2	1.9	5.8	76.8	230.4	2.5	7.7	102.4	307.2	
63	62.80	9.0	400.0	0.7	2.2	28.8	86.4	1.4	4.3	57.6	172.8	1.9	5.7	76.8	230.4	
94	94.20	6.0	600.0	O5	1.4	19.2	57.6	1.0	2.9	38.4	115.2	1.3	3.9	51.2	153.6	
142	141.30	4.0	900.0	3.0	1.0	12.8	38.4	0.6	1.9	25.6	76.8	0.8	2.5	34.1	102.4	
190	188.40	3.0	1200.0	0.2	0.7	9.6	28.8	0.5	1.4	19.2	57.6	0.7	1.9	25.6	76.8	

^{*1.} 1 N = 0.1 kgf, $1 N \cdot m = 0.1 kgf \cdot m$;

Note: The Minimum length of the Roller can be 220MM, please consult our company for details.

^{*2.}The values in this characteristic table are for reference only;

^{*3.}Constant speed closed-loop control, under no-load or rated load, the speed is consistent.

^{*4.}The speed range is 15%-100% of the rated speed

^{*5.}Other speeds can be customized,

^{*6.}L-sprocket drive mode, this parameter is applicable;

^{*7.}Q-PolyVee drive mode, the load of a single driving section does not exceed 100Kg;

^{*8.}O-Pully drive mode, the weight of a single drive section does not exceed 35Kg

³⁻stage gear reduction

²⁻stage gear reduction

¹⁻stage gear reduction

3-etana	MAR	reduction
0-Stage	year	reduction

116.1

116

973.0

Note: The Minimum length of the Roller can be 200MM, please consult our company for details.

HX60-MDR Characteristics Table

					Standard	l Version		
S-non-A		Rated speed (speed range) 15%-100%		24 48		Input Power: 160W Output Power:100W		
Speed				Torqu	e N.m	Traction N		
	M/min	Reduction ratio	R/min	Rated	Start	Rated	Start	
14	14.43	47.0	76.6	9.4	28.2	195.8	587.5	
24	23.88	28.4	126.8	5.7	17	118.3	355	
52	52.17	13.0	276.9	2.6	7.8	54.2	162.5	
160	159.58	4.3	847.0	0.9	2.6	17.7	53.1	
188	188.4	36.0	1000.0	0.7	2.2	15	45	

3-stage gear reduction

2-stage gear reduction

1-stage gear reduction

Note: The Minimum length of the Roller can be 290MM, please consult our company for details.

²⁻stage gear reduction

¹⁻stage gear reduction

^{*1.} 1 N = 0.1 kgf, $1 N \cdot m = 0.1 kgf \cdot m$;

^{*2.} The values in this characteristic table are for reference only;

^{*3.} Constant speed closed-loop control, under no-load or rated load, the speed is consistent.

^{*4.} The speed range is 15%-100% of the rated speed;

^{*5.} Other speeds can be customized.

^{*1.} 1 N = 0.1 kgf, $1 N \cdot m = 0.1 kgf \cdot m$;

^{*2.} The values in this characteristic table are for reference only;

^{*3.} Constant speed closed-loop control, under no-load or rated load, the speed is consistent.

^{*4.} The speed range is 15%-100% of the rated speed;

^{*5.} Other speeds can be customized.

^{*6.}L-sprocket drive mode, this parameter is applicable;

^{*7.}Q-PolyVee drive mode, the load of a single driving section does not exceed 100Kg;

^{*8.}O-Pully drive mode, the weight of a single drive section does not exceed 35Kg



DC 24V/48V MOTOR DRIVE ROLLER

	HX76-MDR Characteristics Table														
				100W-Version				200W-Version				300W-Version			
C	Rated speed (speed range) 15%-100%				24V Input Po 48V Output I			24V 48V		Input Power:320W Output Power:200W		24V 48V		Input Power:480W Output Power:300W	
Specu	Speed		Torque N.m Traction N		on N	Torque N.m		Traction N		Torque N.m		Traction N			
	M/min	Reduction ratio	R/min	Rated	Start	Rated	Start	Rated	Start	Rated	Start	Rated	Start	Rated	Start
9	8.95	96	37.5	19.2	57.6	400	1199.9	38.4	115.2	400.0	1199.9	76.8	230.4	402.0	1206.1
11	111.161	77	46.81	15.4	46.2	320.8	962.3	30.8	92.4	320.8	962.3	61.6	184.8	322.4	967.3
18	18.28	47	76.61	9.4	28.2	195.8	587.5	18.8	56.4	195.8	587.5	37.6	112.8	196.8	590.5
30	30.25	28.4	126.8	5.7	17	118.3	355	11.4	34.1	118.3	355.0	22.7	68.2	119.0	356.9
66	66.08	13	276.9	2.6	7.8	54.2	162.5	5.2	15.6	54.2	162.5	10.4	31.2	54.5	163.4
202	202.14	4	847.01	0.9	2.6	17.7	53.1	1.7	5.1	17.7	53.1	3.4	10.2	17.8	53.4
238	238.64	3.6	1000	0.7	2.2	15	45.01	1.4	4.3	15.0	45.0	2.9	8.6	15.1	45.2

HX76 MDR
High torque MDR
For heavy-duty Pallet Conveyor

Max Capacity: 3000kg Pallet

2-stage gear reduction

1-stage gear reduction

Note: The Minimum length of the Roller can be 300MM, please consult our company for details.



³⁻stage gear reduction

^{*1.} 1 N = 0.1 kgf, $1 N \cdot m = 0.1 kgf \cdot m$;

^{*2.} The values in this characteristic table are for reference only;

^{*3.}Constant speed closed-loop control, under no-load or rated load, the speed is consistent.

^{*4.}The speed range is 15%-100% of the rated speed

^{*5.}Other speeds can be customized,

Product Features Description



No electronic components in the Direct Drive Motor.
The controller directly drives the roller, and the reduction ratio is 1:1.
which has strong environmental adaptability and no maintenance.

It is controlled by the resolver servo, and the position sensor is an inductive encoder. 12-bit commercial A/D converter, 5-pole motor design, resolution up to 20480, minimum recognition angle as low as 0.0176° high-precision position recognition.

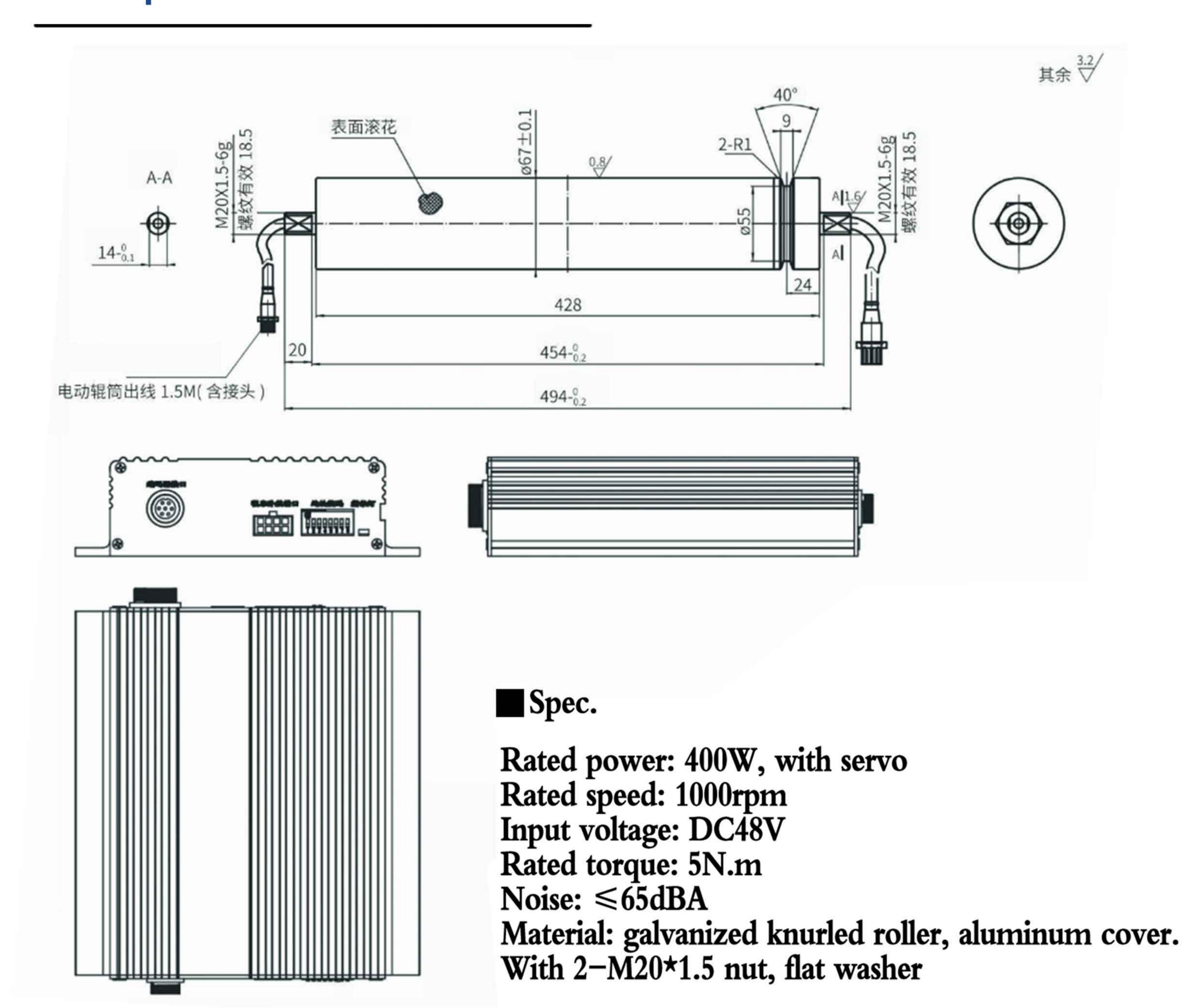
With excellent performance, servo direct drive drum motor products are usually used for:

1. Industries with high hygienic requirements, such as food and packaging industries.

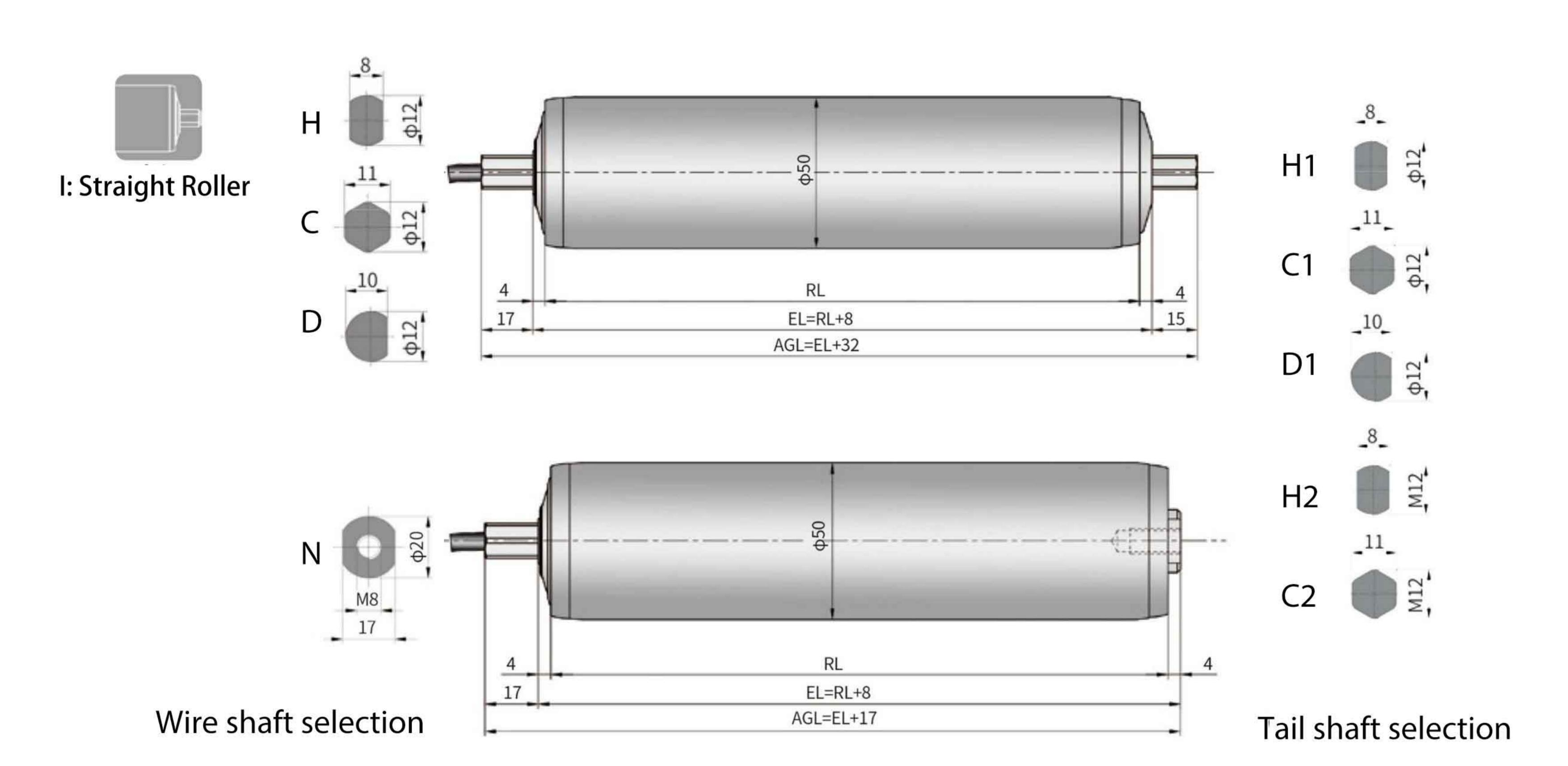
Provides clean and quiet operation without the use of oil and grease.

- 2. Express industry that requires fast response and simple control. High-efficiency sorting system machine suitable for 20,000 pieces/hour.
- 3. High-precision real-time control, the response speed is as low as 0.05S. Suitable for fast scan sorting systems.

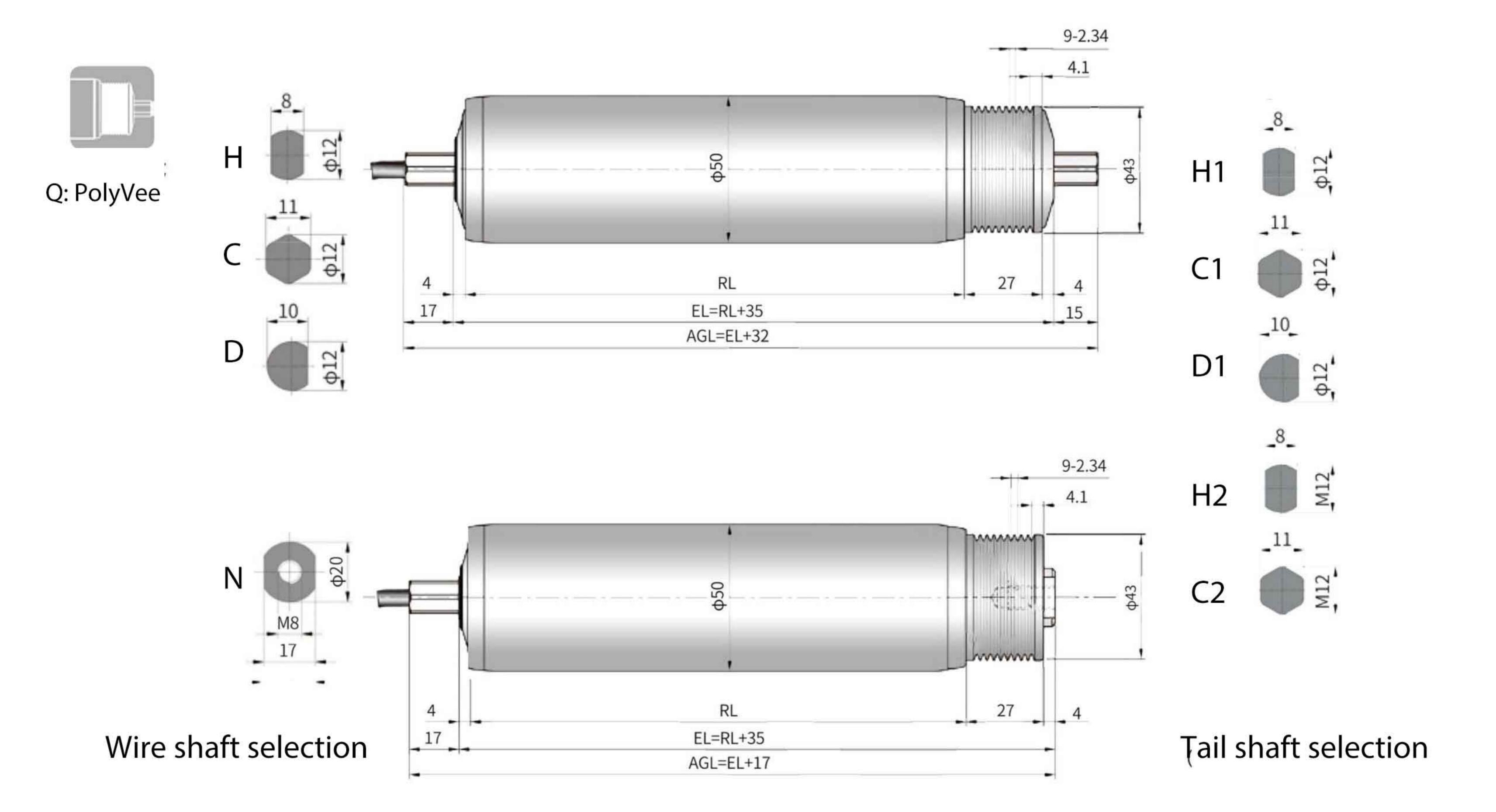
Example Model: DD67-DC48V-428L-400W



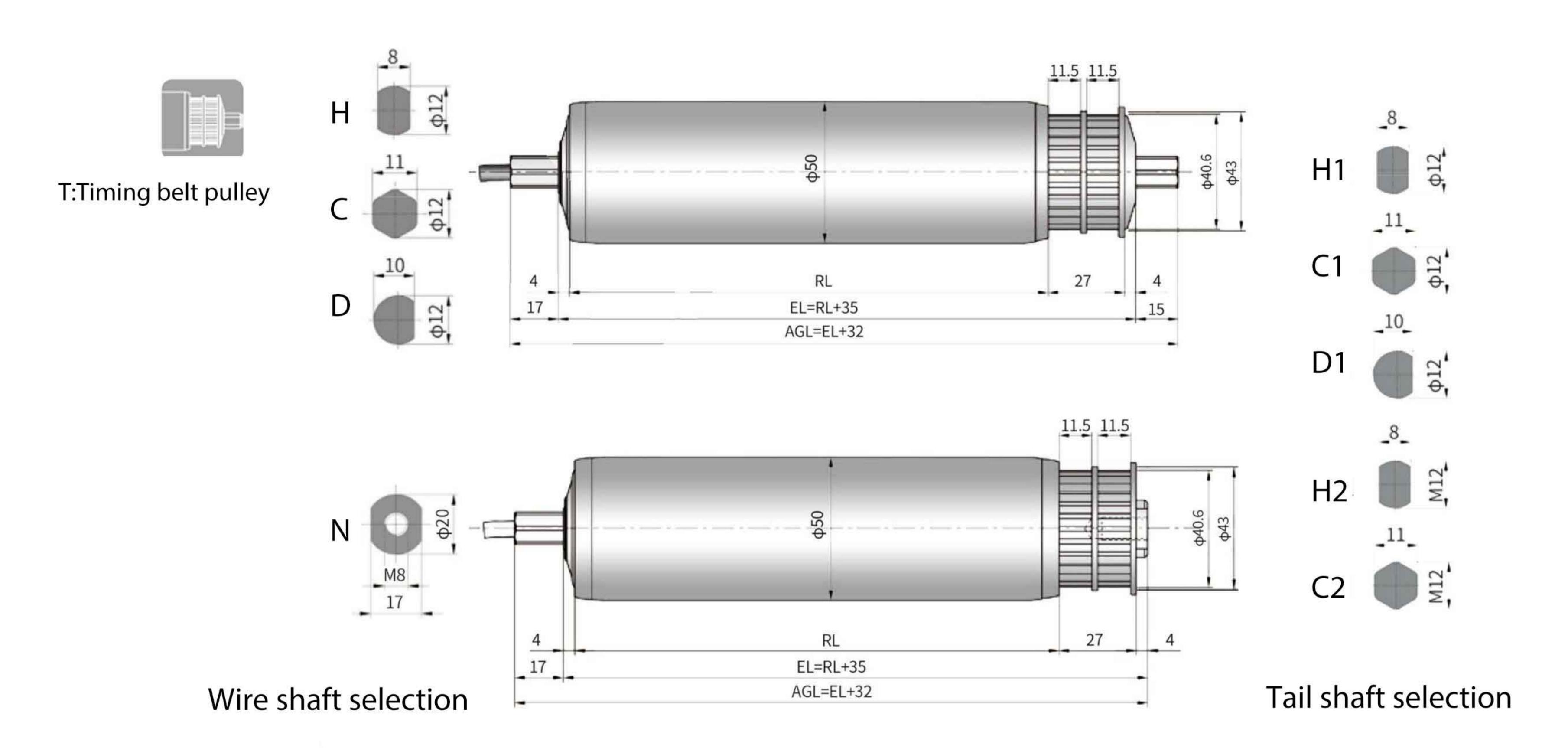
Note: For more details about this type roller and controller, please consult our company for more catalogues.



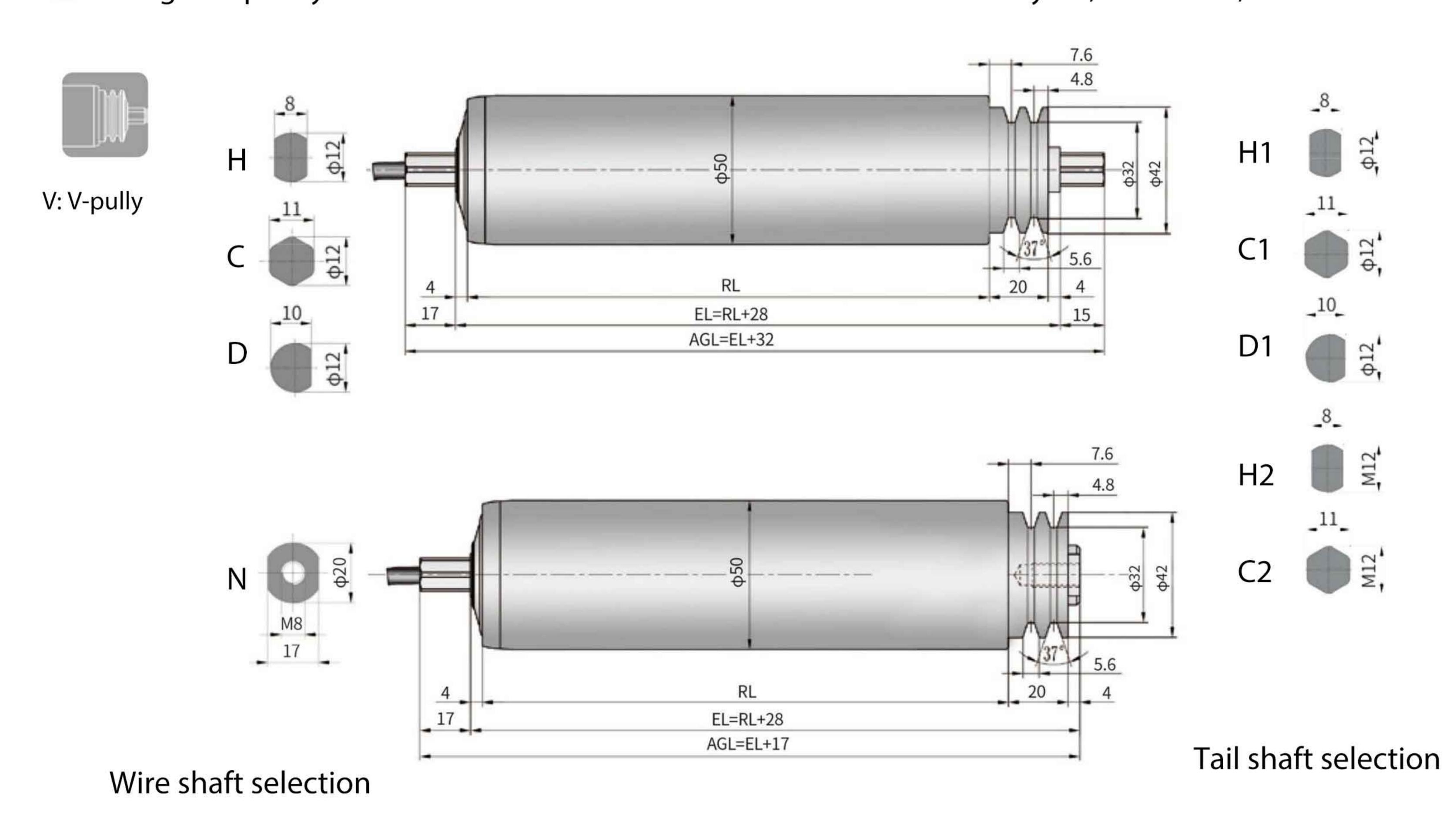
* Straight Roller:Ø50*1.5mm Steel Tube. Material:SS201/304,Galvanized steel



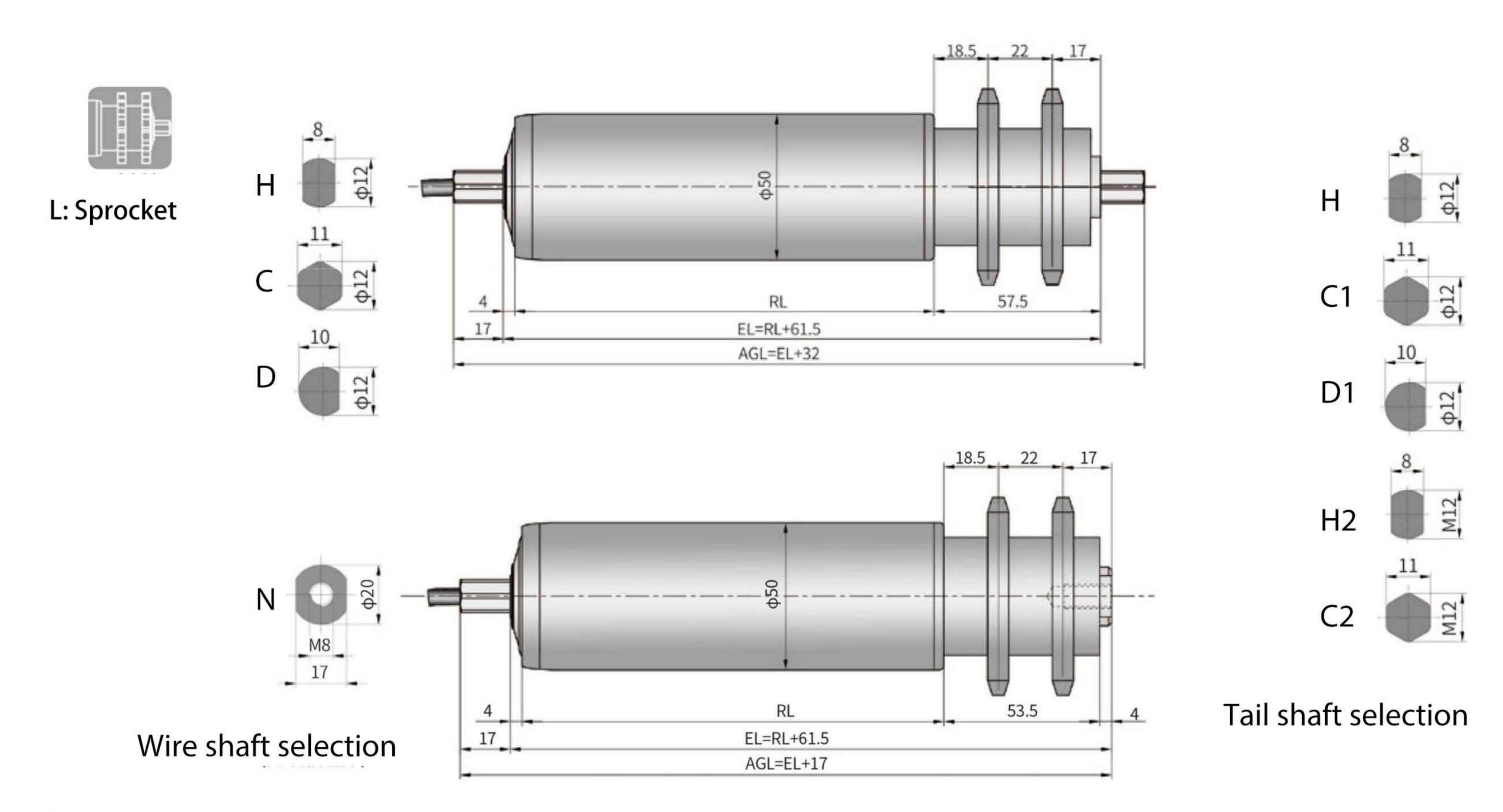
- * PolyVee material:Stainless.Aluminum,Nylon. PJ type PolyVee, 9 grooves,Max load100kg.
- RL=Roller Length(caps included) EL/FW=Frame Width AGL=Axis Gross Length



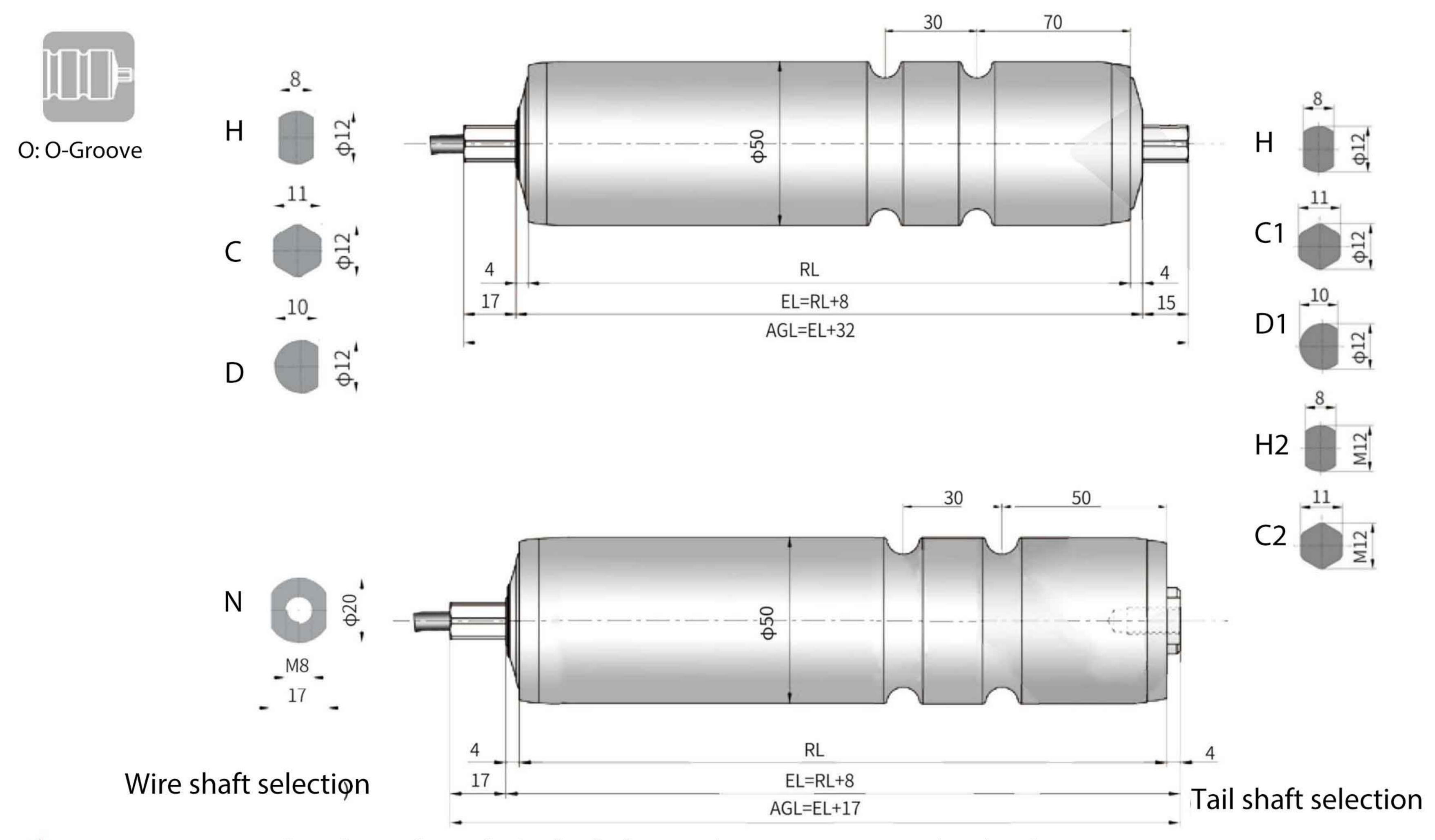
★ Timing belt pulley T5 material aluminium 26 teeth for belt. Material:Nylon,Aluminum,SS304



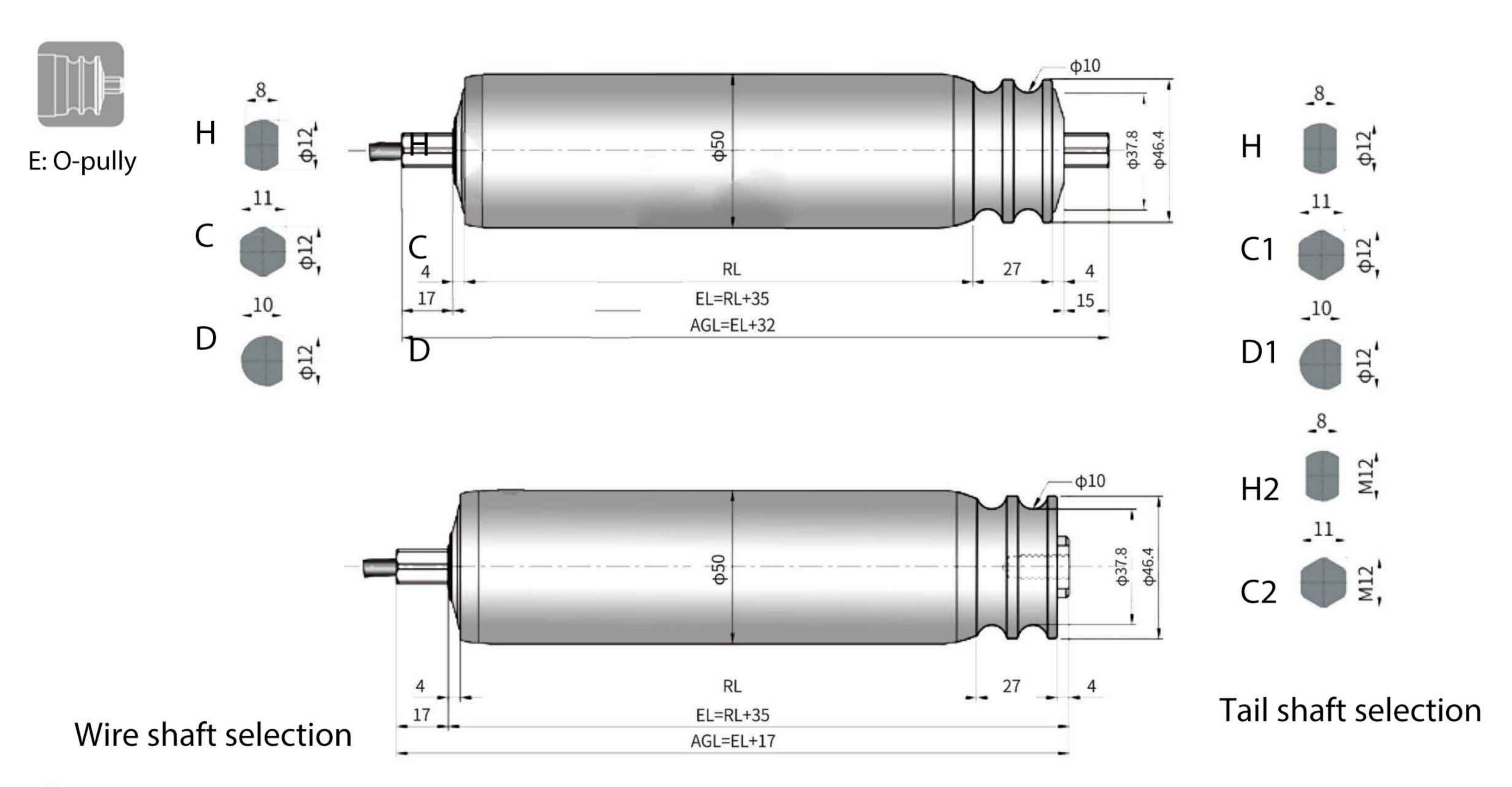
- V-pully:Used with polyurethane belts, suitable for lightweight transporty: Material:Aluminum,SS304
- ★ RL=Roller Length(caps included) EL/FW=Frame Width AGL=Axis Gross Length



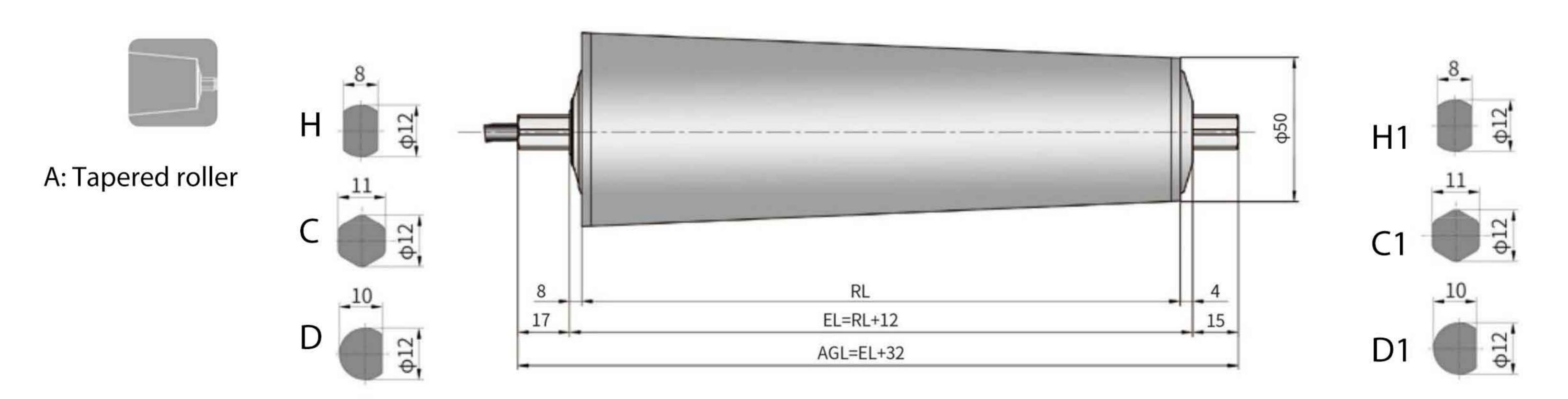
* Sprocket:Suitable for heavy duty transportation. Material:SS304,Galvanized steel



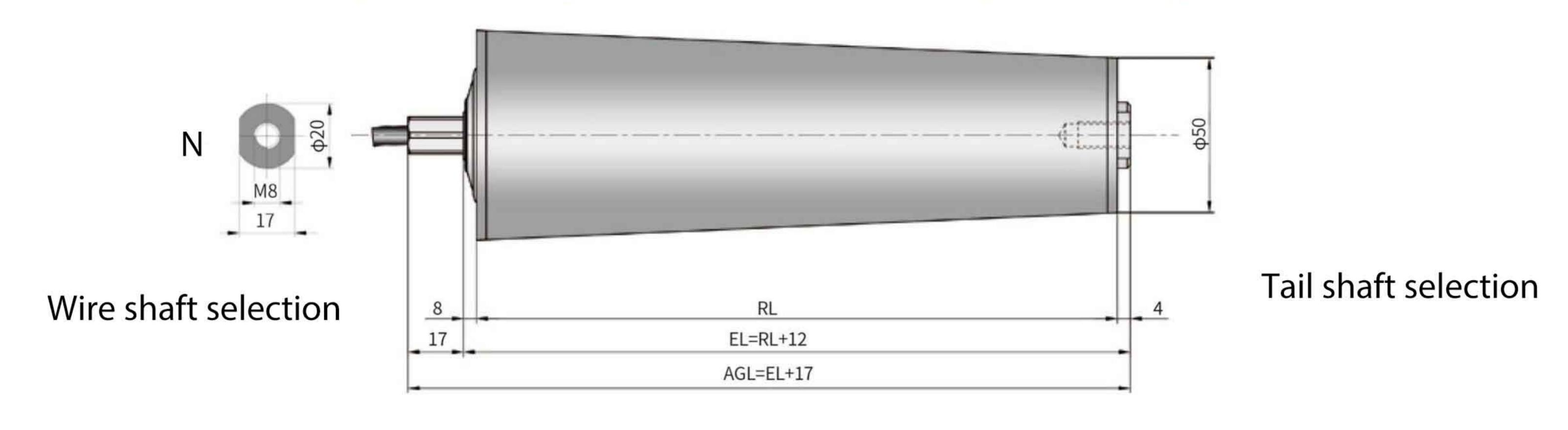
- ★ O-Groove:Use with polyurethane belts for lightweight transport. Max load:35kg
- * Note:The spring shaft is optional, and the size of the groove needs to be confirmed



★ O-Pully: Material:Nylon, Suitable for lightweight transport



Metal Tapered roller's angle can be customized. Plastic taper sleeve's angle is 3.6°



- * Tapered roller:Suitable for curved conveyors. Tubes can be formed in metal or with a plastic sleeve.
- RL=Roller Length(caps included) EL/FW=Frame Width AGL=Axis Gross Length





Commonly Used Drive Modes



T:Timing belt pully

0:0-Groove

Q:PolyVee



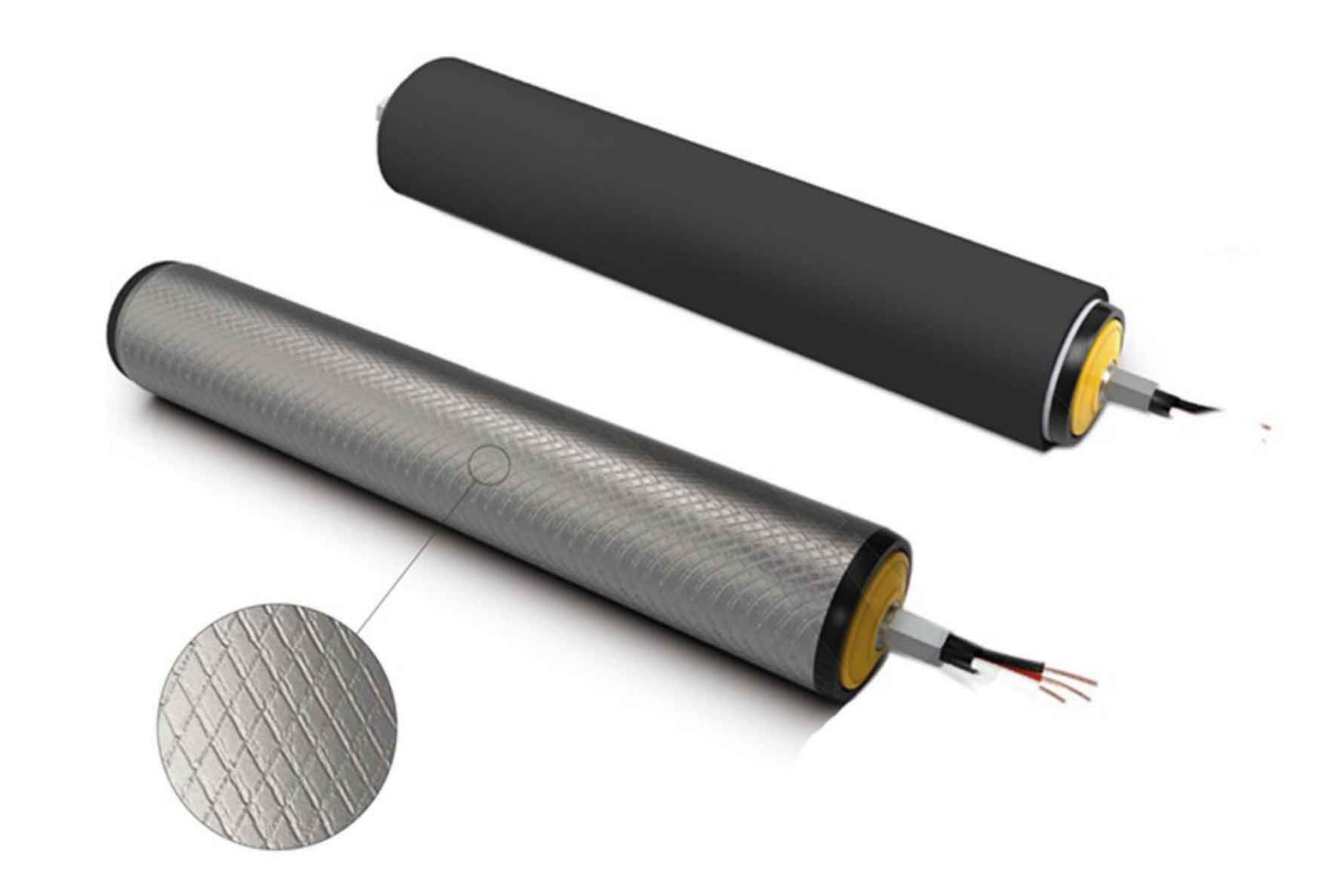
V:V-pully

E:O-Pully

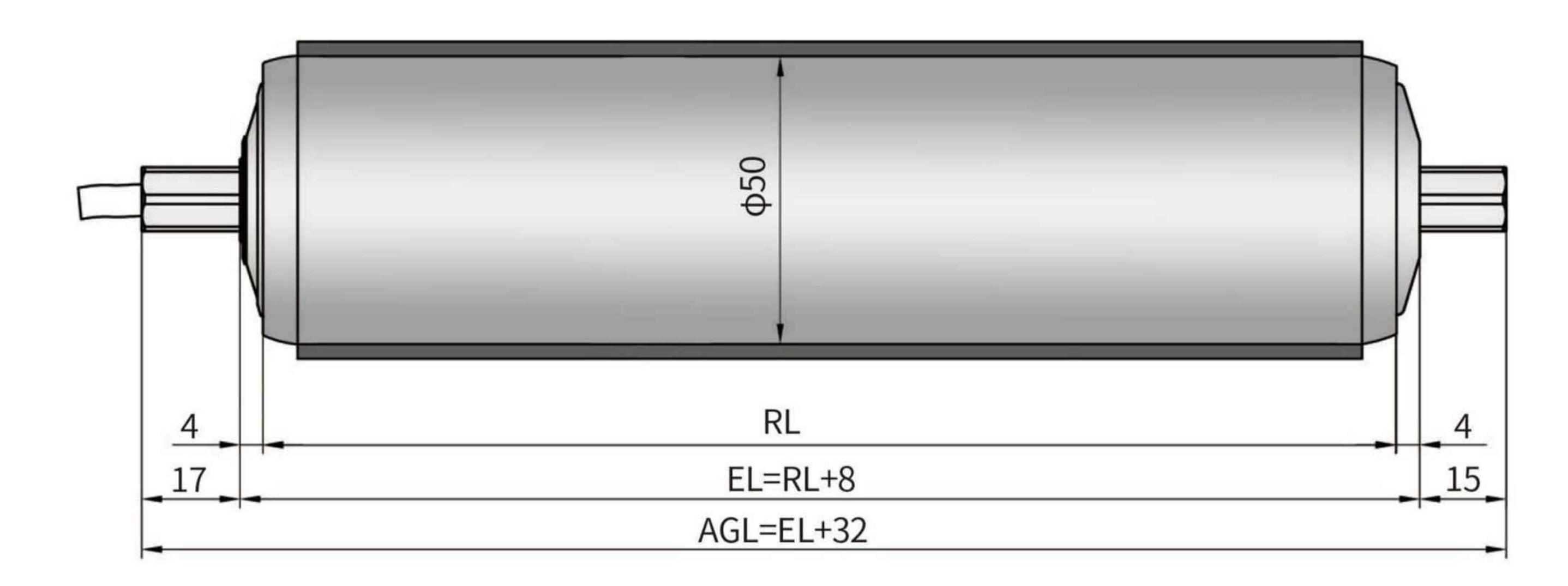
L:Sprocket

Roller Cylinder Process Classification

Optional: Smooth surface. Knurled surface. Wrapped rubber



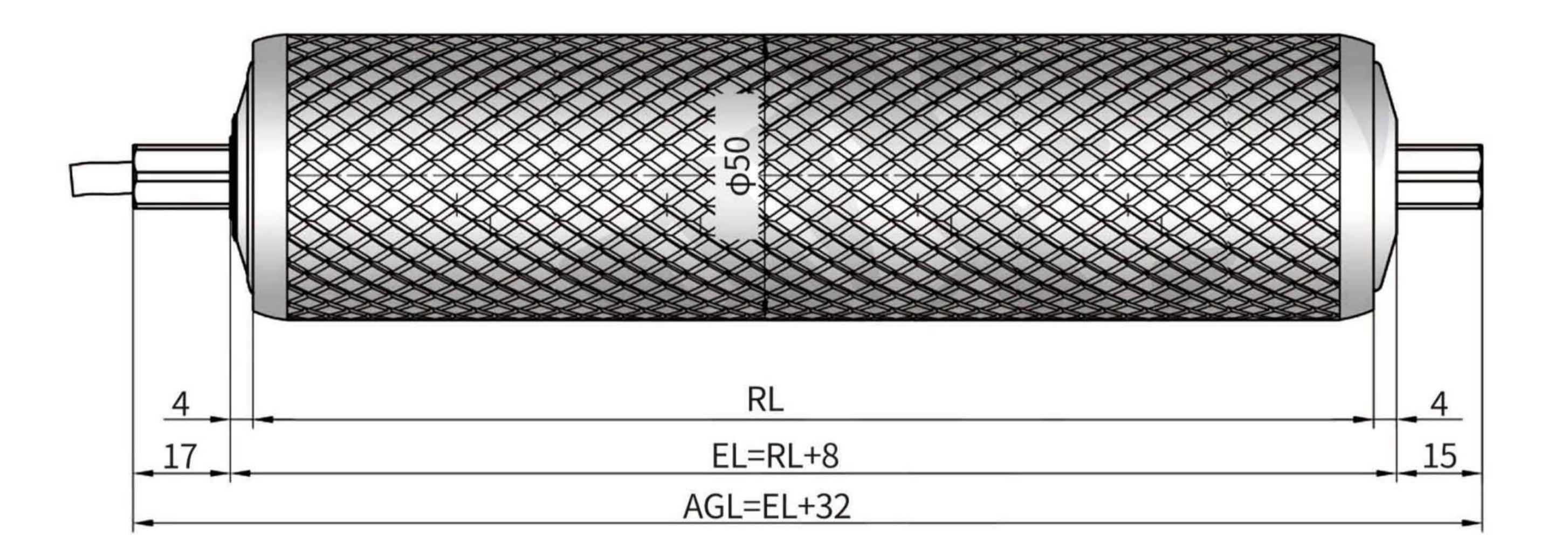




- *1.Roller surface wrapped with rubber: Ø50 wrapped into Ø55; Material options: ordinary rubber, PU, NBR.
- *2.Roller surface cover PVC Sleeve: Ø50 wrapped into Ø54;

It can effectively improve the operation status of the conveying system, prevent slipping, increase friction, and reduce conveying noise.





Roller surface knurling treatment: can increase the friction between the conveying object and the roller.

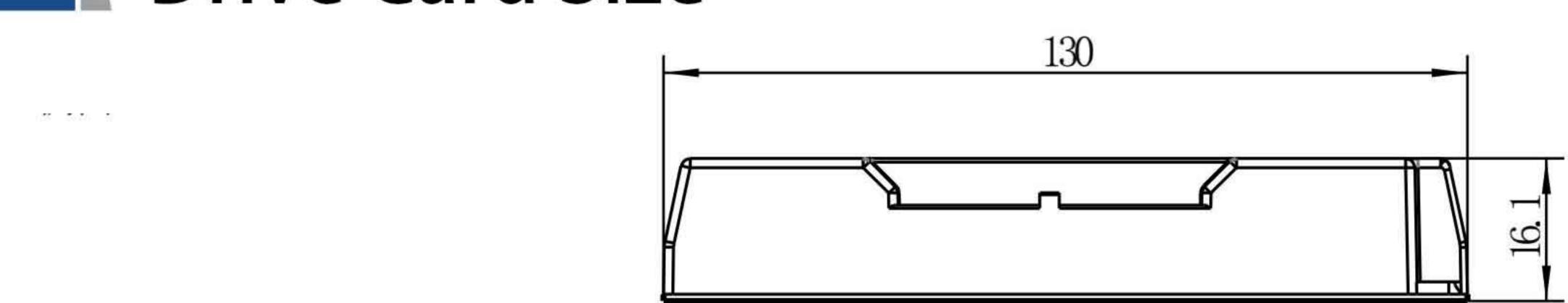
Drum surface pattern: mesh or thread.

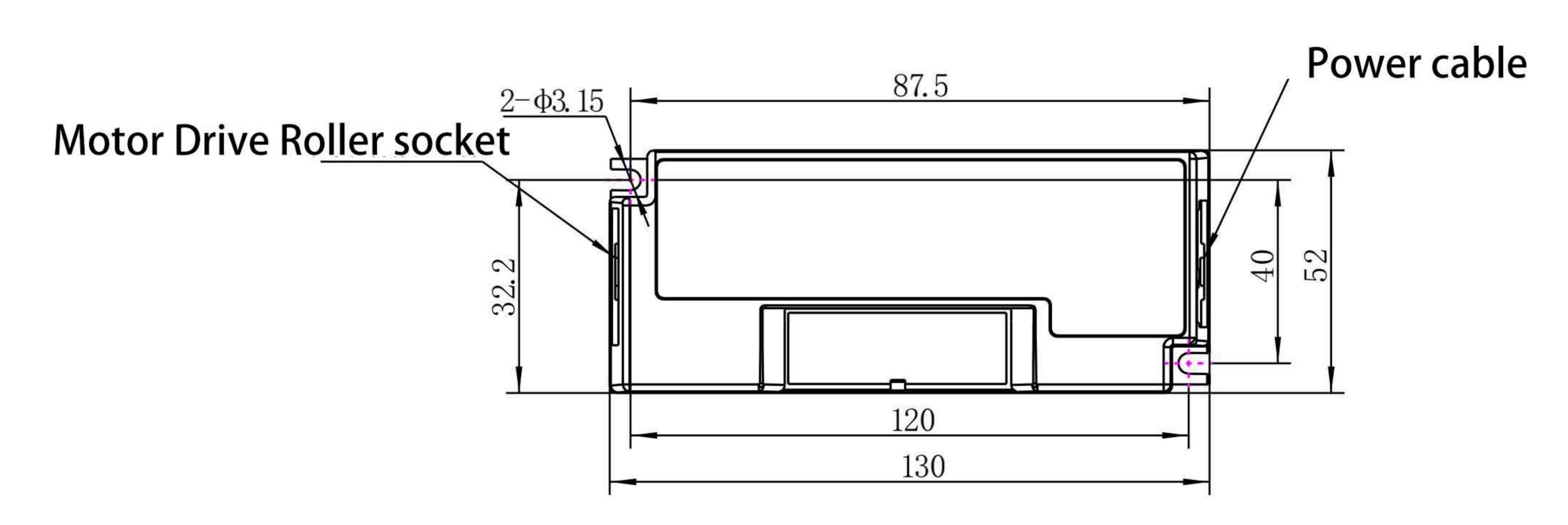




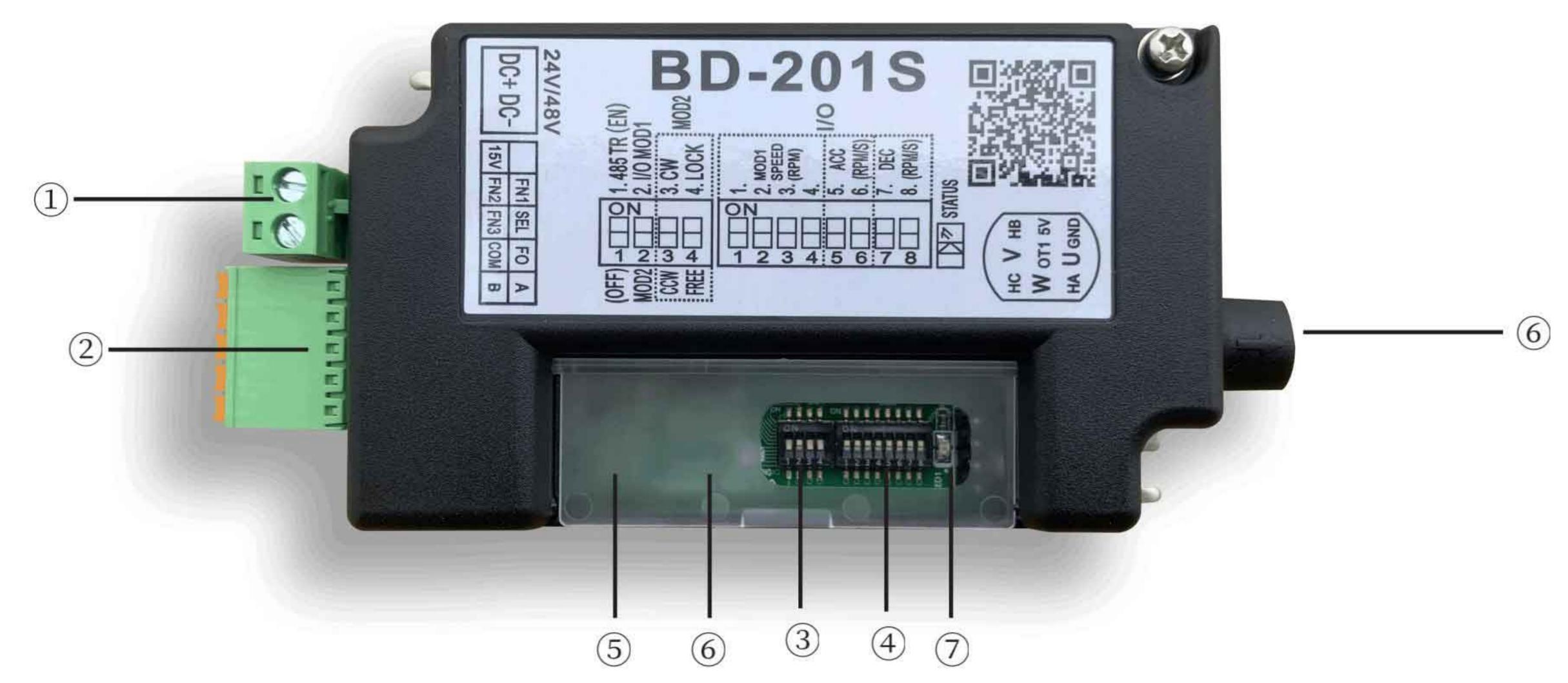
1	Power interface	DC power input port
2	Input and output IO	Control signal input and error signal output, some functions are used in conjunction with DIP dial code.
3	DIP switch	Function setting
4	Speed dial	10-speed speed adjustment, Used in conjunction with DIP dial code to achieve 20-speed speed adjustment
5	Startup speed	Set startup acceleration time
6	Stop speed	Set the stop deceleration time
7	LED	Power light and status light
8	Socket	Motor Drive Roller socket

Drive Card Size



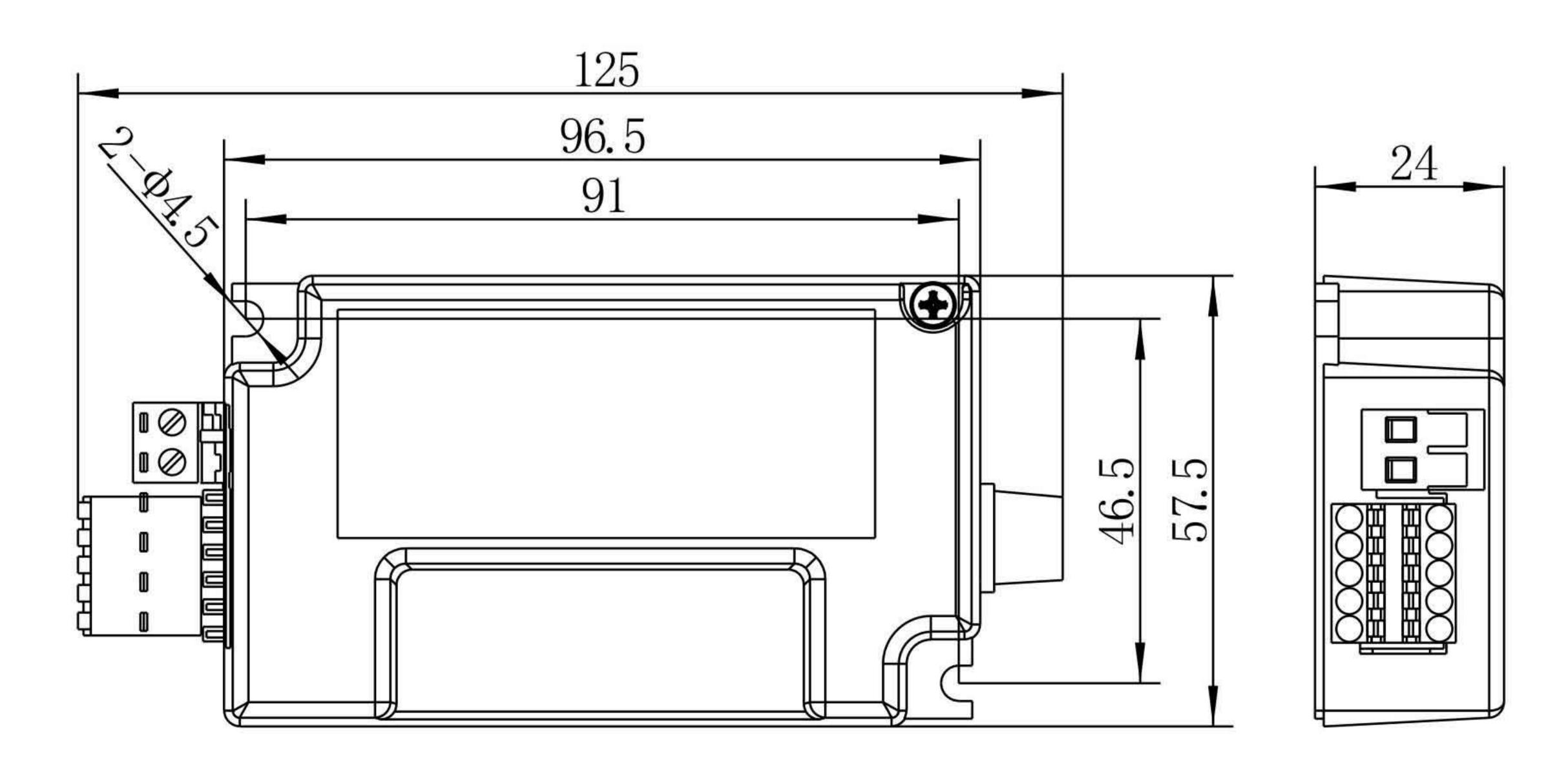


BD-201S



†		
1	Power interface	DC power input port
2	Input and output IO	Control signal input and error signal output, some functions are used in conjunction with DIP dial code.
3	DIP switch	Function setting
4	Speed dial	10-speed speed adjustment, Used in conjunction with DIP dial code to achieve 20-speed speed adjustment
5	LED	Power light and status light
6	Socket	Motor Drive Roller socket

Drive Card Size

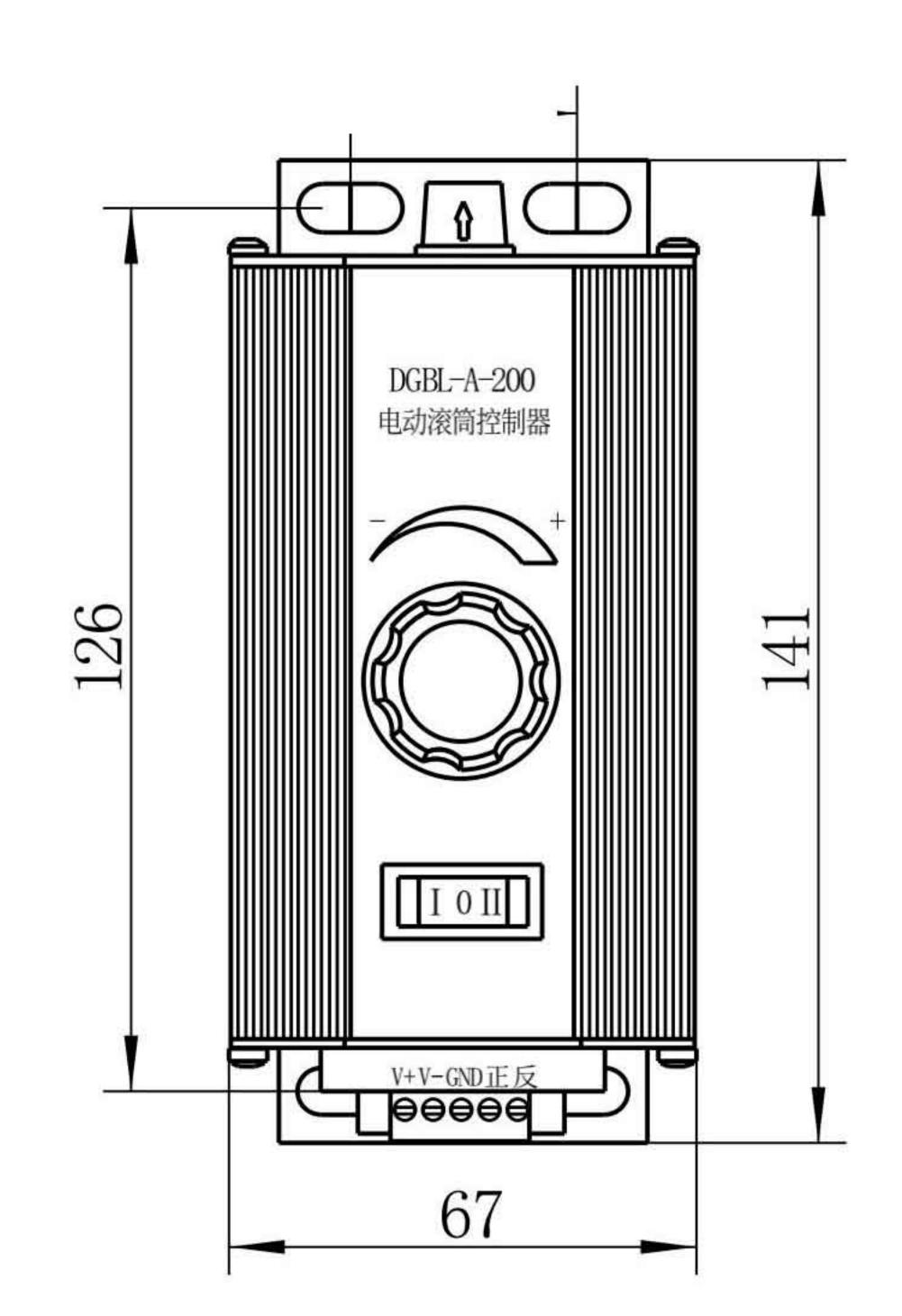


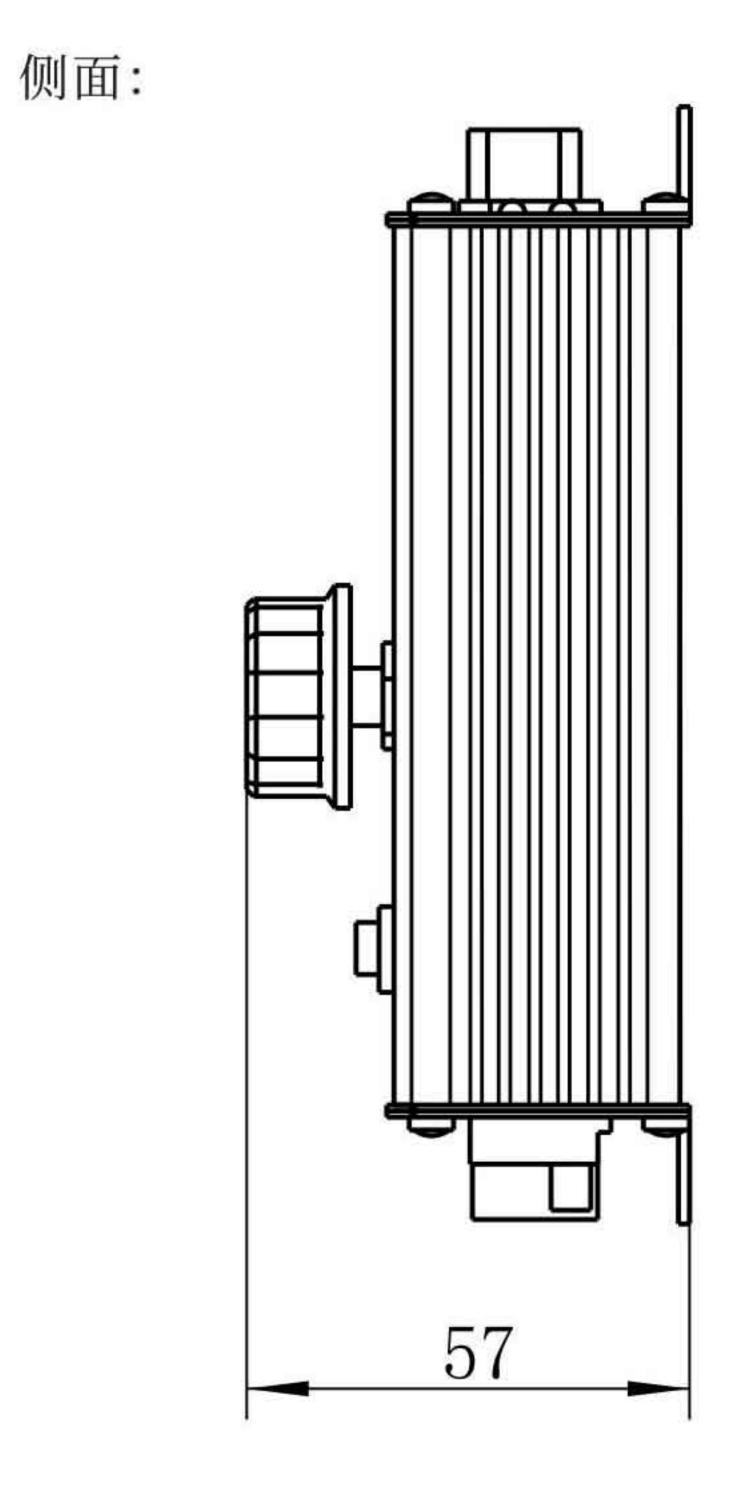
A-Type Controller



1	Power interface	DC power input port
2	Input and output IO	Control signal input and error signal output, some functions are used in conjunction with DIP dial code.
3	Forward/reverse knob	Function setting
4	speed knob	10-speed speed adjustment, Used in conjunction with DIP dial code to achieve 20-speed speed adjustment
5	LED	Power light and status light
6	Socket	Motor Drive Roller socket

Drive Card Size



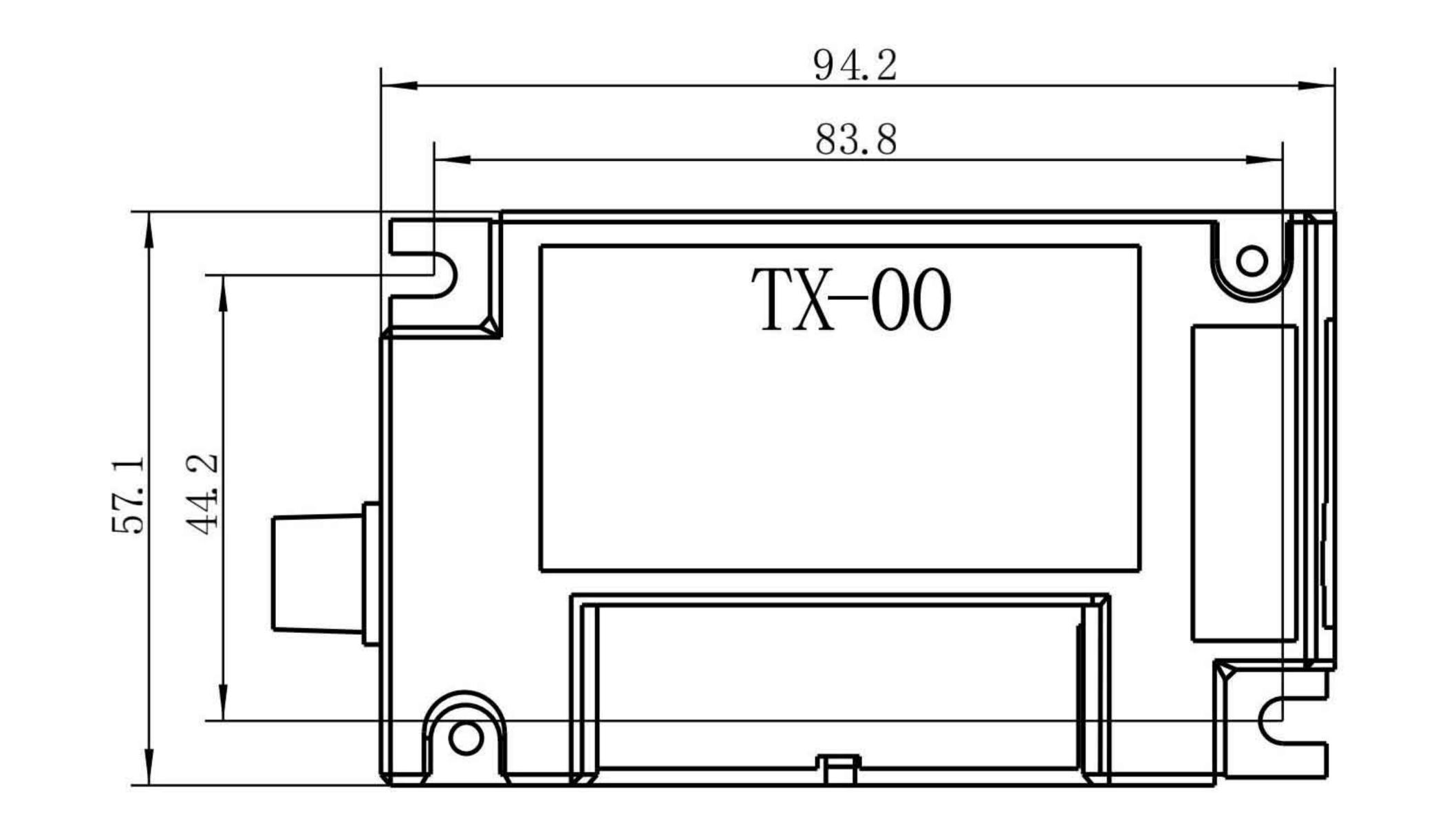


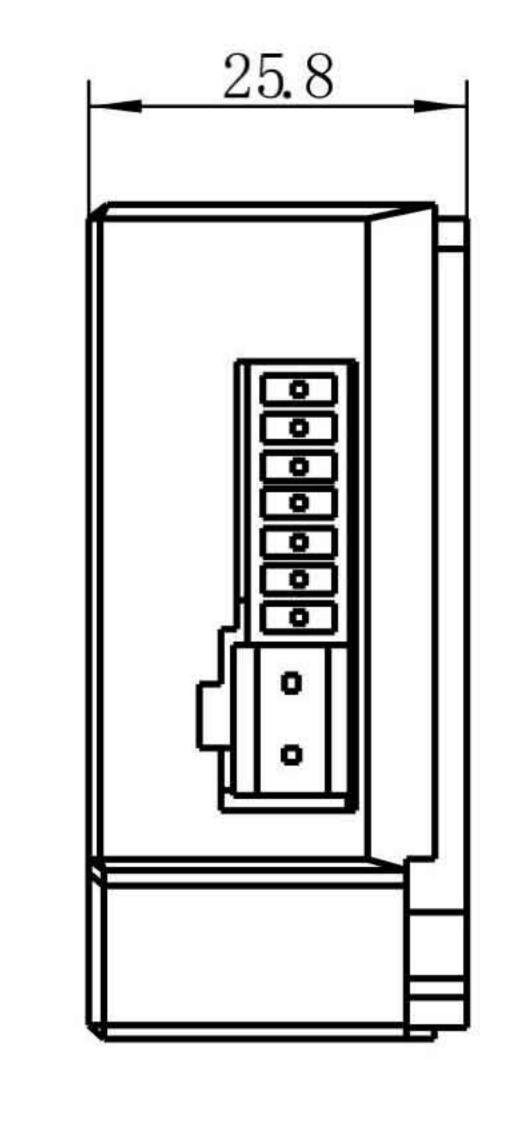
TX-00



1	Power interface	DC power input port
2	Input and output IO	Control signal input and error signal output, some functions are used in conjunction with DIP dial code.
3	DIP switch	Function setting
4	Speed dial	10-speed speed adjustment, Used in conjunction with DIP dial code to achieve 20-speed speed adjustment
.5	Startup speed	Set startup acceleration time
6	Stop speed	Set the stop deceleration time
7	LED	Power light and status light
8	Socket	Motor Drive Roller socket

Drive Card Size









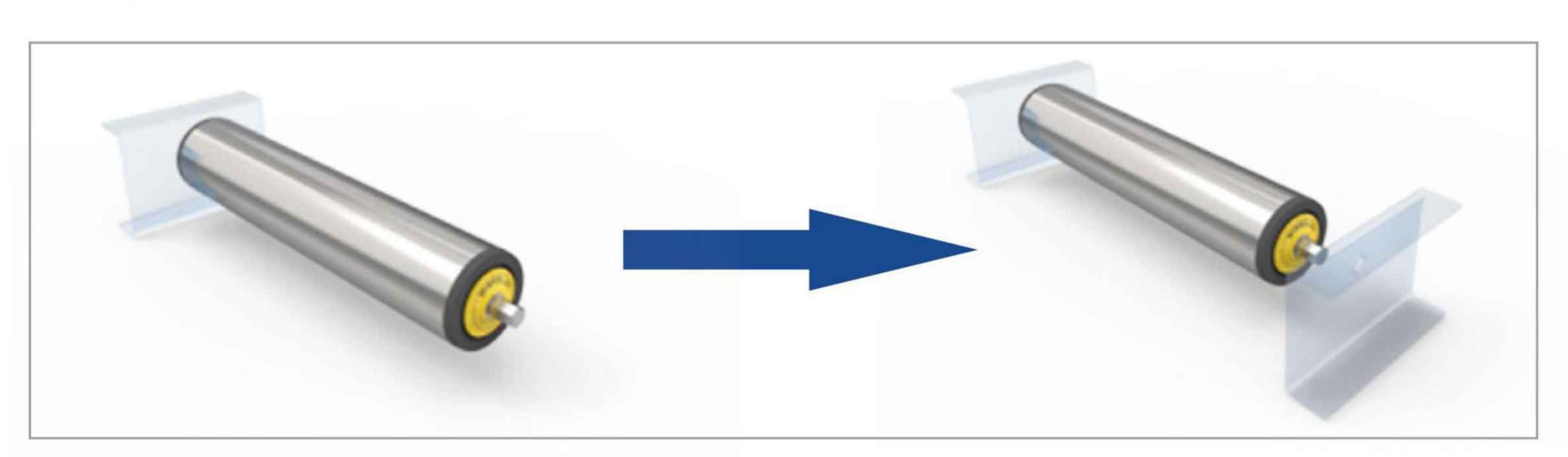
MOUNTING BRACKET



Tail end spring shaft Installation Instructions

Squeeze the spring shaft head on the other side of the Wire Shaft, insert the Wire Shaft into the mounting hole of the conveyor frame, reset by the force of the spring, and complete the installation.

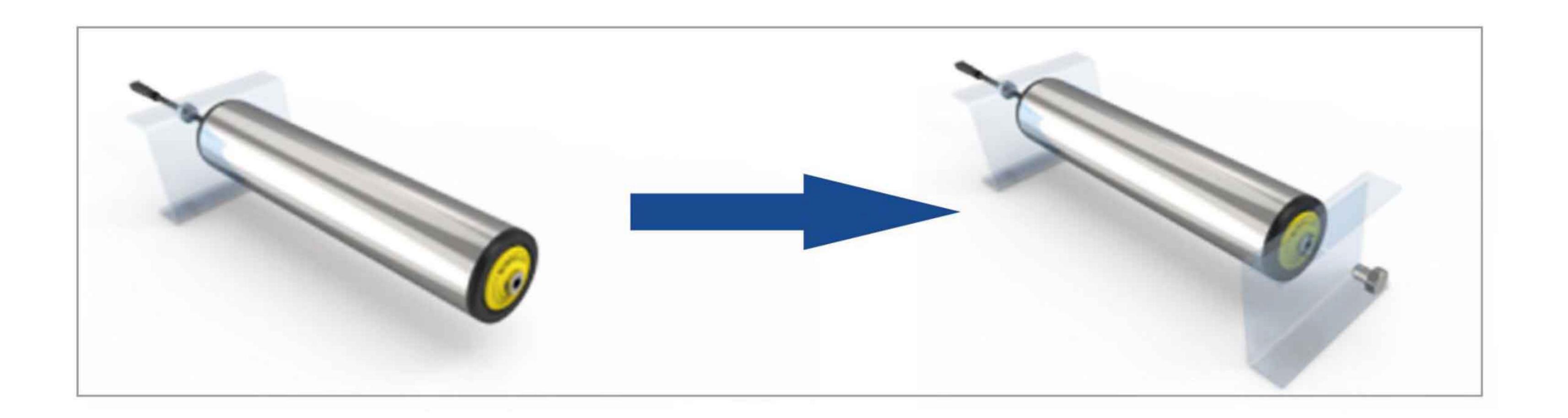
Therefore, the disassembly and assembly of the MDR does not need to dismantle the conveyor frame.





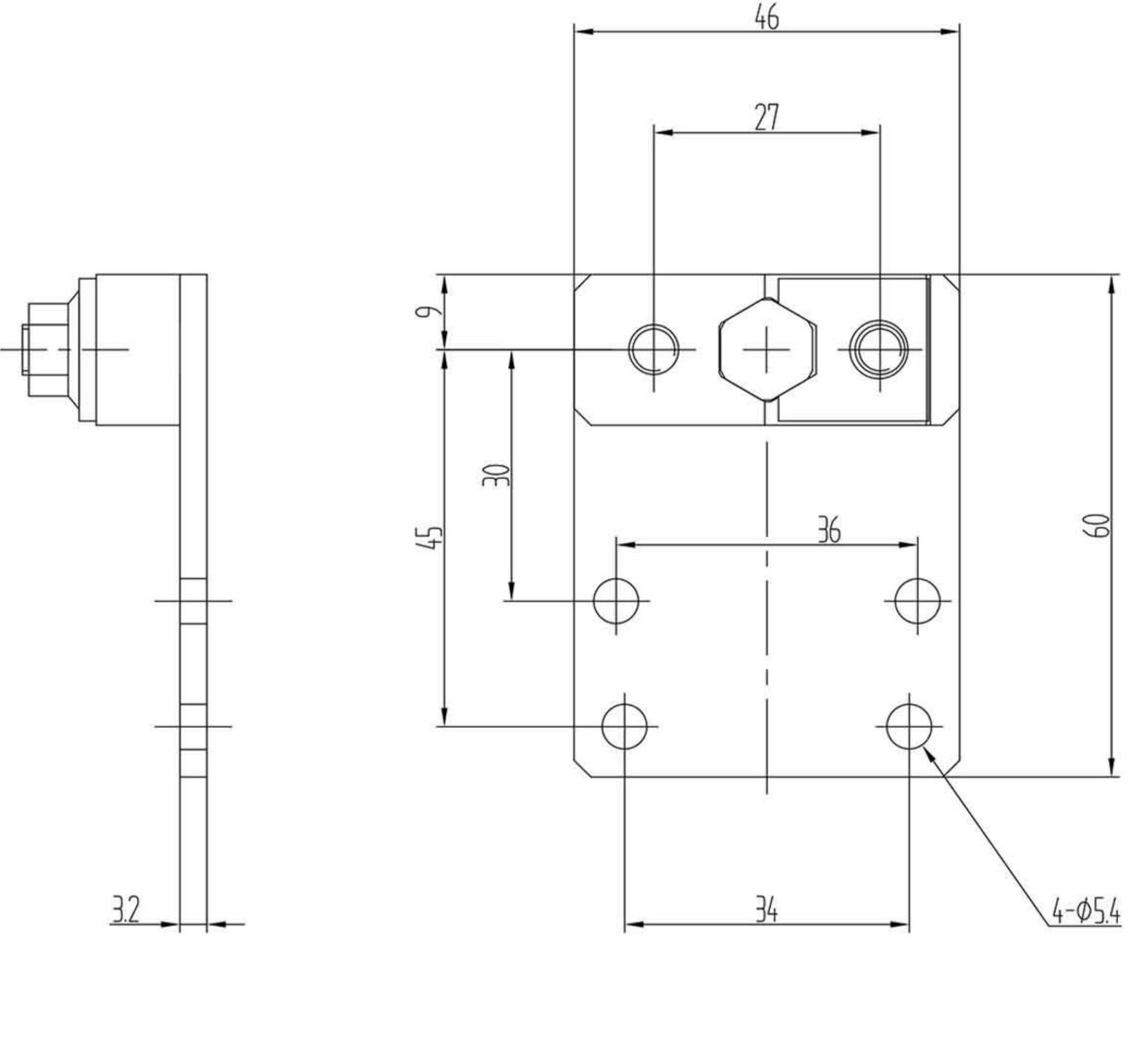
Threaded Shaft Installation Instructions

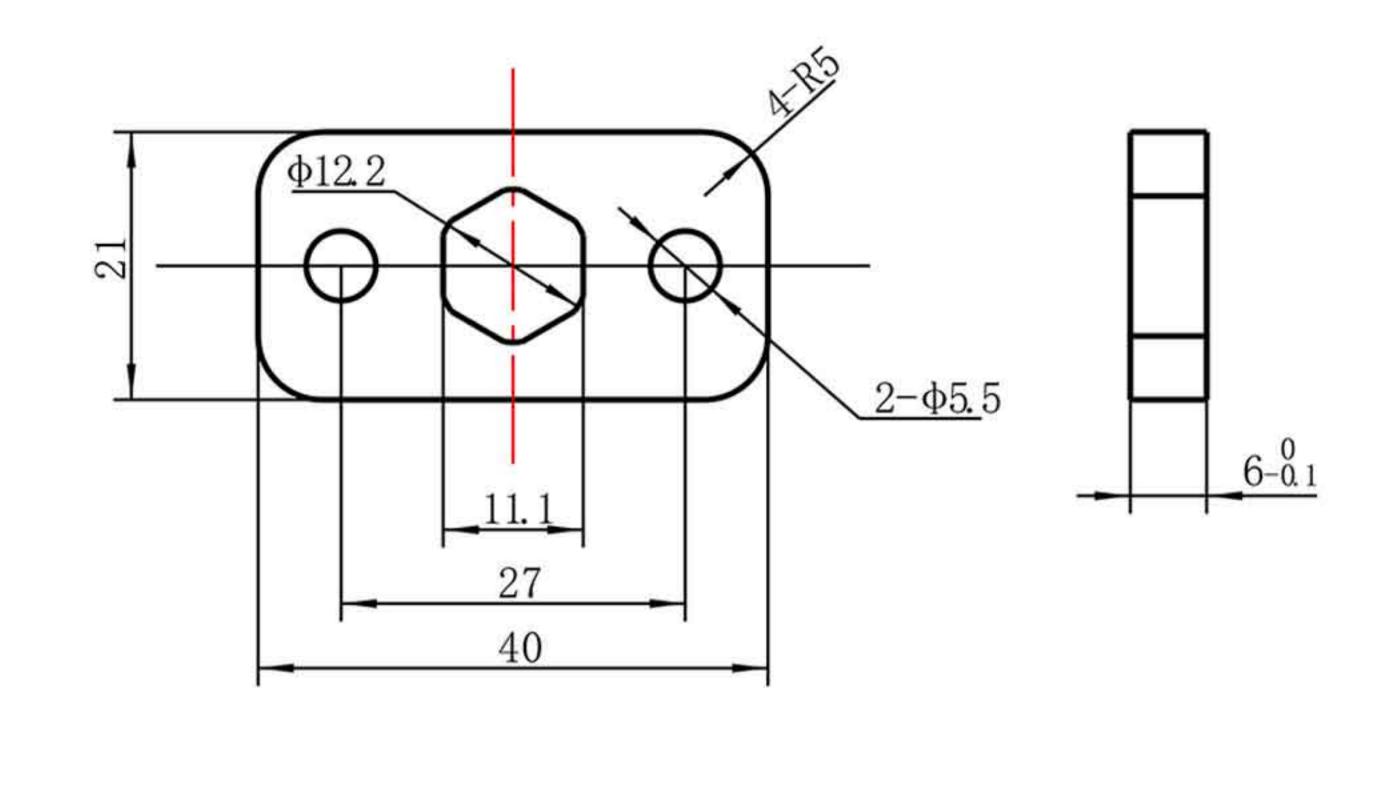
The tail shaft has an internal thread and directly locked with screws on the outside of the frame.

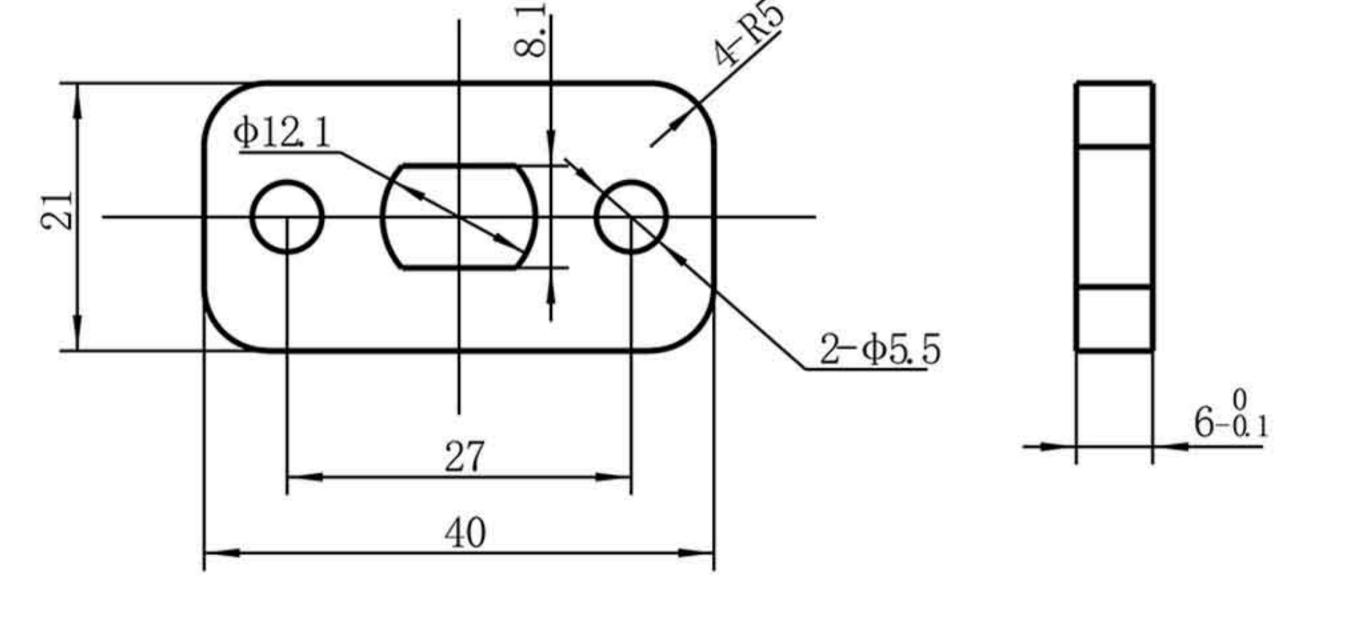


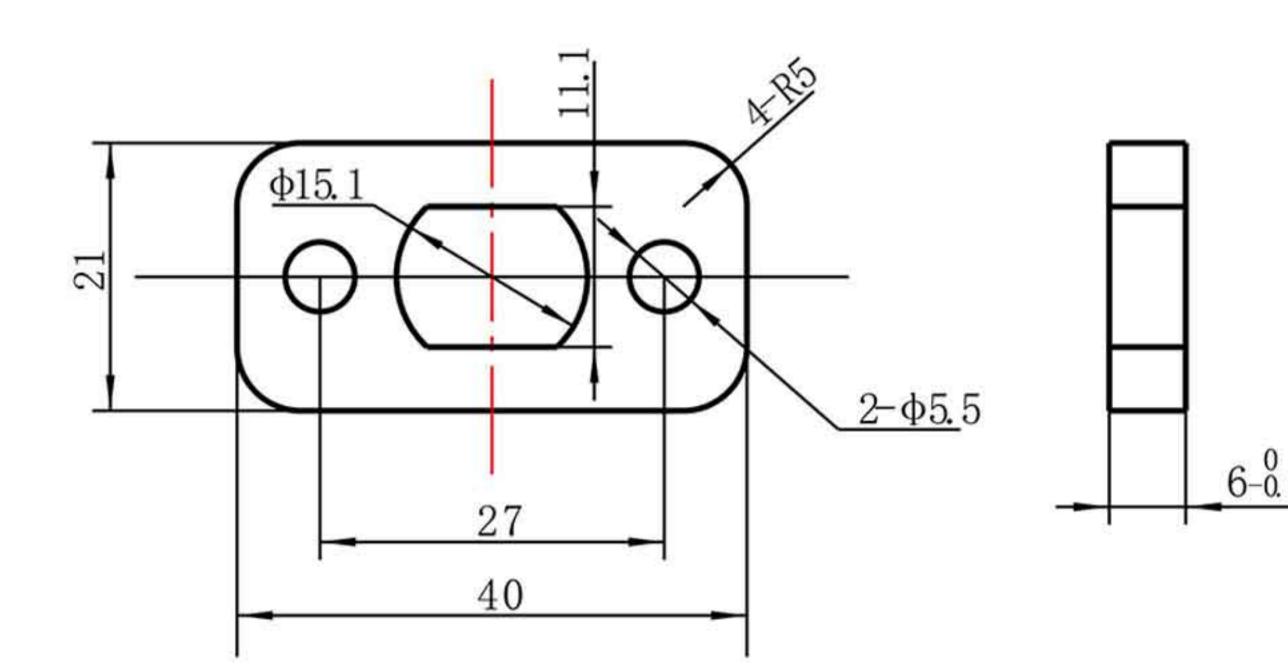


HX50 Mounting Bracket











Application Cases

