Winroller Technology

DC BRUSHLESS GEAR REDUCTION MOTOR DRIVE ROLLER DGBL50A/60A/76

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WINROLLER

Company Profile

WINROLLER is a global manufacturer of advanced conveyor components, specializing in the development and production of miniature and small motors and conveyor rollers.

The company has won numbers of invention patents, and passed ISO9001 ans SGS quality system certification, EU CE certification, ROHS certification, UL certification and high-tech product certification.

Products are widely used in industrial automation, security checking machine, express logistics and other occasions.

We sincerely invite global cooperation agents, strategic partners, interested parties please contact the overseas Marketing Department.

Products include:

Miniature AC asynchronous motor & DC permanent magnet synchronous motor;

DC brushless gear motor rollers;

AC gear motor rollers;

DC gearless motor rollers;

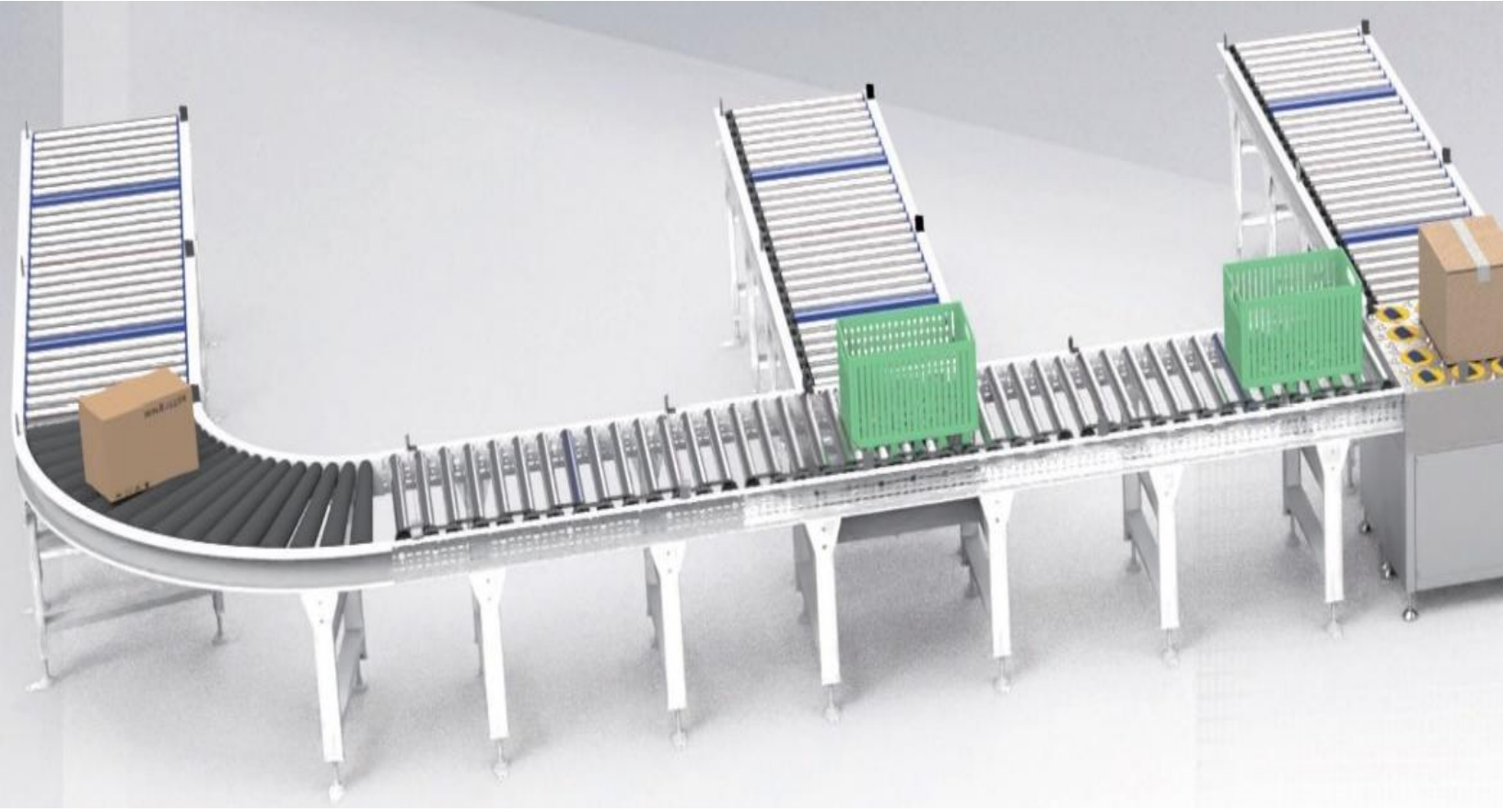
Conveyor idler roller.

Motor roller diameter :

Φ38 Φ50 Φ57 Φ60 Φ67 Φ76 Φ82 Φ98 Φ113 Φ138 Φ165 Φ216

Winroller Technology

CATALOG

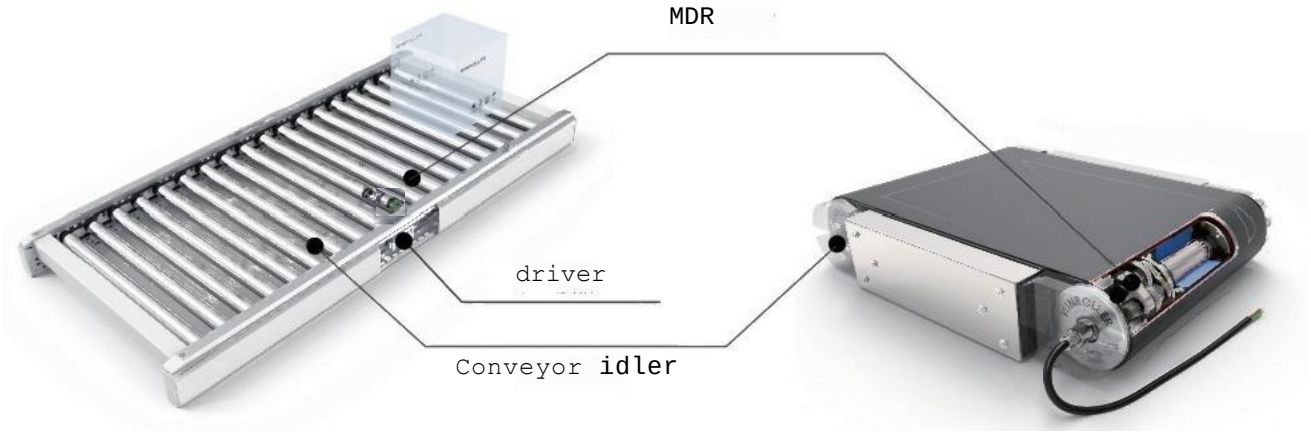


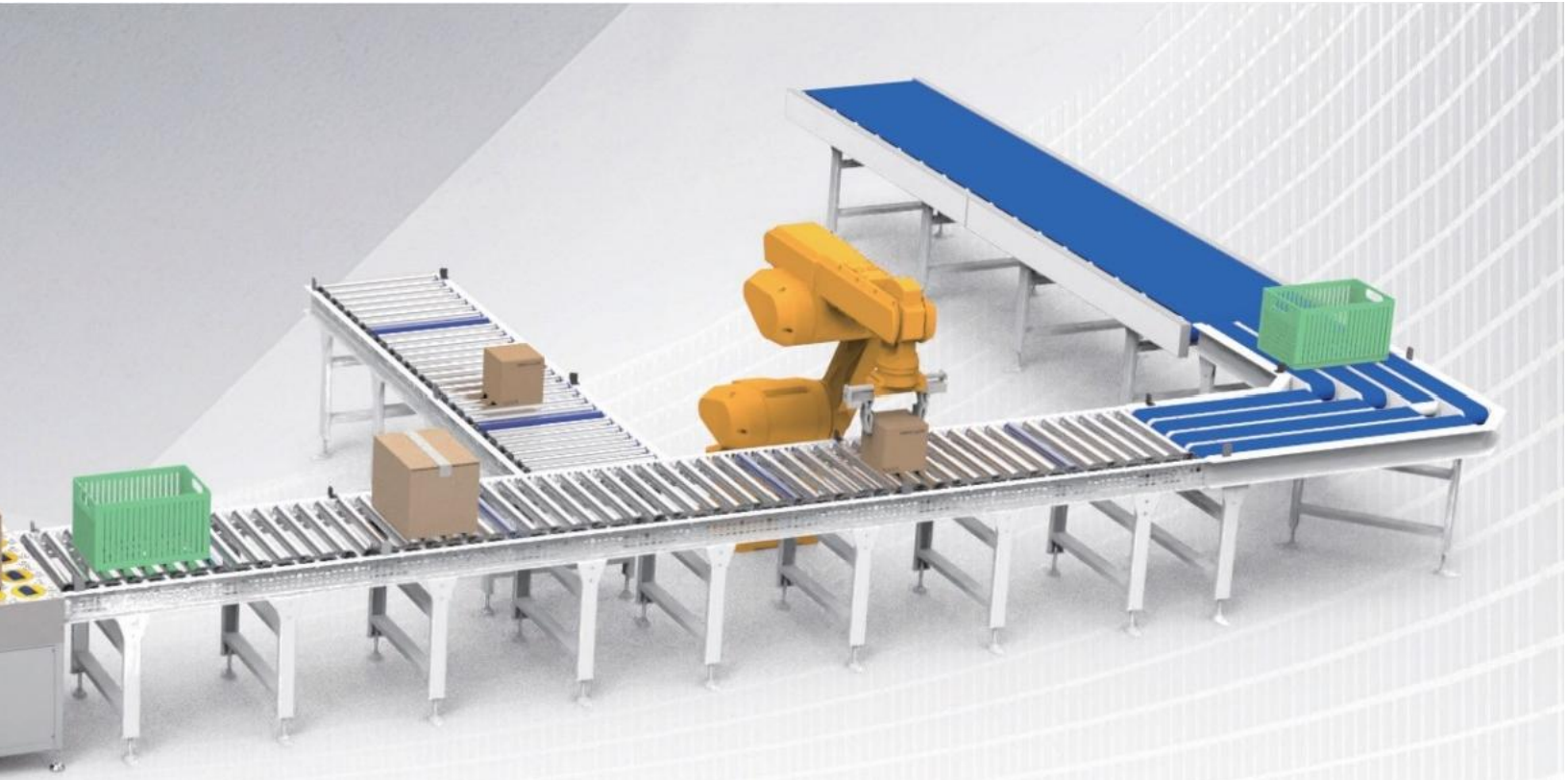
Motor Drive Roller

Motor drive roller(MDR) combine DC brushless motors, gearboxes and sensors, which are embedded in the steel tube. This innovative design allows the conveyor system to be free of the traditional auxiliary drive elements such as motors, chains, intermediate shafts, etc., and also eliminates the use of bulky gearboxes. Simple to install, the MDR can be easily activated by fixing it to the frame and connecting it to the power supply. This not only makes the conveyor system more simple and compact, but also greatly improves its aesthetics, safety and reliability.

MDR are used in a wide range of applications including food processing, pharmaceutical production, electronics assembly, airport logistics, postal services and various distribution industries, meeting the diverse and automated needs of different industries.

WINROLLER is widely recognized in the industry for its superior product quality, technical strength, integrity and service reputation. WINROLLER is a leading R&D and manufacturing company in the industry, and continues to bring superior products and experiences to customers.





Advantages of Winroller MDR >>

- Intelligent
- High torque
- high speed
- Quieter
- Energy saving
- Space saving
- Smart control
- Safety

Operating conditions >>

Selection of customers need to inform the following parameters, so that the business more accurately help choose the right model.

roller conveyor line	Linkage type	Linkage, diameter size, linear speed (with or without speed control), total load, material of conveyor, control mode, work environment, operating frequency, number of idler draged
	Straight roller type	
belt conveyor line	Floor type	Operating voltage, diameter size, belt (length, width, thickness), total load/dimensions/size, linear speed (with or without speed control), control mode, work environment, weight of goods.
	Roller type	

DGBL38 DC brushless MDR

Product Features

- Specially crafted for speed regulation and light to medium load scenarios, it delivers outstanding performance and stability.
- **Energy efficient power core:** Built-in DC brushless gear motor, energy efficient and durable. Match with special control card to realize precise control.
- **Safe voltage design:** 24VDC or 48VDC safe voltage is adopted to ensure the safety and reliability of the use process, no worries.
- **Wide speed range:** the speed range is from 0.8 to 79m/min, and the range of speed adjustment is as high as 12%-130%, which can meet the diversified needs in different scenes.
- **Intelligent control compatibility:** adapt to a variety of intelligent control cards, easy to realize IO control, convenient operation, high degree of intelligence.

- **High-quality roller material:** roller material can be carbon steel galvanized or stainless steel, durable, length can be customized according to demand, flexible and variable.
- **Multi-functional linkage design:** the roller supports pressure groove and can be equipped with linkage elements such as polygonal belt pulley and V-pulley to meet different transmission requirements and improve working efficiency.
- **Simple and Intelligent Installation:** The installation process is simple and convenient, and with the intelligent control system, it is easy to realize efficient and stable operation.

Appearance Dimensions

Selection Naming : DGBL38-20W-S-24V-Linear speed - RL(≥203mm,customizable)-cylinder material-Drive mode-H1H

RL= Reference length/order length* (including cover) EL= Installation length AGL=Total length of shaft

Performance Parameters

DGBL38

Rated power: 20W , Voltage: 24V					
Linear speed	Speed range (m/min)	Rated torque (N.m)	Starting torque (N.m)	Rated traction (N)	Start traction (N)
7	0.8~9.8	3.46	10.4	182	546
20	2.4~26	1.17	3.5	62	185
30	3.6~39	0.77	2.3	41	122
61	7.6~79	0.37	1.1	20	60

DGBL50A/60A DC brushless MDR

Passed CE certification,ROHS 2.0,EMC and other certifications.

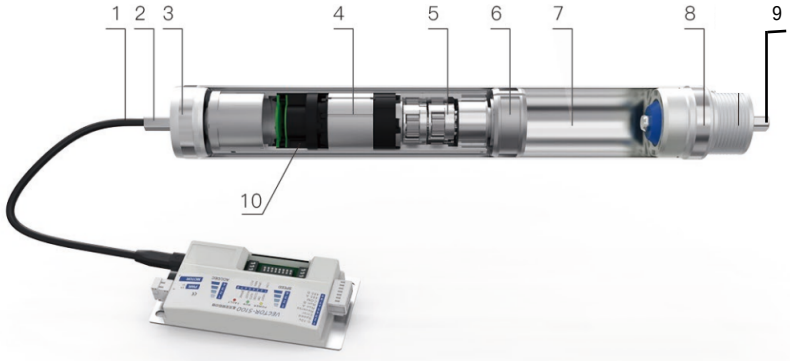
WINROLLER 50A/60A series roller is a high-performance,high-torque,energy-saving,low-noise MDR, widely used in the drive of unit handling conveyor systems,automated transmission systems in various industries transporting card board boxes,bins,platen sortires under normal ambient temperature. Also suitable for linear conveyors,small belt conveyors,especially for zero pressure accumulation(ZPA) conveyors.It can also be used in shuttle systems to connect conveyor sectionsor tranfer unit to other" embranchment of the conveyor system".Protection class IP54,ambient temperaturerange -15℃ to 45℃.

DGBL50A DC brushless MDR

Product Features

- DGBL50A MDR can easily adjust speed and cope with medium and light load scenarios, with excellent performance and wide application.
- Energy-efficient DC brushless gear motor is built-in, strong power and smooth operation;it can also be used with control card to realize precise control and make operation more convenient.
- **Powerful output torque:** Standard S1 working system 40W, S2 working system 50W; Enhanced S1 working system 80W, S2 working system 100W, to meet different load requirements.
- **Safe voltage design:** DC24V and DC48V are available for choice, so you can use it worriless.
- **Wide range of speeds:** from 0.87m/min to 120m/min, easily meets all kinds of speed requirements.
- **Extremely wide range of speed regulation:** from 8.7% to 100%, according to the different models of flexible speed regulation, to meet the needs of different work scenarios.
- **Intelligent control card with various adaptations:** supports IO/RS485/Ethernet communication,realizing accurate and efficient remote control and making the operation more intelligent and convenient.

Profile



1.Cable
2.The cable outlet shaft
3.Front cover
4.Motor core
5.Gearbox
6.Flange and tolerance ring
7.Cylinder
8.Poly-V linkage
9.End shaft
10.Position sensor

Control Advantages

High torque

The combination of new high-efficiency motor and high-precision gear makes the product performance better; under heavy load,the torque is 8%~10% larger than square wave.

More precise control

FOC provides precise control of the motor's stator magnetic field vector, so that the magnetic fields of the stator and rotor are always kept at 90°.

Infinitely adjustable speed

FOC can accurately control the size of the motor current, so the motor speed can generally realize 8.7%~100% stepless adjustable.

High operating efficiency

The operating efficiency of the motor is maximized, which is more than two times higher than that of asynchronous motors.

Sound protection mechanism

Over-voltage, under-voltage, over-current, over-temperature, phase failure and blocking protection.

Constant speed operation

The sine wave can realize constant speed operation.

Fast dynamic response

FOC directly controls the torque, realizes the maximum torque output, and can output positive and negative torque, which makes the whole system have fast dynamic response.

Smoother motor commutation

The commutation performance of FOC drive is extremely excellent, and the forward and reverse switching can be very smooth under the highest speed.

Strong adaptability

Wide range of speed regulation, flexible and effective response to the different needs of customers.

Anti-static

Anti-static, stable structure.

Quieter

The noise level is reduced by about 15% relative to conventional products.

Longer life

Sine wave adopts the maximum torque current to control the corresponding input current, and the iron loss of the motor decreases.

DGBL50A Performance Parameters

DGBL50A DC MDR characteristics table																					
Linear speed	Rated speed (Speed range) 8.7%~100% m/min	Standard										Enhanced									
		S1 working system (40W)				S2 working system (50W)				Max load (one drive unit)	Max number of idlers draged (pcs)	S1 working system (80W)				S2 working system (100W)				Max load (one drive unit)	Max number of idlers draged (pcs)
		torque (N.m)		traction (N)		torque (N.m)		traction (N)				torque (N.m)		traction (N)		torque (N.m)		traction (N)			
		rated	start	rated	start	rated	start	rated	start			rated	start	rated	start	rated	start	rated	start		
10	0.87-10	5.5	30.3	220	1210	7.11	39	284	1420	400	20	9.5	52.5	380	2090	10.6	53	424	2120	550	24
14	1.22-14	3.98	21.9	159.2	875.6	5.12	28.2	205	1025	370	20	6.8	37.4	272	1496	7.68	38.4	307.2	1536	500	24
22	1.91-22	2.8	15.4	112	616	3.48	19.1	139	695	300	18	4.7	25.8	188	1034	5.36	26.8	214.4	1072	440	22
26	2.26-26	2.4	13.2	96	528	2.98	16.4	119	595	250	16	4.1	22.6	164	902	4.6	23	184	920	350	20
36	3.13-36	1.7	9.4	68	374	2.15	11.8	86	430	160	16	2.9	16	116	638	3.3	16.5	132	660	200	18
51	4.43-51	1.20	6.6	48	264	1.50	8.3	60	300	120	14	2.0	11	80	440	2.3	11.5	92	460	180	18
60	5.22-60	1.02	5.6	40.8	224.4	1.29	7.1	52	260	120	12	1.75	9.6	70	385	1.97	9.85	78.8	394	150	16
83	7.22-83	0.74	4.1	29.6	162.8	0.92	5.1	37	185	60	12	1.3	7.2	52	286	1.42	7.1	56.8	284	70	15
120	10.44-120	0.51	2.8	20.4	112.2	0.64	3.5	26	130	40	12	0.88	4.8	35.2	193.6	0.98	4.9	39.2	196	50	15

remark:10~14m:three-stage reduction 22~120m:two-stage reduction

S1 Working system - suitable for continuous conveying of materials.Such like belt conveyor.

S2 working system - suitable for intermittent conveying of materials.Such like box conveyor.

The S1/S2 working system is switched by the driver DIP switch function.

※1.1N=0.1kgf、1N·m=0.1kgf·m; ※ 2. The values in this table for reference only.

※3. Constant speed closed-loop control, consistent speed under no load or rated load; ※4. The speed range is 8.7%~100% of the rated speed.

※5. Other speeds can be customized: For more faster speeds, please refer to the DGDD series.

※6.Sprocket drive mode are applicable for this list; For poly-V drive mode,the load on one drive unit don't exceed 200 kg; for O-belt drive mode,the load on one drive unit don't exceed 35 kg.

※7.Maximum load and maximum number of idlers draged: Due to the differences in the actual use of each customer's site, such as the installation horizontal degree of the roller, the center distance of the roller, the contact area between the goods and the roller, and other factors are not the same, the data is only a reference suggestion, for more accurate selection advice, please communicate with the salesman on the actual working conditions.

Tip: The power of switching power supply for one MDR needs to be double of the MDR power.

DGBL50A External Shortest Roller Length Table

DGBL50A Shortest Roll Length Comparison Table								
Roller power	Standard(40W/50W)				Enhanced (80W/100W)			
Motor type	DGBL50A two-stage reduction		DGBL50A three-stage reduction		DGBL50A two-stage reduction		DGBL50A three-stage reduction	
linear speed (m/min)	22/26/36/51/60/83/120		10/14		22/26/36/51/ 60/83/120		10/14	
End shaft type (with or without internal thread)	internal thread	No internal thread	internal thread	No internal thread	internal thread	No internal thread	internal thread	No internal thread
Plastic flat seal cover	265	320	280	330	295	350	310	360
Plastic O-belt wheel	280	300	300	315	310	330	330	345
Alloy synchronous wheel	270	270	290	290	300	300	320	320
Alloy poly-V belt wheel	270	290	290	305	300	320	320	335
Sprocket Wheel	255	265	275	285	285	295	305	315
Aluminum cover	260	275	280	295	290	305	310	325
Pressure groove	Please contact us for the shortest dimensions due to the variable factors such as the position of the pressure groove and the spring shaft.							

DGBL60A DC brushless MDR

DGBL60A Performance Parameters

DGBL60A DC MDR Characteristics Table																	
linear speed	Rated speed (Speed range) 8.7%~100% m/min	standard								Enhanced							
		S1 working system (40W)				S2 working system (50W)				S1 working system (80W)				S2 working system (100W)			
		torque(N.m)		traction(N)		torque(N.m)		traction(N)		torque(N.m)		traction(N)		torque(N.m)		traction(N)	
		rated	start	rated	start	rated	start	rated	start	rated	start	rated	start	rated	start	rated	start
12	1.04-12	5.5	30.3	183	1008	7.11	39	237	1304	9.5	52.5	316	1741	10.6	53	380	2090
16	1.39-16	3.98	21.9	132	729	5.12	28.2	170	935	6.8	37.4	226	1243	7.68	38.4	272	1496
26	2.26-26	2.8	15.4	93	511	3.48	19.1	116	638	4.7	25.8	156	858	5.36	26.8	188	1034
30	2.61-30	2.4	13.2	80	440	2.98	16.4	99	545	4.1	22.6	136	748	4.6	23	164	902
43	3.74-43	1.7	9.4	56	311	2.15	11.8	72	396	2.9	16	96	528	3.3	16.5	116	638
61	5.31-61	1.20	6.6	40	220	1.50	8.3	50	275	2.0	11	66	363	2.3	11.5	80	440
72	6.26-72	1.02	5.6	34	187	1.29	7.1	43	237	1.75	9.6	58	319	1.97	9.85	70	385
100	8.7-100	0.74	4.1	25	135	0.92	5.1	31	171	1.3	7.2	43	236	1.42	7.1	52	286
144	12.5-144	0.51	2.8	17	93.5	0.64	3.5	21	115	0.88	4.8	29	159	0.98	4.9	35.2	193.6

remark:12~16m:three-stage reduction 26~144m:two-stage reduction

※1.1N=0.1kgf、1N·m=0.1kgf·m;

※ 2. The values in this table are for reference only.

※3. Constant speed closed-loop control, consistent speed under no load or rated load;

※4. The speed range is 8.7%~100% of the rated speed.

※5. Other speeds can be customized: For more faster speeds, please refer to the DGDD series.

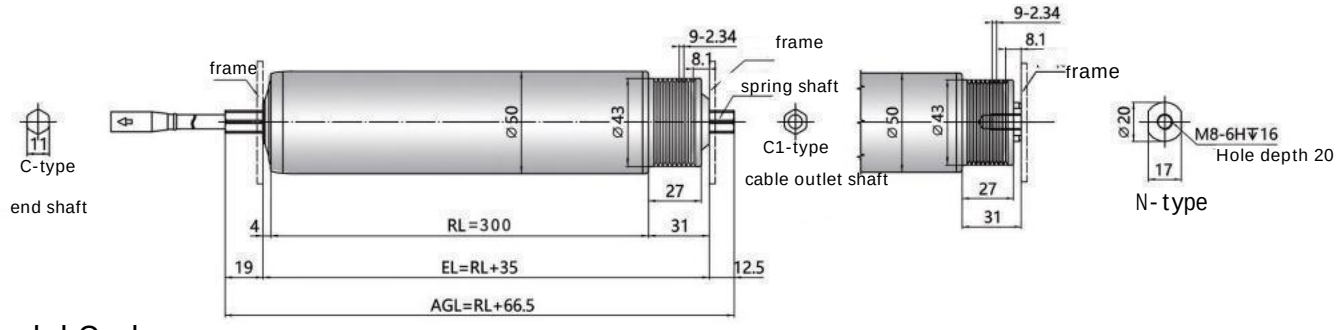
※6.Sprocket drive mode are applicable for this list; For poly-V drive mode,the load on one drive unit don't exceed 200 kg; for O-belt drive mode,the load on one drive unit don't exceed 35 kg.

Tip: The power of switching power supply for one MDR needs to be double of the MDR power.

DGBL60A External Shortest Roller Length Table

DGBL60A Shortest Roll Length Comparison Table								
Roller Power	Standard (40W/50W)				Enhanced (80W/00W)			
Motor type	DGBL60A two-stage reduction		DGBL60A three-stage reduction		DGBL60A two-stage reduction		DGBL60A three-stage reduction	
Linear speed (m/min)	26/30/43/61/72/100/144		12/16		26/30/43/61/72/100/144		12/16	
End shaft type (with or without internal thread)	internal thread	No internal thread	internal thread	No internal thread	internal thread	No internal thread	internal thread	No internal thread
Plastic flat seal cover	265	320	280	330	295	350	310	360
Alloy synchronous Wheel	270	270	290	290	300	300	320	320
Alloy poly-V belt Wheel	270	290	290	305	300	320	320	335
Sprocket Wheel	255	265	275	285	285	295	305	315
Aluminum cover	260	275	280	295	290	305	310	325

MDR Selection Method



Model Code:

DGBL – 50A – 40W – S – 24V – 10M – 300L – X – Q – C1 – C

❶ ❷ ❸ ❹ ❺ ❻ ❼ ❽ ❾ ❿ ⓫

① **Basic type :** DC MDR ② **Roller diameter :** Diameter 50/60mm

③ **Motor power :** 40W,50W(standard) 80W,100W (enhanced)

④ **Driver model :** S100,K100,H100 ⑤ **Voltage:** DC24V, DC48V

⑥ **Linear speed(m/min):** 10,14,22,26,36,51,60,83,120

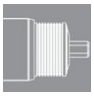
⑦ **Cylinder length:** 300mm(Customized according to customer needs)

⑧ **Cylinder material :**

X: Galvanized carbon steel P:Polyurethane adhesive cover JT:Cold rubber sleeve

JZ: Hot coat rubber sleeve S3: Stainless steel 304 JP:PVC sleeve JG: silica sleeve

⑨**Driving method:**


Q:Poly-V wheel


V: V belt wheel


T:synchronous wheel


E: O wheel


L: sprocket


O: pressure O groove


: knurling


I: roller straight


U:crowned


ZT: taper sleeve

⑩ **Cable outlet shaft**


C1: ϕ12 hexagon opposite side 11


C2:M12 hexagon opposite Side 11

⑪**End shaft**


C: ϕ12 hexagon opposite side 11


N: M8 internal thread

Tip:

※ Voltages and roller dimension can be customized;

※Special requirements: protection (IP65)-HS; brake: electronic brake or (mechanical brake)-Z; spring shaft-TX.

※The tube material of taper roller only use(galvanized, stainless steel).

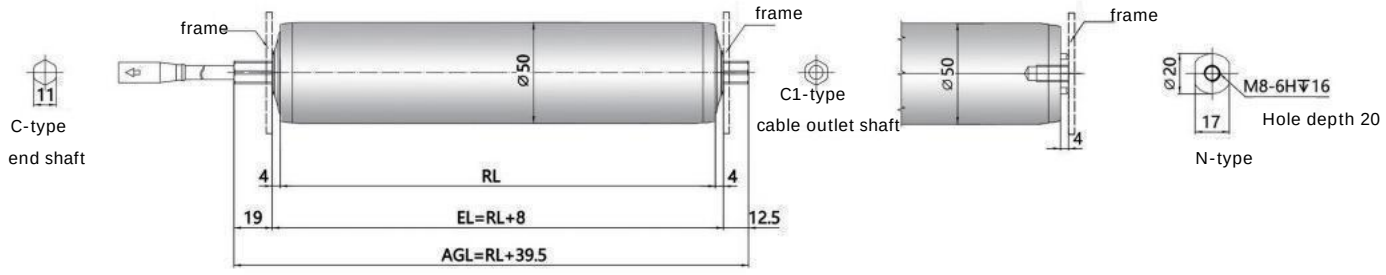
Drive Mode Dimension

※RL =Reference length/Order length* (including cover)

※EL =Installation length

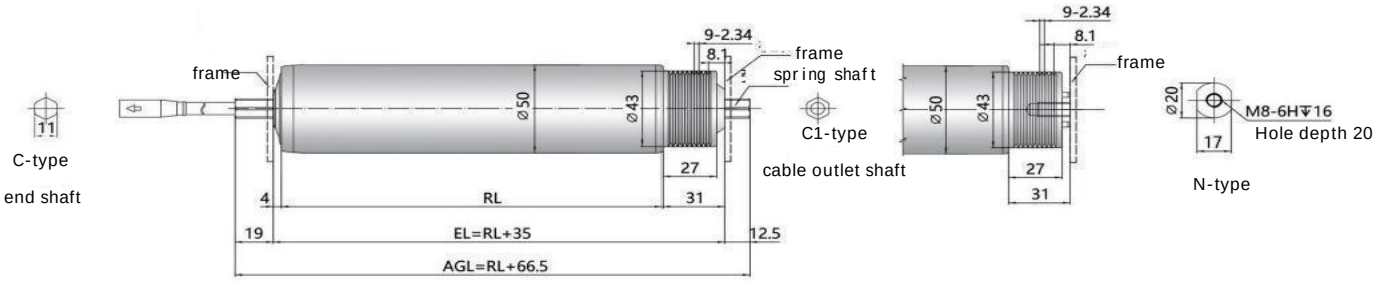
※AGL = Total length of shaft

I: Straight roller



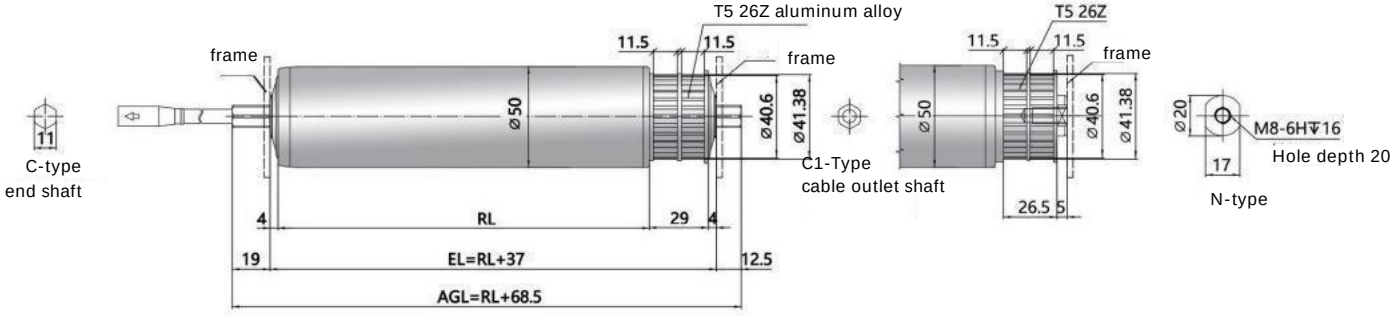
★**I:Straight roller** : Φ50*1.5mm steel pipe, material optional galvanized carbon steel,hard chromated, or 201, 304 stainless steel pipe.
End shaft: C-type shaft default with spring shaft, and no waterproof function.

Q:Poly-V wheel



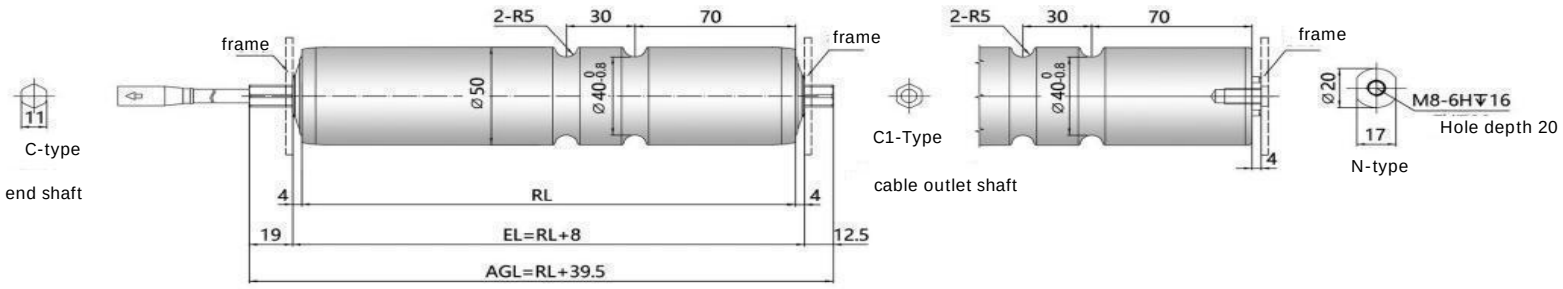
★**Poly V pulley** : ①Poly-V wheel with stainless steel,alloy,polymar three materials to choose. 9 grooves with PJ multi-wedge belt.
② The load capacity of the roller depends on the roller arrangement and the type of Poly-V wheel. When the idler roller is less or the use of 3 or even 4 groove Poly-V wheel, the load capacity is high, and vice versa.
③ The max load can be up to 200KG.For over 100KG, the alloy Poly-V wheel should be selected.
★remark : The φ50 end shaft is the spring shaft by default, and the polymar wheel has no waterproof performance.

T : synchronous wheel



★ **synchronizing wheel :**
①Synchronous belt can prevent skidding effectively, the picture shows molded nylon synchronous wheel,2 groove, T5 type 26 teeth,which can be customized to special requirements, material with aluminum alloy.Stainless steel and polymar wheels aren't waterproof performance.
② The load capacity of the roller depends on the roller arrangement and the type of synchronous belt.
Normally the load capacity of one unit can load 100KG.

Pressure O groove



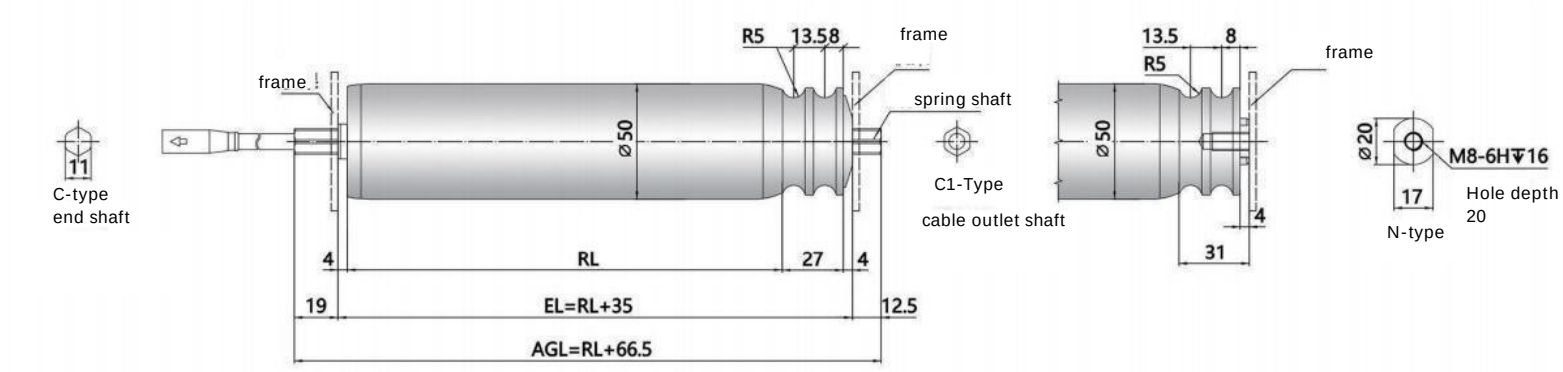
★pressure O groove :

① The roller of the groove are connected with polyurethane O belt, so it is very quiet and suitable for the light weight transportation.

②Torque attenuation is fast,one MDR can drag 7~8 idlers usually,in one conveyer unit, the weight of cargo should not exceed 35KG.

★Remark : when the end shaft of the roller is spring shaft, please contact us to confirm the dimension of the pressing groove.

E:O wheel

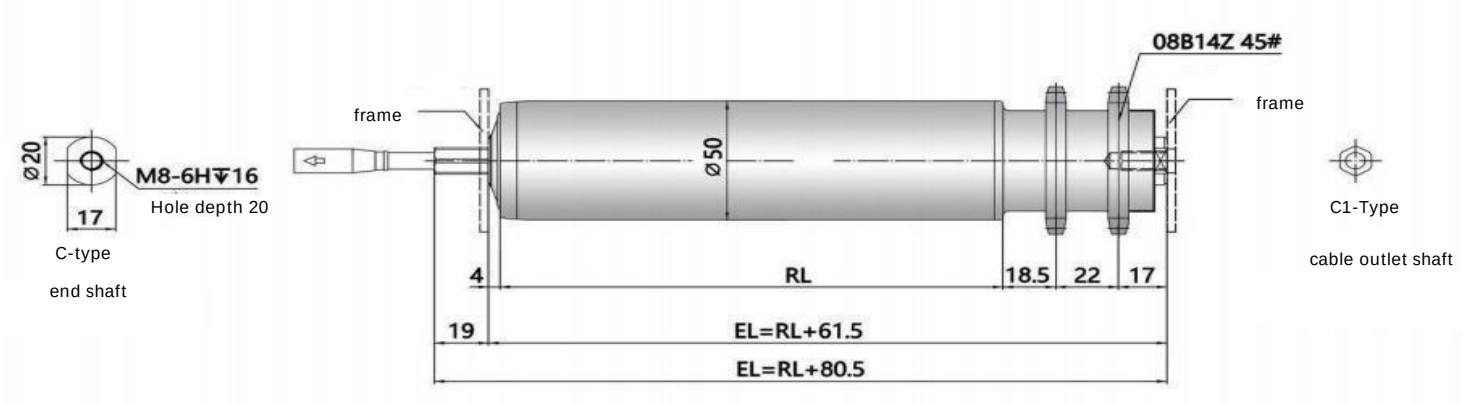


★O wheel:

① Nylon O wheel which using polyurethane O belt connected is very quiet and suitable for light weight conveyer applications.

② Torque attenuation is faster,one MDR can drag 7~8 idlers usually, and the loading weight should not exceed 35kg in one conveyer unit.

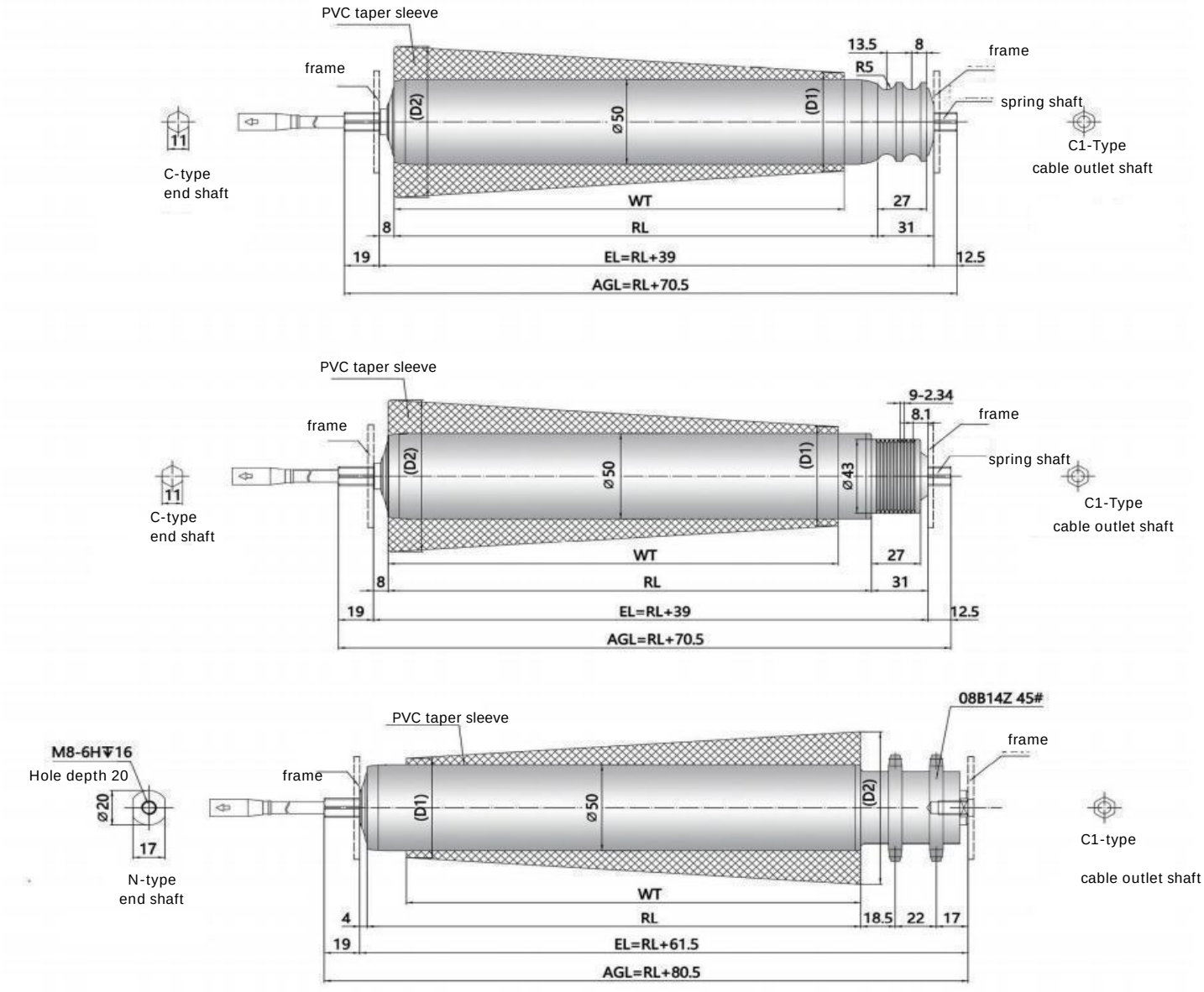
L:Sprocket



★Sprocket:

① Suitable for heavy-duty conveying,standard sprockets are 08B14T, single or double sprocket. The material can be carbon steel and stainless steel.

②Torque attenuation is fast, in order to play its best transmission performance, double sprocket MDR should be arranged in the middle of the conveyor as far as possible.



★**taper sleeve:** ① plastic taper sleeve 3.6 degrees, suitable for curved conveyor, multiple sections of taper sleeve constitute a complete tapered sleeve. (No diameter 60mm roller taper sleeve)

★Remarks:Use special tapered MDR mounting bracket. The mounting method isn't recommended to use external threads.

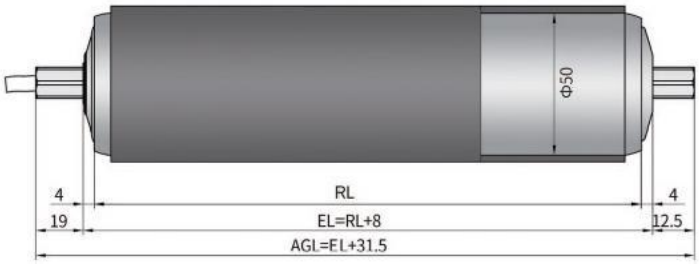
Plastic Taper Sleeve Size(ZT)

unit：mm

ZT	250	350	450	550	650	750	850	950	1050	1150
Small diameter(mm)	φ53.1	φ53.1	φ53.1	φ53.1	φ53.1	φ53.1	φ53.1	φ53.1	φ53.1	φ53.1
large diameter(mm)	φ69.1	φ74.4	φ80.8	φ87.1	φ93.7	φ100.0	φ106.3	φ112.6	φ118.3	φ124.7
ZT	300	400	500	600	700	800	900	1000	1100	
Small diameter(mm)	φ56.0	φ56.0	φ56.0	φ56.0	φ56.0	φ56.0	φ56.0	φ56.0	φ56.0	
large diameter(mm)	φ74.4	φ80.8	φ87.1	φ93.7	φ100.0	φ106.3	φ112.6	φ118.3	φ124.7	

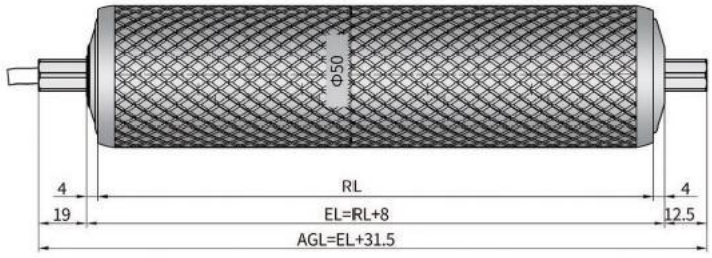
Tube surface process classification

Rubber covered tube surface



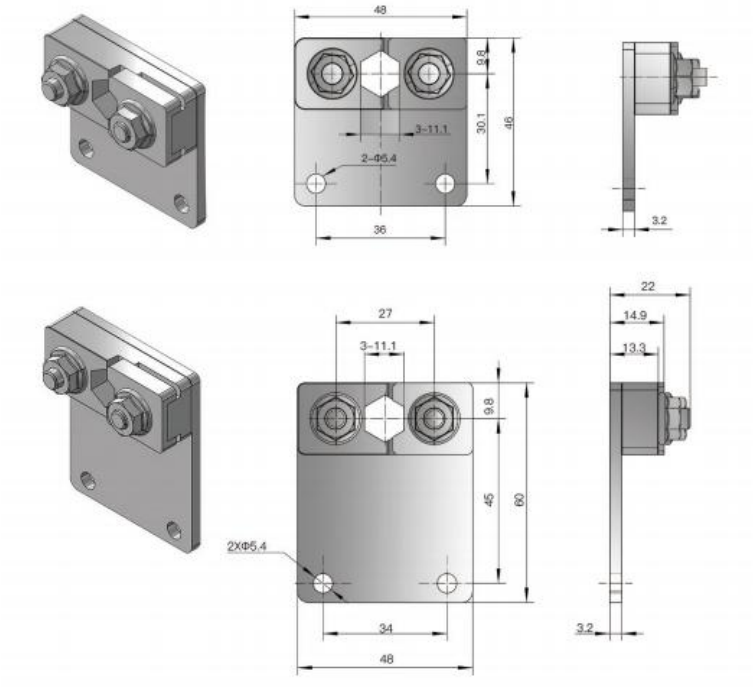
Surface cover rubber:φ50 become φ55 after coverring.
in order to effectively improve the operating conditions of the conveyor system, to prevent slippag(such as the specific station speed,small angle of the climb, etc.), it needs to improve the friction between the contact surface,the rubber coating is the most commonly used treatment.And rubber coating can also protect the bottom surface of the packages, reduce conveyor noise and so on.
Remarks: Default to black rubber or polyurethane. Contact us for special rubber requirements

Knurling tube surface



Surface cover soft PVC:φ50 become φ54after coverring.
In addition to the traditional rubber coating, you can also choose the PVC soft rubber, which has most of the functions of rubber coating, in increasing friction, protecting the bottom of the packages,reducing noise and vibration etc. are similar to the rubbercoating, but which have a good performance in delivery date and cost-effective.

Knurling tube surface treatment.
Knurling surface can increase the surface friction between the cargos and the roller. The most used pattern is mesh pattern.



DGBL50A/60A mounting bracket

Shaft mounting bracket(cable side)-Compact type

★Material: 3.2mm galvanized steel plate

★The cable outlet shaft must be locked tight

and cann't be loosened.

Shaft mounting bracket(cable side)-Standard type

★Material: 3.2mm galvanized steel plate

★The cable outlet shaft must be locked tight

and cann't be loosened.

★This picture is standard type

DGBL76 Pallet DC brushless MDR

TRANSLATION PALLET MOTOR DRIVE ROLLER

Pallet drived up to 3000Kg

The WINROLLER-DGBL high-torque series of MDR, with a max output of up to 300 W. The rollers are internally designed with a robust multi-stage planetary gear and can be equipped with a choice of high-performance AC asynchronous motors or DC brushless motors which depending on the requirements for precise cost control.In addition, this series of rollers can flexibly adjust the power according to the weight of the load, and can drive pallets up to 3000Kg. Together with the intelligent drive mode,it can easily realise network control and plug-and-play, which not only saves space effectively, but also has a compact structure and maintenance-free, greatly simplifying the design, installation and control process, and showing great convenience and aesthetics.

Can drive up to 3000kg of pallets

DGBL76 DC MDR Performance Parameters

DGBL76-100w standard

Rated power ： 100W, Voltage ： 24V/48V					
Linear speed	Speed range(m/min)	Rated torque(N.m)	Starting torque(N.m)	Rated traction(N)	Start traction(N)
11	1.32~14.3	18.6	46.5	489	1222
15	1.8~19.5	14.2	35.5	374	935
19	2.28~24.7	10.8	27	284	710
26	3.12~33.8	8.2	20.5	216	540
30	3.6~39	7.8	19.5	205	513
36	4.32~46.8	6.4	16	168	420
45	5.4~58.5	5.2	13	137	343
59	7.08~76.7	4.0	10	105	263

remark:11~26m:three-stage reduction 30~59m:two-stage reduction

※1.1N = 0.1kgf, 1N·m =0.1kgf·m.
※2. The values in this characteristic table are for reference only;
※3. Rated speed is the speed under rated voltage and rated load. The speed will be changed in case of overvoltage or undervoltage no load or overload; other speeds can be customised; please refer to DGDD67 series if you need faster speed;
※4. Sprocket drive mode are applicable for this list;
※5. Especially suitable for belt conveyor and heavy pallet conveyor;

Tip: The power of switching power supply for one MDR needs to be double of the MDR power.

DGBL76-200w High Torque

Rated power ： 200W,Voltage ： 24V/48V					
Linear speed	Speed range(m/min)	Rated torque(N.m)	Starting torque(N.m)	Rated traction(N)	Start traction(N)
13	1.56~13	25.6	64	674	1685
17	2.04~17	19.5	48.7	513	1283
23	2.76~23	14.8	37	389	972
30	3.6~30	11.2	28	295	738
35	4.2~35	10.8	27	284	710
42	5.04~42	8.8	22	232	580
52	6.24~52	6.4	16	168	420
69	8.28~69	5.4	13.5	142	355
90	10.8~90	4.1	10.2	108	270

remark:13~30m:three-stage reduction 35~90m:two-stage reduction

※1. 1N = 0.1kgf, 1N·m =0.1kgf·m.
※2. The values in this characteristic table are for reference only;
※3. Rated speed is the speed under rated voltage and rated load. The speed will be changed in case of overvoltage or undervoltage no load or overload; other speeds can be customised; please refer to the DGDD67 series if you need faster speed;
※4. Sprocket drive mode are applicable for this list;
※5. Especially suitable for belt conveyor and heavy pallet conveyor;

Tip: The power of switching power supply for one MDR needs to be double of the MDR power.

DGBL76-300w High Torque

Rated power： 300W, Voltage： 24V /48V					
Line speed	Speed range(m/min)	Rated torque(N.m)	Starting torque(N.m)	Rated traction(N)	Start traction(N)
17	2.04~17	28.7	57.4	755	1510
23	2.76~23	21.9	43.7	576	1152
30	3.6~30	16.5	33.1	434	868
35	4.2~35	15.9	31.8	418	836
42	5.04~42	12.9	25.8	339	678
52	6.24~52	10.5	21.0	276	552
69	8.28~69	8.0	16.0	210	420
90	10.8~90	6.0	12.0	158	316

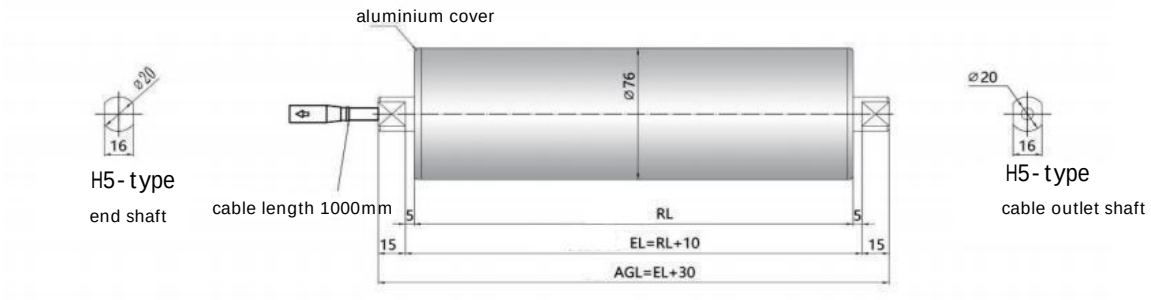
remark:17~23m:three-stage reduction 30~90m:two-stage reduction

※1.1N = 0.1kgf, 1N·m =0.1kgf·m.
※2. The values in this characteristic table are for reference only;
※3. Rated speed is the speed under rated voltage and rated load. The speed will be changed in case of overvoltage or undervoltage no load or overload; other speeds can be customised; please refer to the DGDD67 series if you need faster speed;
※4. Sprocket drive mode are applicable for this list;
※5. Especially suitable for belt conveyor and heavy pallet conveyor;
Tip: The power of switching power supply for one MDR needs to be double of the MDR power.

DGBL76 External Shortest Roller Length Table

DGBL76 Shortest Roll Length - DC						
Roller diameter	φ76					
Motor type	100W		200W		300W	
Linear speed (m/min)	45 ~88	12 ~28	35~ 90	13~30	35~ 90	17 ~30
internal thread▲ spring shaft★	Internal thread▲	internal thread▲	internal thread▲	internal thread▲	internal thread▲	internal thread▲
Straight roller (mm)	245	260	265	285	290	310
Sprockets (mm)	250	265	270	290	295	315

MDR Selection Method



Model Code ：

DGBL – 76– 100W – S – 24V – 12M – 300L – X – I – H5 – H5
❶ ❷ ❸ ❹ ❺ ❻ ❼ ❽ ❾ ❿ ⓫

① **Basic type** : DC motor roller

② **Roller diameter** ： Diameter 76mm

③ **Motor power** ： 100W、200W、300W

④ **Driver model**：S-Type (100W), D-Type (200W/300W)

⑤ **Voltage** : DC24V, DC48V

⑥ **Line speed(m/min)** : 12m/min, customized on request

⑦ **Cylinder length** : 300mm(Customized)

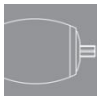
⑧ **Cylinder material** : X:galvanized steel S3:stainless 304 P:polyurethane cover JZ:hot coat rubber sleeve JG: silica

⑨ **Driving method** :


L: sprocket


I: roller straight


: knurling


U:crowned

⑩ **Cable outlet shaft** :


H3: ϕ 15 double-side milled flat 11


H5: ϕ 20 double-side milled flat 16


C3: ϕ 20 hexagonal opposite side 17.3


H52: ϕ 20 double-side milled flat 16 with M20 threads

⑪**Tail end shaft :**


H3: ϕ 15 double-side milled flat 11


H5: ϕ 20 double-sided milled flat 16


C3: ϕ 20 hexagonal opposite side 17.3


N1:M8 internal thread


N2:M12 internal thread

Tip:

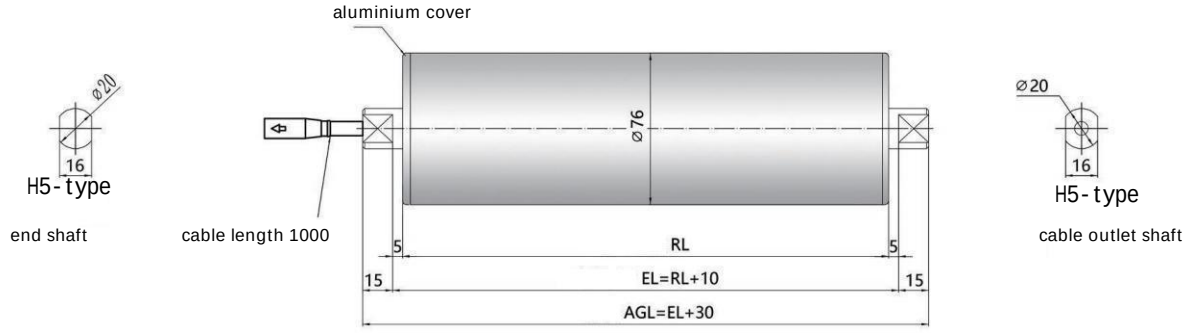
※Voltages and roller dimension can be customized;

※Special requirements: protection (IP65)-HS; brake: electronic brake or (mechanical brake)-Z;

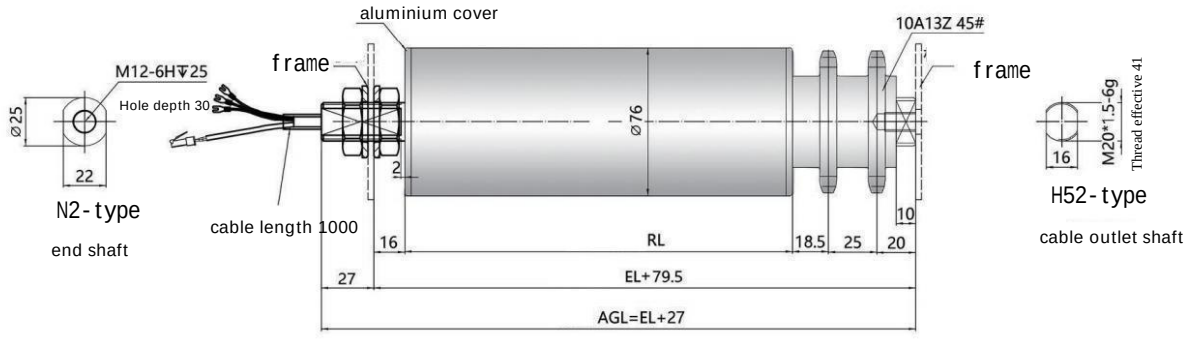
Drive Mode Dimension

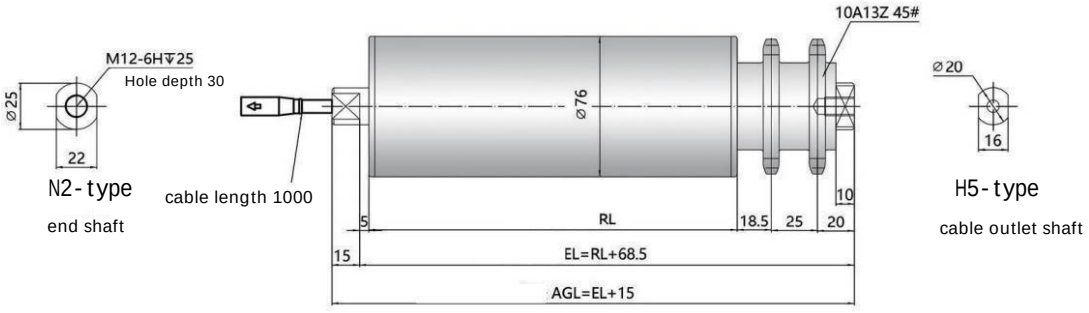
※ RL= Roller length/Ordering length (including cover) EL= Mounting length AGL=Total length of shaft

Straight Roller

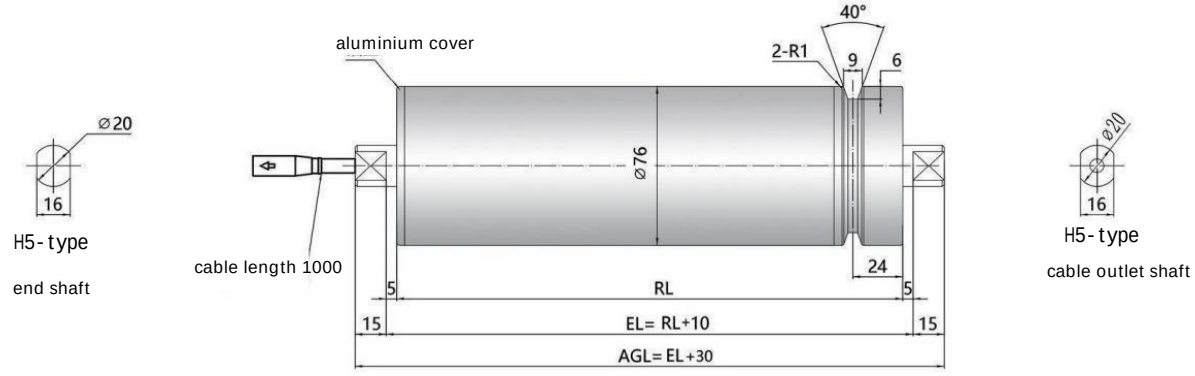


Sprocket





V groove



Control system DC Inverter Drivers

HIGH INTELLIGENCE CONTROL SYSTEM

D-type driver

Main Functions

2-wire system forward and reverse control

16-position digital knob speed control

0-10V analogue voltage stepless speed control

Speed closed loop support

Sensorless operation support

Adjustable start acceleration time

Adjustable stop deceleration time

EBS brake support

Abnormal alarm output

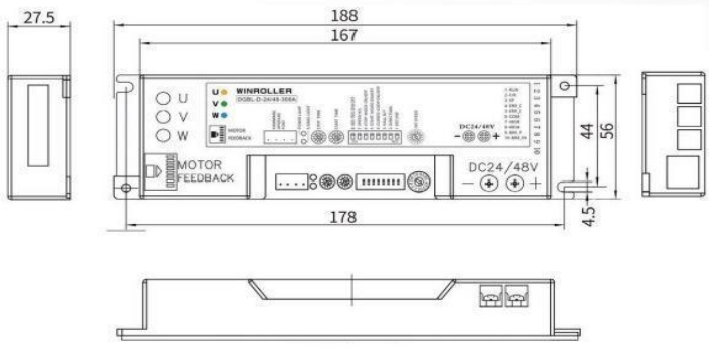
Dual LED status indication

Two-stage speed can be customized (not compatible with stepless speed control)

NPN PNP optional

RS485 interface (custom protocol)

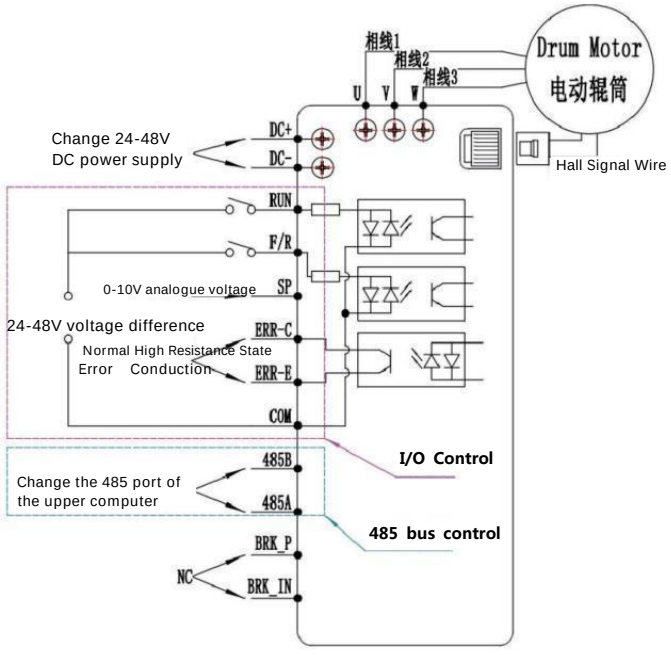
High strength EBS customisable



Installation dimensions

Note: For detailed description of controller instructions, please see our controller manual;

D Drive Wiring Diagram



I/O Control

1. Run valid, forward rotation

2.F/R valid, reverse rotation

3. Use internal speed knob for speed control, or input 0-10V analogue voltage from SP port for speed control, use No.1 DIP dial code to select.

485 bus control

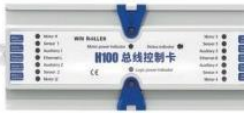
1. Connect to 485 host computer

2. The protocol is free protocol

3. The 485 communication address of the driver card must be configured before official use.

4. 485 directly controls the drum motor, start/stop, running direction and running speed. If the upper computer disconnects after 485 commands the drum to run, the drum still runs.

VECTOR S100 PRO/K100/H100 Drive Cards

comparison term	Drive Model	VECTOR-S100 PRO 	VECTOR-K100 	H100 
Electrical Specification Parameters	Rated Voltage	DC24V/48V	DC20V~65V	DC19V-60V
Speed Parameter	Speed Range/rpm	600～6900	1000~6900	600~6900
	Acceleration and deceleration range/s	0.39 ～ 3.9	0.3~4	0.3~4
Electrical Wiring Patterns	Connect to the roller	One drag one	One drag two	One drag four
	PNP	√(Internal Jumper)	√(Customers free choice)	√(Customers free choice)
	NPN	√(Internal Jumper)	√(Customers free choice)	√(Customers free choice)
Open-close Loop	open loop	√	×	×
	close loop	√	√(Default closed loop)	√(Default closed loop)
Control Mode	External analog	√ (0-10V)	×	Profinet Etherne CC-Link Modbus TCP
	IO	√	√	
	Multi-speed	3 speed	7 speed	
	RS485	√	√	
Brake Mode	Electronic brake	√	×	√
	Free brake	√	√	√
	Servo brake	√	√	√
Fault Output	ERROR-N	×	Faulty 0V No fault +24V/48V	Computer control Adaptive
	ERROR-P	×	Faulty+24V/48V No fault 0 V	
	ERROR	PNP connection, no fault about 13V, fault about 2V; NPN connection, no fault about 2V, fault about 13V.	×	

ROLLING WORLD,
ROLLING WIN.

Station Roller Manufacturer
【Winroller Technology 】

WINROLLER

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