

LOGISTICS SOLUTIONS

www.spg.co.kr
www.spgmotor.net

SPG – Powering the Future of Motion

SPG delivers high-performance motion solutions proved by global OEMs with vertically integrated manufacturing and engineering expertise.

- **Smart Motion**
  High-efficiency motors and precision gearboxes optimized for automated systems including conveyors, sorters, AGVs, and robotic equipment.
- **Proven Performance**
  Engineered for durability and consistent performance in mission-critical OEM equipment.
- **Global Scale**
  Global manufacturing capability and responsive engineering support.

Supporting OEMs worldwide

SPG's global manufacturing network enables reliable production and supply for automation OEMs worldwide.

- R&D and Engineering in Korea
- Manufacturing in Asia
- Local support in the United States

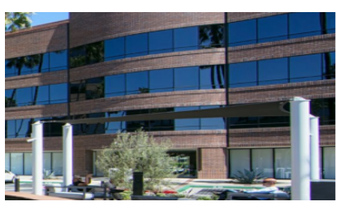

SPG R&D CENTER


SPG CO., LTD


SPG CHINA(SUZHOU) CO.,LTD


SPG USA(CHICAGO)


SPG CO., LTD(YANG-SAN)

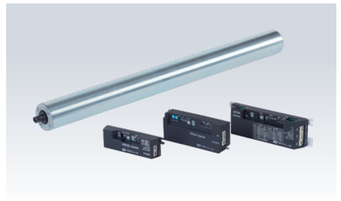

SPG USA(LA TECH CENTER)


SPG CHINA(QINGDAO) CO.,LTD


SPG VIETNAM(HOCHIMINH) CO.,LTD

Key Motion Technologies for Logistics

SPG provides a wide range of motion technologies designed for conveyors, robotics, and automated systems used in modern logistics and material handling environments.


MDR (Motorized Drive Roller)
Compact drive solutions for conveyor systems


Pancake BLDC Motor
Ultra-flat motor for automation equipment

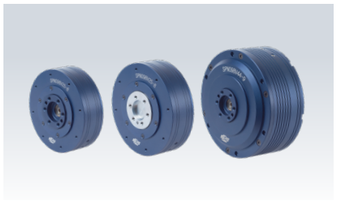

AC/DC/BLDC Gearmotors
Reliable gearmotor solutions

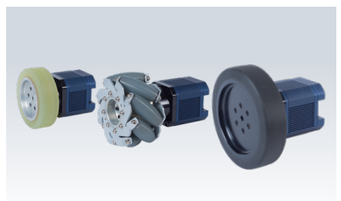
Precision Gearbox for Robotics and Automation

SPG provides a wide range of motion technologies designed for conveyors, robotics, and automated systems used in modern logistics and material handling environments.


Strain Wave Gearbox
High precision gearbox for robotics


Cycloidal Gearbox
Heavy-duty gearbox for high torque applications


QDD Actuator for Robotics
Integrated design, High strength gear material, Higher efficiency through lower operating temperature


Electric Drive Actuator (AGV/AMR)
Integrated wheel and gearmotor for smooth motion


Planetary Gearbox
High torque, Low backlash gearbox


Hollow Rotary Table
High reduction ratio with helical gear driven

Certified for Global Markets

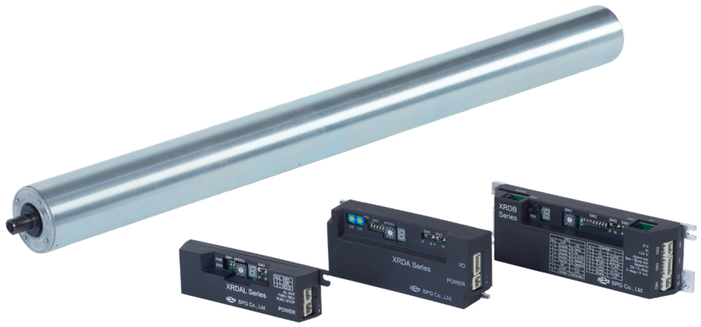
VDE MARK · SEMKO Certificate · Demko(DEMKO) Certificate · CSA MARK · NT MARK · TUV Certificate · CE MARK · UL MARK · I SO 9001 Certification · I SO 14001 Certification · CCC MARK

MDR Drive Solutions

All-in-One Roller Drive. Simplified Integration. Reliable Performance

MDR MOTOR PLATFORM

SPG's Motor Driven Rollers (MDR) offer a compact and energy-efficient conveyor drive solution for modern material handling systems. With the motor integrated inside the roller, MDR systems enable easy installation, flexible conveyor layouts, and reliable operation while supporting features such as zero pressure accumulation (ZPA) and low-maintenance performance.



STANDARD FEATURES

- Easy integration within the conveyor
- Safety and Excellent Energy Efficiency
- Acceleration and deceleration
- Zero pressure accumulation

OPTION

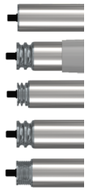
Standard Type

Tapered Roller Type

V-Belt Pulley

Round Pulley

Poly V-Belt Pulley



MDR MOTOR SPECIFICATIONS

Model	SPR380A	SPR500A	SPR605A
Roller Diameter	Ø38 mm	Ø50 mm	Ø60.5 mm
Voltage	DC 24VDC	DC 24VDC	DC 24VDC
Speed	17, 60 rpm	17, 60, 90 rpm	17, 60, 90 rpm
Tube Length [mm]	200, 300, 400, 500, 600 mm (Spring loaded shaft≥ 215)	300, 400, 500, 600, 700 800, 900, 1000 mm (Spring loaded shaft≥ 215)	300, 400, 500, 600, 700 800, 900, 1000 mm (Spring loaded shaft≥ 215)

MDR DRIVE CARD SPECIFICATIONS

Control Unit	XRDAL30F	XRDA50F	XRDB50F
Rated Voltage	DC 24V	DC 24V	DC 24V
Applicable Model	SPR380A	SPR500A	SPR605A
Starting Current	2.6 A	4.3 A	
Speed Control	Internal (10 steps)	Internal (20 steps) / External (0–10Vdc)	Internal (10 steps) / External (0–10Vdc)
I/O Logic	NPN / PNP		
I/O	Run/Stop FWD/REV Alam out	Run/Stop FWD / REV Speed In (0~10V) Alarm Out, Speed Out	F–Stop/F–Run DIR/E–Stop Speed In (0~10V) Sensor/Busy Out, Alarm Out
Feature	Status (FND Display), Servo Brake.	Status (FND Display) Acc/Dec Time(0~2.5sec) Alarm Signal Logic Inversion Alarm Reset (Auto/Manual)	Status (FND Display) ZPA Logic Alarm Signal Logic Inversion Alarm Reset (Auto/Manual)
Protection	Under Voltage Protection Over Voltage Protection Motor Lock Protection Over Current Protection Over Heat Protection JAM Error (only for XRDB50F)		

APPLICATIONS

Intralogistics Drive System / Various Conveyor systems











BLDC Drive Solutions

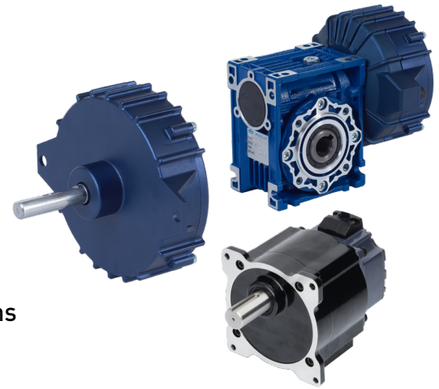
No Brushes. No Wear. Non-Stop Motion

BLDC MOTOR PLATFORM

SPG offers a wide range of BLDC motors with various power ratings and voltage options for industrial automation and logistics applications. These motors are optimized for conveyor and automated system drives. Flexible control solutions are available with standalone controllers or compact OEM-integrated designs.

STANDARD FEATURES

- Brushless design for extended service life
- High efficiency and low heat generation
- Compact and lightweight structure
- Flexible gearbox compatibility
- External or OEM-integrated controller designs

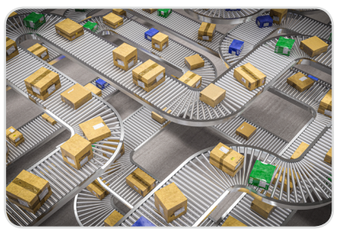


BLDC MOTOR SPECIFICATIONS

Model	DD113-M04W	DD113-M06W	DD113-M08W	DD113-M10W	DD113-M12W
Rated Voltage	DC 24V	DC 24V	DC 24V	DC 24V	DC 24V
Output Power	48 W	60 W	80 W	100 W	120 W
Torque	1.83 N·m	1.64 N·m	1.70 N·m	1.70 N·m	1.75 N·m
Speed	250 rpm	350 rpm	450 rpm	560 rpm	660 rpm

APPLICATIONS

Flexible Powered Conveyors / Roller Conveyors / Accumulation Conveyors / Sortation Systems







BLDC DRIVER CARDS

SPG driver cards deliver efficient control for BLDC motor drive systems in logistics and industrial automation applications. With flexible I/O configuration and user-friendly speed settings, they enable reliable operation and easy integration into automation equipment. Flexible control solutions are available with standalone controllers or compact OEM-integrated designs.

STANDARD FEATURES

- Compact, high-power drive design
- Selectable I/O logic (NPN / PNP)
- LED status indication for diagnostics
- Easy speed configuration (10-step)



DRIVER CARDS SPECIFICATIONS

Model	XRDD Series	XRDE Series
Rated Voltage	DC 24V	DC 24V
Applicable Motors	DD113-M04W ~ M12W	DD113-M04W ~ M12W
Starting Current	4.5A ~ 10.6A	4.5A ~ 10.6A
Speed Control	Internal (10 steps) / External (0-10Vdc)	Internal (10 steps) / External (0-10Vdc)
I/O Logic	NPN / PNP	NPN / PNP
Main Inputs	FWD / REV / Speed In	F-Stop / F-Run / DIR / E-Stop
Outputs	Alarm Out / Busy Out / Speed Out	Alarm Out / Sensor / Busy Out
Display	FND Status Display	FND Status Display
Additional Function	Acc/Dec Time (0-2.5 sec)	ZPA Logic Support
Alarm Handling	Alarm Logic Inversion / Auto-Manual Reset	Alarm Logic Inversion / Auto-Manual Reset

*__AC Input Driver Card Available__: SPG also provides AC-input driver card options, enabling direct AC power operation and eliminating the need for external AC-DC converters.

DC Gearmotor Solutions

OEM Ready. Drop- In Replacement, Proven in Flexible Conveyor Systems

SPG brushed DC gearmotors provide a cost-effective and proven drive solution for flexible conveyor applications. Designed for OEM equipment, they offer reliable performance, easy system integration, and stable long-term operation. A wide range of motor power ratings and gearbox ratios is available to support various conveyor system requirements.

STANDARD FEATURES

- Brushless design for extended service life
- High efficiency and low heat generation
- Compact and lightweight structure
- Flexible gearbox compatibility
- External or OEM-integrated controller designs



DC GEARMOTOR SPECIFICATIONS

Model	DGO-90180FS	DGO-80130BS	DGO-80130PL
Voltage	180 VDC	130 VDC	130 VDC
Power	95 W (1/8 HP)	53 W (1/14HP)	53 W (1/14HP)
Max. Torque	30 in-lb (3.39 N·m)	19 in-lb (2.15 N·m)	19 in-lb (2.15 N·m)
Insulation Class	B	B	B
Duty	Continuous	Continuous	Continuous
Gearbox Type	Parallel Shaft	Parallel Shaft	Planetary Gear
Gear Ratio	1:10	1:13	1:09
Speed	245 rpm	185 rpm	185 rpm
Lubrication	Grease	Grease	Grease

WHAT WE OFFER

1. Strategic Inventory Program
2. Full In-House Manufacturing
3. Local Engineering & Quality Support
4. Stable Cost Control
5. OEM Design Flexibility

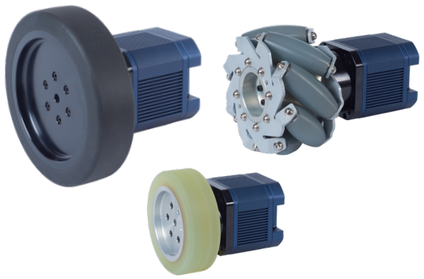
AGV/AMR Drive Solutions

Compact Power. Precision Control. Built for Autonomous Mobility

SPG provides high-performance drive solutions for AGV and AMR systems used in warehouse and logistics automation. Our solutions combine high-efficiency motors, precision gearboxes, and compact drive designs to meet the demanding requirements of autonomous mobile platforms.

STANDARD FEATURES

- Compact integrated drive design
- High torque density for heavy payload vehicles
- Precision planetary gearbox options
- Brushless motor technology for long service life
- Smooth speed control and stable motion



AGV/AMR DRIVE MOTOR SPECIFICATIONS

Model	XKA100R020-12	XKA100R040-12	XKA145R075-15
Frame Size	□100 mm	□100 mm	□145 mm
Voltage	48 VDC	48 VDC	48 VDC
Power	200 W	400 W	750 W
Rated Torque	7.7 N·m	20.8 N·m	45 N·m
Peak Torque	11.6 N·m	31.2 N·m	67.3 N·m
Speed	250 rpm	185 rpm	160 rpm
Gear Ratio	12:1	15:1	15:1
Backlash	≤10 arcmin	≤10 arcmin	≤10 arcmin
Operating Temperature	−10°C ~ +40°C	−10°C ~ +40°C	−10°C ~ +40°C

AGV/AMR DRIVE CONTROL SPECIFICATIONS

Model	VESCular6 (or equivalent)
Rated Voltage	48 VDC
Continuous Current	40 A max.
Control Mode	Position / Speed / Current / DPS / Goto
Encoder	14-bit magnetic encoder
Communication	ART / I2C / CAN / SPI / PPM (RC servo)

APPLICATIONS

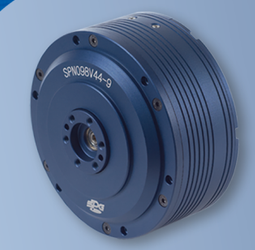
AGV&AMR / Service Mobile Robotics



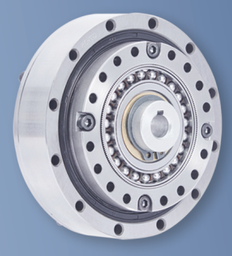




PRECISION GEARHEADS FOR AUTOMATION



QDD Actuator for Robotics



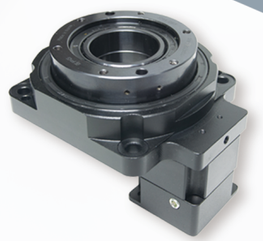
Strain Wave Gearbox



Cycloidal Gearbox



Planetary Gearbox



Hollow Rotary Table

MEMO

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