Pulse Geared Drive

PGD, PGD-Ai, & PGD-Ai-48

PGDs can be used to replace pneumatic and AC drives in conveyor applications to standardize controls and bus systems for higher efficiency and simplification of complex projects. All PDG models are available for **24V** power and PGD-Ai-48 model is available for **48V** power.

Basic idea behind the PGD models is the fact that there are often many more motors in conveyor systems than just the motorized roller. With the PGD's compact and strong gear motor, it can fit seamlessly into the controls architecture of the motor rollers. **No pneumatics** or any secondary communication bus interface is required.

The advantage of this is that the mechanical and electrical design of the conveyor system as a whole gets less expensive, easier to maintain, and more straightforward. Virtually all functionality required in conveyors are now controlled and driven by Pulseroller products. In most cases, pneumatic actuators can be completely replaced.

Compactness is the key for PGD models to be applied in many different applications such as servo motor for pop up wheels, in transfers as belt drive or lift motor, and as a general purpose actuator. This mechanical convenience along with the **advanced positioning control** capabilities of ConveyLinx makes the PGD models a perfect solution.

BENEFITS

- Servomotor for conveyor applications
- Replaces pneumatics
- Versatile application
- Same control like Senergy/Senergy-Ai
- One control for all motion in conveyor
- Space saving design

FEATURES

- Brushless 24V DC motor
- Double bearing output shaft
- Full Ai-Technology available
- External motor controller
- High overload capacity
- High starting torque
- Standard 4-Pin M8 connector with Ai option
- Internal Data memory with Ai option

CE RoHS Compliant ETL Intertek c UL us E503071

Performance Data - Senergy-PGD/Senergy-PGD-Ai 24V
All Models
ECO Mode

Nominal Gear Ratio	Gear Box Stages	Actual Gear Ratio	Output Shaft Speed RPM *Min*		*Max*	Torque N-m *in-lbs* *Rated*	*Starting*
67	3	605/9	8.50	~	86.70	4.4 *38.9*	24.4 *215.9*
45		45	12.80	~	129.00	2.9 *25.7*	16.3 *144.3*
33		33	17.40	~	176.30	2.1 *18.6*	12.0 *106.2*
27		27	21.30	~	215.10	1.7 *15.0*	9.8 *86.7*
18	2	55/3	31.40	~	317.30	1.2 *10.6*	6.6 *58.4*
15		15	38.40	~	387.20	0.9 *8.0*	5.4 *47.8*
11		11	52.40	~	528.90	0.7 *6.2*	4.0 *35.4*
9		9	64.00	~	645.30	0.5 *4.4*	3.2 *28.3*

Rated Current	**Starting Current**
2.5A	3.0A

Performance Data - Senergy-PGD/Senergy-PGD-Ai 24V
All Models
BOOST & BOOST-8 Modes

Nominal Gear Ratio	Gear Box Stages	Actual Gear Ratio	Output Shaft Speed RPM *Min*		*Max*	Torque N-m *in-lbs* *Rated*	*BOOST Starting*	*BOOST-8 Starting*
67	3	605/9	8.50	~	62.70	8.0 *70.8*	31.8 *281.4*	36.1 *319.5*
45		45	12.80	~	93.30	5.4 *47.8*	21.3 *188.5*	24.3 *215.1*
33		33	17.40	~	127.50	3.9 *34.5*	15.6 *138.1*	17.7 *156.6*
27		27	21.30	~	155.50	3.2 *28.3*	12.8 *113.3*	14.5 *128.3*
18	2	55/3	31.40	~	229.50	2.1 *18.6*	8.6 *76.1*	9.8 *86.7*
15		15	38.40	~	280.00	1.8 *15.9*	7.1 *62.8*	8.1 *71.7*
11		11	52.40	~	382.50	1.3 *11.5*	5.2 *46.0*	5.9 *52.2*
9		9	64.00	~	466.60	1.0 *8.9*	4.2 *37.2*	4.8 *42.5*

Rated Current	**BOOST Starting Current**	**BOOST 8 Starting Current**
3.5A	5.0A	8.0A

Performance Data - Senergy-PGD-Ai-48V

Nominal Gear Ratio	Gear Box Stages	Actual Gear Ratio	Output Shaft Speed RPM *Min*		*Max*	Torque N-m *in-lbs* *Rated*	*Holding*
45	3	45	12.89	~	155.56	2.95 *26.1*	7.94 *70.3*
33		33	17.61	~	212.51	2.16 *19.1*	5.82 *51.5*
27		27	21.48	~	259.26	1.25 *11.1*	3.10 *27.4*
15	2	15	38.67	~	466.67	1.02 *9.0*	2.54 *22.5*
11		11	52.82	~	637.52	0.75 *6.6*	1.86 *16.5*

Rated Output	**Rated Current**
50W	1.6A

General Specifications	PGD	PGD-Ai	PGD-Ai-48	PGD-IDC
Shaft Diameter	16 mm			
Keyway	5 x 5 x 25 mm			
Motor Cable Length	600 mm	1000 mm		600 mm
Motor Controller Connection	9 Pin JST	4 Pin M8		5 Pin M8
Washdown Model Available	No	Yes		No
Mechanical Brake Option	Yes	No		No
Ambient Temperature	-10 ~ 40°C (14 ~ 104°F) (No Condensation)			
Ambient Humidity	10 ~ 90% RH (No Condensation)			
Certifications	CE, UKCA, RoHS, IP54 UL Recognized to UL 1004-1 ETL Listed to UL 1004-1 & UL 1004-6			CE, UKCA, RoHS, IP54
Input Voltage	24 VDC		48 VDC	24VDC
Nominal Power Output	40W (50W in Boost Mode)		50W	38W
Rated Current	2.5A (3.5A in Boost Mode)		1.6A	2.4A
Starting Current	5A Boost Mode / 8A Boost-8 Mode		4.0A	3.0A
Maximum Motor RPM	5800 ECO / 4200 Boost & Boost-8		7000	5800
Minimum Motor RPM	580			
Minimum Duty Cycle	0.5 sec ON / 0.5 sec OFF (1.5 sec OFF when in Boost-8 Mode)		0.5 sec ON / 0.5 sec OFF	
Continuous Operation	At rated load/current in ECO Mode		No overheat at rated load/current	
Compatible Controls	ConveyLinx ConveyLinx-HTF ConveyLinxE ConveyLinxE-HTF E-QUBE EZ-QUBE EZ-QUBE-W EZ-QUBE-HTBF	ConveyLinx-Ai2 ConveyLinx-Ai3-24-FC ConveyLinx-Ai3-24-RC MotionLinx-Ai E-QUBE-Ai EZ-QUBE-W-Ai	ConveyLinx-Ai2-48 ConveyLinx-Ai3-48-FC	Any 3rd Party Control that provides: Pin 1: +24V Pin 2: Direction Pin 3: Gnd Pin 4: Error Pin 5: Analog Speed

Intertek

E503071

ALSO AVAILABLE IN IDC CONFIGURATION

Ordering Information

Part Number Definition for PGD / PGD-Ai / PGD-Ai-48 / PGD-IDC Gear Drives

		①		②	③	④	⑤
P G D 0 2 4	-	S E 1	-	1 5	A	A	A
PULSEROLLER Pulse Gear Drive Family		Motor Type		Nominal Gear Ratio	Brake / Wash-Down Options	Output Shaft Finish	Custom Options

① **Motor Type**

SE1 - PGD (DC24V JST Connector)
SE2 - PGD-Ai (DC24V 4-Pin M8 Connector)
SE3 - PGD-Ai-48 (DC48V 4-Pin M8 Connector)
SE4 - PGD-IDC (DC24V 5-Pin M8 Connector)

② **Nominal Gear Ratio**

Select *Nominal Gear Ratio* from *Motor Type* specific *Performance Charts*

③ **Brake / Wash-Down Options**

A - 24V Standard (No Brake or Wash-Down)
B - Holding Brake (Available for Motor Type **SE1** only)
W - Wash-Down (Available for Motor Type **SE2** and **SE3** only)

④ **Output Shaft Finish**

A - Standard Key-Way (no attachment)
H - Pre-Installed Micro-V Hub (Available for Wash-Down **W** option only)

⑤ **Custom Options**

A - Standard
Y - Special

MICRO-V PULLEY ASSEMBLY AVAILABLE

Scan for More Technical Data