

# UniDrive® PowerCube™

24VDC Drive Package

Brushless DC Motor/Reducer

## Virtually fits in a 7-inch cube!

The UniDrive® PowerCube™ is a special version of our quiet, long-life UniDrive® Brushless 24VDC motor coupled to a compact and powerful right angle gear reducer.

### THE POWERCUBE™ DRIVE OPERATIONAL MODES:

#### Basic Motor Drive:

Usable as a standalone drive with the UniDrive® ZoneLogix® Plus control in the Basic Motor setting, it allows simple external control of motor run (on/off), direction, and braking.

#### Smart Conveyor Control:

In the Smart Conveyor Control setting, it can be used to drive Zero Pressure Accumulation conveyors without requiring PLC or computer control, but easily interfaces with either at decision points such as an exit onto other equipment. It's your best value in compact and powerful drive alternatives.



PowerCube™

### P3 POWERCUBE™ LINEUP

	Model	Lead	Torque Range in-lbf*	Torque Range N-m*	Speed Range*	Ratios
60 W Motor UD060	301242	20"	40 - 80	4.5 - 9.0	70 - 14 RPM	5:1
	301243	20"	60 - 120	6.8 - 13.6	46 - 9 RPM	7.5:1
	301244	20"	80 - 160	9.0 - 18.1	35 - 7 RPM	10:1
	301245	20"	120 - 240	13.6 - 27.1	23 - 4 RPM	15:1
	301246	20"	160 - 300	18.1 - 33.9	17 - 3 RPM	20:1
100 W Motor UD100	301247	20"	40 - 110	4.5 - 12.4	112 - 22 RPM	5:1
	301248	20"	60 - 160	6.8 - 18.1	74 - 14 RPM	7.5:1
	301249	20"	80 - 200	9.0 - 22.6	56 - 11 RPM	10:1
	301250	20"	120 - 260	13.6 - 29.4	37 - 7 RPM	15:1
	301251	20"	160 - 320	18.1 - 36.1	28 - 5 RPM	20:1

\*Torque and speed ranges are approximate and may be dependent on the actual application parameters.

Ratings are based on normal room temperatures 20°C (68°F).

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# UniDrive® PowerCube™ 24VDC Drive

The UniDrive® PowerCube™ is your wisest drive choice when designing a powerful, cost-effective drive system for your motion application. The complete system design takes the worry and experimentation out of trying to assemble a drive system made up of multiple components from various suppliers. Simply choose your needed torque and RPM... You're done! No guess work involved.

## ADVANTAGES:

**Powerful For Every Need:** Models from 30 to 400 inch-pounds of torque

**Compact:** Approximately 6"x6.5"x7.25"

**Complete:** UniDrive® Motor and gear combined into one mighty unit

**Long-Life Motor:** UniDrive® motors have a 150,000 - 250,000 hour design life (depending on watt rating)

**Maintenance Free:** Sealed lubrication system design. No scheduled maintenance required.

**Versatile:** Variable speed, bi-directional motion, hollow shaft compatible

**Low Cost:** Less than you might pay for virtually any AC alternative

**Safety:** Low voltage (24Volts DC)

**Single-Source:** UMotor, gear reducer, drive control, I/O and logic system from one company

**Reliable:** Proven in decades of use, on thousands of systems. 3-Year limited warranty

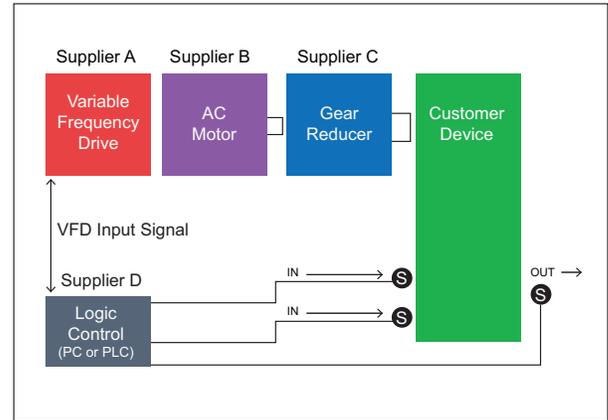


Figure 1. Traditional Multi-Supplier System

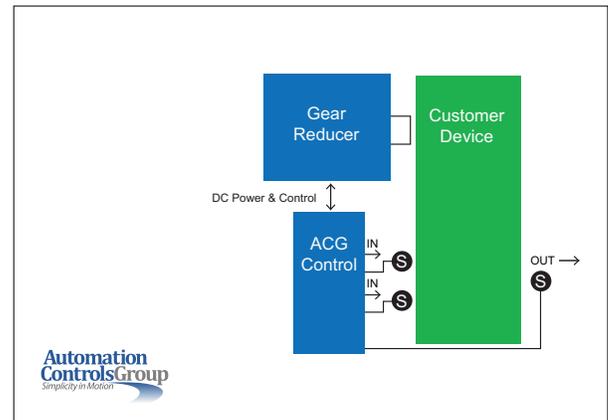


Figure 2. Simplicity in Motion

## FEATURES:

The PowerCube™ Drive provides a P<sup>3</sup> solution by integrating three innovative products from a single source that are easy to apply and use.

### P<sup>1</sup> 24 VDC UniDrive® Brushless Motor

- Exceptionally Long Life
- Naturally Low Speed and High Torque
- Low Noise
- High Reliability

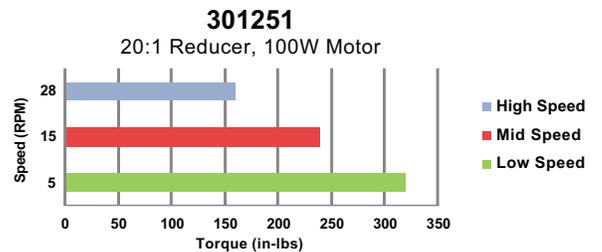
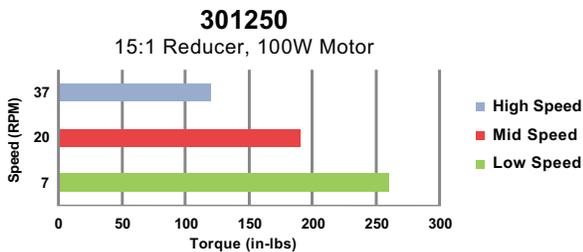
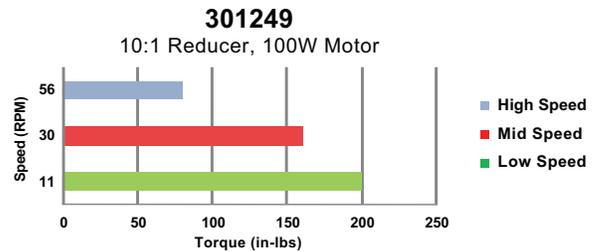
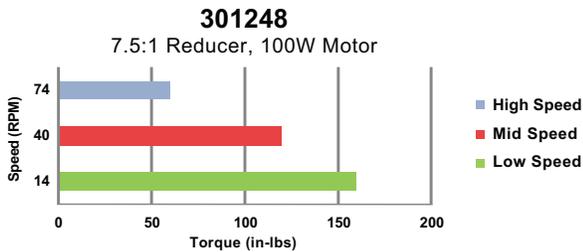
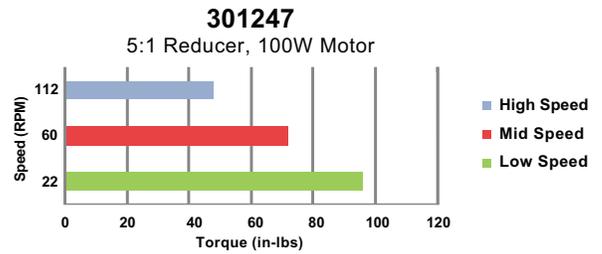
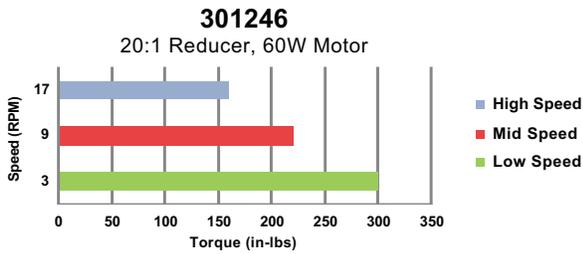
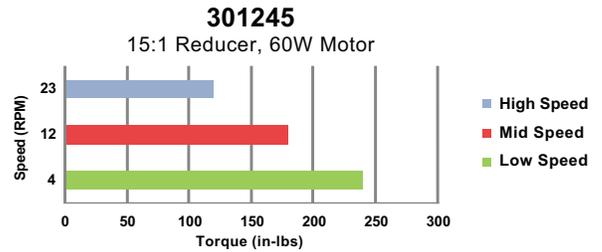
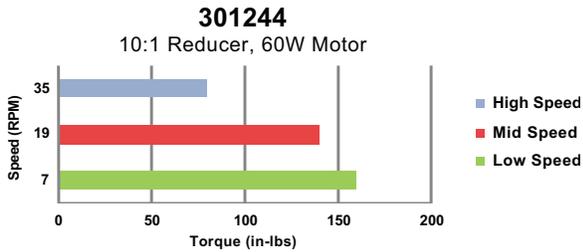
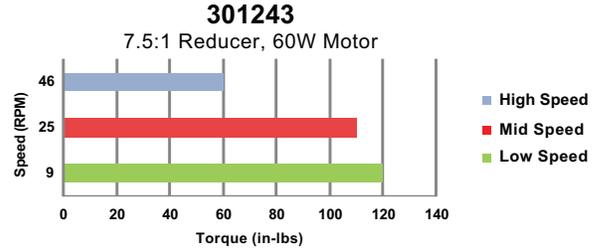
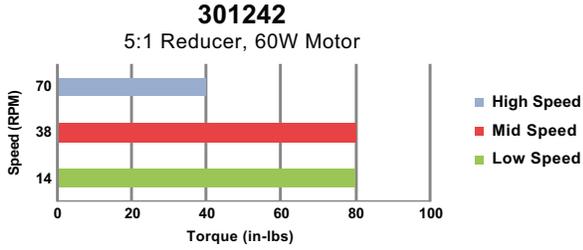
### P<sup>2</sup> UniDrive® Motor Control

- Easily Preset One of 8 Speeds
- Provide a 0-10 VDC Input for Dynamic Speed Control (P/N: 300128 Module can be used)
- Reversible Rotation
- Tight Speed Control within Rated Torque Range
- Effective Electronic Braking

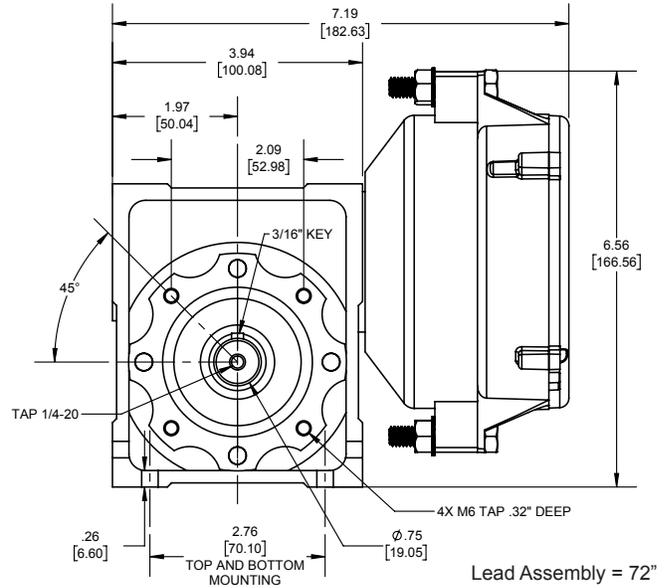
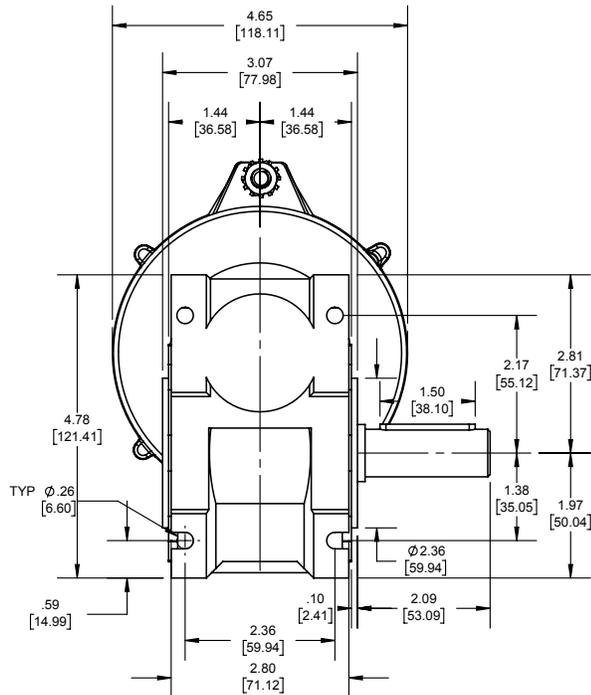
### P<sup>3</sup> Right Angle Reducer

- Speed Reduction Ratio with Torque-Boost
- Single Shaft (Dual position & hollow shaft options)
- Reversible Rotation
- See charts for torque listing

## POWERCUBE™ ASSEMBLY BY MODEL NUMBER



## DIMENSIONS



### Quick Start Guide for Basic Motor Control

- Place DIP switch 3 in the ON position (slide switch to the right).
- On the 3-pin sensor connector, wire the sensor input (center pin) to the sensor “+” voltage (pin on the right).
- Apply 24VDC to the Slug input (I/O pin2 to start and stop the motor).
- When the Slug Input goes high then I/O pin 4 will go high to indicate the motor is running.

### Quick Start Guide for Smart Conveyor Control Operation

- Using Switches 4-6 Set Your Desired Speed
- Set Switch 7 ON and Switch 8 ON to Match the 200W24 Motor
- Connect the Motor Using the 8 Position Plug
- Connect Power and Ground (24 VDC)
- Using Switch 3 configure location (Exit or Entry zone)
- Using Switch 2 configure the operating mode (ZPA or ZIP)
- 24 VDC PNP input for start-stop

Speed Selection			Model Number Speed Setting									
Dip Switches			301242	301243	301244	301245	301246	301247	301248	301249	301250	301251
4	5	6	RPM	RPM	RPM	RPM	RPM	RPM	RPM	RPM	RPM	RPM
Off	Off	Off	70	46	35	23	17	112	74	56	37	28
On	Off	Off	62	41	31	20	15	99	66	49	33	25
Off	On	Off	54	36	27	18	13	86	57	43	29	21
On	On	Off	46	30	23	15	11	73	49	36	24	18
Off	Off	On	38	25	19	12	9	60	40	30	20	15
On	Off	On	30	20	15	10	7	48	32	24	16	12
Off	On	On	22	14	11	7	5	35	23	17	12	9
On	On	On	14	9	7	4	3	22	14	11	7	

Note: Motor speed can be controlled directly on the 301208 from 1-9 VDC or by using the 300128 speed control (Refer to user manual for detailed set-up instructions)