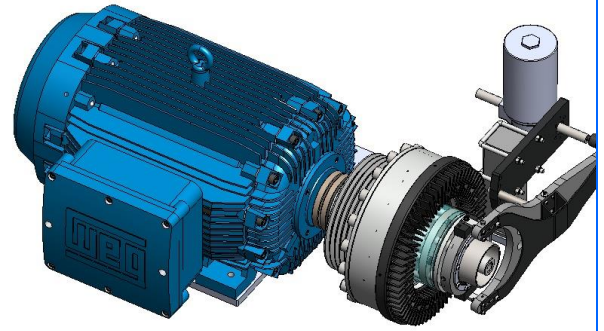


FLUX DRIVE BELT-PULLEY ADJUSTABLE SPEED DRIVE (ASD-BP)

Automatic Adjustable Speed Control & Soft-Start for Belt-Driven Applications



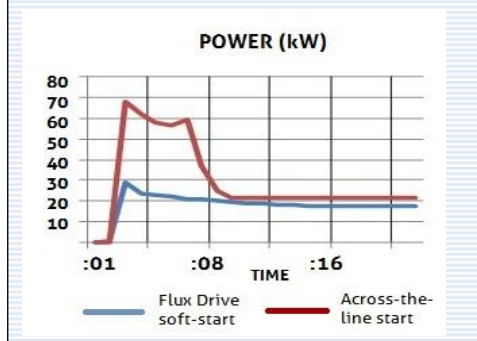
Upgrading centrifugal fans, blowers, pumps and other belt driven loads from fixed speed operation to adjustable speed control is one of the most cost effective energy efficiency upgrades currently available. Many of these systems were originally oversized and produce far more air or water flow than the process demands. While automated inlet vanes, dampers and valves can help to reduce flow to required levels, all of those technologies waste energy – especially compared to fully automatic systems that dynamically reduce the fan or pump's output based upon process variables such as pressure, flow or temperature.

The Flux Drive Belt-Pulley ASD is designed as a simple, ultra-reliable and cost effective means for converting belt driven systems (with or without existing valve/damper control) to fully automated speed control. Unlike electronic Variable Frequency Drives, which typically require new ventilated enclosures, line reactors, bypass starters, and expensive conduit work, the Flux Drive Belt-Pulley ASD simply slides right onto any existing motor in place of the drive sheave. An external actuator engages and disengages the Flux Drive's patented induction rotor to control torque transmission and load speed. On centrifugal devices, even very small reductions in load speed will result in huge energy savings!

Soft-start and Utility Demand Charges

Motor driven applications typically require maximum power (kW) at start-up – up to 7 times normal running power. Utilities will often penalize customers for this high kW "demand".

With the Flux Drive Sheave ASD the motor and load are disconnected at start-up, resulting in significantly reduced locked rotor current and drastically reduced initial kW demand. Belt and pulley wear is also dramatically reduced.



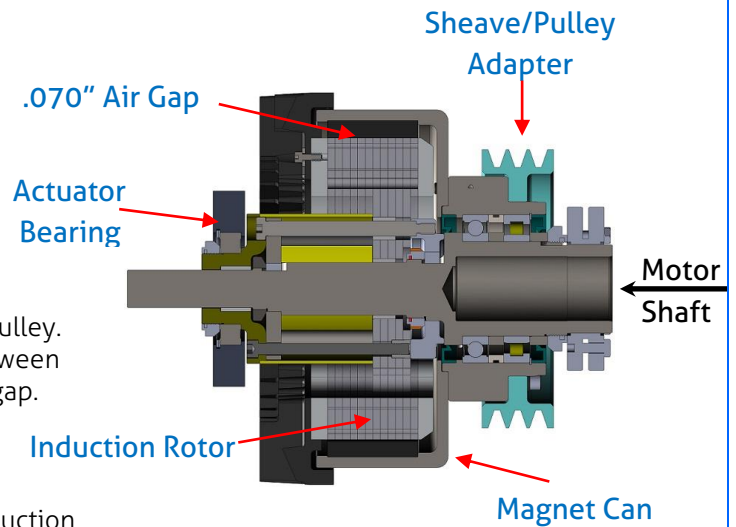
Benefits:

- Truly a 'Green' technology
- Provides soft-start AND energy savings
 - No more belt squealing/smoking
 - Reduced locked rotor current & kW demand
- Reduces number of required belts
 - Lowers radial load on shafts/bearings
 - Decreases belt/sheave wear & tear
- Produces no electrical harmonics
 - No electrically induced bearing damage
 - Safe for surrounding electronics/instruments
- Compatible with any motor
 - Extremely cost effective for medium voltage
 - Does not require inverter duty rated motors
- Impervious to power spikes, sags, or dirty power
- Operates in hot, wet, dirty and corrosive locations
- 5-minute annual maintenance and decades of useful life!

How it Works:

As with all Flux Drive products, rare-earth permanent magnets and our patented induction rotor technology are at the heart of this innovative device. The Flux Drive Belt-Pulley ASD slides onto the motor shaft and is secured with a common coupling. Belts are connected to the magnet cylinder via an integral sheave/pulley. Heavy-duty bearings provide rotational independence between the two sides, which are always separated by a 0.070" air gap.

When motionless, magnetic attraction between the rotor and cylinder is relatively low. As relative motion increases, a directional current is developed within the induction rotor. This current creates a magnetic coupling effect that builds rapidly across the air gap until the drive begins to rotate the load. The time between full "slip" at start-up and full load speed is the soft-start period. This is typically 5-10 seconds but can be adjusted. At full engagement, the device operates at 98.5% efficiency. To adjust speed, the rotor is moved axially in and out of the magnetic cylinder, weakening or strengthening the magnetic field.



BELT/PULLEY ASD OPERATING SPECIFICATIONS

Model / Size	Operating Torque		Locked Rotor Torque (140%)		Operating HP/kW Rating			
					900 RPM	1200 RPM	1800 RPM	3600 RPM
	Lb-ft	Nm	Lb-ft	Nm	HP/kW	HP/kW	HP/kW	HP/kW
08-45-ASD-BP	45	61	63	85	7.5 / 5.5	10 / 7.5	15 / 11.2	30 / 22.4
08-60-ASD-BP	60	81	84	113	10 / 7.5	13 / 9.7	20 / 15	40 / 30
08-75-ASD-BP	75	101	105	141	12.5 / 9.3	17 / 12.7	25 / 18.6	50 / 28
10-90-ASD-BP	90	122	126	171	15 / 11.2	20 / 15	30 / 22.4	60 / 45
10-120-ASD-BP	120	163	168	228	20 / 15	27 / 20	40 / 30	80 / 60
10-150-ASD-BP	150	203	210	284	25 / 18.6	33 / 24.6	50 / 28	100 /
12-180-ASD-BP	180	244	252	342	30 / 22.4	40 / 30	60 / 45	120 / 90
12-225-ASD-BP	225	305	315	427	37.5 / 30	50 / 37	75 / 56	150 / 112
14-300-ASD-BP	300	407	420	570	50 / 28	65 / 49	100 / 75	200 / 150
16-375-ASD-BP	375	508	525	711	62.5 / 47	85 / 63	125 / 93	250 / 187
16-450-ASD-BP	450	610	630	854	75 / 56	100 / 75	150 / 112	300 / 224
18-600-ASD-BP	600	813	840	1138	100 / 75	135 / 100	200 / 150	400 / 300
20-750-ASD-BP	750	1016	1050	1422	125 / 93	165 / 123	250 / 187	500 / 375

About Flux Drive

Flux Drive Inc. designs and manufactures permanent magnetic adjustable speed drives and couplings that increase the life and performance of rotating equipment. The company's patented technology greatly lowers energy consumption and extends the life of motor driven systems by allowing motors to run at constant speed while the Flux Drive device provides soft starting and/or adjustable speed. For more information about Flux Drive, please visit www.fluxdrive.com.



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