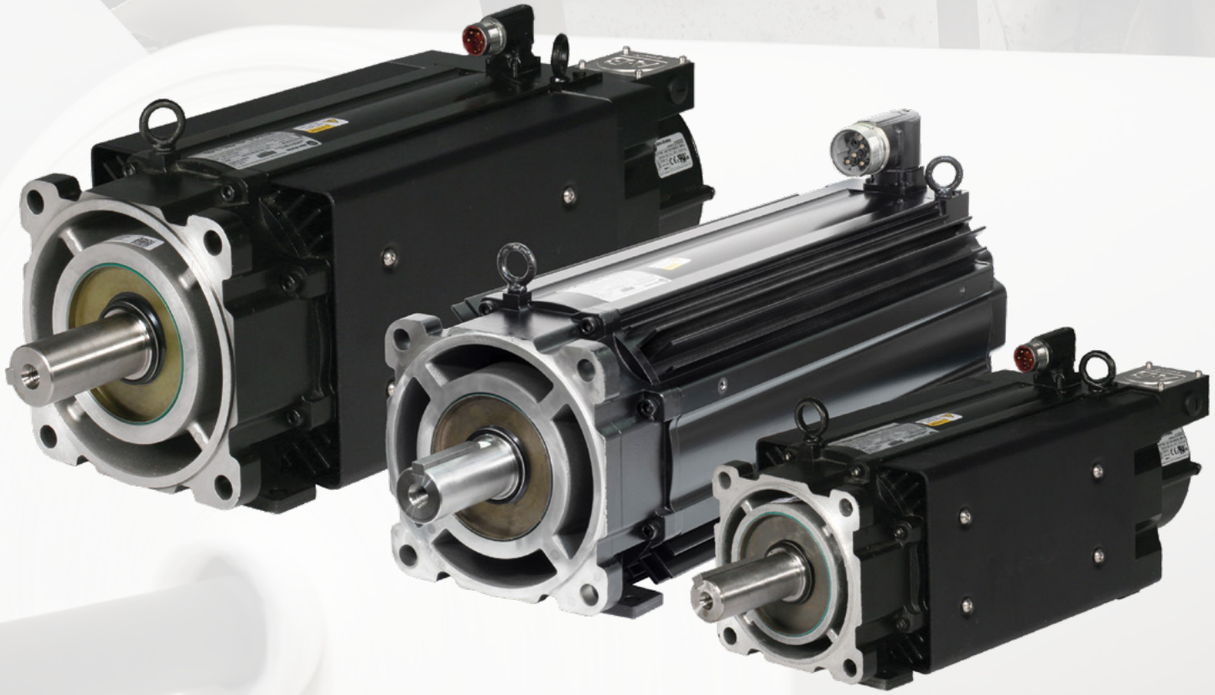
Kinetix VPC Continuous-Duty Servo Motor

High Performance for Continuous-Duty Applications

The Kinetix® VPC Servo Motor uses interior permanent magnet technology to provide more efficiency and higher torque at higher speeds in continuous-duty applications. Design features, such as the option for an attached fan and option for single-cable power and feedback, both enhance machine performance and increase ease of use.

Our common Logix platform allows you to program the Kinetix VPC along with the Kinetix 5700 Servo Drive or PowerFlex® 755 AC Drive and the rest of your control system in the Studio 5000® design environment.



Increase Performance

- Increased torque rating with cooling fins and fan
- High resolution encoders provide faster, better control
- Interior permanent magnet technology provides more efficiency at higher speeds

Reduce Costs

- Up to 60% improvement in L10 bearing life
- Single-cable connectivity reduces cost of spares and downtime
- Achieves IE4 and IE5 efficiency ratings which reduces energy costs

Allen-Bradley
by ROCKWELL AUTOMATION

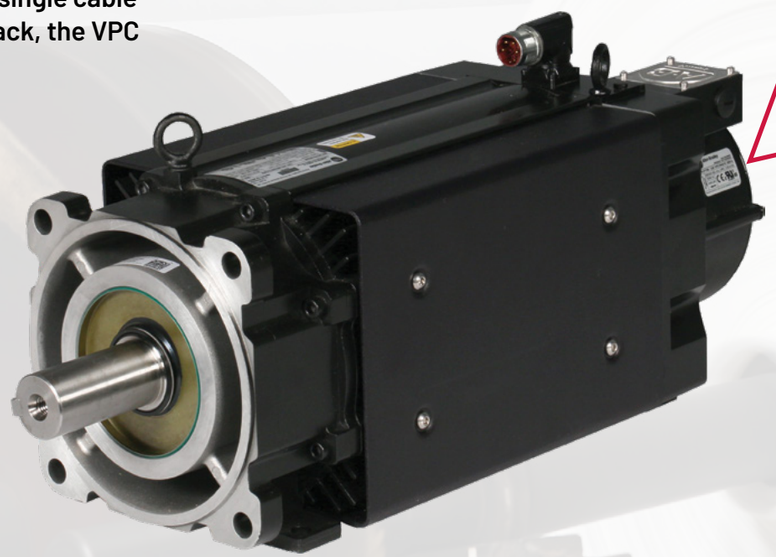
Rockwell Automation

Optimized for Continuous-Duty Applications

The entire Kinetix VPC servo motor is designed with features that enhance speed, torque and performance in roll-to-roll applications.

High resolution digital encoders offer improved machine control.

By reducing wiring with a single cable for both power and feedback, the VPC can save time and money.

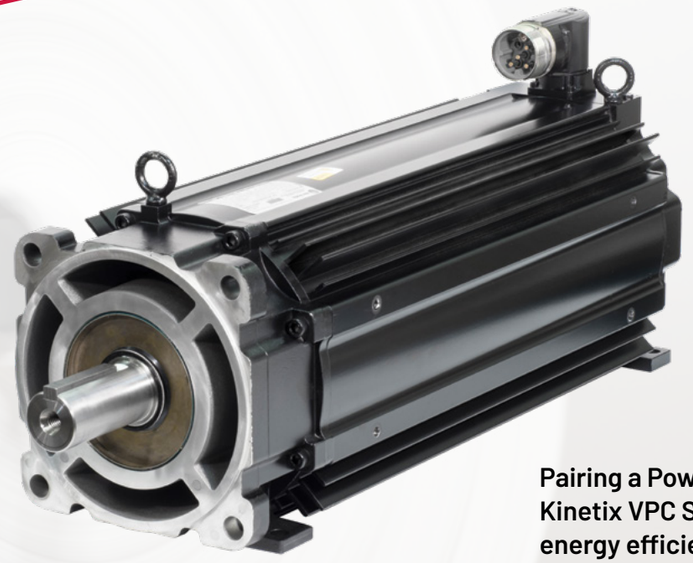


Interior permanent magnet technology, coupled with the Kinetix 5700 servo drive, provides lower torque ripple for smoother performance.

Interior permanent magnet technology provides more efficiency at higher speeds in continuous-duty applications.

The attached fan directs air through cooling channels, increasing continuous torque, thus reducing the motor size needed for the same output.

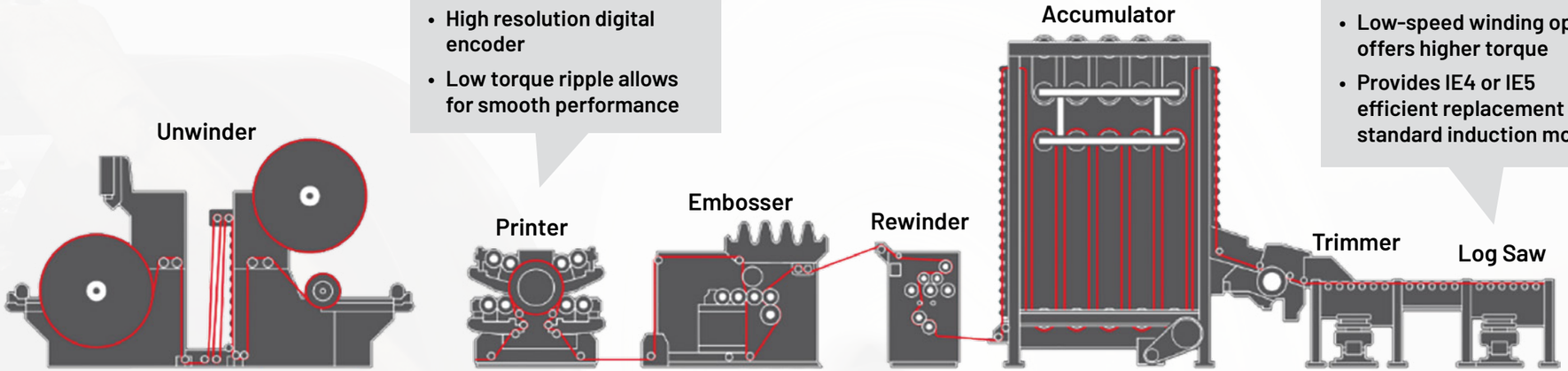
Achieves IE4 and IE5 efficiency ratings which reduces energy costs.



Pairing a PowerFlex 755 AC Drive with the Kinetix VPC Servo Motor provides higher energy efficiency than an induction motor and makes integration easier than with a third-party permanent magnet motor.

Converting, Print and Web

From beginning to end, the Kinetix VPC servo motor can be used across your converting, print or web machine to help maximize throughput and produce a better product. Pair it with a Kinetix 5700 Servo Drive or PowerFlex 755 AC Drive for enhanced system performance.



- High resolution digital encoder
- Low torque ripple allows for smooth performance

- Low-speed winding option offers higher torque
- Provides IE4 or IE5 efficient replacement of a standard induction motor

- Field weakening provides higher maximum speeds
- Fan maximizes power output
- Foot mount increases installation flexibility
- Upsized front bearings for belted connection

- High power density reduces space requirements
- Single-cable wiring with a high resolution DSL encoder and high power density reduce space requirements without compromising performance

- Simplifies bill of material with standard configurations
- High power density and single-cable wiring reduce space requirements

Kinetix VPC Product Specifications for Use with Kinetix 5700 Servo Drives

Motor Catalog	Rated Speed (rpm)	Max Speed* (rpm)	Rated Cont Torque (Nm)	Peak Torque (Nm)	Rated Cont Power(kw)	Energy Efficiency % (IE Rating)	Kinetix 5700 Drive Matching
VPC-B1652A-xxxxAx	1500	2300	21.9	40.3	3.4	91.2 (IE4)	2198-D020-ERSx
VPC-B1652A-xxxxFx		4500	25.5		4.0	91.1 (IE4)	
VPC-B1653A-xxxxAx		2300	28.1	60.6	4.4	93.1 (IE5)	2198-D032-ERSx
VPC-B1653A-xxxxFx		4500	35.1		5.5	92.6 (IE5)	
VPC-B1652D-xxxxAx	3000	4400	15.3	40.7	4.8	94.0 (IE5)	2198-D032-ERSx
VPC-B1652D-xxxxFx		5000	17.6		5.5	93.0 (IE5)	
VPC-B1653D-xxxxAx		4200	18.5	61.4	5.8	94.1 (IE5)	2198-D057-ERSx
VPC-B1653D-xxxxFx		5000	24.0		7.5	93.8 (IE5)	
VPC-B1654D-xxxxAx		4200	22.3	76.6	7.0	95.3 (IE5)	2198-D057-ERSx
VPC-B1654D-xxxxFx		5000	35.1		11.0	93.5 (IE5)	
VPC-B21539-xxxxAx	1000	1500	51.1	118.8	5.3	92.8 (IE5)	2198-D032-ERSx
VPC-B21539-xxxxFx		3000	52.5		5.5	92.7 (IE5)	
VPC-B21549-xxxxAx		1500	64.4	158.4	6.7	93.1 (IE5)	2198-D057-ERSx
VPC-B21549-xxxxFx		3000	72.0		7.5	92.9 (IE5)	
VPC-B2153A-xxxxAx	1500	2300	46.2	111.8	7.3	93.3 (IE5)	2198-D057-ERSx
VPC-B2153A-xxxxFx		4500	48.0		7.5	93.9 (IE5)	
VPC-B2154A-xxxxAx		2300	58.7	140.1	9.2	94.4 (IE5)	2198-D057-ERSx
VPC-B2154A-xxxxFx		4500	70.1		11.0	94.5 (IE5)	
VPC-B2154B-xxxxAx	2000	3200	45.1	131.4	9.4	95.7 (IE5)	2198-S086-ERSx
VPC-B2154D-xxxxFx	3000	5000	48.0		15.0	94.5 (IE5)	
VPC-B2155B-xxxxAx	2000	3200	51.7	156.7	10.8	94.4 (IE5)	2198-S130-ERSx
VPC-B2155D-xxxxFx	3000	5000	59.0		18.5	94.0 (IE4)	

Motor Catalog	Rated Speed (rpm)	Max Speed* (rpm)	Rated Cont Torque (Nm)	Peak Torque (Nm)	Rated Cont Power(kw)	Energy Efficiency % (IE Rating)	Kinetix 5700 Drive Matching
VPC-B2156A-xxxxAx	1500	2800	56.1	139.3	8.8	93.9 (IE5)	2198-S086-ERSx
				185.5			2198-S130-ERSx
VPC-B2156D-xxxxFx	3000	5000	70.0	139.3	22.0	94.0 (IE4)	2198-S086-ERSx
				185.5			2198-S130-ERSx
VPC-B30029-xxxxAx	1000	1400	100.2	183.7	10.5	94.8 (IE5)	2198-S086-ERSx
VPC-B30029-xxxxFx		3000	105.1		11.0	94.9 (IE5)	
VPC-B30039-xxxxAx		1400	135.7	237.9	14.2	96.4 (IE5)	2198-S086-ERSx
VPC-B30039-xxxxFx		3000	143.3		15.0	96.3 (IE5)	
VPC-B30049-xxxxAx		1400	167.7	327.8	17.6	95.6 (IE5)	2198-S086-ERSx
VPC-B30049-xxxxFx		3000	176.7		18.5	96.5 (IE5)	
VPC-B3002A-xxxxAx	1500	2200	90.6	170.4	14.2	94.6 (IE5)	2198-S086-ERSx
VPC-B3002A-xxxxFx		4000	95.5		15.0	95.2 (IE5)	
VPC-B3003A-xxxxAx		2100	111.3	244.8	17.5	96.7 (IE5)	2198-S086-ERSx
VPC-B3003A-xxxxFx		3500	140.3		22.0	96.3 (IE5)	
VPC-B3004A-xxxxAx		2100	155.1	319.0	24.4	95.9 (IE5)	2198-S130-ERSx
VPC-B3004A-xxxxFx		3500	191.1		30.0	96.0 (IE5)	
VPC-B3004B-xxxxAx	2000	2800	78.1	225.8	16.4	94.0 (IE5)	2198-S130-ERSx
				257.7			2198-S160-ERSx
VPC-B3004D-xxxxFx	3000	4000	95.5	225.8	30.0	94.7 (IE4)	2198-S130-ERSx
				257.7			2198-S160-ERSx

**All VPC-Bxxxxx-xxxxFx catalogs require a shunt or other bus protection device required to achieve full max speed*

Kinetix VPC Product Specifications for Use with PowerFlex 755 AC Drives

Motor Catalog	Rated Speed (rpm)	Max Speed* (rpm)	Rated Cont Torque (Nm)	Peak Torque (Nm)	Rated Cont Power (kw)	Energy Efficiency % (IE Rating)	PowerFlex 755 Drive Matching
VPC-B1652A-xxxxAx	1500	2000	21.9	40.3	3.4	91.2 (IE4)	20G11ND8P0JA0NNNNN
VPC-B1652A-xxxxFx		2000	25.5		4.0	91.1 (IE4)	
VPC-B1653A-xxxxAx		2000	28.1	60.6	4.4	93.1 (IE5)	20G11ND014JA0NNNNN
VPC-B1653A-xxxxFx		2000	35.1		5.5	92.6 (IE5)	
VPC-B1652D-xxxxAx	Not recommended with PowerFlex 755 drives						
VPC-B1652D-xxxxFx							
VPC-B1653D-xxxxAx							
VPC-B1653D-xxxxFx							
VPC-B1654D-xxxxAx							
VPC-B1654D-xxxxFx							
VPC-B21539-xxxxAx	1000	1500	51.1	118.8	5.3	92.8 (IE5)	20G11ND014JA0NNNNN
VPC-B21539-xxxxFx		2000	52.5		5.5	92.7 (IE5)	
VPC-B21549-xxxxAx		1500	64.4	158.4	6.7	93.1 (IE5)	20G11ND022JA0NNNNN
VPC-B21549-xxxxFx		2000	72.0		7.5	92.9 (IE5)	
VPC-B2153A-xxxxAx	1500	2000	46.2	111.8	7.3	93.3 (IE5)	20G11ND022JA0NNNNN
VPC-B2153A-xxxxFx		2000	48.0		7.5	93.9 (IE5)	
VPC-B2154A-xxxxAx		2000	58.7	140.1	9.2	94.4 (IE5)	20G11ND022JA0NNNNN
VPC-B2154A-xxxxFx		2000	70.1		11.0	94.5 (IE5)	
VPC-B2154B-xxxxFx	2000	2000	45.1	131.4	9.4	95.7 (IE5)	20G11ND034JA0NNNNN
VPC-B2154D-xxxxFx	Not recommended with PowerFlex 755 drives						
VPC-B2155B-xxxxAx	2000	2000	51.7	156.7	10.8	94.4 (IE5)	20G11ND040JA0NNNNN
VPC-B2155D-xxxxFx	Not recommended with PowerFlex 755 drives						

All VPC motors running on a PowerFlex 755 are limited to a max speed of 2000 rpm

All VPC-Bxxxxx-xxxxFx catalogs require a shunt or other bus protection device required to achieve full max speed

Motor Catalog	Rated Speed (rpm)	Max Speed* (rpm)	Rated Cont Torque (Nm)	Peak Torque (Nm)	Rated Cont Power (kw)	Energy Efficiency % (IE Rating)	PowerFlex 755 Drive Matching
VPC-B2156A-xxxxAx	1500	2000	56.1	139.3	8.8	93.9 (IE5)	20G11ND052JA0NNNNN
				185.5			
VPC-B2156D-xxxxFx	Not recommended with PowerFlex 755 drives						
VPC-B30029-xxxxAx	1000	1400	100.2	183.7	10.5	94.8 (IE5)	20G11ND022JA0NNNNN
VPC-B30029-xxxxFx		2000	105.1		11.0	94.9 (IE5)	
VPC-B30039-xxxxAx		1400	135.7	237.9	14.2	96.4 (IE5)	20G11ND034JA0NNNNN
VPC-B30039-xxxxFx		2000	143.3		15.0	96.3 (IE5)	
VPC-B30049-xxxxAx		1400	167.7	327.8	17.6	95.6 (IE5)	20G11ND034JA0NNNNN
VPC-B30049-xxxxFx		2000	176.7		18.5	96.5 (IE5)	
VPC-B3002A-xxxxAx	1500	2000	90.6	170.4	14.2	94.6 (IE5)	20G11ND034JA0NNNNN
VPC-B3002A-xxxxFx		2000	95.5		15.0	95.2 (IE5)	
VPC-B3003A-xxxxAx		2000	111.3	244.8	17.5	96.7 (IE5)	20G11ND040JA0NNNNN
VPC-B3003A-xxxxFx		2000	140.3		22.0	96.3 (IE5)	
VPC-B3004A-xxxxAx		2000	155.1	319.0	24.4	95.9 (IE5)	20G11ND065JA0NNNNN
VPC-B3004A-xxxxFx		2000	191.1		30.0	96.0 (IE5)	
VPC-B3004B-xxxxAx	2000	2000	78.1	225.8	16.4	94.0 (IE5)	20G11ND065JA0NNNNN
				257.7			
VPC-B3004D-xxxxFx	Not recommended with PowerFlex 755 drives						

Kinetix VPC Servo Motors in Action

Enhanced speed, torque and performance in roll-to-roll applications make the Kinetix VPC motor ideal for metal forming, automotive, tire, entertainment, converting, printing, material handling and web handling.

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