

# Kinetix Rotary Motion Specifications

Kinetix VP, MP-Series, Kinetix 6000M, TL-Series, HPK-Series, RDD-Series

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This publication provides catalog numbers and product specifications, including performance, environmental, certifications, load force, and dimension drawings for Allen-Bradley® rotary motors.

Use this publication in conjunction with the Kinetix® Motion Control Selection Guide, publication [KNX-SG001](#), to help make decisions on the motion control products best suited for your system requirements.



## Summary of Changes

This manual contains new and updated information as indicated in the following table.

Topic	Page
Added Bulletin VPC motors to Servo Drive Compatibility table.	2
Added Kinetix 5700 drive compatibility with Kinetix VP (Bulletin VPL, VPF, VPS), MP-Series™ (Bulletin MPL, MPM, MPF, MPS), RDD-Series™ (Bulletin RDB), and HPK-Series™ motors.	Throughout
Added SIL2/PLd functional safety rating to Bulletin VPL features, catalog numbers, and encoder descriptions.	3...5
Added 2090-CSBM1DE and 2090-CSBM1DG cable compatibility with Bulletin VPL motors.	5
Renamed speed (rpm) specification columns as Rated Speed and Speed, max for Kinetix VP (Bulletin VPL, VPF, and VPS) servo motors.	7, 8, 52, 53, 71
Added Kinetix VP (Bulletin VPC) continuous-duty servo motor features, catalog numbers, and specifications.	26...47
Added SIL2/PLd functional safety rating to Bulletin VPF features, catalog numbers, and encoder descriptions.	48...50
Added 2090-CSBM1DE and 2090-CSBM1DG cable compatibility with Bulletin VPF motors.	50
Corrected the Bulletin VPF shaft seal catalog numbers.	51
Added 2090-CSBM1DE and 2090-CSBM1DG cable compatibility with Bulletin VPS motors.	70
Updated Kinetix VP Single Cable Technology with total cable lengths that includes the Bulletin VPS motor extension cable.	
Renamed speed (rpm) specification columns as Rated Speed and Speed, max for MP-Series (Bulletin MPL, MPM, MPF, and MPS) and RDD-Series motor performance specifications.	78, 79, 94, 95, 105, 113, 131
Corrected the MPM-B1304C motor Rated Speed value.	95
Added the Feedback Connector Kit Compatibility table for RDD-Series compatible drive families.	130
Updated Motor Connector/Cable Compatibility for HPK-Series motors with SpeedTec feedback connectors.	138
<ul style="list-style-type: none"> <li>Added the Speed, max column to HPK-Series performance tables</li> <li>Corrected Motor Rated Output values for HPK-B2212C and HPK-B2010E motors</li> </ul>	139
Added Bulletin VPC motors to Common Rotary Motor Specifications.	162 and 163
Added Kinetix 5500 and Kinetix 5700 drive families to footnote.	164

## Servo Drive Compatibility

Servo Drive Family	Low-inertia Rotary Motors				Continuous Duty	Food Grade		Stainless Steel		Integrated Drive-Motor	Medium Inertia	Direct Drive	Asynchronous
	Bulletin VPL	Bulletin MPL	Bulletin TLY	Bulletin TL	Bulletin VPC	Bulletin VPF	Bulletin MPF	Bulletin VPS	Bulletin MPS	Bulletin MDF	Bulletin MPM	Bulletin RDB	HPK-Series
Kinetix 5700	X	X	–	–	X	X	X	X	X	–	X	X	X
Kinetix 5500	X	X	–	–	–	X	X	X	X	–	X	–	–
Kinetix 6500	–	X	–	–	–	–	X	–	X	–	X	X	–
Kinetix 6200	–	X	–	–	–	–	X	–	X	X	X	X	–
Kinetix 6000	–	X	X (TLY-Axx-H)	–	–	–	X	–	X	X	X	X	–
Kinetix 300/350	–	X	X	–	–	–	X	–	X	–	X	–	–
Kinetix 3	–	–	X (TL-Axx-B)	–	–	–	–	–	–	–	–	–	–
Kinetix 2000	–	X	X	–	–	–	X	–	X	–	X	–	–
Kinetix 7000	–	X	–	–	–	–	–	–	–	–	X	X	X
Ultra™ 3000	–	X	X (TLY-Axx-H)	–	–	–	X	–	X	–	X	–	–

## Kinetix VP Low Inertia Motors



Kinetix VP (Bulletin VPL) low-inertia servo motors are available with winding options matched to the ratings of Kinetix 5500 drives and Kinetix 5700 dual-axis inverters. Optimized system sizing lowers system cost and improves energy efficiency. The digital feedback device provides real-time motor performance information to the control system and the single-cable design between motor and drive simplifies installation. Bulletin VPL motors are based on proven MP-Series technology for dynamic performance, increased reliability, and leverages high volume production.

### Kinetix VP Low Inertia Motor Features

Attribute	Value
Main characteristics	<ul style="list-style-type: none"> <li>• Developed to match the ratings of Kinetix 5500 drives and Kinetix 5700 dual-axis inverters</li> <li>• Single cable technology</li> <li>• Hiperface DSL encoder protocol</li> <li>• High torque to size ratio</li> <li>• Low rotor inertia</li> </ul>
Features	<ul style="list-style-type: none"> <li>• 200V and 400V-class windings</li> <li>• Single-turn and multi-turn absolute feedback</li> <li>• SIL 2 (PLd) rated encoder options</li> <li>• High-energy rare-earth magnets</li> <li>• Shaft-end threaded hole</li> <li>• SpeedTec DIN connector, rotates 325°</li> <li>• Standard IEC 72-1 mounting dimensions</li> </ul>
Motor type	Brushless AC synchronous servo motors
Environmental rating	<ul style="list-style-type: none"> <li>• IP50 minimum, without shaft seal (standard)</li> <li>• IP66 with optional shaft seal and use of environmentally sealed cable connectors</li> </ul>
Certifications	Bulletin VPL rotary motors are UL Recognized components to applicable UL and CSA standards. CE marked for all applicable directives. Refer to <a href="http://ab.rockwellautomation.com">http://ab.rockwellautomation.com</a> for more information.
Continuous stall torque	0.46...33 N·m (4...292 lb·in)
Peak stall torque	1.33...79 N·m (12...702 lb·in)
Rated speed	Up to 8000 rpm
Motor rated output	0.19...7.16 kW (0.25...9.60 Hp)
Compatible servo drives	<ul style="list-style-type: none"> <li>• Kinetix 5700</li> <li>• Kinetix 5500</li> </ul>
Typical applications	<ul style="list-style-type: none"> <li>• Packaging</li> <li>• Converting</li> <li>• Material handling</li> <li>• Electronic assembly</li> <li>• Automotive</li> </ul>