

Motori brushless per applicazioni off-highway e industriali *Brushless Motors for Off-Highway and Industrial Applications* Bürstenlose Motoren für Off-Highway- und Industrieanwendungen

Progettata per ambienti difficili, la nostra nuova gamma di motori brushless a bassa tensione (da 3,5 kW a 16 kW) è ideale per veicoli off-highway, macchine da costruzione e sistemi di automazione industriale. Grazie alla tecnologia IPM (Interior Permanent Magnet), i motori offrono un'elevata densità di coppia, efficienza e controllo di precisione.

Con un design meccanico robusto, connettori rinforzati e un alto grado di protezione IP, questi motori sono costruiti per resistere a condizioni estreme: polvere, umidità, vibrazioni e ampie variazioni di temperatura. Il sensore di posizione Sincos garantisce un feedback preciso e in tempo reale per un controllo avanzato, anche in applicazioni dinamiche.

Disponibili in versioni autoventilate o raffreddate a liquido, i motori possono essere abbinati a riduttori per la trazione o a pompe idrauliche per applicazioni mobili – supportando sia l'uso come motore che come generatore. La compatibilità con basse tensioni (ad esempio 48 V–96 V) li rende perfetti per piattaforme alimentate a batteria.

Le applicazioni includono piattaforme a forbice, sollevatori telescopici, macchine agricole e unità di potenza elettriche, dove precisione, potenza e affidabilità sono fondamentali. Il design modulare consente l'integrazione con inverter di terze parti, garantendo un'architettura di sistema flessibile.

Questa famiglia di motori offre una soluzione robusta, scalabile ed efficiente per l'elettificazione di apparecchiature mobili e industriali dove sono richieste potenza medio-alta, precisione di posizionamento e integrazione elettromeccanica.

Designed for rugged environments, our new range of low-voltage brushless motors (3.5 kW to 16 kW) is ideal for off-highway vehicles, construction machinery, and industrial automation. Featuring IPM (Interior Permanent Magnet) technology, the motors deliver high torque density, efficiency, and precision control.

With robust mechanical design, reinforced connectors, and high IP protection, these motors are built for harsh conditions: dust, moisture, vibration, and wide temperature swings. The Sincos position sensor ensures accurate, real-time feedback for advanced control, even in dynamic applications.

Available in self-ventilated or liquid-cooled versions, the motors can be paired with gearboxes for traction or hydraulic pumps for mobile applications—supporting both motor and generator use cases. Low-voltage compatibility (e.g., 48V–96V) makes them perfect for battery-powered platforms.

Applications include scissor lifts, telehandlers, harvesters, and electric power units, where precision, power, and reliability are key. Their modular design supports integration with third-party inverters, enabling flexible system architecture.

This motor family offers a rugged, scalable, and efficient solution for electrifying mobile and industrial equipment where medium-to-high power, position accuracy, and electromechanical integration are needed.

Entwickelt für raue Einsatzbedingungen bietet unsere neue Reihe von Niederspannungs-Bürstenlosmotoren (3,5 kW bis 16 kW) die ideale Lösung für Off-Highway-Fahrzeuge, Baumaschinen und industrielle Automatisierungssysteme.

Dank der IPM-Technologie (Interior Permanent Magnet) liefern die Motoren eine hohe Drehmomentdichte, Effizienz und präzise Regelbarkeit.

Mit einem robusten mechanischen Design, verstärkten Steckverbindern und hoher IP-Schutzart sind diese Motoren für extreme Bedingungen ausgelegt – einschließlich Staub, Feuchtigkeit, Vibrationen und großen Temperaturschwankungen.

Der Sincos-Positionssensor gewährleistet präzise, Echtzeit-Rückmeldung für eine fortschrittliche Regelung, auch bei dynamischen Anwendungen.

Erhältlich in selbstbelüfteten oder flüssigkeitsgekühlten Ausführungen, können die Motoren mit Getrieben für den Antrieb oder mit Hydraulikpumpen für mobile Anwendungen kombiniert werden – sowohl im Motor- als auch im Generatorbetrieb.

Die Niederspannungskompatibilität (z. B. 48 V–96 V) macht sie ideal für batterieelektrische Plattformen.

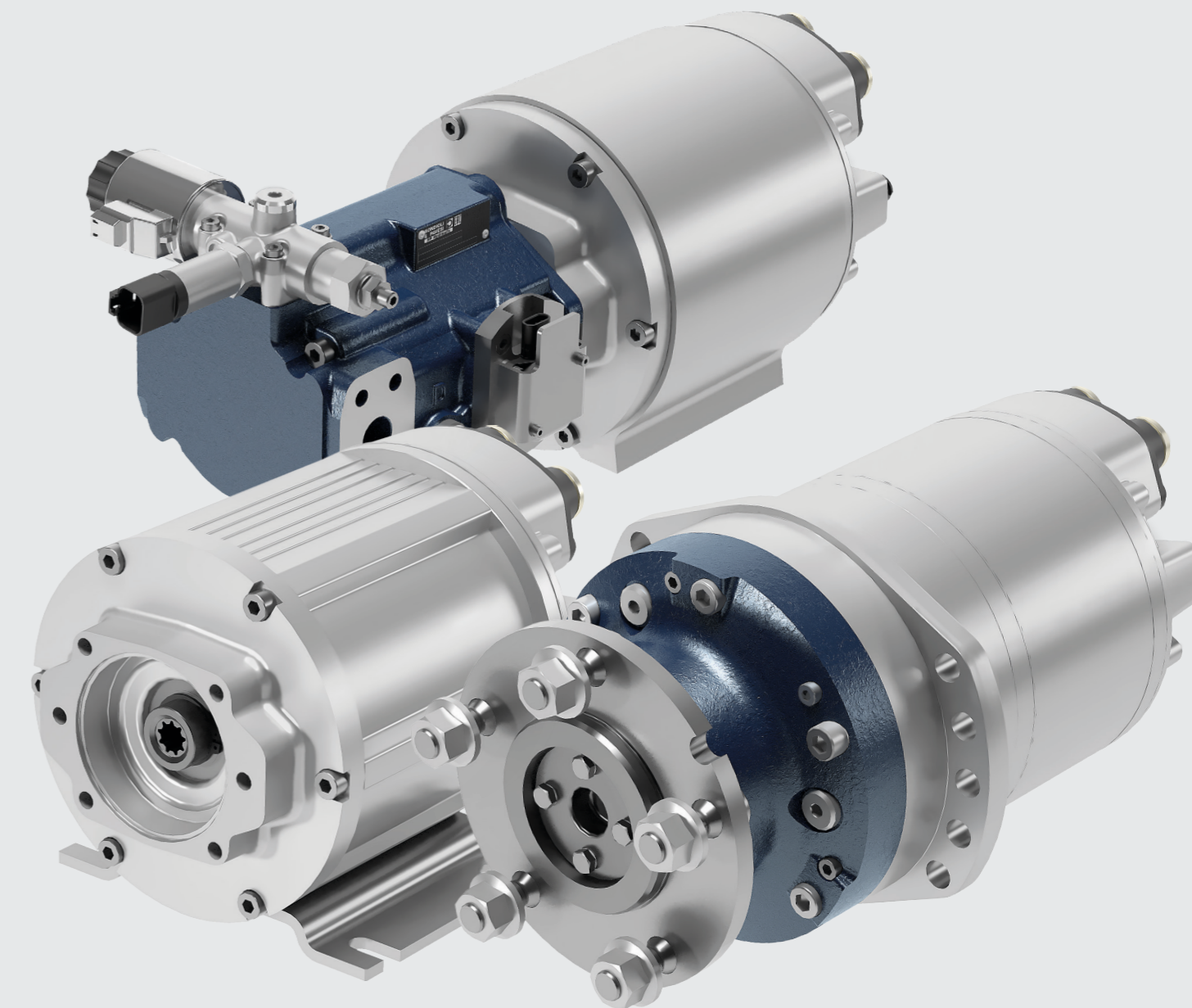
Typische Anwendungen sind Scherenarbeitsbühnen, Teleskoplader, Erntemaschinen und elektrische Antriebseinheiten, bei denen Präzision, Leistung und Zuverlässigkeit entscheidend sind.

Das modulare Design ermöglicht die Integration mit Wechselrichtern von Drittanbietern und unterstützt flexible Systemarchitekturen.

Diese Motorenfamilie bietet eine robuste, skalierbare und effiziente Lösung zur Elektrifizierung mobiler und industrieller Geräte – überall dort, wo mittlere bis hohe Leistung, Positionsgenauigkeit und elektromechanische Integration gefragt sind.

MS

Electric motor solutions



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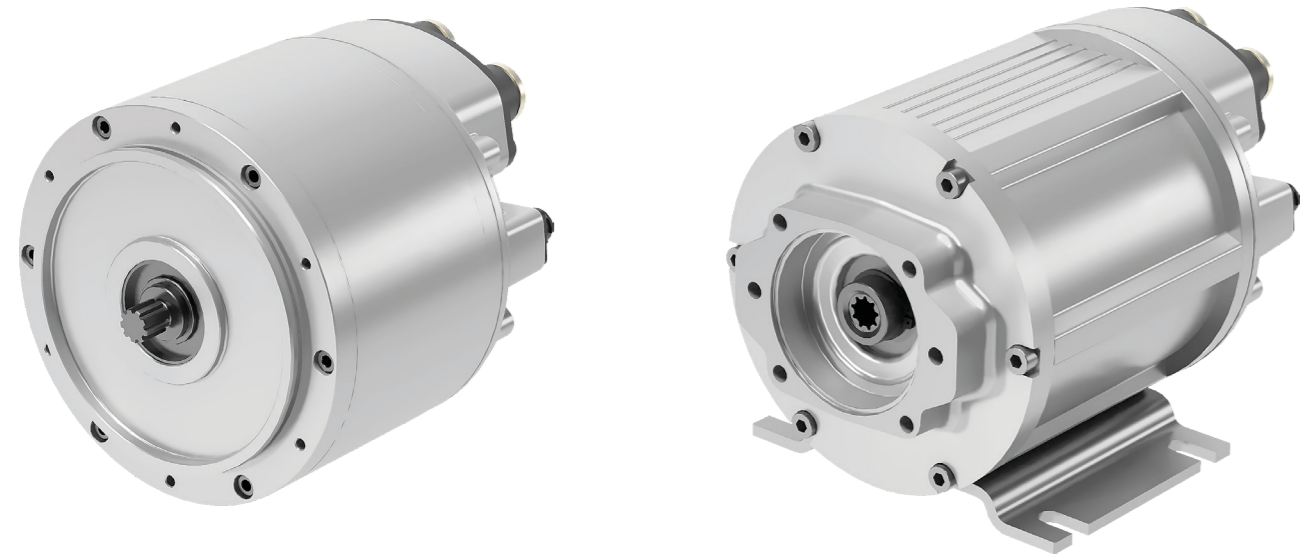
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MSB Series

Motori elettrici - Electric motors - Elektromotoren



MOTOR MODEL		MSB 050		MSB 075		MSB 100	
ELECTRICAL DATA							
Cooling		Liquid	Air	Liquid	Air	Liquid	Air
Voltage Supply	V_{dc}	48		48		48	
Stall torque	Nm	28	14	40	17	54	23
Stall current	A_{rms}	209	116	325	150	406	183
Rated power	kW	8	3,5	11	4	16	5,5
Rated speed	r/min	3000		3000		3000	
Rated torque	Nm	25	12	35	13	50	17
Rated current	A_{rms}	204	102	314	111	396	147
Peak torque	Nm	40	35	60	55	70	70
Peak current	A_{rms}	316	296	495	470	607	557
MECHANICAL DATA							
Rotor moment of inertia	Kg-m²x10⁻⁴	29		43		57	
Weight	kg	13		16		20	
PARKING BRAKE (option)							
Rated voltage +6 / -10%	V_{dc}	24		24		24	
Rated current at 20°C	A	1,1		1,1		1,1	
Moment of inertia	Kg-m²x10⁻⁴	5,5		5,5		5,5	
Weight	Kg	1,6		1,6		1,6	
Holding torque	Nm	37		37		37	
ROTOR POSITION SENSOR SIN-COS (single ended)							
THERMAL SENSOR PT1000							

MSM Series

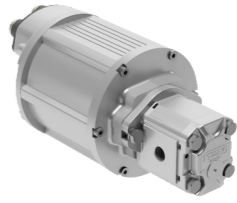

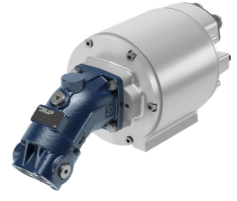
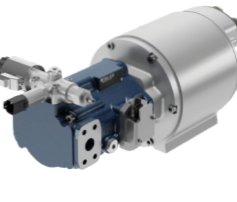
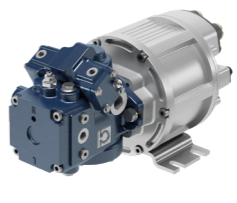
Motori ruota - Electric motorwheels - Radnabenmotoreren



MOTOR MODEL		MSM 050		MSM 075		MSM 100	
Reduction ratio		31.36		31.36		31.36	
GENERAL DATA							
Cooling		Liquid	Air	Liquid	Air	Liquid	Air
Voltage Supply	V_{dc}	48		48		48	
Stall torque	Nm	835	430	1100	520	1100	680
Stall current	A_{rms}	209	116	295	150	275	183
Rated power	kW	8	3,5	11	4	16	5,5
Rated speed	r/min	95		96		96	
Rated torque	Nm	750	350	1000	370	1000	520
Rated current	A_{rms}	204	102	314	111	305	147
Peak torque	Nm	1170	1115	1400		1400	
Peak current	A_{rms}	316	296	390		360	
MECHANICAL DATA							
Mineral gearbox oil type		ISO VG 150/220 EP		ISO VG 150/220 EP		ISO VG 150/220 EP	
Mineral gearbox oil quantity	ml	400		400		400	
Weight	kg	35,5		38,5		42,5	
PARKING BRAKE (option)							
Rated voltage +6 / -10%	V_{dc}	24		24		24	
Rated current at 20°C	A	1,1		1,1		1,1	
Weight	Kg	1,6		1,6		1,6	
Holding torque	Nm	1100		1100		1100	
ROTOR POSITION SENSOR SIN-COS (single ended)							
THERMAL SENSOR PT1000							

MSY Series

Motopompe - Electric motorpumps - Elektromotorpumpen

MSB MOTOR MODEL		MSB 050		MSB 075		MSB 100	
Cooling		Liquid	Air	Liquid	Air	Liquid	Air
PUMP TYPE							
PL Gear pump - Aluminium body		From 5 to 26 cm ³ /rev Up to 260 bar					
PG Gear pump - Cast iron body		From 5 to 20 cm ³ /rev Up to 270 bar					
BF Bent axis Axial piston pump		From 10 to 16 cm ³ /rev Up to 370 bar					
AI Open circuit Axial piston pump		From 05 to 19 cm ³ /rev Up to 260 bar					
MP Closed circuit Axial piston pump		From 7 to 16 cm ³ /rev Up to 260 bar					