



b maXX 6000

A new generation of drive intelligence
Boost your Performance – Reduce your Footprint

The new servo drive generation stands for more performance and maximum scalability.
Compact drives and intelligent functions help to improve the energy balance.

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Boost your Performance – Reduce your Footprint

Boost your Performance: The new servo drive generation stands for more performance and maximum scalability. The new safety functions ensure greater performance. Thanks to its maximum scalability, the drive can be adapted optimally to the provider generate of the different applications.

Reduce your Footprint stands both for compact drives and for intelligent functions from the Baumüller modular SmartValue software kit. These help to improve the energy balance in production, reduce manufacturing costs, and more.



- ✓ b maXX 6300
Industry-specific single and double-axis modules
- ✓ b maXX 6500
Extremely compact mono units with high peak power

High-performance safety for shorter cycle times

- ✓ Even faster response (1 ms) to safety-related events
- ✓ Transfer of the safe position (SP) via FSoE to the safety control for 3D space monitoring
- ✓ Use of digital encoders as safety encoders
- ✓ Safety possible via load-side encoder
- ✓ Higher safety functions via I/Os or FSoE optionally available without safety and in configuration levels

Compact dimensions reduce machine footprint

- ✓ Space-saving module systems (b maXX 6300) and compact mono devices (b maXX 6500)
- ✓ Space required reduced by up to 50% depending on the installation size
- ✓ Simplified installation the control cabinet
- ✓ Significant space savings and even a partial elimination of the control cabinets

Full scalability for maximum application suitability

- ✓ Encoder options range from resolvers to optical and pure digital encoders, and the device is optionally available without encoders
- ✓ Use either no, digital, or analog I/O or a combination of both
- ✓ Air, fluid, push-through air, and push-through fluid technology available as cooling methods
- ✓ DC link protection, signal bus, brake connection optionally available

Intelligent drives function as a data and sensor hub

- ✓ Drive can be used as a data/sensor hub for capturing, preprocessing, and evaluating machine data in the drive
- ✓ Data transfer e.g. to Edge PC or cloud via OPC-UA or MQTT



Drive-based control technology relieves fieldbuses

- ✓ b maXX-softdrivePLC (cycle time $\geq 62.5 \mu\text{s}$)
- ✓ Prepared for b maXX PLC di (drive integrated) with a fieldbus cycle time of $\geq 250 \mu\text{s}$ for complex multi-axis applications
- ✓ Omission of the PLC or use of a more cost-effective solution possible
- ✓ Can be used for data (pre-)processing and transfer to the cloud or Edge PCs

Smart functions reduce energy and maintenance costs

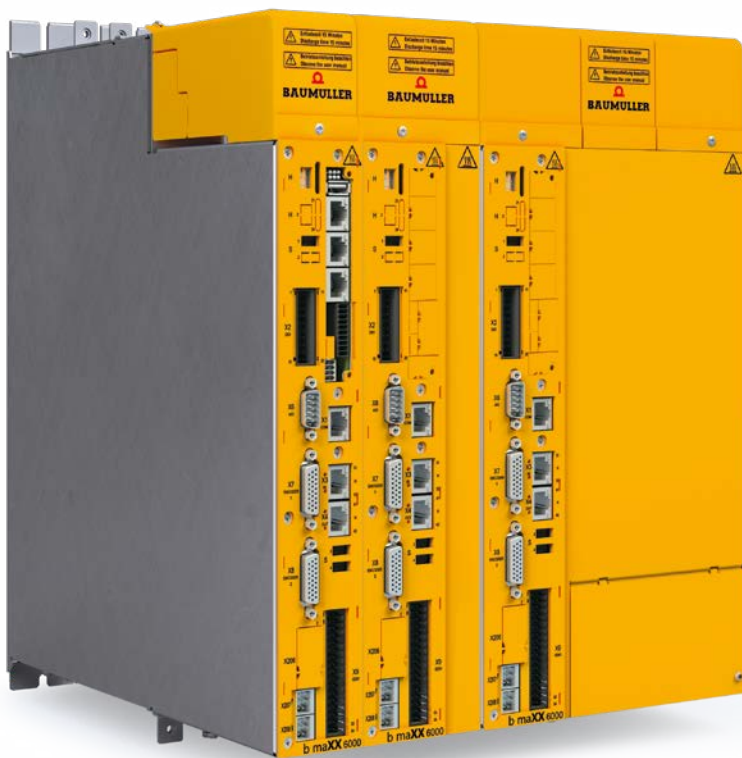
- ✓ Capture, document, and optimize the energy consumption of the drive system per cycle
- ✓ Assists in determining the product carbon footprint (PCF)
- ✓ Condition monitoring: Wear on individual axes can be detected based on increased energy consumption and corrected early on
- ✓ Integrated temperature model monitors important components in the power unit for optimum dimensioning and utilization of servo drives

Available fieldbus options



b maXX 6300

Industry-specific single and double-axis modules



Greater flexibility, higher safety functions

The b maXX 6300 is even more flexible and compact than the current b maXX 5300. It features new safety functionalities and expanded Software, PLC and IoT functionalities, which improve the OEE (overall equipment effectiveness) and thus improve machine availability and productivity.

The converter series b maXX 6300 includes feed-in and regenerative units as well as drive units, which can be quickly and easily combined by an integrated drive connect system. This allows the machine builder to benefit from low installation costs and short commissioning and service times. The drives impress with their high power density and very small installation space.

Fully compatible firmware

- ✓ Easy change from b maXX 5000 to 6000
- ✓ Drive-based functions and softdrivePLC projects can be further used
- ✓ Only a minimal amount of work necessary for adjusting the parameterization for FSoE

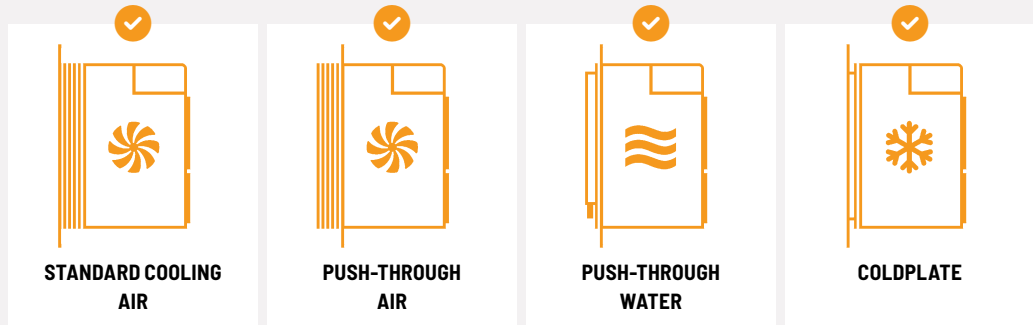
Module systems for high power outputs

The b maXX 6300 axis units are suitable for peak currents of up to 420 A and higher nominal currents of up to 180 A.

b maXX 6300 frame sizes 2, 3 and 7



Cooling options



b maXX 6300 axis units – technical data

Type	Frame size	I_N	I_{MAX}	typ. motor rating		Overload factor	Dimensions
		[A]	[A]	[kW]	[hp]		
BM 6323	2	2x 3	2x 9	2x 1.6	2x 2.1	3	50 x 395 x 280 / 210 ²⁾
BM 6323 ¹⁾	2	2x 4.5	2x 9	2x 2.4	2x 3.2	2	50 x 395 x 280 / 210 ²⁾
BM 6325	2	2x 6	2x 18	2x 3.2	2x 4.3	3	50 x 395 x 280 / 210 ²⁾
BM 6325 ¹⁾	2	2x 8.5	2x 18	2x 4.6	2x 6.2	2.1	50 x 395 x 280 / 210 ²⁾
BM 6326	2	12	24	6.5	8.7	2	50 x 395 x 280 / 210 ²⁾
BM 6327	2	20	40	10.8	14.5	2	50 x 395 x 280 / 210 ²⁾
BM 6328	2	30	60	16.2	21.7	2	50 x 395 x 280 / 210 ²⁾
BM 6331	3	2x 12	2x 24	2x 6.5	2x 8.7	2	75 x 395 x 280 / 210 ²⁾
BM 6332	3	2x 20	2x 40	2x 10.8	2x 14.5	2	75 x 395 x 280 / 210 ²⁾
BM 6333	3	2x 30	2x 60	2x 16.2	2x 21.7	2	75 x 395 x 280 / 210 ²⁾
BM 6334	3	40	60	21.6	29.0	1.5	75 x 395 x 280 / 210 ²⁾
BM 6335	3	60	90	32.4	43.4	1.5	75 x 395 x 280 / 210 ²⁾
BM 6372	7	90	180	48.6	65.1	2	175 x 395 x 280 ³⁾
BM 6373	7	120	240	64.8	86.9	2	175 x 395 x 280 ³⁾
BM 6374	7	150	300	81	108.6	2	175 x 395 x 280 ³⁾
BM 6375	7	180	360	97.2	130.3	2	175 x 395 x 250 ³⁾
BM 6376 air-cooled	7	150	420	81	108.6	2.8	175 x 395 x 280
BM 6376 water-cooled	7	180	420	92.2	123.6	2.3	175 x 395 x 250 ³⁾

Supply voltage; 207-528 V ± 0% AC
Supply frequency: 50/60 Hz
Electronic power supply: external 24 V DC

Clock frequency: 4 / 8 kHz
Certification: CE, cUL
Height / depth without mounting brackets

1) Load cycles acc. to EN 61800
2) Depth of air cooling / depth of coldplate
3) Depth of water cooling

Subject to change

b maXX 6500

Extremely compact mono units with high peak power



↘ 48%

Size 4 of the new b maXX 6500 (left), for example, requires 48% less space than the current model (right)

Reduced footprint

The scalable power modules of the mono units cover a power range from 1 to 315 kW. An expansion up to 400 kW is being prepared. Higher power outputs can be achieved by connecting the mono devices in parallel. With fuse ratings optimized still further, the new devices are even more precisely configurable for the respective application.

Highly reduced installation space

For the b maXX 6500 mono units, the dimensions could be reduced significantly and the power density greatly increased. In the case of the size 4 with a power range up to 75 kW, for example, this means a saving of 48% compared to the previous installed volume. The new mono devices therefore require less space in the control cabinet and can be installed in the most confined space even more easily.

Maximum power

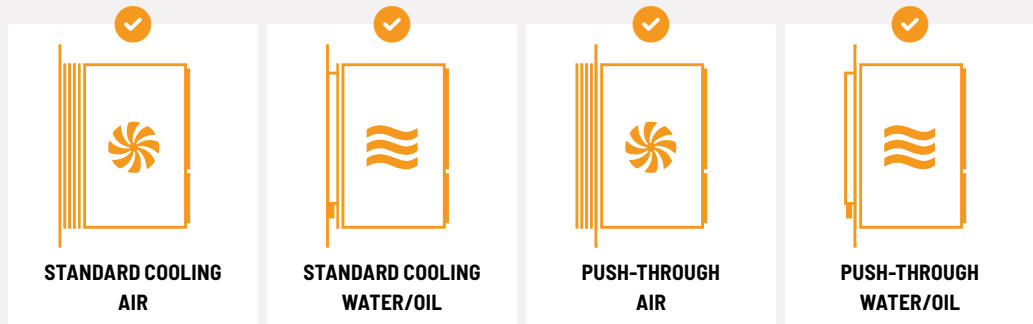
The peak power for the new b maXX 6500 mono units was increased considerably. Compared to the b maXX 5500 series, for example, the size 4 devices achieve a peak current that is 20 percent higher. This means that smaller sizes can be used for dynamic applications. The machine builder therefore benefits from lower initial costs and from a smaller space requirement in the control cabinet.

The mono units b maXX 6500 are available in 4 different sizes. The devices cover a power range from 1 to 315 kW and soon even up to 400 kW. Thanks to the high compactness the b maXX 6500 units enable smaller control cabinets.



b maXX 6500 frame sizes 3, 4, 5 and 6

Cooling options



b maXX 6500 mono units – technical data

Type	Frame size	I_N [A]	I_{MAX} [A]	Overload factor
BM 6532	3	22.5	45	2
BM 6533	3	30	60	2
BM 6534	3	45	90	2
BM 6535	3	60	120	2
BM 6543	4	80	160	2
BM 6544	4	100	200	2
BM 6545	4	130	220	1.7
BM 6546	4	150	250	2
BM 6554	5	210	300	1.43
BM 6555 air-cooled	5	250	390	1.56
BM 6555 water-cooled	5	300	390	1.3
BM 6563	6	300	430	1.43
BM 6564	6	350	500	1.43
BM 6565	6	420	600	1.43
BM 6566 with choke	6	500	800	1.6
BM 6566 without choke	6	500	650	1.3

Supply voltage; 207-528 V \pm 0% AC
Supply frequency: 50/60 Hz

Electronic power supply: external 24 V DC
Clock frequency: 4 / 8 kHz

Certification: CE, cUL
Subject to change

HOUSE OF AUTOMATION



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