BAUMÜLLER



b maXX

b maXX 6000, b maXX 5000, b maXX 3300, Drive Intelligence, Safety, ProDrive, ProMaster, ProSimulation

The converter series of the b maXX family cover a power range of up to 400 kW and not only include devices that can be stacked or mounted side by side but also powerful mono units.


BAUMULLER
b maXX 6000



Added value for our customers

Our goal is to enable more flexibility in your machine design and ensuring your machine users the necessary productivity and efficiency in production, thereby giving your machines a competitive edge. That is why the focus of our development is not just the entire system of a machine, but also the added value that we make available to you with the modularization of machines, the scalability of components and flexible technology modules.

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SERVO DRIVES

b maXX 6300 – Modular/multi-axis

NEW



Nominal output current
from 3 A to 180 A

Nominal peak current
from 9 A to 420 A

Typical motor power
from 1.6 kW to 97 kW

b maXX 6500 – Standalone

NEW



Nominal output current
up to 1000 A

Nominal peak current
up to 1300 A

b maXX 5300 – Modular/multi-axis



Nominal output current
from 3 A to 180 A

Nominal peak current
from 9 A to 420 A

Typical motor power
from 1.6 kW to 97 kW

b maXX 5500 – Standalone



Nominal output current
from 2.5 A to 615 A

Nominal peak current
from 5 A to 800 A

Typical motor power
from 1.1 kW to 315 kW

b maXX 3300 – Compact



Nominal output current
from 1.5 A to 10 A

Nominal peak current
from 6 A to 20 A

Typical motor power
from 0.8 kW to 5 kW

10 reasons for b maXX servo drives

b maXX
Drive Intelligence by Baumüller

What is your main goal?

1. Implement application requirements with pinpoint accuracy: A precise configuration of the controller and the power module for the application leads to time and cost savings. Various encoders, hardware, safety options and cooling variants can be selected flexibly.

2. Set up drive systems flexibly:
The compatibility of all Baumüller products enables an open and scalable system architecture. Baumüller systems and components cover all common bus systems and can thus be flexibly combined with a wide variety of machine controls.

3. Energy efficiency:
The dynamic temperature model monitors the maximum workload of the electric drives at power peaks. The devices are better utilized and smaller in size as a result. Baumüller also implements systems with intermediate circuit group for particularly high peak loads. This allows process-related peaks to be absorbed and the electrical connected load to be reduced.

4. Reduce footprint:
The new mono devices, especially those with water or oil cooling, are extremely compact and require little space in the control cabinet. With a DC link connection of the servo axes in combination with grid rectifiers/inverters, the control cabinet volume can be further minimized.

5. Faster on the market:
Speed is decisive – with ProDrive, Baumüller offers a powerful tool for the commissioning and parameterization of the drives. Due to the clear user guidance, you save plenty of parameter input time. The self-optimization reduces the time you expend even further.

6. Reduce development costs:
With our ProSimulation tool, machines can be virtually commissioned and optimized. Design and systematic errors are identified early and are corrected in advance.

7. Simplify commissioning:
With ProDrive a perfected tool is available for easy commissioning and operation of servo converters. Guided commissioning further simplifies parameterization. The consistent standardization saves time.

8. Maximize machine availability:
Functions such as transmission protection, adaptation of controller parameters, error reactions and controller-integrated monitoring functions ensure lower service costs, shorter standstill times and lower system costs. Drive Intelligence uses already available data like power, current, torque, speed or position to monitor the machine's operating condition and make decisions directly in the drive.

9. Increase productivity:
Short controller clock cycles enable, for example, optimal parameterization of proportional gain and thus highly dynamic positioning. Drive-integrated functionalities bypass fieldbus dead times and operate at the fast controller cycle, reducing cycle time.

10. Ensure product quality:
Baumüller's cogging torque-free motors meet high requirements for synchronous operation. If high-precision motors are not possible for performance reasons, Baumüller offers the "cogging torque compensation" function integrated in the drive, which enables uniform smooth running even at low speeds. The devices also achieve the highest positioning accuracy through highly synchronous set value settings via real-time EtherCAT fieldbus, oversampling in the encoder signal evaluation, and optimal open-loop control.

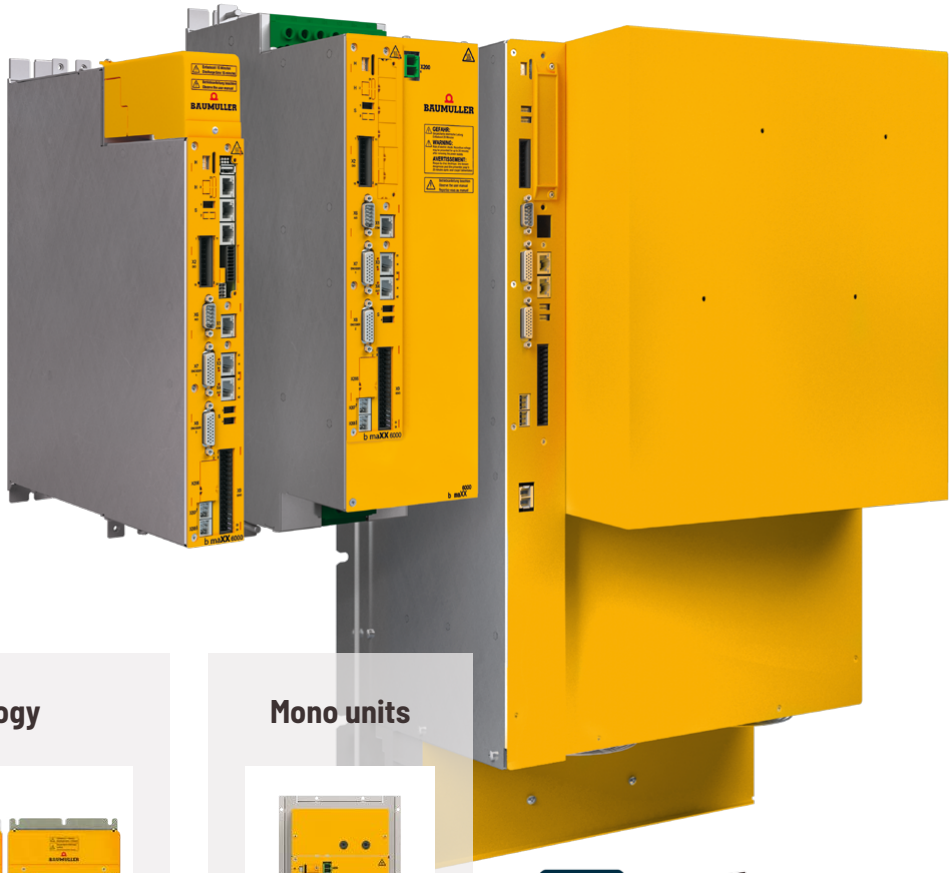
b maXX 6000

Servo controller family

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.

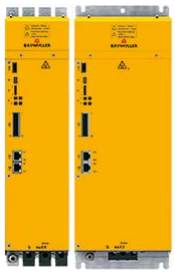
The servo controllers of the b maXX 6000 series are available as mono devices and in a module system. The mono devices have a power supply and motor connection. When there are a larger number of drive axes in the system, the module system is used, where several drives are operated with one power supply.
In the modular system, the rectifier and regenerative feedback units of the b maXX 5000 series are combined with the axis modules of the b maXX 6300.



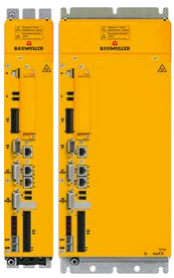
b maXX 6000 Side-by-side technology



BM50XX
Supply units



BM51XX
Regenerative units



BM63XX
Axis/Double axis units

Mono units



BM65XX
Standard units

Safety

PLC inside

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

OPC® Unified Architecture MQTT

Drive-based control technology relieves fieldbuses

- b maXX softdrivePLC (cycle time ≥62.5 µs)
- Prepared for b maXX drivePLC (drive integrated) with a fieldbus cycle time of ≥62.5 µs 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

*) in preparation

EtherCAT® CANopen® VARAN ETHERNET POWERLINK® PROFINET®* EtherNet/IP™* Modbus®*

Extend service life with a dynamic temperature model

The actual output power that can be realized with a servo controller is tied to the switching capacity of the installed IGBTs. This switching capacity depends on several factors: output current, output frequency, temperature rise and duty cycle.

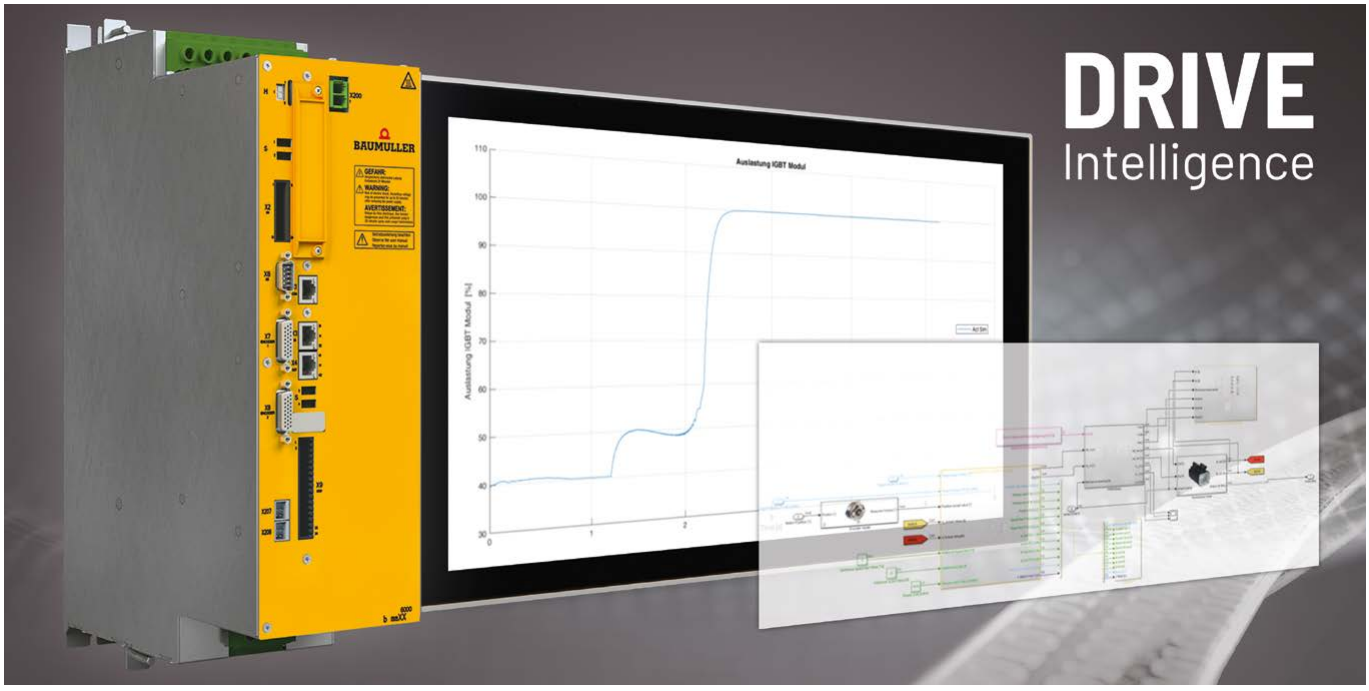
Short-term high loads on electric drives, where high torque is required at low rotation speeds, lead to thermal stress. This stress negatively impacts the service life of the IGBTs and, therefore, the devices. Larger components are therefore often chosen to avoid premature failure, yet these lead to higher manufacturing costs. It doesn't have to be like this.

With Baumüller's **dynamic temperature model**, the load and thermal stress on the servo controllers can be recorded.

The cycle frequency of the power module can then be automatically reduced in real time. This makes it possible to increase the output power of the devices in the short term without affecting their service life.

Advantages

- The drive can be dimensioned smaller
- Or: Machine productivity increases
- Reserves for short-term power peaks are possible (e.g., in shredders, presses)
- Noise pollution from the machine decreases
- High torque at low speed can be implemented in a way that protects the components



Pulse width modulation

Another way to reduce thermal stress is to change the PWM frequency during operation, reducing heat losses and increasing the maximum peak current of the drive.

b maXX 6300

Industry-specific single and double-axis modules



Greater flexibility, higher safety functions

The compact and flexible b maXX 6300 is suitable for a power range from 1 up to 90 kW. 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 axis units, which can be quickly and easily connected to each other and to power supply and regenerative units of the b maXX 5000 series using 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



b maXX 5000
frame sizes 3, 4 and 7

b maXX 5000 supply units – Technical data

Type	frame size	DC link power		DC link peak power [1]		Overload factor	Dimensions WxHxD
		[kW]	[hp]	[kW]	[hp]		[mm]
BM 5030	3	5	6.7	7.5	10.1	1.5	75 x 395 x 280 / 210 [2]
BM 5031	3	10	13.4	15	20.1	1.5	75 x 395 x 280 / 210 [2]
BM 5032	3	18	24.1	27	36.2	1.5	75 x 395 x 280 / 210 [2]
BM 5043	4	36	48.2	54	72.4	1.4	100 x 395 x 280 / 210 [2]
BM 5044	4	70	93.8	70	93.8	1.0	100 x 395 x 280 / 210 [2]
BM 5074	7	150	201	300	402	2.0	175 x 395 x 280 / 250 [3]
BM 5075	7	200	268	300	402	1.5	175 x 395 x 280 / 250 [3]



b maXX 5100
frame sizes 7 and 9

b maXX 5100 regenerative units – Technical data

Type	frame size	DC link power		DC link peak power [1]		Overload factor	Dimensions WxHxD
		[kW]	[hp]	[kW]	[hp]		[mm]
BM 5173	7	36	48.3	54	72.4	1.5 [1]	175 x 395 x 280 / 210 [2]
BM 5174	7	64	87	96	130.2	1.5 [1]	175 x 395 x 280 / 210 [2]
BM 5192	9	150	201	300	402	2.0 [4]	425 x 395 x 280 / 210 [2]
BM 5193	9	200	268	300	402	1.5 [4]	425 x 395 x 210 [3]

Supply units, regenerative units:
Supply voltage: 207 – 528 V ± 0% AC
Supply frequency: 50/60 Hz
Electronics supply: external 24 V DC
Supply rated voltage: 400 V

DC link rated voltage:
540 V (supply unit),
640 V (regenerative unit)
Certification: CE, cUL

1) for 120 seconds
2) depth air cooling / depth cold plate
3) depth water cooling
4) for 10 seconds

Height and depth without mounting brackets; Depth including required bending radius of connecting cables

Subject to change

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

b maXX 6300 axis units – technical data

Type	Frame size	I_N	I_{MAX}	typ. motor rating		Overload factor	Dimensions
		[A]	[A]	[kW]	[hp]		[mm]
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]

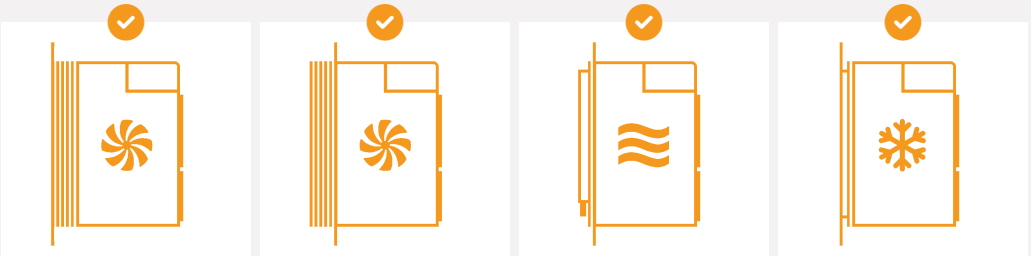
Supply voltage: 207–528 V ± 0% AC
Supply frequency: 50/60 Hz
Electronic power supply: external 24 V DC

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

Cooling options



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.
With fuse ratings optimized still further, the new devices are even more precisely configurable for the respective application.

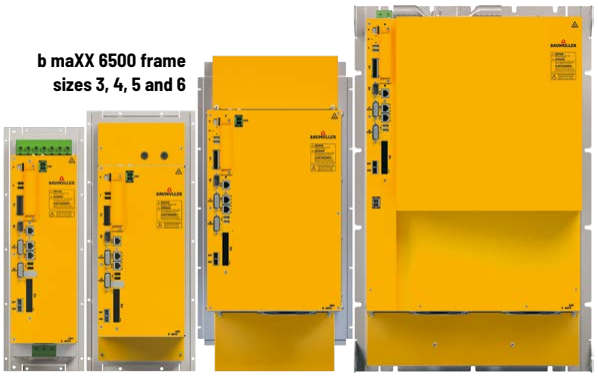
Highly reduced installation space

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

b maXX 6500 mono units – technical data

Type	Frame size	I_N	I_{MAX}	Overload factor	Dimensions BxHxT [1]
		[A]	[A]		[mm]
BM 6512	1	2.5	5	2	80 x 310 x 201 [2]
BM 6513	1	4.5	9	2	80 x 310 x 201 [2]
BM 6522	2	7.5	15	2	106 x 428 x 192 / 248
BM 6523	2	11	22	2	106 x 428 x 192 / 248
BM 6524	2	15	30	2	106 x 428 x 192 / 248
BM 6525	2	15	40	2.7	106 x 428 x 192 / 248
BM 6526	2	22.5	45	2	106 x 428 x 192 / 248
BM 6532	3	22.5	45	2	125 x 430.5 x 164.5 / 248.5
BM 6533	3	30	60	2	125 x 430.5 x 164.5 / 248.5
BM 6534	3	45	90	2	125 x 430.5 x 164.5 / 248.5
BM 6535	3	60	120	2	125 x 430.5 x 164.5 / 248.5
BM 6543	4	80	160	2	163.5 x 462.5 x 165.6 / 248.5
BM 6544	4	100	200	2	163.5 x 462.5 x 165.6 / 248.5
BM 6545	4	130	225	1.7	163.5 x 462.5 x 165.6 / 248.5
BM 6546	4	150	250	1.7	163.5 x 462.5 x 165.6 / 248.5
BM 6554	5	210	300	1.4	253 x 486.7 x 203.6 / 295.3
BM 6555	5	250	390	1.6	253 x 486.7 x 203.6 / 295.3
BM 6556	5	300	390	1.3	253 x 486.7 x 203.6 / 295.3
BM 6563	6	300	430	1.4	403 x 681.3 x 322 / 413.5
BM 6564	6	350	500	1.4	403 x 681.3 x 322 / 413.5
BM 6565	6	420	600	1.4	403 x 681.3 x 322 / 413.5
BM 6566-S/A	6	500	800	1.6	403 x 681.3 x 322 / 413.5
BM 6566-F/Z	6	600	800	1.3	403 x 681.3 x 322 / 413.5

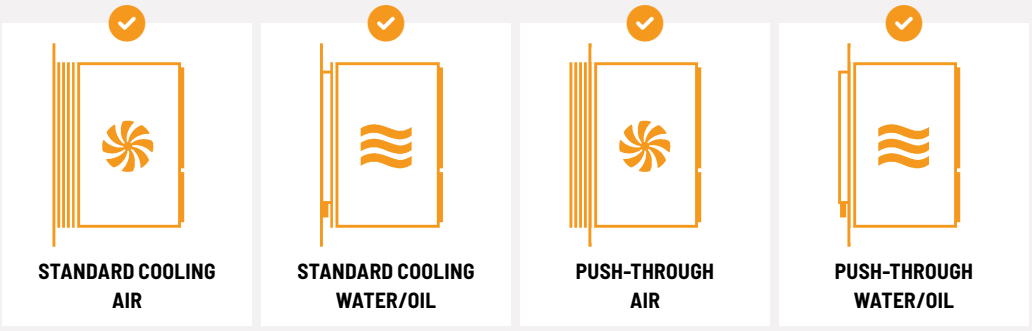
Supply voltage; 207–528 V ± 0% AC
Supply frequency: 50/60 Hz

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

1) Depth water cooling / depth air cooling
2) air cooling only

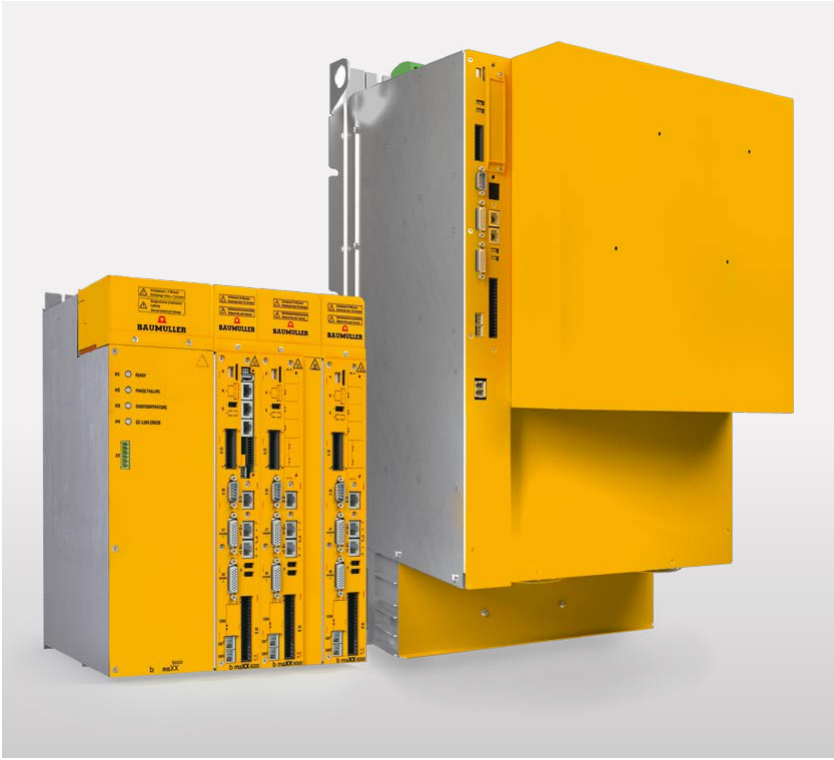
Certification: CE, cUL
Subject to change

Cooling options



Servo controllers b maXX 6000

b maXX 6000 offers side-by-side technology and mono units in a power range from 1.1 to 315 kW and a future expansion to 400 kW.



Braking energy

The control of a brake resistor is integrated as a brake chopper in the device. The connection of a ballast resistor is external. This enables optimal sizing and reduces the construction volume of the control cabinet. For liquid-cooled devices, an optional brake resistor mounted on the device's heat sink is available.

Temperature-dependent fan control

The fan is controlled relative to the temperature inside the device. This leads to a reduction in energy consumption and therefore lowers the overall costs of a system.

Line filter

To optimize configuration from a cost perspective, line filters are always connected in series outside the device. Several power modules can thus be grouped for each line filter resulting in reduced costs for the system as a whole.

Choke-free operation

With the control of the thyristors by the controller, the choke can be omitted depending on the application. This reduces the amount of wiring and leads to space and cost savings. This option is available for all series products across the entire family, within a power range from 1 to 315 kW.

Encoder systems

- Resolver
- Incremental encoder
- SinCos-Hyperface
- Hiperface DSL
- EnDAT 2.1
- EnDAT 2.2
- SSI

Optional modules

It is also possible to expand with add-on modules for the b maXX 6000 series. There are add-on modules for encoder emulation, expansion of the fieldbus variance as well as expansion of the number of analog inputs and outputs as well as the digital inputs and outputs.

Optional modules	Description
IEE-002-001	Rectangle incremental encoder emulation with external 24V power supply. The signal generated can either be used to synchronize a following axis or to detect the position of the axis via a superordinated control.
SIE-001-001	SSI encoder emulation with external 24V power supply. The signal generated can be used to detect the position of the axis via a superordinated control.
PLC-001-001	PLC option module for Drive Intelligence

Optional modules	Analog inputs	Analog outputs	Analoge inputs	Digital inputs	Digital outputs
	-10 V	**±10 V**	**4...20 mA**		
SVP-001-001	4	4	-	4	4
SVP-001-002	2	4	2	4	4
SVP-001-003	-	4	4	4	4

Accessories for b maXX 6000, 5000 and 3000

Electronic type plate

The b maXX 3000, 5000 and 6000 series can read or describe a memory area in the encoder system.
This so-called electronic type plate is generally divided into two areas:

Baumüller-specific memory area:
Among other things, this is where Baumüller stores motor-specific data that the converters can automatically read out during commissioning.

Customer-specific memory area:
The customer can save his or her own data here using the b maXX converter. This begins with the customer-specific item numbers and ends with machine or model numbers.



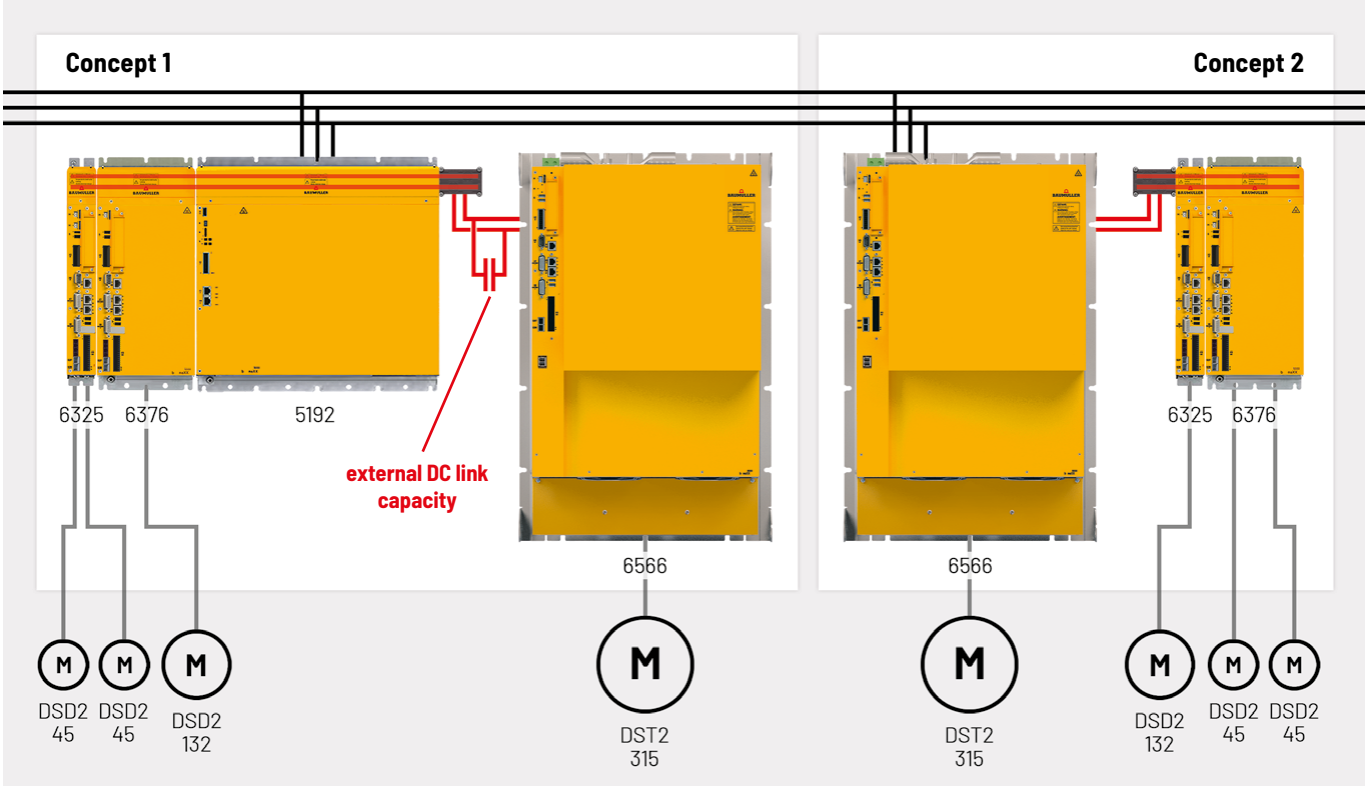
Signal bus coupling module

The signal bus coupling module has been developed to combine servo drives with different signals and voltages in machines and plants.

In addition, the signal bus coupling module can also be used to lift the maximum limit of 12 devices with connected signal bus in the machine. This means that the number of devices connected to the signal bus is unlimited. The module can also be useful to extend and accordingly distribute the signal from one control cabinet to the next.

More efficient with DC link

In energy-intensive applications with multiple drives, systems with a DC link connection can be implemented.
A DC link connection offers higher energy efficiency, cost reduction, and improved system performance.



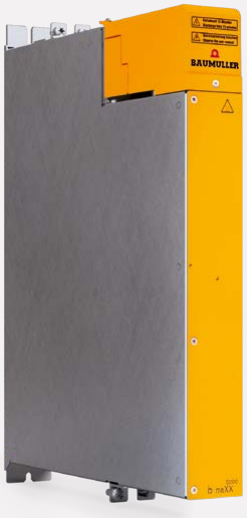
Advantages

- **Energy exchange between drives:** In a DC link connection, drives that are braking can feed energy back into the DC link. This braking energy can be used by other drives that are accelerating. This significantly improves the efficiency of the overall system, as less energy is drawn from the power supply, and less energy is wasted as heat.
- **Reduction of energy requirements:** By reusing braking energy, the external energy requirements can be reduced. This leads to lower operating costs and a better energy balance.
- **Hardware cost savings:** Since feeding back into the power supply is minimized or avoided, no additional regenerative feedback units are required. Smaller devices can also be connected to the DC link of mono devices, eliminating the need for a feed module (concept 2). Lower thermal radiation allows smaller dimensioning of cooling units. Control cabinets are smaller, and there is no need to set up an independent power supply, as stored energy in the DC link enables a controlled shutdown in case of errors or power failures. This reduces the cost of the required hardware.
- **Reduced load on the power supply:** The energy exchange via the DC link reduces the load on the power supply, as fewer power peaks occur. Additionally, the quality of the power supply is improved, as fewer harmonics and current surges are generated.
- **More compact design:** Since the energy exchange occurs directly between the drives, larger power supplies or additional regeneration systems can be omitted, reducing the system's footprint and complexity.

DC link capacitance unit

Energy and cost savings in dynamic applications
With the DC link capacitance unit, the braking energy can be temporarily stored for dynamic applications and used for subsequent acceleration.

Can be used in devices of the converter generation b maXX 5000 and b maXX 6000.



DC link coupling module

A DC link coupling connects several power modules, thus enabling energy equalization between the individual devices. The surplus energy is thus not “burned up”, but is available to other drive units without additional energy being drawn from the power supply.

The DC link coupling module enables the connection of different Baumüller b maXX servo drives in machines and systems. In this way, cable-guided devices can be connected to devices on a copper rail in accordance with standards.





DC link filter

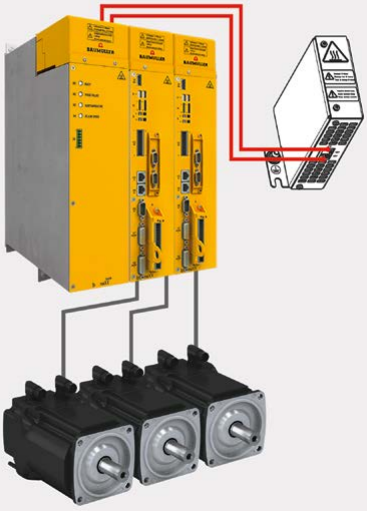
If the motor cables are too long, voltage peaks that are dangerous for the motor can occur. If these are frequently or continuously above the limit value, motor damage can occur, and in the worst case, total failure of the motor. This can be prevented if link filters are installed at the converters or link involved, because these filters prevent or remove the harmful overvoltages before they reach the motor.

The DC link filter must be placed as near as possible to the supply infeed.

Mono devices



Modular devices



DRIVE INTELLI

Because speed matters

Baumüller Drive Intelligence is the shift of intelligence from the central control unit into our servo drives. In addition to control tasks, the servo drive takes over control functions, optimizes itself during operation, and is IoT-enabled.

Baumüller is a pioneer in the field of drive-integrated intelligence. Our core competence is to control complex, highly dynamic and precise movements with pinpoint accuracy.

Our goal is for every machine manufacturer to be able to use this high-performance motion control in their machines. That's why, over 30 years ago, we introduced intelligent converters to the market to enable these solutions to be integrated independently and flexibly into any existing machine topology. As a result, our customers achieve higher machine performance, are quicker to market, and can respond more flexibly to customer requirements.

DRIVE INTELLIGENCE ADVANTAGES



Performance: If the intelligence is distributed decentrally, only preprocessed data or even only status messages are still transmitted via the fieldbus communication between the drive and central control unit. The actual target and actual values of the motion control and safety tasks are processed directly within the machine module at the much faster controller cycle.



Modularity: Only intelligent drive technology makes modularization possible. The superordinated control only communicates with the intelligent servo drives of the machine modules and no longer communicates with the individual system components. If the machine modules are encapsulated, commissioning can be done separately, eliminating the need for commissioning the entire system and saving time and costs.



Simplify: If the machine is set up decentrally, all tasks related to the respective machine module can be computed in the intelligent drive. This significantly reduces the PLC project's complexity in the central control unit.



Connectivity and IoT: By capturing and pre-processing data within the drive and directly communicating this via standardized interfaces, the fieldbus is less loaded. This accelerates communication within the system and reduces cycle times. By separating different communication networks, a higher level of security is possible.



Artificial Intelligence: Intelligent servo drives can provide data faster than the central control unit due to their proximity to the process, acting as a data hub and enabling optimal performance for AI applications. Additionally, when combined with external sensors, the drives can also serve as a sensor hub.

GENCE

DRIVE Intelligence

By shifting control functionalities into the drive, faster communication, shorter cycle times and improved performance are possible. As a specialist in drive-integrated intelligence, Baumüller designs its servo drives specifically for use with its integrated control platforms. A wide range of freely combinable technology blocks brings decisive added value. Application-specific adjustments and enhancements are made as part of EaaS (Engineering as a Service) by an experienced team of application engineers.

Intelligent drives	Platform	Software modules	EaaS
			
Motion Control with b maXX 5000/6000	Firmware, b maXX drivePLC or b maXX softdrivePLC	Analysis, motion & optimize with integrated software	Application-based individualization



Tasks of intelligent servo drives

- Real-time monitoring (energy monitoring, condition monitoring)
- Monitoring and analysis of process characteristics in real-time
- PLC control functions
- Faster data acquisition,
- pre-processing, and data transmission
- Direct communication with other participants in the system (e.g., AI, sensors)
- Autonomous response to changes of state
- Extended safety functions

Systems with drive-integrated control technology are particularly suitable for:

- Applications with highly synchronous motion control
- Applications with high requirements for speed and quality
- Modular machine concepts
- Applications with limited installation space

For the relocation of control and monitoring functions into the drive, Baumüller offers two platforms:



b maXX softdrivePLC

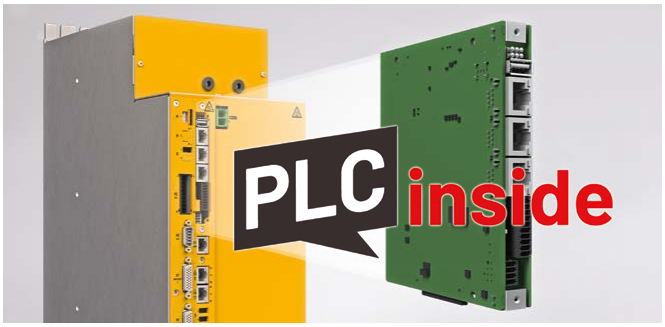
- For single-axis applications
- Motion control
- Analytics
- Modules



b maXX drivePLC

- For multi-axis applications
- Motion control
- IoT functions
- Templates





The **b maXX softdrivePLC** runs as part of the firmware in the Baumüller b maXX 6000, b maXX 5000 and b maXX 3300 drive concepts, and is suitable for single-axis applications. With the help of the b maXX-softdrivePLC, programs in the controller can run highly synchronously with the controller clock at cycle times of up to 62.5 µs. With the b maXX softdrivePLC, machine builders can easily implement simple control tasks decentrally in the controller using the ProDrive parameterization tool. Numerous preconfigured software modules, which can be used for motion control or analysis functions directly in the drive, are available.

The drive-integrated control unit **b maXX drivePLC** can execute complex motion control, technology and control functions directly in the drive. As the drivePLC can also control other drives as an EtherCAT master, the higher-level PLC can even be omitted completely in some cases. This reduces costs for the machine manufacturer and machine operator. Due to its integration in the drive, the drivePLC achieves minimal cycle times of up to 125 µs. The PLC is fully integrated into the Engineering Framework ProMaster. Here, all applications for creating machine and plant topology, the fieldbus and I/O configurators, as well as tools such as the PROPROG programming environment, the ProCAM curve disk editor and much more are available.

Real-time communication

Communication between the drivePLC and the servo controller does not take place via the fieldbus but via an internal interface. This provides access to drive parameters such as voltage, current, power, torque, speed or position in “hard real time”. The servo drive thus takes on sensor tasks and enables smart monitoring with little extent of work.

With interfaces such as OPC UA, MQTT, EtherCAT and Ethernet, the b maXX drivePLC is ideally set up for future requirements regarding automation or the Internet of Things. This comprehensive openness improves development efficiency, time-to-market and flexibility. The digital and analog inputs of the drivePLC are optimized for speed. Through digital inputs, the b maXX drivePLC reacts in real time to important events such as touch probes. The advantage: The control unit works more efficiently and reliably, a plus point in particular for applications with high requirements in terms of dynamics and precision, where fast response times are required.

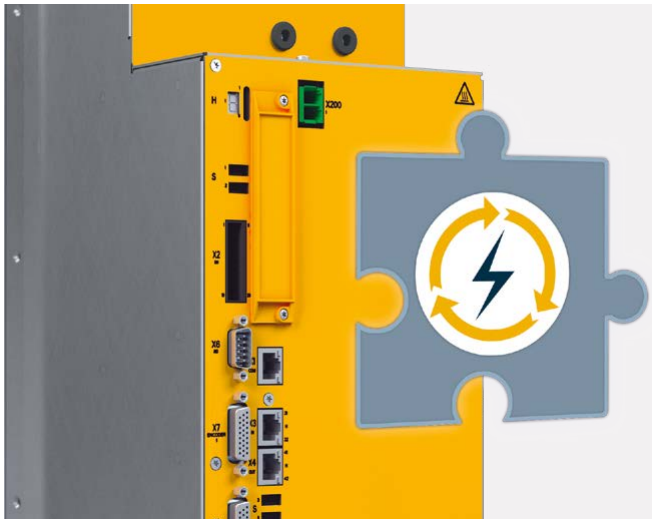
Software packages for intelligent drive technology

DRIVE Intelligence

Baumüller servo drives are equipped with numerous firmware functionalities for highly precise and dynamic motion control. These functionalities can be expanded and customized with Baumüller technology solutions. Tested software packages are available for the various platforms for this purpose. Individual technology solutions, such as templates, libraries and drive-integrated modules, can be freely combined and tailored to specific requirements.

Machine modules

Numerous preconfigured software modules, which can be used for motion control, regulatory tasks or analysis functions directly in the drive, are available for the b maXX softdrivePLC.



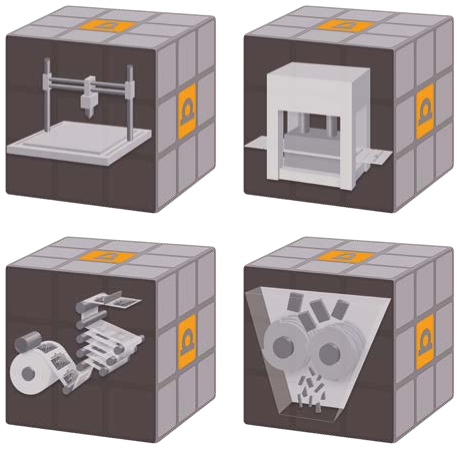
Example energy monitoring:
The Smart Energy Monitoring software function is integrated in the softdrivePLC of the Baumüller converter and can be operated via a vendor-neutral control unit. This enables transparent and autonomous recording of the energy consumption of individual production orders. Based on a reference value, the second step can be the optimization of consumption. The reference measurement also serves as an initial value for detecting energy deterioration in the production process and to set up warning and error thresholds.

Machine templates for b maXX drivePLC and b maXX PLC mc

Machine templates for various industry solutions already offer a large part of the functions, allowing machine programmers to focus on process programming.

How templates work:
Basic functions like recipe and user-level management do not need to be redeveloped but only selected and parameterized. Routine tasks, such as linking variables and modules, are eliminated, saving a lot of time – especially at the start of a project. Frequently used machine functions are also integrated and only need to be adapted to the application. This accelerates programming and shortens the time-to-market. In addition to libraries, general templates for visualizations and error management, as well as industry-specific functions like print mark recognition, are included.

Examples: Servo presses, 3-axis applications, web-processing machines, industrial shredders.



SAFETY

Safety integrated in the drive



Both machine builders and operators must comply with the safety requirements specified in Machinery Directive 2006/42/EC. To ensure this, Baumüller addresses where all machine processes are coordinated: in the automation system. While conventional concepts rely on additional safety components such as emergency stop devices, Baumüller prefers an integrated solution. The prerequisite for this is hardware components that can be scaled with demanding safety functions.

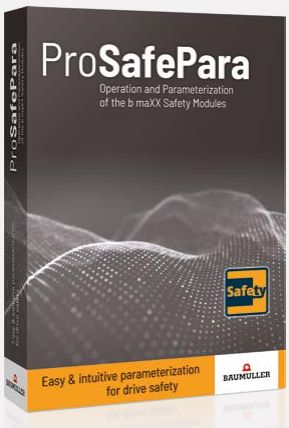
The safety functions for the b maXX 6000 servo controller family have been specially developed for applications with high requirements for dynamics and precision. In the new servo-controllers, the adaptable safety module is integrated directly into the device. The advantage: This allows safety-relevant encoder signals to be analyzed at an even higher resolution.

Drive-integrated safety

Application-specific adaptable safety functions, integrated directly into the drive.

Available safety functions:
STO, SS1, SS2, SOS, SLA, SLS, SLP, SLI, SDI, SBC, SSM, SCA, SP

Parameterize drive safety easily and intuitively with ProSafePara



SINGLE CABLE

Single cable solution for power and feedback systems

b maXX 6000
b maXX 5000
b maXX 3000



The new single cable technology, with which the Baumüller motors are equipped, saves the user from having to use a feedback cable or an expensive inflexible hybrid cable that is otherwise required in addition to the obligatory motor cable.

Unlike with sensorless control, single cable technology allows for highly accurate positioning. The encoder data, rotor position, multi-turn information as well as the status of the thermal conditions in the motor are reliably transmitted interference-free via a purely digital interface. This results in significant cost savings, since both motor and controller side connectors and cables are omitted. Costly, analog evaluation modules in the drive amplifier can be dispensed with.

The diagnostic capability is also a given. The wiring is significantly simplified, which eliminates possible sources of error and also has a positive effect on the peripheral equipment, since now mobile cable handlers, cable glands and reserved areas for the cables in machines and control cabinets are significantly smaller.

The new technology supports an "electronic type plate." This results in greater degrees of freedom on the motor side: The elimination of a plug connection makes it possible to use the new technology in the smallest of installation sizes too.

Customer benefits

- Quick and easy commissioning. Wiring and commissioning are simplified due to fewer cables and plugs
- Reduced wiring costs
- Thanks to the change to just one cable now, costs are eliminated for additional plugs and cables
- Efficient feedback control
- Increased performance thanks to digital feedback
- Reliable system
- Data transmission not susceptible to errors
- Supports electronic type plate

b maXX 5000

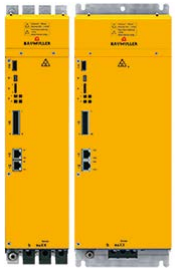
Servo controller family



b maXX 5000 Side-by-side technology



BM50XX
SUPPLY UNITS



BM51XX
REGENERATIVE UNITS



BM53XX
AXIS/DOUBLE AXIS UNITS

b maXX 5000 Mono technology



BM55XX
STANDARD UNITS



BM56XX
PEAK LOAD UNITS



BM57XX
NOMINAL LOAD UNITS

b maXX 5300

The safe, modular servo controller



Safety

Baumüller sets standards with the converter generation b maXX 5300. The further development of the successful b maXX series towards modular systems convinces with high-performance power units in air-cooled, water-cooled and cold plate cooling versions and with flexible expandability and the accessibility to an integrated communica-tion concept. Standardized as well as complex automation solutions can be implemented with Baumüller's converters and controllers within a power range between 1 and 90 kW.

The machine and installation requirements with regard to future reliability, flexible expansion possibilities and a simple adjustment to changed production processes were already considered during the preliminary development process stages of the b maXX 5300.

Individual modules easily can be removed or added over an integrated drive connect system without having to disconnect the entire drive system.

Available fieldbus options

EtherCAT · PROFINET · ETHERNET POWERLINK · VARAN · CANopen · EtherNet/IP · Modbus



b maXX 5000
frame sizes 3, 4 and 7

b maXX 5000 supply units – Technical data

Type	frame size	DC link power		DC link peak power [1]		Overload factor	Dimensions WxHxD
		[kW]	[hp]	[kW]	[hp]		[mm]
BM 5030	3	5	6.7	7.5	10.1	1.5	75 x 395 x 280 / 210 [2]
BM 5031	3	10	13.4	15	20.1	1.5	75 x 395 x 280 / 210 [2]
BM 5032	3	18	24.1	27	36.2	1.5	75 x 395 x 280 / 210 [2]
BM 5043	4	36	48.2	54	72.4	1.4	100 x 395 x 280 / 210 [2]
BM 5044	4	70	93.8	70	93.8	1.0	100 x 395 x 280 / 210 [2]
BM 5074	7	150	201	300	402	2.0	175 x 395 x 280 / 250 [3]
BM 5075	7	200	268	300	402	1.5	175 x 395 x 280 / 250 [3]



b maXX 5100
frame sizes 7 and 9

b maXX 5100 regenerative units – Technical data

Type	frame size	DC link power		DC link peak power [1]		Overload factor	Dimensions WxHxD
		[kW]	[hp]	[kW]	[hp]		[mm]
BM 5173	7	36	48.3	54	72.4	1.5 [1]	175 x 395 x 280 / 210 [2]
BM 5174	7	64	87	96	130.2	1.5 [1]	175 x 395 x 280 / 210 [2]
BM 5192	9	150	201	300	402	2.0 [4]	425 x 395 x 280 / 210 [2]
BM 5193	9	200	268	300	402	1.5 [4]	425 x 395 x 210 [3]

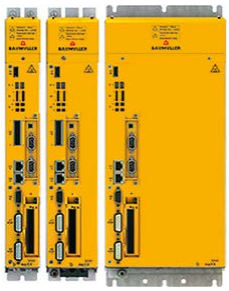
Supply units, regenerative units:
Supply voltage: 207 – 528 V ± 0% AC
Supply frequency: 50/60 Hz
Electronics supply: external 24 V DC
Supply rated voltage: 400 V

DC link rated voltage:
540 V (supply unit),
640 V (regenerative unit)
Certification: CE, cUL

1) for 120 seconds
2) depth air cooling / depth cold plate
3) depth water cooling
4) for 10 seconds

Height and depth without mounting brackets; Depth including required bending radius of connecting cables

Subject to change



b maXX 5300
frame sizes 2, 3 and 7

b maXX 5300 axis units – Technical data

Type	frame size	I_N	I_{MAX}	typ. motor rating		Overload factor	Dimensions WxHxD
		[A]	[A]	[kW]	[hp]		[mm]
BM 5323	2	2x 3	2x 9	2x 1.6	2x 2.1	3	50 x 395 x 280 / 210 [2]
BM 5323 [1]	2	2x 4.5	2x 9	2x 2.4	2x 1.8	2	50 x 395 x 280 / 210 [2]
BM 5325	2	2x 6	2x 18	2x 3.2	2x 4.2	3	50 x 395 x 280 / 210 [2]
BM 5325 [1]	2	2x 8.5	2x 18	2x 4.6	2x 3.5	2.1	50 x 395 x 280 / 210 [2]
BM 5326	2	12	24	6.5	8.7	2	50 x 395 x 280 / 210 [2]
BM 5327	2	20	40	10.8	14.5	2	50 x 395 x 280 / 210 [2]
BM 5328	2	30	60	16.2	21.7	2	50 x 395 x 280 / 210 [2]
BM 5331	3	2x 12	2x 24	2x 6.5	2x 8.7	2	75 x 395 x 280 / 210 [2]
BM 5332	3	2x 20	2x 40	2x 10.8	2x 14.5	2	75 x 395 x 280 / 210 [2]
BM 5333	3	2x 30	2x 60	2x 16.2	2x 21.7	2	75 x 395 x 280 / 210 [2]
BM 5334	3	40	60	21.6	29.0	1.5	75 x 395 x 280 / 210 [2]
BM 5335	3	60	90	32.4	43.4	1.5	75 x 395 x 280 / 210 [2]
BM 5372	7	90	180	48.6	65.1	2	175 x 395 x 280 [3]
BM 5373	7	120	240	64.8	86.8	2	175 x 395 x 280 [3]
BM 5374	7	150	300	81	108.5	2	175 x 395 x 280 [3]
BM 5375	7	180	360	97.2	130.2	2	175 x 395 x 250 [3]
BM 5376 air-cooled	7	150	420	81	105.5	2.8	175 x 395 x 280
BM 5376 water-cooled	7	180	420	92.2	130.2	2.3	175 x 395 x 250 [3]

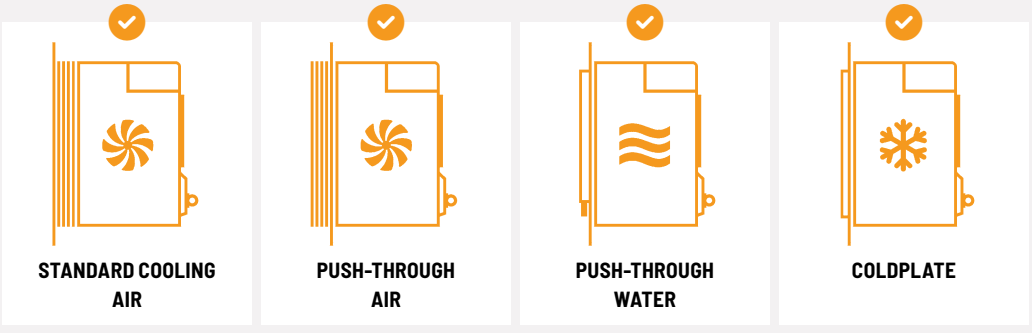
Axis units:
Supply voltage: 207 – 528 V ± 0% AC
Supply frequency: 50/60 Hz
Electronics supply: external 24 V DC

Chopping frequency: 4/8 kHz
Certification: CE, cUL

1) Load cycles as per EN 61800
2) depth air cooling / depth cold plate
3) depth water cooling

Height and depth without mounting brackets; Depth including required bending radius of connecting cables
Subject to change

Cooling types



b maXX 5500

Servo drive for higher output ratings

The modular converters 5000 have been extended to mono units in the range 5500. This covers power ratings of 10 to 315 kW and higher safety functions such as SLS (safely limted speed) and SLP (safely limited position) can be integrated up to high power ratings.

b maXX 5500 offers a performance range from 1.1 kW to 315 kW. All devices have integrated rectifiers, DC link capacitors and inverters.



Safety functions according to IEC 61800-5-2

Available fieldbus options

EtherCAT · PROFINET · ETHERNET POWERLINK · VARAN · CANopen · EtherNet/IP · Modbus

- Mono units in seven sizes for large outputs up to 315 kW
- Pluggable Safety module with higher safety functions
- Cooling types: Standard cooling air/water, push-through air/water, Coldplate



b maXX 5500 mono units – Technical data

Type	Frame size	I_N	I_{MAX}	typ. motor rating		Overload factor	Dimensions WxHxD [1]
		[A]	[A]	[kW]	[hp]		[mm]
BM 5512	1	2.5	5	1.1	1.5	2	106 x 310 x 263 [4]
BM 5513	1	4.5	9	2	2.7	2	106 x 310 x 263 [4]
BM 5522	2	7.5	15	3.4	4.6	2	106 x 428 x 340 / 320
BM 5523	2	11	22	5	6.7	2	106 x 428 x 340 / 320
BM 5524	2	15	30	6.8	9.1	2	106 x 428 x 340 / 320
BM 5525	2	15	40 [2]	6.8	9.1	2.6	106 x 428 x 340 / 320
BM 5526 single phase	2	22.5	45 [2]	6	8.0	2	106 x 428 x 340 / 320
BM 5526	2	22.5	45 [2]	10	13.4	2	106 x 428 x 340 / 320
BM 5532	3	22.5	45	10	13.4	2	155 x 510 x 340 / 325
BM 5533	3	30	60	13	17.4	2	155 x 510 x 340 / 325
BM 5534	3	45	90	20	26.8	2	155 x 510 x 340 / 325
BM 5535	3	60	90	28	37.5	1.5	155 x 510 x 340 / 325
BM 5543	4	80	120	36	48	1.5	190 x 624 x 374 / 327
BM 5544	4	100	130	45	60	1.3	190 x 624 x 374 / 327
BM 5545	4	130	170	58	78	1.3	190 x 624 x 374 / 327
BM 5546	4	150	200	75	100	1.3	190 x 624 x 374 / 327
BM 5553	5	150	195	75	100	1.3	307 x 656 x 374 / 321
BM 5554	5	210	260	110	147	1.3	307 x 656 x 374 / 321
BM 5562	6	250	325	132	177	1.3	437 x 815 x 378 / 316
BM 5563	6	300	390	160	215	1.3	437 x 815 x 378 / 316
BM 5566	6	350	450	175	234	1.3	437 x 815 x 378 / 316
BM 5572	7	450	585	225	302	1.3	520 x 600 x 388 / 340
BM 5573	7	615	800	315	422	1.3	520 x 600 x 388 / 340

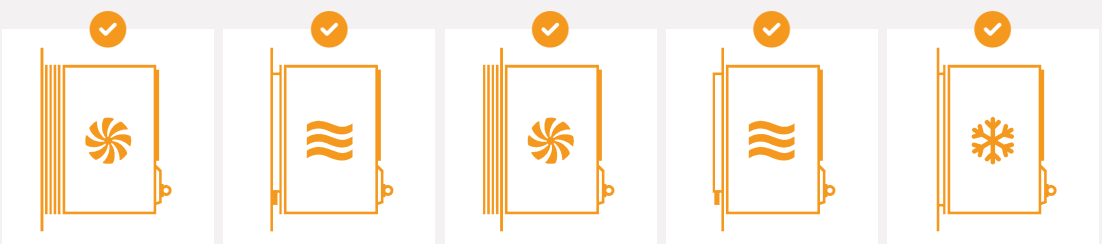
Supply voltage: 207–528 V ± 0% AC
Supply frequency: 50/60 Hz
Supply rated voltage: 400 V
DC link voltage: 540 V rated voltage
Chopping frequency: 2/4/8 kHz

Output voltage: 0–95 % of supply voltage
Electronics supply: external 24 V DC (diagnostic capability)
Fan connection: frame size 1–3: 24 V DC electronics supply, frame size 4–7: 230 V AC ± 10 %
Certification: CE, CSA, UL

1) Depth air cooling / depth water cooling
2) for 1 second 3) single phase 4) air cooling only
Height and depth w/o mounting brackets; depth incl. required bending radius of connecting cables

Subject to change

Cooling types



b maXX 5600/

The application specific servo drive

The established automation and drive solution b maXX was expanded with the new peak load and nominal load devices of the 5600 and 5700 series. The units complete the b maXX series and are available in five sizes. Therewith, Baumüller meets the requirements of industry-specific applications such as in the field of injection moulding or extrusion processes, because here either short-term peak power or permanent maximum power in constant operation are in demand. The drive can optimally be matched to the power demands of the respective application. Even though the series is equipped with greater power rating it is available in smaller sizes and minimizes the required space in the control cabinet – hence the user benefits twice.



Safety functions according to IEC 61800-5-2

Available fieldbus options

EtherCAT · PROFINET · ETHERNET POWERLINK · VARAN · CANopen · EtherNet/IP · Modbus

- Peak load and nominal load units in five sizes
- Optimized for the respective industry requirement
- Low overall volume due to use of water cooling system

5700

Your benefits at a glance

- Optimized drive solution for specific industry requirements
- Different sizes available for compatible drive dimensions
- Less space required in the control cabinet due to smaller devices and the use of water cooling, control cabinet therefore less expensive to manufacture
- Water cooling in the control cabinet provides a cost-effective solution
- Compatible with other devices in the b maXX series



b maXX 5600 peak load units – Technical data

Type	Frame size	I_N	I_{MAX}	Overload factor [1]	Dimensions WxHxD
		[A]	[A]		[mm]
BM 5632-F	3	60	120	2	208 x 556.5 x 325
BM 5641-F	4	85	170	2	242 x 681 x 327
BM 5642-F	4	100	200	2	242 x 681 x 327
BM 5650-F [2]	5	130	260	2	360 x 550 x 285
BM 5651-F [2]	5	165	330	2	360 x 550 x 285
BM 5652-F [2]	5	200	400	2	360 x 550 x 285
BM 5661-F [2]	6	250	500	2	490 x 710 x 285
BM 5662-F [2]	6	300	600	2	490 x 710 x 285

b maXX 5700 nominal load units – Technical data

Type	Frame size	I_N	I_{MAX}	Overload factor [1]	Dimensions WxHxD
		[A]	[A]		[mm]
BM 5755-F [2]	5	260	260	1	360 x 550 x 285
BM 5766-F [2]	6	450	450	1	490 x 710 x 285
BM 5773-F	7	720	800	1.1	580 x 660 x 340

1) for 1 second with a cycle of 5 seconds
2) compact design, water-cooled

Subject to change

b maXX 3300

Compact servo drive up to 5 kW

The servo converter b maXX 3300 is a premium-quality servo controller with an integrated position control for the small power range. The b maXX 3300 distinguishes itself with its compact and space-saving construction. The field-oriented control provides an excellent rotational accuracy. Higher-level speed and position control ensure a precise positioning.

b maXX 3300 is compatible with servo controllers b maXX 5000 with regards to handling, communication parameter structure, main functionality and operation. b maXX 3300 is parameterized in ProDrive.



Available fieldbus options

EtherCAT · PROFINET · ETHERNET POWERLINK · VARAN · CANopen

- Compact servo controller with integrated position control for the small power range
- Excellent rotational accuracy thanks to field-oriented control
- Compatible with the b maXX 5000 converter family

The highly dynamic control of b maXX 3300 in conjunction with the highly dynamic small-sized servo motors of the series DSD increase the cycle-times of the application and increase the production output of machines and installations. The high chopping frequency (16 kHz) reduces noise emission and therefore relieves the burden on the environment.

The servo controller is specifically designed for the operation with the servo motors DSD 28–100 as well as for the Baumüller disc motor series. The consequent design focus of the controller on efficiency and compact construction form qualifies the b maXX 3300 for applications in the handling or robotics fields as well as for applications within the printing, textile and packing industry.

Safety functions according to IEC 61800-5-2

The following control types are available for synchronous machines

- Current control (sampling times 62.5 µs)
- Speed control (sampling times 125 µs)
- Position control (sampling times 125 µs)
- Jogging mode
- Referencing

b maXX softdrivePLC

- Basic and extended version

Safety Technology

- Certified Safety Function STO according to EN ISO 13849 up to PLe

Functions

- 230 V or 400 V mains supply voltage
- Chopping frequency 4/8/16 kHz
- Integrated regenerative switching transistor
- Integrated ballast resistor
- External 24 V supply
- 1 encoder input
- Digital I/Os 24 V/; 2 In; 2 Out
- Analog I/Os ± 10 V; 1 In; 2 Out
- 7 parameter data sets
- Open loop control
- EtherCAT/CANopen on board

Encoder types

- Resolver
- Rectangle incremental encoder
- SINCOS absolute encoder (single/multiturn)
- SINCOS incremental encoder
- ENDAT 2.1 / ENDAT 2.2
- SSI-Encoder
- Hiperface DSL



b maXX 3300 – Technical data

Type	frame size	I_N	I_{MAX}	typ. motor rating		max. peak current time	Dimensions WxHxD [1]
		[A]	[A]	[kW]	[hp]	[s]	[mm]
BM 3302	0	1.5	6	0.8	1.07	60	65 x 170 x 170
BM 3303	0	2.7	11	1.4	1.9	60	65 x 170 x 170
BM 3304	0	5.0	15	2.5	3.4	30	65 x 170 x 170
BM 3312	1	6.5	20	3.3	4.4	10	85 x 170 x 170
BM 3313	1	10	20	5.0	6.7	10	85 x 170 x 170

Mains supply voltage:
frame size 0: 110 V-243 V, single-phase;
supply rated voltage: 230 V
frame size 0/1: 180 V-528 V, three-phase;
supply rated voltage: 400 V

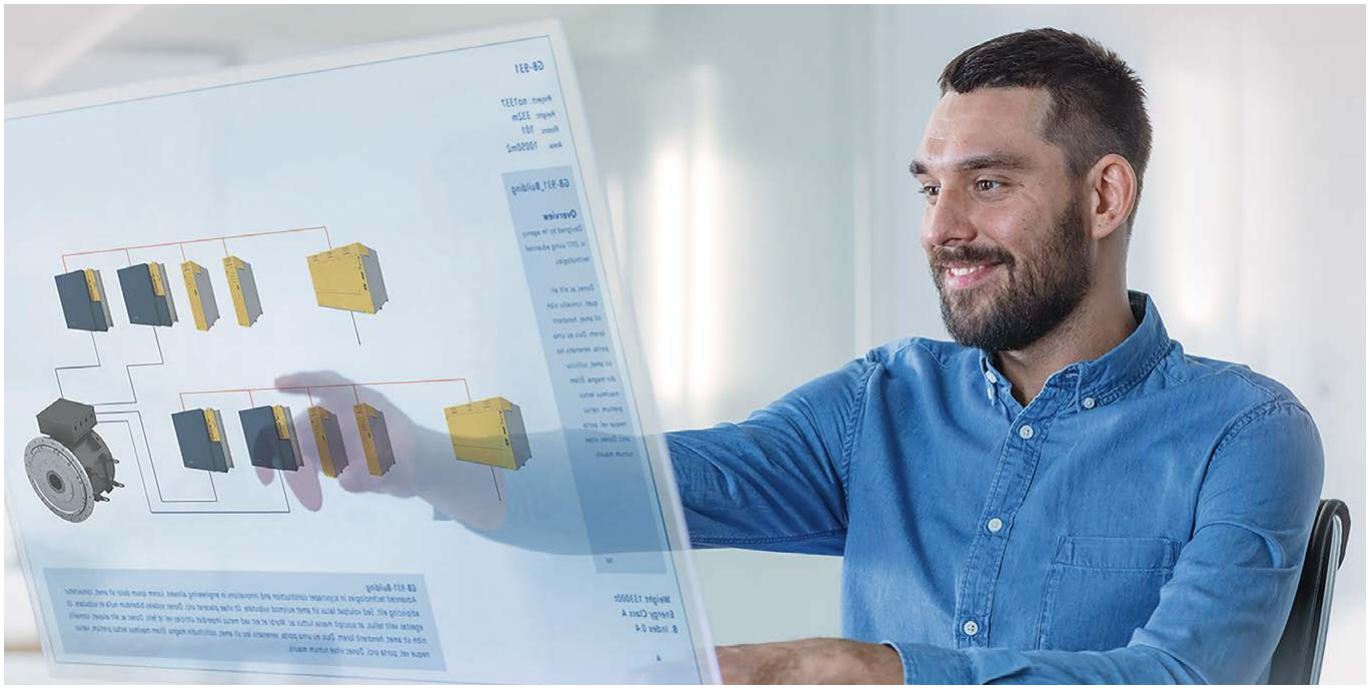
Supply frequency: 50/60 Hz
Chopping frequency:4/8/16 kHz
Output voltage: 0–85% (single-phase),
0–95% (three-phase) of supply voltage
Electronics supply: external 24 V DC

Data is valid for 4 kHz clock frequency
Dimensions without mounting brackets

Subject to change

ENGINEERING

Engineering as a Service (EaaS)



As a specialist in highly synchronous motion control and drive intelligence, we support you with our Engineering Service (EaaS) and implement the most individual and optimal solution for your machine. In this way, we maximize the productivity and efficiency of your machines and systems and shorten your time-to-market. With simulation, we enable optimal drive design, especially for complex movements. For highly synchronous motion control applications, we program drive-based as well as PLC-based functionalities, even with third-party controllers, and provide the appropriate data and interfaces for your IoT project.

DRIVE-BASED SOLUTIONS

PLC-BASED SOLUTIONS

SOLUTIONS WITH THIRD-PARTY CONTROL

IOT SOLUTIONS

SIMULATION

ADVICE, SUPPORT AND TRAINING

ProMaster

Engineering Framework



ProMaster contains the tools for solving all automation tasks: from the drive design to the parameterization, the programming of control units, fieldbus parameterization through to visualization. This applies throughout the entire life cycle, not only during the planning and initial commissioning but also during maintenance.

ProMaster makes engineering more efficient and systematically reduces the extent of work required despite increasing complexity. Defined interfaces, modular machine architectures, and optional extensions result in more efficient automation solutions for flexible use.

The tools for control technology in ProMaster

- ProProg programming system
- ProPLC/ProDevice/ProCatalog
- Visualization tool ProViz
- ProCAM cam editor
- ProEtherCAT
- ProOscilloscope

Advantages

- Efficient processes
- Faster system production
- Improved product quality
- Lower error probability

ProDrive

Fast commissioning



ProDrive is a tool that can save newcomers and advanced users a great deal of time: parameterization, commissioning, analysis and (remote) diagnosis

For the commissioning of its converters and controllers, Baumüller offers a multitude of practical functions and features. For users of Baumüller servo drives, ProDrive is a tool that makes commissioning, parameterization, operation, and diagnosis very easy. It is an ideal support for beginners in particular, allowing them to perform a complete commissioning process after only a brief training time. But ProDrive can do a lot more. It has numerous practical functionalities to offer that go well beyond simple commissioning and operation.

Functions

- Integrated, updateable power module, motor and encoder database, subsequently loaded modules
- Diagnosis/analysis tools such as oscilloscope function and FFT-analysis for optimization and analysis of the drive system
- On-/offline parameterization
- Single Axis or Multi Axis operation via Ethernet
- Language selection: German/English
- Guided commissioning with wizard

ProSimulation

Quick introduction to simulation



ProSimulation simplifies the design, virtual optimization and commissioning of machines and systems. The software expands the functional range of the ProDrive operating software, which allows quick and easy commissioning, parameterization and operation of all b maXX controllers.

- Efficient machine development
- Fast commissioning
- Baumüller drive technology as controller models
- Extensive library of common mechanisms
- CAD import from other tools possible

Advantages

Time and cost savings during development and commissioning

- The creation of a real prototype can be optimized or completely replaced
- Import of existing models from other simulation tools
- Simple user interface and operation (ProDrive extension)
- No need for license for additional modeling software

Optimization of existing machines and systems

- Virtual troubleshooting and optimization

Accumulation of simulation know-how in your company

- Easy introduction to “digital twin” technology
- Faster setting up of your own simulations

Automation – control platforms

With the b maXX control units, you can consistently implement the concept of scalability and modularity for flexible and individual adaptation to today's mechanical engineering requirements. Depending on the application, we support you during the development of central, modular decentralized and hybrid control architectures.

The control platforms are also suitable for highly synchronous drives and are completely integrated in the ProMaster engineering framework.



b maXX servo drives



With its converters, Baumüller provides its customers with important advantages: From cost savings to higher dynamics to increased safety.

Together, the converter series of the b maXX family cover a wide power range up to 400 kW. The b maXX family includes both stackable devices and powerful mono units. With optional safety packs, all devices in this series can be easily adapted to meet your individual safety needs.

Motors

You are looking for the right motor for your application? We offer you a wide portfolio of motors from 0.3 to 530 kW.

Depending on your requirements, we equip your plants or your mobile application with disk motors, dynamic three-phase motors, high-torque motors or if necessary, direct current motors also.



Software tools



As the complexity of machines and plants increases, so too do the demands on automation software. For this reason, it is important to provide users in the engineering field with the most user-friendly and flexible tools and software modules possible in each process phase in order to keep theengineering work required to a minimum. This allows software engineers to concentrate on their actual tasks and reach their goals faster. We offer the right tools and software modules for every stage of the engineering process. Because only with a holistic approach can state-of-the-art automation tasks be solved with minimum resources.

Sheet metal working / control cabinet construction

For many years, we have been implementing custom solutions for renowned machine and plant manufacturers – from sheet metal parts to completely wired control cabinets. You receive everything from us, a single source that can therefore deal optimally with your needs and wishes.

Planning | design | sheet metal production | serial production | assembly | installation



Service / Retrofit / drive modernization



With our services we support maintenance personnel, who are responsible for the smooth running of machines and plants every day, in all topics of industrial maintenance – and regardless of the manufacturer.

Regardless of the manufacturer, we offer you tailored and multi-level solutions for the modernization of your electrical drive systems.

HOUSE OF AUTOMATION



BAUMULLER ANLAGEN-SYSTEMTECHNIK	BAUMULLER	NÜRMONT	BAUMULLER SERVICES
System Engineering	Automation and Drive Systems	Installation and Relocation	Intelligent Services

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