



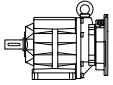
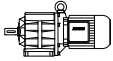

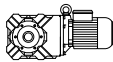
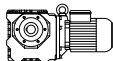
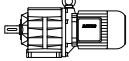

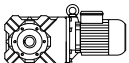
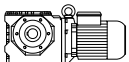
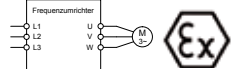
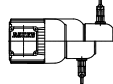
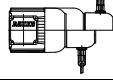



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### Fast - Flexible - Reliable

...As one of the leading manufacturers of intelligent drive technology, we have lived this motto for more than 80 years. Innovative products, modern processes and responsible employees realise this motto with the target of conserving resources and the environment together with efficient energy use over our whole field of activity. The success of our efforts assumes that we know and master our customers applications and the requirements on drive technology. We do this perfectly - from engineering, design and calculation through procurement, production and logistic to special application knowledge in the most important branch sectors.

### CD Rom:



### Internet:

[WWW.BAUERGEARS.COM](http://WWW.BAUERGEARS.COM)



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# Catalogue geared motors PMSM

## General Product Overview

### Helical-Geared Motor Series BG



Compact and economical inline helical geared motors for long lifetime under arduous conditions.

- Motor power from 0.03 kW to 75 kW
- 13 gearbox sizes for torques from 20 Nm to 18500 Nm
- New attachment possibilities with low design height
- High efficiency through 2 stage base design
- Enclosure IP 65 as standard

### Shaft-Mounted Geared Motor Series BF



Shaft-mounted geared motors with integrated torque arm are easily integrated and economically applied.

- Motor power from 0.03 kW to 75 kW
- 10 gearbox sizes for torques from 90 Nm to 18500 Nm
- Gearbox housing with integral torque arm
- High efficiency through 2 stage base design
- Enclosure IP 65 as standard

### Bevel-Geared Motor Series BK



Power-dense, right-angle, bevel-geared motors ensure the highest efficiency especially when used with frequency inverters.

- Motor power from 0.03 kW to 75 kW
- 10 gearbox sizes for torques from 80 Nm to 18500 Nm
- The right angle gearbox with universal attachment possibilities
- High efficiency through 2 stage base design
- Enclosure IP 65 as standard

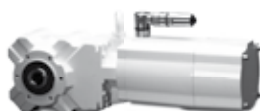
### Small Industry Geared Motors KIG



Gearbox and motor build a compact unit. Small industrial gear motors are space-saving and versatile and can be supplied for any mounting position.

- Available for three-phase and single-phase
- Lightweight, compact drives help to reduce the weight of the machine
- Saves space and reduces costs, especially for conveyor systems
- Motor connection via CAGE CLAMP<sup>®</sup> is vibration-proof and saves you money
- Motor parts for many installation situations and supply voltages
- In self- or non-ventilated design

### AsepticDrive™



Geared motors for the food & beverage industry as well as for all applications with high cleaning intensity or ambient conditions such as dust, fluff etc.

- Motor without fan and cooling fins
- Motor power
  - DA08 0.25 kW - 0.55 kW
  - DA09 0.37 kW - 1.5 kW
  - DA11 1.1 kW - 2.2 kW
- Available with helical, parallel shaft, bevel and worm gears
- Motor winding in Iso Class F with thermistors as standard
- Enclosure IP 67 and IP 69K with acid and alkali resistant coating as standard
- Motor connection through standard stainless steel plug connector

### CleanDrive™



Geared motors for the Food & Beverage industry in enclosure IP 66 with acid and alkali resistant coating as standard.

- Motor without fan and cooling fins
- Motor power 0.12 kW
- Motor winding in Iso Class F with thermistors as standard
- Motor connection through standard terminal box or stainless steel cable gland

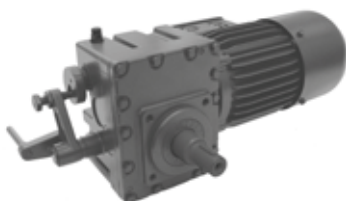
### Worm-Geared Motor Series BS



Economical, right-angle, worm-gear motors install easily in the tightest applications.

- Motor power from 0.03 kW to 5.5 kW
- 8 gearbox sizes for torques from 25 Nm to 1000 Nm
- Hollow shaft version already available from 25 Nm
- High loadable worm gearing for long lifetime
- Enclosure IP 65 as standard

### Overhead Monorail Geared Motor Series BM



A completely new range of monorail drives for light and heavy load monorail applications.

- Torques from 30 Nm up to 680 Nm
- Radial force up to 25.000 N
- Flexible mounting on the running gear
- Enclosure IP 65 as standard
- Improved efficiency – lower energy consumption – ideal as travelling drives
- Reverse motion of the gearbox is possible

### Frequency Converter Geared Motor Series Eta-K



Eta-K solutions are combinations of geared motors and frequency converters. They provide compact drive solutions with infinite speed control.

- Saving space and costs
- No shielded motor cables required
- Mechatronic adaption of VLT drive and geared motor
- Motor power range 0.12 kW up to 7.5 kW
- Supply voltage 3 x 380 V - 480 V
- Compliance to all EMC standards
- Standard RS485-Interface, optional Profibus-Interface
- ⚡ Zone 2 and 22 possible
- UL approved

### CAGE CLAMP®



The use of Bauer geared motors up to 30 kW with CAGE CLAMP® connection technology reduce costs both during installation and in service cases.

- Cost reduction during connection
- Simple handling
- Cable core diameters up to 25 mm<sup>2</sup> without wire-end sleeves
- Cost saving in material and tooling
- Vibration and shock resistant
- ⚡ approved

### Explosion-proof BAUER Geared Motors



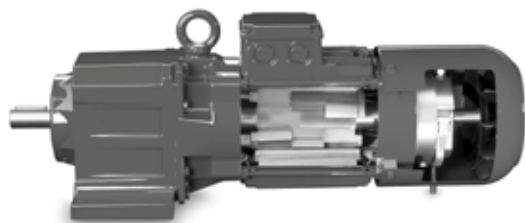
Geared motors suitable for use in explosive areas:

GAS	Zones 1, 2		
DUST	Zones 21, 22		
DXD	Zone 1,	II 2 G Ex d(e) IIC T3...T4 Gb	0,12... 75 kW
DXE	Zone 1,	II 2 G Ex e IIC TT1...T4 Gb	0,12... 11 kW
SXE	Zone 1,	II 2 G Ex e IIC TT1...T4 Gb	0,55 ... 15 kW
DXN	Zone 2,	II 3 G Ex nA IIC T3 Gc	0,03... 30 kW
DXC	Zone 21,	II 2 D Ex tb IIIC T160°C IP66 Db	0,03... 30 kW
DXC	Zone 21,	II 2 D Ex tb IIIC T120°C IP66 Db	0,03... 22 kW
SXC	Zone 21,	II 2 D Ex tb IIIC T120°C...160°C IP66 Db	
DXS	Zone 22,	II 3 D Ex tc IIIC T120°C...160°C IP65 Dc	0,03... 30 kW
DXD	Zone 1/21,	II 2 G Ex d(e) IIC T3...T4 Gb	
		II 2 D Ex tb IIIC T120°C...160°C IP65 Db	0,12... 75 kW
DXE	Zone 1/21,	II 2 G Ex e IIC T1...T4 Gb	
		II 2 D Ex tb IIIC T120°C...160°C IP66 Db	0,12... 11 kW
SXE	Zone 1/21,	II 2 G Ex e IIC T1...T4 Gb	
		II 2 D Ex tb IIIC T120°C...160°C IP66 Db	0,55... 15 kW
DXS	Zone 2/22,	II 3 G Ex nA IIC T1...T3 Gc	
		II 3 D Ex tc IIIC T120°C...160°C IP65 Dc	0,03... 30 kW

# Catalogue geared motors PMSM

## General Product Overview

### Energy Saving Geared Motors



### Energy Saving Geared Motors Series S in IE4 for explosion hazardous areas



W  
O  
R  
L  
D  
  
F  
I  
R  
S  
T

$\eta$	Advantages	Your benefits
Without	<ul style="list-style-type: none"> <li>Motor design according to duty</li> <li>Small installation volume and minimum weight</li> <li>Higher motor powers</li> </ul>	<ul style="list-style-type: none"> <li>Economical</li> <li>Small installation space</li> <li>Efficient motor utilisation</li> <li>Tailored to customer application</li> <li>Smaller motor frame size</li> </ul>
IE1	<ul style="list-style-type: none"> <li>Standard efficiency in continuous operation</li> <li>Small installation volume and minimum weight</li> </ul>	<ul style="list-style-type: none"> <li>Economical</li> <li>Small installation space</li> <li>For general-purpose use inside or outside Europe</li> </ul>
IE2	<ul style="list-style-type: none"> <li>Higher efficiency in continuous operation</li> <li>Higher start-up torque</li> </ul>	<ul style="list-style-type: none"> <li>Economical</li> <li>Small installation space</li> <li>Up to 34% more energy savings compared to IE1</li> <li>Lower rated motor power than IE1 for dynamic load applications</li> <li>Short amortisation period</li> </ul>
IE3	<ul style="list-style-type: none"> <li>Premium efficiency in continuous operation</li> <li>Higher start-up torque</li> </ul>	<ul style="list-style-type: none"> <li>Up to 18% more energy savings compared to IE2</li> <li>Already meets minimum efficiency requirements for 2015/2017</li> </ul>
IE4	<ul style="list-style-type: none"> <li>Super Premium efficiency</li> <li>Speed control with highest possible efficiency</li> <li>Small installation volume and minimum weight</li> <li>Considerably better efficiency than IE2 motors, even under partial load conditions</li> <li>High torque and power density</li> <li>High overload capacity</li> </ul>	<ul style="list-style-type: none"> <li>Up to 39% more energy savings compared to IE2</li> <li>Short amortisation period</li> <li>Small installation space</li> <li>Compact drive unit</li> <li>More torque with same size motor frame</li> <li>Requires smaller installation space with same power</li> <li>Reduced number of variants thanks to higher efficiency over the entire torque range</li> <li>Design security thanks to spare drive unit capacity</li> <li>Technology leader</li> <li>Already meets the efficiency requirements of future standards</li> </ul>

Permanent magnet synchronous motors (PMSM) Series S as variable-speed motors in efficiency class IE4 for use in explosion hazardous areas.

- Design torque  $M_N$ : 5 Nm – 48 Nm
- Rated power  $P_N$ : 0,75 kW – 15 kW
- Protection type: Increased Safety Zone 1

II 2 G Ex e IIC T1 - T3 Gb

S.XE.08MA4  
S.XE.08LA4  
S.XE.09SA4  
S.XE.09XA4  
S.XE.11SA6  
S.XE.11MA6  
S.XE.11LA6

- Dust explosion protection Zone 21

II 2 D Ex tb IICT 160°C ... 120° Db

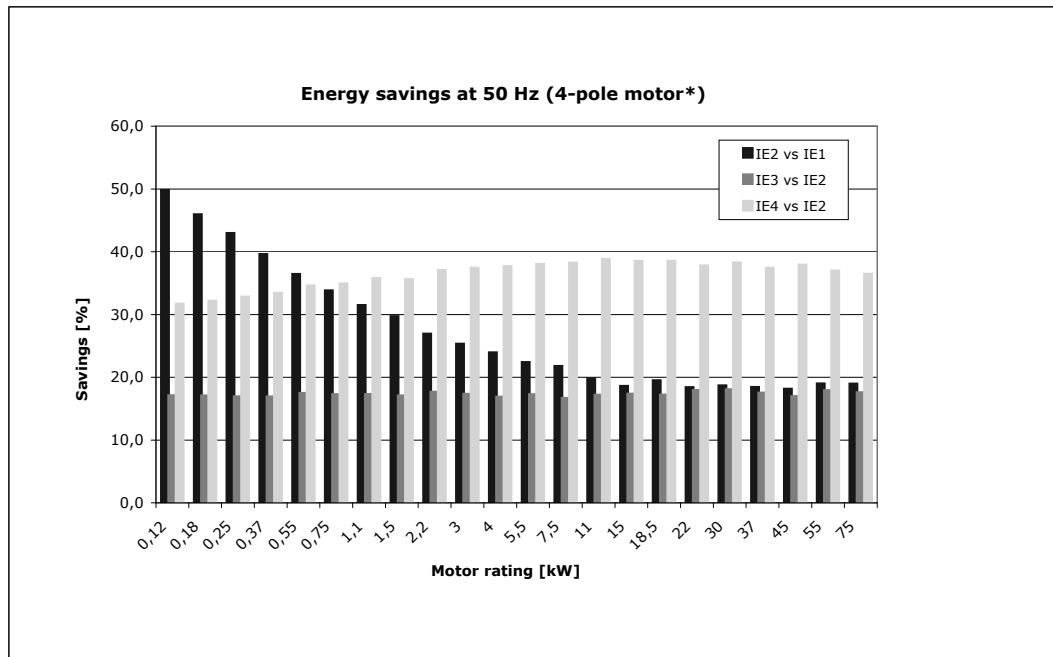
S.XC.08MA4  
S.XC.08LA4  
S.XC.09SA4  
S.XC.09XA4  
S.XC.11SA6  
S.XC.11MA6  
S.XC.11LA6

*The highest energy efficiency that can be achieved with the current state of motor technology.*

### Investment security for the future

Electrically driven machinery accounts for around 70% of overall energy demand for industrial consumption. If existing drives which have already been in service for decades were to be replaced by modern drive systems, energy savings of 135 billion kilowatt-hours per year would be possible within Europe. The Bauer Gear Motor range of motors offers trend-setting technologies for energy-efficient drives and for motor designs tailored to specific applications. The latter option enables highly efficient drive solutions without requiring additional space.

### Potential for energy savings in drive technology



<b>P<sub>N</sub></b> <b>[kW]</b>	<b>IE1*</b>	<b>IE2*</b>	<b>IE3*</b>	<b>IE3*</b>	<b>IE4*</b>
0,55	DSE08MA4	DHE08LA4			SU08MA4
0,75	DSE08LA4	DHE08XA4	DPE09LA4		S08MA4
1,1	DSE09SA4	DHE09LA4	DPE09XA4		S08LA4
1,5	DSE09LA4	DHE09XA4	DPE09XA4C	S08LA4	S09SA4
2,2	DSE09XA4	DHE09XA4C	DPE11MA4	S09SA4	S09XA4
3	DSE11SA4	DHE11MA4	DPE11LA4	S09XA4	S11SA6
4	DSE11MA4	DHE11LA4	DPE11LA4C	S11SA6	S11MA6
5,5	DSE11LA4	DHE11LA4C	DPE13LA4	S11MA6	S11LA6
7,5	DSE13MA4	DHE13LA4	DPE16LA4	S11LA6	
9,5	DSE13LA4	DHE16MA4	DPE16XA4		
11	DSE16MA4	DHE16LA4	DPE18LA4		
15	DSE16LA4	DHE16XA4	DPE18XA4		
18,5	DSE16XA4	DHE18LA4			
22	DSE18LA4	DHE18XA4			
30	DSE18XA4	DHENF20LG4			

\*at 1,500 rpm

