

# Product Overview Drive Solutions with Bauer Geared Motors



**STANDARD**
**F&B SOLUTIONS**
**ENERGY EFFICIENCY  
SOLUTIONS**
**EX SOLUTIONS**
**WATER-/WASTEWATER  
SOLUTIONS**
**DECENTRAL  
GEARED MOTOR  
SOLUTIONS**

## 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 IP65 as standard

## Parallel Shaft 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 IP65 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 IP65 as standard

## Worm-Geared Motor

Series BS



Economical, right-angle, worm-geared 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 IP65 as standard

## Monorail Geared Motors

Series BM



A complete range of geared motors 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 IP65 as standard
- Improved efficiency – lower energy consumption – ideal as travelling drives
- Reverse motion of the gearbox is possible

## HiflexDRIVE

Standard Design



The HiflexDrive consists of three gear sizes BK04, BK08 and BK17.

- **Gearbox BK04** <sup>[3]</sup>  
Torque <sup>[1]</sup> 80 Nm  
Ratios <sup>[2]</sup> 7,25 - 63,33
- **Gearbox BK08**  
Torque <sup>[1]</sup> 200 Nm  
Ratios <sup>[2]</sup> 4,44 - 102,5
- **Gearbox BK17**  
Torque <sup>[1]</sup> 330 Nm  
Ratios <sup>[2]</sup> 4,54 - 108,6
- **Motors**  
Power rating <sup>[2]</sup> 0,18 kW ... 3,0 kW  
Efficiency Classes w/o, IE1 through IE4  
Mains supply 110 V ... 690 V, 50/60 Hz  
Enclosure IP65 (Standard)

## HiflexDRIVE

Aseptic Design



Compact and space saving geared motors fulfill the highest hygiene standards through their smooth and water repellent coating.

- FDA conform Aseptic coating
- Acid and alkali resistant coating (pH 2 through pH 12)
- Rounded edges and corners
- Motor without cooling ribs and fan
- Flexible connection technology
- High enclosure IP67 as standard
- IP69K optional

## HiflexDRIVE

Stainless Steel Design



The stainless steel housing provide these geared motors with the highest mechanical resilience in washdown applications.

- Stainless steel housing
- Highest mechanical resilience
- Rounded edges and corners
- Motor without cooling ribs and fan
- Flexible connection technology
- Enclosure IP65 as standard
- IP67 and IP69K optional



## 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 IP67 and IP69K with acid and alkali resistant coating as standard
- Motor connection through standard stainless steel plug connector

## CleanDRIVE

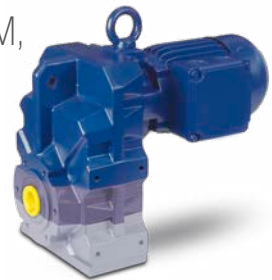


Geared motors for the food & beverage industry in enclosure IP 66 with acid and alkali resistant coating as standard.

- Motor without fan and cooling fins
- Motor power  
DA05 0,06 kW - 0,25 kW  
DA08 0,25 kW - 0,55 kW
- Motor winding in Iso Class F with thermistors as standard
- Motor connection through standard terminal box or stainless steel cable gland

## Surface Protection

C1 to C5-M,  
IM2



Maximum corrosion protection for motors that are exposed to extreme environmental conditions.

- **C1** Indoor areas, very low environmental pollution
- **C2** Outdoor areas, low environmental pollution
- **C3** Indoor and outdoor areas, medium environmental pollution (Production area with low humidity and air pollution)
- **C4** Indoor and outdoor areas, very high environmental pollution (Production area with high humidity and air pollution)
- **C5-I** Outdoor areas, very high environmental pollution, in aggressive atmospheres
- **C5-M** Coast and Offshore areas with high salt concentration
- **IM2** Brackwater

STANDARD

F&amp;B SOLUTIONS

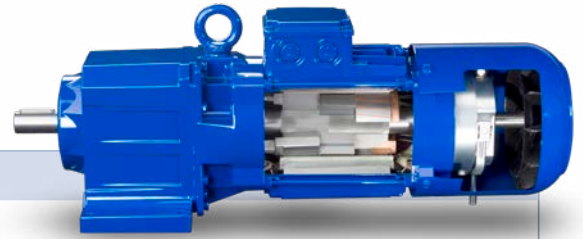
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## Energy Saving Geared Motors



$\eta$	Advantages	Your benefits
<b>Without</b>	<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>Smaller motor frame size</li> <li>Tailored to customer application</li> </ul>
<b>IE1</b>	<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>Can still be used under certain conditions</li> </ul>
<b>IE2</b>	<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>
<b>IE3</b>	<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>Meets global minimum efficiency requirements</li> </ul>
<b>IE4</b>	<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>

## Motor Technologies IE1 • IE2 • IE3 • IE4 • IE5

IE-Class \ kW	0.12	0.18	0.25	0.37	0.55	0.75	1.1	1.5	2.2	3	4	5.5	7.5	9.5	11	15	18.5	22	30	37	45
<b>IE1</b> Asynchronous	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<b>IE2</b> Asynchronous	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<b>IE3</b> Asynchronous	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
<b>IE4</b> Asynchronous					●	●	●	●	●	●	●	●	●	●	●	●	●	●			
<b>IE3</b> PMSM								●	●	●	●	●	●	●	●	●					
<b>IE4</b> PMSM		●	●	●	●	●	●	●	●	●	●	●	●	●	●						
<b>IE5</b> PMSM							●	●	●	●	●										

● = in planning



## 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 T1...T4 Gb	0.12 ... 11 kW
SXE	Zone 1	II 2 G Ex e IIC T1...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

## Series S in IE4\* for 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

Dust explosion protection Zone 21  
 II 2 D Ex tb IIIC T 160°C ... 120° Db

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



\*Individual motor designs can show lower efficiency levels as IE4 at the nominal operating point.

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## IP68 gear motor for submersible operation

IP68 geared motors are most suitable where it is required to convey or transport foul, waste, river or rain water, and all types of sludge-containing waters in communal or industrial areas. They are frequently used in agitators for mixing, homogenising, etc. or in extremely wet areas or completely submersed under water.

- Special design for continuous submersible operation
- Gear housing and motor are completely waterproof
- Maximum leakage protection
- Special seals available for the output shaft
- Electronic leakage detection is available as an option for early recognition of errors
- Energy-saving asynchronous and permanent magnet motors up to IE4
- IP68 motors with brake available
- Gear motor can be operated at constant power in air or in a medium
- Fully cast cable to ensure maximum level of sealing
- Usable down to water depths of 5 m (greater depths also possible)
- Special coating allows extreme underwater conditions (coating resistant against many aggressive chemicals)
- Optionally also available with plug version of the cable
- Power classes: 0.37 – 11 kW (in Ex version on request)
- Use in potentially explosive atmospheres possible (e.g. Atex Zone 1)



IE4

high  
corrosion  
protection

customised sealing systems

stainless steel shafts

advanced coating systems

IP68

leakage sensors

## Compact geared motor solution

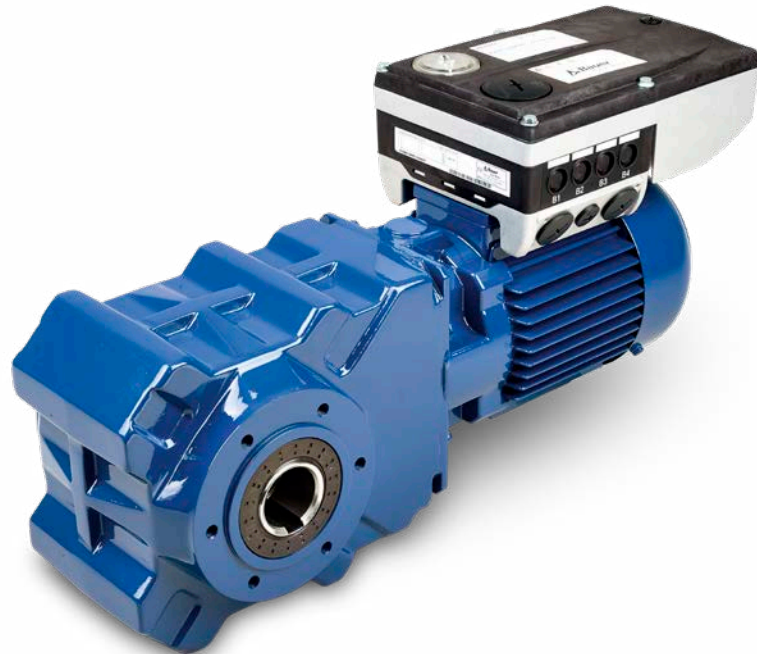
- **Adapted motor windings** matched to VFD for optimised efficiency
- **Optimised motor parameters** over the entire speed and torque range
- **Motor and VFD combinations** surpass IES 2 system efficiency class according to EN 50598-2 and IEC 61800-9-2
- **All necessary options** integrated very compactly, including safety functions

## Motor combinations

Permanent magnet synchronous motors (PMSM)

P <sub>N</sub> [kW]	Type	n <sub>N</sub> [rpm]	P <sub>VFD</sub> [kW]
0,55	S08MA4	3000	0,55
0,55	S08MA4	1500	0,55
0,75	S08MA4	3000	0,75
0,75	S08MA4	1500	0,75
1,1	S08MA4	3000	1,1
1,1	S08LA4	1500	1,1
1,5	S08MA4	3000	1,5
1,5	S08LA4	1500	1,5
1,5	S09SA4	1500	1,5
2,2	S08MA4	3000	2,2
2,2	S08LA4	3000	2,2
2,2	S09SA4	1500	2,2
2,2	S09XA4	1500	2,2
3	S08LA4	3000	3
3	S09XA4	1500	3
3	S11SA6	1500	3
4	S09SA4	3000	4
4	S11SA6	1500	4
4	S11MA6	1500	4
5,5	S09XA4	3000	5,5
5,5	S11MA6	1500	5,5
5,5	S11LA6	1500	5,5
7,5	S11SA6	3000	7,5
7,5	S11MA6	3000	7,5
7,5	S11LA6	1500	7,5

## EtaK2.0



Asynchronous motors (ASM)

		Base frequency 50 Hz Motor: 350 V/50 Hz/Y		Base frequency 87 Hz Motor: 202 V/50 Hz/D	
P <sub>N</sub> 50Hz [kW]	Typ	P <sub>FU</sub> [kW]	I <sub>N</sub> [A]	P <sub>FU</sub> [kW]	I <sub>N</sub> [A]
0,12	DHE06LA4	0,37	1,3	0,37	1,3
0,18	DHE06LA4	0,37	1,3	0,37	1,3
0,25	DHE07LA4	0,37	1,3	0,55	1,8
0,37	DHE08MA4	0,37	1,3	0,75	2,4
0,55	DHE08LA4	0,55	1,8	1,1	3,2
0,75	DHE08XA4	0,75	2,4	1,5	3,9
1,1	DHE09LA4	1,1	3,2	2,2	5,6
1,5	DHE09XA4	1,5	3,9	3	7,3
2,2	DHE09XB4	2,2	5,6	4	9,5
3	DHE11MA4	3	7,3	5,5	13
4	DHE11LA4	4	9,5	7,5	16,5
5,5	DHE11LB4	5,5	13	-	-
7,5	DHE13LA4	7,5	16,5	-	-

The motor combinations listed here are subject to change. Please contact our staff for more information.

## Bauer Gear Motor Facilities

### Europe

**Germany**  
Eberhard-Bauer-Strasse 37  
73734 Esslingen - Germany  
+49 711 3518 0

**Slovakia**  
Tovarenská 49  
953 01 Zlate Moravce - Slovakia  
+421 37 6926100

**United Kingdom**  
Nat Lane Business Park  
Winsford, Cheshire  
CW7 3BS - United Kingdom  
+44 1606 868600

### North America

**Middlesex, NJ**  
T476 Union Ave.  
Middlesex, NJ 08846-1968 - USA  
+1 732 469 8770

**Charlotte, NC**  
701 Carrier Drive  
Charlotte, NC 28216 - USA  
+1 800 825 6544

### Asia Pacific

**China**  
18 Huan Zhen Road Dabo  
Industrial Zone - BoGoang Village  
ShaJing Town - BaoAn District  
Guangdong Province  
518104 Shenzhen City - China  
+86 755 27246308

### Customer Service

**Benelux**  
Brussel (Anderlecht)  
+32 2 5295941

**Finland**  
01510 Vantaa  
+358 207 189700

**France**  
Brussel (Anderlecht)  
+32 2 5295941

**Italy**  
Grisignano di Zocco (VI)  
+39 0444 414392

**Russia**  
Volokolamskoye sh., 142, bldg 6  
Business Center „Irbis“  
125464 Moscow - Russia  
+7 495 6420468

## The Brands of Altra Industrial Motion

### Couplings

**Ameridrives**  
[www.ameridrives.com](http://www.ameridrives.com)

**Bibby Turboflex**  
[www.bibbyturboflex.com](http://www.bibbyturboflex.com)

**Guardian Couplings**  
[www.guardiancouplings.com](http://www.guardiancouplings.com)

**Huco**  
[www.huco.com](http://www.huco.com)

**Lamiflex Couplings**  
[www.lamiflexcouplings.com](http://www.lamiflexcouplings.com)

**Stromag**  
[www.stromag.com](http://www.stromag.com)

**TB Wood's**  
[www.tbwoods.com](http://www.tbwoods.com)

### Geared Cam Limit Switches

**Stromag**  
[www.stromag.com](http://www.stromag.com)

### Electric Clutches & Brakes

**Inertia Dynamics**  
[www.idicb.com](http://www.idicb.com)

**Matrix**  
[www.matrix-international.com](http://www.matrix-international.com)

**Stromag**  
[www.stromag.com](http://www.stromag.com)

**Warner Electric**  
[www.warnerelectric.com](http://www.warnerelectric.com)

### Linear Products

**Warner Linear**  
[www.warnerlinear.com](http://www.warnerlinear.com)

### Engineered Bearing Assemblies

**Kilian**  
[www.kilianbearings.com](http://www.kilianbearings.com)

### Heavy Duty Clutches & Brakes

**Industrial Clutch**  
[www.indclutch.com](http://www.indclutch.com)

**Twiflex**  
[www.twiflex.com](http://www.twiflex.com)

**Stromag**  
[www.stromag.com](http://www.stromag.com)

**Svendborg Brakes**  
[www.svendborg-brakes.com](http://www.svendborg-brakes.com)

**Wichita Clutch**  
[www.wichitaclutch.com](http://www.wichitaclutch.com)

### Belted Drives

**TB Wood's**  
[www.tbwoods.com](http://www.tbwoods.com)

### Gearing

**Bauer Gear Motor**  
[www.bauergears.com](http://www.bauergears.com)

**Boston Gear**  
[www.bostongear.com](http://www.bostongear.com)

**Delroyd Worm Gear**  
[www.delroyd.com](http://www.delroyd.com)

**Nuttall Gear**  
[www.nuttallgear.com](http://www.nuttallgear.com)

### Overrunning Clutches

**Formsprag Clutch**  
[www.formsprag.com](http://www.formsprag.com)

**Marland Clutch**  
[www.marland.com](http://www.marland.com)

**Stieber**  
[www.stieberclutch.com](http://www.stieberclutch.com)

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