

1892-2011  
**119**



## Product Range Electric Motors





**Standard and special version synchronous three-phase motors.**  
**Switchable pole asynchronous three-phase motors**  
**Switchable pole asynchronous three-phase motors (fan drives)**

**Sizes 63 - 180**  
**Thermal class: F or H**  
**Protection class: IP54 – IP66**

Standard and special versions on the basis of the IEC motor series can be supplied. According to the customer's requirements, the housing can be made of die-cast aluminium, extruded aluminium or cast iron. Special mechanical and electrical designs are our speciality. These include switchable pole motors, regulated motors with feedback systems for frequency inverter operation. In addition, we develop special motors, for example for the food industry, medical technology, chemical industry and their suppliers, as well as drives for mixers, packaging and filling machinery.



**Reluctance motors**

**Sizes 63 - 112**  
**Thermal class: F or H**  
**Protection class: IP54 – IP66**

Reluctance motors combine the characteristics of asynchronous and synchronous motors. Their special features are a rotor with distinct poles and a squirrel cage. Because of this, reluctance motors start up asynchronously and then switch over to synchronous mode. They then run at synchronous speed until the reaction torque (synchronous breakdown torque or pull-out torque) is exceeded. This characteristic makes reluctance motors interesting for many drive applications which previously employed the more complex servo technology or asynchronous motors with encoder systems. These are mainly systems where synchronous running is required for several drive units, or where constant speed is required under different loads. A further advantage is their robust, maintenance-free design.

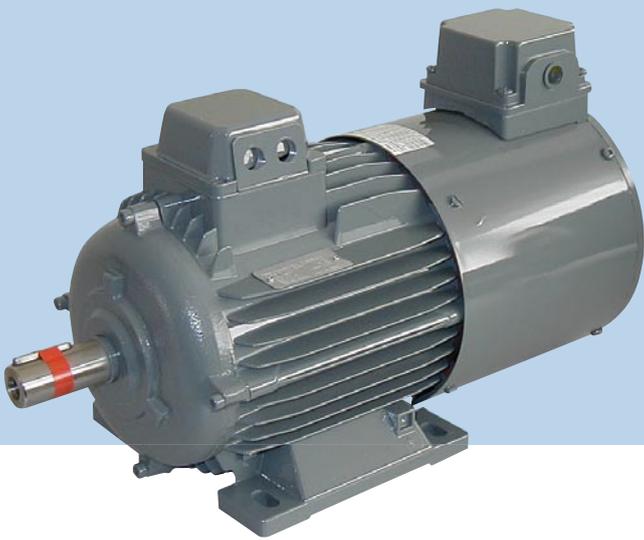
**Mechanical design**

As reluctance motors use a normal asynchronous motor stator, in principle all the mechanical versions which are available for asynchronous motors can be realised. In addition, the motors can optionally be equipped with a mechanical spring-loaded brake (for preference with a noise-reduced design).

**Electrical design**

As standard, HEW manufactures the insulation system in thermal class F. High quality lacquered wire is used and the windings are produced with phase insulation. This guarantees high electrical strength against loads due to switching voltages and when used with frequency inverters. The motors can be optionally equipped with PTC or thermostatic switches as motor protection.

# Electric



## Rotating field magnets

**Sizes 63 - 160**

**Thermal class: F or H**

**Protection class: IP54 – IP66**

Rotating field magnets are special version three-phase squirrel cage motors. They are electrically designed so that they develop their greatest torque (standstill torque) at their rated voltage and with no rotation (braked shaft).

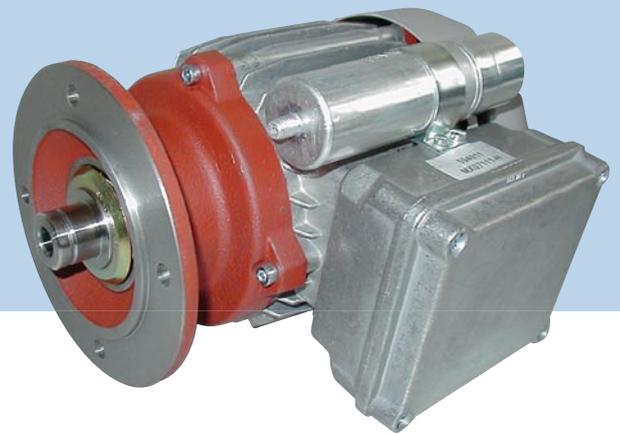
Two versions are available:

- unventilated version (IC 410)
- externally ventilated version (IC 416)

The motors can be used for continuous operation with standstill torque (S1 operation) or with 3 x their standstill torque (delta switching) in intermittent operation (S3-25%).

### Special versions

As a special version, rotating field magnets are also available for operation with single-phase mains. As a further option, the motors can also be equipped with a spring-loaded brake.



## Single-phase motors

**Sizes 63 - 90**

**Thermal class: F or H**

**Protection class: IP54 – IP55**

Single-phase can be operated on single phase 230 V mains. Sizes 63 - 90 are available. The following versions can be selected, depending on the required starting torque:

### Single phase motors with operating capacitors, type REBK

With similar sizes and number of poles these motors provide the same power as three-phase motors, but with a relatively low starting torque. They are therefore particularly suitable for drive units which require a low starting torque, or which do not start under load. The condenser remains permanently connected. The motors are not suitable for use with long idling periods, as the permissible temperature limits may be exceeded.

### Single phase motors with starting and operating capacitors, type REBK ... AR

This version combines the high power of the REBK type with a high starting torque. After the motor has run up to operating speed, the starting condenser is disconnected by means of a starter relay or centrifugal switch.

# motors



## Asynchronous three-phase brake motors

**Sizes 63 - 180**

**Thermal class: F or H**

**Protection class: IP54 – IP66**

HEW brake motors are three-phase or single phase asynchronous motors, which are equipped with a mechanical brake. The motor windings are not subjected to thermal load during braking. Available in sizes 63 - 180

The brake motors are used for hoist and transportation drives, machine tools, packaging machinery, transportation and conveyor technology, positioning drives etc.

The brake motors can be supplied with the following brakes:

- Electromagnetically released spring-loaded brakes, type B
- Electromagnetically actuated brakes, type EB
- Electromagnetically released permanent magnet brakes, type PB
- Noise-reduced double brakes with manual release, specially designed for use in theatre applications.



## Explosion-protected asynchronous three-phase motors

**Sizes 63 - 315**

## Explosion-protected asynchronous three-phase brake motors

**Sizes 63 - 225**

**Thermal class: F or H**

**Protection class: IP54 – IP66**

**Ignition protection type: T4 , T5-T6**

HEW DEx (ignition protection type "pressure-resistant encapsulation") three-phase motors are approved according to the latest ATEX regulations by the PTB in Brunswick.

In addition, the following special solutions are available in this series:

- Switchable pole motors
- Brake motors
- Externally ventilated motors
- Motors with feedback systems for frequency inverter operation

The motors are equipped with PTC sensors.

As an option, thermostatic switches can also be used.



## Hygiene motors

**Sizes 63 - 90**

**Thermal class: F or H**

**Protection class: IP66 – IP68**

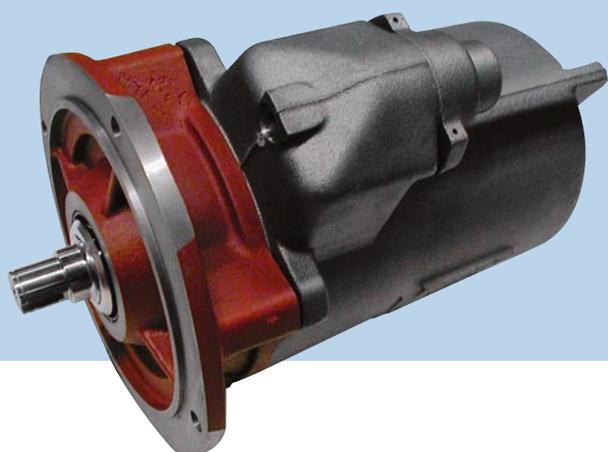
Above all in the sensitive production areas of foodstuffs technologies, i.e. for the production of foods and beverages, the highest demands are placed on hygienic conditions.

This also applies to production in the chemical and pharmaceutical industries. Here, even sterile production environments are often required.

The construction of conventional motors often resulted in problems for the designers of such production facilities, as these motors are usually equipped with cooling fins and fans, in which dirt can accumulate, which cannot be completely removed because of poor accessibility. As a result, there is the possibility of growth of pathogens. As well as this, in the past, cleaning of the production facilities was often made difficult by these features.

This problem is now eliminated by new HEW hygiene motors. The special motors of the GUF series were designed with completely closed surfaces which have no edges, depressions or grooves. Because of this they are very easy to clean and prevent the growth of pathogens and bacteria on their surfaces. The motors are optionally available in V2A stainless steel or aluminium versions. Pre-assembled motor cables of various lengths enable easy connection on site. The windings are provided with phase-coil insulation, which makes them suitable for operation with a frequency inverter.

The drive units can be optionally equipped with a PTC sensor or a bi-metal thermostatic switch. The drive units are available with a power range from 0.09 - 1.5 kW.



## Submersible motors

**Sizes 90 - 160**

**Thermal class: F or H**

**Protection class: IP68**

HEW submersible motors are specially designed for use under water. In combination with a gear unit, the motors comply with protection class IP 68 and can be used in water depths of up to 12 metres. An optimised cast iron barrel casing with few corners and edges is used as the motor housing. Thanks to its robust construction, the drive unit has a long service life. A pre-assembled 15 m motor cable is sealed into the motor and allows easy connection on site. The windings are provided with phase-coil insulation, which makes them suitable for operation with a frequency inverter. The drive units can be optionally equipped with a PTC sensor or a bi-metal thermostatic switch. The drive units are available for power ranges from 1.1 to 30.0 kW.

As a special version, the motors can be supplied with a closed braking system or a standstill heater.

Other special versions are available on request.



### Headquarter:

Herforder  
Elektromotoren-Werke  
Goebenstraße 106  
32051 Herford  
info@hew-hf.de  
www.hew-hf.de  
Tel.: +49 52 21 / 59 04 - 41  
Fax: +49 52 21 / 59 04 - 34

### Agencies Germany:

Achenbach Antriebstechnik  
Am Stubben 7  
21244 Buchholz  
Tel.: +49 41 81 / 38 03 75  
Fax: +49 41 81 / 38 03 76

### Agencies Europe:

Bege Aandrijftechniek B.V.  
Industrieterrein Jagtlust  
Anton Philipsweg 30  
NL-2171 KX Sassenheim/Niederlande  
Tel.: +31 / 2 52 / 22 02 20  
Fax: +31 / 2 52 / 21 84 84

Haag Antriebstechnik AG  
Binzstr. 5  
CH-8953 Dietikon/Schweiz  
Tel.: +41 / 4 47 / 40 28 88  
Fax: +41 / 4 47 / 40 48 34

Ing.-Büro Werner Weber  
Unterstrasse 8  
37351 Silberhausen  
Tel.: +49 3 60 75 / 6 28 48  
Fax: +49 3 60 75 / 6 28 23

H.-H. Wohlers Handelsges. MbH  
Ellerbuscher Weg 179  
32584 Löhne  
Tel.: +49 57 32 / 40 72  
Fax: +49 57 32 / 1 23 18

ATV Antriebstechnik Vogelskamp e.K.  
Heinrich-Heine-Strasse 31  
42489 Wülfrath  
Tel.: +49 20 58 / 89 55 10  
Fax: +49 20 58 / 89 55 11

Moll-Motor  
Mechatronische Antriebstechnik GmbH  
Stammhaus Stockerau  
Industriestraße 8  
AT-2000 Stockerau  
Tel.: +43 / 22 66 / 634 21 78  
Fax: +43 / 22 66 / 634 21 80

Radius Radpohl  
ul. Kolejowa 16 B  
PL-60-185 Skorzewo K/Poznania  
Tel.: +48 / 61 / 814 39 28  
Fax: +48 / 61 / 814 38 43

Infra-Antriebe Thomalla  
Vorsterstr. 448  
41169 Mönchengladbach  
Tel.: +49 21 61 / 55 62 62  
Fax: +49 21 61 / 55 78 68

ZweiZETT-Technik  
Brühlstraße 2  
63303 Dreieich  
Tel.: +49 61 03 / 807290  
Fax: +49 61 03 / 807291

KW Antriebs- und Automationstechnik GmbH  
Kobergeer Strasse 39  
90408 Nürnberg  
Tel.: +49 9 11 / 3 66 33 69 - 0  
Fax: +49 9 11 / 3 66 33 69 - 15