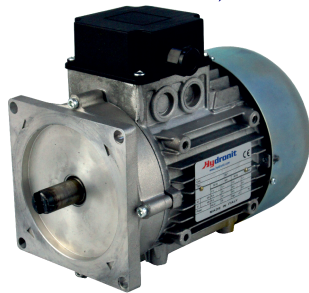


AC & DC ELECTRIC MOTORS

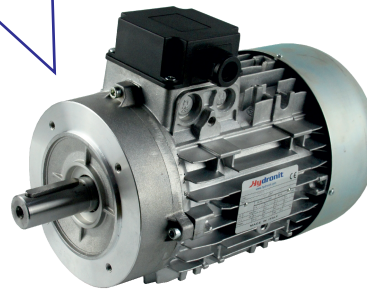
Integral AC motors: the engineered solution for compact and optimised power units from 0,25 to 4 kW, single or three phase, 4 or 2 poles. These AC motors are **directly flanged** on the central manifold for extra compactness. A **single tang drive coupling** can suit all frame sizes and powers.

We suggest you to adopt these advanced motors because of their advantages over standard B14 AC motors and because they are **designed specifically** for our hydraulic mini power packs, offering a **higher power density** and **higher starting torque** than market standard motors. These motors are intended for intermittent duty (S3 40%), which is the standard for most mini-power pack applications. In emergency situations they may be used continuously to 70% of their nominal power. Given their particular construction, single-phase motors must not be operated without load for a long period, to avoid overheating, and are not suggested for «start under load» applications, unless proper techniques and precautions are taken.



B14 IEC and Nema standard AC motors: commodity motors easily available in every market from 0,18 to 7,5 kW, single or three phase. These motors are normally procured and mounted by the customer himself. Hydronit provides adaptor flanges and two piece coupling for frame sizes: 63, 71, 80, 90, 100 and 112 (IEC) + 56C and 184TC (Nema).

Coupling with integrated fan cooling: for DC motors frame 114 and 125.



Frame 151 DC motors: heavy duty motors, with fan cooling, thermal protector and running time of 16 min or over. Power from 2,5kW up to 4kW, 12 or 24VDC.

Frame 114 DC motors: the most popular choice. Power up to 2,1kW 12VDC and 2,2kW 24VDC. All motors have thermal protector switch as standard.

Q & A

Are Integral AC motors compliant with the European Union Minimum Energy Performance Standards?

Hydronit AC integral motors are manufactured using the best technologies currently available and are specifically designed for mini power pack duties, typically intermittent ones. Hydronit motors have higher power density, lower weight and are cost effective, compared with standard IE3 motors on the market. Due to the specific field of application, Hydronit motors are not included in the requirements of the above mentioned Standard since they are specifically and solely manufactured for mini power pack intermittent duties. For continuous duty (S1) applications with 3 phase supply voltage, IE3 motors (IEC 60034-30) must be applied. Ask our sales office.

Are there special requirements to mount IEC B14 or NEMA motors?

No special tools are required. Please carefully follow motor side coupling mounting dimension tolerance as per the relevant drawings. Failure to do so may cause malfunction of the power pack and even breakage of the coupling and pump.

Can I start single phase AC motors under load?

Single phase motors have a reduced starting torque due to their intrinsic design. Starting torque is around 30-40% of the nominal torque at full power output. When designing circuits where a single phase motor must start under load, a proper calculation must be done followed by a field test to ensure proper starting. Alternatively, you can overcome the problem with the startup valve SUV. Ask our technical office.

How do I dimension a DC motor?

DC motors are normally for intermittent duty. It is important to know the required flow in l/min or Gpm, working pressure in bar or PSI and the duty charge. Then, following the diagrams in following pages and relevant instructions, a proper motor/pump combination can be selected.