FEMSAN Electric Motors

Standard Features for KG Series DC Motors

Femsan's production range for KG series, comprises 8 shaft centre heights, each in various core lenghts, with outputs 0.72 KW to 375 KW.

Required motor type is easily selected against voltage, output and speed. Within each type we offer a variety of options which meet exactly your requirements.

WARNING !
For intermediate output, take the nearest higher output listed under the next frame size. For intermediate speed take the next lower speed listed within the output required.

Additional features or more stringent operating conditions require a modification. Please contact with your local dealer.

Degree of Protection

Standard protection class is IP 23 (Motor is protected against ingress of solid objects greater than 12 mm and against dripping water when the machine is tilted at any angle up to 15 degrees from its normal position). Motors having IP 44 or higher protection classes are available on request.

Cooling Type

In KG series, standard cooling type is IC 06 which means open-circuit ventilation through separate ventilation using a fan unit. Blower is forced by an AC motor.

Fan Mounting Type

In standard application the blower that supply the seperate ventilation is radially-mounted to the motor. Axially-mounted fan unit is avaliable on request.

Mounting

Mounting from foot (IM B3 – IM1001) is another standard of KG series. Flange mounting is avaliable on request. For various construction types please see Mounting Arrangements page.

Insulation

All motors in selection and ordering tables have Class F (155 degrees of Celsius) insulation.

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Duty Cycle

The rated outputs in selection and ordering tables are referred to continuous running duty S1, and motors are fed from a 3 - phase fully controlled thyristor.

Fan Unit Position

Standard air flow direction is, from non-drive end to drive end for intensive commutator ventilation. Air flow direction from drive end to non-drive end is also possible. Fan unit is mounted to the top of motor in normal contruction.

Terminal Box Position

In standard production terminal box is mounted to the right side of the motor from drive end view. For alternatives please see Positions for Fan Unit and Terminal Box page.

Altitude and Ambient Temperature

Outputs is based on max. 40 degrees of Celsius ambient temperature and motor located at max. 1000 meters above sea level.

Balance

All motors meet the dynamic balance limits of the vibration grade N.

Stator and Rotor

Stator has square framed design. Main poles and interpoles are fully laminated. Up to frame size 100, main and interpoles are stamped. From frame size 132, main poles screwed on, interpoles stamped.
Frame sizes 80 and 100 have 2 poles. From frame size 132, motors have 4 poles.
Rotor is also fully laminated with axial cooling - air ducts for high utilization.

Bearings

All bearings and their internal clearances have been especially selected based on load carrying ability, thermal stresses and speed range consistent with ample bearing life.

Windings

In standard version, all motors have separate excitation, the field being shunt wound. Compound or series winding can be supplied on request.
Thermostatic receivers replaced between the coils to protect the windings against over heating (130 degrees of Celsius). These receivers have to be connected serially to the DC motor driver's stop circuit in order to resists 3 A. 250 V.

Impregnation

Stator and rotor windings are trickle–impregnated to ensure high static and dynamic resistance among windings.

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Brushes and Brush Holders

All motors utilize top-cushioned brushes for low-vibration operation. Brush holders are extruded metal. The constant pressured springs do not need adjustment.

Commutation

Excellent commutation is abtained due to the ideal magnetic harmony between windings.

Tests

Each motor is given routine tests to determine that it is free from electrical or mechanical defects and to provide assurance that it meet design specifications.