## DC MOTORS

## SOLID YOKE DC MOTORS

Self Fan Cooled (IC 01) / Force Cooled ( ICO6) - ( IP 22 / IP 23 Protection) Range: 0.18 KW to 100 KW with based speed 300 to 3000 rpm , Armature voltage $12 \mathrm{v}, 24 \mathrm{v}, 36 \mathrm{v}, 48 \mathrm{v}, 110 \mathrm{v}, 220 \mathrm{v}, 440 \mathrm{v}$ Available on request. DC motors with verious types of construction are available from 80 to 225 mm FRAME size


Self Fan Cooled


Force Cooled

Standards
Motors confirms to IS 4722. Temperature are well within $45^{\circ} \mathrm{c}$ (ambient temp) Self Fan Cooled motors have an internal cooling fan on the motor shaft. However, with self fan cooling, it is not recommended to run the motor below $80 \%$ of the rated speed for longer periods.
Motors when used for variable speed drives are likely to run continuously at lower speeds. Such motors are
cooled by a separate force cooling unit mounted on the motor.
Normally this unit consists of $1 / 3 \mathrm{Ph}$. A.C.
motor driven Fan (blower), which runs at a constant speed, giving constant rate of cooling, irrespective of the speed of the main D.C. Motor.

## Construction Features

Yoke made of high quality mild steel frame body.
Armature laminations of high grade silicon steel for low iron losses and high efficiencie. i.e. (CRNGO) Commutators made from silver barring copper alloy insulated with epoxy mica.

Armature windings are trickle impregnated with high thermal class synthetic resin properly baked at designated temp. to give complete protection against damages from moisture, acids \& alkalies.

End-shields are made from cast iron FG 200 and precisely machined.
Main poles are made from thick laminations (G.I. sheet) to reduce eddy-current losses.
Interpoles are fitted in motors in order to achieve better commutation.
High-Electro-graphite carbon brushes used which displays best running properties under variable loads.
Ventilation : Motors are equipped with SCREEN PROTECTED DRIP PROOF (SPDP) \& TOTALLY ENCLOSED (TE). External force cooling is provided with blower mounted motor.




| FRAME | D | E | F | G | GA | J | B | BB | BC | BD | BL | V | T | BW | C | K |  |
| :---: | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 132 | M | 28 | 60 | 8 | 24 | 31 | 56 | 114 | 145 | 120 | 96 | 285 | 12 | 0 | 285 | 91.5 | 11 |
|  | L |  |  |  |  |  |  | 140 | 175 |  | 90 |  |  |  |  | 94 |  |
| 160 | S |  |  |  |  |  |  | 150 | 180 |  |  |  |  |  |  | 134 |  |
|  | M |  |  |  |  |  |  | 178 | 220 |  |  |  |  |  |  | 142 |  |
|  | L | 38 | 80 | 10 | 34 | 42 | 70 | 220 | 260 | 148 | 110 | 293 | 8 | 30 | 285 | 146 | 14 |
|  | LK |  |  |  |  |  | 250 | 300 |  |  |  |  |  |  | 157 |  |  |
| 225 | M | 60 | 140 | 18 | 53 | 64 | 125 | 228 | 280 | 160 | 177 | 356 | 10 | 30 | 350 | 201 | 19 |


| FRAME | N | M | P | S | T | LA | LC | LD |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 80 | 130 | 165 | 200 | 12 | 3.5 | 10 | 36 | 61 |
| 112 | 230 | 265 | 300 | 15 | 4 | 12 | 42 | 67 |
| 132 | 250 | 300 | 350 | 19 | 4 | 14 | 44 | 76 |
| 160 | 250 | 300 | 350 | 19 | 5 | 15 | 67 | 120 |



All Dimension are in mm


| FRAME |  | H | A | AA | AB | AC | AD | AE | AF | HA | HB | HC | HD | LA | S | L |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| S |  |  |  |  |  |  |  |  |  | 9 |  |  |  | 241 |  | 284 |
| 80 | M | 80 | 140 | 25 | 166 | 156 | 145 | 228 | 65 | 9 | 188 | 158 |  | 267 | 43 | 310 |
|  | L |  |  |  |  |  |  |  |  | 9 |  |  |  | 293 |  | 336 |
|  | S |  |  |  |  | 192 | 153 | 266 |  |  |  | 208 |  | 252 |  | 305 |
|  | M |  |  |  |  |  |  |  |  |  |  |  |  | 277 |  | 330 |
| 112 | L | 112 | 190 | 40 | 230 | 200 | 175 | 290 | 65 | 10 | 196 | 212 |  | 321 | 53 | 374 |
|  | LK |  |  |  |  |  |  |  |  |  |  |  |  | 368 |  | 419 |
| $\begin{aligned} & 112 \\ & 132 \end{aligned}$ | VS | 112 | 190 | 40 | 230 | 223 | 190 | 305 | 65 | 10 | 238 | 224 |  | 330 | 53 | 383 |
|  | M | 132 | 254 | 50 | 296 | 263 | 200 | 347 | 73 | 17 | 286 | 264 | 312 | 328 |  | 391 |
|  | L |  |  |  |  |  |  |  |  |  |  |  |  | 361 | 63 | 424 |



| FRAME | H | A | AA | AB | AC | AD | AE | AF | HA | HB | HC | HD | LA | S | L | LB |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 132 M | 132 | 254 | 50 | 296 | 263 | 200 | 347 | 73 | 17 | 246 | 270 | 530 | 328 | 63 | 391 | 92 |
| L |  |  |  |  |  |  |  |  |  |  |  |  | 361 |  | 424 |  |
| S |  |  |  |  |  |  |  |  |  |  |  |  | 412 |  | 495 |  |
| M |  |  |  |  |  |  |  |  |  |  | 462 |  | 545 |  |  |  |
| 160 | L | 160 | 254 | 63 | 314 | 306 | 230 | 386 | 90 | 17 | 275 | 318 | 585 | 512 | 83 | 595 |
| LK |  |  |  |  |  |  |  |  |  |  |  | 562 |  | 645 |  |  |
| 225 M | 225 | 356 | 100 | 456 | 438 | 322 | 550 | 105 | 23 | 310 | 455 | 765 | 614 | 145 | 759 | 100 |

All Dimension are in mm

