



PRODUCT STANDARD

SWITCHGEAR ENGINEERING
DIVISION

SG 16014 Rev 00

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GEAR BOX FOR MOTORISED ISOLATOR IN 36KV GIS

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1. APPLICATION :

A gearbox with a worm and worm wheel arrangement is required for driving the moving contacts of switchgear. This gearbox will be used with a fractional HP motor directly mounted on the gearbox. The output shaft rotates at a slow speed and provides sectorial movement of $<360^\circ$. The limits are controlled, electrically, by limit switches. The assembly is engaged to the load by means of splines provided in the worm wheel.

2. GEAR BOX SPECIFICATIONS:

- 2.1 Output : Spline as per details in fig.03
- 2.2 Input shaft diameter : To suit motor-drive ($\phi 12$)
- 2.3 Size : 110x115x90mm, refer OGA No.GB-00
- 2.4 Ratio : 25:1
- 2.5 Body : Aluminum Alloy(Cast)
- 2.6 Worm : Ferrous(EN-24), ground and polished
- 2.7 Wheel : Ferrous/Non-Ferrous
- 2.8 Bearings : Needle/Ball
- 2.9 Lubrication : Grease/Oil
- 2.10 Sealing : Neoprene oil seals at shaft
- 2.11 Manual operation: A square recess (16 A/F, 16mm deep) shall be provided to manually operate the gear.

3. GENERAL :

- 3.1 S.S. threads shall be used in all tapped holes.
- 3.2 Refer Fig.1 for Motor details.
- 3.3 Refer Fig.2 for Motor mounting details.
- 3.4 Refer Fig.3 for spline details.

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4. SURFACE FINISH :

- a) Process : Powder coating
- b) Color : Black
- c) Finish : Structure(dull)

Note : The gearbox shall be sand blasted, deburred and degreased before powder coating with black Nylon powder.

5. TEST CERTIFICATE :

The gear box shall be subjected to a load-cycling test. Load-cycle is defined as operation of the gear from rest to 350° clock wise and return to original position 350° counter clock wise. 1000 No-load operations and 200 On-load operations shall be carried out during inspection. The gear box shall be inspected for wear and tear of the parts. Heavy wear shall reject the supply.

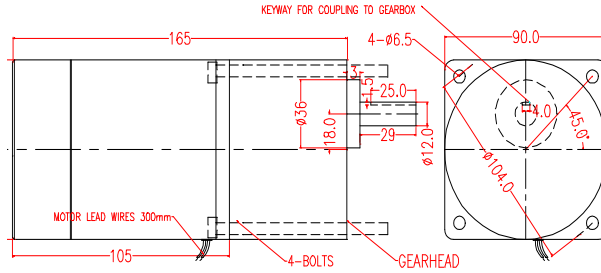


Fig01: Motor Detail

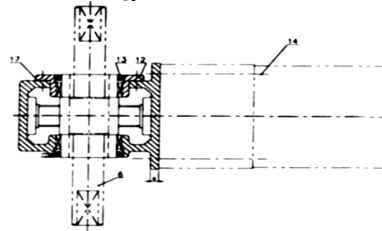


Fig02: Motor Mounting Detail

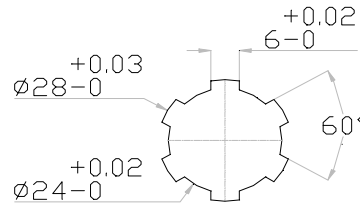


Fig03: Spline Details