

NOTES:-

SHAFT STIFFNESS:-

THE STIFFNESS OF THE SHAFT BETWEEN THE MAIN ROTOR CORE ϕ AND THE SHAFT EXTENSION ϕ IS 1.6865×10^6 kgcm/radian (STIFFENING EFFECT OF MAIN ROTOR CORE IS NOT INCLUDED IN THIS FIGURE)

SHAFT MATERIAL:-

STEEL - C40E TO BSEN 10083-2 2006 (APPROVED BY MARINE AUTHORITIES WHEN APPROPRIATE) MAXIMUM RECOMMENDED VIBRATORY STRESS LEVEL IN THE SHAFT IS 34.47×10^6 N/m² FOR SPEED RANGE OF 0.95 TO 1.1 x NOMINAL SPEED AND 68.94×10^6 N/m² FOR RUN THROUGH CONDITIONS, FOR INDUSTRIAL MACHINES.

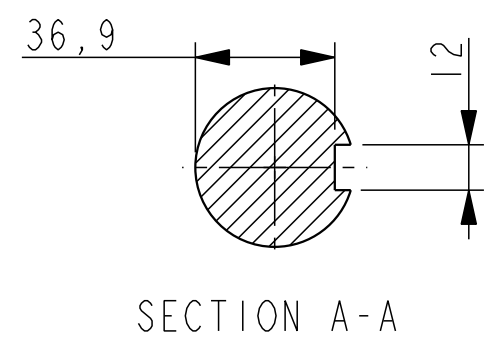
FOR MARINE AUTHORITIES, THEIR APPROPRIATE RULES WILL APPLY.

CUMMINS GENERATOR TECHNOLOGIES LTD SHOULD BE NOTIFIED OF ANY ROTORS NOT COMPLYING WITH THESE RULES. CUMMINS GENERATOR TECHNOLOGIES LTD BALANCE ROTORS TO COMPLY WITH INTERNATIONAL STD ISO 1940 PARTS 1 AND 2. BALANCE GRADE 2.5.

FOR UNBALANCED MAGNETIC PULL (U.M.P.) REFER TO THE FACTORY.

APPROVED DOCUMENT

| COMPONENT | MASS (kg) | WR ² (kgm ²) |
|-------------------------|-----------|-------------------------------------|
| SHAFT | 10.855 | 0.0039 |
| FAN | 0.976 | 0.0067 |
| MAIN ROTOR | 39.090 | 0.1849 |
| EXCITER ROTOR | 5.764 | 0.0225 |
| TOTAL WITHOUT EBG ROTOR | 56.685 | 0.2180 |
| EBG ROTOR | 1.701 | 0.0017 |
| TOTAL WITH EBG ROTOR | 58.386 | 0.2197 |



| CONVERSION FACTORS | | |
|--------------------|---------------------|-----------|
| TO CONVERT | TO | DIVIDE BY |
| kg | lb | 0.453592 |
| kgm ² | lbft ² | 0.04214 |
| kgcm/rad | lbin/rad | 1.1521246 |
| N/m ² | lbf/in ² | 6894.76 |

| | | | | | | | | | |
|--|---|--|------------|-----|---|-----------------|---------------------|--|-------|
| CONFIDENTIAL PROPERTY OF CUMMINS GENERATOR TECHNOLOGIES LTD. | | | | | PI4G TWO BEARING MOMENTS OF INERTIA AND SHAFT DETAILS | | | | |
| MATERIAL PROPS | - | DIMENSIONS IN MILLIMETRES (MM) AT 20°C | PROJECTION | | SCALE 3:10 | MATERIAL | | | |
| FINISH SPEC | - | | | - | | | | | |
| GEOMETRY SPEC | - | SURFACE FINISH VALUES IN MICRO METRES | WEIGHT | | DRG. SIZE C | CASTING No | | | |
| ASSEMBLY SPEC | - | | - | | | - | | | |
| PERFORMANCE SPEC | - | UNLIMITED DIMS ± 0.25 | DRAWN | BSR | 07/05/07 | REL. PHASE P | PART No | | ISSUE |
| QUALITY SPEC | - | | CHECKED | DSG | 25/6/07 | | L15-13196 | | |
| | | | APPROVED | DW | 25/6/07 | Pro/ENGINEER | SHEET 1 OF 1 SHEETS | | |

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|-----------|-------|-------|----------|----------------|
| 4-8440-77 | A | BSR | 07/05/07 | ORIGINAL ISSUE |
| MOD. | ISSUE | DRAWN | DATE | MODIFICATION |