

NOTES:-

SHAFT STIFFNESS:-

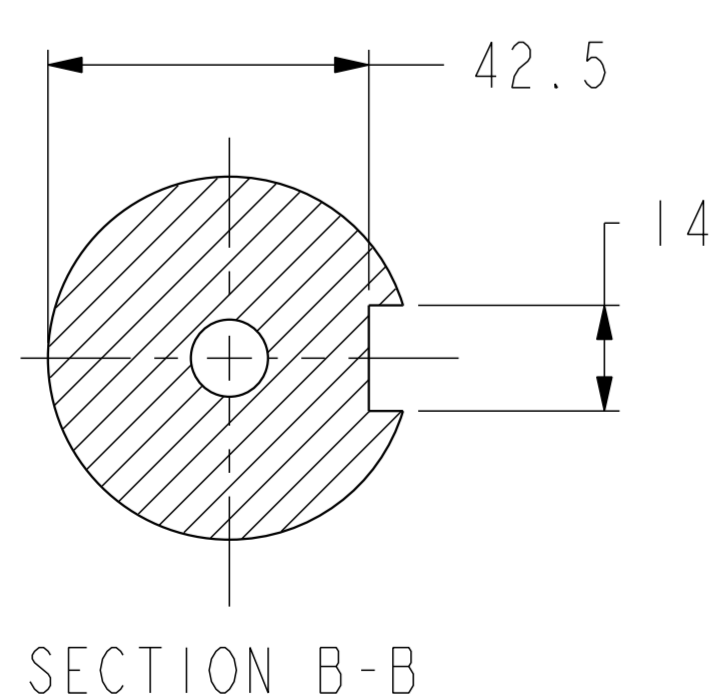
THE STIFFNESS OF THE SHAFT BETWEEN THE MAIN ROTOR CORE ϕ AND THE SHAFT EXTENSION ϕ IS 1.6545×10^6 kgcm/radian (STIFFENING EFFECT OF MAIN ROTOR CORE IS NOT INCLUDED IN THIS FIGURE)

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 BS ISO 1940 PARTS 1 AND 2 . BALANCE GRADE 2.5 FOR UNBALANCED MAGNETIC PULL (U.M.P.) REFER TO THE FACTORY.

COMPONENT	MASS (kg)	WR ² (kgm ²)
SHAFT	11.000	0.0038
FAN	0.976	0.0067
MAIN ROTOR	33.786	0.1199
EXCITOR ROTOR	5.120	0.0201
TOTAL WITHOUT EBG ROTOR	50.882	0.1505
EBG ROTOR	1.701	0.0017
TOTAL WITH EBG ROTOR	52.583	0.1522



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

4-9111-14	A	BSR	16.07.07	ORIGINAL ISSUE
MOD.	ISSUE	DRAWN	DATE	MODIFICATION

CONFIDENTIAL PROPERTY OF CUMMINS GENERATOR TECHNOLOGIES LTD.				P12H TWO BEARING MOMENTS OF INERTIA AND SHAFT DETAILS				
MATERIAL PROPS	-	DIMENSIONS IN MILLIMETRES (MM) AT 20°C	PROJECTION	SCALE	3:10	MATERIAL	-	
FINISH SPEC	-	SURFACE FINISH VALUES IN MICRO METRES		DRG. SIZE	A	CASTING No	-	
GEOMETRY SPEC	-			WEIGHT	=	PART No	L15-13235	ISSUE
ASSEMBLY SPEC	-	UNLIMITED DIMS ±	-	DRAWN	BSR	16.07.07	REL. PHASE	P
PERFORMANCE SPEC	-			CHECKED	RPM	16.07.07	PROJ. ENGINEER	
QUALITY SPEC	-			APPROVED	DPC	16.07.07	SHEET	1 OF 1 SHEETS