



COMPONENT	MASS (kg)	WR ² (kgm ²)
SHAFT	7.567	0.0031
FAN	0.976	0.0067
MAIN ROTOR	17.879	0.0859
EXCITER ROTOR	3.495	0.0139
TOTAL WITHOUT EBG ROTOR	29.917	0.1096
EBG ROTOR	1.701	0.0017
TOTAL WITH EBG ROTOR	31.618	0.1113

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

NOTES:-

SHAFT STIFFNESS:-

THE STIFFNESS OF THE SHAFT BETWEEN THE MAIN ROTOR CORE ϕ AND THE SHAFT FACE 'A' IS 4.4477×10^6 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 BACK TO THE FACTORY.

ADAPTOR SAE No.	COUPLING SAE No.	COUPLING DIMENSIONS		MASS OF DISC (kg) (1 X 3mm THICK)	MASS OF SHAFT SPACER (kg)	MASS OF PRESSURE PLATE (kg)	TOTAL MASS OF COUPLING ASSEMBLY (kg)	COUPLING STIFFNESS (kgcm/rad)	COUPLING DISC WR ² (kgm ²)
		Ø XX mm	YY mm						
4/5	6 1/2	215.8	10	0.850	0.233	0.069	1.152	13.955×10^6	0.0049
4/5	7 1/2	241.2	10	1.069	0.233	0.069	1.371	13.835×10^6	0.0079
3/4/5	8	263.5	41.8	1.275	0.974	0.069	2.318	13.747×10^6	0.0111
2/3/4	10	314.2	33.6	1.819	0.783	0.069	2.671	13.616×10^6	0.0225
2/3	11 1/2	352.3	19.4	2.287	0.452	0.069	2.808	13.555×10^6	0.0355

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MATERIAL PROPS	-	DIMENSIONS IN MILLIMETRES (MM) AT 20°C	PROJECTION			
FINISH SPEC	-					
GEOMETRY SPEC	-		WEIGHT =			
ASSEMBLY SPEC	-		DRAWN	BSR	25/04/07	
PERFORMANCE SPEC	-	SURFACE FINISH VALUES IN MICRO METRES		CHECKED	DSG	28/08/09
QUALITY SPEC	-	UNLIMITED DIMS ± --		APPROVED	JB	28/08/09

P04F ONE BEARING MOMENTS OF INERTIA AND SHAFT DETAILS

SCALE	3:10	MATERIAL	--
DRG. SIZE	C	CASTING No	-
REL. PHASE	P	PART No	L15-13178
PRO/ENGINEER		ISSUE	B
SHEET		1 OF 1 SHEETS	

5-0223-09	B	DW	28/08/09	CHANGED SHAFT STIFFNESS FROM 4.6949 TO 4.4477
4-8440-50	A	BSR	25/04/07	ORIGINAL ISSUE
MOD.	ISSUE	DRAWN	DATE	MODIFICATION

APPROVED DOCUMENT