



6-EQUI-SPACED CAPSCREWS M10 X 1.5 PITCH ON 42 P.C.D.

COMPONENT	MASS (kg)	WR <sup>2</sup> (kgm <sup>2</sup> )
SHAFT	6.865	0.0028
FAN	0.976	0.0067
MAIN ROTOR	14.829	0.0718
EXCITER ROTOR	3.495	0.0139
TOTAL WITHOUT EBG ROTOR	26.165	0.0952
EBG ROTOR	1.701	0.0017
TOTAL WITH EBG ROTOR	27.866	0.0969

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

NOTES:-

SHAFT STIFFNESS:-

THE STIFFNESS OF THE SHAFT BETWEEN THE MAIN ROTOR CORE  $\phi$  AND THE SHAFT FACE 'A' IS  $5.1051 \times 10^6$  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  $34.47 \times 10^6$  N/m<sup>2</sup> FOR SPEED RANGE OF 0.95 TO 1.1 X NOMINAL SPEED AND  $68.94 \times 10^6$  N/m<sup>2</sup> 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 <sup>2</sup> (kgm <sup>2</sup> )
		ØXX mm	YY mm						
4/5	6 1/2	215.8	10	0.850	0.233	0.069	1.152	$13.955 \times 10^6$	0.0049
4/5	7 1/2	241.2	10	1.069	0.233	0.069	1.371	$13.835 \times 10^6$	0.0079
3/4/5	8	263.5	41.8	1.275	0.974	0.069	2.318	$13.747 \times 10^6$	0.0111
2/3/4	10	314.2	33.6	1.819	0.783	0.069	2.671	$13.616 \times 10^6$	0.0225
2/3	11 1/2	352.3	19.4	2.287	0.452	0.069	2.808	$13.555 \times 10^6$	0.0355

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P04E ONE BEARING MOMENTS OF INERTIA AND SHAFT DETAILS

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	-		APPROVED	JB	28/08/09
UNLIMITED DIMS ± --					

SCALE	3:10	MATERIAL	--
DRG. SIZE	C	CASTING No	-
REL. PHASE	P	PART No	L15-13177
PRO/ENGINEER		ISSUE	B
SHEET		1 OF 1 SHEETS	

MOD.	ISSUE	DRAWN	DATE	MODIFICATION
5-0223-09	B	DW	28/08/09	CHANGED SHAFT STIFFNESS FROM 5.4334 TO 5.1051
4-8440-50	A	BSR	25/04/07	ORIGINAL ISSUE