

NOTES:-

SHAFT STIFFNESS:-

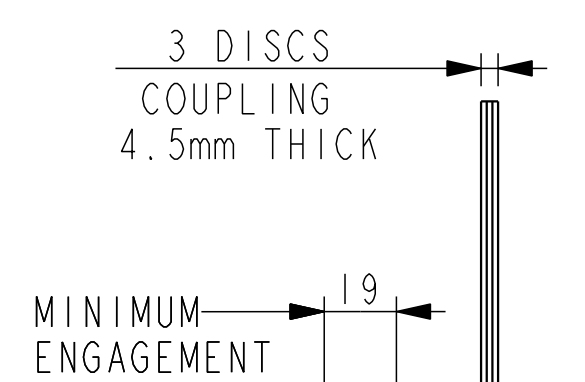
THE STIFFNESS OF THE SHAFT BETWEEN THE MAIN ROTOR CORE ϕ AND THE SHAFT FACE 'A' IS 2.9487×10^6 kgcm/radian (STIFFENING EFFECT OF MAIN ROTOR CORE IS NOT INCLUDED IN THIS FIGURE)

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.

APPROVED DOCUMENT



COMPONENT	MASS (kg)	WR ² (kgm ²)
SHAFT	10.249	0.0039
FAN	1.664	0.0144
MAIN ROTOR	45.608	0.2092
EXCITER ROTOR	6.408	0.0249
TOTAL WITHOUT EBG ROTOR	63.929	0.2524
EBG ROTOR	1.701	0.0017
TOTAL WITH EBG ROTOR	65,630	0.2541

ADAPTOR SAE No.	COUPLING SAE No.	COUPLING DIMENSIONS		MASS OF DISCS (kg) (3 X 1.5mm THICK)	MASS OF SHAFT SPACER (kg)	MASS OF PRESSURE PLATE (kg)	TOTAL MASS OF COUPLING ASSEMBLY (kg)	COUPLING STIFFNESS (kgcm/rad)	COUPLING DISCS WR ² (kgm ²)
		Ø XX mm	YY mm						
3/4	8	263.5	41.8	1.912	0.974	0.069	2.955	20.621×10^6	0.0166
2/3/4	10	314.2	33.6	2.728	0.783	0.069	3.580	20.424×10^6	0.0337
2/3	11 1/2	352.3	19.4	3.430	0.452	0.069	3.951	20.333×10^6	0.0532

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

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

CONFIDENTIAL PROPERTY OF CUMMINS GENERATOR TECHNOLOGIES LTD.						PI4H ONE BEARING MOMENTS OF INERTIA AND SHAFT DETAILS				
MATERIAL PROPS	-	DIMENSIONS IN MILLIMETRES (MM) AT 20°C	PROJECTION			SCALE	MATERIAL			
FINISH SPEC	-					3:10	-			
GEOMETRY SPEC	-		SURFACE FINISH VALUES IN MICRO METRES			DRG. SIZE	CASTING No			
ASSEMBLY SPEC	-		UNLIMITED DIMS ± --			C	-			
PERFORMANCE SPEC	-					25/04/07	PART No			
QUALITY SPEC	-				22/05/07	L15-13185				
						REL. PHASE	ISSUE			
						P	A			
						PRO/ENGINEER	SHEET		1 OF 1 SHEETS	

MOD.	ISSUE	DRAWN	DATE	MODIFICATION
4-8440-50	A	BSR	25/04/07	ORIGINAL ISSUE