



NOTES:

1. SHAFT STIFFNESS:
THE STIFFNESS OF THE SHAFT BETWEEN THE MAIN ROTOR CORE ϕ
AND THE COUPLING HUB IS 260×10^6 kgcm/radian
(STIFFENING EFFECT OF MAIN ROTOR CORE IS NOT INCLUDED IN THIS FIGURE)
2. SHAFT PROPERTIES:
MINIMUM YIELD : 260MPa
MINIMUM ULTIMATE TENSILE STRENGTH : 530MPa
SHAFT MATERIAL IS APPROVED BY MARINE AUTHORITIES WHEN APPROPRIATE
3. 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
4. FOR MARINE AUTHORITIES, THEIR APPROPRIATE RULES WILL APPLY
5. 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 GRADE 2.5 AND BS 6861 PART 1 GRADE 2.5
6. FOR UNBALANCED MAGNETIC PULL (U.M.P) FORCES PLEASE
CONTACT CUMMINS GENERATOR TECHNOLOGIES LTD

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

COMPONENT	Wt Kg	WR ² Kg m ²
1 SHAFT	454	2.5
2 FAN	38	3.9
3 HUB	116	2.2
4 MAIN ROTOR	1241	70.8
5 EXCITER	75	1.7
TOTAL	1924	81.1

COUPLING SAE No	COUPLING DIMENSIONS		COUPLING ASSEMBLY MASS Kg	COUPLING STIFFNESS 10-PLATES Nm/rad	COUPLING DISC WR ² kg m ²
	A	B			
18	571.4	16	29.2	316.8×10^6	0.980
21	673	0	31.6	287.3×10^6	1.891

MODEL/PLATFORM: S9 THIS PART IS SIMILAR TO: -

UNLESS OTHERWISE SPECIFIED THE FOLLOWING SHALL APPLY ANG. TOL.: ± 0.5°

DIMENSIONAL TOLERANCES: X ± 1 .X ± 0.1 .XX ± 0.01

HOLE SIZE 0.00-4.99 TOL. +0.15/-0.08	HOLE SIZE 5.00-9.99 TOL. +0.20/-0.10	HOLE SIZE 10.00-17.49 TOL. +0.25/-0.13	HOLE SIZE 17.50-24.99 TOL. +0.30/-0.13
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Cummins Generator Technologies

DIMENSIONS ARE IN: MILLIMETERS SIZE: A2 SCALE: 1:5
[] ARE IN: -

DIMENSIONING AND TOLERANCING PER: ASME Y14.5-2009

THIRD ANGLE PROJECTION

CAD SYSTEM PTC® Creo® Parametric

S9 D CORE, 1 BRG, ROTOR TORSIONAL DRAWING



Part Number: A063R442

Change Notice	CN00020908	Alternates	
Manufacturer Part (MEP)	No	Usage	Production Only
Release Phase Code	Production (P)	Drawing Specification	DS47047732
External Regulations	No External Regulation		

3D image provided when available for visual reference only.

Associated Specifications

Number	Name	Type	Category	Sub-Category
ESA030B356	SPECIFICATION,MATERIAL	Engineering Specification	Material Specification	Prohibited and Restricted Prohibited and Restricted

Drawing Revision Information

Description of Change(s)
ORIGINAL ISSUE.

Drawing Authorization

Drafter	Mihai-Cristian Ilinca	Date	31JUL2020
Checker	Daniel Ciochina	Date	10AUG2020
Approver	NO APPROVAL REQUIRED	Date	

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