

New directions for machinery reliability training, products and services!

Rotor Balance Data Sheet (Shop Balancing)

1.0 ROTOR INFORMATION					
(1.1) Equipment ID			(1.2) Date		
(1.3) Serial #			(1.4) Manufacturer		
(1.5) Rotor Type (ie fan, blower,cplg,		(1.6) Service RPM			
shaft, impeller etc)					
(1.7) Rotor Weight (lbs)					
(1.8) Service Configuration <i>(circle one)</i>		(1.9) Balancing Configuration <i>(circle one)</i>			
(see note i.) Centernung Overnung		(see note I.) Centernung Overnung			
2.0 BALANCE TOLERANCE CALCULATION					
(2.1) Desired Tolerance <i>(circle one)</i> 4W/N W/N			(2.2) Stack Balance Required ? <i>(circle one)</i> Yes No		
Plane 1			Plane 2		
(2.3) Journal Load [W] (see note ii.)			(2.4) Journal Load [W] (see note ii.)		
(50% of rotor weight from (1.7) if			(50% of rotor weight from 1.7 if		
symmetrical) Lbs			symmetrical) Lbs		
(2.5) RPM [N]			$(2.51) \text{RPIM} [\text{IN}] \\ (from item (1.6))$		
(1011 Iterri (1.0)) (2.6) Max Permissible Unbalance [11]			(27) Max Permissible I Inbalance [11]		
(Calculate based on 4W/N or 1W/N as			(Calculate based on 4W/N or 1W/N as		
(equivalence based on $HHHH$ of HHH derived on P and P			regd.) $U_{MAX} = Oz.in$		
(2.8) Convert to g.in if required			(2.9) Convert to g.in. if required		
U x 28.35 = g.in g.in		U x 28.35 = g.in g.in			
3.0 BALANCE DATA					
(3.1) Balancing	1/2 key Used ?		(3.2) Balancing Machine Type (circle one)		
RPM	yes	no	Hard Bearing S	Soft Bearing	
Plane 1			Plane 2		
(3.3) Correction rad	lius	inches	(3.4) Correction Radius	inches	
(3.51) 1 ST Correction	g	deg	(3.61) 1 ST Correction	g deg	
(3.52) 2 ND Correction	g	deg	(3.62) 2 ND Correction	g deg	
(3.53) 3 TH Correction	g	deg	(3.63) 3 TH Correction	g deg	
(3.54) 4 Correction		ueg_	(3.64) 4 Correction	g deg	
(o.r) Actual Datatice Actileveu (next correction wt x radius)			(o.o) Actual Datafice Actileveu (next correction wt x radius)		
a. in oz.in			g. in oz.in		
(3.9) Desired Unbalance		(3.91) Desired Unbalance			
from item (2.6)		From item (2.7)			
	g. in	oz.in	g. in	oz.in	
Notes / Comments					
Name Signature					



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The purpose of this form is to convey important information about the balance quality of rotors that are balanced in a balancing machine.

This form to accompany every rotor to be balanced

The recommended standard for general machinery is that of the American Petroleum Institute (API) which states that:

$U_{MAX} = 4 W/N$

Where:

 U_{MAX} = the maximum allowable unbalance per plane in oz-in. W = static journal load in lbs. (for symmetrical rotors, ½ rotor weight) N = the maximum continuous rotating speed in RPM

In some special cases a standard of 1 W/N may be requested

Notes:

i. **Configuration** Items (1.8); (1.9)

configuration



configuration

 ii. Journal Load Items (2.3) ; (2.4)
For symmetrical rotors the journal load is 50% of rotor weight For Non-symmetrical rotors the individual journal load must be calculated.

