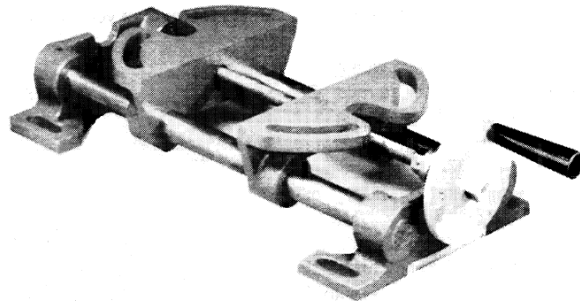


MBA & MB Motor Bases

Installation & Maintenance Manual

P-5069-TBW
Form 770A



Installation - MBA & MB Bases

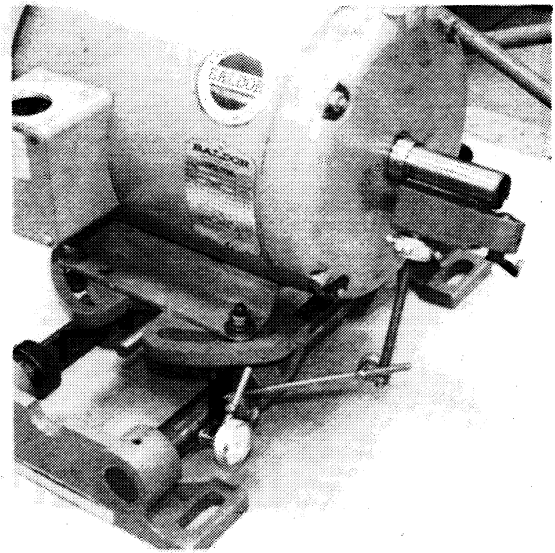
The components used determines the SETUP required:

- A. Variable sheave - goes on the motor shaft
 - One adjustable flange: "MS" Sheave
 - Two adjustable flanges: "All-Pro", "MCS" or "Roto-Cone"
- B. Companion - goes on the driven shaft
 - Sheave: Grooved for belt
 - Pulley: Flat face, no groove

SETUP required

- Angle mount for variable sheave with one adjustable flange and grooved companion.
- Straight mount for all other combinations.

1. The handwheel knob and screw are packaged separately. Locate these parts and fasten the knob to the handwheel.
2. Place the motor base in its approximate position for installation. The handwheel normally points away from the driveN shaft.
3. Slide the unattached motor base cross bar to match the footprint of your motor.
4. Place your motor on the motor base with motor shaft perpendicular to the motor base rails. Check perpendicularity by indicating the motor base rail in reference to the motor shaft as shown in Figure #1. This is done by rotating the motor shaft and adjusting the motor until you get comparable readings of the dial indicator at each end of the rail.
 - For straight mount, tighten motor bolts.
 - For angle mount, finger tighten motor bolts.
5. Position variable sheave on motor shaft. **DO NOT TIGHTEN.** For angle mount, keep sheave out 3/4 inches on shaft. (Refer to variable sheave installation instructions.)
6. Install companion on driveN shaft; locate as close to shaft bearings as possible. Tighten in position following the instructions furnished with the companion or bushing.
7. Loosen set collars on motor base rails. Turn handwheel to adjust motor base to position motor as close to the companion as possible. Then adjust in opposite direction to back off one inch.
8. Place belt on drive. Slide motor base on mounting surface to make belt nearly tight. Remove belt.



9. Use a straightedge to align the drive as shown in Figure #2A or #2B. All adjustments are made by moving the motor base on its mounting surface.

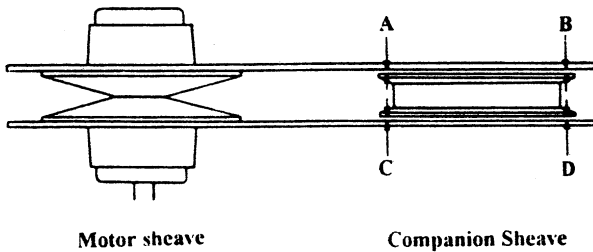


Figure 2A

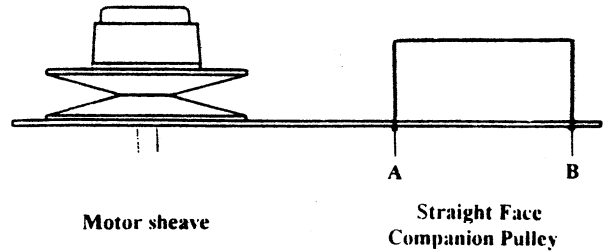


Figure 2B

Distance A, B, C, & D should be equal.

A & B should be "0"

10. For ANGLE mount only:

- A. Mark the motor base mounting surface at the "0" point of the alignment label on each side of the motor base.
- B. Use procedure on back to calculate offset angle.
- C. Rotate motor base on mounting surface to align the correct angular marks on both alignment labels with the marks you made on the mounting surface. Direction of rotation must cause belt to stay aligned as the center distance increases and the belt is pulled down between the flanges.
- D. Rotate motor on the motor base and slide the variable sheave on the motor shaft to obtain four-point alignment. Refer to Figure #2A.
- E. Tighten motor bolts.

11. Shim as required to level and remove any "rock" from motor base. Bolt motor base in place.

12. Tighten variable sheave to motor shaft.

13. Check drive alignment as detailed in Step #9. Correct alignment as required.

14. Install belt. Rotate drive by hand while adjusting the motor base to increase the center distance to seat the belt. The belt must be seated at least nearly flush with the outside of the variable sheave before the drive is operated. The set collar on the motor base rails should be located and tightened to limit belt movement above this position.

15. Continue to rotate the drive and adjust the motor base to pull the belt into the variable sheave. When the belt is at the minimum pitch position, set the other set collar to limit travel in this direction. Check alignment as before.

16. Install belt guards to prevent anything from coming into contact with moving parts as required by any applicable regulations. Your drive is ready to run.

Note: The set collars may be reset to limit speed inside the travel range defined above.

Angled Motor Base Calculations

Because of the unique lubricating principle employed in the Wood's MS sheaves, they are constructed so that only a single flange is adjustable. When a straight face pulley is used as a companion, the belt will traverse across the face of the pulley as the pitch diameter of the MS is changed. However, in order to maintain correct belt alignment when running the MS sheave to a V-groove companion, the motor must be mounted on an angled base to compensate for the belt movement.

When an MC base is furnished, the motor mount holes are drilled in the sliding plate at the angle required by each specific application. When using an MBA motor base, slots are provided for offsetting the motor to any angle.

Angle to Offset Motor Base

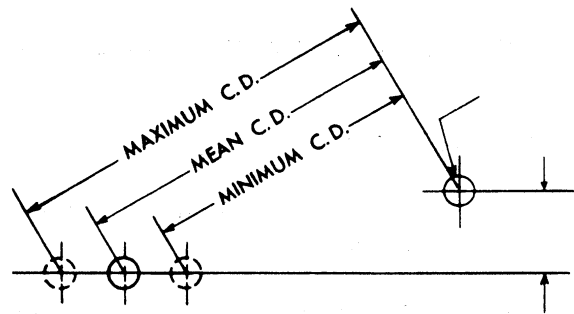
To Find Offset Angle:

1. Determine mean center distance.

$$\text{Mean C.D.} = \frac{\text{Max.} + \text{Min.}}{2}$$

2. Find difference in centerline elevation.
3. Using appropriate table below with required elevation, read across until mean center is located; then read at bottom of table the offset angle. Interpolate for elevations or center distances not shown.

Example: Sheave MS-100-W
 C.D. Min. 18.0, Max. 22.0
 Elevation 7"
 Offset Angle -9 1/2°



		MS-77							
		Mean Center Distance – inches							
Elevation – inches	3								
	4	Offset angle 7 1/2° for less than							
	5	3° elevation; all center							
	6	distances.							
	7		9	10	11	12	15	21*	
	8	9	10	10	11	12	14	17	24*
	10	12	12	13	14	15	17	21	29*
	12	14	14	15	16	18	21	25	35*
	14	16	17	18	19	21	24	29	41*
	16	18	19	20	22	24	27	33	47*
Offset Angle		4°	4 1/2°	5°	5 1/2°	6°	6 1/2°	7°	7 1/2°

		MS-97								
		Mean Center Distance – inches								
Elevation – inches	3									
	4	Offset angle 9° for less than								
	5	3° elevation; all center								
	6	distances.								
	7					11	13	16	22*	
	8				11	12	13	15	18	25*
	10	12	13	14	15	16	18	22	32*	
	12	15	15	16	18	20	22	27	38*	
	14	17	18	19	21	23	26	31	44*	
	16	20	21	22	24	26	30	36	50*	
Offset Angle		5 1/2°	6°	6 1/2°	7°	7 1/2°	8°	8 1/2°	9°	

		MS-100W		MS-127		MS-975-S						
		Mean Center Distance – inches										
Elevation – inches	3											
	4	Offset angle 10° for less than										
	5	3° elevation; all center										
	6	distances.										
	7					11	13	17	22	35*		
	8				11	12	13	15	17	23	30	47*
	10	12	12	13	14	15	16	18	21	28	37	58*
	12	14	15	16	17	18	19	22	26	34	44*	
	14	17	17	18	19	21	23	25	30	40	50*	
	16	19	20	21	22	24	26	29	34	46	57*	
Offset Angle		5 1/2°	6°	6 1/2°	7°	7 1/2°	8°	8 1/2°	9°	9 1/2°	9 3/4°	10°

* Mean center distances and larger.

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