Pump Alignment

This formula has you mount the indicators on the moveable unit with the dial plunger touching the static (non-moveable) unit. Zero indicator point on top of motor coupling. Rim (radial): A plus indicates the motor is low. Face (angular): A plus indicates the first motor support is high.

Formula

D = Diameter at indicator point

F = Face indicator reading (bottom #)

R = Rim indicator reading (bottom #)

L_1 = Length from indicator point to first motor support

L_2 = Length from indicator point to second motor support

S_1 = Shims needed under first motor support

S_2 = Shims needed under second motor support

Tolerance

Rim (radial) +/- .002”

Face (angular) +/- .002”

OR manufacturer/contractor specifications

Procedure

I. Indicate and record Rim (Radial)

II. Indicate and record Face (Angular)

III. Use the formula to compute shims. A plus sign means to add shims. A minus sign means to remove shims. Take ½ of the TIR of rim and add or remove from S_1 and S_2.

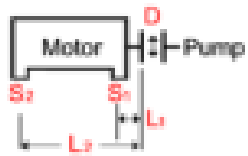
IV. Install or remove shims as required.

V. Repeat step I and II as needed. If reading is within tolerances the alignment is satisfactory.

EXAMPLE: **L_1** = 8”, **L_2** = 16”, **D** = 2”, **F** = + .004”, **R** = + .006”

$$S_1 = \frac{L_1}{D} \times F + \frac{1}{2} R$$

$$S_2 = \frac{L_2}{D} \times F + \frac{1}{2} R$$



$S_1 = \frac{8}{2}$ x .004” = +.016” + .003” = +.019”

$S_2 = \frac{16}{2}$ x .004” = +.032” + .003” = .035”

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