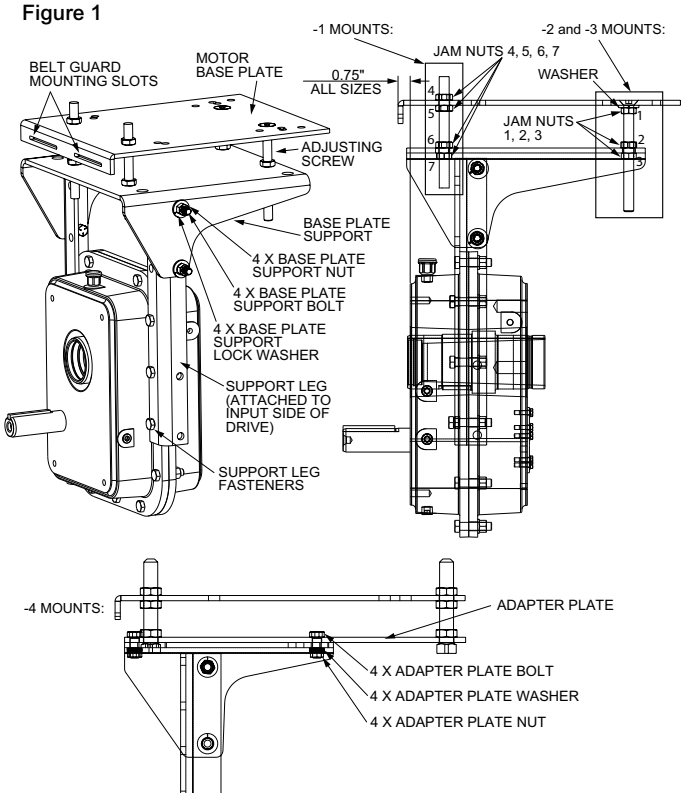
Motor Mount Installation

INTRODUCTION

The Falk Equi-Poised motor mount is an all steel weldment that bolts directly to the drive housing of Falk Shaft-Mounted (Type JR), Flange-Mounted (Type JF) and Screw Conveyor (Type JSC) Drives, as shown in Figure 1.

This modern design provides a simple means of tensioning V-belts or chains with adjusting screws. Motor baseplates are available from Factory pre-drilled for NEMA and IEC standard foot-mounted motors within the rated capacity of the drive.

Figure 1

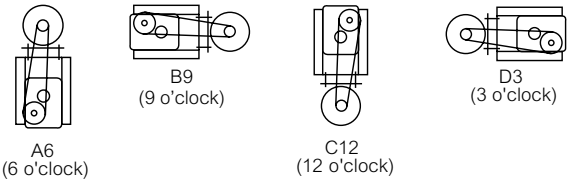


ASSEMBLY INSTRUCTIONS

From Figure 2, determine which assembly is required. For minimum bearing loads on driven machine, minimum shaft deflection and the most economical belt selections, use the 6 o'clock mounting position, high-speed shaft relative to the low-speed shaft, illustrated in Figure 1. The motor/drive assembly can also be mounted in positions shown in Figure 2. Always locate air vent at the top of horizontal drives.

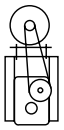
STANDARD ASSEMBLIES

Figure 2



Letter = Motor Mount Position
Clock = Drive High-speed Shaft Position

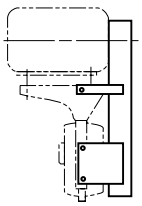
OPTIONAL ASSEMBLY



The motor mount may be mounted on the high-speed shaft end of FLANGE MOUNTED DRIVES – JF (also SCREW CONVEYOR DRIVES – JSC) if clearance over the trough end permits) when increased motor mount clearance is required at the driven machine. Consult Factory for SHAFT-MOUNTED DRIVES – JR.

GUARDS

CAUTION: *Consult applicable local and national safety codes for proper guarding of rotating members.*



OSHA type guard when specified. Dimensions to suit components.

Mounting slots located on the motor base plate are provided for installing a belt guard. Refer to Appendix L for installation of Falk V-Belt guards.

WARNING: *Remove all external loads from system before servicing drive or accessories.*

1. **ATTACH BASE PLATE SUPPORT TO SUPPORT LEGS** — Loosely assemble support legs to the base plate support as shown in Figure 1.
2. **ATTACH SUPPORT LEGS WITH BASE PLATE SUPPORT TO DRIVE** — To determine the number of housing flange fasteners to be removed for a given shaft center and drive size, refer to Table 2. Attach support legs to the input side of drive with the hex nuts on output side of drive. Tighten support leg and base plate support fasteners to torque values specified in Table 1.

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TABLE 1 — Motor Mount Fasteners & Torques lb-ft (Nm)

DRIVE SIZE	Support Leg to Baseplate Support		Support Leg to Housing		Adapter Plate to Baseplate Support		-1 & -2 Adjusting Screws		-3 Adjusting Screws		-4 Adjusting Screws	
	Fastener Size	Tightening Torque	Fastener Size	Tightening Torque	Fastener Size	Tightening Torque	Fastener Size	Tightening Torque	Fastener Size	Tightening Torque	Fastener Size	Tightening Torque
5107	.375-16UNC x 1.00	28 (38)	.312-18UNC x 1.50	20 (26)	...	...	.625-11UNC	137 (186)	...	...	...	...
5115	.375-16UNC x 1.00	28 (38)	.312-18UNC x 1.50	20 (26)	...	...	.625-11UNC	137 (186)	...	...	...	...
5203	.500-13UNC x 1.25	69 (94)	.375-16UNC x 2.00	28 (38)	...	...	.625-11UNC	137 (186)	...	...	...	...
5207	.500-13UNC x 1.25	69 (94)	.500-13UNC x 2.25	69 (94)	...	...	.625-11UNC	137 (186)	.750-10UNC	108 (146)	...	...
5215	.625-11UNC x 1.50	137 (186)	.500-13UNC x 2.25	69 (94)	...	...	.625-11UNC	137 (186)	.750-10UNC	108 (146)	...	...
5307	.750-10UNC x 1.75	245 (332)	.500-13UNC x 2.50	69 (94)	.625-11UNC x 1.50	60 (81)	.625-11UNC	137 (186)	.750-10UNC	108 (146)	1.000-8UNC x 8.00	180 (244)
5315	.750-10UNC x 1.75	245 (332)	.500-13UNC x 2.50	69 (94)	.625-11UNC x 1.50	60 (81)	.625-11UNC	137 (186)	.750-10UNC	108 (146)	1.000-8UNC x 8.00	180 (244)

3. Loosely install adjusting screws, washers (for flat-head socket cap screws only) and jam nuts (except #3 and #7) on to the motor base plate per Figure 1. Do not tighten adjusting bolts until step 4.

   NOTE: *If your motor base plate uses two 82 degree flat-head socket cap screws, make sure to install the washer between motor base plate and first jam nut as shown in Figure 1, otherwise motor base plate may be loose between the flathead cap screw and motor base plate.*

4. ATTACH MOTOR BASE PLATE TO BASE PLATE SUPPORT — Install motor base plate onto base plate support, install jam nuts 3 and 7 per Figure 1. Set motor plate to desired height and torque all jam nuts per Table 1. After jam nuts are tightened make sure motor base plate is fully secured to base plate support.

Figure 3

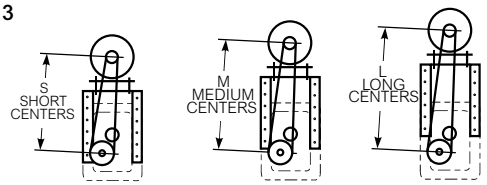
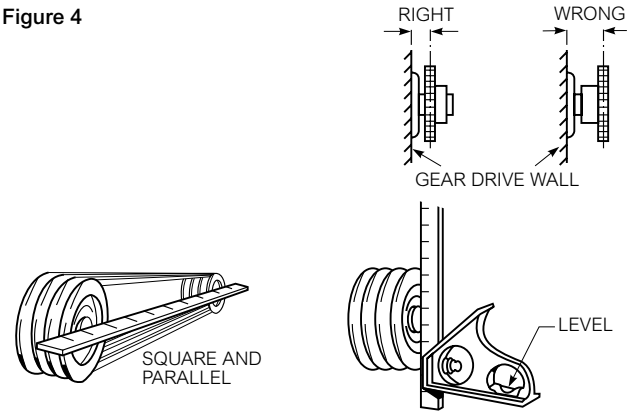


TABLE 2 — Support Leg Fastener Quantity (Per Side)

A6 Shaft Centers	Drive Size					
	5107	5115	5203	5207	5215	5307 & 5315
Compact	3	3	4	...	...	...
Short	3	3	4	4	4	6
Medium	3	3	3	3	3	5
Long	2	2	2	2	2	4
A3 & A9 Shaft Centers						
Compact	3	3	3	...	...	...
Short	3	3	3	3	3	5
Medium	3	3	3	2	2	4
Long	2	2	2	...	...	3

5. MOUNT MOTOR — Position motor on motor base plate so that all mounting holes are in alignment. Install and tighten motor fasteners.
6. SPROCKET, PULLEY OR SHEAVE CONNECTION — Mount power take-offs as close to drive and motor housing as possible to avoid undue bearing load and shaft deflection. Align the high-speed shaft of drive square and parallel with motor shaft by placing a straightedge across the face of the sprockets or sheaves as illustrated in Figure 4. Check horizontal shaft alignment by placing one leg of a square against the face of the sheave or sprocket with the spirit level on the horizontal leg of the square.

Figure 4



Adjustment of the belt or chain is accomplished by turning adjusting screws evenly. DO NOT over-tighten belts or chains. Over-tightening belts or chains reduces belt/chain and bearing life. When the required tension is reached, tighten adjusting screw jam nuts to torques listed in Table 1. Adjust chain tension to manufacturer's specifications. Adjust belts as follows:

The ideal belt tension is the lowest tension at which the belt will not slip under peak load conditions. Check belt tension frequently during the first 24 to 48 hours of run-in operation. Keep belts free from foreign material which may cause slippage. Inspect the V-belt drive periodically; re-tighten belts if they are slipping.