FLEX–END ASSEMBLY

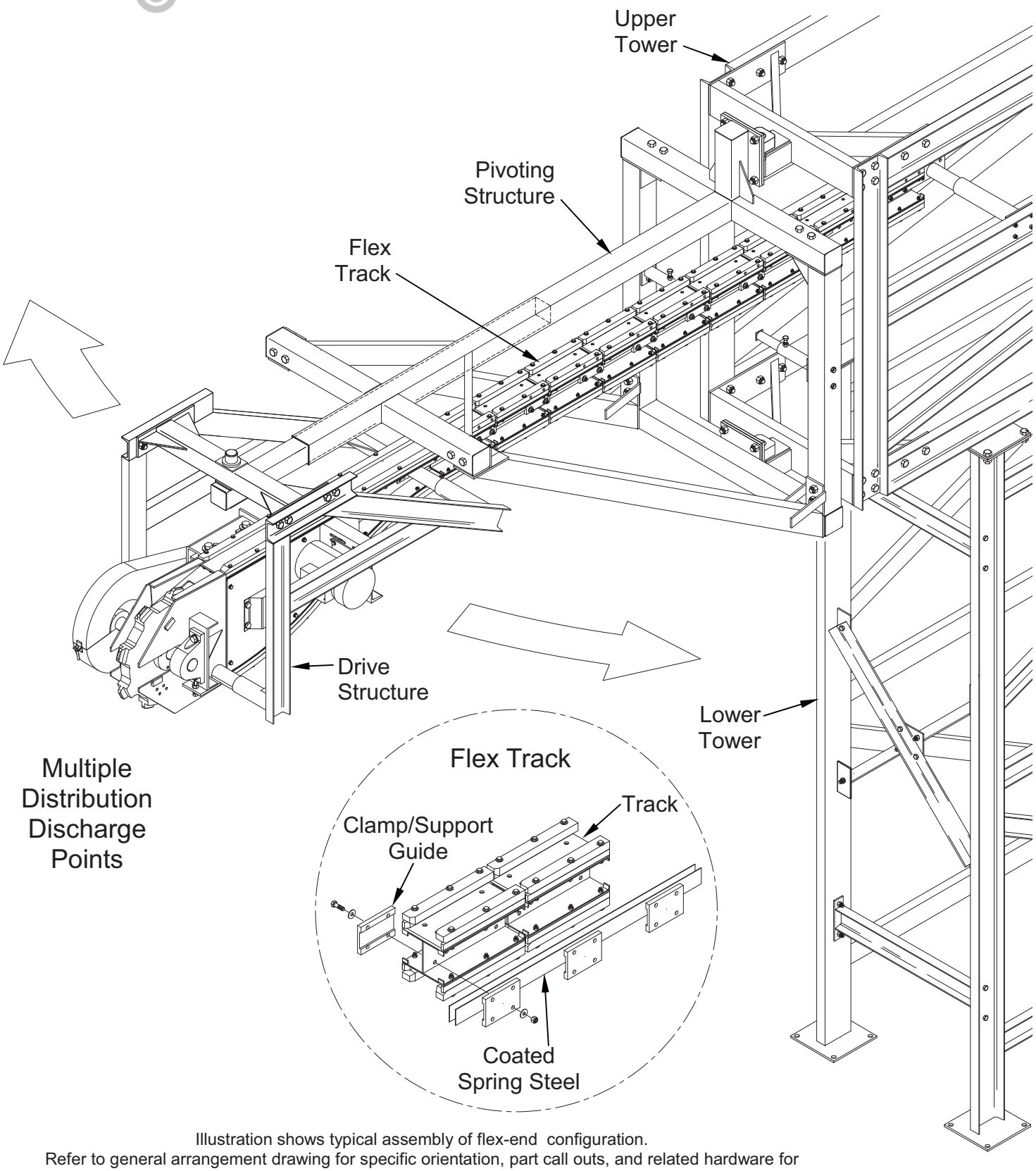


Illustration shows typical assembly of flex-end configuration.
Refer to general arrangement drawing for specific orientation, part call outs, and related hardware for assembly per application.

JOB NAME:		CONVEYOR NO.:	1
JOB NO.:			

FLEX–END TOWER ASSEMBLY

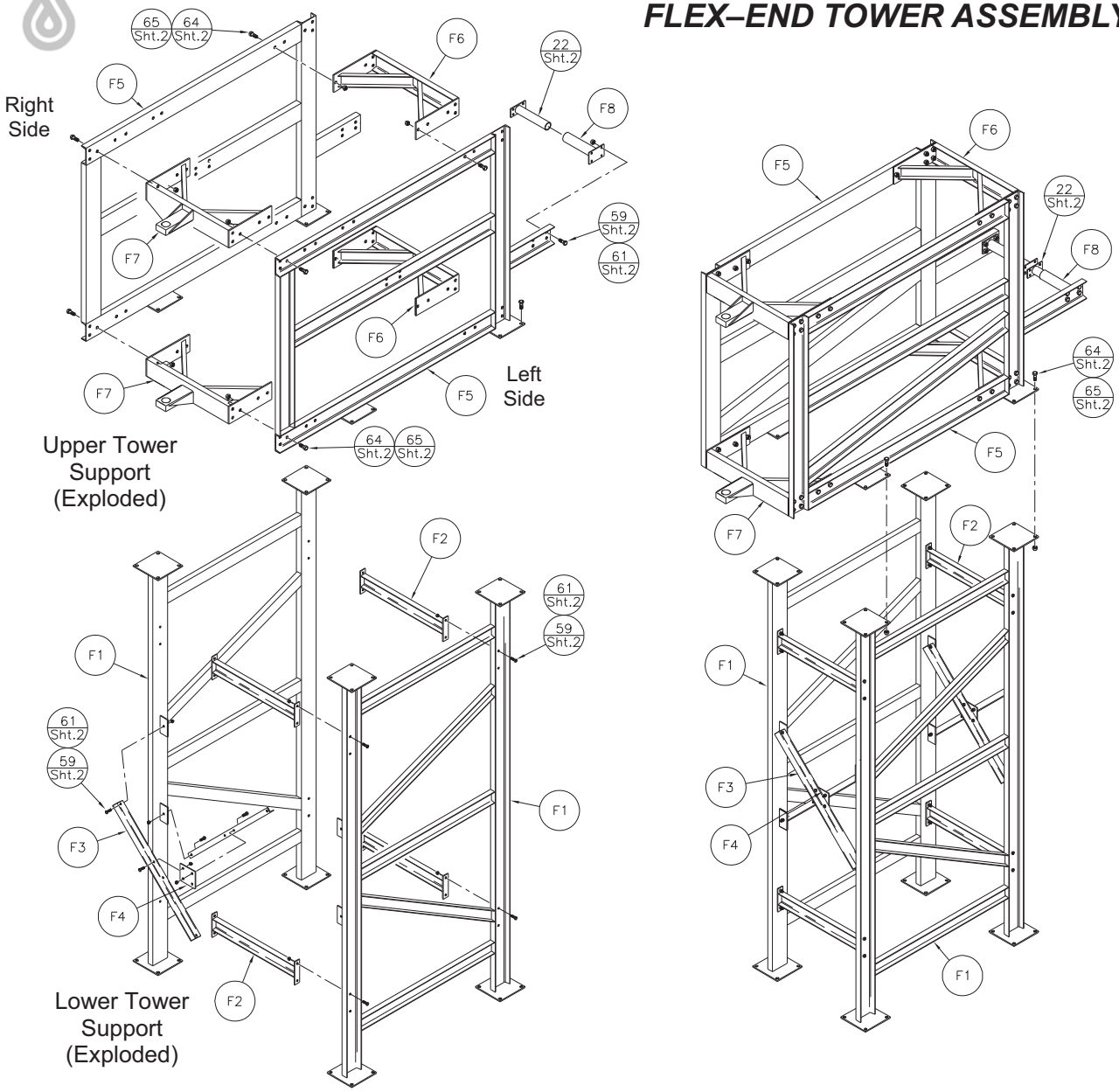


Illustration shows typical assembly of flex-end support structure.
Refer to general arrangement drawing for specific orientation, part call outs, and related hardware for assembly per application.

ITEM NO.	PARTS NO.	DESCRIPTION	MAT'L.	WT. each	NO. REQ'D.
F1	See GA.	Lower Tower Support	Galv.	See GA.	1 PR.
F2		Channel Brace x "LG.	Galv.		See GA.
F3		Cross Brace Angle 45° Orientation	Galv.		See GA.
F4		Cross Brace Plate 45° Orientation	Galv.		See GA.
F5	See GA.	Upper Tower Support	Galv.	See GA.	1 PR.
F6	P2-0135-0428-D	Rear Pivot "K" Brace	Galv.	58.1	2
F7	P2-0135-0428-D	Front Pivot "K" Brace	Galv.	86.7	1 PR.

JOB NAME:		CONVEYOR NO.:	1
JOB NO.:			

FLEX–END PIVOTING ASSEMBLY (EXPLODED)

Continued

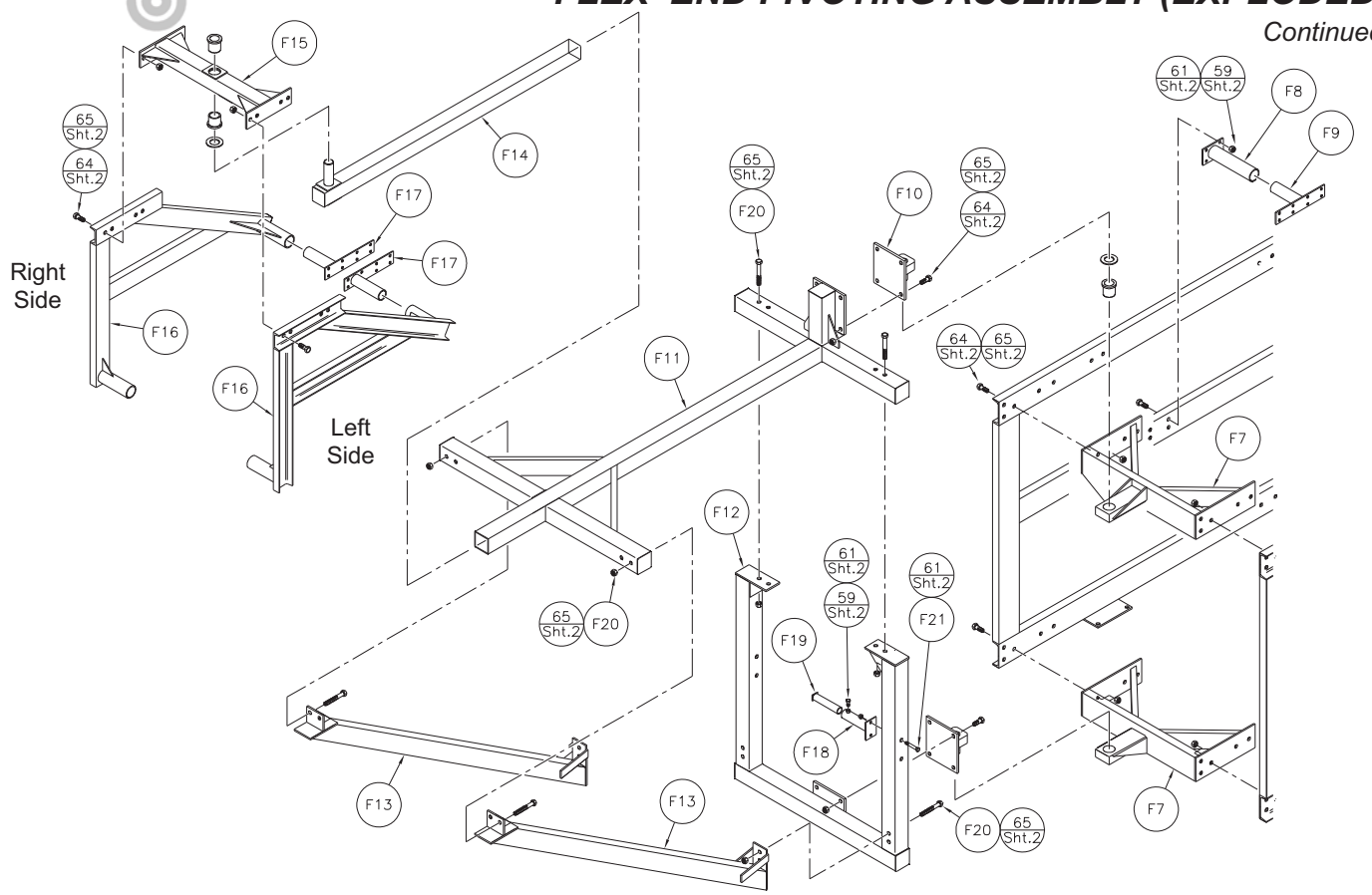
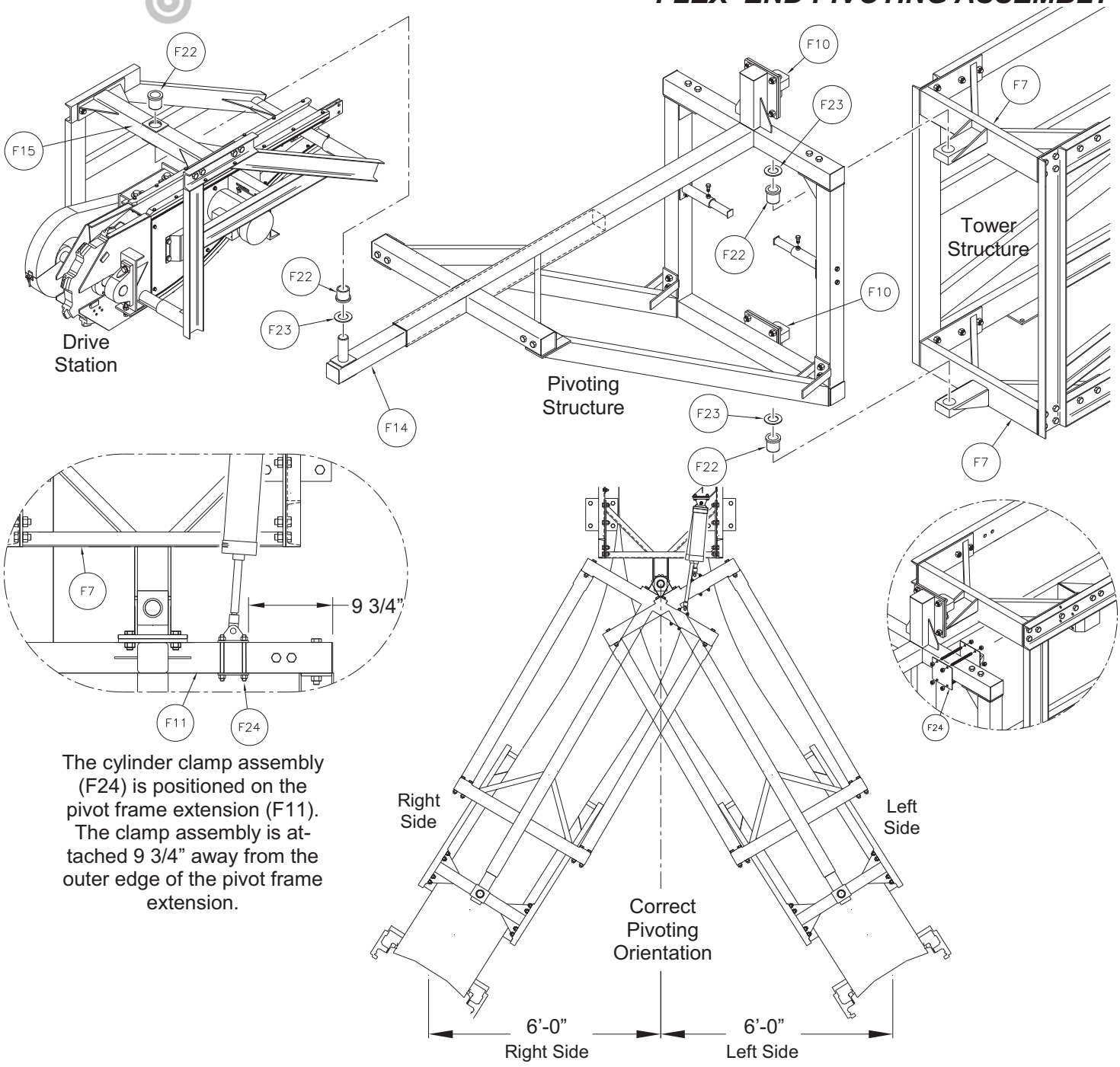


Illustration shows typical assembly of flex-end pivoting support structure.
Refer to general arrangement drawing for specific orientation, part call outs, and related hardware for assembly per application.

ITEM NO.	PARTS NO.	DESCRIPTION	MAT'L.	WT. each	NO. REQ'D.
F8	P2-0135-0440-A	Tower Pipe Support	Galv.	8.2	4
F9	P2-0135-0442-A	Flex Track Pipe Support	Galv.	6.2	2
F10	P2-0135-0432-A	Bearing Support Shaft Bracket	Galv.	28.4	2
F11	P2-0135-0435-D	Pivot Frame Extension	Galv.	190.7	1
F12	P2-0135-0433-D	Pivot Frame Connection	Galv.	118.4	1
F13	P2-0135-0434-D	Pivot Frame Brace	Galv.	85.9	2
F14	P2-0135-0437-D	Pivot Frame Sleeve	Galv.	62.1	1
F15	P2-0135-0438-D	Drive Pivot Frame Brace	Galv.	42.5	1
F16	P2-0135-0439-D	Flex end Drive Support	Galv.	92.9	1 PR.
F17	P2-0135-0441-A	Drive Station Splice Support	Galv.	7.4	2
F18	P2-0135-0443-A	Pivot Frame Flex-Track Outer Adjuster	Galv.	5.1	2
F19	P2-0135-0444-A	Pivot Frame Flex-Track Inner Adjuster	Galv.	3.0	2
F20		3/4"-10NC x 5 1/2"LG. Hx.Hd.Bolt	304SS	-	12
F21		1/2"-13NC x 5 1/2"LG. Hx.Hd.Bolt	304SS	-	4

JOB NAME:		CONVEYOR NO.:	1
JOB NO.:			

FLEX–END PIVOTING ASSEMBLY



The cylinder clamp assembly (F24) is positioned on the pivot frame extension (F11). The clamp assembly is attached 9 3/4” away from the outer edge of the pivot frame extension.

Illustration shows typical assembly of flex-end pivoting support structure.
Refer to general arrangement drawing for specific orientation, part call outs, and related hardware for assembly per application.

ITEM NO.	PARTS NO.	DESCRIPTION	MAT’L.	WT. each	NO. REQ’D.
F22	FF-2501	Flange Bushing—Oilite	Bronze	-	4
F23	TT-3001	Thrust Bushing—Oilite	Bronze	-	3
F24	P2-0135-0446-A	Cylinder Clamp Assembly, 304SS Hdwr.	Galv.	8.3	1

JOB NAME:		CONVEYOR NO.:	1
JOB NO.:			

FLEX–END PNEUMATIC ASSEMBLY (EXPLODED)

Continued

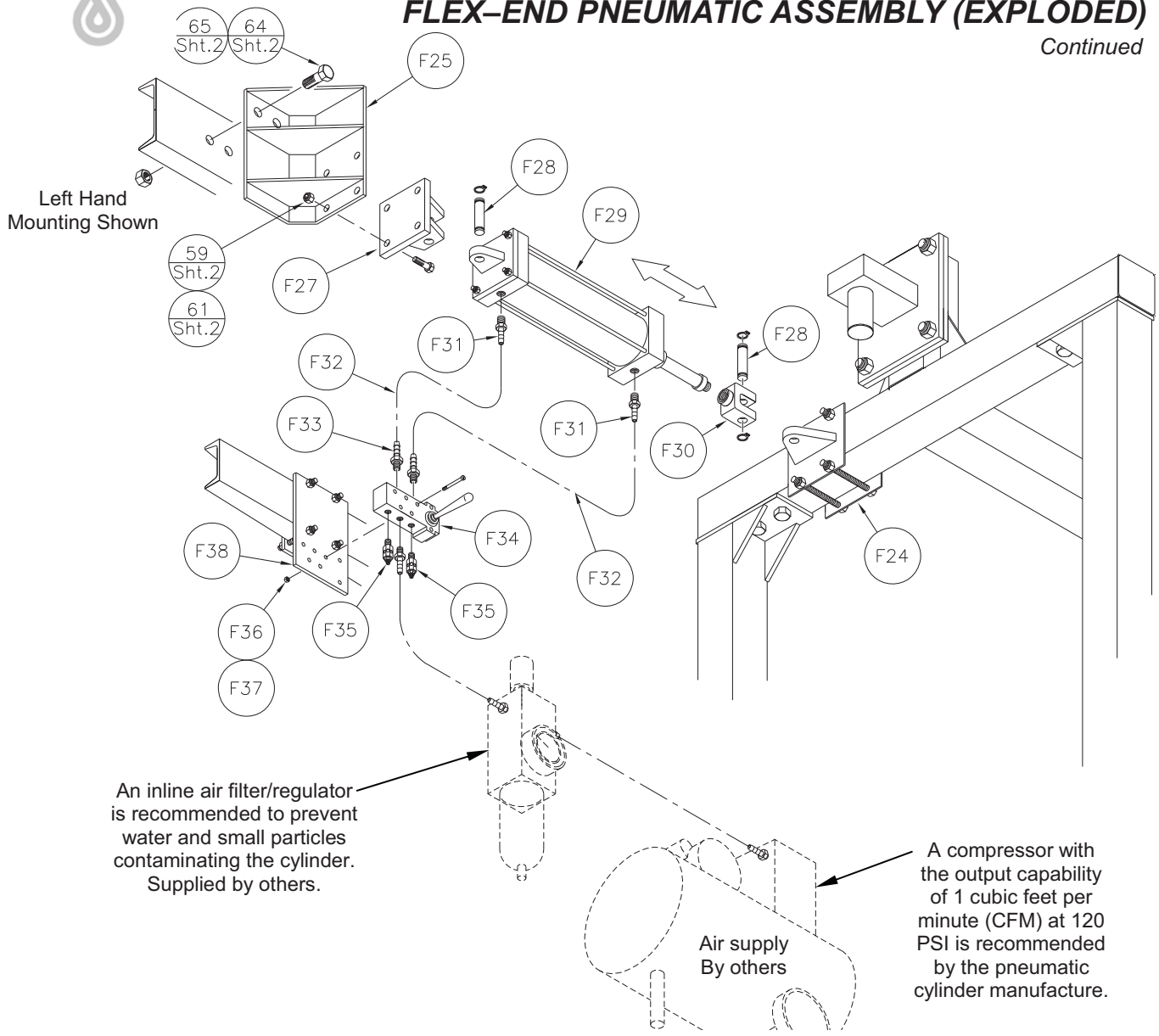


Illustration shows typical assembly of pneumatic system.
Refer to general arrangement drawing for specific orientation, part call outs, and related hardware for assembly per application.

ITEM NO.	PARTS NO.	DESCRIPTION	MAT'L.	WT. each	NO. REQ'D.
F25	P2-0135-0453-A	Cylinder Support Bracket, LH	Galv.	16.0	1
F26	P2-0135-0445-A	Cylinder Support Bracket, RH	Galv.	16.0	1
F27	1458050075	Clevis Bracket (3/4" Bore Mount) - Parker	Primed Steel	-	1
F28	0856640075	Clevis Pin, (3/4" Dia.) - Parker	Primed Steel	-	2
F29		Pneumatic Cylinder-Series 2MA, Style:BE, Thrd Style:4 Bore:4", Rod:#4, Stroke:12"LG.—Parker	Aluminum	-	1
F30	1458030075	Female Rod Clevis (3/4" Bore Mount) - Parker	Primed Steel	-	1
F31	30182-8-6B	Male Pipe–1/2" NPTF, Series-82—Parker	Brass	-	2

JOB NAME:		CONVEYOR NO.:	1
JOB NO.:			

FLEX–END PNEUMATIC ASSEMBLY

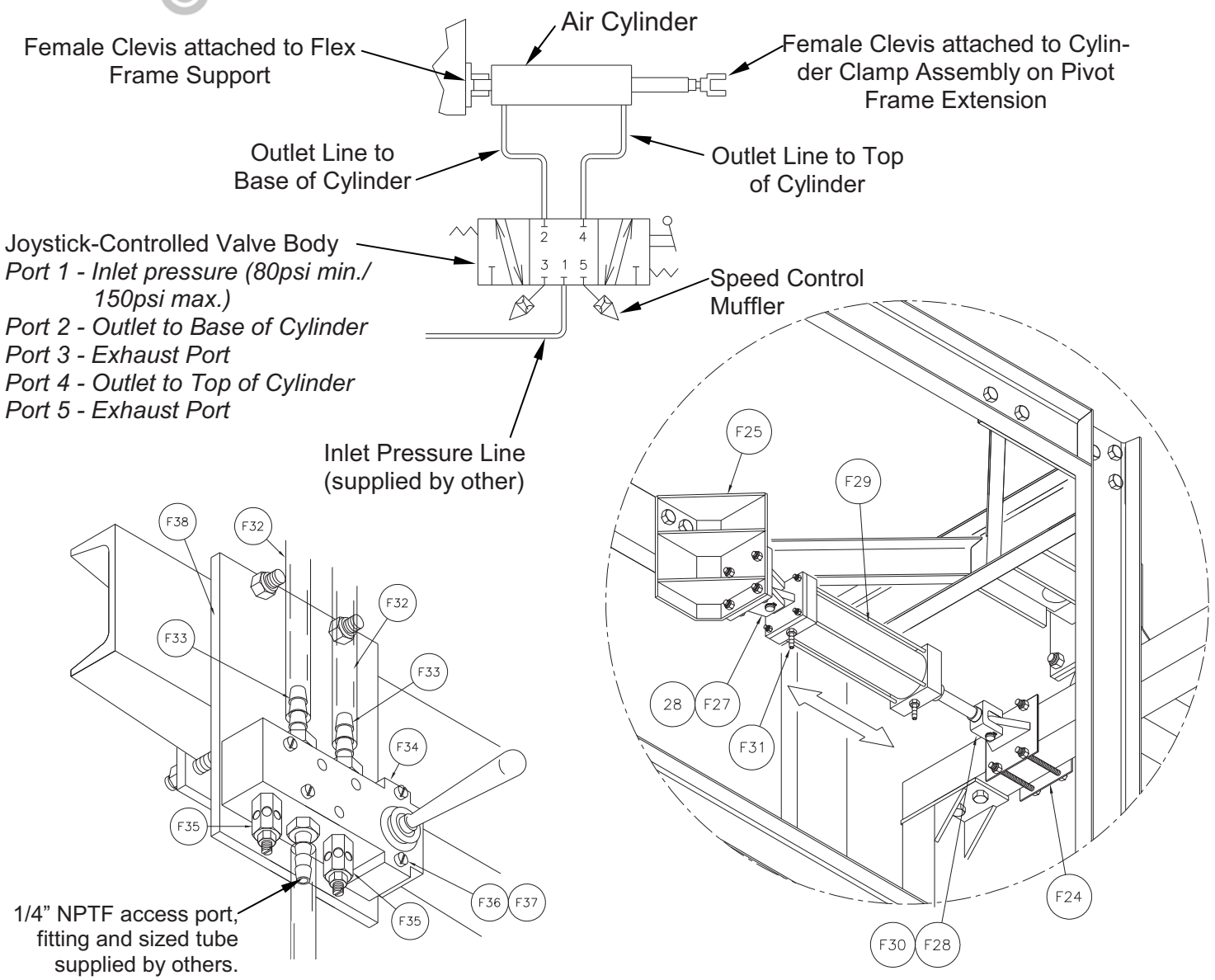


Illustration shows typical assembly of pneumatic system.
Refer to general arrangement drawing for specific orientation, part call outs, and related hardware for assembly per application.

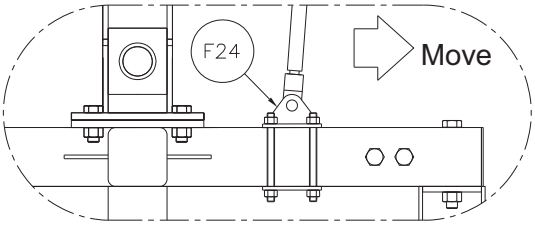
ITEM NO.	PARTS NO.	DESCRIPTION	MAT'L.	WT. each	NO. REQ'D.
F32		Hose-Series-82 Push-Loc x 40'-0"LG.-801-6	Synth. Rubber	-	1
F33	30182-4-6	Male Pipe–1/4" NPTF, Series-82,	Steel	-	2
F34	52181-1000	Air Control Valve– 4-Way, 5 Port, 3-Position, Lever Operated, 1/4" Ports	Zinc Cast	-	1
F35	SP25	Port Flow Control– 1/4" NPTF	Bronze	-	2
F36		8-32-NC x 2"LG. Rd.Hd.Screw	304SS	-	4
F37		8-32-NC Hx. Nut	304SS	-	4
F38	P2-0135-0447-A	Air Control Mount (C4) Assembly , 304SS Hdwr.	Galv.	8.6	1

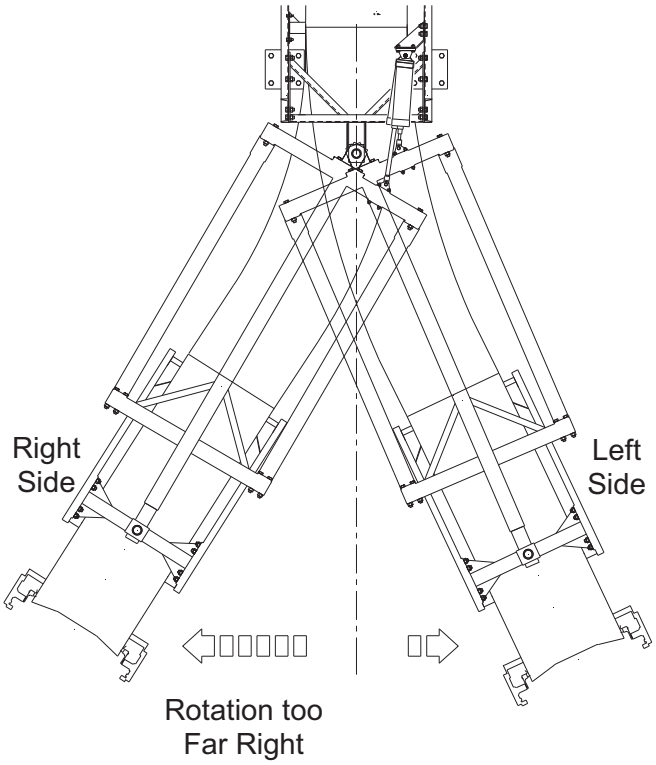
JOB NAME:		CONVEYOR NO.:	1
JOB NO.:			

FLEX–END SWING ADJUSTMENTS

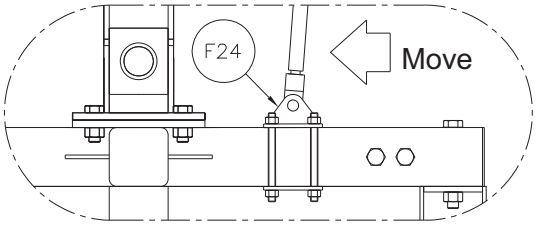
Flex-End Rotates More to One Side than the Other: The cylinder clamp assembly can be moved on the Pivot Frame Extension to allow equal rotation on both the right and left sides. If conveyor rotates too far to the left, move clamp assembly away from the center, towards the outside edge, of the Pivot Frame Extension. If conveyor rotates too far to the right, move clamp assembly towards the center.

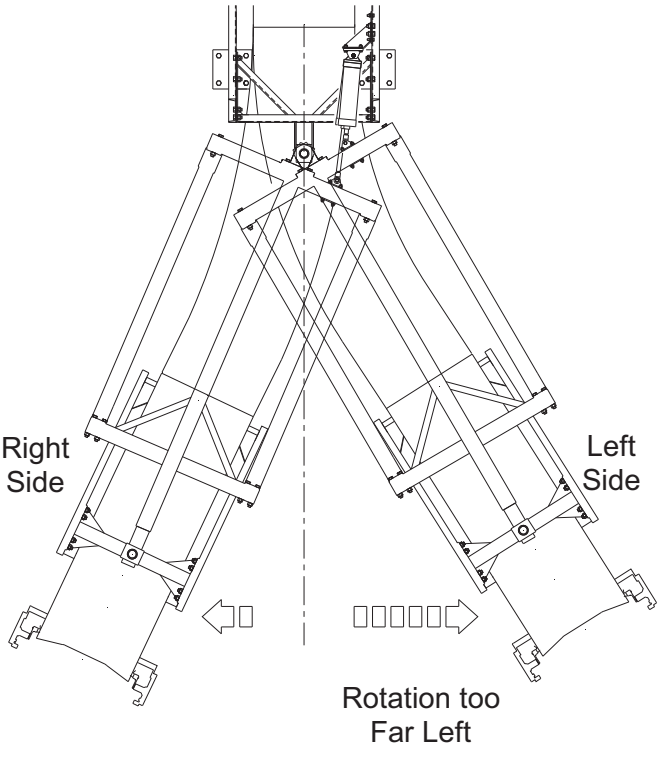
If conveyor rotates too far to the right hand side, move Clamp Assembly towards the center of the Pivot Frame Extension





If conveyor rotates too far to the left hand side, move Clamp Assembly more towards the outside edge of the Pivot Frame Extension





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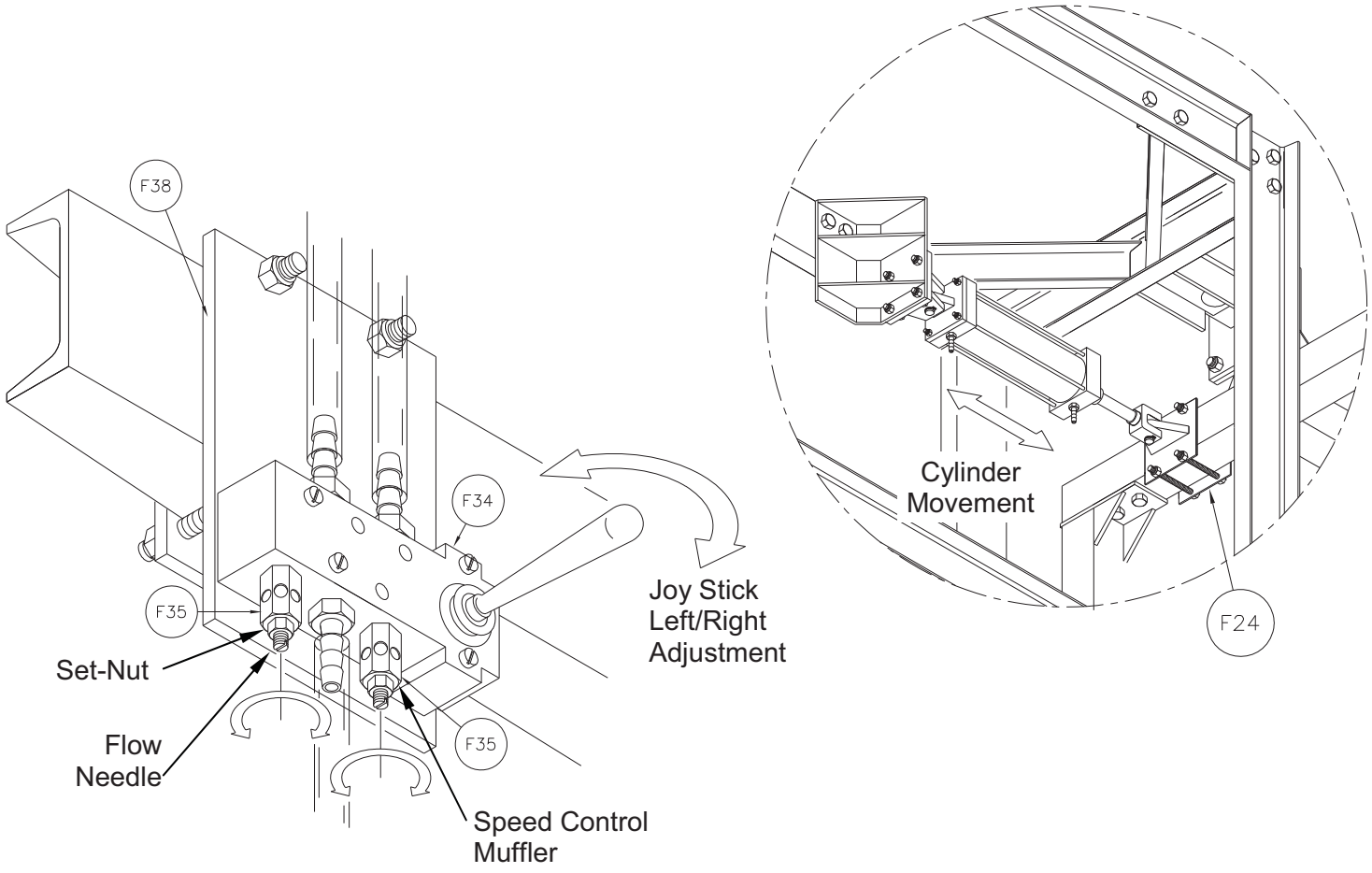
FLEX–END FLOW ADJUSTMENTS

Speed Control Muffler (Port Flow Control):
The speed of rotation is dependant on the exhaust air leaving the cylinder. There are adjustable mufflers on exit ports 3 and 5 on the valve body. Begin the adjustment process with the exhaust mufflers closed; seat the needle in the muffler by rotating it clockwise. With the joystick engaged in either direction, slowly open the corresponding muffler to allow air flow. To open the mufflers, release the set-nut and use a flathead screwdriver to open the flow needle with counter-clockwise rotation on the needle. When a steady, slow rotation speed is found, tighten the set-nut on the muffler. Repeat process on the opposite direction; cycle the flex-end discharge of the conveyor lock-to-lock to make sure full range of motion can be reached.

Note: Since the air cylinder is pressurized on either side of the internal piston, motion of the flex-end is not instantaneous. There is a ramp-up acceleration time and ramp-down deceleration time; operators should become aware of the operating parameters and use care during rotation. Make sure conveyor rotation area is clear and free of obstructions, vehicles, and personal.

Warning: There is no braking system on the flex-system. High speed rotation is NOT RECOMMENDED and may cause damage to the conveyor system.



FLEX-END DISCHARGE TROUBLESHOOTING

Problem	Possible Cause	Solution
The conveyor swings over too fast and when it stops the drive station jiggles back and forth momentarily.	Speed Control Muffler (F35) maladjustment.	Adjust the Speed Control Muffler's flow needle's too allow less air to escape (buffering of the return action). *See Flex–End Flow Adjustments sheet.*
	The input air pressure has been increased.	Re-adjust air pressure and/or add an air flow control valve (note: recommended min 80PSI, max.130PSI).
The conveyor swings over too slow, erratically or not at all.	Speed Control Muffler (F35) maladjustment.	Adjust the Speed Control Muffler's flow needle's too allow more air to escape (less buffering of the return action). *See Flex–End Flow Adjustments sheet.*
	The input air pressure has been de-creased.	Re-adjust air pressure (note: recommended min 100PSI, max.130PSI).
	Water and/or particulates have entered the cylinder and wore away the lubricated seals.	Obtain re-build kits for cylinder and repair (or seek factory repair). Add an air filter/regulator in front of the flex pneumatic control system.
	Leaks in air hose and/or connections.	Replace hoses and tighten connections
	Binding of rear pivoting bushings.	To verify binding, disconnect the air cylinder from the pivot frame connection (F11). Hand pull the flex system from the flex-end drive support (F16). If there is significant resistance in pushing/pulling a pivoting shaft(s) maybe out of alignment. Loosen the front "K" braces (F7) and let gravity align the shafts. Re-tighten the bolts.
	Binding of front pivoting bushings.	Push/pull on the back angled support of the Flex-end drive support (F16). A small swing action should occur between the flex track and the drive splice section. When the system is flexed the pivot frame sleeve (F14) should move slightly within the pivot frame extension (F11). If these conditions don't exist contact Serpentix.
The joystick positioning does not follow the same positioning of the flex track.	Valve output hose's are not in the correct output ports	reverse ports 2 and 4.
Belting runs with popping and/or bumping sound through the flex track.	The chain tension is loose.	Go to the tail sprocket (tension station) and ratchet more tension to the system. *See applying chain tension.*
	The track guiding poly is worn out.	Replace worn track.
	The chain guide blocks are worn or damaged.	Replace worn or damaged guide blocks.