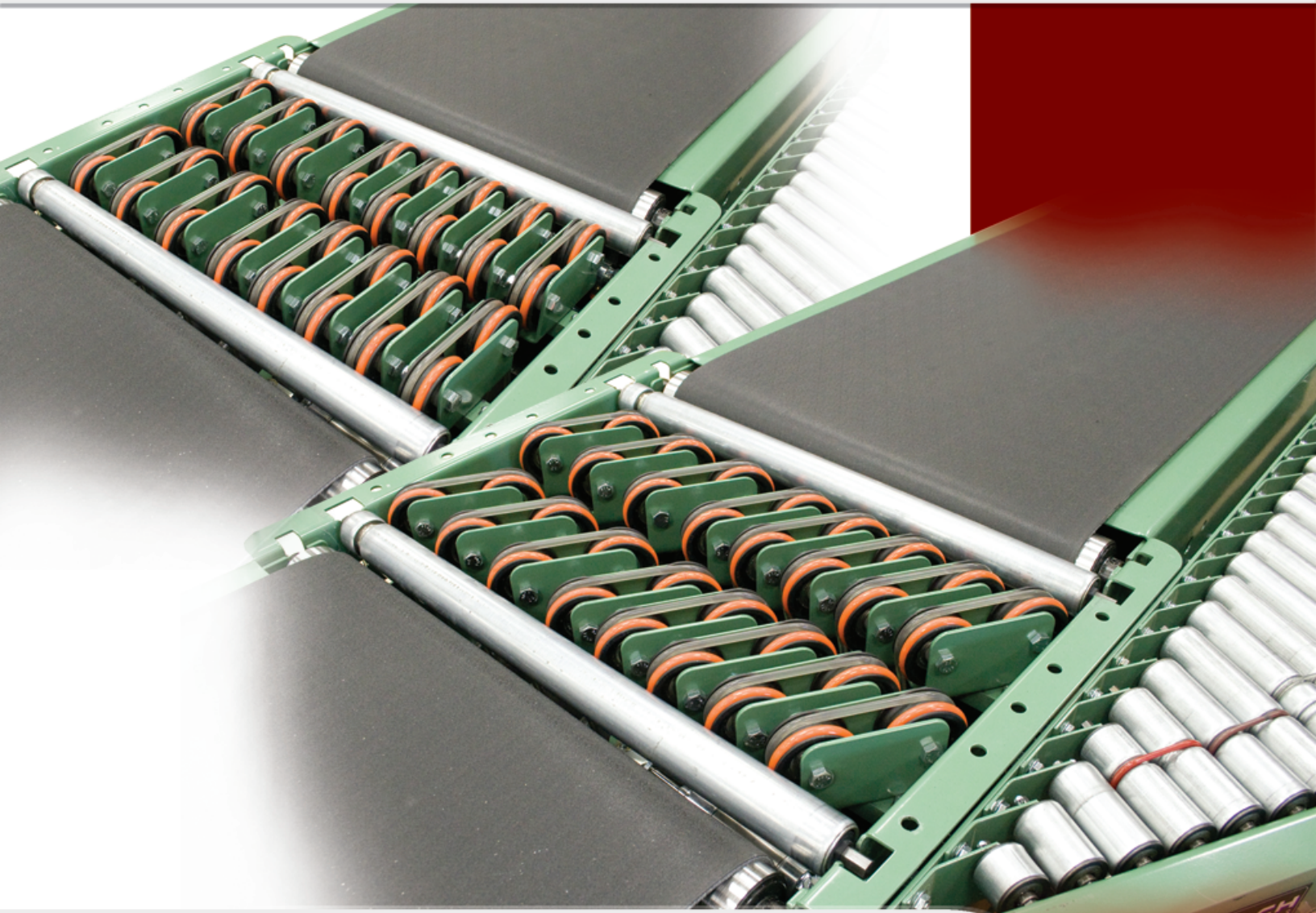




# OWNER'S MANUAL



## 30° Pivoting Belt Diverter

DO NOT OPERATE BEFORE READING THIS HANDBOOK  
KEEP IN A SAFE PLACE - DO NOT DISCARD

# 30 DEGREE PIVOTING BELT DIVERTER

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## WARNING LABELS



ABOVE: Label attached to all protective guards (drives, roller guards, etc.)



ABOVE: Label placed near all drive assemblies and at 30' intervals

# CAUTIONS, WARNINGS AND HAZARDS

## INTRODUCTION

This manual was prepared as a “how-to-guide” for installers, end-users and maintenance personnel. It is also intended to educate both owner (purchaser) and all individuals working around the unit, of potential hazards.

With proper installation and maintenance, sorters are essential for achieving a variety of functions essential in today’s industrial marketplace. By following a simple, periodic maintenance schedule, the life of a typical sorter (or, most any type of machinery--including our automobiles!) will increase when compared to a similar unit

in an application receiving little or no maintenance. You may find that a sorter can become your best workplace friend by following simple safety guidelines. **Failure to follow even the most basic safety suggestions can result in serious personal injury.**

Sorters contain many moving: therefore, it is imperative to become familiar with basic unit operation and know all points of potential hazards.

Remember, when working around or near Sorters (and any industrial machinery)

it is **your** responsibility to become familiar with the unit, to know potential hazards (many are noted with caution labels) and to operate unit in strict accordance with the safety guidelines in this manual.

Keep this manual in a safe place for future reference. It should be placed where appropriate personnel may maintain proper maintenance and records.

**This manual must be read by all new users before operating or working near this unit.**

**⚠ WARNING**

**DO NOT OPERATE BEFORE READING THIS MANUAL!**

**KEEP IN SAFE PLACE--DO NOT DISCARD!**

# CAUTIONS, WARNINGS AND HAZARDS

**⚠ WARNING**

**⚠** Always anchor permanent supports to floor (or mounting surface). Use 3/8" x 2-1/2" (or longer) wedge anchors for permanent installation in concrete flooring.

**⚠** The responsibility of the customer and installation personnel to supply and install net or mesh guarding on overhead mounted conveyors to prevent product and/or debris falling to floor in areas where required.

Electrical controls must be designed by a qualified electrical engineer to ensure that appropriate safety features (emergency stops, pull cords, switches, etc.) are installed on unit for safe operation. Before conveyor start-up, all operators and other personnel coming in

**⚠** Contact with unit must be properly trained and must read accompanying Tech Handbook.

Only trained personnel shall perform maintenance functions. Before maintenance operations are performed, shut conveyor "OFF" and lock out power source to prevent unauthorized start-up. When maintenance is completed, only authorized personnel shall be permitted to start conveyor following maintenance or other emergency shut-off.



# SAFETY INFORMATION/RECEIVING AND INSPECTION IMPORTANT SAFETY GUIDELINES

## ⚠️ WARNING

**WARNING:** All personnel coming in contact with this sorter should be aware of the following safety guidelines **BEFORE USING OR WORKING AROUND SORTER.** **NOTE:** ALWAYS notify Roach Manufacturing® whenever any sorter is used in an application or condition other than was originally intended. Failure to notify Roach® may allow conveyor to be operated in a hazardous operating condition. Injuries resulting from negligence or violation of safety instructions hereby removes responsibility of product liability claims

⚠️ Do not operate sorter with protective guards removed. This includes chain guards, belt guards, snub roller guards, center drive guards and any other safety guard.

⚠️ Do not walk, ride, climb, or touch moving parts on a sorter in operation.

⚠️ Do not wear loose clothing or uncovered hair around sorter.

⚠️ Do not work near sorter without knowing how & where to shut power "OFF" and lock out power

⚠️ e.

⚠️ Do not remove jammed product with r running.

Do not replace parts or perform maintenance on conveyor, or moving sorter parts, without first shutting

⚠️ " power to sorter and locking power source.

To prevent electrical shock, sorter must be grounded, and have proper electrical connections in accordance

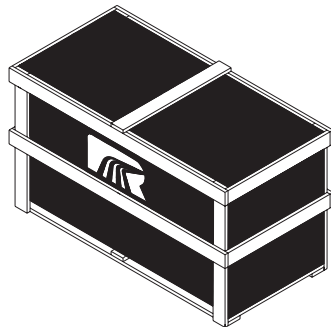
⚠️ federal, state, and local codes.

It is the responsibility of sorter end-user to comply with all safety standards including OSHA and other

federal, state, and local codes or regulations. Install protective guarding and other related safety precautionary equipment to eliminate hazardous operating conditions which may exist when two or more vendors supply machinery for related use.

Any violation of above safety instructions hereby removes all product liability claims from Roach Manufacturing Corporation®.

## SHORTAGES, DAMAGES AND RETURN AUTHORIZATIONS



Before uncrating, check quantity of items received against bill of lading to confirm that all material has been received. Examine the condition of the equipment to determine if any damage has occurred.

Also, it is possible that some items may become separated from the original shipment. Therefore, when receiving goods, it is imperative that the bill of lading (or,

accompanying freight documentation) be checked to ensure receipt of ALL units ordered including ALL accessories.

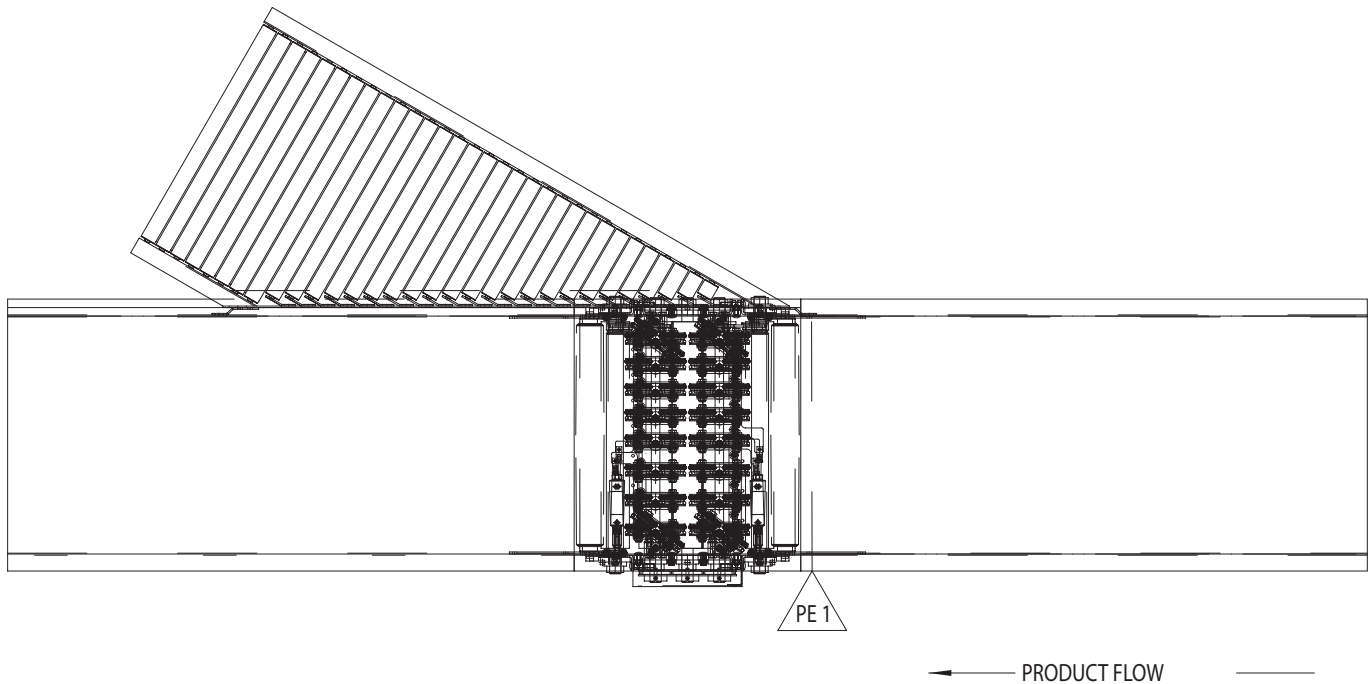
Damage and/or shortage in shipment should be reported immediately to both vendor and carrier. Obtain a signed damage report from carrier agent and send copy to vendor. **Do not repair any damage before obtaining this**

**NOTE:** Do not return goods to factory without prior, written return authorization. Unauthorized returns are subject to refusal at factory.

### report.

For damaged shipments, consult factory to determine if entire shipment must be returned to factory for repair **or** if an immediate order should enter production to produce a new, replacement shipment.

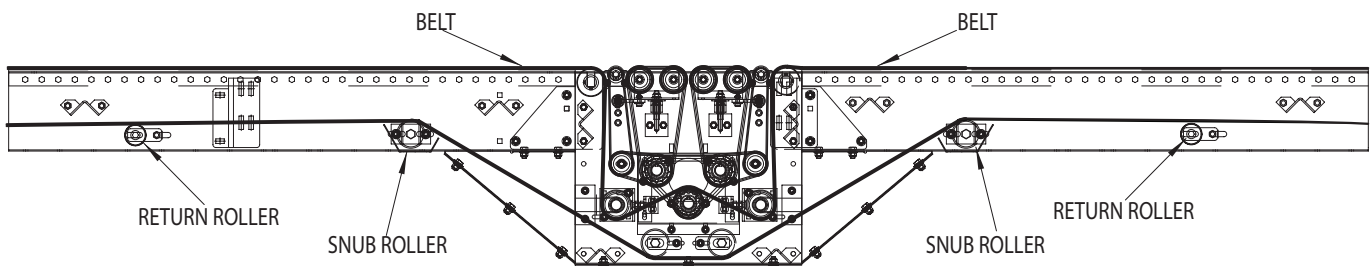
# 30 DEGREE PIVOTING BELT DIVERTER ELECTRICAL OPERATION



The diverter is controlled with a single solenoid valve provided on the unit. This is the only electrical control supplied with the diverter. The valve is to be energized to make the product divert. When the valve is de-energized the diverter will return to its normal position. A delay may be required to keep the diverter energized until the product clears the main line conveyor.

The customer should supply the controls (encoders, photoeyes, etc) necessary to track the package throughout the system and make the decision to divert when the package has arrived at the diverter. A photoeye should be placed at the diverter to confirm that the product has arrived.

# 30 DEGREE PIVOTING BELT DIVERTER BELT PATH



# MAINTENANCE SAFETY PRECAUTIONS BEFORE PERFORMING MAINTENANCE

**CAUTION:** Only trained personnel shall perform maintenance functions. Before maintenance operations are performed, diverter must be shut "OFF" and disconnects locked in the "OFF" position to prevent unit from unauthorized start-up.

One of the most important guidelines for maximizing sorter operation and personnel safety is to implement a regular maintenance schedule and train personnel on the appropriate needs of the specific unit.

Only trained personnel shall perform maintenance functions. Before maintenance operations are performed, sorter must be shut "OFF" and disconnects locked in the "OFF" position to prevent unit from unauthorized start-up during maintenance. Make sure

air flow to unit is turned "OFF". All personnel should be informed of the safety procedures associated with unit maintenance and performance.

Do not perform any work on sorters or sorter system while in operation unless it is impossible to otherwise conduct adjustment, lubrication or other maintenance function. Only experienced, trained personnel possessing advanced hazards-training should attempt such critical operations.

# MAINTENANCE SAFETY PRECAUTIONS MAINTENANCE AND FOLLOW-UP DETAILS

**CAUTION:** Only trained personnel shall perform maintenance functions. When maintenance is completed, only authorized personnel shall be permitted to start diverter following maintenance or other emergency shut-off.

While performing maintenance do not wear loose clothing. Immediately report any hazardous conditions--sharp edges, pinch (or nip) points or other conditions that may result when several manufacturers supply machinery which may create operating hazards.

When using mechanical aids such as hoists, cables, or cranes exercise extreme caution to prevent damage to diverters or other integrated machinery which may create a working hazard when maintenance is completed and units are in operation.

Clean up any spilled lubricants or other materials used in the maintenance process or those which may be deposited during unit operation. Eliminating poor housekeeping practices increases unit efficiency while creating safer personnel working conditions.

After maintenance, conduct visual inspection to ensure that all safety devices and guards have been replaced. Confirm that all units are clear of tools, debris or other items. Before starting conveyor, check condition of unit caution labels (see "WARNING LABELS" at front of handbook). If labels have been destroyed or are not clearly legible, call 870.483.7631 to receive replacement labels. Placement of warning labels is critical to avoid unauthorized unit operation which may result in hazardous working conditions for all related personnel coming in contact with diverter.

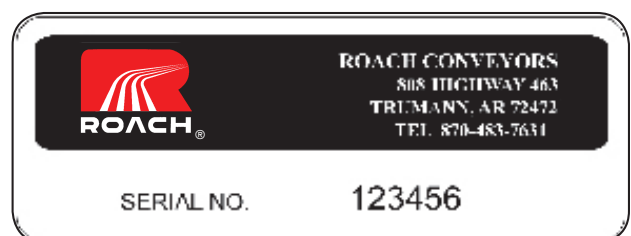
Warn personnel that diverter is being prepared for start-up and to stay clear of unit. Do not start diverter until all personnel are clear. When maintenance is completed, only authorized personnel shall be permitted to start diverter following maintenance or other

# REPLACEMENT PARTS SERIAL PLATE

To order any replacement parts or when calling for assistance with any powered conveyor, **ALWAYS** provide the unit serial number. Shown at actual size, this aluminum plate is placed on the sorter frame.

To order replacement parts or add-on components, contact the Roach distributor who originally furnished the unit if possible. If this is not possible, contact the National Sales Office at 870-483-7631 for the name of the authorized Roach distributor in your area. Have unit model number and serial number

**BEFORE** calling. Refer to unit drawings (in rear section of handbook) for part numbers if ordering replacement parts.



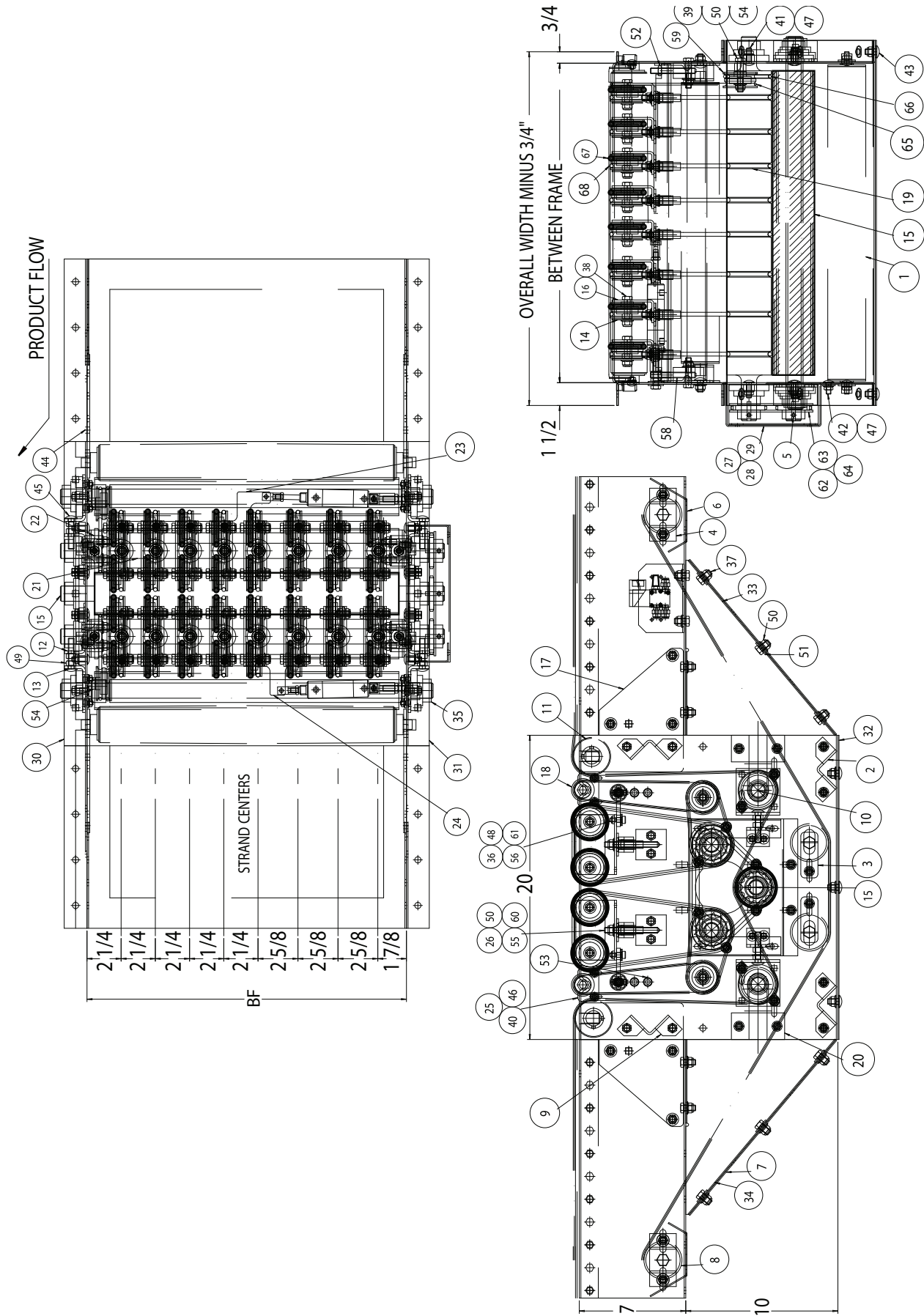


# 30 DEGREE PIVOTING BELT DIVERTER PARTS LIST FOR UNIT

ITEM	QTY	DESCRIPTION	DWG.#	PART#	ITEM	QTY	DESCRIPTION	DWG.#	PART#
1	2	251S ROLLER ASSY 21"BF	GB-013	251S-21-D	35	10	2 HOLE 1" BORE BEARING	P.P.	BRW04010-01
2	2	FRAME CROSSBRACE 21"BF	GC-1000	M00119-21	36	16	5/16" NOM. S.S. FLAT WASHER	P.P.	FSW00329
3	4	2.5 ROLLER KEEPER	PA-197	M01170H	37	36	3/8" X 3/4"LG. HHCS	P.P.	FSW00355
4	4	2.5 RETURN IDLER MTG BRKT	PA-414	M01528	38	40	3/8" X 1 3/4"LG. HHCS	P.P.	FSW00360
5	3	1/4" SQ. X 7/8"LG. KEYSTOCK	PA-1573	S12396	39	2	3/8" X 2"LG. HHCS	P.P.	FSW00361
6	2	SNUB ROLLER BELT GUARD	PB-128	M02372-21	40	8	1/4"-20 X 1/2"LG. CARR. BOLT	P.P.	FSW04251
7	2	BOTTOM COVER PLATE	PB-401	M02713-15-21	41	20	5/16"-18 X 1"LG. CARR. BOLT	P.P.	FSW04257
8	2	251S ROLLER ASSY 18 11/16"BF	MOD. STD.	251S-18.69-D	42	18	5/16"-18 X 3/4"LG. CARR.BOLT	P.P.	FSW04259
9	2	FRAME CROSSBRACE	MOD. STD.	MS00119-20.62	43	24	3/8"-16 X 3/4"LG. CARR. BOLT	P.P.	FSW04355
10	2	SNUB PULLEY ASSEMBLY	444865-2	444865-2	44	2	3/8"-16 X 1"LG. CARR. BOLT	P.P.	FSW04357
11	2	FIXED END PULLEY ASSEMBLY	444865-7	444865-7	45	4	3/8"-16 X 2"LG. CARR. BOLT	P.P.	FSW04360
12	4	BEARING T-UP PLATE	444865-12	444865-12	46	8	1/4"-20 FLANGE NUT	P.P.	FSW09101
13	4	BEARING PUSH PLATE	444865-13	444865-13	47	38	5/16"-18 FLANGE NUT	P.P.	FSW09204
14	16	WHEEL COVER	444865-17	444865-17	48	16	5/16"X3/8"X1/4"-20 SHOULDER B	P.P.	FSW09254
15	1	CENTER SNUB PULLEY ASSEMBLY	446626-5	446626-5	49	8	3/8" HEX NUT	P.P.	FSW09300
16	16	WHEEL MOUNT	446626-7	446626-7	50	124	3/8" FLANGED NYLON INSERT NUT	P.P.	FSW09304-02
17	4	SPLICE PLATE	446626-8	446626-8	51	18	3/8" FLAT WASHER	P.P.	FSW09305
18	2	156G GROOVED ROLLER ASSY	446626-9	446626-9	52	8	3/8" HEX JAM NUT	P.P.	FSW09310
19	2	GROOVED DRIVE SHAFT	446626-10	446626-10	53	4	INSULATOR BUSHING 5/16" I.D.	P.P.	MCW06722
20	2	COVER PLATE (BRG CUT-OUT)	446626-11	446626-11	54	2	NYLON SPACER 3/4"OD X 5/16"LG	P.P.	MCW06725
21	2	PIVOT BAR 20 7/8"LG	446626-12	446626-12	55	16	BRONZE BRG. FLANGED FB810-10	P.P.	SBRW446626-01
22	4	PIVOT BAR ADJUSTMENT BLOCK	446626-13	446626-13	56	16	1/4"-20 NYLON INSERT JAM NUT	P.P.	SFSW362787-01
23	1	PIVOT ARM R.H. 17 5/8"LG.	446626-14	446626-14	57	2	3/8"-16 X 1 3/4" HHTB	P.P.	SFSW354455-01
24	1	PIVOT ARM L.H. 17 5/8"LG.	446626-15	446626-15	58	4	3/8"-16 CUP POINT SET SCREW	P.P.	SFSW446626-01
25	4	POP-OUT ROLLER PLATE	446626-16	446626-16	59	34	TWIN IDLER PULLEY 3/8" BORE	P.P.	SHW76238
26	16	MODIFIED STUD BOLT	446626-17	446626-17	60	16	BRONZE THRUST WASHER(TB1424)	P.P.	SMCW225466-01
27	1	CHAIN GUARD END COVER L.H.	446626-19	446626-19L	61	16	BRONZE THRUST WASHER(TB512)	P.P.	SMCW446626-01
28	1	CHAIN GUARD END COVER R.H.	446626-19	446626-19R	62	2	#40 CHAIN RIVETED	P.P.	SPW00400"
29	1	CHAIN GUARD COVER	446626-20	446626-20	63	1	#40 CONNECTING LINK	P.P.	SPW10400
30	1	DIVERTER SIDE PLT 20"L.SPUR/S	444865-21	444865-21	64	3	H40B30 SPROCKET	P.P.	SSPW147053-01
31	1	DIVERTER SIDE PLT 20"L.O/SPUR	444865-22	444865-22	65	2	1/8"DIA X 17"LG. BELT, CLEAR	P.P.	SVBW446626-01
32	1	DIVERTER BOTTOM COVER	446626-23	446626-23	66	2	3/16"DIA X 12"LG BELT,CLEAR	P.P.	VBW71362
33	2	SIDE COVER PLATE L.H.	446626-24	446626-24L	67	32	5/16"DIA. ENDLESS BELT 6"LG	P.P.	VBW71400
34	2	SIDE COVER PLATE R.H.	446626-24	446626-24R	68	16	1/4" DIA X 24" LG BELT,CLEAR	P.P.	VBW71424



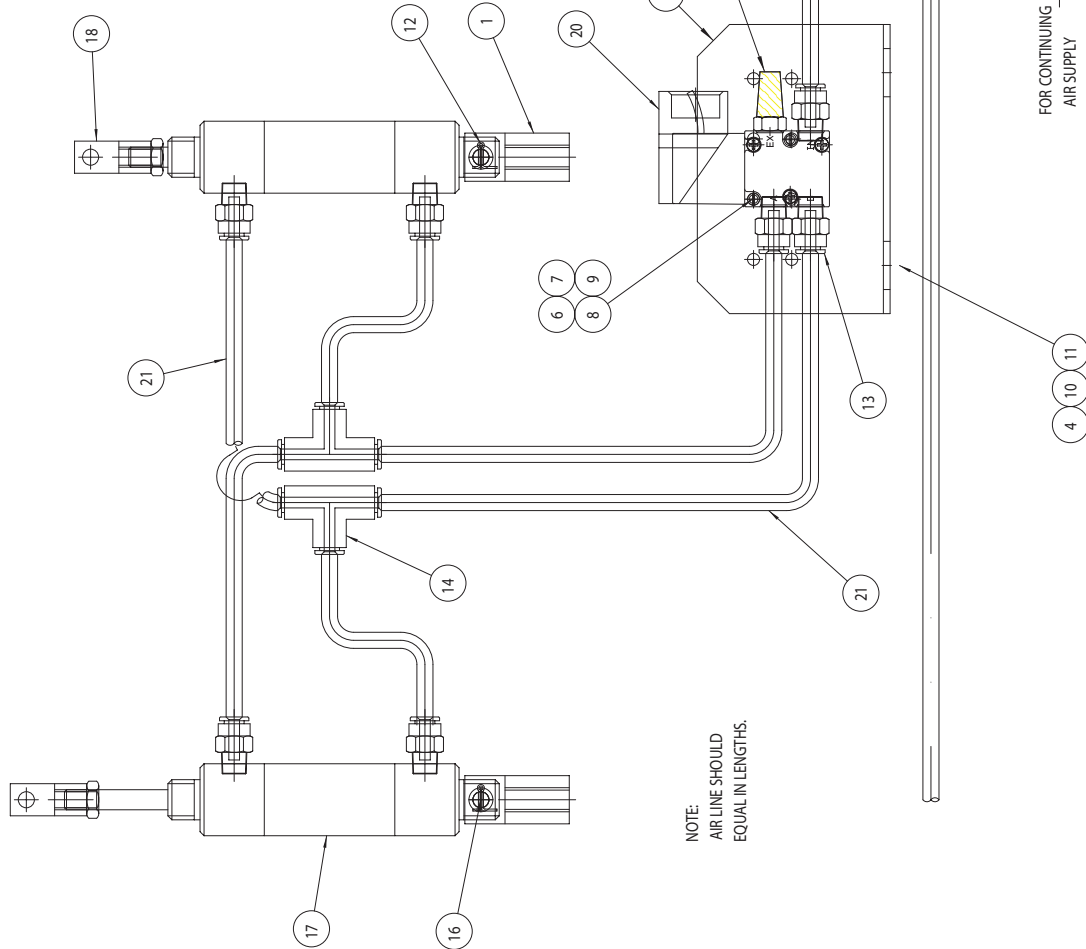
# 30 DEGREE PIVOTING BELT DIVERTER PARTS DRAWING FOR UNIT



# 30 DEGREE PIVOTING DIVERTER PARTS LIST FOR THE PLUMBING

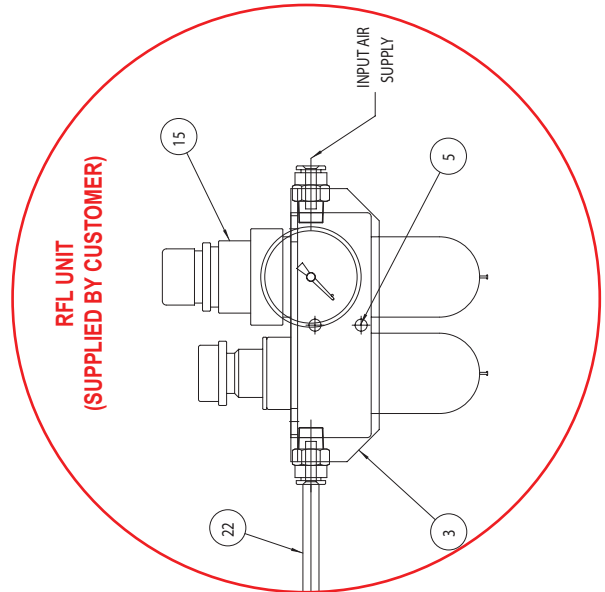
NOTE: CYLINDERS SHOWN WITH DIVERT IN STRAIGHT POSITION.

PRODUCT FLOW →



ITEM	QTY	DESCRIPTION	DWG.#	PART#
1	2	DIVERTER CLEVIS	446626-25	446626-25
2	1	SOLENOID VALVE MOUNT	PA-1411	M05601
3	1	1/4" FRL MNTG. BRKT.	SUPPLIED	BY CUSTOMER
4	4	3/8-16 X 3/4" LG HHCS	P.P.	FSW00355
5	2	#10-32 X 1/2" LG RH SMS	SUPPLIED	BY CUSTOMER
6	2	#4-40 HEX NUT	P.P.	FSW08474-01
7	2	#4 FLAT WASHER	P.P.	FSW08474-02
8	2	#4 LOCK WASHER	P.P.	FSW08474-03
9	2	#4-40 X 1 1/2" LG. ROUND HEAD	P.P.	FSW08474-04
10	4	3/8"-16 FLANGE NUT	P.P.	FSW09304-02
11	4	3/8" FLAT WASHER	P.P.	FSW09305
12	2	1/16" DIA X 1" LG. COTTER PIN	P.P.	FSW09956-01
13	9	1/8" NPT X 1/4" STRAIGHT CONN.	P.P.	PNW06204
14	2	1/4" O.D. TUBE, UNION TEE	P.P.	PNW06259
15	1	1/4" FRL UNIT W/GAUGE	SUPPLIED	BY CUSTOMER
16	2	1/4" DIA. X 1" LG. CLEVIS PIN	P.P.	PNW06316-06
17	2	1.06 DXP SRB 1" STROKE CYLDR	P.P.	PNW06483
18	2	ROD CLEVIS LO 7130 0300	P.P.	PNW06484-01
19	1	1/8" MUFFLER	P.P.	PNW06540-03
20	1	45-A-AA2-DAAA-1CM 1/8" S.S MAC	P.P.	PNW06582-03
21	4'	1/4" OD X 1/8" ID GREEN TUBING	P.P.	PNW06731
22	1' 1/4"	I.D. BLACK TUBING	P.P.	PNW06745

NOTE: AIR LINE SHOULD EQUAL IN LENGTHS.





# ROACH CONVEYORS WARRANTY

- Materials used by Roach Conveyors are of good quality.
- Any part proving to be defective in materials or workmanship upon Roach inspection, will be replaced at NO cost, FOB, Trumann, Arkansas, for one year. Installation expense will be paid by others.
- Roach liability includes furnishing said part or parts; Roach is not liable for consequential damages, such as loss of profit, delays or expenses incurred by failure of said part or parts.
- Failure due to abuse, incorrect adjustments, exposure to corrosive or abrasive environment or operation under damp conditions does not constitute failure due to defects in workmanship or materials.
- Component parts not manufactured by Roach (motors, gear reducers, etc.) will be repaired or replaced at the option of their manufacturer. Contact nearest authorized service center for all warranty claims.

**NOTE:** Motors or gear reducers tampered with before inspection shall be considered free of ALL Warranty Claims.

--All specifications are subject to change without notice--  
--Drawings are intended for illustration ONLY and are not to scale--

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