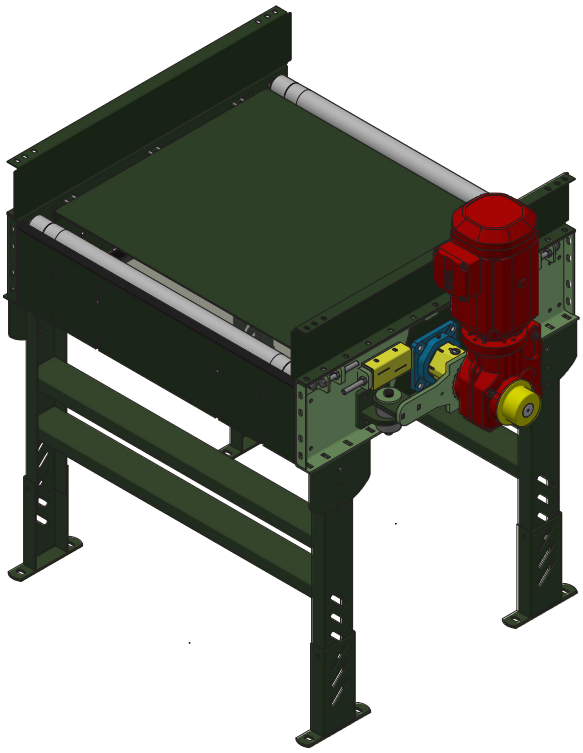
HSQC INSTALLATION AND MAINTENANCE MANUAL



MODEL	BULLETIN #	EFFECTIVE DATE
HSQC	769	NOVEMBER 2026

870.935.3700 | www.Hytrol.com | 2020 Hytrol St. Jonesboro, AR 72401
Copyright© 1947-2026 Hytrol. All rights reserved.

TABLE OF CONTENTS

1 INTRODUCTION
1.1 Receiving & Uncrating 4
1.2 How to Order Replacement Parts 4

2 SAFETY INFORMATION
2.1 Installation 5
2.2 Operation 6
2.3 Maintenance/Safety Labels 7

3 INSTALLATION
3.1 Support Installation 8
3.2 Ceiling Hanger Installation 9
3.3 Electrical Equipment 10
3.4 Belt Installation 12

4 OPERATION
4.1 Conveyor Start-Up 14

5 MAINTENANCE
5.1 Lubrication 15
5.2 Belt Tracking 16

6 PARTS DRAWINGS
6.1 Shaft Mounted Queue Center Drive Drawings 18
6.2 Shaft Mounted Queue Center Drive Drawings Continued 19
6.3 Shaft Mounted Queue Center Drive Parts List 20
6.4 Motor Drive Pulley Variant Drawings 21
6.5 Motor Drive Pulley Variant Drawings Continued & Parts List 22

7 TROUBLESHOOTING
7.1 Troubleshooting Guide 23
7.2 Troubleshooting Drive Belt Tracking 23

8 PREVENTIVE MAINTENANCE
8.1 Preventive Maintenance Checklist 24

TABLE OF CONTENTS

LIST OF FIGURES

Figure 1 Support Installation....8
Figure 2 Ceiling Hanger Installation....9
Figure 3 Belt Lacing Installation....12
Figure 4 Belt Installation - End Drive....13
Figure 5 Belt Installation....13
Figure 6 Drive Pulley....17
Figures 7-8 Belt Tracking....17

1 INTRODUCTION

This manual provides guidelines and procedures for installing, operating, and maintaining your conveyor. A complete parts list is provided with recommended spare parts highlighted in gray.

Important safety information is also provided throughout the manual. For safety to personnel and for proper operation of your conveyor, it is recommended that you read and follow the instructions provided in this manual.

1.1 RECEIVING & UNCRATING

- Check the number of items received against the bill of lading.
- Examine condition of equipment to determine if any damage occurred during shipment.
- Move all crates to area of installation.
- Remove crating and check for optional equipment that may be fastened to the conveyor. Make sure these parts (or any foreign pieces) are removed.

1.2 HOW TO ORDER REPLACEMENT PARTS

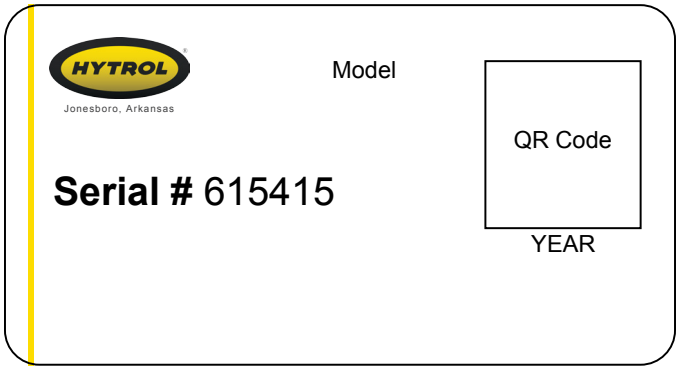
Included in this manual are parts drawings with complete replacement parts lists. Minor fasteners, such as nuts and bolts, are not included.

When ordering replacement parts:

- Contact dealer from whom conveyor was purchased or nearest Hytrol Integration Partner.
- Give Conveyor Factory Order Number/Serial Number.
- Give complete description from Parts List.
- If you are in a breakdown situation, call our Customer Care team at 1-844-4HYTROL.

NOTE

If damage has occurred or freight is missing, contact your Hytrol Integration Partner.



2 SAFETY INFORMATION

2.1 INSTALLATION

GUARDS AND GUARDING

Interfacing of Equipment: When two or more pieces of equipment are interfaced, special attention shall be given to the interfaced area to ensure the presence of adequate guarding and safety devices.

Guarding Exceptions: Whenever conditions prevail that would require guarding under these standards, but such guarding would render the conveyor unusable, prominent warning means shall be provided in the area or on the equipment in lieu of guarding.

Guarded by Location or Position: Where necessary for the protection of employees from hazards, all exposed moving machinery parts that present a hazard to employees at their work station shall be mechanically or electrically guarded, or guarded by location or position.

- Remoteness from frequent presence of public or employed personnel shall constitute guarding by location.
- When a conveyor passes over a walkway, roadway, or work station, it is considered guarded solely by location or position if all moving parts are at least 8 ft. (2.44 m) above the floor or walking surface or are otherwise located so that the employee cannot inadvertently come in contact with hazardous moving parts.
- Although overhead conveyors may be guarded by location, spill guards, pan guards, or equivalent shall be provided if the product may fall off the conveyor for any reason and if personnel would be endangered.

Headroom

- When conveyors are installed above exit passageways, aisles, or corridors, there shall be provided a minimum clearance of 6 ft. 8 in. (2.032 m) measured vertically from the floor or walking surface to the lowest part of the conveyor or guards.
- Where system function will be impaired by providing the minimum clearance of 6 ft. 8 in. (2.032 m) through an emergency clearance, alternate passageways shall be provided.
- It is permissible to allow passage under conveyors with less that 6 ft. 8 in. (2.032 m) clearance from the floor for other than emergency exits if a suitable warning indicates low headroom.

2.2 OPERATION SET-UP

A. Only trained employees shall be permitted to operate conveyors. Training shall include instruction in operation under normal conditions and emergency situations.

B. Where employee safety is dependent upon stopping and/or starting devices, they shall be kept free of obstructions to permit ready access.

C. The area around loading and unloading points shall be kept clear of obstructions which could endanger personnel.

D. No person shall ride the load-carrying element of a conveyor under any circumstances unless that person is specifically authorized by the owner or employer to do so. Under those circumstances, such employee shall only ride a conveyor which incorporates within its supporting structure platforms or control stations specifically designed for carrying personnel. Under no circumstances shall any person ride on any element of a vertical conveyor.

E. Personnel working on or near a conveyor shall be instructed as to the location and operation of pertinent stopping devices.

F. A conveyor shall be used to transport only material it is capable of handling safely.

G. Under no circumstances shall the safety characteristics of the conveyor be altered if such alterations would endanger personnel.

H. Routine inspections and preventive and corrective maintenance programs shall be conducted to ensure that all safety features and devices are retained and function properly.

I. Personnel should be alerted to the potential hazard of entanglement in conveyors caused by items such as long hair, loose clothing, and jewelry.

J. Conveyors shall not be maintained or serviced while in operation unless proper maintenance or service requires the conveyor to be in motion. In this case, personnel should be made aware of the hazards and how the task may be safely accomplished.

K. Owners of conveyor should ensure proper safety labels are affixed to the conveyor warning of particular hazards involved in operation of their conveyors.

CAUTION!

Because of the many moving parts on the conveyor, all personnel in the area of the conveyor need to be warned that the conveyor is about to be started.

2.3 MAINTENANCE / SAFETY LABELS

Refer to ANSI Z244.1-1982, American National Standard for Personnel Protection – Lockout/Tagout of Energy Sources – Minimum Safety Requirements and OSHA Standard Number 29 CFR 1910.147 “The Control of Hazardous Energy (Lockout/Tagout).”

- All maintenance, including lubrication and adjustments, shall be performed only by qualified and trained personnel.
- It is important that a maintenance program be established to ensure that all conveyor components are maintained in a condition which does not constitute a hazard to personnel.
- When a conveyor is stopped for maintenance purposes, starting devices or powered accessories shall be locked or tagged out in accordance with a formalized procedure designed to protect all persons or groups involved with the conveyor against an unexpected start.
- Replace all safety devices and guards before starting equipment for normal operation.
- Whenever practical, DO NOT lubricate conveyors while they are in motion. Only trained personnel who are aware of the hazard of the conveyor in motion shall be allowed to lubricate.

Safety Guards
Maintain all guards and safety devices IN POSITION and IN SAFE REPAIR.

Safety Labels
In an effort to reduce the possibility of injury to personnel working around Hytrol conveying equipment, safety labels are placed at various points on the equipment to alert them of potential hazards. Please check equipment and note all safety labels. Make certain your personnel are alerted to and obey these warnings. See Safety Manual for examples of warning labels.

REMEMBER

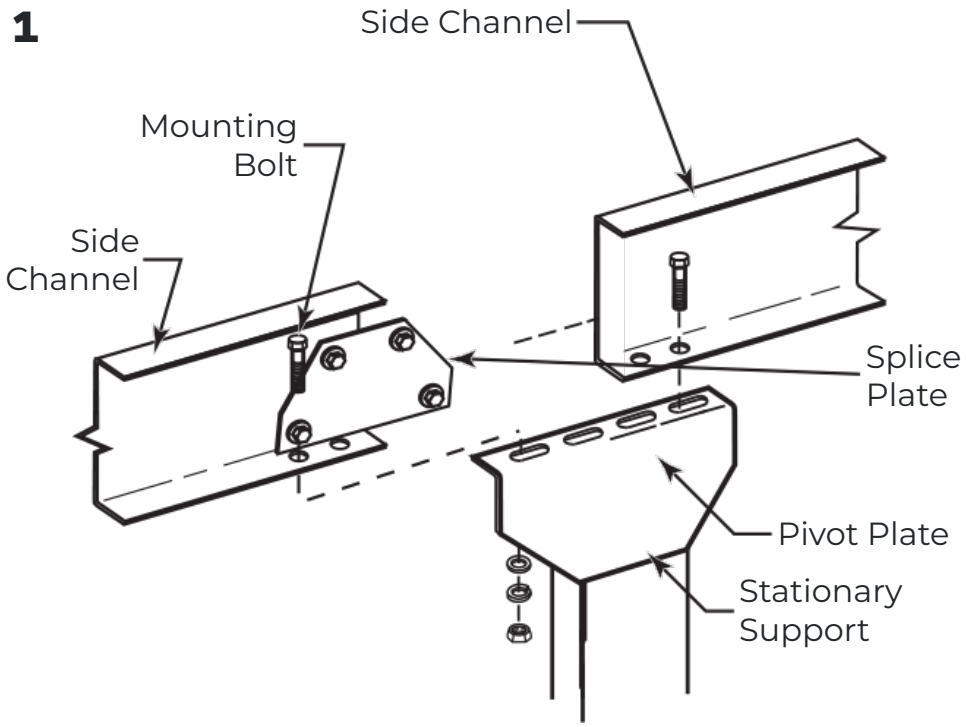
Do not remove, reuse, or modify material handling equipment for any purpose other than its original intended use.

3 INSTALLATION

3.1 CONVEYOR SET-UP

1. Mark a chalk line on floor to locate center of the conveyor.
2. Place the section in position. Fasten sections to pivot plates (Figure 1). Hand tighten bolts only.
3. Check to see that conveyor is level across width and length of unit. Adjust supports and ceiling hangers as necessary.
4. Install electrical controls and wire motor.

FIGURE 1



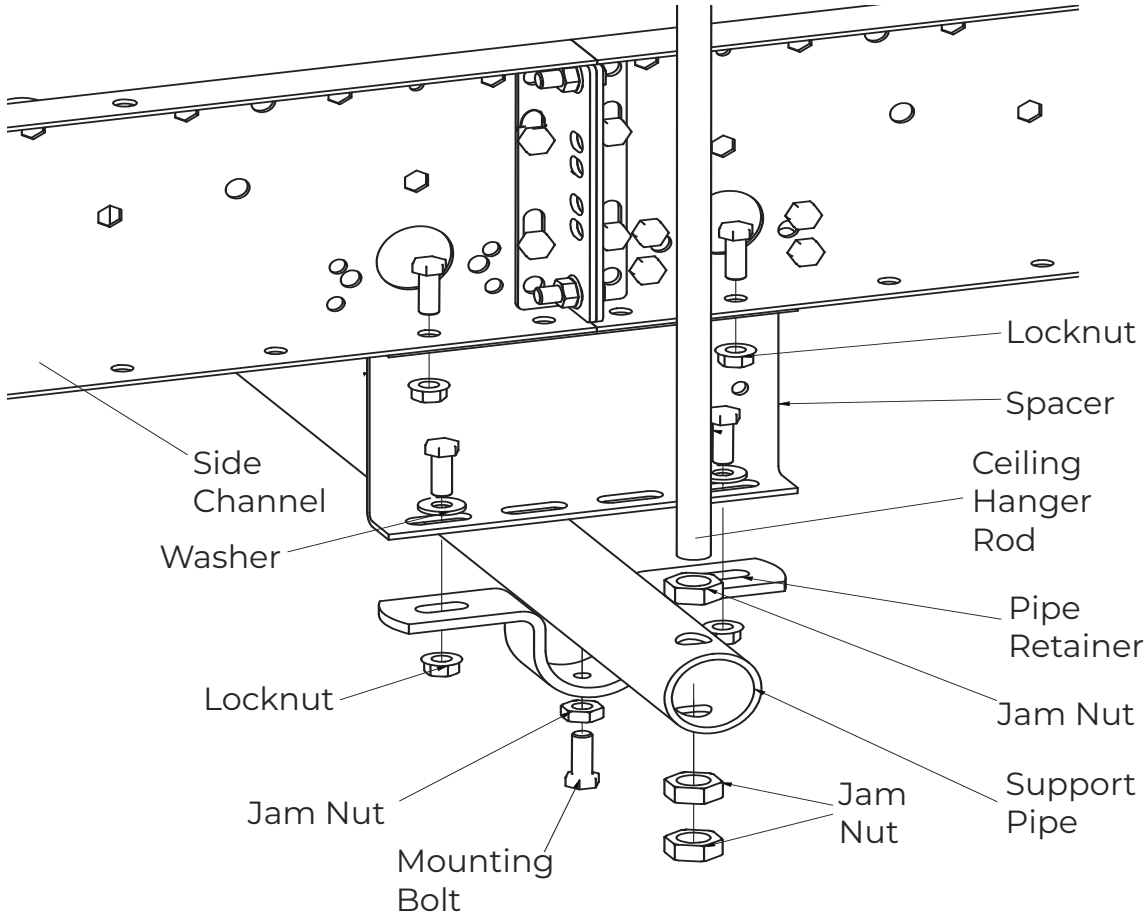
3.2 CEILING HANGER INSTALLATION

If conveyors are to be used in an overhead application, ceiling hangers may have been supplied in place of floor supports.

Figure 2 show how a ceiling hanger mounts to a conveyor section. Ceiling hangers should be mounted at section joints.

For safety information concerning conveyors mounted overhead, refer to section 2.1 INSTALLATION on page 5.

FIGURE 2



NOTE

When installing ceiling hanger rods in an existing building, all methods of attachment must comply with local building codes.

3.3 ELECTRICAL EQUIPMENT

CONTROLS

Electrical Code: All motor controls and wiring shall conform to the National Electrical Code (Article 670 or other applicable articles) as published by the National Fire Protection Association and as approved by the American Standards Institute, Inc.

CONTROL STATIONS

A. Control stations should be so arranged and located that the operation of the equipment is visible from them, and shall be clearly marked or labeled to indicate the function controlled.

B. A conveyor which would cause injury when started shall not be started until employees in the area are alerted by a signal or by a designated person that the conveyor is about to start.

- When a conveyor would cause injury when started and is automatically controlled or must be controlled from a remote location, an audible device shall be provided which can be clearly heard at all points along the conveyor where personnel may be present. The warning device shall be actuated by the controller device starting the conveyor and shall continue for a required period of time before the conveyor starts. A flashing light or similar visual warning may be used in conjunction with or in place of the audible device if more effective in particular circumstances.
- Where system function would be seriously hindered or adversely affected by the required time delay or where the intent of the warning may be misinterpreted (i.e., a work area with many different conveyors and allied devices), clear, concise, and legible warning shall be provided. The warning shall indicate that conveyors and allied equipment may be started at any time, that danger exists, and that personnel must keep clear. The warnings shall be provided along the conveyor at areas not guarded by position or location.

C. Remotely and automatically controlled conveyors, and conveyors where operator stations are not manned or are beyond voice and visual contact from drive areas, loading areas, transfer points, and other potentially hazardous locations on the conveyor path not guarded by location, position, or guards, shall be furnished with emergency stop buttons, pull cords, limit switches, or similar emergency stop devices.

- All such emergency stop devices shall be easily identifiable in the immediate vicinity of such locations unless guarded by location, position, or guards. Where the design, function, and operation of such conveyor clearly is not hazardous to personnel, an emergency stop device is not required.

- The emergency stop device shall act directly on the control of the conveyor concerned and shall not depend on the stopping of any other equipment. The emergency stop devices shall be installed so that they cannot be overridden from other locations.

D. Inactive and unused actuators, controllers, and wiring should be removed from control stations and panel boards, together with obsolete diagrams, indicators, control labels, and other material which serve to confuse the operator.

SAFETY DEVICES

A. All safety devices, including wiring of electrical safety devices, shall be arranged to operate in a "Fail-Safe" manner, that is, if power failure or failure of the device itself would occur, a hazardous condition must not result.

B. Emergency Stops and Restarts. Conveyor controls shall be so arranged that, in case of emergency stop, manual reset or start at the location where the emergency stop was initiated, shall be required of the conveyor(s) and associated equipment to resume operation.

C. Before restarting a conveyor which has been stopped because of an emergency, an inspection of the conveyor shall be made and the cause of the stoppage determined. The starting device shall be locked out before any attempt is made to remove the cause of stoppage, unless operation is necessary to determine the cause or to safely remove the stoppage.

Refer to ANSI Z244.1-1982, American National Standard for Personnel Protection – Lockout/Tagout of Energy Sources – Minimum Safety Requirements and OSHA Standard Number 29 CFR 1910.147 "The Control of Hazardous Energy (Lockout/Tagout)."

WARNING!

Electrical controls shall be installed and wired by a qualified electrician. Wiring information for the motor and controls are furnished by the equipment manufacturer.

3.4 BELT INSTALLATION

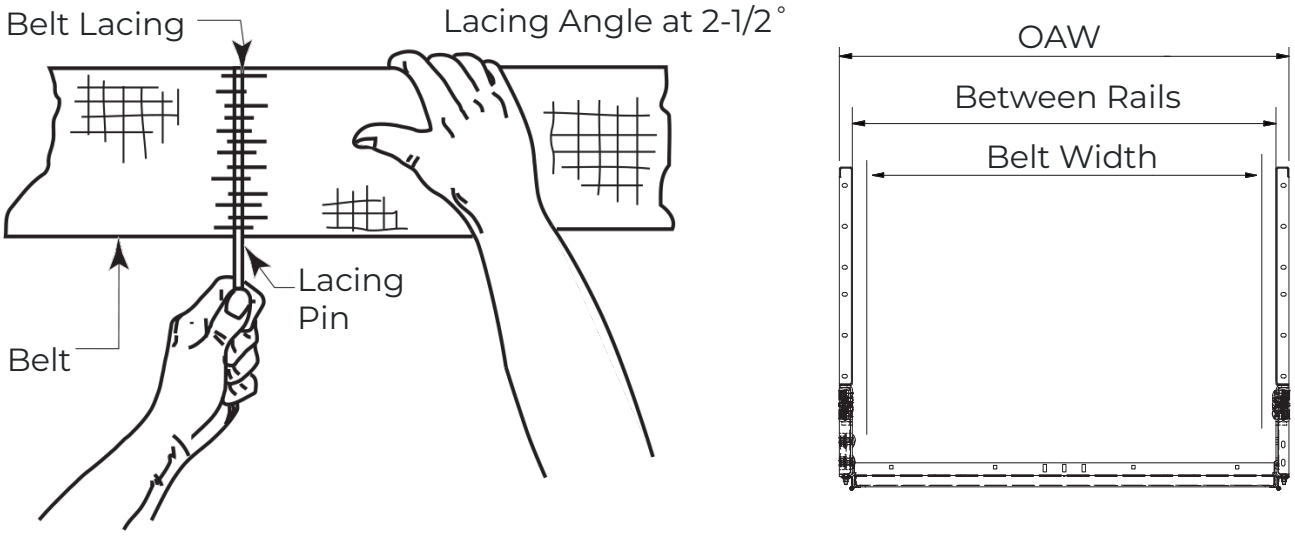
The conveyor belt has been cut to the proper length with lacing installed at the factory. To install, follow these steps:

1. Thread belt through conveyor as shown (Figures 4-5).
2. Pull ends together and insert lacing pin (Figure 3).
3. Adjust belt tension with the take-up roller. Keep pulley square by moving both take-up bolts an equal amount. Maintain enough tension so the drive pulley will not slip when carrying the rated load.
4. Track belt per 5.2 BELT TRACKING on page 16.

NOTE

If belt ends cannot be pulled together by hand, it may be necessary to loosen take-up rollers' minimum positions or use a belt puller so lacing pin can be easily inserted.

FIGURE 3



BELT WIDTH	36.5"	43.5"	48.5"
OVERALL WIDTH	40"	46"	52"

FIGURE 4: BELT INSTALLATION – CENTER DRIVE

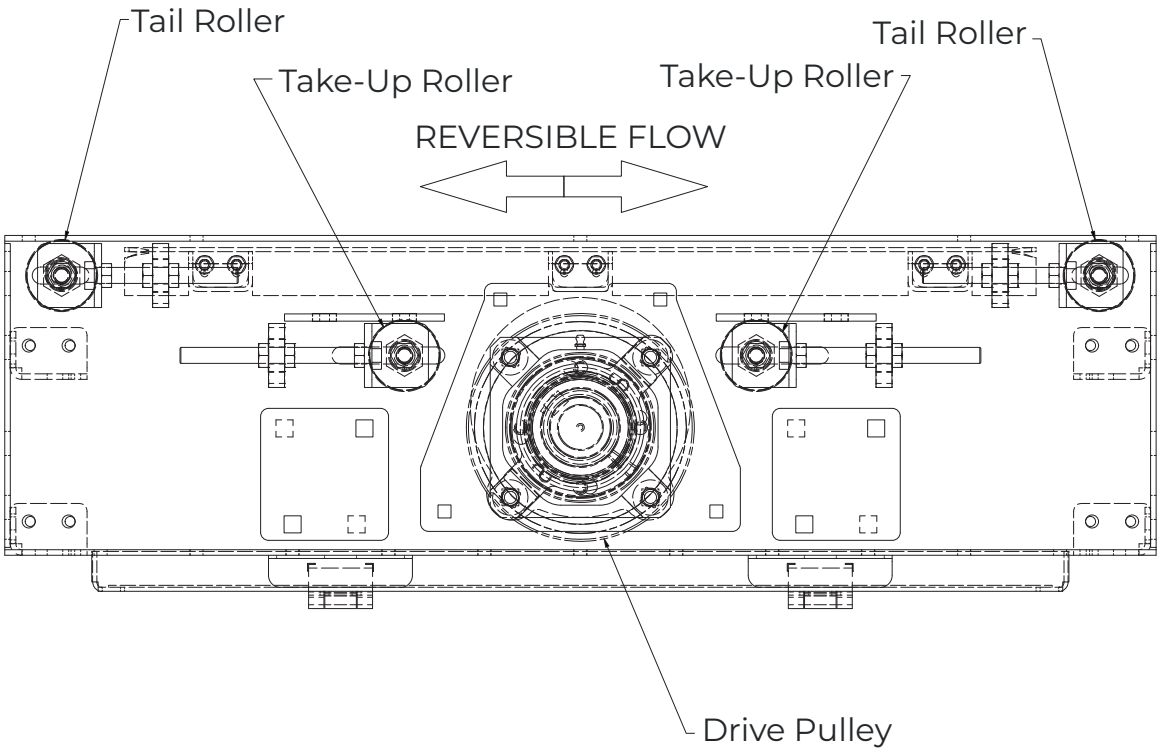
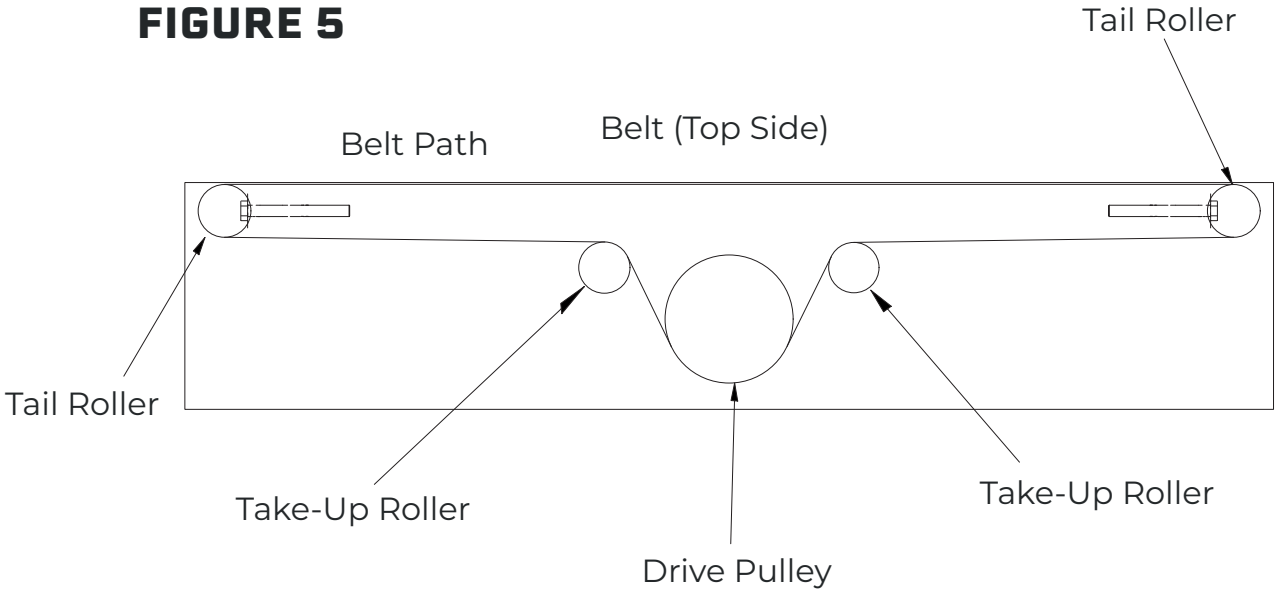


FIGURE 5



4 OPERATION

4.1 CONVEYOR START-UP

Before the conveyor is turned on, check for foreign objects that may have been left inside conveyor during installation. These objects could cause serious damage during start-up.

After the conveyor has been turned on and is operating, check all moving parts to make sure they are working freely.

CAUTION!

Because of the many moving parts on the conveyor, all personnel in the area of the conveyor need to be warned that the conveyor is about to be started.

5 MAINTENANCE

5.1 LUBRICATION

BEARINGS

A. No grease fitting - Pre-lubricated. No lubrication required.
B. With grease fitting - Re-lubricate approximately every 10 to 12 weeks with lithium base grease suitable for ball bearing service.

RECOMMENDED CHAIN LUBRICANT

A good grade of clean non-detergent petroleum or synthetic oil is recommended. See chart for proper viscosity.

AMBIENT TEMPERATURE DEGREES (°F)	SAE	ISO
20-40	20	46 or 68
40-100	30	100
100-120	40	150

REDUCERS

See recommendations by manufacturer.

5.2 BELT TRACKING

HOW IS THE CONVEYOR BELT TRACKED

The belt is tracked by adjusting the drive pulley and take-up rollers. The same tracking principles apply to conveyors supplied with end drives, center drives, or underside take-ups.

PRE-TRACKING INSPECTION

Before attempting to physically track the belt:

1. Make sure conveyor is level across the width and length of unit. Adjust supports as necessary.
2. Check to make sure the drive pulley and take-up rollers are square with conveyor bed (FIGURES 7 & 8 on page 17).
3. Make sure belt has been properly threaded through conveyor per section 3.4 BELT INSTALLATION on page 12.
4. Ensure the V-guided belt is nested correctly around the outer edges of all of the rollers.

NOTE

The belt bead should NOT protrude above the tail roller (internally trapped rollers) surfaces.

5. Make sure belt lacing has been installed correctly and is square with the belt.
6. Check for improper loading. Feed should be in direction of belt travel, centered on belt.

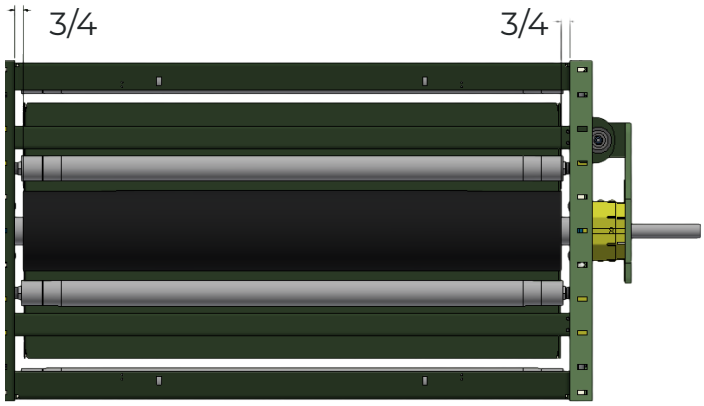
Give the belt adequate time to react to the adjustments. It may take several complete revolutions around the conveyor for the belt to begin tracking properly on long, slow conveyor lines.

A. Looking towards the drive, stand at the tail roller and note what direction belt is traveling.
B. Having observed belt and determined tracking problem, follow procedures described below:

IMPORTANT

When belt tracking adjustments are made, they should be minor (1/16” at a time on idlers, etc., should be sufficient).

FIGURE 6 – DRIVE PULLEY



NOTE

When installing the drive pulley, make sure the pulley tube is centered in frame before tightening the bearings.

HOW TO STEER THE BELT

- **Condition 1:** When the belt is running in the direction (FLOW) with the arrow, but tracking (drifting) towards Side “X,” move the take-up roller nearest the INFEED end of Side “X” towards the INFEED end of the conveyor.
- **Condition 2:** When the belt is running in the direction (FLOW) with the arrow, but tracking (drifting) towards Side “Y,” move the take-up roller nearest the INFEED end of Side “Y” towards the INFEED end of the conveyor.
- These instructions differ for units that contain snub rollers.
- The HSQC is designed to run in reverse.

FIGURE 7

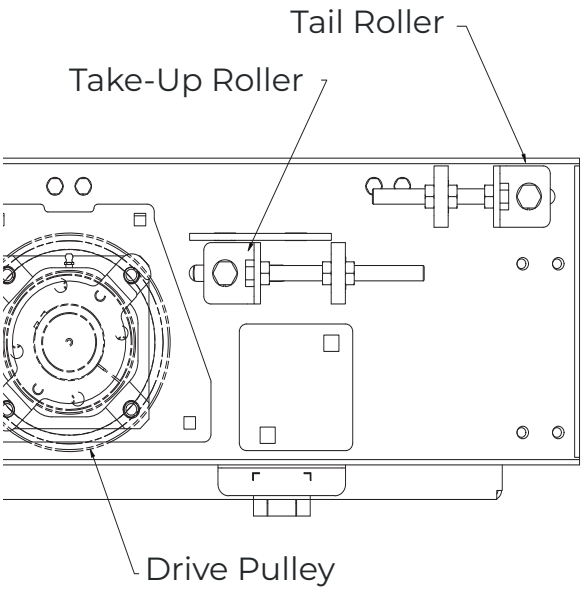
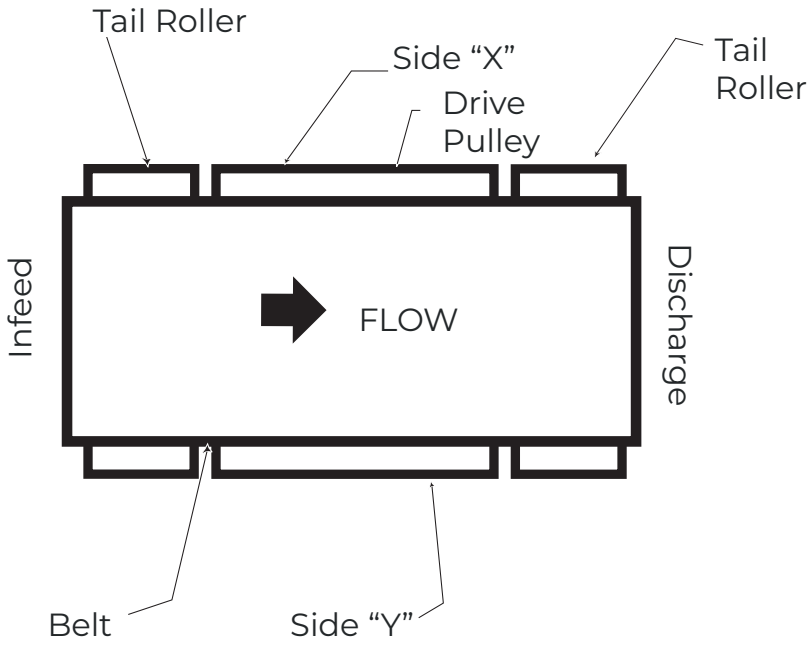
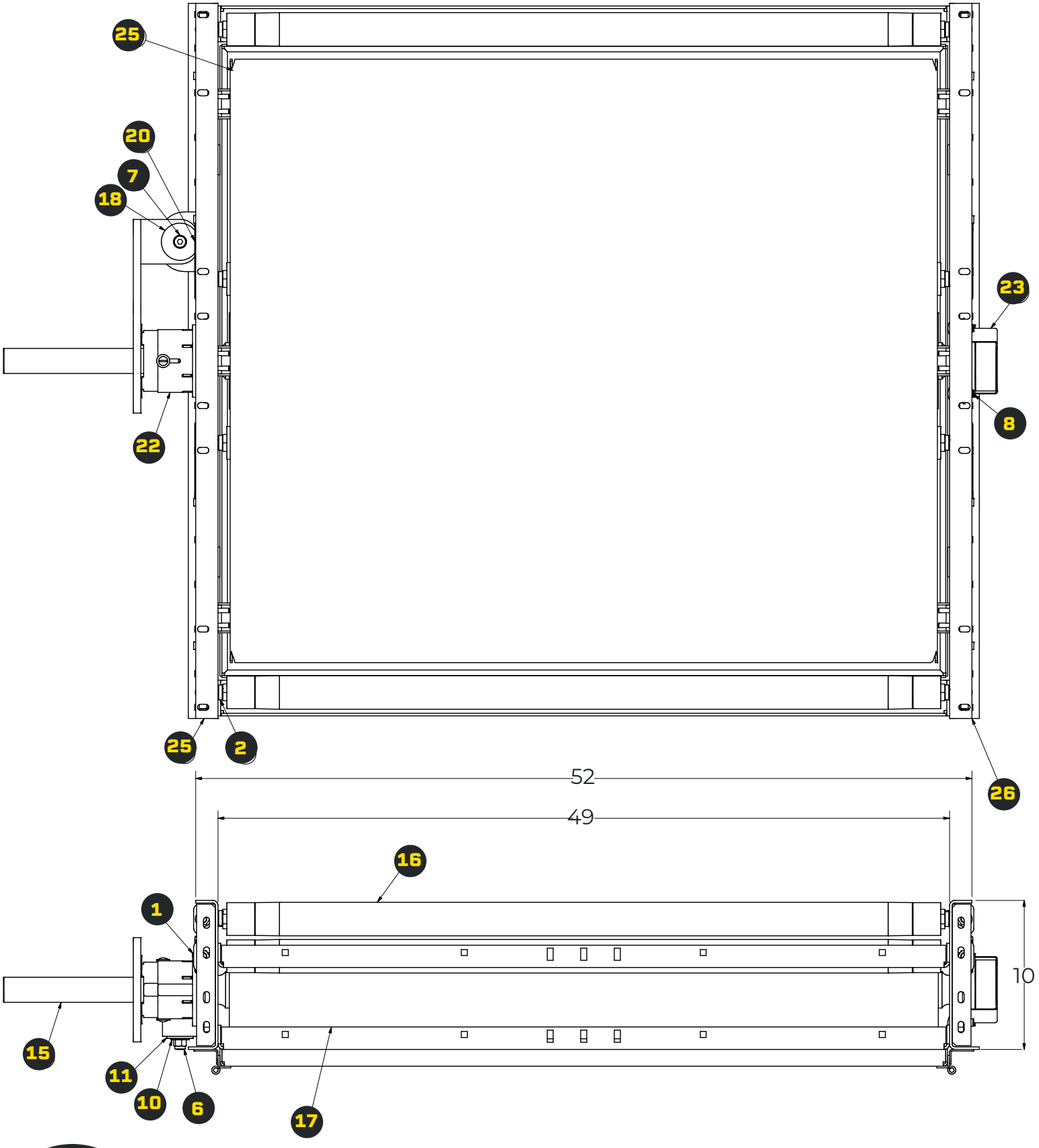


FIGURE 8

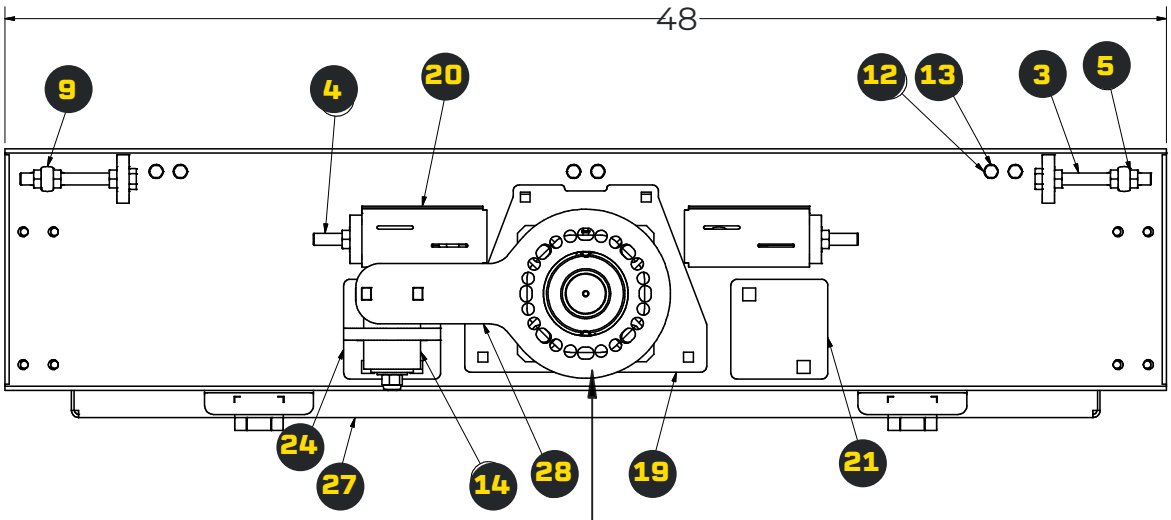


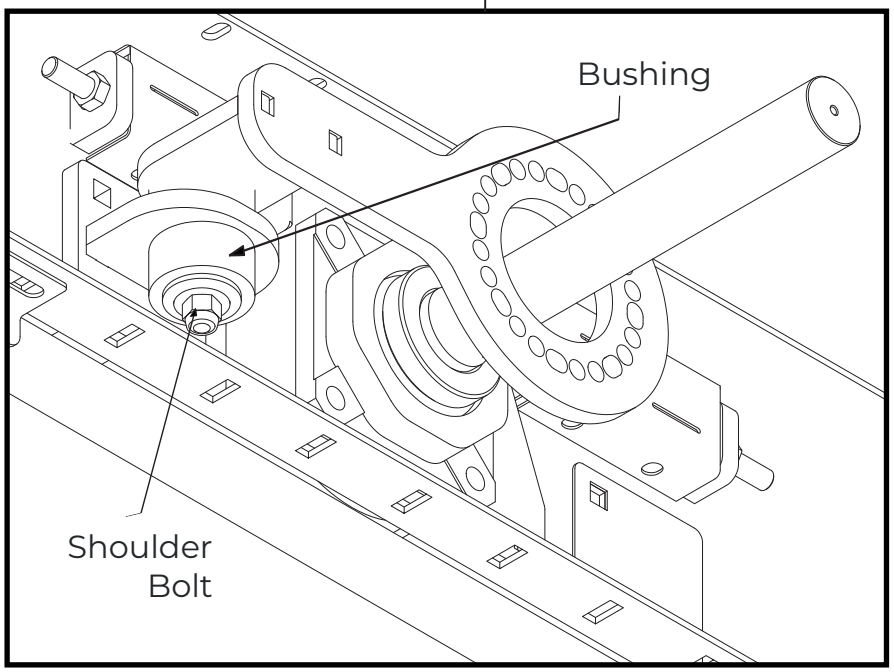
6 PARTS DRAWINGS

6.1 SHAFT MOUNTED QUEUE CENTER DRIVE DRAWINGS



6.2 SHAFT MOUNTED QUEUE CENTER DRIVE DRAWINGS CONTINUED

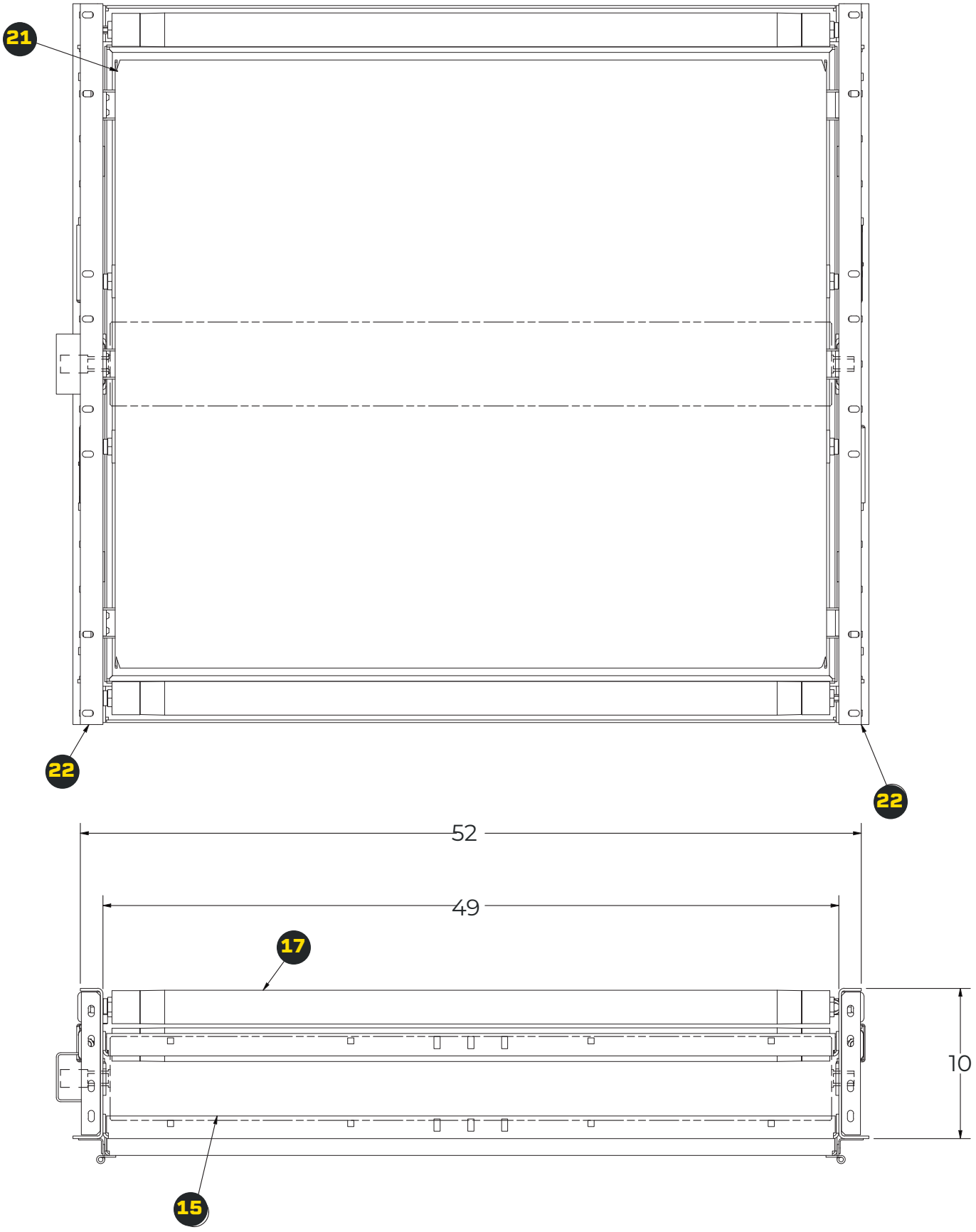




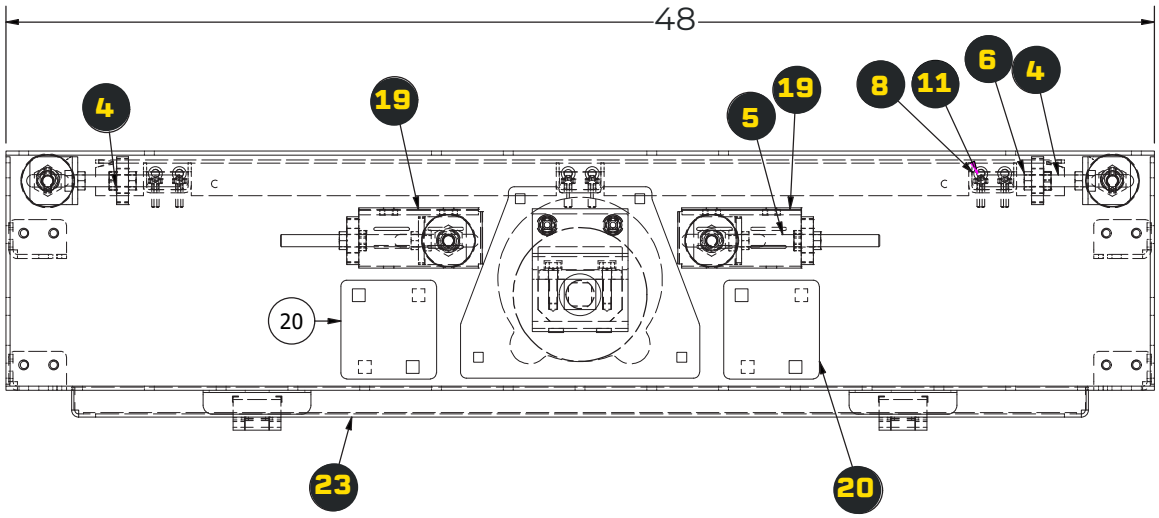
6.3 SHAFT MOUNTED QUEUE CENTER DRIVE PARTS LIST

REF #	DESCRIPTION
1	BEARING - CAST IRON, 4-BOLT, 1-15/16"BORE
2	SPACER - .656"ID X 1.000"OD X 5/16"LG
3	1/2-13 X 4-1/2"LG HEX BOLT-FULL THREAD,Z
4	1/2-13 X 6"LG HEX BOLT - FULL THREAD, ZP
5	1/2-13 NC2B HEX JAM NUT -SEMI-FIN,REG,ZP
6	1/2-13 NC2B HEX LOCKNUT -NYLON INSERT,ZP
7	5/8"DIA X 3-3/4"LG SHOULDER BOLT
8	1/2-13 X 1-1/2"LG CARRIAGE BOLT,GR 5,ZP
9	ROD END - 1/2-13 X 2-7/16"LG C TO E
10	1/2"ID FLAT STEEL WASHER, ZP
11	5/8"ID FLAT STEEL WASHER, ZP
12	5/16"ID SPLIT LOCKWASHER, MEDIUM, ZP
13	5/16-18 X 1"LG HEX BOLT - GRADE 5
14	RUBBER TORQUE ARM BUSHING
15	6-5/8"DIA DRIVE PULLEY - 49"BW PUL-20
16	2-1/4"OD ROLLER - 49"BR, HSQC
17	BED SPACER - 49"BW, FXG
18	TORQUE ARM BUSHING WASHER
19	BEARING PLATE - HSQC
20	TAKE-UP GUARD, HSQC
21	COVER PLATE - TORQUE ARM BUSHING MTG
22	ADJUSTABLE SHAFT GUARD-DRI-34,KT67
23	BEARING COVER WELD - 1-15/16"B, CAP
24	TORQUE ARM WELD - ATTACHMENT BRKT, HEAVY
25	4'0"LG BED PAN WLD-49"BW, HSQC
26	4'0"LG SIDE CHNL WELD - HSQC
27	UNDERSIDE GD WLD- 48"BED LG,49"BW, HSQC
28	TORQUE ARM WELD- HSQC, KT67

6.4 MOTOR DRIVE PULLEY VARIANT DRAWINGS



6.5 MOTOR DRIVE PULLEY VARIANT DRAWINGS CONTINUED & PARTS LIST



REF #	DESCRIPTION
1	SPACER - .656"ID X 1.000"OD X 5/16"LG
2	3/8-16 X 1-1/2"LG HEX BOLT-FULL THREAD,ZP
3	1/2-13 X 2"LG HEX BOLT - FULL THREAD, ZP
4	1/2-13 X 4-1/2"LG HEX BOLT-FULL THREAD,ZP
5	1/2-13 X 6"LG HEX BOLT - FULL THREAD, ZP
6	1/2-13 NC2B HEX JAM NUT -SEMI-FIN,REG,ZP
7	3/8-16 X 1"LG CARRIAGE BOLT, ZP
8	5/16"ID SPLIT LOCKWASHER, MEDIUM, ZP
9	3/8"ID SPLIT LOCKWASHER, MEDIUM, ZP
10	1/2"ID SPLIT LOCKWASHER, MEDIUM, ZP
11	5/16-18 X 1"LG HEX BOLT - GRADE 5
12	3/8-16 SMALL FLANGE LOCKNUT, ZP
13	2-1/4"OD PULLEY - 49"BR, HSQC
14	STOP BOLT BRACKET - 5-1/8"LG
15	BED SPACER - 49"BW, FXG
16	PULLEY CLAMP PLATE - VAN DER GRAAF
17	COVER PLATE - VAN DER GRAAF
18	VAN DER GRAAF PULLEY POWER COVER
19	TAKE-UP GUARD, HSQC
20	COVER PLATE - TORQUE ARM BUSHING MTG
21	4'0"LG BED PAN WLD-49"BW, HSQC
22	4'0"LG SIDE CHANNEL WELD - HSQC
23	USBC WELD-48" BED LENGTH, 49"BW, HSQC
24	MOUNTING PLATE WELD, VAN DER GRAAF PULLEY

7 TROUBLESHOOTING

7.1 TROUBLESHOOTING GUIDE

TROUBLE	CAUSE	SOLUTION
Conveyor will not start or motor quits frequently.	1. Motor is overloaded. 2. Motor is drawing too much current.	1. Check for overloading of conveyor. 2. Check heater or circuit breaker and change if necessary
Loud popping or grinding noise.	1. Defective bearing. 2. Loose set screws in bearing. 3. Loose drive chain.	1. Replace bearing. 2. Tighten set screw. 3. Tighten chain.
Motor or reducer overheating.	1. Conveyor is overloaded. 2. Low voltage to motor. 3. Low lubricant level in reducer.	1. Check capacity of conveyor and reduce load to recommended level. 2. Have electrician check and correct as necessary. 3. Re-lubricate per manufacturer's recommendations. • For Hytrol reducer, refer to Installation and Maintenance Manual #684 (Speed Reducers 4A, 4AC, 5A, 5AC).
Belt does not move, but drive runs.	1. Conveyor is overloaded. 2. Belt is too loose. 3. Lagging on drive pulley is worn.	1. Reduce load. 2. Use belt take-up to tighten belt. 3. Replace drive pulley lagging and tighten belt.

7.2 TROUBLESHOOTING DRIVE BELT TRACKING

TROUBLE	CAUSE	SOLUTION
Entire length of belt creeps off at one spot only.	1. One conveyor section not level or square. 2. Material build-up on pulleys or idlers.	1. Make necessary adjustments to supports. 2. Remove residue from pulleys or idlers. Install belt, cleaners, or scrappers if possible.
Belt creeps to one side at tail pulley.	1. Tail pulley not properly aligned or square with bed.	1. Adjust as necessary. See 5.2 BELT TRACKING on page 16 for details.
Entire belt creeps to one side.	1. Conveyor not straight. 2. Conveyor not level. 3. Material build-up on rollers, pulleys, or idlers.	1. Realign bed sections as necessary. 2. Correct as necessary. 3. Remove residue and install belt cleaners or scrapers if possible.

8 PREVENTIVE MAINTENANCE

8.1 PREVENTIVE MAINTENANCE CHECKLIST

The following is a general maintenance checklist which covers the major components of your conveyor. This will be helpful in establishing a standard maintenance schedule.

COMPONENT	SUGGEST ACTION	SCHEDULE		
		WEEKLY	MONTHLY	QUARTERLY
Motor	Check Noise			
	Check Temperature			
	Check Mounting Bolts			
Reducer	Check Noise			
	Check Temperature			
	Check Oil Level			
Belt	Check Tracking			
	Check Tension			
	Check Lacing			
Bearings (Pulleys & Rollers)	Check Noise			
	Check Mounting Bolts			
Structural	General Check: All loose bolts, etc., tightened			



Need Assistance?
Contact Us
Hytrol Customer Care:
1-844-449-8765
wecare@hytrol.com
Live Chat