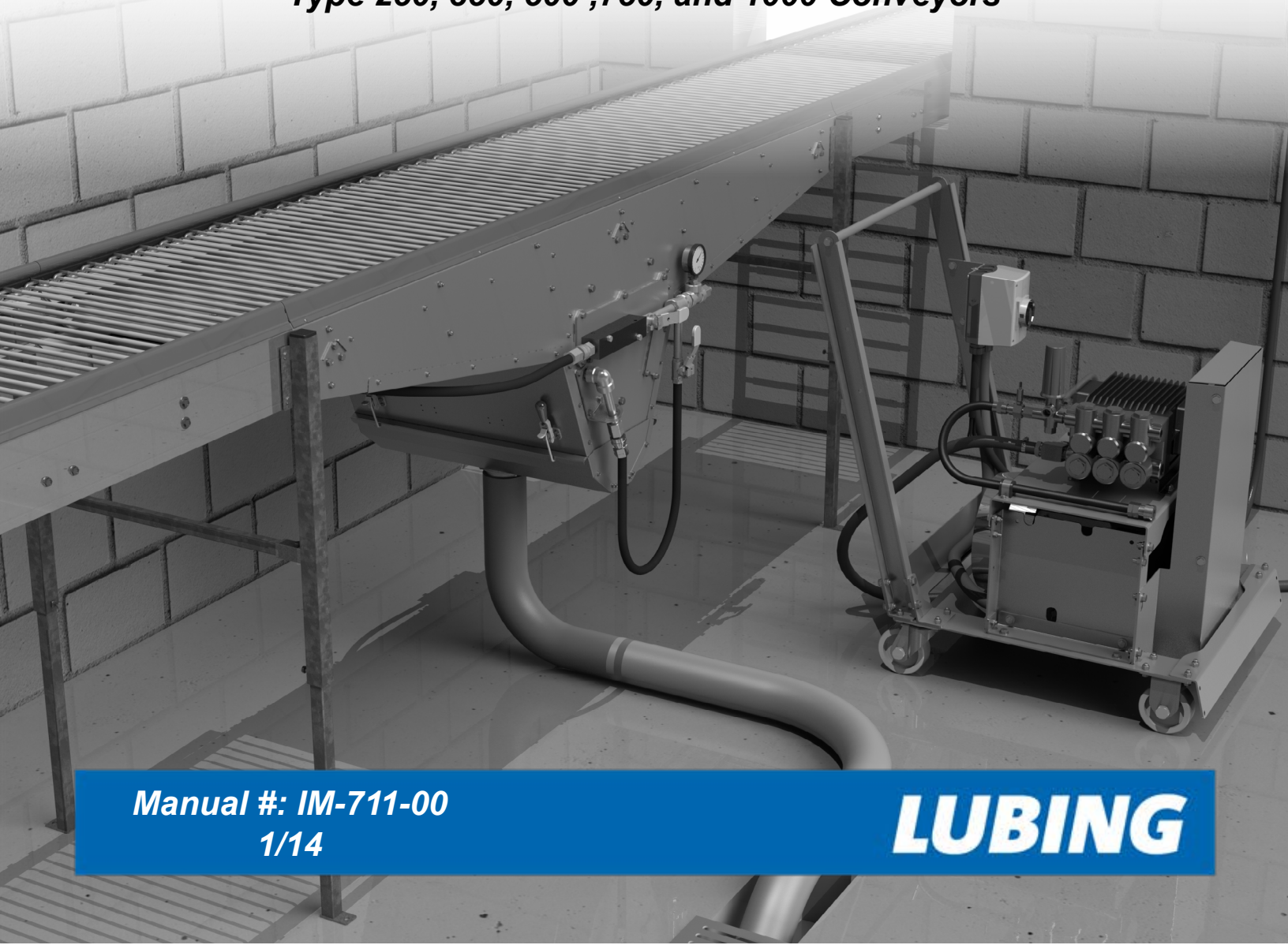
LUBING A Tradition of Innovation.

Spray Cabinet

Product & Installation Manual

Type 250, 350, 500 ,750, and 1000 Conveyors



Manual #: IM-711-00
1/14

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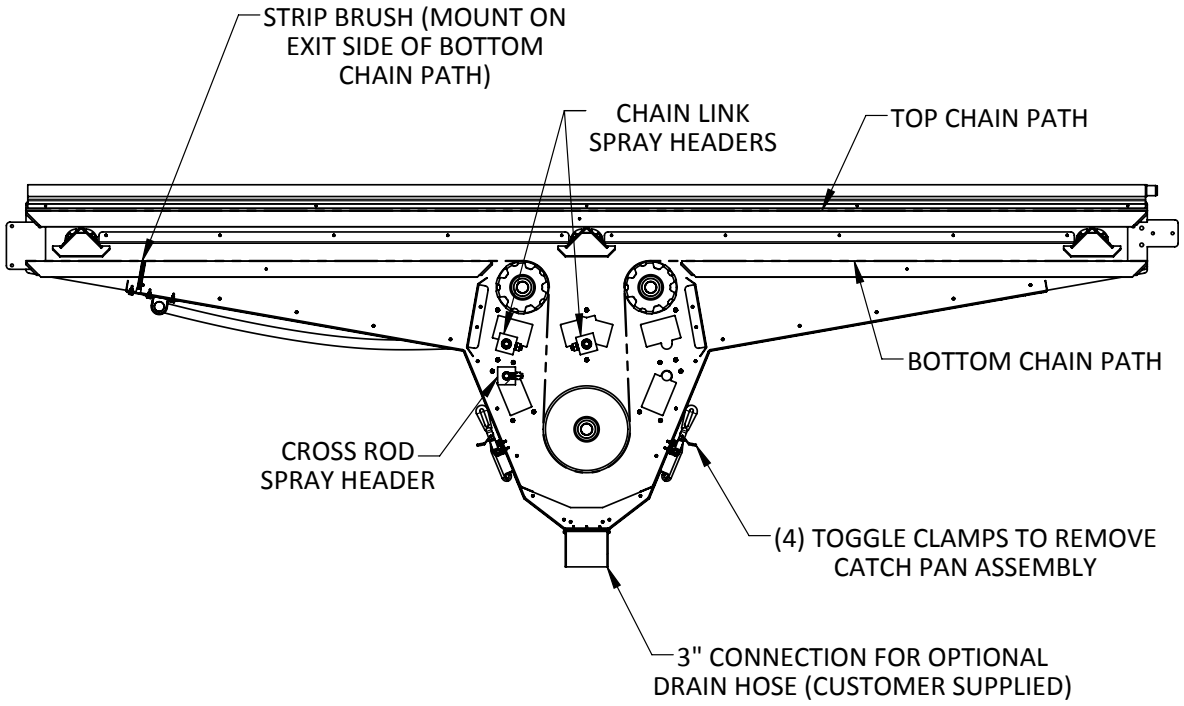
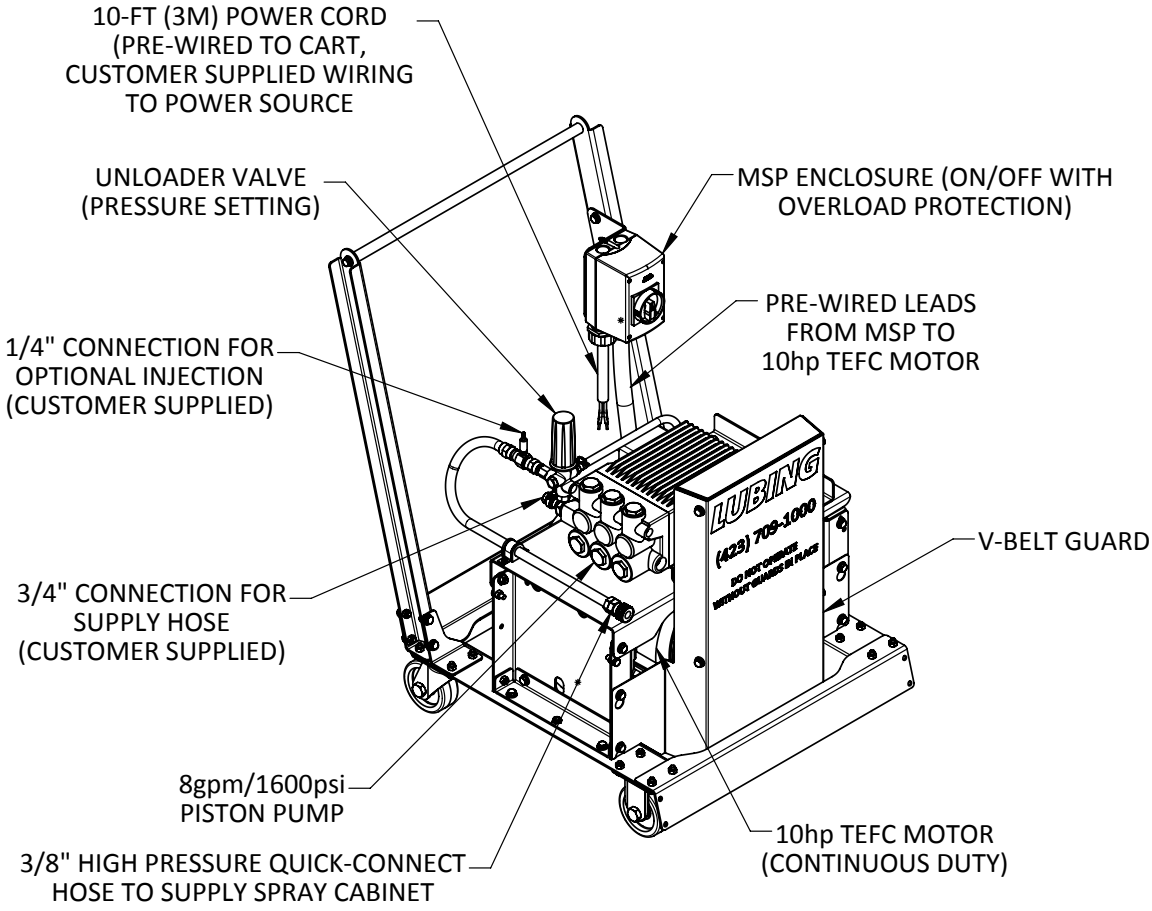
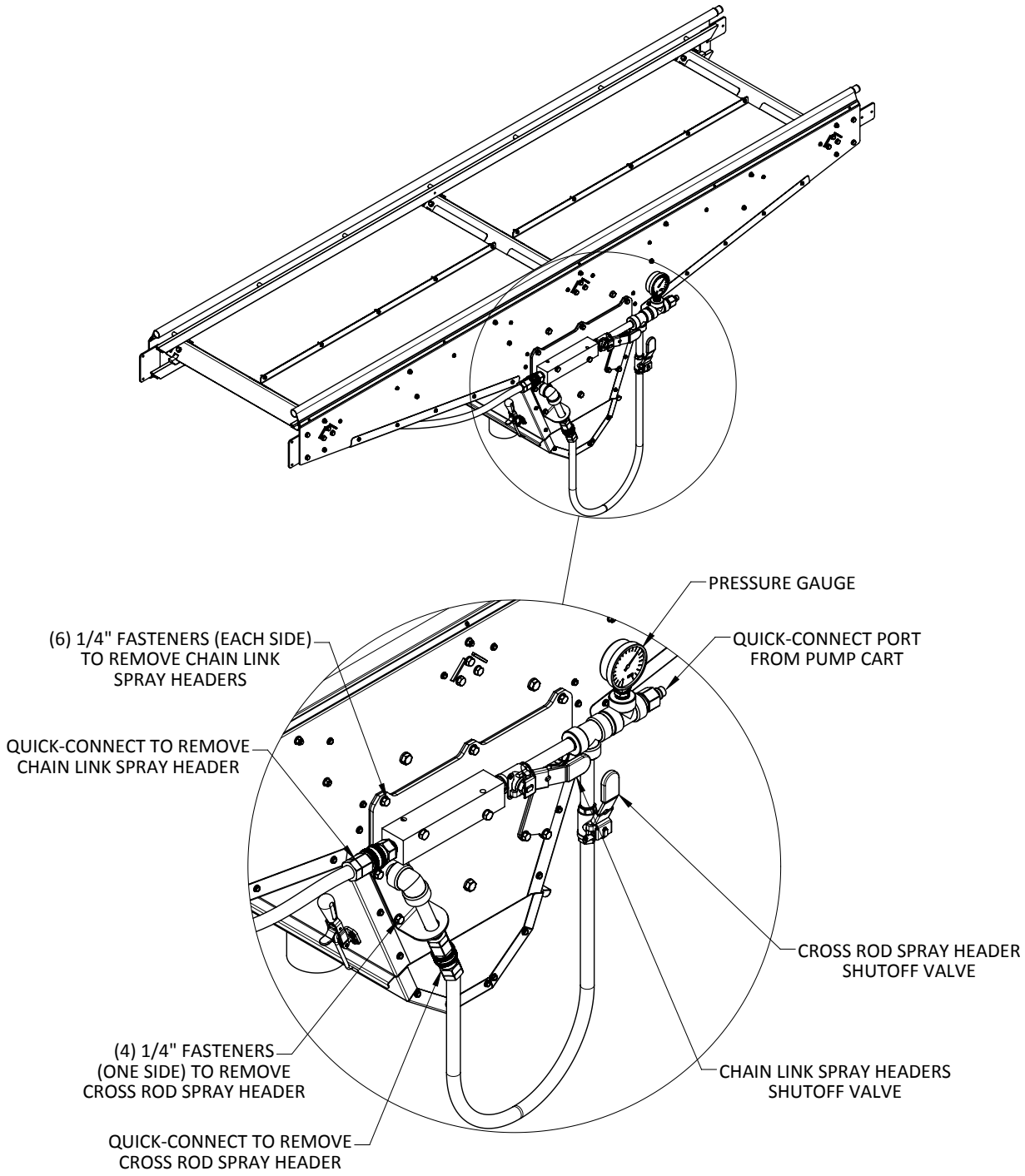
SECTION 1 OVERVIEW

Functionality

1. The Spray Cabinet is intended as a permanent inline method for removing buildup from the conveyor chain via water pressure provided from the mobile Pump Cart which can be shared between multiple installations.
2. Internal baffles and splash guards are designed to reduce overspray at the ends of the Spray Cabinet while the top splash guards allow operation during normal production without effecting eggs.
3. Integrated shutoff valves allow concentration of the spray pattern onto the chain links (edges) or the cross rods of the conveyor chain. Both valves can be opened to supply coverage to the entire conveyor chain at a reduced pressure.
4. The Spray Cabinet is designed to utilize cold water as the primary consumable, however, hot water can be supplied to the pump and/or customer-supplied cleaning agents, descalers, or degreasers may be introduced via the provided Injection Port if approved by the appropriate governing bodies for your facility.
5. The following views illustrate some additional functionality and key areas for operating the Spray Cabinet and Pump Cart.


STRIP BRUSH (MOUNT ON EXIT SIDE OF BOTTOM CHAIN PATH)
CHAIN LINK SPRAY HEADERS
TOP CHAIN PATH
BOTTOM CHAIN PATH
CROSS ROD SPRAY HEADER
(4) TOGGLE CLAMPS TO REMOVE CATCH PAN ASSEMBLY
3" CONNECTION FOR OPTIONAL DRAIN HOSE (CUSTOMER SUPPLIED)


10-FT (3M) POWER CORD (PRE-WIRED TO CART, CUSTOMER SUPPLIED WIRING TO POWER SOURCE
UNLOADER VALVE (PRESSURE SETTING)
MSP ENCLOSURE (ON/OFF WITH OVERLOAD PROTECTION)
PRE-WIRED LEADS FROM MSP TO 10hp TEFC MOTOR
1/4" CONNECTION FOR OPTIONAL INJECTION (CUSTOMER SUPPLIED)
V-BELT GUARD
3/4" CONNECTION FOR SUPPLY HOSE (CUSTOMER SUPPLIED)
8gpm/1600psi PISTON PUMP
3/8" HIGH PRESSURE QUICK-CONNECT HOSE TO SUPPLY SPRAY CABINET
10hp TEFC MOTOR (CONTINUOUS DUTY)
LUBING
(423) 709-1000


PRESSURE GAUGE
(6) 1/4" FASTENERS (EACH SIDE) TO REMOVE CHAIN LINK SPRAY HEADERS
QUICK-CONNECT PORT FROM PUMP CART
QUICK-CONNECT TO REMOVE CHAIN LINK SPRAY HEADER
CROSS ROD SPRAY HEADER SHUTOFF VALVE
(4) 1/4" FASTENERS (ONE SIDE) TO REMOVE CROSS ROD SPRAY HEADER
CHAIN LINK SPRAY HEADERS SHUTOFF VALVE
QUICK-CONNECT TO REMOVE CROSS ROD SPRAY HEADER

New Installations

1. When installing a Spray Cabinet along with a new conveyor, refer to the *Curve Conveyor Installation Manual* and any provided layout drawings for correct placement of all components.
   Follow the procedures provided in the *Curve Conveyor Installation Manual* for Start-up for the entire system and refer to the *Start-up Section* of this manual when commissioning the Spray Cabinet.

   Note: The conveyor chain transports the required lubrication to the top and bottom chain sliding surfaces. If installing the Spray Cabinet on a new installation, allow adequate operation of the system to apply lubrication to the entire length before operating the Spray Cabinet.

Existing Installations

1. When installing the Spray Cabinet into an existing conveyor system, follow the *Preparing for Installation Section* in this manual for location and installation considerations.
2. A Lubing representative can assist in determining the best location for the Spray Cabinet(s).

Water Supply and Drain Considerations

1. Water supplied to the Pump Cart should be of good quality. Excessive minerals and other contaminants will impact the performance and life of the Spray Cabinet and Pump Cart.

   Note: Special consideration will need to be taken in situations were water quality is poor.

2. The Pump Cart requires an eight (8) gallon per minute (30 liters per minute) incoming water supply with a minimum 3/4” (20mm) connection. Placement of the Pump Cart near the appropriate water supply is critical to ensure the best performance and pump longevity.
3. Water supply and quality should be verified at any connection point within the installation where the Pump Cart may be used.
4. The Spray Cabinet is provided with a 3”(75mm) connection for drainage. If desired, a customer-supplied drain hose can be attached to direct debris removed from the conveyor chain to a specific drain location.

   Note: It is the customer’s responsibility to ensure the water going to drain is within all local, state, and nationals codes.

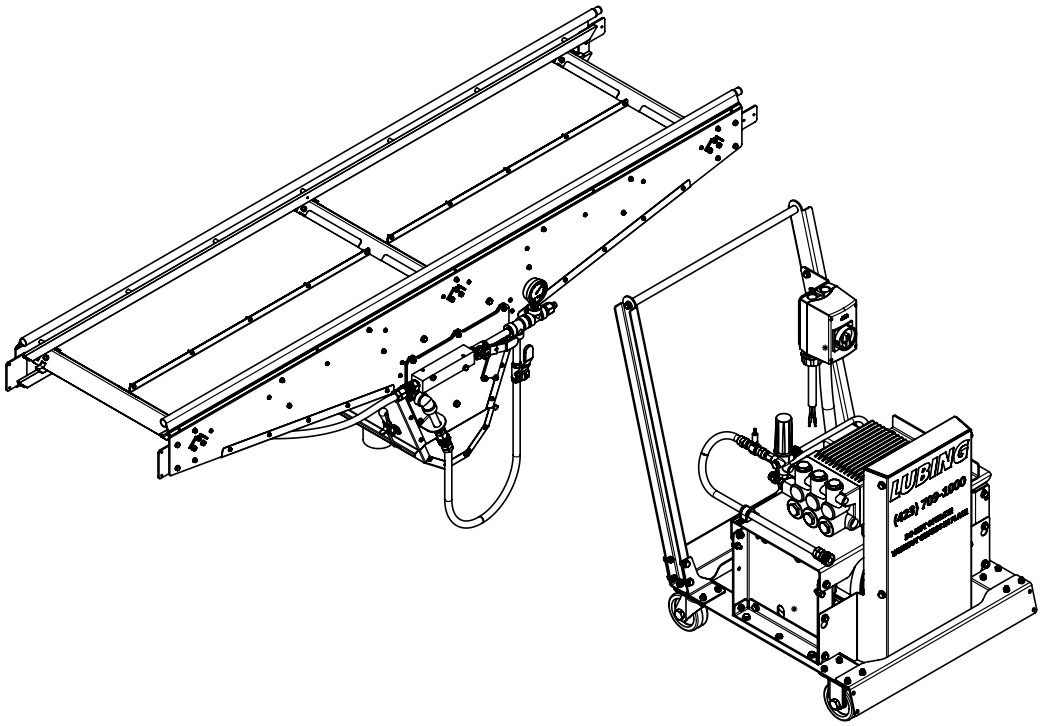
Performance Expectations

1. The Spray Cabinet is intended to reduce buildup on the conveyor chain when used as part of a routine maintenance program. Operational schedules will have to be developed on an individual basis based on system variables (e.g. amount of existing buildup, environment, etc.).
2. Overall performance is contingent on frequency of use and the amount of care taken to properly maintain the Spray Cabinet and Pump Cart.
3. Any pressures noted in this document are provided as reference only and assume the usage of the specified voltages and frequency parameters noted in the *Electrical Specifications Section*.

   Note: Consult engineering when other voltages or frequencies are required.

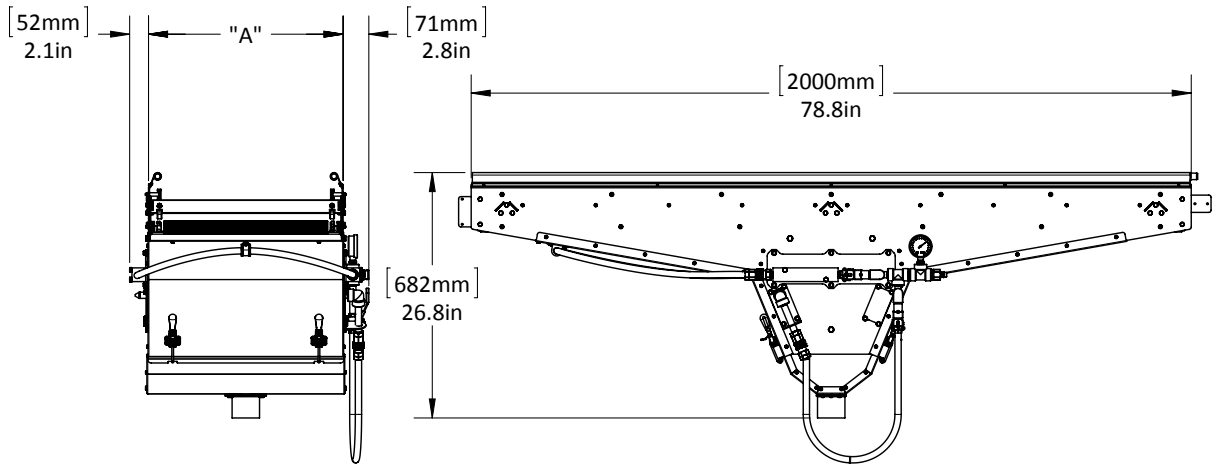
SECTION 2 COMPONENT DETAILS

Spray Cabinet and Pump Cart

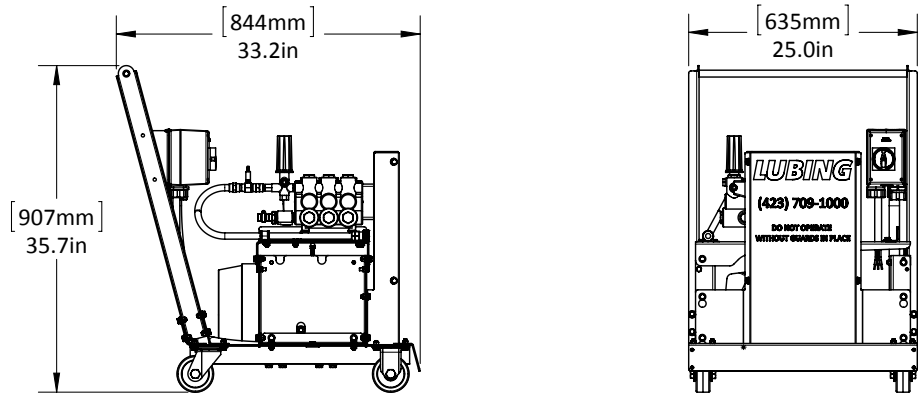


Spray Cabinet US			
Conveyor Type	**Part Number**	**Drawing Number**	**Description**
250	C204A	12N A 400 00A	Spray Cabinet T250 US
350	D204A	12N A 300 00A	Spray Cabinet T350 US
500	E204A	12N A 200 00A	Spray Cabinet T500 US
750	F204A	12N A 100 00A	Spray Cabinet T750 US
1000	G204A	12N A 000 00A	Spray Cabinet T1000 US

Spray Cabinet Pump Cart Stainless US			
Conveyor Type	**Part Number**	**Drawing Number**	**Description**
250 - 1000	A200A	12N A 050 00A	Spray Cabinet Pump Cart 208-230v Stainless US
	A200B	12N A 050 00B	Spray Cabinet Pump Cart 460v Stainless US

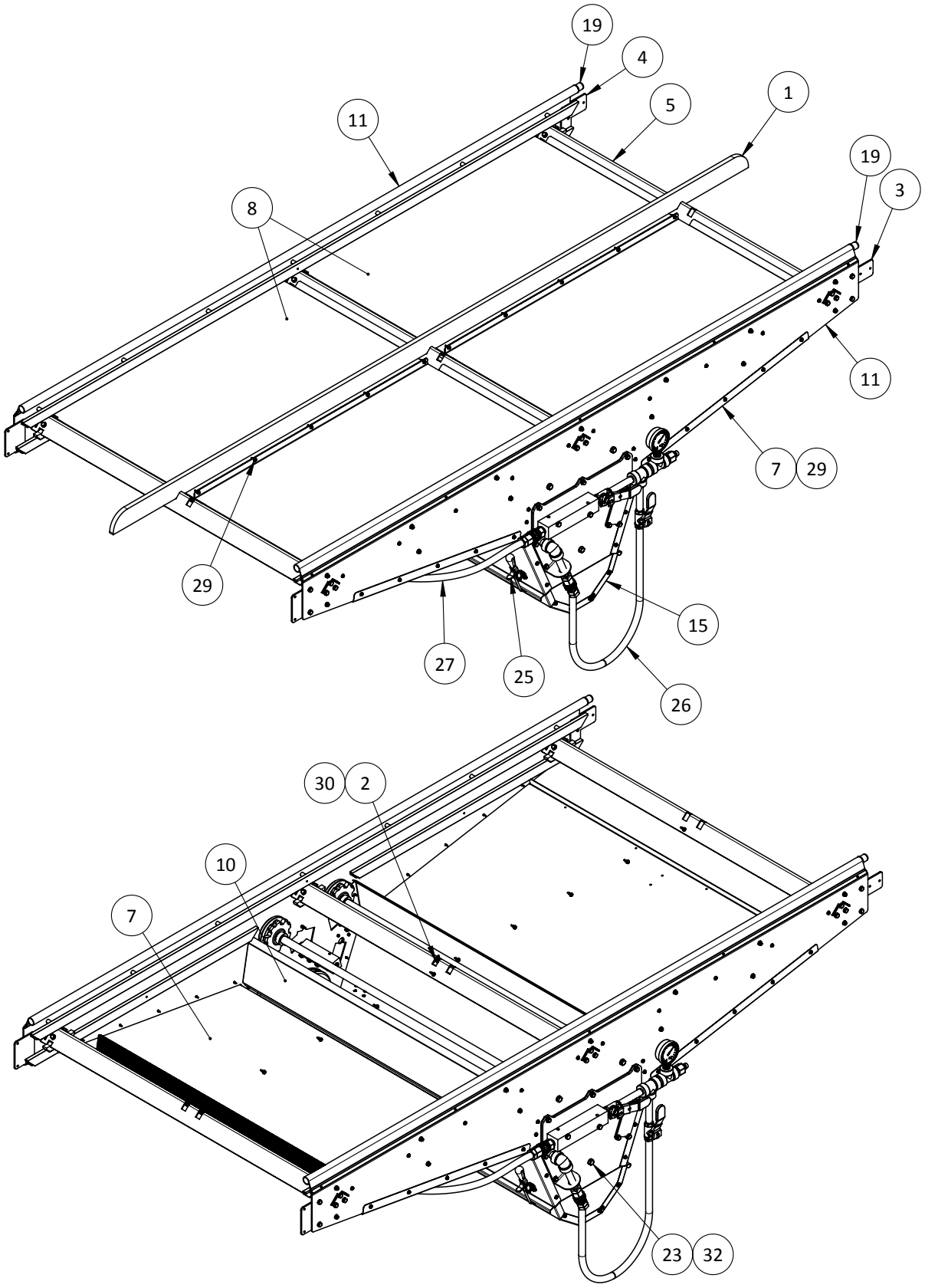


Spray Cabinet US			
Part Number	**Conveyor Type**	**Description**	**A (mm/inches)**
C204A	250	Spray Cabinet T250 US	290/11.4
D204A	350	Spray Cabinet T350 US	390/15.4
E204A	500	Spray Cabinet T500 US	540/21.3
F204A	750	Spray Cabinet T750 US	790/31.1
G204A	1000	Spray Cabinet T1000 US	1040/40.9



Spray Cabinet Pump Cart Stainless US					
Part Number	**Conveyor Type**	**Description**	**Voltage AC**	**Phase**	**Amps**
A200A	250 - 1000	Spray Cabinet Pump Cart 208-230v Stainless US	208-230	3	25
A200B		Spray Cabinet Pump Cart 460v Stainless US	460		12

ITEM NO.	DRAWING NO.	PART NO.	DESCRIPTION	T250	T350	T500	T750	T1000
1	12C A 000 01A		Center Bearing Runner	-	-	-	-	1
2	12C A 000 02A		Runner Mount	-	-	-	-	1
3	12C A 000 03A		Adapter Thread Plate, RH	1	1	1	1	1
4	12C A 000 04A		Adapter Thread Plate, LH	1	1	1	1	1
5	12C A 024 00A		Traverse Stainless T250	3	-	-	-	-
5	12C A 023 00A		Traverse Stainless T350	-	3	-	-	-
5	12C A 022 00A		Traverse Stainless T500	-	-	3	-	-
5	12C A 021 00A		Traverse Stainless T750	-	-	-	3	-
5	12C A 020 00A		Traverse Stainless T1000	-	-	-	-	3
6	12N A 000 03A		Blockoff Plate	2	2	2	2	2
7	12N A 004 01A		Drip Pan T250	2	-	-	-	-
7	12N A 003 01A		Drip Pan T350	-	2	-	-	-
7	12N A 002 01A		Drip Pan T500	-	-	2	-	-
7	12N A 001 01A		Drip Pan T750	-	-	-	2	-
7	12N A 000 01A		Drip Pan T1000	-	-	-	-	2
8	12N A 004 02A		Spray Shield T250	4	-	-	-	-
8	12N A 003 02A		Spray Shield T350	-	4	-	-	-
8	12N A 002 02A		Spray Shield T500	-	-	4	-	-
8	12N A 001 02A		Spray Shield T750	-	-	-	4	-
8	12N A 000 02A		Spray Shield T1000	-	-	-	-	4
9	12N A 004 04A		Strip Brush T250	1	-	-	-	-
9	12N A 003 04A		Strip Brush T350	-	1	-	-	-
9	12N A 002 04A		Strip Brush T500	-	-	1	-	-
9	12N A 001 04A		Strip Brush T750	-	-	-	1	-
9		RPVC312036	Strip Brush T1000	-	-	-	-	1
10	12N A 004 05A		Splash Guard T250	2	-	-	-	-
10	12N A 003 05A		Splash Guard T350	-	2	-	-	-
10	12N A 002 05A		Splash Guard T500	-	-	2	-	-
10	12N A 001 05A		Splash Guard T750	-	-	-	2	-
10	12N A 000 05A		Splash Guard T1000	-	-	-	-	2
11	12N A 010 00A		Spray Cabinet Side Sheet Complete	2	2	2	2	2
12	12N A 042 00A		Link Spray Manifold Assembly	1	1	1	1	1
13	12N A 043 00A		Link Spray Manifold Assembly LH	1	1	1	1	1
14	12N A 044 03A		Front Cover Gasket	2	2	2	2	2
15	12N A 430 00A		Catch Pan Assembly T250	1	-	-	-	-
15	12N A 330 00A		Catch Pan Assembly T350	-	1	-	-	-
15	12N A 230 00A		Catch Pan Assembly T500	-	-	1	-	-
15	12N A 130 00A		Catch Pan Assembly T750	-	-	-	1	-
15	12N A 030 00A		Catch Pan Assembly T1000	-	-	-	-	1
16	12N A 444 00A		Cross Rod Spray Manifold Assembly T250	1	-	-	-	-
16	12N A 344 00A		Cross Rod Spray Manifold Assembly T350	-	1	-	-	-
16	12N A 244 00A		Cross Rod Spray Manifold Assembly T500	-	-	1	-	-
16	12N A 144 00A		Cross Rod Spray Manifold Assembly T750	-	-	-	1	-
16	12N A 044 00A		Cross Rod Spray Manifold Assembly T1000	-	-	-	-	1
17	185 515 21 00		Deflection Wheel Grooved 94.7mm	4	4	4	4	4
18	185 515 22 01		Deflection Wheel Smooth 155mm	2	2	2	2	2
19	185 520 18 00		Intermediate Coupling	2	2	2	2	2
20	186 515 04 02		20mm Axle T250	3	-	-	-	-
20	187 515 04 02		20mm Axle T350	-	3	-	-	-
20	185 515 04 02		20mm Axle T500	-	-	3	-	-
20	188 515 04 02		20mm Axle T750	-	-	-	3	-
20	191 515 04 02		20mm Axle T1000	-	-	-	-	3
21		3VF3-SS	QD Coupler, Female 4200#	1	1	1	1	1
22		V3F3-SS	QD Plug Female 4200#, Stainless	1	1	1	1	1
23		21 56 087	M8 x 20 Hex Bolt	6	6	6	6	6
24		26 43 064	Adjusting Ring A20-705	6	6	6	6	6
25		5136A770	Pull Clamp	4	4	4	4	4
26		8646T02	Hydraulic Hose, 3/8" MNPT Rigid Ends, 2-ft	1	1	1	1	1
27		8646T04	Hydraulic Hose, 3/8" MNPT Rigid Ends, 4-ft	1	-	-	-	-
27		8646T04	Hydraulic Hose, 3/8" MNPT Rigid Ends, 4-ft	-	1	-	-	-
27		8646T05	Hydraulic Hose, 3/8" MNPT Rigid Ends, 5-ft	-	-	1	-	-
27		8646T06	Hydraulic Hose, 3/8" MNPT Rigid Ends, 6-ft	-	-	-	1	-
27		8646T06	Hydraulic Hose, 3/8" MNPT Rigid Ends, 6-ft	-	-	-	-	1
28		8981T31	Vibration Damping Clamp 11/16"	1	1	1	1	1
29		F8-66-7-0-8	#8 x 1/2" Self-Drilling Hex Screw, Stainless	91	91	91	92	92
30		F8-66-19-0-16	1/4" x 1" Hex Head Self-Tapping Screw, Stainless	-	-	-	-	1
31		F8-66-19-2-8	1/4-20 x 1/2" Type F Hex Head Screw, Stainless	8	8	8	8	8
32		F8-96-48-0-0	M8 Lockwasher, Stainless	6	6	6	6	6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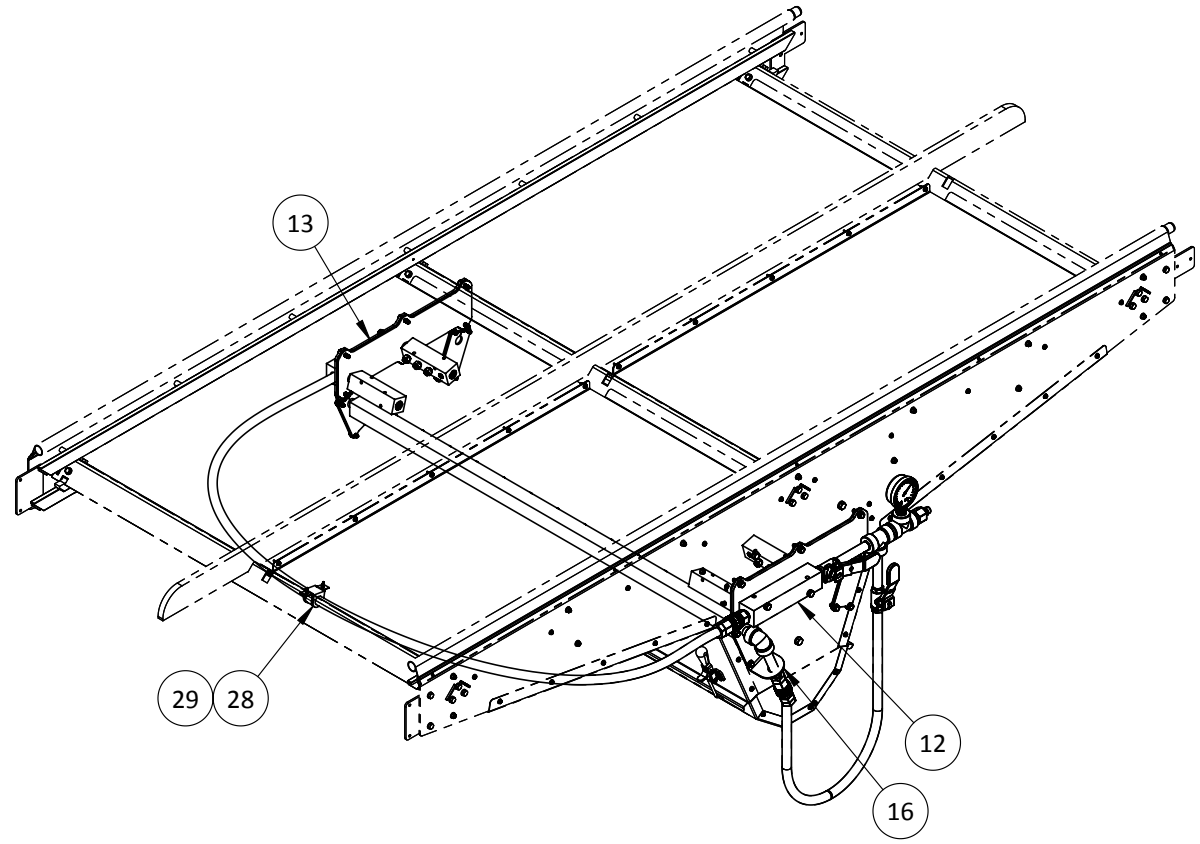
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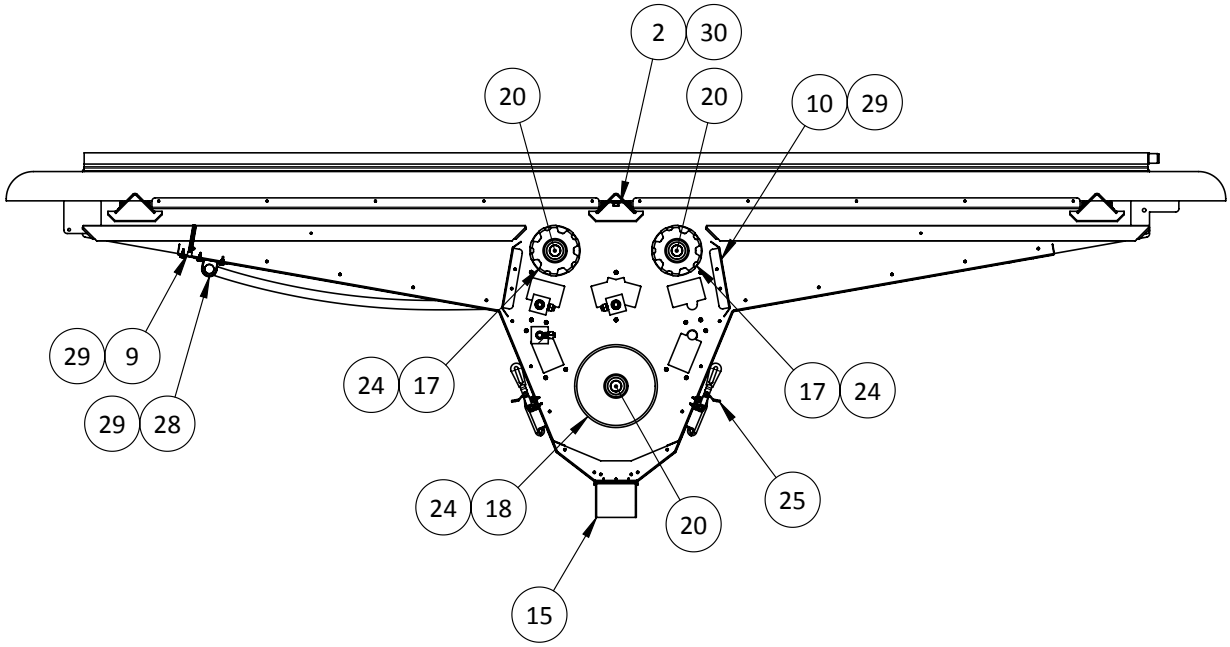
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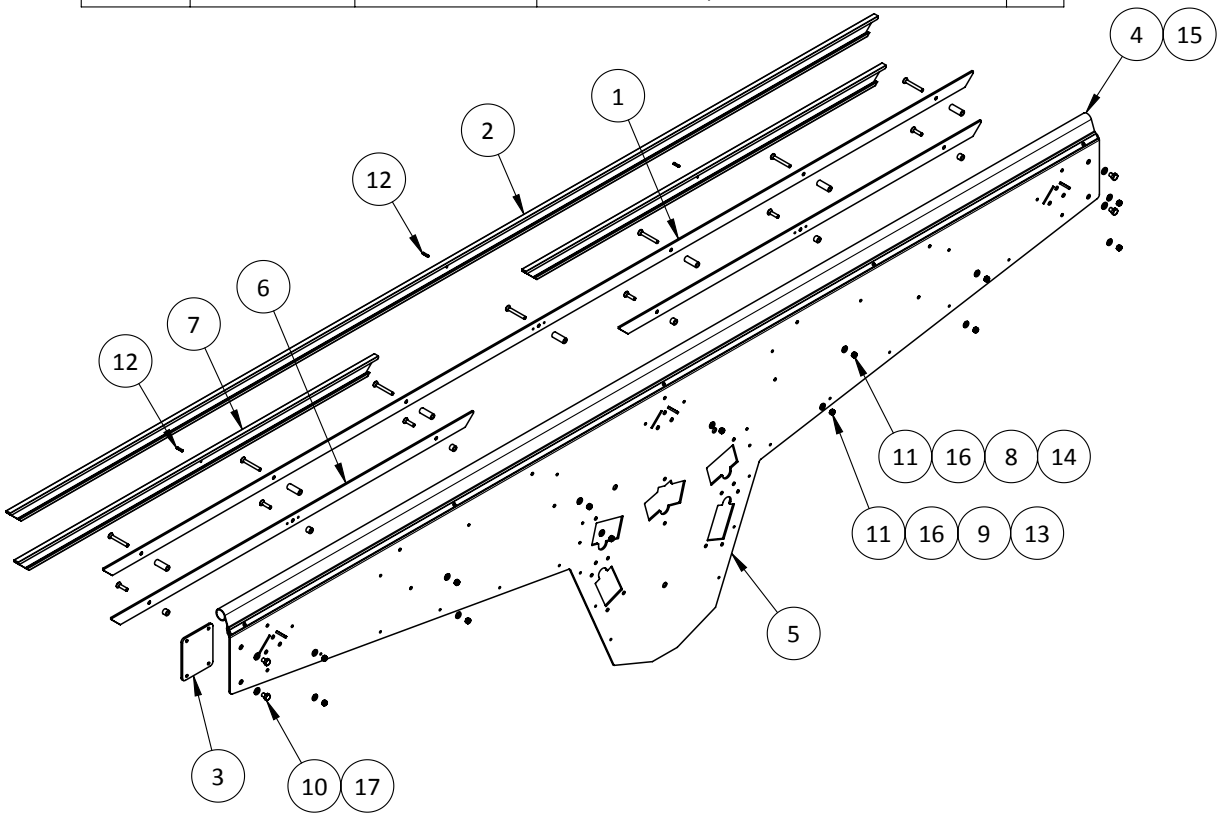
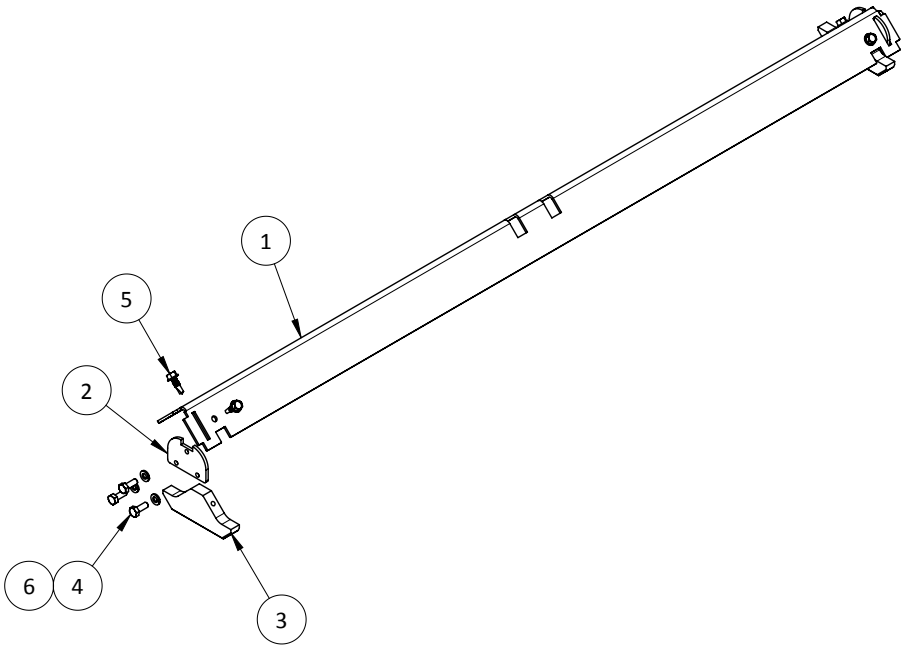
ITEM NO.	DRAWING NO.	PART NO.	DESCRIPTION	QTY.
1	12C A 010 02A		Bearing Bar 2m	1
2	12C A 010 03A		Bearing Strip 2m	1
3	12C A 010 04A		Thread Plate Stainless US	1
4	12C A 010 05A		Capping Connecting Part 2m Stainless	1
5	12N A 010 01A		Spray Cabinet Side Sheet	1
6	12N A 010 02A		Bearing Bar, Short	2
7	12N A 010 03A		Bearing Strip, Short	2
8		92320A569	Spacer 1"	7
9		92320A814	Spacer 9/32"	6
10		F8-7-46-2-144	M6 x 8 Hex Bolt, Stainless	4
11		F8-29-45-2-0	M5 Nylock Nut, Stainless	13
12		F8-38-17-0-8	1/8" x 1/2" Roll Pin, Stainless	3
13		F8-58-45-2-161	M5 x 20mm FHCS, Stainless	6
14		F8-58-45-2-181	M5 x 40mm FHCS, Stainless	7
15		F8-67-133-2-142	M2.9 x 6.5mm Self-Tapping Screw, Stainless	5
16		F8-92-45-0-0	M5 Flat Washer, Stainless	13
17		F8-92-46-0-0	M6 Flat Washer, Stainless	4



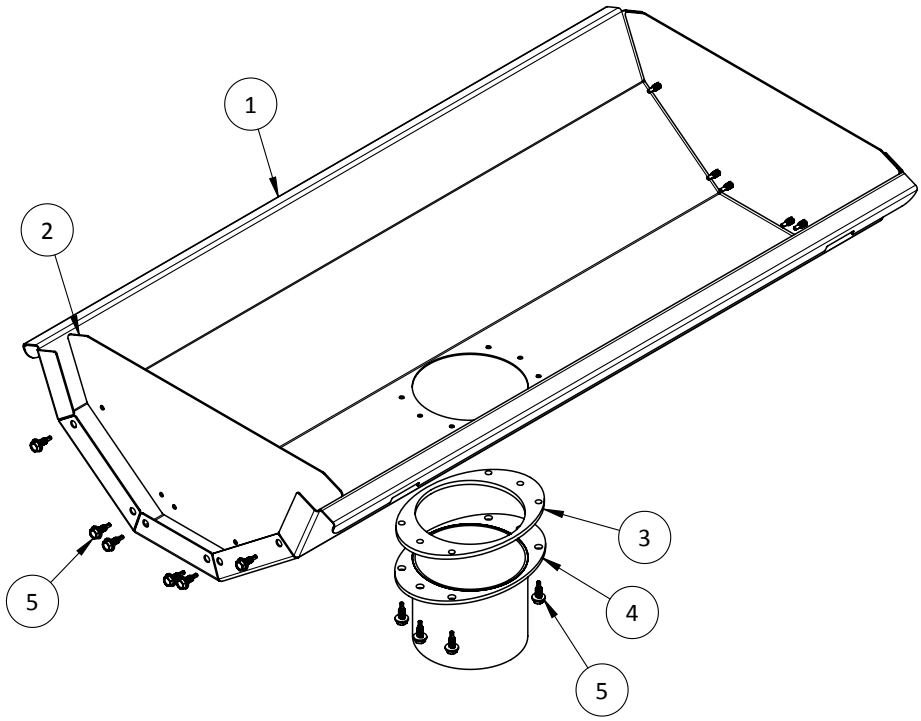
Spray Cabinet Sidesheet Complete			
Conveyor Type	**Part Number**	**Drawing Number**	**Description**
250 - 1000	--	12N A 010 00A	Spray Cabinet Sidesheet Complete

ITEM NO.	DRAWING NO.	PART NO.	DESCRIPTION	T250	T350	T500	T750	T1000
1	12C A 060 01A		Traverse Angle T250 Stainless	1	-	-	-	-
1	12C A 050 01A		Traverse Angle T350 Stainless	-	1	-	-	-
1	12C A 040 01A		Traverse Angle T500 Stainless	-	-	1	-	-
1	12C A 030 01A		Traverse Angle T750 Stainless	-	-	-	1	-
1	12C A 020 01A		Traverse Angle T1000 Stainless	-	-	-	-	1
2	12C A 020 02A		Traverse Mount Plate Stainless	2	2	2	2	2
3	12C A 020 03A		Sliding Shoe	2	2	2	2	2
4		23 56 068	M6 x 16mm Hex Bolt, Stainless	6	6	6	6	6
5		F8-66-19-0-12	1/4" x 3/4" Hex Head Self-Tapping Screw, Stainless	4	4	4	4	4
6		F8-96-46-0-0	M6 Lockwasher, Stainless	6	6	6	6	6



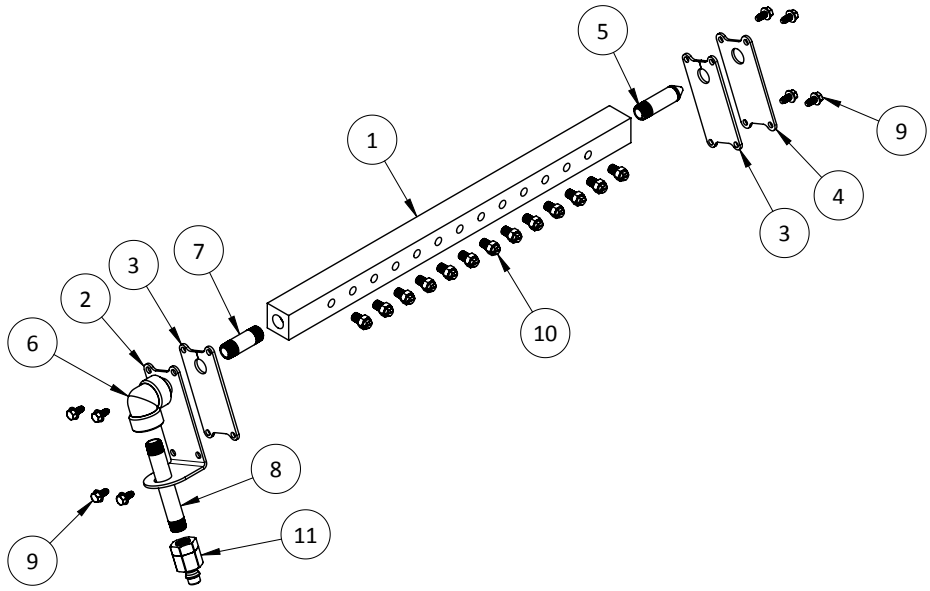
Traverse Stainless			
Conveyor Type	**Part Number**	**Drawing Number**	**Description**
250	--	12C A 024 00A	Traverse Stainless T250
350	--	12C A 023 00A	Traverse Stainless T350
500	--	12C A 022 00A	Traverse Stainless T500
750	--	12C A 021 00A	Traverse Stainless T750
1000	--	12C A 020 00A	Traverse Stainless T1000

ITEM NO.	DRAWING NO.	PART NO.	DESCRIPTION	T250	T350	T500	T750	T1000
1	12N A 430 01A		Catch Pan Body T250	1	-	-	-	-
1	12N A 330 01A		Catch Pan Body T350	-	1	-	-	-
1	12N A 230 01A		Catch Pan Body T500	-	-	1	-	-
1	12N A 130 01A		Catch Pan Body T750	-	-	-	1	-
1	12N A 030 01A		Catch Pan Body T1000	-	-	-	-	1
2	12N A 030 02A		End Cap	2	2	2	2	2
3	12N A 030 03A		Drain Gasket	1	1	1	1	1
4	12N A 030 04A		Drain Stub	1	1	1	1	1
5		F8-66-7-0-8	#8 x 1/2" Self-Drilling Hex Screw, Stainless	18	18	18	18	18



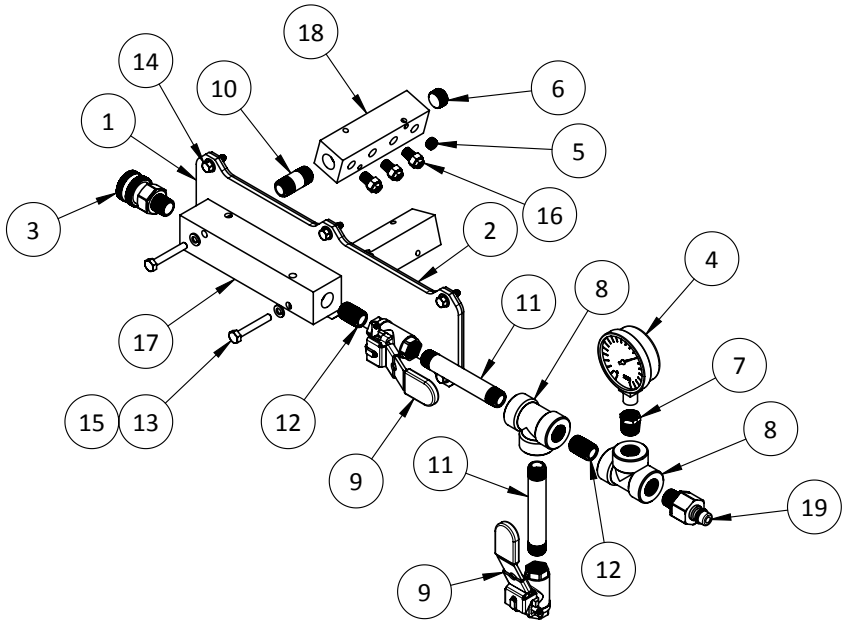
Catch Pan Assembly			
Conveyor Type	**Part Number**	**Drawing Number**	**Description**
250	--	12N A 430 00A	Catch Pan Assembly T250
350	--	12N A 330 00A	Catch Pan Assembly T350
500	--	12N A 230 00A	Catch Pan Assembly T500
750	--	12N A 130 00A	Catch Pan Assembly T750
1000	--	12N A 030 00A	Catch Pan Assembly T1000

ITEM NO.	DRAWING NO.	PART NO.	DESCRIPTION	T250	T350	T500	T750	T1000
1	12N A 444 01A		Cross Rod Manifold T250	1	-	-	-	-
1	12N A 344 01A		Cross Rod Manifold T350	-	1	-	-	-
1	12N A 244 01A		Cross Rod Manifold T500	-	-	1	-	-
1	12N A 144 01A		Cross Rod Manifold T750	-	-	-	1	-
1	12N A 044 01A		Cross Rod Manifold T1000	-	-	-	-	1
2	12N A 044 02A		Front Cover Plate	1	1	1	1	1
3	12N A 044 03A		Front Cover Gasket	2	2	2	2	2
4	12N A 044 04A		Rear Cover Plate	1	1	1	1	1
5	12N A 044 05A		Plug Nipple Weldment	1	1	1	1	1
6		130817	3/8" SS Elbow, 3000#	1	1	1	1	1
7		1068760	3/8" x 2" Sch. 80 SS304 Nipple	1	1	1	1	1
8		1236962	3/8" x 4" Sch. 80 SS304 Nipple	1	1	1	1	1
9		F8-66-19-2-8	1/4-20 x 1/2" Type F Hex Head Screw, Stainless	8	8	8	8	8
10		H1/8VV-SS6501	VeeJet Nozzle 65 Degree	13	13	13	13	13
11		V3F3-SS	QD Plug Female 4200#, Stainless	1	1	1	1	1



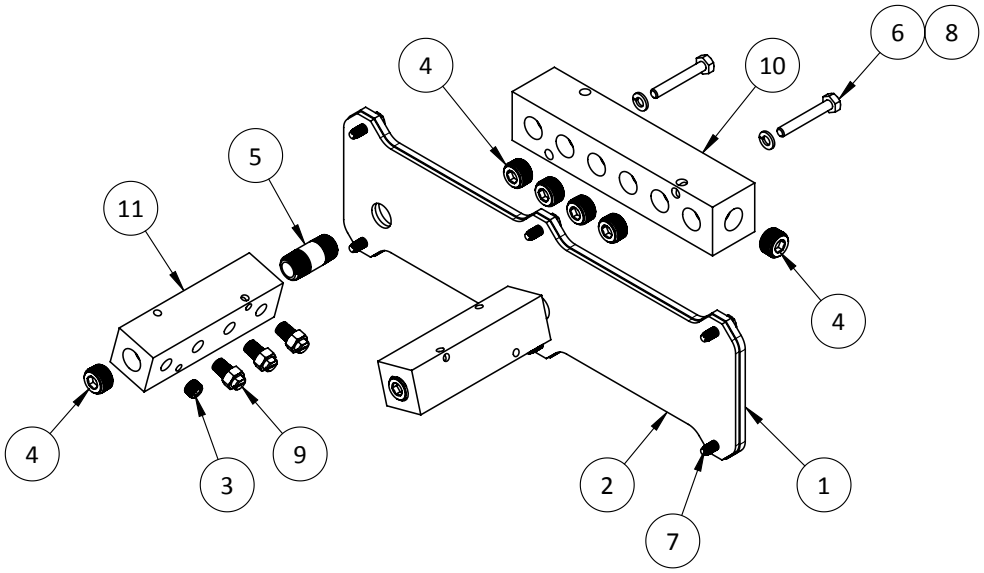
Cross Rod Spray Manifold Assembly			
Conveyor Type	**Part Number**	**Drawing Number**	**Description**
250	--	12N A 444 00A	Cross Rod Spray Manifold Assembly T250
350	--	12N A 344 00A	Cross Rod Spray Manifold Assembly T350
500	--	12N A 244 00A	Cross Rod Spray Manifold Assembly T500
750	--	12N A 144 00A	Cross Rod Spray Manifold Assembly T750
1000	--	12N A 044 00A	Cross Rod Spray Manifold Assembly T1000

ITEM NO.	DRAWING NO.	PART NO.	DESCRIPTION	QTY.
1	12N A 042 01A		Manifold Mount	1
2	12N A 042 02A		Manifold Gasket	1
3		3VM3-SS	QD Coupler Male 4200#, Stainless	1
4		3795K13	Gauge 0-2000psi, Stainless	1
5		4464K561	1/8" Hex Plug, Stainless	2
6		4464K563	3/8" Hex Plug, Stainless	6
7		66723	3/8" to 1/4" Reducing Bushing 3000#, Stainless	1
8		129524	3/8" Threaded Tee 3000#, Stainless	2
9		390230	3/8" SS316 Ball Valve	2
10		1175711	3/8" x 1-1/2" Sch. 80 SS304 Nipple	2
11		1236962	3/8" x 4" Sch. 80 SS304 Nipple	2
12		1241404	3/8" Sch. 80 SS304 Close Nipple	2
13		F8-7-19-2-28	1/4-20 x 1-3/4" Hex Bolt, Stainless	2
14		F8-66-19-2-12	1/4-20 x 3/4" Type F Hex Head Screw, Stainless	6
15		F8-96-19-0-0	1/4" Lock Washer, Stainless	2
16		H1/8VV-SS1501	VeeJet Nozzle 15 Degree	6
17		SA-375-6	6-Outlet 3/8" to 3/8" Manifold 3000#	1
18		SIL-125-4	4-Outlet 3/8" to 1/8" Manifold 3000#	2
19		V3M3-SS	QD Plug Male 4200#, Stainless	1



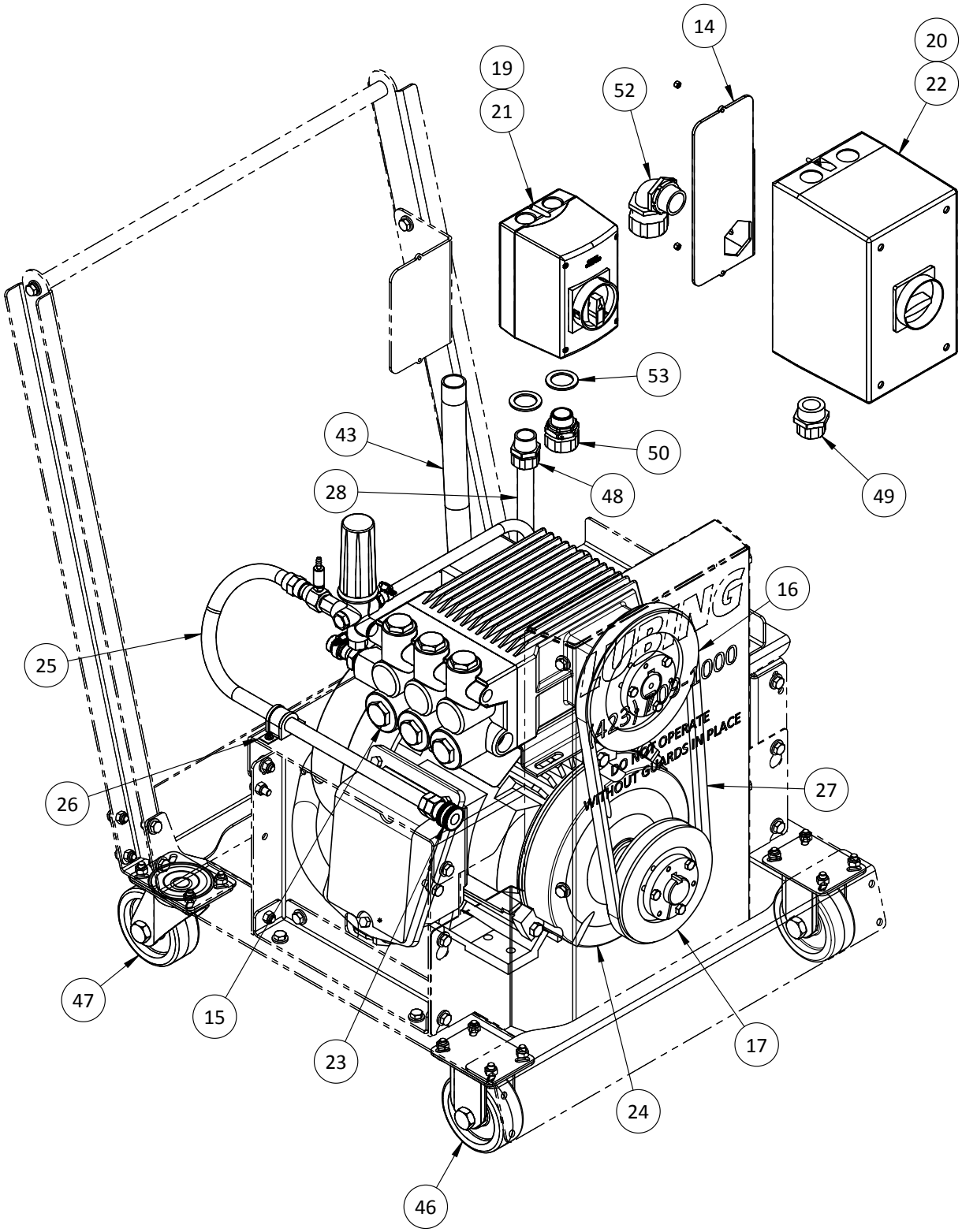
Link Spray Manifold Assembly			
Conveyor Type	**Part Number**	**Drawing Number**	**Description**
250 - 1000	--	12N A 042 00A	Link Spray Manifold Assembly

ITEM NO.	DRAWING NO.	PART NO.	DESCRIPTION	QTY.
1	12N A 042 01A		Manifold Mount	1
2	12N A 042 02A		Manifold Gasket	1
3		4464K561	1/8" Hex Plug, Stainless	2
4		4464K563	3/8" Hex Plug, Stainless	7
5		1175711	3/8" x 1-1/2" Sch. 80 SS304 Nipple	2
6		F8-7-19-2-28	1/4-20 x 1-3/4" Hex Bolt, Stainless	2
7		F8-66-19-2-12	1/4-20 x 3/4" Type F Hex Head Screw, Stainless	6
8		F8-96-19-0-0	1/4" Lock Washer, Stainless	2
9		H1/8VV-SS1501	VeeJet Nozzle 15 Degree	6
10		SA-375-6	6-Outlet 3/8" to 3/8" Manifold 3000#	1
11		SIL-125-4	4-Outlet 3/8" to 1/8" Manifold 3000#	2



Link Spray Manifold Assembly LH			
Conveyor Type	**Part Number**	**Drawing Number**	**Description**
250 - 1000	--	12N A 043 00A	Link Spray Manifold Assembly LH

ITEM NO.	DRAWING NO.	PART NO.	DESCRIPTION	460VAC	208-230VAC
1	12N A 051 01B		Cart Base	1	1
2	12N A 051 02B		Pump Base	1	1
3	12N A 051 03B		Pump Support Channel	2	2
4	12N A 051 04B		Caster Angle	2	2
5	12N A 051 05B		Belt Guard Top Inner	1	1
6	12N A 051 07B		Handle Upright	2	2
7	12N A 051 08B		Belt Guard Bottom	1	1
8	12N A 051 09B		Handle Weldment	1	1
9	12N A 051 10B		Handle Gusset RH	1	1
10	12N A 051 11B		Handle Gusset LH	1	1
11	12N A 051 12B		Pump Support Angle	3	3
12	12N A 051 13B		Tensioner Angle	1	1
13	12N A 051 14B		Starter Bracket 480v	1	-
14	12N A 051 15B		Starter Bracket 208/240v	-	1
15	12N A 052 00B		Pump Piping Assembly	1	1
16	12N A 053 00B		Pump Pulley Assembly	1	1
17	12N A 054 00B		Motor Pulley Assembly	1	1
18		3LK92	Sealing Ring 1"	-	3
19		3RV1021-4AA10	Motor Starter Protector 11A-16A 10hp 460VAC Size 0	1	-
20		3RV1031-4EA10	Motor Starter Protector 22A-32A 10hp 208-230VAC Size 2	-	1
21		3RV1923-1DA00	MSP Enclosure 460VAC Size 0	1	-
22		3RV1933-1DA00	MSP Enclosure 208-240VAC Size 2	-	1
23		3VF3-SS	QD Coupler, Female 4200#	1	1
24		0104SDSR41A-P	Motor 10hp 3ph 208-230/460VAC TEFC 1800rpm	1	1
25		8646T10	Hydraulic Hose, 10-ft, 3/8" MNPT Rigid, 1600psi	1	1
26		8981T31	Vibration Damping Clamp 11/16"	1	1
27		BP42	Predator V-Belt	1	1
28		CORD 10/4 SO*	Type SO/SJ 4 #10 AWG Wire (UOM = FT)	10	-
28		HOU 8/4C SO Cord*	#8 4Conductor SO Cord (UOM = FT)	-	10
29		F8-7-48-2-161	M8 x 20 Hex Bolt, Stainless	46	46
30		F8-7-48-2-166	M8 x 25 Hex Bolt, Stainless	14	14
31		F8-7-50-2-176	M10 x 35 Hex Bolt, Stainless	8	8
32		F8-15-48-2-0	M8 Acorn Nut, Stainless	1	1
33		F8-29-44-2-0	M4 Nylock Nut, Stainless	4	4
34		F8-29-48-2-0	M8 Nylock Nut, Stainless	60	60
35		F8-29-50-2-0	M10 Nylock Nut, Stainless	8	8
36		F8-73-44-2-152	M4 x 12 SHCS, Stainless	4	2
37		F8-73-44-2-157	M4 x 16 SHCS, Stainless	-	2
38		F8-92-44-0-0	M4 Flat Washer, Stainless	2	4
39		F8-92-48-0-0	M8 Flat Washer, Stainless	65	65
40		F8-92-50-0-0	M10 Flat Washer, Stainless	16	16
41		F8-96-48-0-0	M8 Lock Washer, Stainless	2	2
42		F9-7-48-2-201	M8 x 60mm Hex Bolt Full Thread, Zinc	2	2
43		FLX 3/4 ULLT 100*	3/4" Liquid-Tight Armored Flex (UOM = FT)	3	-
43		FLX 1 ULLT 100*	1" Liquid-Tight Armored Flex (UOM = FT)	-	3
44		HOU 8MTW BLACK*	#8 Strand MTW Black (UOM = FT)	12	12
45		HOU 8MTW Green*	#8 Strand MTW Green (UOM = FT)	4	4
46		R-HL-4A	Rigid Caster	2	2
47		S-HL-4A	Swivel Caster	2	2
48		TNB 2535	3/4" Cord Grip, 5/8" - 3/4" Range	1	-
49		TNB 2545	1" Cord Grip, 5/8" to 3/4" Range	-	1
50		TNB 5233	3/4" Straight Seal-Tite Connector	1	-
51		TNB 5253	3/4" 90 Degree Seal-Tite Connector	1	1
52		TNB 5254	1" Liquid-Tight 90 Degree Fitting	-	2
53		TNB 5263	Sealing Ring 3/4"	3	-
54		TNB RB 132	1" to 3/4" Face Bushing, Steel	1	-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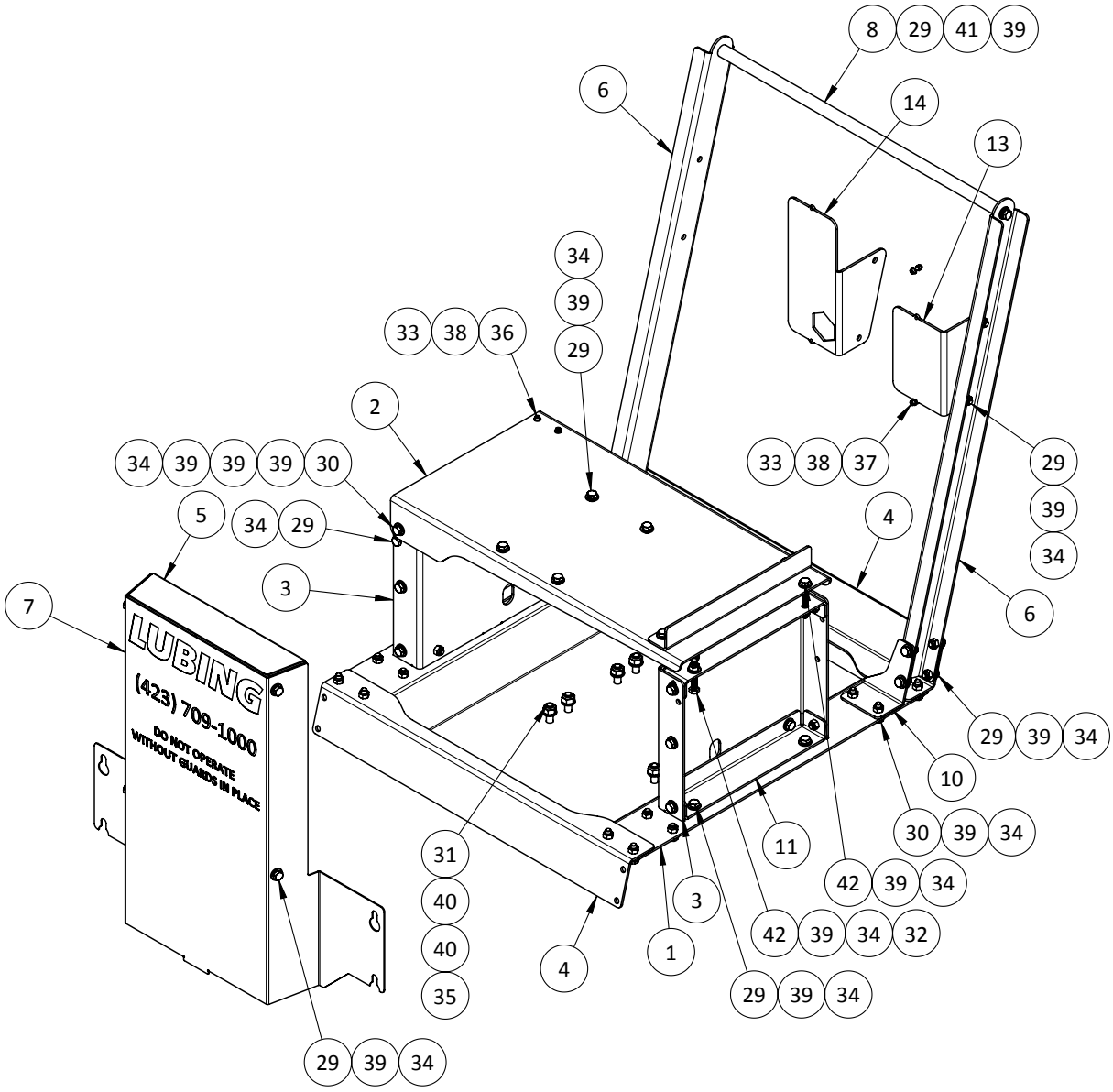
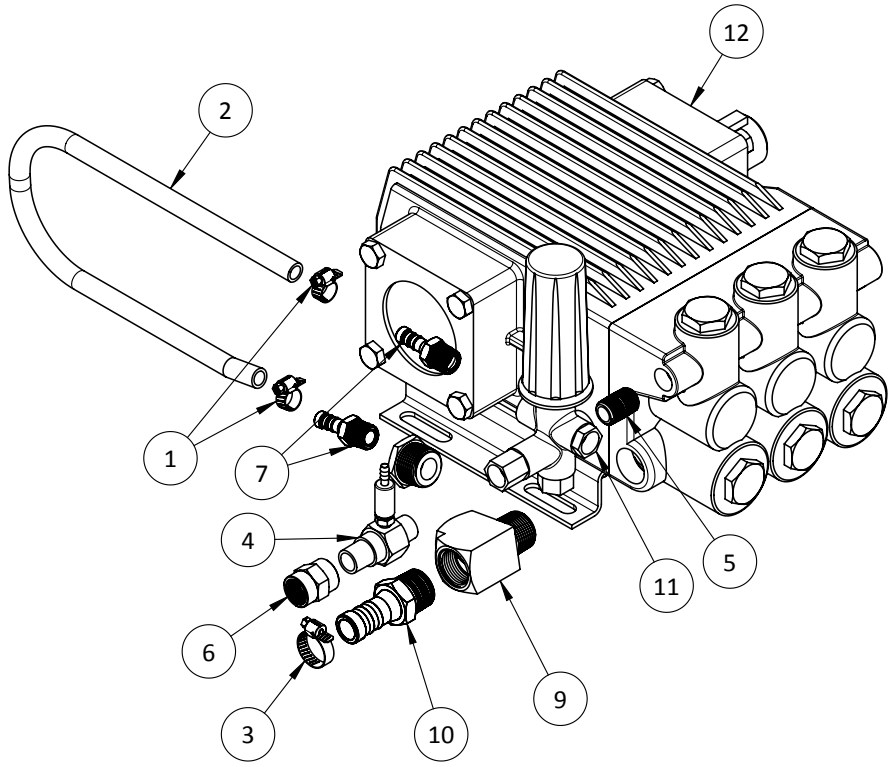
DO NOT OPERATE
WITHOUT GUARDS IN PLACE

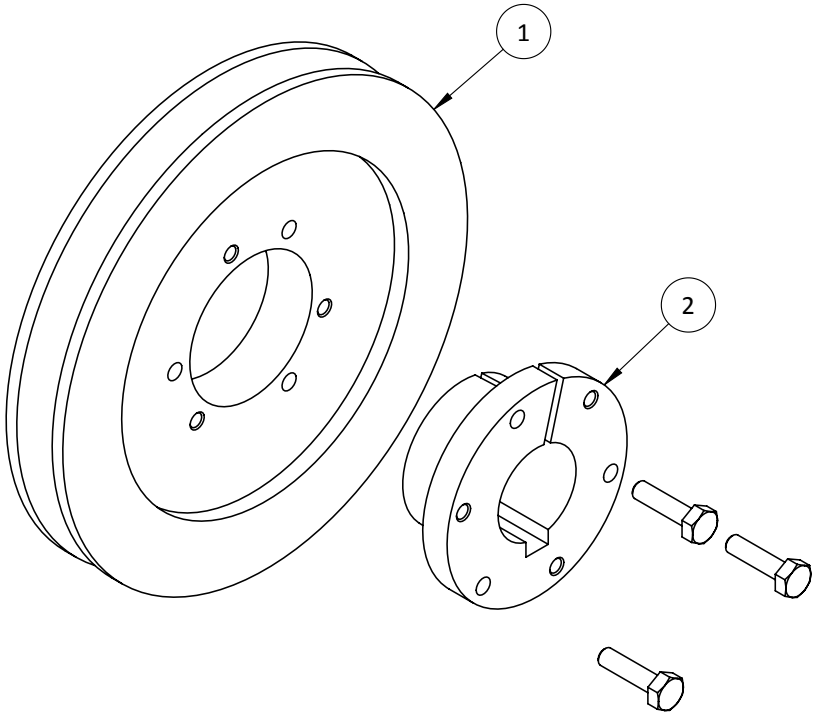

LUBING
(423) 709-1000
DO NOT OPERATE
WITHOUT GUARDS IN PLACE

ITEM NO.	DRAWING NO.	PART NO.	DESCRIPTION	QTY.
1		5321K16	#6 SAE Hose Clamp, Stainless	2
2		52375K42	5/16" I.D. Hose, Reinforced Clear PVC (UOM = FT)	2
3		54155K14	#12 SAE Hose Clamp, Stainless	1
4		100813	Chemical Injector	1
5		1093425	3/8" Sch. 80 Brass Close Nipple	1
6		1196748	3/8" Brass Coupling, 3000#	1
7		1196749	3/8" NPT to 5/16" Hose Barb Fitting, Brass	2
8		1196750	3/4" to 3/8" Brass Reducing Bushing, 150#	1
9		1196752	3/4" Male to Female to Female Tee, Brass	1
10		1196754	Brass Barb Fitting, 3/4" NPT to 3/4" Barb	1
11		PULSAR4KHP	Unloader Valve, 7.8gpm, 4000psi (max)	1
12		TS1041	Piston Pump, 1450rpm, 1600psi, 8gpm	1



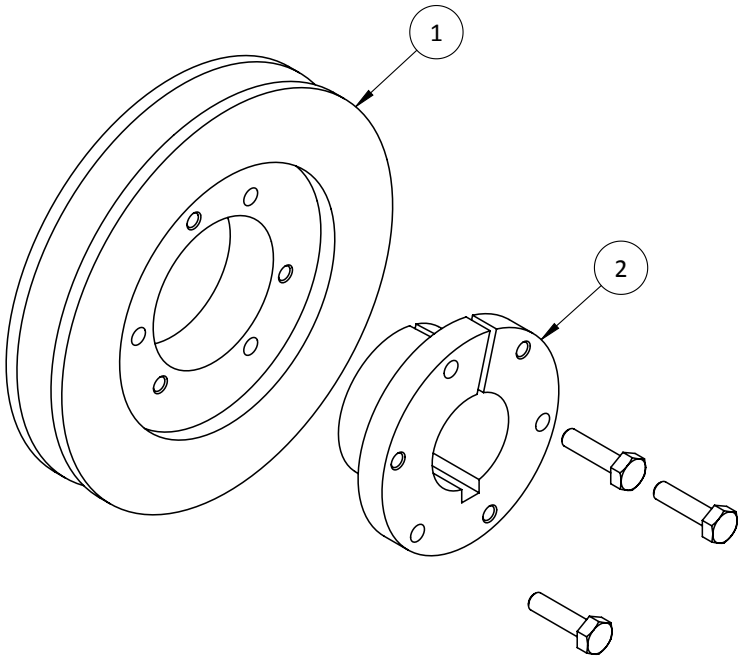
Pump Piping Assembly			
Conveyor Type	**Part Number**	**Drawing Number**	**Description**
250 - 1000	--	12N A 052 00B	Pump Piping Assembly

ITEM NO.	DRAWING NO.	PART NO.	DESCRIPTION	QTY.
1		QD1A6.4/B6.8	V-Belt Sheave	1
2		SDS 35mm	QD Bushing 35mm	1



Pump Pulley Assembly			
Conveyor Type	**Part Number**	**Drawing Number**	**Description**
250 - 1000	--	12N A 053 00B	Pump Pulley Assembly

ITEM NO.	DRAWING NO.	PART NO.	DESCRIPTION	QTY.
1		QD1A5.2/B5.6	V-Belt Sheave	1
2		SDS 1-3/8"	QD Bushing 1-3/8"	1



Motor Pulley Assembly			
Conveyor Type	**Part Number**	**Drawing Number**	**Description**
250 - 1000	--	12N A 054 00B	Motor Pulley Assembly

SECTION 3 ASSEMBLY AND INSTALLATION

Preparing for Installation

1. Installations typically occur, but are not limited to, the process area. Lubing Systems does not recommend installation near walkways where slip hazards are a concern or on floor surfaces where water damage could occur.
2. If multiple Spray Cabinets are to be installed and are intended to share one Pump Cart, choose a location where the conveyors come into close proximity with one another to decrease the distance of travel required to attach the Pump Cart.
3. Consider the location of drains, electrical connections, and water supply when placing the Spray Cabinet(s).
4. Spray Cabinets can be installed level or at an incline or decline angle up to 10 degrees maximum.

   CAUTION: ANY ANGLE INCREASES THE CHANCE OF OVERSPRAY AND POTENTIAL FOR DRIPPING.

5. Spray Cabinets can be supported via Floor Supports (not included) or suspended.

   CAUTION: IF SUSPENDING, SPRAY CABINET WEIGHT MUST BE CONSIDERED ALONG WITH ANY STATE, LOCAL, OR OTHER BUILDING CODES. ANY POTENTIAL DEBRIS ACCUMULATING WITHIN THE SPRAY CABINET MUST ALSO BE CONSIDERED WHEN CALCULATING WEIGHT.

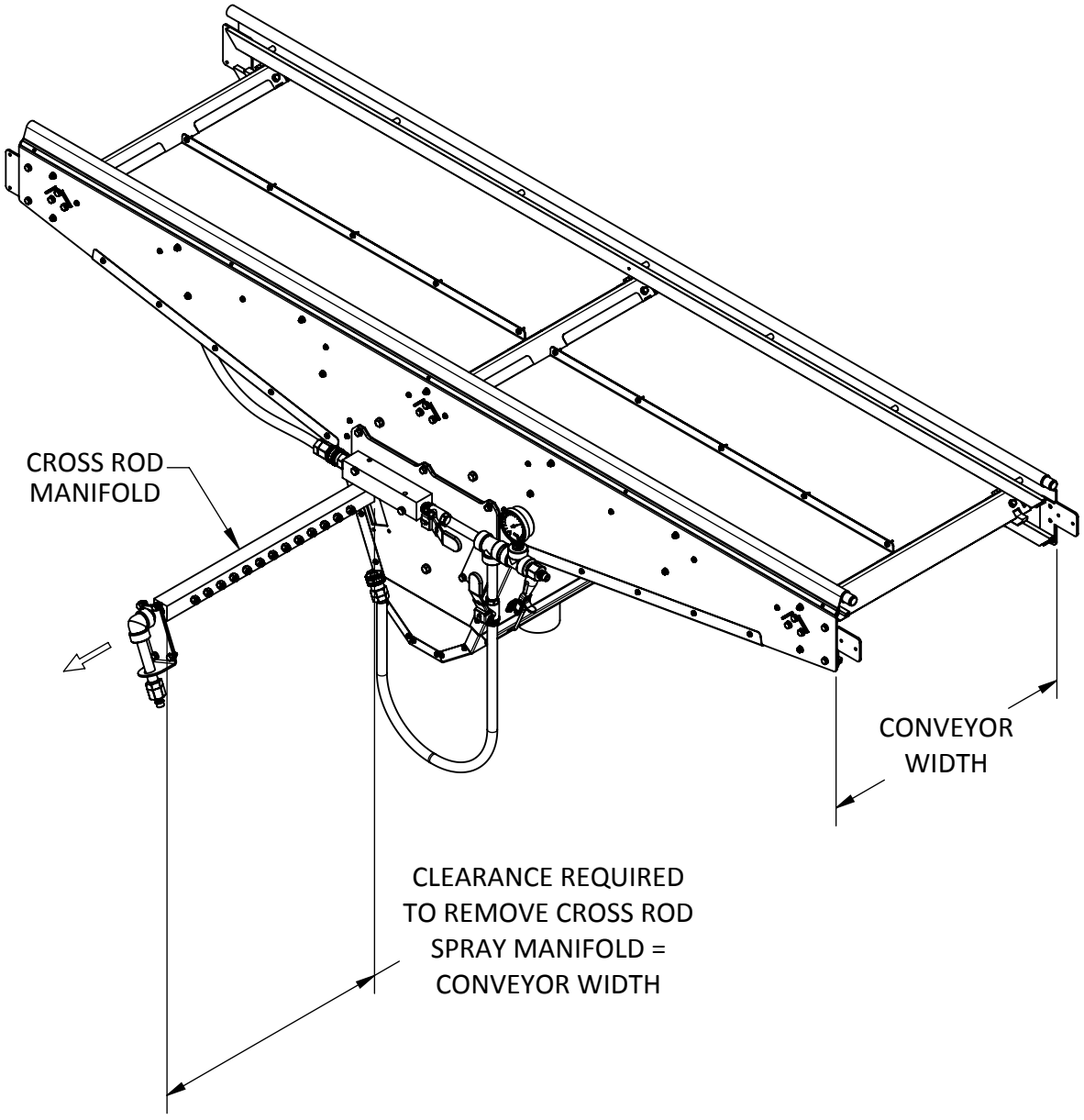
6. When suspending overhead, avoid high-traffic areas where slip hazards could occur.
7. The incoming water supply should be 3/4” (20mm) minimum to prevent pump starvation (cavitation) and should be as short and straight as possible to the Pump Cart.

   Note: Excessive distances may decrease the performance of the pump.

Verifying Clearances

8. When locating a Spray Cabinet, verify clearance to remove the Cross Rod Manifold.

   Note: The required clearance for Cross Rod Manifold removal is equal to the conveyor width.

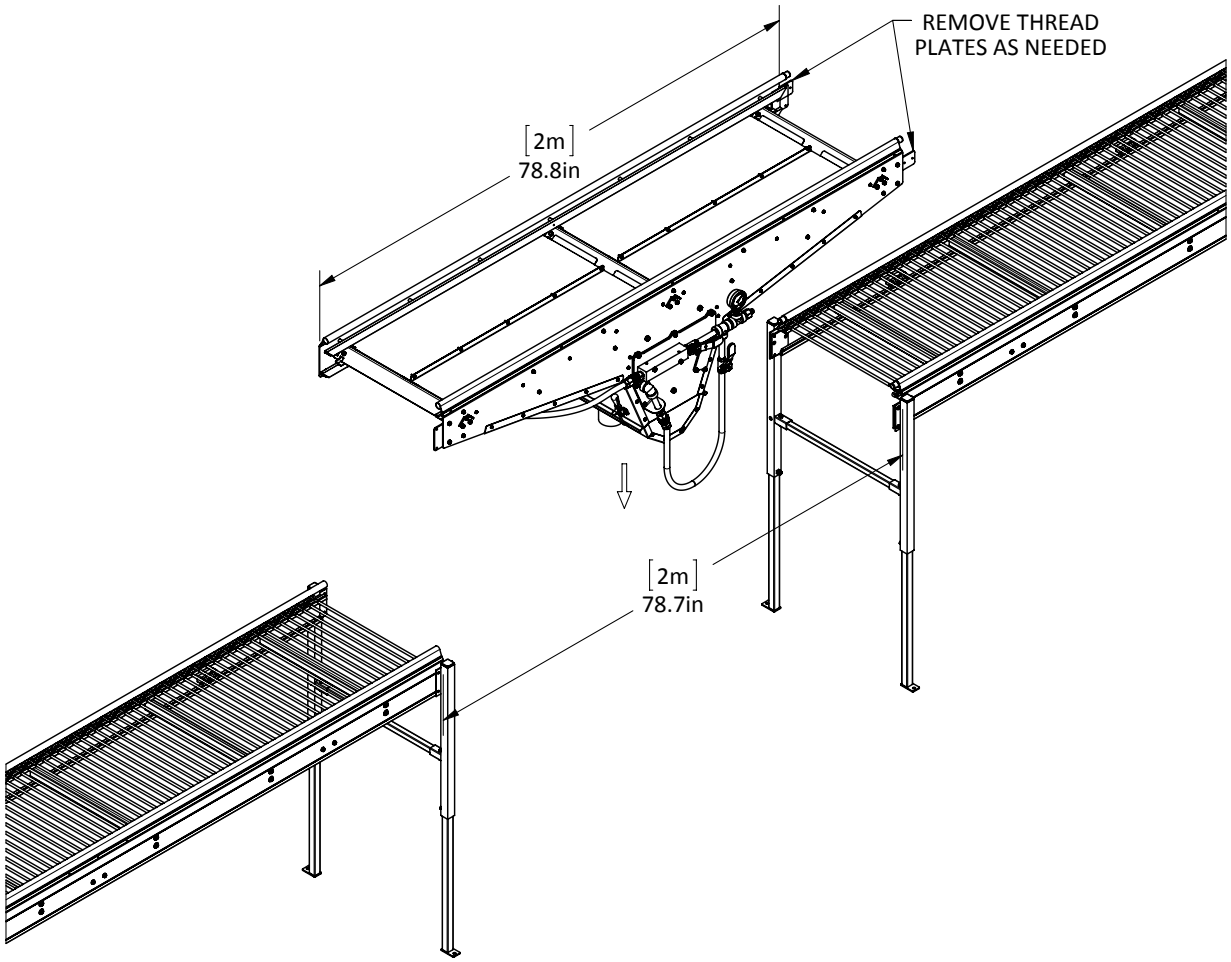


9. The Spray Cabinet length was designed as a drop-in replacement for standard 2 meter Connecting Parts or, with an additional 1 meter Connecting Part, replacement of a 3 meter Connecting Part. The following views illustrate each scenario.

Replacing a 2 meter Connecting Part

10. The following view illustrates the replacement of a 2 meter Connecting Part. Remove the chain on the top and bottom side of the conveyor to allow adequate access to the intended area.

    Note: Due to the routing of chain through the bottom of the Spray Cabinet, additional chain may be required to complete installation. Refer to the *Curve Conveyor Installation Manual* for any procedures affecting any other components within the system.

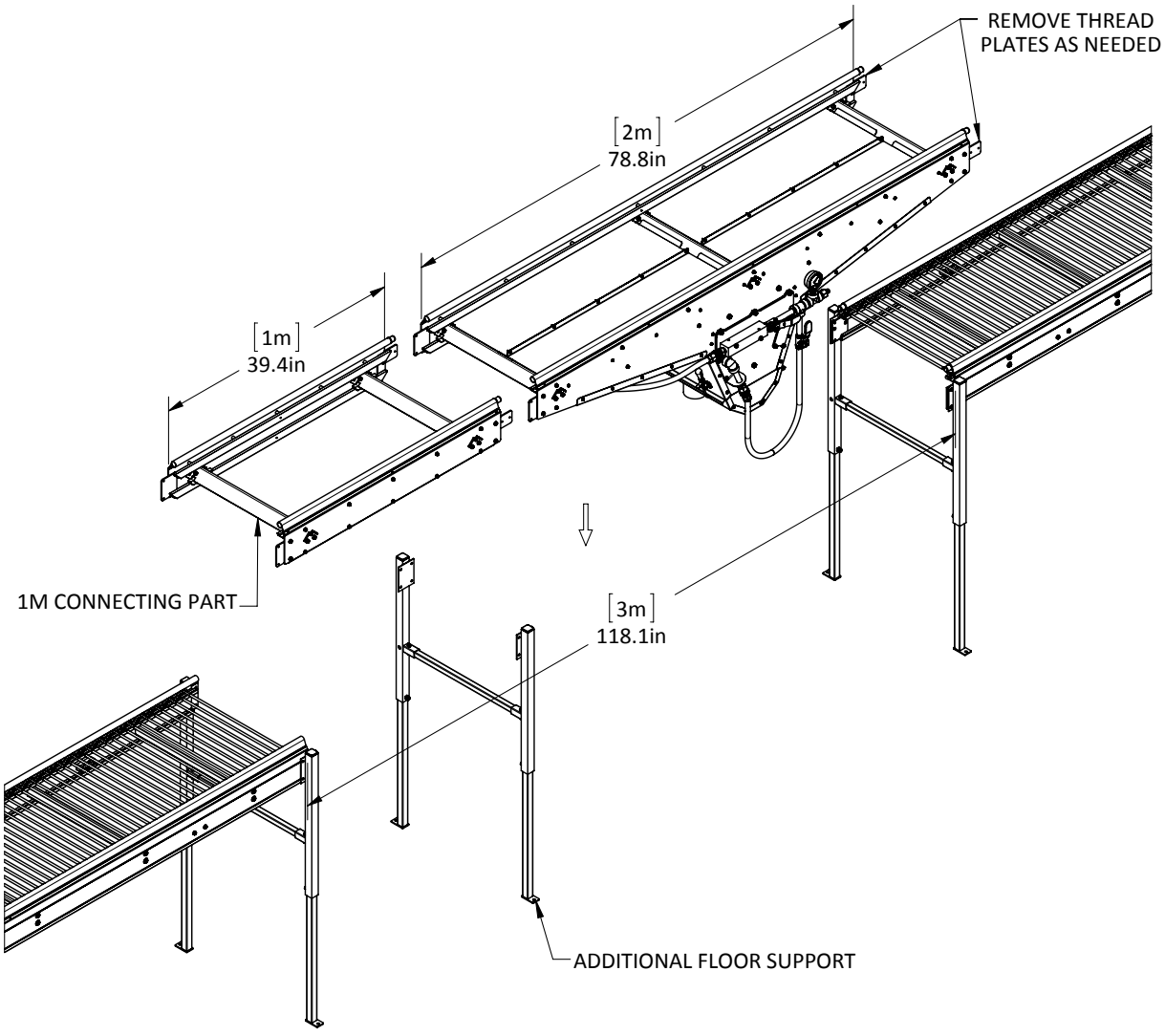


Replacing a 3 meter Connecting Part

11. Due to the 2 meter length of the Spray Cabinet, an additional 1 meter Connecting Part will be required when replacing a 3 meter Connecting Part. This may be obtained by the use of a standard 1 meter Connecting Part, stainless 1 meter Connecting Part, or modifying the length of the Connecting Part removed.

    Note: Refer to the *Curve Conveyor Installation Manual* for steps to modify Connecting Part lengths.

    Note: Due to the routing of chain through the bottom of the Spray Cabinet, additional chain may be required to complete installation. Refer to the *Curve Conveyor Installation Manual* for any procedures affecting any other components within the system.



Installing Multiple Spray Cabinets

12. Spray Cabinets can be installed in various configurations based on the access required for each conveyor system. Review the following *Staggered* and *Opposing* Installation scenarios to determine the best configuration for accessibility and servicing the Spray Cabinets.

    Note: Some installations may require a combination of Staggered and Opposing configurations to provide the best access for servicing all Spray Cabinets.

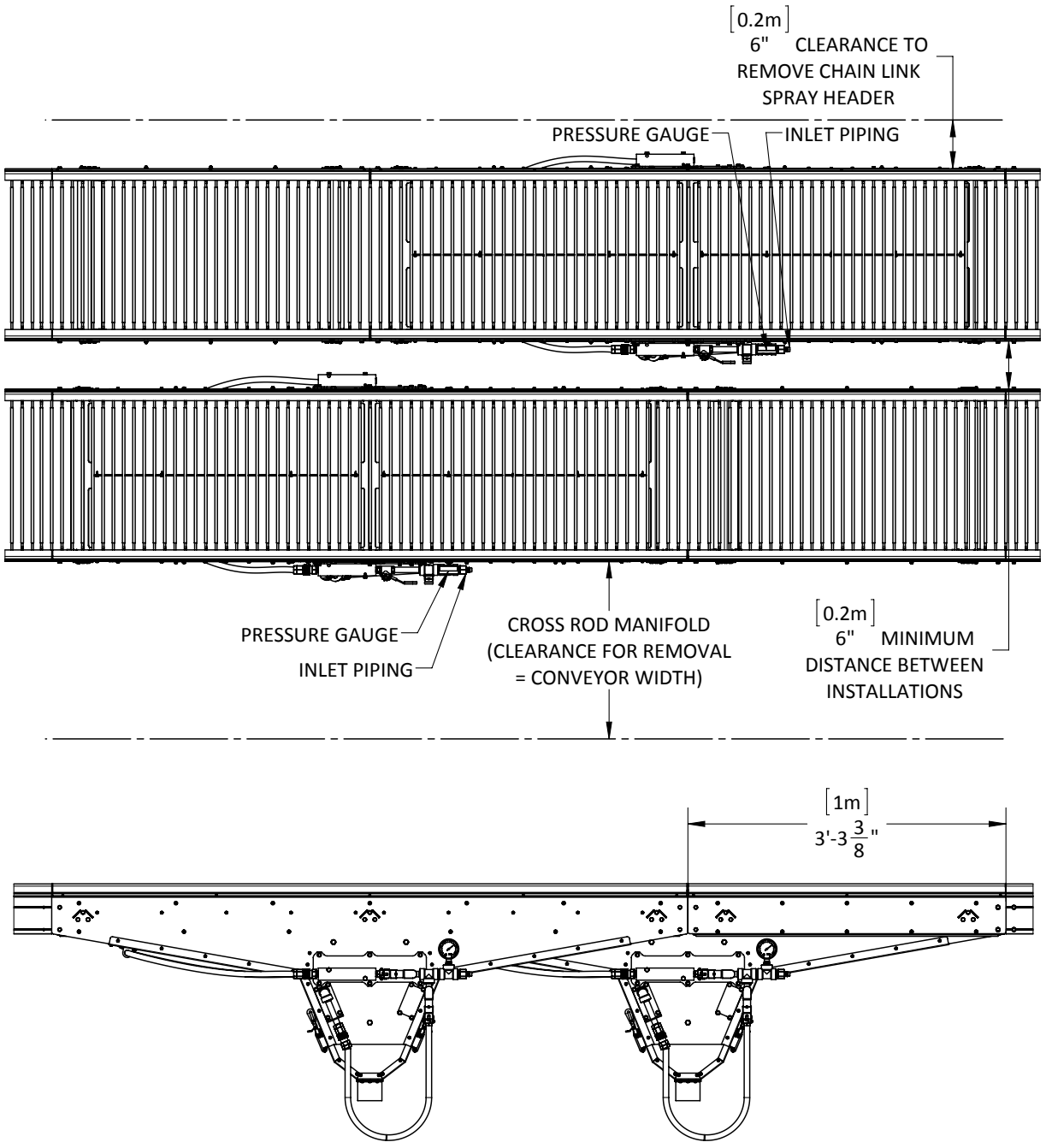
    Note: Any mounting should always provide good visibility to the Pressure Gauge.

Staggered Installations

13. If access to the Inlet Piping and Pressure Gauges must be achieved from one side of the conveyors, follow the steps for Staggered Installations.

    Note: Spray Cabinets can be spaced further apart, the following views illustrate the minimum distances for adequate clearances to service the Spray Cabinets.

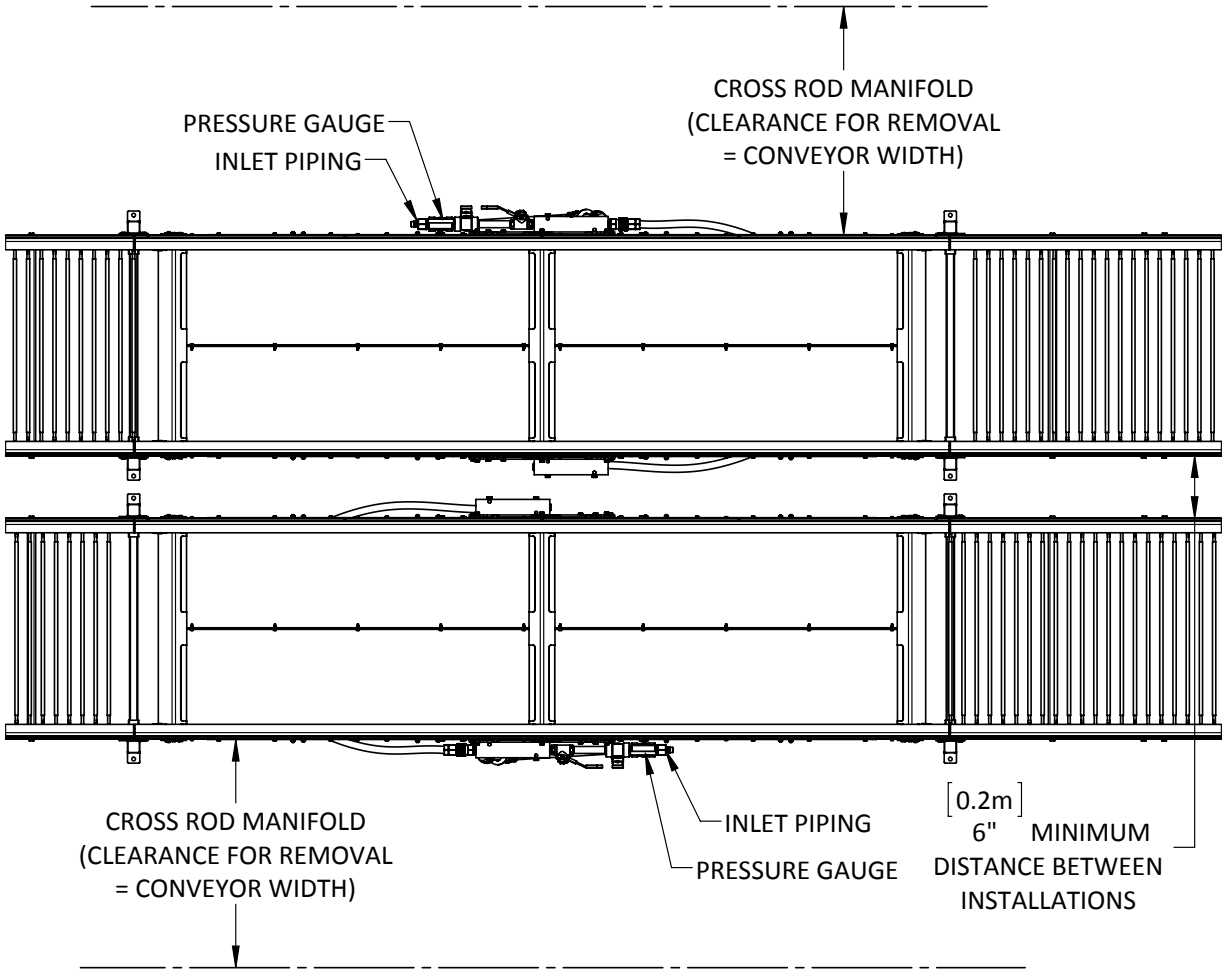
14. When installing staggered Spray Cabinets, stagger locations by approx. 3’ (1m) minimum to allow access to the Spray Headers, Valves, and Pressure Gauges.

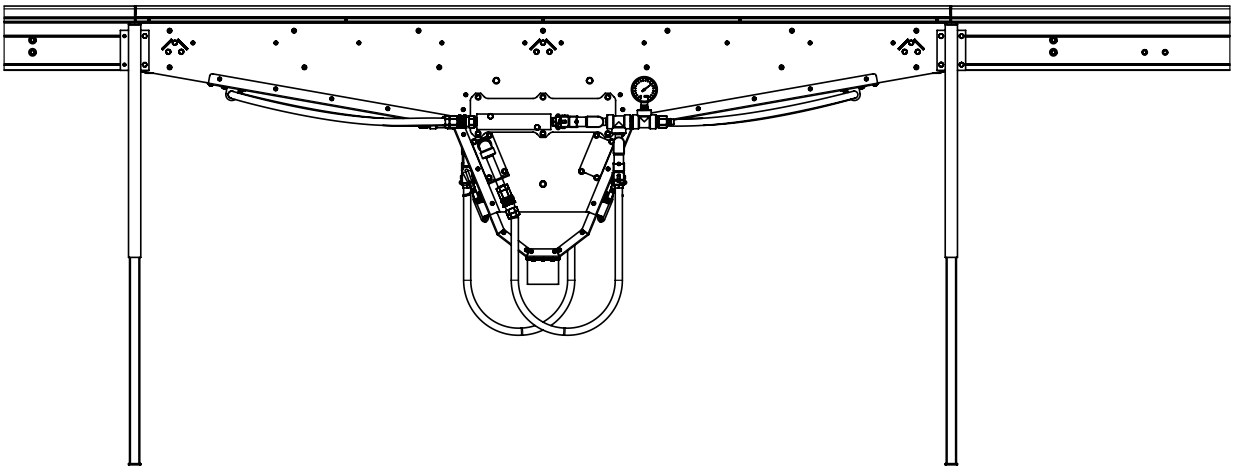


Opposing Installations

15. When desiring to access the Inlet Piping and Pressure Gauges from the outside of each conveyor, follow the steps for Opposing Installations.

    Note: Spray Cabinets can be spaced further apart, the following views illustrate the minimum distances for adequate clearances to service the Spray Cabinets.

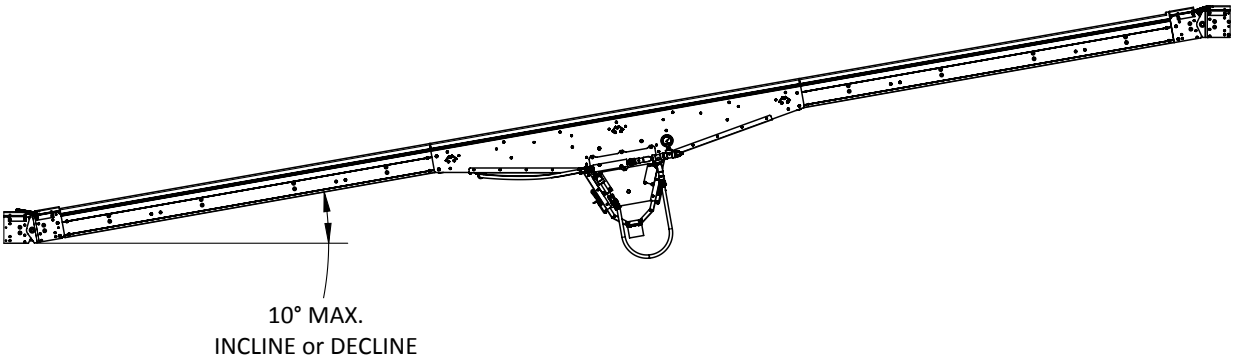

CROSS ROD MANIFOLD
(CLEARANCE FOR REMOVAL
= CONVEYOR WIDTH)
PRESSURE GAUGE
INLET PIPING
CROSS ROD MANIFOLD
(CLEARANCE FOR REMOVAL
= CONVEYOR WIDTH)
INLET PIPING
PRESSURE GAUGE
[0.2m]
6" MINIMUM
DISTANCE BETWEEN
INSTALLATIONS



Angled Installations

16. The following view illustrates the maximum angles of incline or decline that can be achieved when installing a Spray Cabinet.

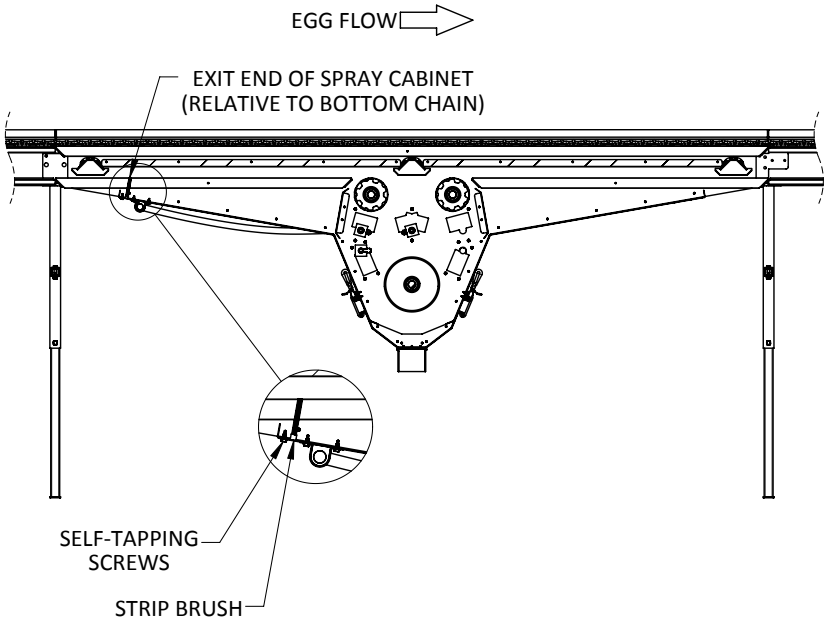
    CAUTION: ANY ANGLE INCREASES THE CHANCE OF OVERSPRAY OR DRIPPAGE THAT MAY OCCUR. WHEN INSTALLING OVERHEAD, HIGH-TRAFFIC AREAS SHOULD BE AVOIDED WHERE SLIP HAZARDS COULD OCCUR.



Locating the Strip Brush

17. Once installed into the conveyor system, verify the Strip Brush is located on the exit end of the Spray Cabinet (relative to bottom chain). If not, remove the Self-tapping screws securing the Strip Brush and relocate to the provided holes on the opposite end of the Spray Cabinet.

    Note: The Strip Brush is intended to remove water droplets from the Cross Rods of the Chain before exiting the Spray Cabinet to decrease the amount of water falling from the chain onto the floor.



Electrical Power and Water Supply

18. As discussed previously in the *Preparing for Installation Section*, the area chosen must provide easy access to electrical power, water, and drainage. The following view illustrates the correct practices for the appropriate utilities.

    CAUTION: VIEW IS FOR REFERENCE ONLY, ALL UTILITIES MUST BE INSTALLED BY A QUALIFIED ELECTRICIAN IN A MANNER THAT SATISFIES ALL LOCAL, STATE, AND NATIONAL CODES.

    Note: The Pump Cart ships pre-wired from the factory for the requested voltage.

    Note: The Pump Cart is shipped with a 10’ (3m) long Power Cord that is intended for wiring into an electrical disconnect provided by the customer, however, if desired, the customer may elect to supply the required components to power the Pump Cart with the appropriate plug and receptacle.

    Note: The customer is responsible for ensuring all electrical devices are sized accordingly. Refer to the *Electrical Specifications Chart* in this manual for voltage, current, etc.

    CAUTION: EXTENDING THE POWER CORD LENGTH IS NOT RECOMMENDED DUE TO VOLTAGE DROP.

19. The Pump Cart is provided with an Inlet Water Supply hose barb and hose clamp to accept a customer-supplied 3/4” (20mm) Water Supply Hose.

    Note: The Inlet Water Supply should be capable of supplying a continuous steady flow of eight (8) gallons per minute (30 liters per minute) to the pump. Prior to start-up, this supply should be verified to prevent pump starvation (cavitation) which may result in damage to the pump.

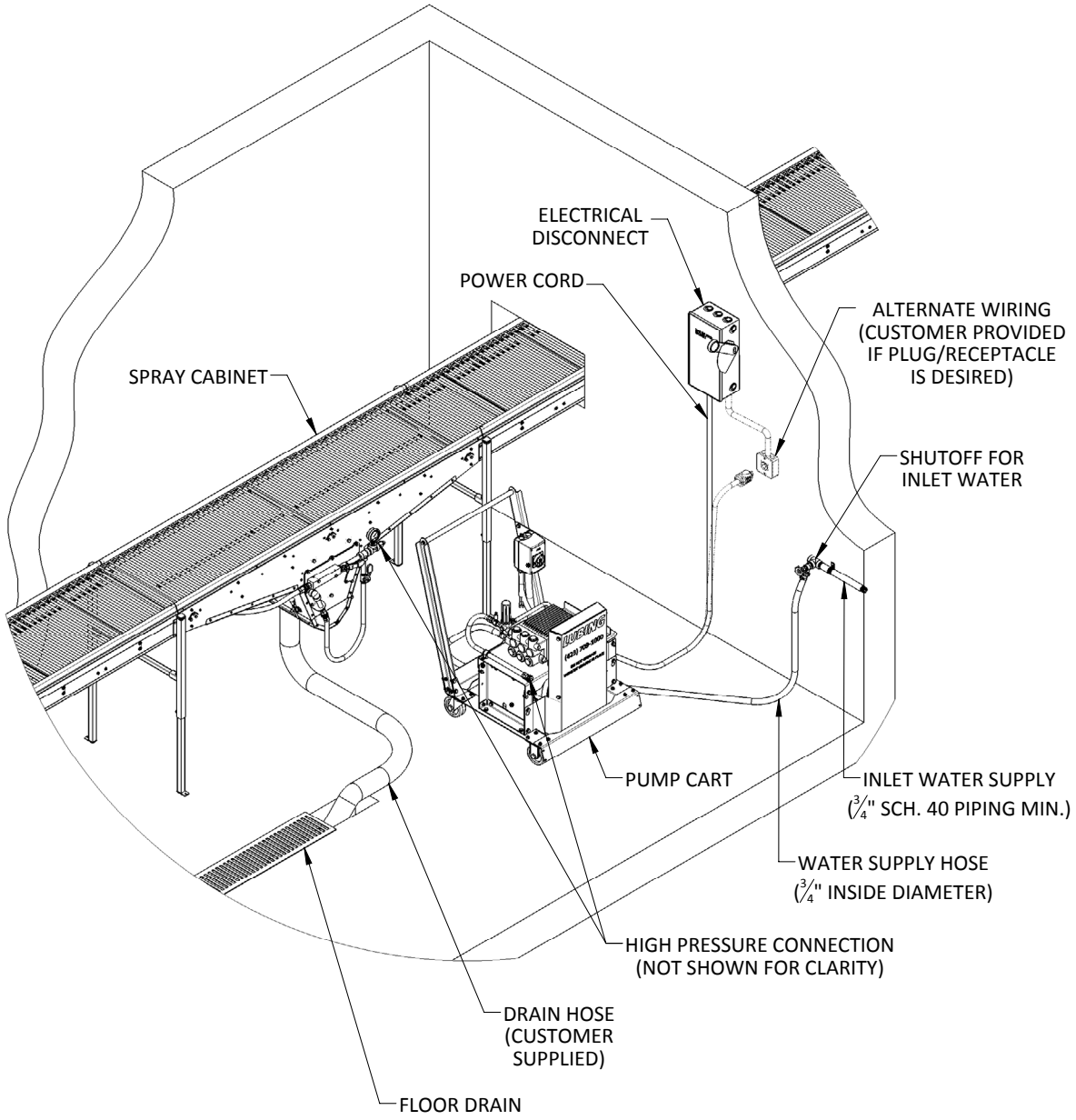
    Note: A shutoff valve is recommended for the Inlet Water Supply for pump servicing.

    Note: The Water Supply Hose should be as short and straight as possible. Excessive length and/or changes in direction can effect pump performance.

20. If desired, a customer supplied 3” (75mm) Drain Hose may be attached to the Catch Pan to direct water and debris to a Floor Drain.
21. The Pump Cart is provided with a 10’ (3m) High Pressure Connection with a quick-disconnect fitting for attachment to the Spray Cabinet and ease of connection when sharing a single Pump Cart between multiple Spray Cabinets.

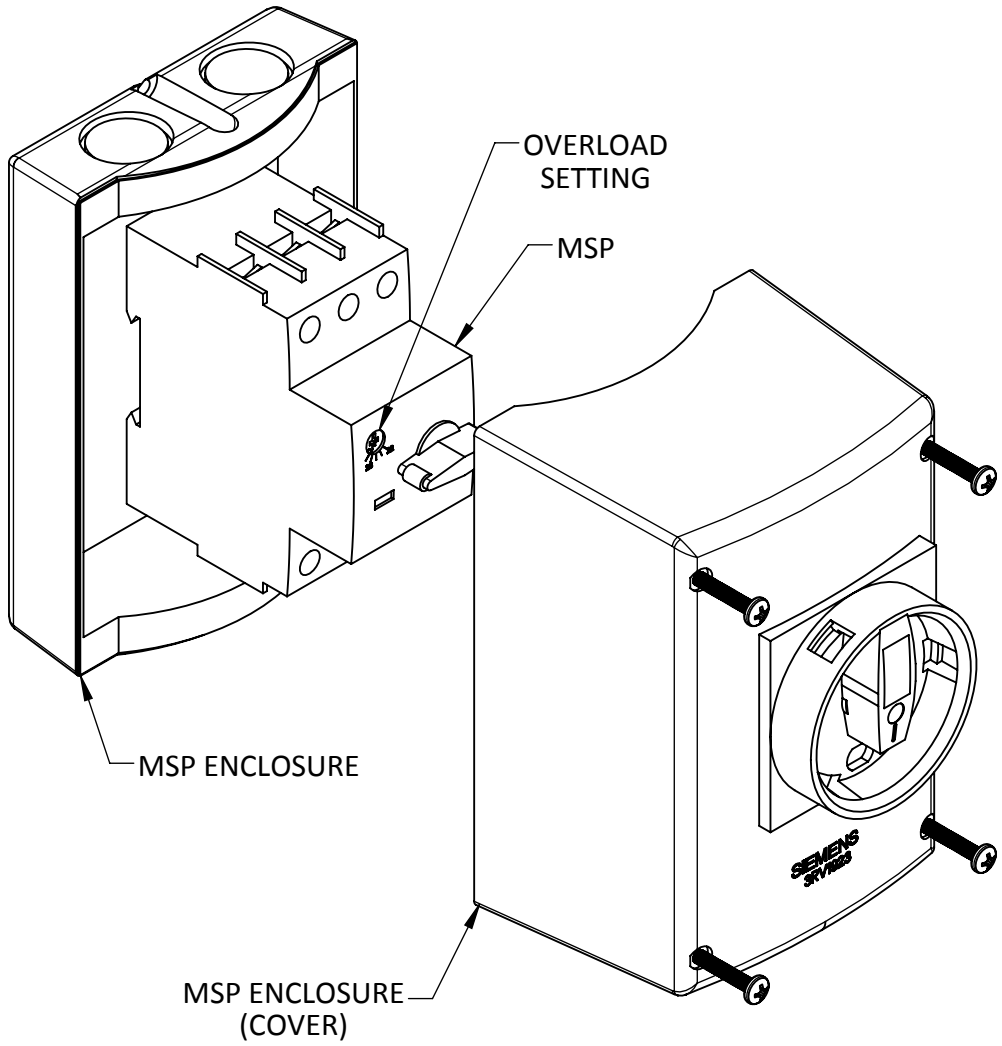
    Note: All pressures and electrical specifications noted in this manual are based on the provided 10’ (3m) Power Cord and High Pressure Connection lengths.

    Note: If installation requires additional length, lengthen the high pressure hose. This can be accomplished by ordering additional 10’ (3m) high pressure hoses and joining together or having a custom length high pressure hose assembled by a local hydraulic hose supplier.


ELECTRICAL DISCONNECT
POWER CORD
ALTERNATE WIRING (CUSTOMER PROVIDED IF PLUG/RECEPTACLE IS DESIRED)
SPRAY CABINET
SHUTOFF FOR INLET WATER
PUMP CART
INLET WATER SUPPLY (¾" SCH. 40 PIPING MIN.)
WATER SUPPLY HOSE (¾" INSIDE DIAMETER)
HIGH PRESSURE CONNECTION (NOT SHOWN FOR CLARITY)
DRAIN HOSE (CUSTOMER SUPPLIED)
FLOOR DRAIN

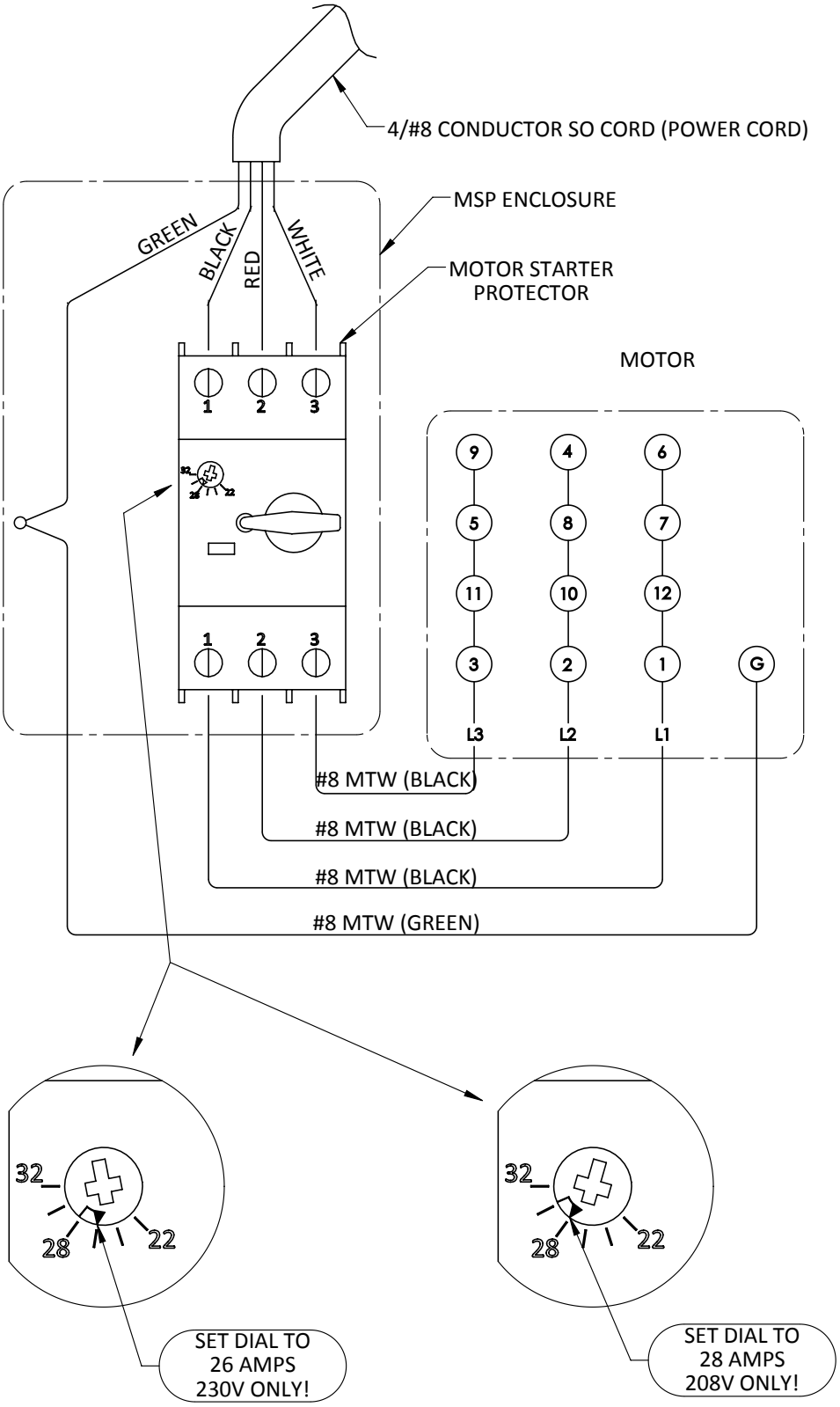
Electrical Schematics & Motor Overload Settings

22. Before operating the Pump, remove the cover of the MSP Enclosure and verify the Overload Setting is correct for your installation by loosening the (4) Phillips Head screws.

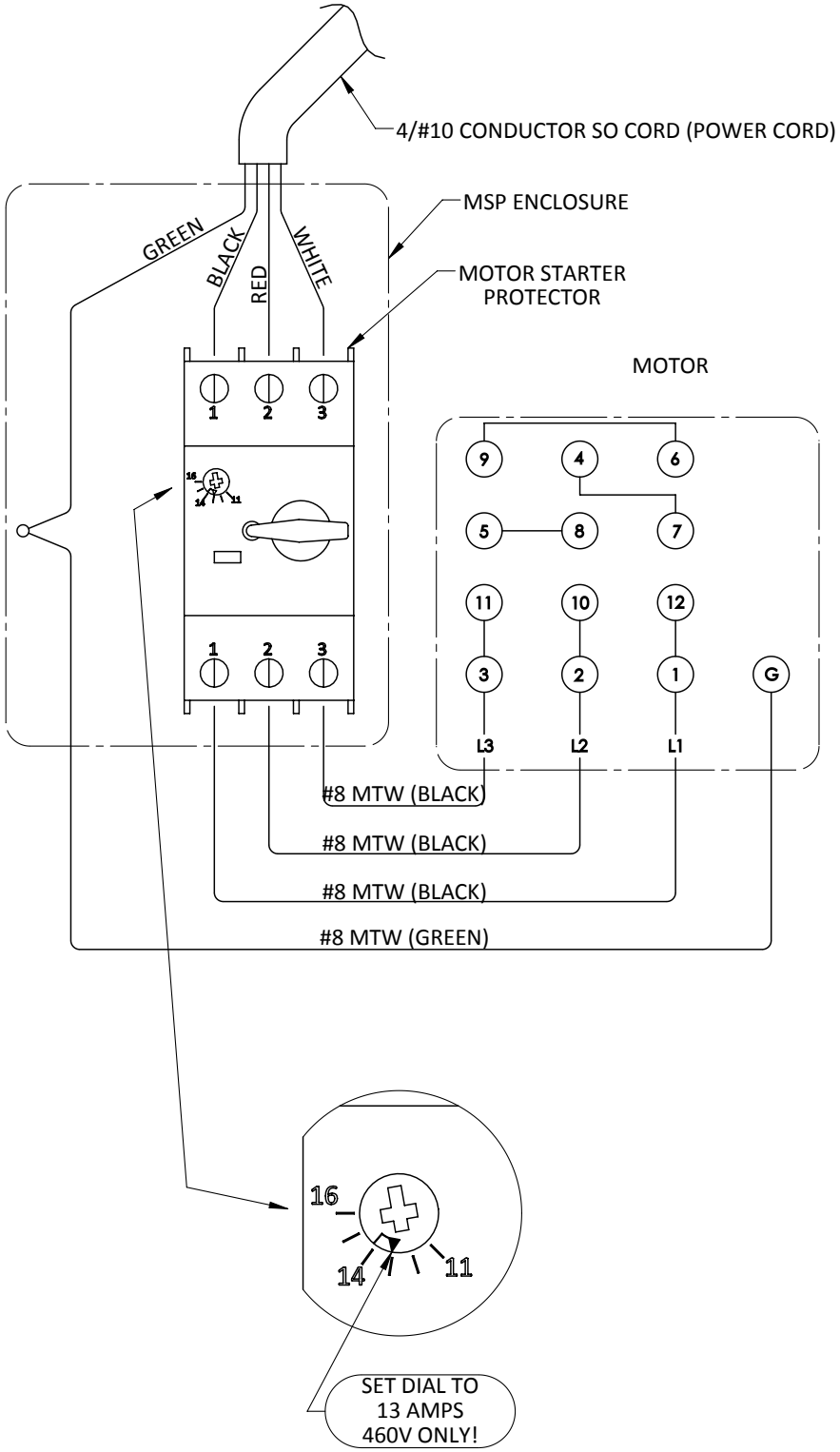


23. Once the cover is removed, locate the Overload Setting and refer to the following views for the proper settings for 208, 230, and 460 volt AC power.
24. The following views also illustrate the wiring of the Power Cord.

208/230 Volt Wiring & Overload Settings



460 Volt Wiring & Overload Settings



SECTION 4 START-UP AND TROUBLESHOOTING

System Start-up

Personal and Equipment Safety

1. Be sure to wear all necessary *Personal Protective Equipment* (PPE) prior to beginning any work.
2. Always observe all *Lockout-Tagout* procedures prior to performing any work on the system.
3. All safety systems should be tested and verified for correct operation before starting the system.
4. All electrical systems should be tested and verified for correct operation before starting the system.

Verifying Installation

1. If applicable, verify the installation to the provided layout.
2. All components should be securely anchored into the appropriate position.
3. If the Spray Cabinet is part of a new installation, refer to the *Curve Conveyor Installation Manual's Start-up and Troubleshooting Section* before proceeding.
4. Once the Spray Cabinet is installed, but before operating with water, run the conveyor and check for any issues as the chain passes through the unit. Correct any issues before proceeding with start-up.

   Note: The conveyor chain transports the required lubrication to the top and bottom chain sliding surfaces. If installing the Spray Cabinet on a new installation, allow adequate operation of the system to apply lubrication to the entire length before operating the Spray Cabinet.

Start-up Checklist

1. If the Spray Cabinet is part of a new installation, refer to the *Curve Conveyor Manual's Start-up and Troubleshooting Section* before proceeding.
2. Inspect the work area for loose or foreign objects. Remove if present.
3. Ensure all slack has been removed from the system at the tensioners.
4. Verify the chain is oriented correctly and in its proper track on the top and bottom side of the Spray Cabinet.

Preparing the Pump for Start-up

1. After any Spray Cabinet(s) are installed into the conveyor system and all *Start-up and Break-In Procedures* are performed on the conveyor system, prepare the Pump for Start-up.

   The following view illustrates the proper steps and order for safe start-up.

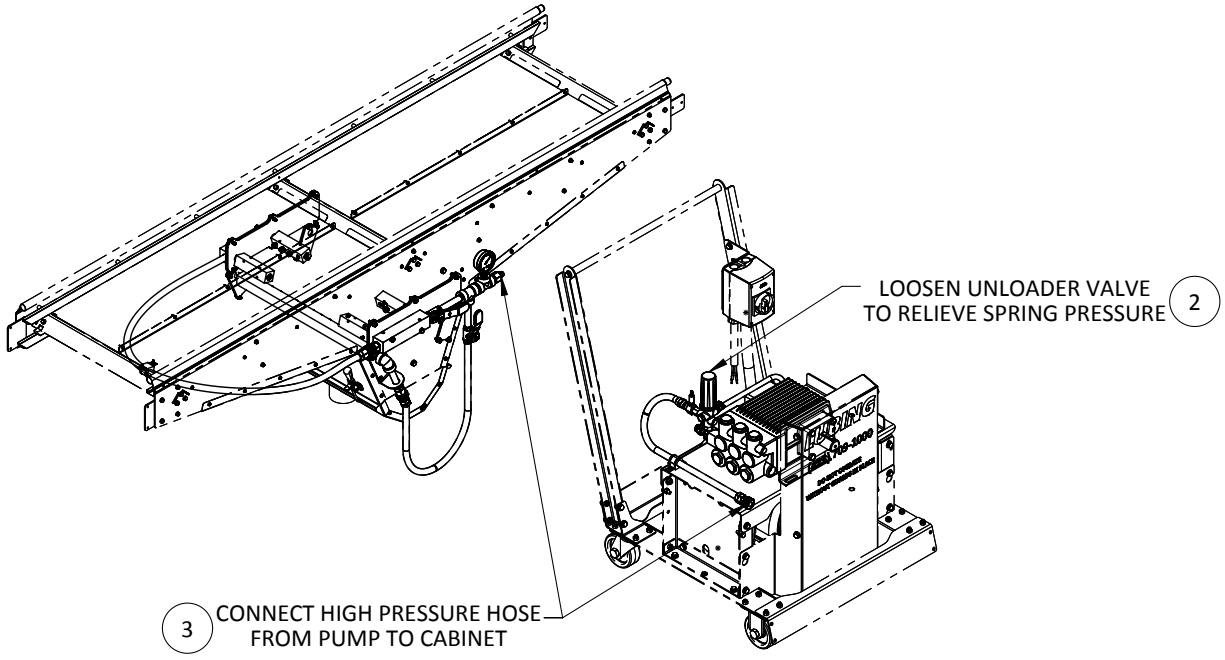
   CAUTION: NEVER OPERATE THE PUMP BEFORE CONNECTING TO THE SPRAY CABINET! FAILURE TO CONNECT THE PUMP WILL OVER PRESSURIZE THE PUMP (DEAD HEAD) AND MAY RESULT IN DAMAGE TO THE PUMP AND/OR PIPING.

   CAUTION: NEVER START THE PUMP WITH BOTH SPRAY CABINET BALL VALVES IN THE CLOSED POSITION. THIS WILL ALSO OVER PRESSURIZE THE PUMP (DEAD HEAD) AND MAY RESULT IN DAMAGE TO THE PUMP AND/OR PIPING.

2. At Start-up, it is recommended that both ball valves to be in the open position.

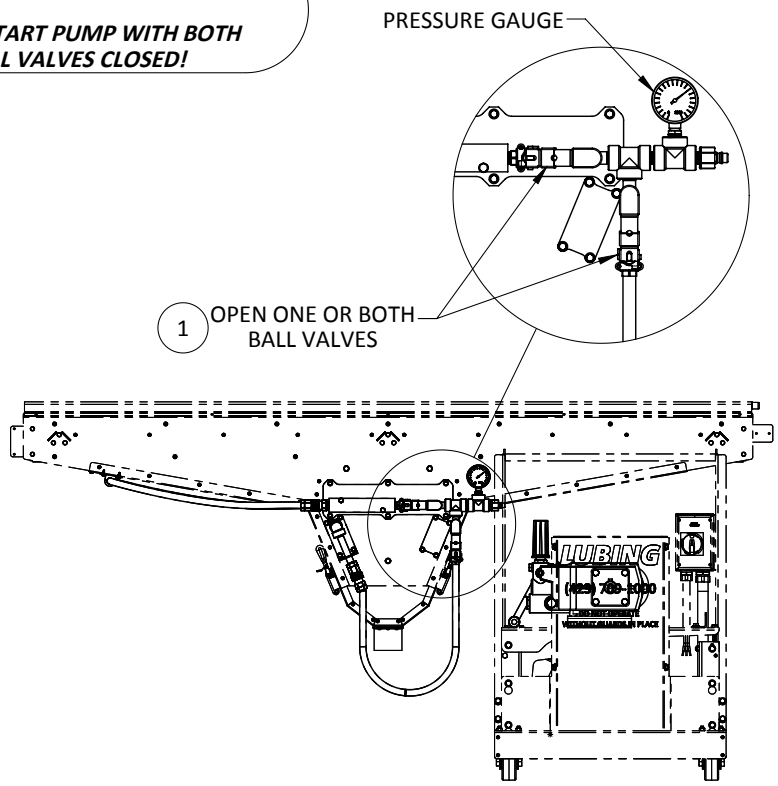
   CAUTION: AT LEAST ONE BALL VALVE MUST BE IN THE OPEN POSITION DURING OPERATION AT ALL TIMES.

3. Loosen the Unloader Valve to relieve spring pressure until knob is loose.
4. Connect the high pressure hose from the Pump Cart to the Spray Cabinet.

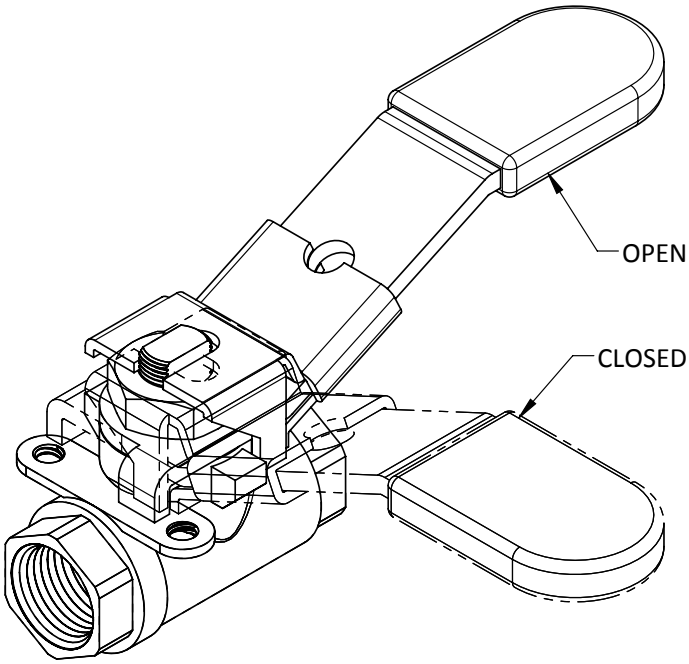


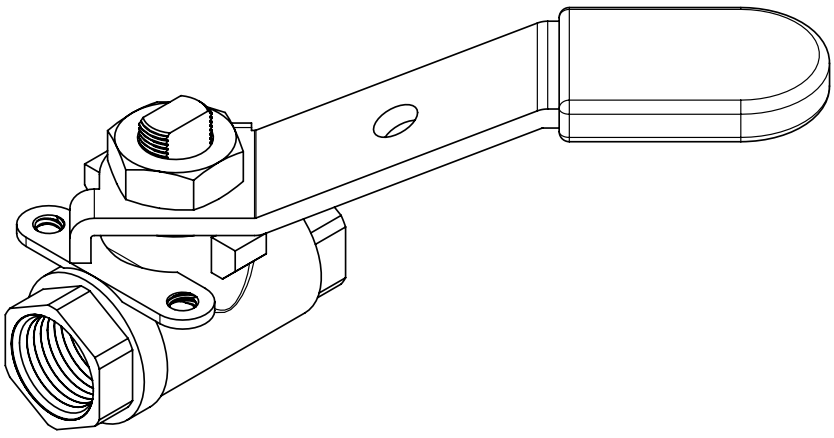
NEVER OPERATE PUMP BEFORE CONNECTING TO SPRAY CABINET!

NEVER START PUMP WITH BOTH BALL VALVES CLOSED!



5. The following view illustrates the open and closed positions of a ball valve.





BALL VALVES MUST BE OPERATED IN THE FULLY OPEN OR FULLY CLOSED POSITIONS

DO NOT OPERATE PARTIALLY OPEN OR CLOSED

6. Turn on the water supply. Verify water passes through the Pump and into the Spray Cabinet under line pressure only.

   CAUTION: DO NOT OPERATE THE PUMP BEFORE VERIFYING WATER FLOWS FREELY UNDER LINE PRESSURE. FAILURE TO DO SO MAY OVER PRESSURIZE (DEAD HEAD) THE PUMP AND MAY RESULT IN DAMAGE TO THE PUMP AND/OR PIPING.

   Note: Water should be flowing out of the Catch Pan Drain Connection at the bottom of the Spray Cabinet or, if present, out of the customer-supplied Drain Hose.

7. With the Inlet Water Supply still running, turn on the Pump at the MSP and allow the Pump to operate for a few minutes at a reduced pressure.

   Note: The Inlet Water Supply should always be running through the Pump and Spray Cabinet prior to start-up to prevent pump starvation (cavitation).

8. Check for leaks at the Pump and Spray Cabinet piping as well as the temperature of the Pump for excessive heat.

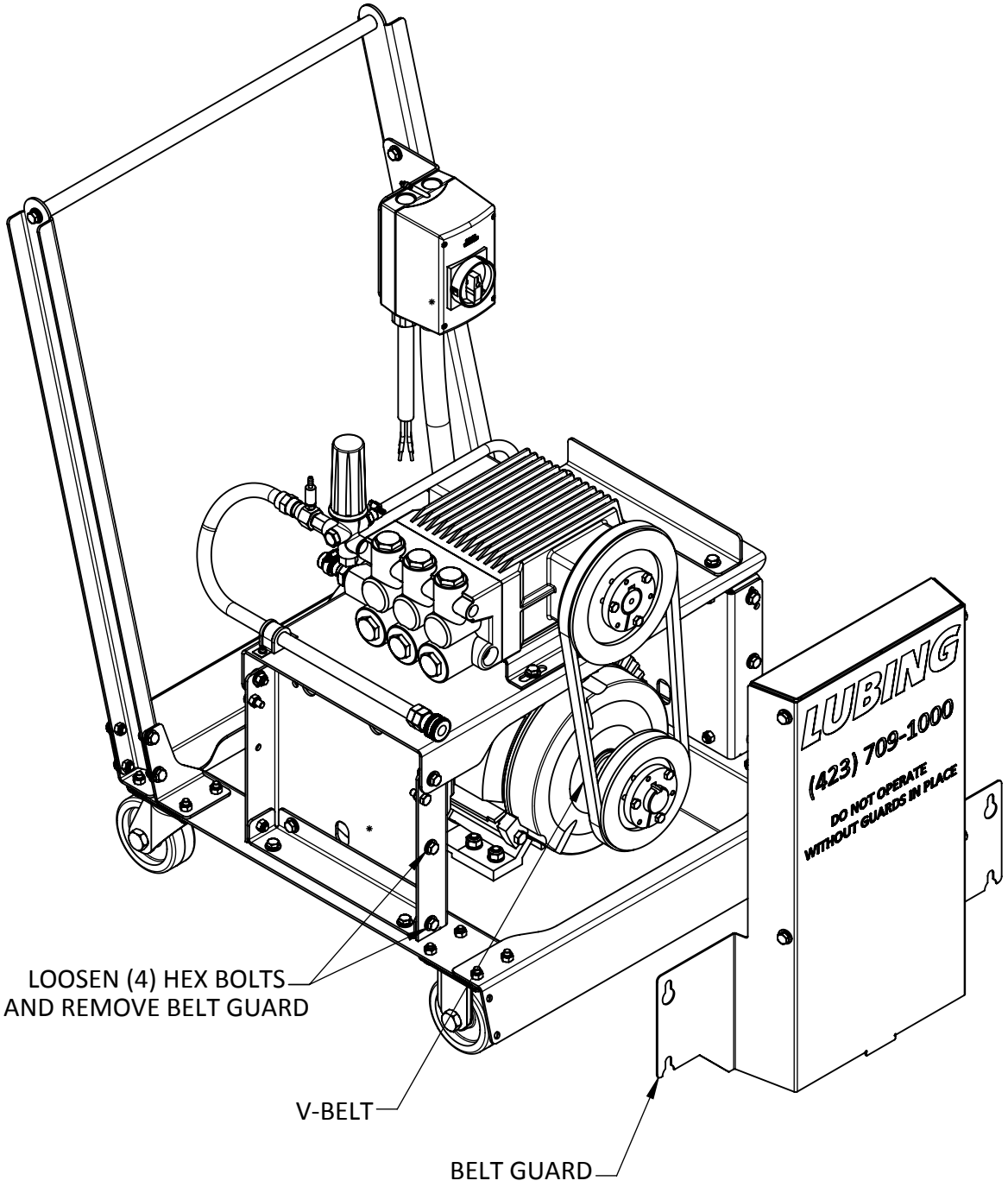
   Note: The Pump temperature should always remain comfortable to the touch.

9. With both ball valves open, adjust the Unloader Valve to increase the pressure to approx. 300 - 400 psi at the Pressure Gauge.

   Note: Pressures achieved will vary at each installation.

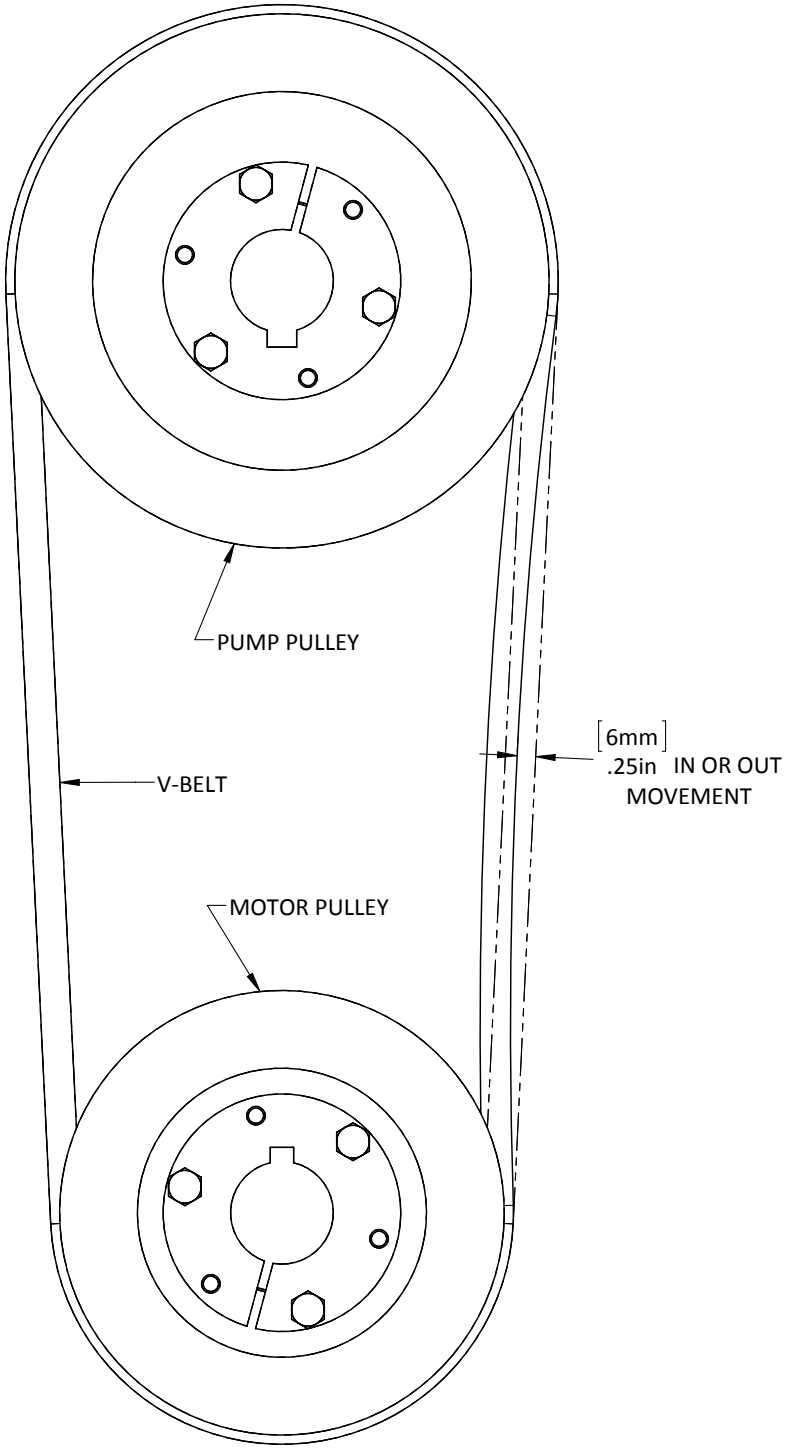
Verifying and Setting Belt Tension

10. Turn off the Pump after running the for 5-10 minutes under light load and check belt tension.
11. The following view illustrates the removal of the Belt Guard to access the V-belt.



12. The following view illustrates the proper technique for checking belt tension.

    Note: Proper belt tension should allow approx. 1/4” (6mm) of movement in and out on the belt path between pulleys. Over tensioning will shorten the life of the belt and increase the load on the motor and pump bearings which may result in premature failure.

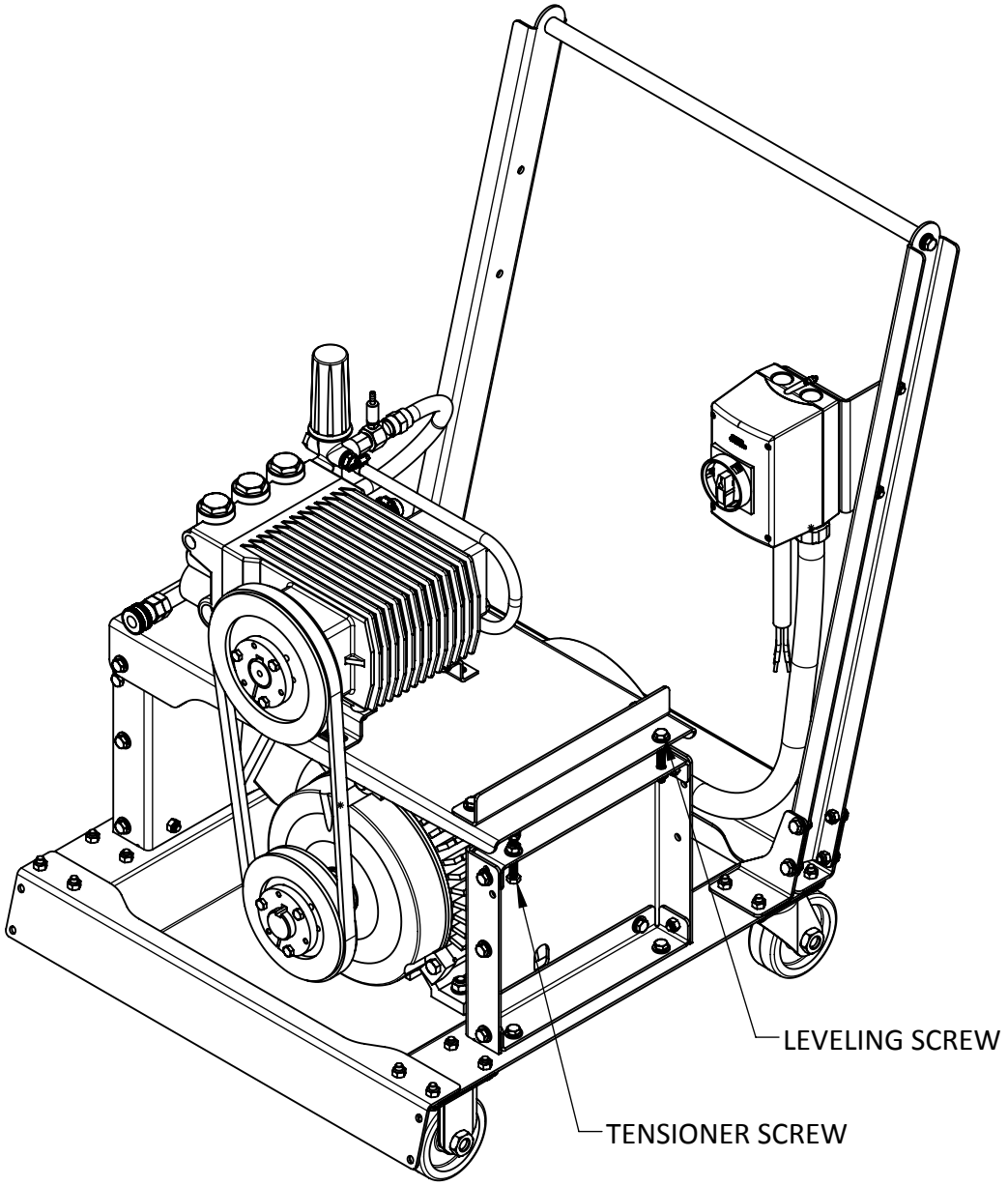


13. The following view illustrates belt tensioning if required.
14. Loosen the Leveling Screw and apply more tension to the V-belt by tightening the Tensioner Screw.

    Note: The Leveling Screw is used to level the Pump Plate once the V-belt is tensioned. Loosen as needed when making adjustments to belt tension then level accordingly.

15. Replace the Belt Guard before operating.

    CAUTION: NEVER OPERATE THE PUMP CART WITHOUT THE BELT GUARD IN PLACE.



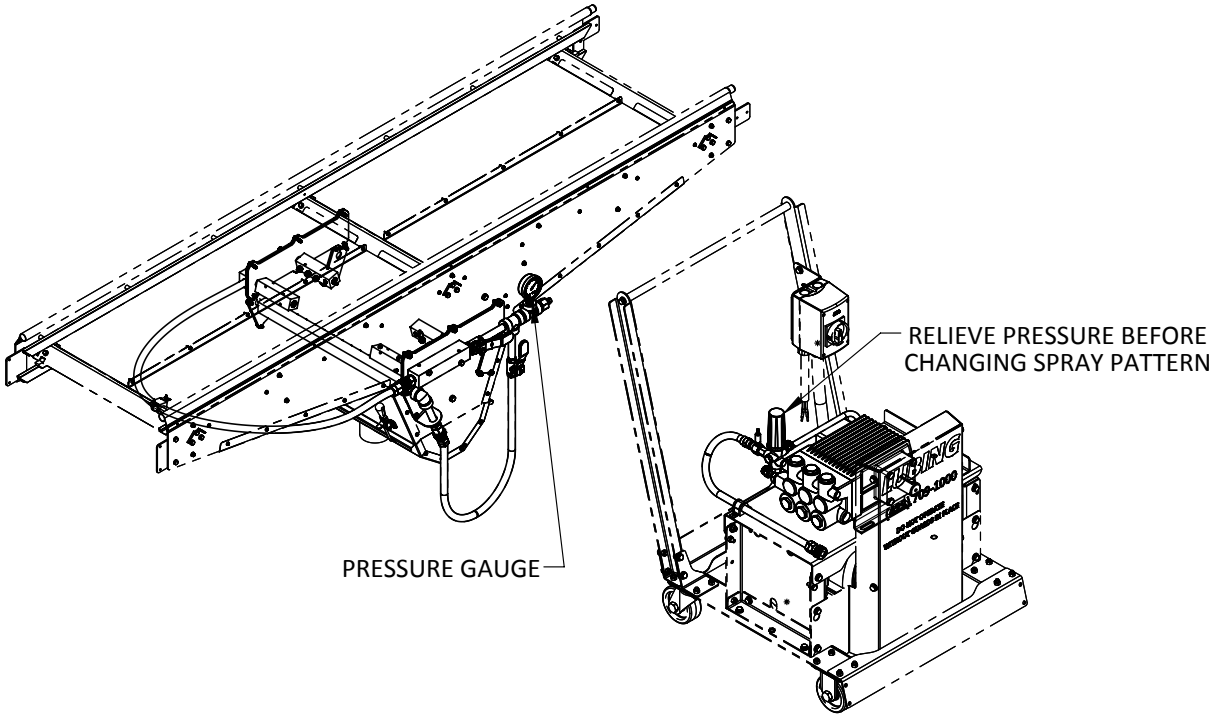
Selecting a Spray Pattern

16. For high pressure spraying, choose the area of the chain to be cleaned first. The Spray Cabinet ball valves allow all pump capacity to be directed to either the Chain Links or Cross Rod.

    CAUTION: ALWAYS RELIEVE PRESSURE AT THE UNLOADER VALVE WHEN CHANGING THE SPRAY PATTERN TO PREVENT OVER PRESSURIZING THE PUMP (DEAD HEAD).

    CAUTION: NEVER CLOSE BOTH VALVES WHILE OPERATING THE PUMP, IF CHANGING SPRAY PATTERN, OPEN BOTH VALVES, THEN CLOSE THE VALVE FOR THE AREA NOT USED.

    Note: The conveyor system does not have to be stopped while changing the spray pattern.

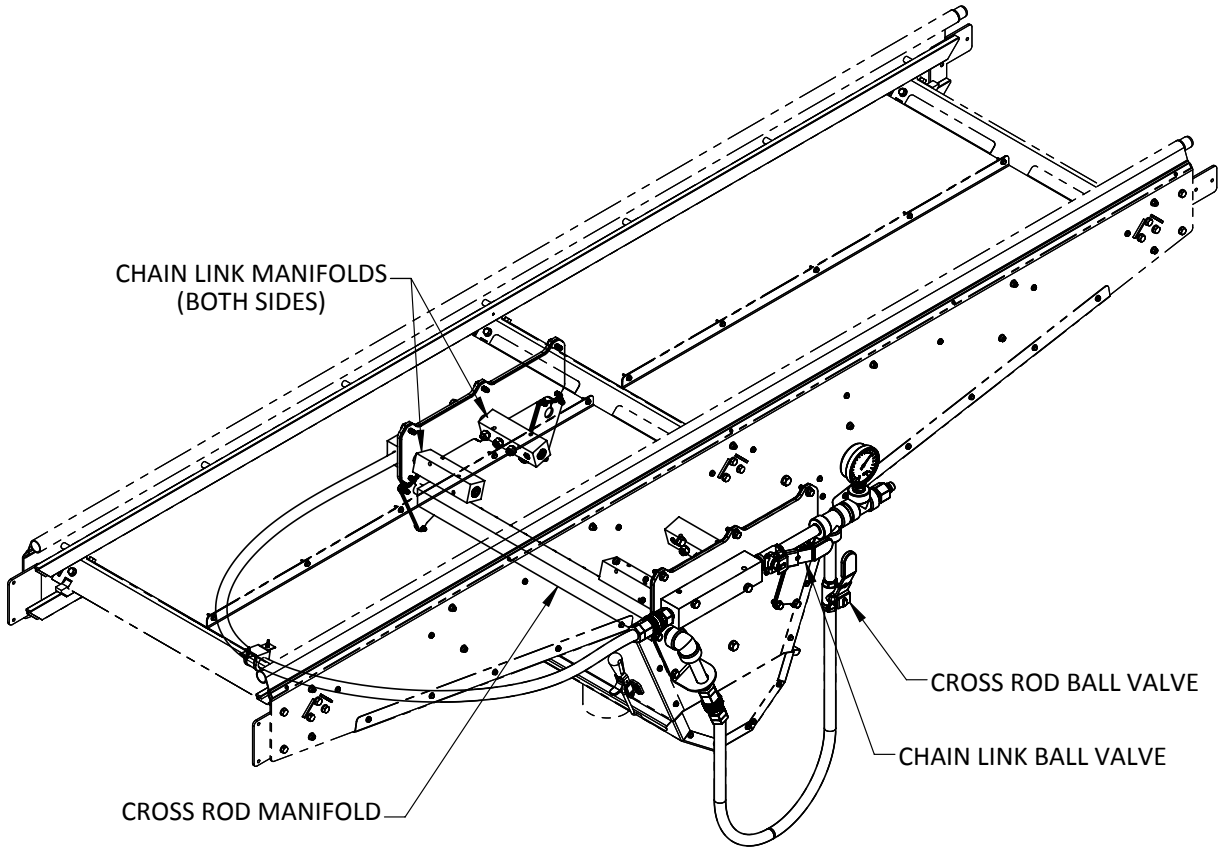


17. The following view illustrates the ball valve locations and functionality.
18. After selecting the spray pattern, increase pump pressure at the Unloader Valve until the Pressure Gauge reads 1,400 - 1,600 psi.

    CAUTION: NEVER EXCEED 1,600 PSI!

    Note: Maximum pressures will vary according to installation methods, location of pump relative to Spray Cabinet, water supply, etc.

19. Pressures can be varied based on amount of buildup on the chain and environment (e.g. a new conveyor installation will require much less pressure to maintain the chain within the system than an older conveyor with excessive buildup on the chain).
20. Lower pressures will increase the life of the pump. Set the pump pressure as low as possible to achieve the desired results. With systems that contain more buildup, pressure requirements may decrease over time when using the Pump Cart as part of a scheduled maintenance routine.



IF CHANGING SPRAY PATTERN FROM "CROSS ROD" TO "CHAIN LINK":
OPEN BOTH VALVES, THEN CLOSE THE CROSS ROD BALL VALVE

IF CHANGING SPRAY PATTERN FROM "CHAIN LINK" TO "CROSS ROD":
OPEN BOTH VALVES, THEN CLOSE THE CHAIN LINK BALL VALVE

NEVER CLOSE BOTH VALVES DURING OPERATION!

Troubleshooting Table

Component	Observation(s)	Action(s)
Pressure Gauge	Pressure surging	• Verify continuous 8 gpm (30 lpm) water supply • Verify belt tension
	No/Low pressure	• Verify pump is running and connecting to Spray Cabinet • Verify ball valves are in correct position • Verify Unloader Valve is set properly • Verify motor wiring
	High Pressure	• Check Spray Nozzles for operation under line pressure (pump not running) • Check for restrictions in piping from Pump Cart to Spray Cabinet • Verify Unloader Valve is set properly
Motor	Overloading	• Verify Unloader Valve is set properly • Verify MSP is adjusted to correct amps according to voltage requirements • Verify belt tension • Check for restrictions in piping from Pump Cart to Spray Cabinet
	No power	• Verify correct motor specifications (voltage, phase, FLA, etc.) • Check power connection • Verify MSP is adjusted correct amps according to voltage requirements • Check any disconnects and circuit breakers
Spray Cabinet	Water leaks	• Check for blockages in Catch Pan or Drain Hose • Verify Spray Manifold Gasket fasteners are tightened
Pump Cart	Excessive vibrations	• Verify belt tension • Verify pulleys are tight and aligned • Verify belt turns smoothly by hand • Verify continuous 8 gpm (30 lpm) water supply
	Water leaks	• Verify piping components are tight • Verify water supply connection
	Pump overheating	• Verify adequate water supply • Verify ball valve positions • Check oil level in pump crankcase

SECTION 5 MAINTENANCE AND SPARE PARTS

Inspection Schedule

Interval	Component(s)	Key Observations
Weekly	Spray Headers	• Verify flow through Spray Nozzles without the pump running (line pressure only)
	Catch Pan Assembly	• Remove Catch Pan and check for accumulating debris or debris too large to pass through drain connection
	Pull Clamps	• Verify all clamps are in place and holding Catch Pan Assembly
	Pressure Gauge	• Verify lens is clean • Verify Gauge is steady and reading pressure
	Inlet Piping	• Check for leaks and proper operation of shutoff valves
	Pump Cart	• Verify all guards are in place and secured • Check for leaks • Verify pressure changes when Unloader Valve is adjusted up or down
Monthly	V-Belt	• Verify tension of Drive Belt

Preventive Maintenance

1. Depending on the water quality of each installation site, routine cleaning of the Spray Headers may be required to prevent the clogging of Spray Nozzles by minerals or other contaminants in the water.
2. Utilize the Injection port to introduce white distilled vinegar or other cleaning/descaling agents into the system to flush.

   Note: It is the customer's responsibility to ensure any chemicals introduced into the system are in accordance with any governing body's regulations for your facility and within all local, state, and national codes for drainage.

   Note: Observe manufacturer's recommended concentrations if introducing any cleaning agents into the system. Also, note the materials of construction in the Spray Cabinet system (304 Stainless, Silicone Rubber Gaskets, etc.) for compatibility with said chemicals.

3. The following table suggests a time interval and action for Preventive Maintenance.

Interval	Component(s)	Action(s)
Month 3	Spray Nozzles	• Inspect for flow without pump running • Inject white distilled vinegar or other cleaning/descaling agents if permitted
	V-Belt	• Inspect for signs of stretch or wear • Tension or replace as needed
	V-Belt Pulleys	• Verify fasteners are tight and pulleys are aligned
	Pump	• Check oil level in pump
Month 6	Hydraulic Hoses	• Inspect hoses for signs of wear, cuts, or abrasions
	Strip Brush	• Inspect bristles for wear or buildup • Clean or replace as needed
Month 12	Chain Contact Surfaces	• Inspect all chain contact surfaces • Clean or replace as needed
	Deflection Wheels	• Inspect for wear • Replace as needed
	Gaskets	• Inspect gaskets for signs of failure • Replace as needed

Pump Cart Electrical Requirements

Part Number	Conveyor Type	Description	Voltage AC	Phase
A200A	250 - 1000	Spray Cabinet Pump Cart 208-230v Stainless US	208-230	3
A200B		Spray Cabinet Pump Cart 460v Stainless US	460	

Pump Motor Specifications

Mfg.	Model	Frame	Encl.	HP	Phase	Voltage AC	Freq.	Full Load Amps	RPM	Service Factor
Toshiba	0104SDSR41A-P	215T	TEFC	10	3	208-230/460	60HZ	28-26/13	1765	1.15

Pump Mechanical Specifications

Mfg.	Model	Inlet Connection	High Pressure Connection	Operating Pressure (max.)	RPM (max.)	Flow Capacity (max.)
General	TS-1041	3/4” Hose	3/8” NPT	1,600 psi	1,450	8 gpm

Recommended Spare Parts

Part Number	Description	Recommended Qty.	Spray Cabinet T250	Spray Cabinet T350	Spray Cabinet T500	Spray Cabinet T750	Spray Cabinet T1000	Pump Cart 208-230v	Pump Cart 460v
185 515 21 00[1]	Deflection Wheel Grooved 94.7mm	4	•	•	•	•	•		
185 515 22 01[1]	Deflection Wheel Smooth 155mm	2	•	•	•	•	•		
12C A 010 03A[1]	Bearing Strip 2m	2	•	•	•	•	•		
12N A 010 03A[1]	Bearing Strip Short	4	•	•	•	•	•		
12N A 044 03A	Front Cover Gasket	2	•	•	•	•	•		
12N A 001 04A	Strip Brush T750	1				•			
12N A 002 04A	Strip Brush T500	1			•				
12N A 003 04A	Strip Brush T350	1		•					
12N A 004 04A	Strip Brush T250	1	•						
RPVC312036	Strip Brush T1000	1					•		
8646T02	Hydraulic Hose, 2-ft	1	•	•	•	•	•		
8646T04	Hydraulic Hose, 4-ft	1	•	•					
8646T05	Hydraulic Hose, 5-ft	1			•				
8646T06	Hydraulic Hose, 6-ft	1				•	•		
8646T10	Hydraulic Hose, 10-ft	1						•	•
12N A 030 03A	Drain Gasket	1	•	•	•	•	•		
H1/8VV-SS6501	VeeJet Nozzle 65 Degree	6	•	•	•	•	•		
H1/8VV-SS1501	VeeJet Nozzle 15 Degree	6	•	•	•	•	•		
3795K13	Pressure Gauge 0-2,000psi	1	•	•	•	•	•		
BP42	V-Belt	1						•	•
3RV1021-4AA10	MSP 11A-16A 460VAC Size 0	1							•
3RV1031-4EA10	MSP 22A-32A 208/230VAC Size 2	1						•	
100813	Chemical Injector	1						•	•
PULSAR4KHP	Unloader Valve 7.8gpm, 4000psi	1						•	•
52375K42	5/16” Hose, Reinforced Clear PVC (ft.)	2						•	•

[1]*Critical Spares* are defined as any component(s) in which failure will shutdown or impair the performance of the entire conveyor system.

All other *Recommended Spares* effect the performance of the Spray Cabinet and/or Pump Cart only.

SECTION 6 OPERATIONS

Calculating Run Time

1. Determining the amount of run time is crucial to achieving the best performance by operating the Spray Cabinet for a minimum of one (1) full revolution of the conveyor chain. Use the below formula for calculating the required amount of run time.

   •Total Conveyor Length X 2 = Total Chain Length

   Example: 1,000 feet Total Conveyor Length = 2,000 feet Total Chain Length

   •Total Chain Length divided by Conveyor Speed = Time for one (1) Revolution

   Example: 2,000 Total Chain Length running at 25 feet/minute (2,000/25) = 80 minutes

   Run time for one (1) complete revolution = 80 minutes

   Note: If spraying only the Chain Links or Cross Rods of the chain, the calculated time will permit spraying on this area for one (1) complete revolution. If both areas are to be independently sprayed, operate the Spray Cabinet for the calculated time period, switch the Spray Pattern, and run again.

Purging the System

1. When a spraying cycle is complete, it is recommended that one (1) gallon (4 liters) of white distilled vinegar be injected into the water stream to prevent mineral buildup within the Spray Nozzles.

   Note: Each site should develop a purge schedule and routine based on water quality, frequency of use, etc.

Climate Considerations

1. The climate in which the Spray Cabinet and Pump Cart are operated within must be considered if the equipment will be exposed to extreme temperatures.
2. If operating or storing equipment in extreme cold, care must be taken to prevent any residual water from freezing within the Spray Cabinet and/or Pump Cart.

   CAUTION: ICE MAY CAUSE PRESSURE SPIKES, BLOCKAGES, OR EVEN BURST PIPING.

3. If operating or storing equipment in extreme heat, condensation may develop on the Spray Cabinet and/or Pump Cart and slip hazards may occur.
4. If operating or storing the equipment in direct sunlight, care must be taken to protect high pressure hoses from prolonged exposure to UV light.

   CAUTION: FAILURE TO PROPERLY GUARD HIGH PRESSURE HOSES MAY RESULT IN DAMAGE TO THE SPRAY CABINET AND/OR PUMP CART.

   Note: Always inspect the equipment when retrieving from prolonged storage. Follow the *Start-up Procedures* in this manual when operating after prolonged storage.

SECTION 7 GENERAL INFORMATION

Lubing Contact Information

Lubing Systems, L.P.
135 Corporate Drive SW
Cleveland, TN 37311 USA
423 709.1000 telephone
866 289.3237 toll-free fax

www.lubingusa.com	Lubing Systems, L.P. USA Website
info@lubingusa.com	General Information Requests
customerservice@lubingusa.com	Customer Service/Order Assistance
support@lubingusa.com	Technical Support Requests

Lubing Regional Sales Contact Information

LUBING

Contact your local Lubing Distributor or Representative for additional information regarding Lubing products.

Northeast/Canada MA,VT, NH, ME, RI, CT, NY, NJ, PA, DE,
GEORGE BAILEY MD, VA, WV, NC, MI, OH
Cell: (540) 908-8899 East Canada: MB, ON, QC, NB, NL, PEI
Fax: (540) 433-7400
E-mail: gbailey@lubingusa.com

Southeast AL, FL, GA, KY, IN, MS, LA, SC, TN
BARRY DUTTON
Cell: (205) 612-5625
Fax: (240) 368-8784
E-mail: bdutton@lubingusa.com

Midwest/Canada AK, AR, CO, KS, MO, ND, NE, NM,
STEVE KUYKENDALL OK, SD, TX, WY
Cell: (469) 908-8899 West Canada: AB, SK, BC, YT, NT
Fax: (540) 433-7400
E-mail: skuykendall@lubingusa.com

West Coast AZ, CA, ID, NV, OR, UT, WA, MT, HI
International Sales
KURT HUTT
Cell: (432) 464-0500
Fax: (423) 709-1001
E-mail: khutt@lubingusa.com

LUBING Systems, L.P.
135 Corporate Drive, SW
Cleveland, TN 37312 - USA
Tel: (423) 709-1000
Fax: (423) 709-1001
E-mail: info@lubingusa.com
E-mail: support@lubingusa.com

LUBING

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or Representative for additional
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LUBING Systems, L.P.
135 Corporate Drive, SW
Cleveland, TN 37311 - USA

T: (423) 709-1000
F: (423)-709-1001

E: info@lubingusa.com
E: support@lubingusa.com

www.lubingusa.com

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