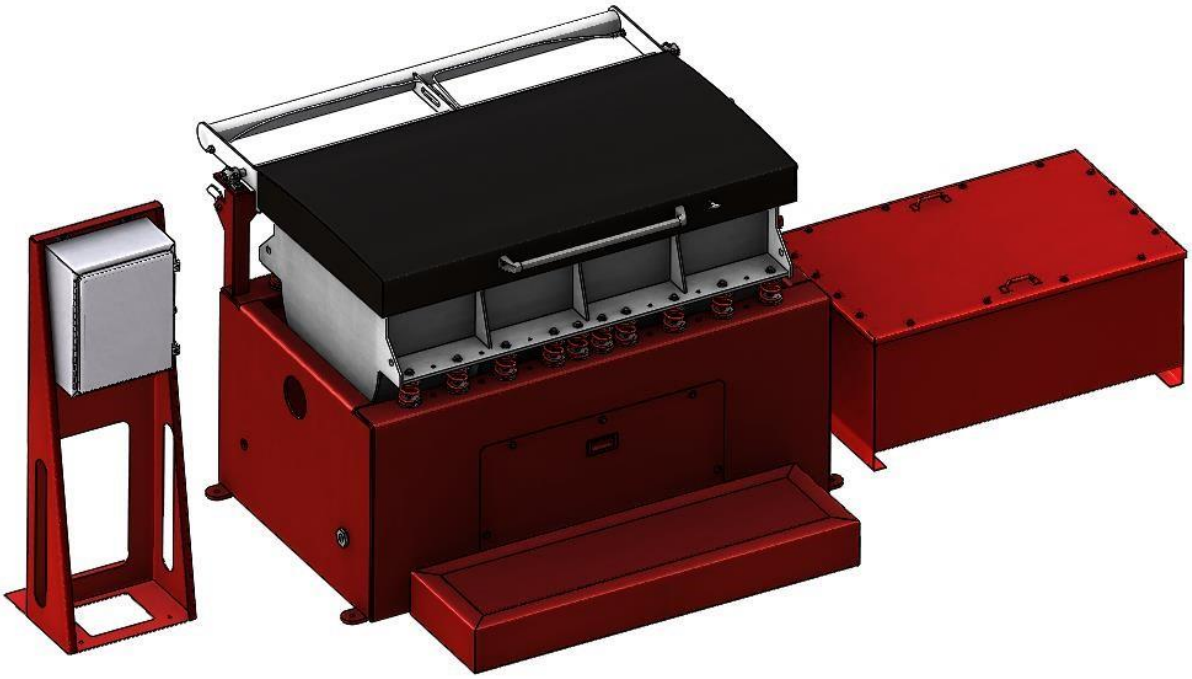

Vibratory Thread Protector Cleaner

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Introduction

At R&R we provide over 80 years of combined experience in the engineering, R&D, manufacturing and installation of tubular cleaning units, pipe handling/cleaning equipment and all forms of conveyance systems.

In addition to the manufacturing of new equipment we also have a seasoned service staff that can perform on site repairs, maintenance and refurbishment (both mechanical and electrical). R&R also carries a variety of replacement parts for all of your tubular cleaning units as well as new and improved patent pending products exclusively provided by our company.

Warranty

R&R Manufacturing products are guaranteed for 12 months to be free from defects of material or workmanship and to perform as promised when maintained in accordance with manuals and operated under the conditions for which they were designed. Wear items such as wheels, brushes and wear tabs are excluded. Damage due to improper electrical or mechanical applications void this warranty. Use of other than genuine R&R Manufacturing replacements parts or service work performed by other than authorized R&R Manufacturing service agents will void the warranty.

Safety

To ensure this quality product is safely and correctly utilized, all instructions within this manual must be read and understood prior to equipment start-up. Be aware of all safety labels on machinery. If you do not understand any of the safety instructions, contact your supervisor or product supplier immediately! Compliance with safety standards, including federal, state and local codes or regulations is the responsibility of the purchaser(s). A safety study should be made of the products application by the purchaser(s). It is the purchaser's responsibility to provide any additional guards, safety labels or other safety equipment deemed necessary based on this safety study.

The information contained in this safety manual is correct at the time of printing. Due to the continuing development of product lines, changes in specifications are inevitable. The company reserves the right to implement such changes without prior notice. If you suspect fire hazards, safety hazards, dangers towards health or any other job safety concerns, consult your federal, state or local codes.

Inspect equipment for safety labels. Make sure personnel are aware of and follow safety instructions. always Maintain an orderly environment in the vicinity of the conveyor. Clean up spilled materials or lubricants immediately. All personnel shall be instructed regarding the necessity for continuous care and attention to safety during the operation. They must be trained to identify and immediately report all unsafe conditions or practices relating to the conveyor and its operation. Know your company's machine specific Lockout / Tagout procedure. Do not perform maintenance until electrical disconnect has been turned off! Replace all safety devices, guards and guarding prior to equipment start-up.

All electrical installations and wiring shall conform to federal, state and local codes

Control stations should be so arranged and located that the operation of the affected equipment is visible from them. Control stations shall be clearly marked or labeled to indicate the function controlled. Remotely and automatically controlled products, and products where operator stations are not manned or are beyond voice or 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. 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 devices shall be installed so that they cannot be overridden from other locations. Only trained, qualified personnel shall be permitted to operate a machine. Training shall include instruction in operation under normal conditions and emergency situations.

The product shall be used to transport only a load that it is designed to handle safely. It is the responsibility of the purchaser of this unit to train operating personnel in the proper manner of operation. It is furthermore understood that R&R Manufacturing assumes no responsibility for injury, disability, or death resulting from improper operation, removal, or bypassing of any electrical or mechanical safety devices incorporated in the design and manufacturing of this product.

Unit Setup

Unloading

R&R Manufacturing equipment is carefully inspected and packed before leaving our factory. The transportation company assumes full responsibility for safe delivery of this equipment. Visible damage or loss should be noted on freight bill and signed by person making delivery. A freight claim should be filed immediately with the transportation company. If damage is unnoticed or concealed until equipment is unpacked, notify the transportation company immediately and tell them you want to file a concealed damage claim. This must be done within fifteen (15) days after delivery was made. Be sure to retain all packing material and cartons.

WARNING: Installation of this equipment should be performed only by qualified personnel with consideration for local, state and federal regulations.
Adjustments and service work should be performed only by a qualified service technician. Service & Installation is available through R&R Manufacturing.

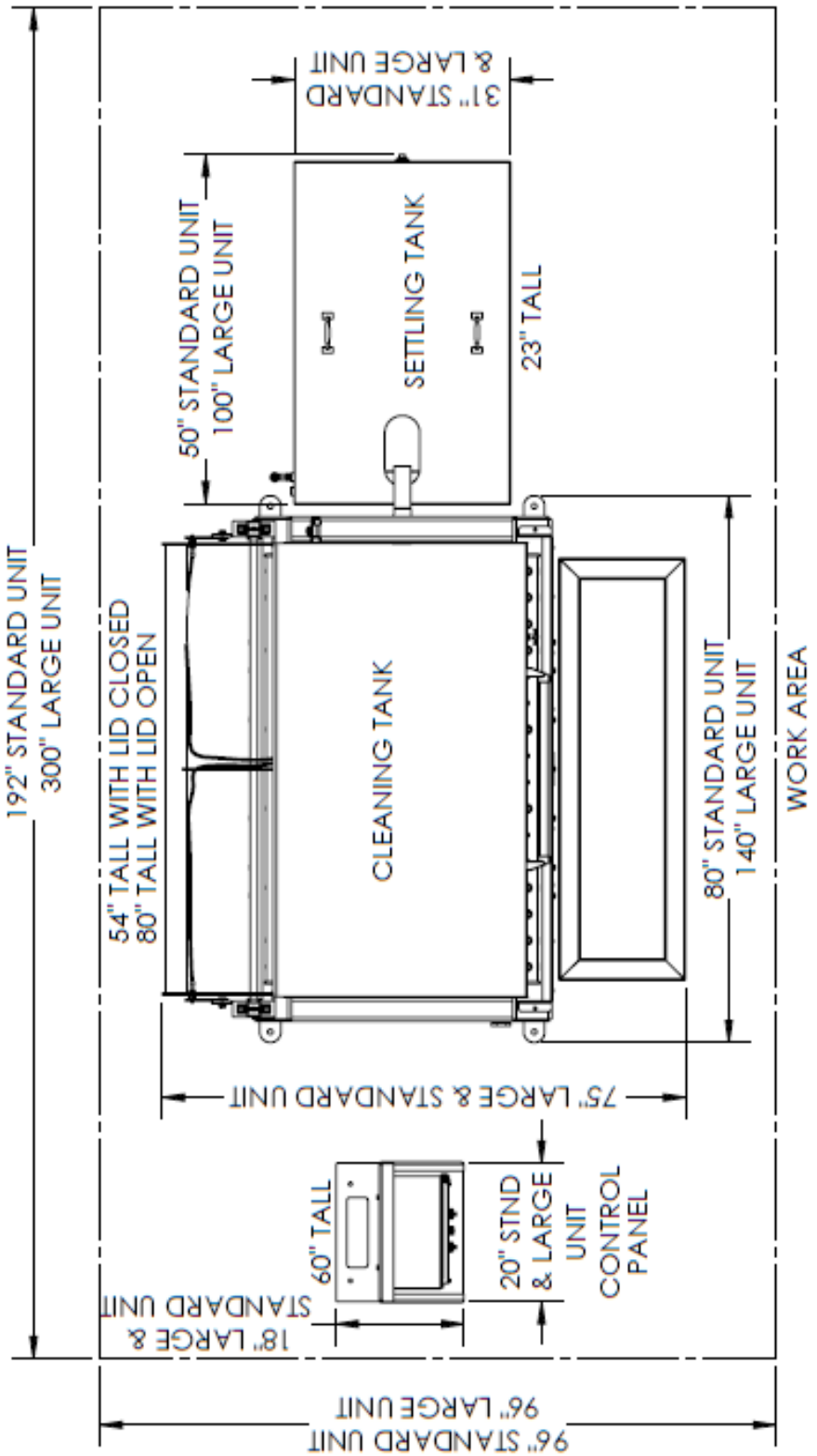
Assembly

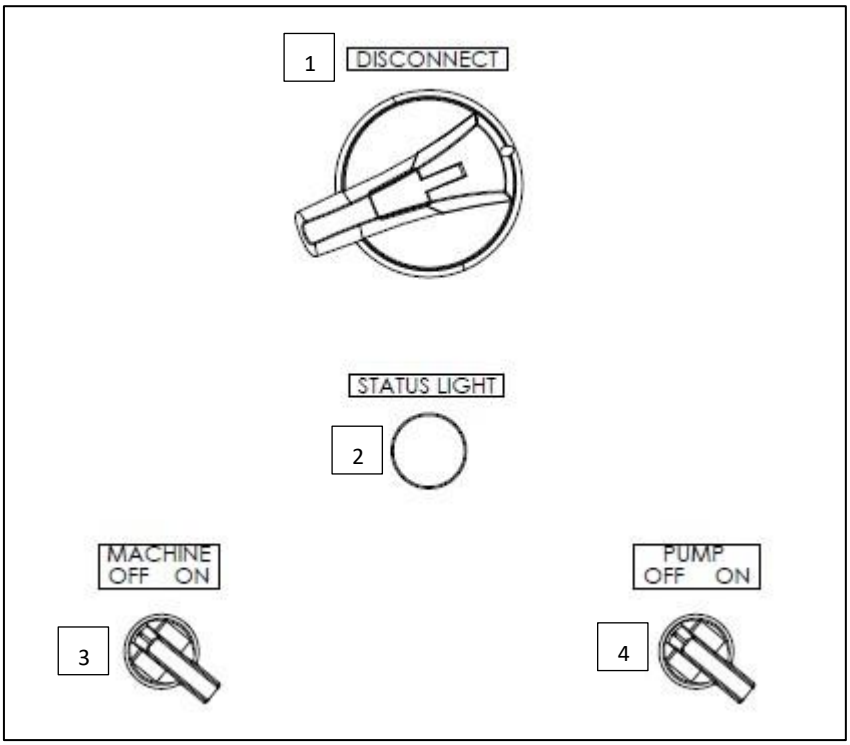
2. Position main frame and auxiliary equipment as indicated
3. Connect all plumbing and electrical connections as per schematics.
4. Level the machine with a 1/8" drop towards the settling tank.
5. If anchoring machine to concrete, vibration pads must be installed. A minimum of 4" thick concrete is required but local soil conditions may dictate otherwise.
6. Tighten anchor bolts as per manufacturer's recommendation.

Startup

1. Ensure all plumbing and electrical lines are tight and secure.
2. Ensure settling tank is filled with desired solvent,
    a. Standard unit requires approximately 55 gallons.
    b. Large unit requires approximately 110 gallons.
3. Ensure vibratory tub is filled with ceramic media.
    a. Standard unit requires 600-700 lbs. of media.
    b. Large unit requires 1200-1400 lbs. of media.
4. Ensure electrical motors rotation by check rotation of ceramic media and thread protectors. Material should rotate towards the front.
5. Jog machine on switch (3) for 10 seconds then off to ensure proper function.
6. Turn spray pump (4) on and ensure proper function. Spray output may be delayed 4-5 seconds.
7. Start machine again and run for 20 minutes.
    a. If vibrator makes unusual or excessive noise, make sure mounting bolts are tight
    b. Check decibel level of vibrator noise during operation. See OSHA 1910.95 to determine whether noise exceeds safe limits. If required, wear ear protection to avoid impairment or loss of hearing.
    c. After a few hours of operation, check each line current. If reading is higher than nameplate rating, check for correct phase voltage ensuring that it is correct and balanced. If phase voltages are correct (± 10% of nameplate rating) and balanced, recheck wiring, ensure that mounting bolts are correctly installed.
8. Turn machine off via the disconnect switch (1) provided to ensure functionality.
9. Once all machine functions have been verified, proceed to operations.
10. After machine has run for 10 hours, check all hardware to ensure components remained secure.

Layout


31" STANDARD & LARGE UNIT
50" STANDARD UNIT
100" LARGE UNIT
SETTLING TANK
23" TALL
192" STANDARD UNIT
300" LARGE UNIT
54" TALL WITH LID CLOSED
80" TALL WITH LID OPEN
CLEANING TANK
80" STANDARD UNIT
140" LARGE UNIT
WORK AREA
75" LARGE & STANDARD UNIT
60" TALL
20" STND & LARGE UNIT
CONTROL PANEL
18" LARGE & STANDARD UNIT
96" LARGE UNIT
96" STANDARD UNIT



Operation

1. Ensure that all preventative maintenance is up to date and the all safety procedures are followed.
2. Open lid and add protectors to vibratory tub.
3. Turn machine on (3), green status light (2) will come on and vibratory motor will start.
4. Turn spray pump on (4).
5. Commence cleaning cycle.
    a. Cleaning time is dependent on multiple variables, but typically ranges from 20 to 60 minutes.
6. After cleaning cycle is complete, turn spray pump off.
7. Tub should still be rotating protectors towards the operator so that they are easy to grab.
8. After all protectors are removed, turn unit off.

Preventative Maintenance

- 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 components are maintained in a condition which does not constitute a hazard to personnel.
- When a unit 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 machine against an unexpected start.
- Replace all safety devices and guards before starting equipment for normal operation.

Thread Protector Cleaner Preventative Maintenance

Company _____
Location _____
Serial No. _____
Month _____

Perform each task at the start week.
Initial in each block after the task is complete
Additional information can be found throughout the operations manual

Weekly	**Inpect:** -Ceramic media level (12" to 15" from top lip)	**Inspect:** -Fluid level -Debris level	**Inpect:** -Spring height range 3-1/2" to 3-13/16"	**Grease:** -Lid hinge bearing	**Grease:** -Vibratory Motor (Every 2000 hrs)
1					
2					
3					
4					

Comments:

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Service Instructions

Lubrication guide

The application of grease and corrosion inhibitors are vital to operation of the unit. The table below details the appropriate lubricant grade during any service work.

Vibratory Motor	Kluber Isoflex Topas NB 52
Lid Hinge Bearings	Chevron SRI NLGI No. 2

Vibratory Motor

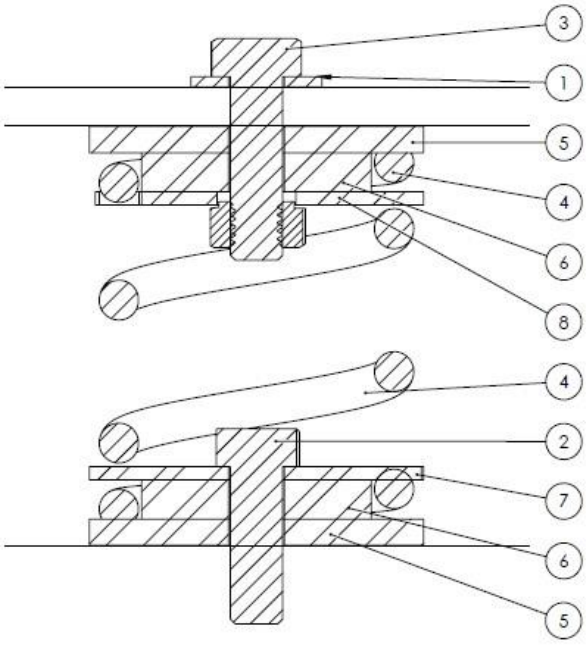
1. Add 30 grams per bearing every 2000 hrs.
2. If vibrator housing temperatures exceed 194°F (90°C), cut lubrication time and amount in half for every 18°F (10°C) increment that meets or exceeds 194°F (90°C).
3. Clean vibrator at each pipe plug in housing to remove dirt and debris. Remove pipe plug. Insert 1/8 in. NPT grease fitting. Add grease. Remove grease fittings; tightly replace pipe plugs. (Use anti-seize compound on threads.)

Lid Hinge Bearings

1. Add 2 grams per bearing biweekly.

Part/Assembly Drawings

Spring Assembly



ITEM NO.	PART NO.	DESCRIPTION
1	30000	WASHER, FLAT, 0.500
2	30071	BOLT, HEX, 0.500-13 X 1.50” LONG
3	31182	BOLT, HEX, 0.500-13 X 1.75” LONG
4	50535	SPRING, COMPRESSION
5	3040-041	SPRING WEAR PLATE
6	3040-042	SPRING CENTER PLATE
7	3040-043	SPRING RETAINER PLATE, BOTTOM
8	3020-013	SPRING RETAINER PLATE ASSEMBLY, TOP

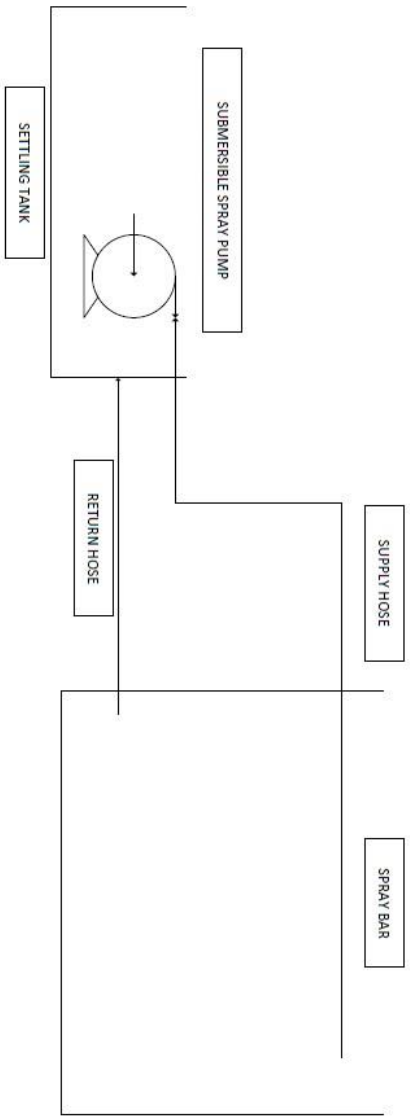
Miscellaneous parts

PART NO.	DESCRIPTION
50539	3 HP VIBRATORY MOTOR
50540	SUBMERSIBLE SPRAY PUMP
50059	CERAMIC MEDIA, 50 LB. BOX
	LID HINGE BEARING

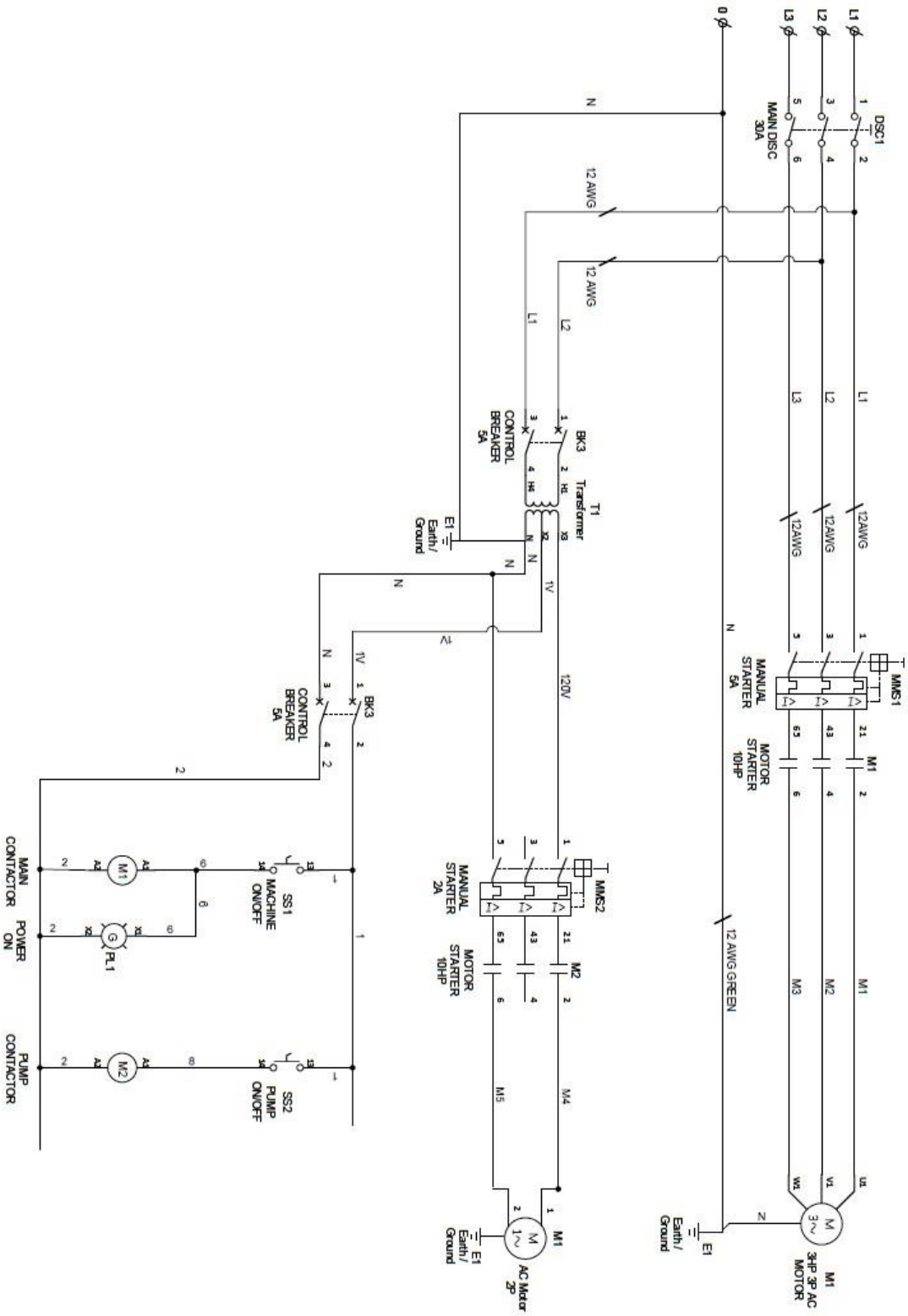
Schematics

The schematics below is a general guideline, consult R&R Manufacturing for machine specific schematics.

Plumbing



Electrical


L1
L2
L3
N
DSC1
MAIN DISC 30A
12 AWG
CONTROL BREAKER 5A
BK3
T1
Transformer
E1
Earth/ Ground
MMS1
MANUAL STARTER 5A
MOTOR STARTER 10HP
M1
3HP 3P AC MOTOR
MMS2
MANUAL STARTER 2A
M2
AC Motor 2P
120V
MAIN CONTACTOR
POWER ON
PL1
SS1
MACHINE ON/OFF
PUMP CONTACTOR
SS2
PUMP ON/OFF