

INSTRUCTIONS

FOR

HL-4 HOPPER LOADER



PPE Hopper Loaders are manufactured and sold direct by Plastic Process Equipment, Inc. We are not associated with any other manufacturer. Always specify genuine PPE Hopper Loaders! Do not accept substitutes.

MODEL NO.
HL-4
SERIAL NO.

Made in the U.S.A. by Plastic Process Equipment, Inc. © copyright 2019



PLASTIC PROCESS EQUIPMENT, INC.

www.ppe.com • e-mail: sales@ppe.com



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8303 CORPORATE PARK DRIVE, MACEDONIA (Cleveland), OHIO 44056, USA

216-367-7000 • Toll Free: 800-321-0562 • Fax: 216-367-7022 • Order Fax: 800-223-8305

Toll Free: USA, Canada & Mexico
800-362-0706

RECEIVING

Please thoroughly inspect your HL-4 Hopper Loader and report any damage to the motor freight carrier before uncrating for setup. They are responsible for any damage incurred during transit. Make note of model and serial numbers. These numbers must be used when ordering parts or accessories from PPE.

INTRODUCTION

The PPE model HL-4 Hopper Loader is a self-contained vacuum conveying system. It is designed to keep your material feed hopper full during operation. The unit will cycle loading and dumping material into the hopper until the hopper is full. It will then wait until the material level drops below the dump valve, at which point it will cycle again until the hopper is full. The load time can be varied to provide optimum performance in virtually all conditions. The HL-4 contains a diaphragm filter and blow-off system. This filter remains clean from the blowoff system, but should be checked every 8 hours of use. Do not use with powders.

ELECTRICAL

The HL-4 Hopper Loader comes wired for 120/60/1 power. Always use a **grounded** 120 volt outlet. If you must use an extension cord, ensure that the extension cord's rating is of the proper size. Failure to do so could cause a low voltage condition and premature failure of the motor. The HL-4 Hopper Loader is equipped with a circuit breaker instead of a replaceable fuse. The reset button is located on the side of the electrical enclosure. **NO FUSE TO LOSE!**

INSTALLATION

The HL-4 Hopper Loader must be mounted on a flat horizontal surface. It is usually fastened to the cover of the material feed hopper. **Precautions must be taken to prohibit the fasteners from loosening and falling into the feed throat (i.e.: nylok nuts, lok-tite, etc.).** It requires a 9" dia. hole in your hopper lid. The unit must be mounted so that the discharge counterweight valve swings without hitting anything. The counterweight has been adjusted at the factory and should not require any readjustments. The feed probe is secured to the feed hose with the supplied hose clamps. The other end of the hose is connected to the inlet tube located on the loader unit. A ground wire must be installed inside the feed hose to make a good connection between the feed probe and the loader unit. We suggest you strip 1-1/2" at each end and pinch the stripped ends between the feed hose and the mounting tubes it slides over. **Failure to connect the ground wire can cause excessive static buildup and can result in possible static shock and damage the unit.** When the HL-4 Hopper Loader is in operation the feed hose should not have any sags or goose-necks, like the trap under a sink. If the hose sags, when the unit shuts off the material in the hose will fall to the bottom of the sag and can plug the feed hose and restrict suction. When inserting the feed probe into your material gaylord, do not jam the probe in! Insert the probe gently until it is about 1/4 to 1/3 submersed. When the unit is turned on, the probe will pull itself toward the bottom of the gaylord.

SETTING THE UNIT

After the unit has been installed and grounded, plug in the power cord and move the "CONVEY" potentiometer clockwise to the max time position. Next move the power switch to the "ON" position. The lights should flash and the unit should begin to cycle.

For optimum performance the unit should run just long enough to fill itself. A full unit is indicated by a higher pitched motor sound. Run several cycles and decrease the "CONVEY" time slightly each cycle until the motor shuts off at approximately the same time it is full. If the unit is allowed to run after it is full, performance will decrease. The load time can be adjusted from 10 to 70 seconds (Note: these are approximate times and may vary by a few seconds). In general, longer load times will be needed for: longer distances, heavier materials, and increased amounts of regrind.

Your PPE HL-4 Hopper Loader was designed to operate on the **ON DEMAND** principal. The "MOTOR" light indicates that the unit is in its loading cycle and should be conveying material up to the loader. When your machine material hopper is full the unit will sense this because the loader dump valve will remain held open by the presence of your material. As long as the dump valve remains open the unit will not cycle. As the machine hopper material level lowers, the dump valve will freely swing closed and the loader will begin to cycle again.

MAINTENANCE

The HL-4 Hopper Loader is a filtered unit. There is a diaphragm type filter located between the top and bottom halves of the loader housing. This filter should be checked often. The automatic air blow-off system should keep the filter clean, but checking is required to make sure there are no tears or holes. Extra filters are available from PPE. A dirty filter greatly reduces material flow and may cause the vacuum motor to strain and/or fail.

When the "CHANGE BRUSHES" light comes on the motor brushes should be inspected and/or replaced. This light comes on every 300 hours of use and can be reset by pushing the brushes reset button.

WARNING: The brushes should be changed BEFORE the brush stunt touches the commutator. On reassembly and handling, the lead wires must be kept away from rotating parts and motor frame.

To achieve best performance, the new brushes should be seated on the commutator before full rated voltage is applied. After brush change, apply 50% to 75% of rated voltage for thirty minutes to accomplish this seating. The motor will return to full performance after thirty to forty-five minutes of running at full rated voltage. The motor must not be run with the vacuum air inlet sealed off. **DIRECT APPLICATION OF FULL RATED VOLTAGE AFTER CHANGING BRUSHES WILL CAUSE ARCING, COMMUTATOR PITTING, AND REDUCED OVERALL LIFE.** If reduced voltage is unavailable, connecting two motors of similar rating in series for thirty minutes will accomplish the brush seating.

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8303 CORPORATE PARK DRIVE, MACEDONIA (Cleveland), OHIO 44056, USA			Toll Free: USA, Canada & Mexico
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WARRANTY

All PPE machinery is warranted to be free of defective material and workmanship for a minimum period of 1 YEAR from date of sale. Some machinery components may carry longer warranties per our suppliers policies which are passed on to our customers (i.e. our drier compressors, conveyor motors, etc.).



WARNING
STATIC SHOCK HAZARD



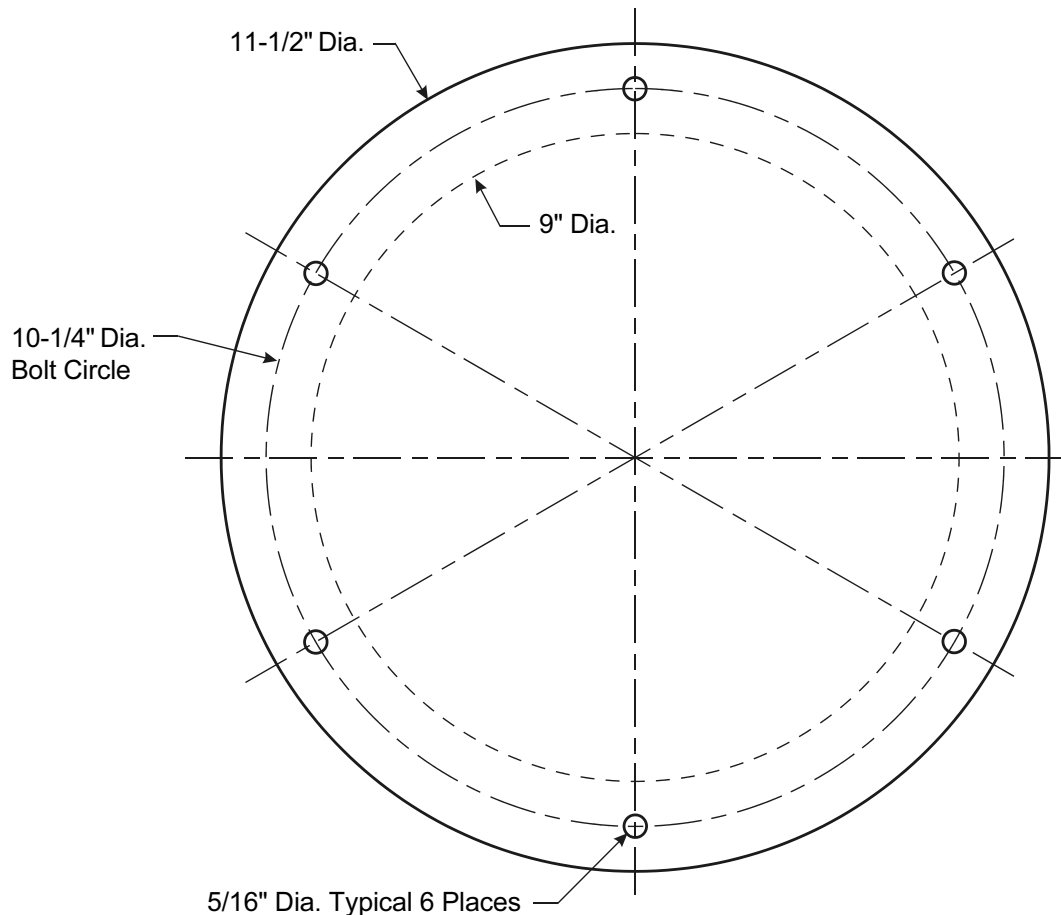
All PPE Vacuum Hopper Loaders are supplied with a vacuum hose that contains a ground wire to help control static electricity for user safety. We also recommend you install an extra static ground wire on your HL Series Vacuum Hopper Loader unit. The ground wire should be run **INSIDE** your feed tube and connect the metal probe to the hopper loader frame. This will help to dissipate the static charge generated by some plastics as they are conveyed up the tube. You can use a standard 18 gauge electrical wire, strip the ends about 1-1/2" and pinch them between the plastic feed hose and the metal tubes that it mounts over, then clamp it securely with the supplied hose clamps. Do not use plastic suction probes!



STATIC SHOCK HAZARD
WARNING



BASE MOUNTING DIMENSIONS



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PPE
WEST

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SOUTH

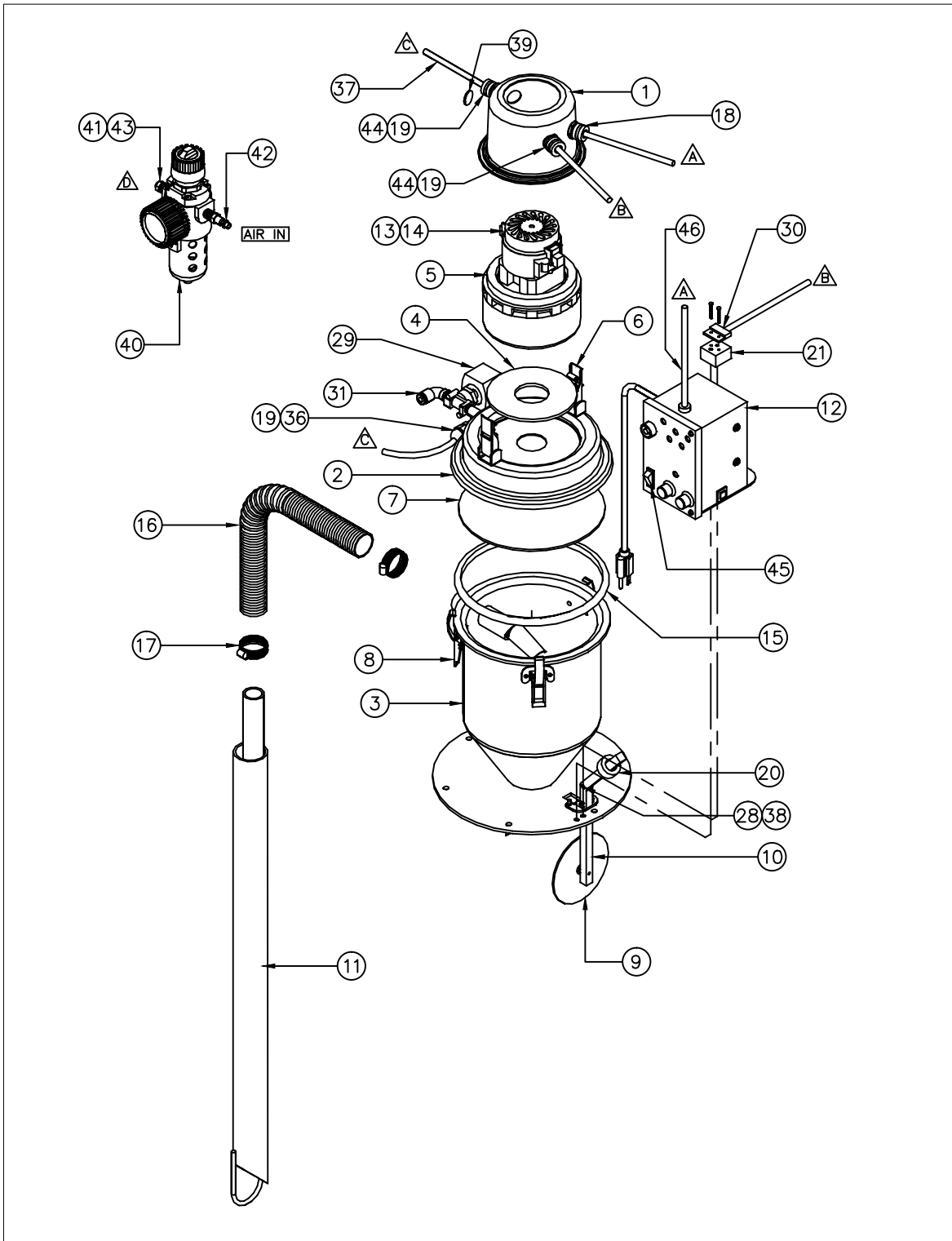
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HL-4 HOPPER LOADER PARTS



PLASTIC PROCESS EQUIPMENT, INC.

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HL-4 HOPPER LOADER

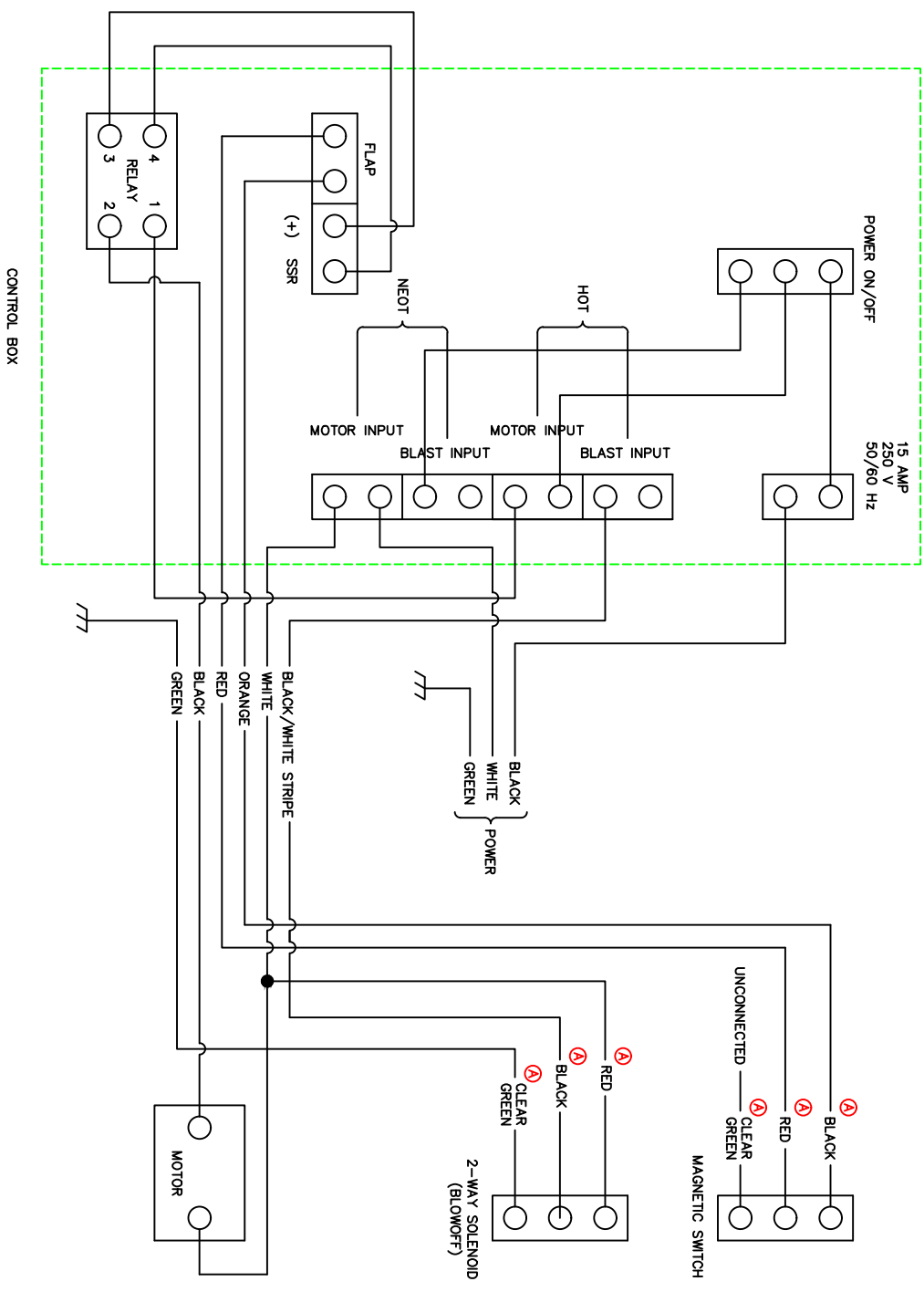
06/24/24

PARTS LIST

06/24/24

ID	QTY	P/N	DESCRIPTION	UOM
1	1	A-9105	HOPPER LOADER MOTOR CAP	EA
2	1	A-9106	HOPPER LOADER LID WITH BLOWOFF	EA
3	1	C-9177	HOPPER LOADER HOUSING	EA
4	1	ZX2056	ROUND MOTOR GASKET FOR HOPPER LOADER	EA
5	1	8694K14	FOAM MOTOR GASKET MATERIAL PER FT (was 8694K	FT
6	2	91-99-218	MOTOR COVER CLAMP FOR HOPPER LOADER	EA
7	1	FR1	FILTER RING 8.5" A-3723	EA
8	3	HR1	HOUSING CLAMPS	EA
9	1	B-2617	FOOT VALVE	EA
10	1	B-7446	FOOT VALVE ARM	EA
11	1	TALP382P	36"S.S.PROBE 1-1/4"OD INLET 2 PIECE FOR TAL	EA
12	1	CBHL4	MICROPROCESSOR CONTROLLER FOR HL-4	EA
13	1	2M266	MOTOR	EA
14	2	1R236	BRUSHES FOR HOPPER LOADER MOTOR	EA
15	1	ZX2054	GASKET 8.5"DIA	EA
16	1	VHG11415	GROUNDED VACUUM HOSE 1-1/4" DIA 15FT	EA
17	2	HSS-20	HOSE CLAMPS	EA
18	1	2R7006A20A120	PANEL MOUNT CONNECTOR FOR CONTROL CABLE	EA
19	4	S1212	STRAIN RELIEF FOR ELECTRIC CORD	EA
20	1	A-1195	3/4" SCREW COLLARS	EA
21	1	A-7418	SWITCH MOUNTING BLOCK FOR HOPPER LOADER	EA
28	1	ZF10172N	FOOT VALVE MOUNTING BRACKET HOPPER LOADERS	EA
29	1	SD8262G212-120	2 WAY SOLENOID VALVE FOR BLOWOFF	EA
30	1	PRX8300P	MAG SWITCH WITH 6" LEADS AND PLUG	EA
31	1	KQ2L11-35AS	ELBOW UNION	EA
36	1	88122601	DIN CONNECTOR FOR SOLENOID	EA
37	1	85-2231M	3 CONDUCTOR GRAY WIRE FOR HL PER FT	FT
38	1	MASL02501000	MAGNET FOR HL-1 SWITCH	EA
39	1	NERS50	KNOCK OUT SEAL FOR HOPPER LOADER LID	EA
	1	HL-4PCB	PC BOARD FOR HL-4/7/9	EA
40	1	AMC403D	AIR REGULATOR	EA
41	1	KQ2H11-35AS	MALE CONNECTOR	EA
42	1	H2CH	1/4" NPT MALE THREAD HOSE NIPPLE	EA
43	1	TISA11W-20	3/8" NYLON TUBING 22FT	EA
44	3	BL-50	1/2" TIGER GRIPS	EA
45	1	1500R11E	ROCKER ON/OFF SWITCH	EA
46	1	207000A01F030	SPARE 3FT CONTROL CABLE FOR HL W/SINGLE FITT	EA

DATE	SW	REVISION RECORD	AUTH	DR	CK
6/24	A	CHANGED WIRE COLOR		DT	



CONFIDENTIALITY

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TOLERANCES UNLESS OTHERWISE SPECIFIED		TITLE	
DECIMAL	± .005	HL-4 HL-7 HL-9	PLASTIC PROCESS EQUIPMENT, INC.
FRACTIONAL	± 1/16	HOPPER LOADER WIRING DIAGRAM	MACEDONIA, OH
ANGULAR	± 1/2°	DATE	01/12/23
		DRAWING NUMBER	A-14670
		SCALE	
		DRAWN BY	DT
		APPROVED BY	