BLAST-IT-ALL®

WARNING

DO NOT USE ***SAND.*** SAND WILL CAUSE SILICA DUST, WHICH IS THE CAUSE OF SILICOSIS DISEASE, A CONDITION OF MASSIVE FIBROSIS OF THE LUNGS. ***THIS STATEMENT INDICATES POTENTIAL PERSONNEL HAZARD. FAILURE TO COMPLY WITH THESE INSTRUCTIONS MAY RESULT IN PERSONAL INJURY.***

WEBSITE FOR SILICOSIS:
http://www.osha.gov/Silica/IT69D 1.html

LARRY HESS AND ASSOCIATES, INC.
185 PIPER LANE
SALISBURY, NC 28144 USA
1-800-535-2612
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sales@blast-it-all.com

EQUIPMENT MANUAL

MM-830

6060 CUBE PRESSURE SYSTEM

TABLE OF CONTENTS

LIST OF ILLUSTRATIONS

DESCRIPTION **DWG NO**

SECTION I

INTRODUCTION

1-1 **GENERAL INFORMATION**: This manual provides operation and maintenance instructions for equipment manufactured by LARRY HESS & ASSOCIATES, Airport Industrial Park, Highway 29 South, Salisbury, North Carolina 28147, U.S.A. Please read this manual completely before attempting any installation procedures or operations of any sort.

1-2 MAJOR ASSEMBLIES:
Blast Enclosure, Reclaimer, and Dust Collector.

1-3 BLAST ENCLOSURE: The enclosure is the main unit which contains the blast.

1-4 RECLAIMER: The reclaimer is of the centrifugal cyclone separator type using discharge air to convey and separate the spent media from the dust and debris of the dry-blasting process. A tuning provision has been provided to allow the balancing of media reclamation and, conversely, the prevention of media carry-over into the dust collector. The provision is a vertically sliding sleeve in the top of the reclaimer housing. The sliding sleeve can be adjusted in either direction as needed. As the dust collector filters mature and coat with dust, the reclaimer may have to be readjusted. As the media is separated from the dust, all good media passes through a screen which retains large particles from passing into the blast generator.

1-5 DUST COLLECTOR: The dust collector collects the excess dust carry over from the reclaimer.

1-6 ELECTRICAL CONTROLS. The electrical controls required for this system are contained in the main control box.

SECTION II
INSTALLATION OF COMPONENTS

2-1 SITE REQUIREMENTS: Locate components per plan view and component drawings. **NOTE:** Refer to the illustrations in this manual to identify and install this equipment.

2-2 CABINET INSTALLATION:

1. Locate cabinet as indicated in the plan view so there is room for the reclaim and dust collector and off load from the shipping skid. Place reclaimer
2. Attach the outside track to the side of the cabinet.
3. Connect compressed air line to inlet air filter on the rear of cabinet, and to the regulator on the header on the dust collector.
4. Place fluorescent light onto machine and wire into junction box.

2-3 RECLAIMER INSTALLATION:

1. Remove the reclaim / pressure pot and hopper from their skids and locate as per the plan view. Place reclaimer onto hopper and bolt in place so that the blast hose runs as straight as possible to the machine. Place reclaimer on trash screen with the inlet toward machine.
2. Install the six inch FLEX hose from the cabinet to the reclaim
3. Attach the 1/2" media hose from the cabinet to the media outlet valve. Twist on fittings and pin. Place blast hose arch onto cabinet. Thread blast hose through the arch and push end of hose through seal at the front of cabinet. Slide nozzle holder onto hose until hose seals against front of holder. Install screws through holder into hose. Install nozzle and nozzle washer securely.
4. Connect 1" airline from controls on machine to inlet of combo valve.
5. Connect control airline (1/4" OD clear) to push-lock fitting on combo valve.
6. Connect 3/4 purge line from pressure pot to inlet of reclaimer.

2-4 DUST COLLECTOR INSTALLATION RPJ-2: Move the dust collector to a position close to the reclaimer. Slip one end of the flex hose 8" for RPJ-2 (900 CFM) on the outlet adapter located on the top reclaimer and clamp in place. Slip the other end of the flex hose on the inlet damper of the dust collector and clamp in place. Connect the $\frac{1}{4}$" plastic air supply line for the shaker valve to the fitting supplied on the compressed air line. **Be sure the slide gate on the bottom of the Dust Collector sump is in place before starting machine.**

2-5 ELECTRICAL CONNECTIONS: Make electrical connections according to the electrical diagram. Be sure that the proper voltage is applied. The voltage notation is on panel.

SECTION III
OPERATION INSTRUCTIONS

3-1 SYSTEM OPERATION:

3-2 OPERATING INSTRUCTIONS AND SEQUENCE:

1. At the main control panel press the DUST COLLECTOR "START" push-button. The exhauster blower should start. Turn cabinet light "ON".

**** MAKE SURE FAN ROTATION IS CORRECT.**

2. Load a part on to the turntable. Roll into cabinet and blast.

3. Make sure all doors are closed and latched.

4. Reach into cabinet glove ports, grasp the nozzle (direct the nozzle at the part) press the foot switch.

5. To stop blasting release the foot switch.

NOTE: Only abrasives manufactured or processed for blast cleaning should be used with this equipment.

SECTION IV
MAINTENANCE

4-1 Before Each Use:

A. Check moisture trap and drain if needed.

B. Visually inspect machine for unsafe conditions.

C. Turn on compressed air supply.

D. Turn on electrical supply.

4-2 After each use:

A. Turn off electrical supply.

B. Turn off compressed air supply.

C. Drain moisture trap.

4-3 Daily Inspection:

A. Clean trash screen in reclaimer.

B. Empty dust drawer for dust collector.

C. Check nozzles for wear.

4-4 Weekly Inspection:

A. Check nozzle for wear.

B. Check machine door gaskets.

C. Check reclaimer door gasket.

D. Check flex hose for soft spots.

4-5 As Needed:

A. Add media.

B. Replace any worn or defective parts.

SECTION V
TROUBLESHOOTING PROCEDURES

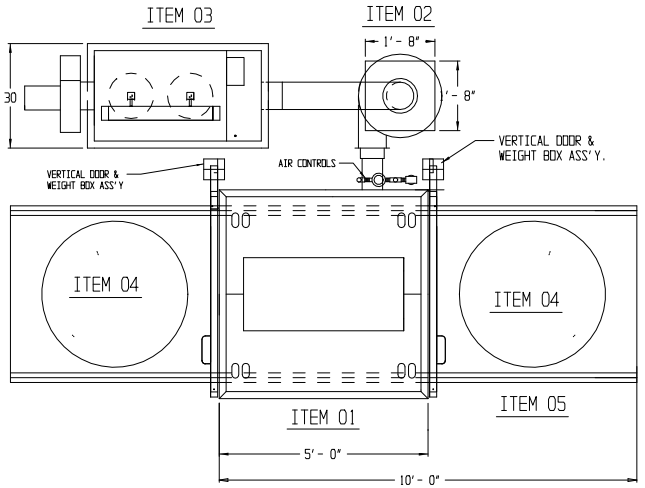
WARNING

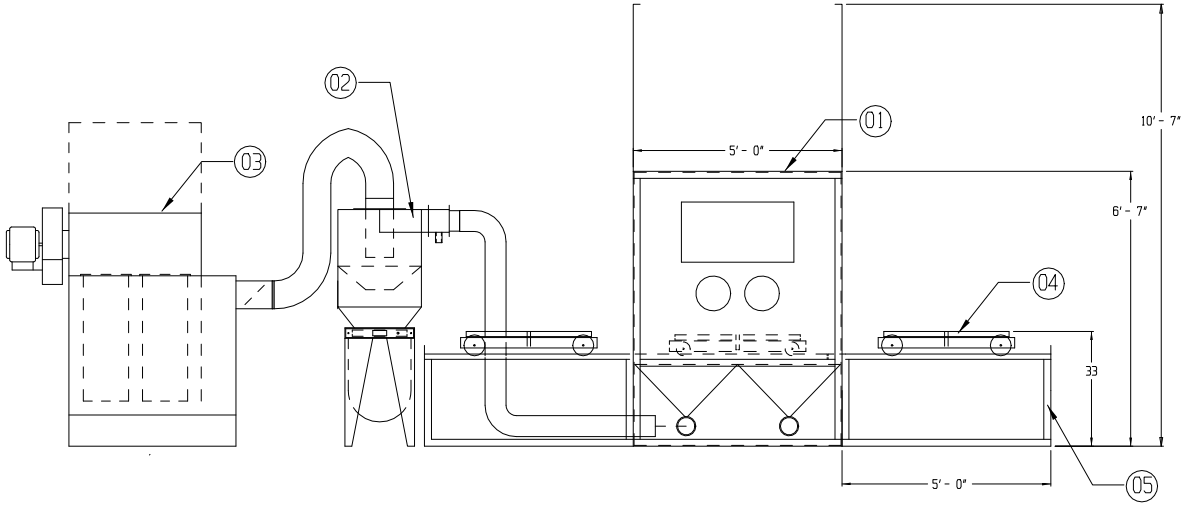
Never attempt to do any maintenance on this system if it is under pressure or has to capability of being pressurized. Turn off all air supply and electrical supply sources before servicing.

	PROBABLE CAUSE	SOLUTION
5-1	**NO BLAST - NO ABRASIVE OR AIR FROM NOZZLE.**	
1.	Improper or no electricity	Check electrical
2.	No air to machine	Turn on air supply
3.	Power switch off	Turn on main power
4.	Air regulator adjusted too low.	Set regulator
5.	Air hose from solenoid to blast gun pinched	Inspect air hose
6.	Door safety locks (open)	Make sure switches are made.
7.	Blast solenoid bad.	Check & replace
8.	Air regulator bad	Check & replace
5-2	**NO MEDIA FROM GUN (AIR ONLY)**	
1.	Out of media	Add media to system
2.	Hose off media valve	Twist and lock hose back on to fitting
3.	Media valve or hose plugged	Check & clear
4.	Worn media hose	Check & replace
5.	Reclaim trash screen clogged	Remove & clean

	PROBABLE CAUSE	SOLUTION
5-3	**MEDIA SURGING**	
1.	Fluctuating system air pressure	Check compressed air supply
2.	Contaminated media	Remove media & replace with new
3.	Worn media hose	Inspect & replace
4.	Media valve out of adjustment	Reduce media amount
5-4	**CABINET CLOUDY**	
1.	Low air movement	Check dust collector
2.	Media broken / fine	Check media size and condition.
5-5	**LOW OR NO AIR MOVEMENT**	
1.	Fan not operating	Check electrical
2.	Fan operating in reverse	CHECK ROTATION
3.	Media return flex hose clogged	Remove hose & clean
4.	Air inlet closed	Open cabinet inlet
5.	Inlet damper on dust collector closed (not on all machines)	Open damper
5-6	**RECLAIMER NOT SEPARATING**	
1.	Contaminated media	Replace media
2.	Reclaim air wash	Lower air wash
3.	Reclaim worn	Inspect & replace

	PROBABLE CAUSE	SOLUTION
5-7	**CONTAMINATED MEDIA**	
1.	Condensation in air line	Drain all traps
2.	Oil in air line	Check compressed air
3.	Parts wet or dirty	Blow dry parts
5-8	**MEDIA CARRY-OVER TO COLLECTOR**	
1.	Reclaim out of adjustment	Adjust sliding tube
2.	New filters	Allow filters to mature
5-9	**EXCESSIVE MEDIA CONSUMPTION**	
1.	Blast pressure too high	Reduce pressure
2.	Wrong media application	Check & change
3.	Improper exhaust hook-up	Check exhaust system for compatibility
5-10	**REDUCTION IN BLAST RESULTS**	
1.	Reduced media size	Change media
2.	Nozzle worn	Check & replace
5-11	**MANUAL SAFETY DOOR SWITCH(S)**	
1.	Limit safety switch bad	Remove & replace
2.	Switch out of adjustment	Adjust as required





BILL OF MATERIAL

ITEM	QTY	DESCRIPTION	PART NO.
01	1	6060 CABINET	
02	1	RECLAIMER, 24" DIA.	
03	1	DUST COLLECTOR RPJ-2 WITH DRAWER	
04	2	48" TURNTABLE & CART ASS'Y. 2,000 LB	
05	2	5 FT. TRACK ASS'Y.	

LARRY HESS & ASSOCIATES
SALISBURY NORTH CAROLINA

6060 CABINET	QUOTE NO.
	DWG. NO. PD1530

DESIGN CRITERIA

EXHAUST FAN

VOL - 900 CFM
MOTOR - 2 HP

SOUND POWER DB RE 10-12 WATTS
OCTAVE BAND

RECLAIM FAN

SOUND POWER DB RE 10-12 WATTS
OCTAVE BAND

DUST COLLECTOR

MODEL - RPJ-2 W/ DRAWER

RECLAIMER

TYPE - CYCLONE
DIAMETER - 24"

PRESSURE SYSTEM

1 CU FT PDT

ELECTRICAL

POWER - 220 V / 1 PH / 60 HZ

SIGNATURE APPROVAL: _____

DATE: _____

***PLEASE RETURN SIGNED COPY**

NO.	DATE	BY	REVISION

NO.	DATE	BY	REVISION

TOLERANCE	SCALE: 1/16" = 1"
FRACTIONAL	DATE: 12/07/15
	DRAWN BY: LJF
DECIMAL	CHECKED BY:
	APPROVED BY:
UNLESS NOTED OTHERWISE	PROP. NO.:

INSTALLATION	CUSTOMER	ENGINEER

LARRY HESS & ASSOCIATES
SALISBURY NORTH CAROLINA

6060 CABINET	QUOTE NO.
	DWG. NO. PD1530

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LARRY HESS & ASSOCIATES

SALISBURY NORTH CAROLINA

6060 CABINET	QUOTE NO.
	DWG. NO. PD1530

DESIGN CRITERIA

EXHAUST FAN

VOL - 900 CFM
MOTOR - 2 HP

SOUND POWER DB RE 10-12 WATTS
OCTAVE BAND

RECLAIM FAN

SOUND POWER DB RE 10-12 WATTS
OCTAVE BAND

DUST COLLECTOR

MODEL - RPJ-2 W/ DRAWER

RECLAIMER

TYPE - CYCLONE
DIAMETER - 24"

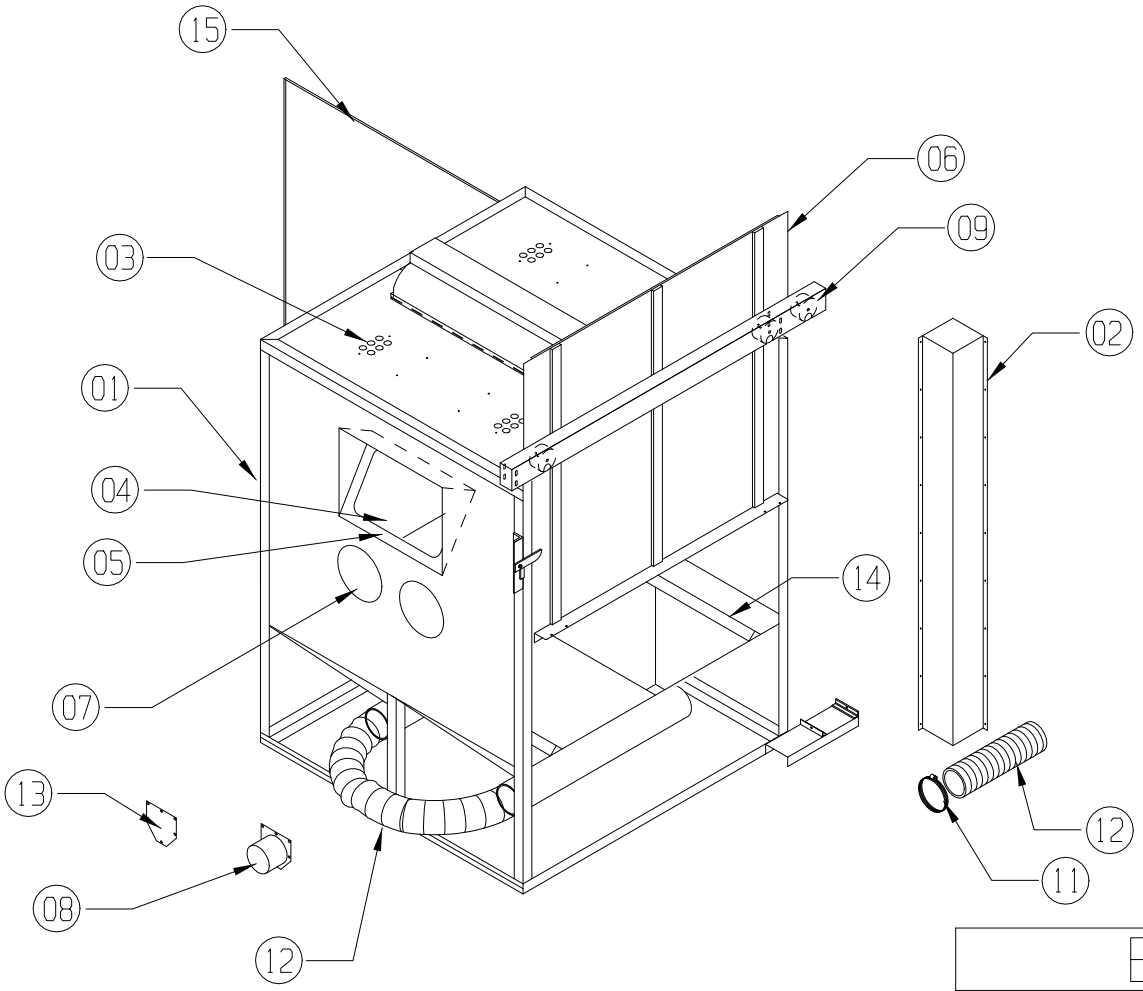
PRESSURE SYSTEM

1 CU FT POT

ELECTRICAL

POWER - 220 V / 1 PH / 60 HZ

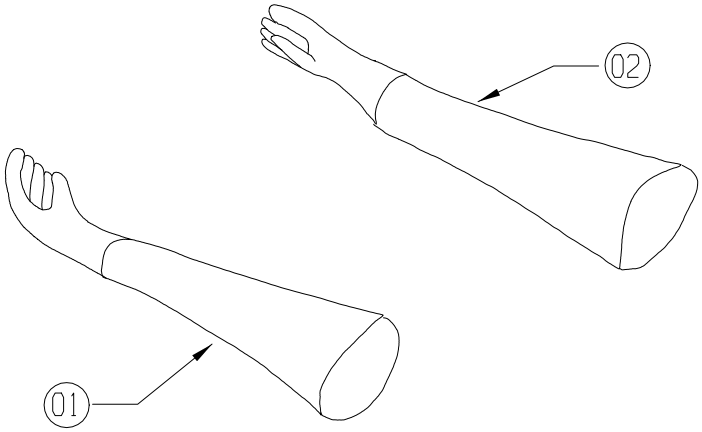
B6524-N



ITEM NO.	QTY.	DESCRIPTION	PART NO.
16	*	CUT SHEET	A20535
15	1	SWING DOOR (OPTIONAL)	B6538
14	1	INSIDE TRACK	
13	1	SUMP COVER PLATE	A650-1A
12	*	6" FLEX HOSE	19-096
11	4	6" CLAMP	21-036
10	*	3/16" DIA. STEEL CABLE	010460
09	3	4" DIA. PULLEY	15-910
08	1	6" DIA. SUMP ADAPTOR	A650
07	1	LARGE CAPACITY SNAP-IN-GLOVES	SEE A876
06	1	VERTICAL DOOR (OPTIONAL)	B6342
05	1	WINDOW FRAME	23-053
04	1	WINDOW (VIEWING)	23-050
03	2	AIR BAFFLE (INSIDE MACHINE)	A370
02	1	WEIGHT BOX COVER	B6393
01	1	6060-54 CABINET	

BLAST-IT-ALL, INC.

6060-54 CUBE W/ VERTICAL DOOR			JOB NO. 68408	ITEM NO.
DRAWN BY DEC	DATE 06/13/11	SCALE 1/20"	DWG. NO. B6524-N	
REVISION DEC	DATE 11/11/14			



ITEM NO.	QTY.	DESCRIPTION	DWG.NO./ MATERIAL
02	1	RIGHT GLOVE (LARGE)	22-1012
01	1	LEFT GLOVE (LARGE)	22-1011

LARRY HESS & ASSOCIATES, INC.
SALISBURY, NORTH CAROLINA

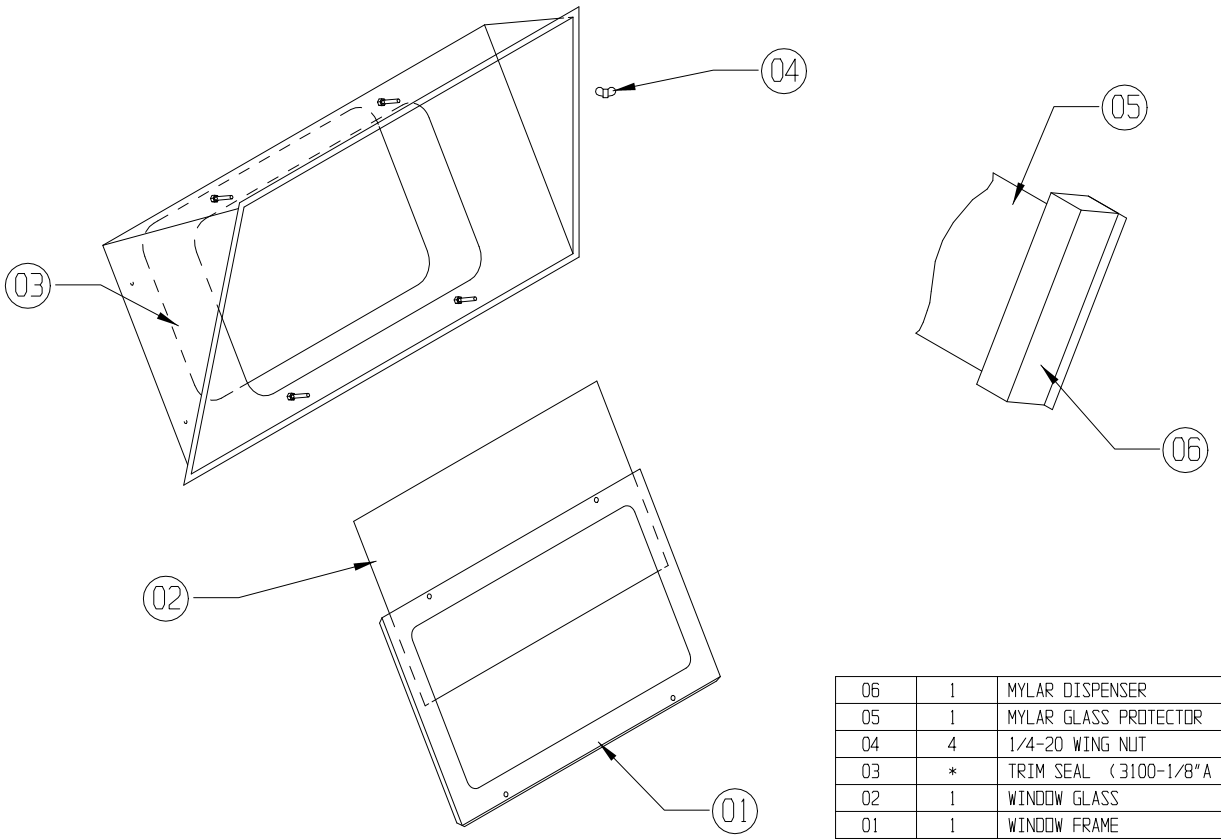
DESCRIPTION:
LARGE 10" SNAP-IN-GLOVE

MATERIAL:

DRAWN BY:	DATE:	SCALE:	JOB NO:
MJB	09/29/09	1/16"= 1"	STD.
CHK'D BY:	DATE:	FRACTIONAL: DECIMAL: ANGULAR:	NEXT ASS'Y.:

DRAWING NO.: A876

REV.	DESCRIPTION	BY	DATE



ITEM NO.	QTY.	DESCRIPTION	DWG.NO./ MATERIAL
06	1	MYLAR DISPENSER	011191-S
05	1	MYLAR GLASS PROTECTOR	011191
04	4	1/4-20 WING NUT	30-510
03	*	TRIM SEAL (3100-1/8"A [5'])	23-059
02	1	WINDOW GLASS	23-050
01	1	WINDOW FRAME	A283

LARRY HESS & ASSOCIATES, INC.
SALISBURY, NORTH CAROLINA

REV.	DESCRIPTION	BY	DATE

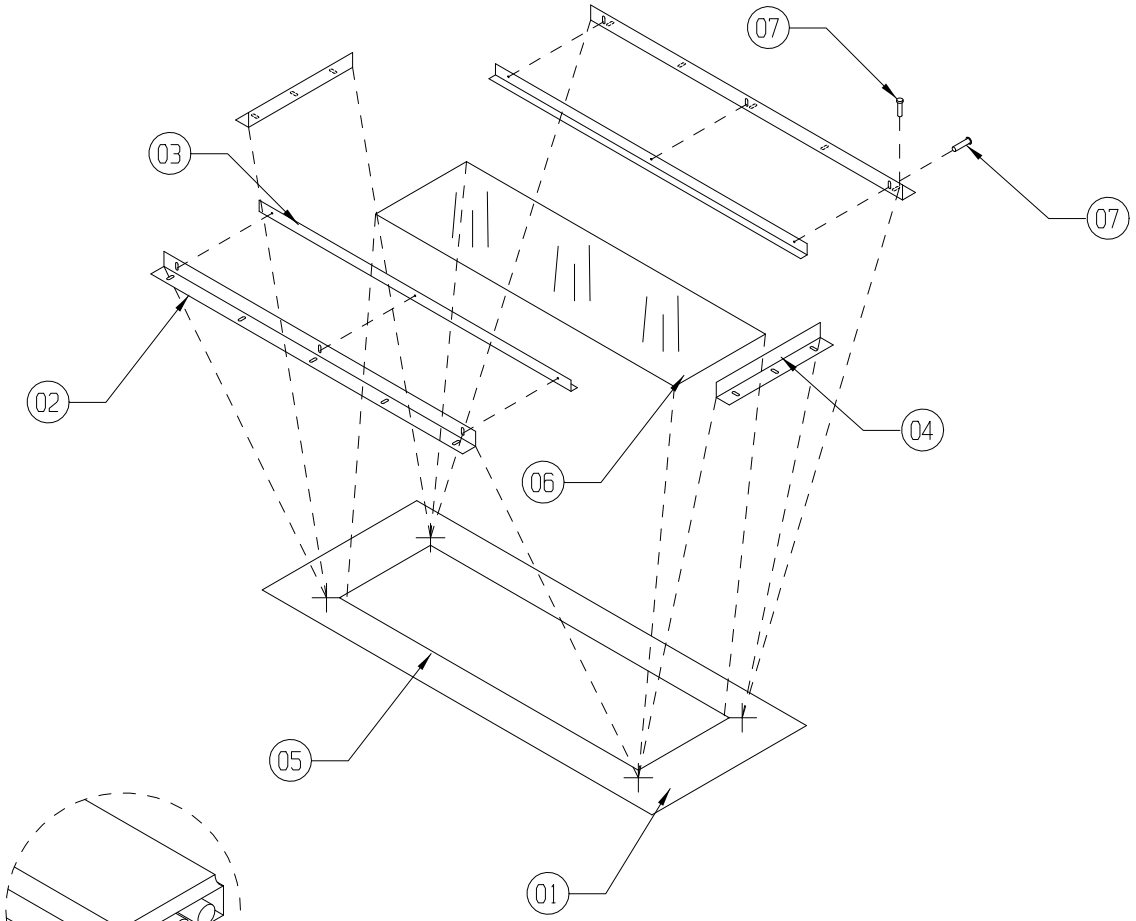
CONFIDENTIAL

DESCRIPTION: VISOR ASS'Y. W/MYLAR DISPENSER

MATERIAL: PER DWG.

DRAWN BY:	DATE:	SCALE:	JOB NO:
DEC	06/19/02	3/32"= 1"	
CHK'D BY:	DATE:	FRACTIONAL: DECIMAL: ANGULAR:	NEXT ASS'Y.:

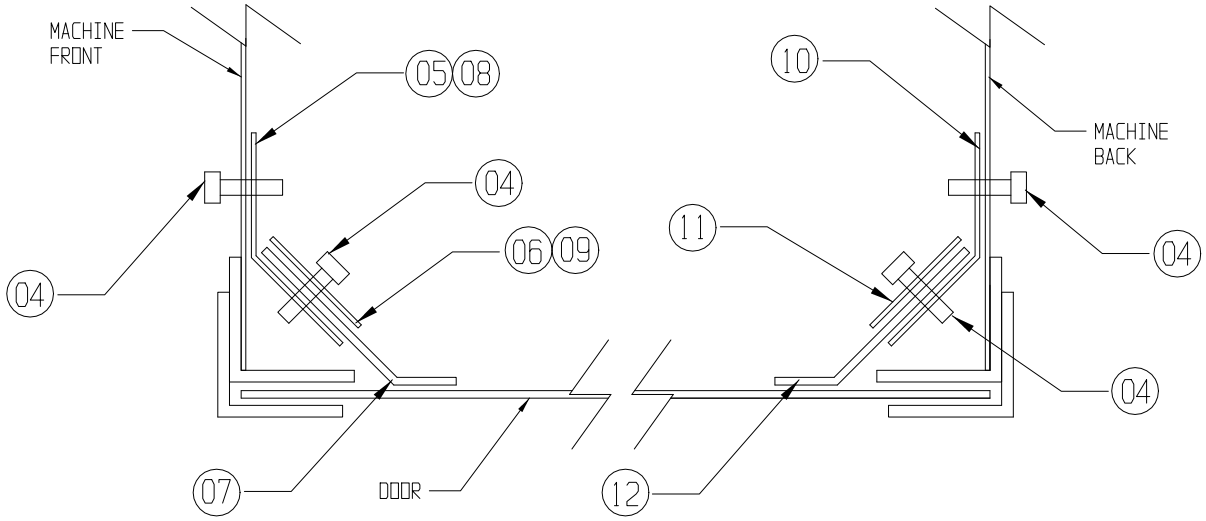
DRAWING NO.: A20540-M



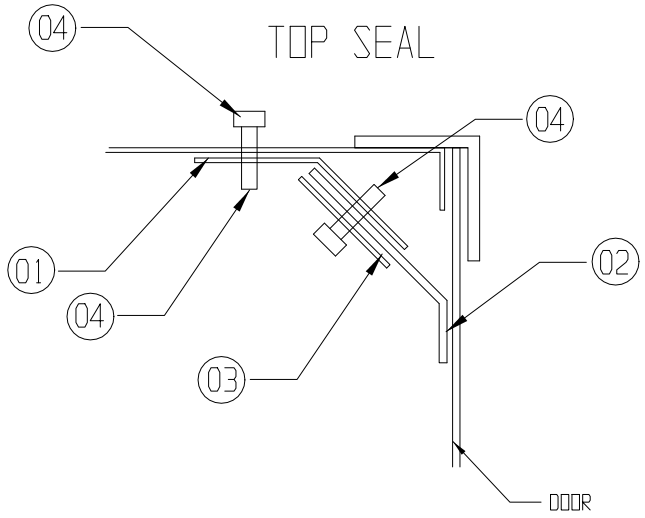
Fixture sits on top of protector.

Index No.	Part Number	Description	Units per assy	Usable on code	SM&R code
-C	13-688	Light Module	Ref		
-1	B6232 & B6283	7272 & 6060 Cube Machine	1		
-2	A33592-1	Panel light hold down, 48" x 2" angle	2		
-3	A33592-2	Panel light hold down, 48" x 1 1/4" angle	2		
-4	A33592-4	Panel light hold down, 24" x 2" angle	2		
-5	24-054-11	Gasket	1		
-6	011209	Plexiglass protector, 24" x 48"	1		
-7	30-145	Bolt, 1/4" x 1/2", self tap	16		
-8	30-307	Bolt, 1/4" x 1", self driller	10		
-9	011217	Light fixture, 48", 4 tube	1		
-10	13-538	Tube, 48"	4		

LIGHT MODULE FOR CUBE MACHINE



TOP VIEW OF MACHINE



ITEM NO.	QTY.	DESCRIPTION	DWG.NO./ MATERIAL
13			
12	1	RUBBER SEAL	B223-11
11	1	STRIP PLATE	B223-10
10	1	BASE PLATE	B223-09
09	1	STRIP PLATE	B223-07
08	1	BASE PLATE	B223-08
07	1	RUBBER SEAL	B223-06
06	1	STRIP PLATE	B223-04
05	1	BASE PLATE	B223-05
04	36	BOLT, 1/4-20 x 1/2 SELF TAP	30-145
03	1	STRIP PLATE	B223-02
02	1	RUBBER SEAL	B223-03
01	1	BASE PLATE	B223-01

REV.	DESCRIPTION	BY	DATE

LARRY HESS & ASSOCIATES, INC.
SALISBURY, NORTH CAROLINA

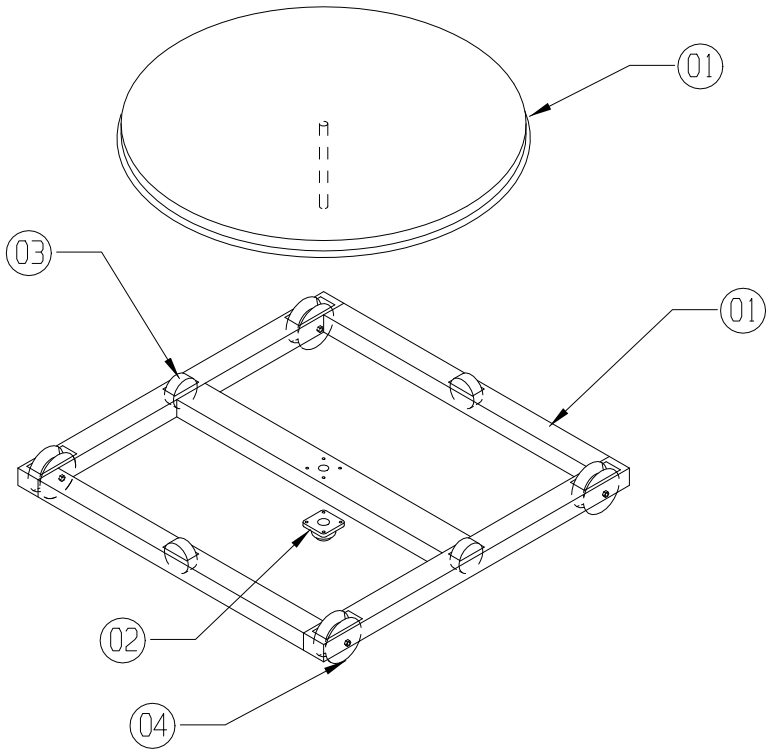
DESCRIPTION: 6060 VERTICAL DOOR SEAL

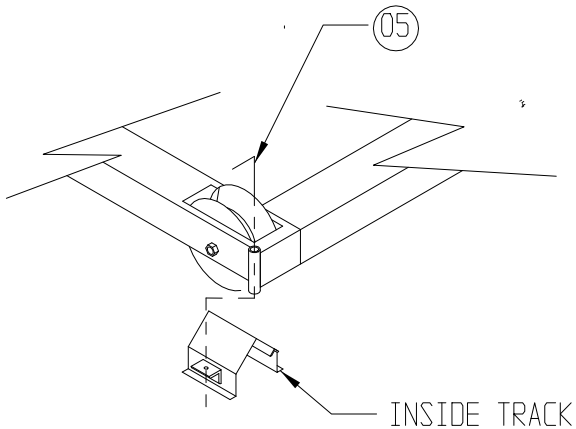
MATERIAL: PER DWG.

DRAWN BY:	DATE:	SCALE:	JOB NO:
DEC	06/26/03		STD
CHK'D BY:	DATE:	FRACTIONAL: / DECIMAL: / ANGULAR:	NEXT ASS'Y.:

DRAWING NO.: B224-1

A11225M





ITEM NO.	QTY.	DESCRIPTION	DWG.NO./ MATERIAL
05	1	LOCKING PIN	
04	4	6" V-GROOVE WHEEL	010590
03	4	4" FLAT WHEEL	15-912
02	1	BEARING (FLANGE)	15-920
01	1	TURNTABLE & CART ASS'Y.	B11027

LARRY HESS & ASSOCIATES, INC.
SALISBURY, NORTH CAROLINA

DESCRIPTION:
48" (2000#) TURNTABLE

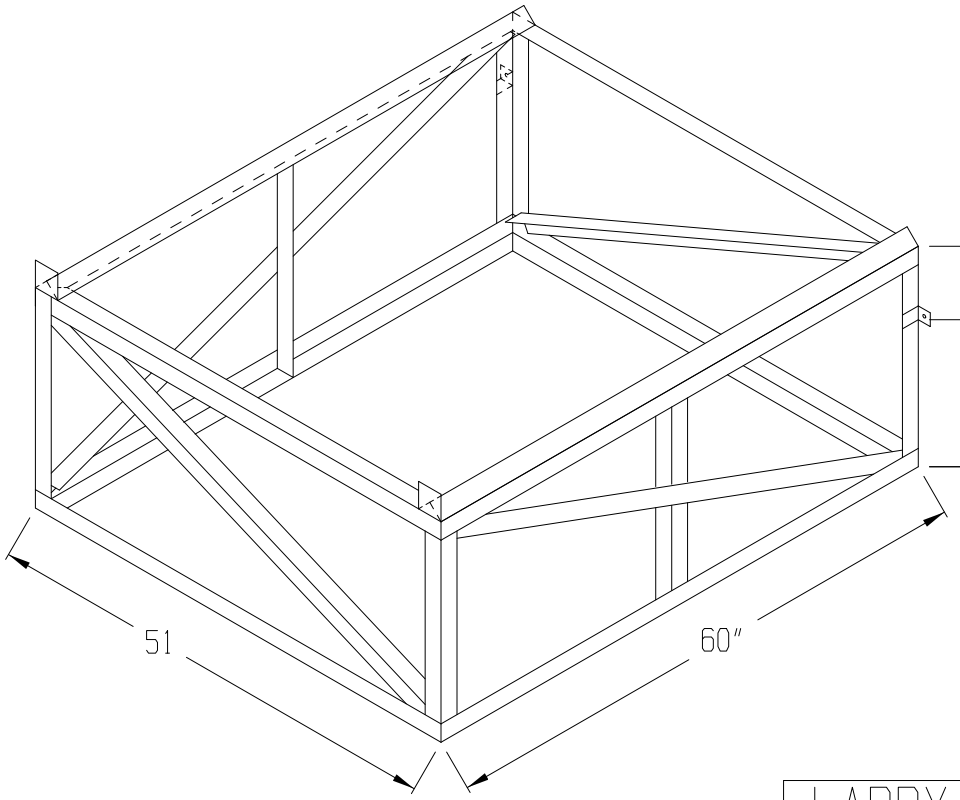
MATERIAL:
PER DWG.

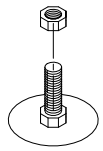
DRAWN BY:	DATE:	SCALE:	JOB NO:
DEC	05/22/96	3/64"= 1"	
CHK'D BY:	DATE:	FRACTIONAL: DECIMAL: ANGULAR:	NEXT ASS'Y.:

DRAWING NO.: A11225M

REV.	DESCRIPTION	BY	DATE

A11302





1 NUT WELDS TO TRACK
(6 PLACES)
2 ARE FOR JAM NUTS
@ TOP OF BOLT

REV.	DESCRIPTION	BY	DATE

LARRY HESS & ASSOCIATES, INC.
SALISBURY NORTH CAROLINA

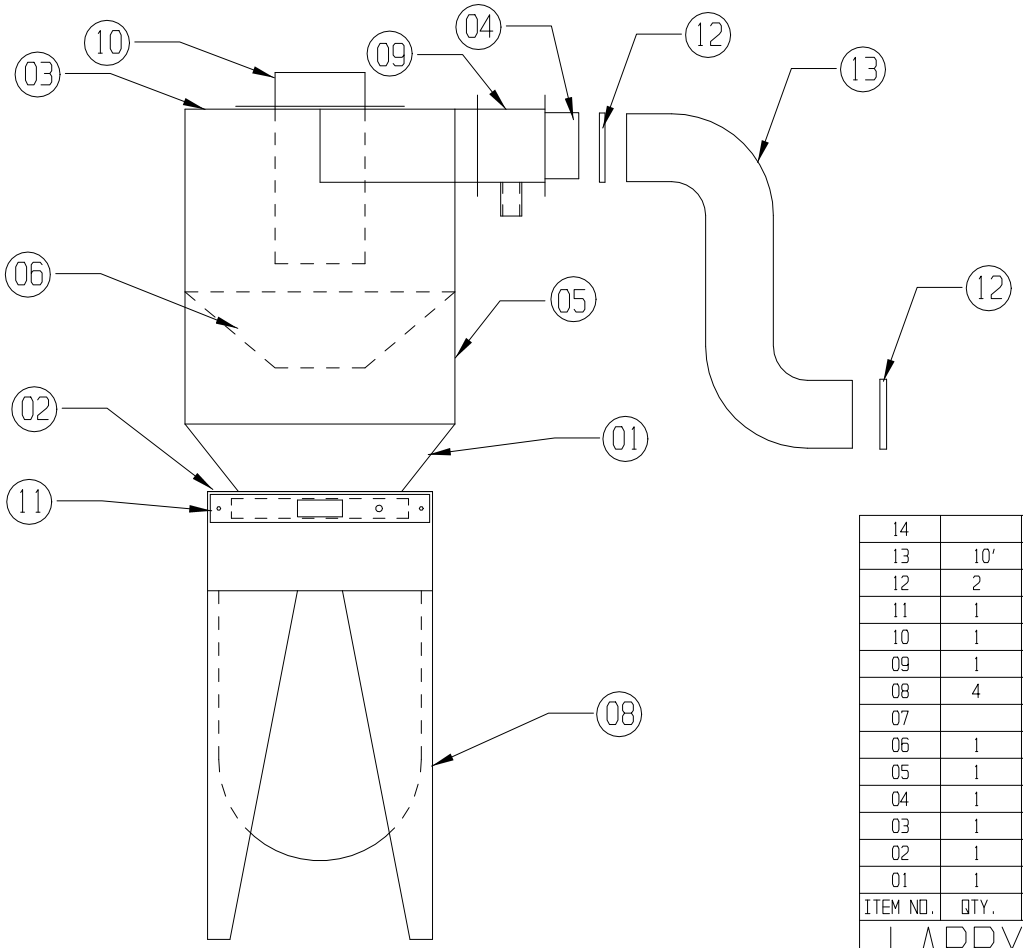
DESCRIPTION: Ø 48" TURNTABLE TRACK
2,000 LBS. (6060 CUBE)

MATERIAL: PER DWG.

DRAWN BY:	DATE:	SCALE:	JOB NO:
LJF	04/03/03	1/16"= 1"	STD.
CHK'D BY:	DATE:	FRACTIONAL: DECIMAL: ANGULAR:	NEXT ASS'Y.:

DRAWING NO.: A11302

A36066



*NOTE: HEIGHT 77-1/2" TALL

ITEM NO.	QTY.	DESCRIPTION	DWG.NO./ MATERIAL
14		CUT SHEET	A36067
13	10'	FLEX HOSE (6")	19-096
12	2	CLAMP	21-035
11	1	TRASH SCREEN	A673
10	1	TOP OUTLET	A1209
09	1	PURGE ADAPTOR	B1125-1
08	4	LEGS (31")	A1124-3
07			
06	1	STD. 900 INNER CONE	A1206-1
05	1	STD. 900 BODY	A1203-2
04	1	STD. 6" INLET	A12767
03	1	STD. 900 TOP	A1211-1
02	1	SUMP FLANGE	A1125-1
01	1	BOTTOM CONE	A1226

LARRY HESS & ASSOCIATES, INC.
SALISBURY, NORTH CAROLINA

NO.	REVISION	BY	DATE	NO.	REVISION	BY	DATE

DESCRIPTION: 900 REC. W/PRESSURE POT

MATERIAL: PER DWG.

DRAWN BY:	DATE:	SCALE:	JOB NO:
D. CLINTON	10/27/99	1/16"= 1"	
CHK'D BY:	DATE:	FRACTIONAL: DECIMAL: ANGULAR:	NEXT ASS'Y.:

DRAWING NO.: A36066

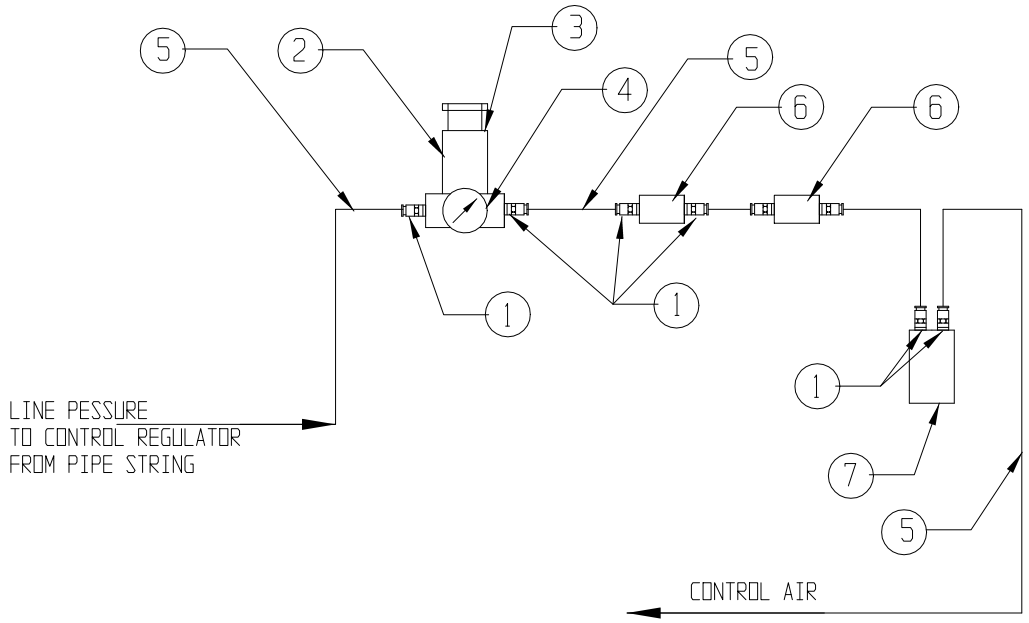
LARRY HESS & ASSOCIATES

DESCRIPTION: CUBE PRESSURE AIR CONTROL

DATE: 01/06/16

ENGINEER: DEC

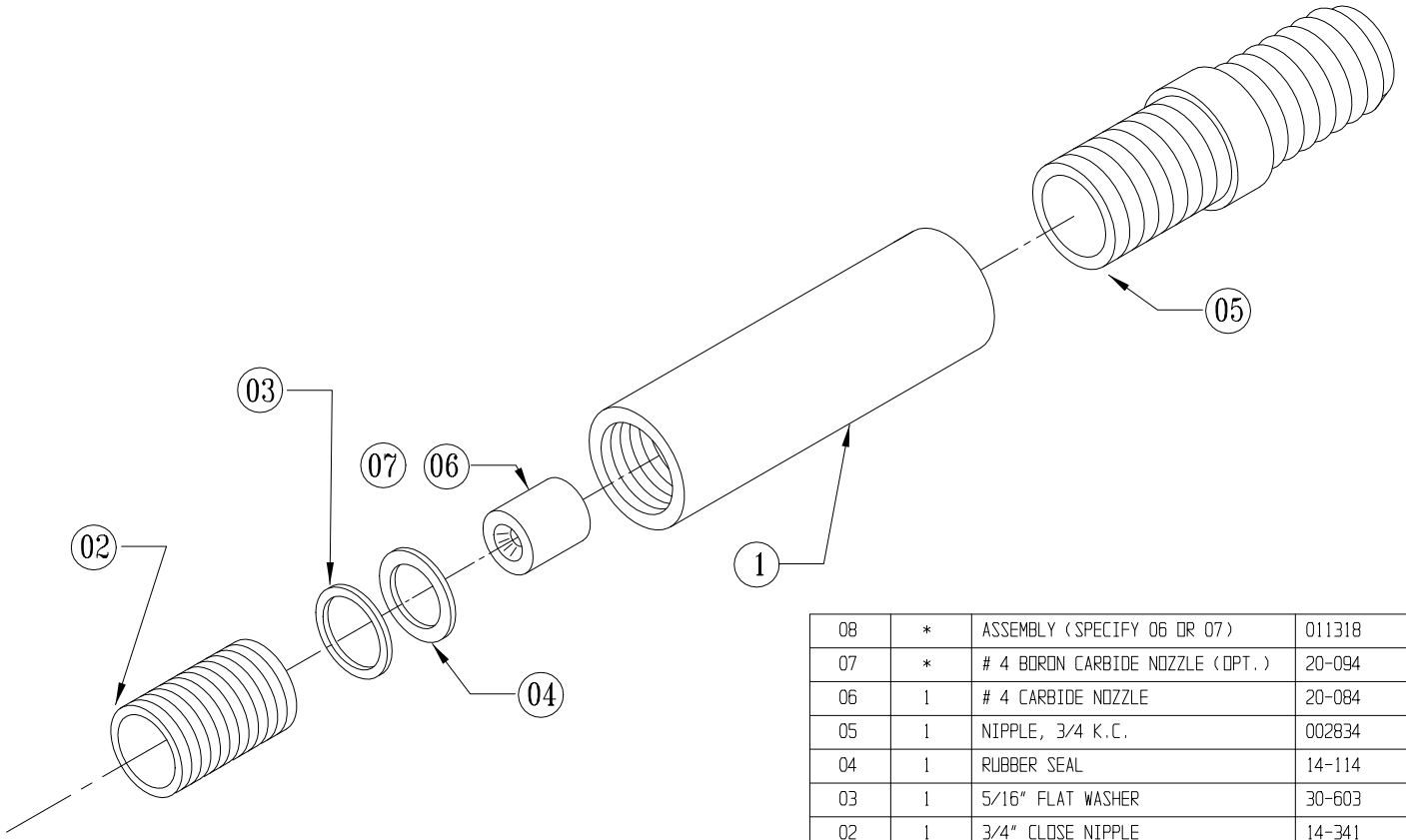
DWG. NO.: M7077



DOUBLE DOOR MODELS

ITEM NO.	PART NO.	QTY.	DESCRIPTION
1	16-951	8	FITTING 1/4" TUBE x 1/8" NPT
2	001564	1	REGULATOR, 1/8"
3	001564-N	1	NUT FOR REGULATOR
4	16-820	1	GAUGE, 1/8" BACK
5	18-111	*	TUBING 1/4", O.D, VINYL
6	010600	2	VALVE. AIR 1/8" 3-WAY (SAFETY DOOR)
7	003190	1	VALVE. AIR (FOOT CONTROL)

A4096M



ITEM NO.	QTY.	DESCRIPTION	DWG.NO./ MATERIAL
08	*	ASSEMBLY (SPECIFY 06 OR 07)	011318
07	*	# 4 BORON CARBIDE NOZZLE (OPT.)	20-094
06	1	# 4 CARBIDE NOZZLE	20-084
05	1	NIPPLE, 3/4 K.C.	002834
04	1	RUBBER SEAL	14-114
03	1	5/16" FLAT WASHER	30-603
02	1	3/4" CLOSE NIPPLE	14-341
01	1	HOLDER	011319

LARRY HESS & ASSOCIATES, INC.
SALISBURY NORTH CAROLINA

DESCRIPTION: BLOW DOWN RESTRICTOR

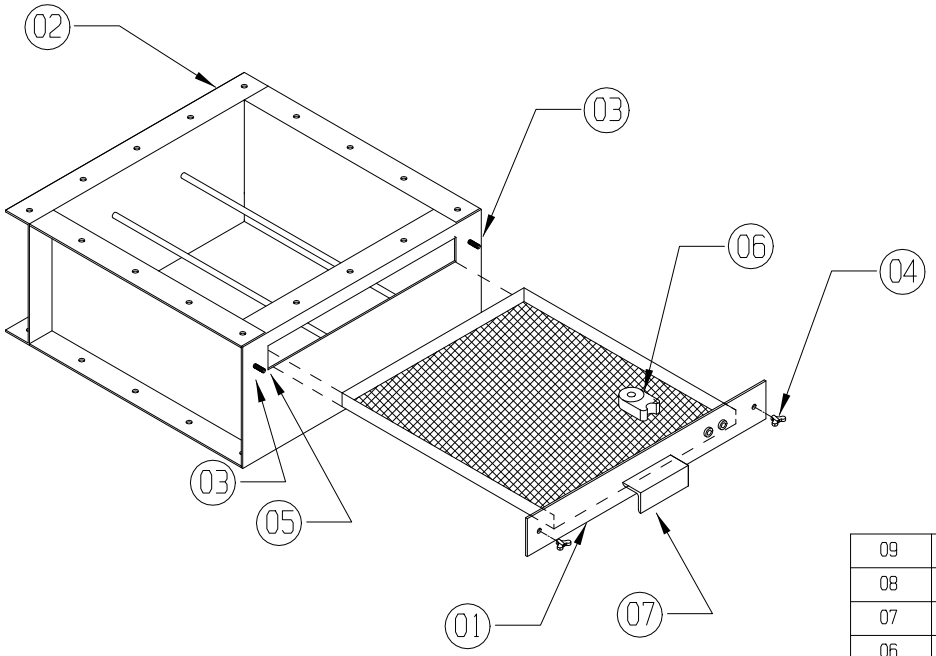
MATERIAL:

DRAWN BY:	DATE:	SCALE:	JOB NO:
LJF	06/14/00	1/4"= 1"	STD.
CHK'D BY:	DATE:	FRACTIONAL: DECIMAL: ANGULAR:	NEXT ASS'Y.:

DRAWING NO.: A4096M

REV.	DESCRIPTION	BY	DATE

A673-A



ITEM NO.	QTY.	DESCRIPTION	DWG.NO./ MATERIAL
09	1	REPLACEMENT DRAWER (3/8" HOLES)	010581-2
08	1	REPLACEMENT DRAWER (1/4" HOLES)	010581-1
07	1	REPLACEMENT DRAWER (3/16" HOLES)	010581
06	1	VIBRATOR (OPTIONAL)	16-919
05	3 FT.	1/8" x 3/4" GASKET	24-021
04	2	1/4" WING NUT	30-510
03	2	1/4" SELF TAPPER x 1" LONG	30-148
02	1	TRASH SCREEN BOX ASS'Y.	A268
01	1	DRAWER ASS'Y.	A270

LARRY HESS & ASSOCIATES, INC.
SALISBURY NORTH CAROLINA

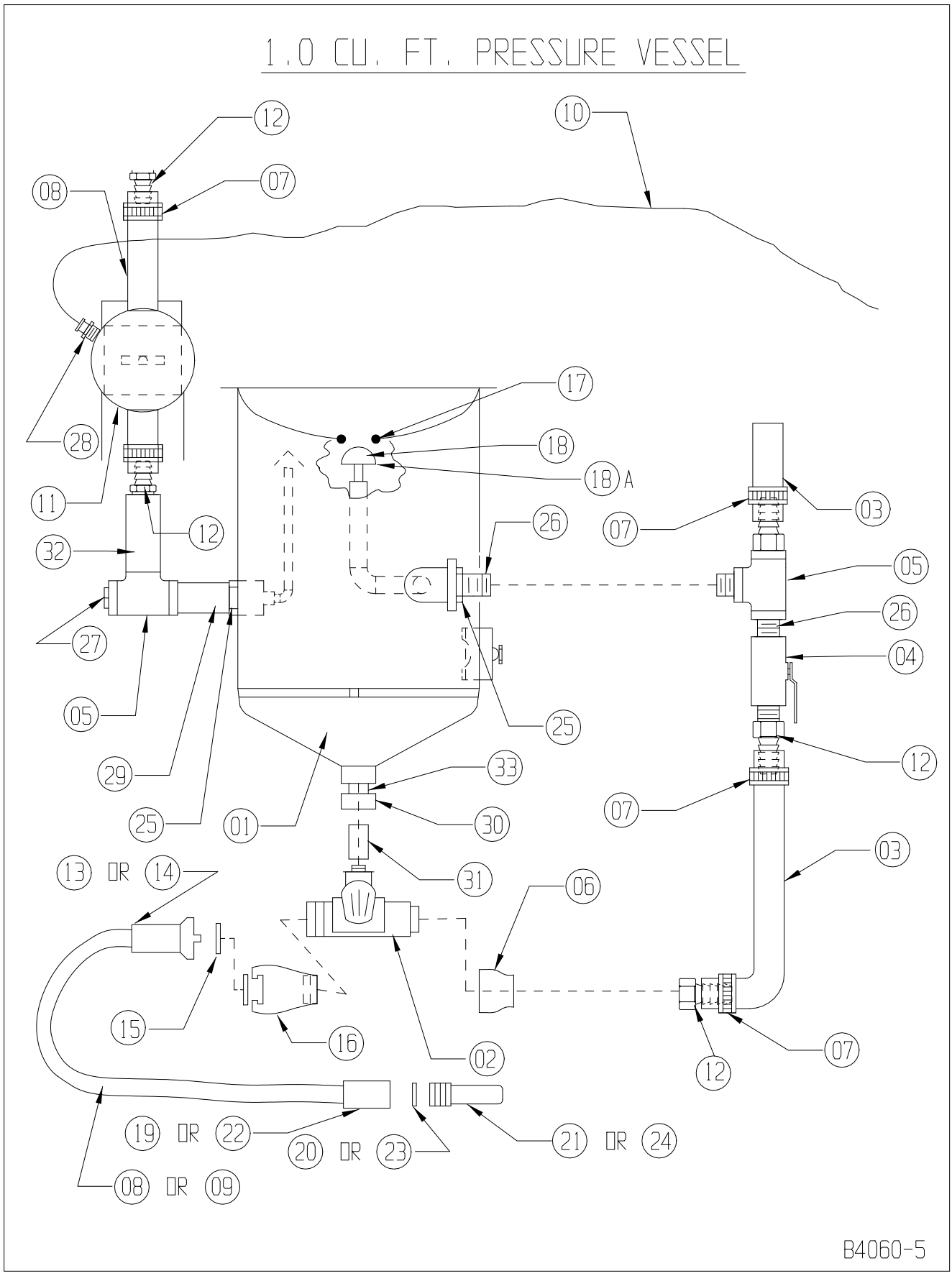
DESCRIPTION: TRASH SCREEN ASM.
010580

MATERIAL:

DRAWN BY:	DATE:	SCALE:	JOB NO:
DEC	6/14/99	3/32"= 1"	STD.
CHK'D BY:	DATE:	FRACTIONAL: DECIMAL: ANGULAR:	NEXT ASS'Y.:

DRAWING NO.: A673-A

REV.	DESCRIPTION	BY	DATE
#1	ADD 3/8" DRAWER	LJF	12/09/08


1.0 CU. FT. PRESSURE VESSEL
12
10
08
07
17
28
18
18A
11
12
26
07
03
32
05
27
26
04
25
29
12
33
25
01
30
07
03
13 OR 14
31
06
15
16
02
12
07
19 OR 22
20 OR 23
21 OR 24
08 OR 09
B4060-5

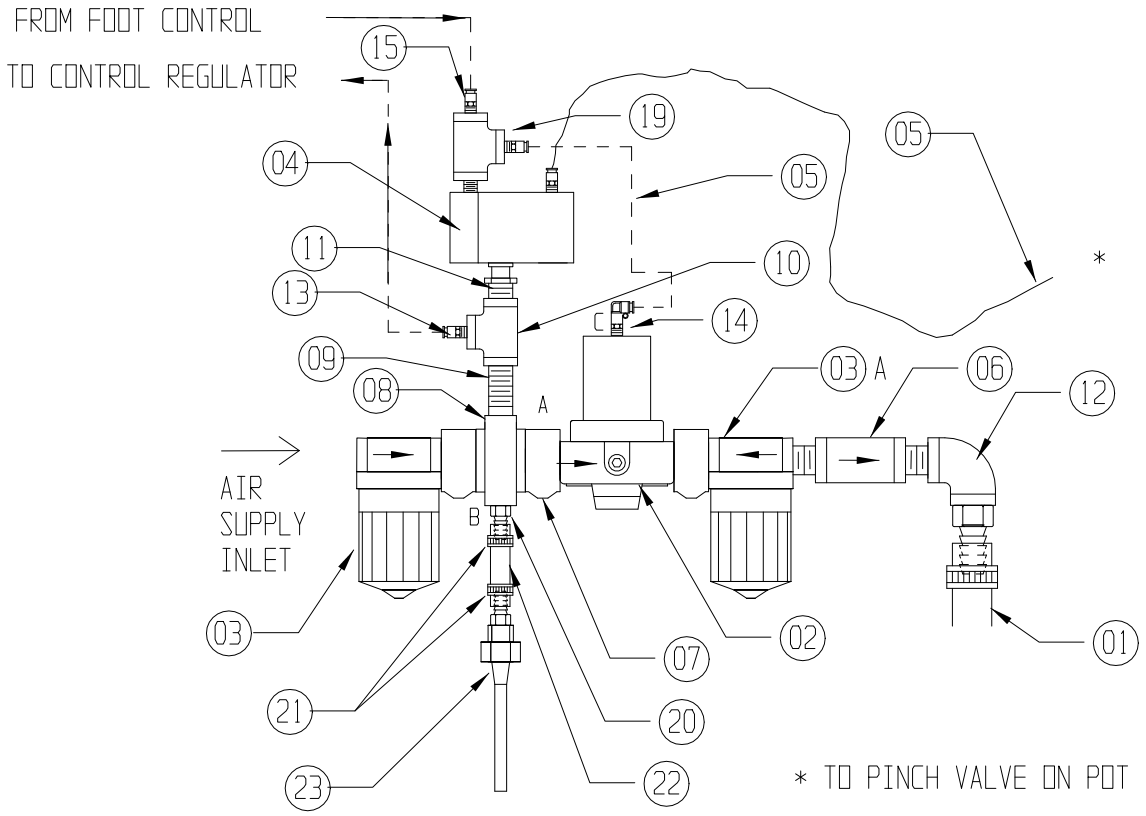
1.0 CU. FT. PRESSURE VESSEL

33	1	NIPPLE, 1" CLOSE	14-357
32	1	BLOW-DOWN RESTRICTOR	011318
31	1	NIPPLE, 1-1/4" CLOSE	14-350
30	1	BUSHING, 1" x 1-1/4"	14-363
29	1	NIPPLE, 3/4" x 3" LG.	14-520
28	1	FITTING, STRAIGHT CONNECTOR 1/4" x 1/4"	004623
27	1	PLUG, 3/4"	000835
26	7	NIPPLE, CLOSE 3/4	14-341
25	2	BUSHING, 1" x 3/4"	14-371
24	1	NOZZLE, 1-1/4" THREADS	20-622
23	1	WASHER, NCW 1" ID x 1-1/2	14-113
22	1	HOLDER, NOZZLE 1-1/4" THREADS	14-109
21	1	NOZZLE, 1/4"	20-602
20	1	WASHER, NCW 1/2" ID x 1-1/8"	14-114
19	1	HOLDER, NOZZLE 3/4" THREADS	14-108
18A	1	VALVE, POP-UP, URETHANE (7/17/00)	16-706U
18	1	VALVE, POP-UP, STEEL	16-706
17	1	SEAL, POP-UP	16-707
16	1	TANK COUPLING 1-1/4 FPT 2 PRONG AL	14-117
15	2	WASHER, QC & TC	14-107
14	1	QUICK COUPLING 3/4" HOSE	14-102
13	1	QUICK COUPLING, 1/2" HOSE	14-101
12	5	3/4" K.C. NIPPLE	002834
11	1	PINCH VALVE ASMB.	16-1015
10	*	TUBING 1/4" OD VINYL	18-111
09	*	HOSE, BLAST 1/2" ID X 1-1/8 OD	18-100
08	*	HOSE, BLAST 3/4" ID X 1-1/2" OD	18-101
07	5	CLAMP	21-031
06	1	BELL REDUCER 1 1/2 X 3/4	006227
05	2	TEE 3/4" 150# MI	14-509
04	1	VALVE, BALL 3/4"	14-464
03	*	HOSE, AIR 3/4" I.D.	18-080
02	1	MICRO VALVE	16-878
01	1	PRESSURE POT 1 CU. FT.	16-935
ITM	QTY	DESCRIPTION	PART NO.

B4060-5PL

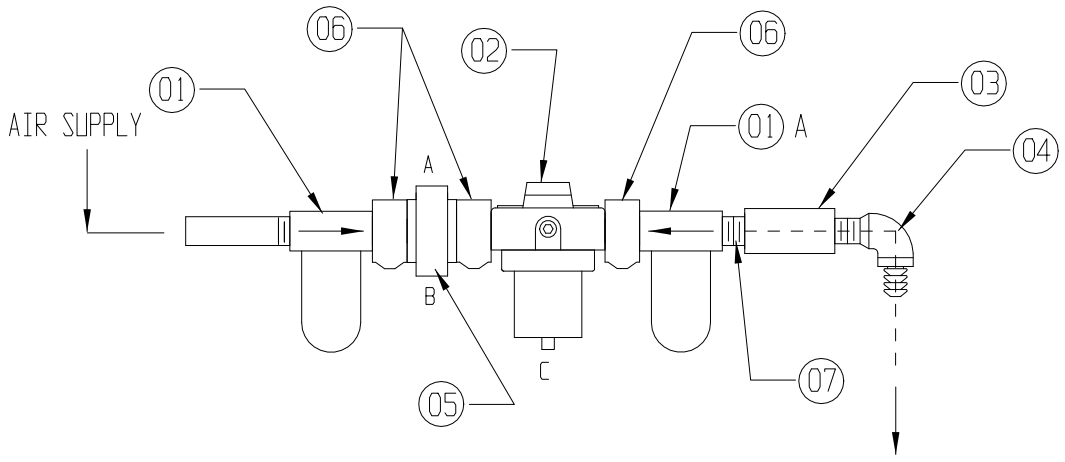
P01 PRESSURE SYSTEM PIPE STREAM (STANDARD MACHINE)

LOCATED ON BACK OF BLAST CABINET



ITEM NO.	PART NO.	DESCRIPTION
1	18-080	HOSE, AIR 3/4" I.D.
2	16-896	REGULATOR, PILOT OPERATED 3/4" FPT.
3	16-897	AIR FILTER 3/4" FPT.
3A	16-897-5	AIR FILTER 3/4" FPT.(HAS 5 MICRON CARTRIDGE)
4	16-832	SOLENOID 3-PORT AIR/SPRING
5	18-111	TUBING 1/4" O.D. VINYL
6	006271	VALVE, CHECK IN-LINE
7	012117	BODY CONNECTOR
8	012119	'T" BLOCK
9	14-320	NIPPLE, 1/4" CLOSE
10	14-329	TEE, 1/4" BRASS
11	14-389	BUSHING, 1/4" x 1/8"
12	14-456	STREET ELL, 3/4"
13	004623	FITTING, STRAIGHT CONNECTOR 1/4" x 1/4"
14	003083	FITTING, 90° ELBOW CONNECTOR 1/4" x 1/4"
15	16-951	FITTING, STRAIGHT CONNECTOR 1/8" x 1/4"
16	------	----------
17	------	----------
18	------	----------
19	14-326	TEE, 1/8"
20	14-313	FITTING, 1/4"
21	21030	CLAMP
22	000738	HOSE, 1/4"
23	16-822	BLOW OFF NOZZLE

A4116



***COMPLETE ASSEMBLY - 012120

ITEM NO.	QTY.	DESCRIPTION	DWG.NO./ MATERIAL
07	1	NIPPLE, 3/4"	14-341-B
06	3	BODY CONNECTOR	012117
05	1	"T" BLOCK	012119
04	1	ELL, 90° 3/4" MPT x 3/4" BARB	012132
03	1	CHECK VALVE, 3/4"	006271
02	1	REGULATOR, 3/4"	16-896
01A	1	FILTER, 3/4" (HAS 5 MICRON CARTRIDGE)	16-897-5
01	1	FILTER, 3/4"	16-897

LARRY HESS & ASSOCIATES, INC.
SALISBURY, NORTH CAROLINA

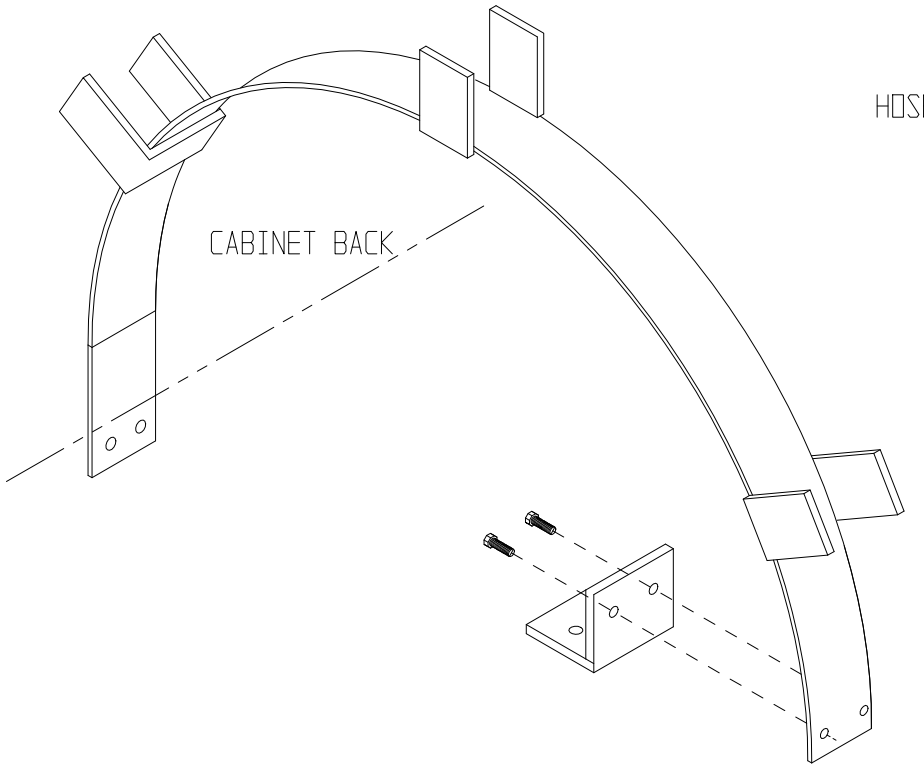
DESCRIPTION: AIR CONTROL ASSEMBLY PRESSURE

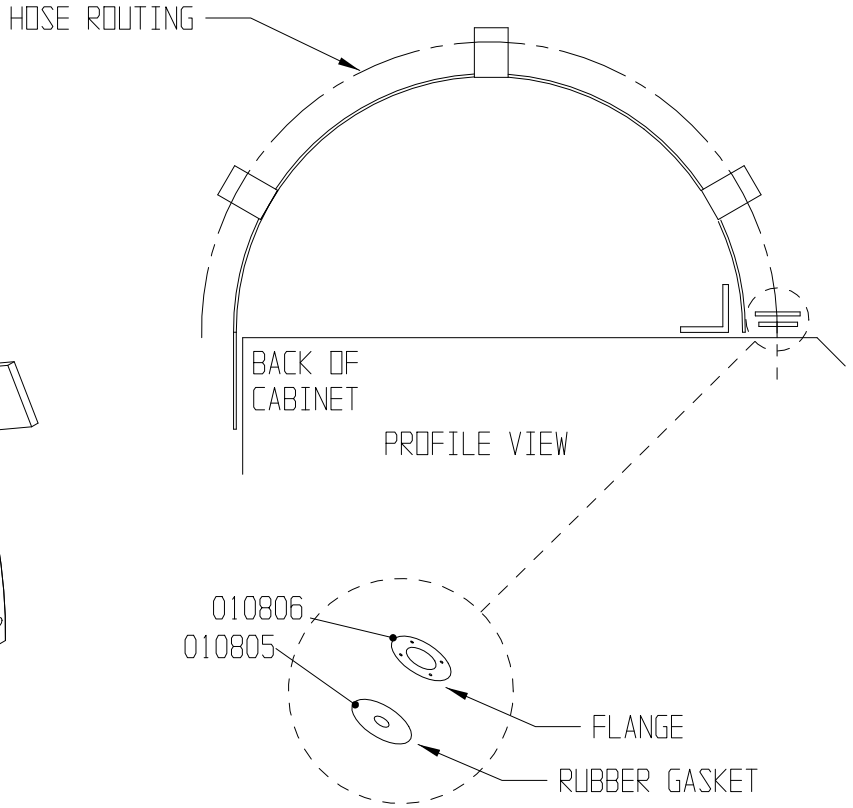
MATERIAL: PER DWG.

DRAWN BY:	DATE:	SCALE:	JOB NO:
DEC	06/22/09	NONE	
CHK'D BY:	DATE:	FRACTIONAL: DECIMAL: ANGULAR:	NEXT ASS'Y.:

DRAWING NO.: A7229

REV.	DESCRIPTION	BY	DATE





8484 CUBE	011092-65
7272 CUBE	011092-65
6060 CUBE	011092-47
CABINET MODEL (LB)	SUPPORT NO.

REV.	DESCRIPTION	BY	DATE

LARRY HESS & ASSOCIATES, INC.
SALISBURY NORTH CAROLINA

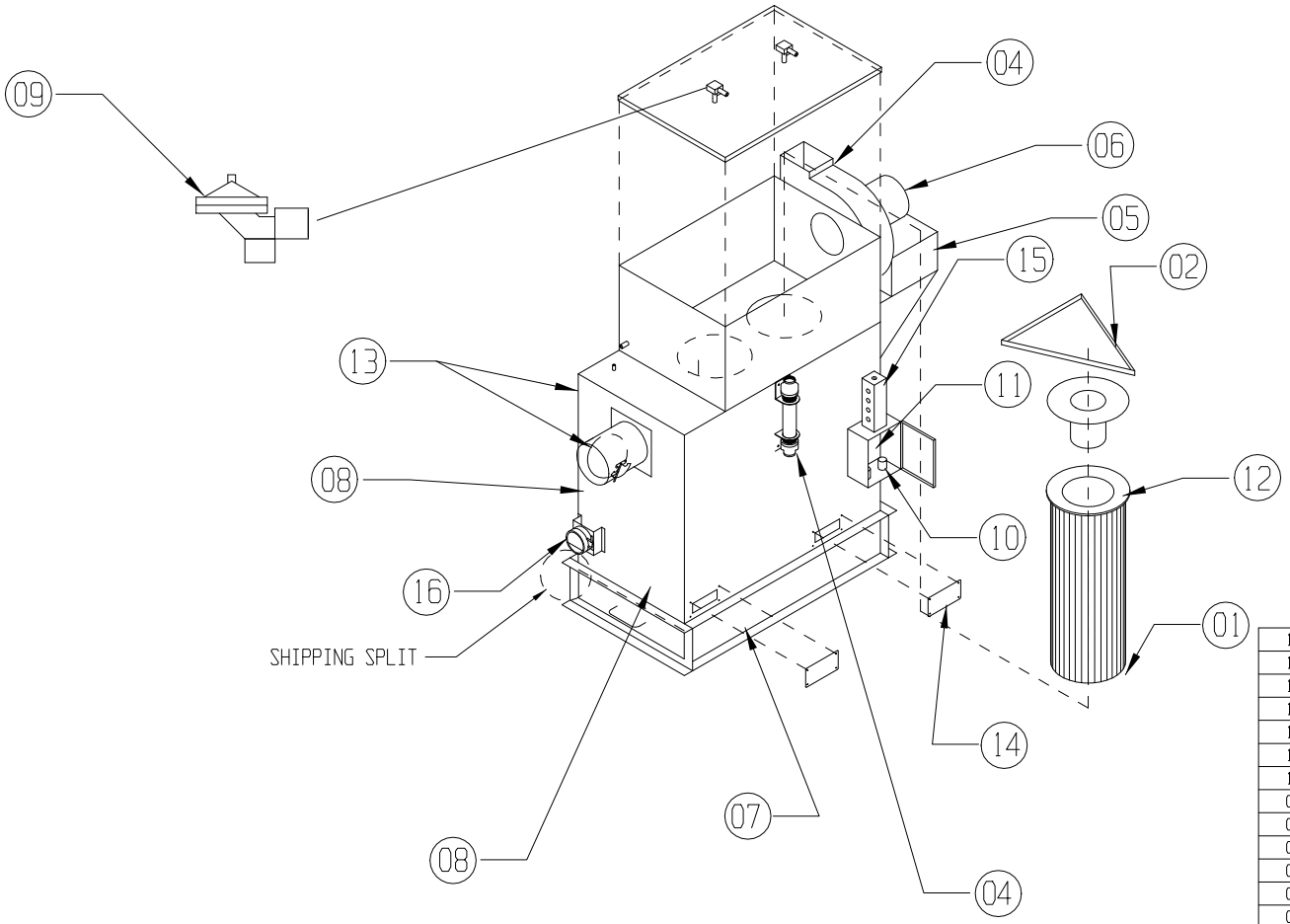
DESCRIPTION: BLAST HOSE TOP SUPPORT ASSEMBLY

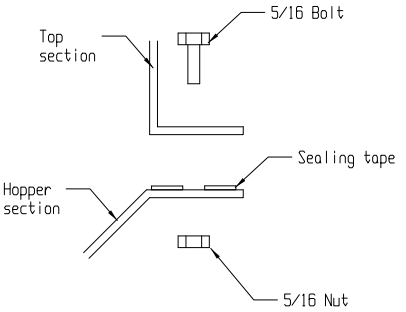
MATERIAL:

DRAWN BY:	DATE:	SCALE:	JOB NO:
DEC	01/02/06	N.T.S.	STD.
CHK'D BY:	DATE:	FRACTIONAL: DECIMAL: ANGULAR:	NEXT ASS'Y.:

DRAWING NO.: A698-MCUB

M2068-1





HOPPER SEAL

SHIPPING SPLIT

ITEM NO.	QTY.	DESCRIPTION	DWG.NO./ MATERIAL
16	1	MAGNEHELIC GAGE	004457-10
15	1	ELECTRICAL BOX	A5176
14	4	FORKLIFT COVER	A2714
13	1	8" DAMPER INLET ASS'Y.	001046
12	2	CARTRIDGE CAP	A2463
11	1	CONTROL BOARD	010453
10	2	SOLENOID VALVE	003285
09	2	PULSE VALVE, 1"	005410
08	1	RPJ2-93	007420
07	1	DRAWER ASS'Y.	
06	1	MOTOR, 2 HP (OPTIONAL)	13-900
05	1	FAN ASS'Y (LESS MOTOR)	001062
04	1	BLADE	001054
03	1	MANIFOLD	B7111
02	2	CARTRIDGE HOLDER	010849
01	2	CARTRIDGE	006870 / 010899

*NOTE: AFTER PLACING THE TOP SECTION OF THE RPJ DUST COLLECTOR ON THE BOTTOM SECTION PLACE FORKLIFT COVERS OVER HOLES. USE PUTTY TAPE BETWEEN ALL BOLT TOGETHER FLANGES.

REV.	DESCRIPTION	BY	DATE
#2	UPDATED	DEC	02/28/07
#1	UPDATED TO 900	DEC	03/02/05

LARRY HESS & ASSOCIATES, INC.
SALISBURY, NORTH CAROLINA

DESCRIPTION: (900 CFM) 2 CARTRIDGE DUST COLLECTOR

MATERIAL: 14 GA.

DRAWN BY:	DATE:	SCALE:	JOB NO:	DRAWING NO.:
DEC	7/18/95	3/64"= 1"		M2068-1
REV'D BY: DEC	DATE: 5/13/98	FRACTIONAL: DECIMAL: ANGULAR:	NEXT ASS'Y.:	

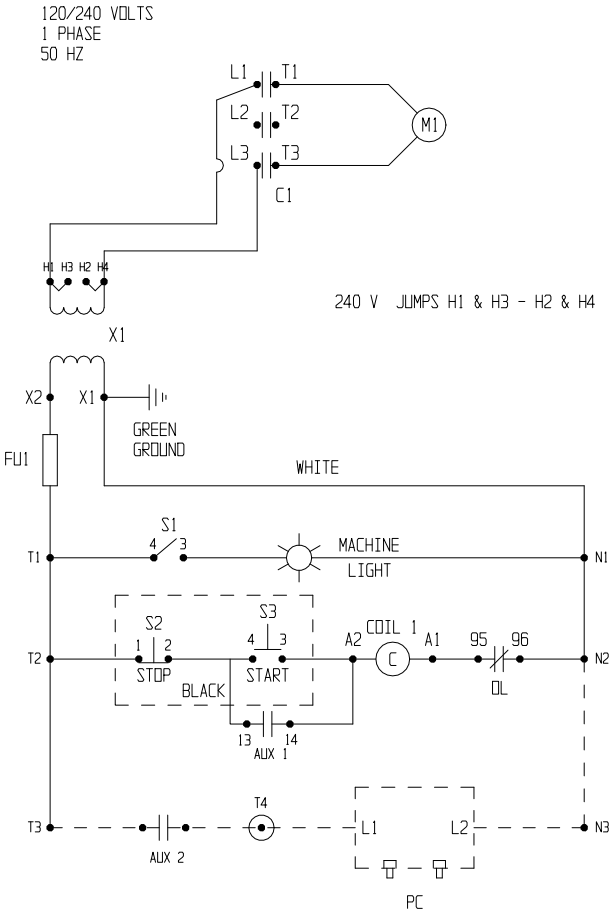
LARRY HESS & ASSOCIATES

DESCRIPTION 120/240 1 PHASE ELECTRICAL SCHEMATIC

DATE 10/19/15

ENGINEER DEC

DWG. NO. A5286



SWITCH NO.	FUNCTION	PART NO.
S1	MACHINE LIGHT - OFF/ ON	13-655
S2	M1 (PUSH TO STOP)	006404
S3	M1 (PUSH TO START) STARTS M1	
X1	TRANFORMER (250 VA 2 LIGHTS)	000117
X1	TRANFORMER (150 VA 1 LIGHT)	010222
FU1	FUSE	13-101-5A
FH	FUSE HOLDER	13-101
C1	CONTACTOR	010210-S
OL	OVERLOAD (230 V) 2 HP	010223-S
OL	OVERLOAD (460 V) 2 HP	010211-S
M1	MOTOR (2 HP) 3 PH	13-900
OL	OVERLOAD (230 V) 1HP	010211-S
OL	OVERLOAD (460 V) 1 HP	011795
M1	MOTOR (1 HP) 3 PH	13-701
PC	PULSE CONTROL BOARD (RPJ ONLY)	010453
AUX 1	AUXILLARY CONTACT (2 NO)	011720

MANUAL NUMBER: MM-329

BLAST-IT-ALL®

REVERSE PULSE DUST COLLECTOR

WARNING

DO NOT USE ***SAND.*** SAND WILL CAUSE SILICA DUST, WHICH IS THE CAUSE OF SILICOSIS DISEASE, A CONDITION OF MASSIVE FIBROSIS OF THE LUNGS. ***THIS STATEMENT INDICATES POTENTIAL PERSONNEL HAZARD. FAILURE TO COMPLY WITH THESE INSTRUCTIONS MAY RESULT IN PERSONAL INJURY.***

WEBSITE FOR SILICOSIS:
http://www.osha.gov/Silica/IT69D 1.html

RPJ-2

LARRY HESS & ASSOCIATES, INC
P.O. BOX 1615
SALISBURY, NC 28145-1615
TOLL 1-800-535-2612 / FAX 704-636-9311
www.blast-it-all.com OR sales@blast-it-all.com

Table of Contents

MM-329

Specifications and Instructions for RPJ Collectors

1.0 General Description

*The **MODEL RPJ COLLECTORS** are cartridge filter jet pulse type collectors. These collectors may be supplied as a complete unit or they may be supplies in two sections ready for installation in the user's plant. A top opening door is provided for the inspection and/or replacement of the filter cartridges and the air pulsing system components. If the unit is supplied with a hopper it is of the pyramidal type forming the lower part of the collector. An air inlet is located either on the side or top depending on the size of the collector. The dirty air stream passes through the inlet and is deflected away from the cartridges to help prevent premature cartridge wear. As the dirty air inters the collection chamber the velocity reduces due to the expanded area. The heavier particles drop into the Dust Drawer or Hopper. The air separates as it is drawn into the cartridge filters. The air goes through the cartridge media for the final separation of the solids (dirt) from the air stream. Solid particles are captured on the filter media as the air steam passes through and into the center section of the cartridge and is exhausted from the collector. Compressed air jets are used periodically to BACK FLUSH (CLEAN) the filter pleats causing the collected particles to fall down into the drawer or hopper.*

2.0 Design Considerations

2.01 Maximum negative pressure: 12" WG.

2.02 Design operating temperature: 150 f

2.03 Compressed air supply: 80 to 90 PSIG operating pressure with a 100 PSIG being the maximum design.

3.0 Installation and Arrangement

The user will place the unit on a flat level surface. The self-supporting base and/or structure provided does not require anchor bolts for indoor applications. If the unit is to be located outdoors, the user must provide adequate anchoring consistent with the appropriate building codes. When locating the unit, allow sufficient space to allow filter removal from the top of the unit (usually 3 feet).

4.0 Basic Construction

4.01 Basic Unit: The basic unit is fabricated from 12-gauge carbon steel. All seams are continuously welded to form a solid seal. The filter/air pulsing access door(s) are gasketed. The air jet valves are designed especially for this type air pulse application and are operated through the sequence control by manual push buttons or by timed unit depending on the model or the unit.

4.02 Filter Cartridges: Each cartridge contains approximately 250 pleats and the number of filter units depends of the unit size. The open end of the cartridge has a lip under which a special composition gasket is mounted. Any cuts gouges or tears in this gasket will cause premature failure of the filtering unit.

4.03 Cleaning Control: The cleaning is actuated by one of two means. On the manual cleaning units a manual push-button is provided. On the larger units a solid state controller it provided. On some units this control may be shipped loose for installation by the customer.

5.0 Reverse Pulse Jet Air System

The compressed air manifold is to be supplied with compressed air at 85 PSIG. The user must provide a pressure regulator to maintain the pressure. The air supply must be clean and free of moisture. Air consumption rates for 85 PSIG are determined as follows in standard cubic feet of compressed air:

Number of pulse valves (cartridges) x 1.75 SCF

Example: 2 cartridges x 1.75 SCF=3.5 SCF
If we clean every 3 minutes the usage is divided by 3 or 1.16 SCFM.

6.0 Paint

One coat of primer is applied to interior and exterior surfaces. A finish coat of industrial enamel is applied to the exterior.

7.0 Shipment

The smaller units without hopper(s) are shipped assembled. The units with hoppers are shipped in two sections. The filters, filter hold-downs, and control box require field installation.

8.0 Compressed Air Piping

The compressed air piping installed by user shall be a minimum of ½" sch. 40. In addition a pressure regulator must be provided and installed by the user.

Pre-Start Check

1.0 Pre Start Checklist

Review all components to assure that they are operational.

1.01 ***All Ductwork*** *– the inlet and exhaust ducting must be inspected to assure it is properly installed and complete.*

1.02 ***Dust Drawer / Hopper Gaskets*** *– The gasket on the drawer edge must be installed and attached to the drawer. This drawer must be closed and secured before operation.*

1.03 ***Compressed Air Piping*** *– A pressure regulator must be installed and set for 85 PSI. Make sure the air is clean and dry.*

1.04 ***Wiring*** *– Motors must be wired and installed with proper overload protection.*

1.05 ***Sequence Control Box*** *– Provide incoming wiring. Control will be pre-set. The control box is to be field installed.*

1.06 ***Electrical Protection Devices*** *– Fuses, circuit breakers, heaters, etc., must be properly sized and installed.*

1.07 ***System Fan*** *– Make sure the rotation of the fan is correct.*

Operation

1.0 Start-Up and Operation

1.01 Turn on compressed air supply.

1.02 Start system: CHECK FAN ROTATION

1.03 Check seals.

2.0 Filter Cleaning

2.01 If the unit is equipped with automatic pulse cleaning, the cleaning cycle will be timer and activated when the unit is in operation.

2.02 *If the unit is not equipped with an automatic pulse package, the filters are cleaned by manually pushing the clean pulse air valve. This will allow the cartridge to be pulse cleaned.* ***(PULSE AND RELEASE) THIS NEEDS TO BE OPERATED AT LEAST ONCE EACH HOUR OF OPERATION OR MORE IF A DIRTY CABINET CONDITION EXISTS.***

3.0 Dust Drawer / Hopper Emptying

The collector must be shut down before any attempt is made to empty the dust container.

3.01 Shut system down.

3.02 UN-latch dust drawer / hopper.

3.03 Remove and empty container into approved dust receptacle.

3.04 Replace drawer or container and secure.

NOTE: MAKE SURE GASKET SEAL IS IN PLACE.

Maintenance

Regular maintenance is consistent with satisfactory and efficient operation of any dust collector. Remember to clean and inspect the filter regularly and do not allow the dust container(s) to overfill.

1.0 Weekly

1.01 Compressed air pressure set at 85 PSI.

1.02 Drain all moisture from compressed air lines.

1.03 Check and record pressure drop across the filters with customer supplied manometer.

1.04 Empty dust container. The container may have to be emptied more frequently depending on use.

2.0 Monthly

2.01 Inspect dust container gasket(s).

2.02 Remove and inspect filter cartridge.

2.03 Replace cartridge if evidence of dirt is inside

3.0 Yearly

3.01 Check all gaskets and replace if required.

3.02 Remove all cartridges and inspect for wear. If evidence of dirt is inside replace filters.

4.0 Filter Removal

4.01 Open filter access area.

4.02 Remove filter hold-down device.

4.03 Pull out filters "being careful not to knock off dust into clean air area".

5.0 Filter Cartridge Replacement

5.01 Brush any dust that may have fallen into the clean air compartment into the dustbin. Remove any bits of the old filter gasket that may have stuck to the filter plate.

5.02 Slowly place cartridges in holes.

5.03 Replace the hold-down bars and attach with the holding nuts. Maintain even pressure at all points.

5.04 Close collector.

Troubleshooting

1.0 Visibility Poor in Cabinet

1.01 Pulse Interval Time Too Long:

Adjust the knob in the sequence control panel to shorter time. (The larger unit the shorter the time required).

102 Filter(s) Wet:

Make sure there is not moisture in the compressed air lines.

1.02 Filter(s) Blinded:

A. Blinded filters can be the result of operating the unit too long without cleaning or the cleaning interval is too long.

B. The dust drawer or bin is over full. A full bin will cause severe dust retainment, which will overload (blind) the filters. Remove the filters from the unit and clean or replace.

2.0 Control Circuit Fails to Operate:

2.01 If the diaphragm valve does not operate, this generally indicated a leak in the tubing. If the control tube has a leak the diaphragm valve will remain open and no pressure will build up in the log manifold.

2.02 Compressed Air Bleed Down: If a diaphragm valve will not return to the closed position, this indicates either a break in the diaphragm, a leaking control line, or a control pulse solenoid is stuck in the open position.

2.03 Check to make sure there is sufficient air pressure flow to the log manifold.

3.0 Puff or Dust Out Exhaust After Each Cleaning:

3.01 Cleaning too often: Clean less often or increase the interval on the control panel.

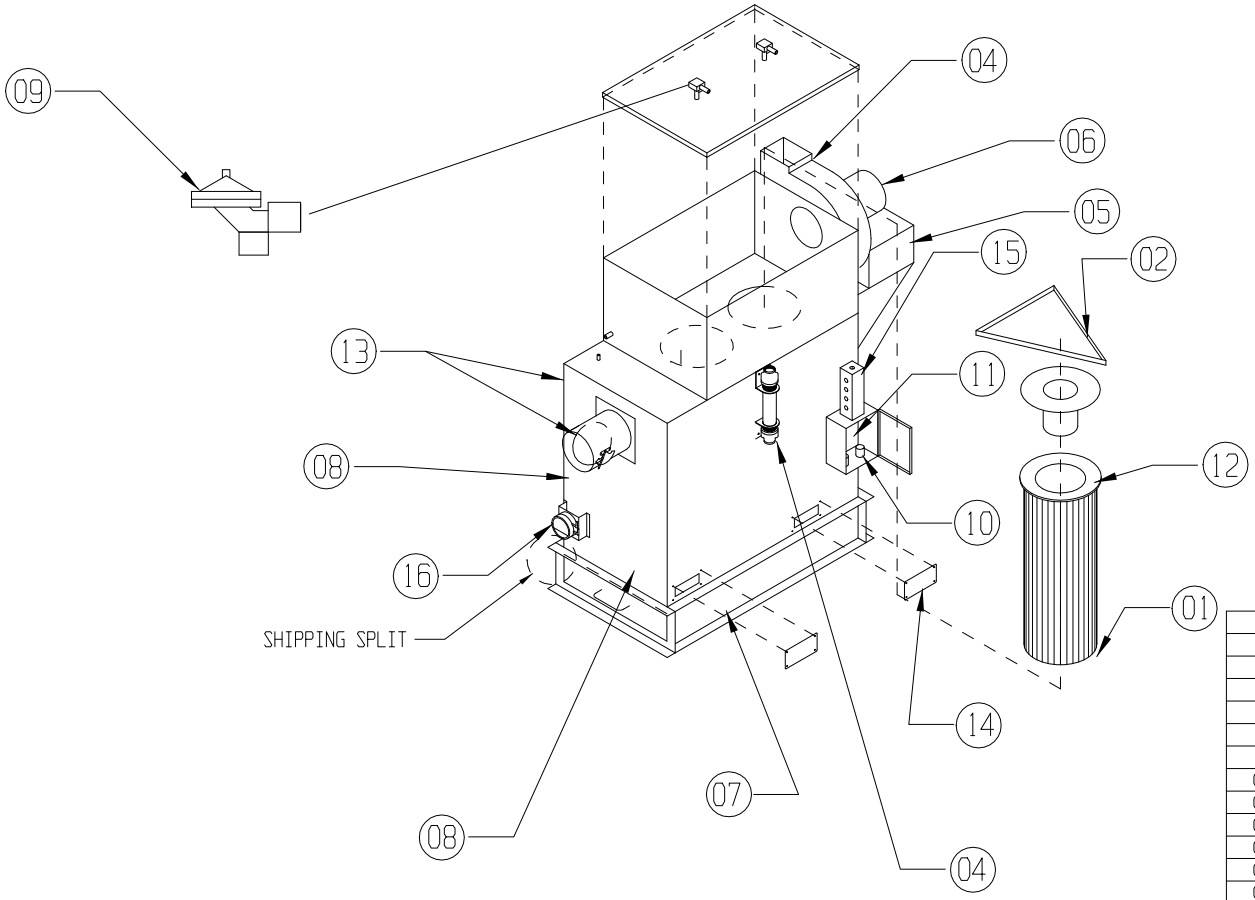
3.02 Filter Worn: Remove and inspect filters for pin holes, spots, or other locations where dust may be passing through the filter media. Replace filter cartridges if required.

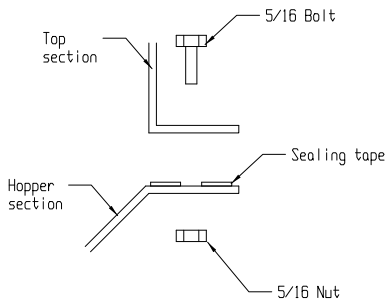
4.0 Continuous Dust Out Exhaust:

4.01 Broken, torn, or punctured filter media. Locate and replace cartridge.

4.02 Poor seal between cartridge and collector plate: Look for dust patterns around the filter seals. Re-tighten or replace filter. Do not attempt to repair gasket seal.

M2068-1





HOPPER SEAL

SHIPPING SPLIT

ITEM NO.	QTY.	DESCRIPTION	DWG.NO./ MATERIAL
16	1	MAGNEHELIC GAGE	004457-10
15	1	ELECTRICAL BOX	A5176
14	4	FORKLIFT COVER	A2714
13	1	8" DAMPER INLET ASS'Y.	001046
12	2	CARTRIDGE CAP	A2463
11	1	CONTROL BOARD	010453
10	2	SOLENOID VALVE	003285
09	2	PULSE VALVE, 1"	005410
08	1	RPJ2-93	007420
07	1	DRAWER ASS'Y.	
06	1	MOTOR, 2 HP (OPTIONAL)	13-900
05	1	FAN ASS'Y (LESS MOTOR)	001062
04	1	BLADE	001054
03	1	MANIFOLD	B7111
02	2	CARTRIDGE HOLDER	010849
01	2	CARTRIDGE	006870 / 010899

*NOTE: AFTER PLACING THE TOP SECTION OF THE RPJ DUST COLLECTOR ON THE BOTTOM SECTION PLACE FORKLIFT COVERS OVER HOLES. USE PUTTY TAPE BETWEEN ALL BOLT TOGETHER FLANGES.

REV.	DESCRIPTION	BY	DATE
#2	UPDATED	DEC	02/28/07
#1	UPDATED TO 900	DEC	03/02/05

LARRY HESS & ASSOCIATES, INC.
SALISBURY, NORTH CAROLINA

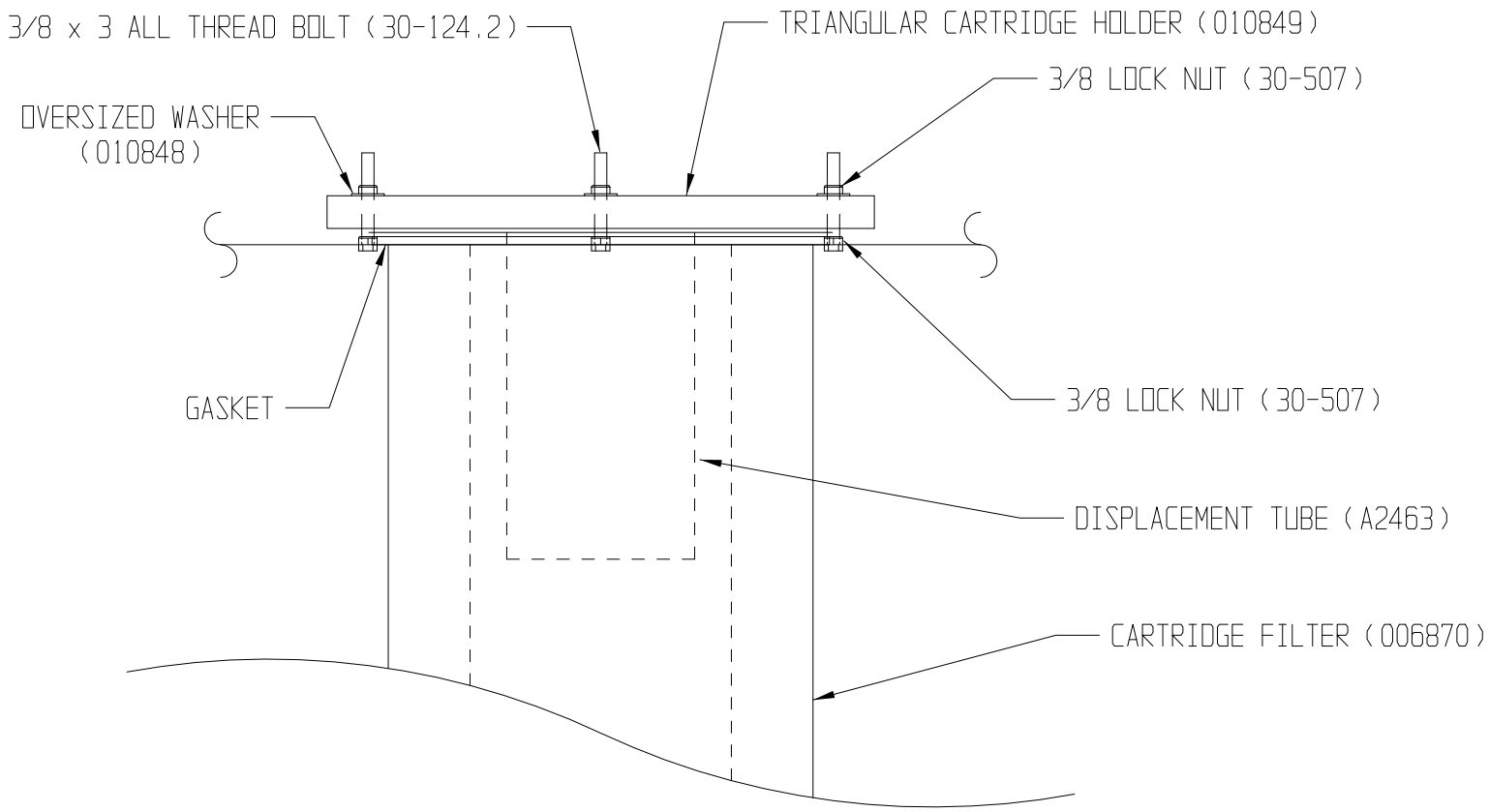
DESCRIPTION: 2 CARTRIDGE DUST COLLECTOR (900 CFM)

MATERIAL: 14 GA.

DRAWN BY:	DATE:	SCALE:	JOB NO:
DEC	7/18/95	3/64"= 1"	
REV'D BY:	DATE:	FRACTIONAL: / DECIMAL: / ANGULAR:	NEXT ASS'Y.:
DEC	5/13/98		

DRAWING NO.: M2068-1

A2509



REV.	DESCRIPTION	BY	DATE
1	ADDED DISP. TUBE	DEC	02/03/97

LARRY HESS & ASSOCIATES, INC.
SALISBURY, NORTH CAROLINA

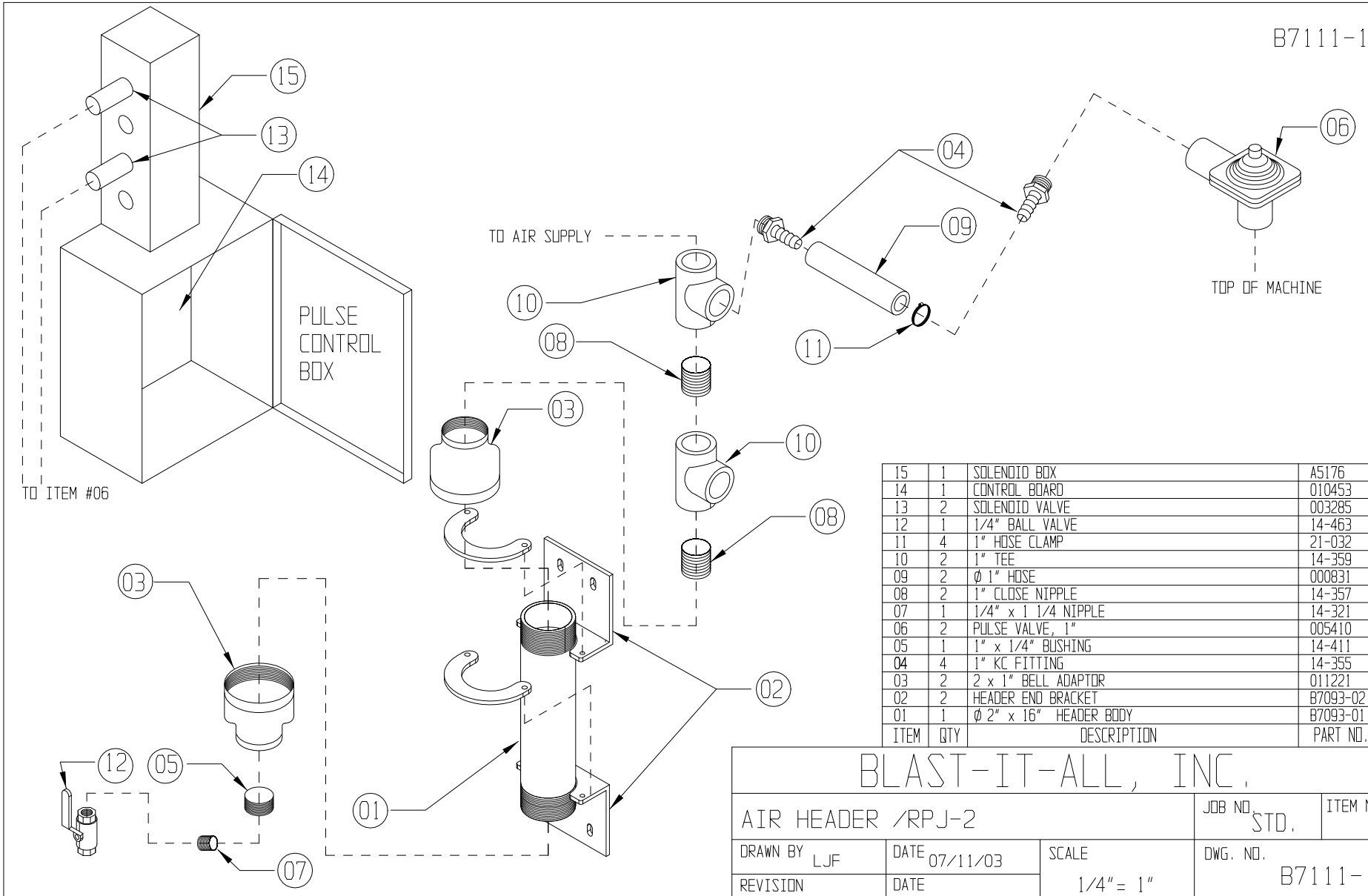
DESCRIPTION: RPJ CARTRIDGE INSTALLATION

MATERIAL: PER DWG.

DRAWN BY:	DATE:	SCALE:	JOB NO:
DEC	6/02/95	3/16"= 1"	
CHK'D BY:	DATE:	FRACTIONAL: DECIMAL: ANGULAR:	NEXT ASS'Y.:

DRAWING NO.: A2509

B7111-1



ITEM	QTY	DESCRIPTION	PART NO.
15	1	SOLENOID BOX	A5176
14	1	CONTROL BOARD	010453
13	2	SOLENOID VALVE	003285
12	1	1/4" BALL VALVE	14-463
11	4	1" HOSE CLAMP	21-032
10	2	1" TEE	14-359
09	2	Ø 1" HOSE	000831
08	2	1" CLOSE NIPPLE	14-357
07	1	1/4" x 1 1/4 NIPPLE	14-321
06	2	PULSE VALVE, 1"	005410
05	1	1" x 1/4" BUSHING	14-411
04	4	1" KC FITTING	14-355
03	2	2 x 1" BELL ADAPTOR	011221
02	2	HEADER END BRACKET	B7093-02
01	1	Ø 2" x 16" HEADER BODY	B7093-01

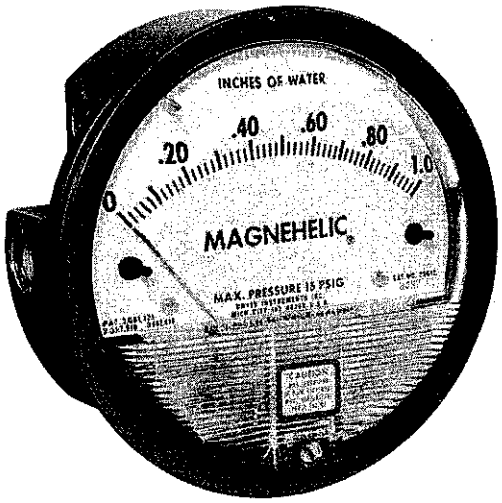
BLAST-IT-ALL, INC.

AIR HEADER /RPJ-2			JOB NO. STD.	ITEM NO.
DRAWN BY LJF	DATE 07/11/03	SCALE 1/4"= 1"	DWG. NO. B7111-1	
REVISION	DATE			

BULLETIN NO. A-27B

Magnehelic® Differential Pressure Gage

OPERATING INSTRUCTIONS



PART NO. 004457-10

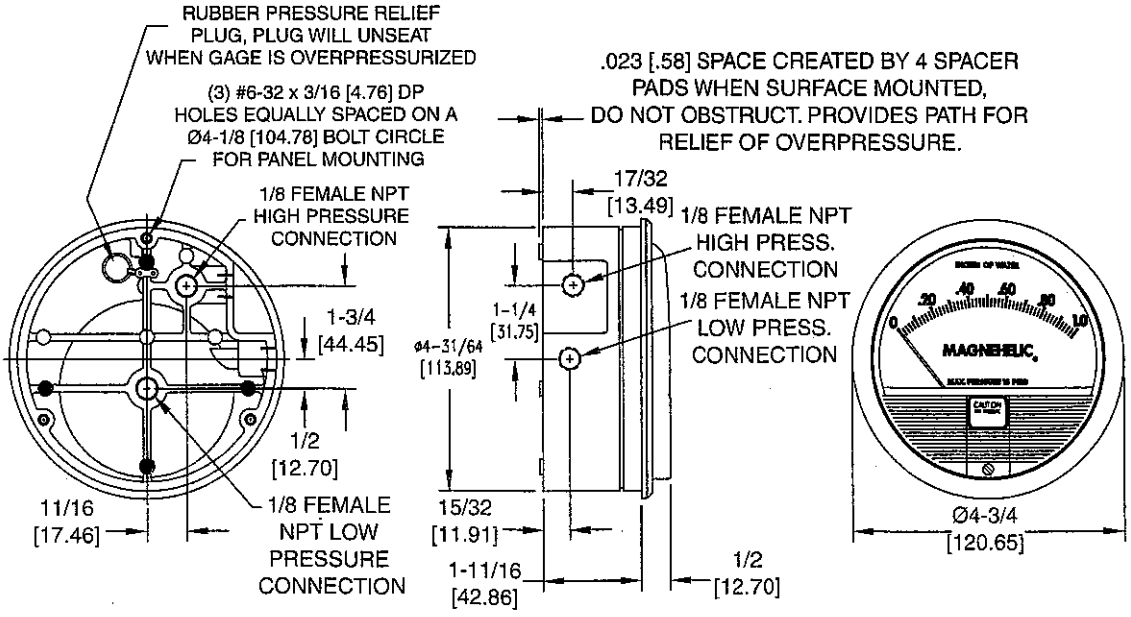
SPECIFICATIONS

Dimensions: 4-3/4″ dia. x 2-3/16″ deep.
Weight: 1 lb. 2 oz. (510 g)
Finished: Baked dark gray enamel.
Connections: 1/8″ female NPT high and low pressure taps, duplicated, one pair side and one pair back.
Accuracy: Plus or minus 2% of full scale, at 70°F (21.1°C). (Model 2000-0, 3%; 2000-00, 4%).
Pressure Rating: 15 PSI (1.03 bar)
Ambient Temperature Range: 20° to 140°F (-7 to 60°C).
Standard gage accessories include two 1/8″ male NPT plugs for duplicate pressure taps, two 1/8″ male NPT pipe thread to rubber tubing adapters, and three flush mounting adapters with screws.

Caution: For use with air or compatible gases only.

For repeated over-ranging or high cycle rates, contact factory.

Not for use with Hydrogen gas. Dangerous reactions will occur.



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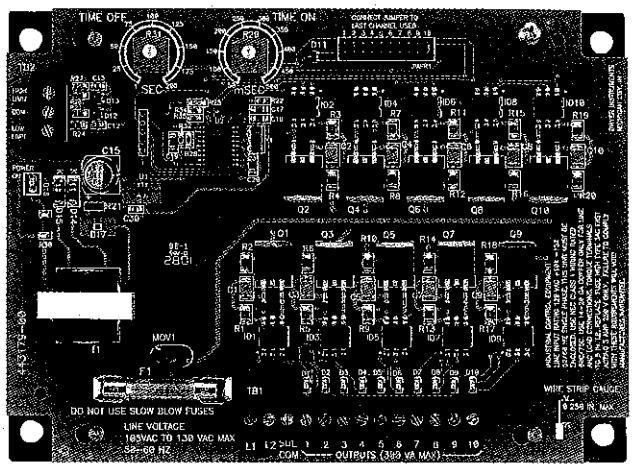
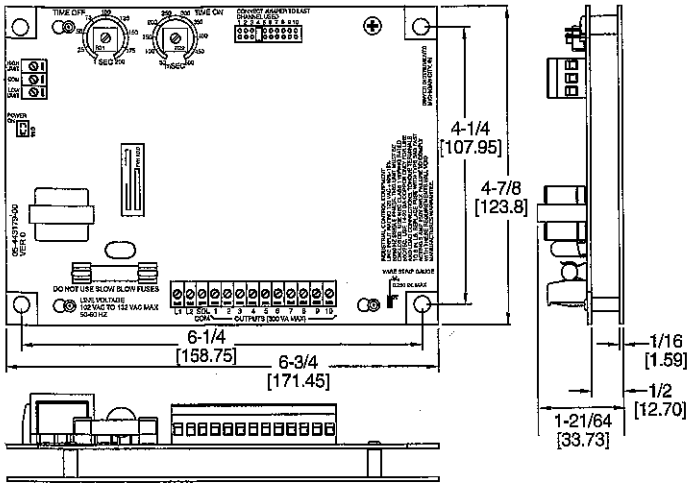
Series DCT 500 Timer Controller

BULLETIN E-98

Specifications – Installation & Operating Instructions





Introduction

The Series DCT 500 Timer Controller is a timing system for pulse-jet type dust collectors or pneumatic conveying systems in either continuous or on-demand cleaning applications. It is provided with either 4, 6, or 10 channels. The DCT 500 was designed for ease of installation in your dust collector system. For installations requiring fewer channels than available on the board, a shorting plug is provided to allow selection of the last used channel. Time-on and time-off settings are selected using two potentiometers. High-limit and low-limit control inputs are provided for use with on-demand systems. When used in a continuous mode the high-limit input is jumpered. For safety, the control circuitry including the control inputs and the last channel jumper, is isolated from the power line.

Installation

Warning: Always install and service this device with the power off and a lockout installed if required. Line voltages are exposed on the board. As a result, this device is not intended to be installed in any open location. It must be installed within an enclosure that meets appropriate safety and local code requirements. Follow applicable safety procedures when installing or servicing this product.

Warning: Always replace the fuse with the proper type and rating. The fuse is Type 3 AG fast acting 3 Amp @ 250V. DO NOT use slow-blow type fuses. Failure to comply with this requirement will pose a serious safety risk and will void manufacturer's warrantee.

Power Requirements

The controller is designed for operation on 120 VAC 50/60 Hz power. The input voltage must be between 102 VAC and 132 VAC either 50 or 60 Hz. The solenoid loads must be rated for 120 VAC operation.

Location

The system must be located in an enclosure that meets relevant safety standards and electrical codes. There are no other special orientation requirements. Mount it using the four mounting holes in the baseplate. The baseplate back is flush, so no special spacers are needed to accommodate obstructions except for those imposed by the location itself.

PHYSICAL DATA

Storage Temperature: -40°F to 176°F (-40°C to 80°C).
Operating Ambient Temperature: -40°F to 176°F (-40°C to 80°C).
Weight: 9 oz (255 gm).
Power: 102 to 132 VAC 50 or 60 Hz, 1.8W max no load power.
Fuse: Type 3AG, 3A @250VAC.
Output Channels: 4, 6, and 10 channels available.
Solenoid supply: 300 VA.
On Time: 50 msec to 500 msec.
On Time Accuracy: ±5% of setting.
Off Time: 1 second to 200 seconds.
Off Time Accuracy: 5% of setting.

Connections

The line and solenoid connections are located at the lower edge of the board. The terminal block is a "Euro" style connector system that clamps the wire within the connector body. The connector will accept wire sizes from 14 to 22 gages. These terminals should be torqued to 5 in. lb. The connectors are specified for single connection but multiple wires may be connected to a single lug provided local codes allow this and good workmanship practices are followed. When using stranded wire, make sure that there are no "stray" strands. These pose safety hazards and may cause system failure or damage. Connect the line power to L1 and L2. Connect the solenoids between the selected output and the solenoid common. Solenoid common and L2 are internally connected. Refer to Figure 2-1.

The wire should be stripped to no more than 0.25 in. A strip gauge is provided at the lower right corner of the board. Longer than this may cause shorts or expose line voltages to possible contact.

Switches connected to the control inputs at the top of the board must be isolated normally open contacts connected only to the relevant terminal and to the common terminals.

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The following subparagraphs describe the external switch connections. Refer to figure 2-1 for switch connection illustration.

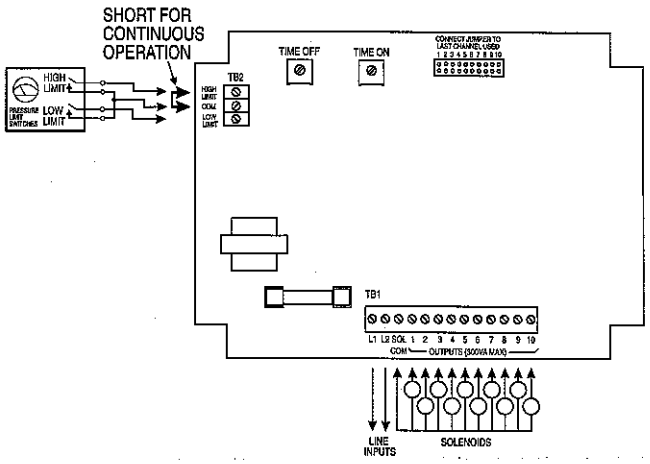


FIGURE 2-1 Switch Connections

External Limit Switch Connection

The controller may be used with an external pressure limit switch or sensor to provide demand-cleaning operation. A three pin terminal block provides connection for external high and low limit switches. A simple on-off system can be established with a single pressure switch connected to the high limit input. Better control can be achieved with a high and low limit switch/gage such as the Dwyer Photohelic® pressure gage. The switches must be isolated contacts between the high or low limit input and the common connection. The wiring from the switches must be two or three wires with no other connections made to these. The common line must not be connected to equipment ground or protective ground, since these may introduce electrical noise and cause improper operation or possible damage to the control board. The operation of these inputs is summarized as follows:

Current Operation	Low Limit Switch	High Limit Switch	Next Operation
Hold	Open	Open	Hold
Hold or Run	X	Closed	Run
Hold	Ø	Open	Hold
Hold	Closed	Ø	Run
Run	Closed	≠	Run
Hold	Closed	Ø	Run
Run	≠	Open	Hold

Ø —Transition from open to closed
≠— Transition closed to open
X — Either open or closed

Operating Modes

Continuous Cycle Mode

The DCT 500 has two operating modes available for different applications. Starting with the most basic mode, it is capable of operating in a continuous cleaning cycle. This can be initiated by placing a jumper between the high limit input and the common connection. Two setup parameters control operation: time off, time on. Time on and time off specifically deal with the solenoid on time and the time interval between the end of the on pulse and the start of the next.

Demand Mode

Demand mode operation can be configured using the high limit and low limit inputs. A simple on-off system can be setup with a single pressure switch connected to the high limit input. Better control can be achieved with a high and low limit switch set such as is provided in the Photohelic® pressure gage. In this on-demand mode, time on and time off may be programmed to define the cleaning cycle.

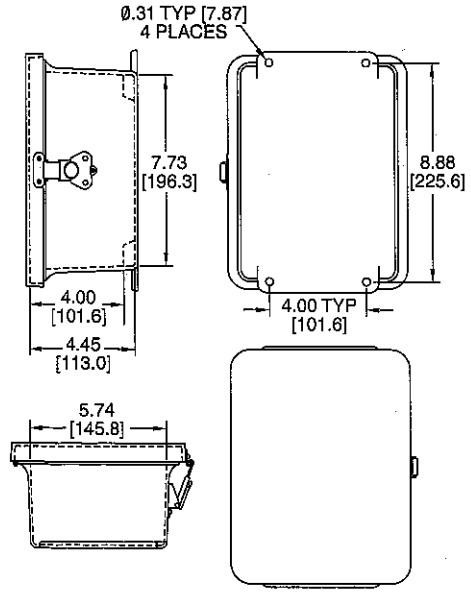
System Setup

Last Channel Selection

A jumper connector is provided to select the last channel used. Place the jumper on the two pins corresponding to the last channel used in the installation.

Time Off and Time On Setup

Time off defines the period of time between solenoid activations when no channels are enabled. This value may be set between 1 second and 200 seconds with a resolution of 1 second. Time on defines the solenoid on time. The value may be set between 50 msec and 500 msec with a resolution of 10 msec. If adjustments are made while the system is in operation, the new setting will take effect in the following solenoid cycle. Do not use excessive force to turn the potentiometers. This will damage the



Weatherproof Enclosure Option

Printed in U.S.A. 8/01
FR# 05-443180-00

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WARRANTY

Larry Hess & Associates, Inc. warrants to the original purchaser the merchandise sold to be free from defects in material and workmanship under normal use and service for a period of one (1) year. Upon prompt notification by the buyer, to LHA, components that are determined by LHA to be defective will be repaired or replaced at no additional charge, F.O.B. our factory.

Manufacturer shall have the right to inspect prior to replacing all merchandise in question.

This warranty does not apply to parts that are directly involved in the blasting operation. Example: gun, gun parts, viewing window, hose, gloves, etc.

Manufacturer shall not be required to pay any removal or installation charges whatsoever under this warranty.

Manufacturer shall not be liable for prospective profits, special or consequential damages, nor shall any recovery of any kind against manufacturer be greater in amount than the cost of repairs of defects in workmanship.

This warranty does not apply to damage caused by accidents, damage in transit, alterations by unauthorized personnel, abuse or damage by flood, fire, or acts of God, nor by artificially generated electric currents or any other cause whatsoever except defects in material or factory workmanship.

In all cases, defective parts must be returned to Larry Hess & Associates, Inc. before credit is issued.

If genuine BLAST-IT-ALL® replacement parts are not used, the warranty is void.

This warranty is in lieu of all other warranties expressed or implied and releases Larry Hess & Associates, Inc. of all other obligations and liabilities whatsoever. This warranty neither assumes nor authorizes any person to assume any obligation other than those specified by this warranty.

WARNING

DO NOT USE ***SAND***. SAND WILL CAUSE SILICA DUST, WHICH IS THE CAUSE OF SILICOSIS DISEASE, A CONDITION OF MASSIVE FIBROSIS OF THE LUNGS. ***THIS STATEMENT INDICATES POTENTIAL PERSONNEL HAZARD. FAILURE TO COMPLY WITH THESE INSTRUCTIONS MAY RESULT IN PERSONAL INJURY.***

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