



**OWNER'S MANUAL
MANUEL DE L'UTILISATEUR**

VACCUM MACHINE
450A

IMPORTANT SAFETY INSTRUCTIONS

SAVE THESE INSTRUCTIONS



This symbol points out important safety instructions which, if not followed, could endanger the personal safety and/or property of yourself and others. Read and follow all instructions in this manual before attempting to operate your machine. Failure to comply with these instructions may result in personal injury.

General Operation

- Read, understand, and follow all instructions in the manual and on the machine before starting. Keep this manual in a safe place for further and regular reference and for ordering replacement parts.
- Only allow responsible individuals familiar with the instructions to operate the machine. Be sure to know controls and how to stop the machine quickly.
- Never put your hands near moving parts.
- Only allow qualified individuals for the maintenance of your machine.
- Remove all obstacles, which may interfere with the machine functions.
- Clear the work area such as electrical wires, buckets, knives etc.
- Be sure that everyone else is clear of your work area before operating the machine.
- Do not sit nor stand on the machine.
- Always turn off the machine after your work is done. Never leave a running machine unattended.
- Always disconnect and wait till the machine has cooled before attempting any maintenance.
- Do not wear loose fitting clothes or jewelry as they may get caught in moving parts of the machine.
- Always wear security shoes, to prevent injury caused by moving the machine or objects falling from the machine.
- Never exceed the time limit to seal, which is recommended by the manufacturer. This is to avoid any damage that may be caused to the sealing bars and to eliminate the risk of fire in the machine. Thus avoiding corporal burns.
- Never touch the sealing bars after they have been used, this will avoid corporal burns. Wait a few minutes to let the machine cool down before touching.
- Always make sure that the sealing bars are well installed in their "Guide Blocks" before starting a cycle.
- Never incline the machine more than 30 degrees, it may tip over and hurt someone seriously.
- Work only in daylight or good artificial light.

Do not operate the machine while under the influence of alcohol or drugs!

Service

- Use proper containers when draining the oil. Do not use food or beverage containers that may mislead someone into drinking from them. Properly dispose of the containers, or store in a safe place immediately following the draining of the oil.
- Prior to disposal, determine the proper method to dispose of waste from your local office of Environmental Protection Agency. Recycling centers are established to properly dispose of materials in an environmentally safe fashion.

Do not pour oil or other fluids into the ground, down a drain or into a body of water.



Warning-Your responsibility:

This machine should only be operated by personal who can read, understand and respect warnings and instructions regarding this machine in the owners manual. Save these instructions for future reference.

VACUUM PACKAGING MACHINE

MODEL 450A

(MC-40 SIPROMAC)

GENERAL TABLE OF CONTENTS

I OPERATION INSTRUCTIONS

II MECHANICAL

- A- 450A Front view assembly drawing
- B- 450A Rear view assembly drawing
- C- P.C. board support drawing
- D- 450A Structure assembly drawing
- E- Seal bar assembly drawings (twin seal)
- F- Seal bar assembly drawings (electrical bag cut option)
- G- Cover assembly drawings
- H- Gas injection kit installation drawing
(gas injection option)

III ELECTRICAL

- A- Electrical drawings

IV PNEUMATIC

- A- Pneumatic drawing

VACUUM PACKAGING MACHINES-OPERATION INSTRUCTIONS

TABLE OF CONTENTS

1. Setting up the machine
2. Electrical connection
3. Operation
 - 3.1 Working principles
 - 3.2 Special packaging
 - 3.2.1 Gas flushing
 - 3.2.2 Electrical bag cut (optional)
 - 3.3 Vacuum packaging operation
 - 3.3.1 Basics
 - 3.3.2 Functions menu
 - 3.3.2.1 Create a program
 - 3.3.2.2 Delete a program
 - 3.3.2.3 Select operating mode
 - 3.3.3 Programs menu
 - 3.3.3.1 Program identification
 - 3.3.3.2 Vacuum time setting (sensor disabled)
 - 3.3.3.3 Vacuum level setting (sensor enabled)
 - 3.3.3.4 Vacuum plus time setting (sensor enabled)
 - 3.3.3.5 Gas time setting (sensor disabled)
 - 3.3.3.6 Gas flush level setting (sensor enabled)
 - 3.3.3.7 Sealing time setting
 - 3.3.4 Vacuum cycle execution
 - 3.3.5 System monitor
 - 3.4 Daily cleaning
4. Trouble shooting
 - 4.1 Failure during a packaging cycle
 - 4.2 Insufficient vacuum
 - 4.2.1 Leakage in the bag
 - 4.2.2 No leakage in the bag
 - 4.2.3 Insufficient vacuum in the chamber
 - 4.3 Faulty seal
 - 4.3.1 Insufficient seal
 - 4.3.2 No seal
 - 4.3.3 Permanent sealing current
 - 4.3.4 Seal does not stick
 - 4.4 Fault in the valves
 - 4.5 Control board failure
5. Regular maintenance

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VACUUM PACKAGING MACHINES

1. SETTING UP THE MACHINE:

Before choosing the site for the machine, please consider that you will also need room for packaged and non-packaged products apart from the space needed for the machine itself.

Keep in mind that the machine must not be set up upon uneven ground. Especially with mobile models, the weight of the pump might then cause warping of the machine. Then the lid will not fit correctly.

Before starting to work, check the oil view glass on the pump, if there is a sufficient quantity of oil in the pump. Never use oil other than recommended by the producer. Never exceed maximum quantity of oil indicated, when adding or changing oil. Verify weekly.

Normal ambient temperature for the vacuum pump is between 10 to 70°C. For temperature below 10°C; it is recommended to use synthetic oil. Please consult factory and pump manufacturer manual for more information or when ambient temperature are outside normal limits.

2. ELECTRICAL CONNECTION:

Electrical connections must be made by qualified personnel. This person must make sure that the electrical entries correspond to the proper voltage and amperage of the machine. **GROUNDING INSTRUCTIONS:** This appliance must be grounded. In the event of malfunction or breakdown, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. This appliance is equipped with a cord having an equipment-grounding conductor and a grounding plug. The plug must be plugged into an appropriate outlet that is properly installed and grounded in accordance with all local codes and ordinances.

DANGER Improper connection of the equipment-grounding conductor can result in a risk of electric shock. The conductor with insulation having an outer surface that is green with or without yellow stripes is the equipment-grounding conductor. If repair or replacement of the cord or plug is necessary, do not connect the equipment-grounding conductor to a live terminal. Check with a qualified electrician or serviceman if the grounding instructions are not completely understood, or if in doubt as to whether the appliance is properly grounded. Do not modify the plug provided with the appliance if it will not fit the outlet; have a proper outlet installed by a qualified electrician.

All vacuum machines are supplied with an electrical schematic drawing. An important step in connecting the machine is to make sure that the pump turns in its correct rotation.



The pump should not rotate more than 3 to 4 seconds in the wrong rotation or it may cause serious damage. The proper rotation is indicated by an arrow on the pump motor.

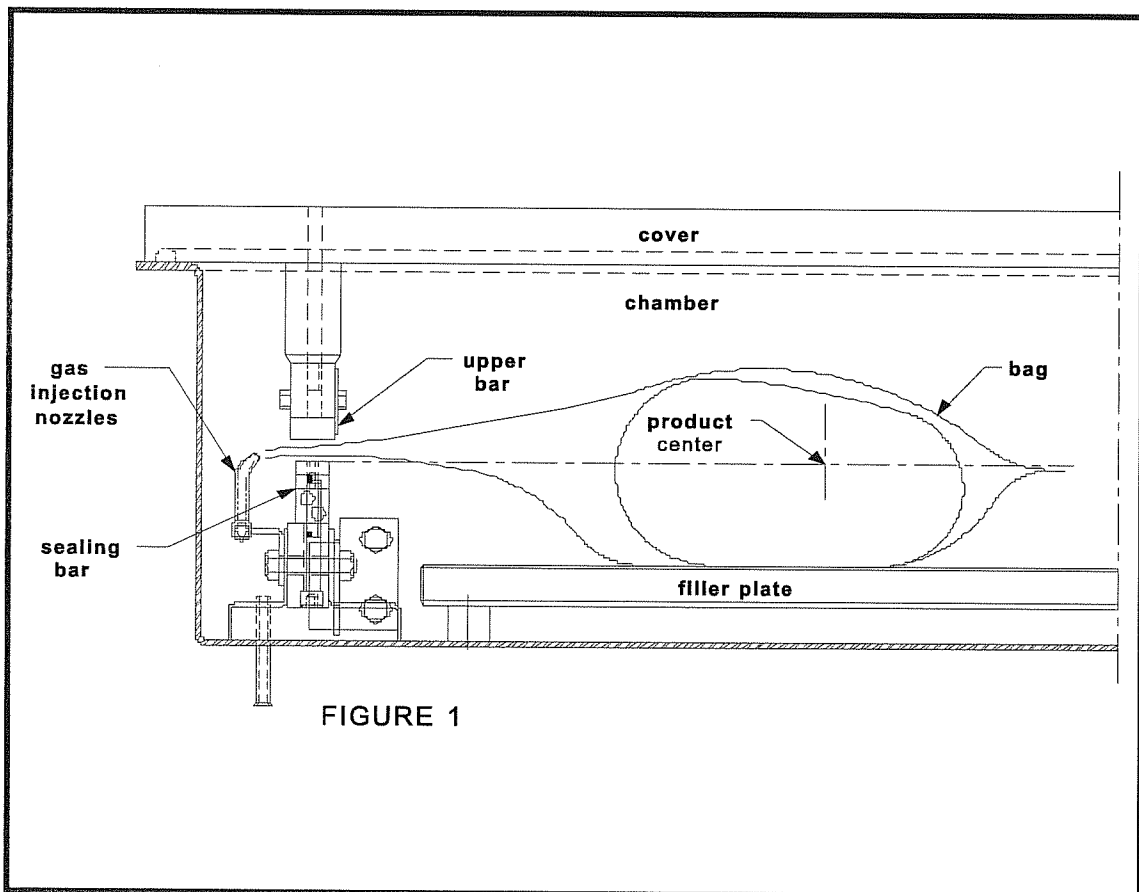
3. OPERATION:

3.1 Working principles:

A vacuum packaging cycle is made of 3 stages. First the vacuum is made, the air is completely taken out of the chamber and from bag containing the product. (See figure 1). Then it is possible to inject neutral gas from the nozzles, if the product is delicate. Finally, a mechanism pushes the sealing bar to the rubber support to seal the bag.

To obtain nice packages, the products and the bags have to be of proportional sizes. The bag's opening should never exceed 50 cm(2") past the seal bars. The product should be centered in height in relation to the seal bar by adjusting the spacers provided.

To obtain a good seal, make sure that no residue of fat is left between the bag's inner sides where sealing is done.



3.2 Special packaging:

3.2.1 Gas flushing (option):

There is an atmospheric pressure of 1 kg/ sq. cm (14 lbs/sq. inch) upon products when

fully evacuated. Products which can be damaged by high pressure must be packaged with a partial vacuum, or the pressure must be counterbalance by inflating the bag with gas (nitrogen or carbon dioxide) before sealing after evacuation.

For gas flushing, the bags are placed on the sealing bars, the open end placed over the gas nozzles mounted alongside the sealing bar. After evacuation, the vacuum valve closes and the gas valve opens. Gas time (sec.) can be set in the program menu.

The necessary gas tank and pressure valve mounted on tank is not supplied, The pressure of the gas regulator should be set at approximately 1/3 kg/sq. cm (5 lbs/sq.inch.). Each machine has an adaptor for gas connection when gas flush option is ordered.

3.2.2 Electrical bag cut (optional):

This option is used to obtain a package that the excess bagtail is cut off close to the seal (cannot be used with top and bottom sealing).

3.3 Vacuum packaging operation:

Note: Refer to the menus structure on page 13 and the keyboard detail on page 14.

3.3.1 Basics:

Use key "POWER" to power ON / OFF the vacuum packaging machine. When the unit is energized, the identification of the last executed program is displayed on LCD screen. To disconnect, use the "POWER" key to turn off the machine , then remove plug from outlet. Do not unplug by pulling on cord. To unplug, grasp the plug, not the cord. Unplug from outlet when not in use and before servicing or cleaning.

Use the "ESC" key to change over from the programs menu to the functions menu and from the functions menu to the programs menu.

In functions menu, use key "SELECT" to select a function and key "ENTER" to accede and executed the selection.

In programs menu, use key "SELECT" to select a program and key "ENTER" to accede and modify the selection.

In programs submenu, use key "ENTER" to pass over the parameters and point to the following one; the parameters are blinking to point out the acquisition mode. A return to programs menu is performed automatically following the last parameter acquisition.

In program submenu, use key "ESC" to get back to the programs menu. Strike any key to clear the error messages which may be displayed on LCD screen.

3.3.2 Functions menu:

3.3.2.1 Create a program:

When executing the "create a program" function, the program submenu is accessed, starting with the identification. The initial identification "Pxx NO NAME" is given to the program and all parameters are established to zero; the program number is allocated automatically.

3.3.2.2 Delete a program:

When executing the "delete a program" function, the programs menu is accessed and the number of the first program in memory is blinking to point out the deletion mode. Use key "SELECT" to select a program and key "ENTER" to accede and confirm deletion of the selection. Use key "ESC" to unconfirm a deletion and to leave the function. When leaving the function, the number of the actual program on LCD screen cease to blink.

3.3.2.3 Select operating mode:

When executing the "select operating mode" function, which is available only for the automatic units, the actual selection is blinking to point out the acquisition mode. Use key "SELECT" to get through the operating modes, which are automatic, semi-automatic and manual; the validation of the selected operating mode is performed automatically. Use key "ESC" or "ENTER" to leave the function and get back to the program menu.

3.3.3 Programs menu:

3.3.3.1 Program identification:

For a selected program, set the identification, using the numeric keyboard characters chart; press numeric key until the desired character is selected (4 times for the numeric value). Use key "ENTER" to validate the character and to validate the characters string at the end(the new characters string is blinking). In a middle of an acquisition, use key "ESC" to come backward and erase one or several characters.

Example: EXAMPLE 1 → keys 2, 2, ENTER → E
(9 characters) keys 8, 8, 8, ENTER → X
keys 1, ENTER → A
keys 5, ENTER → M
keys 6, ENTER → P
keys 4, 4, 4, ENTER → L
keys 2, 2, ENTER → E
keys 9, 9, 9, ENTER → space
keys 1, 1, 1, 1, ENTER → 1
key ENTER to validate the characters string

3.3.3.2 Vacuum time setting (sensor disabled):

For a selected program set the vacuum time, in seconds; the validation is automatically performed following the second digit entry (the new vacuum time is blinking). In a middle of an acquisition, use key "ENTER" to validate the vacuum time and key "ESC" to come backward and start over with a new acquisition (the old vacuum time is blinking).

Examples: 1s → keys 0, 1 or 1, ENTER
15s → keys 1, 5

3.3.3.3 Vacuum level setting (sensor enabled)

For a selected program set the vacuum level, starting with the values; the decimal point is automatically inserted following the second digit entry and the validation is automatically performed following the third digit entry (the new vacuum level is blinking). The vacuum level is rounded off to the nearest half value. In the middle of an acquisition, use key "ENTER" to validate the vacuum level and key "ESC" to come backward and start over with a new acquisition (the old vacuum level is blinking). Set vacuum level to zero to bypass the pressure transducer and proceed only using the vacuum plus time.

Examples: 90.0% → keys 9, 0, 0 or 9, 0, ENTER or
keys 9, 0, 1 or 9, 0, 2 or 9, 0, 3 or 9, 0, 4
97.5% → keys 9, 7, 5 or
keys 9, 7, 6 or 9, 0, 7 or 9, 0, 8 or 9, 0, 9
0.0% → keys 0, 0, 0 or 0, ENTER

3.3.3.4 Vacuum plus time setting (sensor enabled)

For a selected program set the vacuum plus time, in seconds; the validation is automatically performed following the second digit entry (the new vacuum plus time is blinking). In a middle of an acquisition, use key "ENTER" to validate the vacuum plus time and key "ESC" to come backward and start over with a new acquisition (the old vacuum plus time is blinking).

Examples: 1s → keys 0, 1 or 1, ENTER
15s → keys 1, 5

3.3.3.5 Gas time setting (sensor disabled)

For a selected program set the gas time setting following the same procedure as for the vacuum time. Keep in mind that increasing gas time decrease sealing pressure. Some vacuum must be kept inside to assure proper functioning.

3.3.3.6 Gas flush level setting: (sensor enabled)

For a selected program set the gas flush level following the same procedure as for the vacuum level; the maximum gas flush level setting is 10% below the vacuum setting.

3.3.3.7 Sealing time setting:

For a selected program set the sealing, starting with the seconds; the decimal point is automatically inserted following the first digit entry and the validation is automatically performed following the third digit entry (the new sealing time is blinking). The sealing time is truncated to the nearest half hundredth. In a middle of an acquisition, use key "ENTER" to validate the sealing time and key "ESC" to come backward and start over with a new acquisition (the old sealing time is blinking).

Examples: 4.50s → keys 4, 5, 0 or 4, 5, ENTER or
keys 4, 5, 1 or 4, 5, 2 or 4, 5, 3 or 4, 5, 4
2.35s → keys 2, 3, 5 or
keys 2, 3, 6 or 2, 3, 7 or 2, 3, 8 or 2, 3, 9
0.00s → keys 0, 0, 0 or 0, ENTER

3.3.4 Vacuum cycle execution:

For the manual units and the automatic units set on manual, close the cover to initiate a vacuum cycle. For the automatic units set on semi-automatic or on automatic, use push button "STOP / START" to initiate or interrupt a vacuum cycle. A selected program can be initiated only in the programs menu, when no modifications are in progress, and the access to the other programs and functions is denied. During cycle execution the operation status is sequentially displayed on LCD screen, except for the parameters established to zero, which are not displayed:

- Vacuum time or vacuum % status during vacuum sequence,
- Gas time or gas % status during gas flush sequence,
- Sealing time status during sealing sequence,
- ATM message during atmosphere sequence.

During cycle execution, use key "1" to abort the vacuum sequence and execute the following sequence, which is gas flush or sealing, and key "ENTER" to accede and modify the program; the parameters become valid only for the following vacuum cycles.

3.3.5 System monitor:

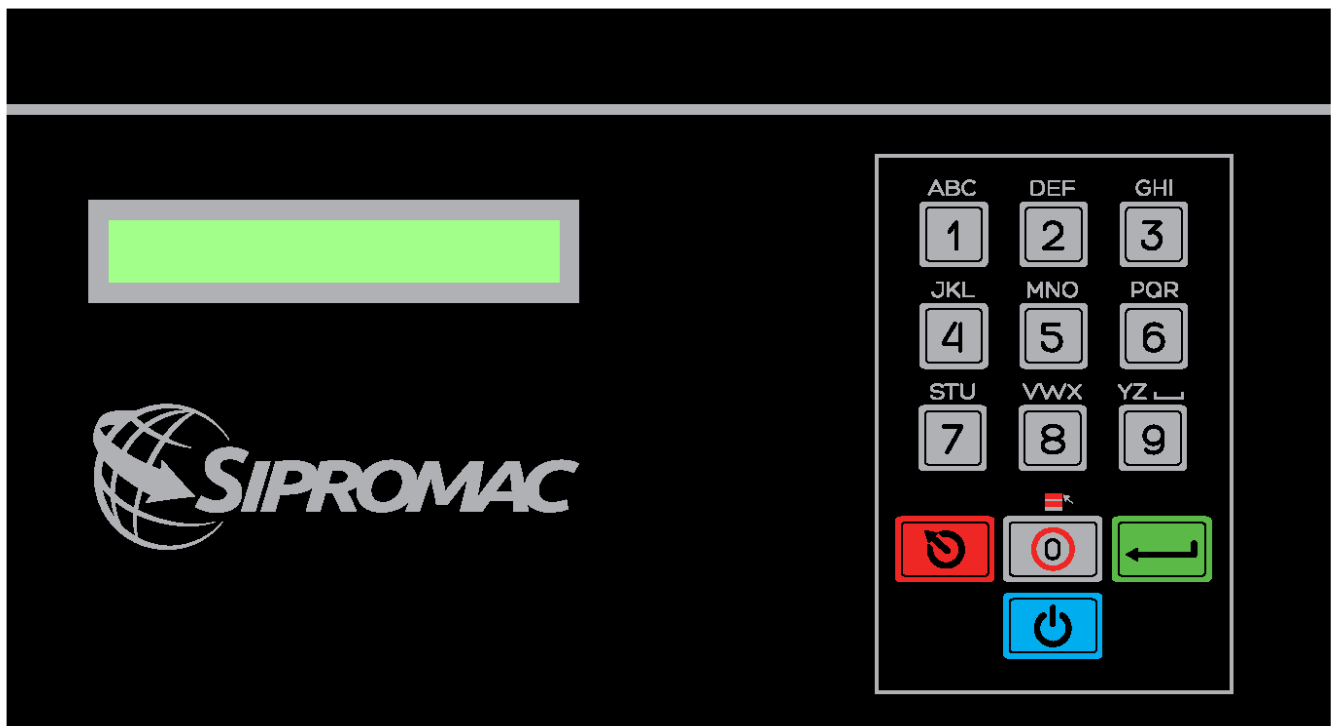
To accede the diagnostics menu, power up the vacuum packaging machine while keeping pushed in the "ESC"key. Use key "SELECT" to select the system monitor function and key "ENTER" to accede and visualize the monitored parameters. Use key "SELECT" to change over from the software revision, the amount of working hours done and the amount of complete cycles performed since first initialization.

-MENUS STRUCTURE-

- **Functions menu:**
 - "F1 CREATE A PRGM"
 - "F2 DELETE A PRGM"
 - "F3 SELECT OPMODE" (automatic units only)
- **Programs menu:**
 - "Pxx NAME"
 - Program submenu:
 - "VACUUM: xx.x%" (10.0% - 99.5%)
 - "VACUUM PLUS: xxs" (0s - 99s)
 - "VACUUM: xx.xs" (10 – 199s) (sensor disabled in D8 menu)
 - "GAS FLUSH: xx.xs" (0 – 99s) (units with gas option) (sensor disabled in D8)
 - "GAS FLUSH: xx.x%" (0.0% - 10% below the vacuum level) (units with gas option)
 - "SEAL TIME: x.xxs" (0.00s - maximum unit allocated setting)
 - "Pxx NAME" (12 characters)
- **Diagnostics menu** (keys "ESC" & "POWER" for access):
 - "DIAGNOSTICS MENU" (access code required)
 - "D1 INPUTS TEST"
 - "D2 OUTPUTS TEST"
 - "D3 MODEL SELECT"
 - "D4 GAS OPTION"
 - "D5 SEALING TIME"
 - "D6 COOLING TIME"
 - "D7 OFFSET CALIB"
 - "D8 VACUUM SENSOR"
 - "D9 SIPROMAC PUB"
 - "D10 LOADING TIME" (automatic units only)
 - "D11 UNLOADNG TIME" (automatic units only)
 - "SYSTEM MONITOR" (no access code required)
 - "SOFTWARE: R x.xx"
 - "WORK HRS: xxxxx"
 - "CYCLES: xxxxxxx"

-KEYBOARD DETAILS-

MC-40 CONTROLS





WARNING: All electrical work described in this brochure should be done by a QUALIFIED and AUTHORIZED technician.

3.4 Daily cleaning:

For hygienic cleanliness, it is imperative to clean chamber and spacers daily. Also clean the lid rubber to assure tight seat of the lid.

Cleaning instructions for gas injection nozzles: Periodically on a regular basis the gas injection nozzles must be removed with the connection tube and soaked in a food grade soap and water solution, then dried and re-installed.

4. TROUBLE SHOOTING:

4.1 Failure during packaging cycle:

4.1.1 "VACUUM ERROR" message is displayed on LCD:

No pressure variation is picked up by the PCB transducer during the vacuum sequence within a preset period of time.

- Check vacuum lines for potential leaks or kinks.

4.1.2 "GAS FLUSH ERROR" message is displayed on LCD:

No pressure variation is picked up by the PCB transducer during the gas flush sequence within a preset period of time.

- Check gas flush and vacuum lines for potential leaks or kinks.

4.1.3 "ATMOSPHERE ERROR" message is displayed on LCD:

No pressure variation is picked up by the PCB transducer during the atmosphere sequence within a preset period of time.

- Check vacuum lines for potential leaks or kinks.

4.1.4 "COVER DOWN ERROR" message is displayed on LCD(manual units):

The input signal of the down position switch has been lost during cycle execution.

- Check limit switch adjustment.

4.2 Insufficient vacuum:

4.2.1 Leakage in the bag:

Most frequently, insufficient vacuum in bags is due to leakage in bag and not due to any fault of the machine.

Pin-hole leak for which there is no obvious explanation is due to faulty bag material.

Pin-hole leak caused by sharp edge of the product (bone, etc.). Use bone-guard or thicker film.

Tear in bag by careless handling (sharp edge on filling table, damage made by retailer or customer).

Leakage in lateral or bottom seal, complain to supplier of bags or film.

4.2.2 No leakage in the bag:

Bag is too large, therefore the surplus of air remains visible (there is surplus of air in 0.4% of the bag volume in each bag). Use bags of suitable size.

Vacuum level is too low:

Pressure bar is jammed and closes opening of bag during evacuation.

4.2.3 Insufficient vacuum in chamber:

If troubles described under 4.2.1 and 4.2.2 do not apply, there is something wrong with the evacuation. To find the leakage quickly, check for leaks with a precision vacuumeter, going back step by step from the chamber to the pump.

At the chamber (measuring point at base of valve) at maximum time of evacuation. If more than 6 torr, proceed directly to the pump, if more than 3 torr: have pump service by pump supplier. If pressure at pump is good, reconnect hoses to pump and measure again.

Verify at vacuum hose connections and valve connections.

When proceeding this way, starting from pump, loss of pressure per step must not exceed 0.5 to 1 torr.

Caution: Verify connections of measuring equipment before verifying machine.

Most frequent points of leakage: lid gasket, damaged vacuum hose or loose hose clamps.

4.3 Faulty seal:

4.3.1 Insufficient seal:

Damaged teflon or silicone rubber.

Sealing pressure too low, bellows leaking or pressure bar jammed.

Leakers in seal: heating wire mechanically damaged (knicked) or silicone rubber uneven.

4.3.2 No seal:

Sealing wire burnt.

Faulty contact in sealing circuit.

Sealing transformer burnt through.

Contactors does not work.

4.3.3 Permanent sealing current:

Contactors is jammed check sealing transformer for damage through overload.

4.3.4 Seal does not stick:

Insufficient layer of polyethylene (inferior quality of bags).

Seal area extremely contaminated by fat or meat juice. Use filling aid.

Sealing temperature is too low (when using very thick films).

Caution: Do not increase sealing time more than really necessary; higher temperature will reduce working life of teflon and silicone rubber.

4.4 Fault in the valve:

Vacuum or air valve does not open.

Check whether there is voltage on the magnetic valves during their period of operation. If there is no voltage a wire is broken or the PC board is damaged.

Lid does not open at the end of the cycle; air enters, but there is still 20 - 40% vacuum in chamber. Vacuum valve does not close.

4.5 MC40 Control board failure

NOTE: Refer to menu structure on page 12.

This board software is allowing access to a "Diagnostics Menu". Only qualified service technicians are authorized to access this menu by entering a security password.

By acceding either the "D1 input test" feature or the "D2 output test" feature, a trained technician will be able to quickly know the origin of the problem: pump, sealing system, pneumatic problem, security switches problem, etc...

Keep in mind that in most cases trouble is due to a leakage, loose electrical connection or evident damage to the main components: vacuum pump, valves, electrical contactors, thermal overload, fuses holder or transformer.

For assistance do not hesitate to contact your local service technicians.

5. Regular maintenance:

Routine controls to be made at regular intervals:

Check teflon for wear.

Check silicone rubber for burnt spots and smooth even position.

Check pressure bar for jamming.

Check lid sealing for damage and hardened spots.

Check switch-point of micro switch, adjust if necessary.

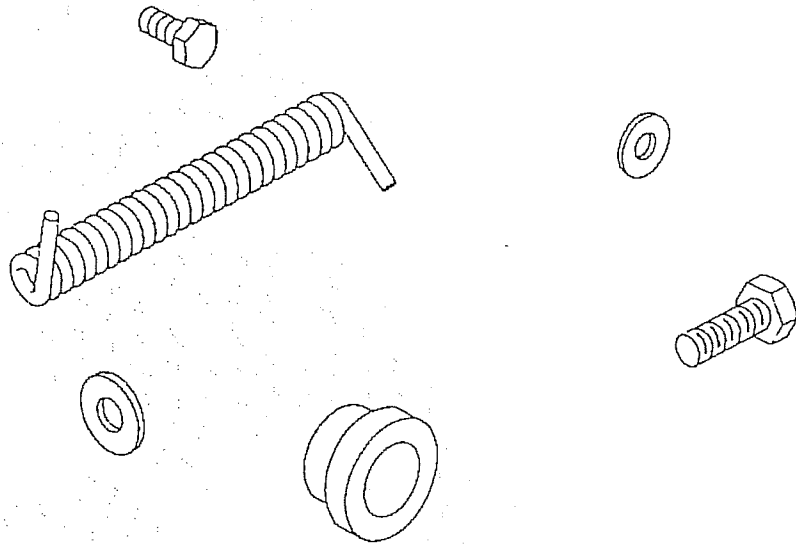
Check evacuation hose for damage (contraction of diameter, or abrasions).

Check vacuum connections for tightness.

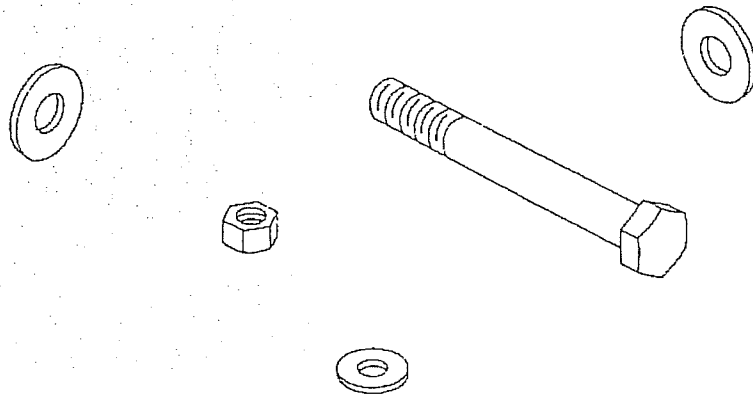
Check oil in pump (oil level in view glass; add if necessary. Regular change of oil - necessity indicated by change of color).

Check vacuum in chamber with precision vacuumeter.

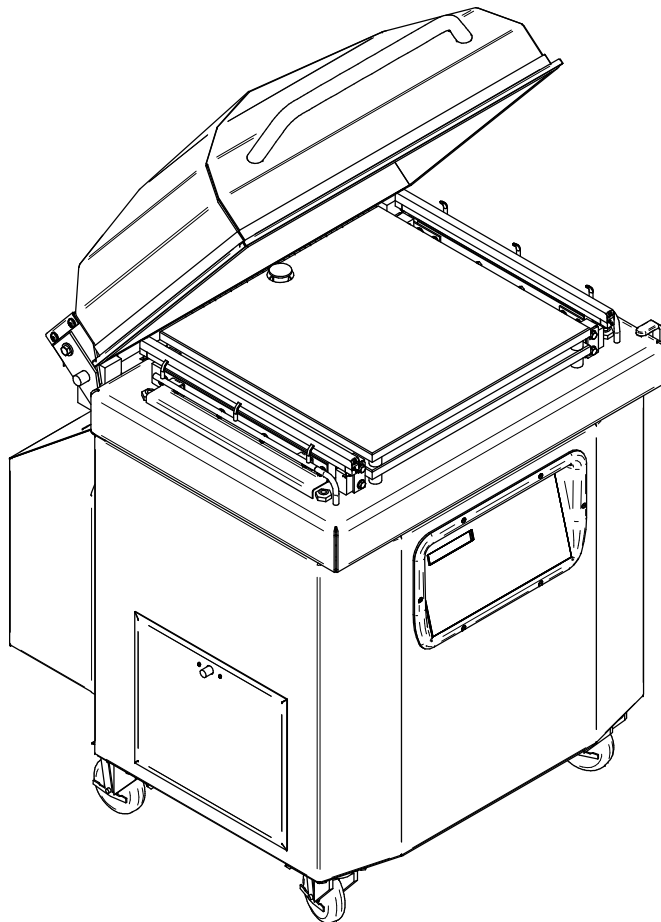
Check function of cycle with various settings of timers.



MECHANICAL DRAWING

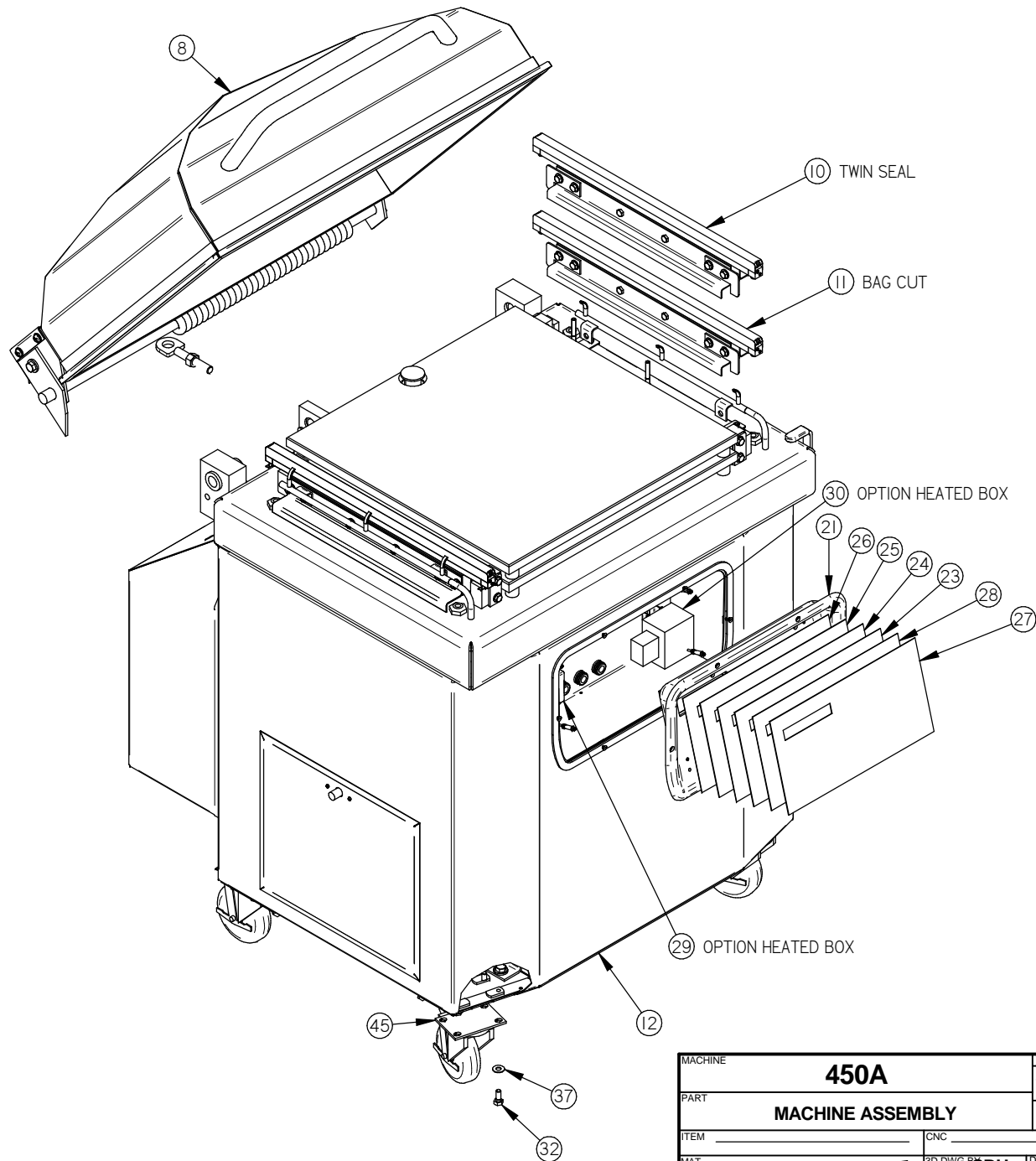


ITEM	PART #	DESCRIPTION	QT.	ITEM	PART #	DESCRIPTION	QT.
35	051-0630	NUT 1/2"-13 S/S	1	1	001-1335	COVER STOPPER	1
36	051-0740	WASHER 1/4" FLAT S/S	4	2	004-0129	COVER AXIS PRE-ASS'Y	1
37	051-0760	WASHER 5/16" FLAT S/S	16	3	004-0172	SPRING COVER PRE-ASSEMBLY	1
38	051-0783	WASHER 3/8" FLAT THICK S/S	2	4	004A4230	REAR ACCESS DOOR ASSY (KB-0020)	1
39	100-0832	HEX. PLUG 1/2" NPT S/S	1	5	004A4232	REAR ACCESS DOOR ASSY (RA0063 & RA0040)	1
40	102-0410	MALE CONN.1/4"MNPTx3/8"T.QUICK	1	6	004B4113	GAS VALVE ASSEMBLY (OPTION)	1
41	104-0064	SILICONE TUBING 3/8" OD x 3/16" ID x 82MM	1	7	005-0346	SPRING TENSION SUPPORT PRE-ASS'Y	1
42	104-0064	SILICONE TUBING 3/8" OD x 3/16" ID x 82MM	1	8	005-0540	COVER ASSEMBLY	1
43	127-0040	STICKER "AIR" BLUE/WHITE 1" X 2"	1	9	005A0533	LEFT GAS INJECTION BAR ASSEMBLY	1
44	127-0041	STICKER "GAS" YELLOW/BLACK 1" X 2"	1	10	005A0564	SEAL BAR ASSEMBLY W/SUPPORT (TWIN SEAL)	2
45	130-4PHB	4" PL.CASTER SWIVEL W/BRAKE	4	11	005A0565	SEAL BAR ASSEMBLY W/SUPPORT (BAG CUT)	2
				12	005A0601	BASE MACHINE ASSEMBLY	1
				13	005A0808	RIGHT GAS INJECTION BAR ASSEMBLY	1
				14	005A1498	RA-0063 PUMP ASSEMBLY	1
				15	005A1499	RA-0040 PUMP ASSEMBLY	1
				16	005A1500	KB-0020 PUMP ASSEMBLY	1
				17	005A1501	2X KB-0020 PUMP ASSEMBLY	1
				18	005A1503	ELECTRONIC SOFT AIR (RA-0040 @ RA-0100)	1
				19	005A1504	ELECTRONIC SOFT AIR (KB-0020)	1
				20	005A1508	AIR REGULATOR ASSY	1
				21	005B0583	MC-40 CONTROL BOARD	1
				22	008-0460	COVER SPRING	1
				23	033-0013	MC-40 KEYBOARD "CPI/GUARDIAN"	1
				24	033-0014	MC-40 KEYBOARD "FOODPAK"	1
				25	033-0015	MC-40 KEYBOARD "SIPROMAC"	1
				26	033-0016	MC-40 KEYBOARD "HOLLYMATIC"	1
				27	033-0018	MC-40 KEYBOARD "BERKEL"	1
				28	033-0019	MC-40 KEYBOARD "BSA"	1
				29	039-0191	THERMOSTAT HAMMOND	1
				30	039-0192	HEATER 100W HAMMOND	1
				31	051-0185	SCREW 1/4-20x 1/2" PAN PHIL S/S	4
				32	051-0300	BOLT 5/16"-18 x 3/4" S/S	16
				33	051-0360	BOLT 3/8"-16nc. X 1" S/S	2
				34	051-0620	NUT 3/8"-16 NC S/S	2



MACHINE		450A		DEPT. TOL.	METRIC	INCH	SIPROMAC ST-GERMAIN DE GRANTHAM QUEBEC CANADA
PART		MACHINE ASSEMBLY		USINAGE	± 0.1	± 0.004"	
ITEM		CNC		TOLERIE	± 0.5	± 0.020"	
MAT.		3D DWG BY SBU		DATE	14-06-18		NO. 005B0607
LET.		MODIFICATION		DATE	14-06-18		

LET.	MODIFICATION	DATE	INT.
------	--------------	------	------



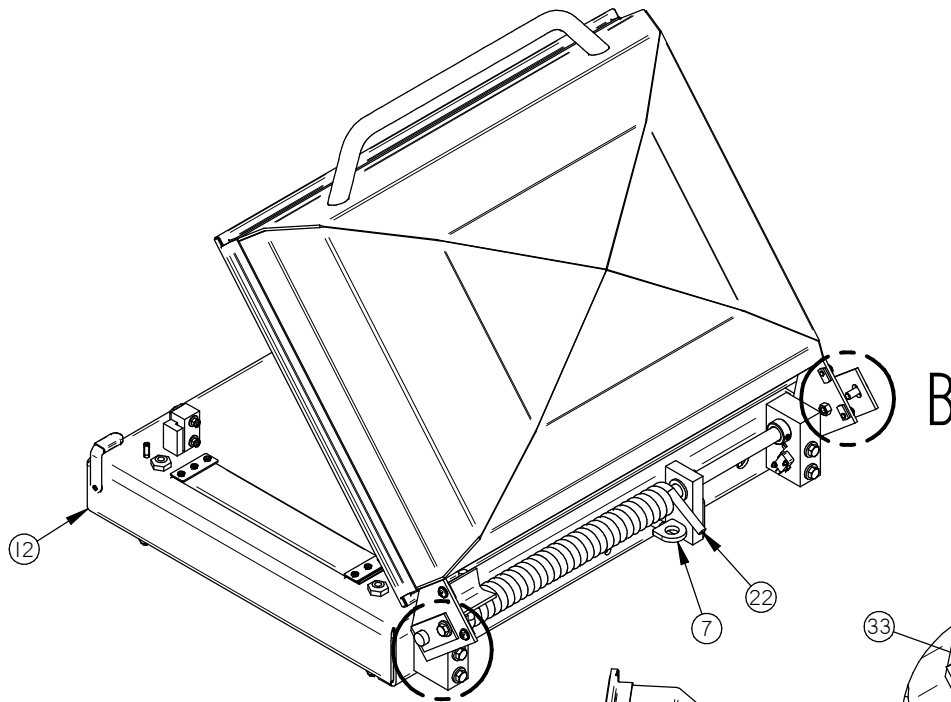
MACHINE		450A		DEPT. TOL.	METRIC	INCH	SIPROMAC ST-GERMAIN DE GRANTHAM QUEBEC CANADA
PART		MACHINE ASSEMBLY		USINAGE	± 0.1	± 0.004"	
				TOLERIE	± 0.5	± 0.020"	
				SOUDEAGE	± 0.5	± 0.020"	N.T.S.
ITEM	CNC			DEPT.	M-I		QTY. 1
MAT.	3D DWG BY SBU	DATE	14-06-18	NO.	005B0607		
	2D DWG BY AG	DATE	14-06-18				

COVER INSTALLATION PROCEDURE

1. ENSURE THAT THE ALUMINIUM BLOCKS ARE FREE
2. PLACE THE COVER ON THE MACHINE
3. PLACE THE SHAFT IN PLACE
4. DO THE VACCUM
5. AJUST THE ALUMINIUM BLOCKS
6. ENSURE THAT THE SHAFT CAN ROTATE FREELY
7. RESTORE THE ATMOSPHERIC PRESSURE
8. INSTALL THE SPRING

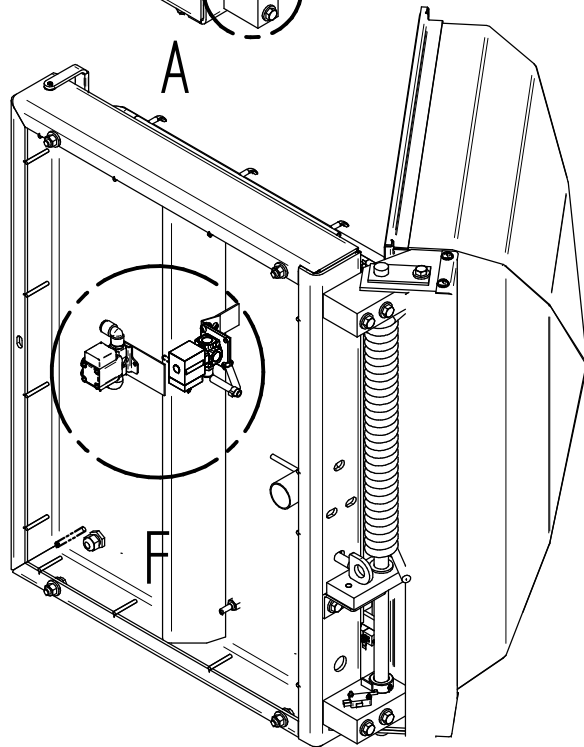
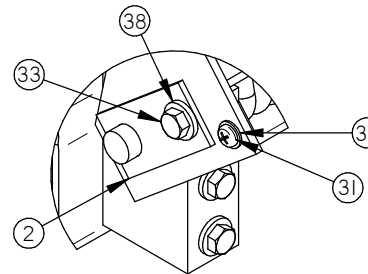
ÉTAPE D'INSTALLATION DU COUVERCLE

1. S'ASSURER QUE LES BLOCS D'ALUMINIUM SONT LOUSSES
2. METTRE LE COUVERCLE SUR LA MACHINE
3. METTRE L'ARBRE EN PLACE
4. FAIRE LE VIDE DE LA MACHINE
5. AJUSTER LES BLOCS D'ALUMINIUM
6. S'ASSURER QUE L'ARBRE TOURNE LIBREMENT
7. RETABLIR LA PRESSION ATMOSPHERIQUE
8. INSTALLER LE RESSORT



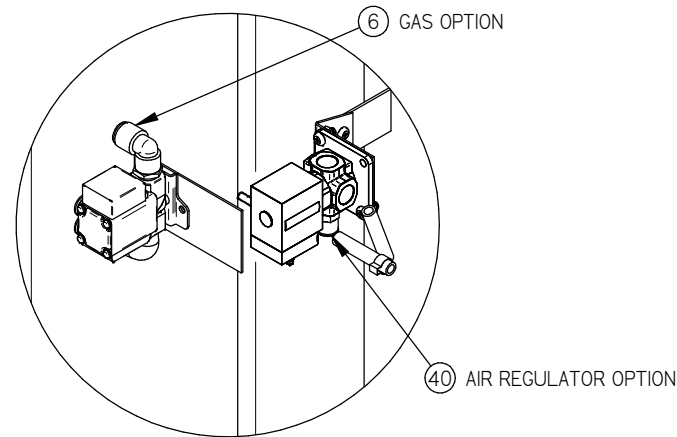
B

DETAIL A

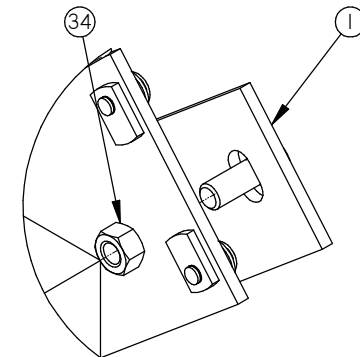


A

F

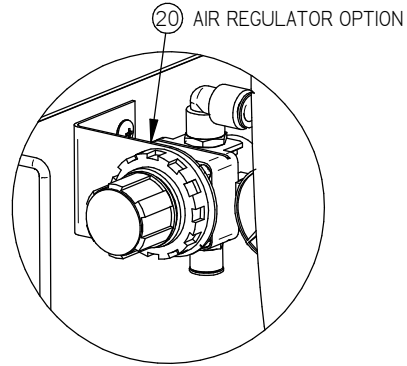


DETAIL F

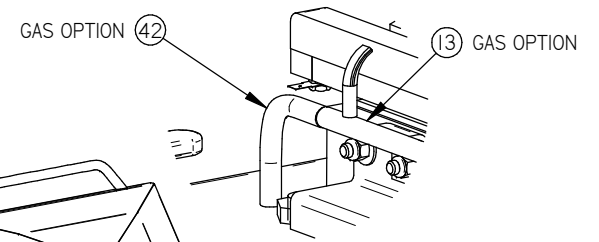


DETAIL B

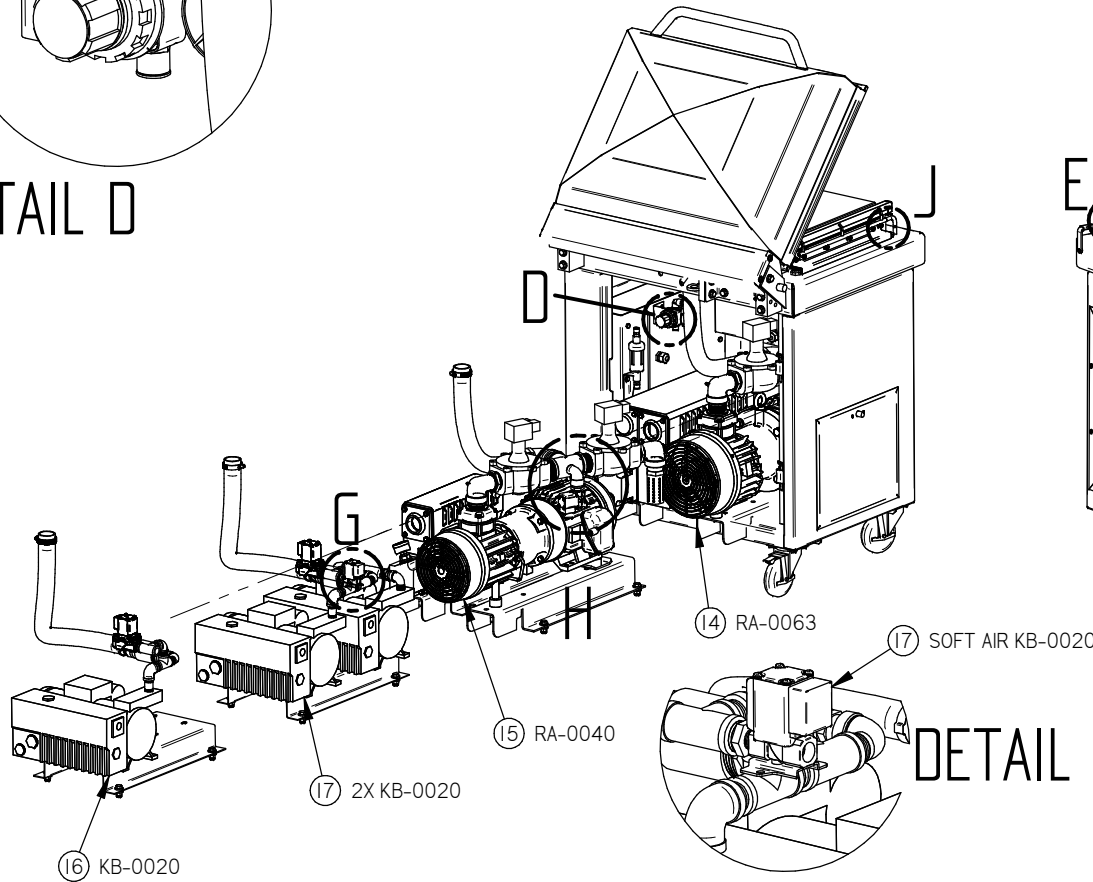
MACHINE		450A		DEPT. TOL. METRIC	INCH	SIPROMAC	
PART		MACHINE ASSEMBLY		USINAGE	± 0.1	± 0.004"	ST-GERMAIN DE GRANTHAM QUEBEC CANADA
ITEM		CNC		TOLERIE	± 0.5	± 0.020"	
MAT.		3D DWG BY SBU		SOUDAGE	± 0.5	± 0.020"	
		2D DWG BY AG		DATE 14-06-18		NO. 005B0607	
				DATE 14-06-18		DEPT. M-I QTY. 1	



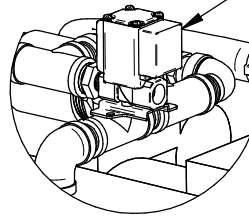
DETAIL D



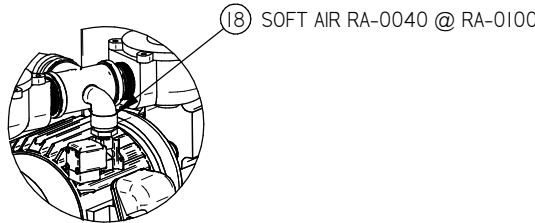
DETAIL E



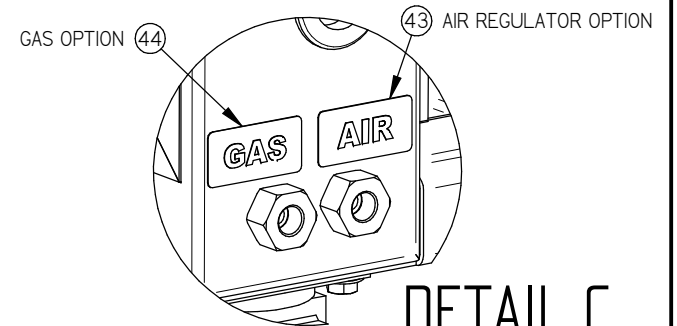
DETAIL G



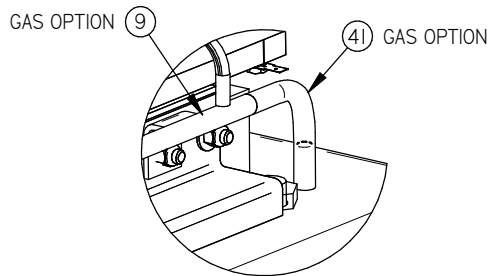
17 SOFT AIR KB-0020



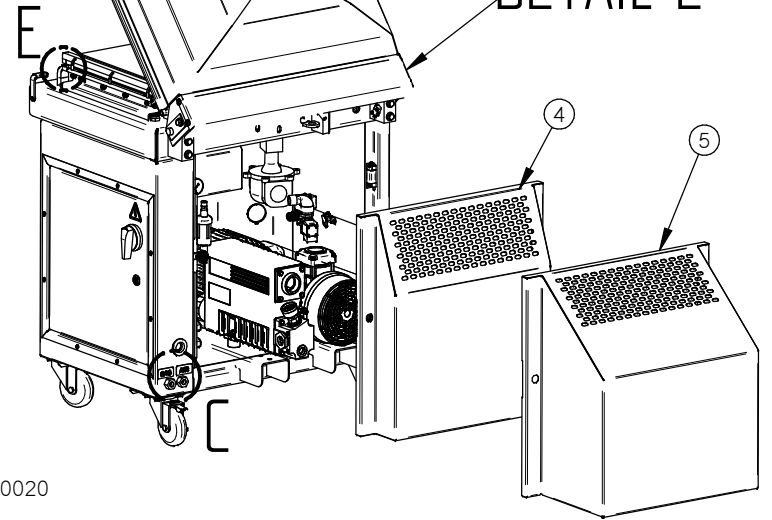
18 SOFT AIR RA-0040 @ RA-0100



DETAIL C



DETAIL J

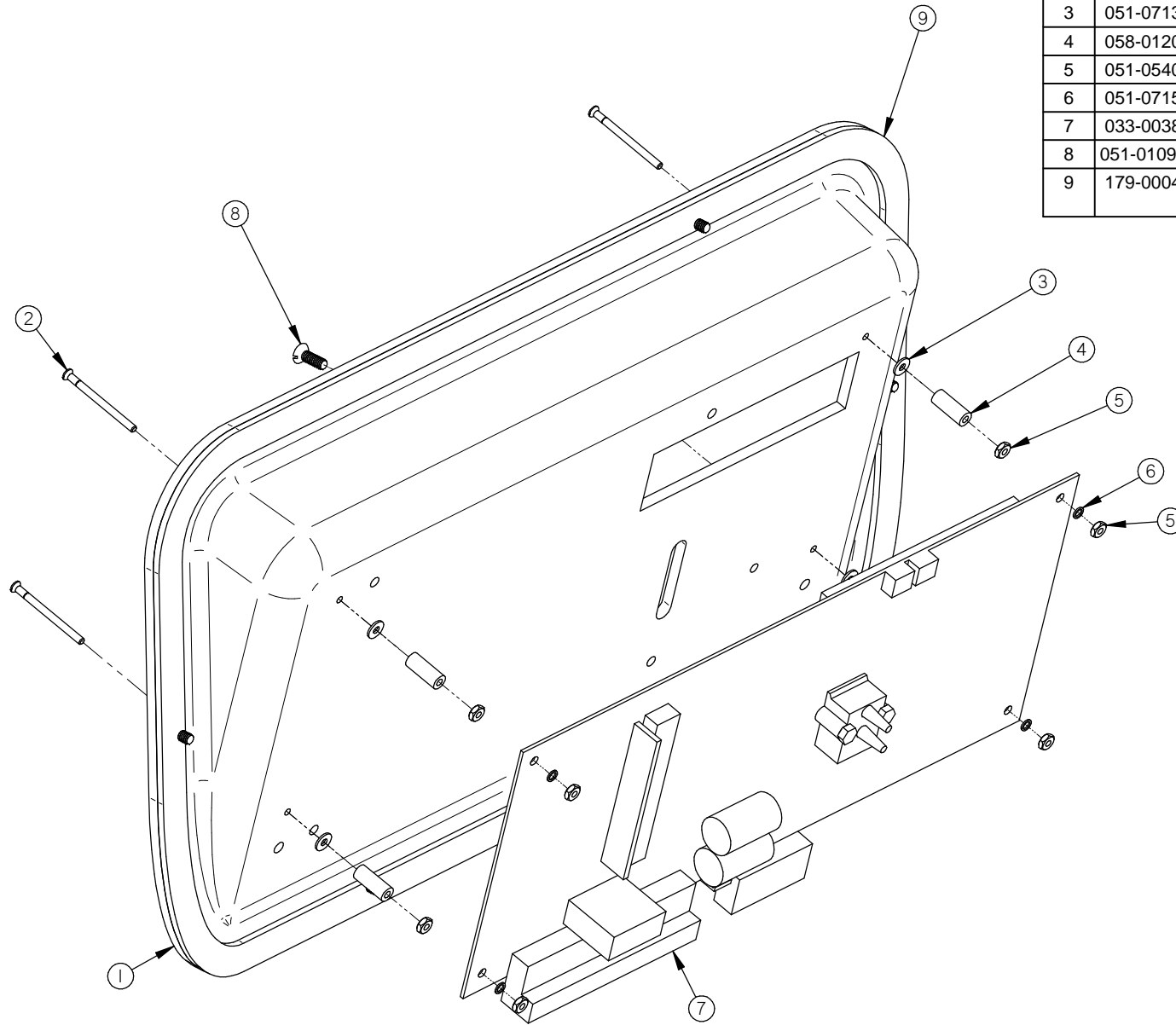


DETAIL H

MACHINE	450A		DEPT. TOL. METRIC	INCH	SIPROMAC ST-GERMAIN DE GRANTHAM QUEBEC CANADA
PART	MACHINE ASSEMBLY		USINAGE ± 0.1	± 0.004"	
ITEM	CNC	DATE	TOLERIE ± 0.5	± 0.020"	
MAT.	3D DWG BY SBU	DATE 14-06-18	SOUDAGE ± 0.5	± 0.020"	NO. 005B0607
	2D DWG BY AG	DATE 14-06-18			DEPT. M-I QTY. 1

005B0583

ITEM	PART #	DESCRIPTION	QT.
1	003A0403	CONTROL INSERT	1
2	051-0092	SCREW #4-40 x 1 1/4" FLAT SLT S/S	4
3	051-0713	WASHER #4 FLAT S/S	4
4	058-0120	CPVC SPACER 0.120" x 1/4" x 5/8"	4
5	051-0540	NUT #4-40 HEX S/S	8
6	051-0715	WASHER #4 LOCK SS	4
7	033-0038	MC-40 SENSOR VACUUM	1
8	051-01095	SCREW 8-32 x 1/2 FLAT SLOT SS	6
9	179-0004	NITRILE 1/2" X 1/8" AUTOCOLLANT X 1220mm long	1

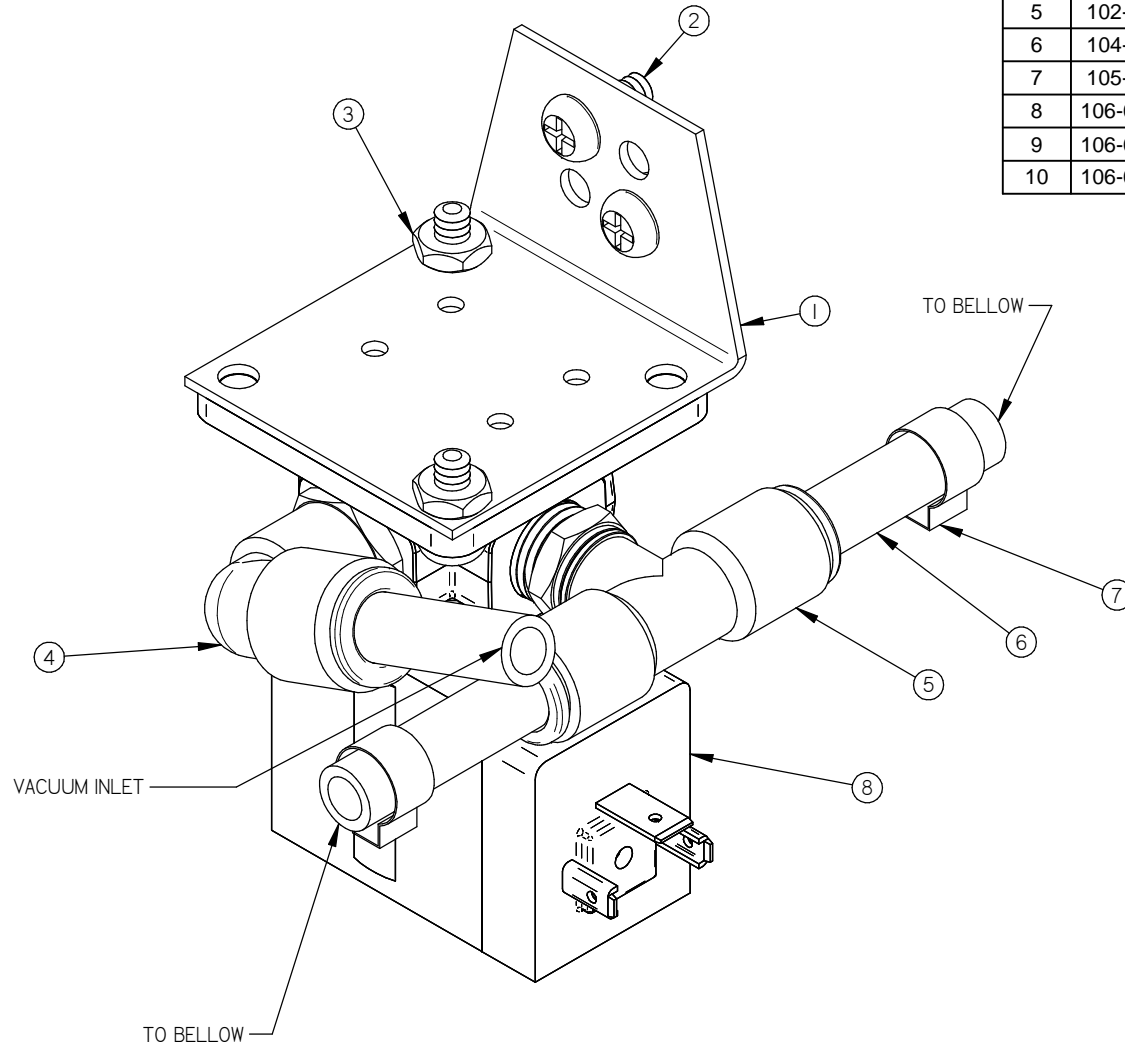


MACHINE		VACUUM		DEPT. TOL.	METRIC	INCH	SIPROMAC ST-GERMAIN DE GRANTHAM QUEBEC CANADA
PART		MC-40 CONTROL BOARD		USINAGE	± 0.1	± 0.004"	
				TOLERIE	± 0.5	± 0.020"	
				SOUDEAGE	± 0.5	± 0.020"	N.T.S.
ITEM		CNC		DEPT.	M		QTY. 1
MAT.		DWG BY	SBU	DATE	13-11-21		NO. 005B0583
		APP. BY		DATE			

LET.	MODIFICATION	DATE	INT.
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005A1507

ITEM	PART #	DESCRIPTION	QT.
1	001B6779	VALVE SUPPORT BRACKET	1
2	051-0144	SCREW #10-24 N.C 1/2" PAN PHIL. S/S	4
3	051-0571	NUT #10-24 S/S	4
4	102-0330	ELBOW 1/4" NPT X 3/8" HOSE QUICK	1
5	102-0355	BRANCH TEE 1/4" MNPT X 3/8" T.QUICK	1
6	104-0060	TUBE 3/8" OD x 1/4" ID POLYETHYL.	3
7	105-0205	1 EAR CLAMPS 3/8" SS	2
8	106-00641	VALVE 3 WAY 1/4" NPT 120V	1
9	106-00661	VALVE 3 WAY 1/4" NPT 240V	1
10	106-00701	VALVE 3 WAY 1/4" NPT 24VAC	1

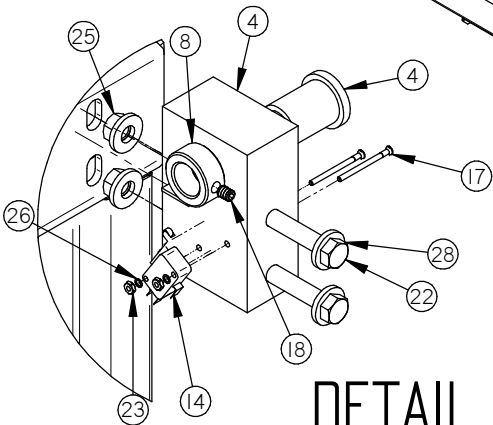
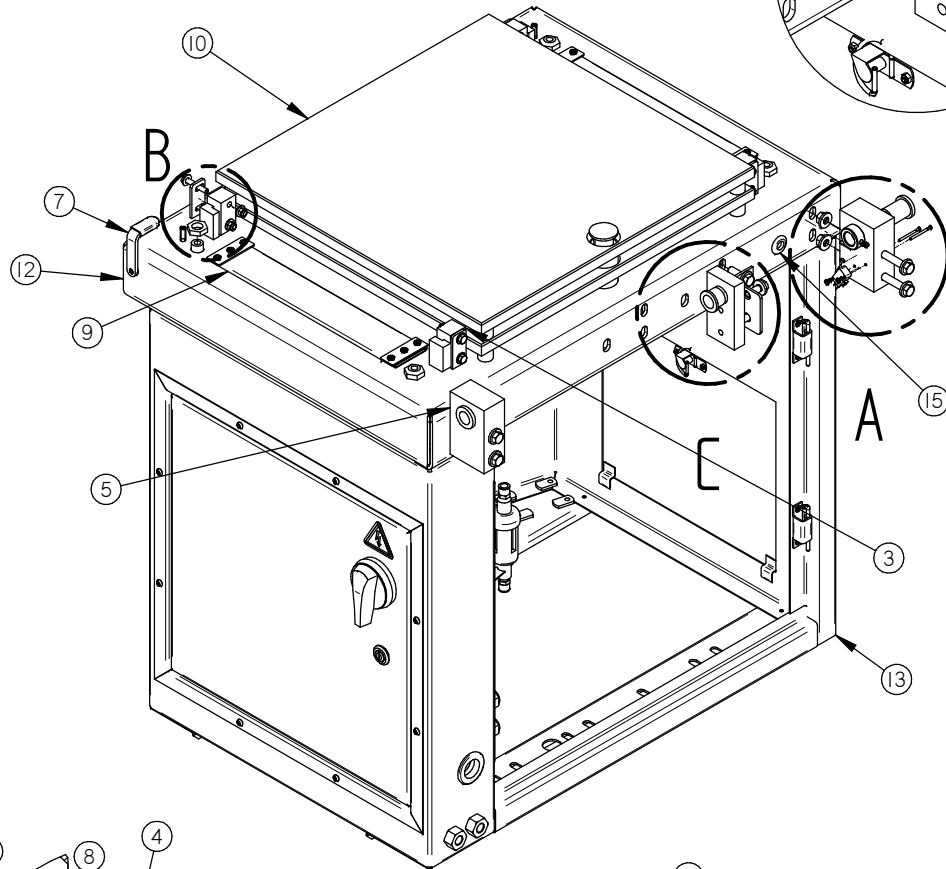
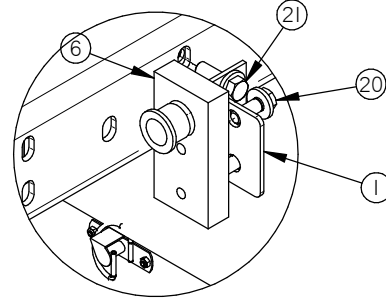


LET.	MODIFICATION	DATE	INT.

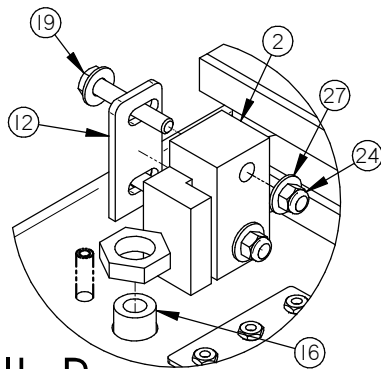
MACHINE	DEPT. TOL.	METRIC	INCH	SIPROMAC	
SINGLE CHAMBER VACUUM	USINAGE	± 0.1	± 0.004"	ST-GERMAIN DE GRANTHAM QUEBEC CANADA	
PART	TOLERIE	± 0.5	± 0.020"		
BELLOW VALVE ASSEMBLY	SOUDAGE	± 0.5	± 0.020"		
N.T.S.				DEPT.	M
ITEM	CNC	DATE	14-06-13	NO.	1
MAT.	3D DWG BY SBU	DATE	14-06-16	005A1507	
	2D DWG BY AG	DATE	14-06-16		

005A0601

DETAIL C

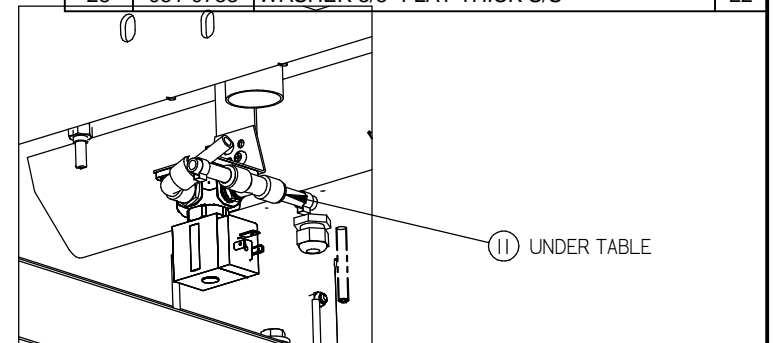


DETAIL A



DETAIL B

ITEM	PART #	DESCRIPTION	QT.
1	001-1540	CENTRAL COVER AXIS SUPPORT FIXATION	1
2	002-0326	LEFT SEAL BAR GUIDE BLOCK	2
3	002-0327	RIGHT SEAL BAR GUIDE BLOCK	2
4	004-0274	LEFT COVER AXIS SUPPORT	1
5	004-0275	RIGHT COVER AXIS SUPPORT	1
6	004-0276	CENTRAL COVR AXIS SUPPORT	1
7	004B1651	COVER HOLD DOWN ASS'Y	1
8	005-0348	MICRO SWITCH COLLAR ASS'Y	1
9	005-0532	BELLOWS ASSEMBLY	2
10	005-0534	FILLER PLATE ASSEMBLY	2
11	005A1507	BELLOW VALVE ASSEMBLY	1
12	005C0531	TABLE ASSEMBLY	1
13	005C0602	STRUCTURE ASSEMBLY	1
14	026-0610	LIMIT SWITCH LONG ROLLER	1
15	036-0280	PLUG GROMMET 1-1/16" X 1/2" X 13/16" HOLE	1
16	036-0400	WIRE CONNECT. 3/8" NPT CD09/O-RING/NUT	4
17	051-0094	SCREW 4-40 X 1 1/2" FLAT SLOT SS	2
18	051-0178	SCREW 1/4"-20 x 5/16" SKT SET S/S	1
19	051-0250	BOLT 1/4"-20nc. X 1 1/2" S/S	8
20	051-0360	BOLT 3/8"-16nc. X 1" S/S	6
21	051-0372	BOLT 3/8"-16 x 1-1/4" S/S	2
22	051-0424	BOLT 3/8"-16 x 3-1/2" SS	4
23	051-0540	NUT #4-40 HEX S/S	2
24	051-0581	NUT 1/4"-20 NYLON LOCK S/S	8
25	051-0620	NUT 3/8"-16 NC S/S	10
26	051-0715	WASHER #4 LOCK SS	2
27	051-0740	WASHER 1/4" FLAT S/S	16
28	051-0783	WASHER 3/8" FLAT THICK S/S	22

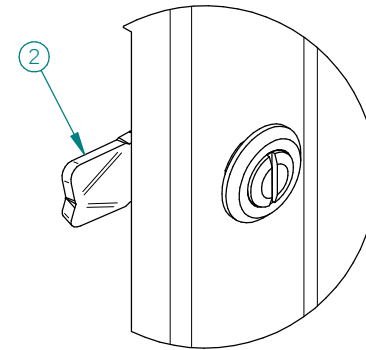
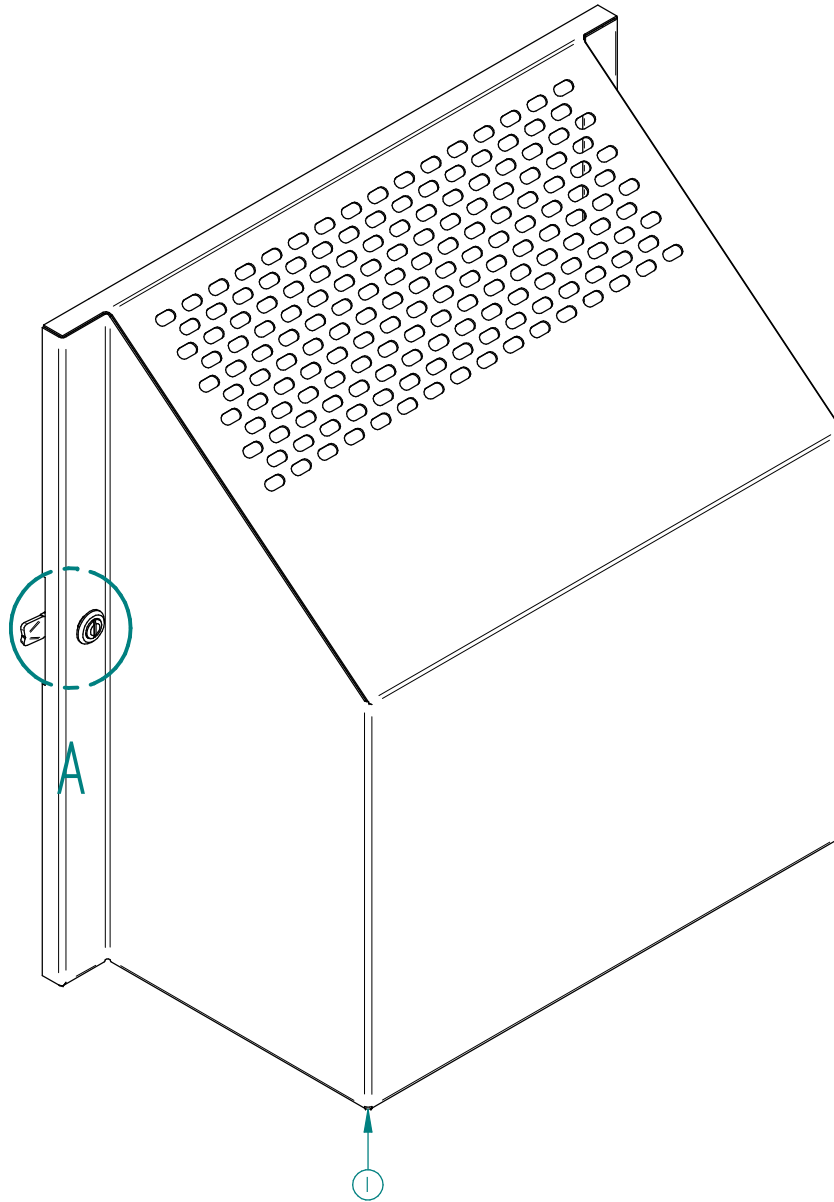


MACHINE		450A		DEPT. TOL.	METRIC	INCH.	SIPROMAC ST-GERMAIN DE GRANTHAM QUEBEC CANADA
PART		BASE MACHINE ASSEMBLY		USINAGE	± 0.1	± 0.004"	
				TOLERIE	± 0.5	± 0.020"	
				SOUDEAGE	± 0.5	± 0.020"	
				N.T.S.			
ITEM	CNC	DEPT.	M	QTY.	1		
MAT.	3D DWG BY SBU	DATE	14-06-09		NO.	005A0601	
	2D DWG BY AG	DATE	14-06-17				

LET.	MODIFICATION	DATE	INT.
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004A4232

ITEM	PART #	DESCRIPTION	QT.
1	004A4231	REAR ACCESS DOOR PRE-ASSY (RA0063 & RA0040)	1
2	056-2612	CAM LOCK QUARTER TURN SS304	1



DETAIL A

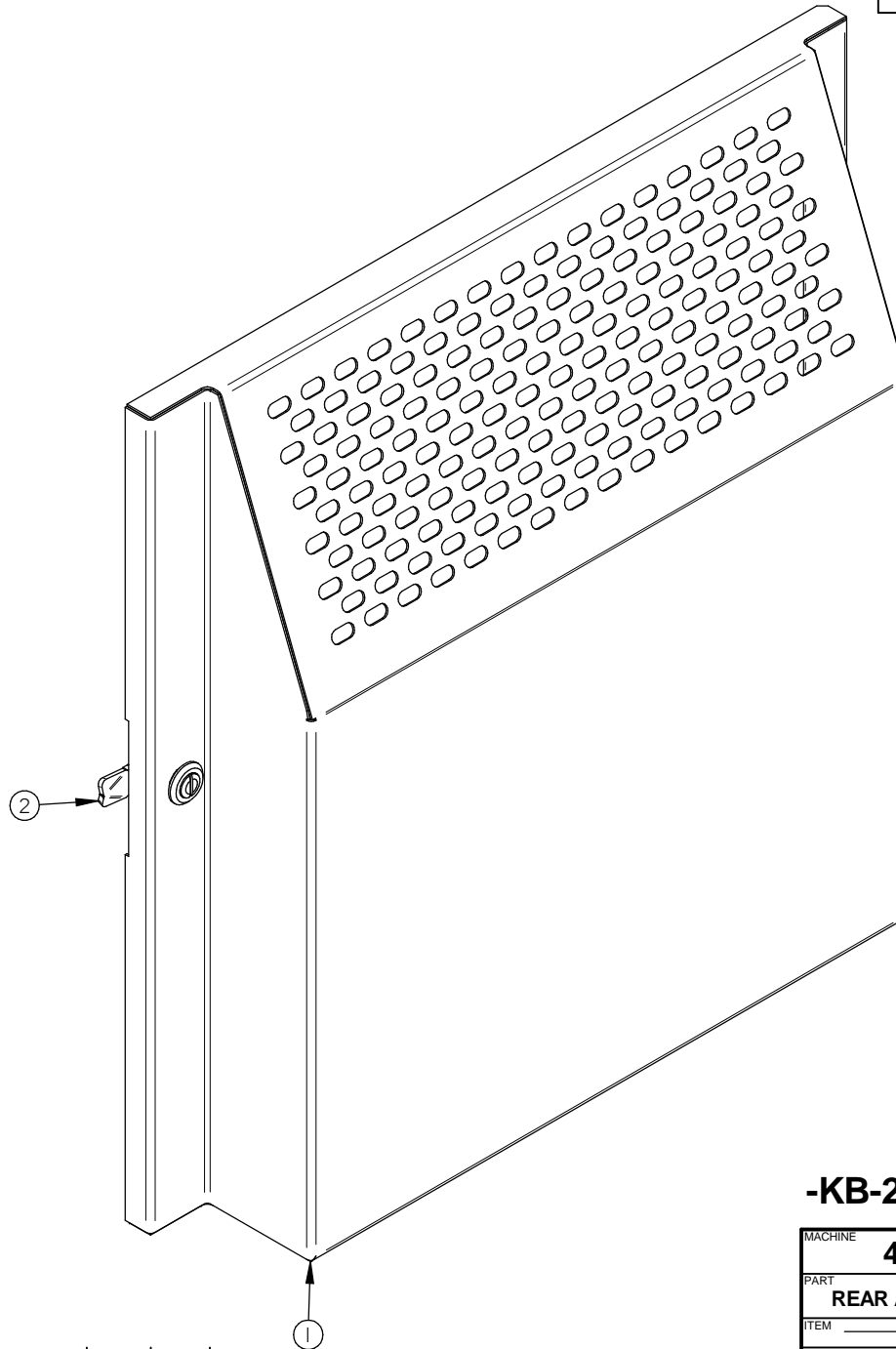
RA-0040 - RA-0063 OPTION

MACHINE		400 - 450A		DEPT. TOL.	METRIC	INCH	SIPROMAC ST-GERMAIN DE GRANTHAM QUEBEC CANADA
PART		REAR ACCESS DOOR ASSY (RA0063 & RA0040)		USINAGE	± 0.1	± 0.004"	
ITEM		CNC		TOLERIE	± 0.5	± 0.020"	
MAT.		3D DWG BY SBU DATE 14-06-10		SOUDEGE	± 0.5	± 0.020"	NO. 004A4232
LET.		MODIFICATION		DATE		INT.	DEPT. M
							QTY. 1

LET.	MODIFICATION	DATE	INT.
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004A4230

ITEM	PART #	DESCRIPTION	QT.
1	004A4229	REAR ACCESS DOOR PRE-ASSY (KB-0020)	1
2	056-2612	CAM LOCK QUARTER TURN SS304	1



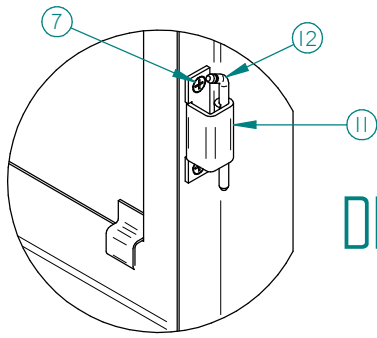
-KB-20 OPTION (400, 450A)-

MACHINE		DEPT. TOL. METRIC		INCH		SIPROMAC ST-GERMAIN DE GRANTHAM QUEBEC CANADA
400, 450A & 550A		USINAGE	± 0.1	± 0.004"		
PART		TOLERIE	± 0.5	± 0.020"		
REAR ACCESS DOOR ASSY (KB-0020)		SOUDEAGE	± 0.5	± 0.020"		N.T.S.
ITEM	CNC	DEPT.	M	QTY.	1	
MAT.	3D DWG BY SBU	DATE	14-06-10	NO.	004A4230	
	2D DWG BY AG	DATE	14-07-03			

LET.	MODIFICATION	DATE	INT.
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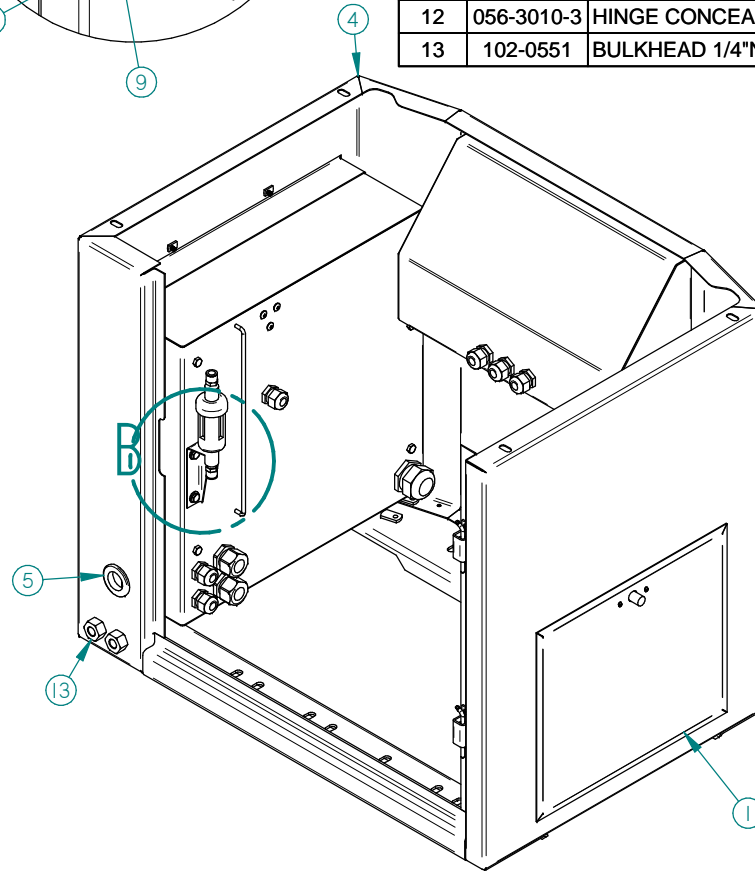
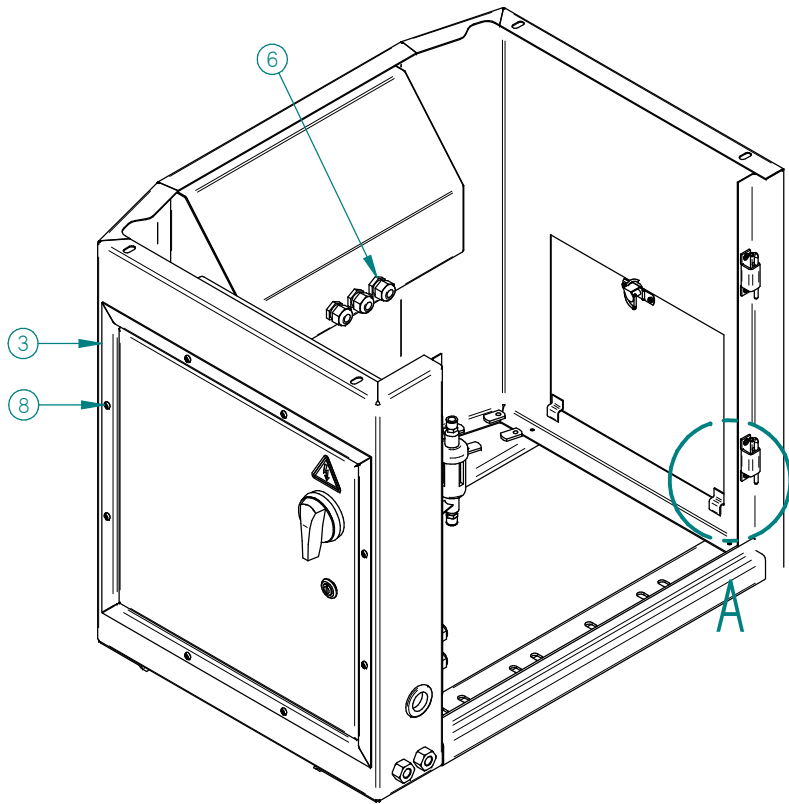
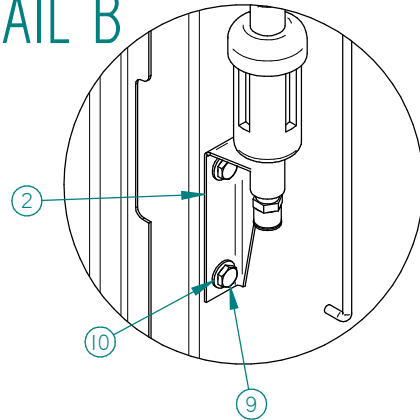
005C0602

ITEM	PART #	DESCRIPTION	QT.
1	004A4090	ACCESS DOOR ASSEMBLY	1
2	004A4138	VACUUM SENSOR FILTER	1
3	004A4155	ELECTRIC BOX ASS'Y	1
4	004C0438	STRUCTURE WELD ASSY	1
5	036-0250	GROMMET 1 1/8ID x 1 7/8OD RUBBER	1
6	036-0409	PRESSE-ETOUPE CD13	3
7	051-01385	SCREW 10-24 x 1/2"FLAT-UND. PHIL S/S	4
8	051-0144	SCREW #10-24 N.C 1/2"PAN PHIL. S/S	8
9	051-0180	BOLT. HEX. 1/4"-20 NC. x 1/2" S/S	2
10	051-0740	WASHER 1/4" FLAT S/S	2
11	056-3010-1	HINGE CONCEALED SS304 - BASE	2
12	056-3010-3	HINGE CONCEALED SS304 - PIN	2
13	102-0551	BULKHEAD 1/4"NPT X 3/8 TUBE QUICK	2



DETAIL A

DETAIL B

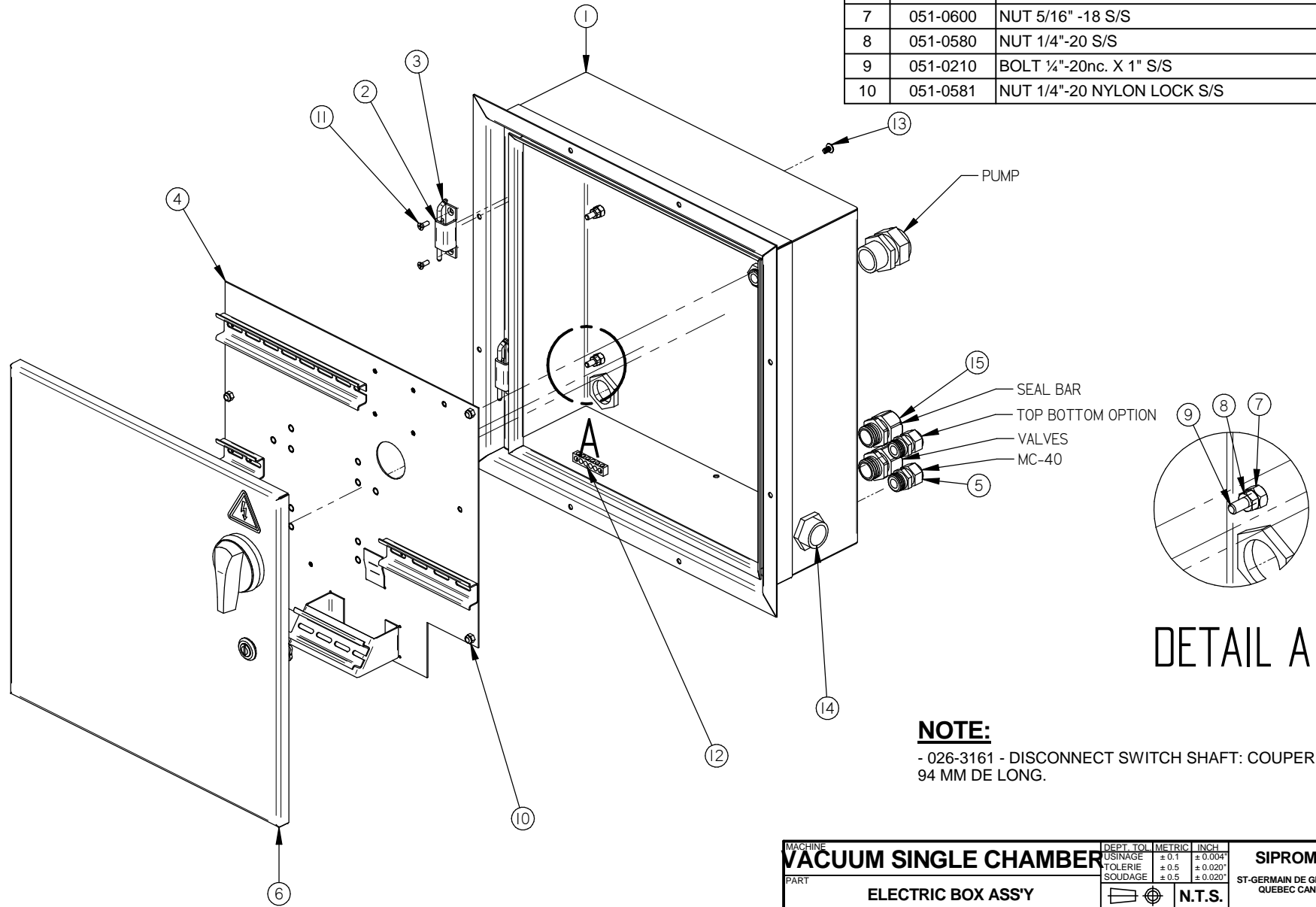


LET.	MODIFICATION	DATE	INT.
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MACHINE		450A		DEPT. TOL.	METRIC	INCH	SIPROMAC ST-GERMAIN DE GRANTHAM QUEBEC CANADA
PART		STRUCTURE ASSEMBLY		USINAGE	± 0.1	± 0.004"	
				TOLERIE	± 0.5	± 0.020"	
ITEM		CNC		SOUDEGE		± 0.5	± 0.020"
MAT.		3D DWG BY SBU DATE 14-06-10		NO.		005C0602	
		2D DWG BY AG DATE 14-06-17		DEPT.		M QTY. 1	

004A4155

ITEM	PART #	DESCRIPTION	QT.	ITEM	PART #	DESCRIPTION	QT.
11	051-0139	SCREW 10-24 x 1/2" FLAT PHIL S/S	4	1	004A4156	E-BOX PRE-ASSY	1
12	028-0105	GROUND BARRIER (6 HOLES)	1	2	056-3010-1	HINGE CONCEALED SS304 - BASE	2
13	051-0128	SCREW 10-24 x 3/8" TRUSS PHIL S/S	3	3	056-3010-3	HINGE CONCEALED SS304 - PIN	2
14	036-0430	PRESSE-ÉTOUPE CD29	2	4	004A4102	E-BOX FALSE BOTTOM	1
15	036-0420	PRESSE-ÉTOUPE CD21	2	5	036-0409	PRESSE-ETOUPE CD13	3
				6	004A4100	E-BOX DOOR ASSEMBLY	1
				7	051-0600	NUT 5/16" -18 S/S	4
				8	051-0580	NUT 1/4"-20 S/S	4
				9	051-0210	BOLT 1/4"-20nc. X 1" S/S	4
				10	051-0581	NUT 1/4"-20 NYLON LOCK S/S	4



NOTE:

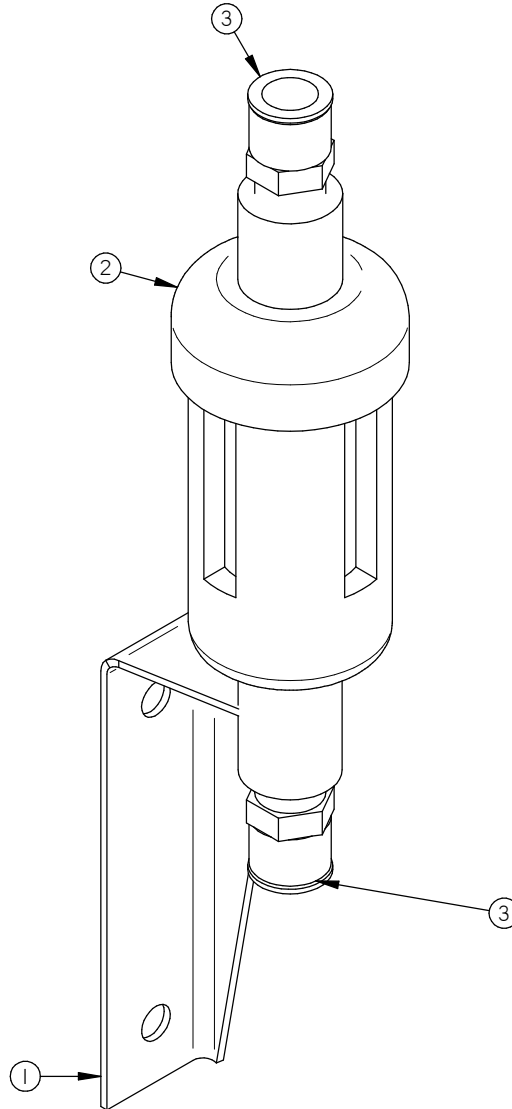
- 026-3161 - DISCONNECT SWITCH SHAFT: COUPER À 94 MM DE LONG.

LET.	MODIFICATION	DATE	INT.
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MACHINE		DEPT. TOL.	METRIC	INCH	SIPROMAC ST-GERMAIN DE GRANTHAM QUEBEC CANADA
VACUUM SINGLE CHAMBER		USINAGE	± 0.1	± 0.004"	
PART		TOLERIE	± 0.5	± 0.020"	
ELECTRIC BOX ASS'Y		SOUDEAGE	± 0.5	± 0.020"	N.T.S.
ITEM	CNC	DEPT.	M	QTY.	1
MAT.	DWG BY SBU	DATE 14-06-10	NO.	004A4155	
	APP. BY	DATE			

004A4138

ITEM	PART #	DESCRIPTION	QT.
1	004A4139	VACUUM SENSOR FILTER SUPPORT	1
2	114-2020	FILTER / DRYER 1/4"mnpt. X 1/4"t.p. COMP.	1
3	102-0410	MALE CONN.1/4"MNPTx3/8"t.QUICK	2

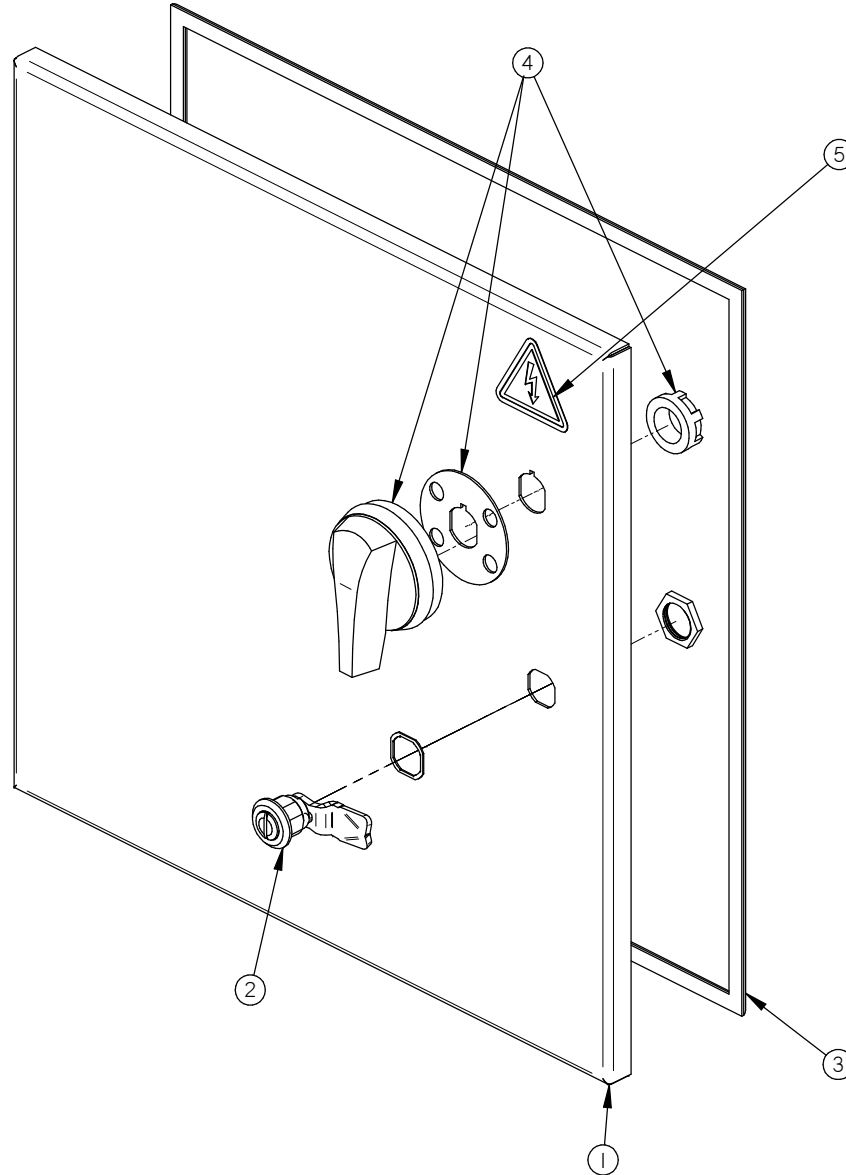


MACHINE		VACUUM		DEPT. TOL.	METRIC	INCH	SIPROMAC ST-GERMAIN DE GRANTHAM QUEBEC CANADA
PART		VACUUM SENSOR FILTER		USINAGE ± 0.1	± 0.004"	N.T.S.	
ITEM		CNC		TOLERIE ± 0.5	± 0.020"		
MAT.		APP. BY SBU		SOUDAGE ± 0.5	± 0.020"		
LET.		MODIFICATION		DATE		INT.	DEPT. M
				DATE 13-11-19			QTY. 1
				DATE			004A4138

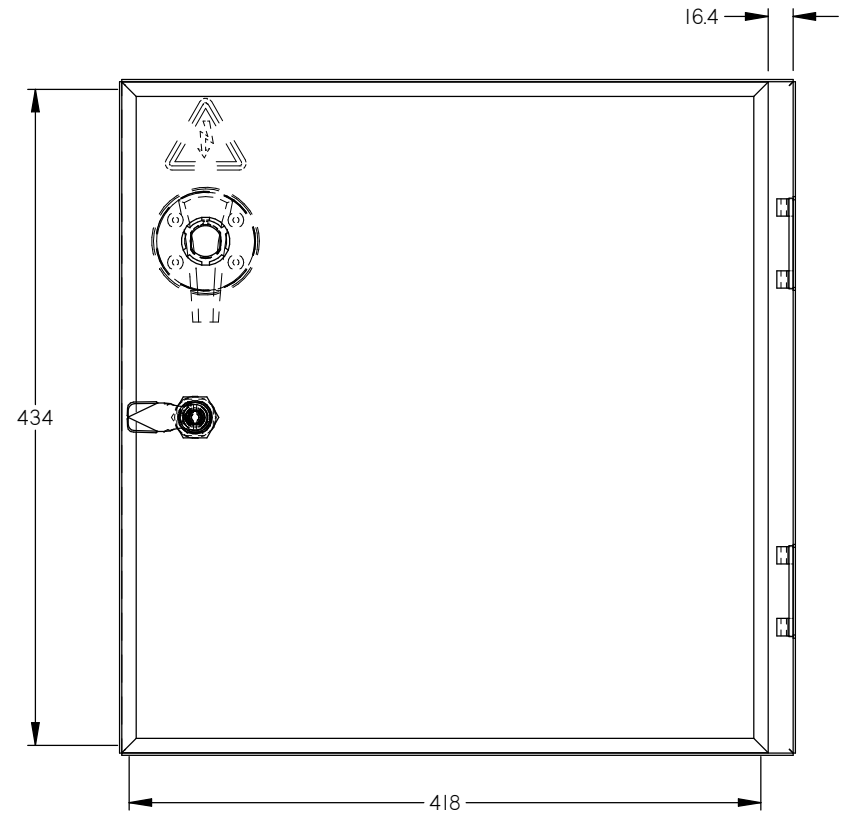
LET.	MODIFICATION	DATE	INT.
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004A4100

ITEM	PART #	DESCRIPTION	QT.
1	004A4101	E-BOX DOOR PRE-ASSY	1
2	056-2612	CAM LOCK QUARTER TURN SS304	1
3	179-0026	D-SHAPED RUBBER SEAL 1683mm LONG	1
4	026-3160	HANDLE RED/YELLOW NEMA 4X, COMPACT, PADLOCKABLE	1
5	127-0100	STICKER ELEC.HAZARD ISO 2-1/2" TRIANGLE	1



5 CENTER WITH HANDLE

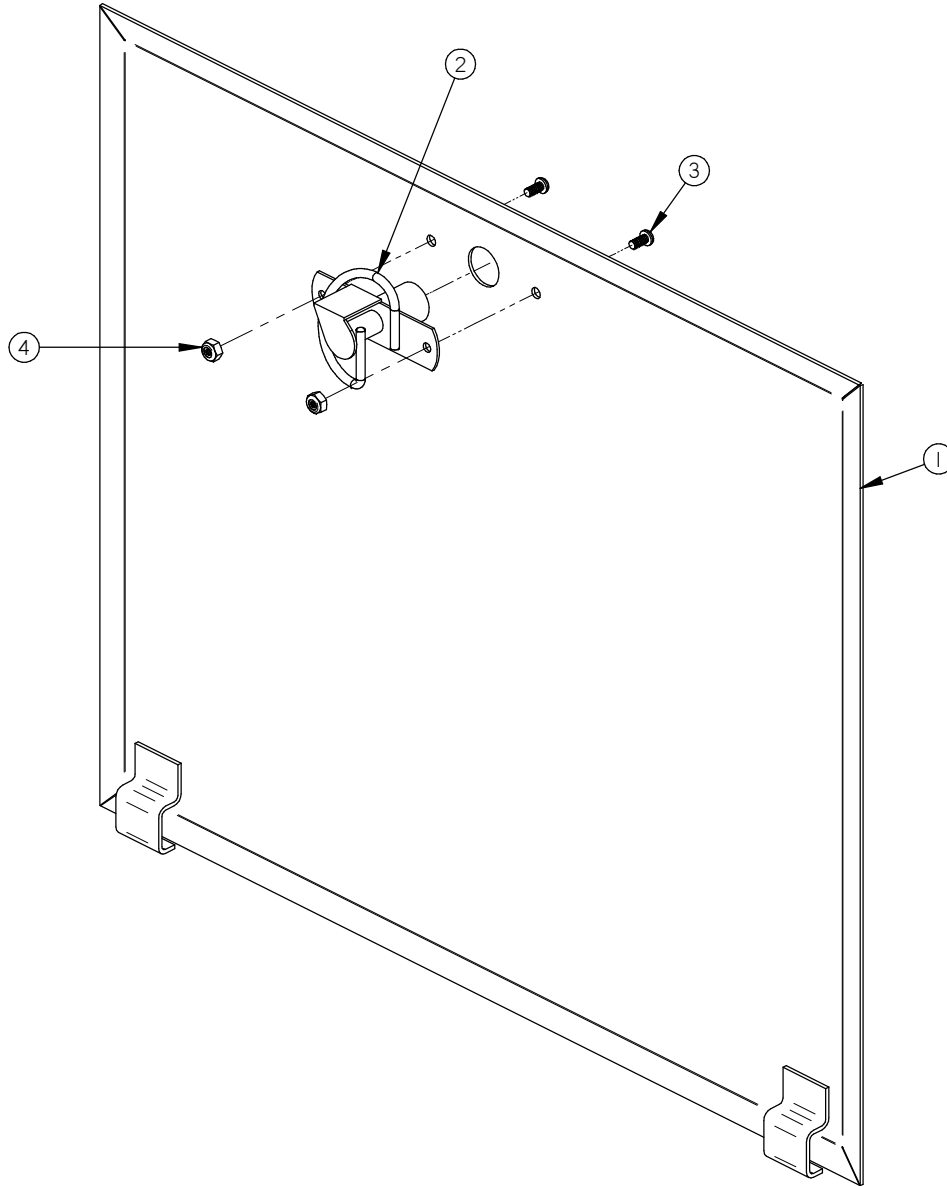


MACHINE		VACUUM		DEPT. TOL.	METRIC	INCH	SIPROMAC ST-GERMAIN DE GRANTHAM QUEBEC CANADA
PART		E-BOX DOOR ASSEMBLY		USINAGE	± 0.1	± 0.004"	
ITEM		CNC		TOLERIE	± 0.5	± 0.020"	
MAT.		APP. BY		DATE		NO.	1
LET.		MODIFICATION		DATE		INT.	004A4100

LET.	MODIFICATION	DATE	INT.
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004A4090

ITEM	PART #	DESCRIPTION	QT.
1	004A4089	ACCESS PANEL PRE-ASSY	1
2	056-2600	SPRING PAWL LATCHE SS KNOB	1
3	051-0071	SCREW 4-40 x 1/4" RND SLOT S/S	2
4	051-0541	NUT # 4-40 NYLON LOCK SS	2

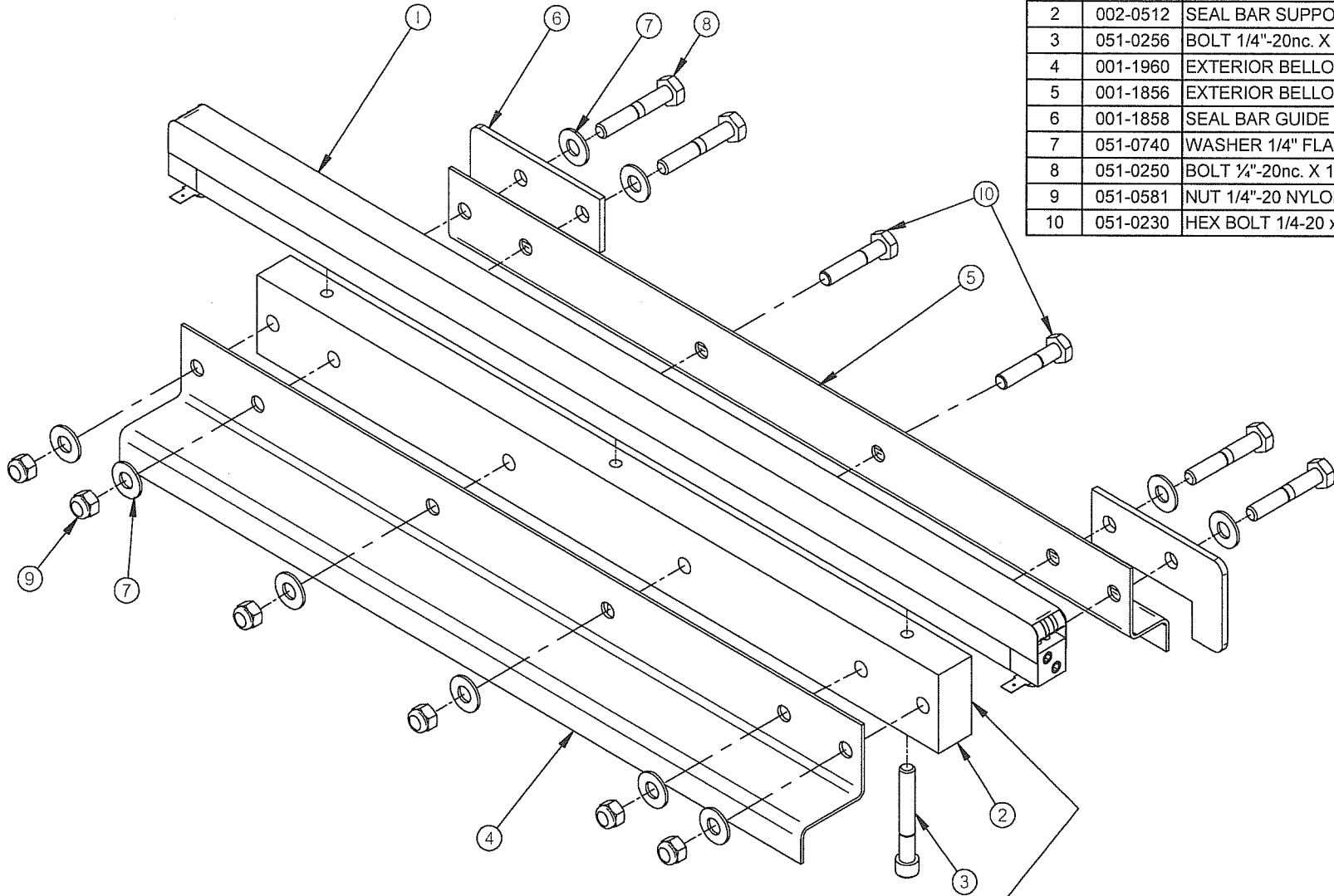


LET.	MODIFICATION	DATE	INT.
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MACHINE		VACUUM		DEPT. TOL.	METRIC	INCH	SIPROMAC ST-GERMAIN DE GRANTHAM QUEBEC CANADA
PART		ACCESS DOOR ASSEMBLY		USINAGE	± 0.1	± 0.004"	
ITEM		CNC		TOLERIE	± 0.5	± 0.020"	
MAT.		APP. BY		DATE		DATE	N.T.S.
		DWG BY SBU		DATE 13-09-11		NO.	004A4090
						DEPT.	M
						QTY.	1

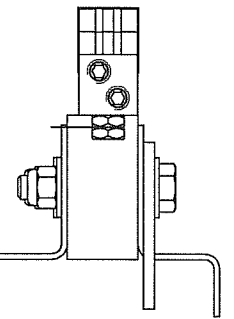
1005A0564

ITEM	PART #	DESCRIPTION	QT.
1	004-0352	SEAL BAR PRE-ASSEMBLY	1
2	002-0512	SEAL BAR SUPPORT	1
3	051-0256	BOLT 1/4"-20nc. X 1 3/4" CAP SKT S/S	3
4	001-1960	EXTERIOR BELLOWS COVER	1
5	001-1856	EXTERIOR BELLOWS COVER	1
6	001-1858	SEAL BAR GUIDE	2
7	051-0740	WASHER 1/4" FLAT S/S	10
8	051-0250	BOLT 1/4"-20nc. X 1 1/2" S/S	4
9	051-0581	NUT 1/4"-20 NYLON LOCK S/S	6
10	051-0230	HEX BOLT 1/4-20 x 1 1/4" SS	2



-CE COTÉ DU SUPPORT ÉGAL AVEC DE LA BARRE DE SCELLAGE.
-THIS SIDE OF SUPPORT TO FIT FLUSH W/ SEAL BAR.

-ITEM #2 ÉGAL AVEC L'ITEM #4 & #5.
-ITEM #2 FLUSH WITH ITEM #4 & #5.



-TWIN SEAL OPTION-

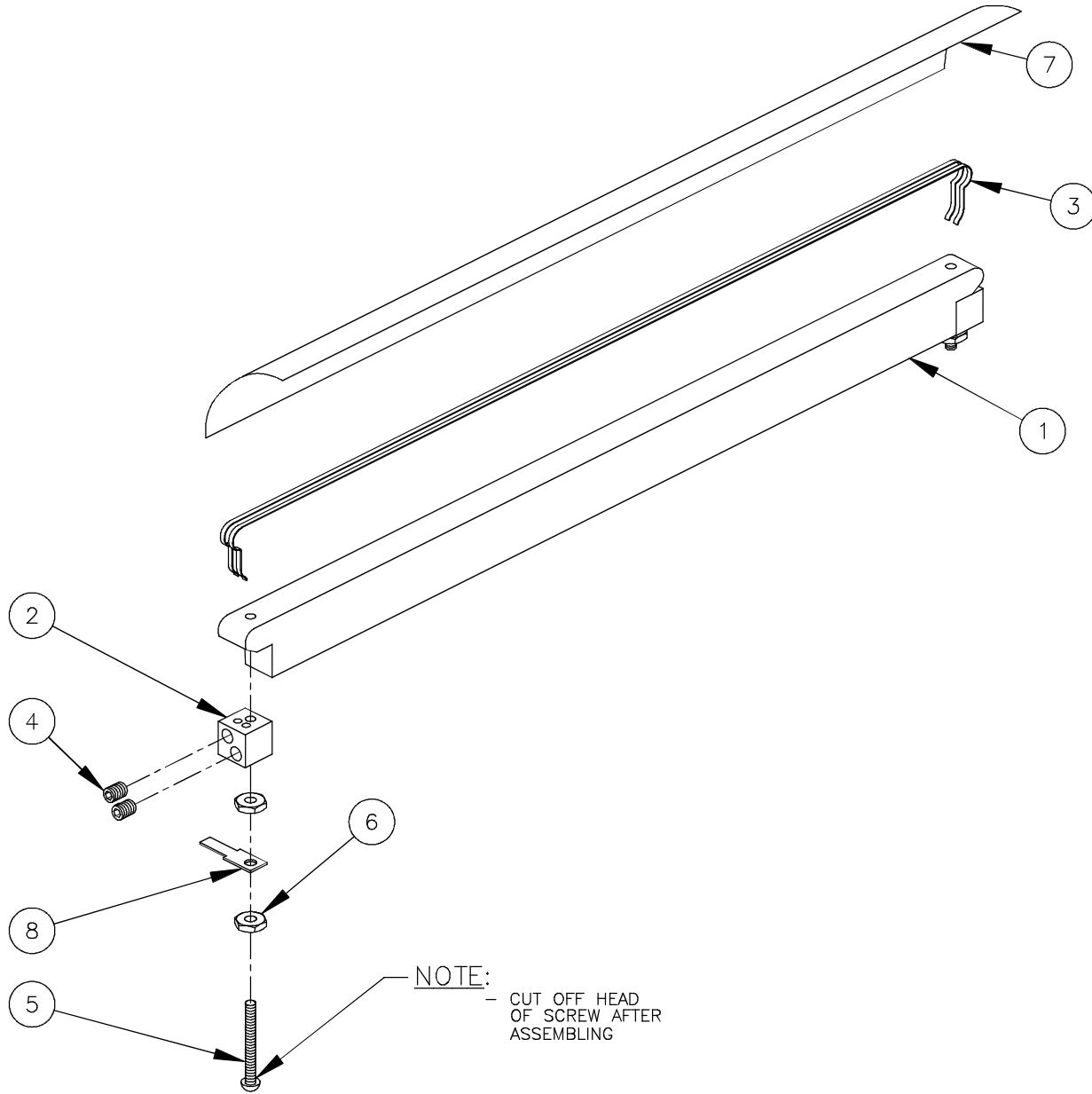
-END VIEW-

E	REDRAWN/ REMOVE WIRE DUCT	12-04-03	CF
LET.	MODIFICATION	DATE	INT.

MACHINE 400, 450T & 450A		DEPT. TOL. METRIC	INCH	SIPROMAC ST-GERMAIN DE GRANTHAM QUEBEC CANADA
PART SEAL BAR ASSEMBLY W/SUPPORT		USINAGE ± 0.1	± 0.004	
		TOLERIE ± 0.5	± 0.020"	
		SOUDEAGE ± 0.5	± 0.020"	
ITEM	CNC	N.T.S.		DEPT. M-I(M) QTY. 2
MAT.	DWG BY CF	DATE 12-04-03	NO 005A0564	
	APP. BY	DATE		

1004-0352

ITEM	#PART	DESCRIPTION	QT.
1	002-0481	SEAL BAR (TABLE)	1
2	002-0031	CONNECTOR	2
3	039-0200	SEALING ELEM. STD TWIN (2x626mm EA.)	4.31
4	052-0395	SCREW 1/4"-20 NC. X 5/16" SET HEX SKT OVAL PT	4
5	052-0250	SCREW #8-32 X 1 1/2" RND SLOT BRASS	2
6	051-0550	NUT #8-32 S/S	4
7	176-0200	TEFLON TAPE 5S ADHESIVE X 2" X (496mm EA.)	0.063
8	027-0400	CONNECTOR ADAPTOR 1/4" X #10 STUD	2



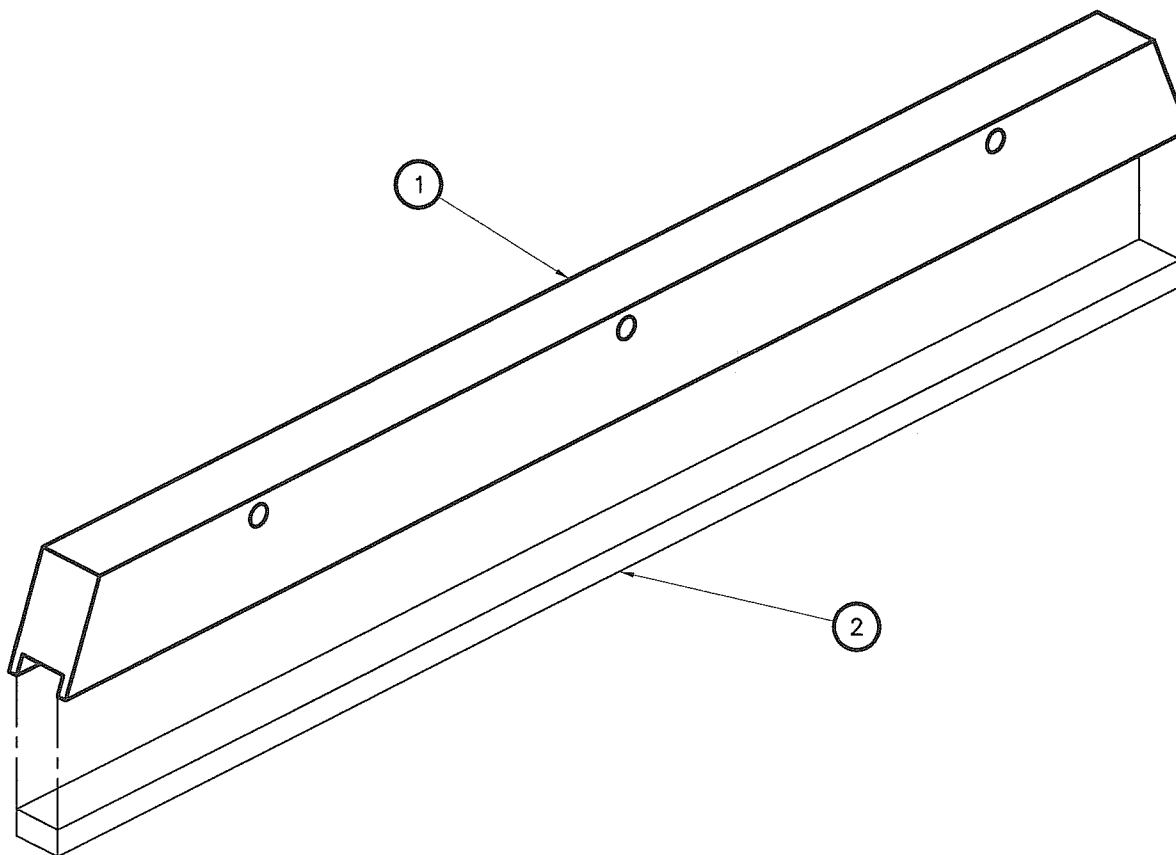
420A	4
450T	2
450A	2
400	2
350D	2
350	1
300D	2
300	1
MACHINE	QTÉ.

G	ADDED 420A WAS 005-0267	14-08-21	SBU
F	ADDED 300, 300D, 350 & 350D WAS 005-0267	12-09-24	J.G.
E	ADDED 450T WAS 005-0377	08-05-26	D.A.
D	MODIFICATION #A-0398 (CONNECTEUR)	04-04-19	J.G.
C	ADDED 400	99-05-06	S.L.
B	REDRAWN	98-02-10	A.P.
LET.	MODIFICATION	DATE	INT.

MACHINE		TOLERANCE		SIPROMAC	
VOIR LISTE		METRIC	INCH	ST-GERMAIN DE GRANTHAM, QUEBEC CANADA	
PART		USINAGE ± 0.1	± 0.004"		
SEAL BAR PRE-ASSEMBLY		TOLERIE ± 0.5	± 0.020"		
		SOUDAGE ± 0.5	± 0.020"		
		N.T.S.			
ITEM:	CNC:	DEPT.	M-1	QT.	2
MAT:	DWG BY A. P.	DATE	98-02-10	NO. 004-0352	
	APP.	DATE			

004A0351

ITEM	PART #	DESCRIPTION	QT.
1	002A0480	UPPER SEAL BAR SUPPORT	1
2	008-0450	UPPER SEAL BAR RUBBER	1

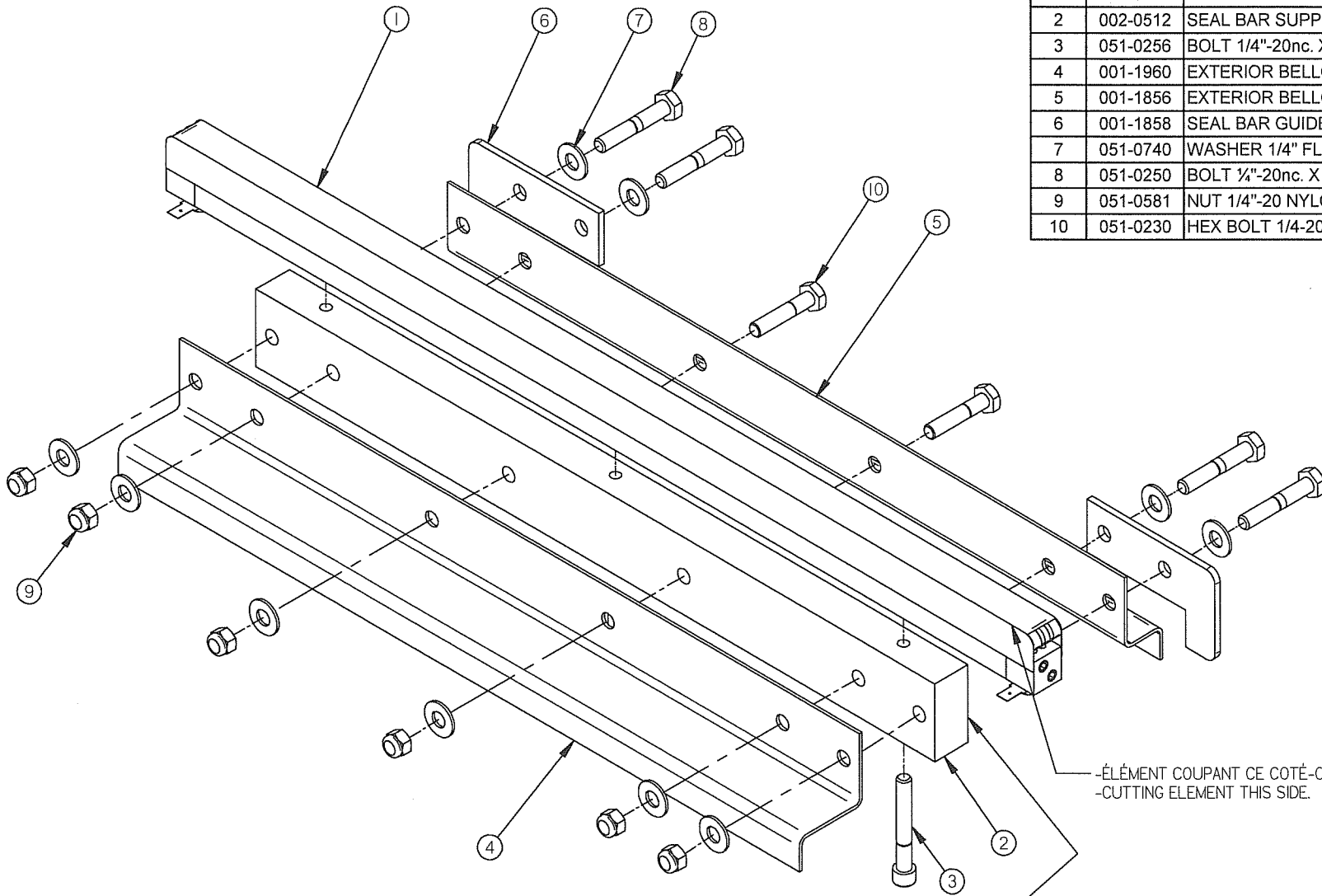


D	ADDED 450T WAS 004A0161	08-05-26	D.A.
C	REDRAWN	99-08-02	S.L.
LET.	MODIFICATION	DATE	INT.

MACHINE	400, 450T & 450A	METRIC TOLERANCE	INCH TOLERANCE	SIPROMAC
PART	UPPER SEAL BAR PRE-ASS'Y	0. ± .5 .0 ± .05 .00 ± .005 .000 ± .0005 ANGLE ± 1°	.0 ± .015" .00 ± .005" .000 ± .0005" N.T.S.	ST-GERMAIN DE GRANTHAM QUEBEC CANADA
ITEM:	CNC: -----	DEPT.	M-1	QT. 2
MAT:	BY S. LAROUCHE APP.	DATE	99-08-02	NO. 004A0351
		DATE	9-12-15	

005A0565

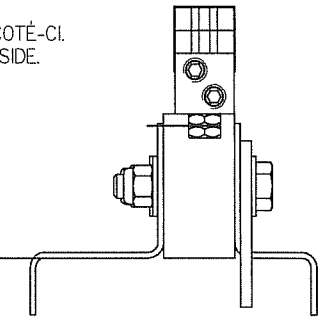
ITEM	PART #	DESCRIPTION	QT.
1	004-0355	BAG CUT SEAL BAR PRE-ASSEMBLY	1
2	002-0512	SEAL BAR SUPPORT	1
3	051-0256	BOLT 1/4"-20nc. X 1 3/4" CAP SKT S/S	3
4	001-1960	EXTERIOR BELLOWS COVER	1
5	001-1856	EXTERIOR BELLOWS COVER	1
6	001-1858	SEAL BAR GUIDE	2
7	051-0740	WASHER 1/4" FLAT S/S	10
8	051-0250	BOLT 1/4"-20nc. X 1 1/2" S/S	4
9	051-0581	NUT 1/4"-20 NYLON LOCK S/S	6
10	051-0230	HEX BOLT 1/4-20 x 1 1/4" SS	2



-ÉLÉMENT COUPANT CE CÔTÉ-CI.
-CUTTING ELEMENT THIS SIDE.

-CE CÔTÉ DU SUPPORT ÉGAL AVEC DE LA BARRE DE SCELLAGE.
-THIS SIDE OF SUPPORT TO FIT FLUSH W/ SEAL BAR.

-ITEM #2 ÉGAL AVEC L'ITEM #4 & #5.
-ITEM #2 FLUSH WITH ITEM #4 & #5.



-END VIEW-

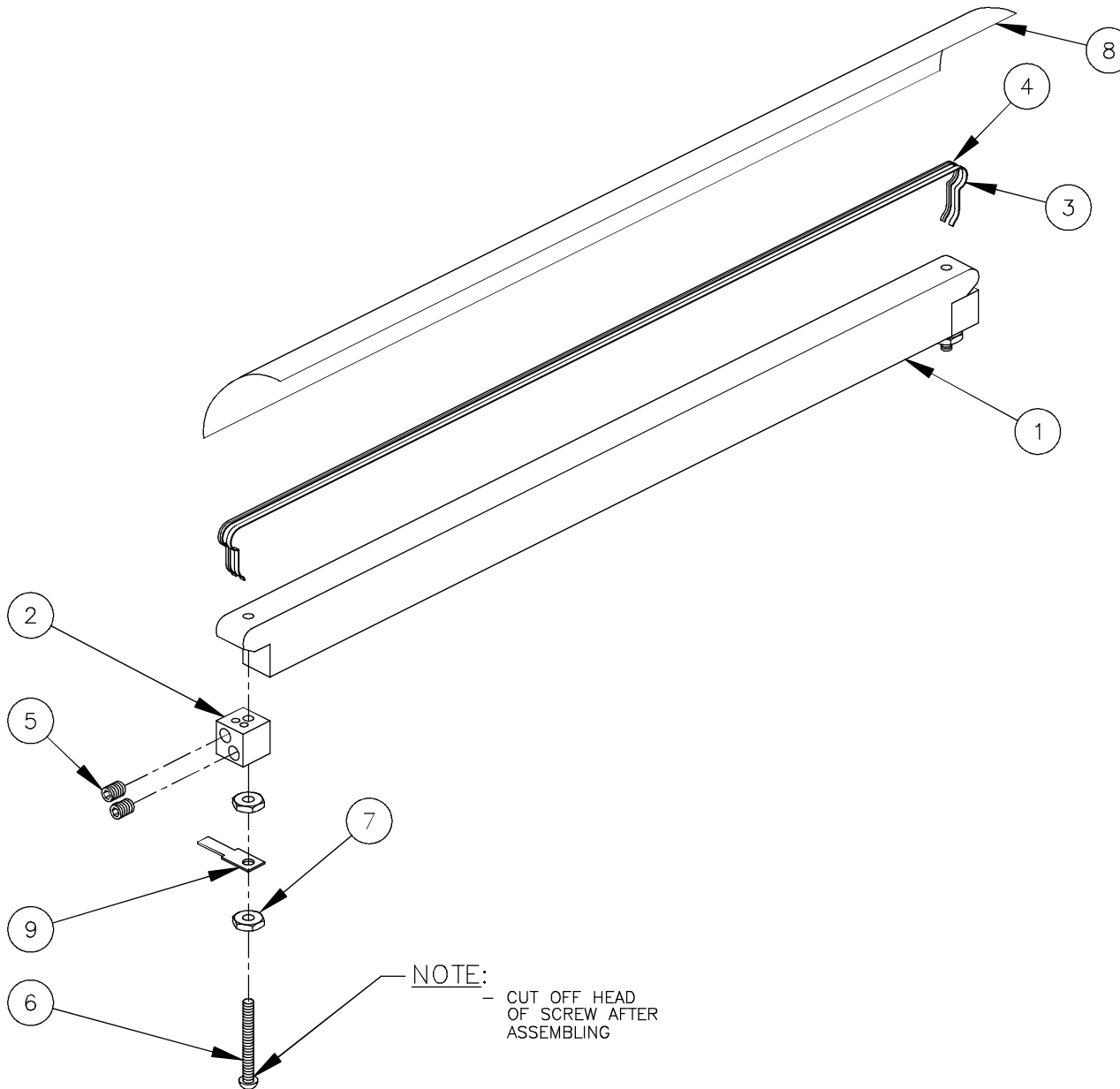
-BAG CUT OPTION-

MACHINE 400, 450T & 450A		DEPT TOL METRIC INCH	SIPROMAC ST-GERMAIN DE GRANTHAM QUEBEC CANADA
PART SEAL BAR ASSEMBLY W/SUPPORT		USINAGE ± 0.1 ± 0.004" TOLERIE ± 0.5 ± 0.020" SOUDAGE ± 0.5 ± 0.020"	
ITEM	CNC	N.T.S.	
MAT.		DEPT.	M-I-(M) QTY. 2
DWG BY CF DATE 12-04-03		NO. 005A0565	
APP. BY CF DATE			

D	REDRAWN/ REMOVED WIRE DUCT	12-04-03	CF
LET.	MODIFICATION	DATE	INT.

1004-0355

ITEM	#PART	DESCRIPTION	QT.
1	002-0481	SEAL BAR	1
2	002-0031	CONNECTOR	2
3	039-0230	REFLEX BAND 2.5MM (626mm EA.)	0.063
4	039-0270	"T" PROFILE CUT. ELEM. (626mm EA.)	0.063
5	052-0395	SCREW 1/4"-20 NC. X 5/16" SET HEX SKT OVAL PT	4
6	052-0250	SCREW #8-32 X 1 1/2" RND SLOT BRASS	2
7	051-0550	NUT #8-32 S/S	4
8	176-0200	TEFLON TAPE 5S ADHESIVE X 2" X (496mm EA.)	0.063
9	027-0400	CONNECTOR ADAPTOR 1/4" X #10 STUD	2



NOTE: - CUT OFF HEAD OF SCREW AFTER ASSEMBLING

420A	4
450T	2
450A	2
400	2
350D	2
350	1
300D	2
300	1
MACHINE	QTÉ.

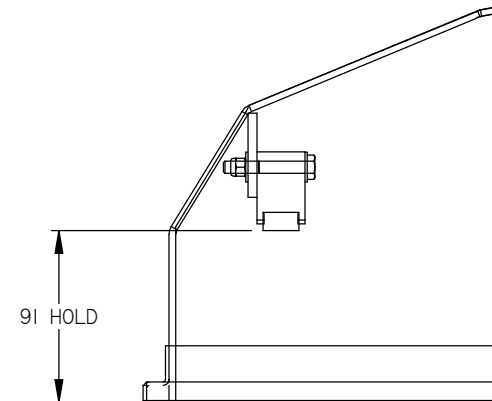
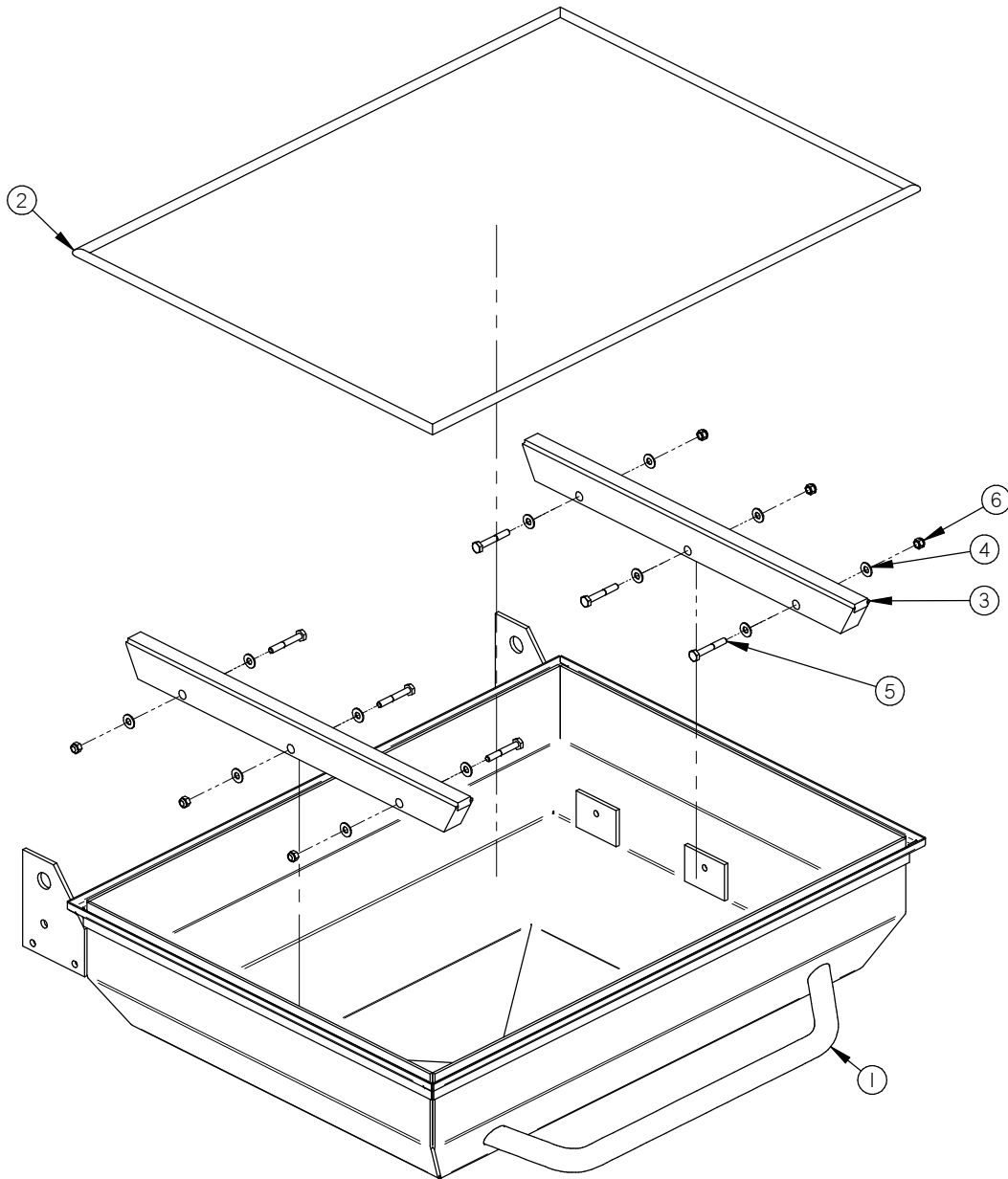
-BAG CUT OPTION-

G	ADDED 420A WAS 005-0267	14-08-21	SBU
F	ADDED 300, 300D, 350 & 350D WAS 005-0267	12-09-24	J.G.
E	ADDED 450T WAS 005-0383	08-05-26	D.A.
D	MODIFICATION #A-0398 (CONNECTEUR)	04-04-19	J.G.
C	ADDED 400	99-05-06	S.L.
B	REDRAWN	98-02-10	A.P.
LET.	MODIFICATION	DATE	INT.

MACHINE		VOIR LISTE		TOLERANCE		INCH		SIPROMAC	
PART		SEAL BAR PRE-ASSEMBLY		USINAGE	± 0.1	± 0.004"		ST-GERMAIN DE GRANTHAM, QUEBEC CANADA	
ITEM:		CNC:		TOLERIE	± 0.5	± 0.020"			
MAT:		DWG BY APP.		SOUDEAGE	± 0.5	± 0.020"		N.T.S.	
		DATE		DATE		DATE		M-I QT. LISTE	
		98-02-10		98-02-10		98-02-10		NO. 004-0355	

005-0540

ITEM	PART #	DESCRIPTION	QT.
1	004-0354	COVER PRE-ASSY	1
2	179-0020	NEOPRENE SPONGE 1/2" x 16'	1
3	004A0351	UPPER SEAL BAR PRE-ASSY	2
4	051-0740	WASHER 1/4" FLAT S/S	12
5	051-0255	BOLT 1/4-20 x 1-3/4" HEX SS	6
6	051-0581	NUT 1/4"-20 NYLON LOCK S/S	6

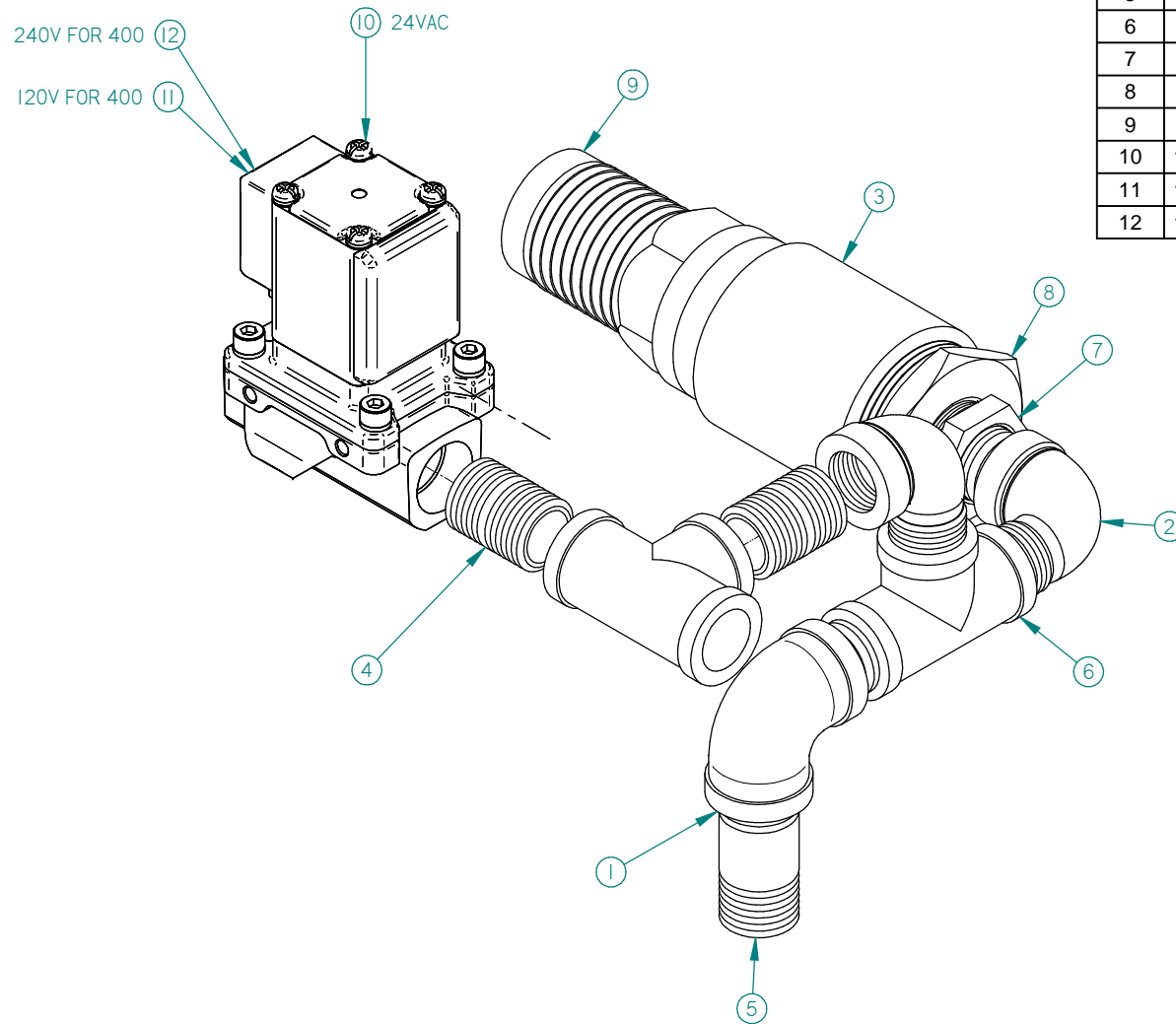


C	REDESSINE SE	13-08-06	SBU
B	MODIFIED VIEW ITEM #3 (UPPER SEAL BAR)	00-01-24	S.L.
A	ADDED 400	99-05-07	S.L.
LET.	MODIFICATION	DATE	INT.

MACHINE	400, 450A		DEPT. TOL	METRIC	INCH	SIPROMAC ST-GERMAIN DE GRANTHAM QUEBEC CANADA
PART	COVER ASSEMBLY		USINAGE	± 0.1	± 0.004"	
ITEM	CNC		TOLERIE	± 0.5	± 0.020"	
MAT.	DWG BY	SBU	DATE	13-08-06	NO.	005-0540
	APP. BY		DATE		DEPT.	
					QTY.	1

005A1506

ITEM	PART #	DESCRIPTION	QT.
1	100-0025	ELBOW 90° X 1/2" NPT S/S	1
2	100-0075	STREET ELBOW 1/2" NPT SS	2
3	100-0144	COUPLING 1-1/2" NPT S/S	1
4	100-0230	CLOSE NIPPLE 1/2" npt, S/S	4
5	100-0325	NIPPLE 1/2"npt. X 2" S/S	1
6	100-0465	TEE 1/2"npt. S/S	2
7	100-0520	RED.BUSH.3/4"NPT x 1/2"NPT S/S	1
8	100-0553	REDUCING BUSH. 1-1/2" NPT X 3/4" NPT SS	1
9	100-1230	STRAIGHT 1-1/2"MNPT x1-1/2" HOSE BARB	1
10	106-00201	VALVE 2WAY 24V 1/2" NPT	1
11	106-00621	VALVE 2WAY 120V 1/2" NPT	1
12	106-00631	VALVE 2WAY 240V 1/2" NPT	1

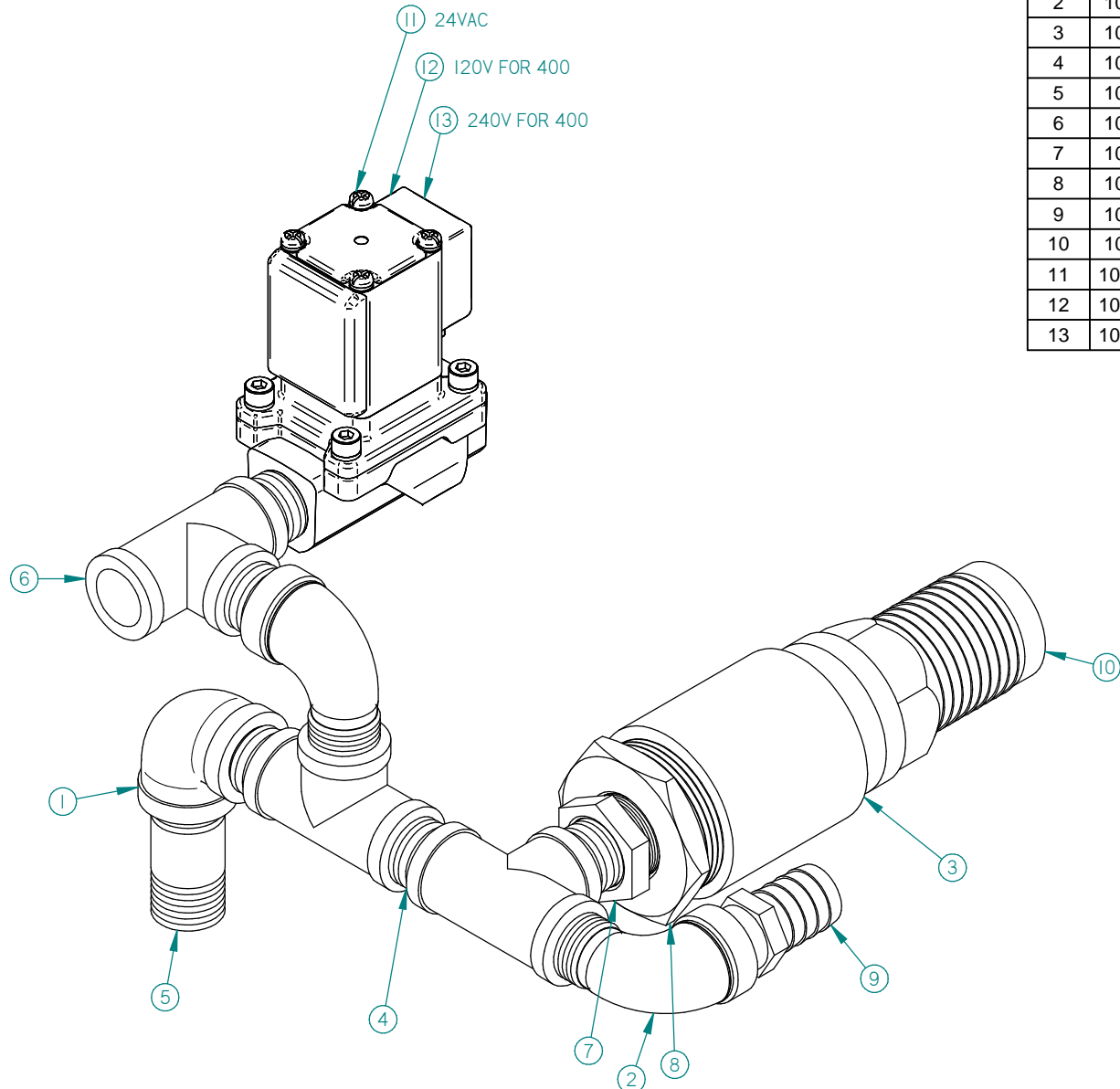


KB-0020 OPTION

MACHINE		DEPT. TOL.	METRIC	INCH	SIPROMAC ST-GERMAIN DE GRANTHAM QUEBEC CANADA
PART		USINAGE	± 0.1	± 0.004"	
VACUUM/ATM VALVE ASSY (KB-0020)		TOLERIE	± 0.5	± 0.020"	
ITEM		CNC	N.T.S.		DEPT. M
MAT.		3D DWG BY SBU	DATE 14-06-12	NO. 005A1506	QTY. 1
LET.		MODIFICATION	DATE	INT.	
		2D DWG BY AG	DATE 14-06-16		

LET.	MODIFICATION	DATE	INT.
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005A1505



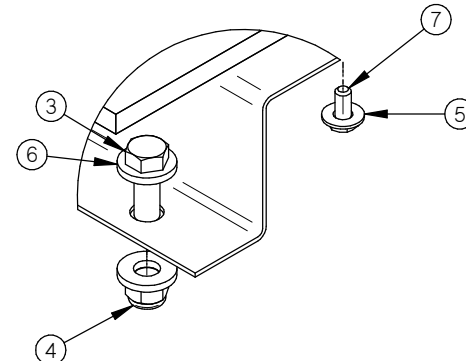
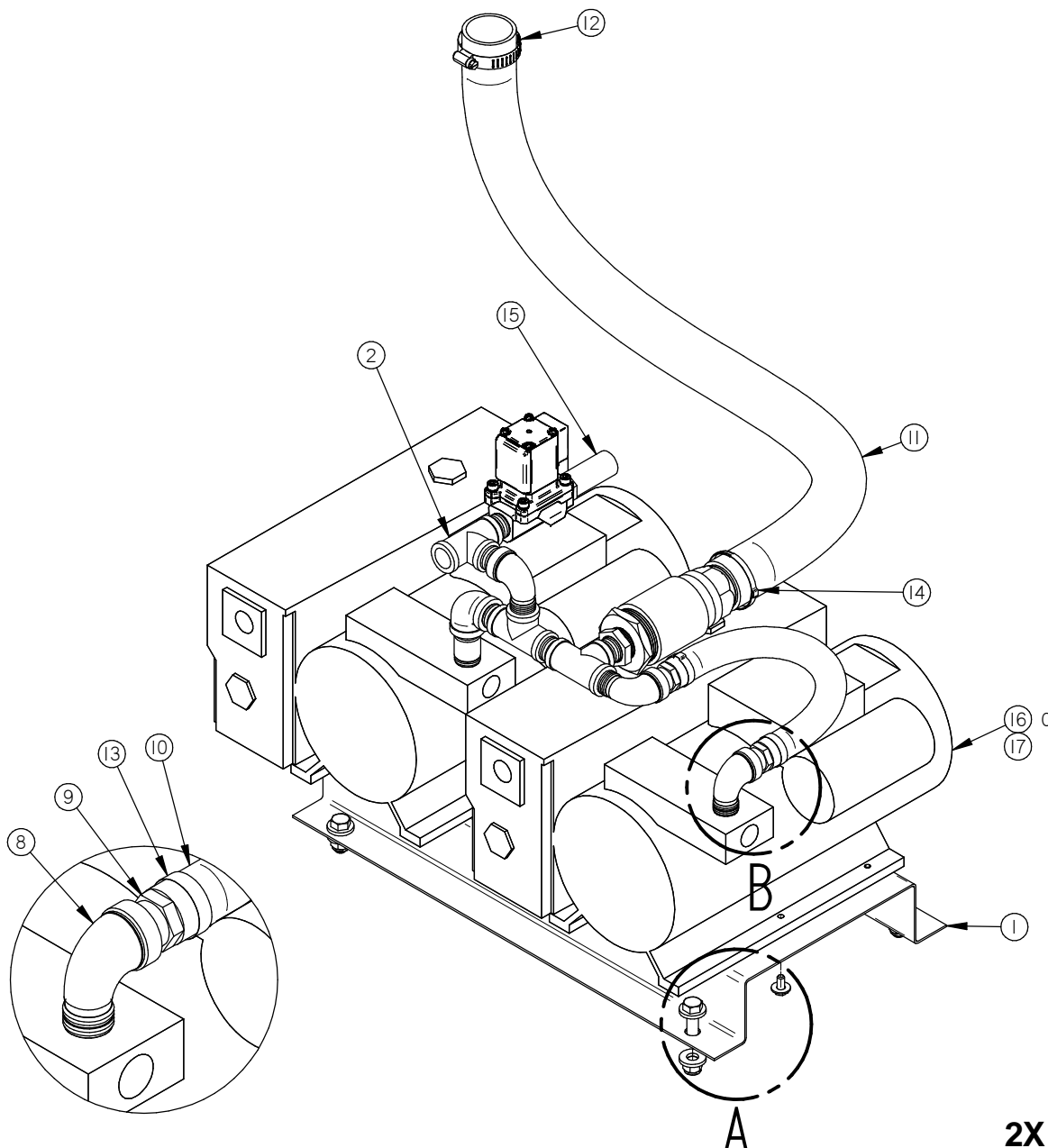
ITEM	PART #	DESCRIPTION	QT.
1	100-0025	ELBOW 90° X 1/2" NPT S/S	1
2	100-0075	STREET ELBOW 1/2" NPT SS	2
3	100-0144	COUPLING 1-1/2" NPT S/S	1
4	100-0230	CLOSE NIPPLE 1/2" npt, S/S	5
5	100-0325	NIPPLE 1/2"npt. X 2" S/S	1
6	100-0465	TEE 1/2"npt. S/S	3
7	100-0520	RED.BUSH.3/4"NPT x 1/2"NPT S/S	1
8	100-0553	REDUCING BUSH. 1-1/2" NPT X 3/4" NPT SS	1
9	100-1205	STRAIGHT 1/2"MNPTx3/4" HOSE BARB S/S	1
10	100-1230	STRAIGHT 1-1/2"MNPT x1-1/2" HOSE BARB	1
11	106-00201	VALVE 2WAY 24V 1/2" NPT	1
12	106-00621	VALVE 2WAY 120V 1/2" NPT	1
13	106-00631	VALVE 2WAY 240V 1/2" NPT	1

2X KB-0020 OPTION

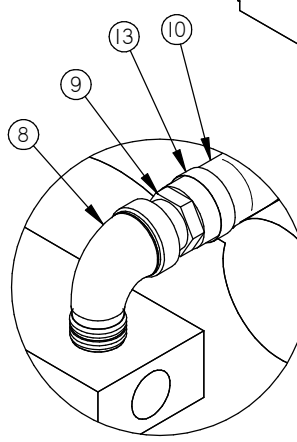
MACHINE		DEPT. TOL.	METRIC	INCH	SIPROMAC ST-GERMAIN DE GRANTHAM QUEBEC CANADA
PART		USINAGE	± 0.1	± 0.004"	
VACUUM/ATM VALVE ASSY (KB-0020)		TOLERIE	± 0.5	± 0.020"	
ITEM		CNC	N.T.S.		DEPT. M
MAT.		3D DWG BY SBU	DATE 14-06-12	NO. 005A1505	QTY. 1
LET.		MODIFICATION	DATE	INT.	

005A1501

ITEM	PART #	DESCRIPTION	QT.
1	001C2921	DOUBLE KB-20 SUPPORT	1
2	005A1505	VACUUM/ATM VALVE ASSY (KB-0020)	1
3	051-0360	BOLT 3/8"-16nc. X 1" S/S	4
4	051-0622	NUT 3/8"-16nc. NYLON LOCK S/S	4
5	051-0740	WASHER 1/4" FLAT S/S	8
6	051-0783	WASHER 3/8" FLAT THICK S/S	8
7	051-0948	BOLT M6 x 12 SS	8
8	100-0075	STREET ELBOW 1/2" NPT SS	1
9	100-1205	STRAIGHT 1/2" MNPTx3/4" HOSE BARB S/S	1
10	104-0110	HOSE 3/4" ID VACUUM TIGERFLEX (400mm)	1
11	104-0130	HOSE 1-1/2" ID VACUUM TIGERFLEX 737MM	1
12	105-0110	SCREW CLAMPS 1-1/16" TO 2" ALL S/S	1
13	105-0238	EAR CLAMP 23.9-27.1 SS	2
14	105-0250	EAR CLAMP 1-1/2" S/S	1
15	114-2050	EXHAUST MUFLER 1/2 NPT S/S	1
16	125-1020	BUSCH KB-0020 115V/1PH/60HZ	2
17	125-1021	BUSCH KB-0020 220-240V/1PH/50-60HZ	2



DETAIL A



DETAIL B

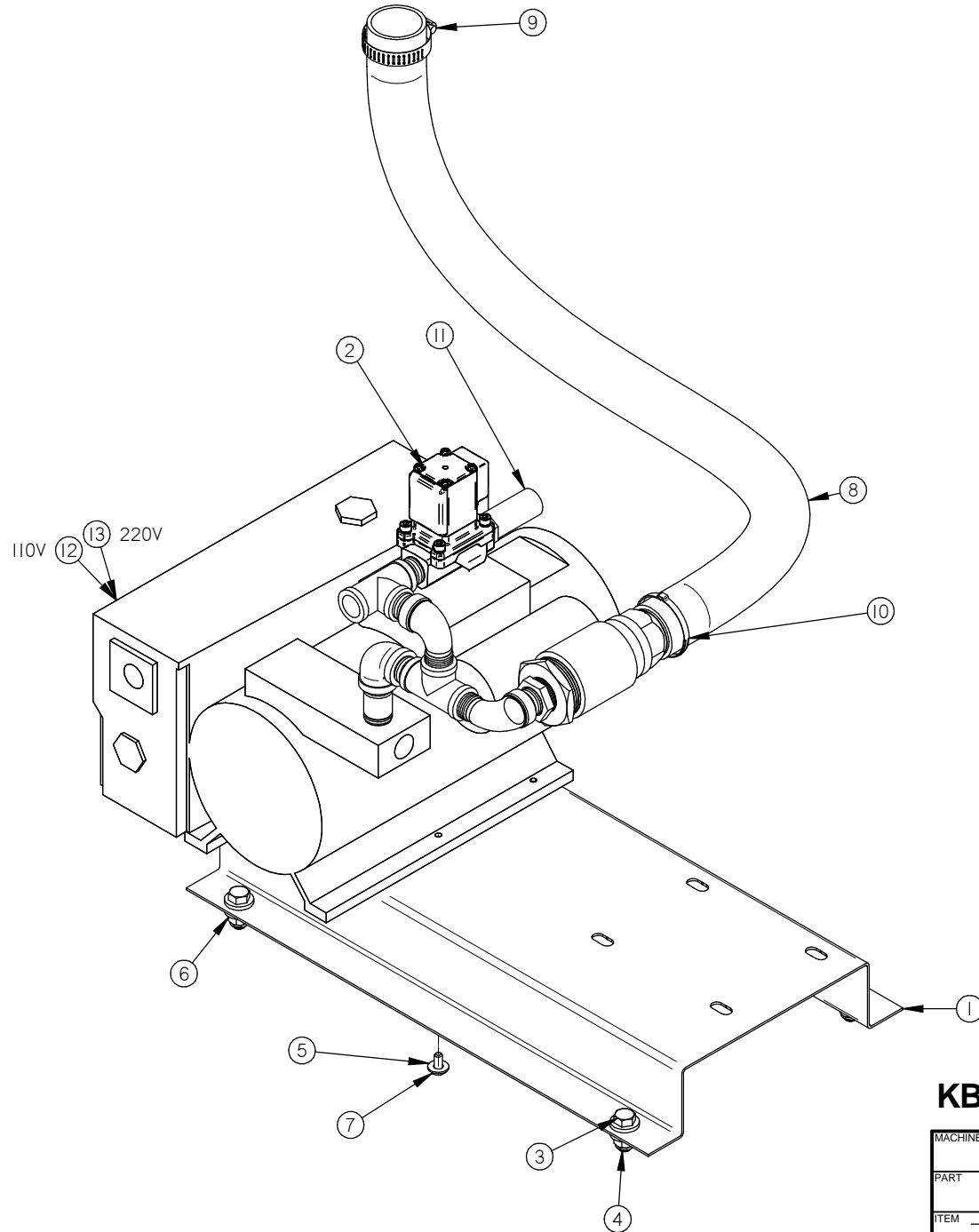
2X KB-0020 OPTION

MACHINE		450A		DEPT. TOL.	METRIC	INCH	SIPROMAC ST-GERMAIN DE GRANTHAM QUEBEC CANADA
PART		2X KB-0020 PUMP ASSEMBLY		USINAGE	± 0.1	± 0.004"	
ITEM		CNC		TOLERIE	± 0.5	± 0.020"	
MAT.		3D DWG BY SBU		DATE	14-06-12	NO.	005A1501
LET.		MODIFICATION		DATE	14-06-17	DEPT.	
INT.						QTY.	1

LET.	MODIFICATION	DATE	INT.
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005A1500

ITEM	PART #	DESCRIPTION	QT.
1	001C2921	DOUBLE KB-20 SUPPORT	1
2	005A1506	VACUUM/ATM VALVE ASSY (KB-0020)	1
3	051-0360	BOLT 3/8"-16nc. X 1" S/S	4
4	051-0622	NUT 3/8"-16nc. NYLON LOCK S/S	4
5	051-0740	WASHER 1/4" FLAT S/S	4
6	051-0783	WASHER 3/8" FLAT THICK S/S	8
7	051-0948	BOLT M6 x 12 SS	4
8	104-0130	HOSE 1-1/2" ID VACUUM TIGERFLEX 737MM	1
9	105-0110	SCREW CLAMPS 1-1/16" TO 2" ALL S/S	1
10	105-0250	EAR CLAMP 1-1/2" S/S	1
11	114-2050	EXHAUST MUFFLER 1/2 NPT S/S	1
12	125-1020	BUSCH KB-0020 115V/1PH/60HZ	1
13	125-1021	BUSCH KB-0020 220-240V/1PH/50-60HZ	1



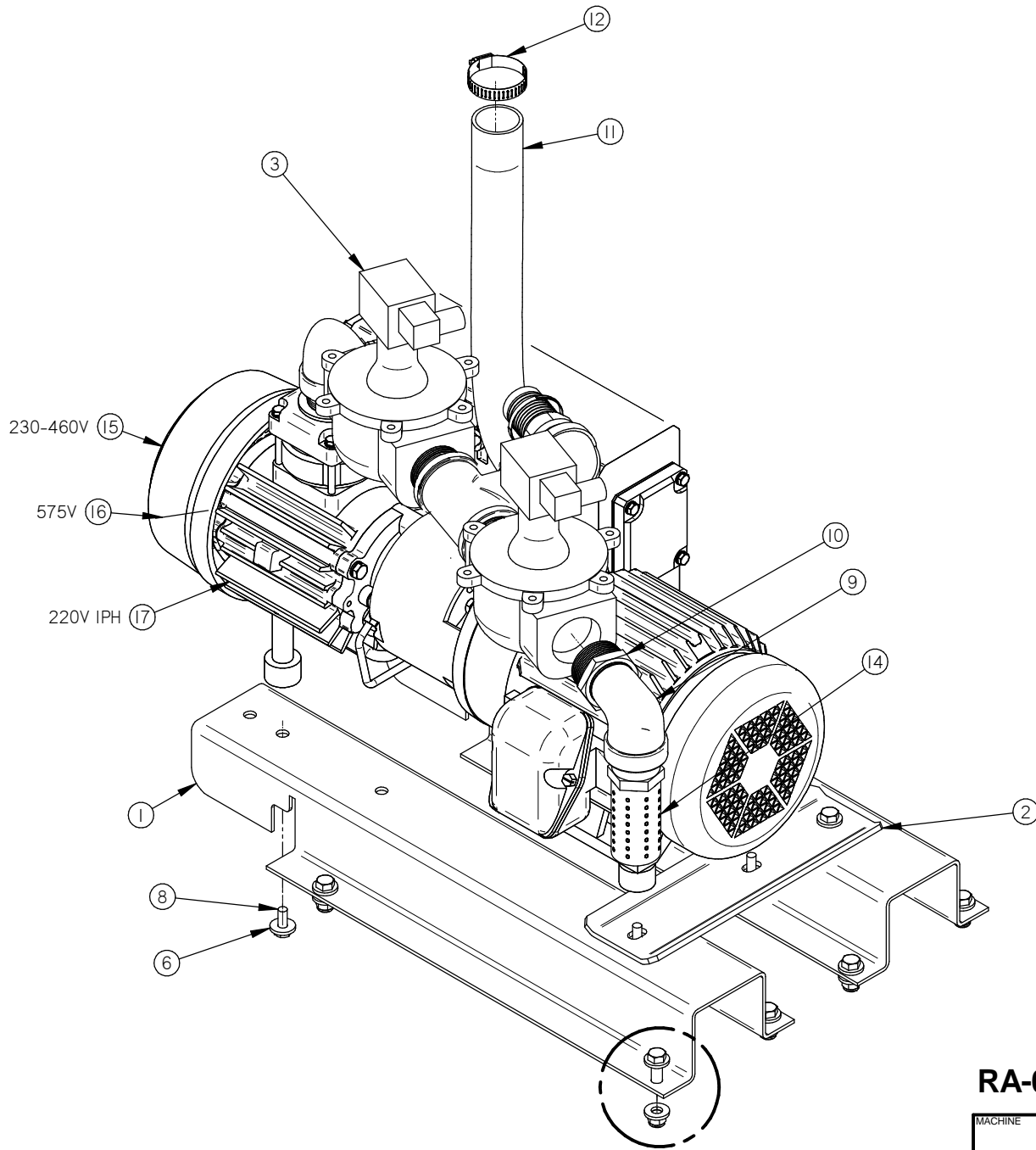
KB-0020 OPTION

MACHINE		400-450A		DEPT. TOL.	METRIC	INCH	SIPROMAC ST-GERMAIN DE GRANTHAM QUEBEC CANADA
PART		KB-0020 PUMP ASSEMBLY		USINAGE	± 0.1	± 0.004"	
ITEM		CNC		TOLERIE	± 0.5	± 0.020"	
MAT.		3D DWG BY SBU DATE 14-06-12		SOUDEGE	± 0.5	± 0.020"	N.T.S.
LET.		MODIFICATION		DATE		INT.	DEPT. M
							QTY. 1
		2D DWG BY AG DATE 14-06-16					NO. 005A1500

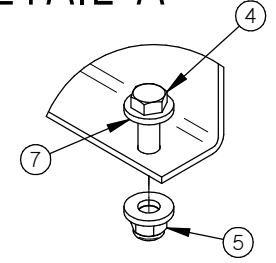
LET.	MODIFICATION	DATE	INT.
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005A1499

ITEM	PART #	DESCRIPTION	QT.
1	001A6817	PUMP SUPPORT (RA0063 & RA0040)	2
2	001A6818	PUMPS SUPPORT 40m ³	1
3	004B1404	VACUUM / ATMOSPHERE VALVE ASSY.	1
4	051-0360	BOLT 3/8"-16nc. X 1" S/S	9
5	051-0622	NUT 3/8"-16nc. NYLON LOCK S/S	9
6	051-0762	WASHER 5/16" THICK FLAT S/S	4
7	051-0783	WASHER 3/8" FLAT THICK S/S	18
8	051-0980	BOLT M8 x 20 S/S	4
9	100-0090	STREET ELBOW 90° X 1-1/4" NPT SS	1
10	100-0555	RED.BUSH.1-1/2" x 1-1/4" NPT S/S	1
11	104-0130	HOSE 1-1/2" ID VACUUM TIGERFLEX 788MM	1
12	105-0110	SCREW CLAMPS 1-1/16" TO 2" ALL S/S	1
13	105-0250	EAR CLAMP 1-1/2" S/S	1
14	114-2030	VACUUM MUFFLER 1-1/4"NPT	1
15	125-0030	BUSCH RA-0040 230-460V/3PH/60HZ	1
16	125-0032	BUSCH RA-0040 575V/3PH/60Hz	1
17	125-0034	BUSCH RA0040 220V/1PH/60Hz	1



DETAIL A

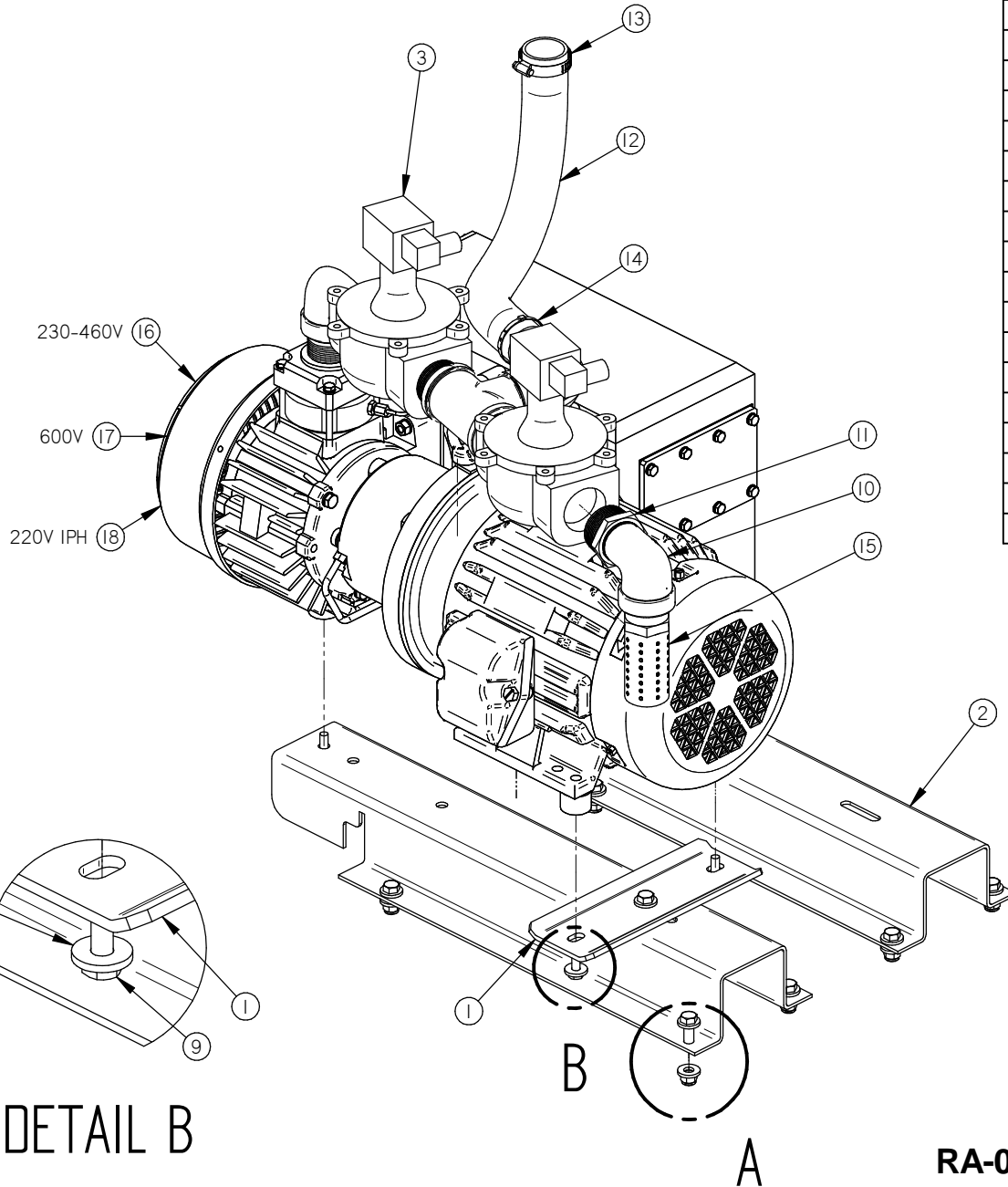


RA-0040 OPTION

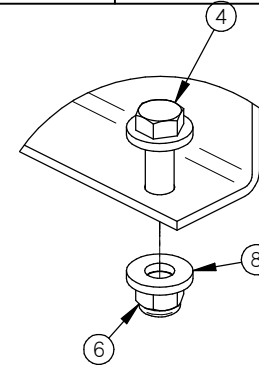
MACHINE	450A		DEPT. TOL.	METRIC	INCH	SIPROMAC ST-GERMAIN DE GRANTHAM QUEBEC CANADA
PART	RA-0040 PUMP ASSEMBLY		USINAGE	± 0.1	± 0.004"	
			TOLERIE	± 0.5	± 0.020"	
			SOUDEAGE	± 0.5	± 0.020"	
ITEM	CNC	DEPT.	N.T.S.		M	QTY. 1
MAT.	3D DWG BY	SBU	DATE	14-06-12	NO.	005A1499
	2D DWG BY	AG	DATE	14-06-16		

LET.	MODIFICATION	DATE	INT.
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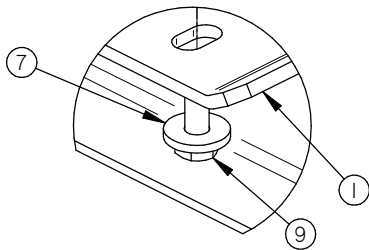
005A1498



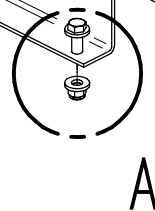
ITEM	PART #	DESCRIPTION	QT.
1	001-1318	PUMPS SUPPORT 63m ³ & 100m ³	1
2	001A6817	PUMP SUPPORT (RA0063 & RA0040)	2
3	004B1404	VACUUM / ATMOSPHERE VALVE ASSY.	1
4	051-0360	BOLT 3/8"-16nc. X 1" S/S	8
5	051-0372	BOLT 3/8"-16 x 1-1/4" S/S	1
6	051-0622	NUT 3/8"-16nc. NYLON LOCK S/S	9
7	051-0762	WASHER 5/16" THICK FLAT S/S	4
8	051-0783	WASHER 3/8" FLAT THICK S/S	18
9	051-0980	BOLT M8 x 20 S/S	4
10	100-0090	STREET ELBOW 90° X 1-1/4" NPT SS	1
11	100-0555	RED.BUSH.1-1/2" x 1-1/4" NPT S/S	1
12	104-0130	HOSE 1-1/2" ID VACUUM TIGERFLEX 637 MM	1
13	105-0110	SCREW CLAMPS 1-1/16" TO 2" ALL S/S	1
14	105-0250	EAR CLAMP 1-1/2" S/S	1
15	114-2030	VACUUM MUFFLER 1-1/4"NPT	1
16	125-0040	BUSCH RA0063 230-460V/3PH/60HZ	1
17	125-0042	BUSCH RA0063 575V/3PH/60HZ	1
18	125-0044	BUSCH RA0063 220V/1PH/60HZ	1



DETAIL A



DETAIL B



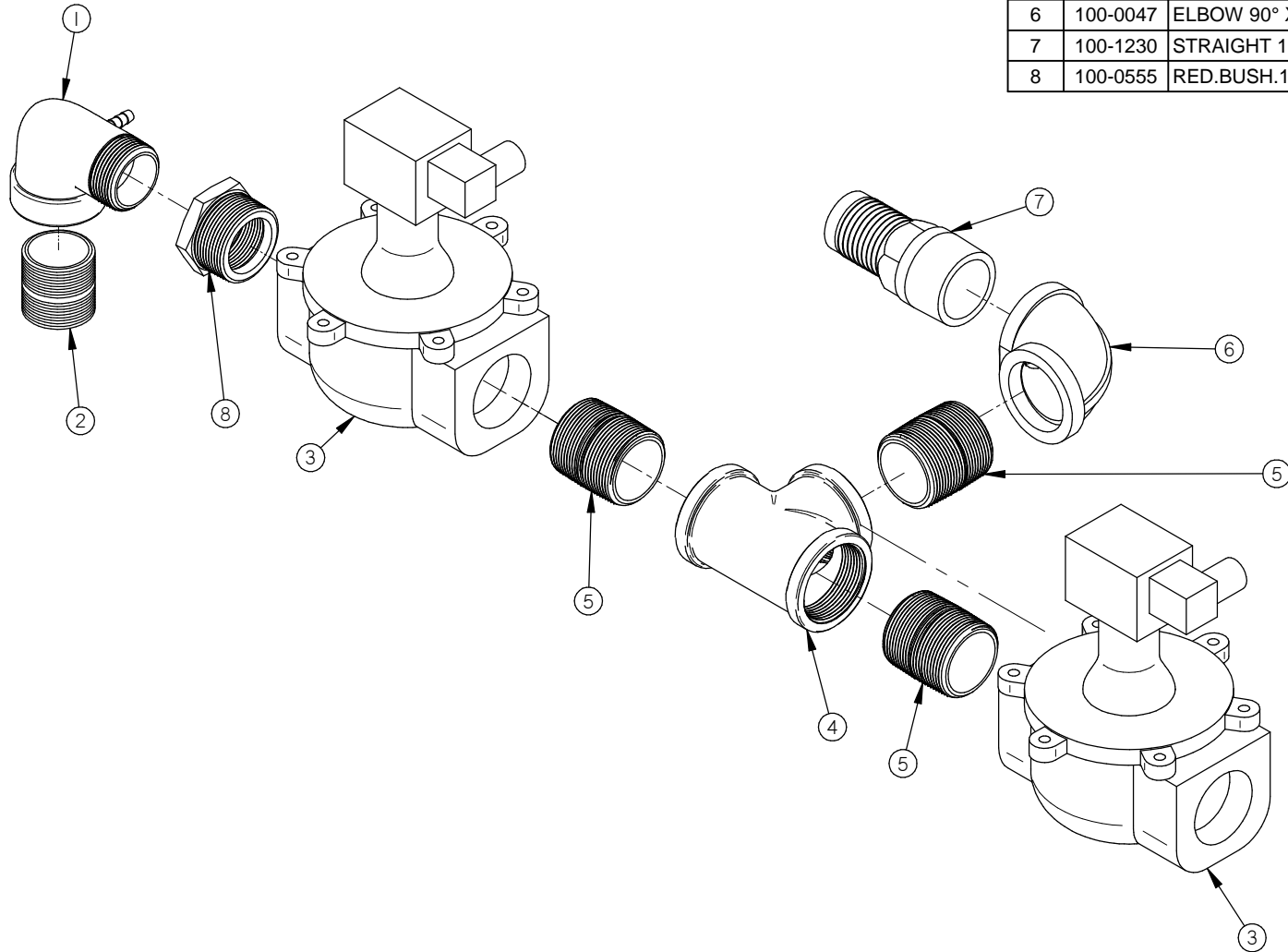
A

RA-0063 OPTION

MACHINE		450A		DEPT. TOL.	METRIC	INCH	SIPROMAC ST-GERMAIN DE GRANTHAM QUEBEC CANADA
PART		RA-0063 PUMP ASSEMBLY		USINAGE	± 0.1	± 0.004"	
ITEM		CNC		TOLERIE	± 0.5	± 0.020"	
MAT.		3D DWG BY SBU		DATE	14-06-11		NO. 005A1498
MODIFICATION		DATE		DATE	14-06-16		
LET.	MODIFICATION	DATE	INT.	DEPT.	M	QTY.	1

004B1404

ITEM	PART #	DESCRIPTION	QT.
1	004A4081	BELLOWS ELBOW CONNECTOR ASSY	1
2	100-0245	CLOSE NIPPLE 1 1/4"npt. S/S	1
3	106-0051	VALVE 2WAY 24V 1-1/2"NPT60Hz	2
4	100-0485	TEE 1-1/2" NPT S/S	1
5	100-0440	NIPPLE 1-1/2" NPT X 2" SS	3
6	100-0047	ELBOW 90° X 1-1/2" NPT S/S	1
7	100-1230	STRAIGHT 1-1/2"MNPT x1-1/2" HOSE BARB	1
8	100-0555	RED.BUSH.1-1/2" x 1-1/4" NPT S/S	1



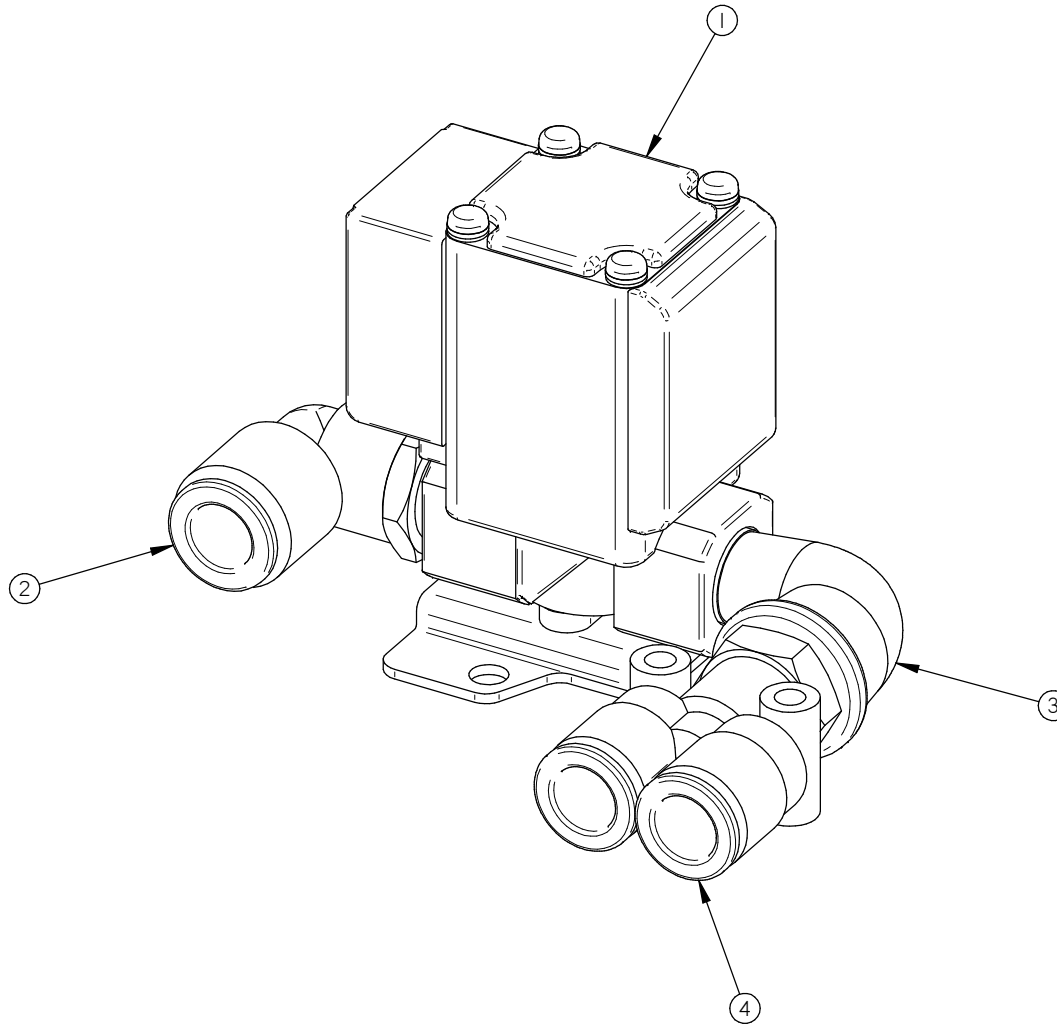
-OPTION - 40M³, 63M³ & 100M³ PUMP

MACHINE		DEPT. TOL. METRIC		INCH		SIPROMAC	
VACUUM		USINAGE	± 0.1	± 0.004"			
PART		TOLERIE	± 0.5	± 0.020"	ST-GERMAIN DE GRANTHAM		
VACUUM / ATMOSPHERE VALVE ASSY.		SOUDEAGE	± 0.5	± 0.020"	QUEBEC CANADA		
ITEM	CNC	DEPT.		M-I	QTY.	1	
MAT.	DWG BY SBU	DATE	13-09-19	NO.		004B1404	
	APP. BY	DATE					

LET.	MODIFICATION	DATE	INT.
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004B4113

ITEM	PART #	DESCRIPTION	QT.
1	106-0010	VALVE 2WAY N.C. 24VAC 1/4" NPT(SMC)	1
2	102-0330	ELBOW 1/4" NPT X 3/8" HOSE QUICK	1
3	100-0065	STREET ELBOW 1/4" NPT SS	1
4	102-0361	Y BRANCH 1/4" MNPT X 3/8" T. QUICK	1



-OPTION - GAS

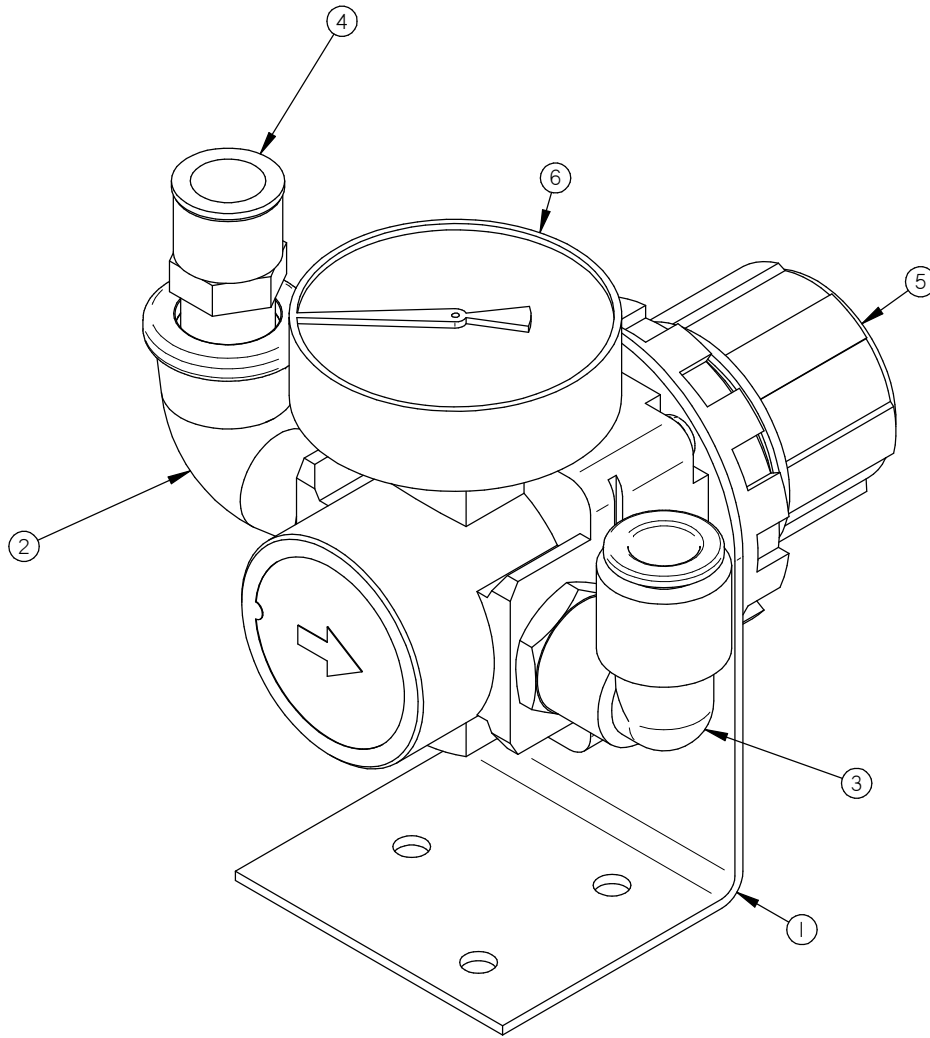
DOUBLE CHAMBER	2
SINGLE CHAMBER	1
MACHINE	QTY

MACHINE		VACUUM		DEPT. TOL.	METRIC	INCH.	SIPROMAC ST-GERMAIN DE GRANTHAM QUEBEC CANADA
PART		GAS VALVE ASSEMBLY (OPTION)		USINAGE	± 0.1	± 0.004"	
ITEM				TOLERIE	± 0.5	± 0.020"	
MAT.				SOUDEAGE	± 0.5	± 0.020"	N.T.S.
		CNC		DEPT.		M	QTY
		DWG BY	SBU	DATE	14-05-27	NO.	LISTE
		APP. BY		DATE		004B4113	

A	VALVE UPDATE	14-05-27	SBU
LET.	MODIFICATION	DATE	INT.

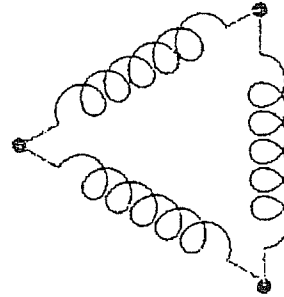
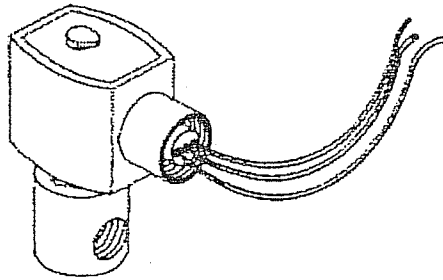
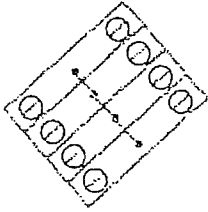
005A1508

ITEM	PART #	DESCRIPTION	QT.
1	001A6815	AIR REGULATOR SUPPORT	1
2	100-0065	STREET ELBOW 1/4" NPT SS	1
3	102-0330	ELBOW 1/4" NPT X 3/8" HOSE QUICK	1
4	102-0410	MALE CONN. 1/4" MNPT x 3/8" T. QUICK	1
5	114-0145	PRESSURE REGUL. 0-30 PSI 1/4" NPT	1
6	114-0235	PRESSURE GAUGE 0-30 PSI 1/8" NPT	1

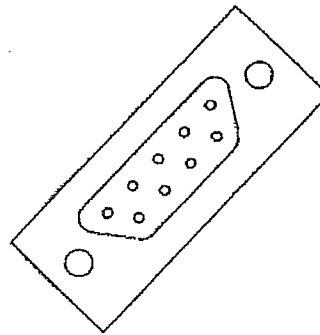
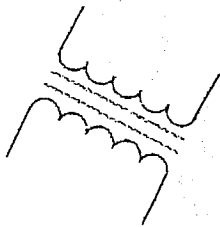


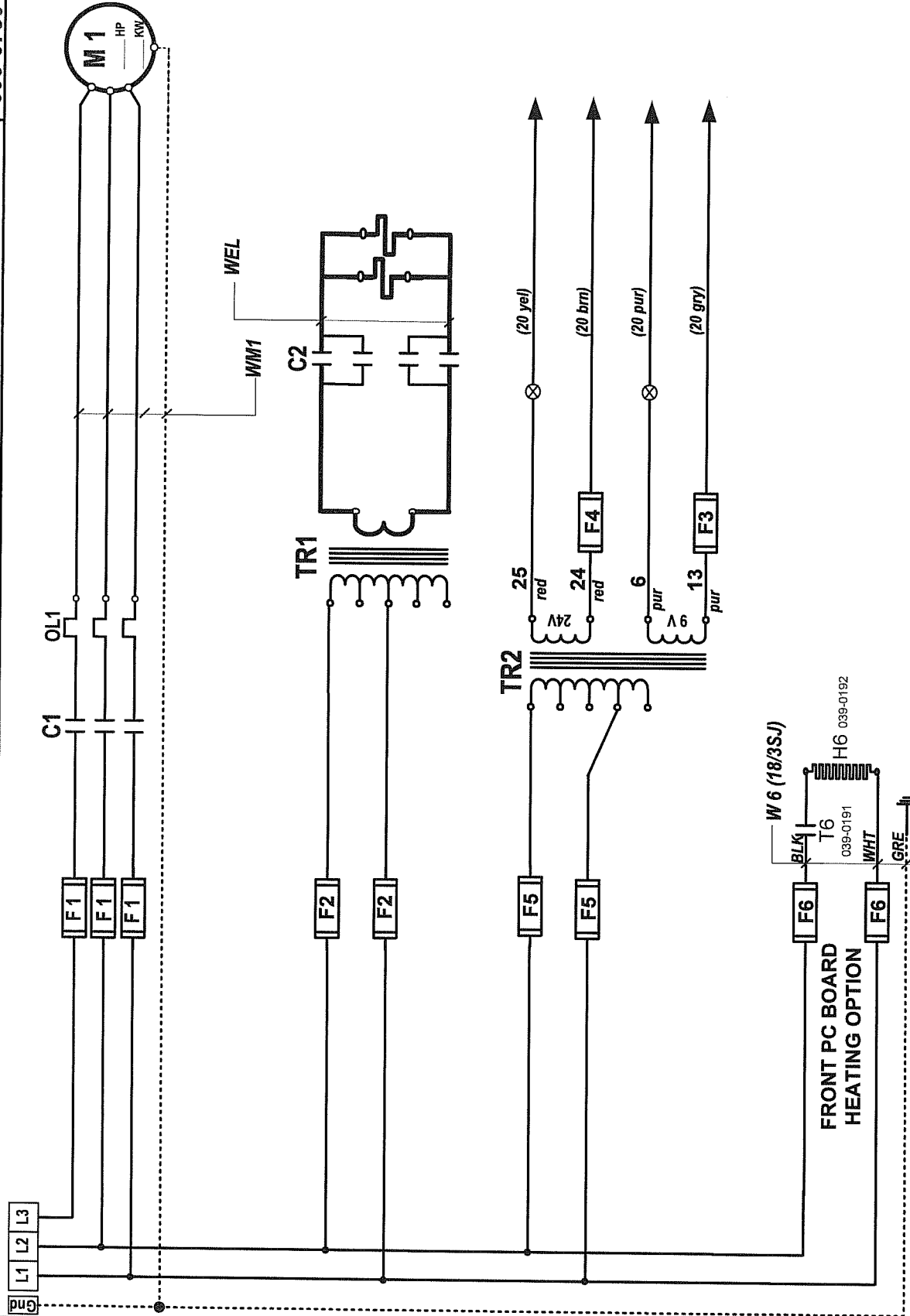
AIR REGULATOR OPTION

MACHINE		DEPT. TOL.	METRIC	INCH	SIPROMAC	
SINGLE CHAMBER VACUUM		USINAGE	± 0.1	± 0.004"	ST-GERMAIN DE GRANTHAM QUEBEC CANADA	
PART		TOLERIE	± 0.5	± 0.020"		
AIR REGULATOR ASSY		SOUDAGE	± 0.5	± 0.020"		
				N.T.S.		
ITEM	CNC	DEPT.	M		QTY.	1
MAT.	3D DWG BY SBU	DATE	14-06-16		NO.	005A1508
	2D DWG BY AG	DATE	14-06-16			



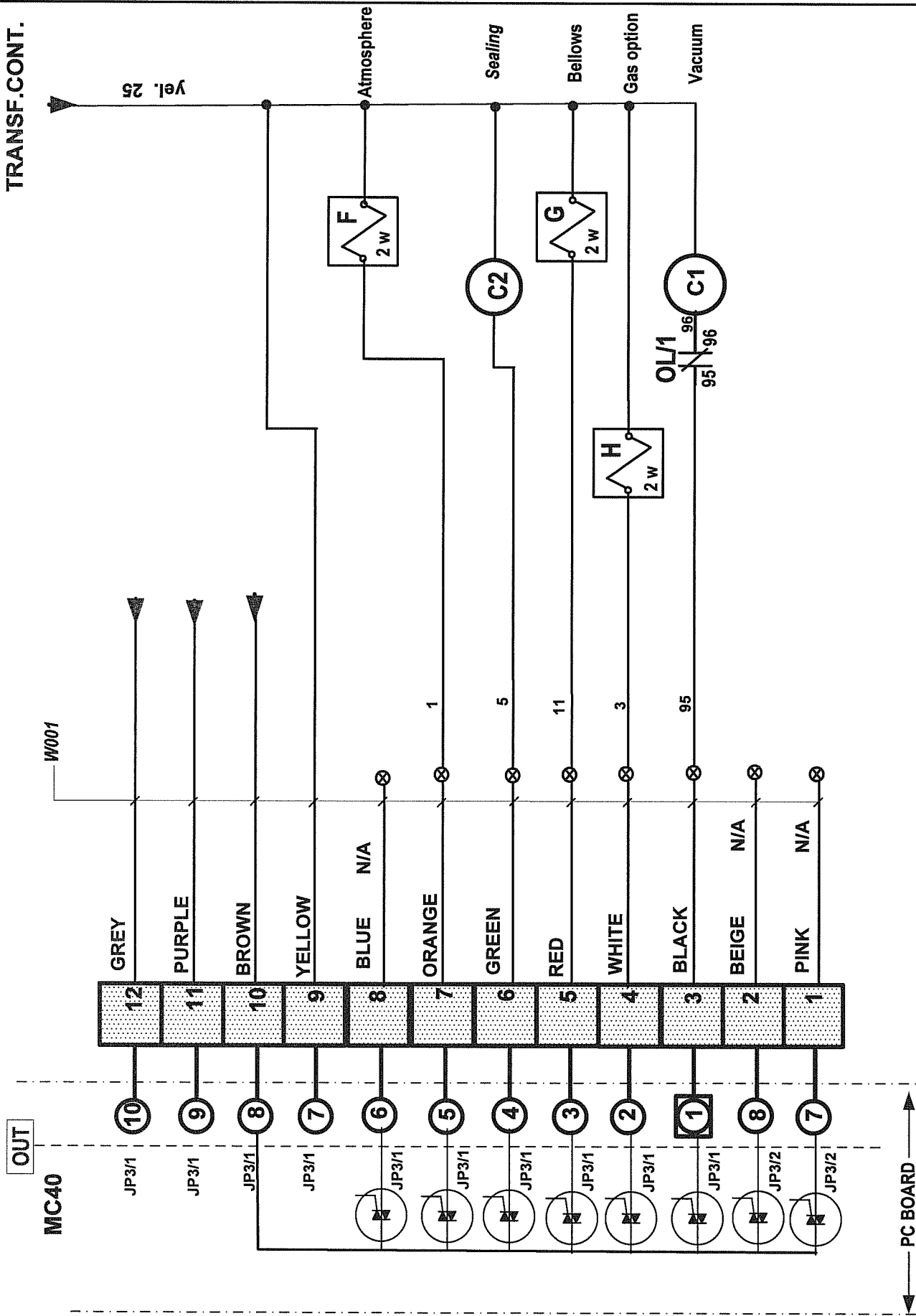
ELECTRICAL DRAWING





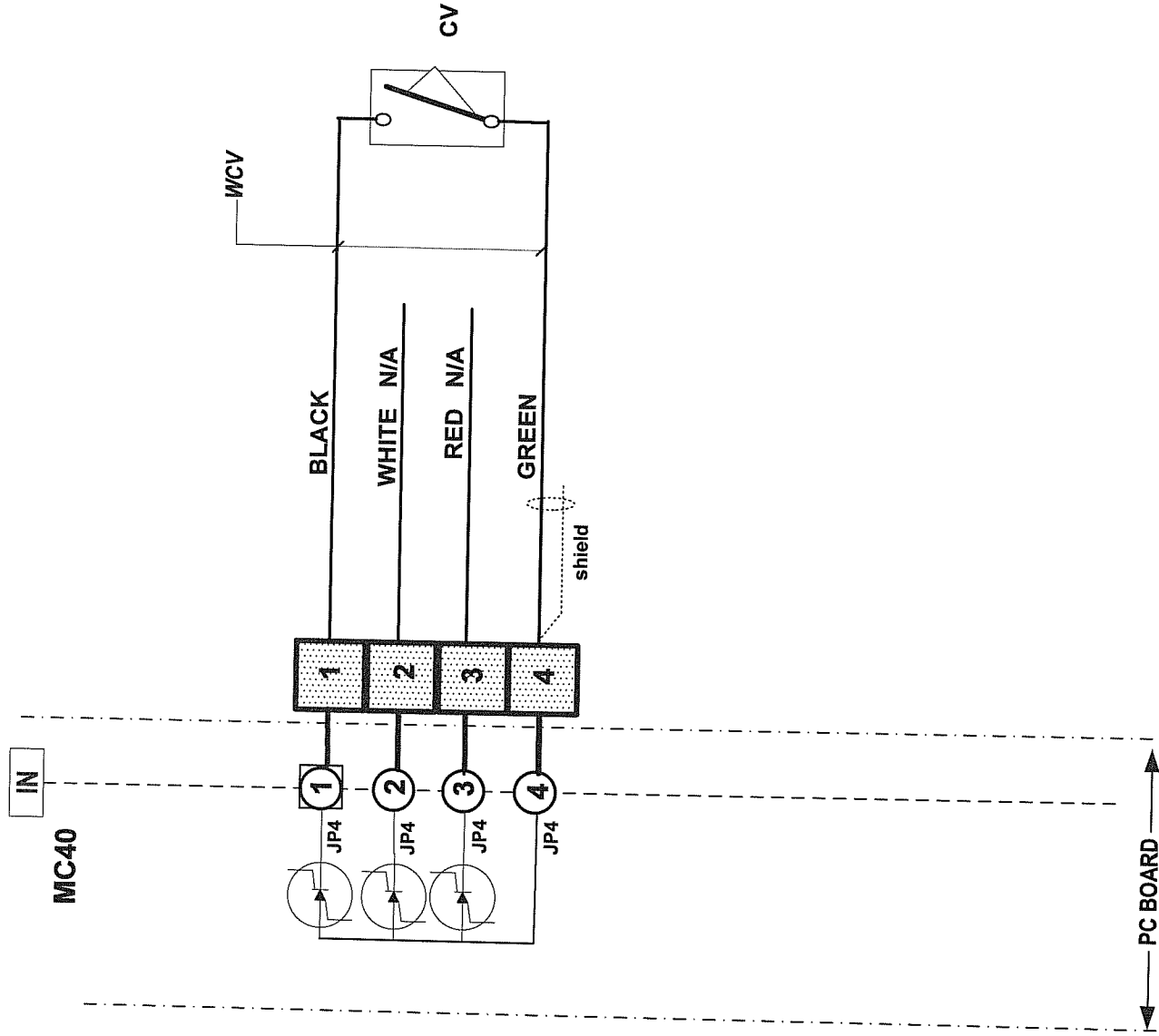
category	VACUUM PACK	model	450A	volt.	3Ph 60HZ
system	MC-40	usage	power	year	month
functions		options		day	08
				draw	07
				app	DL
				concept	XX
				draw	PP
				app	DL
				block	
				concept	XX
				draw	PP
				app	DL
				block	
				concept	XX
				draw	PP
				app	DL
				block	
				concept	XX
				draw	PP
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				concept	XX
				draw	

TRANSF.CONT.



category	VACUUM PACK	model	450A	volts	ALL
system	MC-40			year	10 07 08
usual functions				month	08
options				day	08
				block	
				concept	XX
				draw	PP
				app	DL
				DL	
				006-0737	PAGE 1 de 2

SIPROMAC
St-Germain de Grantham
QUEBEC, CANADA

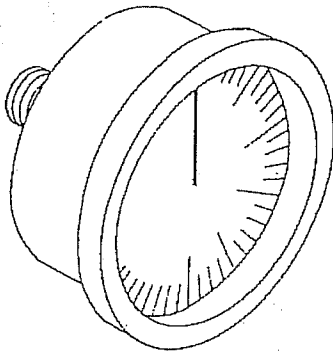


category	VACUUM PACK	model	450A	ALL			
system	MC-40			year	month	day	block
usual functions			concept	10	07	08	app
options			draw	XX	PP	DL	DL
			concept	XX	PP	DL	DL
			draw	XX	PP	DL	DL
			app	XX	PP	DL	DL
			concept	XX	PP	DL	DL
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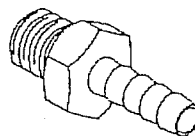
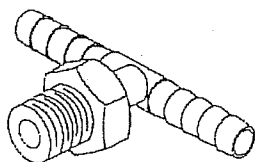
# SIPRO	PART DESCRIPTION	PART APPLICATION	MACHINE VOLTAGE	MACHINE	REF.	OPT.	QTY
028-0018	TERMINAL BLOCK M6/8 600V/50A,(8AWG)	SUPPLY	208V/3PH/60HZ	450A	L1-L2-L3		3
028-0020	GROUND TERMINAL BLOCK M6/8P	SUPPLY	208V/3PH/60HZ	450A	GND		1
028-0060	SEPARATOR M4/6	SUPPLY	208V/3PH/60HZ	450A	GND-L1-L2-L3		4
028-0105	GROUND BARRIER (6 HOLES)	SUPPLY	ALL	450A	GND		1
034-0700	FUSE HOLDER 30A/600V GOULD	VACUUM	208V/3PH/60HZ	450A	F1		3
034-0500	FUSE MIDGET 15A/250V TIME-DELAY	VACUUM RA-0040	208V/3PH/60HZ	450A	F1	A1	3
025-0030	MOTOR CONTACTOR 2HP IN 208V/3PH-CSA,UL	VACUUM RA-0040	208V/3PH/60HZ	450A	C1	A1	1
025-0160	THERMAL OVERLOAD 5.5 TO 8A-CSA,UL	VACUUM RA-0040	208V/3PH/60HZ	450A	O/L1	A1	1
030-0180	CAB TIRE	VACUUM RA-0040	208V/3PH/60HZ	450A	WM1	A1	2M.
125-0030	BUSCH RA-0040 230-460V/3PH/60HZ 2HP 6.2A	VACUUM RA-0040	208V/3PH/60HZ	450A	M1	A1	1
034-0530	FUSE MIDGET 20A/250V TIME-DELAY	VACUUM RA-0063	208V/3PH/60HZ	450A	F1	A2	3
025-0025	MOTOR CONTACTOR 3HP IN 208V/3PH-CSA,UL	VACUUM RA-0063	208V/3PH/60HZ	450A	C1	A2	1
025-0170	THERMAL OVERLOAD 7 TO 10A-CSA,UL	VACUUM RA-0063	208V/3PH/60HZ	450A	O/L1	A2	1
030-0180	CAB TIRE	VACUUM RA-0063	208V/3PH/60HZ	450A	WM1	A2	2M.
125-0040	BUSCH RA-0063 230-460V/3PH/60HZ 3HP 8.4A	VACUUM RA-0063	208V/3PH/60HZ	450A	M1	A2	1
034-0550	FUSE MIDGET 25A/250V TIME-DELAY	VACUUM RA-0100	208V/3PH/60HZ	450A	F1	A3	3
025-0030	MOTOR CONTACTOR 5HP IN 208V/3PH-CSA,UL	VACUUM RA-0100	208V/3PH/60HZ	450A	C1	A3	1
025-0190	THERMAL OVERLOAD 12 TO 18A-CSA,UL	VACUUM RA-0100	208V/3PH/60HZ	450A	O/L1	A3	1
030-0140	CAB TIRE	VACUUM RA-0100	208V/3PH/60HZ	450A	WM1	A3	2M.
125-0060	BUSCH RA-0100 230-460V/3PH/60HZ 5HP 13.6A	VACUUM RA-0100	208V/3PH/60HZ	450A	M1	A3	1
034-0700	FUSE HOLDER 30A/600V GOULD	SEALING	208V/3PH/60HZ	450A	F2		2
034-0450	FUSE MIDGET 7A/250V TIME-DELAY	SEALING	208V/3PH/60HZ	450A	F2		2
029-0040	TRANSFO 500VA/208-240/24V 60HZ	SEALING	208V/3PH/60HZ	450A	TR1		1
027-0220	TERMINAL ROUND STUD #10 600V 75°C	SEALING	ALL	450A	WEL		2
025-0020	CONTACTOR ITH=28A-CSA,UL	SEALING	ALL	450A	C2		1
030-0410	TEW #10/104 BLACK	SEALING	ALL	450A	WEL		7M.
027-0065	TERMINAL FLAG FEMALE YELLOW .250"	SEALING	ALL	450A	WEL		4
005-0564	SEAL BAR ASSEMBLY W/SUPPORT	SEALING TWIN SEAL	ALL	450A	WEL	B1	2
005-0565	SEAL BAR ASSEMBLY W/SUPPORT	SEALING BAG CUT	ALL	450A	WEL	B2	2
034-0740	FUSE HOLDER M4/8SF	CONTROL TRANSFO	208V/3PH/60HZ	450A	F5		2
034-0200	FUSE 5X20MM 3/4A 250V T-DELAY	CONTROL TRANSFO	208V/3PH/60HZ	450A	F5		2
029-0009	TRANSFO 65VA/208-230V/24-9V	CONTROL TRANSFO	208V/3PH/60HZ	450A	TR2		1
034-0740	FUSE HOLDER M4/8SF	CONTROL 9VAC+24VAC	ALL	450A	F3+F4		2
034-0210	FUSE 5X20MM 2A/250V TIME DELAY	CONTROL 9VAC	ALL	450A	F3		1
034-0240	FUSE 5X20MM 4A/250V TIME DELAY	CONTROL 24VAC	ALL	450A	F4		1
034-0740	FUSE HOLDER M4/8SF-CSA	HEATING PANEL(OPTION)	208V/3PH/60HZ	450A	F6	C	1
034-0200	FUSE 5x20MM 3/4A/250V TD-CSA	HEATING PANEL(OPTION)	208V/3PH/60HZ	450A	F6	C	1
030-0210	CAB TIRE 18/3 S.J-CSA	HEATING PANEL(OPTION)	208V/3PH/60HZ	450A	W6	C	2M.
039-0191	THERMOSTAT HAMMOND DIN RAIL	HEATING PANEL(OPTION)	208V/3PH/60HZ	450A	T6	C	1
039-0192	HEATER 15W	HEATING PANEL(OPTION)	208V/3PH/60HZ	450A	H6	C	1
030-0590	20AWG/12COND.PVC,UNSHIELD.300V	OUTPUT CONTROL	ALL	450A	W001		2.5M.

#	PART DESCRIPTION	PART APPLICATION	MACHINE VOLTAGE	MACHINE	REF.	OPT.	QTY
036-0740	12 CONTACTS CONNECTOR	OUTPUT CONTROL	ALL	450A	JP3/1-2		1
030-0631	22AWG/4COND.PVC,SHIELDED,300V.	INPUT CONTROL	ALL	450A	WCV		2.5M.
036-0820	0.156" CENTERLINE CRIMP HOUSING	INPUT CONTROL	ALL	450A	JP4		1
036-0850	0.156" CENTERLINE CRIMP TERMINAL	INPUT CONTROL	ALL	450A	JP4		2
033-0038	MICROPROCESSOR MC-40 SENSOR VACUUM	CONTROL WITH SENSOR	ALL	450A	MC-40	D1	1
033-00385	MICROPROCESSOR MC-40 NO SENSOR VAC.	CONTROL W/O SENSOR	ALL	450A	MC-40	D2	1
033-0015	MEMBRANE MC-40 SIPROMAC	CONTROL SIPROMAC	ALL	450A		E1	1
033-0018	MEMBRANE MC-40 BERKEL	CONTROL BERKEL	ALL	450A		E2	1
106-0010	VALVE 2WAY 24V 1/4 NPT(G22) 60HZ	OPTION GAS	ALL	450A	H	F	1
106-0030	VALVE 2WAY 24V 3/4 NPT(G95) 60HZ	ATMOSPHERE	ALL	450A	F		1
106-0070	VALVE 3WAY 24V 1/4 NPT(G176)60HZ	BELLOWS	ALL	450A	G		1
026-0610	LIMIT SWITCH LONG ROLLER 16A 250V	COVER POSITION	ALL	450A	CV		1
028-0018	TERMINAL BLOCK M6/8 600V/50A.(8AWG)	SUPPLY	460V/3PH/60HZ	450A	L1-L2-L3		3
028-0020	GROUND TERMINAL BLOCK M6/8P	SUPPLY	460V/3PH/60HZ	450A	GND		1
028-0060	SEPARATOR M4/6	SUPPLY	460V/3PH/60HZ	450A	GND-L1-L2-L3		4
028-0105	GROUND BARRIER (6 HOLES)	SUPPLY	ALL	450A	GND		1
034-0700	FUSE HOLDER 30A/600V GOULD	VACUUM	460V/3PH/60HZ	450A	F1		3
034-0480	FUSE MIDGET 10A/600V FAST ACTING	VACUUM RA-0040	460V/3PH/60HZ	450A	F1	A1	3
025-0010	MOTOR CONTACTOR 5HP IN 460V/3PH-CSA,UL	VACUUM RA-0040	460V/3PH/60HZ	450A	C1	A1	1
025-0140	THERMAL OVERLOAD 2.5 TO 4A-CSA,UL	VACUUM RA-0040	460V/3PH/60HZ	450A	O/L1	A1	1
030-0190	CAB TIRE	VACUUM RA-0040	460V/3PH/60HZ	450A	WM1	A1	2M.
125-0030	BUSCH RA-0040 230-460V/3PH/60HZ 2HP 2.6A	VACUUM RA-0040	460V/3PH/60HZ	450A	M1	A1	1
034-0510	FUSE MIDGET 15A/600V FAST ACTING	VACUUM RA-0063	460V/3PH/60HZ	450A	F1	A2	3
025-0025	MOTOR CONTACTOR 7.5HP IN 460V/3PH-CSA,UL	VACUUM RA-0063	460V/3PH/60HZ	450A	C1	A2	1
025-0150	THERMAL OVERLOAD 4 TO 6A-CSA,UL	VACUUM RA-0063	460V/3PH/60HZ	450A	O/L1	A2	1
030-0190	CAB TIRE	VACUUM RA-0063	460V/3PH/60HZ	450A	WM1	A2	2M.
125-0040	BUSCH RA-0063 230-460V/3PH/60HZ 3HP 3.9A	VACUUM RA-0063	460V/3PH/60HZ	450A	M1	A2	1
034-0540	FUSE MIDGET 20A/600V FAST ACTING	VACUUM RA-0100	460V/3PH/60HZ	450A	F1	A3	3
025-0010	MOTOR CONTACTOR 5HP IN 460V/3PH-CSA,UL	VACUUM RA-0100	460V/3PH/60HZ	450A	C1	A3	1
025-0160	THERMAL OVERLOAD 5.5 TO 8A-CSA,UL	VACUUM RA-0100	460V/3PH/60HZ	450A	O/L1	A3	1
030-0190	CAB TIRE	VACUUM RA-0100	460V/3PH/60HZ	450A	WM1	A3	2M.
125-0060	BUSCH RA-0100 230-460V/3PH/60HZ 5HP 6.3A	VACUUM RA-0100	460V/3PH/60HZ	450A	M1	A3	1
034-0700	FUSE HOLDER 30A/600V GOULD	SEALING	460V/3PH/60HZ	450A	F2		2
034-0430	FUSE MIDGET 4A/600V FAST ACTING	SEALING	460V/3PH/60HZ	450A	F2		2
029-0045	TRANSFO 500VA/220-400-460V/24V	SEALING	460V/3PH/60HZ	450A	TR1		1
027-0220	TERMINAL ROUND STUD #10 600V 75°C	SEALING	ALL	450A	WEL		2
025-0020	CONTACTOR ITH=25A-CSA,UL	SEALING	ALL	450A	C2		1
030-0410	TEW #10/104 BLACK	SEALING	ALL	450A	WEL		7M.
027-0065	TERMINAL FLAG FEMALE YELLOW .250"	SEALING	ALL	450A	WEL		4
005-0564	SEAL BAR ASSEMBLY W/SUPPORT	SEALING TWIN SEAL	ALL	450A	WEL	B1	2

#	PART DESCRIPTION	PART APPLICATION	MACHINE VOLTAGE	MACHINE	REF.	OPT.	QTY
005-0565	SEAL BAR ASSEMBLY W/SUPPORT	SEALING BAG CUT	ALL	450A		B2	2
034-0700	FUSE HOLDER 30A/600V GOULD	CONTROL TRANSFO	460V/3PH/60HZ	450A	F5		2
034-0420	FUSE MIDGET 2A/600V FAST ACTING	CONTROL TRANSFO	460V/3PH/60HZ	450A	F5		2
029-0007	TRANSFO 65VA/220-380-460V/24-9	CONTROL TRANSFO	460V/3PH/60HZ	450A	TR2		1
034-0740	FUSE HOLDER M4/8SF	CONTROL 9VAC+24VAC	ALL	450A	F3+F4		2
034-0210	FUSE 5X20MM 2A/250V TIME DELAY	CONTROL 9VAC	ALL	450A	F3		1
034-0240	FUSE 5X20MM 4A/250V TIME DELAY	CONTROL 24VAC	ALL	450A	F4		1
030-0590	20AWG/12COND.PVC,UNSHIELD.300V	OUTPUT CONTROL	ALL	450A	W001		2.5M.
036-0740	12 CONTACTS CONNECTOR	OUTPUT CONTROL	ALL	450A	JP3/1-2		1
030-0631	22AWG/4COND.PVC,SHIELDED,300V.	INPUT CONTROL	ALL	450A	WCV		2.5M.
036-0820	0.156" CENTERLINE CRIMP HOUSING	INPUT CONTROL	ALL	450A	JP4		1
036-0850	0.156" CENTERLINE CRIMP TERMINAL	INPUT CONTROL	ALL	450A	JP4		2
033-0038	MICROPROCESSOR MC-40 SENSOR VACUUM	CONTROL WITH SENSOR	ALL	450A	MC-40	C1	1
033-00385	MICROPROCESSOR MC-40 NO SENSOR VAC.	CONTROL W/O SENSOR	ALL	450A	MC-40	C2	1
033-0015	MEMBRANE MC-40 SIPROMAC	CONTROL SIPROMAC	ALL	450A		D1	1
033-0018	MEMBRANE MC-40 BERKEL	CONTROL BERKEL	ALL	450A		D2	1
106-0010	VALVE 2WAY 24V 1/4 NPT(G22) 60HZ	OPTION GAS	ALL	450A	H	E	1
106-0030	VALVE 2WAY 24V 3/4 NPT(G95) 60HZ	ATMOSPHERE	ALL	450A	F		1
106-0070	VALVE 3WAY 24V 1/4 NPT(G176)60HZ	BELLOWS	ALL	450A	G		1
026-0610	LIMIT SWITCH LONG ROLLER 15A 250V	COVER POSITION	ALL	450A	CV		1



PNEUMATIC DRAWING



MANUEL D'UTILISATEUR

MICROPROCESSEUR MC-40 **AVEC OU SANS DÉTECTEUR DE VIDE**

EMBALLEUSE SOUS VIDE

TABLE DES MATIÈRES

I INSTRUCTIONS POUR LES OPÉRATIONS

II MÉCANIQUE

- A- Vue de face
- B- Vue de l'arrière
- C- Procédure d'ajustement du couverc
- D- Schéma de l'assemblage de l'axe central
- E- Barres de scellage
(Double scellage)
- F- Dessin des barres de scellage
(Option du coupe sac électrique)
- G- Dessins des barres d'assemblage
(Scellage du haut et du bas en option)
- H- Gas injection kit installation drawing
(gaz injection option)

III ELECTRIQUE

- A- Schéma électrique (Bas voltage)
- B- Schéma électrique (Haut voltage à une phase)
- C- Schéma électrique (Haut voltage à 3 phases)
- D- Schéma électrique (Haut voltage 1 phase 50 Hz)
- E- Schéma électrique (Haut voltage 3 phase 50 Hz)

IV PNEUMATQUE

- A- Schéma Pneumatique

EMBALLEUSES SOUS VIDE INSTRUCTIONS D'OPÉRATIONS

TABLE DES MATIÈRES

1. Mise en marche de la machine
2. Connexion Électrique
3. Opération
 - 3.1 Principes de travail
 - 3.2 Emballage Spécial
 - 3.2.1 Injection de Gaz
 - 3.2.2 Scellage haut et bas
(bi-active sealing)
 - 3.2.3 Coupe sac électrique
 - 3.3 Ajustement des contrôles digital
 - 3.4 Nettoyage Quotidien
4. Trouble de lancement
 - 4.1 Échec durant le cycle d'emballage
 - 4.2 Vide insuffisant
 - 4.2.1 Fuites dans le sac
 - 4.2.2 Pas de fuite dans le sac
 - 4.2.3 Vide insuffisant dans la chambre
 - 4.3 Scellage Inadéquat
 - 4.3.1 Scellage insuffisant
 - 4.3.2 Pas de scellage
 - 4.3.3 Courant ininterrompu sur les barres de scellage
 - 4.3.4 Le scellage ne tient pas
 - 4.4 Problème avec les valves
 - 4.5 Problème du panneau de contrôle
5. Maintenance Régulière

SIPROMAC INC.

EMBALLEUSES SOUS VIDE

1. MISE EN PLACE DE LA MACHINE:

Avant de choisir le site d'installation de votre machine, veuillez considérer que vous aurez besoin d'espace pour les produits emballés et non-emballés à part de l'espace occupé par la machine elle-même.

Bien vouloir vous rappelez que vous aurez besoin d'un sol bien au niveau pour votre installation. Spécialement avec les modèles mobiles, le poids de la pompe peut gauchir la machine et le couvercle ne fermera plus correctement.

Avant de commencer à travailler, vérifier l'huile de la pompe pour voir si elle est en quantité suffisante. Bien vouloir ne jamais utiliser une huile autre que celle recommandée par le fabricant. Ne pas excéder la quantité indiquée quand vous ajoutez ou faites le changement d'huile et faites votre vérification hebdomadairement.

En raison de la viscosité de l'huile, la machine sera plus difficile à démarrer à basses températures. Ainsi donc la pompe doit être placée dans un endroit où la température est d'au moins 50°F (+10°C). D'autre part, l'air doit circuler librement aux alentours de la pompe pour permettre le refroidissement dans les cas où la température des opérations atteindrait 160°F (70°C) ou la température maximale permise.

2. CONNEXION ÉLECTRIQUE:

Les connexions électriques doivent se faire par du personnel qualifié. La personne désignée doit s'assurer que les entrées électriques correspondent au voltage et à l'ampérage approprié de la machine.

Un schéma électrique accompagne chacune de nos machines.

Une étape importante dans le branchement de la machine est de s'assurer que le moteur de la pompe tourne dans une rotation appropriée.

Attention: Le moteur de la pompe ne devrait pas tourner plus de 3 ou 4 secondes dans une mauvaise rotation car il en résultera des dommages sérieux. La rotation est indiquée par une flèche sur le moteur de la pompe.

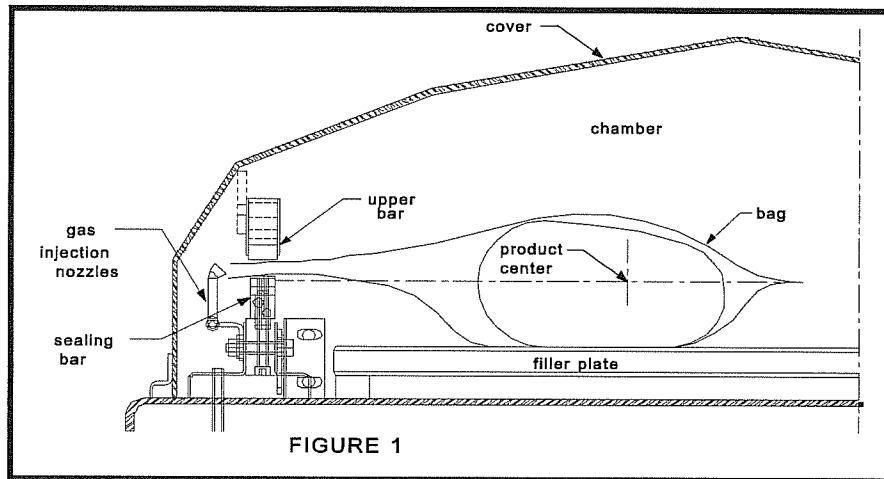
3. OPÉRATION:

3.1 Principes de travail:

Un emballage sous vide est un cycle composé de 3 étapes. Premièrement le vide est fait et l'air est complètement enlevé de la chambre et du sac contenant le produit. (Voir figure 1). Ensuite c'est possible d'injecter du gaz neutre par les conduits si le produit est très délicat. Finalement, un mécanisme pousse la barre de scellage sur le support de caoutchouc pour sceller le sac

Pour obtenir de beaux emballages, les produits et les sacs doivent être de taille proportionnelles. L'ouverture du sac ne devrait jamais excéder 2" (50cm) au delà des barres de scellage. Le produit doit être centré en hauteur par rapport aux barres de scellage en ajustant les écarteurs qui vous sont fournis.

Pour obtenir un bon scellage, assurez-vous qu'il n'y a pas de résidu de graisse qui reste entre les côtés intérieurs des sacs où le scellage doit être fait.



3.2 Emballage Spécial:

3.2.1 Injection de Gaz (option):

Il y a une pression atmosphérique de 14 lbs / pouce carré (= 1 kg / cm carré) sur les produits quand le vide demandé est atteint. Les produits qui peuvent être endommagés par une haute pression doivent être emballés avec un vide partiel et la pression doit être contrebalancée en injectant du gaz dans le sac (nitrogène ou dioxyde de carbone) avant le scellement et après avoir atteint le vide.

Pour l'injection de gaz, les sacs sont placés sur les barres de scellage, l'ouverture placée au dessus des conduits de gaz qui sont montés le long des barres de scellage. Après que le vide soit atteint, la valve du vide se ferme et la valve du gaz s'ouvre. Le pourcentage de gaz peut être ajusté par le menu du programme.

Le réservoir de gaz et la valve de pression qui est rattachée au réservoir ne sont pas fournis par Sipromac. La pression pour le régulateur de gaz devrait être ajustée approximativement à 5 lbs/pouce carré (1/3 Kg/cm carré). Chaque machine a un adaptateur pour la connexion de gaz quand l'option de l'injection de gaz est commandée.

3.2.2 Scellage Haut et Bas (optionnel):

Pour le scellage des sacs en aluminium comme pour le café il est impératif d'avoir une barre de scellage en haut et en bas.

3.2.3 Coupe sac électrique: (optionnel):

Cette option est utilisée pour obtenir un paquet dont l'excédent de film au niveau du scellage doit être coupée très près de la ligne de scellage. (cette option ne peut pas être utilisée avec le scellage Haut et Bas)

3.3 Les opérations de l'emballage sous vide:

Note: Reportez-vous aux menus structure de la page 8 et aux détails du panneau de contrôle sur la page 9

3.3.1 Bases:

Utilisez la touche "POWER" pour initier le bouton ON/OFF sur votre machine sous vide. Quand votre unité sera en fonction le dernier programme exécuté apparaîtra sur l'écran à cristaux liquides.

Utilisez la touche "ESC" pour passer du menu programme au menu fonctions et du menu des fonctions au menu des programmes.

Dans le menu des fonctions, utilisez la touche "SELECT" pour sélectionner une fonction et la touche "ENTER" pour exécuter la sélection.

Dans le menu des programmes, utilisez la touche "SELECT" pour sélectionner un programme et la touche "Enter" pour accéder ou modifier la sélection.

Dans les programmes du sous menu, utilisez la touche "ENTER" pour voir défiler les paramètres et lorsque ces derniers clignotent pour indiquer ils sont dans le mode d'acquisition. Quand la séquence de tous les paramètres se sont affichés, on revient automatiquement au début de la liste.

Dans les programmes du sous menu, utilisez la touche "ESC" pour revenir au menu des programmes. Pressez n'importe quelle touche pour effacer les messages d'erreur qui peuvent s'afficher sur l'écran à cristaux liquide.

3.3.2 Menu des fonctions:

3.3.2.1 Créer un programme:

Quand vous exécutez la fonction "create a program", le programme sous menu est atteint en commençant par l'identification. L'identification initiale "PxxNO NAME" est donné au programme et tous les paramètres sont établis à zéro; le numéro du programme est alloué automatiquement.

3.3.2.2 Supprimer un programme:

En exécutant la fonction de "delete a program", vous avez accès au menu des programmes et le numéro du premier programme en mémoire clignote pour indiquer le mode de suppression. Utilisez la touche "SELECT" pour sélectionner un programme et la touche "ENTER" pour avoir accès et confirmer la suppression de la sélection. Utilisez la touche "ESC" pour annuler une suppression et quitter la fonction. Quand vous quittez la fonction, le nombre des programmes actuels sur l'écran à cristaux liquides cesse de clignoter.

3.3.2.3 Choisir le mode d'opération:

Quand vous exécutez la fonction "Select Operating Mode", laquelle est disponible seulement pour les unités automatiques, la sélection en cours clignote pour vous indiquez le mode. Utilisez la touche "SELECT" pour parcourir les modes d'opération, lesquels sont automatiques, semi-automatiques et manuels.

Le mode d'opération sera validé et exécuté automatiquement. Utilisez la touche "ESC" ou "ENTER" pour quitter la fonction et retourner au menu des programmes.

3.3.3 Menu des Programmes:

3.3.3.1 Identification des Programmes:

Pour un programme sélectionné, choisissez l'identification en utilisant le panneau de contrôle numérique avec la chartre des caractères et pressez sur la touche numérique jusqu'à ce que le caractère soit sélectionné (4 x pour la valeur numérique). Utilisez la touche "ENTER" pour valider le caractère ainsi que la chaîne de caractères jusqu'à la fin (la nouvelle chaîne de caractères clignote). Vous pouvez utiliser la touche "ESC" pour revenir en arrière dans le cas où vous vous êtes trompé et que vous voulez effacer le caractère.

Exemple: EXAMPLE 1 → (9 caractères)

Touche 2, 2, ENTER	→ E
Touche 8, 8, 8, ENTER	→ X
Touche 1, ENTER	→ A
Touche 5, ENTER	→ M
Touche 6, ENTER	→ P
Touche 4, 4, 4, ENTER	→ L
Touche 2, 2, ENTER	→ E
Touche 9, 9, 9, ENTER	→ espace
Touche 1, 1, 1, 1, ENTER	→ 1

Touche ENTER pour valider la chaîne de caractères

3.3.3.2 L'ajustement du niveau de Vide (capteur de vide désactivé):

Pour un programme sélectionné, ajustez le niveau de vide, en secondes; la validation est automatiquement exécutée après la deuxième entrée digitale (Le nouveau temps de vide clignote). En cours de traitement, utilisez la touche "ENTER" pour valider la valeur du niveau de vide et la touche "ESC" pour revenir en arrière et changer la valeur du niveau de vide (La valeur du niveau de vide la plus ancienne clignotera à ce moment).

Exemples: 1 sec. → Touches 0, 1 ou 1, ENTER
15 sec. → Touches 1, 5

3.3.3.3 L'ajustement du niveau de Vide (capteur de vide en activé):

Pour un programme sélectionné, ajustez le niveau de vide avec les valeurs; le point décimal est automatiquement inséré suivant la deuxième entrée digitale et la validation est automatiquement exécutée après la troisième entrée digitale (La nouvelle valeur du niveau du vide clignote). Le niveau de vide est arrondi à la demie la plus près de la valeur. En cours de traitement, utilisez la touche "ENTER" pour valider la valeur du niveau de vide et la touche "ESC" pour revenir en arrière et changer la valeur du niveau de vide (La valeur du niveau de vide la plus ancienne clignotera à ce moment). Ajustez le niveau du vide à zéro pour pouvoir contourner le capteur de vide et procédez en réglant seulement le " Temps de vide Plus" (Vacuum plus time).

Exemples: 90.0% → Touches 9, 0, 0 ou 9, 0, ENTER ou
Touches 9, 0, 1 ou 9, 0, 2 or 9, 0, 3 ou 9, 0, 4
97.5% → Touches 9, 7, 5 ou
Touches 9, 7, 6 ou 9, 0, 7 or 9, 0, 8 ou 9, 0, 9
0.0% → Touches 0, 0, 0 ou 0, ENTER

3.3.3.4 Ajustement du Temps de Vide "Plus" (capteur de vide activé):

Pour un programme sélectionné, réglez le "temps de vide plus" en secondes; la validation est automatiquement exécutée après la deuxième entrée digitale (La nouvelle valeur du "temps de vide plus" clignotera à ce moment). En cours de traitement, utilisez la touche "ENTER" pour valider la nouvelle valeur du "temps de vide plus" et la touche "ESC" pour revenir et recommencer avec de nouvelles valeurs (la valeur la plus ancienne du "temps de vacuum plus" clignotera).

Exemples: 1s → Touche 0, 1 or 1, ENTER
15s → Touche 1, 5

3.3.3.5 Ajustement de l'injection de gaz (capteur de vide désactivé):

Pour sélectionner un programme placer le niveau d'injection de gaz en suivant la même procédure que pour le niveau de vide. Gardez en mémoire que plus le temps d'injection de gaz est haut, moins la pression du sellage sera forte. Un certain niveau de vide doit être maintenu pour un bon fonctionnement.

3.3.3.6 Ajustement de l'injection de gaz (capteur de vide activé):

Pour sélectionner un programme placer le niveau d'injection de gaz en suivant la même procédure que pour le niveau de vide; L'ajustement pour le gaz le plus haut devrait être de 10% au-dessous du niveau de l'ajustement de vide.

3.3.3.7 Ajustement du cachetage:

Pour sélectionner un programme le temps de cachetage, en commençant par les secondes; le point décimale est automatiquement insérée après la première entrée de chiffre et la validation est automatiquement effectuée après la troisième entrée de chiffre (le nouveau temps de cachetage clignote). Le temps de cachetage est arrondi à la moitié la plus proche du cent. À un milieu l'entrée des données, utiliser la clé "ENTER" pour valider l'heure du cachetage et la clé " ESC " pour revenir en arrière et reprogrammer le temps cachetage avec de nouvelles données (le vieux temps de cachetage clignote).

Exemples: 4.50s → clés 4, 5, 0 or 4, 5, ENTER or
clés 4, 5, 1 or 4, 5, 2 or 4, 5, 3 or 4, 5, 4
2.35s → clés 2, 3, 5 or
clés 2, 3, 6 or 2, 3, 7 or 2, 3, 8 or 2, 3, 9
0.00s → clés 0, 0, 0 or 0, ENTER

3.3.4 Exécution de cycle de vide :

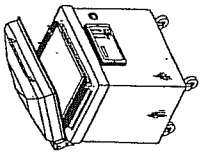
Pour les unités manuels ainsi que les unités automatiques faire la mise en marche manuelle, fermer le couvercle afin de lancer un cycle de vide. Pour l'unité automatique faire mise en marche semi-automatique ou automatique, utilisez le bouton "ARRÊT / DÉBUT" pour lancer ou interrompre un cycle de vide. Le programme sélectionné peut être lancé seulement dans le programme du menu, au moment où aucune modification n'est nécessaire, et l'accès des autres programmes et des fonctions ne sont pas requis. Pendant l'exécution du cycle le statut d'opération est séquentiellement affiché sur l'écran à cristaux liquides, excepté pour les paramètres établis à zéro, qui ne sont pas montrés:

- niveau de vide de la chambre pendant la séquence,
- vide additionné du temps pendant le vide plus la séquence,
- niveau de vide de la chambre pendant la séquence d'injection de gaz,
- statut de temps de cachetage pendant la séquence de cachetage,
- niveau de vide de la chambre pendant La séquence d'atmosphère .7

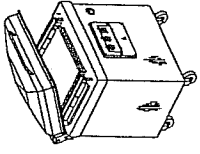
Pendant l'exécution du cycle, utilisé la clef "1" pour interrompre la séquence de vide et pour exécuter la séquence suivante, soit l'injection du gaz ou le cachetage, suivi de la clé "ENTER" afin d'accéder et modifier le programme; les paramètres deviennent valides seulement pour les cycles suivants de vide.

3.3.5 System monitor:

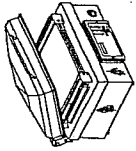
Pour accéder le menu des diagnostics, monter la puissance de la machine d'emballage sous vide tout en maintenant le bouton "ESC" enfoncé. Utilisez la clé "SELECT" pour choisir la fonction du système du moniteur et "ENTER" pour accéder et visualiser les paramètres surveillés. Employez la clé "SELECT" pour changer la révision de logiciel, la quantité d'heures de travail faites et de la quantité de cycles complets exécutés depuis la première initialisation.



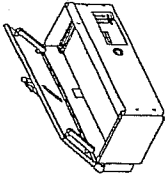
450A



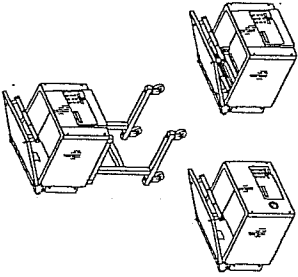
400A



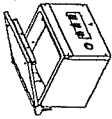
450T



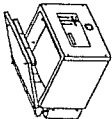
380A



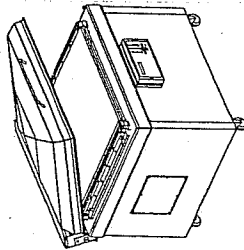
350/350D



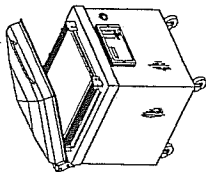
300



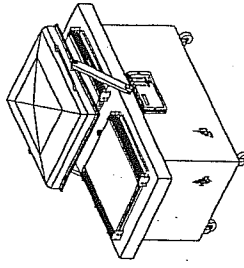
250



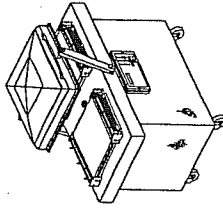
580A



550A

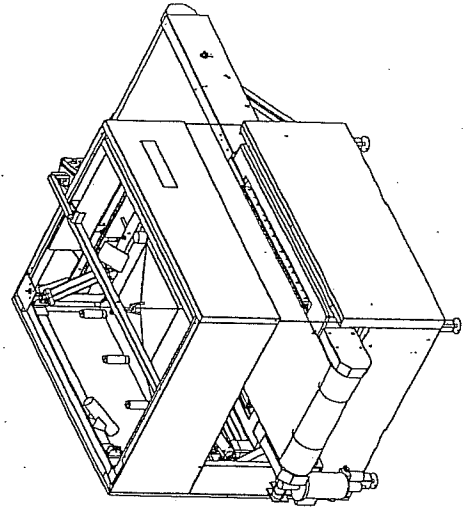


600A

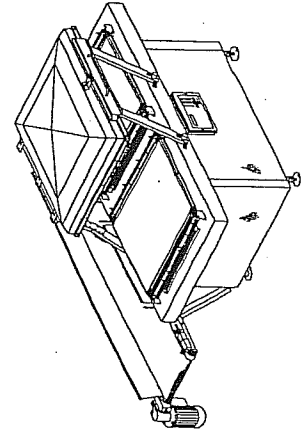


420A

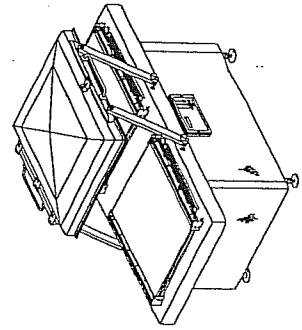
VACUUM PACKAGING MACHINES



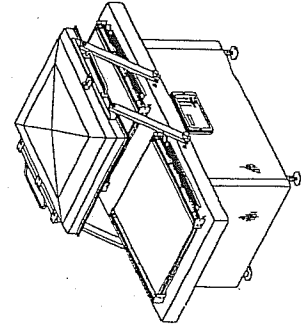
750A



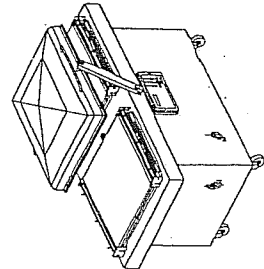
700A



680A



650A



620A