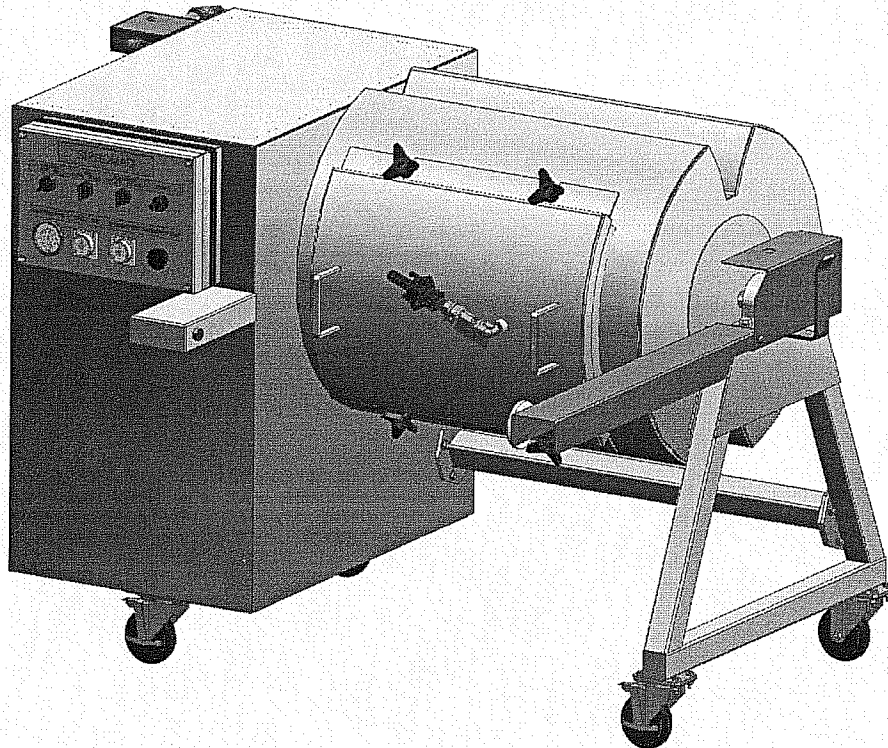


ET-3, ET-5
VACUUM TUMBLERS



OWNERS MANUEL
(MANUEL D'UTILISATION)
(MANUAL DE UTILIZACION)

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SAFETY INSTRUCTIONS

WARNING TO ALL PURCHASERS, OPERATORS AND OPERATION SUPERVISORS :
MAKE CERTAIN EVERY PERSON WHO IS TO OPERATE THIS MACHINE HAS READ THIS MANUAL
BEFORE BEING PERMITTED TO OPERATE THIS MACHINE.

HAVE ALL OPERATORS SIGN THE SIGNATURE PAGE FOUND AT THE END OF THIS MANUAL.

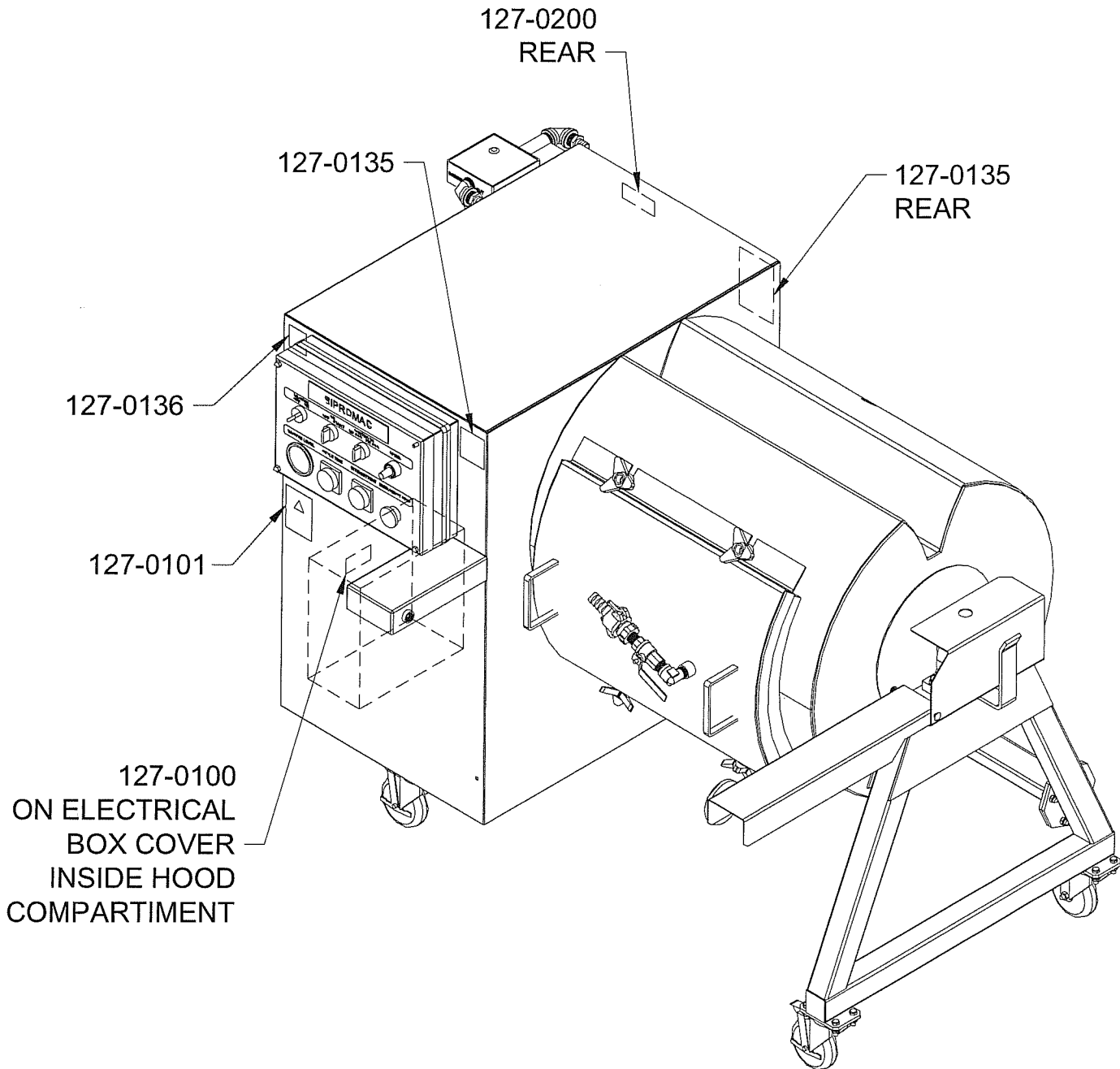


This symbol points out important safety instructions which, if not followed, could endanger the personal safety and/or property of yourself and others. Read and follow all instructions in this manual before attempting to operate your vacuum machine. Failure to comply with these instructions may result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

**READ THIS MANUAL COMPLETELY BEFORE OPERATING
ADDITIONAL MANUALS AS WELL AS REPLACEMENT SAFETY LABELS ARE AVAILABLE.**

1. DO NOT OPERATE THIS MACHINE UNTIL IT HAS BEEN INSPECTED AND MADE READY FOR OPERATION.
2. DO NOT TOUCH MOVING PARTS.
3. DO NOT OPERATE OR WORK AROUND THIS MACHINE WITH LOOSE FITTING CLOTHING. IT COULD BECOME ENTANGLED IN THE MACHINE
4. NEVER TRY TO MANUALLY STOP OR TURN THE TUMBLER. USE THE JOG FUNCTION TO POSITION THE TUMBLER AS DESIRED.
5. FAILURE TO PROPERLY GROUND THIS MACHINE COULD RESULT IN ELECTRICAL SHOCK. ONLY A QUALIFIED ELECTRICIAN WHO IS FAMILIAR WITH THE APPROPRIATE ELECTRICAL CODES SHOULD PROVIDE THE PROPER ELECTRICAL CONNECTION.
6. DO NOT ALTER OR MODIFY THIS TUMBLER IN ANY WAY FROM ITS ORIGINAL FORM. ALLOW ONLY AUTHORIZED PERSONAL TO SERVICE YOUR MACHINE.
7. ALWAYS TURN OFF THE MACHINE WHEN IT IS NOT IN USE.
8. UNPLUG THE MACHINE FROM THE POWER SOURCE BEFORE REMOVING ANY PANELS OR HOUSING FOR MAINTENANCE OR MAKING ADJUSTMENTS TO THE MACHINE.
9. ALWAYS OPERATE ON A LEVEL SURFACE.
10. KEEP UNAUTHORIZED PERSONAL AWAY FROM MACHINE.
11. THESE TUMBLERS ARE DESIGNED TO HANDLE VACUUM AND NOT PRESSURE. **NOTE: DO NOT PUT ANYTHING IN THE DRUM WHICH WOULD GENERATE A PRESSURE SUCH AS CARBON DIOXIDE SNOW OR PELLETS**
12. INSTALL THE MACHINE IN A POSITION THAT PROVIDES ADEQUATE SPACE TO ALLOW SAFE CLEARANCE OF ANY PERSONAL IN THE AREA.

LABEL PLACEMENT



LABEL LIST

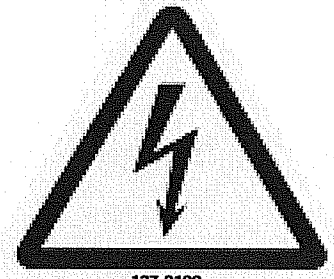
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VOLT	<input type="text"/>	PH.	<input type="text"/>
AMP	<input type="text"/>	KW.	<input type="text"/>
DATE	<input type="text"/>	SER.	<input type="text"/>

FABRIQUE AU CANADA MADE IN CANADA

127-0200



127-0135



127-0100

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.

AVERTISSEMENT - VOTRE RESPONSABILITÉ!
CETTE MACHINE NE DOIT ÊTRE UTILISÉE QUE PAR DES PERSONNES QUI PEUVENT LIRE, COMPRENDRE ET RESPECTER LES AVERTISSEMENTS ET INSTRUCTIONS QUI FIGURENT DANS LE MANUEL D'UTILISATION ET SUR LA MACHINE.

AVISO - SU RESPONSABILIDAD!
SOLO DEBE ESTAR UTILIZADA ESTA MÁQUINA POR PERSONAS QUIENES PUEDEN LEER, COMPRENDER Y RESPETAR LAS ADVERTENCIAS Y INSTRUCCIONES FIGURANDO EN EL MANUAL DE USO Y EN LA MÁQUINA.

127-0101

⚠ CAUTION

**Do NOT
pressure wash**

127-0136



Specifications

ET-3 & ET-5

Power Requirement :	120Volts / 60 Cycles / 1 Phase (other voltages & Hz are available)
Drive motor :	½ H.P.
Vacuum Pump :	1.21 H.P.(9 kW), 20m ³ /Hr or 21m ³ /Hr
Construction :	Stainless Steel frame, drum and cabinet
Capacity :	300 lbs (product and brine) for ET-3 & 500 lbs (product and brine) for ET-5
Speed :	Variable from 2-15 RPM
Reverse :	Can only operate manually at a fixed 2 RPM speed with no time setting. Programs can not be set for the reverse function.(for optional MC-40 Microprocessor Controls) Must only operate at minimal speed by using jog button.(for Analog Controls)

Exclusive touch pad microprocessor controls featuring:

- Cycle time up to 72 hours
- Speed infinitely adjustable from 2-15 RPM
- Work pause capacity up to 24 hours
- Stores up to 10 programs
- Error diagnostic coding
- Run/Jog for easy loading and unloading

Photo electric safety beam :	Protects operating area of machine
Mobility :	Four 4" swivel casters (two locking)
Special design :	Bolt-on frame extension allows for capacity changes between 300 and 500 pounds.

OVERALL DIMENSIONS :

ET-3 : 64.3"L X 48.5"W X 50"H

ET-5 : 83"L X 48.5"W X 50"H

*** DRUM DIAMETER ON ALL MODELS IS APPROXIMATELY 24"**

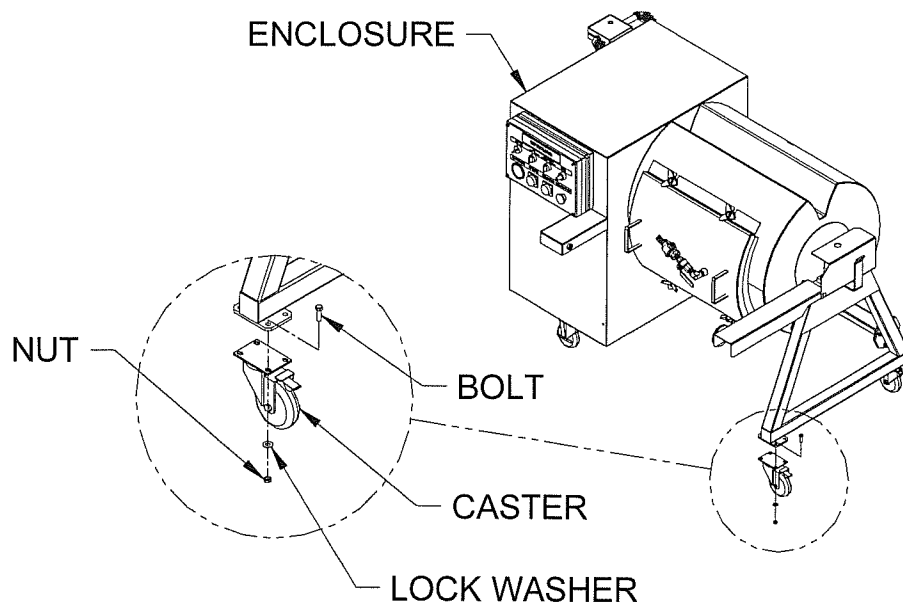
RECEIVING

ELECTRICAL PLUG ASSEMBLY :

Some tumblers is shipped without an electrical plug (voltage depending). An electrician should attach an appropriate plug to accommodate the electrical supply.

CASTER ASSEMBLY :

1. The casters are inside the tumbler in a box with hardware. You may want to rotate the tumbler opening upright before opening the lid (See operating procedures).
2. Before installing the casters, remove the anchor screws that hold the machine's frame to the wooden shipping base. You must remove the access panel of the enclosure to access the screws.
3. Slide the machine so that the end opposite the enclosure hangs over the wood base. Lift the frame up and support the frame 7 to 8 inches above the floor. Make sure the machine is stable.
4. Install two casters to the supported end of the machine's frame. Use the fasteners provided with the casters. Assemble as shown below.
5. After two casters are securely fastened, remove the support and pivot the machine so the enclosure hangs over the wood base.
6. Lift and support the enclosure end of the frame 7 to 8 inches above the floor. Be careful, this end is heavy.
7. Install the other two caster using the fasteners provided.
8. Remove the support under machine's frame.



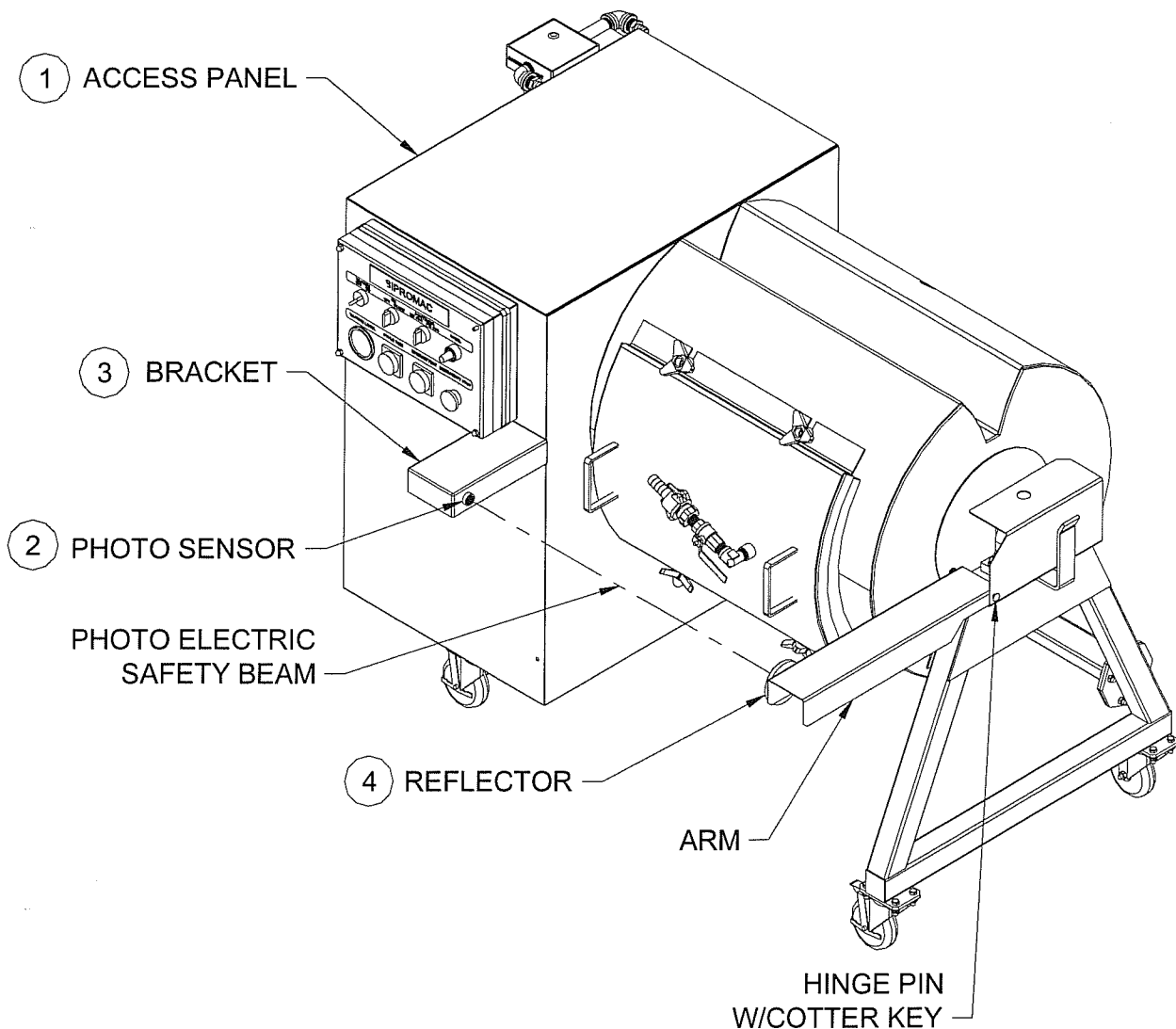
PRE-OPERATION

PHOTO ELECTRIC SAFETY BEAM ASSEMBLY :

The photo sensor bracket and the reflector arm are fastened to the shipping skid.

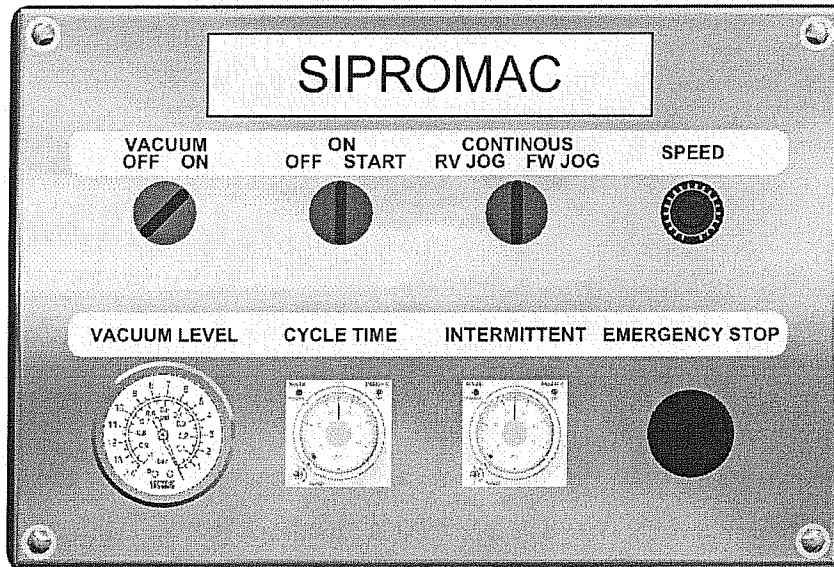
- 1) Remove the access panel on the left side of the cabinet.
- 2) Unscrew the plastic nut from the sensor and pass it through the large hole in the end of the bracket. Pass the sensor through other hole and tighten with the plastic nut.
- 3) Fasten the bracket to the cabinet with the hardware provided.
- 4) Fasten the reflector arm to the frame using the hinge pin and cotter key as shown.

NOTE : The photo sensor and reflector must be in line for the machine to operate.
The height of the reflector can be changed by turning the adjustment screw on the bottom of the arm.



OPERATING INSTRUCTIONS

FOR ANALOG CONTROLS



VACUUM BUTTON :

1. The **ON** position engage the vacuum pump,
2. The **OFF** position disengage the vacuum pump.

ON/OFF/START BUTTON :

1. The **ON** position start the tumbler.
2. The **START** position start turning the drum(cycle).
3. The **OFF** position shut down the tumbler.

CONTINUOUS/JOG BUTTON:

1. The **RV JOG** position jog the drum reverse.
2. The **FW JOG** position jog the drum forward.
3. The **CONTINUOUS** position is needed for doing a cycle.

NOTE : It's recommended to set the speed at minimal position in jog mode.

SPEED BUTTON :

1. Turn left to decrease the speed.
2. Turn right to increase the speed.

VACUUM LEVEL (MANOMETER) :

This manometer is graduated in **psi** units & **kPa** units. Indicate vacuum level inside of the drum.

CYCLE TIME-ANALOG TIMER :

This timer is graduated from 1 to 50 units. With the RANGE selector button (bottom left), you must choose the scale factor (see table A). With the MODE selector button (bottom right) you must choose the ON mode (1 or 2 timers option) (Other modes included are FO, OF1, SF, OS, OF2, OC). The top left LED is the power indicator. The top right LED is the Operation indicator.

Time unit		seconds	minutes	hours	hours x 10
		Scale			
Control time range	1	0.1s to 1s	0.1min to 1min	0.1h to 1h	1.0h to 10h
	5	0.5s to 5s	0.5min to 5min	0.5h to 5h	5h to 50h
	10	1.0s to 10s	1.0min to 10min	1.0h to 10h	10h to 100h
	50	5s to 50s	5min to 50min	5h to 50h	50h to 500h

Table A default setting ▲

INTERMITTENT TIMER(OPTION) :

Use to switch between rotation on and rotation pause during a timed cycle. See example below. With the RANGE selector button (bottom left), you must choose the scale factor (see table A). With the MODE selector button (bottom right) you must choose the FL mode (2 timers option).

EMERGENCY STOP BUTTON :

1. Pushing the button will stop the tumbler.
2. Pulling the button will disengage emergency stop.

POWER :

Plug the machine into a proper electrical outlet that is grounded.

LOADING PRODUCT :

1. To load product, jog tumbler so that lid is facing upward and drain cap on the bottom is securely in place.
2. Remove lid and add product.
3. Place the lid back on the tumbler and secure.

NOTE : It's recommended to reduce the speed at minimal position in jog mode.



WARNING : DO NOT OVERLOAD THE TUMBLER

DOING A NORMAL CYCLE :

1. Turn the **ON/OFF** button to **ON** position.
2. Plug the hose on the drum. (Make sure lid is securely in place, vacuum hose has been attached to tumbler lid and the valve is in the open position)
3. Turn the **VACUUM BUTTON** button to **ON** position.
4. Check the **VACUUM LEVEL** and when the desired pressure of vacuum is obtained, turn the **VACUUM BUTTON** button to **OFF** position;
5. Close the valve and remove the hose.

NOTE : If the vacuum level on the guage does not increase, the lid is not sealed tight. Turn the **VACUUM BUTTON** button to **OFF** position, tighten the lid and start vacuum again.



WARNING : DO NOT ROTATE THE TUMBLER WITH THE VACUUM HOSE IN PLACE.

6. To set cycle time, select the range of the **CYCLE TIME-ANALOG TIMER** with the selector in bottom left (see table A), turn the the time selector at desired position.

7. To start the cycle, turn the button to **START** position during 1 second.
8. The tumbler will stop after the cycle time delay is completed.

DOING A INTERMITTENT CYCLE(OPTION) :

1. Before starting the cycle, set the intermittent timer at desired position.
2. If you don't want to use the intermittent option, set the time of intermittent timer longer than the cycle time.



WARNING : STAY CLEAR OF MOVING PARTS.

INTERRUPT A CYCLE :

If you want to interrupt a cycle in progress by pushing the **EMERGENCY STOP** button or by turning **OFF** the **ON/OFF/START BUTTON**, the timer will reset.

REMOVING PRODUCT :

1. After the tumbler has stopped, jog the tumbler into an unloading position (see tumbler positioning section below)
2. Open valve to allow tank pressure to re-stabilize and remove lid.
3. The product may now be removed.

NOTE : It's recommended to reduce the speed to the minimal position in the jog mode.

TUMBLER POSITIONING :

To accurately position the tumbler for unloading product or make the vacuum, it's possible to jog the tumbler :

1. Turn the **CONTINUOUS/JOG BUTTON** to **RV JOG** position to jog the drum reverse.
2. Turn the **CONTINUOUS/JOG BUTTON** to **FW JOG** position to jog the drum forward.

Tip: Release button to stop the rotation.

SAFETY SENSOR :

The safety sensor arm must be extended outward for the tumbler to operate. Make sure the tumbler area is cleared before imitating a cycle. Stay beyond customer security perimeter when a cycle is running. If an obstruction comes in the path of the safety sensor eye the tumbler will immediately stop. The timer will reset so you can't resume the cycle. The machine will not recall where it left off.



**WARNING : PROTECT THE BACK AREA OF TUMBLER FROM ACCESS
PLACE ALONG A WALL FOR BETTER SECURITY.**

OPERATING & PROGRAMING INSTRUCTIONS

FOR OPTIONAL MC-40 MICROPROCESSOR CONTROLS

POWER :

Plug the machine into a proper electrical outlet that is grounded. Press **ON/OFF** to start the tumbler. When the tumbler is energized, the identification of the last executed program is displayed on the LCD screen. If **EMERGENCY STOP** appears on the screen instead press **ENTER** to proceed.

MANUAL OPERATION :

To manually jog the machine for loading or unloading, press the **START** key and hold down the #2 key until the tank is in the desired position. Press the #1 key to continuously rotate the tumbler. Press stop key to stop.

NOTE: Rotation direction of the manual operation is opposite that of the programmed operation.

PROGRAMMING OPERATION :

The **ESC** key switches you between the Function Menus and Program Menus. The **SELECT** key scrolls you through either the Function submenus or the Program submenus depending on which mode you are currently in. The **ENTER** key allows you to access particular functions, programs and options. Below is a list of how each menu is organized.

FUNCTION MENUS :

F1 CREATE A PRGM
F2 DELETE A PRGM
F3 UNLOCK A PRGM
F4 VACUUM : OFF

PROGRAM MENUS :

PRGRM CYCLE NAME: For example, P01 : (12 character limit)

PRGRM SEGMENT #1

SEGMENT TIME : 0h00
MESSAGE ON : 0h00
MESSAGE OFF : 0h00
SPEED LEVEL : -- . --

PRGRM SEGMENT #2

SEGMENT TIME : 0h00
MESSAGE ON : 0h00
MESSAGE OFF : 0h00
SPEED LEVEL : -- . --

PRGRM SEGMENT #3

SEGMENT TIME : 0h00
MESSAGE ON : 0h00
MESSAGE OFF : 0h00
SPEED LEVEL : -- . --

CREATING A PROGRAM NAME :

1. If **F1 CREATE A PRGM** is not displayed on the LCD screen Press **ESC**. Once **F1 CREATE A PRGM** appears press **ENTER**.
2. **PRGM CYCLE NAME** will appear on the LCD screen. Press **ENTER** to create a new program name.
3. **Pxx NO NAME** will flash. (The program number (Pxx) will be allocated automatically). Begin typing the program name by using the numeric keyboard; press a numeric key until the desired character appears. Once the correct letter is displayed press **ENTER** and the cursor will move one space to the right. Upon completion of typing program name press **ENTER** two times. The newly typed program name will flash. Press **ENTER** to confirm. Your program name has been completed.
4. To set program features enter the program menu by pressing **ESC**. The newly created program name will appear on the LCD screen. Press **ENTER** if the displayed program name is the one needing to be set or modified. Or press the **SELECT** key to display other pre-set programs. Once the correct program name appears press **ENTER**. *See setting program options below for more information.*

SETTING PROGRAM OPTIONS :

Within each program three segments are available to set the tumbler times and speeds. A complete program duration may be up to 72 hours in length (24 hours per segment). For example, say you want to start tumbling immediately. **PRGRM SEGMENT #1** can be set for X amount of time with the **MESSAGE OFF** (no rotation will occur). Then **PRGRM SEGMENT #2** can be set for X amount of time with the **MESSAGE ON** (rotation will occur) at a set RPM (rotations per minute). Perhaps after this tumbling cycle you will want to tumble for X more amount of time but at a different speed. In **PRGRM SEGMENT #3** type this final tumbling time **MESSAGE ON** and at what RPM. Depending on your tumbling needs, one two or all three of the segments may be programmed. In short, the different cycles may be used for a pause in tumbling or tumbling at different speed.

1. **PRGRM SEGMENT #1** : will appear once a program name has been selected for modification or programming. To make changes to this segment press **ENTER**.
2. **SEGMENT TIME : 0h00** will appear. Enter the length of tumbling segment #1. Hours must be entered in two number increments (i.e. 01, 05, 12, etc. up to 24) followed by the minutes. In total, you must enter 4 numbers to set the tumbling cycle time. When completed the time will flash. Press **ENTER** to confirm and move the next screen.
3. **MESSAGE ON : 0h00** will appear. Type the length of time you want to *tumble*. Type the same time as the **SEGMENT TIME** if tumbling is desired during this. If no time is entered the machine will not rotate. In this case **PRGRM SEGMENT #1** will act as a timer, delaying tumbling until the next segment is activated. Press **ENTER** to confirm time and/or move to the next screen.

SETTING PROGRAM OPTIONS :

4. **MESSAGE OFF : 0h00** will appear. This option is for producers who want to temporarily stop tumbling in a tumbling cycle. No time need be entered if a MESSAGE ON time has been entered. If no tumbling is desired in the segment, type the same time as SEGMENT TIME. Press **ENTER** to confirm time or move to next screen.
5. **SPEED LV : __ . __ rpm** will appear. Three numbers must be entered for speed level (2.0-15.0). The rpm will flash after it has been entered. Press **ENTER** to confirm.
6. **PRGRM SEGMENT #1** will re-appear. If this is only a one-segment tumbling program press **ESC** to display program name and press **ENTER** to begin tumbling. If additional segments need to be set, press the **SELECT** key to scroll to PRGRM SEGMENT #2 and press **ENTER** to set options. Same procedure applies for setting PRGRM SEGMENT #3. Following instructions from setting PRGRM SEGMENT #1.

MODIFYING PRE-SET PROGRAM OPITONS :

1. To modify a pre-set program press **ESC** if in function mode (i.e. F1, F2, F3 or F4).
2. When a program name appears either press **ENTER** if that is the program to be modified or press the **SELECT** key to scroll though pre-set programs. When the desired program appears press **ENTER**.
3. **PRGRM SEGMENT #1** will appear. To make changes in this segment press **ENTER**.
4. As you press **ENTER**, numbers for each submenu will flash. If you want to make a change, enter the new time or speed and press **ENTER**. If no changes are needed to a time or speed press **ENTER** to confirm and advance you to the next submenu screen.
5. To move onto segments #2 and/or #3 press **ENTER** until **PRGRM SEGMENT #1** appears and press the **SELECT** key to scroll to other segments. Press **ENTER** when desired segment appears. Repeat steps as above.

LOADING PRODUCT :

1. To load product, jog tumbler so that lid is facing upward and drain cap on the bottom is securely in place.
2. Remove lid and add product.
3. Place the lid back on the tumbler and secure.



WARNING : DO NOT OVERLOAD THE TUMBLER

DRAWING A VACUUM :

1. Press **ESC** after product has been loaded and a program has been created/selected to enter the function menus.
2. When **F1 CREATE A PRGM** appears press the **SELECT** key to scroll to **F4 VACUUM: OFF**.
3. Make sure lid is securely in place, vacuum hose has been attached to tumbler lid and the valve is in the open position.
4. Press **ENTER** to draw vacuum range is from 0.0 % to 99.5%.

DRAWING A VACUUM :

5. Press the **START/STOP** button to stop drawing a vacuum when desired value is reached.
NOTE: This will allow you to exit the vacuum function menu.
6. Close the valve and remove the hose

*After stopping the vacuum or after taking too long to press **ENTER** when the F4 vacuum screen appeared, the screen will switch back to the program name menu press **ESC** to switch back to the function menus and follow the above directions to get back to the F4 Vacuum screen.

NOTE : If the % vacuum on the LCD screen does not increase, the lid is not sealed tight. Press **ESC** to stop the vacuum, tighten the lid and start vacuum again.



WARNING : DO NOT ROTATE THE TUMBLER WITH THE VACUUM HOSE IN PLACE.

ACTIVATING A PROGRAM :

After drawing a vacuum the screen switches from functions to programs.

1. Press **ENTER** if the program name you want to run appears to activate.
2. To select a different program than the one on the screen, press the **SELECT** key.
3. Press **ENTER** after the correct program name appears.
4. The selected program will run until all segment have been completed, the safety sensor is tripped, or the programmed is manually stopped.



WARNING : STAY CLEAR OF MOVING PARTS.

STOPPING A PROGRAM :

1. To interrupt a program in progress press the **STOP/START** button. Doing so only stops the rotation of the tumbler. The machine will remember how much time has elapsed.
2. Push the **STOP/START** button again to continue , if so desired.
3. Press **ESC** to access the function menus if you would like to clear out the program memory from a program manually stopped before completion.
4. Press the **SELECT** key to scroll to **F3 UNLOCK A PRGM** and then press **ENTER**. The name of the current program will appear.
5. Press **ENTER** to reset the counters. At this point another program may be accessed.

*A program is locked from the beginning of execution through completion to prevent any unintentional modification to the status of the current program.

REMOVING PRODUCT :

1. After the tumbler has stopped, jog the tumbler into an unloading position (see tumbler positioning section below)
2. Open valve to allow tank pressure to re-stabilize and remove lid.
3. The product may now be removed.

DELETING A PROGRAM :

2. To delete a pre-set program from the tumbler's memory access the function menus and scroll to **F2 DELETE A PRGM** and press **ENTER**.
3. The first program in memory will blink. Press **ENTER** to delete or the **SELECT** key to move to the next program.
4. Once the program needing to be deleted appears press **ENTER**.
5. Press **ESC** to unconfirmed a deflection and/or to exit the delete function.

TUMBLER POSITIONING :

To accurately position the tumbler for unloading product or make the vacuum, it's possible to jog the tumbler

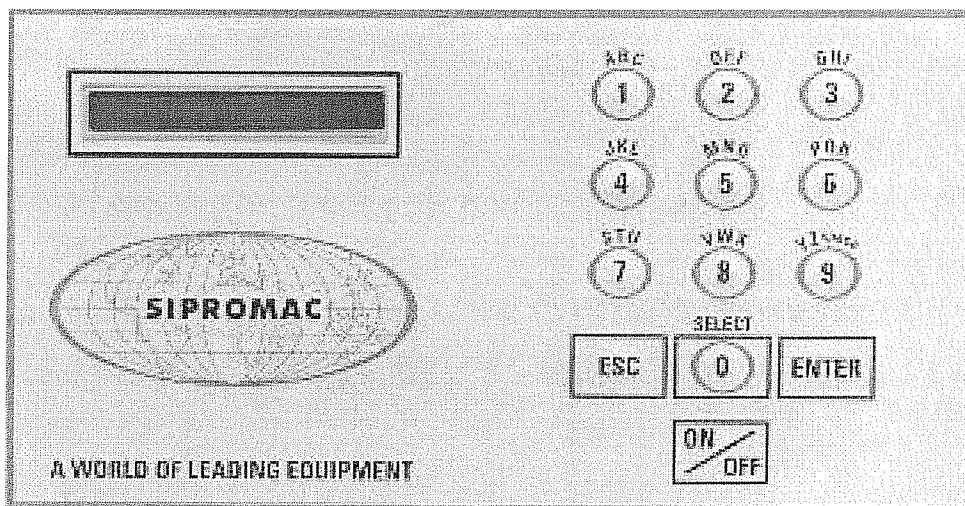
- Hold down the #1 key to jog the tumbler in the forward direction, release the key to stop the rotation.
- Hold down the #2 key to jog the tumbler in the reverse direction, release the key to stop the rotation.
- Reverse is not an option for pre-set programs. It's possible to jog the tumbler only in stop mode.

SAFETY SENSOR :

The safety sensor arm must be extended outward for the tumbler to operate. Make sure the tumbler area is cleared before initiation a cycle. Stay beyond customer security perimeter when **"CYCLE ON"** INDICATOR IS LIT. If an obstruction comes in the path of the safety sensor eye the tumbler will immediately stop and **EMERGENCY STOP** will appear on the LCD screen. Press the **START/STOP** button to resume the program in progress. The machine will recall where it left off.



**WARNING : PROTECT THE BACK AREA OF TUMBLER FROM ACCESS
PLACE ALONG A WALL FOR BETTER SECURITY.**

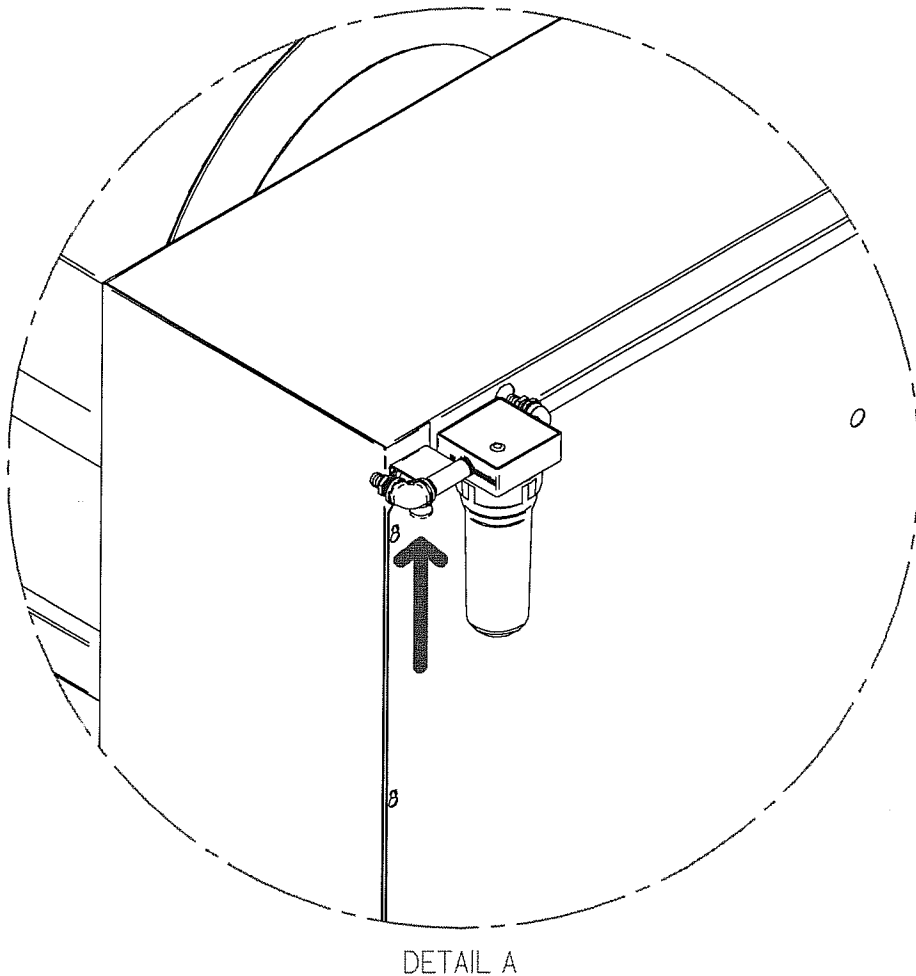


VACUUM PUMP DAILY MAINTENANCE :

Maintenance procedure is required after **each utilization** of the tumblers for the evacuation of the water condensation inside the pump.

1. Connect the vacuum hose to the plug located under the water separator support (see drawing).
2. Start and run the pump, as usual, for a minimum of 20 minutes.

***** IMPORTANT NOTICE;** failure to do this regular maintenance could damage the pump and void the warranty supplied by Busch Vacuum Pumps & Systems.



PROGRAM SAMPLE ET-3 & ET-5

FOR OPTIONAL MC-40 MICROPROCESSOR CONTROLS

OBJECTIVE :

TUMBLE CHICKEN PARTS FOR 15 MINUTES AT 15 RPM, AT 98% VACUUM.

<u>PRESS</u>		<u>RESULTING DISPLAY</u>
1. On/Off		Display Lights
2. ESC	until	F1 Create a PRGM
3. Enter		PRGM Cycle name
4. Enter		P01 No name (Flashing)
5. Number keypad		P01 chick parts
	until desired letter appears	
	Enter after each selection	
	Enter Twice	Program Cycle name
6. Select		PRGM SEG #1
7. Enter		SEGMENT TIME:0h00 (Flashing)
8. 0015		SEGMENT TIME:0h15
9. Enter		MESSAGE ON: 0h00
10. 0015		MESSAGE ON: 0h15
11. ENTER		MESSAGE OFF: 0h00
12. ENTER		SPEED LV: 0.0 RPM
13. 1 5 0		SPEED LV: 15.0 RPM
14. ENTER		PRGM SEGMENT #1
15. ESC		P01 CHICK

PROGRAM IS NOW COMPLETE

No other segments are necessary unless you want to change speeds during the program.

If you make a mistake when entering, press ESC key.

Press ENTER to review program selections.

PROGRAM SAMPLE ET-3 & ET-5

FOR OPTIONAL MC-40 MICROPROCESSOR CONTROLS

JOG :

Press key pad 2 to jog for load and unload. Press key pad 1 for continuous reverse rotation.
NOTE: Wait 5 seconds after tank stops before using jog.

DRAW VACUUM:

- Load Product and Marinade.
- Connect vacuum hose and open valve.
- ESC til vacuum off
- Enter Starts Pump Draw vacuum to 98%
- Start/Stop Stops pump
- Close valve and disconnect vacuum hose

PRESS START/STOP TO BEING PROGRAM

TO UNLOCK A PROGRAM:

ESC til	F1 Create a PRGM
SELECT til	Unlock a PRGM
ENTER	

TO CHANGE SPEED DURING PROGRAM:

ENTER til	Speed LV: 15.0 RPM (Flashing)
100	Speed LV: 10.0 RPM
(RPM Changes Automatically)	

NOTE: PROGRAM WILL REVERT TO ORIGINAL SPEED AFTER (1) CYCLE.
YOU MUST UNLOCK PROGRAM TO MAKE PERMANENT CHANGES.

TYPICAL VACUUM CONTROL SETTINGS

Products	% of Vacuum	Ctrl speed Setting RPM	Time
Boneless chicken breast	Full (98%)(-98KkPa)	10 ½	15 min
Boneless pork chops	Full (98%)(-98KkPa)	10 ½	15 min
Ruffy fillet	Full (98%)(-98KkPa)	7 ½	12-24 min
Whitefish fillet	Full (98%)(-98KkPa)	6 ½	On 5 Off 5 On 5 Done
Peeled & divined shrimp	Full (98%)(-98KkPa)	6 ½	12-24 min
Turkey drum	Full (98%)(-98KkPa)	14	45 min to 2 hours
Ribs	Full (98%)(-98KkPa)	12	45 min
Beef Shish	Full (98%)(-98KkPa)	7 ½	15 min
Chicken shish	Full (98%)(-98KkPa)	7 ½	15 min
Sirloin steak –1” Cut	Full (98%)(-98KkPa)	7 ½	12-15 min
*Delmonico steak–1” Cut	Full (98%)(-98KkPa)	7 ½	12-15 min
*Strip steak – 1” Cut	Full (98%)(-98KkPa)	7 ½	12-15 min
**Chuck steak – 1” Cut	Full (98%)(-98KkPa)	9	15 min
Round Steak – 1” Cut	Full (98%)(-98KkPa)	10 ½	15-20 min
Terriaki Tip	Full (98%)(-98KkPa)	9	15 min

*Adjust accordingly for thickness and lap length.

**With mock tender and salse strap fat removed.

MAINTENANCE

1. Unplug the machine from its power source before doing any maintenance.
2. Grease the tumbler shaft bearings every 400 hours.
3. Lubrification : the speed reducer is supplied with food grade synthetic long life lubricant formulated of polyglycol. The speed reducer is maintenance-free and completely sealed, without oil-plugs. Although, If you need to replace the oil, use 95 ml(3.2oz) of synthetic food grade CLP PG 680(140 Weight).
4. The helical input stage inserted between the motor and the speed reducer is maintenance-free. Although, if you need to lubricate this part use standard bearing grease.

CLEANING & SANITATION

The Vacuum Tumbler drum and machine must be cleaned and sanitized daily and whenever one marinating product is switched to another.

1. After removing all excess marinating solution, fill the tumbler $\frac{1}{2}$ way with a solution of water and mild detergent.

Hot water is not recommended in the first step as it may cause the myosin protein left over from the tumbling process to build up and discolour the inside surface of the drum

2. Fasten the lid back into position and rotate the drum at full speed for approximately two (2) minutes.
3. Drain the cleaning solution by removing the drain plug from the clean out port or remove the lid and jog the opening of the drum into a downward position.
4. Wash the inside of the drum with hot soapy water and then rinse with hot water.
5. Always unplug from the power source when cleaning the tumbler except when rotation described in step 2.
6. Lid gasket should be washed and sanitized in warm soapy water. The gasket is attached to the lid and should be washed in place. **Do not remove gasket from lid.**
7. The outside surface of the machine cabinet and drum should also be wiped down and cleaned.
8. During cleaning of the machine, do not direct water on the controls. Instead, wipe with a damp cloth and dry with a clean dry towel.
9. After cleaning and rinsing the tumbler, plug it in and jog the tumbler until the opening is toward the bottom to allow to drain.
10. After cleaning, the machine should be sanitized with a USDA FDA approved sanitation solution.

OPERATOR'S SIGNATURE PAGE

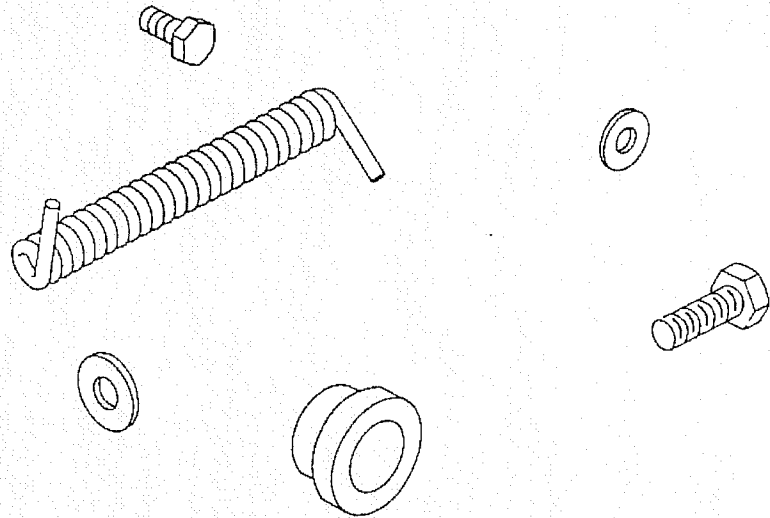
WARNING :
Read and understand this entire manual before signing below.

My signature below attests that I have completely read and understand this manual. I Realize that this machine, if operated carelessly, can cause serious injury to myself and others.

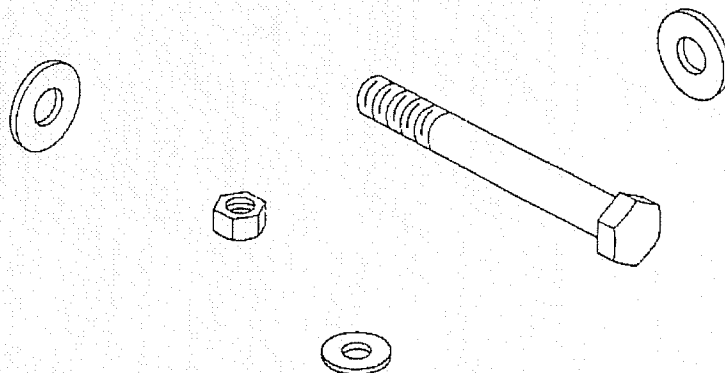
Name (print)	Signature	Date

NOTES

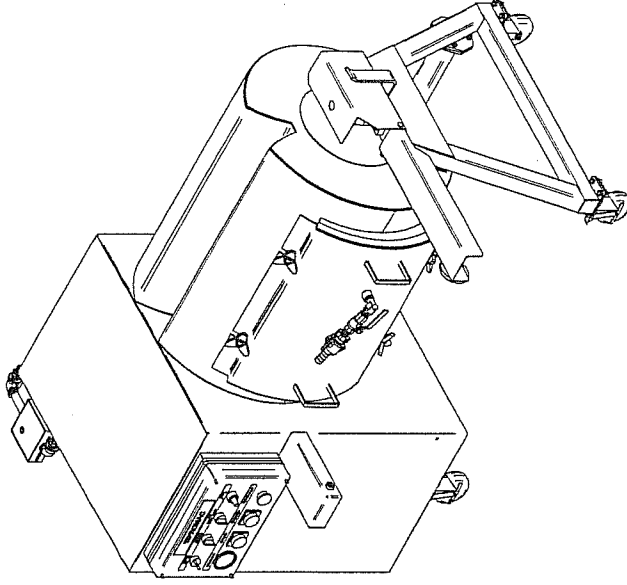
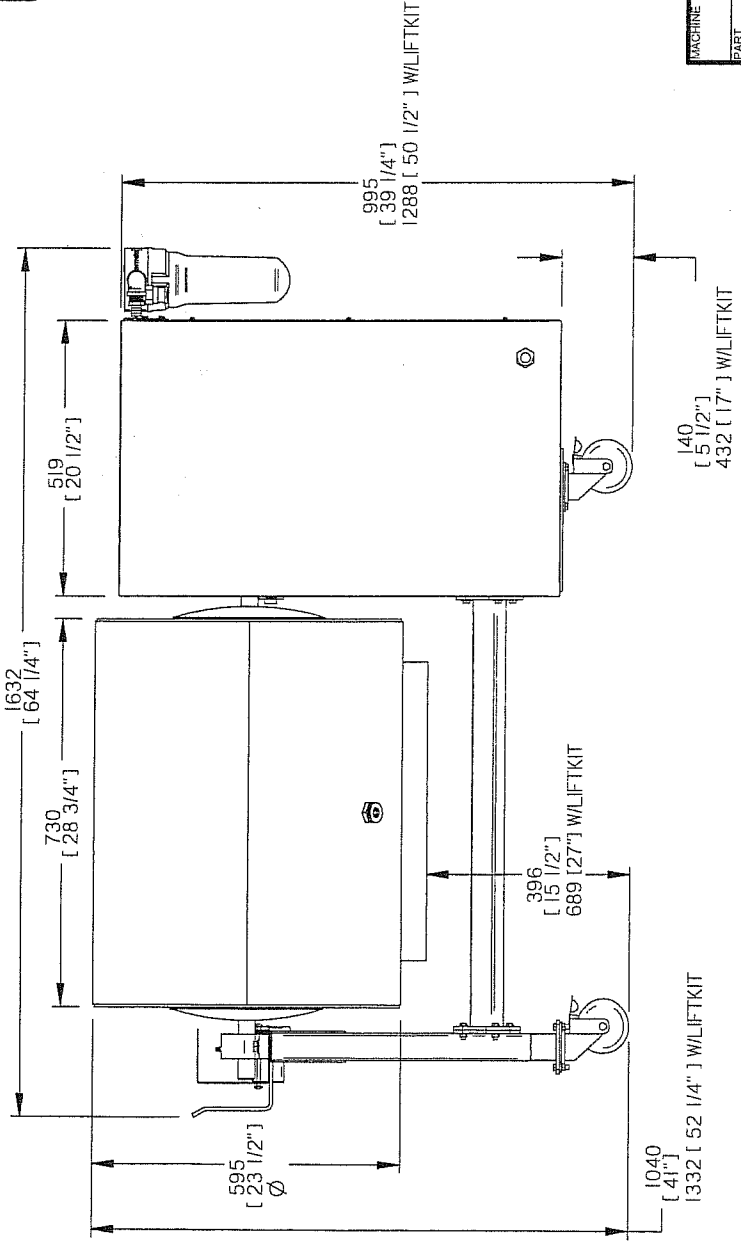
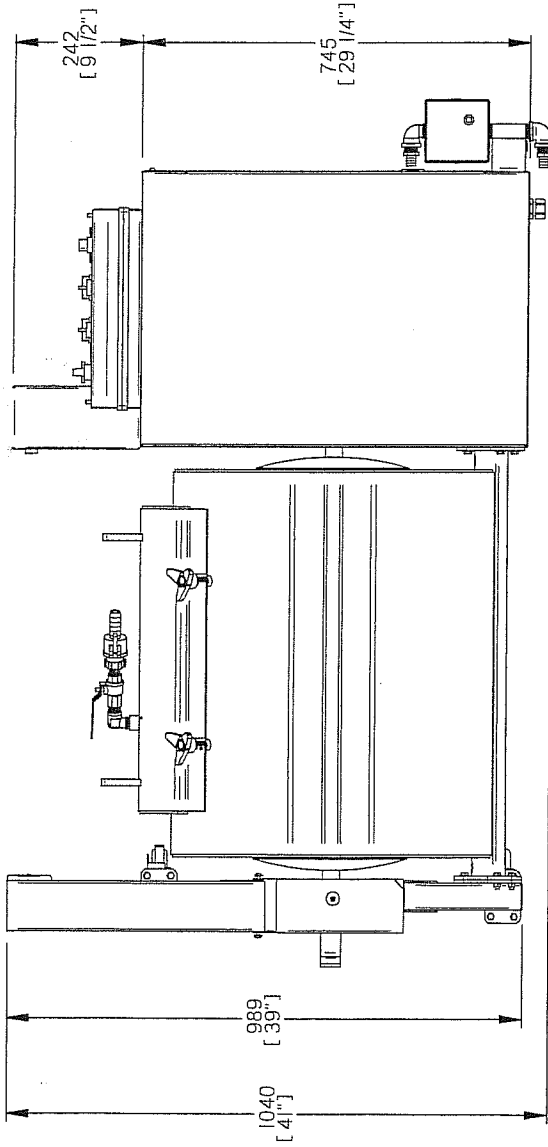




MECHANICAL DRAWING



SK-0298

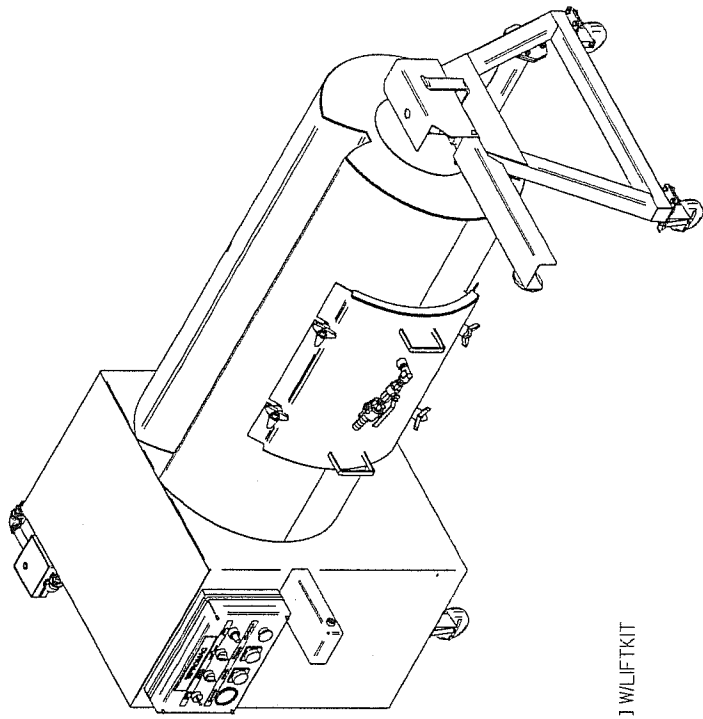
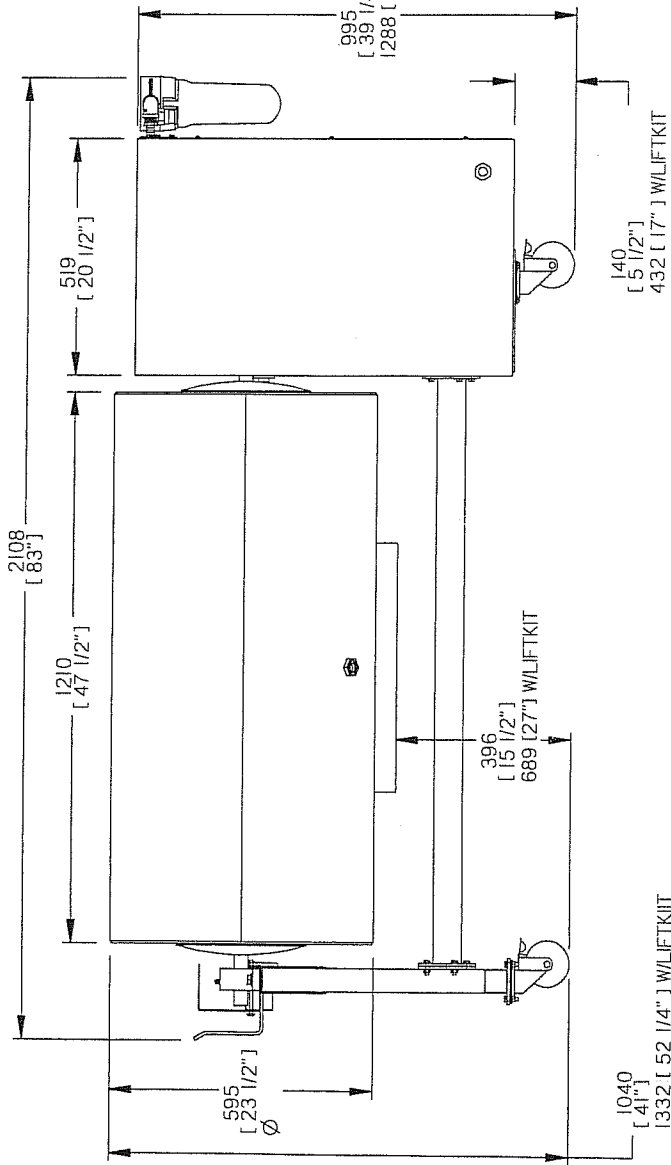
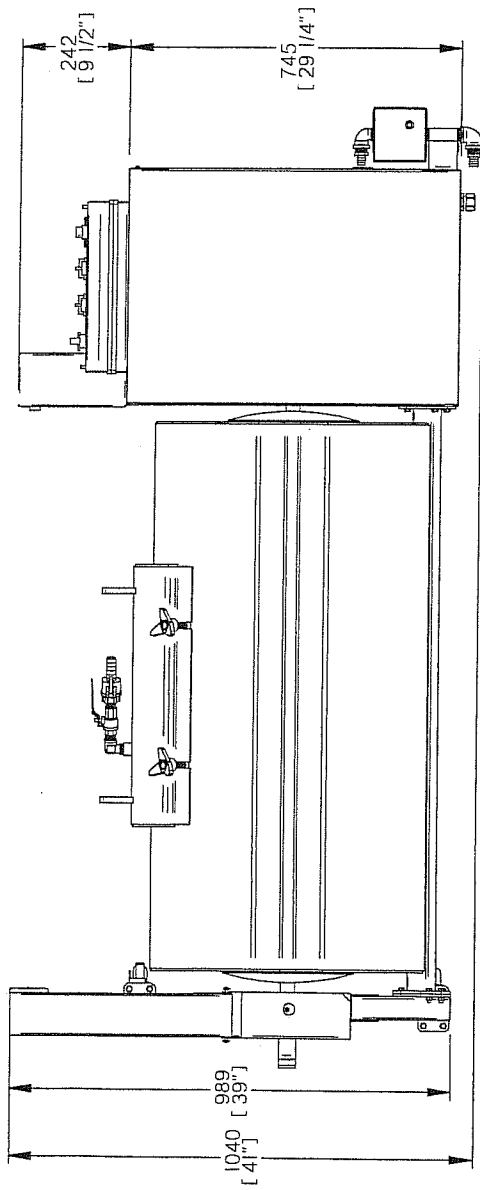


NOTE:
 -SHOWN WITH ANALOG CONTROL,
 DIGITAL CONTROLS OPTIONAL.

MACHINE	ET-3	DEPT.	ST-GERMAIN DE GRANTHAM	QTY.	1
PART	OVERALL DIMENSIONS	USINAGE	ST-GERMAIN DE GRANTHAM	NO.	SK-0298
ITEM		TOLERANCE	QUEBEC CANADA	DATE	04-11-17
MAT.		SOUDAGE		APP. BY	J.G.
				DATE	05-01-20

A	ETAIT AUSSI 005-0618	04-11-17	J.G.
LET.	MODIFICATION	DATE	INT.

SK-297



NOTE:

-SHOWN WITH ANALOG CONTROL,
DIGITAL CONTROLS OPTIONAL.

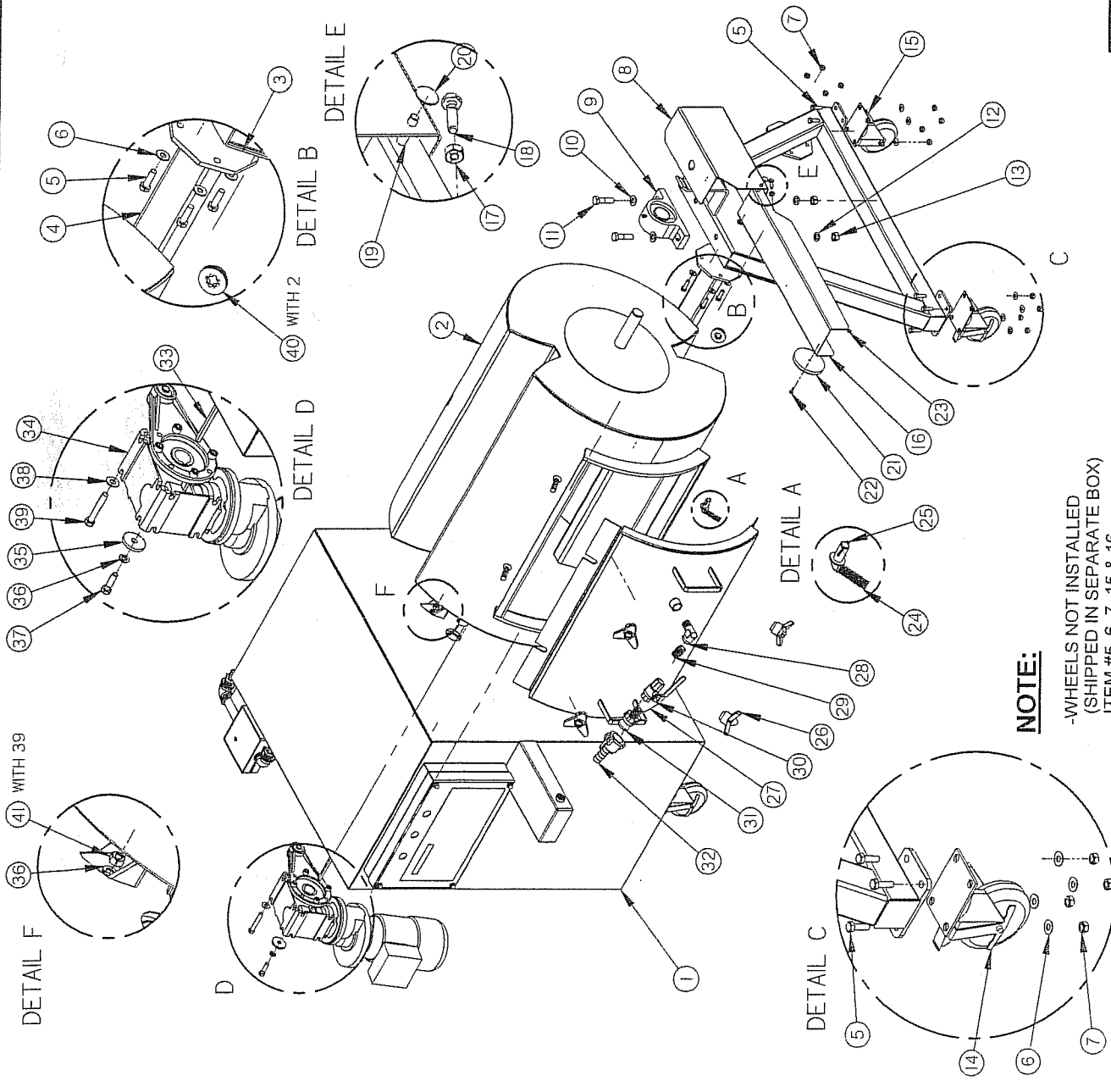
MACHINE	ET-5	DEPT./O. I.	METRIC	INCH	SIPROMAC
PART	OVERALL DIMENSIONS	UNFINISHED	± 0.020"	FINISHED	ST. GERMAIN DE GRANVILLE
ITEM		TOLERANCE	± 0.5	NO.	QUEBEC CANADA
MAT.		WELDING	± 0.020"	DATE	04-11-17
		BY	N.T.S.	DATE	05-01-70
		APP. BY		QTY.	1

A	ETAIT AUSSI 005A0590	04-11-17	J.G.
LET.	MODIFICATION	DATE	INT.

SK-297

1005-0618

ITEM	PART #	DESCRIPTION	QT.
1	005A0591	STRUCTURE VIEW ASSEMBLY	1
2	004A0453	CYLINDER ASSY	1
3	004-0427	RIGHT FRAME SIDE PRE-ASSY	1
4	004-0454	FRAME REAR TUBE FIXATION	1
5	051-0305	BOLT 5/16"-18 NC X 1" S/S	16
6	051-0760	WASHER 5/16" FLAT S/S	16
7	051-0600	NUT 5/16"-18 S/S	16
8	004-0423	PILLOW BLOCK GUARD PRE-ASSY	1
9	075-1537	PILLOW BL. 1-1/4" SET SCREW CORR.REST.	1
10	051-0792	WASHER 3/2" FLAT THICK S/S	2
11	051-0444	BOLT 3/2"-13nc. X 2" S/S	2
12	051-0791	LOCK WASHER 1/2" S/S	2
13	051-0630	NUT 1/2"-13 S/S	2
14	130-4PHB	4" SWIVEL CASTER W/BRAKE	1
15	130-4PHO	4" SWIVEL CASTER W/O BRAKES	1
16	004-0424	REFLECTOR ARM PRE-ASSY	1
17	051-0580	NUT 1/4"-20nc. S/S	1
18	051-0210	BOLT 1/4"-20nc. X 1" S/S	1
19	002-0546	REFLECTOR SUPPORT AXIS	1
20	056-0022	PUSH CAP 1/4" S/S	2
21	026-1131	REFLECTEUR (PHOTO-CELL) 80 MM	1
22	051-0144	SCREW #10-24 N.C 1/2" PAN PHIL. S/S	1
23	051-0571	NUT #10-24 S/S	1
24	004-0450	COVER FIXATION	2
25	056-0118	COTTER PIN 3/32" x 1" S/S	2
26	004-0419	DOOR HANDLE ASSEMBLY	4
27	005-0685	CYLINDER DOOR ASSEMBLY	1
28	101-0670	ELBOW STREET 90° 1/2" NPT. BR.	1
29	101-0370	CLOSE NIPPLE 1/2" NPT BRASS	1
30	107-0030	BALL VALVE 1/2"npt. BRASS	1
31	102-0901	MALE ADAPTER 3/4" X 1/2" MNPT	1
32	102-0905	FEMALE COUPER 3/4" X 3/4" HOSE BLACK	1
33	002A0548	CYLINDER DRIVE SHAFT KEY	1
34	004A0579	GEARMOTOR W/ARM PLATE ASSY	1
35	001A2912	WASHER 0.391 ID x 1 1/2" OD x 3/16"	1
36	051-0781	WASHER 3/8" LOCK S/S	2
37	051-0372	BOLT 3/8"-16nc. X 1 1/4" S/S	1
38	051-0780	WASHER 3/8" FLAT S/S	1
39	051-0400	BOLT 3/8"-16 NC X 2 1/4" S/S	1
40	102-0750	PLASTIC DRUM PLUG 3/4"NPT	1
41	051-0620	NUT 3/8"-16 NC S/S	1



NOTE:

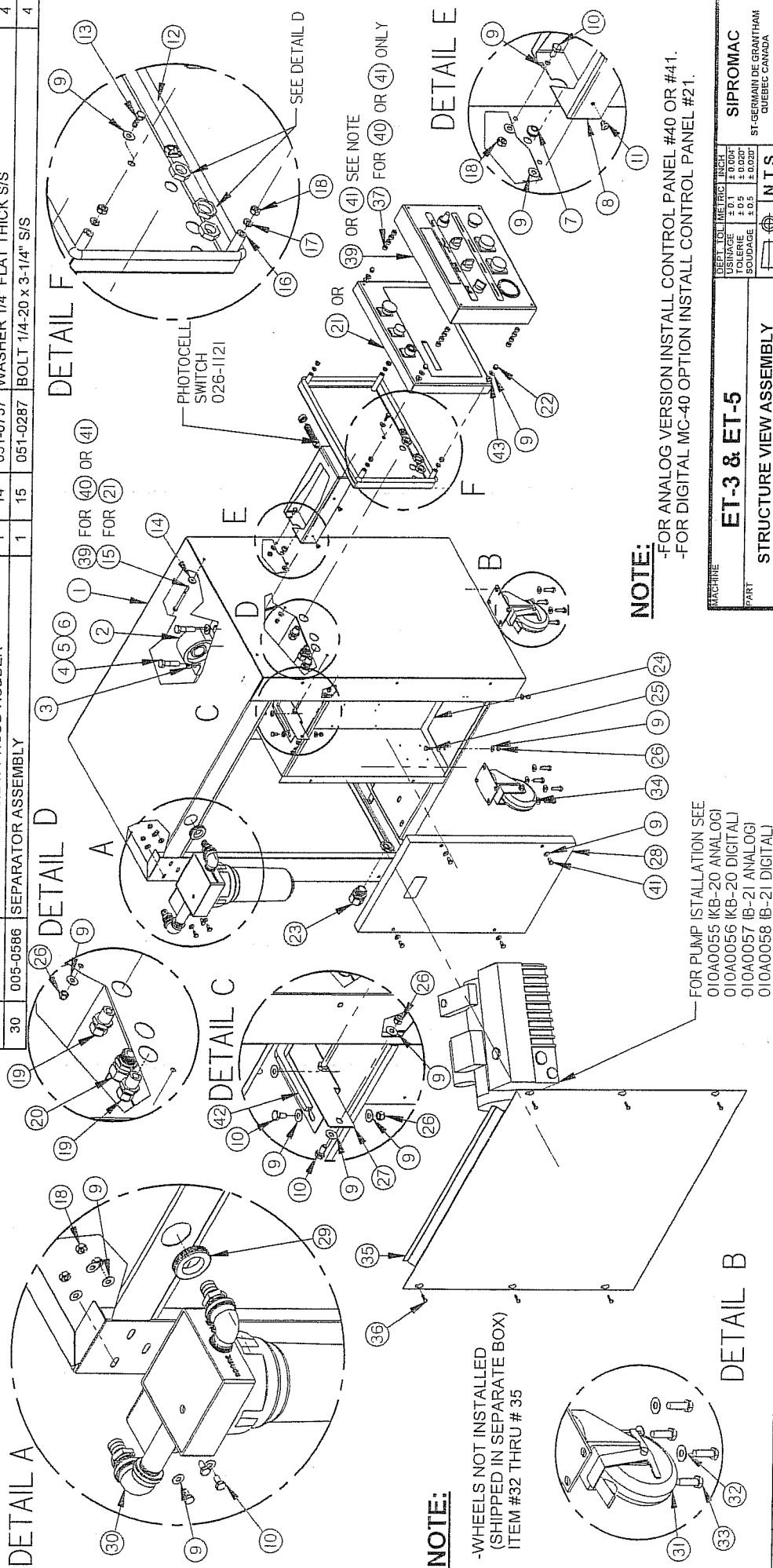
-WHEELS NOT INSTALLED
(SHIPPED IN SEPARATE BOX)
ITEM #5, 6, 7, 15 & 16

MACHINE		DEPT. FOR MEASUREMENTS		SIPROMAC	
PART		USINAGE		ST-GERMAIN DE GRANTHAM	
ITEM		TOLERANCE		QUEBEC CANADA	
MAT.		SOUDAGE		N.T.S.	
TUMBLER ASSEMBLY		DATE 05-09-27		M-I	
CNC		APP. BY M.A.L.		QTY. 1	
NOV 1991		NO 005-0618			

H	REDRAWN, MODIFIED VIEW #1	05-09-27	M.A.
LET.	MODIFICATION	DATE	INT.

1005A0591

ITEM	PART #	DESCRIPTION	QT.	ITEM	PART #	DESCRIPTION	QT.	ITEM	PART #	DESCRIPTION	QT.
31	130-4PHB	4" SWIVEL CASTER W/BRAKE	1	16	058-0140	PLASTIC SPACER 0.266" x 1/2" x 2 1/4"	4	1	004A0430	STRUCTURE W/LEFT FRAME SIDE PRE-ASSY	1
32	051-0760	WASHER 5/16" FLAT S/S	8	17	051-0750	WASHER 1/4" LOCK S/S	4	2	075-1535	PILLOW BLOCK 1 1/4" HCP-207-20	1
33	051-0305	BOLT 5/16"-18 NC X 1" S/S	8	18	051-0580	NUT 1/4"-20nc. S/S	9	3	051-0792	WASHER 1/2" FLAT THICK S/S	2
34	130-4PHO	4" SWIVEL CASTER W/O BRAKES	1	19	036-0400	PRESSE-ÉTOUPES CD09NABKNS + "O" RING	2	4	051-0444	BOLT 1/2"-13nc. X 2" S/S	2
35	001-2002	STRUCTURE ACCES PANEL	1	20	036-0409	PRESSE-ÉTOUPES CD13NABKNS + "O" RING	1	5	051-0791	LOCK WASHER 1/2" S/S	2
36	052-0420	SCREW 1/4"-20 N.C. x 3/4" PAN SLOT BRASS	6	21	005-0588	FRONT P.C. BOARD SUPPORT ASSEMBLY	1	6	051-0630	NUT 1/2"-13 S/S	2
37	058-0025	NYLON SPACER 0.257" ID x 0.500" OD x 1/4"	16	22	051-0591	NUT 1/4"-20 ACORN S/S	4	7	036-0182	GROMMET 17/64" ID. x 5/8" OD. RUBBER	2
38	051-02892	BOLT 1/4"-20 x 4-1/4" S/S	4	23	036-0420	PRESSE-ÉTOUPES CD21NABKNS "O" RING	1	8	004-0432	DETECTOR GUARD PRE-ASSY	1
39	005A0928	ANALOG CONTROL PANEL W/TIMER ASSY	1	24	004-0431	ELECTRICAL BOX PRE-ASSEMBLY	1	9	051-0740	WASHER 1/4" FLAT S/S	30
40	005A0959	ANALOG CONTROL PANEL ASSY	1	25	051-0190	BOLT 1/4"-20 x 3/4" HEX S/S	2	10	051-0180	BOLT. HEX. 1/4"-20 NC. x 1/2" S/S	8
41	052-0402	BOLT. HEX. 1/4"-20 NC. x 1/2" BRASS	4	26	051-0581	NUT 1/4"-20 NYLON LOCK S/S	6	11	057-0050	NYLON FLAT TIE HOLDER (FTH-9)	2
42	179-0014	RUBBER 1/4"x3/8"x1/16"U SHAPED (0.5512)	1	27	001-2095	UPPER E-BOX SUPPORT	1	12	005-0589	REAR P.C. BOARD SUPPORT ASSEMBLY	1
43	057-0089	1/4" x 5/8" O.D. EPDM RUB. SEAL. WASHER	4	28	005-0587	E-BOX COVER ASSEMBLY	1	13	051-0189	BOLT 1/4"-20 x 5/8" HEX S/S	1
				29	036-0250	GROMMET 1 1/8" ID x 1 7/8" OD RUBBER	1	14	051-0757	WASHER 1/4" FLAT THICK S/S	4
				30	005-0586	SEPARATOR ASSEMBLY	1	15	051-0287	BOLT 1/4"-20 x 3-1/4" S/S	4



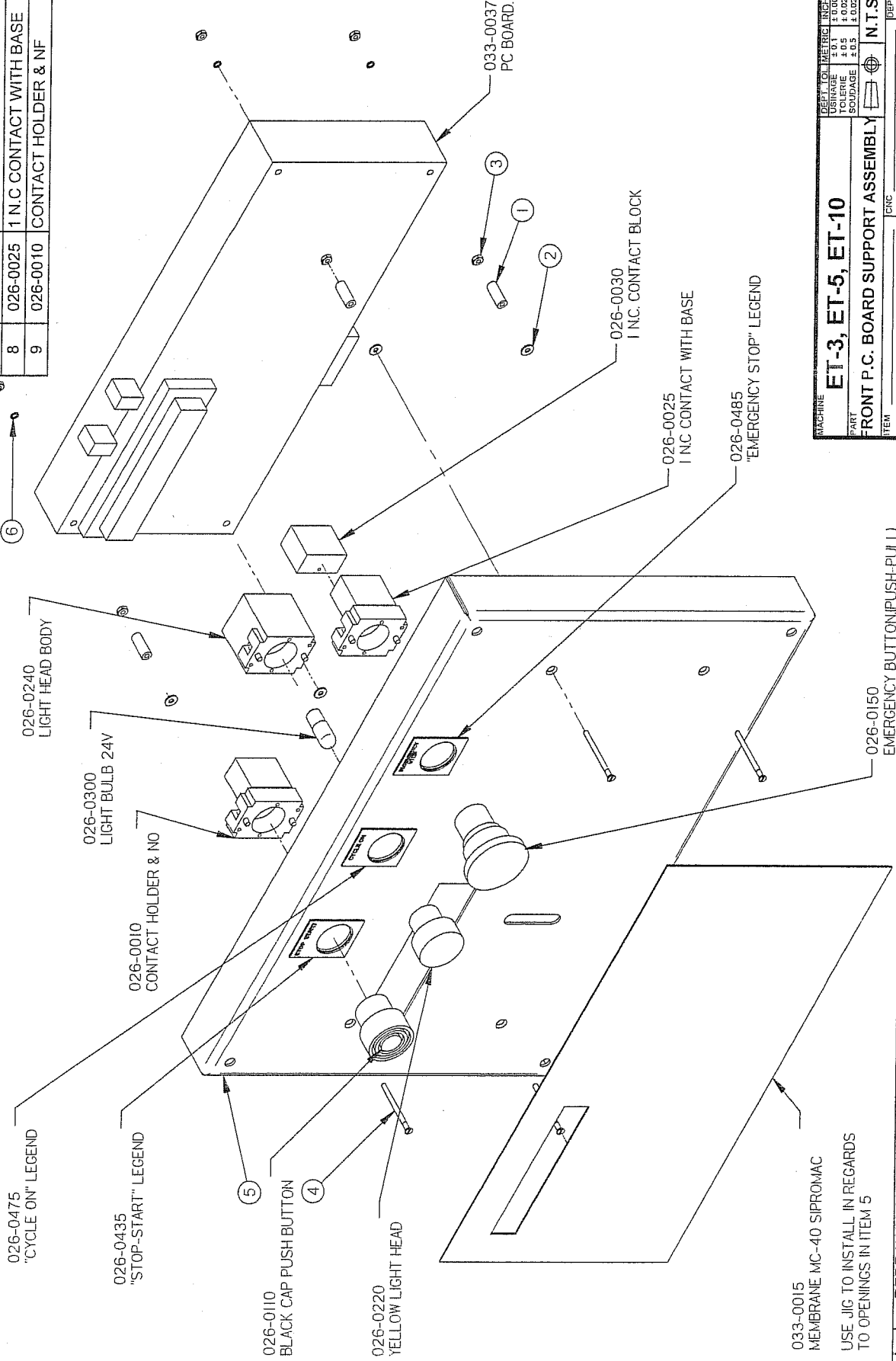
NOTE:
-FOR ANALOG VERSION INSTALL CONTROL PANEL #40 OR #41.
-FOR DIGITAL MC-40 OPTION INSTALL CONTROL PANEL #21.

MACHINE		N.T.S.	
PART	ET-3 & ET-5	STRUCTURE VIEW ASSEMBLY	
ITEM			
MAT.			
DATE	05-09-27	DATE	05-09-27
APP. BY	M.A.L.	APP. BY	M.A.L.
DEPT	M-I	DEPT	M-I
QTY.	1	QTY.	1
SIPROMAC		SIPROMAC	
ST-GERMAIN DE GRANTHAM		ST-GERMAIN DE GRANTHAM	
QUEBEC CANADA		QUEBEC CANADA	
NO		NO	
005A0591		005A0591	

G	ADDED ITEMS 41 & 42	06-01-05	M.A.
F	REDRAWN; MODIFIED VIEW #12, 21, 40 & 41	05-09-27	M.A.
LET.	MODIFICATION	DATE	INT.

1005-0588

ITEM	PART #	DESCRIPTION	QT.
1	058-0120	CPVC SPACER 0.120" x 1/4" x 5/8"	4
2	051-0713	WASHER #4 FLAT S/S	4
3	051-0540	NUT #4-40 HEX S/S	8
4	051-0092	SCREW #4-40 x 1 1/4" FLAT SLT S/S	4
5	004-0433	FRONT P.C. BOARD SUPPORT PRE-ASSY	1
6	051-0715	WASHER #4 LOCK SS	4
7	026-0030	CONTACT NF	1
8	026-0025	1 N.C CONTACT WITH BASE	1
9	026-0010	CONTACT HOLDER & NF	1



033-0015
MEMBRANE MC-40 SIPROMAC
USE JIG TO INSTALL IN REGARDS
TO OPENINGS IN ITEM 5

ET-3, ET-5, ET-10
FRONT P.C. BOARD SUPPORT ASSEMBLY

DEF. TO: METRIC INCH
USINAGE ±0.1
TOLERANCE ±0.5
SOUDAGE ±0.25

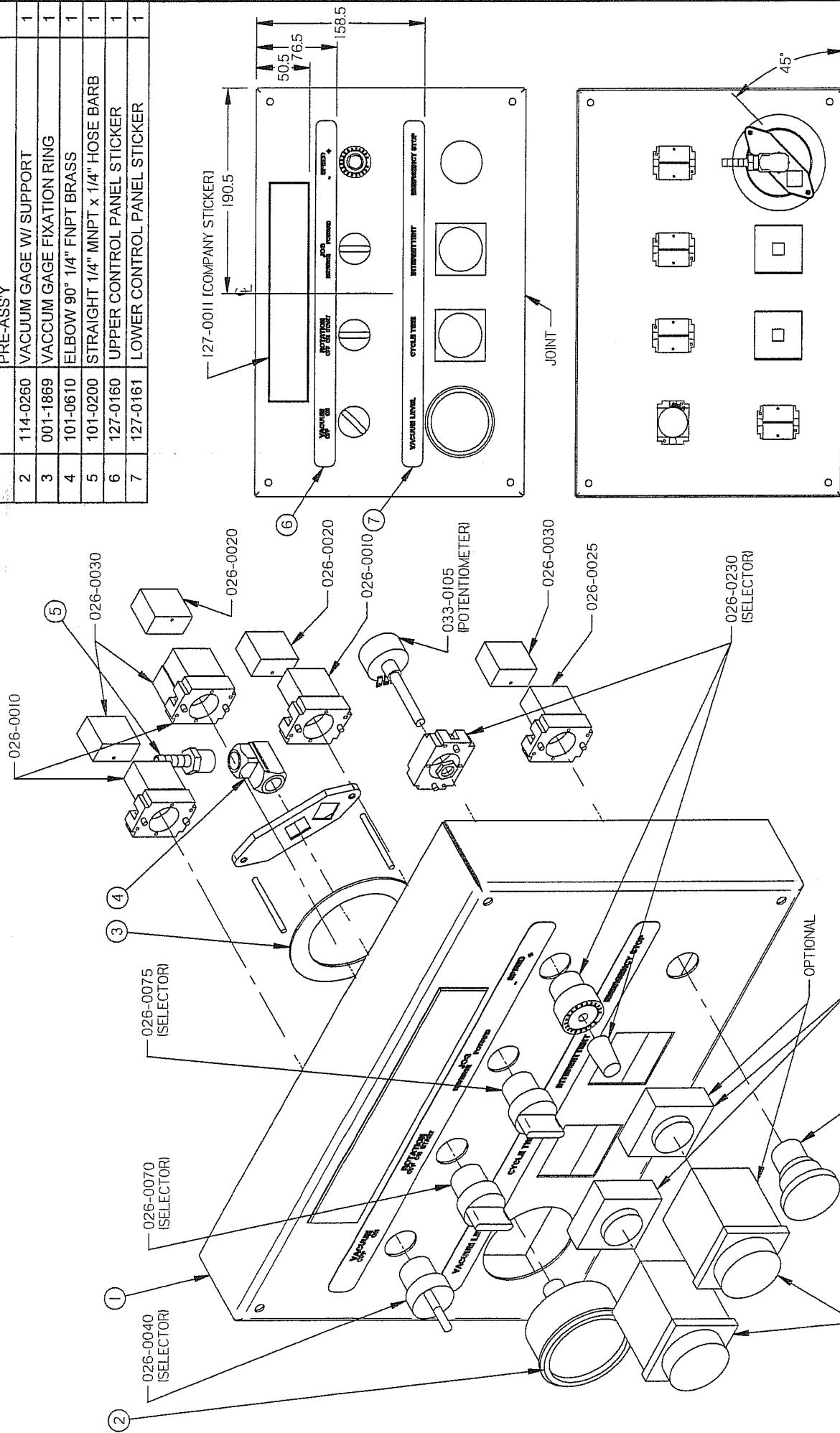
SIPROMAC
ST-GERMAIN DE GRANTHAM
QUEBEC CANADA

DATE: 05-09-26
APP. BY: M.A.L.
CNC: M
DWB BY: M.A.L.
ITEM: M
MATERIAL: N.T.S.
NO: 005-0588
CITY: 1

REDRAWN, MODIFIED VIEW ITEM 5
DATE: 05-09-26
M.A.
MODIFICATION: DATE INT.

005A0928

ITEM	PART #	DESCRIPTION	QTY.
1	004A1397	ANALOG CONTROL PANEL W/TIMER PRE-ASSY	1
2	114-0260	VACUUM GAGE W/ SUPPORT	1
3	001-1869	VACUUM GAGE FIXATION RING	1
4	101-0610	ELBOW 90° 1/4" FNPT BRASS	1
5	101-0200	STRAIGHT 1/4" MNPT x 1/4" HOSE BARB	1
6	127-0160	UPPER CONTROL PANEL STICKER	1
7	127-0161	LOWER CONTROL PANEL STICKER	1



MACHINE
ET-3, ET-5 & ET-10

PART
ANALOG CONTROL PANEL W/TIMER ASSY

DEPT. N.T.S.

DATE 05-09-26

APP. BY M.A.L.

DEPT. M-1

QTY. 1

NO. 005A0928

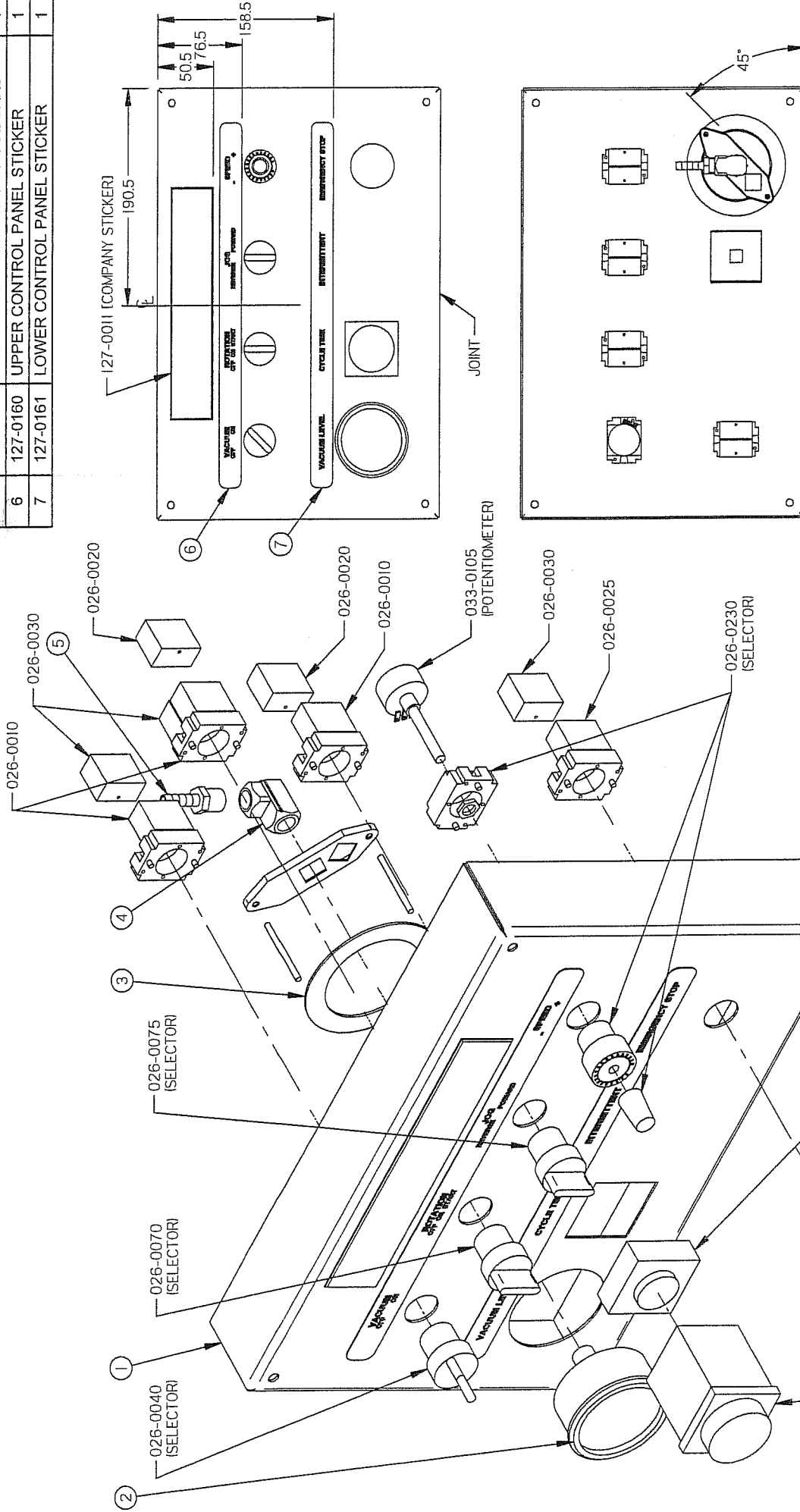
ST-GERMAIN DE GRANVILLE
QUEBEC CANADA

DEPT. INCH
USINAGE ± 0.1 ± 0.004
TOLERANCE ± 0.5 ± 0.027
SOUDAGE ± 0.3 ± 0.020

C	MODIF #A-0428	05-02-01	M.A.
B	REDRAWN, REMOVED ITEM 179-0014	05-09-26	M.A.
LET.	MODIFICATION	DATE	INT.

1005A0959

ITEM	PART #	DESCRIPTION	QT.
1	004A1261	ANALOG CONTROL PANEL PRE-ASS'Y	1
2	114-0260	VACUUM GAGE W/ SUPPORT	1
3	001-1869	VACUUM GAGE FIXATION RING	1
4	101-0610	ELBOW 90° 1/4" FNPT BRASS	1
5	101-0200	STRAIGHT 1/4" MNPT x 1/4" HOSE BARB	1
6	127-0160	UPPER CONTROL PANEL STICKER	1
7	127-0161	LOWER CONTROL PANEL STICKER	1

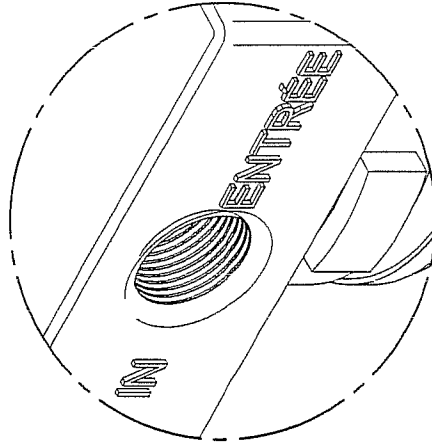
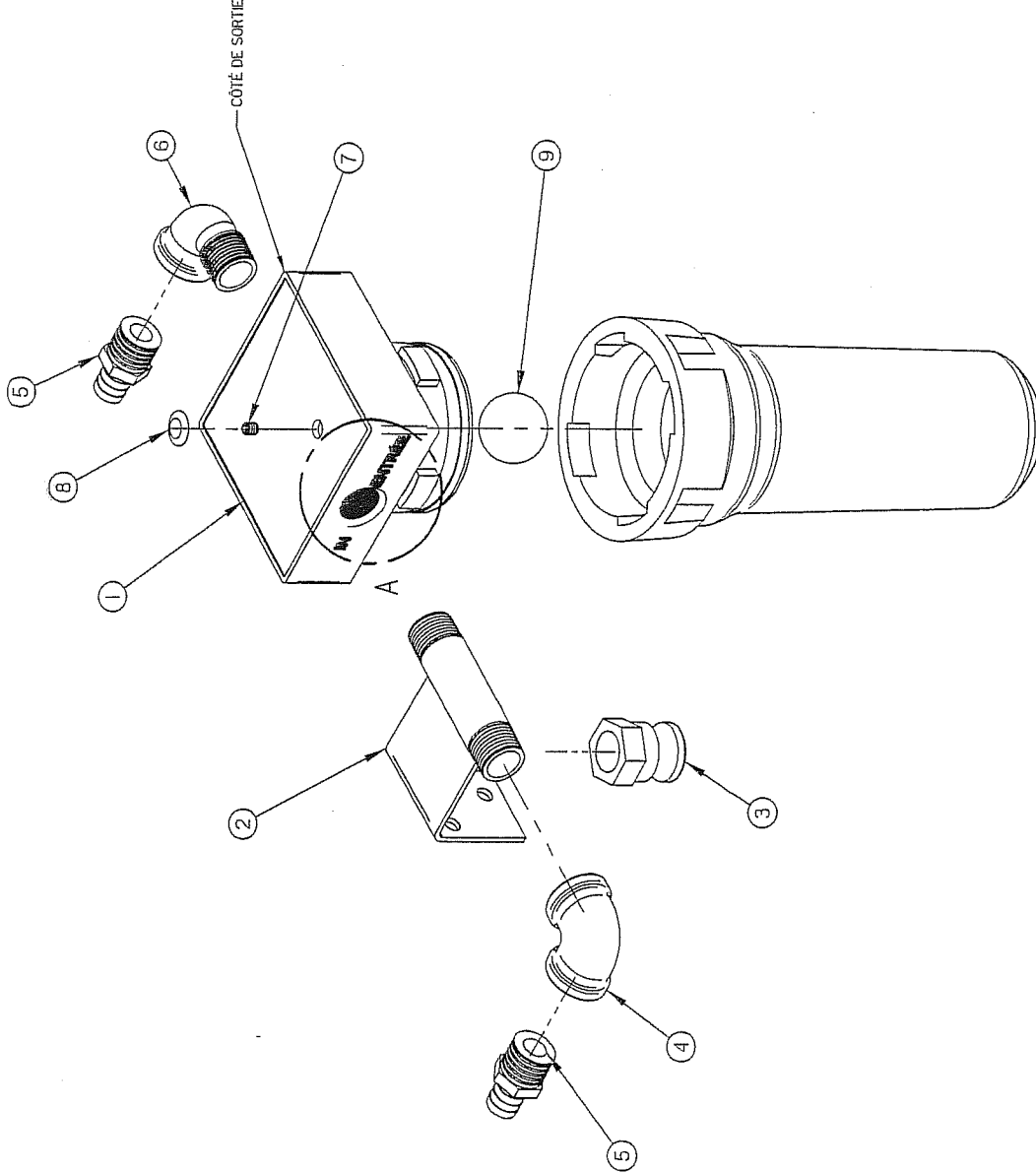


MACHINE		SIPROMAC	
PART		ST-GERMAIN DE GRANTHAM QUEBEC CANADA	
ANALOG CONTROL PANEL ASSY		N.T.S.	
ITEM	CNC	DATE	QTY.
		05-09-26	1
DRAWN BY M.A.L.		DEPT. M-1	
APP. BY		NO. 005A0959	

A REDRAWN, REMOVED ITEM 179-0014
 LET. MODIFICATION DATE INT. 05-09-26 M.A.

005-0586

ITEM	PART #	DESCRIPTION	QT.
1	003-0106	SEPARATOR BODY	1
2	004-0372	SEPARATOR SUPPORT PRE-ASS'Y	1
3	102-0885	MALE ADAPTER 3/4" X 1/2" FNPT YELLOW	1
4	101-0631	ELBOW 90° 3/4" FNPT CAST BRASS	1
5	101-0280	STRAIGHT 3/4" MNPT x 3/4" HOSE BARB	2
6	101-0681	ELBW STREET 90° 3/4" NPT CAST BRASS	1
7	051-0178	SCREW 1/4"-20 x 5/16" SKT SET S/S	1
8	057-0440	PLUG 3/8" PLASTIC	1
9	154-0300	PING PONG BALL	1



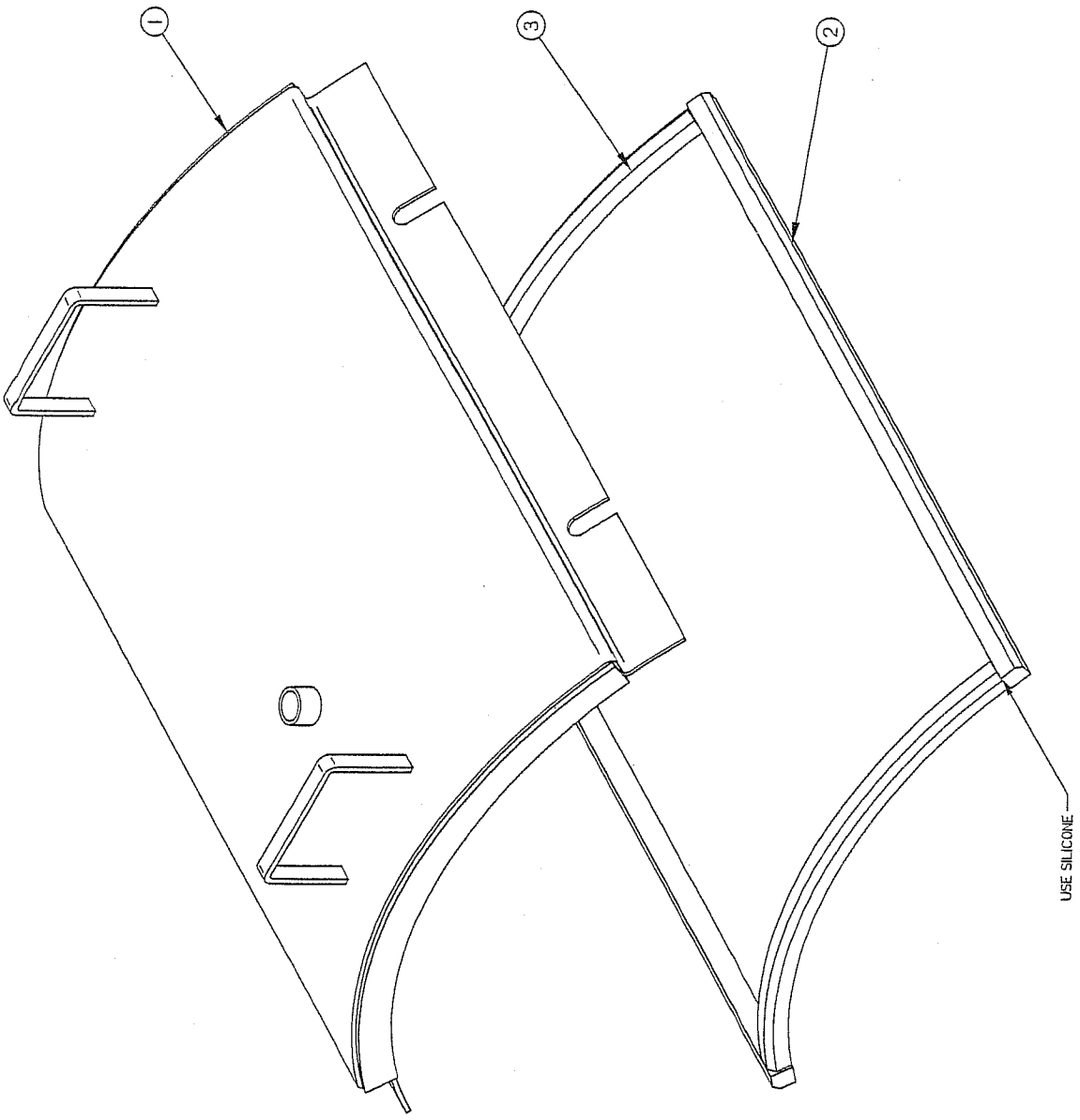
DETAIL A

MACHINE		DEPT. TOL. METRIC		FINISH	
ET-2, 3, 5 & ET-10		USINAGE ±0.1		±0.004"	
SEPARATOR ASSEMBLY		SOUDEAGE ±0.5		±0.020"	
SINC		N.T.S.		M	
DATE 02-09-18		DATE		DATE	
Y.C.		Y.C.		Y.C.	
APP. BY LT		APP. BY		APP. BY	
REDESSINER S.E		MODIFICATION		005-0586	
DATE 02-09-18		DATE		DATE	
Y.C.		Y.C.		Y.C.	
INT.		INT.		INT.	

E	REDESSINER S.E	02-09-18	Y.C.
LET.	MODIFICATION	DATE	INT.

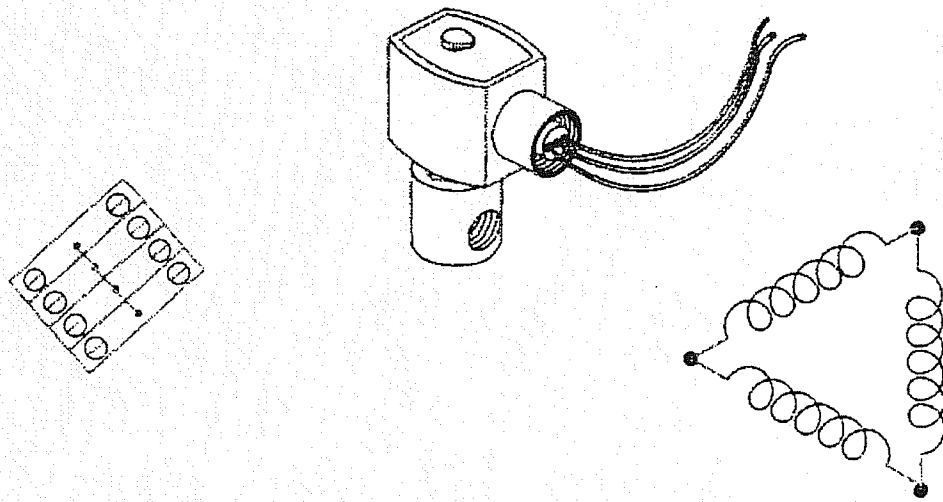
005-0685

ITEM	PART #	DESCRIPTION	QT.
1	004-0435	CYLINDER DOOR PRE-ASSY	1
2	008-0477	CYLINDER DOOR HOR. RUBBER	2
3	008-0478	CYLINDER DOOR VERTICAL RUBBER	2

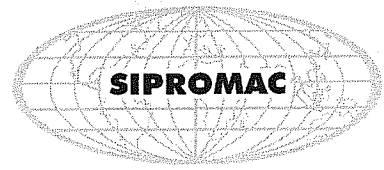
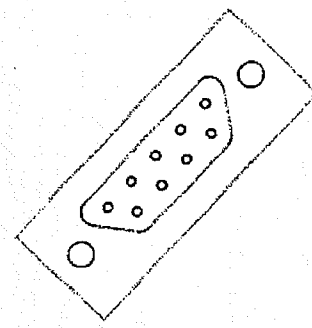
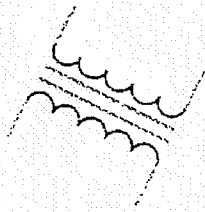


MACHINE	ET-3 & ET-5		DEPT. TOL. METRIC	INCH	SIPROMAC
PART	CYLINDER DOOR ASSEMBLY		USINAGE ± 0.1	± 0.004	ST-GERMAIN DE GRANTHAM
ITEM			TOLERANCE ± 0.5	± 0.020	QUEBEC CANADA
DRAWN BY	Y.C.	DATE	SCODDAGE ± 0.5	± 0.020	
APP. BY	LT	DATE	N.T.S.		
			DEPT.		M
			NO.		005-0685
			DEPT.		

A	REDESSINER S.E	02-08-21	Y.C.
LET.	MODIFICATION	DATE	INT.



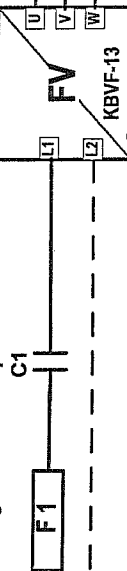
ELECTRICAL DRAWING



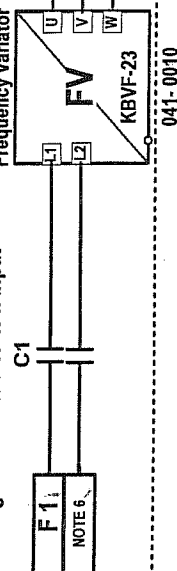
Gnd L1 L2 L3 N

- C1:LC1D18G7 #025-0023-1/2 HP.115V. # KBVF-13 # 041-0009 = 11A. FUSE F1:15A. # 034-0500
- C1:LC1D09M7 #025-0021-1/2 HP.230V. # KBVF-23 # 041-0007 = 7.0A. FUSES F1:10A. # 034-0470
- C1:LC1D18G7 #025-0023-1 HP.115V. # KBVF-14 # 041-0008 = 16A. FUSE F1:20A. # 034-0530
- C1:LC1D09M7 #025-0021-1 HP.230V. # KBVF-24 # 041-XXXX = 10A. FUSES F1:15A. # 034-0500

Wiring for 120VAC input



Wiring for 208-240VAC 1Ph input

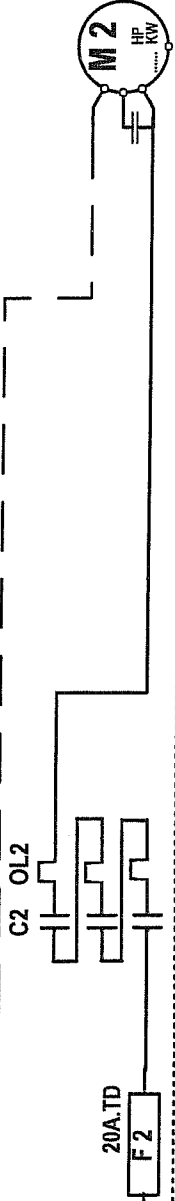
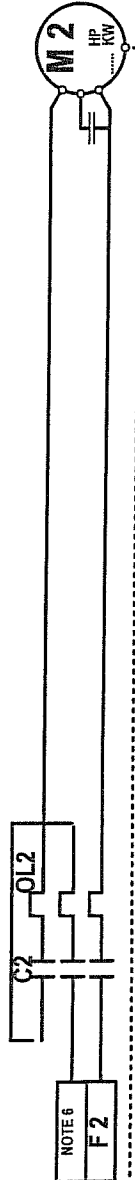


PUMP

Model: _____ M³/h
 Sn : _____ TOTAL: _____ A

PUMP

Model: _____ M³/h
 Sn : _____ TOTAL: _____ A



1)120V/1Ph.60Hz(csa)Direct Connection (N)

KB20 LC1D18G7 #025-0023 LRD21 #025-0190 set: 13A (for 125V)

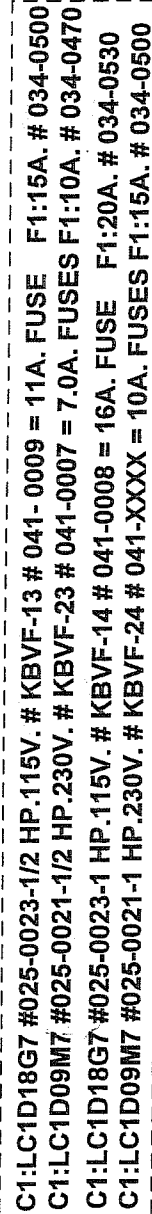
NOTE 6

240V / 1 PH / 50 HZ (Europe) Dummy Fuse Midget (L2)

DRUM. ROTATION SYSTEM

MOTOR

Model: _____
 Sn : _____
 Gearbox : _____
 Model: _____
 Sn : _____
 Ratio : _____
 FREQ. VARIATOR
 Model: _____
 Sn : _____



category		model		vol.		1 Ph 50 Hz		SIPROMAC	
TUMBLERS		ET 2,3,5 & 10		circuit		year		St-Germain de Grantham	
system		POWER		day		month		QUEBEC, CANADA	
options		ANALOG		block		app		PAGE 1 de 1	
				06 07 12		DL PP XX		006-1900	

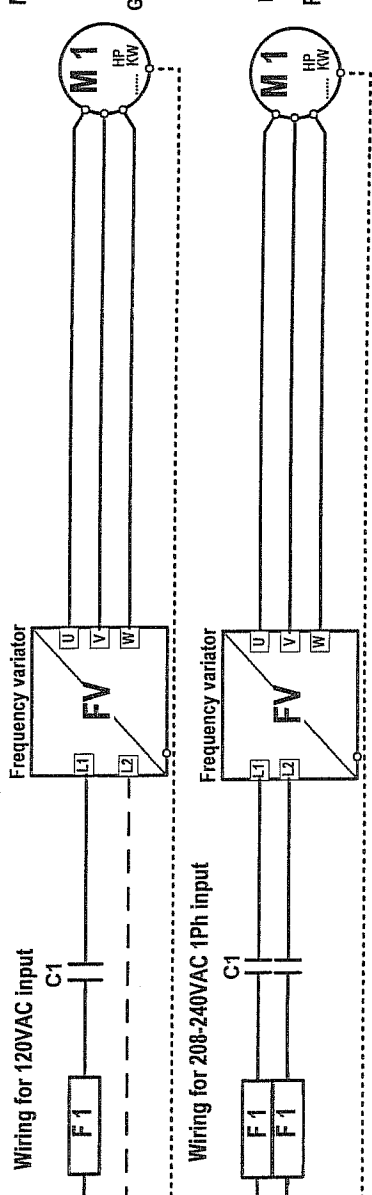
- C1: LC1D18G7 #025-0023-1/2 HP.115V. # KBVF-13 # 041-0009 = 11A. FUSE F1:15A. # 034-0500
- C1: LC1D09M7 #025-0021-1/2 HP.230V. # KBVF-23 # 041-0007 = 7.0A. FUSES F1:10A. # 034-0470
- C1: LC1D18G7 #025-0023-1 HP.115V. #KBVF-14 # 041-0008 = 15A. FUSE F1:20A. # 034-0530
- C1: LC1D09M7 #025-0021-1 HP.230V. # KBVF-24 # 041-XXXX = 10A. FUSES F1:15A. # 034-0500

DRUM. ROTATION SYSTEM

name plate
measured

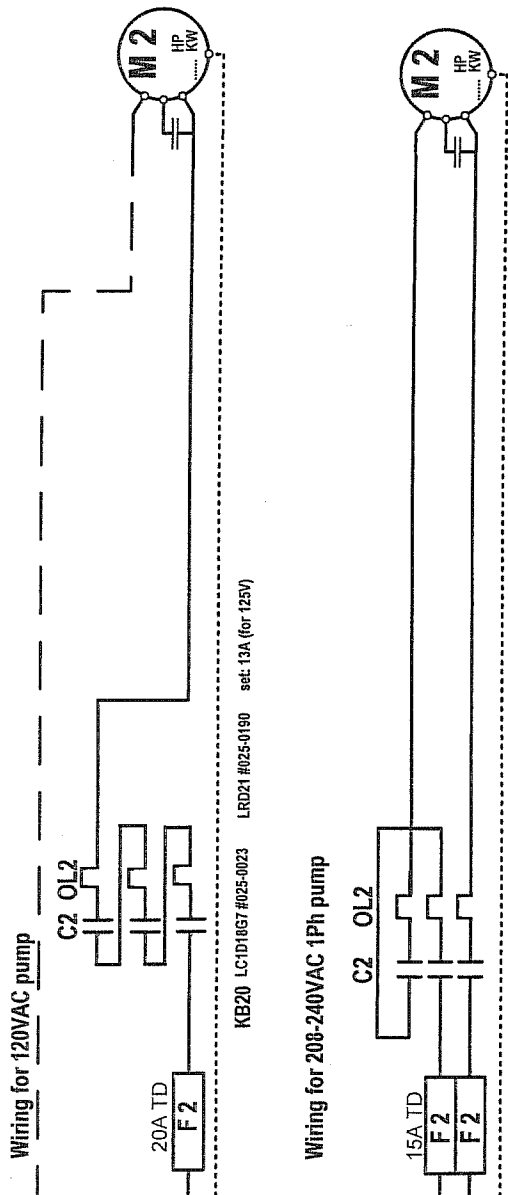
MOTOR

Model: _____ Sn : _____
 Gearbox: _____
 Model: _____ Sn : _____
 Ratio : _____
FREQ. VARIATOR
 Model: _____ Sn : _____



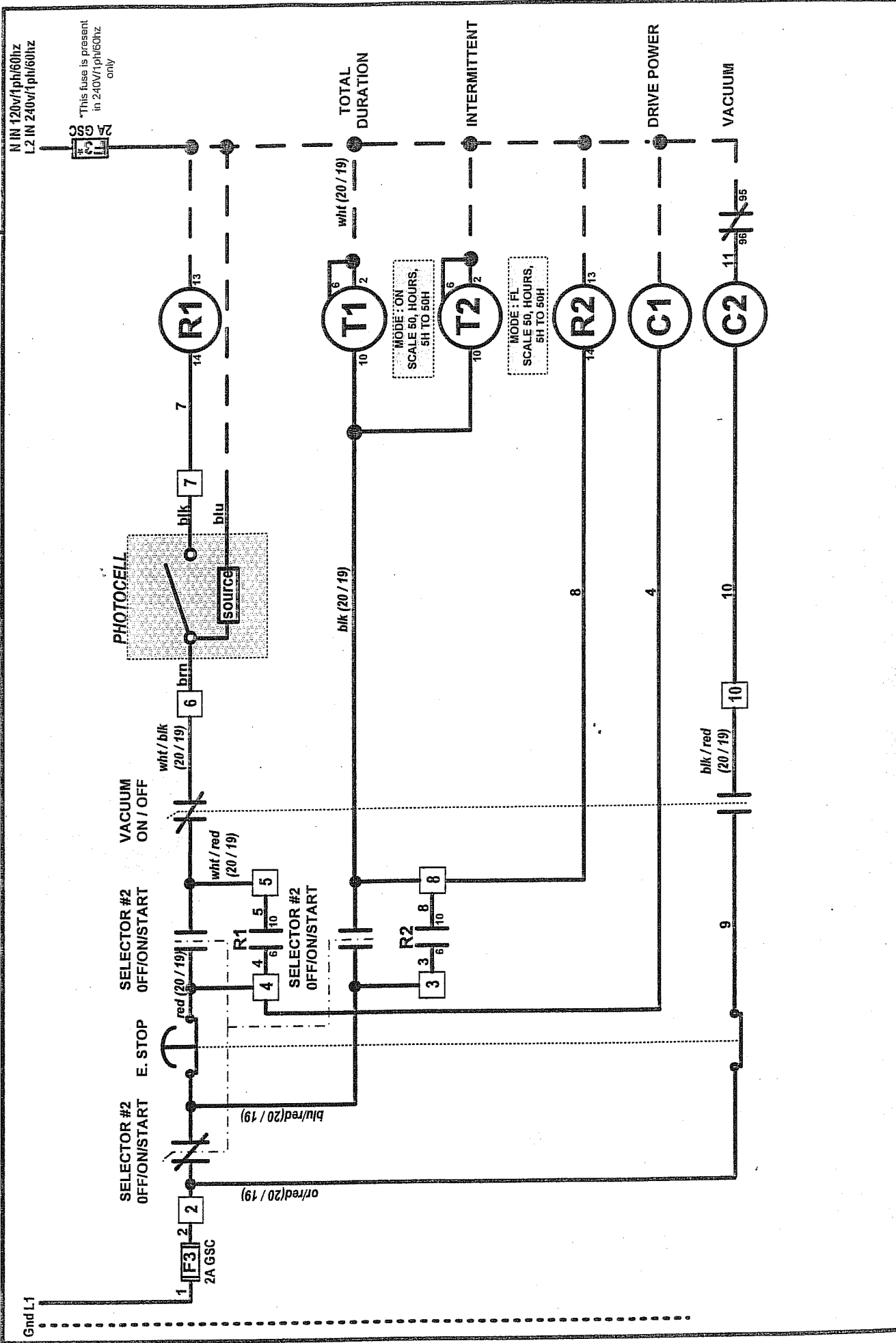
PUMP

Model: _____ Sn : _____
 M³ / h _____
 Model: _____ Sn : _____



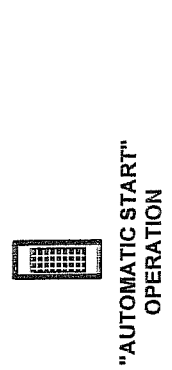
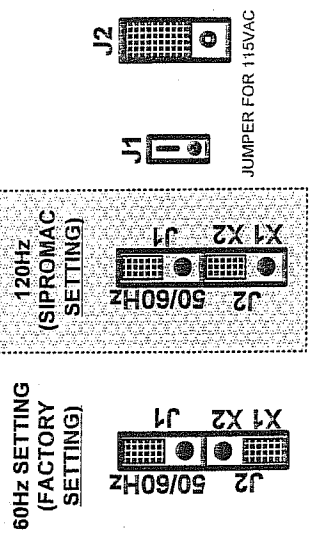
B21 LC1D09P7 #025-0021 LRD12 # 025-0160 set: 6.5A (for 208 @ 240V)

category	TUMBLERS	model	ET 2,3,5 & 10	vol.	1Ph 60Hz
system	POWER			year	month
options	ANALOG			day	12
				concept	DL
				draw	SP
				app	XX
				block	
SIPROMAC St-Germain de Grantham QUEBEC, CANADA					
006-1920 PAGE 1 de 1					



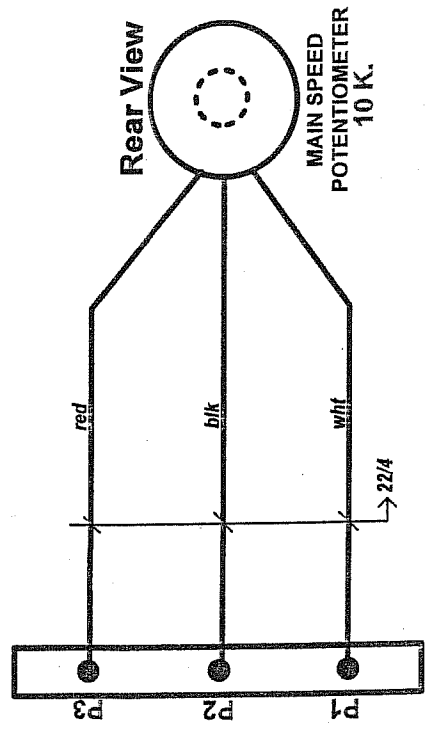
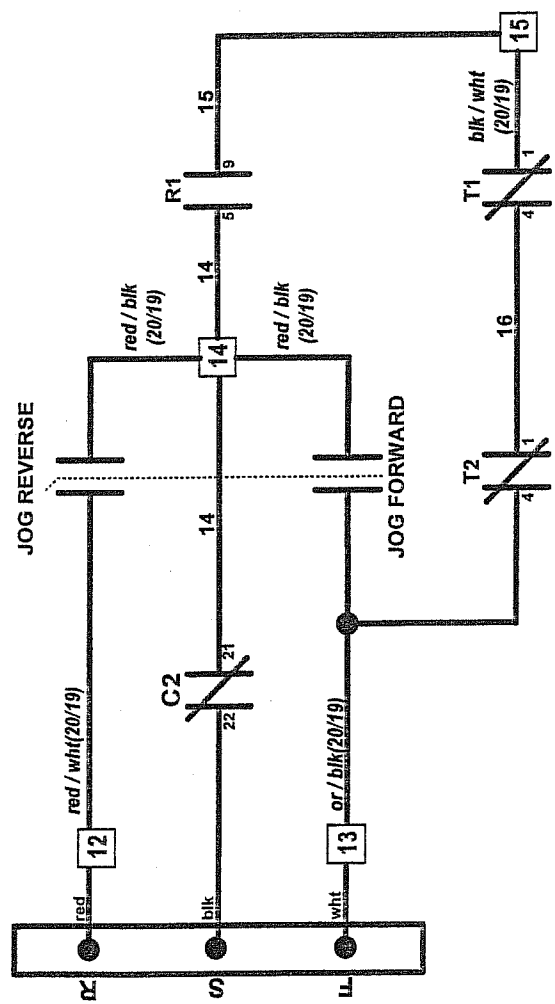
category		model		1 Ph		block	
TUMBLERS		ET 2,3,5 & 10		Year	month	day	
system		COMMAND		06	07	12	
options		ANALOG (with intermittent timer)		concept	draw	app	DL
				DL	SP	DL	
				006-1937		PAGE 1 de 4	

SIPROMAC
 St-Germain de Grantham
 QUEBEC, CANADA

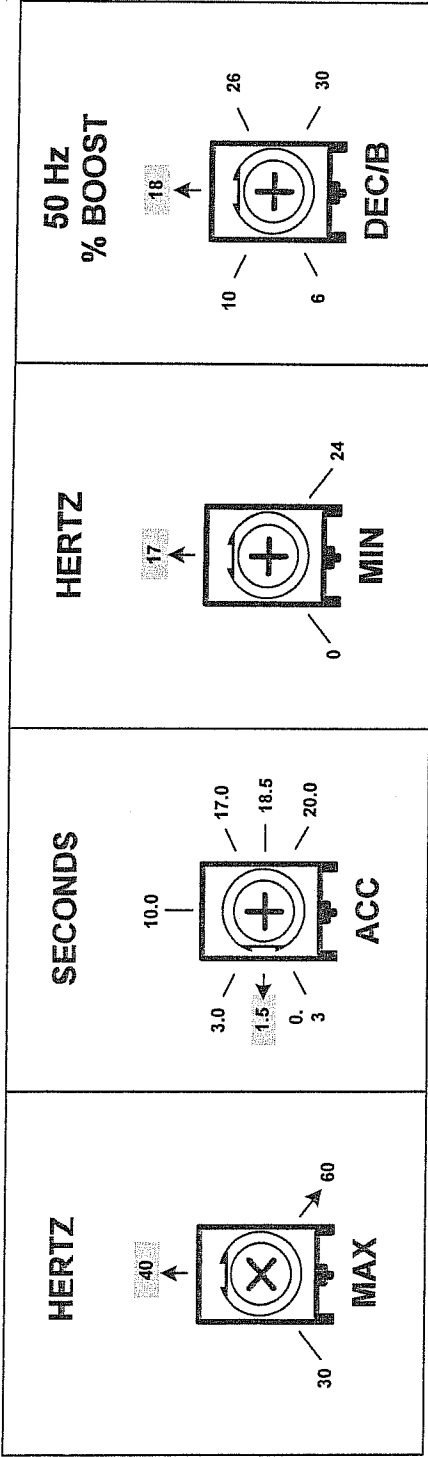


MINIMUM SPEED (MIN) 17 Hz.
 MAXIMUM SPEED (MAX) 60 Hz.
 ACCELERATION (ACC) 5.0 S.
 DECELERATION (DEC) 5.0 S.

CURRENT LIMIT 1st.
 shutdown (CL)
 SET 160 % FULL RATED.

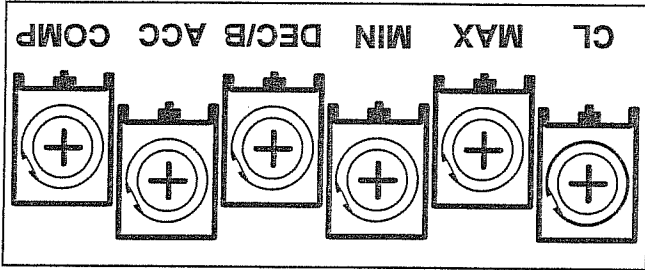
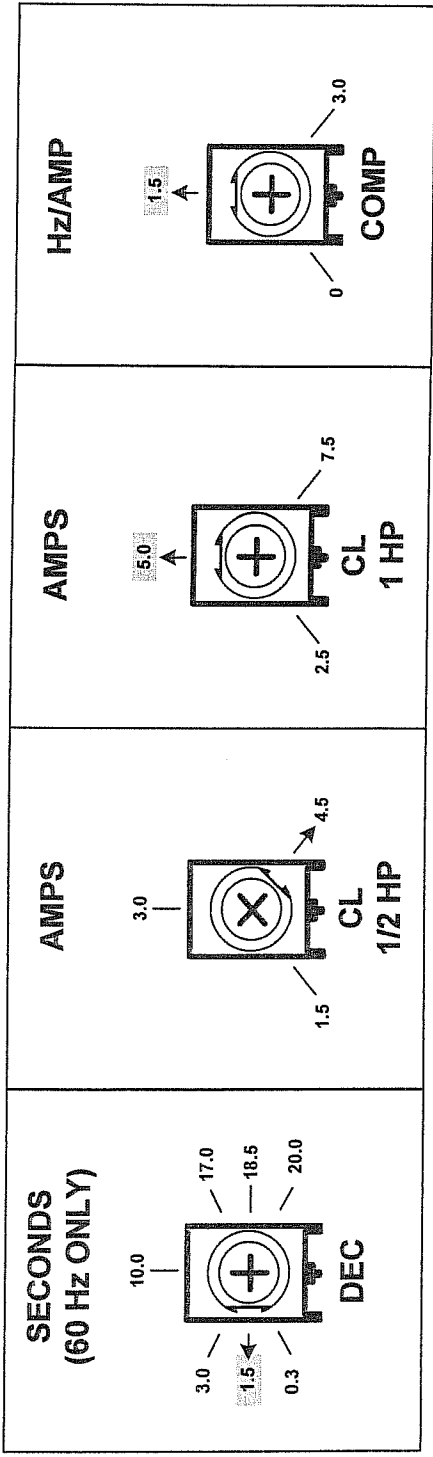


category		model		vol		block	
TUMBLERS		ET 2,3,5 & 10		1 Ph			
system		COMMAND		year	month	day	block
options		ANALOG (with intermittent timer)		06	02	27	
		concept	draw	app	DL	SP	DL
				006-1937		PAGE 2 de 4	
				SIPROMAC		St-Germain de Grantham QUEBEC, CANADA	

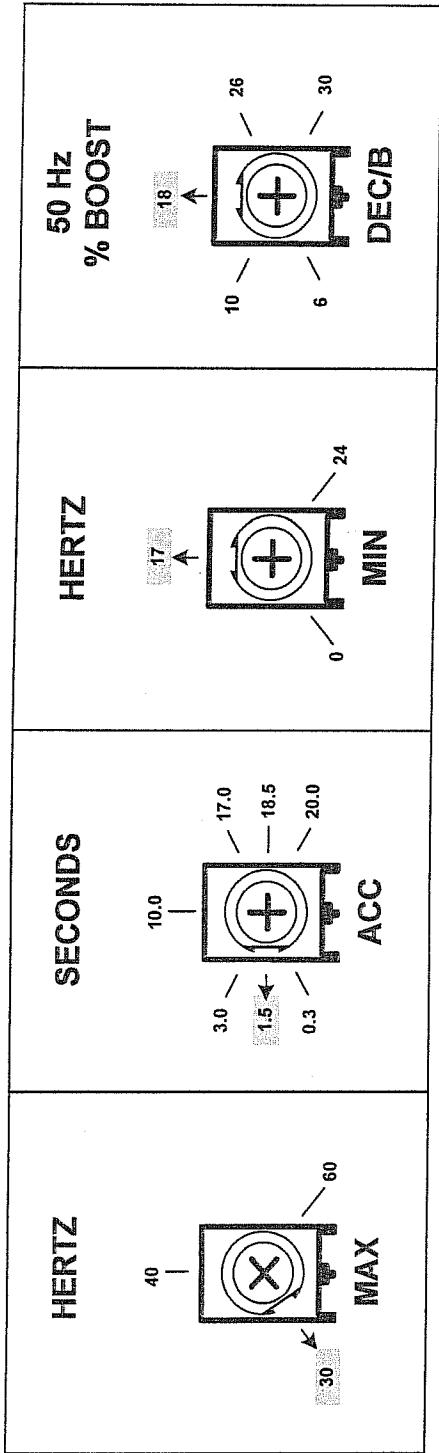


12 RPM MAX.

2 RPM MIN.

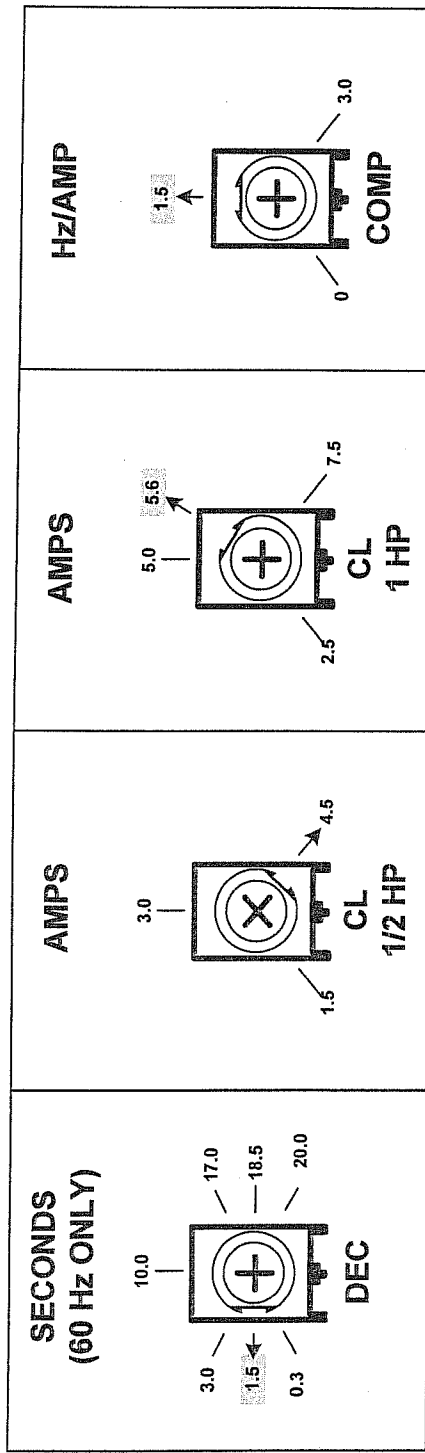
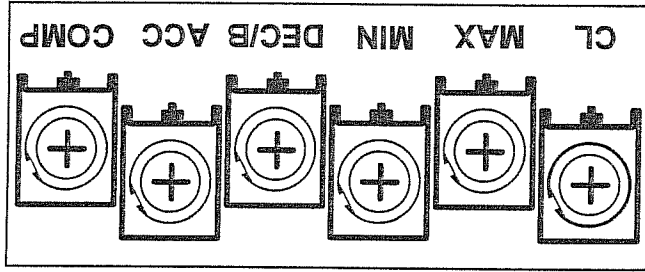


category		model		1 Ph		volt		SIPROMAC	
system		ET 2,3 & 5		year		circuit		St-Germain de Grandham QUEBEC, CANADA	
options		DRIVE SETTING		month		block			
		ANALOG		day					
				06 05 01					
				concept		app			
				DL		PP		DL	
				006-1937		PAGE		3 de 4	



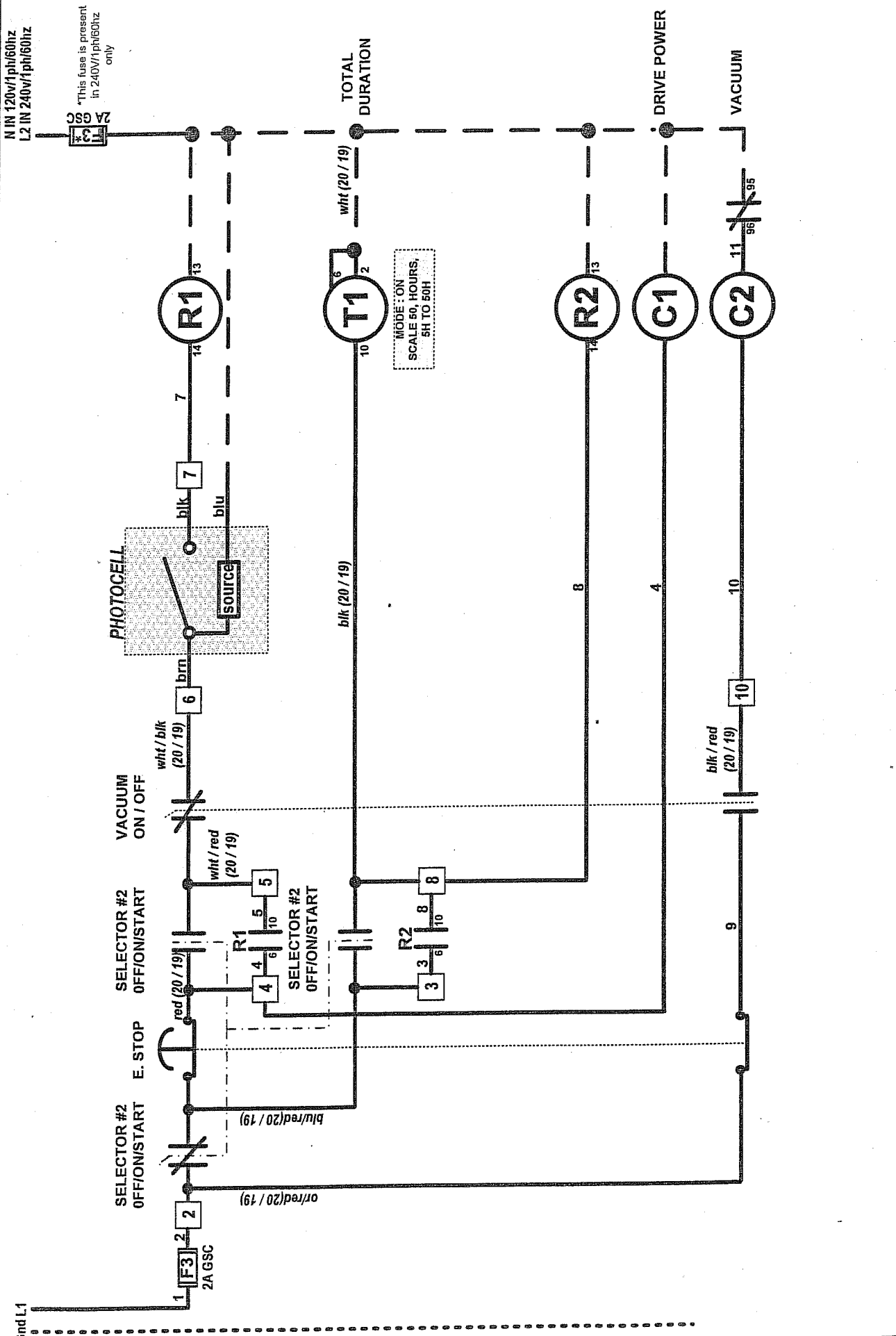
12 RPM MAX.

2 RPM MIN.



category		model		vol.		1 Ph		SIPROMAC	
system		ET-10		circuit		year		St-Germain de Grantham	
options		DRIVE SETTING		concept		month		QUEBEC, CANADA	
		ANALOG		draw		day			
				DL		06 05 01			
				PP		app			
				DL		DL			
								006-1937 PAGE 4 de 4	

NOTE: ET-10 WITH GEAR



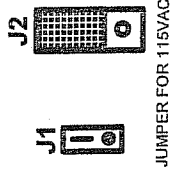
category	TUMBLERS		model	ET 2,3,5 & 10			volt	1 Ph		
	system	COMMAND		year	06	07	12	day	12	block
options	ANALOG (without intermittent timer)		concept	DL	SP	DL	draw	DL	DL	app
			006-1938			PAGE 1 de 4				

SIPROMAC
 St-Germain de Grantham
 QUEBEC, CANADA

60Hz SETTING
(FACTORY
SETTING)



120Hz
(SIPROMAC
SETTING)



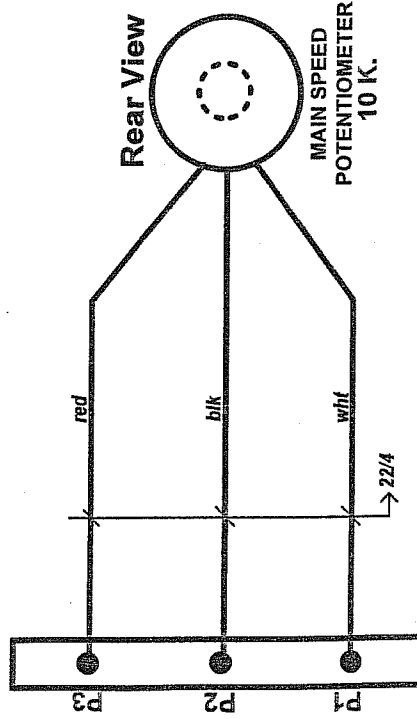
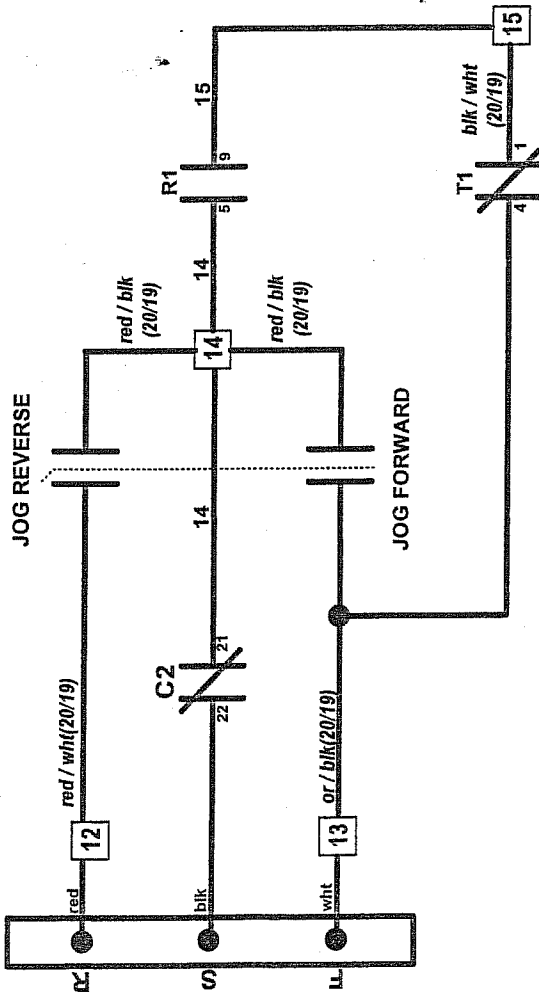
JUMPER FOR 115VAC



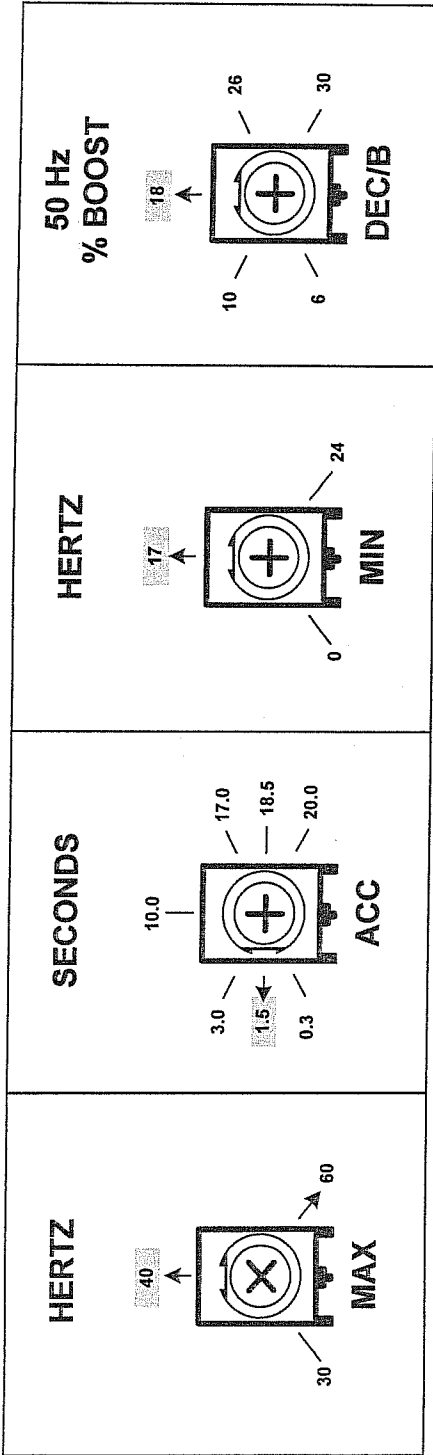
"AUTOMATIC START"
OPERATION

MINIMUM SPEED (MIN) 17 Hz.
MAXIMUM SPEED (MAX) 60 Hz.
ACCELERATION (ACC) 5.0 S.
DECELERATION (DEC) 5.0 S.

CURRENT LIMIT 1%
shutdown (CL)
SET 160 % FULL RATED.

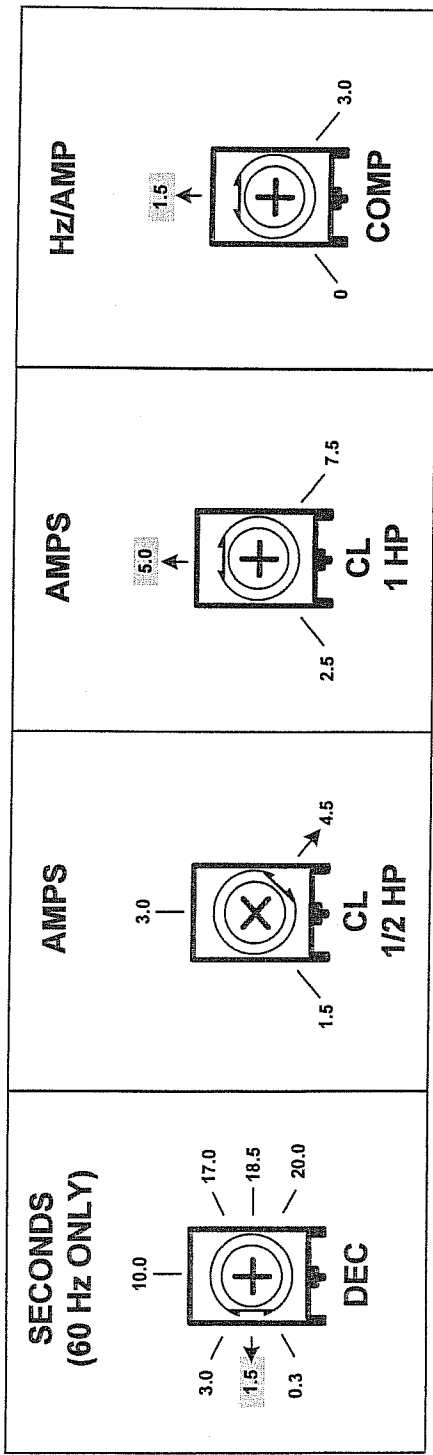
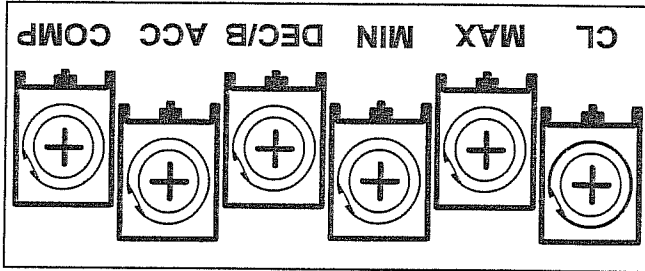


category	model	vol.	1 Ph				SIPROMAC	
system	ET 2,3,5 & 10	circuit	year	month	day	block	St-Germain de Grantham QUEBEC, CANADA	
options	COMMAND		06	02	27		006-1938 PAGE 2 de 4	
	ANALOG (without intermittent timer)		DL	SP	DL	DL		



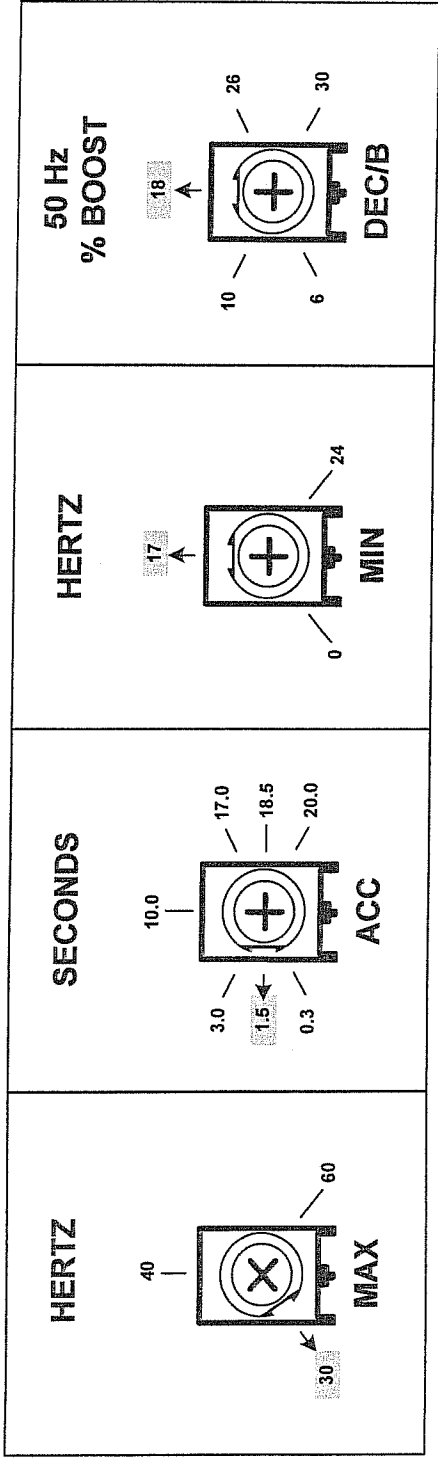
2 RPM MIN.

12 RPM MAX.



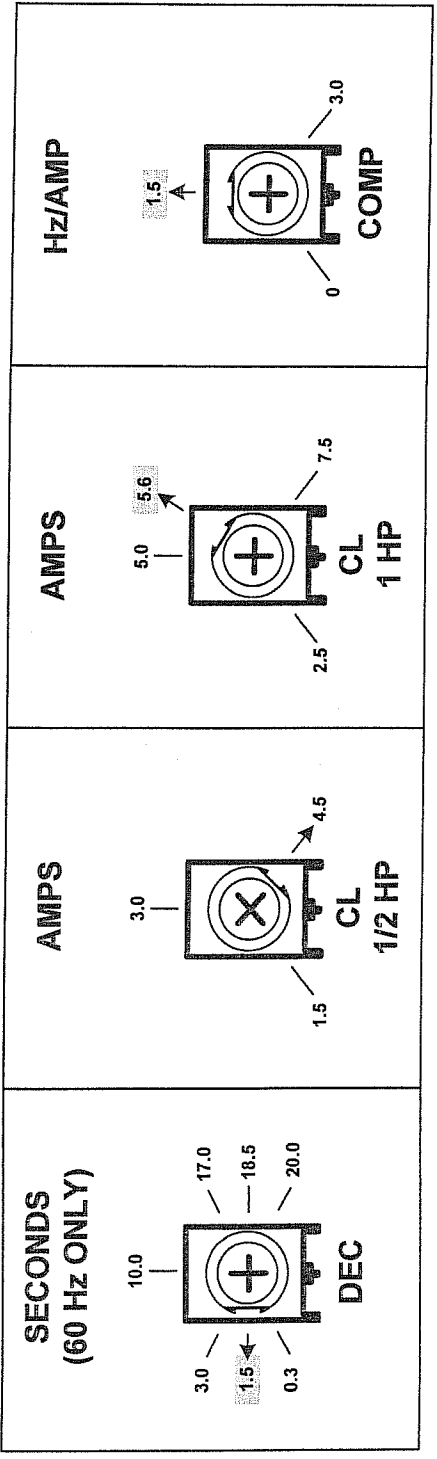
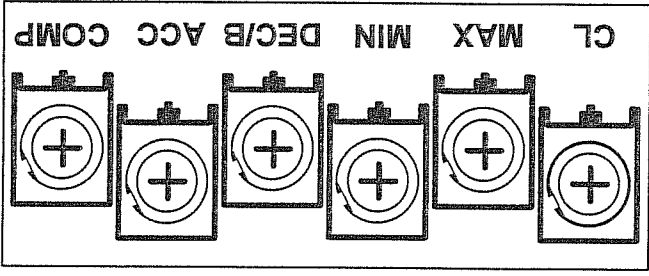
category	model	voit	1 Ph
system	ET 2,3 & 5	circuit	year month day
options	DRIVE SETTING		06 05 01
			block
			DL PP DL
			concept draw app DL
			DL PP DL
			006-1938
			PAGE 3 de 4
SIPROMAC			
St-Germain de Grantham QUEBEC, CANADA			

ANALOG



12 RPM MAX.

2 RPM MIN.



NOTE: ET-10 WITH GEAR

TUMBLERS model **ET-10** 1 Ph
 category system
 year month day
 06 05 01
 concept draw app DL PP DL
 options

DRIVE SETTING

ANALOG

SIPROMAC
St-Germain de Grantham
QUEBEC, CANADA

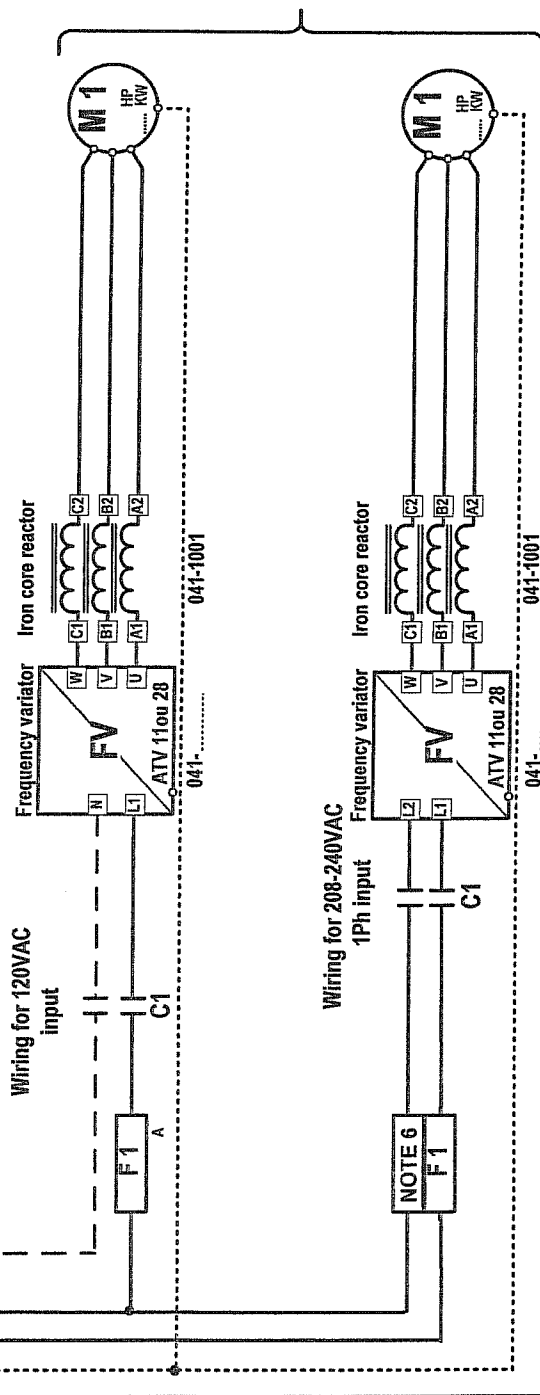
006-1938 PAGE 4 de 4



KB20
LC1D1810
LR2D1321
B21
LC1D0810
LR2D1312

set: 13A (for 125V)
set: 6.5A (for 20h @ 240V)

Wiring for 208-240VAC
1Ph input



ATV 11

Circuit	Fuse #	120V 1Ph	220V 3Ph	220V 1Ph
GEAR BOX 1/2 hp	F1	15A FA	15A FA	15A FA
GEAR BOX 1 hp	F1	25A FA	15A FA	15A FA
PUMP 20 M ³ /h	F2	20A TD	10A TD	15A TD
Control primary Tr	F101	BDC 1A	BDC 1A	BDC 1A
Control sec. Tr 24V	F104	BDC 4A	BDC 4A	BDC 4A
Control sec. Tr 9V	F105	BDC 2A	BDC 2A	BDC 2A

NOTE 6
1) 120V/1Ph, 60Hz (csa) Direct Connection (N)
2) 240V/1Ph, 60Hz (csa) Fuse as F2 (L2)
3) 240V/1Ph, 50Hz (europe) Dummy Fuse Midget (L2)

PUMP

Model: _____ M³/h _____
Sn : _____ TOTAL : _____ A

DRUM. ROTATION SYSTEM

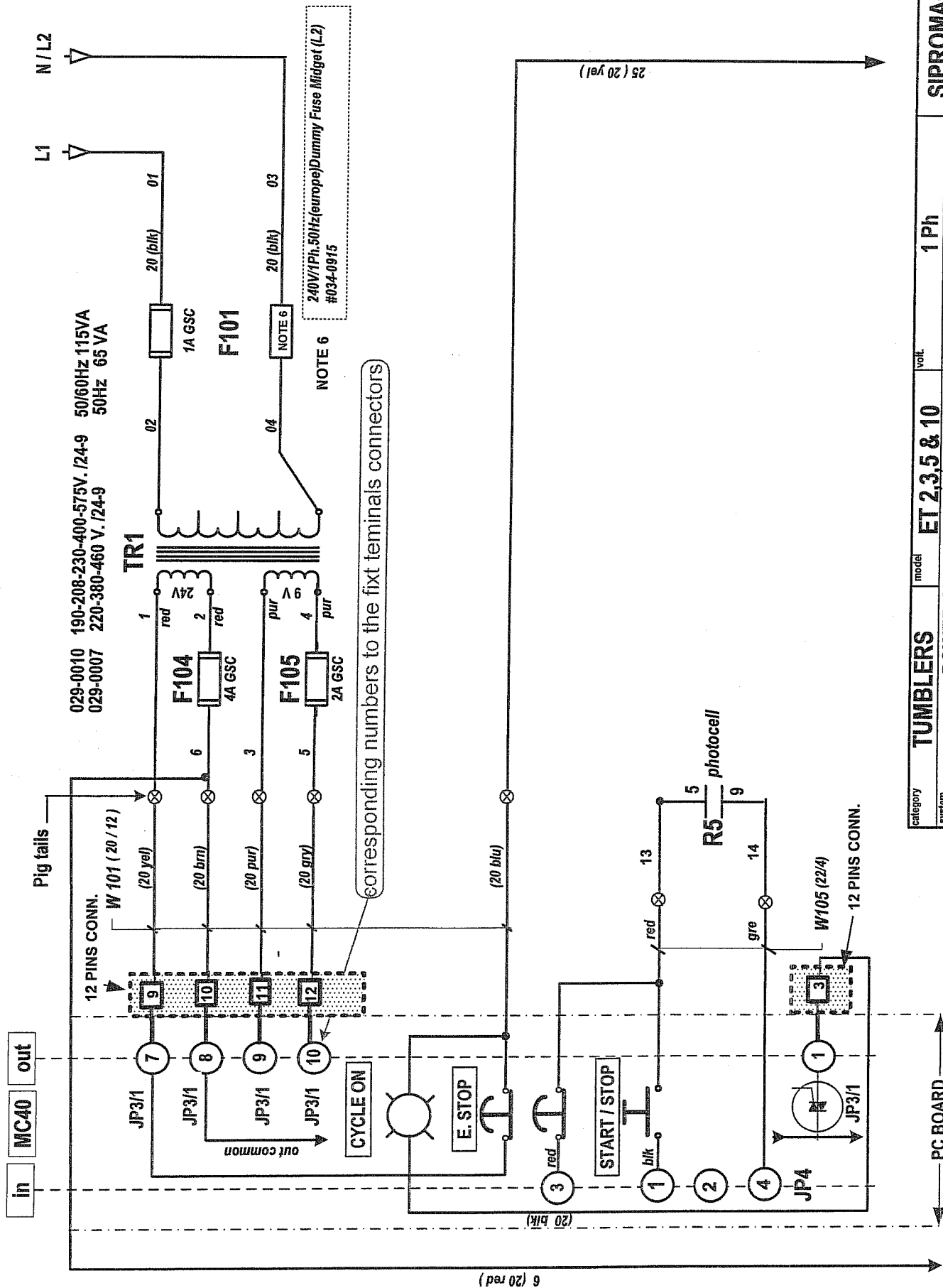
MOTOR
Model: _____
Sn : _____
Gearbox : _____
Model: _____
Sn : _____
Ratio : _____

FREQ. VARIATOR

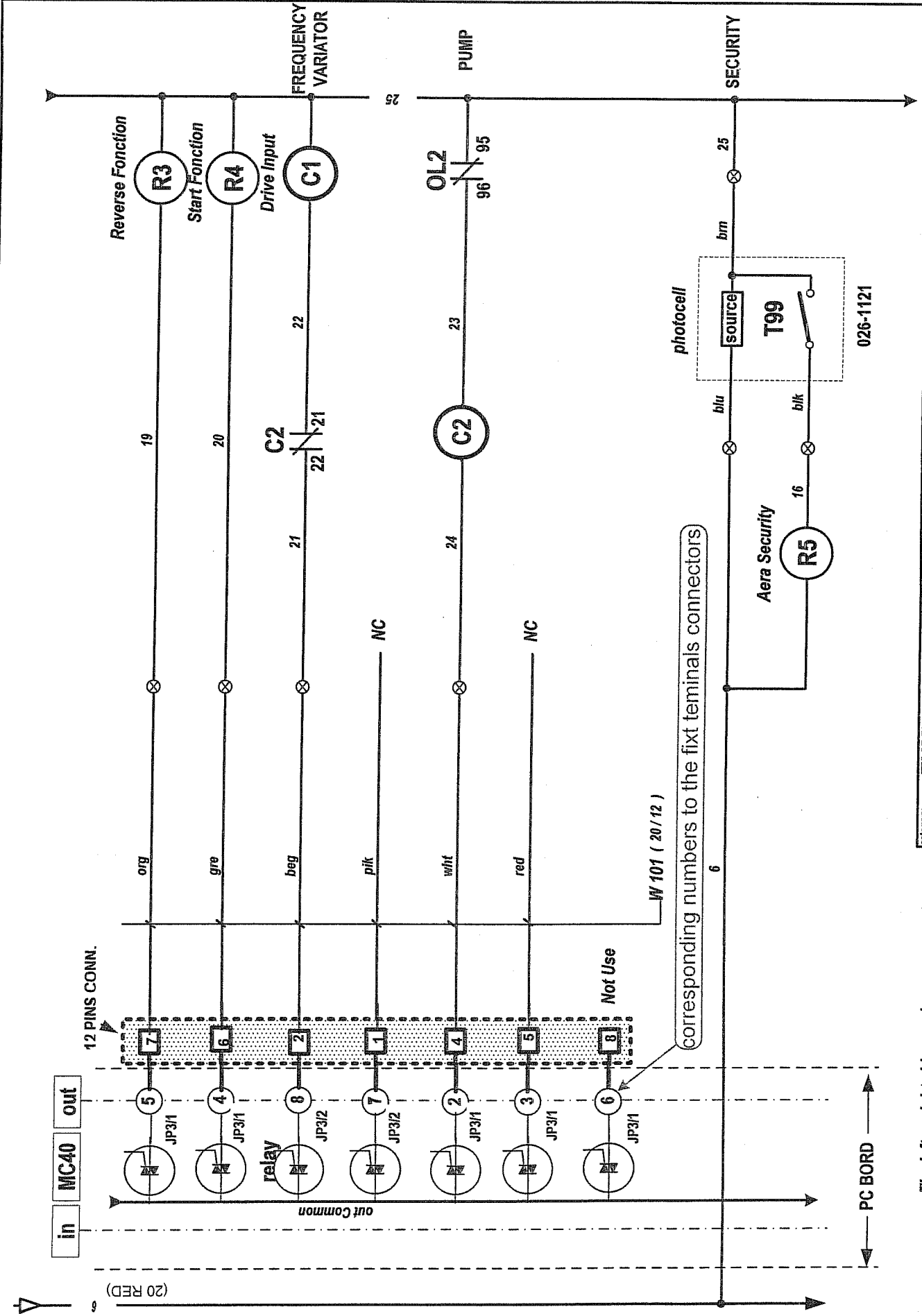
Model: _____
Sn : _____
Sipromac : 041-

TOTAL : _____ A

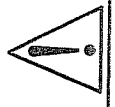
category	TUMBLERS	model	ET 2,3,5 & 10	volt.	
system		POWER		circuit	
options		DIGITAL (MC-40)			
			1 Ph	year	05 09 20
				month	09
				day	20
				block	
concept	GM	draw	PP	app	DL
			006A2037	page	1 de 5
			SIPROMAC	St-Germain de Grantham QUEBEC, CANADA	



category system options	TUMBLERS POWER SUPPLIES DIGITAL (MC-40)	model ET 2,3,5 & 10		1 Ph			vol.		
		Control						block	1
		year		month		day			
		concept	draw	PP	app	DL	05 09 07		
006A2037		PAGE 2 de 5		SIPROMAC St-Germain de Grantham QUEBEC, CANADA					



The left or right sides are base on operator position facing the control panel
 RC filters must be connect on each coil AC (not show on diagram)



category	TUMBLERS	model	ET 2,3,5 & 10	vol.	1 Ph
system	Command Control	year	06	month	06
options	DIGITAL (MC-40)	day	22	block	2
		draw	PP	app	D.L.
		concept	GM		

ALTIVAR 11 (with gear)

Parameters name	Sipromac set ET 2			Sipromac set ET 3			Sipromac set ET 5			Sipromac set ET 10		
	Set	Hz	RPM	Set	Hz	RPM	Set	Hz	RPM	Set	Hz	RPM
HSP	100	80.3	15	105	82.5	10	122	96.5	15			
ITH 1.5 * I NOMINAL	2.1			2.1			5.3					
LSP	5.0	15.1	3	0.0	16.6	2	1.5	14.6	2			

ACC=6.0 DEC=3.0

since 05/06/22 PP

ALTIVAR 11 (Direct Drive)

Parameters name	Sipromac set ET 2-3-5		
	Set	Hz	RPM
HSP	160	125	15
ITH 1.5 * I NOMINAL	2.8		
LSP	0.0	17.0	2

ACC = 6.0 DEC = 3.0

ALTIVAR 11 (Direct Drive)

Parameters name	Sipromac set ET 2-3-5		
	Set	Hz	RPM
HSP	128	100	12
ITH 1.5 * I NOMINAL	2.8		
LSP	3.8	17.0	2

ACC = 6.0 DEC = 3.0

ALTIVAR 31 (with gear)

Parameters name	Sipromac set ET-10		
	Set	Hz	RPM
HSP	100.0	79.5	12
ITH 1.5 * I NOMINAL	5.3		
LSP	5.0	14.9	2

ACC = 6.0 DEC = 3.0

ACC = 6.0 DEC = 3.0

DRC - TUN - YES, DONE

ALTIVAR 28

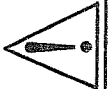
Parameters name	Sipromac set ET 2			Sipromac set ET 3			Sipromac set ET 5			Sipromac set ET 10		
	Set	Hz	RPM	Set	Hz	RPM	Set	Hz	RPM	Set	Hz	RPM
HSP	100	81.5	15									
ITH 1.5 * I NOMINAL	3.6											
LSP	10	19.9	2									
FRS	60											

DRC - TUN - YES, DONE

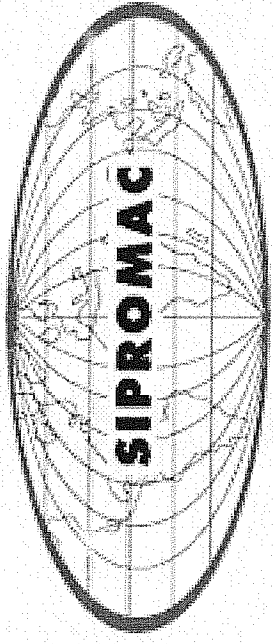
DRC - TUN - YES, DONE

MC-40 : IC PROGRAMME VERSION T-505(05-03-09)

The left or right sides are base on operator position facing the control panel
RC filters must be connect on each coil AC (not show on diagram)

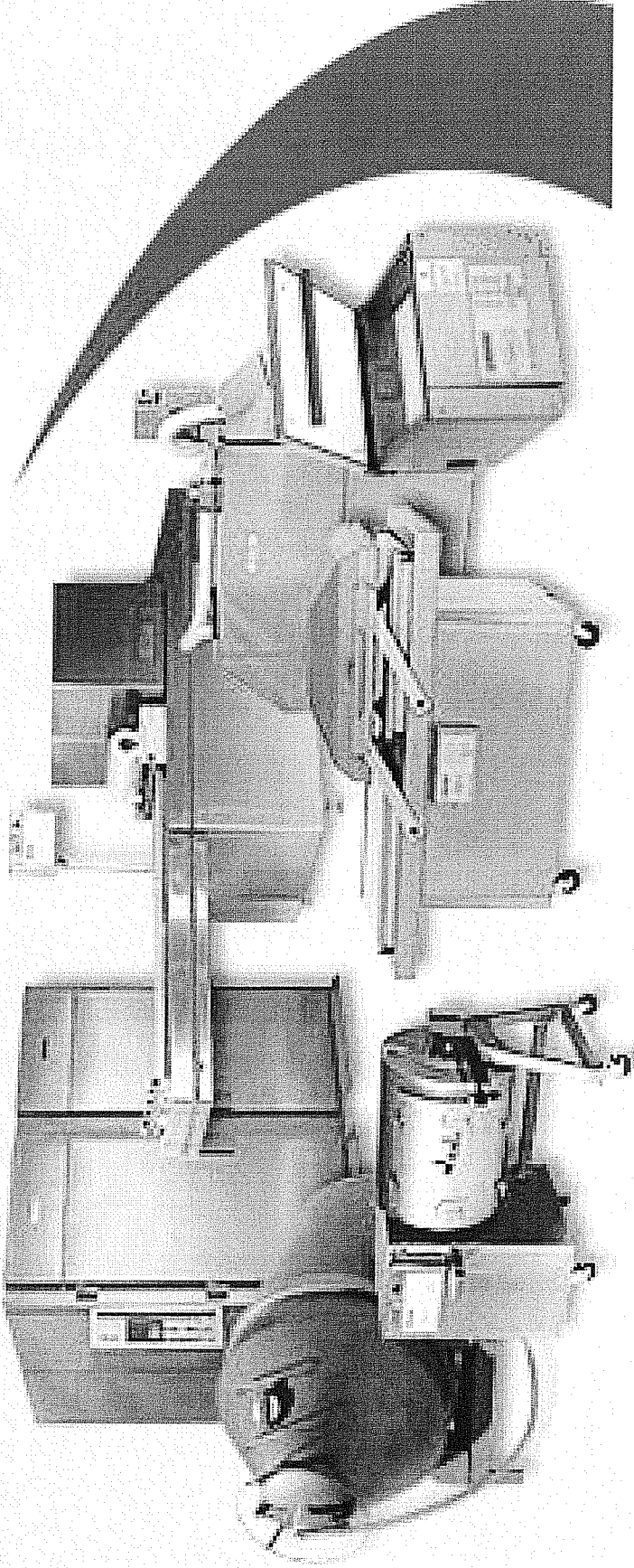


category	TUMBLERS	model	ET 2,3,5 & 10	volt	1 Ph
system	Speed Control			year	05 06 29
options	DIGITAL (MC-40)			month	05 06 29
				day	05 06 29
				block	3
				concept	GM PP
				draw	006A2037
				app	5 de 5
				D.L.	
					SIPROMAC
					St-Germain de Granitiam
					QUEBEC, CANADA



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For over 20 years, Sipromac has been manufacturing food processing equipment for the meat, poultry, seafood and dairy industries. Our full range of high quality stainless steel equipment includes vacuum chambers (single, double, automatic, and conveyor belt machines), shrink tunnels, injectors, tumblers and massagers, smokehouses and steam boxes, smoke generators, and our latest line of (M.A.P.) tray sealers.



Food Processing Equipment Manufacturer