



## OWNER'S MANUAL

***DIP TANK***

**DT-10**

# SAFETY INFORMATION

## PRECAUTIONS

1. 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.
2. Only allow responsible individuals familiar with the instructions to operate the machine. Be sure to know controls and how to stop the machine quickly.
3. Never put your hands near moving parts
4. Only allow qualified individuals for the maintenance of your machine.
5. Remove all obstacles, which may interfere with the machine functions.
6. Clear the work area such as electrical wires, buckets, knives etc.
7. Be sure that everyone else is clear of your work area before operating the machine.
8. Do not sit nor stand on the machine.
9. Always turn off the machine after your work is done. Never leave a running machine unattended.
10. Always disconnect and wait till the machine has cooled before attempting any maintenance.
11. Do not wear loose fitting clothes or jewellery as they may get caught in moving parts of the machine.
12. Always wear security shoes, to prevent injury caused by moving the machine or objects falling from the machine.
13. Work only in daylight or good artificial light.
14. Do not operate the machine while under the influence of alcohol or drugs

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## **Section 1- Setting up the machine**

### **1.1. Environmental requirements**

Requirements for the installation of a DT-10 machine are indicated below. Install the DT-10 machine in a location only these requirements are satisfied to avoid possible malfunctioning.

Maximum ambient temperature is 35°C with no freezing. (DT-10 must be distanced from heating generating devices and must be indoors.)

### **1.2. Handling**

To move the DT-10, you must use the proper lift truck. Place the forks inside the DT-10 caster and try to use the maximum width available. The lift truck must be on the front of the DT-10. We don't assume responsibility for others handling method that can possibly damage the DT-10.

### **1.3. Connections**

#### **1.3.1. Electric connections**

Electrical connection must be set according to the ID plate of the DT-10 and electrical schematic drawing found in section 5. 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. An isolated device must be provided in the vicinity of the associated phase conductor terminals for connection of the machine to the external protective conductor to disconnect all power.

#### **1.3.2. Drain connections**

Connect the drain to the ½" NPT ball valve.

#### **1.3.3. Water connections**

Connect the water inlet to the ½" NPT ball valve.

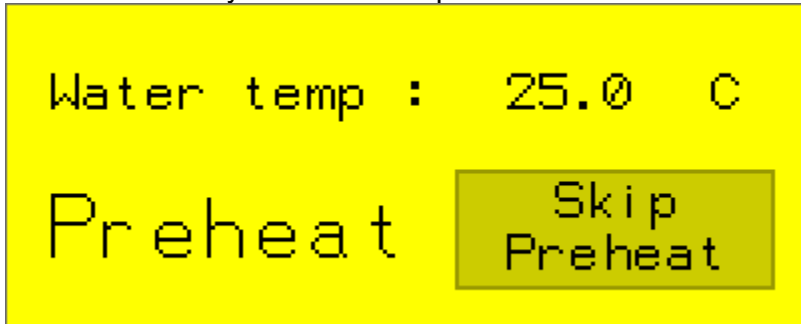
## 1.4. Machine power up

### 1.4.1. Machine power up sequence

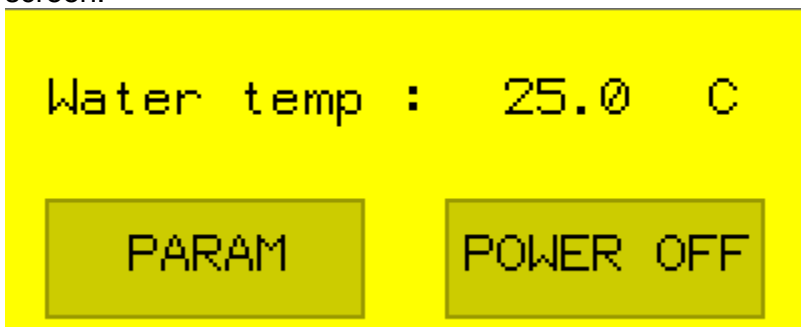
- Make sure the lid cover is in vertical position.
- Make sure all guard are properly close and be sure that everyone else is clear of your work area.
- Make sure that power is supplied to the DT-10 Electrical box by the external power source.
- Press the POWER ON on the screen to activate the machine. If there is no water in the machine, the LOW WATER message will appear on the screen.



- Open the water filling valve and let the machine fill up with water until the desired quantity (the product must be completely immersed in water). The heater will come on once the LOW WATER message disappears.
- Close the lid to heat up water faster. You can use hot water to initially fill the DT-10. You will see the preheat page at this time. You can press SKIP PREHEAT at any time to start operate the machine.

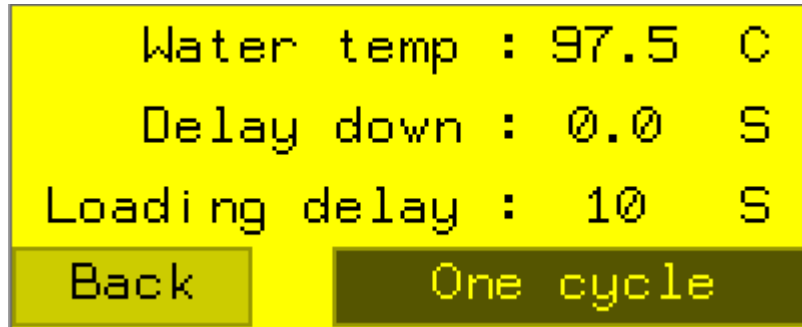


- To adjust the parameters, you can go to the PARAM page from the main screen.

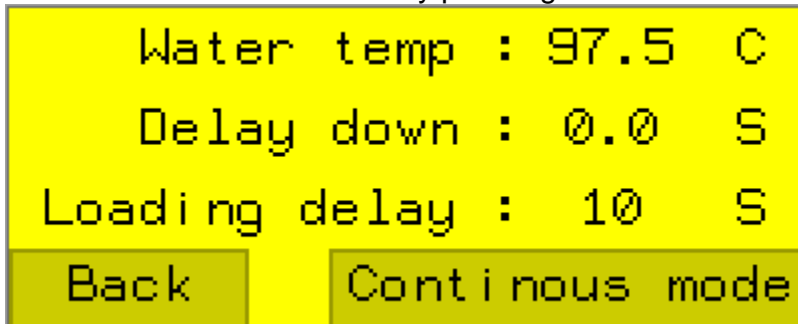


From this page, you can adjust the Water temperature, the delay at the

down position and the delay at the up position for the loading (continuous mode).



- When the water temperature set point is reached, you can start to supply your DT-10 with some bags with your product in it. If the bags are not enough shrunk, increase the bottom pause time or increase temperature, and try some other bags. Repeat this step until your bags are well shrunk. The recommended temperature is around 90°C – 95°C.
- In ONE CYCLE mode, the machine will do one complete cycle and then stop. You need to press the START/STOP button to do the cycle. In CONTINUOUS MODE mode, the machine will cycle by itself. You can stop the CONTINUOUS movement by pressing the START/STOP button.



- To stop the heating, press the POWER OFF button on the main screen.

## Section 2- Troubleshooting

- If the DT-10 doesn't heat the water
  - Check water level inside the DT-10. The LOW water message should not show.
  - Check the temperature set point.
  - Check F1 fuse continuity.
  - Check the water level switch operation.
  - Check the temperature sensor.
  
- If the plateau movement doesn't work
  - Check F2 fuse continuity.
  - Check the limit switch function
  - Check the variable frequency drive for errors
  
- If the water reservoir doesn't fill
  - Check water inlet ball valve

## Section 3- Maintenance

### CAUTION

- To prevent personnel other than those involved in maintenance and inspection work from turning the power ON while maintenance and inspection is in progress, place signs stating “**DO NOT TURN THE POWER ON**” or words to that effect at the primary power supplies of related control panels and other relevant locations.

*Failure to observe this caution could lead to electric shock.*

- Do not install or remove boards, wiring, connectors, etc, while the power is ON.

*Failure to observe this caution could lead to electric shock, product failure or malfunction.*

- Do not let foreign matter such as electrical wire scrap enter the unit.

*Failure to observe this caution could result in fire, product failure or malfunction.*

- Be sure to check the following points after completing maintenance and inspection work:
  1. Check that all fastening bolts are tightened.
  2. Check that no tools or other objects have been left inside the control panel.
  3. Check that the control panel door is closed properly.

*Failure to carry out these checks could lead to electric shock, injuries, fire or malfunction.*

- Do not change the set values of the devices, variable resistors, etc, in the control panel.

*Failure to observe this caution could lead to fire, product failure or malfunction.*

### 3.1. Reservoir cleaning

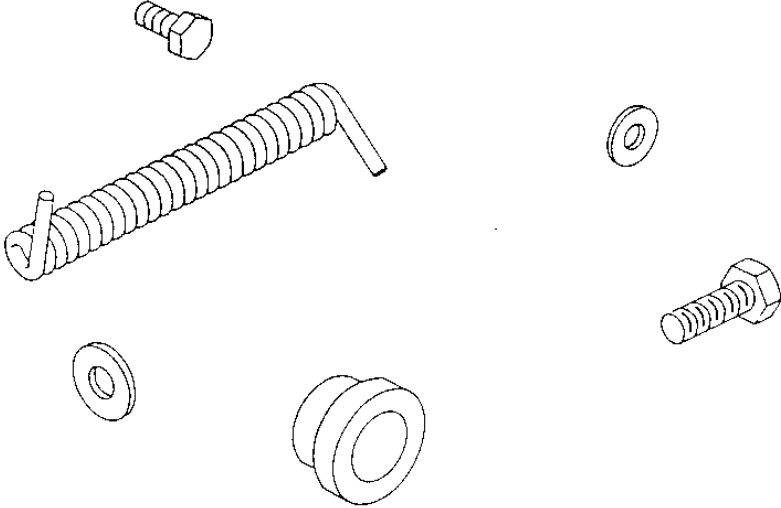
- Drain the water using the manual valve on the side of the machine
- Remove the roller conveyor
- Unbolt the conveyor plateau from the driving post
- Clean the reservoir and conveyor using mild detergent. Do not directly hose down the machine
- Do the reverse operation to reassemble the conveyor



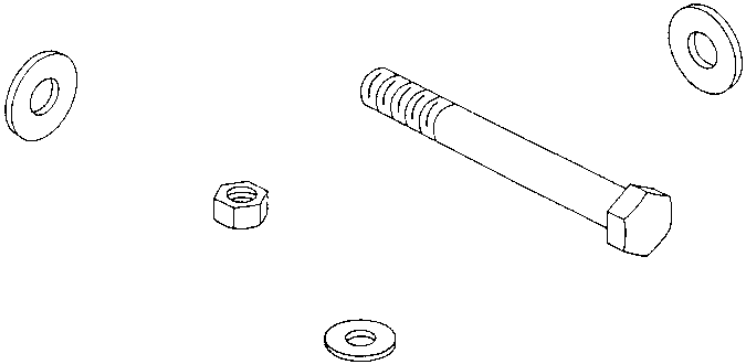
### **3.2. Gear box Oil change**

- The gear unit is filled with mineral oil, the lubricant should be replaced at least after every 10,000 operating hours or after every two years. Often gear reducers are exposed to extreme ambient conditions, hostile environments, wet conditions, or dirty and dusty operating areas. Especially in these situations, it is important to establish a condition-based oil service interval.
- Standard Oil Fill. ISO VG 220, Mineral Oil

Section 4- Mechanical drawing and parts list

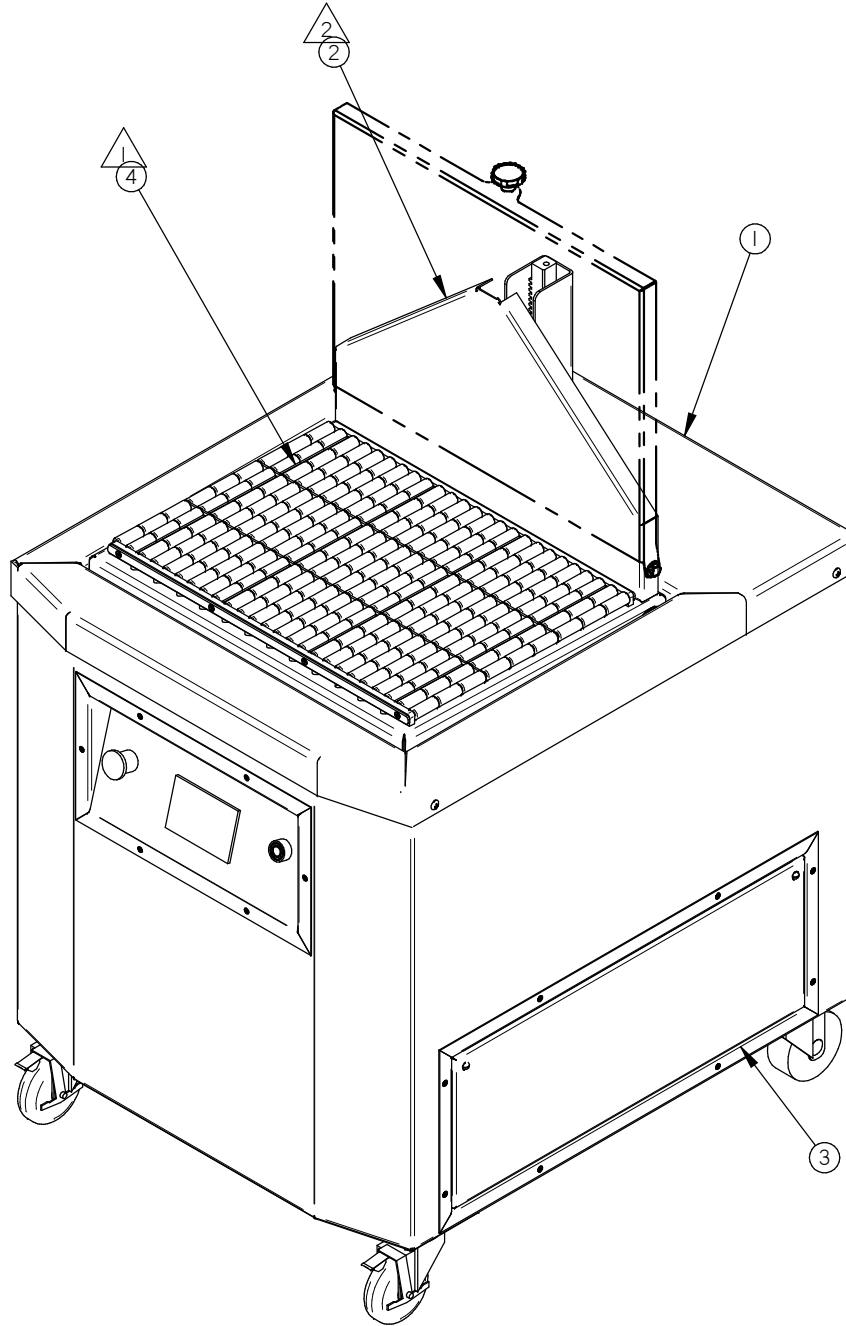


**MECHANICAL DRAWINGS**



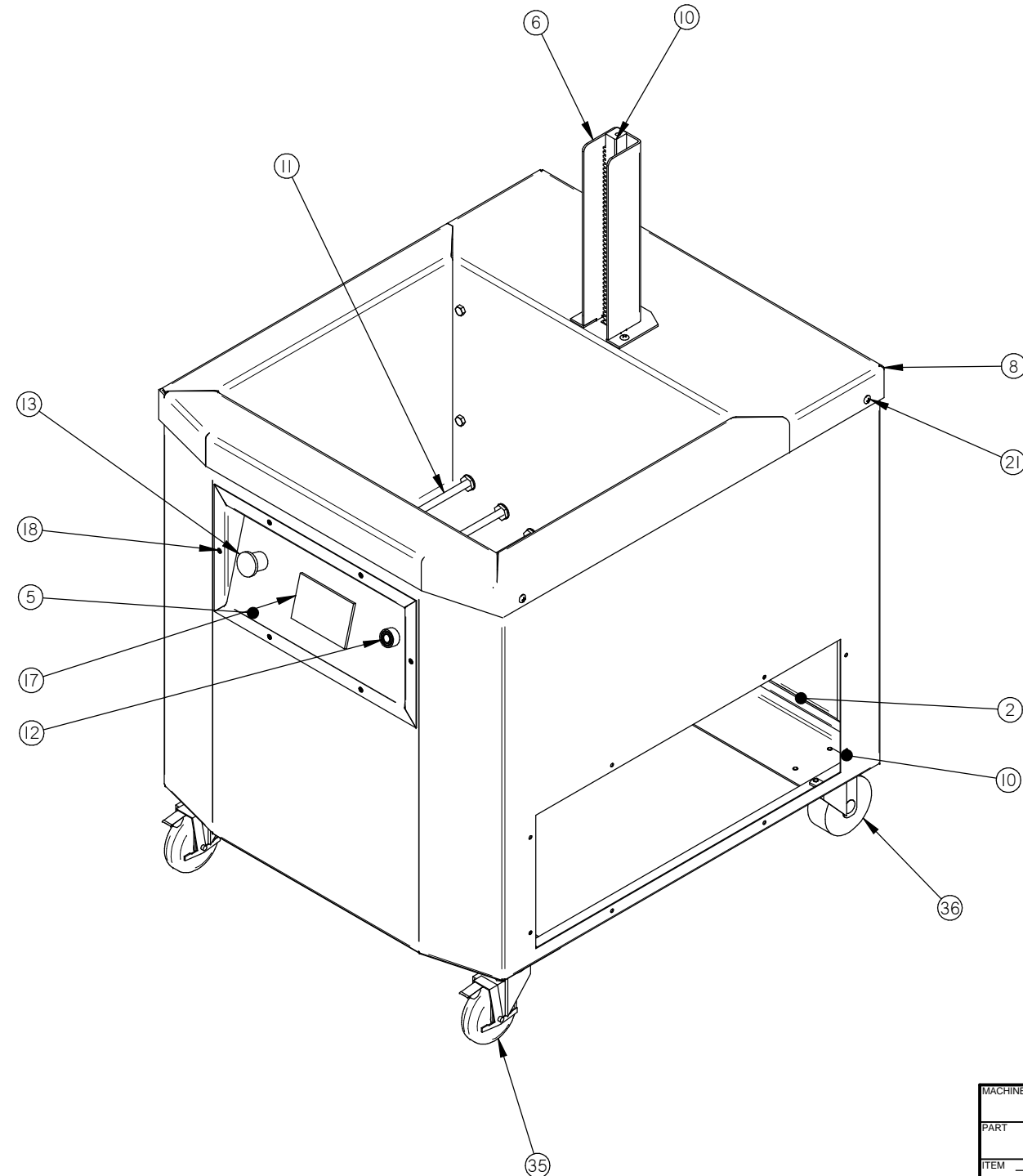
# 005D1398

ITEM	PART #	DESCRIPTION	QT.
1	005D1395	BODY ASS'Y	1
2	005D1396	WORKING BED ASS'Y	1
3	005C1410	ELECTRICAL BOX PRE-ASSY	1
4	005B1415	WORKING BED ASS'Y	1



MACHINE		<b>DT-10</b>		DEPT. TOL.	METRIC	INCH	SIPROMAC ST-GERMAIN DE GRANTHAM QUEBEC CANADA
PART		<b>DT-10</b>		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	AG	DATE	15-01-21		NO. <b>005D1398</b>
		APP. BY		DATE			

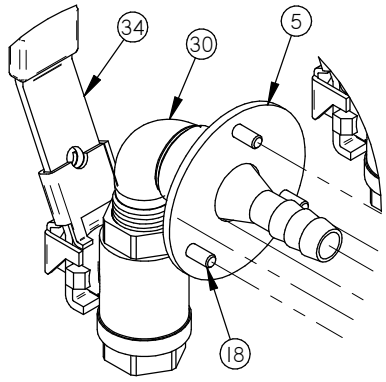
LET.	MODIFICATION	DATE	INT.
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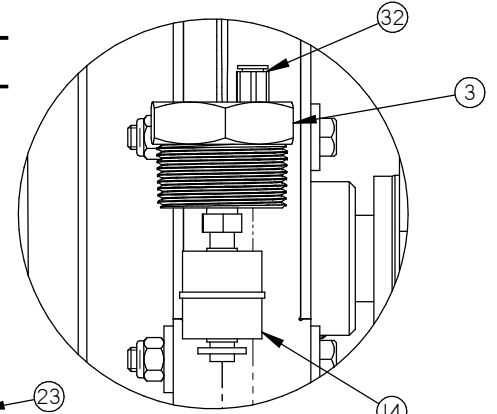
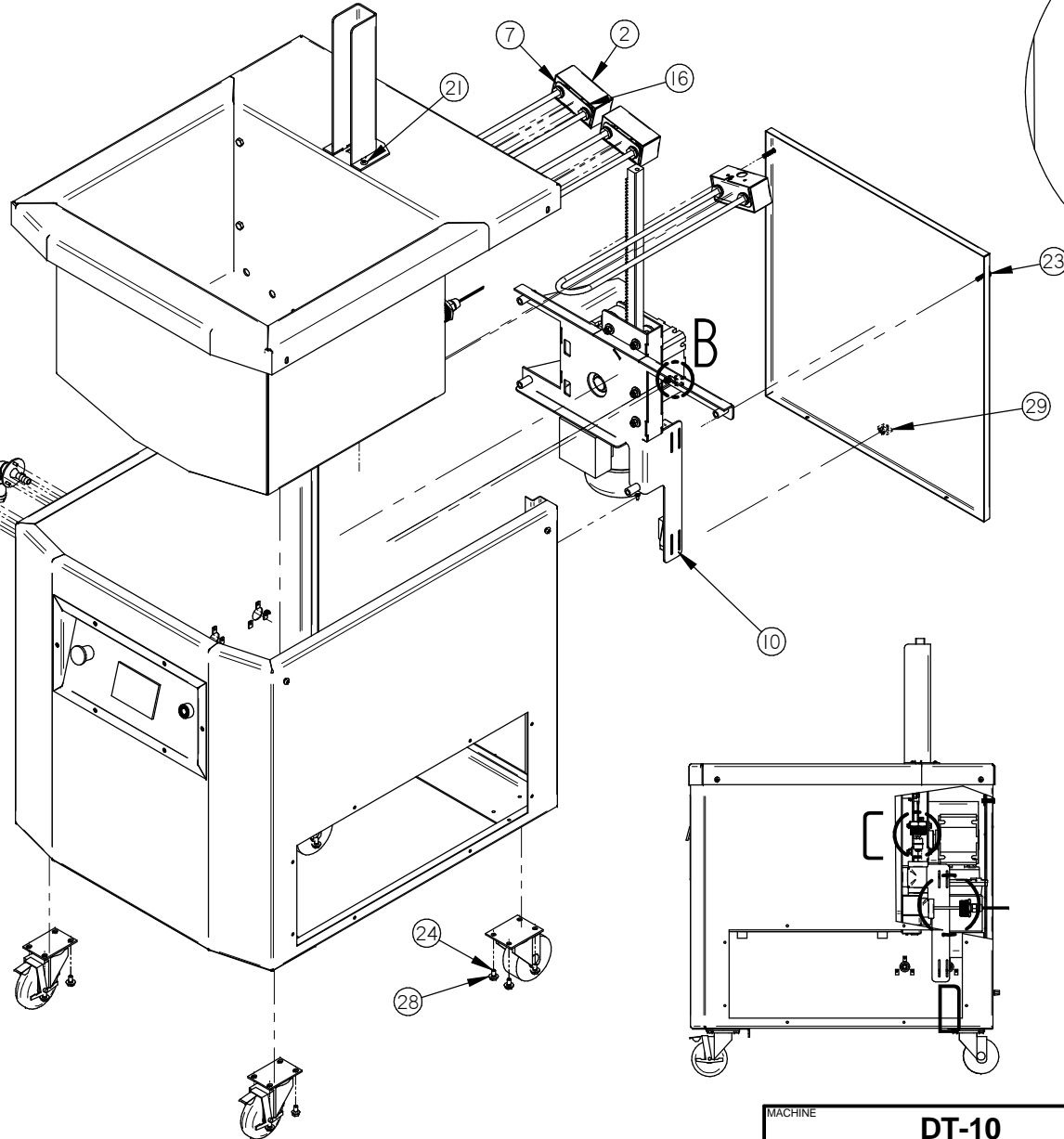
ITEM	PART #	DESCRIPTION	QT.
1	001B6443	BACK COVER BODY	1
2	001B6608	ELEMENT COVER DOUBLE	3
3	002A4148	LEVEL PLUG	1
4	004A4125	CONTROL INSERT	1
5	004A4130	FLANGE PIPE	2
6	004B4124	RACK GUARD	1
7	004B4126	ELEMENT COVER BRACKET	3
8	004C4000	TROUGH ASS'Y	1
9	004D3995	BODY ASS'Y	1
10	005A1414	MOTION ASSY	1
11	009A0232	ELEMENT	3
12	026-0110	BLACK CAP PUSH BUTTON (WATER)	1
13	026-0150	EMERGENCY BUTTON (PULL-PUSH)	1
14	031-0010	WATER LEVEL SENSOR 1/8" NPT	1
15	031-00115	TEMPERATURE PROBE (3 WIRES)	1
16	036-0390	CABLE CONNECT.3/8"-1/2"/METAL	3
17	040-0075	HMISTO511	1
18	051-01385	SCREW 10-24 x 1/2"FLAT-UND. PHIL S/S	12
19	051-0143	SCREW 10-24 x 3/8" PAN PHIL S/S	7
20	051-0162	SCREW 10-24nc. X 5/8" SKT S/S	3
21	051-0186	SCREW 1/4-20 x 1/2"TRUSS PHIL S/S	7
22	051-0189	BOLT 1/4-20 x 5/8" HEX S/S	1
23	051-0233	SCREW 1/4-20 X 1-1/4" PAN PHIL S/S	2
24	051-0298	BOLT 5/16"-18 x 5/8" HEX S/S	16
25	051-0580	NUT 1/4"-20 S/S	1
26	051-0730	WASHER #10 FLAT S/S	6
27	051-0740	WASHER 1/4" FLAT S/S	3
28	051-0760	WASHER 5/16" FLAT S/S	13
29	057-00055	TWO ARM KNOB 1/4"-20 NYLON	1
30	100-0075	STREET ELBOW 1/2" NPT SS	2
31	100-01065	RED. COUPLING 1-1/4" MNPT X 1/2" FNPT SS	1
32	102-0370	MALE CONN.1/8 MNPTX1/4 T.QUICK	1
33	105-0450	METAL CABLE CLAMPS #6 SS	1
34	107-0035	BALL VALVE 1/2 NPT SS WITH LOCKING	2
35	130-4PHB	4" SWIVEL CASTER W/BRAKE	2
36	130-4PHO	4" SWIVEL CASTER W/O BRAKES	2

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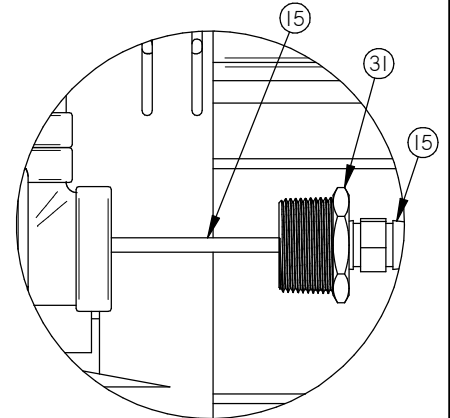
MACHINE		<b>DT-10</b>		DEPT. TOL.	METRIC	INCH	SIPROMAC ST-GERMAIN DE GRANTHAM QUEBEC CANADA
PART		<b>BODY ASS'Y</b>		USINAGE ± 0.1	± 0.004		
				TOLERIE ± 0.5	± 0.020	N.T.S.	
ITEM		CNC		DEPT.	M	QTY.	1
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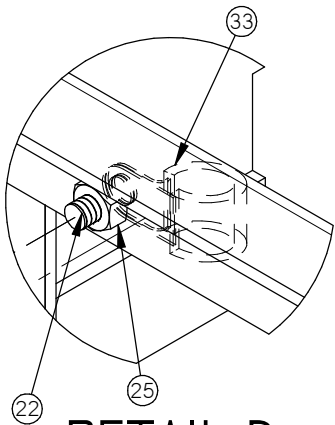
DETAIL A



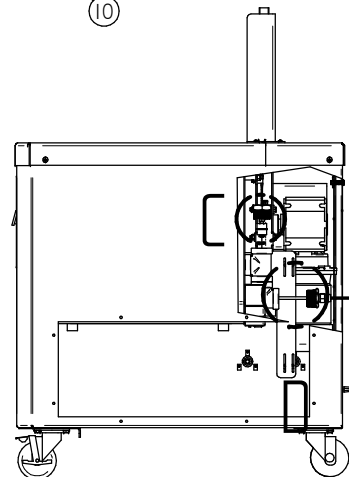
DETAIL C



DETAIL D



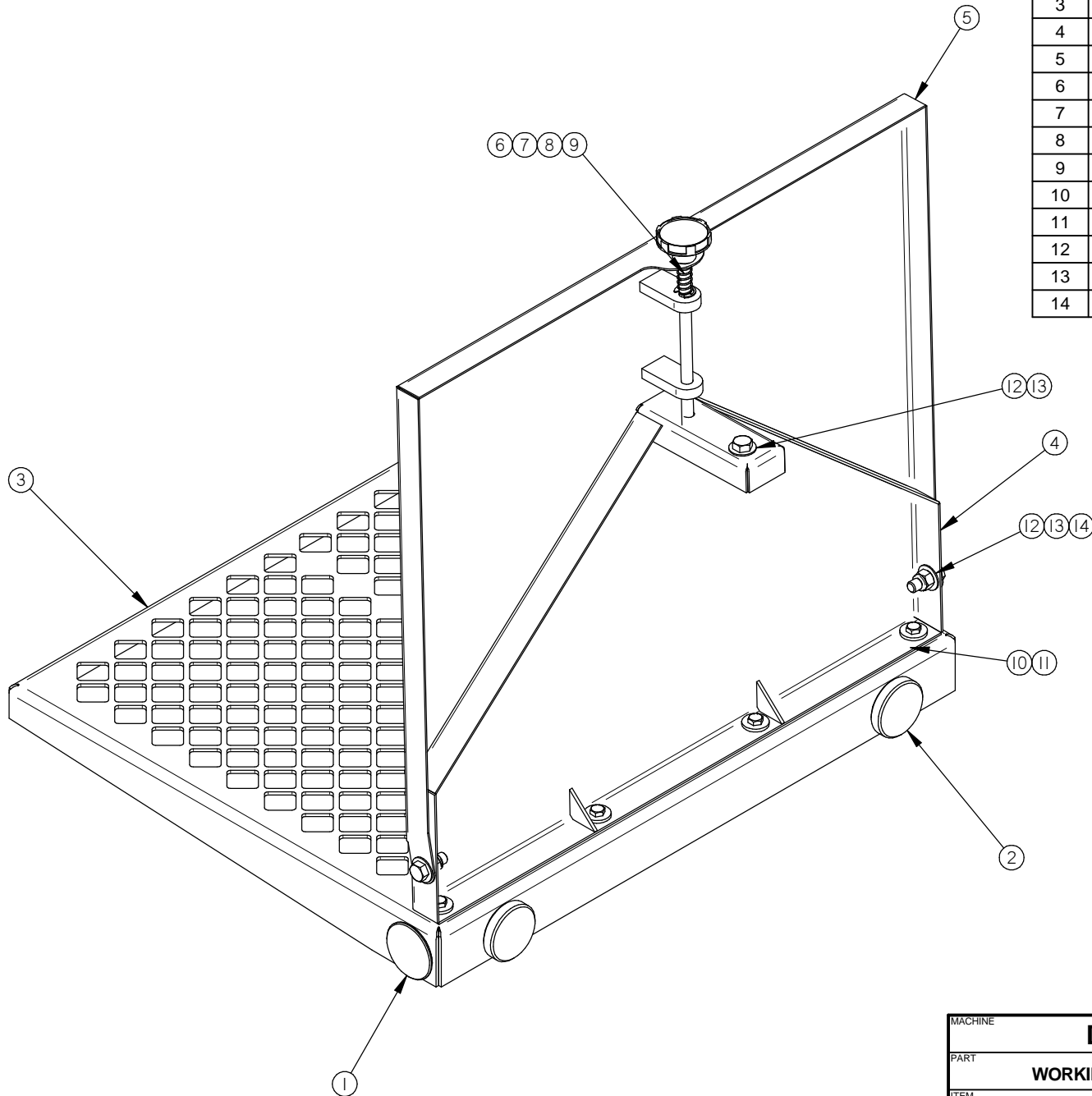
DETAIL B



MACHINE		<b>DT-10</b>		DEPT. TOL. METRIC	INCH	SIPROMAC ST-GERMAIN DE GRANTHAM QUEBEC CANADA
PART		<b>BODY ASS'Y</b>		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 <b>AG</b>	DATE	15-01-29	NO.	<b>005D1395</b>	
	2D DWG BY	DATE				

# 005D1396

ITEM	PART #	DESCRIPTION	QT.
1	002B4074	WORKING BED STOPPER	2
2	002B4153	REAR BED STOPPER	2
3	004C4006	BASKET ASS'Y	1
4	004C4007	BASKET SUPPORT ASS'Y	1
5	004C4010	WORKING BED COVER ASS'Y	1
6	002B4076	LOCK SHAFT COVER WORKING BED	1
7	056-9201	BLACK PHENOLIC KNOB 3/8-16 (OD 1-3/4")	1
8	056-0315	EXT. RETAINER RING 3/8" S/S	1
9	077-01021	SPRING C 0480-045-1500 S COMP.	1
10	051-0757	WASHER 1/4" FLAT THICK S/S	4
11	051-0190	BOLT 1/4-20 x 3/4" HEX S/S	4
12	051-0780	WASHER 3/8" FLAT S/S	5
13	051-0360	BOLT 3/8"-16nc. X 1" S/S	3
14	051-0622	NUT 3/8"-16nc. NYLON LOCK S/S	2

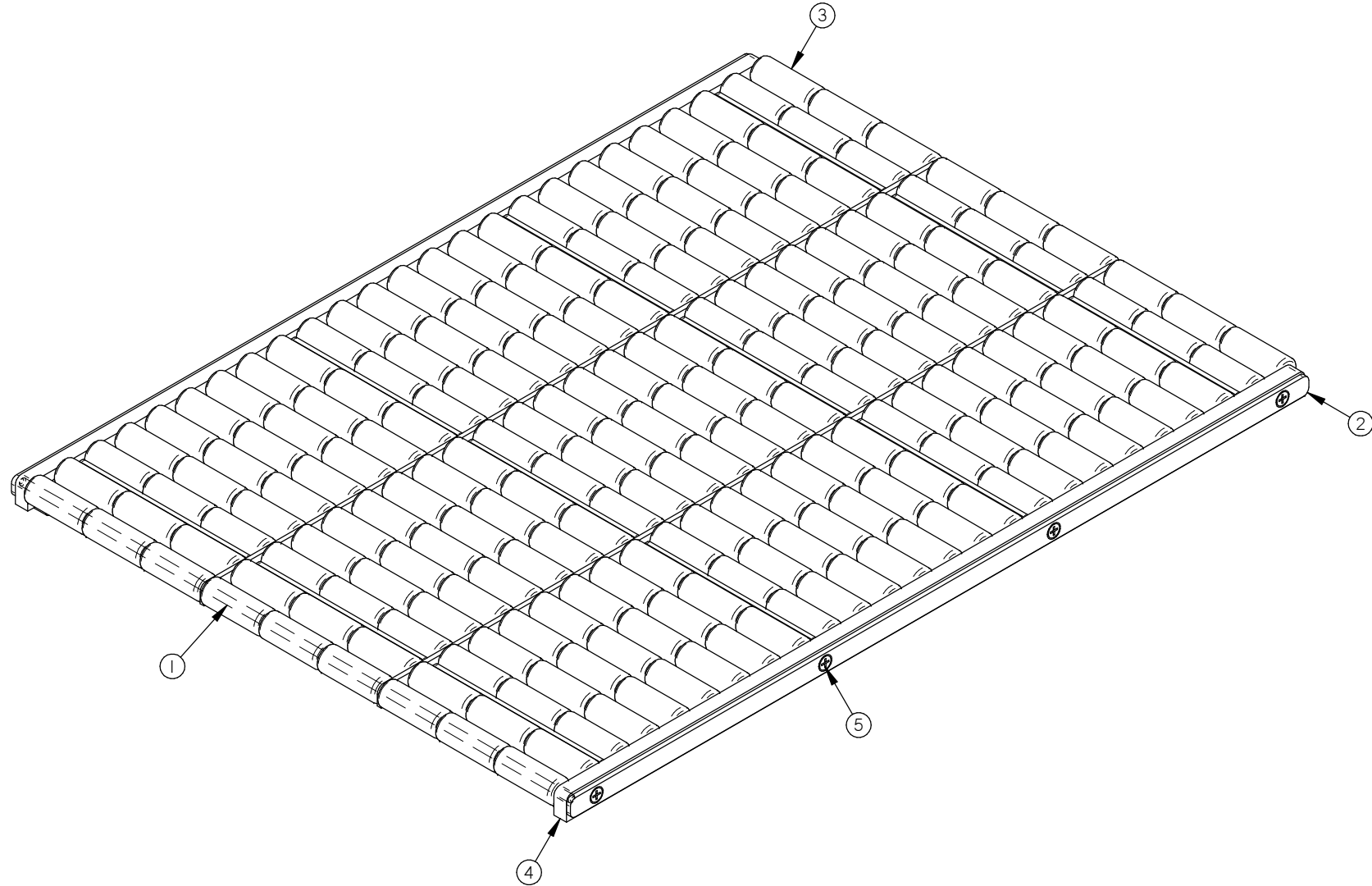


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MACHINE		<b>DT-10</b>		DEPT. TOL.	METRIC	INCH	SIPROMAC ST-GERMAIN DE GRANTHAM QUEBEC CANADA
PART		<b>WORKING BED ASS'Y</b>		USINAGE	± 0.1	± 0.004"	
				TOLERIE	± 0.5	± 0.020"	
ITEM		CNC		SOUDEGE	± 0.5	± 0.020"	N.T.S.
MAT.		DWG BY <b>AG</b>		DATE <b>15-01-21</b>		NO.	
		APP. BY		DATE		DEPT.	QTY.
						<b>M</b>	<b>1</b>
						<b>005D1396</b>	

# 005B1415

ITEM	PART #	DESCRIPTION	QT.
1	002B4073	ROLLER SHAFT	25
2	002B4075	ROLLER STOPPER	2
3	002C4062	CONVEYOR ROLLER	225
4	004C4004	CONVEYOR FRAME	1
5	051-01385	SCREW 10-24 x 1/2"FLAT-UND. PHIL S/S	8

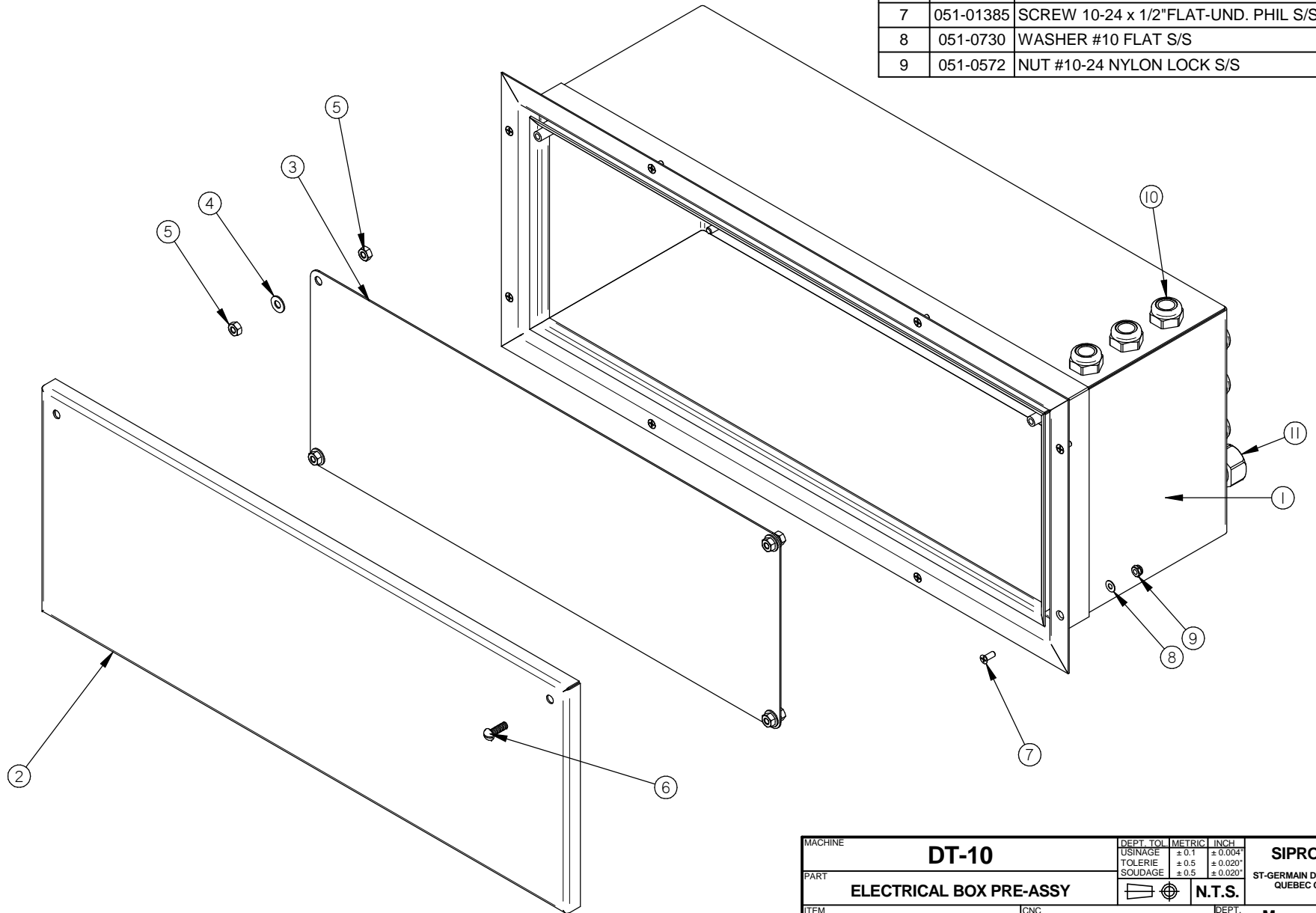


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MACHINE	<b>DT-10</b>			DEPT. TOL.	METRIC	INCH	SIPROMAC ST-GERMAIN DE GRANTHAM QUEBEC CANADA
PART	<b>WORKING BED ASS'Y</b>			USINAGE	± 0.1	± 0.004"	
				TOLERIE	± 0.5	± 0.020"	
				SOUDEAGE	± 0.5	± 0.020"	
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	2D DWG BY <b>AG</b>	DATE	15-01-21	QTY.	1		

# 005C1410

ITEM	PART #	DESCRIPTION	QT.	ITEM	PART #	DESCRIPTION	QT.
10	036-0415	WIRE CONNECTOR 1/2NPT CD16 + O-RING +NUT	6	1	004D3996	ELECTRIC BOX ASSY	1
11	036-0420	PRESSE-ÉTOUPE CD21	1	2	004D3999	COVER ELECTRIC BOX ASSY	1
				3	001C6444	BACK PLATE ELECTRIC BOX	1
				4	051-0740	WASHER 1/4" FLAT S/S	4
				5	051-0580	NUT 1/4"-20 S/S	8
				6	052-0420	SCREW 1/4"-20 N.C x 3/4" PAN SLOT BRASS	2
				7	051-01385	SCREW 10-24 x 1/2" FLAT-UND. PHIL S/S	8
				8	051-0730	WASHER #10 FLAT S/S	8
				9	051-0572	NUT #10-24 NYLON LOCK S/S	8



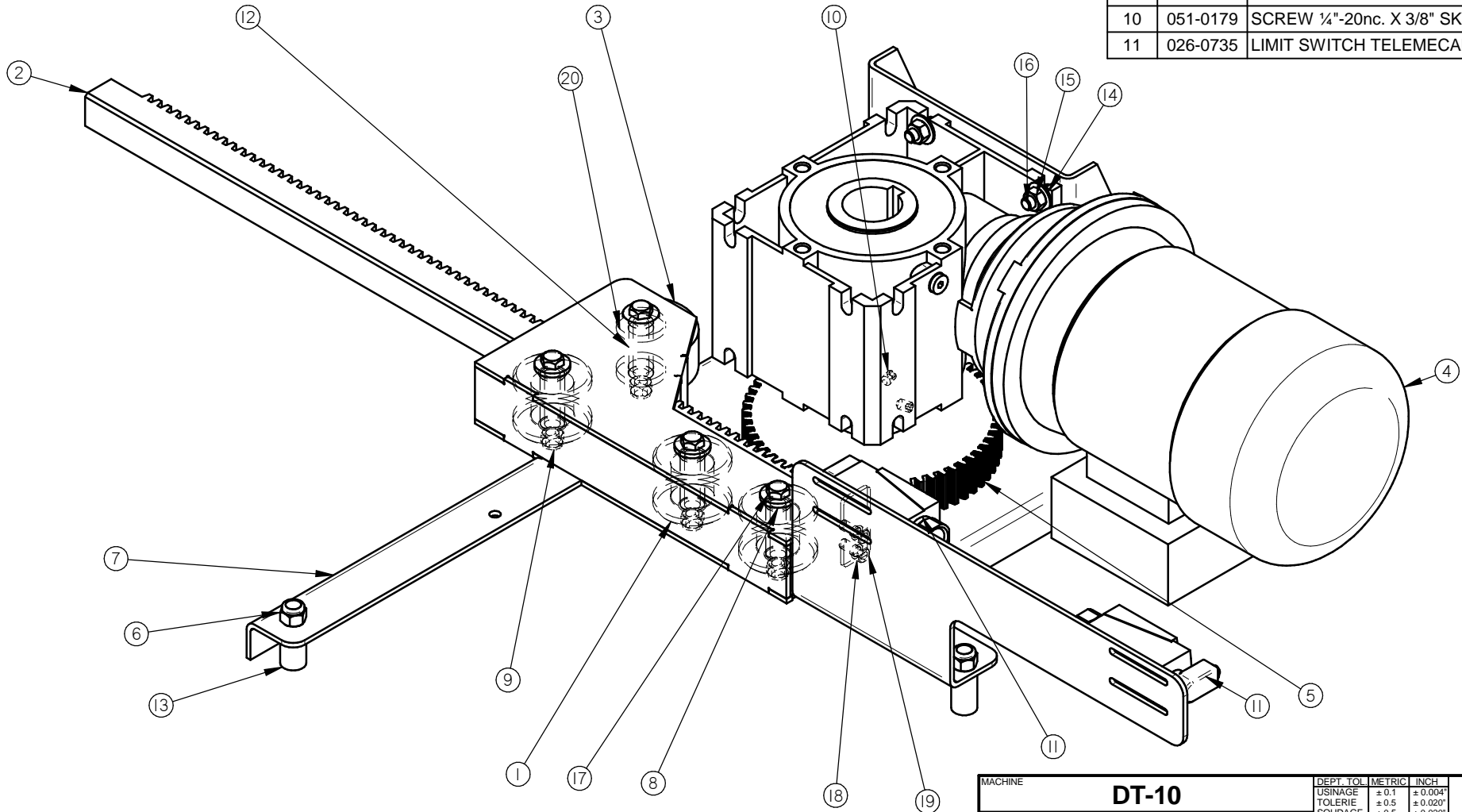
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MACHINE	<b>DT-10</b>		DEPT. TOL. METRIC	INCH	SIPROMAC ST-GERMAIN DE GRANTHAM QUEBEC CANADA
PART	<b>ELECTRICAL BOX PRE-ASSY</b>		USINAGE ± 0.1 ± 0.004"	TOLERIE ± 0.5 ± 0.020"	
			SOUDEAGE ± 0.5 ± 0.020"	N.T.S.	
ITEM	CNC	DEPT.	M	QTY.	1
MAT.	DWG BY <b>AG</b>	DATE <b>15-01-21</b>	NO. <b>005C1410</b>		
	APP. BY	DATE			



# 005B1414

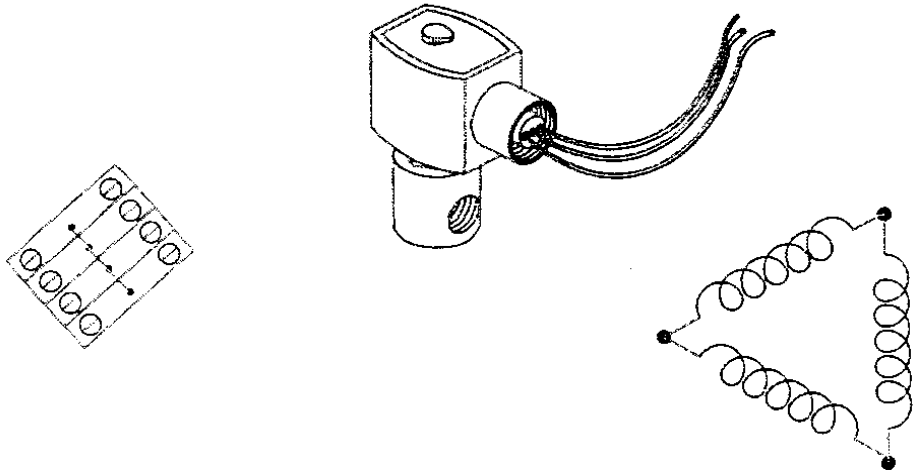
ITEM	PART #	DESCRIPTION	QT	ITEM	PART #	DESCRIPTION	QT
12	002A4238	IDLER SHIM	4	1	002A4152	ROLL IDLER	3
13	002A4154	SPACER	4	2	002B4151	RACK	1
14	051-0760	WASHER 5/16" FLAT S/S	8	3	002B4150	LARGE RACK ROLLER	1
15	051-0600	NUT 5/16" -18 S/S	4	4	037-09192	SHAFT MOUNTED GEAR MOTOR 1/2HP FRAME 63	1
16	051-0305	BOLT 5/16"-18 NC X 1" S/S	4	5	004B4129	PINION	1
17	051-0313	BOLT 5/16"-18 x 2-1/2" HEX S/S	4	6	051-0622	NUT 3/8"-16nc. NYLON LOCK S/S	4
18	001A6930	END PLATE	1	7	004B4127	MOTION PLATE ASSY	1
19	051-01845	BOLT 1/4"-20 x 1/2"CAP HEX SKT.S/S	2	8	051-0783	WASHER 3/8" FLAT THICK S/S	8
20	001A6931	LARGE RACK ROLLER WASHER	2	9	051-0601	NUT 5/16"-18 NYLON LOCK S/S	4
				10	051-0179	SCREW 1/4"-20nc. X 3/8" SKT SET S/S	2
				11	026-0735	LIMIT SWITCH TELEMECANIQUE	2



MACHINE		<b>DT-10</b>		DEPT. TOL. METRIC	INCH	SIPROMAC	
PART		<b>MOTION ASSY</b>		USINAGE ± 0.1	± 0.004"	ST-GERMAIN DE GRANTHAM	
				TOLERIE ± 0.5	± 0.020"	QUEBEC CANADA	
				SOUDAGE ± 0.5	± 0.020"	N.T.S.	
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DWG BY	YF	DATE	15-01-29	<b>005B1414</b>			
APP. BY		DATE					

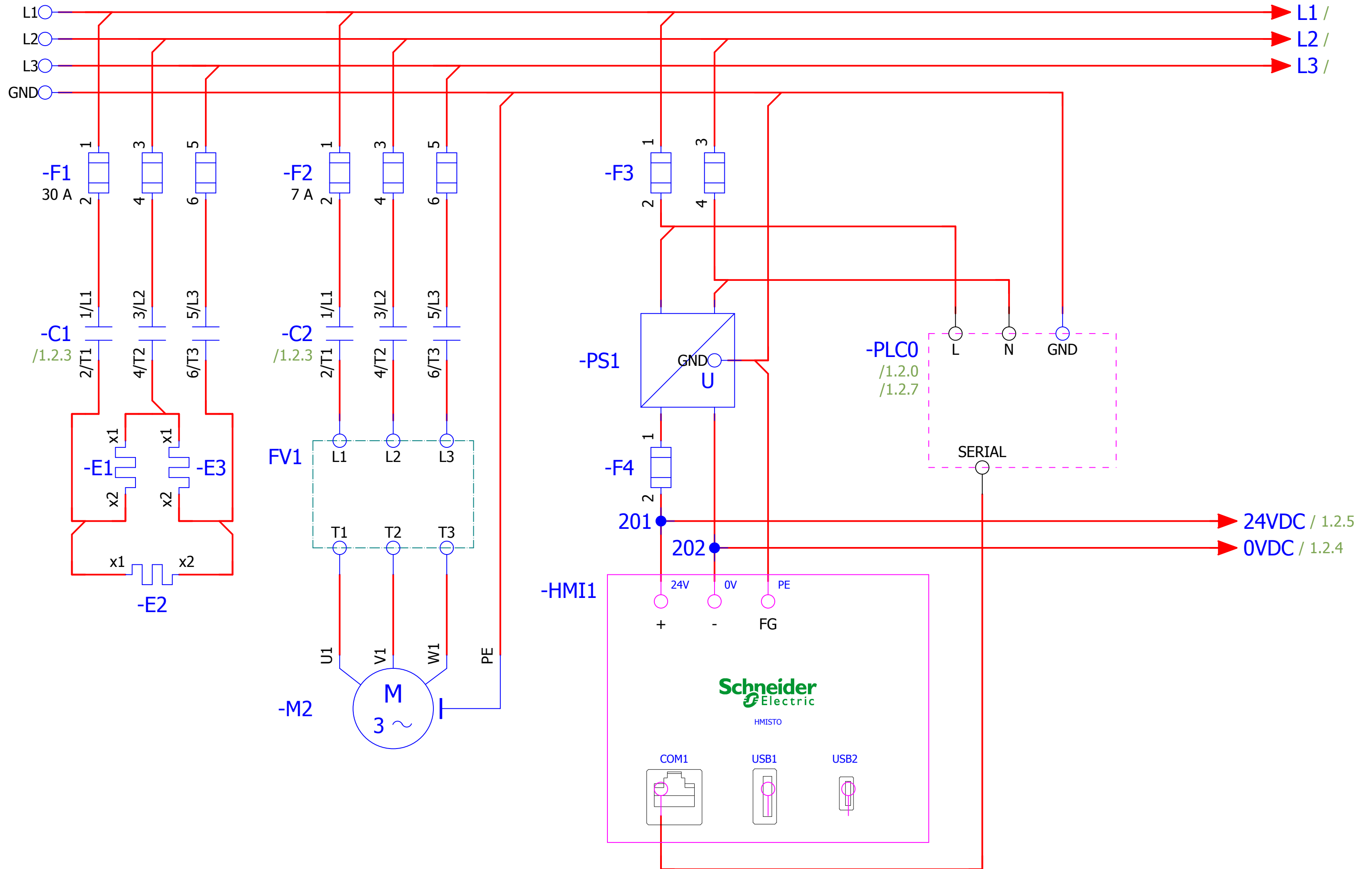
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Section 5- Electrical drawing and parts list



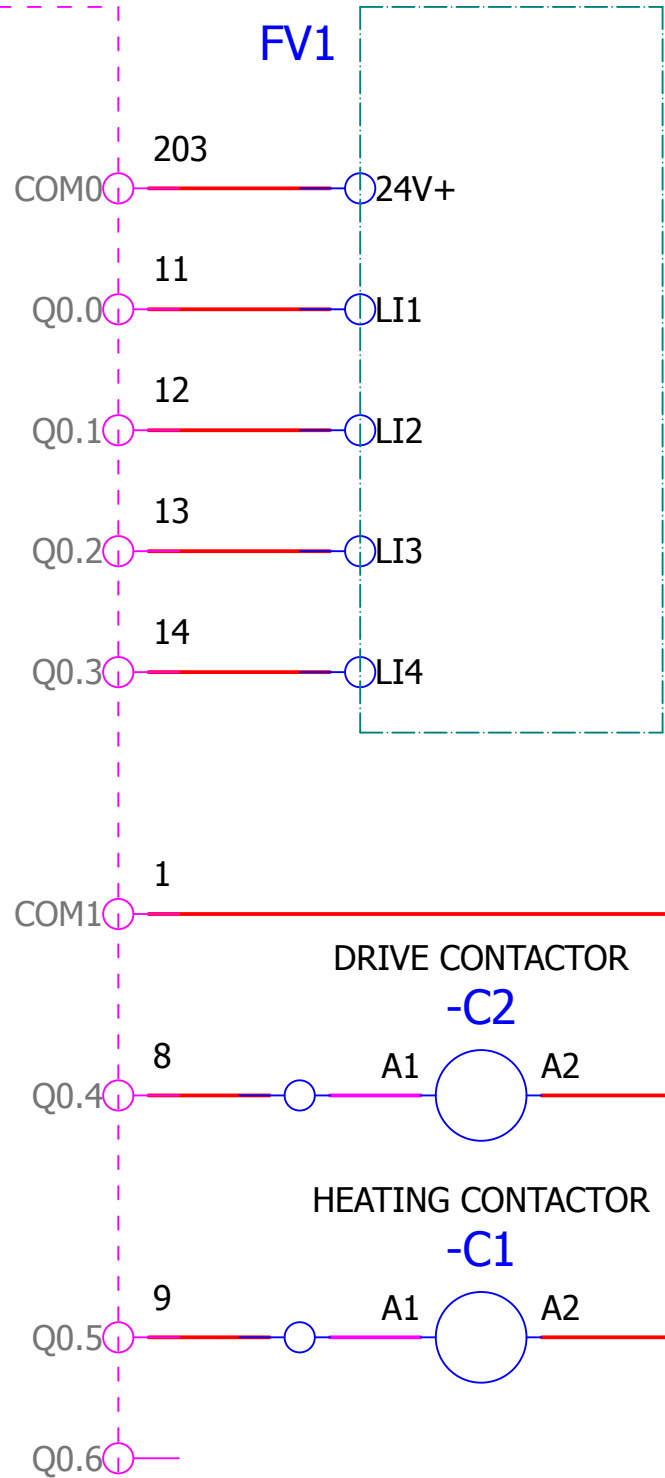
**ELECTRICAL DRAWINGS**





Modification	Date	Name	Original	Replaced by	SIPROSHRONK DT-10	SIPROMAC II INC. 240 boul. Industriel St-Germain-de-Grantham, J0C 1K0, Qc, Canada	Alimentation	=	006-5000	Page 1
								+		Page 4

-PLC0  
/1.6  
.7  
OUTPUT



1.8 0VDC  
1.8 24VDC

E-STOP

START-STOP

WATER-LEVEL

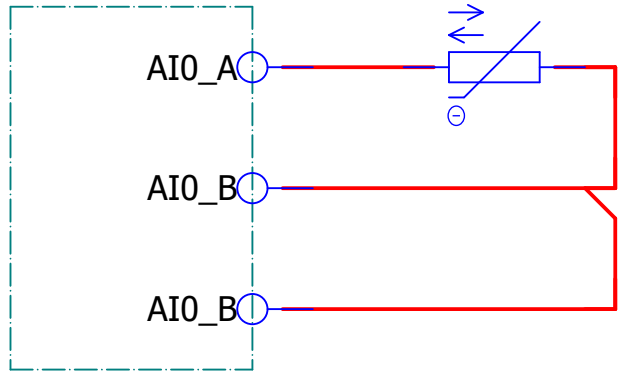
TOP-LIMIT

BOTTOM-LIMIT

PLC0  
/1.6  
.0  
INPUT

PLCA

-PT100



Date	02/03/2015	SIPROMAC II INC. 240 boul. Industriel St-Germain-de-Grantham, J0C 1K0, Qc, Canada	Automate	006-5000	Page	1.2
Ed.	msylvain				Page	4
Appr.						
Modification	Date	Name	Original	Replacement of	Replaced by	

ItemId	Qty	Unit	Note	ItemDescription1
034-0755	3	UN	F1	FUSE HOLDER 60A/600V 3 POLE CLASS J
034-0580	3	UN	F1	FUSE LPJ-SPI 45A/600V TIME DELAY
025-0401	1	UN	C1	MOTOR CONTACTOR 12A 24VDC LOW CONSUMPTION
039-0127	3	UN	E1, E2, E3	ELEMENT 4000W,230V,.440" X 40" U (DT-10)
034-0755	3	UN	F2	FUSE HOLDER 30A/600V 1 POLE USM1
034-0460	3	UN	F2	FUSE MIDGET 7A/600V FAST ACTING
025-0400	1	UN	C2	MOTOR CONTACTOR 9A 24VDC LOW CONSUMPTION
041-0112	1	UN	FV2	FREQ. VARIATOR 1/2 HP 200/250V 3PH
037-09192	1	UN	M2	SHAFT MOUNTED GEAR MOTOR 1/2HP SIZE 63
034-0740	3	UN	F3, F4	FUSE HOLDER M4/8SF
028-0070	2	UN	F3, F4	SEPARATOR M4/8SF
034-0230	2	UN	F3	FUSE 5X20MM 3A/250V FAST ACTING
040-0067	1	UN	PS1	POWER SUPPLY 70W-3A, TERMINAL STANDARD
034-0205	1	UN	F4	FUSE 5X20MM 1A/250V T-DELAY
040-0072	1	UN	PLC0	PLC 16 IO 7 out relay, 9 in, Ethernet, 100-240VAC
040-0074	1	UN	PLCa	CARTOUCHE 2 ENTREE TEMPERATURE
040-0075	1	UN	HMI	INTERFACE OPERATEUR 3.4 IN MONOCHROME SERIAL
031-0045	1	UN	WATER TEMP.	RTD PT100 3-WIRE 1/4in OD x 6in 6ft LEADS
031-0046	1	UN	WATER TEMP.	COMPRESSION FTG 1/2in MNPT FOR 1/4in OD TEMPERATUR
026-0110	1	UN	START/STOP	SILICON CAP PUSH BUTTON (WATER)
026-0020	1	UN	START/STOP	1 N.O. CONTACT BLOCK
026-0150	1	UN	E-STOP	EMERGENCY BUTTON (PUSH-PULL)
026-0025	1	UN	E-STOP	1 N.C CONTACT WITH BASE
026-0735	2	UN	TOP AND BOTTOM	LIMIT SWITCH TELEMECANIQUE/ROLLER LEVER
031-0044	1	UN	WATER LEVEL	WATER LEVEL SENSOR 1/8" NPT
028-0023	3	UN		TERMINAL BLOCK M16/12
028-0024	2	UN		GROUND TERMINAL BLOCK M10/10P
028-0008	8	UN		TERMINAL BLOCK M4/6
028-0060	4	UN		SEPARATOR M4/6