



MODEL SPECTRA HP v.20

SERIAL # 2007-8899999

2270 Industrial boul. , Montreal (Laval), Canada, H7S 1P9

Tel.: (450) 667-9769, Fax: (450) 667-6320



INSTRUCTION **MANUAL**

**FOR ALL INQUIRIES
PLEASE CONTACT
OUR LOCAL DISTRIBUTOR**

**FOR NORTH AMERICA ONLY
1-800-333-6556**

Thank you for choosing ORION stretch-wrapping equipment. It is a wise choice, which will benefit your company now and in the future.

ORION uses a unique combination of functional, rugged steel structure and sophisticated control systems to offer equipment high in durability and low in maintenance requirements. Our advance control systems mean that Orion equipment can be operated safely and efficiently without the need for special operator expertise.

Please read this manual carefully and keep it handy. Following these simple operating instructions will insure the safe and efficient performance of this machine while simple maintenance procedures will guarantee a long and productive life of the equipment.

Notice:

Our manual covers standard features of the machine. Certain options may not be fully covered due to their unique application.

In order to acquire more information about custom made features of your machine and to provide quicker service, the following information is required when making an inquiry:

- 1)Model
- 2)Serial Number **2007-8899999**
- 3)Subassembly (see PART LIST)

SAFETY:

ORION'S stretch wrappers should be operated with caution and common sense as any other industrial equipment. To prevent injury and/or electrical shocks, careful operation of the machine and awareness of its many automatic functions is required.

NOTE: All electrical power and compressed air must to be disconnected prior to all inspection, maintenance or repair work.

ORION PACKAGING INC.

SpectraHP

HIGH Profile Semi Automatic Heavy Duty Rotary Turntable Wrapper

Maximum Load Size	52"W x 52"L x 90"H
Minimum Load Size	30"W x 30"L x 10"H
Weight Capacity	5,000 lbs. Dynamic ; 20,000 lbs. Static
Utilities	115 / 1 / 60 ; 20 Amp Electrical Service
Turntable & Drive:	65" Diameter x 3/8" Steel Plate 0-14 RPM variable speed with adjustable soft-start Dynamic positive alignment home positioning feature Chain & sprocket drive with automatic, self-adjusting chain tensioner In-line helical gear reducer on turntable drive train No-maintenance, quiet DuraGlide™ support bearings
Control Features:	CSA and UL Approved Control Panel State-of-the-Art Logic Control User Friendly Microprocessor with Micro-Switch Keypad DuraLogic™ Controller with Modular Plug In Components Revo-Logic™ Exact Wrap Counting Technology Insta-Sense™ Film Broken / Out Sensing Logic with Indicator Electronic Film Tension Control Adjustment on the Panel Separate Top / Bottom Wrap Count Selectors with LED Count Display Variable Speed Film Carriage Up/Down Control Film Carriage Raise/Lower Switch (Manual) All Colors Compatible Photocell for Automatic Load Height Detection Turntable Jog Pushbutton Cycle Pause for Stopping the Wrap Cycle Without Resetting
Film Stretch & Delivery:	Uses standard 20" film rolls InstaThread® for ultra-fast drop-in film threading 260% Standard film stretch (available from 100% to 425%) AUTOMATIC electronic non-contact film force-to-load control Dynamic dancer bar for consistent film tension around entire load Precision ground, polyurethane stretch rollers with lifetime warranty
Film Carriage Drive:	Heavy Duty Zero-maintenance industrial belt lift carriage Variable Speed Drive Motor UHMW Precision Carriage Guidance System
Structural Features:	All STEEL base frame and tower construction Base structure includes dual full-length steel channels Forklift portable from front or rear of machine Hinged tower for ease of transport (reduces machine profile) Adjustable, foldaway film roping bar to lock load to pallet
Ease Of Use And Safety:	Fail-Safe film carriage drive with free-fall prevention Film carriage features obstacle detection with automatic shut-off Ergonomic side facing film replacement Protective cover over powered prestretch rollers All-enclosed chains & electronics
Available Options:	SPE-001 Extended tower for loads up to 110" tall (ships with tower hinged/tilted) SPE-010 Heavy-duty ramp for loading with pallet-jack or electric walkie

*ORION PACKAGING RESERVES RIGHTS TO CHANGE THIS SPECIFICATION AT ANY TIME WITHOUT NOTICE

MACHINE UNLOADING INSPECTION & INSTALLATION

UNLOADING

Machine can be easily unloaded and transported by a forklift with a minimum capacity of 2500 lbs.

1. Carefully insert the forks into the lifting tubes to the maximum possible depth. Depending on the model, a forklift access may be either at the turntable end of the machine frame, the tower end or both. In case of the mongoose machine enter the forks under the frame or insert the forks in the tube brackets welded to the top of the machine.

2. Lift the machine (or other part of system) only to the necessary height to move it with no bouncing or friction on the floor.

3. Sit the machine down assuring uniform contact with the floor, which is necessary to ensure correct and smooth operation.

INSPECTION

1. Remove all packing and supporting additions - these may include the blocks under the carriage and the restraining bar over the table.

NOTE: when removing the stretchwrap film covering the machine, care must be taken not to cut any of the electrical wires and/ or polyurethane covering on the film carriage rollers.

2. Perform a visual inspection of the electrical and mechanical parts for loosened joints and / or broken connections. Any suspected shipping damage must be reported immediately to the freight carrier. Any transport damage cannot be claimed to Orion Packaging Inc. Items that are vulnerable to damage and must be inspected are as follows:

- Motors and transmissions
- Junction boxes
- Electrical conduits
- Proximity and limit switches
- Photocells

3. Check under the turntable to ensure that there is no crippling of the movable parts i.e. casters, center axle or drive assembly.

4. Verify the following:

- Turntable or rotary arm drive system to confirm that the reducer to drive the chain is snug and properly aligned.
- Verify the wires tight conduits for crushed sections or loose fittings.

- Verify the film carriage to be sure that it is correctly aligned with the tower
- Verify the tension on the lift chain.
- Verify all the dials and knobs on the control panel for smooth action.

MACHINE INSTALLATION

After the visual inspection has been completed, the electrical power and the compressed air shall be connected as specified on the diagrams supplied with the machine. An electrical diagram is provided with each machine in the envelope attached to the panel box.

ASSEMBLY PROCEDURE

The structural frames of the machine have to be installed on a leveled floor. Locate the main wrapper section into its final position, keeping the tower assembly* away from any traffic. The wrapper mainframe section **must be bolted to the floor by the 1/2" concrete floor anchors** (leg & shield or expandable type).

Any wiring that has been disconnected to facilitate transport is marked with a number located on the junction box to which the wiring must be reconnected. Any wire run that appears too short or long may indicate that the position of the mechanical components is incorrect. Verify the status of all assemblies before proceeding.

* The tower deviation from vertical must not exceed 1/4" on the distance of 10 feet (angle: 0 degrees 6').

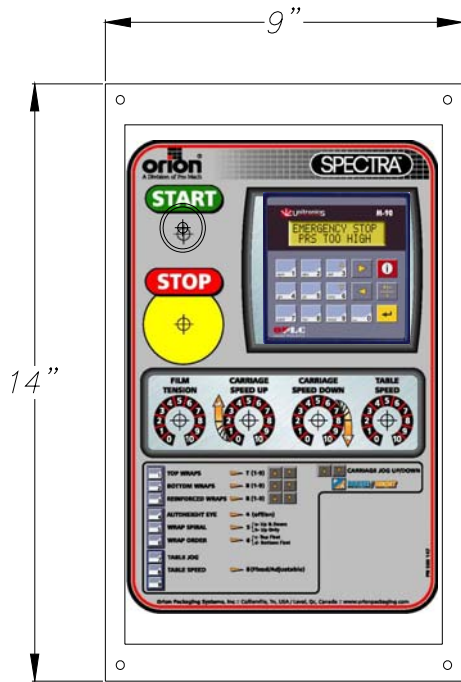
The roping bar

The roping bar is rotating around the shoulder screw (dwg M-435381 item # 7) and his height can be adjusted from 0 to 6 inches from the base. That device is squeezing a stripe from 0 to 6 inches of the film like a rope to stabilize the load itself or attach it on the pallet. To adjust the roping bar you need a 1/2" wrench and you have to loose up the screw #5 and #6.

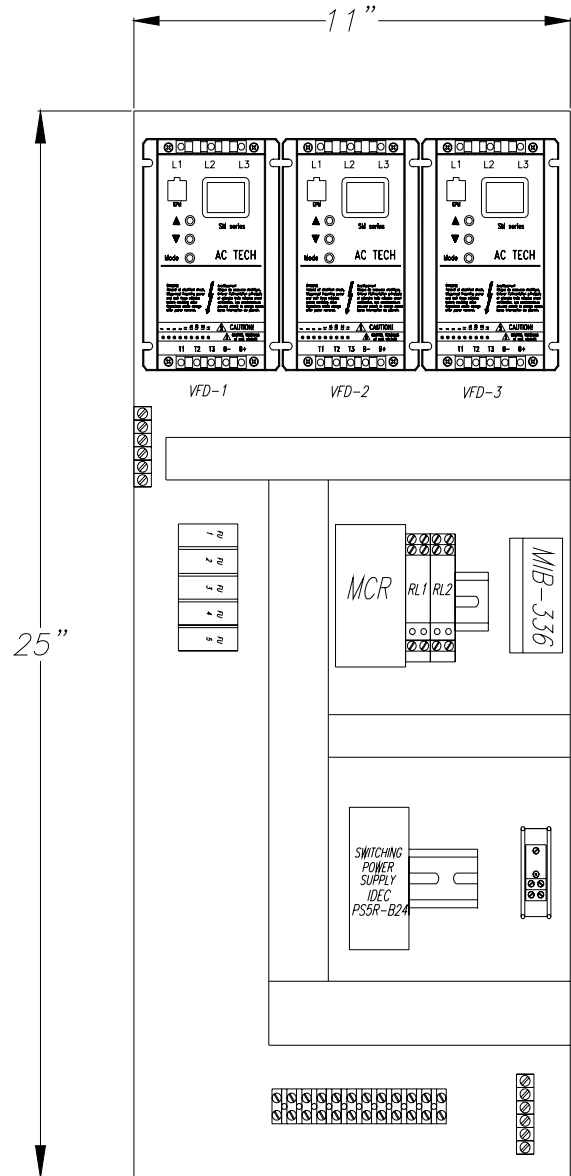
Getting started (Security tip)

Be careful to never walk on the turntable it could cause you an injury.

Put a pallet on the turntable and attach the end of film around the load on the same side than the control panel. Put the carriage at the bottom end of the tower to begin a cycle of wrapping. After the start don't stay to close and wait until the end of the cycle. After the cycle, cut the film and remove the load. The carriage is returned back to the bottom of the tower and ready to wrap again.

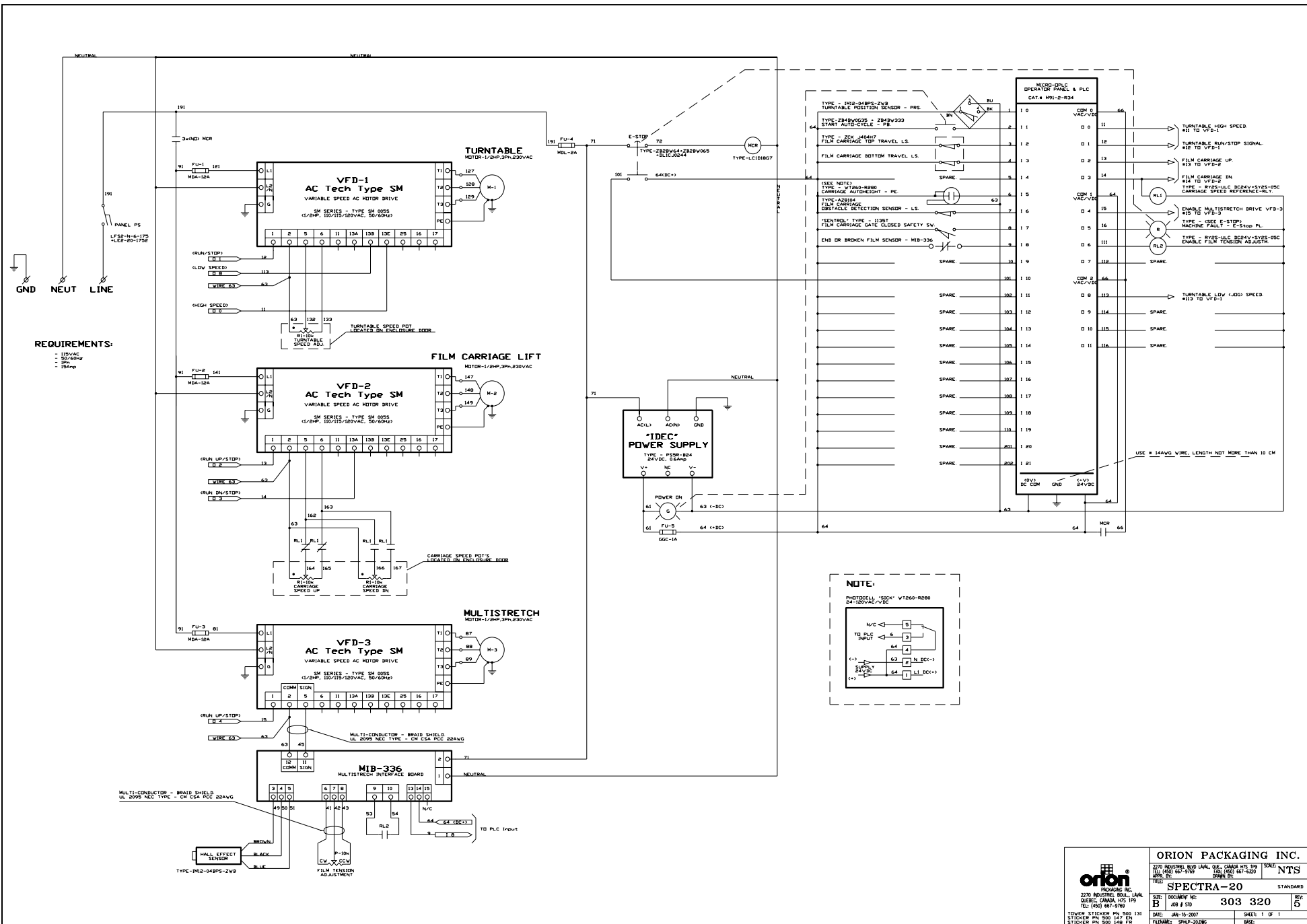


FRONT PLATE



BACK PLATE

		ORION PACKAGING INC.	
		2270 INDUSTRIEL ELVO LAVAL, Q.C., CANADA H7S 1P9 TEL: (450) 667-9769 FAX: (450) 667-6320 APPR. BY: J.B.S. DRAWN BY: J. ALEXANDER	
SIZE: DOCUMENT NO: B J06 # STD 303 320/L		SCALE: 1:2 TITLE: SPECTRA-20 "STANDARD"	
DATE: DEC-19-2006		SHEET: 1 OF 1	
FILENAME: SP-20LDWG		BASE:	



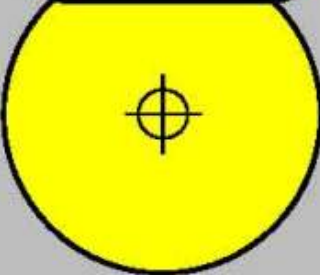
Note: For VFD adjustment, please contact Orion Packaging service department.

<p>ORION 2270 INDUSTRIAL BOLL... LUAL GABRIEL CANADA 975 199 TEL (450) 667-3769</p>	ORION PACKAGING INC.		SCALE	
	3770 AVIGNON, B.V. LUAL, O.E. CANADA 975 199		NTS	
	TEL (450) 667-3769		702 (450) 667-8200	
	FAX (450) 667-3769		ORION	
	TITLE: SPECTRA-20		STANDARD	
SIZE: B	DOCUMENT NO: 303 320	JOB # STD	REV 5	
DATE: JUN-10-2007		SHEET: 1 OF 1		
TOWER STICKER PN 300 131				
STICKER PN 300 147 63				
STICKER PN 300 148 FR				
FILENAME: SPMF-260W				

START



STOP



FILM TENSION	CARRIAGE SPEED UP	CARRIAGE SPEED DOWN	TABLE SPEED

<input type="checkbox"/> 1	TOP WRAPS	T (1-9)	
<input type="checkbox"/> 2	BOTTOM WRAPS	B (1-9)	
<input type="checkbox"/> 3	REINFORCED WRAPS	R (1-9)	
<input type="checkbox"/> 4	AUTOHEIGHT EYE	4 (off/on)	
<input type="checkbox"/> 5	WRAP SPIRAL	5 {	
<input type="checkbox"/> 6	WRAP ORDER	6 {	
<input type="checkbox"/> 7	TABLE JOG		
<input type="checkbox"/> 8	TABLE SPEED	8 (Fixed/Adjustable)	
<input type="checkbox"/> 9			

CARRIAGE JOG UP/DOWN

PAUSE/RESET

PM 500 147

MACHINE OPERATION

POWER SWITCH

Located on the panel door or side of the panel box, the lockable power switch has two settings:

- ON - connects a power source to the machine
- OFF - disconnects the power source.

START AND EMERGENCY STOP SWITCHES

The START switch is used to start the cycle once the load is on the turntable. The cycle may be stopped at anytime by pressing the STOP button. (see **Figure 1**)

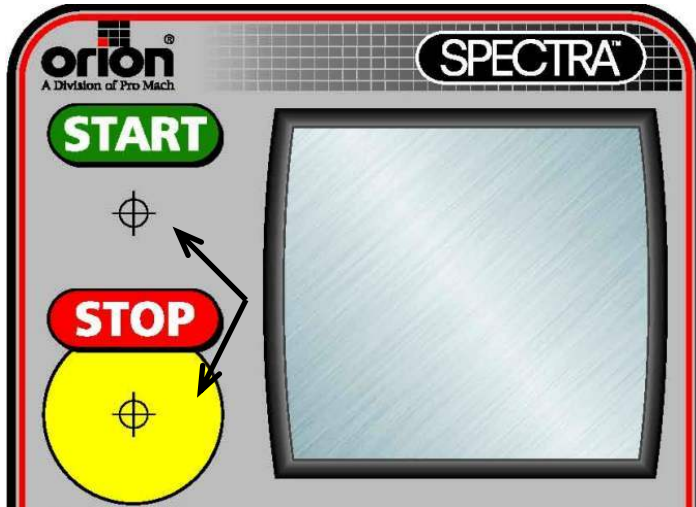


Figure 1

NOTICE: The STOP button interrupts the entire machine electrical circuits. To continue the cycle the STOP push/pull button should be pulled out and START button pressed for the machine to restart. Double pressing the push – pull STOP button will reset the machine program and machine will be ready to apply the wrapping cycle from the beginning.

SETTING-UP MACHINE PARAMETERS

Note: Parameter change is available when machine is not in cycle.

1- TOP WRAPS 1,2,3...9

Press button #1 on the keypad to select “Top Wrap”, then using the arrows on the keyboard select between 1 to 9 for required number of wraps on top of the load.

2- BOTTOM WRAPS 1,2,3...9

Press button #2 on the keypad to select “Bottom Wrap”, then using the arrows on the keyboard select between 1 to 9 for required number of wraps at the bottom of the load.

Note: Refer to the list of options at the bottom of the panel sticker for reference. (see **Figure 3**)



Figure 2

3- REINFORCED WRAPS

This application allows you to apply extra wrap around the load (overlap) to reinforce and stabilize the load on the pallet. When ever you feel like adding extra wrap, simply press the #3 button and the carriage will stop moving. Machine is preset to apply 1 extra lap around the load, but you can increase that up to 9, by using the arrow.

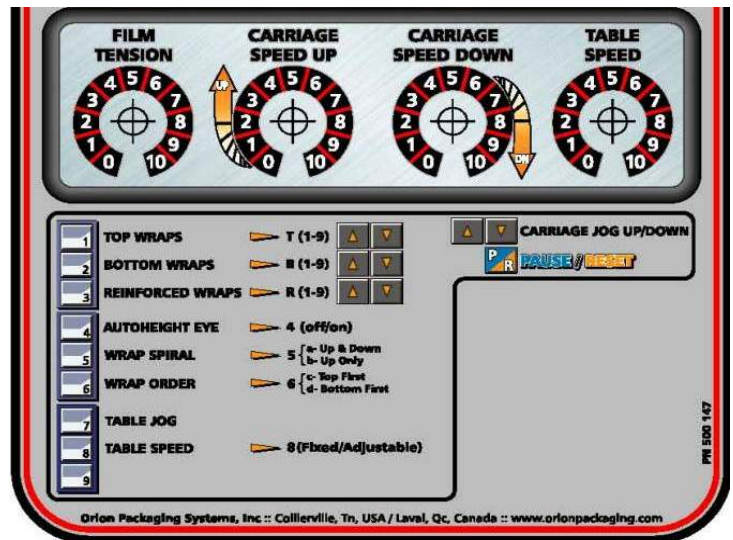


Figure 2

4- AUTOHEIGHT EYE

Press button #4 on the keypad to switch from ON to OFF, or vice-versa.(see **Figure 2**)

ON - When ON, the photocell is activated to automatically detect top of the load. The carriage will automatically stop at the top of the load regardless of its height.

OFF - When OFF, the photocell is inoperative and carriage will travel to the top limit switch regardless of its height.

NOTE: For proper machine operation, top limit switch position should be adjusted to desired level prior to starting the cycle.

5- WRAPPING SPIRAL ; UP & DOWN OR UP ONLY

Press button #5 on the keypad to switch from UP ONLY to UP & DOWN, or vice-versa.

UP ONLY- When the UP ONLY position has been selected machine will first wrap bottom of load applying selected number of bottom wraps. The film carriage will then move to the top of load and stop. Selected number of top wraps will then be applied, after which the turntable will slow down and stop in home position. Wrap pattern "SPIRAL UP ONLY" has been completed.

UP & DOWN - This Selection has two Sub-Modes, programmable to enable the machine to perform the two different wrap patterns (Bottom Wraps First and Top Wraps First ; See wrap order #6). (Figure 4)

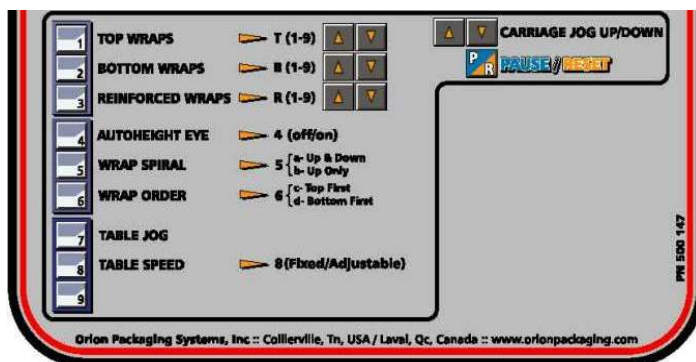


Figure 4

6- WRAP ORDER

TOP WRAPS FIRST - When this Sub-Mode has been selected film carriage will move to top of load and stop. Selected number of top wraps will be applied. The film carriage will then move to bottom of the load and stop. Selected number of bottom wraps will then be applied. The film carriage will be in bottom position; turntable will slow down and stop in home position.

BOTTOM WRAPS FIRST - When this Sub-Mode has been selected machine will first wrap bottom of load applying selected number of bottom wraps. The film carriage will then move to top of load and stop. Selected number of top wraps will then be applied. The film carriage will move down to bottom position, after which the turntable will slow down and stop in home position.

7- TURNTABLE JOG

The turntable jog can operate only when machine is not in cycle. The turntable jog will rotate at a low speed when the button #7 is held down, when released, the turntable will stop.

8- TABLE SPEED

The option has two setting, fix or adjustable. When set to fix, the turntable speed is constant and can not be change by the knob(knob is inactive). When set to adjustable table speed knob is active and can be used to control the speed of the table during the operation mode.

IMPORTANT:
TURNTABLE SPEED NOT TO BE ADJUSTED DURING THE WRAP CYCLE.

FILM TENSION

Film tension may be adjusted using the film tension control knob (see Figure 5). The range of tension is from 0 to 10 (0 to 4 the low range, 4 to 8 the most selected range for most of the films used by our customers, 8 to 10 as a very high range which may break some types of films).

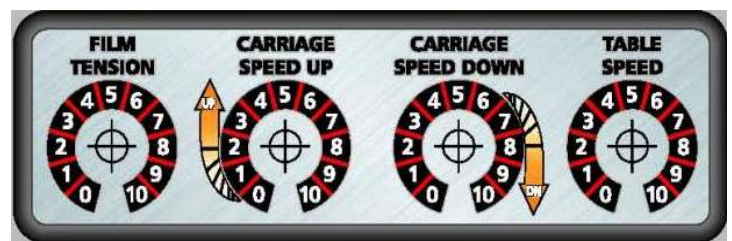


Figure 5

CARRIAGE SPEED (Film Overlap)

The carriage speed knob can be used to control the amount of film overlap apply during the wrap. The potentiometer has settings from 0 to 10, the higher the settings the faster the speed. High settings apply less film overlap due to faster carriage speed. Low settings apply more film overlap due to lower carriage speed.

This machine is equipped with independent speed adjustment for travel up & down. (see Figure 5)

MACHINE WRAPPING TEST

Notice: It is advisable to test-run the equipment with several pallet loads before attempting to wrap using film. Please position the operator beside the EMERGENCY STOP push button. Start up of the machine (system) may determine the need for the adjustment of:

- Load height stop photoswitch (on the carriage)
- Top limit switch position
- Bottom limit switch position
- Roping bar height adjustment

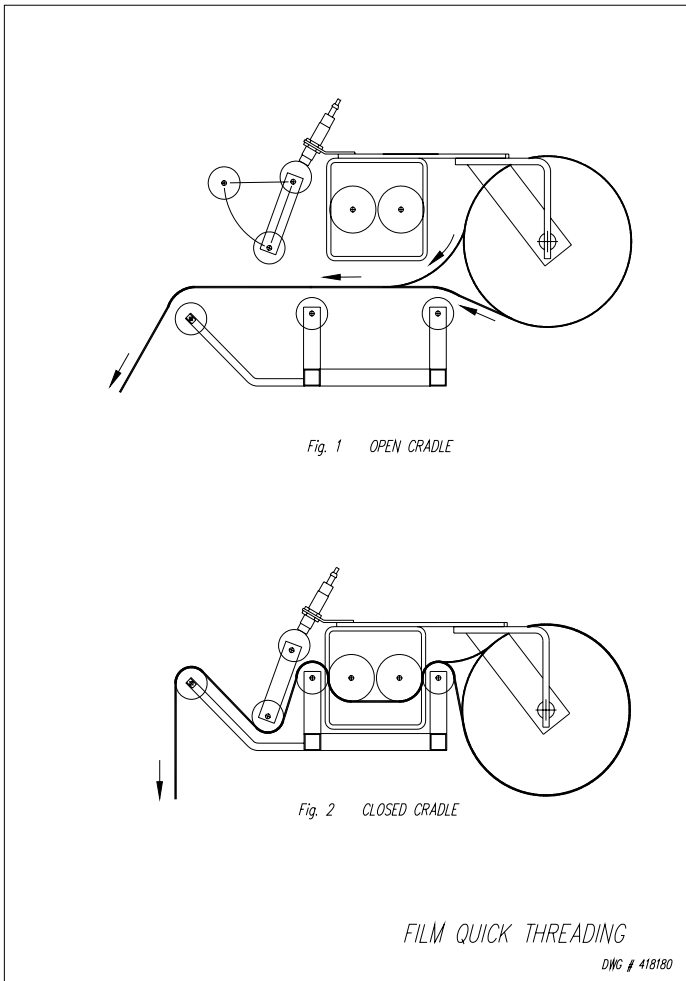
Before the test procedures adjust the wrapping cycle parameters i.e. top wraps, bottom wraps, height photocell on/off, film tension, carriage speed (Last two parameters may be adjusted during the wrapping cycle).

LOADING THE FILM

The film roll can be loaded on the carriage mandrel from either end of the roll. When using tacky film, please verify that the inward tacky surface of the film is inward on the load.

1. Disconnect power (turn off power switch).
2. Swing up the top mandrel spool.
3. Put the roll of film on the bottom mandrel.
4. Install the top mandrel on top of the roll to prevent upward movement.
5. Pull the handle marked PULL TO OPEN to open film distributor cradle.
6. Pass the roped tail of the film through opening (as shown on the film quick threading pattern DWG. # 418180 Fig.1).
7. Close the film distributor cradle by pushing bar marked PUSH TO CLOSE.
8. When the film feeding is completed (fig. 2) – turn the power switch on.
9. Peel off the first few winds of the film (multistrech will run due to displacement of the dancer roller) and fix the film end onto the load.

The system is now ready to begin the first wrapping cycle.

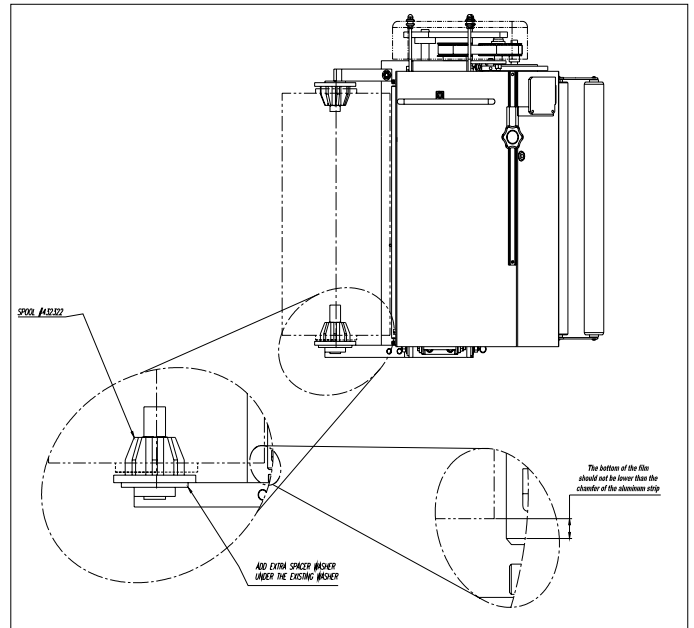


ADDITIONAL SPACER WASHER

(IF NEEDED ONLY)

The roll of film may be slightly different from time to time, so you might have to change the bottom spool spacer (washer). The only thing you have to do is to add or remove the spacer washer under the bottom spool. With the machine there is 1 washer under the bottom spool (432322), and you have received with the machine 2 extra washer to be use if needed.

Note: The bottom of the film should not be lower than the chamfer of the aluminum strip as shown on the drawing below.



PROXIMITY SENSOR ADJUSTMENT

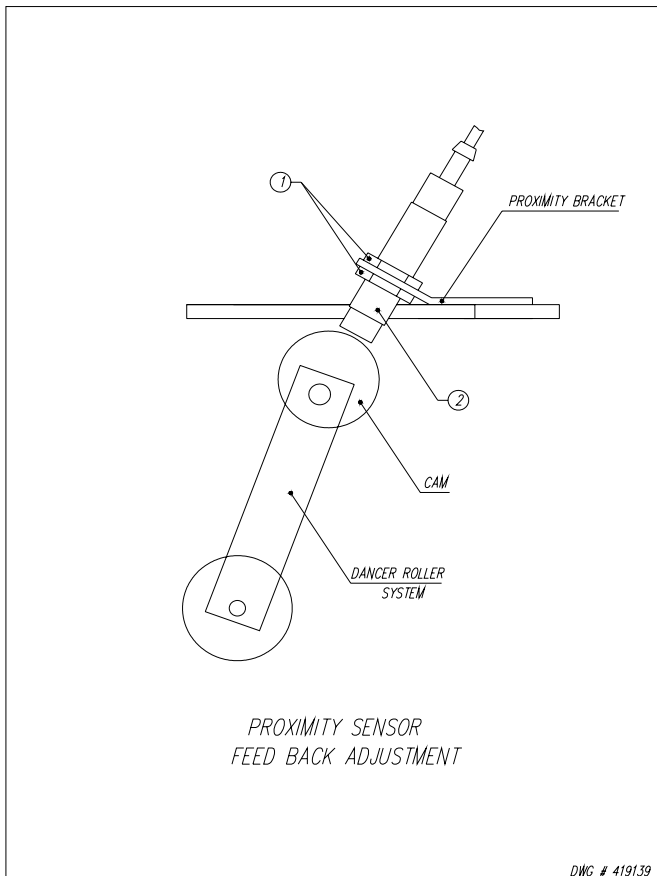
Occasionally the Feed Back Proximity Sensor may need some adjustment. The position of the feed back proximity sensor against the cam is shown on drawing # 419139 and on **Figure 6**.

Adjustment instructions:

- Power down machine.
- Remove the carriage cover.
- Unbolt the two nuts holding the proximity switch - item # 1.
- Turn the Proximity sensor - (item # 2) to create the gap between the cam and the front side of proximity sensor about 1/8 ".
- Tighten on the nuts securing the Proximity Sensor.
- Put the cover back on.
- Power up machine.
- Turning the trim pot SPAN adjust the moment when motor starts to turn when dancer roller moved from its home position up to 1 1/2".
- If not satisfied repeat the procedure.



Figure 6



MACHINE MAINTENANCE

All general information about machine maintenance is based on normal machine working conditions: indoor, moderate dust and low moisture environment, and maximum rotation of 32 RPM of turntable/rotary arm. They should be regarded as guidelines, reviewed and corrected according to requirements of actual use and conditions.

MOTOR MAINTENANCE

An occasional inspection of the brushes should be made in order to establish a wear rate. Replacement brushes should be installed before old brushes wear to 9/16" long, measured on the long side. After replacing brushes run the motor near rated speed for at least 1/2 hour with no load to seat the new brushes. Failure to properly seat the new brushes may cause commutator damage and rapid wear of the new brushes. If the commutator becomes rough, scored or out of shape, a competent motor shop should disassemble it and resurface the commutator. With every third brush change, have a competent motor shop resurface the commutator and blow the carbon dust out of the motor.

REDUCER OIL CHANGE

All external cap screws and plugs on the reducing transmission should be checked for tightness after the first week. It is recommended to change the oil every six months or at least 1800 hours of operation, whichever comes first. When adding or changing oil, the transmission should never be filled above the oil level mark indicated, because leakage and overheating may occur. Below is the list of the type of lubricant that should be used. List of recommended reducer oils:

Manufacturer	Lubricant
American Oil Co.	American Cyl Oil no: 196-L
Cities Service Oil Co.	Citgo Cyl Oil 100-5
Gulf Oil Corp.	Gulf Senate 155
Mobil Oil Corp.	Mobil 600 W Suer-r Cyl. Oil
Philips Oil Corp.	Andes S 180
Texaco Inc.	624 + 650T Cyl.Oil
Shell Oil Co.	Velvata Oil J82
Union Oil of Cal.	Red Line Worm Gear Lube 140

RING BEARING MAINTENANCE (when applicable)

The ring bearing (located under the turntable) should be re-lubricated internally and externally.

Internally: by injecting grease into all the lubrication nipples in succession until a collar of fresh grease appears around the perimeter of the ring. The re-lubrication interval suggested for these bearings, used in Stretch Wrapping Machinery is 750 hours, with a maximum period of 6 months. The lubricant should be fresh and applied in sufficient quantities to make sure all surfaces are lubricated.

Externally: by lubricating and wiping the chain drive with oily cloth. The frequency of lubrication depends on entirely upon the usage of the machine and environment in which the machine is placed (dust, moisture etc.). Machines working under extremely dirty conditions should be lubricated every 400 operating hours but at minimum, every 2 months. Longer lubrication intervals may occur only when machine is working under very clean and dry conditions but should be not be longer than 6 months.

List of recommended lubricants for the ring bearing lubrication

Manufacturer	Lubricant
BP	Energrease LS2
Castrol	Speeroll AP2
Esso	Beacon 2
Gulf	Crown Grease 2
Mobil	Mobilus 2
Shell	Avania Grease RT 2
Texaco	Glissando FT 2
Valvoline	LB-2

TOWER RACEWAYS MAINTENANCE

The film distributor (carriage) is sliding on the plastic guides attached behind its back plate. The section of the tower on which the plastic guides move (raceways) should be cleaned and re-greased approximately every 600 hours of machine operation.

NOTICE: If the machine works in a dusty and corrosive environment, the raceways should be re-greased more often (at least every 100 hours).

CHAIN MAINTENANCE

To clean the chain, wipe it with an oily cloth every month. When machine is working in a dusty and damp environment, it may be necessary to repeat the cleaning operation more often. As the chain lubricants please use the most common chain lubricants on the market. With time, the chain will tend to stretch. A loose tower chain should be tightened by moving the reducer on its mounting plate. Turntable is equipped with automatic chain tensionner and does not need any adjustment.

NOTICE: First chain tension inspection must be done after the first two weeks of machine usage.

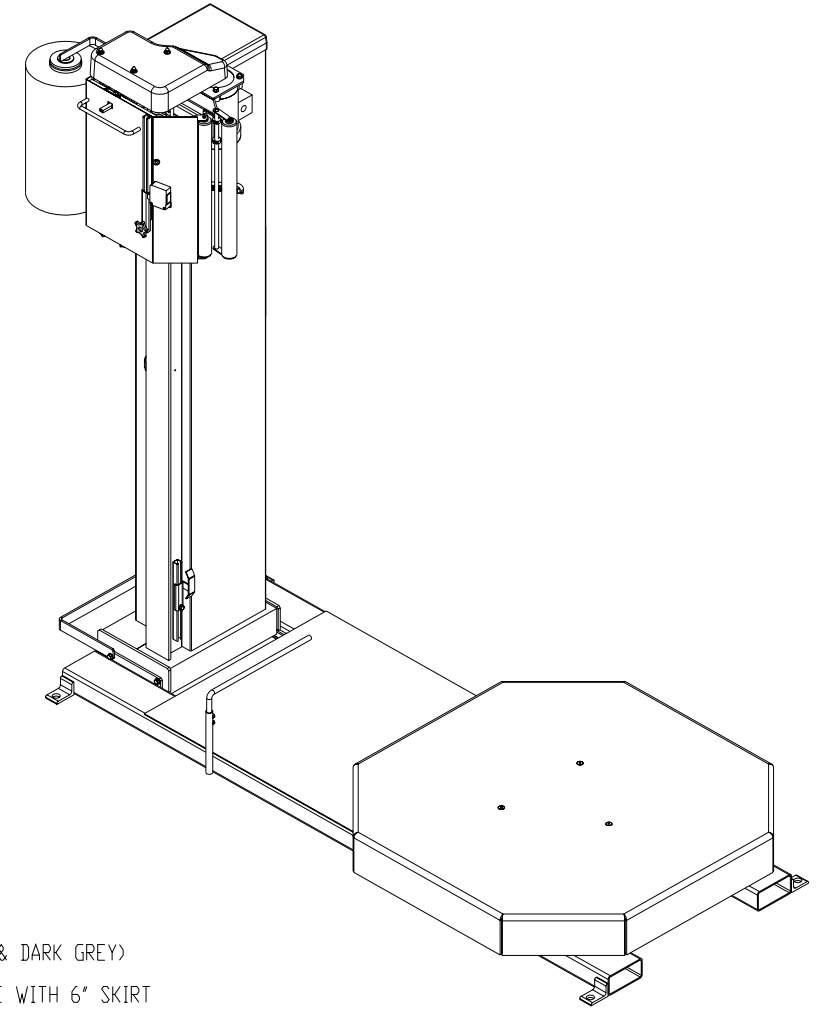
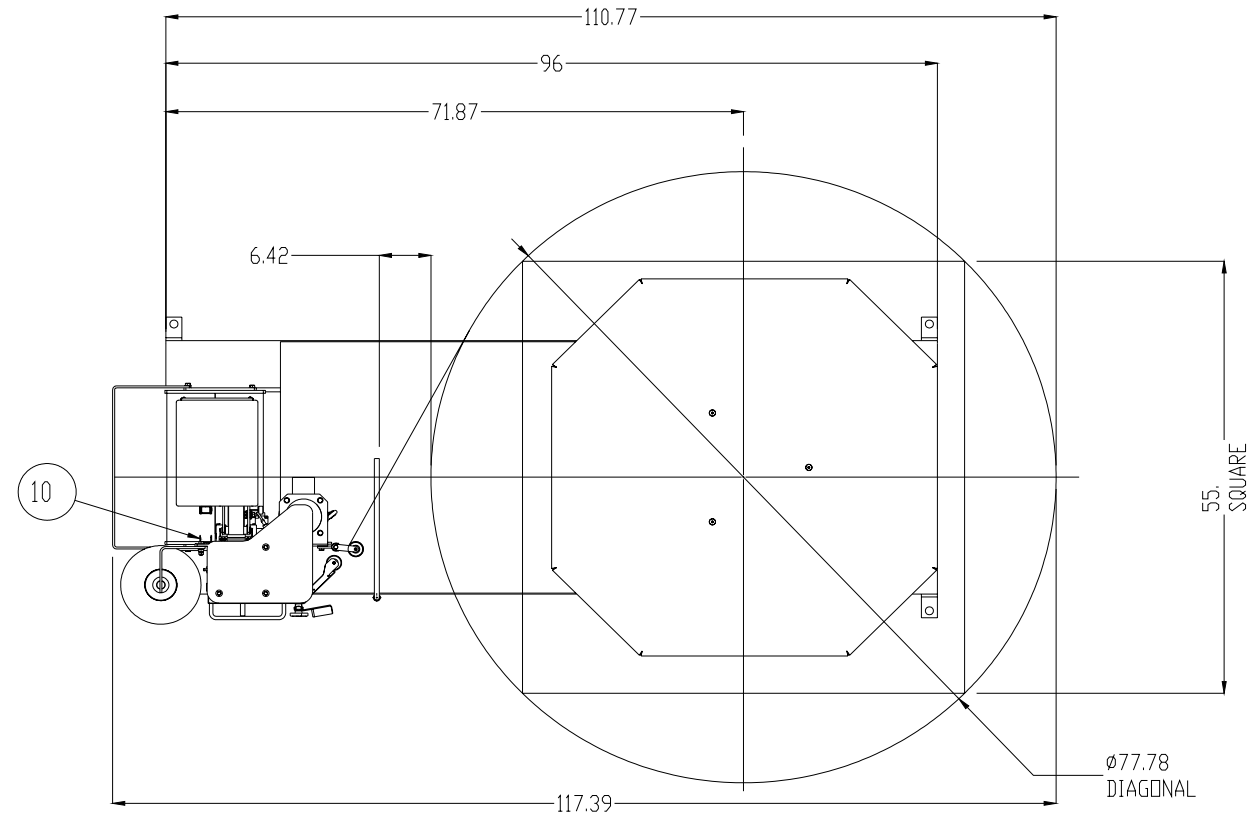
CAM FOLLOWER MAINTENANCE (when applicable)

The cam followers have deep grease pockets and do not need frequent relubrication. The portion of the tower on which the cam followers run, should be cleaned and regreased every 300 hours of operation. If the machine operates in a dusty or corrosive environment the tower should be relubricated more often.

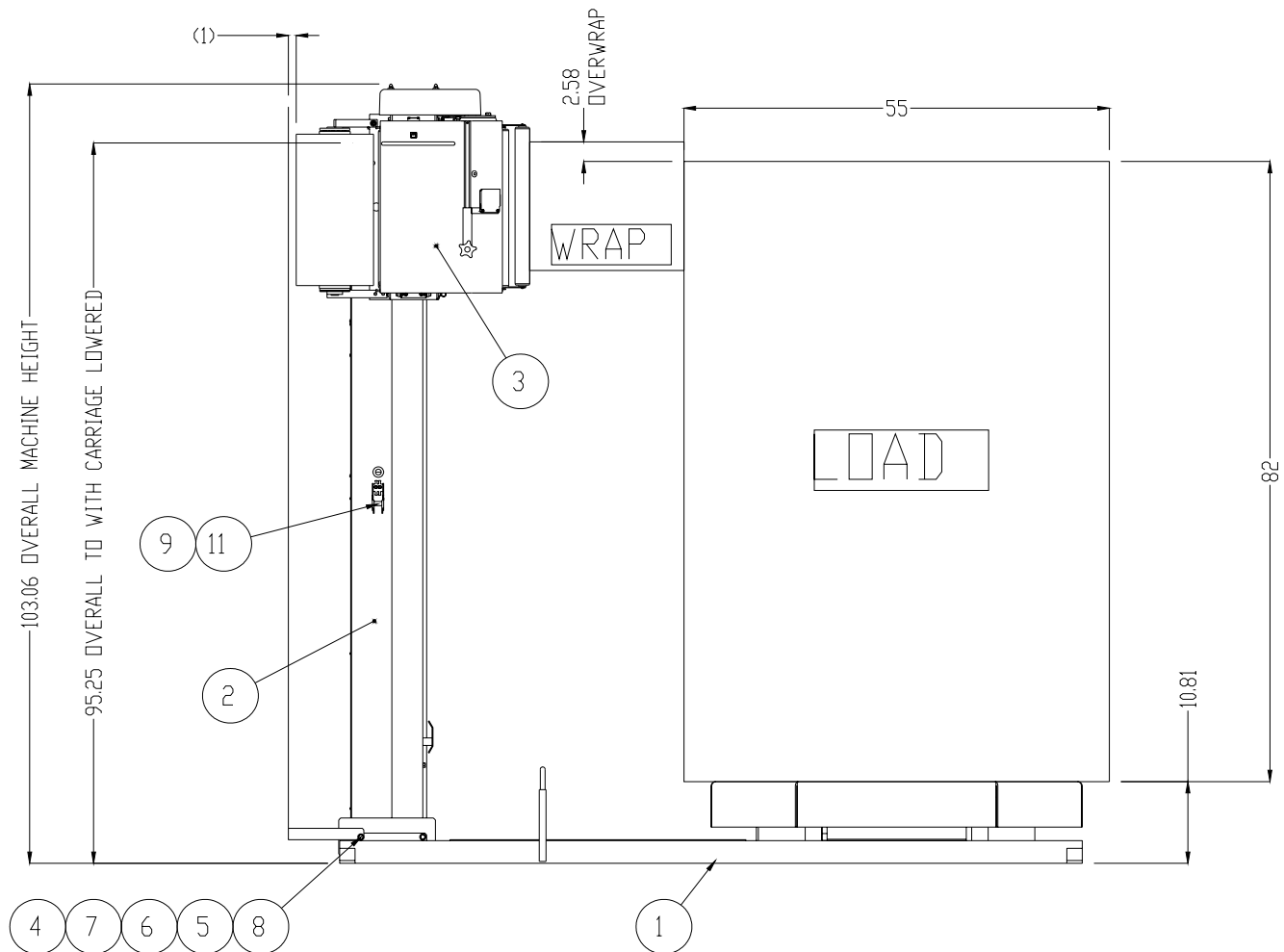
SEMI-AUTOMATIC STANDARD ASSEMBLY PART LIST

Note :

- * Quantity listed in order of part number**
- ** The names given to the parts are generic**



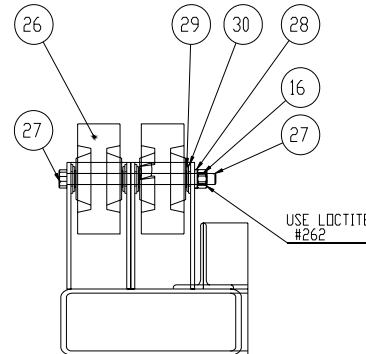
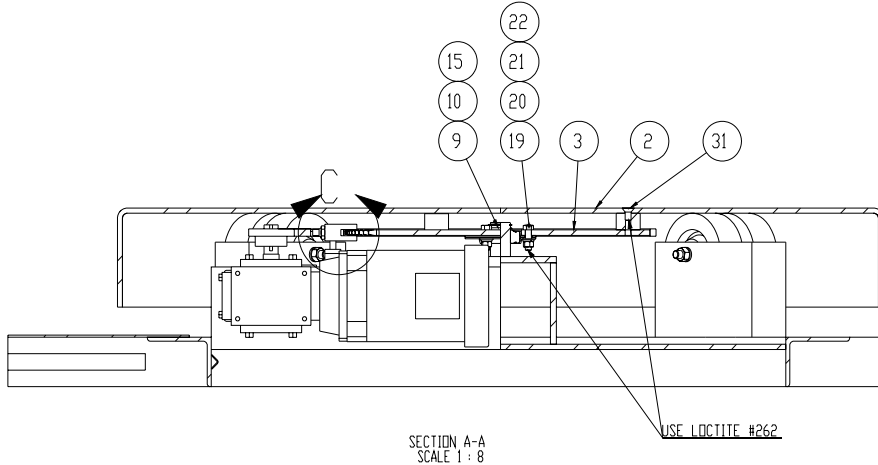
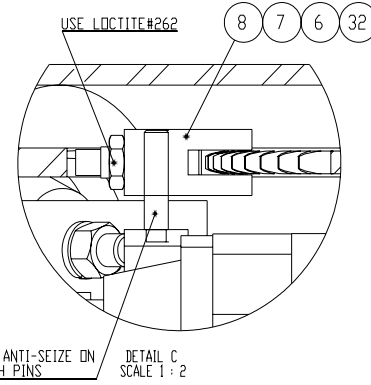
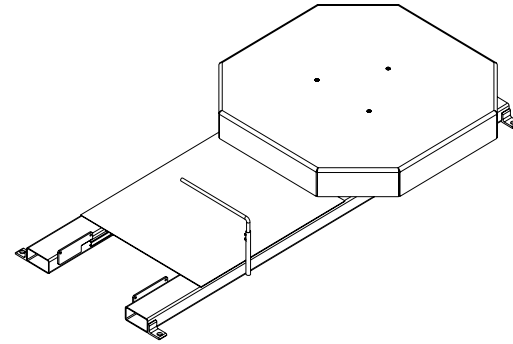
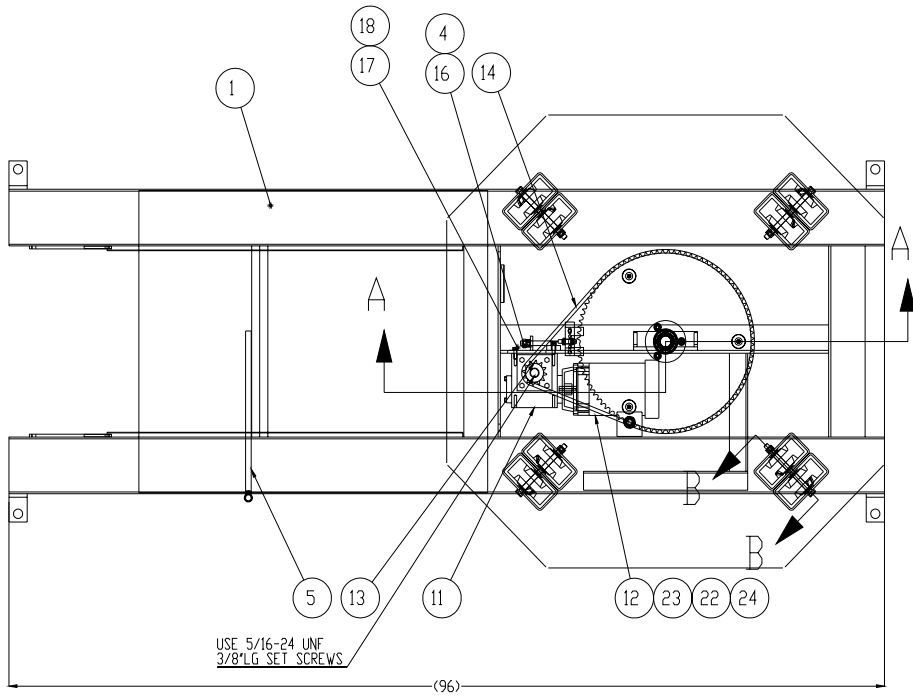
- NOTES :
1. TURNABLE SPEED: 12 RPM MAX.
 2. LOAD SIZE : 55"W x 55"L x 82"H
 3. WEIGHT CAPACITY : 4,000 lb
 4. POWER REQUIREMENT : 115/1/60, 15 amp SERVICE
 5. MACHINE COLOR : 2 TONE ORION STD GREY (PLATINUM & DARK GREY)
 6. 20" INSTA-THREAD FILM CARRIAGE
 7. 48" x 48" FORMED AND WELDED OCTAGONAL TURNTABLE WITH 6" SKIRT



#	TITLE	Length	PART NO.	Q
11	VERSATRAX #0345-040-025-038	45 1/2"	019053	1
10	MOVING END BRACKET		019054	1
9	FIXED END BRACKET		019055	1
8	HEX BOLT 3/8-16NC x 1 1/2"		017400	4
7	HEX NUT 3/8-16NC		011128	4
6	LOCK WASHER 3/8"		011390	4
5	FLAT WASHER 3/8"		010948	4
4	SPECTRA HP BACK TOWER STOPPER	39 11/64"	446681	1
3	INSTA THREAD - FLR - 20" CARRIAGE		443591	1
2	SPECTRA HP/20 TOWER ASSEMBLY		450404	1
1	SPECTRA HP/20 BASE ASSEMBLY (STANDARD)		450397-00	1
				0

REMARKS				
REMARKS				
SPECTRA HP/20 - LAYOUT				
 2270 INDUSTRIEL, LAVAL QUEBEC, CANADA, H7S 1P9 TEL: (450) 667-9169	TOLERANCES UNLESS OTHERWISE SPECIFIED MACHINED - H1/64 WELDED - H1/32 ANGLE - H1/32 XXX - H0.02 XXXX - H0.05 REFERENCE DWG	DRAWN BY G.PETRAZZUOLI APPROVED BY	DRAWN DATE JAN/31/2007 APPROVED DATE	WEIGHT (lb) 1123.53 SCALE 1:24 SHEET 1 / 1
	MACHINE TYPE SPECTRA HP/20 ASSEMBLY DWG	JOB NO. STD DWG SIZE B	DWG NO. 450398M	REV. A

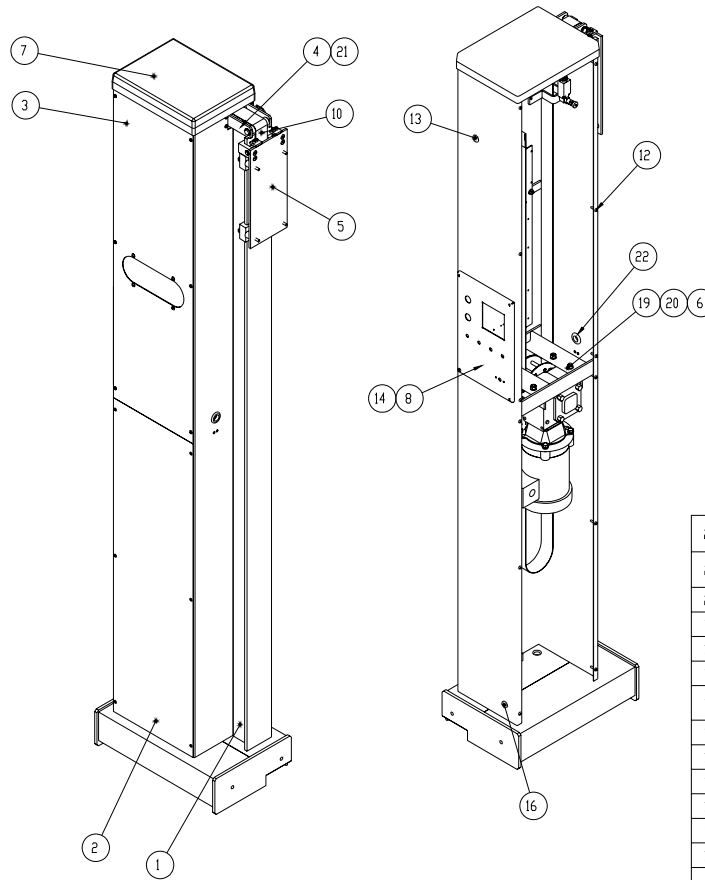
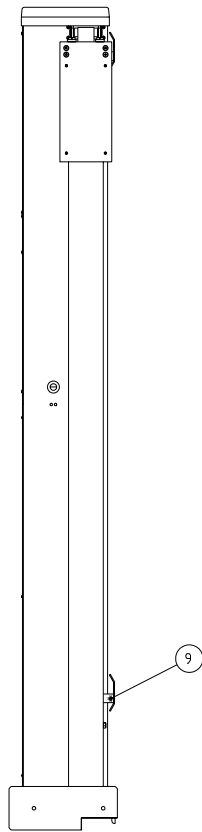
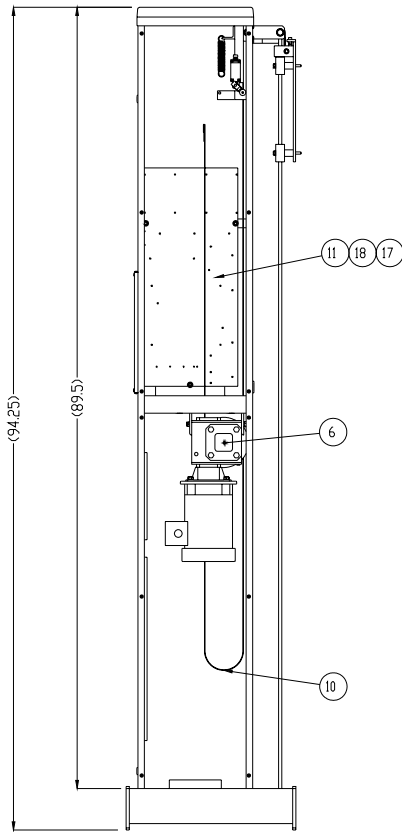
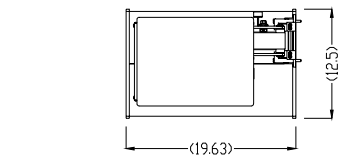
CE DESSIN EST CONFIDENTIEL ET NE DOIT PAS ETRE REPRODUIT OU UTILISE SANS LE CONSENTEMENT DES EMBALLAGES ORION INC.



32	JAM NUT M12x1		013041	2
31	SOCKET FLAT HEAD SCREW 3/8-16NC x 3/4" (GR.8)		012692	3
30	FLAT WASHER 5/8"		012930	16
29	FLAT WASHER 1/2"		012584	16
28	LOCK WASHER 1/2"		012583	4
27	HEX BOLT 1/2-13NC X 7.000		015296	4
26	PHENOLIC WHEEL 5 DIA X 2		015350	8
25	SEALING WASHER 1/2"		010650-3	1
24	NUT LOCK 1/2"		010650-2	1
23	PLASTIC CONNECTOR 1/2"		010650-1	1
22	HEX NUT 3/8-16NC		011128	3
21	LOCK WASHER 3/8"		011390	3
20	FLAT WASHER 3/8"		010948	3
19	HEX BOLT 3/8-16NC x 1 1/4"		012406	3
18	LOCK WASHER 5/16"		012724	4
17	HEX BOLT 5/16-18NC x 1"		010316	4
16	HEX NUT 1/2-13NC		011266	6
15	EXTERNAL RETAINING RING - 1 1/4" SIZE		013655	1
14	CHAIN #50, 109 LINKS + C/L	68 1/8"	010009	1
13	SPROCKET 50B12, 7/8" BORE		010435	1
12	EL. MOTOR 1/2HP, 208-230/460VAC, 1725 R.P.M.		015225	1
11	REDUCER CFC-175, 15:1, RIGHT, 56C		015191	1
10	HOUSING PF-206		014487	2
9	BEARING RINGBALL SA 206-20		013689	1
8	PROXIMITY SWITCH BRACKET	3"	433743	1
7	PROXY GUIDE ASS'Y		433744	1
6	PROXIMITY SWITCH BASE BRACKET	1"	434849	1
5	ROPING BAR	23 1/8"	413868	1
4	CHAIN TIGHTENER (BQ-175) ASS'Y		412261	1
3	SPROCKET 50A96 - H55		429603	1
2	TURNTABLE - 48" OCTAGONAL		412405	1
1	SPECTRA HP/20 BASE WELDING (STANDARD)		450396-00	1
#	TITLE	Length	PART NO	Q

REMARKS					
REMARKS					
SPECTRA HP/20 BASE ASSEMBLY (STANDARD)					
 2270 INDUSTRIEL LAVAL QUÉBEC, CANADA H3V 1Y9 TEL: (450) 667-9789	TOLERANCES UNLESS OTHERWISE SPECIFIED	DRAWN BY G.PETRAZZUOLI	ISSUE DATE JAN/31/2007	WEIGHT (KG) 687.81	
	NUMBER OF SHEETS 1 OF 6	APPROVED BY	APPROVED DATE	SCALE 1:32	
	MACHINE TYPE SPECTRA HP/20	JOB NO. STD		SHEET 1 / 1	
	ASSEMBLY NO. 450398	DWG SIZE B	DWG NO. 450397-00M	REV. A	

CE DESSIN EST COMPLEMENTAIRE ET NE DOIT PAS ETRE REPRODUIT OU UTILISE SANS LE CONSENTEMENT DES EMBALLAGES ORION INC.



22	GROMMET RB-247 (1 3/8"OD x 3/4"ID x 3/8"THK)		017326	2
21	BUTTON SOCKET HEAD CAP SCREW 1/4-28NF x 1/2"		017304	4
20	HEX NUT 3/8-24NF		012582	4
19	LOCK WASHER 3/8"		011390	4
18	HEX NUT 1/4-20NC		012689	3
17	FLAT WASHER 1/4"		012221	3
16	GROMMET 5/16 ID x 9/16 GROOVE DIA x 3/16 GROOVE W		014502	1
15	HEX NUT #10-32NF		013451	4
14	SPANNER TRUSS HEAD SCREW #10-32NF x 3/4"		017295	4
13	SNAP-IN FINISHING PLUG UNVENTED 11/16"		018427	1
12	PAN PHILIPS HEAD SCREW #10-24NF x 3/4"		013351	16
11	ELECTRICAL INSIDE PANEL PLATE 25 X 11		443629	1
10	CARRIAGE BELT	150"	436474	1
9	LIMIT SWITCH STRIKER ASSEMBLY		436843	2
8	SPECTRA ELECTRICAL PANEL PLATE		448969	1
7	TOWER COVER		433976	1
6	CARRIAGE BELT DRIVE		443441	1
5	CARRIAGE ATTACHMENT ASSEMBLY		430020	1
4	BELT IDLER ROLLER ASS'Y		436413	1
3	TOWER BACK WALL TOP ASS'Y		443626	1
2	TOWER BACK WALL		436412	1
1	SPECTRA HP/20 TOWER WELDING		450403	1
#	TITLE	Length	PART NO	QTY

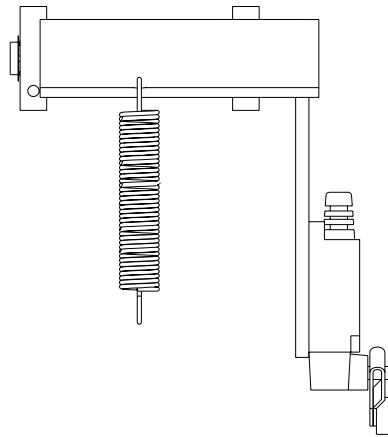
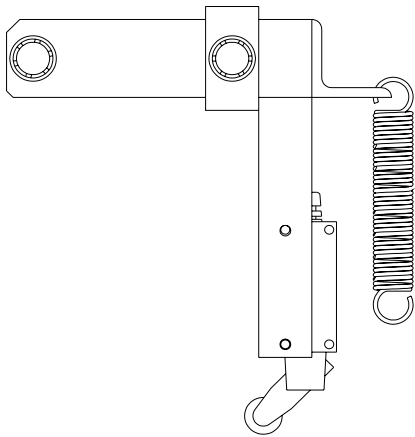
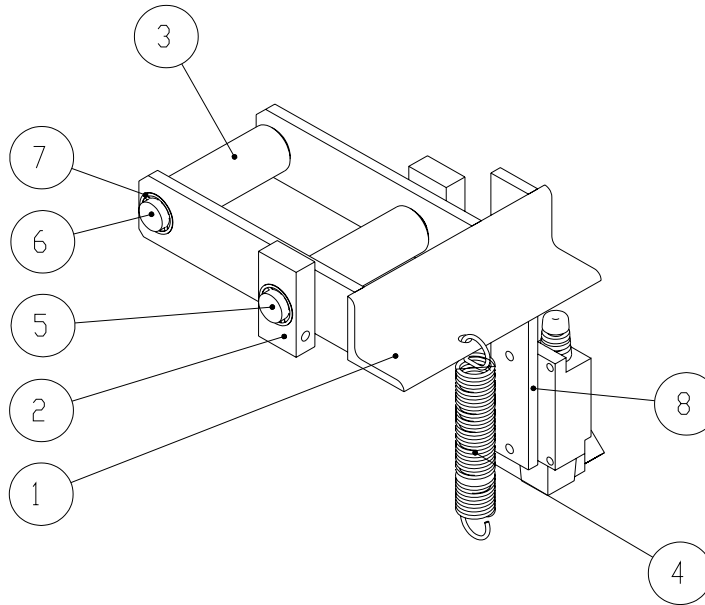
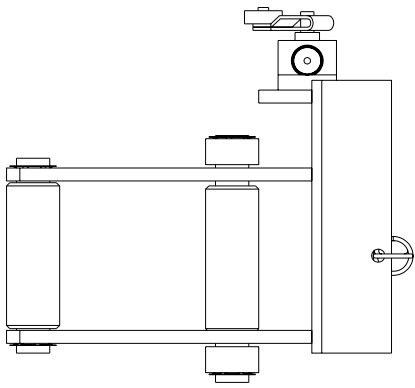
REMARKS

REVISIONS

SPECTRA HP/20 TOWER ASSEMBLY

 ORION PACKAGING, INC. 2278 BUCKINGHAM LANE SHERBROOKE, CANADA J5R 1P9 TEL: (450) 667-9169	TOLERANCES UNLESS OTHERWISE SPECIFIED MILLIMETERS - 0.04 INCHES - 0.002 HOLE - 0.02 MAX - 0.02 MIN - 0.00	DRAWN BY G.PETRAZZUOLI APPROVED BY 	DRAWN DATE JAN/31/2007 APPROVED DATE 	WEIGHT (LBS) 269.52 SCALE 1:15 SHEET 1 / 1
	MACHINE TYPE SPECTRA HP/20 REFERENCE FIGS 	JOB NO STD WORK CENTER B TIME CODE 450398 PIVOT NO 450404M PART A+		

CE DESSIN EST CONFIDENTIEL ET NE DOIT PAS ETRE REPRODUIT OU UTILISE SANS LE CONSENTEMENT DES EMBALLAGES ORION INC.



#	TITLE	Length	PART NO	Q
8	LIMIT SWITCH 1ND/1NC		012006	1
7	RETAINING RING EXTERIOR 5/8" - R6100-62		017624	4
6	CRS ROD 5/8"Ø	3 3/4"	RC1902	1
5	CRS ROD 5/8"Ø	4 3/4"	RC1902	1
4	YELLOW TENSION SPRING 3/4"OD x 0.080" WIRE		010047	1
3	BELT ROLLER	2 13/16"	436421	2
2	BEARING PLATE	2"	430022	2
1	BELT IDLER ROLLER BRACKET		436420	1

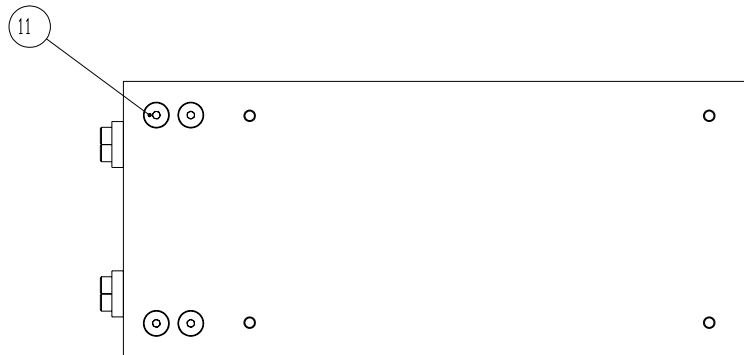
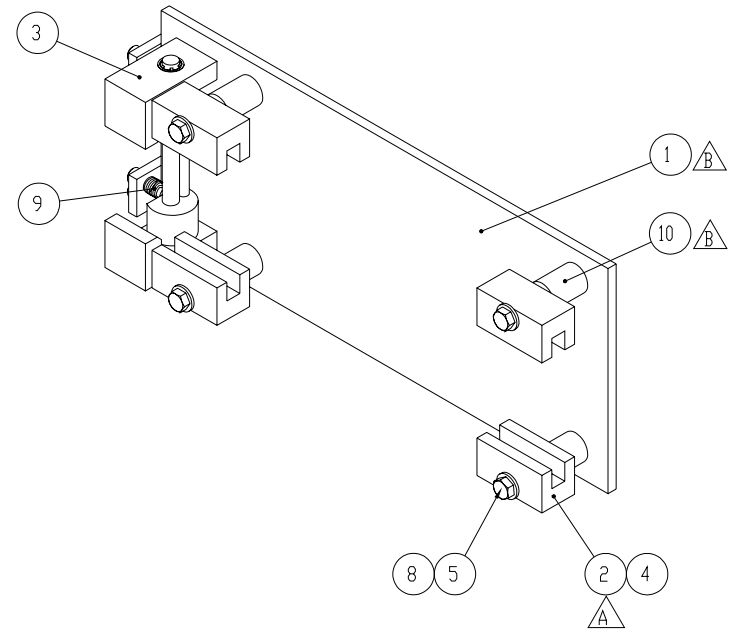
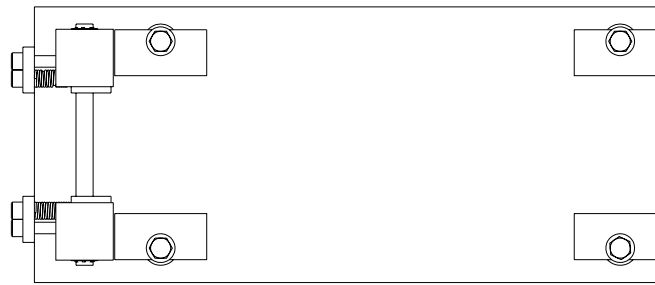
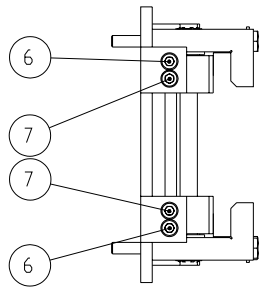
REMARKS

REMARKS

BELT IDLER ROLLER ASS'Y

<p>ORION PACKAGING INC. 2270 INDUSTRIEL, LAVAL QUEBEC, CANADA, H7S 1P9 TEL: (450) 667-9769</p>	<p>TOLERANCES UNLESS OTHERWISE SPECIFIED</p> <p>MACHINED: ±1/32 WELDED: ±1/16 ANGLE: ±1/16 XXX: ±0.02 XXXX: ±0.005</p>		<p>DRAWN BY ROGER F.</p>	<p>DRAWN DATE 11/19/2002</p>	<p>WEIGHT (lb) 4.71</p>
	<p>APPROVED BY</p>		<p>APPROVED DATE</p>	<p>SCALE 1:4</p>	
	<p>MACHINE TYPE SPECTRA II</p>		<p>JOB NO. 12812</p>	<p>SHEET 1 / 1</p>	
	<p>REFERENCE DWG</p>	<p>ASSEMBLY DWG 436404</p>	<p>DWG SIZE A</p>	<p>DWG NO. 436413</p>	<p>REV. B</p>

CE DESSIN EST CONFIDENTIEL ET NE DOIT PAS ETRE REPRODUIT OU UTILISE SANS LE CONSENTEMENT DES EMBALLAGES ORION



11	SOCKET FLAT HEAD SCREW 1/4-28NF x 3/4"			017399	4
10	SPACER 3/4 OD x 1/4 ID	1.030		434103	4
9	SPRING #23			013995	2
8	FLAT WASHER 1/4"			012221	4
7	SOCKET HEAD CAP SCREW 1/4-28NF x 3/4"			017398	2
6	SOCKET HEAD CAP SCREW 1/4-28NC x 1"	1"		014254	2
5	HEX BOLT 1/4-28NF x 3" FULL THREAD			018276	4
4	SPACER 3/8 OD x 1/4 ID	1.020		434102	4
3	SAFETY LOCK			430031	1
2	SLIDE BEARING	2"		439161	4
1	CARRIAGE ATTACHMENT BACK PLATE			430028	1
#	TITLE	Length		PART NO	Q

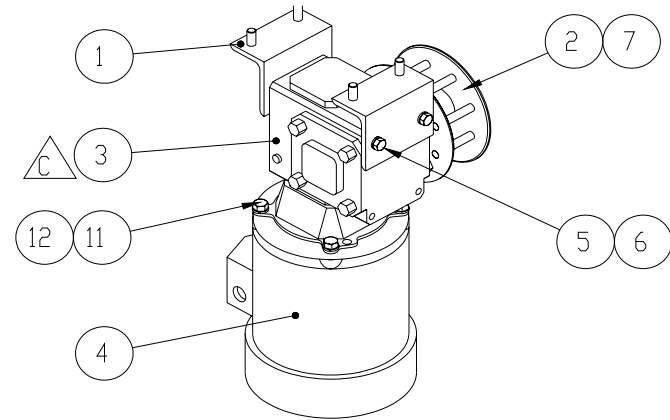
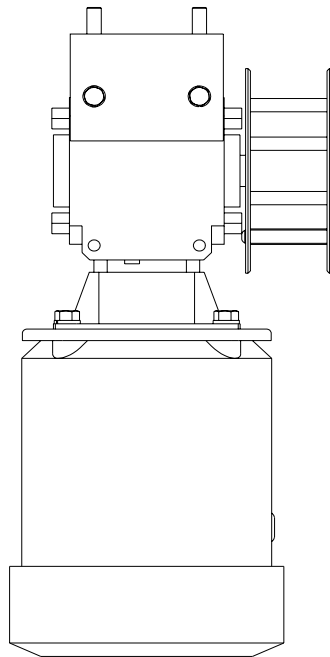
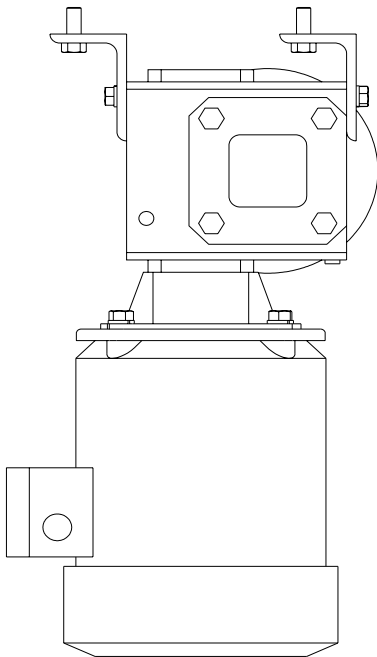
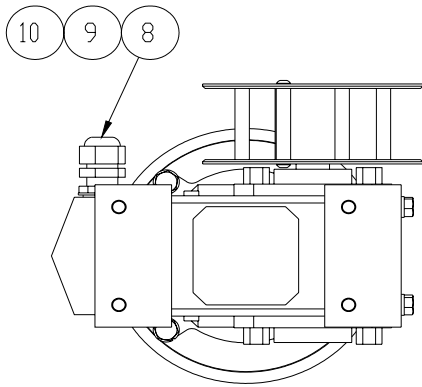
REMARKS

REMARKS

CARRIAGE ATTACHMENT ASSEMBLY

 ORION 2270 INDUSTRIEL, LAMÉ, QUÉBEC, CANADA, H7S 1P5 TEL: (450) 667-9169	UNLESS OTHERWISE SPECIFIED FINISH: 15/4 HOLE: 15/2 HOLE: 15/2 HOLE: 15/2 HOLE: 15/2 REFERENCE: 3/16	TOLERANCES FINISH: 15/4 HOLE: 15/2 HOLE: 15/2 HOLE: 15/2 HOLE: 15/2 REFERENCE: 3/16	DRAWN BY ROGER F.	CHECKED BY APPROVED DATE	ISSUE DATE 03/25/2002	WEIGHT (KG) 8.53
	MACHINE TYPE SPECTRA II	JOB NO 11295	SCALE 1:3	SHEET 1 / 1	ASSEMBLY DWG 4.30011	DWG SIZE B

CE DESSIN EST CONFIDENTIEL ET NE DOIT PAS ÊTRE REPRODUIT OU UTILISÉ SANS LE CONSENTEMENT DES EMBALLAGES ORION INC.



12	LOCK WASHER 3/8"		011390	4
11	HEX BOLT 3/8-16NC x 1"		010293	4
10	SEALING WASHER 1/2"		010650-3	1
9	NUT LOCK 1/2"		010650-2	1
8	PLASTIC CONNECTOR 1/2"		010650-1	1
7	SQ. KEY STOCK 3/16" X 3/16"	1 1/4"	010295	1
6	LOCK WASHER 5/16"		012724	4
5	HEX BOLT 5/16-18NC x 1"		010316	4
4	EL. MOTOR 1/2HP, 208-230/460VAC, 1725RPM		015225	1
3	REDUCER CFC-175, 50:1, ASS'Y-2		015700	1
2	BELT WHEEL		430024	1
1	REDUCER BRACKET		436439	2
#	TITLE	Length	PART NO	Q

REMARKS

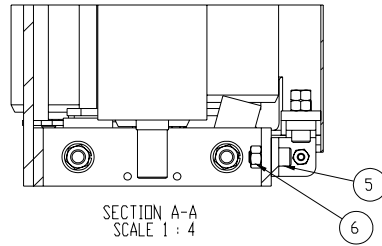
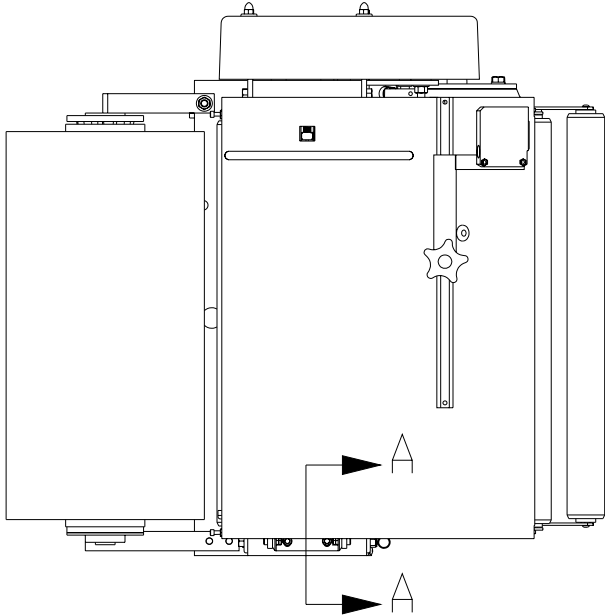
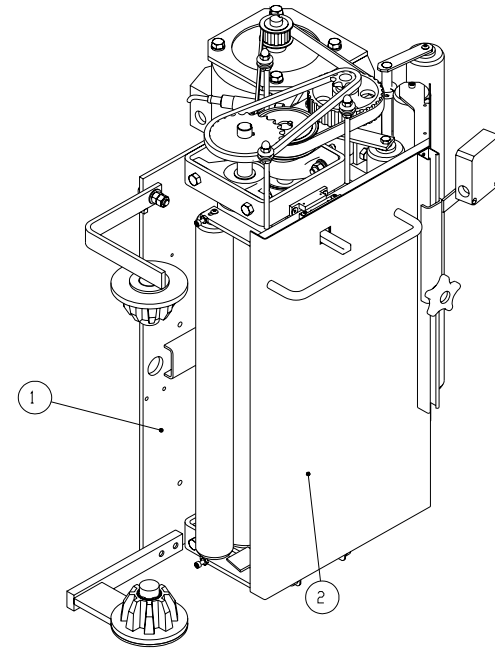
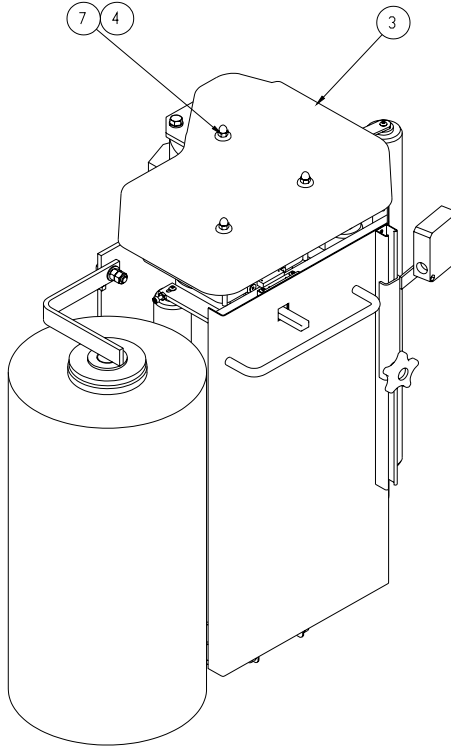
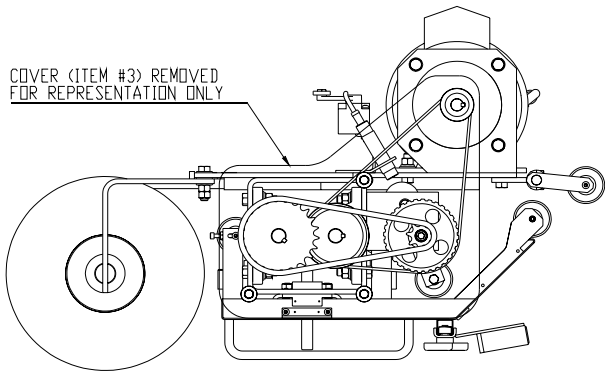
REMARKS

CARRIAGE BELT DRIVE

<p>ORION PACKAGING INC. 2270 INDUSTRIEL, L'AVAT QUEBEC, CANADA, H1S 1P9 TEL: (450) 667-9769</p>	TOLERANCES UNLESS OTHERWISE SPECIFIED	DRAWN BY M.MIERNIK	DRAWN DATE 12/20/2004	WEIGHT (KG) 33.97
	MACHINED - H1/32 WELDED - H1/16 ANGLE - H1/16 XXX - H0.02 XXXX - H0.05	APPROVED BY	APPROVED DATE	SCALE 1:5
	REFERENCE DWG	MACHINE TYPE SPECTRA II, MAX	JOB NO.	SHEET 1 / 1
		ASSEMBLY DWG 443622	DWG SIZE A	DWG NO. 443441

CE DESSIN EST CONFIDENTIEL ET NE DOIT PAS ETRE REPRODUIT OU UTILISE SANS LE CONSENTEMENT DES EMBALLAGES ORION INC.

COVER (ITEM #3) REMOVED FOR REPRESENTATION ONLY



8	MAGNETIC SENSOR 1.6CM RANGE		015101	1
7	HEX CAP NUT 1/4-20NC		014195	3
6	HEX NUT 5/16-24NF		013407	2
5	SOCKET HEAD CAP SCREW 5/16-24NF x 3/4"	3/4"	017538	2
4	GROMMET 5/16 ID x 9/16 GROOVE DIA x 3/16 GROOVE W		014502	3
3	INSTA TREAD CARRIAGE FIBERGLASS COVER (FLR)		414854	1
2	CRADLE ROLLER ASSEMBLY FLR-20		443593	1
1	INSTA THREAD FLR 20 BACK PLATE ASS'Y		443592	1
#	TITLE	Length	PART NO.	Q

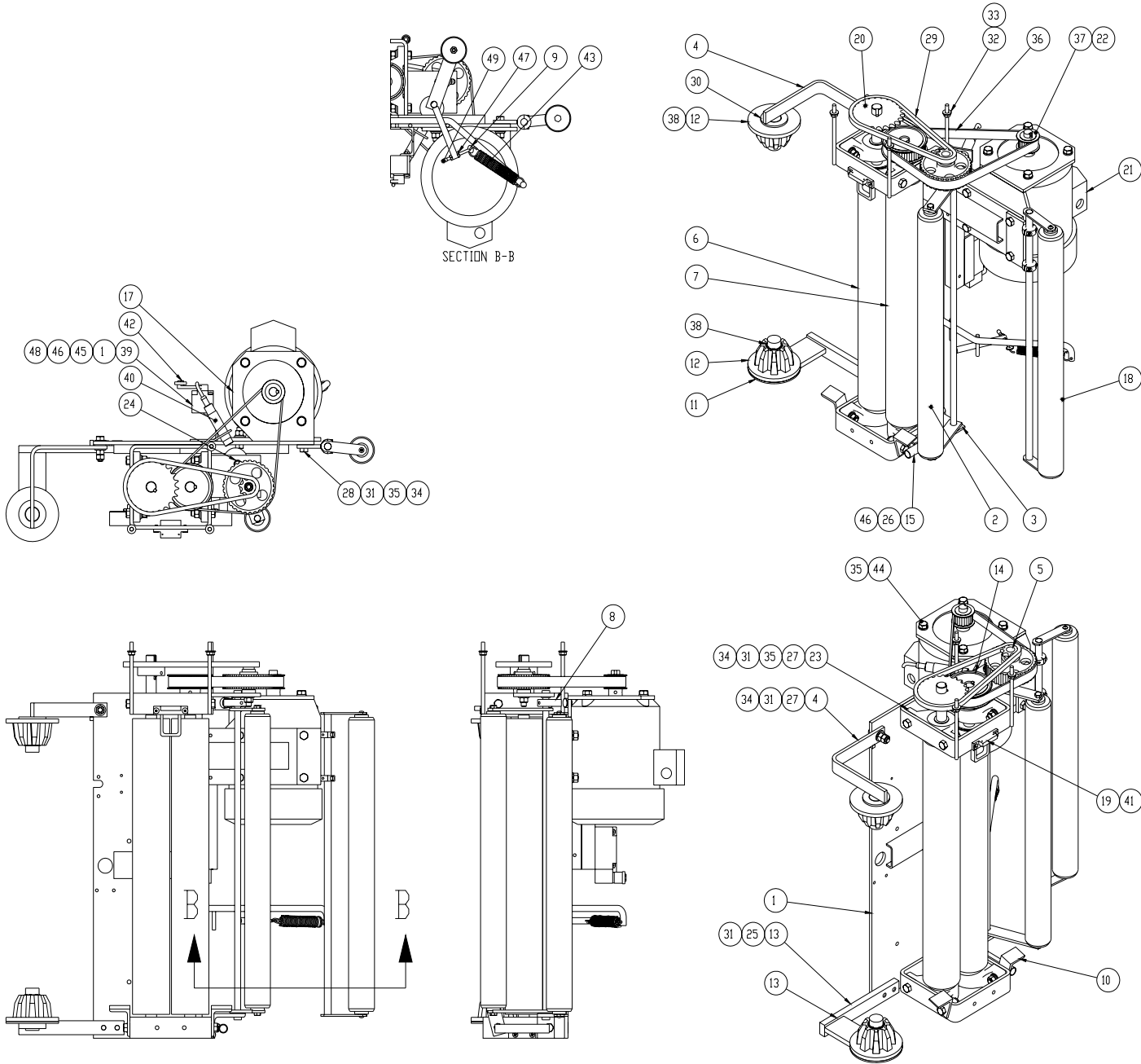
REMARKS

REMARKS

INSTA THREAD - FLR - 20" CARRIAGE

<p>ORION PACKAGING INC. 2270 INDUSTRIEL, LAVAL, QUEBEC, CANADA, H7S 0P9 TEL: (450) 667-9169</p>	TOLERANCES UNLESS OTHERWISE SPECIFIED	DRAWN BY V. TELEBAK	DRAWN DATE 01/13/2005	WEIGHT (KG) 161.69
	MACHINED: ±0.04	APPROVED BY	APPROVED DATE	SCALE 1:8
	MILLED: ±0.02	MACHINE TYPE SPECTRA II	JOB NO.	SHEET 1/1
	ANGLE: ±1/32 DRY: ±0.02 XXX: ±0.05 REFERENCE DWG.	ASSEMBLY DWG	DWG SIZE B	DWG NO. 443591

CE DESSIN EST CONFIDENTIEL ET NE DOIT PAS ETRE REPRODUIT OU UTILISE SANS LE CONSENTEMENT DES EMBALLAGES ORION INC.



49	RUBBER CAP RB-191			017675	1
48	HEX NUT #10-24NC			012726	2
47	HEX NUT #10-32NF			013451	2
46	LOCK WASHER #10			013444	4
45	PAN PHILIPS HEAD SCREW #10-24NC x 1 3/4"			012754	2
44	HEX BOLT 3/8-16NC x 1"			010293	4
43	YELLOW TENSION SPRING 3/4"OD x 0.080" WIRE			010047	1
42	LEVER ZCKY13			015215	1
41	SOCKET FLAT HEAD SCREW #10-32NF x 1/2"			018533	2
40	PROXIMITY SENSOR IMB1805T			011470	1
39	LIMIT SWITCH ZCKJ404			015118	1
38	SEFT SEATING RETAINING RING 1/2 SIZE R6100-100			013860	2
37	GEARBELT PULLEY 12L075			431477	1
36	GEARBELT 285L075			011151	1
35	LOCK WASHER 3/8"			011390	16
34	HEX NUT 3/8-16NC			011128	14
33	HEX NUT 1/4-20NC			012689	3
32	FLAT WASHER 1/4"			012221	3
31	FLAT WASHER 3/8"			010948	17
30	FLAT WASHER 1"			017327	1
29	CHAIN #40, 44 LINKS + C/L	22 1/2"		013397	1
28	HEX BOLT 3/8-16NC x 1 1/4"			012406	4
27	HEX BOLT 3/8-16NC x 1 1/2"			012476	9
26	PAN PHILIPS HEAD SCREW #10-24NC x 1/2"			012481	2
25	SOCKET FLAT HEAD SCREW 3/8-24NF x 3/4"			013363	2
24	OIL BR FLANGE BUSHING 7/16 ID x 9/16 OD x 1/2 LG			014247	2
23	PILLOW BLOCK BEARING UCP 204-12, 3/4" BORE			011192	4
22	SQ. KEY STOCK 3/16" x 3/16"	1"		010295	3
21	EL. MOTOR 1/2HP, 208-230/460VAC, 1725RPM			015225	1
20	SPROCKET 40B24			435715	1
19	POSITION SWITCH HOLDER - 1	2 1/2"		443073	1
18	ADJUSTED ROLLER ASS'Y			443415	1
17	MOTOR BRACKET			442415	1
16	LIMIT SWITCH BRACKET ASS'Y			434410	1
15	CABLE SUPPORT BRACKET			434409	1
14	GEARBELT PULLEY 26L075			431672	1
13	BOTTOM MANDREL			431737	1
12	BOTTOM SPOOL			432323	2
11	BOTTOM SPOOL WASHER			432322	1
10	CRADLE ROLLER OPENING LOCK	1"		409469	2
9	TENSION SCREW			433629	1
8	PROXIMITY SENSOR CAM	1/2"		413744	1
7	RUBBER ROLLER - 2 (20" FILM)			420917	1
6	RUBBER ROLLER - 1 (20" FILM)			420916	1
5	SPROCKET 40BB / GEARBELT PULLEY 32L075 ASS'Y			434017	1
4	TOP MANDREL (FLR)			434077	1
3	DANCER ROLLER BRACKET (FLR)	1 1/4"		414852	1
2	DANCER ROLLER ASSEMBLY - 20 (FLR)			435540	1
1	CARRIAGE BACK WELDED PLATE FLR-20			443413	1
#		Length	PART NO		0

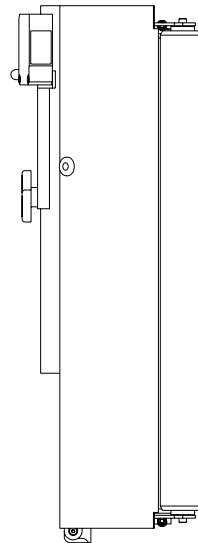
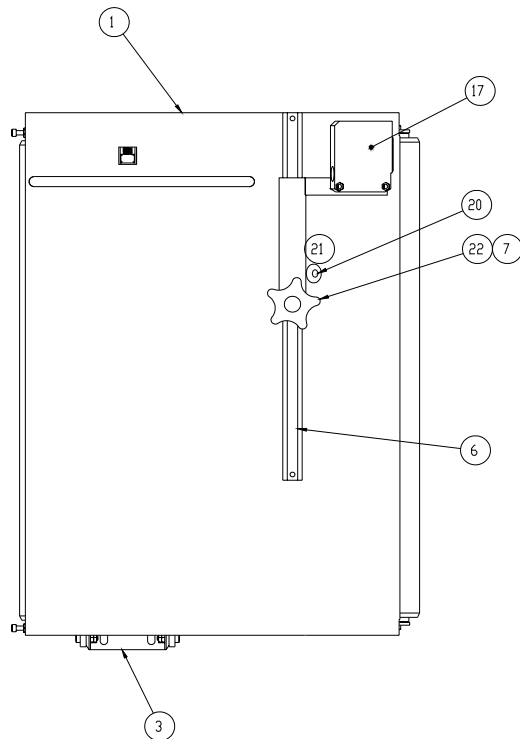
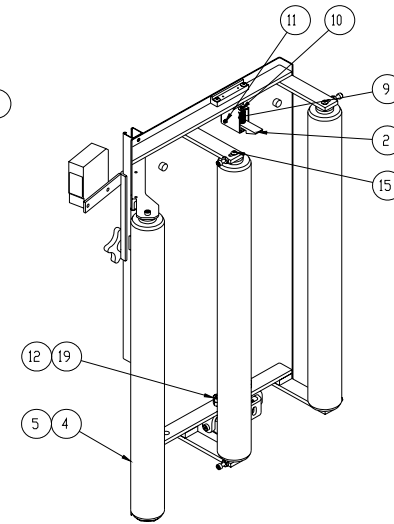
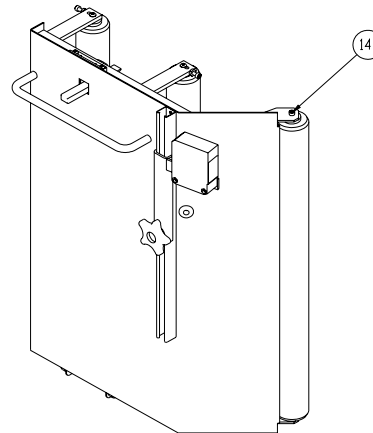
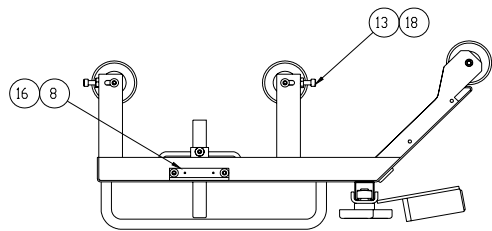
REMARKS

INSTA THREAD FLR 20 BACK PLATE ASS'Y

 ORION PACKAGING INC.	TOLERANCES UNLESS OTHERWISE SPECIFIED	DRAWN BY VTELEBAK	DRAWN DATE 01/13/2005	WEIGHT 99.28
	NUMBER - 644 SIZE - 1/2" FILE - 452 LTR - 452 DATE - 01/13/05 REFERENCE DWG	APPROVED BY	APPROVED DATE	SCALE 1:8
		MACHINE TYPE SPECTRA II	JOB NO.	
		REFERENCE DWG 443591	ENG. DATE 01/13/05	443592

REV C+

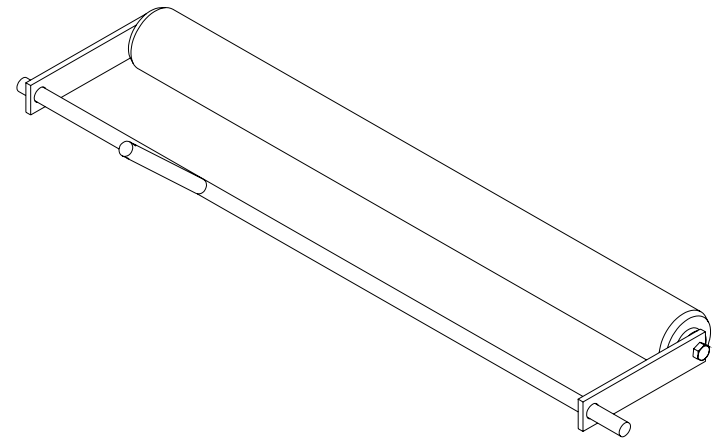
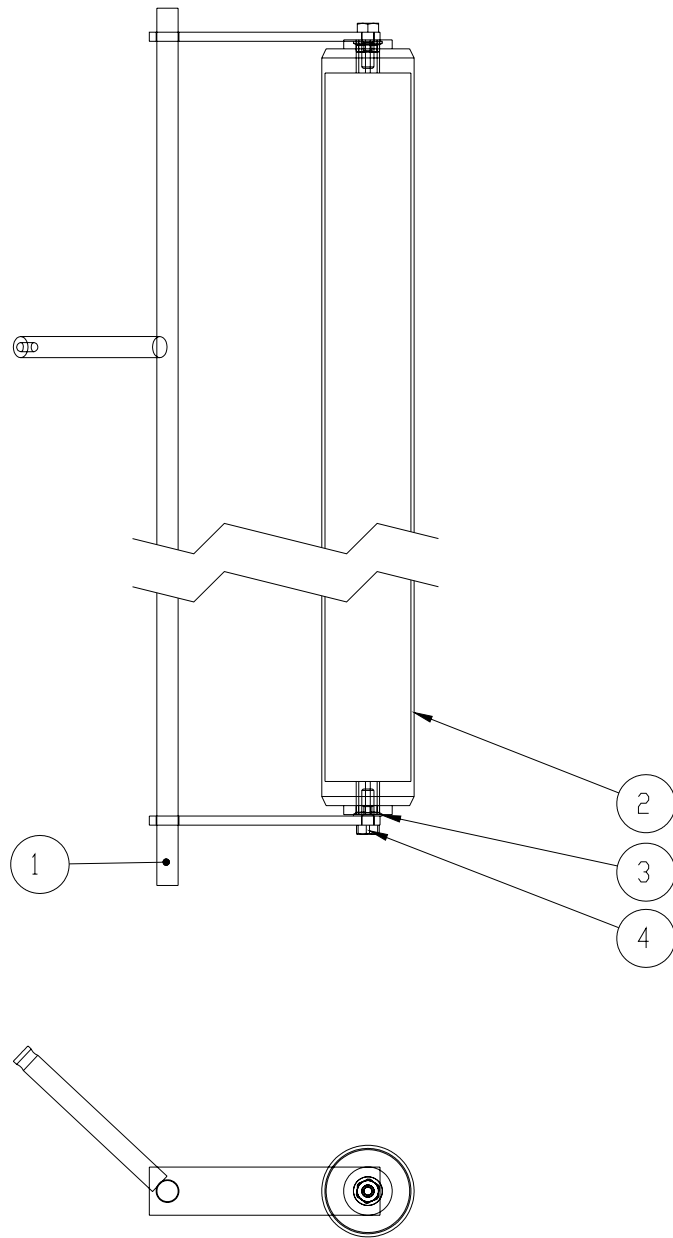
CE DESSIN EST CONFIDENTIEL ET NE DOIT PAS ETRE REPRODUIT OU UTILISE SANS LE CONSENTEMENT DES EMBALLAGES DORIN INC.



22	KNOB W/ THREADED BLIND HOLE 3/8-16NC		010092	1
21	FLAT SQUARE NUT 3/8-16NC		017853	1
20	GROMMET 5/16 ID x 9/16 GROOVE DIA x 3/16 GROOVE W		014502	1
19	HEX NUT 5/16-24NF		013407	4
18	HEX NUT #10-32NF		013451	4
17	PHOTOCELL DIFFUSE, WT 260-R 280 (SICK)		017303	1
16	SOCKET BUTTON HEAD CAP SCREW #10-32 x 1/2"		014665	2
15	BUTTON SOCKET CAP SCREW #10-32NF x 5/8"		015133	4
14	SOCKET HEAD CAP SCREW #10-32 x 1/2"		014209	2
13	SOCKET HEAD CAP SCREW #10-32NF x 1"	1"	015020	4
12	SOCKET HEAD CAP SCREW 5/16-24NF x 1"	1"	016410	2
11	SPRING PIN SLOTTED 3/16"Ø x 1"LG		014458	1
10	POP RIVET 3/16" x 1/4" LG		015534	1
9	SPRING #23		013995	1
8	POSITION SWITCH HOLDER - 2	2.500	443088	1
7	PHOTOCELL HIGH HOLDER		434412	1
6	PHOTOCELL HIGH CHANNEL	16"	434411	1
5	IDLE ROLLER SHAFT - 21 5/16" LG	21 5/16"	413249	3
4	CONVEYOR ROLLER "INTERROLL" SERIE 1600	21 1/4"	015153	3
3	ROLLER CRADLE HINGE		430054	1
2	LATCH	4 1/4"	430053	1
1	CRADLE ROLLER SHELL WELDING FLR-20		443424	1
#	TITLE	Length	PART NO	Q

REMARKS				
REMARKS				
CRADLE ROLLER ASSEMBLY FLR-20				
 2270 INDUSTRIAL LANE OREGON, CANADA, R7S 1P9 TEL: (430) 667-9769	TOLERANCES UNLESS OTHERWISE SPECIFIED FRACTIONS: ±.004 DECIMALS: ±.002 HOLE: H9/h9 SHAFT: H8/h8 ASSEMBLY: H9/h9	DRAWN BY V. TELEBAK APPROVED BY	DRAWN DATE JAN-13-2004 APPROVED DATE	WEIGHT (lbs) 20.52 SCALE 1:6 SHEET 1 / 1
	MACHINE TYPE M67/17 ASSEMBLY DWG 443591	JOB NO STD DWG NO 443593	REV B	

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#	TITLE	Length	PART NO	Q
4	HEX BOLT 1/4-20NC x 3/4"		012475	2
3	HEX FLANGE NUT 1/4-20NC		014164	2
2	CONVEYOR ROLLER "INTERROLL" SERIE 1.600	21 1/4"	015153	1
1	DANCER ROLLER CRADLE - 20 (FLR)		435541	1

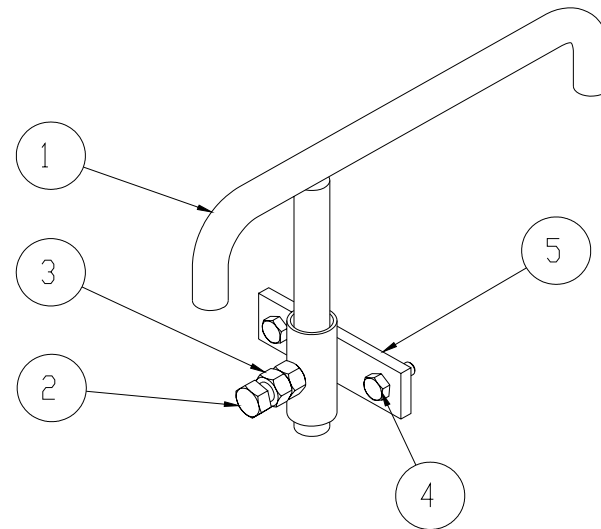
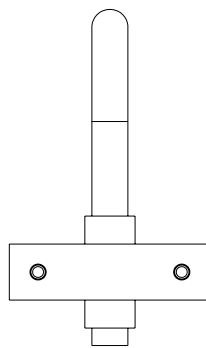
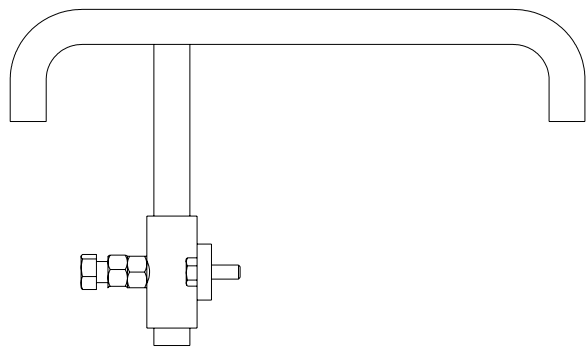
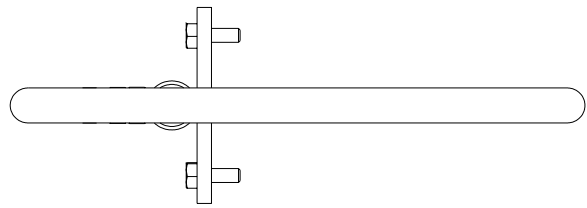
REMARKS

REMARKS

DANCER ROLLER ASSEMBLY - 20 (FLR)

<p>ORION PACKAGING INC. 2270 INDUSTRIEL, LAVAL QUEBEC, CANADA, H7S 1P9 TEL: (450) 667-9769</p>	TOLERANCES UNLESS OTHERWISE SPECIFIED		DRAWN BY	DRAWN DATE	WEIGHT (lb)
	MACHINE D - 15/32		ROGER F.	01/13/2003	3.39
	WELDED - 15/16		APPROVED BY	APPROVED DATE	SCALE
	ANGLE - 15/16	60°			1:8
XXX - 10/82		MACHINE TYPE	JOB NO.	SHEET	
XXXX - 10/05		SPECTRA		1/1	
REFERENCE DWG.	ASSEMBLY DWG	DWG SIZE	DWG NO.	REV.	
	434006	A	435540	A	

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5	ROPING BAR BRACKET		443609	1
4	HEX BOLT 1/4-20NC x 3/4"		012475	2
3	HEX NUT 3/8-16NC		011128	1
2	HEX BOLT 3/8-16NC x 1"		010293	1
1	ROPING BAR		443610	1
#	TITLE	Length	PART NO	Q

REMARKS

REMARKS

ROPING BAR ASSEMBLY

<p>ORION PACKAGING INC. 2270 INDUSTRIEL, LAVAL QUEBEC, CANADA, H7S 1P9 TEL: (450) 667-9769</p>	<p>TOLERANCES UNLESS OTHERWISE SPECIFIED</p>		<p>DRAWN BY V. TELEBAK</p>	<p>DRAWN DATE 01/14/2005</p>	<p>WEIGHT (lb) 1.96</p>
	<p>MACHINED - ±1/32 WELDED - ±1/16 ANGLE - ±1/16 XXX - ±0.02 XXXX - ±0.05</p>	<p>APPROVED BY</p>	<p>APPROVED DATE</p>	<p>SCALE 1:4</p>	<p>SHEET 1/1</p>
	<p>REFERENCE DWG</p>	<p>MACHINE TYPE SPECTRA II</p>	<p>JOB NO. 14920</p>	<p>DWG NO. 443608</p>	<p>REV. C</p>
	<p>ASSEMBLY DWG 443511</p>	<p>DWG SIZE A</p>	<p>DWG NO. 443608</p>	<p>REV. C</p>	

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