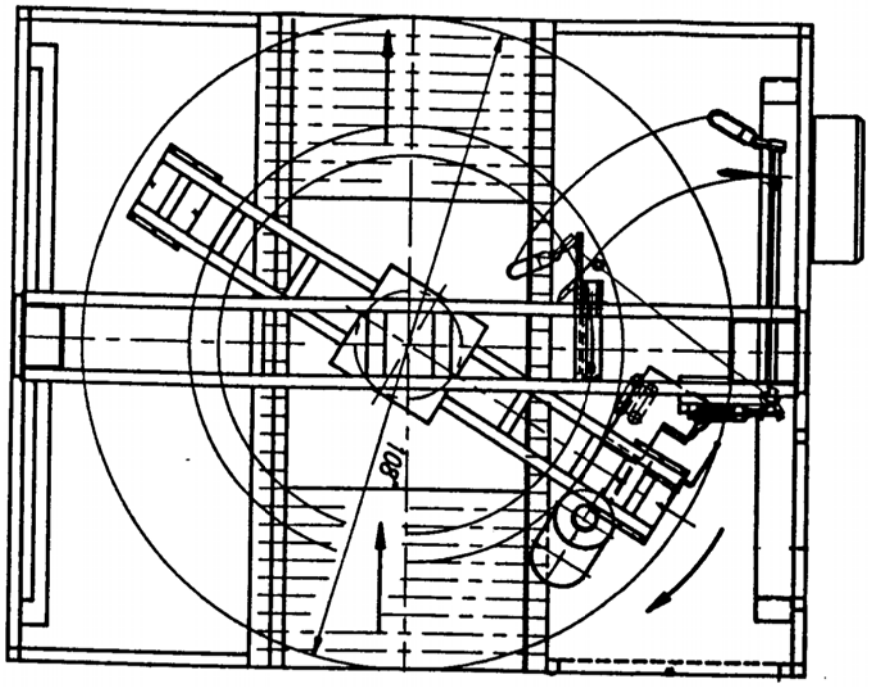
orion®



STRETCHWRAPPERS

INSTRUCTION MANUAL

FOR ALL INQUIRIES
PLEASE CONTACT
OUR LOCAL DISTRIBUTOR

FOR U.S. (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 advanced 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**
3) **SUBASSEMBLY (see PART LIST)**

H/L44-12 (96T) (~~112T~~)
Prog. Version 12.1
Dwg. # 301 250

SAFETY:

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

Note: All electrical power and compressed air must be disconnected prior to performing any inspection, maintenance or repair work.

ORION PACKAGING INC.

Semi-Automatic Machines Version –12. Specifications

(Revised: June 10, 1997)

ORION "VORTEX" SERIES MODEL L-44SX

Deluxe Spiral Semi-Automatic Heavy Duty Low Profile *w/ Surrounding Steel Deck Frame*

Maximum Load Size	60"W x 60"L x 84"H
Weight Capacity	6,000 lbs. Dynamic, 30,000 lbs. Static
Utilities	115/1/60 20 Amp Service
Turntable	66" Diameter Structural Steel Plate Quiet, Non-Lubricating, Phenolic Caster Support System 3 1/8" Height Floor to Top of Turntable
Turntable Drive	0 - 18 RPM Variable Turntable Speed DC Variable Speed Drive Motor Heavy Duty Chain Drive with Tensioner Adjustable Electronic Soft Start Positive Alignment Feature
Control Features	CSA Approved, NEMA 12 Control Panel Expanded Allen Bradley MicroLogix PLC and RevoLogic® for Maximum Flexibility User Friendly Controls with Non-Proprietary Pushbuttons, and Switches High / Low Turntable Speed Switch Film Broken / Out Sensor with Indicator Light and Cycle Pause Logic RevoLogic® Exact Top and Bottom Wrap Counting Logic Electronic Film Tension Control Adjustment on the Panel End of Cycle Film Force Release Separate Top and Bottom Wrap Count Selectors Variable Speed & Separate Film Carriage Up/Down Controls Film Carriage Raise/Lower Switch (Manual) Cycle Pause On/Off Switch Reinforce Wrap Switch for Banding Photocell for Automatic Load Height Detection with On/Off Switch Turntable Jog Pushbutton Spiral Up or Up/Down Cycles
Film Delivery	20" Orion Power Prestretch "InstaThread™" Self Threading Carriage Electronic Film Tension Control Adjustment on the Panel Full Authority Film Dancer Bar with Variable Speed Output Heavy Duty ANSI Chain & Sprocket Ratio Control Maximum Available Pre-Stretch Ratio of 395% (Standard Setting of 245%) DC Variable Speed Drive Motor Adjustable Film Roping Bar on Chassis for Stronger Interlocking of Load and Pallet
Film Carriage Elevator Drive	Heavy Duty ANSI Chain Carriage Lift DC Variable Speed Drive Motor Ultra-High Molecular Weight Carriage Guidance System
Structural Features	100% Structural Steel Construction Throughout Non-Proprietary, Locally Obtainable Components Throughout Easy Access to All Components Open Mechanical Design for Ease of Maintenance Forklift Portable Base Design Full Steel Surrounding Base Frame Structural Steel "H" Beam Mast
Estimated Shipping Weight	2,200 lbs.

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 or the conveyor, enter the forks under the frame.

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.
2a. On the mongoose machines use the brackets welded on the top part of the machine.

3. Sit the machine down assuring uniform contact with the floor which is necessary to ensure correct and smooth operation.
3a. Mongoose type machines (M66, M67) have to be attached on the bracket or on the stand (collapsible or anchored to the floor). The M55 has it's own supporting frame which allows the machine to stand independently.

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 <u>any of the electrical wires and rubber covering on the multistretch rollers.</u>

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.

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 (H - series models only) 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 carriage to be sure that it is correctly aligned with the tower and 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 may 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 levelled 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).

Conveyor sections (where applicable) have to be positioned, levelled** and bolted to the floor. Any wiring which has been disconnected to facilitate transport is marked with a number located on the junction box to which the wiring must be reconnected. It allows identification of the proper position of the infeed and outfeed conveyor sections. 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.

CAUTION: improper placement and alignment of the conveyor section(s) and/or electric photocells may lead to equipment malfunction and damage.

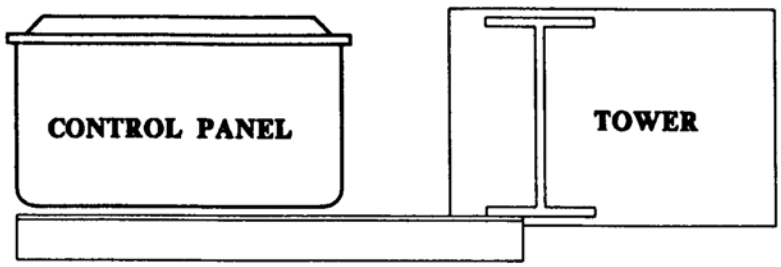
* The tower deviation from vertical must not exceed 1/4" on the distance of 10 feet (angle: 0 degrees 6').

** In the case of the conveyors, the roller deviation from the horizontal must not exceed 1/16 "on the distance 52" (angle: 0 degrees 4').

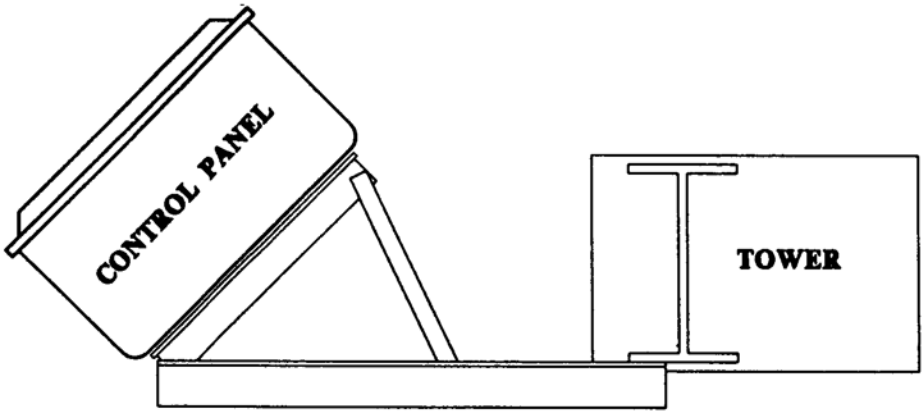
CONTROL PANEL

In the case of the free standing panel (console) place it adjacent to the system and anchor firmly to the floor. Connect the liquid tide (rigid conduit) to the main junction box located on the wrapper main frame next to the tower (or tower home position in case of mongoose). The wires must be matched properly on both sides.

In order to faciliate access and manipulation, the control panel can be mounted in two positions:



1. On the angle brackets aligned to the tower.



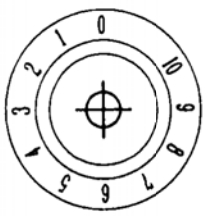
2. With the position bar (installed between upper angles), control panel can be rotated forward/to the side. (additional screw is attached to the tower's foot)

CONTROL PANEL MOUNT TWO POSITIONS

START

orion®

FILM TENSION



STOP

1x PAUSE

2x RESET

SPIRAL

UP UP/DOWN

TOP WRAPS

2

1 3

REINFORCE WRAP

TOWER T.TABLE JOG

PHOTOCELL

OFF ON

BOTTOM WRAPS

2

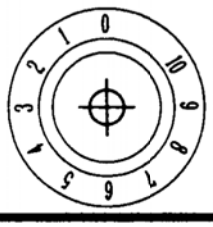
1 3

CARRIAGE

LOWER RAISE

POWER

CARRIAGE SPEED UP



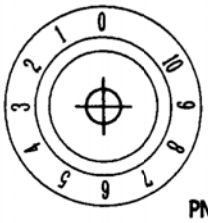
WARNING! DANGEROUS OR FATAL ELECTRIC SHOCKS MAY RESULT IF POWER TO THE MACHINE IS NOT DISCONNECTED BEFORE OPENING THE PANEL. DISCONNECT POWER TO THE MACHINE BEFORE OPENING THE PANEL

TOWER / T.TABLE SPEED

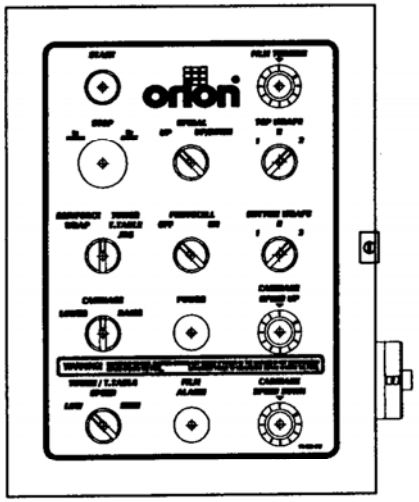
LOW HIGH

FILM ALARM

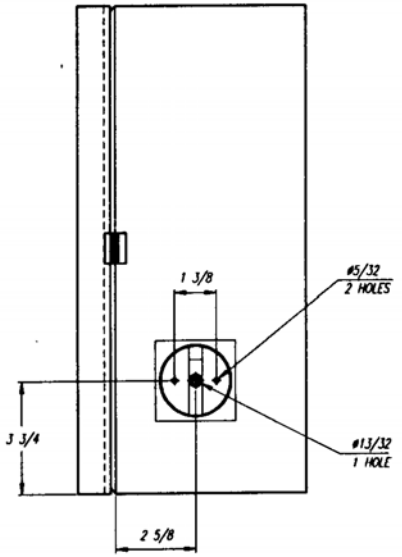
CARRIAGE SPEED DOWN



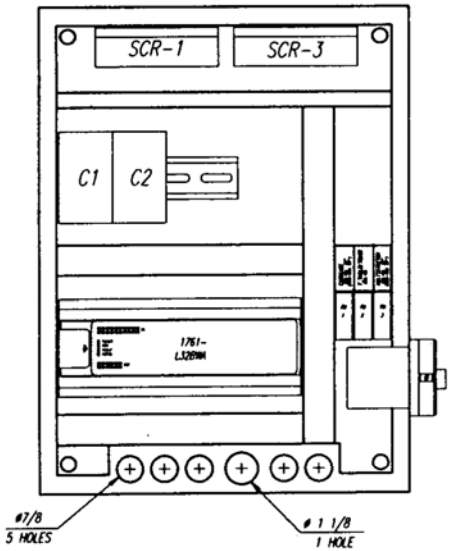
PN-500 047



HL44-12
PANEL STICKER PN-500 047
(5412 ESCH161206)



SIDE VIEW
MAIN SWITCH LOCATION

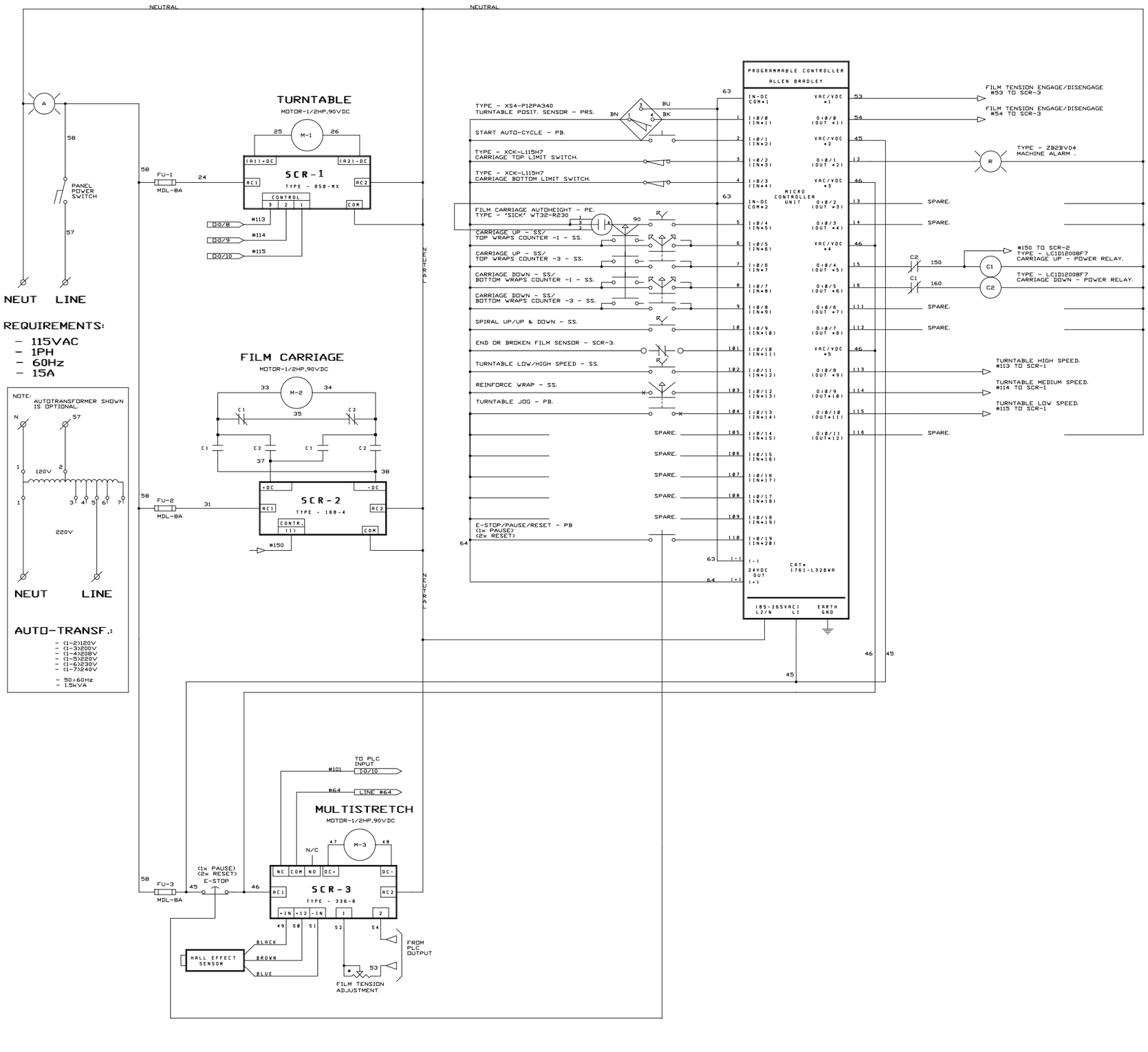


HL44-12 PANEL LAYOUT
PANEL SIZE 16X12X06

NOTES:

1: SCR-2 (168-4) IS LOCATED ON ENCLOSURE DOOR
2: FU-2 & FU3
MDL-8A (20" CARRIAGE)
MDL-10A (30" CARRIAGE OR HEAVY FILM GAUGE UPGRADE)

orion
ORION PACKAGING INC.
SCALE 1:2
H/L44-12
SIZE D
DRAWING NO. 301 250/L
REV 1
DATE FEB-01-1997
SHEET 1 OF 1



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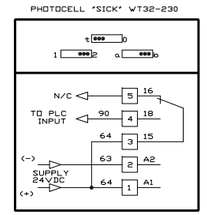


1. FUSES FU-2 AND FU-3:
   - MDL-8A (20" CARRIAGE)
   - MDA-10A (30" CARRIAGE OR HEAVY FILM GAUGE UPGRADE)

PANEL SIZE 5412 ESCH161206
STICKER 500 047 (ENGLISH)
STICKER 500 043 (FRENCH)

orion PACKAGING INC. MONTREAL

ORION PACKAGING INC.

2270 INDUSTRIEL BD LAVAL,QUE.,CANADA H7S 1P9
TEL.:(514)-667-9769 FAX:(514)-667-6320
CK'D BY:J.B.S. DRAWN BY:M.THOMAS

TITLE: **HL44-12**

SIZE	DOCUMENT NO.	REV
D	JOB# STANDARD 301 250	4

DATE: JAN-29-97 SHEET 1 OF 1
FILENAME: HL44-12.SCH BASE:

CARRIAGE SPEED

The carriage speed potentiometer control can be used to control the amount of overlap the film will have during the wrap. The potentiometer has settings from 0 to 10, the higher settings being the fastest.High settings mean less film overlap because of faster carriage speed and low settings mean more film overlap because of lower carriage speed.

TOP WRAPS 1,2,3...9

Three position switch controls the number of wraps that may be applied on the top of the load. The machine is preset RANGE # 1 (top wraps: 1 or 2 or 3). To change the values of wrap see *TOP & BOTTOM WRAP COUNTS CHANGE.*

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

Three position switch controls the number of wraps that may be applied on the bottom of the load.The machine is preset with RANGE # 1 (bottom wraps: 1 or 2 or 3) which may be applied. To change the values of wrap see *TOP & BOTTOM WRAP COUNTS CHANGE.*

TOP & BOTTOM WRAP COUNTS CHANGE

The Top & Bottom Wrap Selector Switches have three (3) ranges of wrap counts and operate independently of each other.

Range #1	Wrap values of 1-2-3
Range #2	Wrap values of 4-5-6
Range #3	Wrap values of 7-8-9

For the selection of any of these ranges for top and bottom wraps please do as follows:

Before proceeding ensure that machine is in MANUAL, STANDBY MODE (machine is powered on and all machine manual functions are enabled)

1. Press the STOP (Red) Button
2. Set the Top and Bottom wrap count selector switch to the position corresponding with the desired count range.:

   1= Range #1
   2= Range #2
   3= Range #3

3. Press the START (Green) pushbuttons and maintain for approximately 12 seconds.
4. Pull the STOP (Red) push-button out.
5. Perform standard machine reset procedure by double push-pull operation of the red mushroom stop button.

At this point machine is ready and new preset values are loaded

CYCLE CONTROLS

The control panel layout is custom designed for each particular installation, however, common standard controls have been employed.

CAUTION: before proceeding be familiar with the EMERGENCY button and all functions, switches and pushbuttons.

POWER SWITCH

The Power Switch has two settings:

ON - connects a power source to the machine (voltage depends on the machine type - see electrical diagram provided with the machine).

OFF - disconnects the power source.

START AND STOP SWITCHES (EMERGENCY STOP)

The START switch is used to start the cycle once the load is on the turntable (or under the rotary arm). The cycle may be stopped at anytime by pressing the STOP button.
NOTICE: In case of emergency, use the STOP button which interrupts all the machine electrical circuits (except multistretch drive). If the STOP pushbutton is pressed in the middle of the cycle, the carriage and turntable may be returned to their home position by using the jog buttons before restarting the cycle.

SPIRAL WRAP SWITCH

The SPIRAL WRAP switch has two positions:

UP - in this position the cycle will end after completing the specified number of top wraps, therefore, the machine will only wrap the load once, going up.

UP/DOWN - in this position the cycle will be completed after the load is wrapped in both the up and down directions.
NOTE: TOP WRAP FIRST (OPTIONAL)
The carriage raises faster at the beginning of the cycle to wrap the top of the load (see electrical diagram provided with the machine).

CARRIAGE CONTROL SWITCH

The CARRIAGE CONTROL switch is a three position switch with the following settings:

RAISE - raises the carriage until the top limit switch on the tower is activated.

LOWER - lowers the carriage until the bottom limit switch on the tower is attained.

The switch is normally positioned in the middle where the carriage remains stationary. Turning the switch to the RAISE or LOWER will activate the carriage to move in its respective direction.

TURNTABLE (ROTARY TOWER) JOG

The turntable (rotary tower) jog switch is a pushbutton which will rotate the turntable (rotary arm) in a clockwise direction (as viewed from the top) when the switch is held depressed. When the switch is released the turntable (rotary tower) will stop. The switch is inoperative during the wrap cycle.

PHOTOCELL SWITCH

The photocell switch has two settings:
ON - when turned ON, the photocell instructs the carriage to stop and begin the top wraps sequence once the top of the load is reached. The carriage will always stop at the top of the load regardless of its height. The photoswitch position on the track can be adjusted in order to make the carriage pass the top of the load and overlap the top.

OFF - when turned OFF, the photocell is inoperative and the carriage will stop when the top limit switch has been activated.

FILM TENSION

Film tension may be adjusted using the film tension control knob. It has a range of tension from 0 to 10 (0 to 4 the low range, 4 to 8 the most usefull range for most of the films used by our customers, 8 to 10 as a very high range which may break some films).

NOTE: Lighter loads may require lower tension settings then heavier loads.

Film tension is controlled through the dancer bar system. Occasionally the feed back proximity sensor may need some adjustment. Adjustment of feed back is shown on drawing # 001

Adjustment instructions:
- remove the carriage cover
- unbolt the two nuts holding the proximity switch -item # 1
- turn the proximity switch - item # 2 until the moment when the motor starts to turn (or hums)
- tighten on the nuts securing the proximity switch.

NOTE: The condition in which the motor hums but does not turn must be maintained even after all elements are tightened. If not, the adjustment procedure must be repeated.

TO LOAD THE FILM....

The film roll can be loaded on the mandrel of the carriage 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. Put the roll of film on the mandrel and press down to insure penetration of spikes into the card board center of the film roll.

3. In the case of automatic machines, install the film cap on top of the roll to prevent upward movement.

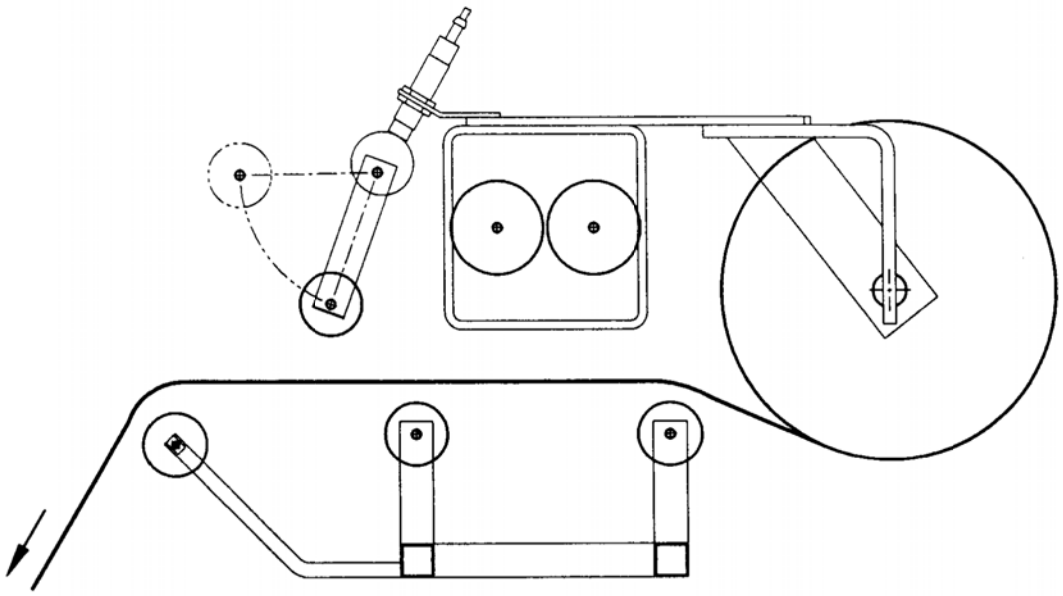
4. Introduce the roping end of the film between the shafts of all rollers (as shown on the dwg.) and pull to pass it around all three rollers (pressure roller and both rubber rollers).

5. Pass the film between the two dancer (aluminium) rollers (in certain applications the film has to be passed around one or two additional position aluminium rollers).

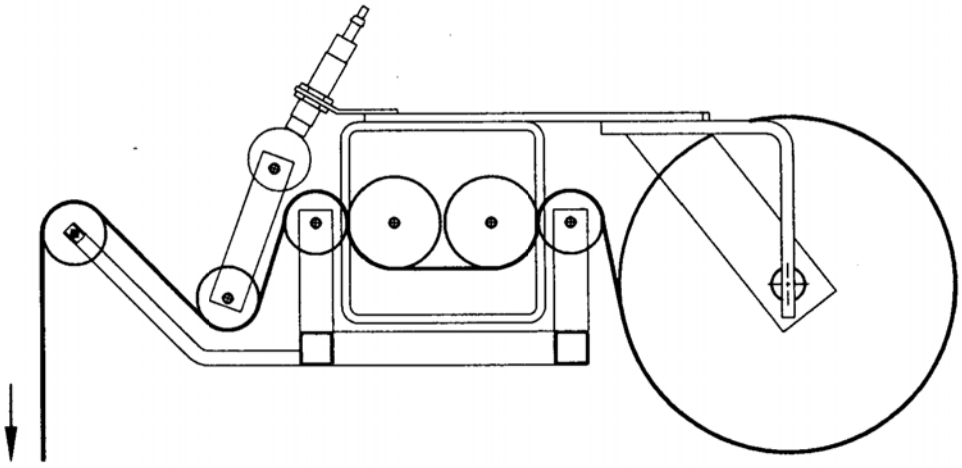
6. When the film feeding is completed - turn the power switch ON

7. Peel off the first few winds of the film (multistretch will run due to displacement of the dancer roller) and fix the film end onto the load or into the clamp mechanism (if machine is fully automatic).

The system is now ready to begin the first wrapping cycle.
Proceed to page titled SYSTEM START UP.



OPENED CRADLE



CLOSED CRADLE

FILM QUICK THREADING

418180

SYSTEM START-UP

Notice: It is advisable to test-run the equipment with several pallet loads before make the attempt to wrap with film. Please position a worker at the EMERGENCY STOP push button.

Start up of the machine (system) may determine the need for the adjustment of:

- pallet sensor eyes (automatic systems only)
- load height stop photoswitch (on the carriage)
- conveyor acceleration/deceleration
- turntable speed & jog speed
- turntable speed acceleration/deceleration
- turntable home position (rotary tower home position)
- film tail treatment devices (automatic systems).

MACHINE WRAPPING TEST

Before the test procedure adjust the wrapping cycle parameters i.e. top wraps, bottom wraps, height photocell on/off, film tension, carriage speed (those two parameters may be adjusted during the wrapping cycle).
When there is no photocell, verify the top limit switch position.

MACHINE MAINTENANCE

REDUCER OIL CHANGE

On the reducing transmission, after the first week all external cap screws and plugs should be checked for tightness. It is recommended to change the oil every six months or 25000 hours of operation, which ever comes first. When adding oil, the transmission should never be filled above the oil level mark indicated, because leakage and overheating may occur. Below is a list of the type of lubricant that should be used:

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 Suerr Cyl.Oil
Philips Oil Co.	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

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 the motor 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.

CHAIN MAINTENANCE

To clean the chain, wipe it with an oily cloth every month. If the environment is very dusty or damp, it may be necessary to clean it more often.
With time the chain will tend to stretch. A loose elevator and turntable (rotary arm) chain should be tightened at the chain tensioner, or by moving the reducer on the mounting plate.

CAM FOLLOWER MAINTENANCE

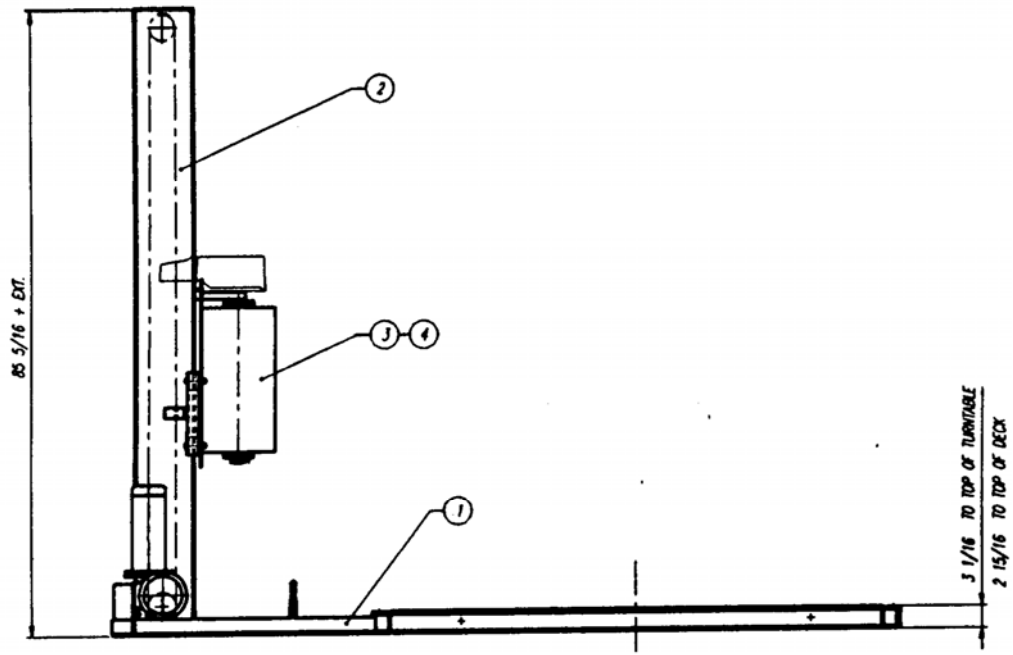
The cam followers behind the carriage have deep grease pockets and do not need frequent relubrication. The portion of the tower on which the cam followers run, should be cleaned and regreased every 300 hours of operation. If the machine operates in a dusty or corrosive environment the tower should be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

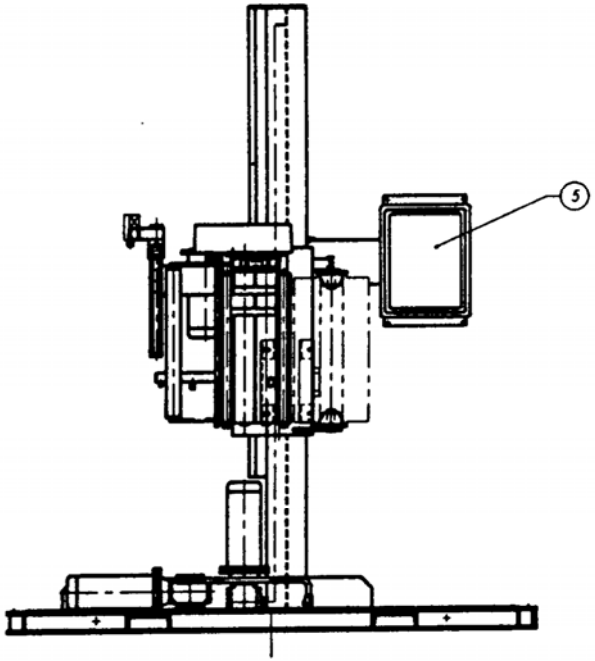
SEMI-AUTOMATIC
STANDARD ASSEMBLY
PART LIST

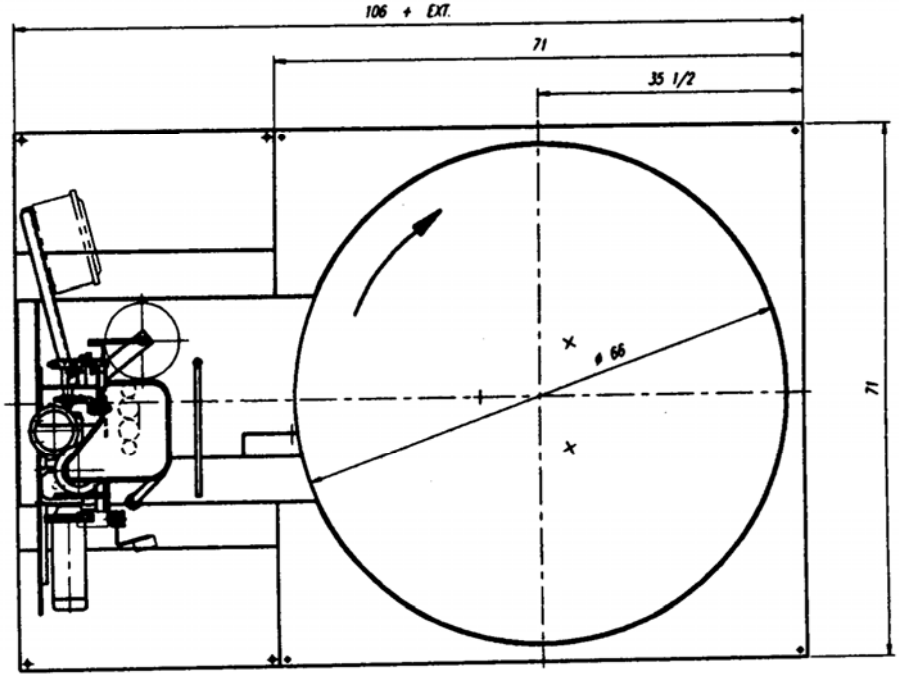
Note :

* **Quantity listed in order of part number**

** **The names given to the parts are generic**







TOP VIEW

TOTAL WEIGHT: APROX. 1971 (1988) Lbs

No.	DESCRIPTION	DWG SIZE	PART No	Q'ty	WEIGHT
5	CONTROL PANEL			1	30.0
4	30" INSTA-THREAD FILM CARRIAGE			1	154.9
3	20" INSTA-THREAD FILM CARRIAGE			1	137.9
2	TOWER ASSEMBLY - W18 x 18	C	414036	1	100.0
1	L44/12SX BASE ASS'Y W/"DURA-GLIDE" CASTERS	C	414136	1	1702.8

REMARKS: 18 RPM, SPROCKETS 50B16/50A96, REDUCER ASS'Y-3, REVOLOGIC

REMARKS: -

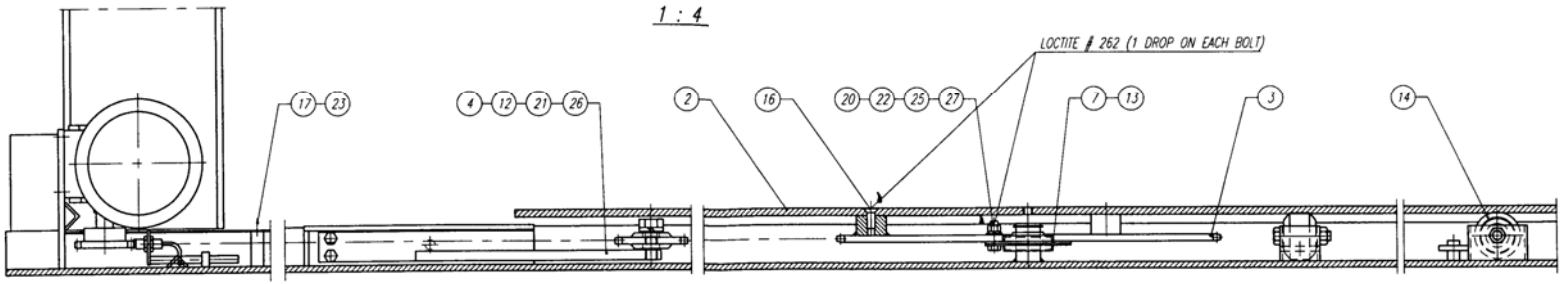
REQ'D : 1 Pc.

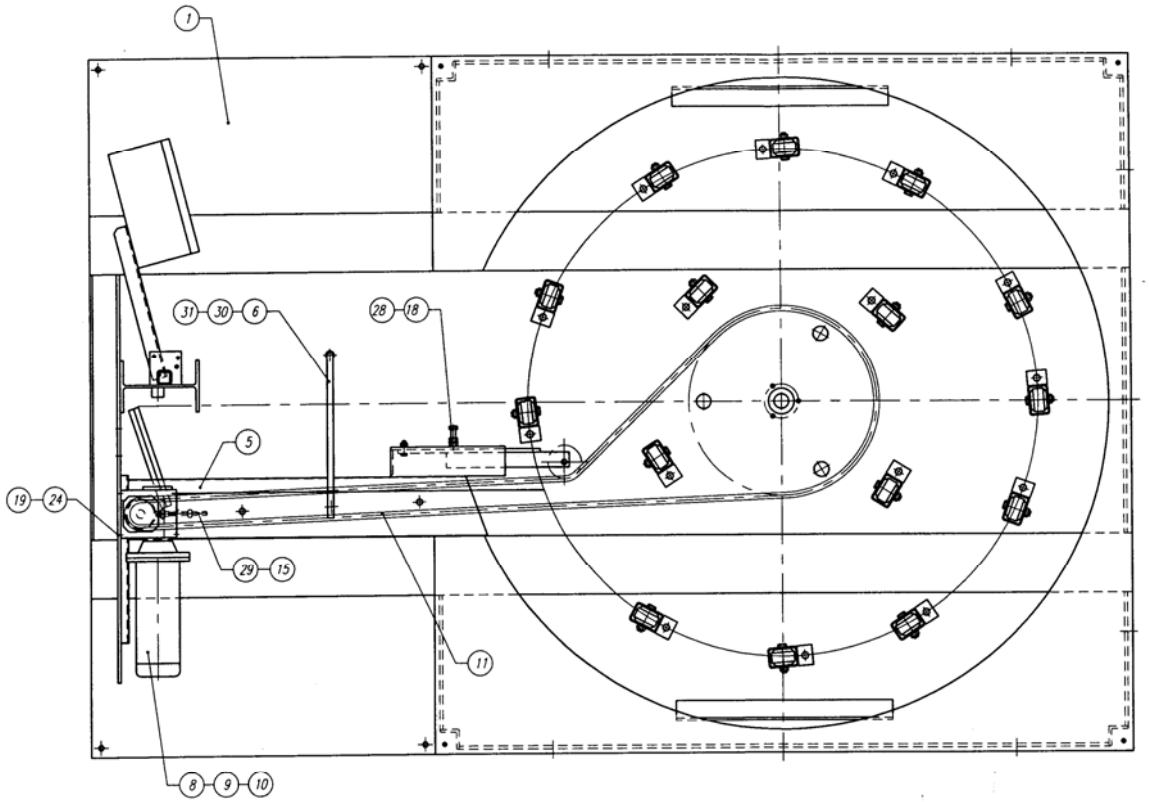
L44/12SX WRAPPER WITH "DURA-GLIDE" CASTERS

orion PACKAGING INC.
2270 INDUSTRIEL, LAVAL
QUEBEC, CANADA, H7S 1P9
TEL.: (514) 667-9780

ASSEMBLY DWG: LAYOUT	DATE: NOV-12-1996	SCALE: 1 : 12	
	DRAWN BY: M. W. SOBUCKI	MACHINE TYPE: L44/12SX	
	CHECKED BY:	DRAWING SIZE: C	
	JOB No.: STD	DRAWING No.: 414135	

1 : 4





No.	DESCRIPTION	DWG SIZE	PART No.	Q'ty	WEIGHT
31	HEX. NUT		013407	1	
30	HEX. HEAD SCREW		014157	1	
29	PROXIMITY SWITCH BRACKET	A	413653	1	
28	HEX NUT		011266	1	
27	HEX NUT		011128	3	
26	SPRING WASHER		012721	1	
25	SPRING WASHER		011390	3	
24	SPRING WASHER		012724	4	
23	SPRING WASHER		011393	3	
22	FLAT WASHER		010948	3	
21	HEX HEAD SCREW		010329	1	
20	HEX HEAD SCREW		012406	3	
19	HEX HEAD SCREW		010291	4	
18	HEX. HEAD SCREW		013989	1	
17	PAN PHILL		012049	3	
16	FLAT SOCKET SCREW		013842	3	
15	PROXIMITY SWITCH		013848	1	
14	"DURA-GLIDE" CASTER - ASSEMBLY	A	416055	15	
13	EXTERNAL RETAINING RING		013655	1	
12	IDLER SPROCKET		010008	1	
11	CHAIN # 50,		010009	1	
10	SPROCKET		012818	1	
9	REDUCER		010093	1	
8	EL. MOTOR		010036	1	
7	STAMP HOUSING FLANGE BEARING		013654	1	
6	ROPING BAR	A	413868	1	
5	CHAIN GUARD 417453	A	~~414856~~	1	
4	CHAIN TIGHTENER ARM	A	411592	1	
3	SPROCKET 50A96	A	406338	1	
2	66" DIA. TURNTABLE DISK (REVOLOGIC)	B	416447	1	
1	L44/12SX BASE W/ "DURA-GLIDE" CASTERS (WELD)	D	417230	1	

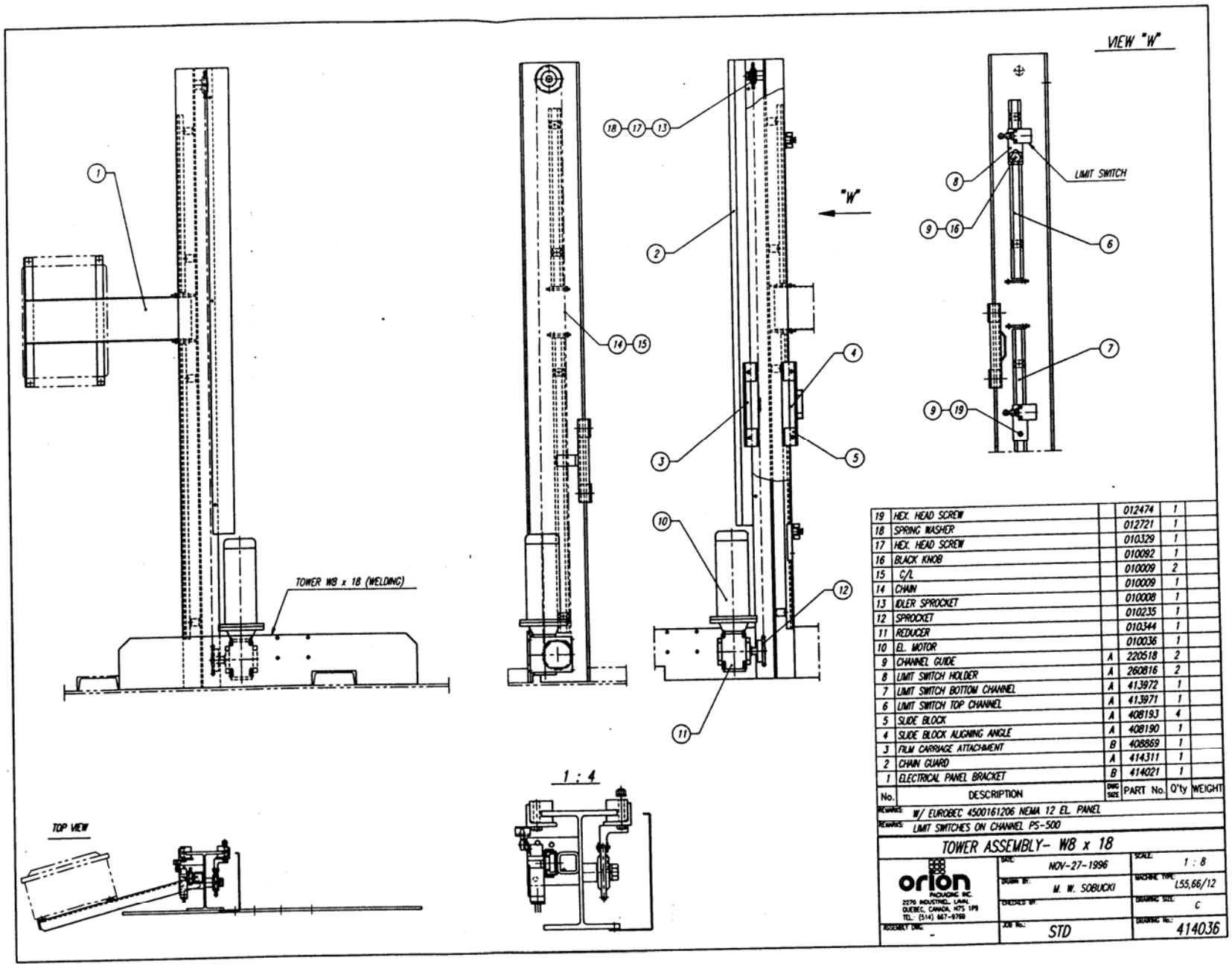
REMARKS: 16 RPM

REMARKS: REPLACES DWG 416529D

L44/12SX BASE ASSEMBLY WITH "DURA-GLIDE" CASTERS

orion PACKAGING INC.
2270 INDUSTRIEL, LAVAL
QUEBEC, CANADA, H7S 1P9
TEL.: (514) 667-9769

ASSEMBLY DWG.: -	DATE: SEP. 10/1997	SCALE: 1 : 8	
	DRAWN BY: G. STACHURA	MACHINE TYPE: L44/12SX	
	CHECKED BY:	DRAWING SIZE: D	
	JOB No.: STD /12	DRAWING No.: 417226	



No.	DESCRIPTION	DWG SIZE	PART No.	Q'ty	WEIGHT
19	HEX. HEAD SCREW		012474	1	
18	SPRING WASHER		012721	1	
17	HEX. HEAD SCREW		010329	1	
16	BLACK KNOB		010092	1	
15	C/L		010009	2	
14	CHAIN		010009	1	
13	IDLER SPROCKET		010008	1	
12	SPROCKET		010235	1	
11	REDUCER		010344	1	
10	EL. MOTOR		010036	1	
9	CHANNEL GUIDE	A	220518	2	
8	LIMIT SWITCH HOLDER	A	260816	2	
7	LIMIT SWITCH BOTTOM CHANNEL	A	413972	1	
6	LIMIT SWITCH TOP CHANNEL	A	413971	1	
5	SLIDE BLOCK	A	408193	4	
4	SLIDE BLOCK ALIGNING ANGLE	A	408190	1	
3	FILM CARRIAGE ATTACHMENT	B	408869	1	
2	CHAIN GUARD	A	414311	1	
1	ELECTRICAL PANEL BRACKET	B	414021	1	

REMARKS: W/ EUROBEC 4500161206 NEMA 12 EL. PANEL

REMARKS: LIMIT SWITCHES ON CHANNEL PS-500

TOWER ASSEMBLY- W8 x 18

orion PACKAGING INC.
2570 INDUSTRIAL LAVAL
QUEBEC, CANADA, H7S 1P8
TEL.: (514) 667-9769

ASSEMBLY DWG.: -

DATE: NOV-27-1996

DRAWN BY: M. W. SOBUCKI

CHECKED BY:

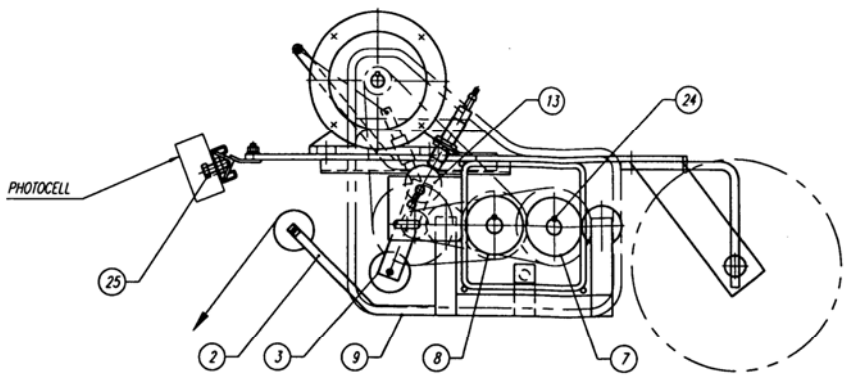
JOB No.: STD

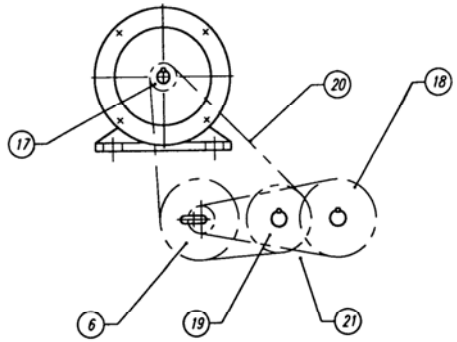
SCALE: 1 : 8

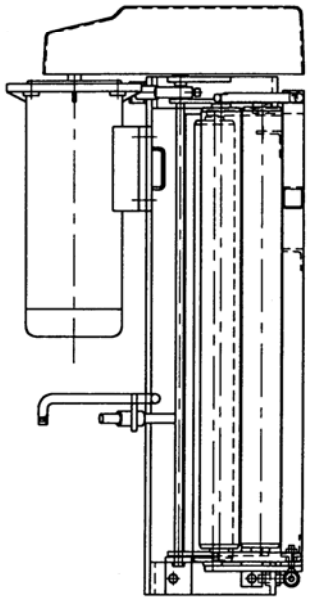
MACHINE TYPE: L55,66/12

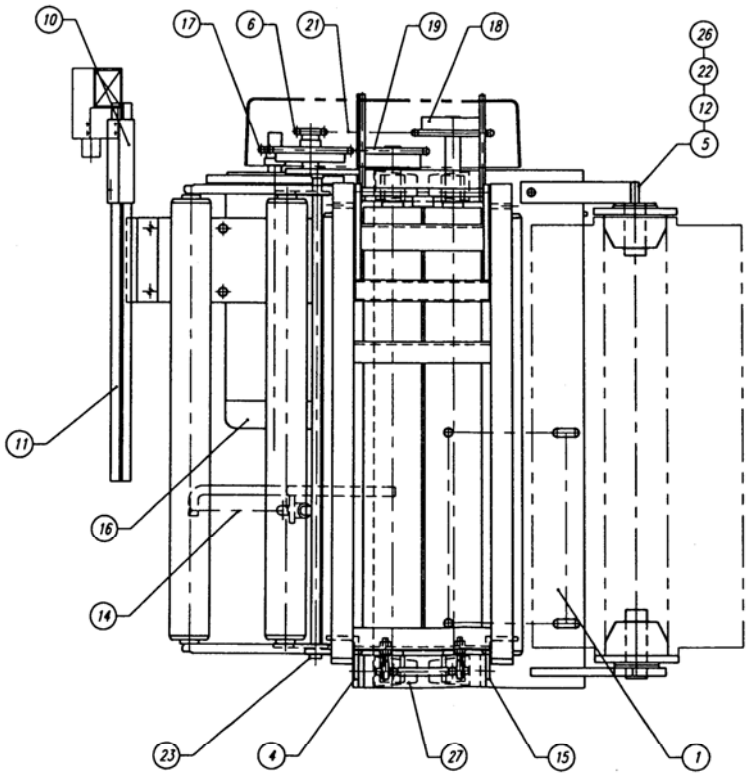
DRAWING SIZE: C

DRAWING No.: 414036









No.	DESCRIPTION	DWG SIZE	PART No.	Q'ty	WEIGHT
27	PILLOW BLOCK		011192	4	
26	FLAT WASHER		012323	2	
25	BLACK KNOB		010092	1	
24	SQ. KEY		010227	3	
23	FL. BRONZE BUSHING		014247	2	
22	SELF SEATING RETAINING RING		013860	2	
21	CHAIN		010583	1	
20	CHAIN		010583	1	
19	SPROCKET		011454	1	
18	SPROCKET STD PRESTRETCH 245 %		011457	1	
17	SPROCKET	A	415109	1	
16	ELECTRIC MOTOR		010036	1	
15	CRADLE ROLLER OPENING LOCK	A	409469	2	
14	EXTENSION SPRING	B	403118	1	
13	PROXIMITY SENSOR CAM	A	413744	1	
12	SPOOL	A	405855	2	
11	PHOTOCELL CHANNEL - 20, CW ROT'N	A	414304	1	
10	PHOTOCELL BRACKET	A	416225	1	
9	FIBERGLASS COVER - CW ROT'N	B	414305	1	
8	RUBBER ROLLER - 2 (20" FILM)	A	413296	1	
7	RUBBER ROLLER - 1 (20" FILM)	A	413295	1	
6	DOUBLE SPROCKET	A	414546	1	
5	TOP MANDREL	A	414193	1	
4	DANCER ROLLER BRACKET	A	413745	1	
3	DANCER ROLLER ASSEMBLY - 20 (FRL)	A	414194	1	
2	CRADLE ROLLER ASSEMBLY - 20 (FRL)	C	415941	1	
1	BACK PLATE - 20 INSTA. (FRL)	C	416214	1	

REMARKS: W8 x 18 TOWER

REMARKS: REPLACES DWG 415397 D

20" INSTA-THREAD FILM CARRIAGE ASS'Y (FRL)

orion PACKAGING INC.
2270 INDUSTRIEL, LAVAL
QUEBEC, CANADA, H7S 1P9
TEL.: (514) 667-9769

ASSEMBLY DWG: -

DATE: MAY 14/1997

DRAWN BY: G. STACHURA

CHECKED BY:

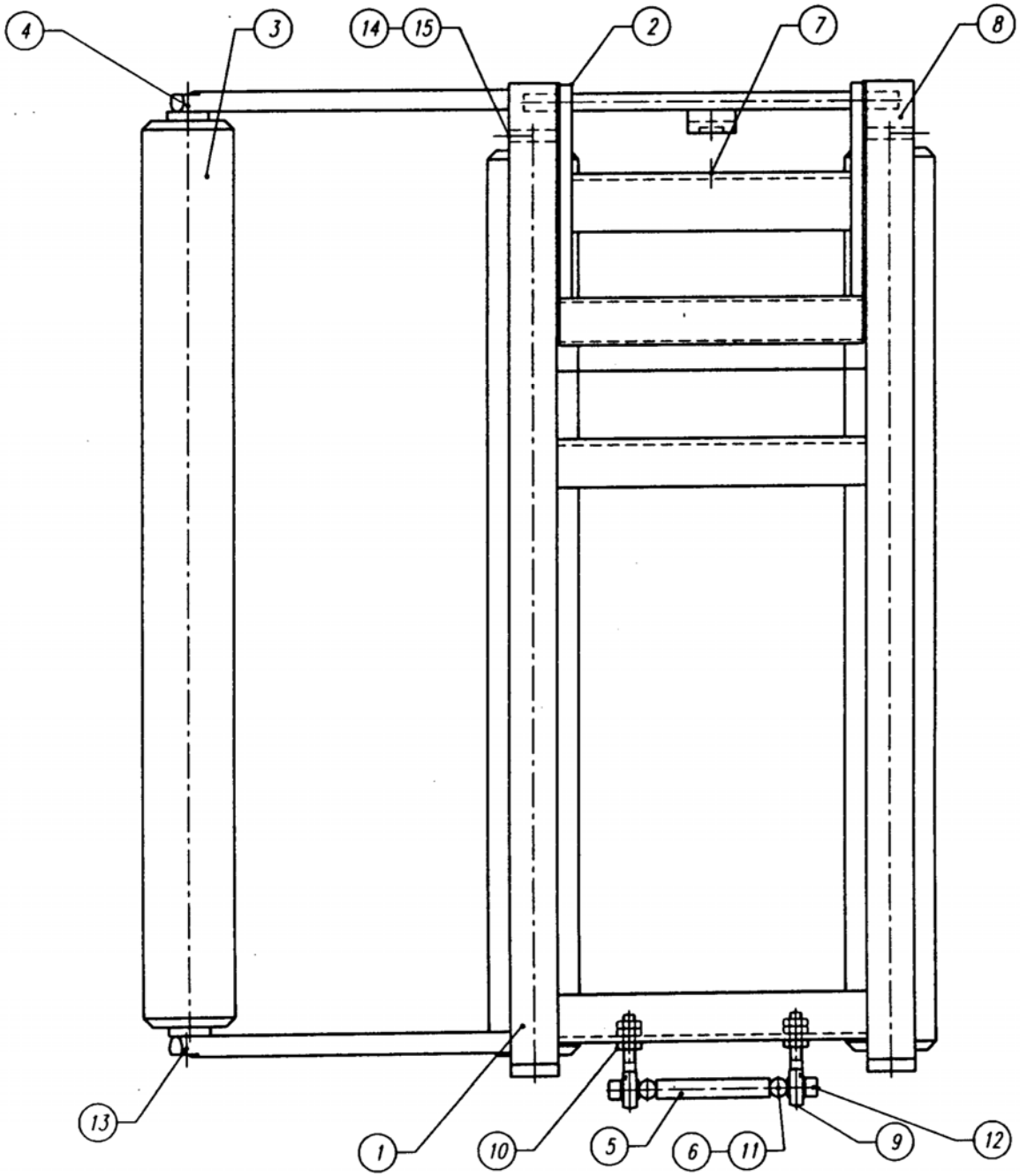
JOB No.: STD /12.3

SCALE: 1 : 4

MACHINE TYPE: H,L66,55,44

DRAWING SIZE: D

DRAWING No.: 416211



No.	DESCRIPTION	CHNG SIZE	PART No.	Q'ty	WEIGHT
15	HEX NUT #10-32UNF		-	2	
14	HEX SOCK. CAP SCREW #10-32UNF 1 LG		-	2	
13	HEX SOCK. BUTTON HEAD SCREW #10-32UNF 1LG		-	2	
12	HEX SOCK. CAP SCREW 1/4-28UNF 1 LG		-	2	
11	JAM NUT		012582	6	
10	JAM NUT		013048	6	
9	ROD END HM - 4		-	2	
8	POLYETHYLENE 7/8 x 7/8 1 3/4 LG		-	2	
7	SPRING # 40		-	1	
6	SPECIAL BOLT	A	415938	2	
5	SHAFT	A	412541	1	
4	IDLE ROLLER SHAFT - 21 1/4 LG	A	413249	3	
3	ALUMINIUM ROLLER 1.9 DIA - 20 LG	A	402789	3	
2	LOCK	A	412542	1	
1	CRADLE ROLLER FRAME - 20" (FRL)	B	414787	1	

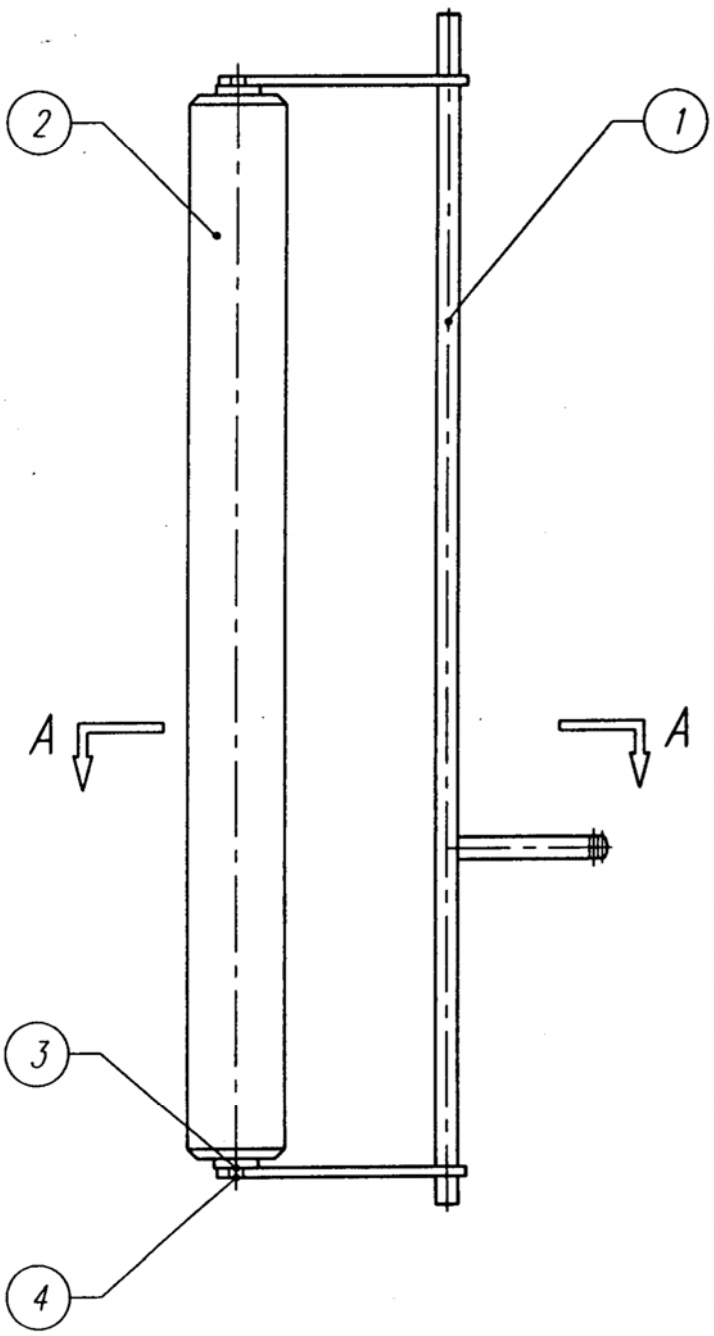
REMARKS: -

REMARKS: -

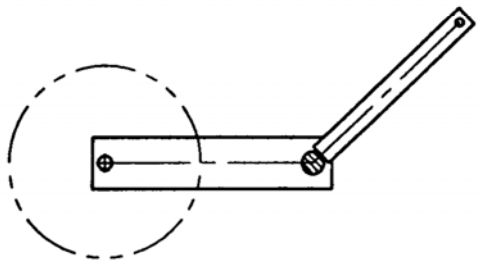
CRADLE ROLLER ASSEMBLY - 20 (FRL)

orion
PACKAGING INC.
2270 INDUSTRIEL LAVAL
QUEBEC, CANADA, H7S 1P9
TEL.: (514) 667-9768

DATE: APR-22-1997	SCALE: 1 : 2
DRAWN BY: ROGER F.	MACHINE TYPE: ALL/12
CHECKED BY:	DRAWING SIZE: C
ASSEMBLY DWG.: 415397	JOB No.: STD - 12.2
	DRAWING No.: 415941



A – A



No.	DESCRIPTION	DWG. SIZE	PART No.	Q'ty	WEIGHT
4	HEX HEAD SCREW		012475	2	
3	FLANGE NUT 1/4-20UNC		–	2	
2	ALUMINIUM ROLLER 1.9 DIA – 20	A	402789	1	
1	DANCER ROLLER CRADLE – 20 (FRL)	A	414195	1	

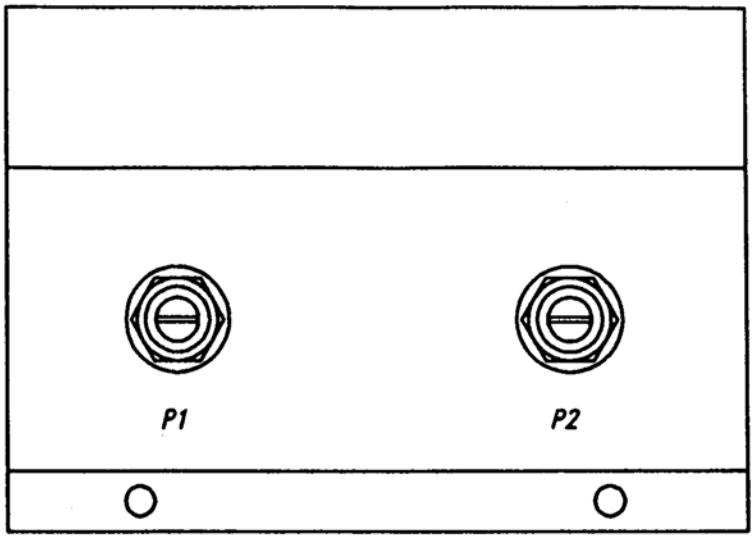
REMARKS: –

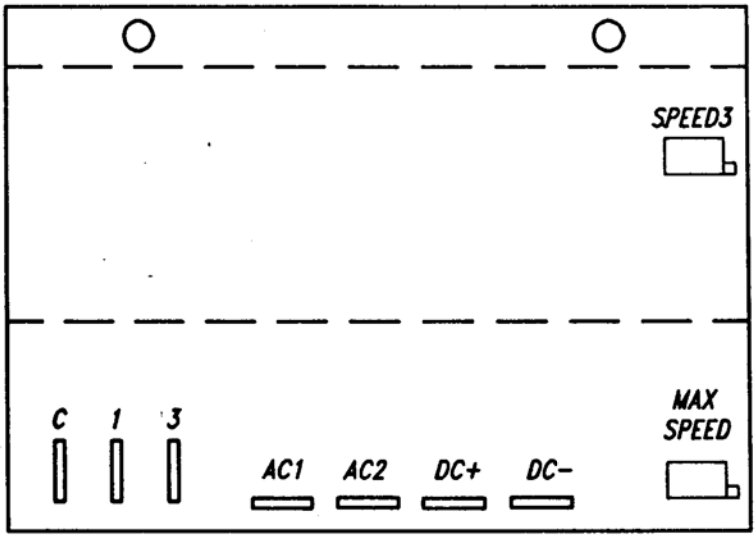
REMARKS: – –

DANCER ROLLER ASSEMBLY – 20 (FRL)

orion
PACKAGING INC.
2270 INDUSTRIEL, LAVAL
QUEBEC, CANADA, H7S 1P9
TEL.: (514) 667-9769

ASSEMBLY DWG.: 414189	DATE: NOV-22-1996	SCALE: 1 : 4
	DRAWN BY: ROGER F.	MACHINE TYPE: ALL/12
	CHECKED BY:	DRAWING SIZE: A
	JOB No.: STD – 12.1	DRAWING No.: 414194





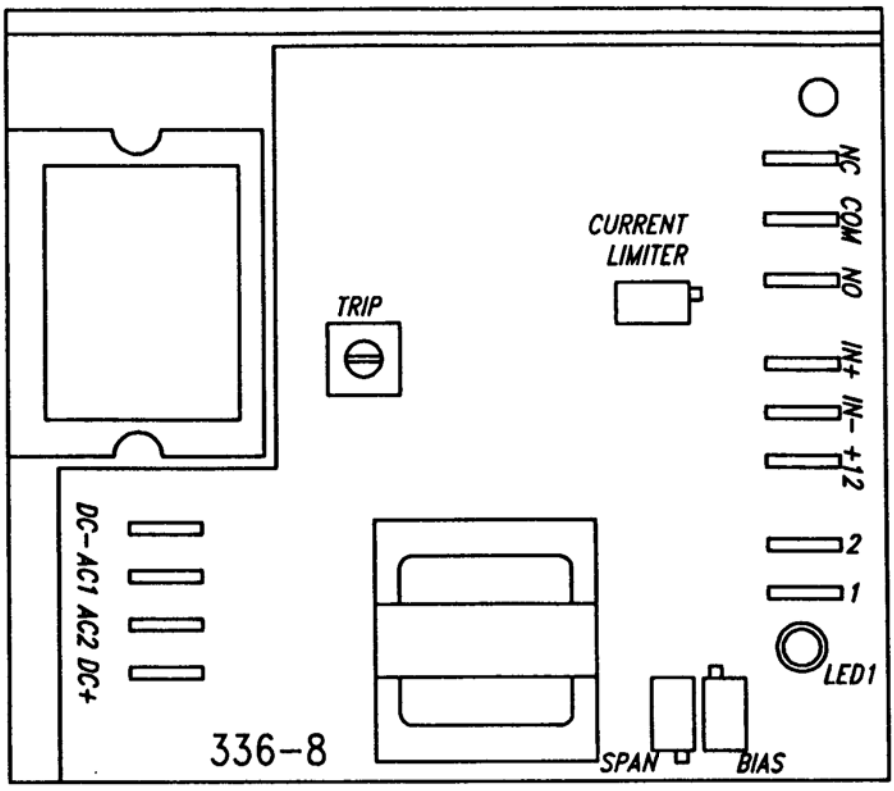
CONNECTORS

C : COMMON
1 : SPEED CONTROL
3 : SPEED CONTROL
AC1: AC INPUT
AC2: AC INPUT
DC+: ARMATURE CONTROL
DC-: ARMATURE CONTROL

POTS: SPEED ADJUSTEMENT.

P1 : POTENTIOMETER 1
P2 : POTENTIOMETER 2
SPEED3 : TECHNOLOGICAL SPEED
MAX SPEED: MAX SPEED

168-5 CARRIAGE THREE SPEED BOARD



DC+: ARMATURE CONTROL

AC1: AC INPUT

AC2: AC INPUT

DC-: ARMATURE CONTROL

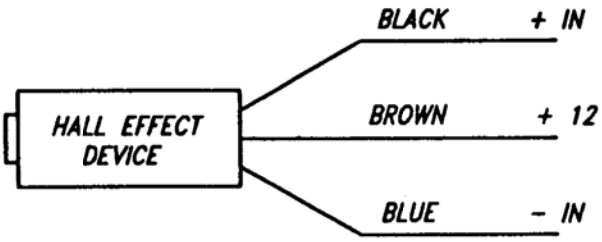
POTENTIOMETER

SPAN: HALL EFFECT SENSITIVITY CONTROL

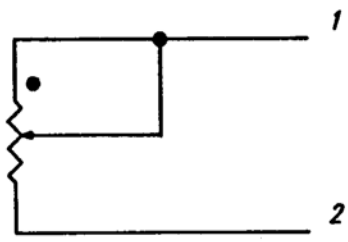
BIAS: SYSTEM BIAS (FACTORY SET)

TRIP: END OR BROKEN FILM SENSING CIRCUITRY. TRIP LEVEL (FACTORY SET)

CURRENT LIMITER: (FACTORY SET)



FILM TENSION ADJUSTMENT
REMOTE POTENTIOMETER



336-8
MULTISTRETCH BOARD

Multistretch Motor Control Board Calibration Instructions.
For 336-8 Board

Adjustments

Bias: **(RV3) The pot marked RV3 controls the system bias.**

This control injects an offset voltage which adds or subtracts from the voltage reference defined by the External Tension Adjustment (Film Tension Potentiometer); this will allow extremes of adjustment to be set to levels consistent with proper operation. Typically, the bias will be used to center the operating range in linear portion of its characteristics.

Note: **This adjustment is normally made at the factory and should not require field adjustment. For reference, the factory test procedure calls for a voltage setting of 1.30 Volts DC at the cathode of Z1 (Zener Diode) achieved by adjusting the RV3 pot.**

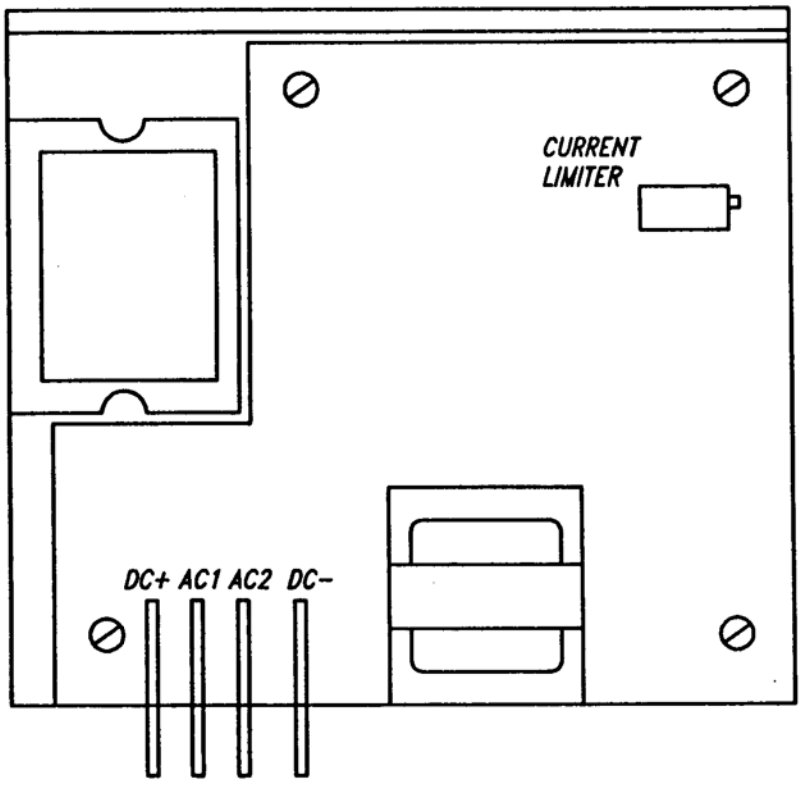
Span: **(RV1) The pot marked RV1 controls the system loop gain.**

The system loop gain may be adjusted if the motor continues to be energized when the dancer arm is unloaded and at rest. With the machine stopped, the potentiometer should be adjusted to ensure that the motor is de-energized in this condition, and so that a light pull on the free end of the film causes the film to feed freely. Counter clockwise (CCW) adjustment of this potentiometer will increase the response time i.e. (soften the motor tension response) plus decrease the response time i.e. (sharpen the motor response) plus increase the maximum possible motor speed attainable.

Current Limit: **(RV4) The pot marked RV4 controls the torque (Amps) that the 336 Board allows to the motor.**

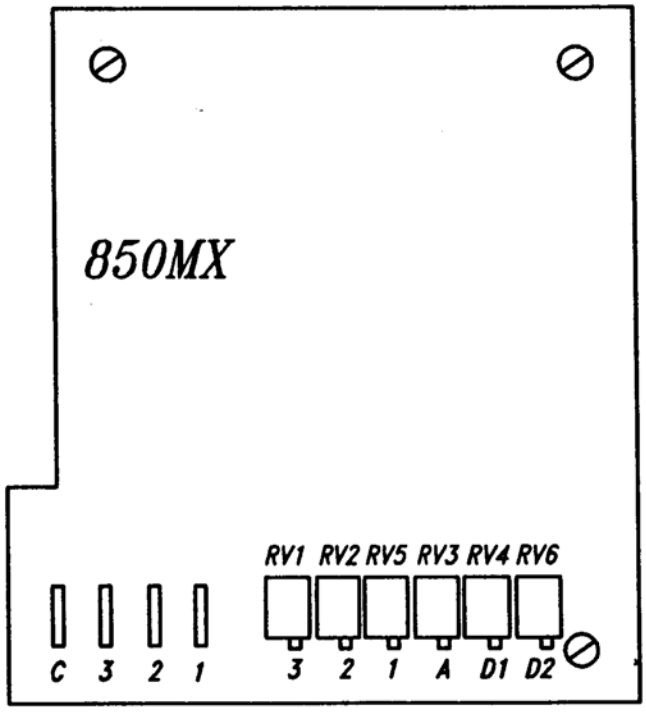
To protect the unit against damage, should the motor stall, jam, or current demands exceed its rating, a current-limiting circuit is included which keeps motor current at a safe level regardless of motor load, or input from the tension-arm. This potentiometer is set at the factory to suit 1/2 HP Motors. Should changes be required in the field, proceed as follows. Monitor the motor current. Advance the potentiometer slowly until desired current is reached. This should not exceed 125% of the nameplate rating. do not stall the motor for more than a few seconds, or damage may occur.

Trip: **The output relay located on SCR Board (Outputs: Com, NO, NC) is energized when the current flowing between DC "+" & DC "-" overshoots the level selected on the potentiometer marked "Trip". It de-energizes when the current falls below the normal current by approximately 5% or when power to the board breaks.**



TERMINALS:

DC+: ARMATURE CONTROL
AC1: AC INPUT
AC2: AC INPUT
DC-: ARMATURE CONTROL



TERMINALS:

C: COMMON
1: SPEED CONTROL (HIGH)
2: SPEED CONTROL (LOW)
3: SPEED CONTROL (JOG)

POTENTIOMETERS:

1: JOG SPEED ADJUSTMENT.
1: LOW SPEED ADJUSTMENT.
2: HIGH SPEED ADJUSTMENT.
A: ACCELERATION ADJUSTMENT.
D1: LOW & JOG SPEED DECELERATION ADJUSTMENT.
D2: HIGH SPEED DECELERATION ADJUSTMENT.

850MX 3 SPEED DC MOTOR CONTROL BOARD

850-MX MOTOR CONTROL BOARD CALIBRATION INSTRUCTIONS.

FACTORY SET-UP PROCEDURE CALLS FOR THE FOLLOWING:

1. Speed Control 1 (RV1)= Turntable/Tower Jog Speed.
   Selected by a 120 VAC signal applied to terminals (1) to (C).
   This should be set for approximately **2-3 R.P.M**

2. Speed Control 2 (RV2)= Turntable/Tower Low Speed.
   Selected by a 120 VAC signal applied to terminals (1) & (2) to (C).
   This should be set for approximately **10-12 R.P.M**

3. Speed Control 3 (RV5)= Turntable/Tower High Speed.
   Selected by a 120 VAC signal applied to terminals (3), (2) & (1) to (C).
   This should be set for approximately **16 R.P.M**

   Note: When making adjustments on speed control,
   the decelaration control will have to be re-calibrated.

4. Deceleration control D1 (RV4) = The transition time that the board provides when it is switched from low speed at the end of the wrap cycle.

Start with the D1 pot set fully CCW. Then , cycling the machine, observe the transition to jog speed at the end of cycle, prior to the stop of the turntable/tower at home position. Gradually increase the D1 pot setting (CW) until the turntable/tower only jogs approximately 1/8 to 1/4 turn before reaching home position. CCW adjustment of the pot quickens the stop and shortens the deceleration time required for the turntable/tower to settle to it's present jog speed. While CW softens the stop and lengthens the time required for the turntable/tower to settle to it's present jog speed.

5. Deceleration control D1 (RV6) = The transition time that the board provides when it is switched from high speed to jog speed at the end of wrap cycle.

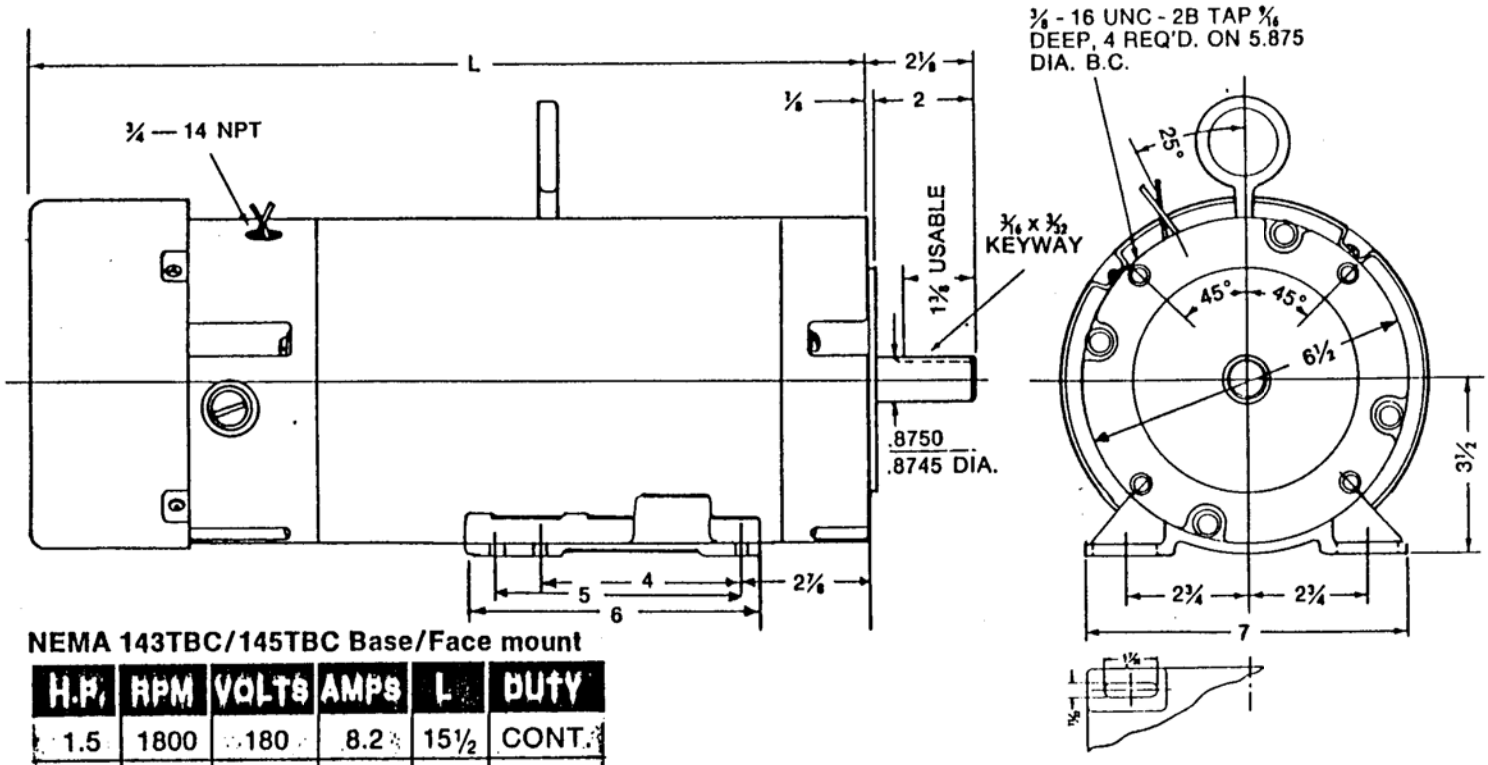
On fully automatic models start with the D2 pot set fully CCW. Then, cycling the machine,observe the transition to jog speed at the end of the cycle, prior to the stop of the turntable/tower at home position. Gradually increase the D2 pot setting (CW) until the turntable/tower only jogs approximately 1/8 to 1/4 turn before reaching home position. CCW adjustment of this pot quickens the stop and shortens the deceleration time required for the turntable/tower to settle to it's present jog speed. While CW softens the stop and lengthens the time required for the turntable/tower to settle to it's present jog speed.

On semi-automatic models, place the control panel High/Low selector switch in the"High" speed position, cycle the machine, and adjust theD2 pot as above, starting from minimum (fully CCW).

APPENDIX

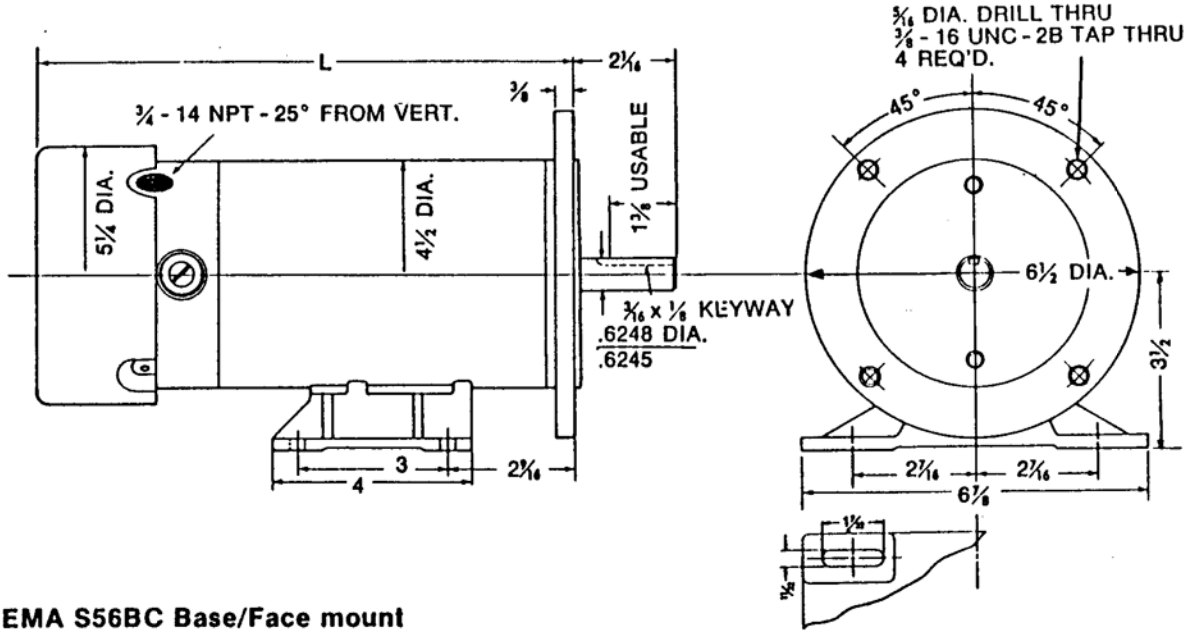
Motor dimensions

TEFC P/M motor



NEMA 143TBC/145TBC Base/Face mount

H.P.	RPM	VOLTS	AMPS	L	DUTY
1.5	1800	180	8.2	15½	CONT.
2	1800	180	11.6	16½	CONT.



NEMA S56BC Base/Face mount

180 V.

H.P.	RPM	VOLTS	AMPS	L	DUTY
½	1725	180	2.8	10¾	CONT.
¾	1725	180	3.5	12¾	CONT.
1	1725	180	5.35	14¾	CONT.

90 V.

H.P.	RPM	VOLTS	AMPS	L	DUTY
½	1725	90	5.35	10¾	CONT.
¾	1725	90	8.1	12¾	CONT.
1	1725	90	10.6	14¾	CONT.

Lubrication

REDUCERS MAY BE FILLED TO THE PROPER LEVEL AT THE FACTORY WITH AGMA No. 8 compounded oil. AFTER INSTALLATION OF THE BREATHER PLUG, UNIT IS READY FOR USE. Before installing breather plug, refer to instruction tag and determine proper position according to reducer mounting.

We recommend an initial oil change after 250 hours of operation, then every six months or every 2500 hours of service under Class I Service. If fluctuating temperatures, humid, dirty or corrosive environment, oil changes should be made more frequently. Frequency can be established by oil sample analysis.

KEEP YOUR OIL CLEAN

Doerr Electric replacement oil

To order oil, request:

Doerr part no. 00019001 — synthetic AGMA #7EP (–40°F to 150°F)
Doerr part no. 00019101 — AGMA #8 (50°F to 125°F)

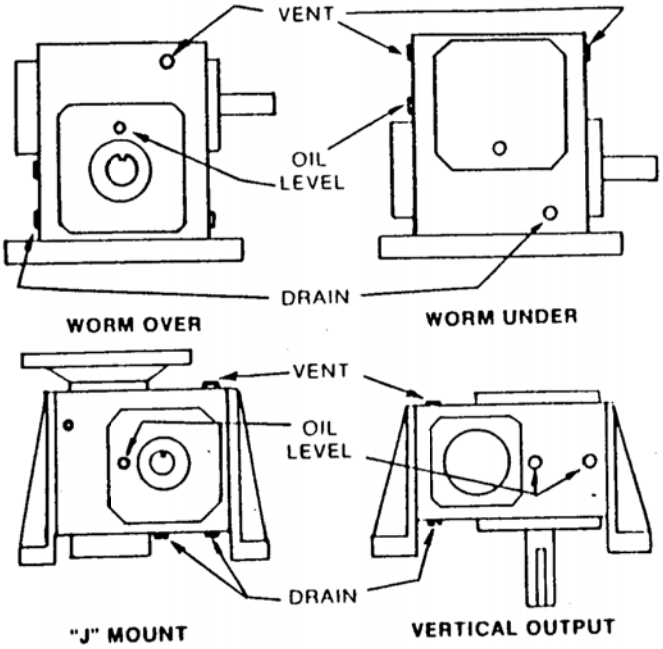
Oil is packed 12 one quart bottles per carton, minimum ship one carton.
Contact DEC Service Dept. for order information.

OIL CAPACITIES*

UNIT TYPE	UNIT SERIES 133	175	205	262	325
Worm Over	14	20	27	49	84
Worm Under	17	22	28	49	73
Vertical Output	10	15	20	37	63
"J" Mount	13	18	23	38	63

***Capacities in approximate ounces. On double reduction units determine capacity of both primary and secondary reducers.**

OIL LEVELS*



***On double reduction units fill and vent each unit to levels shown.**