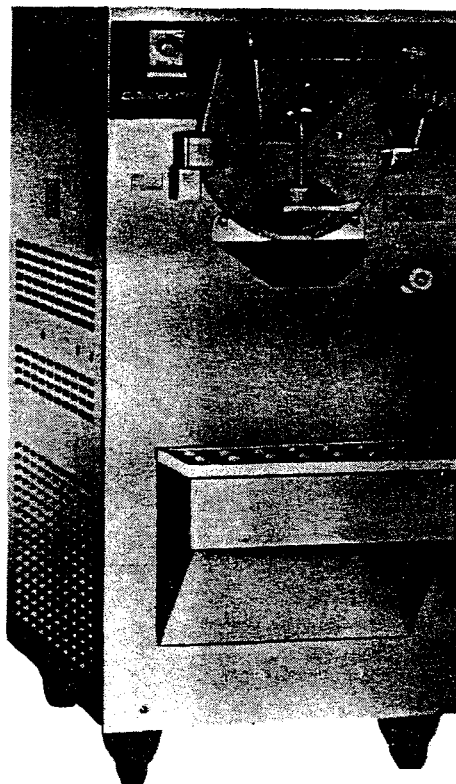


***COLDDELITE***



**Batch Freezer**

**MODELS LB-250/LB-500/LB-1000/LB-500G/LB-1000G**

# **OPERATION and SERVICE MANUAL**

***COLDDELITE***<sup>®</sup>  
CORPORATION OF AMERICA

**5543110**

P.O. Box 4069 • Winston-Salem, NC 27115  
3760 Industrial Drive • Winston-Salem, NC 27105  
Telephone: (919) 661-9893 Telefax: (919) 661-9895 Telex: 754170







## F O R E W O R D

Thank you for selecting COLDELITE to meet today's fast growing demands. Your COLDELITE freezer has been manufactured at the most modern freezer manufacturing plant in the U.S.A., our Lodi, New Jersey facility, utilizing the most advanced equipment and technology available in the industry. We, at COLDELITE, take great pride and care in the manufacture of each and every freezer, using only the finest components available, to provide you with years of trouble-free operation.

Over twenty-five years of experience in the manufacturing of dispensing equipment have guided us in the preparation of this Operation and Service Manual. PLEASE READ IT CAREFULLY. Keep it for future reference and most of all, follow the instructions from the very time your machine is delivered.

On the following pages, you will find important information and procedures which describe the proper installation, sanitizing, operation and maintenance of your COLDELITE machine. We feel certain that your full compliance with these instructions will assure you of excellent performance, trouble-free operation and a profitable business for years to come.

## N O T I C E

Failure to closely follow set-up and maintenance procedures, can void your warranty. Coldelite Corporation will not be responsible for any machine not properly maintained.

---

## W A R N I N G

EXTREME CARE MUST BE TAKEN WHEN REMOVING SIDE, REAR OR CONTROL BOX PANELS.

ALWAYS TURN THE SELECTOR SWITCH TO THE OFF POSITION. ALSO TURN OFF THE DISCONNECT SWITCH ON ELECTRICAL SUPPLY LINE BEFORE EXPOSING ANY ELECTRICAL CONNECTIONS AND/OR MOVING PARTS, SUCH AS BELTS, PULLEYS, FAN BLADES AND BEATER.

---



## BATCH ICE CREAM FREEZERS

---

MODELS LB-250 - 500 - 1000  
LB-500G - LB-1000G

### PART I                      I N S T A L L A T I O N

#### A - UNCRATING

Before starting this procedure, make sure the carton does not show evidence of having been dropped, tampered with or abused in such a way as to indicate that its contents may have been damaged in transit.

---

IMPORTANT - In the event the outside of the crate should give any indication of possible hidden damage, so state on the Bill of Lading before signing. Contact the carrier immediately and request an inspection of the damage. You, the customer, must place any claim for damage and/or shortage in shipment with the carrier. Coldelite Corporation cannot make any claim against the carrier.

---

#### 1) Proceed to unpack, as follows:

Remove the strapping. When you cut this strapping, do it with caution as it may snap out. Lift the carton straight up and away from the freezer. Remove the side panels by lifting and pulling out from the bottom. Remove the bolts holding the freezer to the skid. Now, carefully, install the casters or legs, while keeping the freezer in an upright position. In some cases, installation of the casters may not be necessary as they are part of the frame. You are now ready to move the machine to the point of installation.

2) Inside the freezer cabinet, on the left side, when facing the front of the machine, you will find a 4"x4" electric junction box. The electrical connection from your cut-out box or fuse box is made to this junction box. The electrician does not have to go into the unit's control box. (See additional details under Electrical Connections, Paragraph B.)

3) Water cooled models will have two, 1/2" male pipe thread fittings extending out the rear panel, marked 'Water Inlet' and 'Water Outlet', connect accordingly. (For additional details, refer to Plumbing Connections, Paragraph C.)



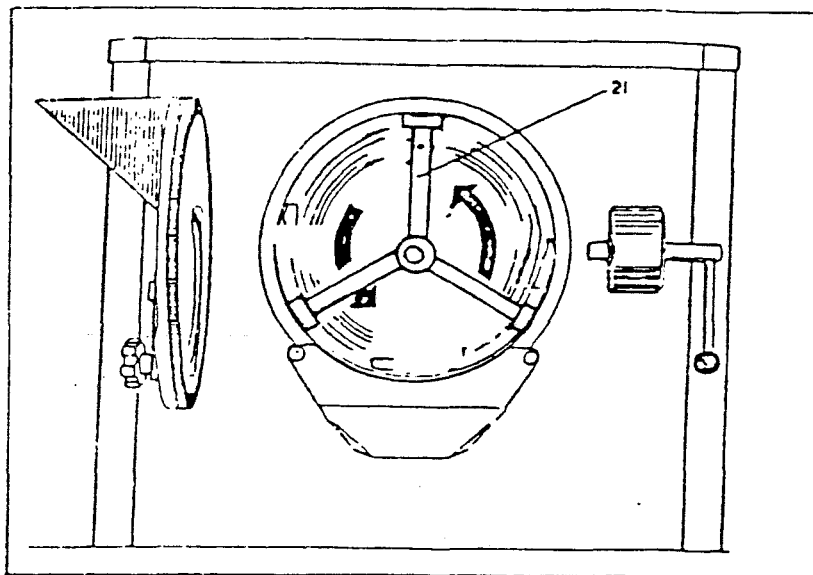
5) Air cooled models, remove the cardboard protection from the condenser at the rear. The AIR FLOW IS FROM FRONT TO BACK and there must be a minimum of 12 inches of open area behind the freezer.

Note: Failure to provide adequate ventilation will result in poor performance and will void your warranty.

6) The compressor may be either blocked or bolted down. Before operating, remove the blocks or loosen the nuts. When this is done, the compressor should 'float' freely on its mounting spring.

7) Also be sure to remove the block from the beater motor as this is only for shipment.

If your machine is three phase, rotation of beater must be checked when the electrician has made his connection. All batch freezers run counter clockwise when facing the machine. (See illustration.)



#### B) ELECTRICAL CONNECTIONS:

Wiring should be made in accordance with the National Electrical Codes, rules and regulations.

#### MINIMUM ELECTRICAL REQUIREMENTS

MODEL	COMPRESSOR MOTOR	BEATER MOTOR	F.L.A.		WIRE GAUGE	
			1 ph.	3 ph.	1 ph.	3 ph.
LB-250	1-1/2 hp	2 hp	12.4	6.5	#10	#10
LB-500	2 hp	3 hp	18	9	#8	#10
LB-500 G	3 hp	7.5/3.75	--	20/17		#8
LB-1000	5 hp	7.5	--	20		#8
LB-1000 G	6 hp	10/5	25.9/18.9			#8

POWER SUPPLY must be adequate to meet requirements at all times. With the machine in operation, voltage fluctuations should not exceed  $\pm 10\%$  of the normal or rated voltage. Be sure to check



for correct voltage at the fuse box before turning on your machine.

ADEQUATE WIRING should be provided with regard to wire size or gauge. Unless otherwise required by the local Electrical Code, the wire gauge at the machine junction box should be used for the direct power line. See chart on Page 3. A separate circuit breaker, with adequate fuse protection, should be employed.

An unfused disconnect switch or proper size plug-in, close to the freezer, is recommended.

COLDELITE freezers provide protection for the beater motor. Should the line voltage drop or if there is a short circuit, the overload protector will automatically disconnect the starter and the machine will stop immediately so that no permanent damage can be caused to the motor. To start the freezer again, wait approximately one to two minutes, then push the RESET button located in the left panel of the machine. The compressor is also internally protected. If the Klixon protector trips due to an overload, this Klixon automatically resets and the compressor will be re-activated.

ROTATION - Never reverse the rotation by changing the connections inside the starter box. If the rotation is not counter clockwise, interchange the wire connections between two of the three legs (phases) inside the junction box.

---

NOTE: IN ALL INSTALLATIONS, BOTH SINGLE AND THREE PHASE, THE MACHINE MUST BE PROPERLY GROUNDED. SINCE ALL ELECTRICAL COMPONENTS ARE CONNECTED BY MEANS OF FLEXIBLE CONDUIT, ADEQUATE GROUND CONTINUITY IS ASSURED BY RUNNING AND FASTENING A GROUND LINE TO THE MACHINE JUNCTION BOX.

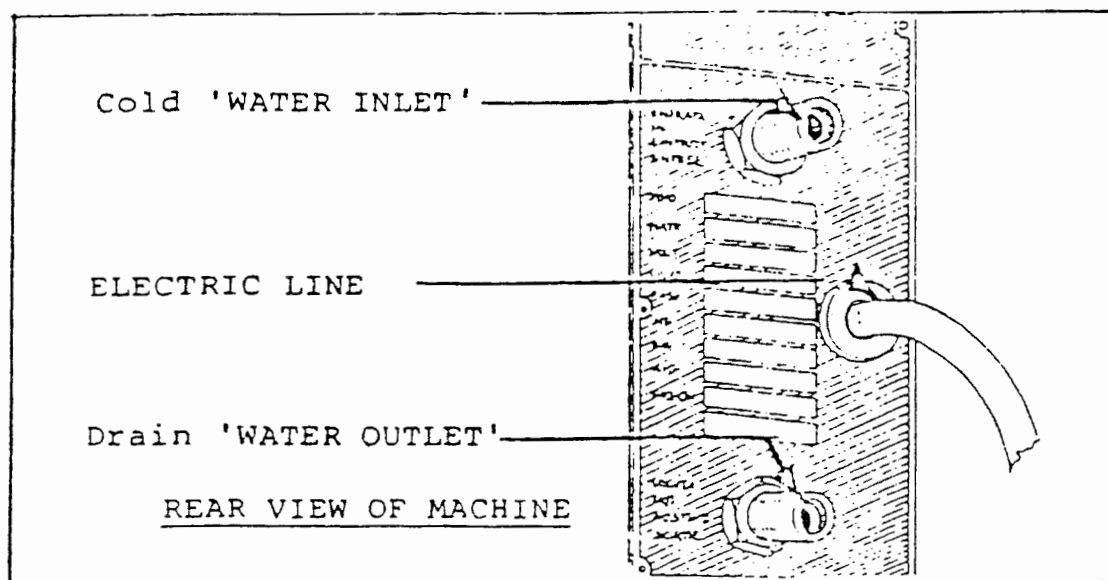
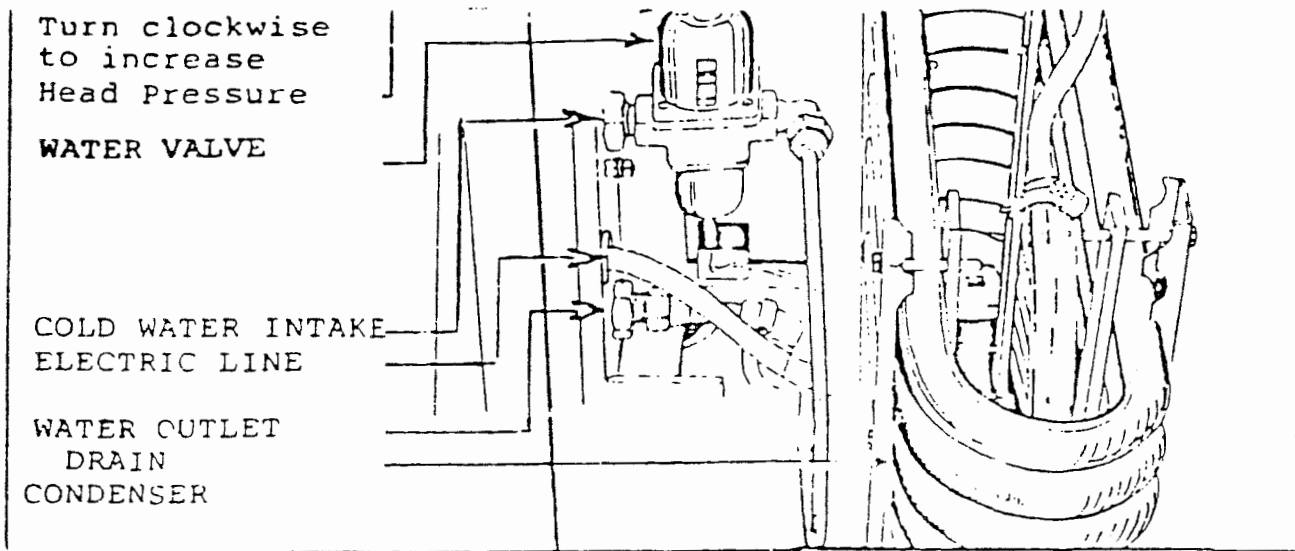
---

### C) PLUMBING CONNECTIONS

On water cooled machines, you will find a 1/2" male pipe thread fitting, marked 'Water Inlet' and one, marked 'Water Outlet'. The cold water line is connected to the 'Water Inlet' and the 'Water Outlet' must run to a drain. The drain line is under pressure so the water can flow upwards, if necessary. The water pressure at the machine should be 60 lbs. p.s.i. The temperature of the water should not exceed 68°F (20°C). If hoses are used for the connection, they must be high pressure rated.

WATER VALVE ADJUSTMENT - The water valve should be set so that the water runs only when the compressor is in operation. When the machine is running, the drain water should be lukewarm.





BACK FLOW VALVE - In some areas of the country, an 'anti-syphoning' or 'anti-back' flow valve is required on machines with a water cooled condenser.

The purpose of this valve is to prevent water inside the machine's condenser from being drawn into the water supply line in the event a vacuum condition occurs in the supply line.

Check your local plumbing codes to determine if this valve is required, and if so, have a plumber install it outside the unit.

### W A R N I N G

Never leave the freezer at an ambient temperature lower than 32°F (0°C) without draining the water from the condenser. To drain water completely, open water valve by raising the seat and apply air pressure to the 'Water Intake' line.



## PART II

## EXPLANATION OF ELECTRICAL CONTROLS

The COLDELITE batch freezer is equipped with two primary switches:

- a) SELECTOR SWITCH - This switch has the total control of the machine and consists of four positions, which are, as follows:

OFF - Machine is completely off

PRODUCTION - Beater motor and compressor are running automatically and the compressor will be turned on and off by the Hard-O-Matic.

NOTE: On the LB-500 and LB-1000, the beater is running on high speed.

On the LB-500G and the LB-1000G, the beater is running at low speed.

EXTRACTION - Only the beater runs. The compressor is off. This position is used at the completion of the batch to whip in air and then dispense the product.

NOTE: On the LB-500, LB-1000, LB-500G and LB-1000G, the beater runs at high speed.

CLEANING - Used for all cleaning and sanitizing operations. The compressor is off.

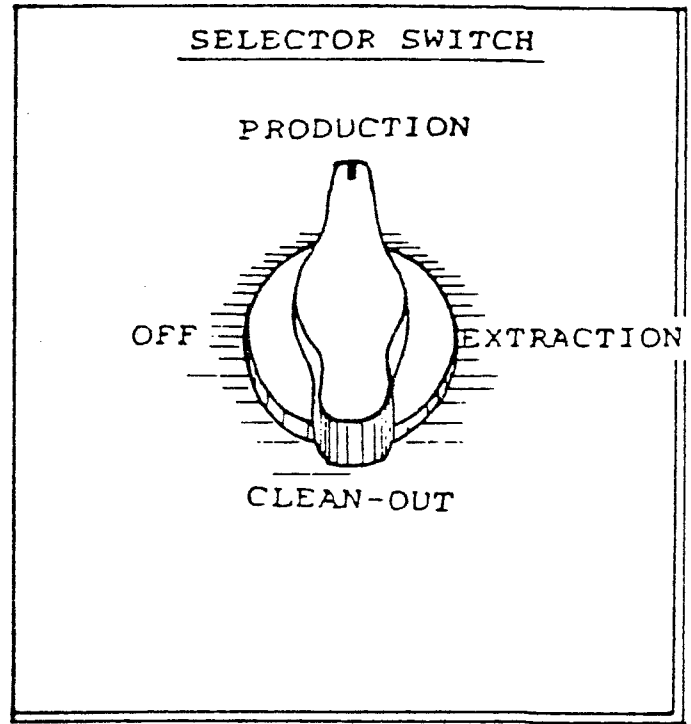
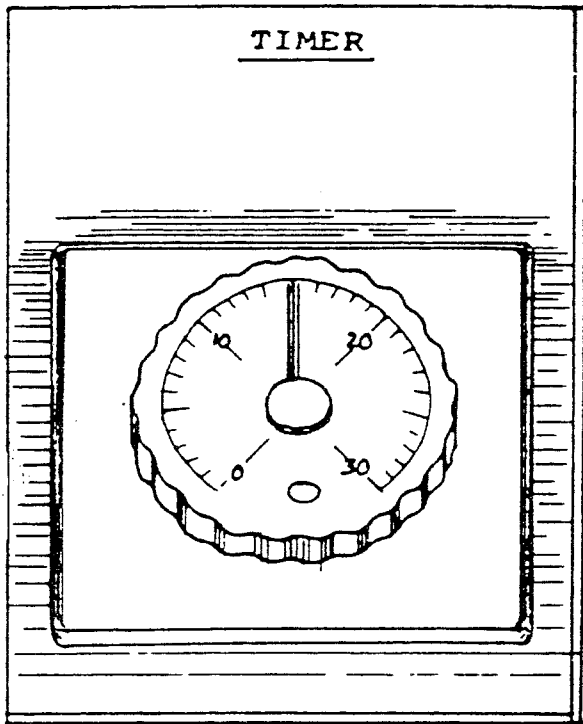
- b) TIMER - This switch is to assist you in timing the freezing of a batch. Generally 10 to 12 minutes is the normal cycle time. However, the first batch may take up to 15 minutes. It is recommended that the initial batch be set at 15 minutes and reset at 12 minutes for subsequent batches.

The duration of batches may vary with the mixes or flavors used.

When the timer returns to zero, a bell will sound and the batch should be finished. To stop the bell, turn the selector switch to EXTRACTION. Timer operates only in PRODUCTION position. See following page.



TIMER - SELECTOR SWITCH





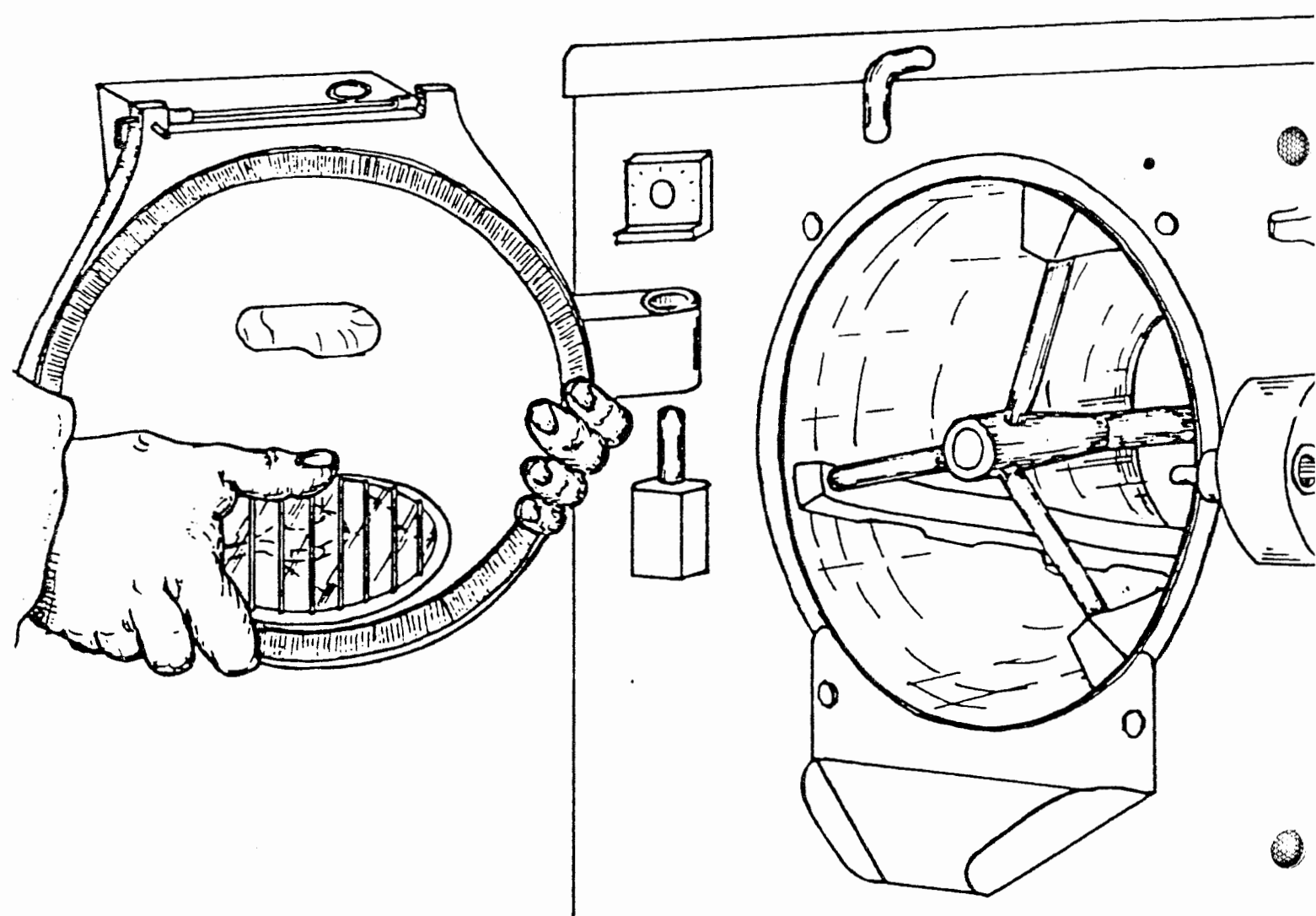
This is a new freezer and before making a product, it must be carefully washed and sanitized, as follows:

a) Remove the door assembly by loosening the locking bolt. Swing the door to the left and lift it off the hinge pin. Remove the dispensing gate, handle and hand knob, or on later models, the eccentric plastic handle. Remove the beater from the cylinder. Be sure the rear seal comes out with the beater. If it remains on the back plate, remove it. Take all parts to the sink and wash them thoroughly with a mild soap. Rinse parts and return to machine. Lubricate the rear seal liberally to insure no leakage from the rear. If you notice mix in the rear drip pan,

---

**WARNING!** DO NOT OPERATE THE MACHINE WITH THE FRONT DOOR REMOVED OR OPEN! DO NOT REMOVE THE PROTECTIVE GRILL!

---





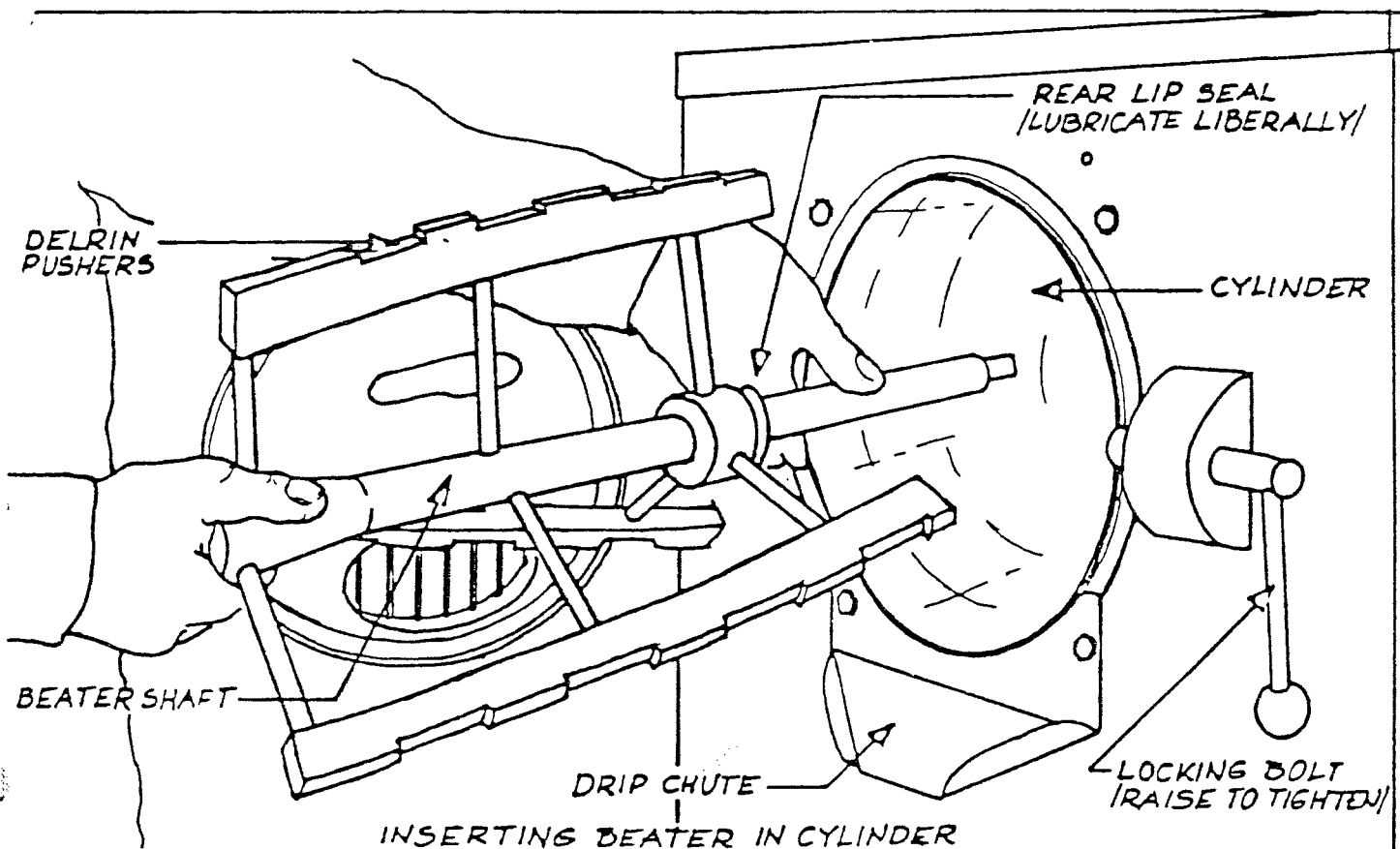
check the condition of the seal. Replace, if necessary. Lubricate the head gasket very lightly.

b) Reassemble the freezer with the door assembly firmly locked in place and slide the bolt tight. Be sure that the pin (P) is energizing the micro switch Code 1720250 behind the front panel (see Page 19). You are now ready to sanitize the freezer.

c) Make a Stera-Sheen solution or equivalent (chlorine 200 ppm), one gallon for the LB-250, two gallons for the LB-500 and LB-1000. Pour solution into the cylinder and close the chute cover. Turn the selector switch to CLEAN-OUT and allow the machine to run for 30 to 40 seconds.

d) The solution has now been in contact with all of the product zone parts (parts that will be in contact with the mix product). Place pail under the head, turn the switch to OFF and slowly open the dispensing gate completely. Open the door to make sure there is no sanitizer left in the cylinder.

IMPORTANT - During the washing and sanitizing period, run the machine only for the time strictly necessary for this operation. Prolonged use of the beater in the cleaning position may cause damage to the machine.





## O P E R A T I O N

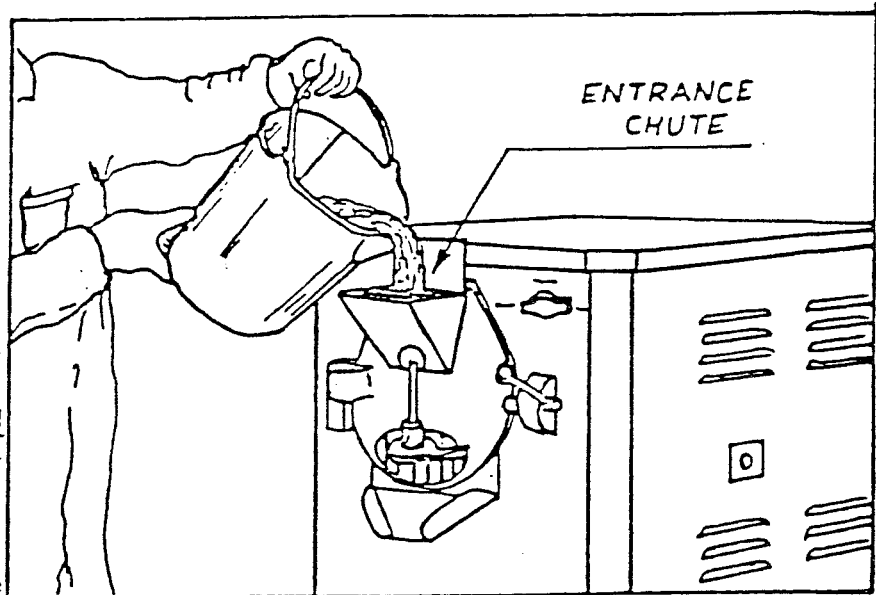
You have the finest, fastest and most dependable freezer manufactured. Congratulations! You can now make hard ice cream, sherbets, ices, gelato and more with this outstanding freezer.

Batch sizes will vary depending on the ingredients, desired overrun, etc. As you gain experience, you will learn how to judge the size of each batch. For example, when making ices, you will make a larger initial batch because expansion is at a minimum (overrun).

The following are the suggested initial batch sizes:

LB-250	-	Initial mix approximately 4 - 5 quarts
LB-500	-	Initial mix approximately 9 - 11 quarts
LB-500 G	-	" " " " " "
LB-1000	-	Initial mix approximately 19 - 21 quarts
LB-1000 G	-	" " " " " "

Pour the mix in the machine. Replace the entrance chute cover. Turn the timer to 15 minutes (this may vary also) and turn the selector switch to PRODUCTION. After 15 minutes, the bell will sound indicating the completion of the freezing cycle. Then turn the switch to EXTRACTION and draw out the product into a sanitized, cold container.



You will notice that the second batch is made faster. However, exact timing has to be worked out based on the mix used, desired overrun, firmness, etc.

If you are working with different flavors, you should plan your batches ahead. For example, always start with vanilla, then cherry vanilla, vanilla chip, coffee, walnut and other light colored flavors one after the other without rinsing out the freezer. Naturally, chocolate is the last flavor made.



Always remember to use quality ingredients. Making quality ice cream, ices or sherbets will guarantee superior products and a successful operation.

#### PART IV                      T E C H N I C A L   D A T A

##### a) REFRIGERATION -

Compressors - Semi-Hermetic - Refrigerant - R-502

	Size Compressor	Suction Pressure	High Side Pressure		R-502 Lbs.
			Water	Air	
Model LB-250	1-1/2 hp	20 lbs.	210	250	4
Model LB-500	2 hp	22 lbs.	210	250	5
Model LB-500 G	3 hp	8 lbs.	210	250	6
Model LB-1000	5 hp	15 lbs.	210	*-	10
Model LB-1000 G	6 hp	8-10 lbs.	210	*-	14

Above models are available either air or water cooled.

\*The Model LB-1000, air cooled, is available only with a remote compressor.

##### b) ADJUSTING PRODUCT CONSISTENCY

COLDELITE uses a patented Hard-O-Matic system which is referred to as HOM. This mechanical device controls the refrigeration system in the freezing cylinder by 'sensing' the consistency or hardness of the product inside the freezing cylinder. NO thermostats are used in this system.

Basically, the HOM control consists of a clutch assembly. The inclines of a disc, fastened to the fly wheel, are engaged to the inclines on a facing disc, which in turn rotates the beater. A set of springs, properly calibrated and radially located around the fly wheel, maintains the two engaged discs by exerting a certain pressure.

With the gradual hardening of the product inside the freezing cylinder, a certain resistance (or drag) will be exerted on the beater by the product itself.

The disc, rotating the beater, will also be affected by this drag and will start sliding on the inclines of the other disc, overcoming the pressure of the springs.

The gradual separation of the two discs, as a result of the sliding on the inclined surfaces of one disc against the other,



will move the complete drive assembly toward the rear of the machine.

By the time the product has reached the proper consistency or hardness, the drive assembly will have moved backward just enough to OPEN a normally closed micro switch fastened to the support on the rear frame of the machine.

The opening of this micro switch will de-energize the coil of the compressor contactor, which will immediately stop the compressor. The beater will continue to run.

c) HOW TO ADJUST THE HOM (Product temperature)

The firmness of the product depends on the position of the micro switch in relation to the drive assembly. The compressor must cut off when the current absorbed by the beater motor is approximately 9/10 of the plate amperage (see F.L.S. on the beater plate). By using an ammeter across the line, feeding the beater motor, it is possible to check the amperage drawn by the motor at the time the micro switch opens.

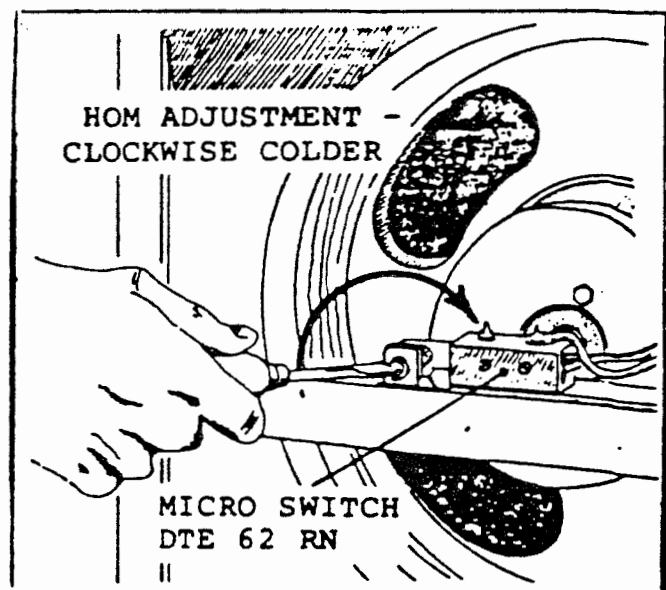
If a reading indicates an amperage lower than 9/10 of the plate amperage, the micro switch OPENS too soon, and should be moved AWAY from the fly wheel. The adjustment screw should be turned clock-wise. The micro switch is secured to the rectangular mounting plate where it is fastened to the frame of the machine but is free to rotate slightly around its retaining bolt. Rotation of the plate towards or away from the fly wheel is achieved by turning a screw located on the plate itself and held in that position by a spring.

As a result, the micro switch will also move in either direction allowing the desired adjustment.

Turning the adjustment screw clockwise will move the micro switch AWAY from the fly wheel and the compressor will run longer and make the product harder.

Turning the adjustment screw counter-clockwise will move the micro switch CLOSER to the fly wheel. The compressor will run less, making the product softer.

See WARNING - next page





---

★ ★ ★ ★ W A R N I N G ★ ★ ★ ★

---

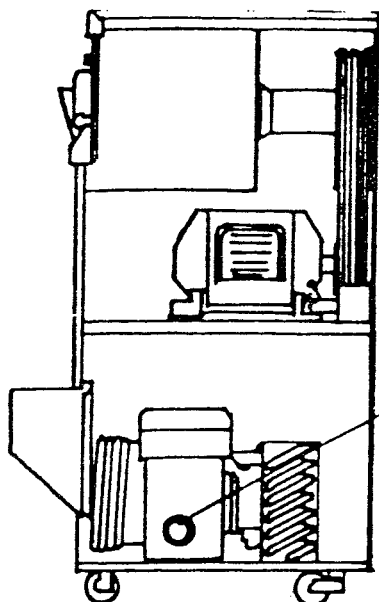
THE MAXIMUM TRAVEL OF THE DISC AND CONSEQUENTLY OF THE DRIVE ASSEMBLY, IS APPROXIMATELY 1/4 INCH.

IN ADJUSTING THE DISTANCE OF THE MICRO SWITCH FROM THE DRIVE ASSEMBLY, CAREFULLY AVOID INCREASING THIS DISTANCE BEYOND 1/4 INCH. THE DRIVE ASSEMBLY WOULD NEVER REACH FAR ENOUGH TO OPEN THE NORMALLY CLOSED MICRO SWITCH AND THE COMPRESSOR WOULD NO LONGER BE ABLE TO STOP.

THE ADJUSTMENT OF THE MICRO SWITCH POSITION REQUIRES ONLY SLIGHT MOVEMENTS OF THE ASSEMBLY IN EITHER DIRECTION.

---





COMPRESSOR OIL LEVEL in sight glass must be maintained between (A) and (B) at all times. Periodic checks are recommended.

#### d) DRIVE SYSTEM

##### BEATER MOTORS, AMPS. AND BELT SIZES

	Beater Motor Size	Actual Running Amps.		Drive Belt(s)	
		1 ph.	3 ph.	Size	Number
LB-250	2 hp	11.2	5.9	3ø 3415560 1ø 3414160	3 3
LB-500	3 hp	16.6	8.2	3415190	6
*LB-1000	7½ hp	---	18	3415020	1
LB-500G	7.5/3.75	---	15.3	3415500	6
LB-1000G.	10/5	---	23.5/17.1	3415020	1

\*LB-1000 available only in 3 phase.

After a batch freezer has been in operation for about a month, it is advisable to check the belt tension. You should be able to push in the belt(s) at the center point between the two pulleys about 1/2". Should you find excessive play, tighten the belt(s) with the adjustment bolt on the beater motor.

It is suggested that you use belt dressing every twelve months to increase the life of the belt and reduce the belt noise factor.

#### **\*\* W A R N I N G \*\***

EXTREME CARE SHOULD BE TAKEN WHEN REMOVING EITHER OF THE CONTROL SWITCHES AND THE SIDE AND REAR PANELS.

FIRST MAKE CERTAIN THE SELECTOR SWITCH IS ON THE "OFF" POSITION. THEN TURN OFF THE MAIN POWER DISCONNECT SWITCH ON THE ELECTRICAL SUPPLY LINE BEFORE EXPOSING ANY ELECTRICAL CONNECTIONS OR MECHANICAL MOVING PARTS SUCH AS BELTS, PULLEYS, FAN BLADES AND BEATER.



## T R O U B L E   S H O O T I N G

<u>Problem</u>	<u>Possible Cause</u>	<u>Suggested Remedy</u>
Compressor short cycles	Water shut off	Open water valve and check water supply.
Burnt rubber odor	Product in barrel frozen too hard Slippage of belts on beater pulley	Refer to HOM Adjustment
Bubbles in sight glass	Shortage of refrigerant	Repair leak and recharge
Frosted liquid line	Receiver valve, strainer or drier restricted	Open valve or replace restricted part
Top condenser coils cool when unit is in operation	Refrigerant under charged or mechanical defect on compressor	Repair leak and recharge. Check and correct compressor.
Unit on vacuum. Frost on expansion valve only.	Ice plugging expansion valve orifice.	Apply hot wet cloth to expansion valve. Moisture indicated by increase in suction pressure. Install new drier.
	Plugged expansion valve strainer	Clean strainer or replace expansion valve.



T R O U B L E   S H O O T I N G

<u>Problem</u>	<u>Possible Cause</u>	<u>Suggested Remedy</u>
Noisy compressor	Insufficient compressor oil Tubing rattles. Mountings loose. Oil sloshing or refrigerant flooding back.	Add oil to proper level Bend tubes away from contact. Tighten Adjust oil level or refrigerant charge. Check expansion valve for leak or oversize orifice.
Compressor loses oil	Broken valve seal	Repair leak and recharge if needed, add refrigerant oil.
Compressor will not start	Low line voltage	Check main line voltage. Determine location of voltage drop.
	Open circuit in starting winding.	Check stator leads. If leads are okay, replace stator.
	Improperly wired	Check wiring against diagram.
<u>Single Phase Only</u>	Open starting capacitor. Relay contacts not closing.	Replace starting capacitor. Replace relay, if defective.
Compressor operates long or continuously	Shortage of gas Dirty condenser Location too warm (Air cooled unit only)	Repair leak and recharge. Clean condenser Change to cooler location or increase air flow.



## T R O U B L E   S H O O T I N G

<u>Problem</u>	<u>Possible Cause</u>	<u>Suggested Remedy</u>
Product too soft	H.O.M. not properly calibrated	Check amperage setting and adjust the H.O.M.
	Insufficient freezing time	Increase time of freezing
Product too hard	Freezing time too long	Check freezing time or the H.O.M. setting
Machine does not start	Main switch is off	Turn switch on
	Front micro switch not energized	Check if front door is properly closed and if pin is energizing the micro switch located behind the front panel (See Page 19)
	Beater motor and compressor starter not energized	Check if 24 volt transformer is operating properly.



FRONT VIEW

1723060 - 220 volt  
1723080 - 24 volt  
1723090 - Digital

1745030  
1745040

3206290

1990530

1990540

1720030

1720110

1657120

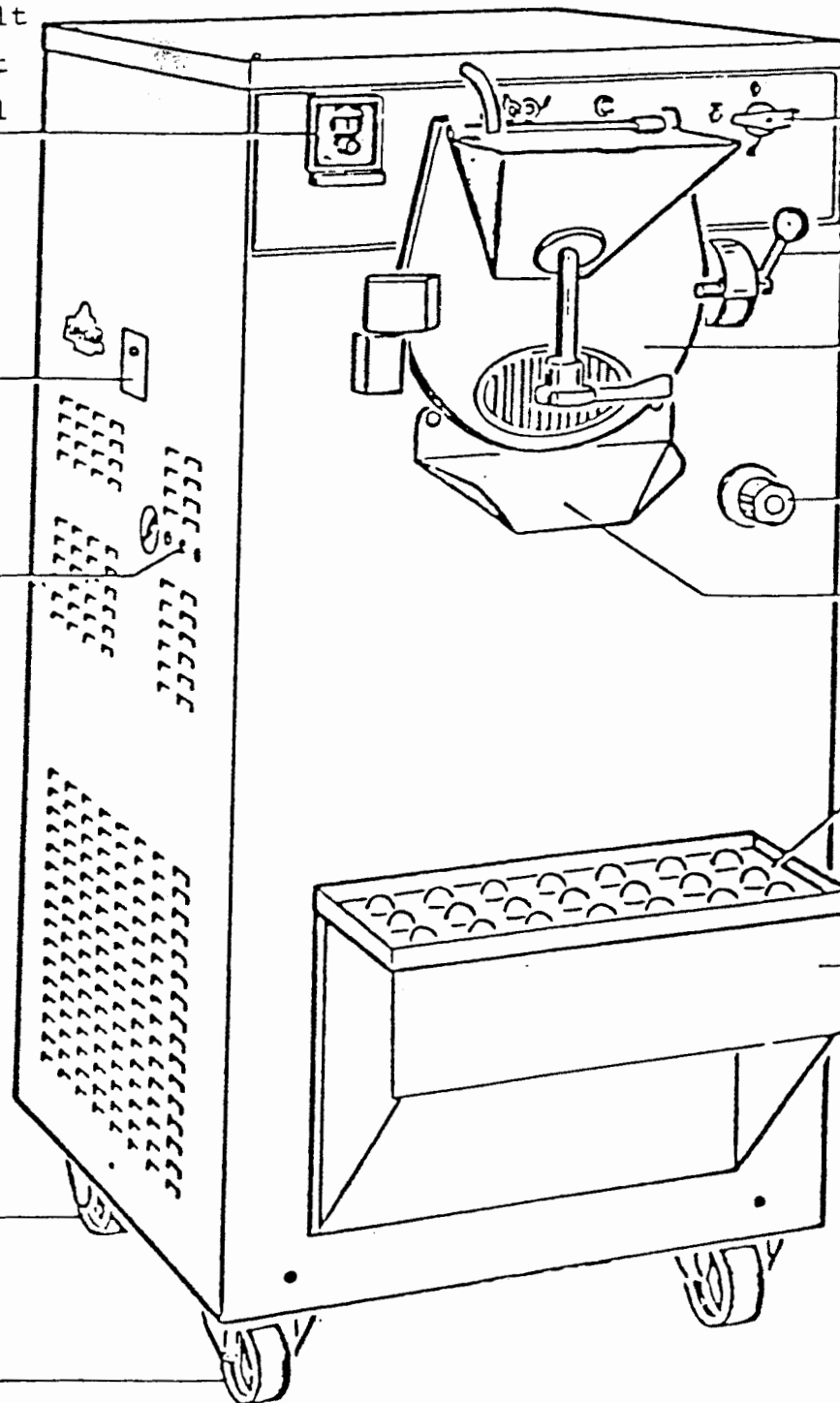
1651370

1990500

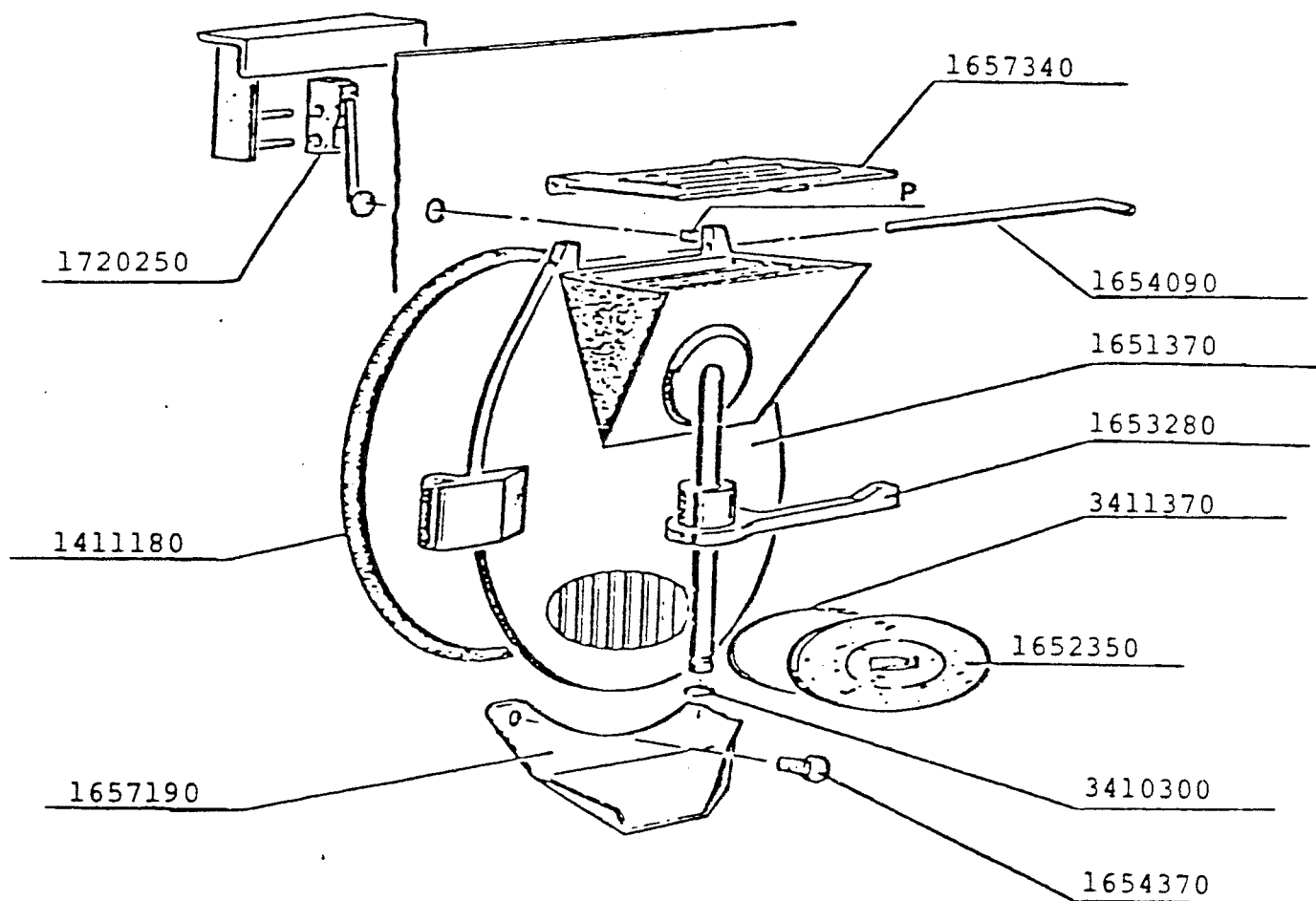
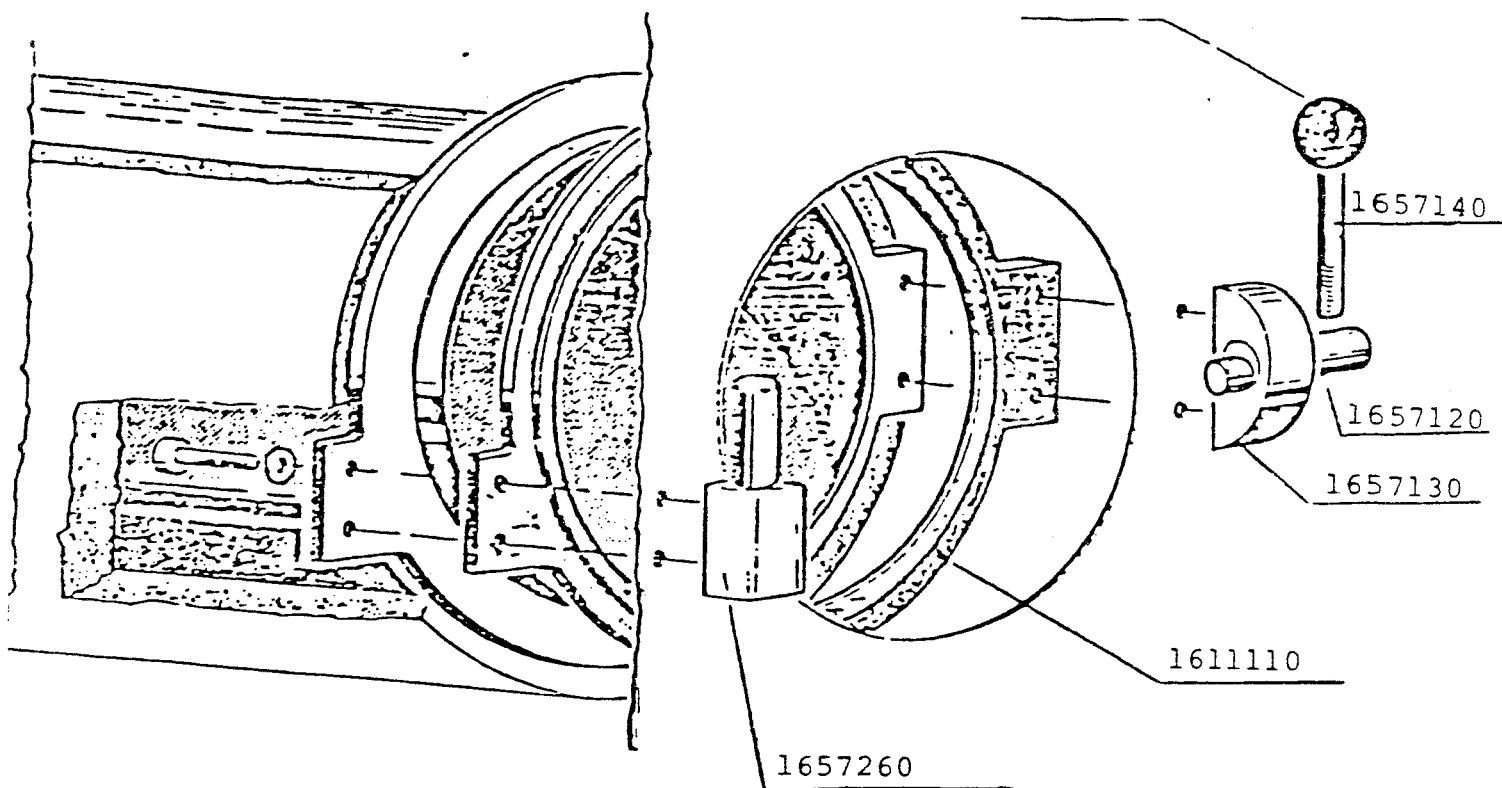
1657190

1990460

1745270

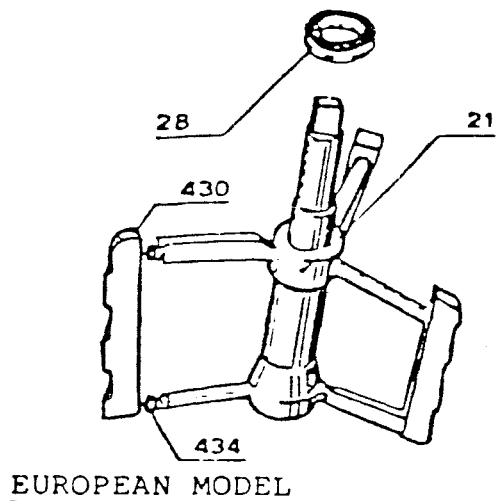




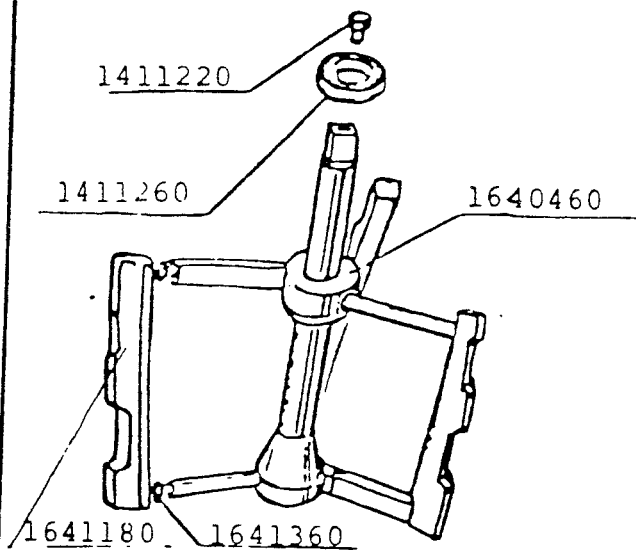




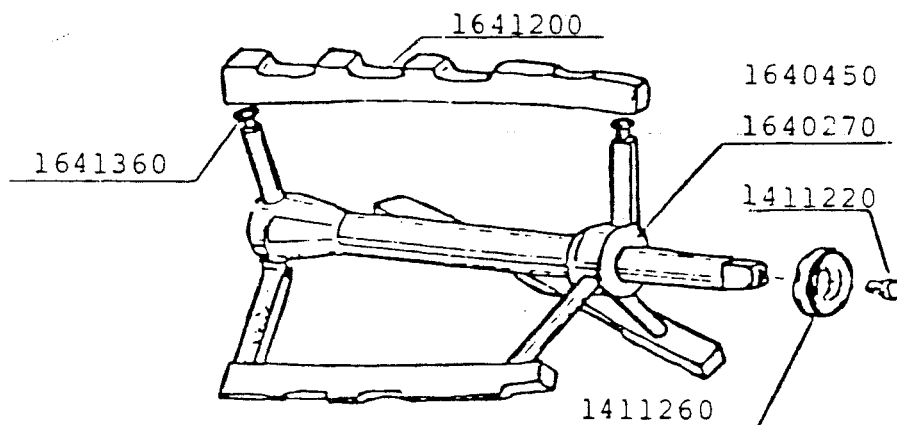
LABO 16/20



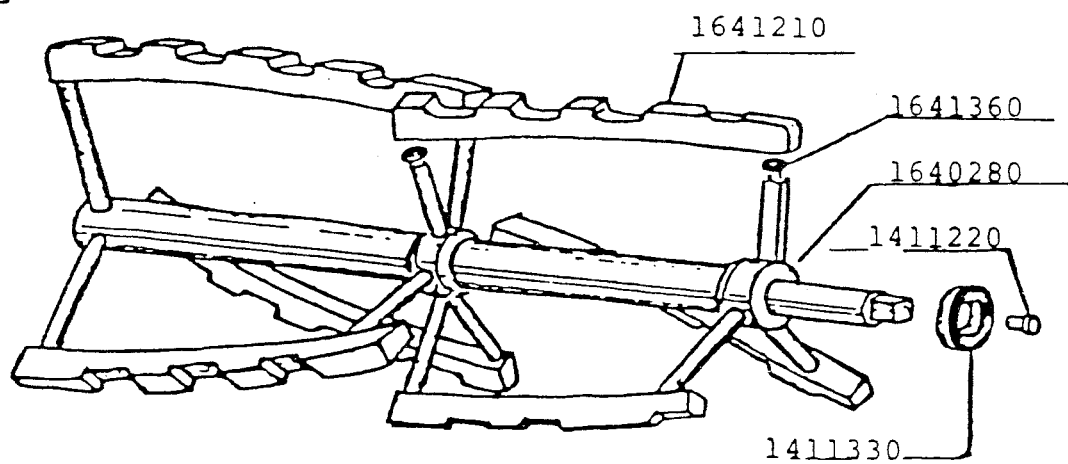
LB-250



LB-500  
LB-500G



LB-1000  
LB-1000G





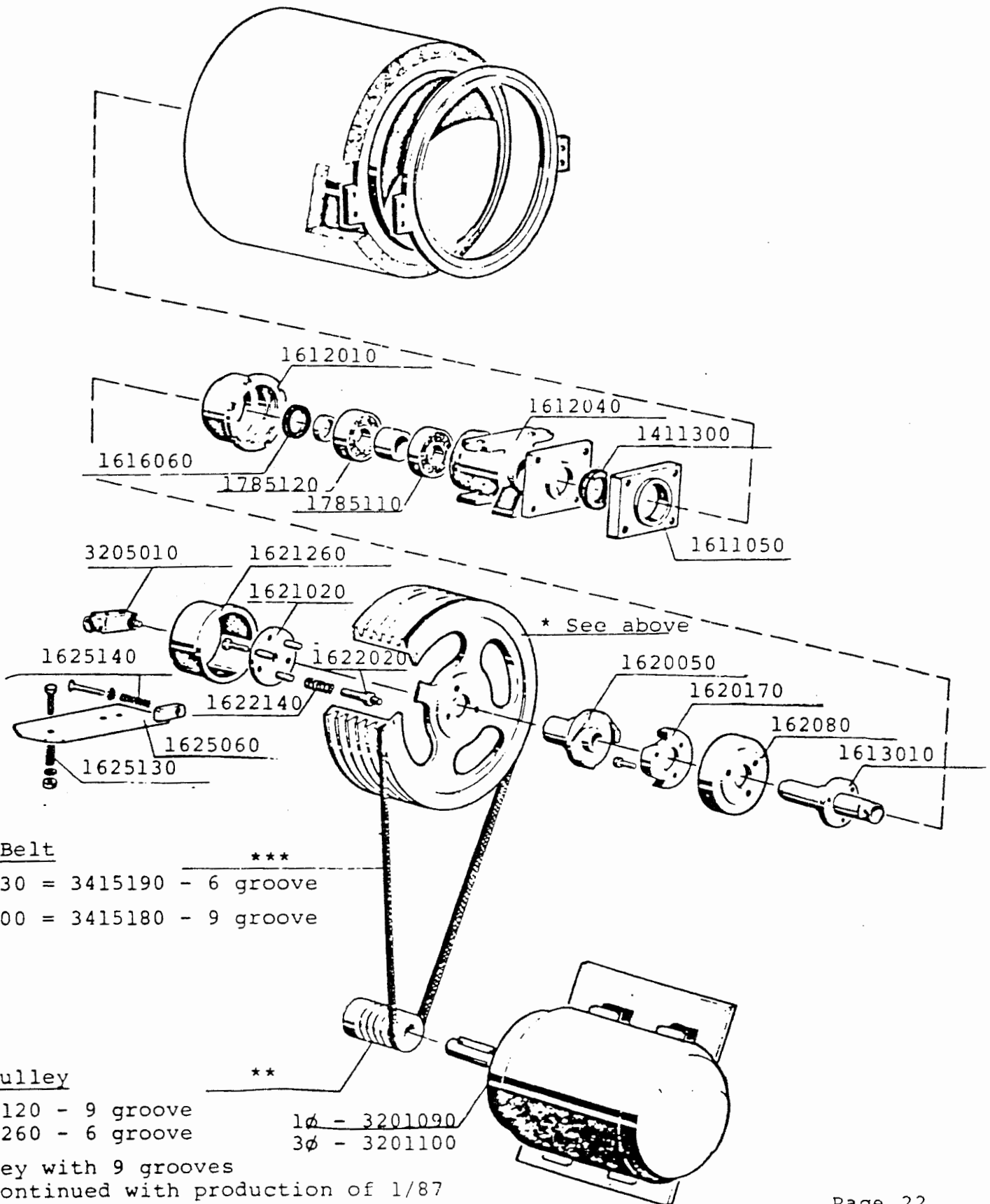




\*Fly Wheel

9 groove - 390mm - 1618140  
 6 groove - 390mm - 1618220  
 6 groove - 440mm - 1618230

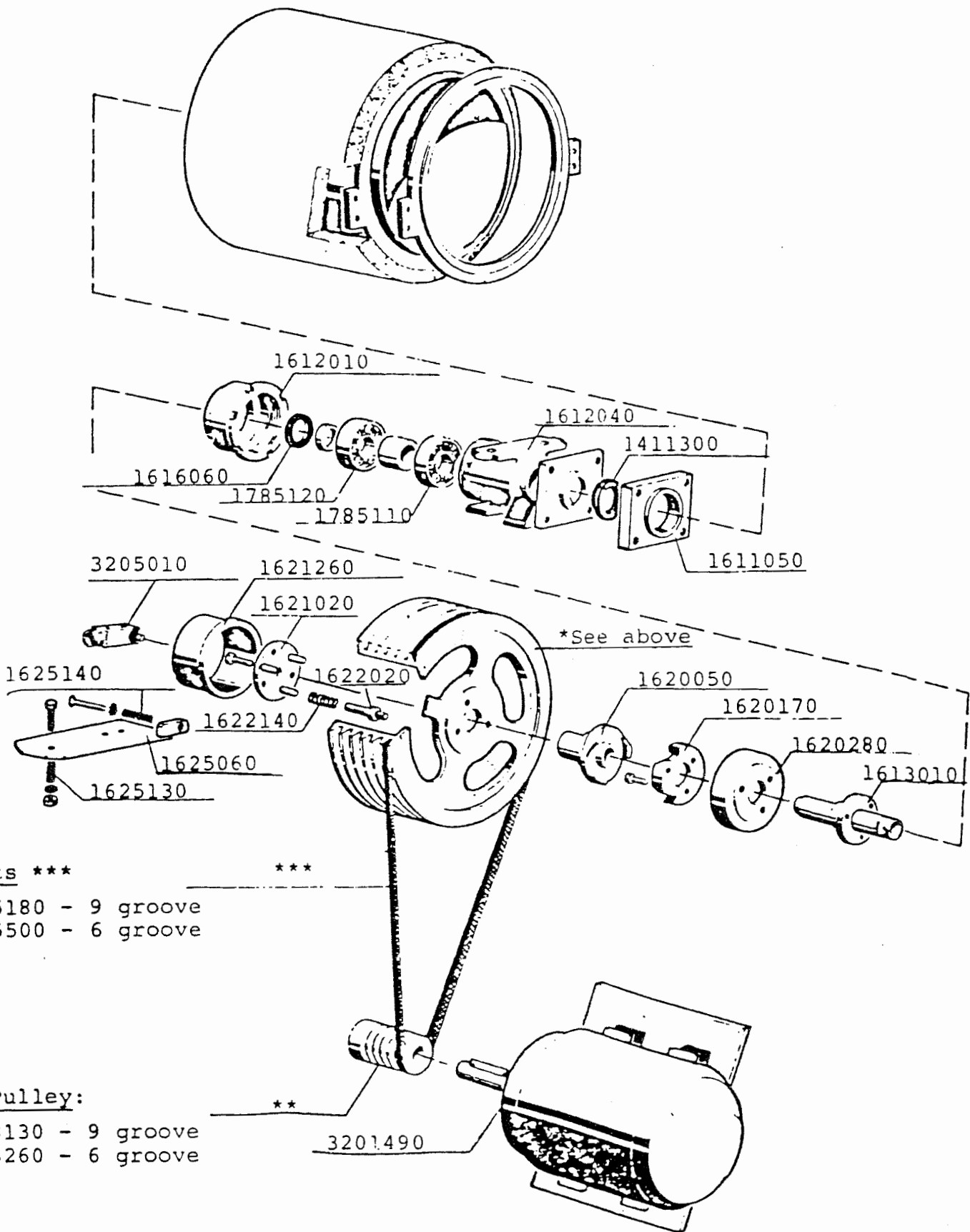
LB-500



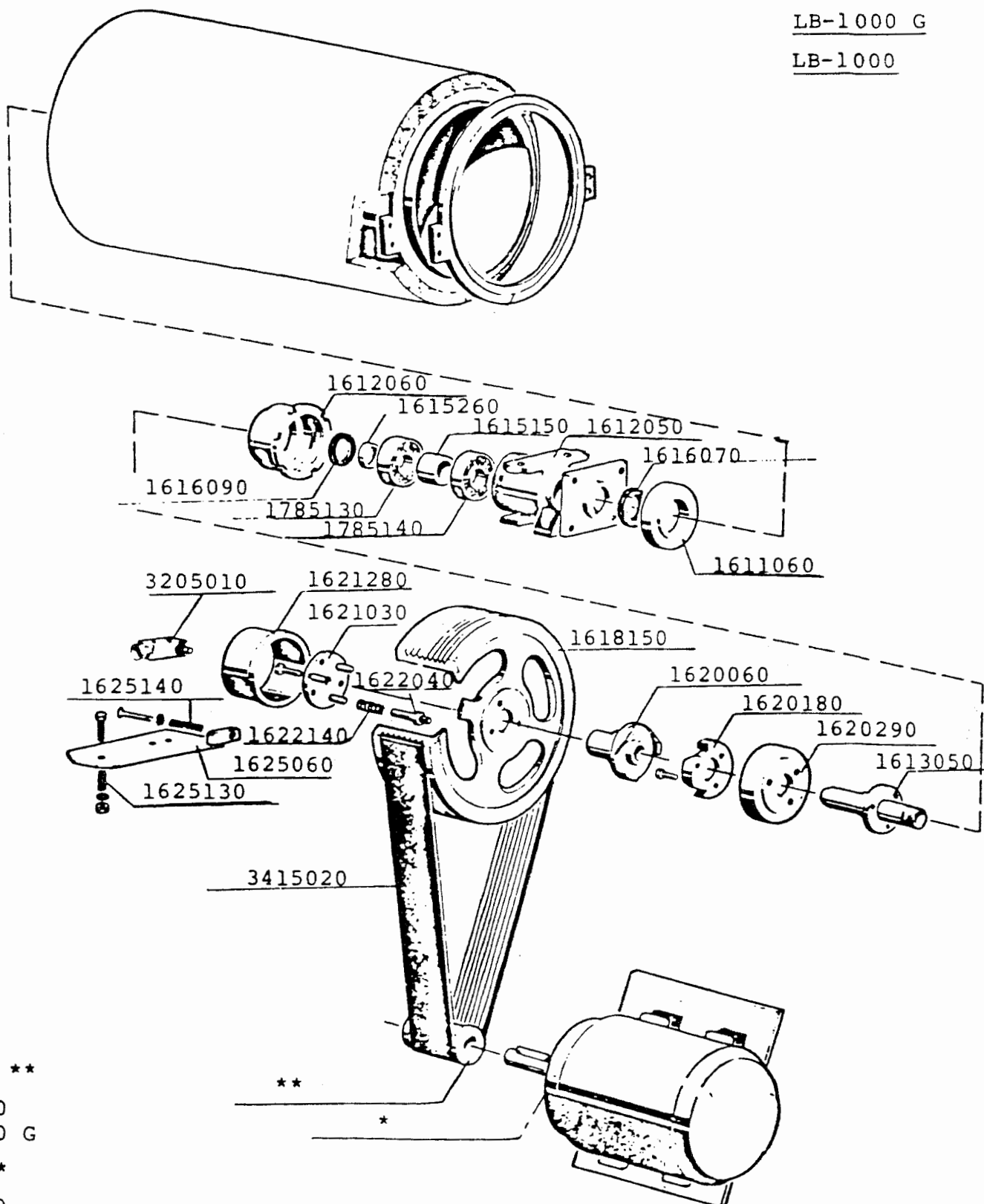


\* Fly Wheel

9 groove - 390mm - 1618140  
 6 groove - 390mm - 1618220  
 6 groove - 440mm - 1618230





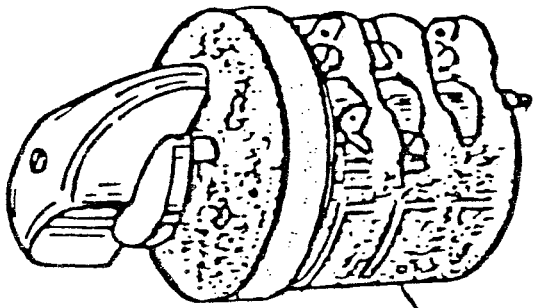
Pulley \*\*

1708030  
1708090 G

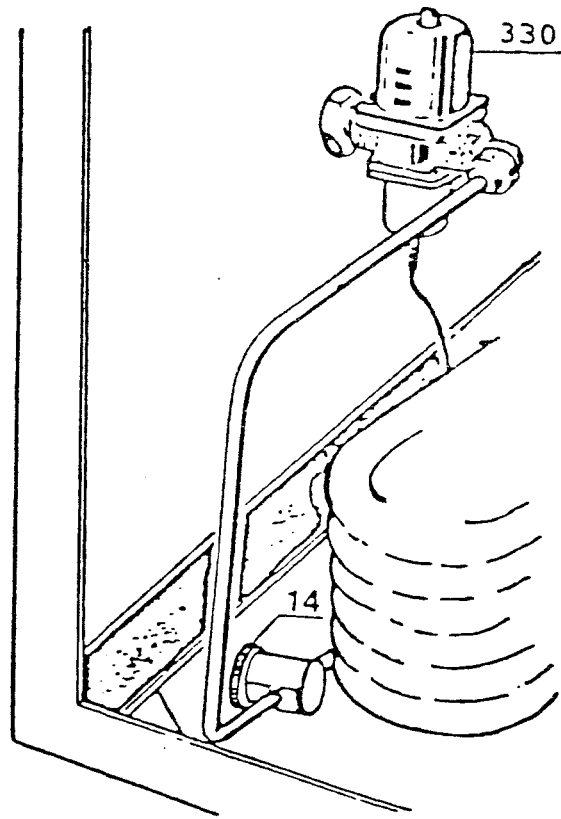
Motor \*

3201010  
3201470 - G

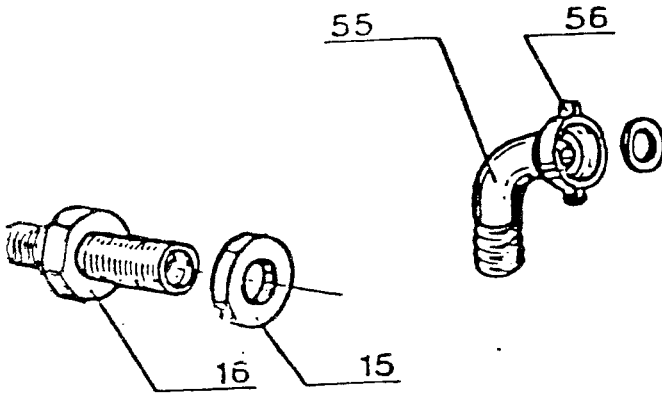




1720030  
1720110



3304110  
3304130



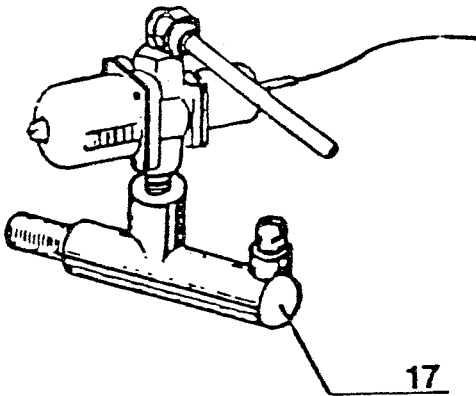
55

56

16

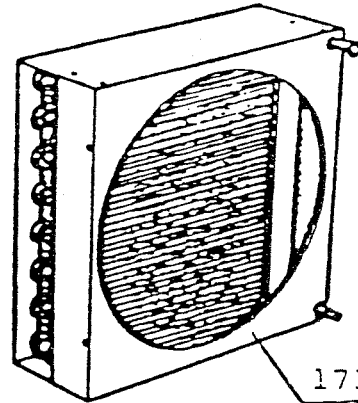
15

European models only

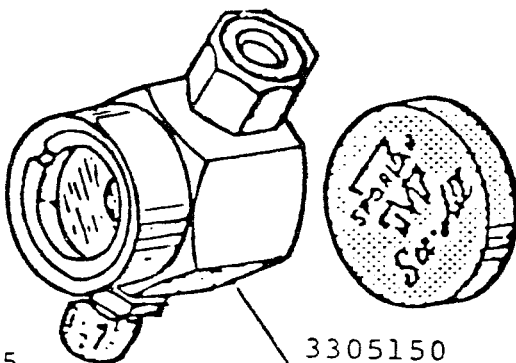


17

European models only

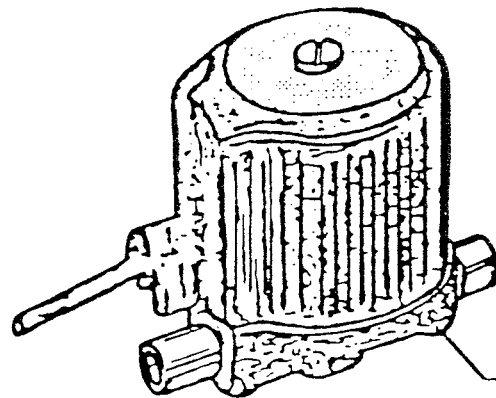


1731050  
1731040



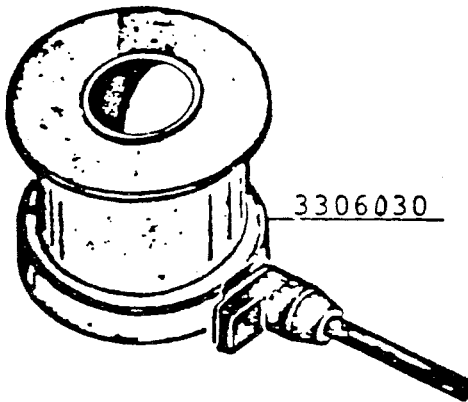
3305150

Page 25

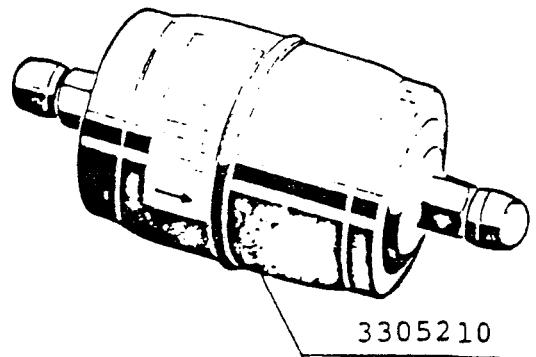


3306010  
3306060

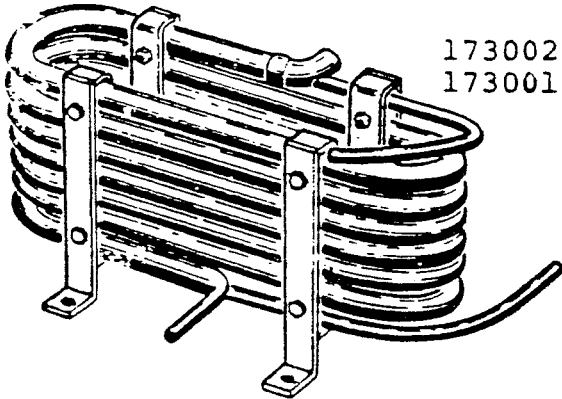




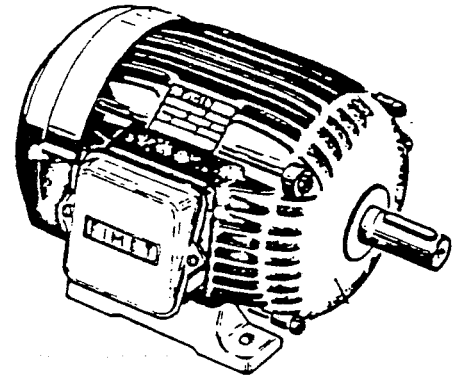
3306030



3305210

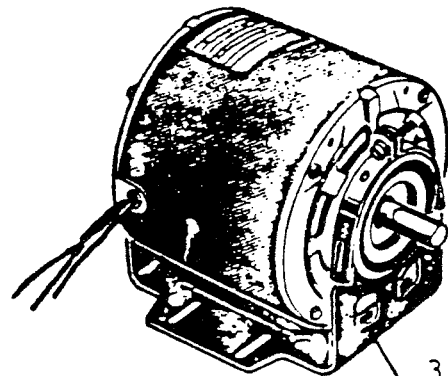
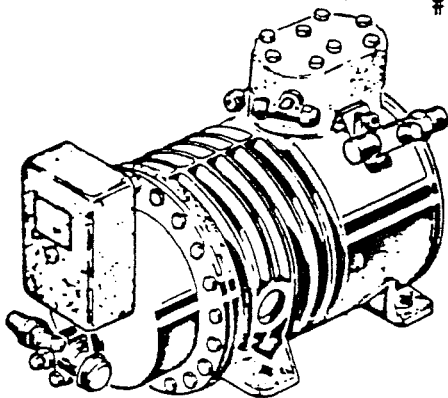


1730020  
1730010



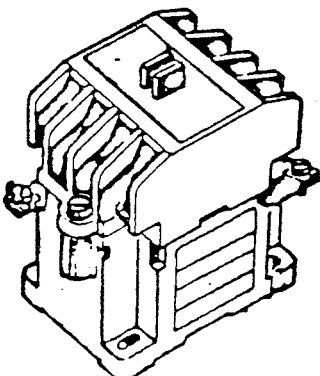
See Parts List -  
Motor 3201...

See Parts List - Compressor  
#3301...

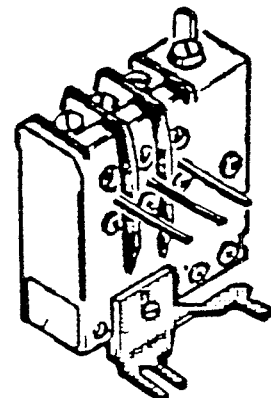


3203110

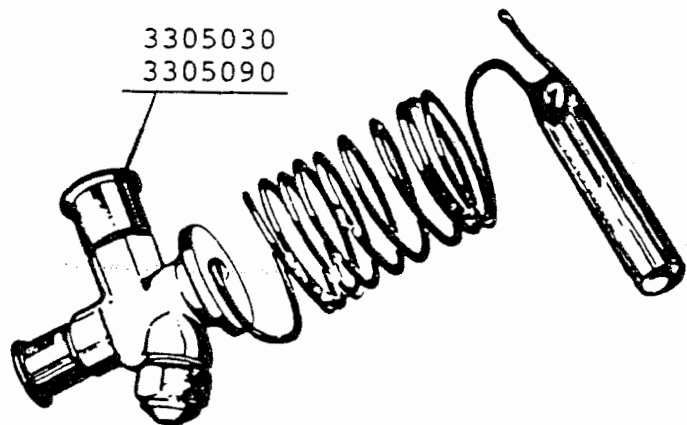
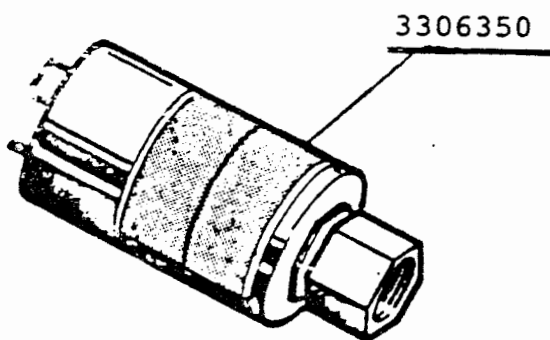
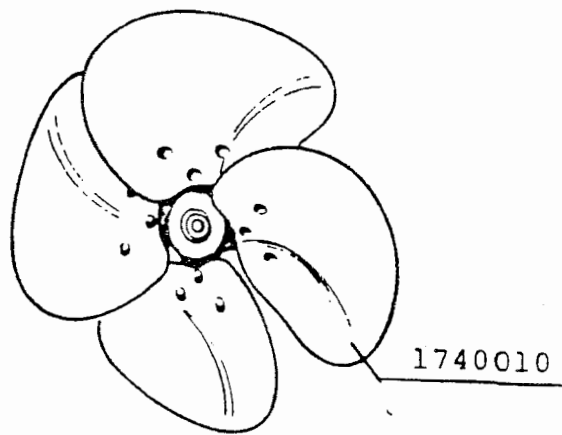
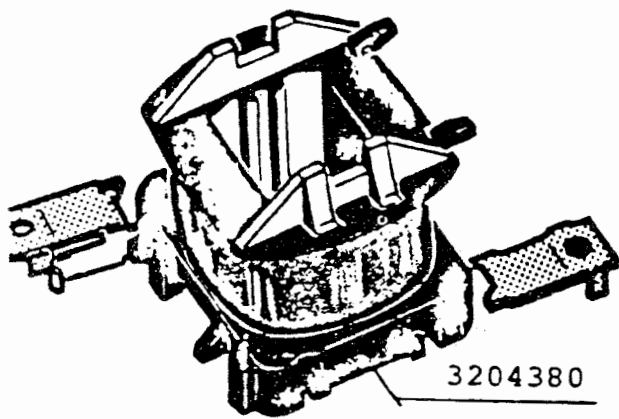
See Parts List - Contactor and  
Starter #3204...



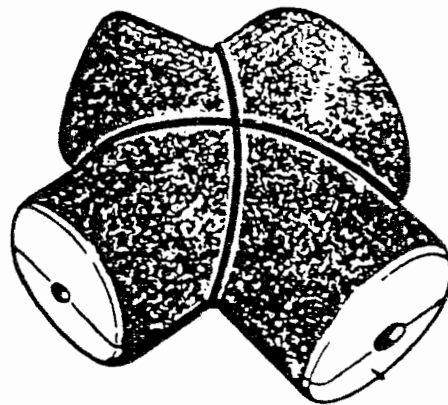
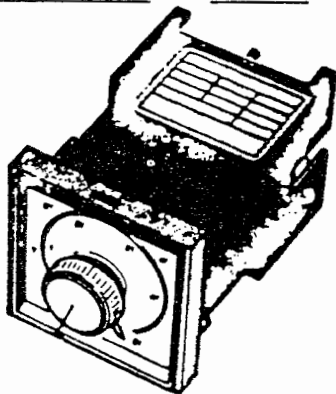
3204310  
3206380  
3206390



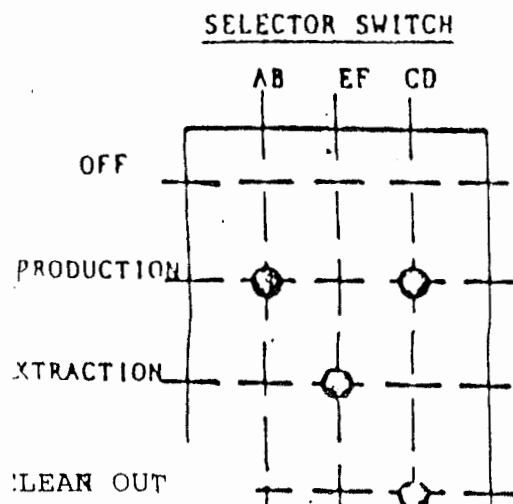




See Parts List - Timer #17230..



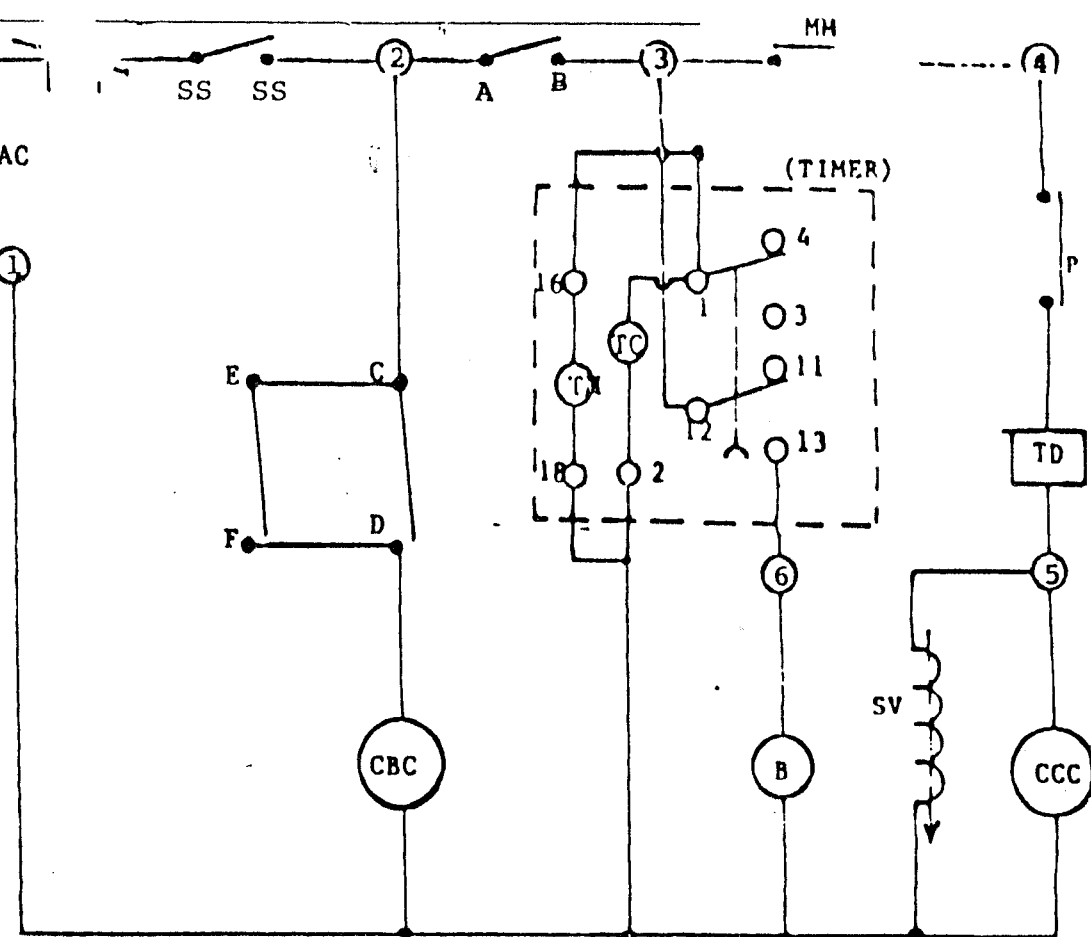
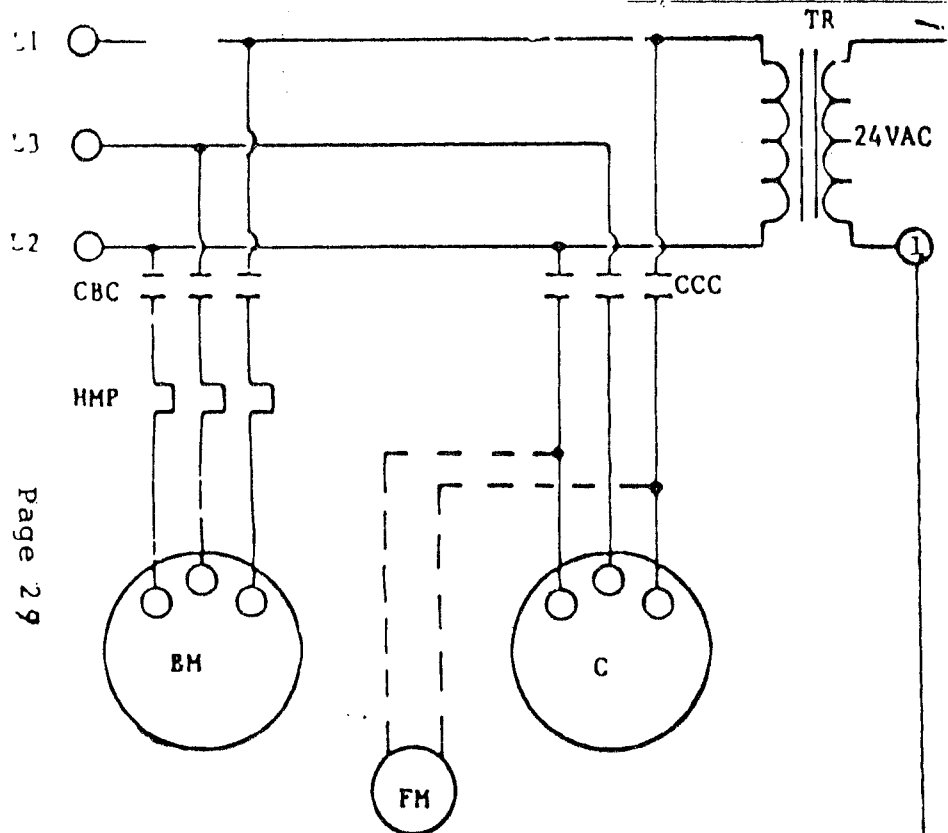




- CLS - COIL: LOW SPEED STARTER  
CHS - COIL: HIGH SPEED STARTER  
HMP - HEATER: OVERLOAD RELAY  
CHS-1 - CONTACTOR: HIGH SPEED  
MP - OVERLOAD RELAY CONTACTS  
SS - DOOR SAFETY SWITCH  
MH - MICRO SWITCH - HARD-O-MATIC  
TIMER - FOR BELL WARNING  
T - TRANSFORMER  
B - WARNING BUZZER  
P - PRESSURE CONTROL  
SV - COIL - SOLENOID VALVE  
TD - TIME DELAY  
CCC - COMPRESSOR CONTACTOR COIL  
M - MOTOR  
C - COMPRESSOR  
TM - TIMER MOTOR

- \* ALL CONTACTS ON BOTH STARTERS WIRED IN SERIES
- |     |                      |           |
|-----|----------------------|-----------|
| AC  | - Auxillary Contacts | - Low Spe |
|     |                      | Starter   |
| AC1 | - Auxiliary Contacts | - High Sp |
|     |                      | Starter   |

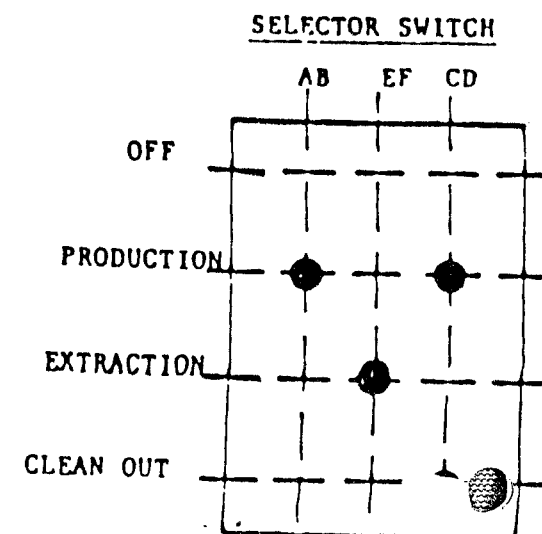




P - PRESSURE CONTROL  
 BM - BEATER MOTOR  
 HP - OVERLOAD RELAY  
 C - COMPRESSOR  
 TR - TRANSFORMER  
 HMP - HEATER OVERLOAD RELAY  
 CBC - COIL BEATER MOTOR  
 TM - TIMER MOTOR  
 B - BUZZER  
 MH - MICRO SWITCH (HARD-O-MATIC)  
 SS - DOOR SAFETY SWITCH  
 TD - TIME DELAY  
 CCC - COMPRESSOR CONTACTOR COIL  
 SV - COIL SOLENOID VALVE  
 FM - FAN MOTOR (AIR COOLED ONLY)  
 TC - THERMISTOR COIL  
 TM - THERMISTOR MOTOR

CODE #211

#100604





## SPARE PARTS - LB: 250 - 500 - 500g - 1000 - 1000g

Code	Description	250	500	500g	1000	1000g
-----	-----	---	---	---	---	---
11180	SEAL - front lid	1	1	1	1	1
11220	SEAL/PLUG - text - shaft end	1	1	1	1	1
1411260	SEAL - beater	1	1	1		
1411300	SEAL - rear drive ass/y	1	1	1		
1411330	SEAL - beater				1	1
1540130	SPATULA	1	1	1	1	1
1540140	OR EXTRACTOR - S.S.	1	1	1	1	1
1602150	DRIVE ASSY - LB 250/500	1	1	1		
1602160	DRIVE ASSY - LB 1000				1	1
1611050	GASKET - plastic - rear	1	1	1		
1611060	GASKET - plastic - rear				1	1
1611110	GASKET - front - plastic	1	1	1	1	1
1612010	COVER - transmission housing	1	1	1		
1612040	BASE - transmission housing	1	1	1		
1612050	BASE - transmission housing				1	1
1612060	COVER - transmission housing				1	1
1613010	SHAFT - drive - transmission	1	1	1		
1613050	SHAFT - drive transmission				1	1
1615030	RING NUT - transm. housing		1	1		
1615150	RING NUT - transm. housing				1	1
1615260	RING - angus-transm housing				1	1
1615270	RING - angus-transm housing	1	1	1		
1616060	SEAL - transmission housing	1	1	1		
1616070	SEAL - transmission housing				1	1
1616090	SEAL - transmission housing				1	1
18130	FLY WHEEL - D 390 - Z 3	1				
18140	FLY WHEEL - D 390 - 9z		1	1		
1618150	FLY WHEEL - D 500 - L 18				1	1
1618220	FLY WHEEL - D 390 - 6 Z		1	1		
1618230	FLY WHEEL - D 440 - 6z		1	1		
1620050	CLUTCH - driven slide disk	1	1	1		
1620060	CLUTCH - driven slide disk				1	1
1620170	CLUTCH - drive fixed disk	1	1	1		
1620180	CLUTCH - drive fixed disk				1	1
1620280	CLUTCH - cover	1	1	1		
1620290	CLUTCH - cover				1	1
1621020	CLUTCH - spring base	1	1	1		
1621030	CLUTCH - spring base				1	1
1621260	HOM COVER - w/out pulley	1	1	1		
1621280	HOM COVER - w/out pulley				1	1
1622020	HOM-STUD	3	3	3		
1622040	HOM-STUD				3	3
1622140	SPRING - hom	6	6	6	9	9
1625060	BRACKET - rear micro	1	1	1	1	1
1625090	BAR - rear micro support					
1625130	SPRING - rear micro bracket	1	1	1	1	1
1625140	SPRING - rear micro adjustm.	1	1	1	1	1
1625150	SPRING - rear micro adjustm.	1	1	1	1	1
1640270	BEATER - plastic 3E - LB 500			1		
1640280	BEATER - plastic 3E LB 1000					1
1640450	BEATER - plastic-3E-LB 500 C		1	1		
1640460	BEATER - plastic 3E - LB 250	1				
1641180	BLADE - plastic - 1 set of 3	1				
1641200	BLADE-plastic-3E- 1 set of 3		1	1		
1641210	BLADE-plastic-3E- 1 set of 6				1	1



## SPARE PARTS - LB: 250 - 500 - 500g - 1000 - 1000g

Code	Description	250	500	500g	1000	1000g
-----	-----	---	---	---	---	---
1641360	SHIM-DELRIN BLADE	6	6	6	12	12
1651370	FRONT LID - w/oval lift gate	1	1	1	1	1
1652350	GATE COVER - oval- lift type	1	1	1	1	1
1653260	BALL HANDLE - black plastic	1	1	1	1	1
1653280	HANDLE-plastic-eccentric cam	1	1	1	1	1
1654090	PIN - cover - mix shute	1	1	1	1	1
1654370	THD. PLUG - fr.pan. to frame	2	2	2	2	2
1657120	SHAFT - eccentric cam lock	1	1	1	1	1
1657130	SUPPORT - eccentric shaft	1	1	1	1	1
1657140	LEVER - w/ black ball	1	1	1	1	1
1657190	DRIP SHUTE	1	1	1	1	1
1657260	PIVOT - support front LB lid	1	1	1	1	1
1657340	COVER - fill shute - hinged	1	1	1	1	1
1708030	PULLEY - 70 x 34.9 x 18L 1sp				1	
1708090	PULLEY -70 x 41.28 x 18L 2sp					1
1708120	PULLEY - 28.5 x 68 x 9z 1sp		1			
1708130	PULLEY - 34.9 x 68 x 9z -2sp			1		
1708170	PULLEY - 22.2 x 55 x 3z 3e	1				
1708180	PULLEY - 28.5 x 55 x 3z 1e	1				
1708260	PULLEY - 34.9 x 68 x 6z 2sp			1		
1720030	SWITCH - selector - 33023-VT	1	1	1		1
1720070	SEAL - for switch 1720...	1	1	1	1	1
1720110	SWITCH - selector - 36096				1	
1720250	SWITCH - micro - frond lid	1	1	1	1	1
1723060	TIMER-220 V-T 27-5-24-07-	1	1	1	1	1
1723080	TIMER-24 V.-T 27-2-24-07-	1	1	1	1	1
1723090	TIMER - 24 volt - digital	1	1	1	1	1
1730010	CONDENSOR - water	1				
1730020	CONDENSOR - water		1	1	1	1
1731050	CONDENSOR - air		1	1		
1731110	CONDENSOR - air	1				
1731240	SHROUD FOR 1731050		1	1		
1740010	FAN BLADE - diametro 400	1	1	1		
1745030	DRIP TRAY - rear - L 650				1	1
1745040	DRIP TRAY - rear - L 450	1	1	1		
1745270	CONSOLE - front drip tray	1	1	1	1	1
1745320	SCREW- support front console	2	2	2	2	2
1785110	BALL BEARING - 5 A - 6208	1	1	1		
1785120	BALL BEARING - 6AANO - 3209	1	1	1		
1785130	BALL BEARING - 8AANON - 3211				1	1
1785140	BALL BEARING - 7A - 6210				1	1
1785370	ROLL-RIV	1	1	1	1	1
1902090	PANEL - left side		1	1		
1902110	PANEL - left side				1	1
1902130	PANEL - left side	1				
1903030	PANEL - right side	1				
1903100	PANEL - rigt side		1	1		
1903120	PANEL - right side				1	1
1904100	PANEL - rear - upper	1				
1904110	PANEL - rear - upper		1	1		
1904120	PANEL - rear - upper				1	1
1905010	PANEL - rear - lower - water		1	1		
1905020	PANEL - rear - lower - water	1				
1905030	PANEL - rear - lower - air	1				
1905130	PANEL - rear - lower - water				1	1



## SPARE PARTS - LB: 250 - 500 - 500g - 1000 - 1000g

Code	Description	250	500	500g	1000	10
-----	-----	---	---	---	---	---
90200	GREASE-TIVELLA	1	1	1	1	1
1990380	FOOT - LB model				4	4
1990430	COVER expansion valve-small	1	1	1		
1990460	RUBBER MAT - LB model	1	1	1	1	1
1990500	WATER TAP - LB - PK model	1	1	1	1	1
1990530	CASTER - pivotting	2	2	2	2	2
1990540	CASTER	2	2	2	2	2
2111080	FITTING - water inlet - 3/4"				1	1
2111100	NUT - brass - 3/4"				1	1
2114260	PULLEY - 28.5 x 55 x 6z 1sp		1			
3113110	SPRING-R.Micro B/T hold/down	1	1	1	1	1
3201010	MOTOR beater 7.5HP 220/60/3				1	
3201090	MOTOR - 3HP - 200-230/60/1		1			
3201100	MOTOR - 3HP - 200-220/60/3		1			
3201140	MOTOR - 2HP - 230/60/1	1				
3201150	MOTOR - 2HP - 208/60/3	1				
3201470	MOTOR-10/5HP-1800/900-208/3					1
3201490	MOTOR - 7.5/3.75HP 208/60/3			1		
3203100	BASE - fan motor 3203110	1	1	1		
3203110	MOTOR - fan - 230/60/1-1/8HP	1	1	1		
3204110	STARTER-6.5 to 8.5A.208V.	1 t				
3204120	STARTER-11/14A.-208/24	1 s	1 t	1 t		
3204130	STARTER 19/25A-208/24-low sp		1 s	1 t	1 t	
3204140	STARTER-24 VOLT					3
3204180	CONTACTOR - compressor	1 ^	1 ^	2 ^	1 ^	
3204230	CONTACTOR-compressor 2 speed					1
3204250	CONTACTOR-compressor 24 volt					1
3204310	INTERLOCK-2 SPEED MOTOR					1
3204380	COIL - 24 VOLT-for 32041..	2	2	4	2	
3204800	AUXILIARY CONTACTOR - N/C			2		2
3205010	MICROSWITCH - rear	1	1	1	1	1
3206290	RESET BUTTON	1	1	2	1	2
2206380	OVERLOAD- H.SPEED MOTOR					1
3206390	OVERLOAD-L.SPEED MOTOR 16/23				1	
3209210	BUZZER - electronic, 28 Volt	1	1	1	1	1
3209220	RECTIFIER BRIDGE-buzzer 24V	1	1	1	1	1
3212130	DELAY TIMER - 24V. - 1.4"	1	1	1	1	1
3213060	TRANSFORMER-50W.-120,240/28	1	1	1	1	
3213080	TRANSFORMER - 150 W. 230/24					1
3301200	COMPRESSOR -W-1.5HP-220/60/1	1				
3301210	COMPRESSOR -A-1.5HP-230/60/1	1				
3301220	COMPRESSOR -W-1.5HP-220/60/3	1				
3301230	COMPRESSOR -A-1.5HP-220/60/3	1				
3302010	COMPRESSOR -A -2HP -220/60/3		1			
3302020	COMPRESSOR -W -2HP -220/60/3		1			
3302030	COMPRESSOR -A -2HP -230/60/1		1			
3302040	COMPRESSOR -W -2HP -230/60/1		1			
3302120	COMPRESSOR - 3HP - 220/60/3			1		
3302220	COMPRESSOR - 5HP - 220/60/3				1	
3302260	COMPRESSOR - 6HP - 220/60/3					1
3304100	VALVE - water - 3/8"	1				
3304110	VALVE - water - 1/2"		1	1	1	
3304130	VALVE - water - 3/4"					1
3304200	RECEIVER - 4 lbs	1	1			
3304210	RECEIVER - 6 lbs			1	1	1



SPARE PARTS - LB: 250 - 500 - 500g - 1000 - 1000g

Code	Description	250	500	500g	1000	1000
-----	-----	---	---	---	---	---
3304330	ADAPTER - angle - receiver	1	1	1	1	1
3304340	VALVE - inlet - receiver	1	1	1	1	1
3305030	VALVE - thermostatic - sporl	1	1	1	1	
3305090	VALVE - thermostatic - sporl					1
3305150	LIQUID INDICATOR	1	1	1	1	1
3305210	FILTER DRYER	1	1	1	1	1
3306010	VALVE - solenoid body	1	1	1		
3306030	COIL-24 V. for 3306010/6060	1	1	1	1	1
3306060	VALVE - solenoid body				1	1
3306350	PRESSOSTAT out 375/in 275	1	1	1	1	1
3310010	CAPACITOR/RELAY ASS/Y-1.5 HP	1				
3310020	CAPACITOR/RELAY ASS/Y - 2HP		1			
3403100	GAS - refrigerant R 502	4lb	5lb	6lb	10lb	12lb
3410300	O RING - 113 or (118)	1	1	1	1	1
3411370	O RING - icecream oval gate	1	1	1	1	1
3412220	WASHER - rubber -motor mount	4	4	4	4	4
3414160	BELT	3 s				
3415020	BELT - poly				1	1
3415180	BELT		9	9		
3415190	BELT - 3V x 630		6			
3415500	BELT - SPZ 1662			6		
3415560	BELT - 1422 MM	3 t				
3540100	STERASHEEN	5	5	5	5	5
3540110	PETROGEL	1	1	1	1	1
3540250	BRUSH - 3/8" x 12"	1	1	1	1	1
3540260	BRUSH - 3/4" x 12"	1	1	1	1	1
3540270	BRUSH - 1 1/2 x 12"	1	1	1	1	1
3550040	PLASTIC TUBE - black - water	6	6	6	6	6
5543110	OPERATION & SERVICE MANUAL	1	1	1	1	1

Explanation of Letters and Symbol:

s - Single Phase

t - Three Phase

Ft - Foot

LB - Pound

^ - 24 volts