



Little Giant Pump Company  
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## VCM-15 & VCM-20 Series Série VCM-15 & VCM-20 Serie VCM-15 & VCM-20

### INTRODUCTION

Your Little Giant condensate pump is designed as an automatic condensate removal pump for water dripping off an air conditioner evaporative coil. The pump is controlled by a float/switch mechanism which turns the pump on when approximately 2½" of water collects in the tank, and automatically switches off when the tank drains to approximately 1¼".

The Little Giant unit you have purchased is of the highest quality workmanship and material. It has been engineered to give you long and trouble-free service.

The Little Giant pumps are carefully packaged, inspected and tested to insure safe operation and delivery. When you receive your pump, examine it carefully to determine that there are no broken or damaged parts that may have occurred during shipment. If damage has occurred, make notation and notify the firm that you purchased the pump from. They will assist you in replacement or repair, if required.

READ INSTRUCTIONS CAREFULLY BEFORE ATTEMPTING TO INSTALL, OPERATE OR SERVICE THE LITTLE GIANT PUMP. KNOW THE PUMP APPLICATION, LIMITATIONS AND POTENTIAL HAZARDS. PROTECT YOURSELF AND OTHERS BY OBSERVING ALL SAFETY INFORMATION. FAILURE TO COMPLY WITH INSTRUCTIONS COULD RESULT IN PERSONAL INJURY AND/OR PROPERTY DAMAGE! RETAIN INSTRUCTIONS FOR FUTURE REFERENCE.

### SAFETY GUIDELINES



DO NOT USE TO PUMP FLAMMABLE OR EXPLOSIVE FLUIDS SUCH AS GASOLINE, FUEL OIL, KEROSENE, ETC. DO NOT USE IN EXPLOSIVE ATMOSPHERES. PUMP SHOULD BE USED WITH LIQUIDS COMPATIBLE WITH PUMP COMPONENT MATERIALS.

DO NOT HANDLE PUMP WITH WET HANDS OR WHEN STANDING ON A WET OR DAMP SURFACE, OR IN WATER. THIS PUMP IS SUPPLIED WITH A GROUNDING CONDUCTOR AND/OR GROUNDING TYPE ATTACHMENT PLUG. TO REDUCE THE RISK OF ELECTRICAL SHOCK, BE CERTAIN THAT IT IS CONNECTED TO A PROPERLY GROUNDED GROUNDING TYPE RECEPTACLE.

IN ANY INSTALLATIONS WHERE PROPERTY DAMAGE AND/OR PERSONAL INJURY MIGHT RESULT FROM AN INOPERATIVE OR LEAKING PUMP DUE TO POWER OUTAGES, DISCHARGE LINE BLOCKAGE, OR ANY OTHER REASON, A BACKUP SYSTEM(S) AND/OR ALARM SHOULD BE USED.

SUPPORT PUMP AND PIPING WHEN ASSEMBLING AND WHEN INSTALLED. FAILURE TO DO SO MAY CAUSE PIPING TO BREAK, PUMP TO FAIL, MOTOR BEARING FAILURES ETC.

### INSTALLATION

- Carefully unpack the pump. Remove the cardboard packing from the motor cover air slots. Carefully slide the packing away from the pump. This packing is used to prevent switch movement during shipment (Fig. 1).
- Mounting the pump-the tank has two slots provided to mount the unit. The slots are located on the end of the tank cover. The unit should be mounted either on the side of the air conditioner unit or nearby wall. Pump must be level

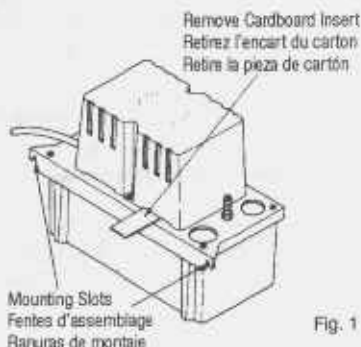


Fig. 1

and the inlet must be below the coil drain. Conduit fittings are not compatible with the plastic pump housing.

- The pump should not be installed in a manner that will subject it to splashing or spraying.

### ELECTRICAL CONNECTIONS



- Shut off electrical power at fuse box before making any connections. All wiring must comply with local codes.
- Line voltage-connect power cord to line voltage specified on motor and nameplate. Power cord must be connected to a constant source of power (not a fan or other device that runs intermittently). If power cord does not have a plug, wiring is as follows: green (or green/yellow)-ground. Black (or brown)-line. White (or blue)-neutral.

Connect here to turn control relay on.  
Connexion de relais de commande "On".  
Conecte aquí para activar el disyuntor de mando.

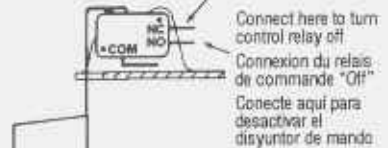


Fig. 2

- Safety switch-the safety overflow switch should be connected to a class II low voltage circuit. Typical hook-up of "NC" circuits would be (Figs. 2 & 3):

N.O.-When water rises, circuit opens to turn off heating or cooling equipment.

N.C.-When water rises, circuit closes to activate a bell or alarm.

- If fused plug is used on 230V units, a 1.0 amp fuse is recommended.

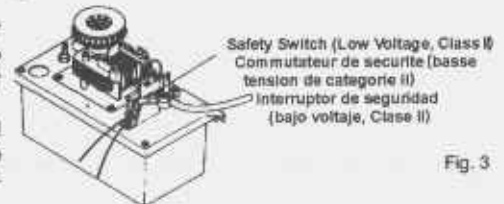


Fig. 3

### PIPING

- Run flexible tubing or pipe from evaporator drain into pump inlet. Be sure inlet piping is sloped downward to allow gravity flow (Fig. 4).
- The outlet piping should be flexible tubing or pipe (3/8" I.D. maximum to prevent excessive flow back to unit). From condensate unit, extend discharge piping straight up as high as necessary. Do not extend this line above the

Discharge Line Installation  
Installation de la ligne d'écoulement  
Instalación de la tubería de descarga

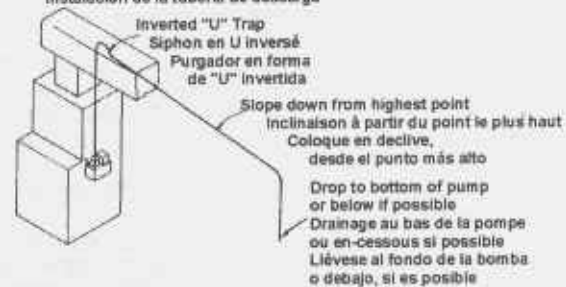


Fig. 4

head/GPH of the particular model being installed. From this high point, slope discharge line down slightly to a point above drain area; then turn down and extend to a point below or approximately level with the bottom of the condensate unit. This will give a siphoning effect which will improve efficiency of the condensate unit and will, in most cases, eliminate the need for a check valve (Fig 5). If it is not possible to slope discharge line down, make an inverted "U" trap directly above the pump at the highest point.

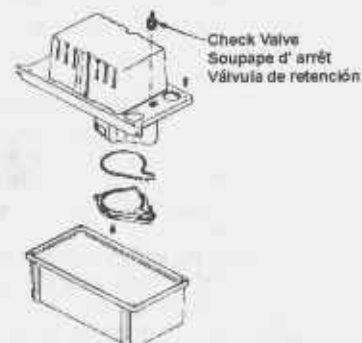


Fig. 5

## SERVICE INSTRUCTIONS



1. Make certain that the unit is disconnected from the power source before attempting to service or remove any component!
2. Be sure the floats move freely. Clean as necessary (Fig 6).
3. Remove the volute and check for obstructions. Clean as necessary.
4. Clean the tank with warm water and mild soap.
5. Check the inlet and outlet piping. Clean as necessary. Be sure there are no kinks in the line that would inhibit flow.

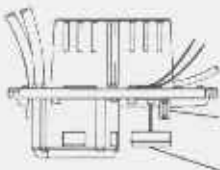


Fig. 6

Safety Switch Float  
Commutateur de Sécurité de Flotteur  
Flotador del interruptor de Seguridad

Motor Switch Float  
Commutateur de Moteur Flotteur  
Flotador del interruptor del Motor

## TESTING

1. Turn on power
2. Remove motor/tank cover assembly and hold level.
3. Test motor switch by raising motor switch float with finger (Fig. 6). Motor should turn on just before circlip on stem contacts stem guide.
4. Test safety switch by raising safety switch float with finger. Safety switch should activate before float contacts cover.
5. Replace motor/tank cover assembly on tank.

This pump is suitable for gas furnace condensate applications. Caution must be taken to ensure acidity of condensate does not increase below the average pH of 3,4 (to prevent localized pocket of acid that acts like a battery causing pitting) by routinely cleaning or flushing tank with fresh water.

No.	Part No.	Description	554005 VCM-15ULS	554007 VCM-15ULS	554006 VCM-15UL	554108 VCM-20ULS	554110 VCM-20ULS	554111 VCM-20ULS	554101 VCM-20UL	554109 VCM-20UL	554118 VCM-20ULS	554305 VCM-15ULST	554304 VCM-15ULST	554308 VCM-20ULST	554315 VCM-20ULST	554307 VCM-20ULT	554310 VCM-20ULST	554037 VCM-20S	554137 VCM-20S
1	154006	Cover, Motor	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
2	154031	Fan	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
3	979470	Motor, 115V	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
3	979472	Motor, 115V				*	*	*	*	*	*	*	*	*	*	*	*	*	*
3	979474	Motor, 220-240V				*	*	*	*	*	*	*	*	*	*	*	*	*	*
4	154021	Plate, Motor	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
5	154102	Cover, Tank	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
6	154715	Adapter, Discharge	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
7	154003	Tank	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
8	154111	Volute	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
9	154025	Impeller	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
9	154026	Impeller				*	*	*	*	*	*	*	*	*	*	*	*	*	*
10	154038	Strain Relief	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11	951556	Power Cord, 115V	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11	951222	Power Cord, 220-240V				*	*	*	*	*	*	*	*	*	*	*	*	*	*
11	951834	Power Cord, 220-240V																	*
12	902431	Screw (#8-18 x 1/2")	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
13	920006	Nut (#8-32)	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
14	921015	Washer, Lock #8	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
15	154516	Float/Stem Assy	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16	929602	Plug, Drain Hole	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
17	923006	Retaining Ring	2	2	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
18	920035	Nut (2-56)	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
19	925015	Grommet	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20	950337	Switch	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21	950403	Wire Nut	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22	901600	Screw (2-56 x 9/16")	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
23	928022	Seal Ring	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
24	951982	Lead Wire Assembly	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
25	154710	Safety Switch	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
25	154720	Safety Switch																	*
26	902436	Screw (#8-18 x 1 1/2")	14	14	13	16	16	16	15	15	16	14	13	16	16	15	16	16	13
27	921027	Washer, Lock #2	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
28*	944302	3/8" X 20' Vinyl Tubing										*	*	*	*	*	*	*	*
29	902421	Screw (#3-32 x 1/2")																	*

