

CITY OF SACRAMENTO  
1231 I Street, Sacramento, CA 95814

Permit No: 0013607  
Insp Area: 2

Site Address: 1831 CASTRO WY SAC  
Parcel No 012-0043-019

Sub-Type: RES  
Housing (Y/N): N

**CONTRACTOR**  
BROWER MECHANICAL INC  
PO BOX 1952  
ROCKLIN, CA 95677

**OWNER**  
BRETT RUGRODEN  
1831 CASTRO WY  
SAC CA. 95818

**ARCHITECT**

**Nature of Work:** HVAC INSTALL SPLIT SYS & GAS TEST

**CONSTRUCTION LENDING AGENCY:** I hereby affirm under penalty of perjury that there is a construction lending agency for the performance of the work for which this permit is issued (Sec. 3097, Civ. C).

Lender's Name \_\_\_\_\_ Lender's Address \_\_\_\_\_

**LICENSED CONTRACTORS DECLARATION:** I hereby affirm under penalty of perjury that I am licensed under provisions of Chapter 9 (commencing with section 7000) of Division 3 of the Business and Professions Code and my license is in full force and effect.

License Class B-CAD License Number 686457 Date 11-14-00 Contractor Signature A. Z. Reuge

**OWNER-BUILDER DECLARATION:** I hereby affirm under penalty of perjury that I am exempt from the contractors License Law for the following reason (Sec. 7031.5, Business and Professions Code; any city or county which requires a permit to construct, alter, improve, demolish, or repair any structure, prior to its issuance, also requires the applicant for such permit to file a signed statement that he or she is licensed pursuant to the provisions of the Contractors License Law (Chapter 9 (commencing with Section 7000) of Division 8 of the Business and Professions Code) or that he or she is exempt therefrom and the basis for the alleged exemption. Any violation of Section 7031.5 by any applicant for a permit subjects the applicant to a civil penalty of not more than five hundred dollars (\$500.00);

\_\_\_\_\_ as a owner of the property, or my employees with wages as their sole compensation, will do the work, and the structure is not intended or offered for sale (Sec. 7044, Business and Professional Code. The Contractors License Law does not apply to an owner of property who builds or improves thereon, and who does such work himself or herself or through his/her own employees, provided that such improvements are not intended or offered for sale. If, however, the building or improvement is sold within one year of completion, the owner-builder will have the burden of proving that he/she did not build or improve for the purpose of sale.)

\_\_\_\_\_ as owner of the property, am exclusively contracting with licensed contractors to construct the project (Sec. 7044, Business and Professions Code). The Contractors License Law does not apply to an owner of property who builds or improves thereon, and who contracts for such projects with a contractor(s) licensed pursuant to the Contractors License Law).

I am exempt under Sec \_\_\_\_\_ B & PC for this reason: \_\_\_\_\_

Date \_\_\_\_\_ Owner Signature \_\_\_\_\_

**IN ISSUING THIS BUILDING PERMIT,** the applicant represents, and the city relies on the representation of the applicant, that the applicant verified all measurements and locations shown on the application or accompanying drawings and that the improvement to be constructed does not violate any law or private agreement relating to permissible or prohibited locations for such improvements. This building permit does not authorize any illegal location of any improvement or the violation of any private agreement relating to location of improvements.

I certify that I have read this application and state that all information is correct. I agree to comply with all city and county ordinances and state laws relating to building construction and hereby authorize representative(s) of this city to enter upon the above-mentioned property for inspection purposes.

Date 11-14-00 Applicant/Agent Signature A. Z. Reuge

**WORKER'S COMPENSATION DECLARATION:** I hereby affirm under penalty of perjury one of the following declarations:

I have and will maintain a certificate of consent to self-insure for workers' compensation as provided for by Section 3700 of the Labor Code, for the performance of work for which the permit is issued.

I have and will maintain workers' compensation insurance, as required by Section 3700 of the Labor Code, for the performance of the work for which this permit is issued. My workers' compensation insurance carrier and policy number are:

Carrier LEGION INSURANCE Policy Number WC31242073 Exp Date 01/01/2001

This section need not be completed if the permit is for \$100 or less) I certify that in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the workers' compensation laws of California and agree that if I should become subject to the workers' compensation provisions of Section 3700 of the Labor Code, I shall forthwith comply with those provisions.

Date 11-14-00 Applicant Signature A. Z. Reuge

**WARNING:** FAILURE TO SECURE WORKER'S COMPENSATION COVERAGE IS UNLAWFUL AND SHALL SUBJECT AN EMPLOYER TO CRIMINAL PENALTIES AND CIVIL FINES UP TO ONE HUNDRED THOUSAND DOLLARS (\$100,000) IN ADDITION TO THE COST OF COMPENSATION, DAMAGES AS PROVIDED FOR IN SECTION 3706 OF THE LABOR CODE, INTEREST AND ATTORNEY'S FEE.

**THIS PERMIT SHALL EXPIRE BY LIMITATION IF WORK IS NOT COMMENCED WITHIN 180 DAYS.**

BROWER MECHANICAL, INC.  
4504 Yankee Hill Court  
Rocklin, CA 95677  
PHONE: 916 624-0808  
FAX: 916 632-1114

**BROWER MECHANICAL, INC.**

Date: 2-21-01

Please submit this fax transmission to:

Company Name: SACRAMENTO INSPECTION DEPT

Attention: NICK BUCKBERGER

Telephone: 264-5920

Fax Number: 264-8370

FROM: MIKE W

BROWER MECHANICAL, INC.

Number of pages to follow: 6

Comments:

HERE IS THE INFORMATION YOU REQUESTED  
I CIRCLED INFO ON PAGE TWO

# **Advanced Distributor Products**

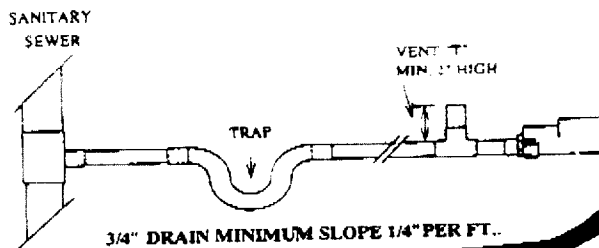
## **EVAPORATOR COILS**

### **INSTALLATION AND OPERATING INSTRUCTIONS**

Quality **A.D.P.** air conditioning products are designed and manufactured with the latest technology and materials. To ensure that each air conditioning system provides the utmost in comfort and customer satisfaction, this product should only be installed by trained professional air conditioning technicians.

The primary and secondary drain fittings are 3/4" and the drain line should also be at least 3/4". On plastic pans the primary drain has the larger hole. The secondary drain has the smaller hole. On metal pans the primary drain is closest to the bottom of the pan and the secondary fitting is higher. Be sure the coil is installed level or slightly sloped toward the drains. The drain lines should have a minimum drop of 1/4" per foot to insure proper condensate disposal. The primary drain is normally routed to the sanitary sewer. If drains are connected to the sewer, then a trap should be installed in the drain near the sewer to prevent sewer gas from reaching the coil or conditioned

space. Long drain lines or negative air pressure conditions in the coil housing or plenum can create the need for a vent tee in the drain line near the coil. (see below)



The auxiliary drain should be routed to empty at a location easily visible, so that any condensate flow from this line can be investigated and the problem corrected.

**ATTENTION/CAUTION:** Any coil installed above a finished space should be placed within a secondary drain pan to collect any overflow and prevent damage. Proper drain operation should be verified before starting the equipment and or leaving jobsite.

### Refrigerant Piping:

Always use refrigerant line sizing recommended by the condensing unit manufacturer as well as their recommended use of filter driers and charging instructions. installation. To avoid damage

to rubber grommets, assemble refrigerant lines to coil. Remove grommets from panel by sliding over lines. Join refrigerant lines and cool before reinstalling grommets.

**IMPORTANT:** Always leak check entire system before charging.

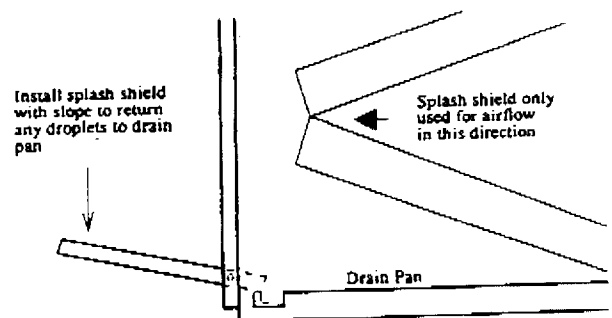
### Versaflow Coils:

Versaflow coils can be used for up, down, horizontal left or horizontal right airflow. Certain airflow arrangements require some additional instruction.

**Upflow:** Follow the standard installation instructions as given.

**Downflow:** Follow the standard installation instructions as given. (make sure to use counterflow air seals)

**Horizontal Left:** Follow the standard installation instructions as given. In addition to this, a splash shield is provided with coils having a 20" or greater fin length. This must be installed according to the following diagram.



SIDE VIEW OF VERSAFLOW COIL

**Horizontal Right:** Follow the above instructions as given for downflow coils. (make sure to use counterflow air seals) In this configuration the airflow enters the top of the "A". This will create a slightly higher static pressure drop than through the bottom of the "A". For this configuration airflow should be kept within 350-375 CFM per nominal ton. The gap between the two drain pans must be sealed with silicone caulk to prevent condensate from blowing through and causing water damage.

Pt # 966540 Rev. 3/97

Tolerances, unless otherwise specified:  
Two place decimals =  $\pm 0.03$   
Three place decimals =  $\pm 0.005$   
Angularity =  $\pm 2^\circ$

When a location is double dimensioned,  
tolerances apply to "Finished View"  
dimensions only.

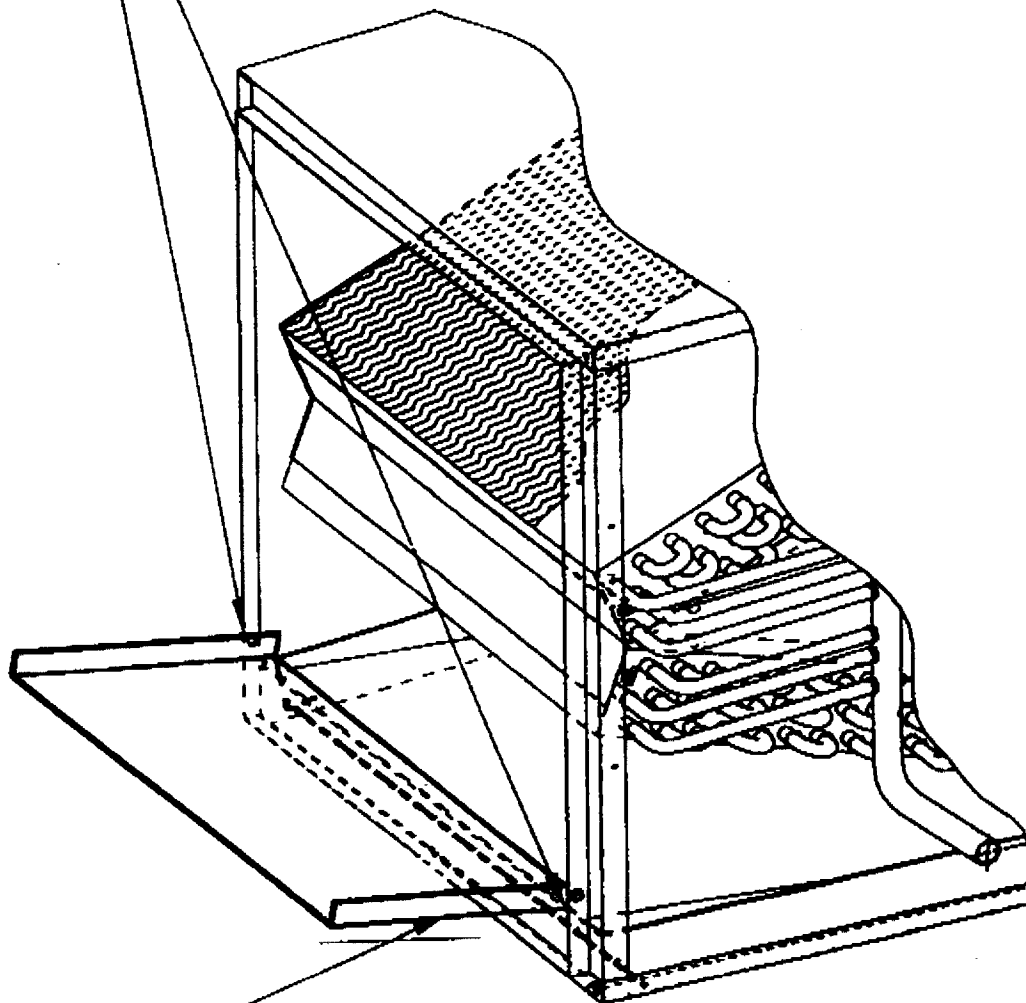
Tolerances are noncumulative.

These tolerances do not apply to material gauges  
or to commercial features or parts.

## MULTIPOSITION COIL INSTALLATION GRAPHIC

(D)

SILICONE NOTE:  
PLACE .38 BEAD OF SILICONE  
ON BOTH EDGES OF SPLASH  
SHIELD TO PREVENT CONDENSATE  
FROM RUNNING INTO HOUSING.



SPLASH SHIELD  
NOTE: INSTALL WITH SLOPE  
TO RETURN ANY DROPLETS  
TO DRAIN PAN.

ISSUED	3/31/93
REV'D.	5/30/97
970171 B	00
BASIC NUMBER	SIZE DASH

## MULTIPOSITION COIL INSTALLATION INSTRUCTIONS

WHEN THIS COIL IS INSTALLED FOR EITHER UPFLOW OR COUNTERFLOW SERVICE, THEN THESE ADDITIONAL INSTRUCTIONS AND SPLASH SHIELD, (SPLASH SHIELD ONLY SUPPLIED FOR COILS OF 20 INCH OR GREATER FIN HEIGHT) SHIPPED LOOSE WITH THE COIL, DO NOT APPLY.

WHEN THIS COIL IS INSTALLED FOR HORIZONTAL SERVICE, THEN THE PREVIOUSLY MENTIONED PARTS SHOULD BE INSTALLED (USING FASTENERS SUPPLIED BY YOU).

FOR COUNTERFLOW USE IN THE HORIZONTAL POSITION, THE JOINT/GAP BETWEEN THE TWO DRAIN PANS SHOULD BE SILICONE SEALED TO PREVENT CONDENSATE BEING BLOWN OUT.

THESE ADDITIONAL PARTS ARE IMPORTANT, IN THAT THEY PROVIDE LONG TERM SUPPORT FOR THE DRAIN PAN AND COIL ASSEMBLY; AND HELP ASSURE BEST PERFORMANCE FROM THIS MULTIPOSITION COIL.

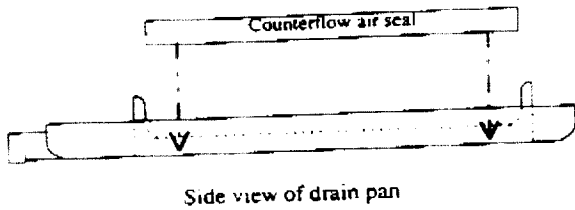
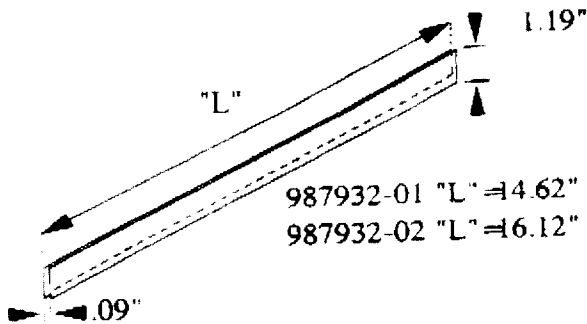


Figure 1

The counterflow air seals are available from your ADP distributor in the sizes shown below

Part #	Fits Coil Model
987932A-01	HA01-15 & HM92,93
987932A-02	HA78 & HA79

Fabricate to these dimensions if part not available. (material .024 minimum G-90)



## EXPANSION VALVES

### Factory Installed Valves:

ADP Coils are available with the expansion valve mounted at the factory. This is indicated by the 5th digit in the model number. (Ex. HA03336, 3=bleed type, 4=non-bleed, and 5=non-bleed HP valve)

**ATTENTION/CAUTION:** On factory installed expansion valve coils, the valve sensing bulb is mounted in a shipping location to prevent overheating during coil installation. After all torch work is completed, the bulb can be strapped to the suction line at the 4 or 8 o'clock position. (see figure 2) Failure to properly locate bulb can result in unsatisfactory performance and compressor damage.

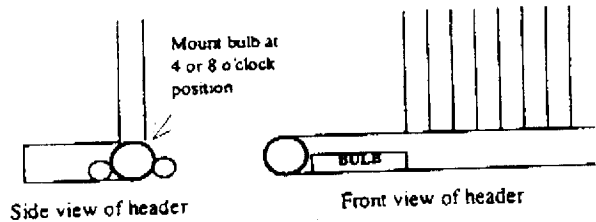


Figure 2

### Field Installed TXV Kits:

ADP offers TXV kits to convert floriator coils to expansion valve. The floriator piston is removed and the valve screws onto the floriator body. The external equalizer tube is then soldered into the suction line. (see valve kit for more complete installation instructions) The following kits are available in non-bleed only.

Part#	Application
TXV-3	1 1/2 - 3 TON A/C
TXV-5	3 1/2 - 5 TON A/C
HPTXV-3	1 1/2 - 3 TON HP
HPTXV-5	3 1/2 - 5 TON HP

**IMPORTANT:** Non-bleed expansion valves require the condensing unit have hard start capabilities or a scroll compressor.

The plastic "A" & "H" coil pans are made of a high quality engineering polymer with a maximum service temperature of 500 degrees F. However, adequate space must be provided between the "A" coil drain pan and the furnace heat exchanger. At least 1 1/2" space is required for sectionalized heat exchangers and 3" for drum type or oil fired furnace heat exchangers. Closer spacing may damage the drain pan and cause leaking.

### Drain Line Installation:

**IMPORTANT:** A brazing/soldering torch must not be used on the drain lines closer than 6" to the drain pan. Use thread sealant compound on drain pan fittings. Install drain line hand tight. Do not over torque.



## Evaporator Installation Instructions

ADP air conditioning products are designed and manufactured with the latest technology and materials; including rifled copper tube and the patented "Raised Lanced Fin" and "Plus One" coil construction. To ensure that each air conditioning system provides the utmost in comfort and customer satisfaction, this product should only be installed by trained professional air conditioning technicians.

### Inspection:

Before beginning installation, inspect the product for any shipping damage. Check drain pan for cracks and coil surface for any obvious damage.

**WARNING:** This coil was manufactured containing a dry air precharge of 20 PSL. This pressure must be relieved through the center of the rubber plugs before removing the plugs.

**IMPORTANT:** Occasionally the dry air charge can leak out through the needle pierce holes in the plugs. This does not indicate a leaking coil nor warrant return of the coil.

### Airflow Requirements:

The blower and duct system must be properly sized in order to provide adequate cooling and heating performance. Select a furnace blower output of 350-450 CFM per 12,000 BTUH of cooling. Return air filters of generous size must be provided in order to avoid contaminating the coil, blower and ductwork or restricting necessary airflow.

### Florator Pistons:

ADP provides equipment performance ratings that match both same size and up sized coils with condensing units of all manufactures. As

shipped from the factory, the florator piston installed in each coil is chosen for the nominal BTUH capacity of the coil. This is indicated by the 6th & 7th digit in the coil model number. (Ex. HA03236 = 36,000 BTUH) The piston size is identified by a label on the front of the coil and also the last 2 digits in the coil model number. (Ex. HA03236A165A000073 = #73 piston) For optimum performance, the piston should be sized to match the nominal BTUH of the condensing unit. Use the chart below for proper sizing.

Nominal Condensing Unit MBTUH						
18	24	30	36	42	48	60
Recommended Piston Size						
#53	#59	#67	#73	#80	#84	#93

Replacement piston kits are available from your ADP distributor. To replace the piston, remove the florator nut located on the liquid line. Using the wire included in the kit, remove the piston. If the nylon gasket is damaged replace it with spare also included in the kit. Install the piston with the nylon seat toward the distribution tubes. Re-install the florator nut and torque to 15 ft./lbs.

### Counterflow/Downflow Installations:

**ATTENTION/CAUTION:** When ADP "A" coils are installed for counterflow/downflow (air flow through the top of the "A") use, (2) each counterflow air seals part #987932. These are to be installed over the sides of the drain pan opening as shown in figure 1. Failure to do so can result in condensate blowoff and damage to the building contents.