



BUFFALO TRIDENT



OPERATING & MAINTENANCE INSTRUCTIONS DELTA SERIES AIR COOLED CONDENSERS

MODELS

DV/DH110 - DV/DH220
LDV/LDH227 - LDV/LDH684

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1. IMPORTANT RECOMMENDATIONS

Delta Series air cooled condensers are intended for installation only by **Qualified Refrigeration Personnel**, and are to be installed in accordance with the guidelines mentioned in this manual.

(All electrical work is to be carried out by **Qualified Electrical Personnel** and to be in accordance with local electrical regulations)

2. SAFETY RECOMMENDATIONS

Condensers supplied with **Nitrogen Holding Charge. (Release fully before removing seals)**

Electrical power to be **isolated** prior to the commencement of any electrical work

During normal operation, **Pressurised Refrigerant** is contained within the condenser. Extreme care should be taken to avoid leakage, as personnel injury may occur. **(Avoid the use of sharp objects in close proximity to refrigeration piping)**

Extensive gas loss in enclosed area may result in asphyxiation.

Contact with refrigerant may cause personnel injury. (Freeze Burns)

Normal operating conditions involve **Hot** surfaces within the condenser. Extreme care should be taken to avoid contact.

Avoid contact with condenser fins, as sharp edges may cause personnel injury.

Insertion of any object into condenser fans is to be avoided, as this may result in personnel injury and/or equipment damage.

Operating sound pressure levels may cause discomfort. Refer to catalogue for calculated sound levels.

3. APPLICATION RANGES

These condensers are intended for use in commercial refrigeration systems, with a maximum operating ambient temperature of approximately 60°C. **(Special designs available on application)**

Recommended refrigerants: **HFCs, HCFCs.** (Also suitable for CFCs)

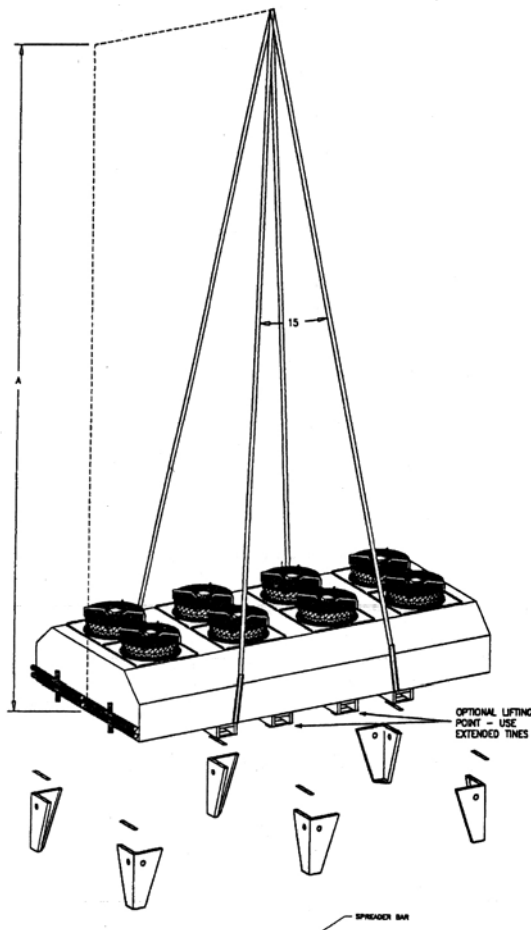
This series condenser is **not suitable** for use with NH₃. (Ammonia)

Standard condensers are not to be installed in hazardous/combustible environments. **(Special designs available on application)**

4. INSTALLATION GUIDE

A. MOUNTING - VERTICAL AIR FLOW

4. INSTALLATION GUIDE A. MOUNTING - VERTICAL AIR FLOW



Vertical Air Flow Condensers are shipped without legs fitted.

Using an appropriate lifting device (refer figure 1(a) and 1(b) for recommended lifting methods), attach legs to condenser using bolt kit supplied.

Place condenser into installation location, and fix using mounting holes located in feet.

Please Note:

Minimum diameter of fixing bolts to be 9.525mm (3/8").

The use of lifting devices during installation is recommended where applicable.

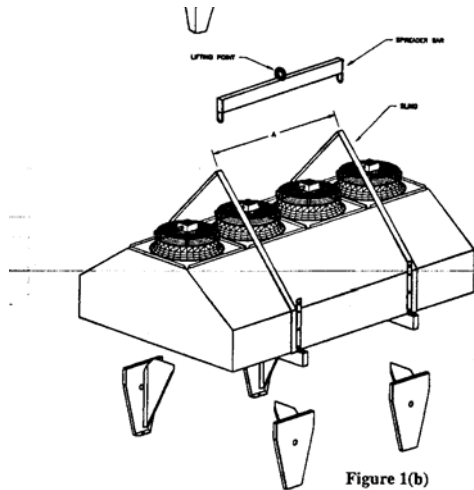
Observe recommended condenser mounting locations as per figure 2.

Remove the sling channels/guides (LDV) or transport brackets (DV) on completion of lift.

Ensure that condenser is installed level, to avoid liquid locking within coil.

Refrigeration piping connections should be carried out in accordance with the current "Refrigeration Code of Good Practice"*.
(Beware of **HOT** surfaces present during welding procedure)

Refer to figure 2 for refrigeration piping connection points.



UNIT	DIMENSION "A"
4 FAN	2578 mm
6 FAN	2578 mm
8 FAN	7922 mm
10 FAN	8355 mm

UNIT	DIMENSION "A"
4 FAN	1218 mm
5 FAN	1827 mm
6 FAN	2436 mm
7 FAN	1827 mm
8 FAN	2436 mm

Figure 1(b)

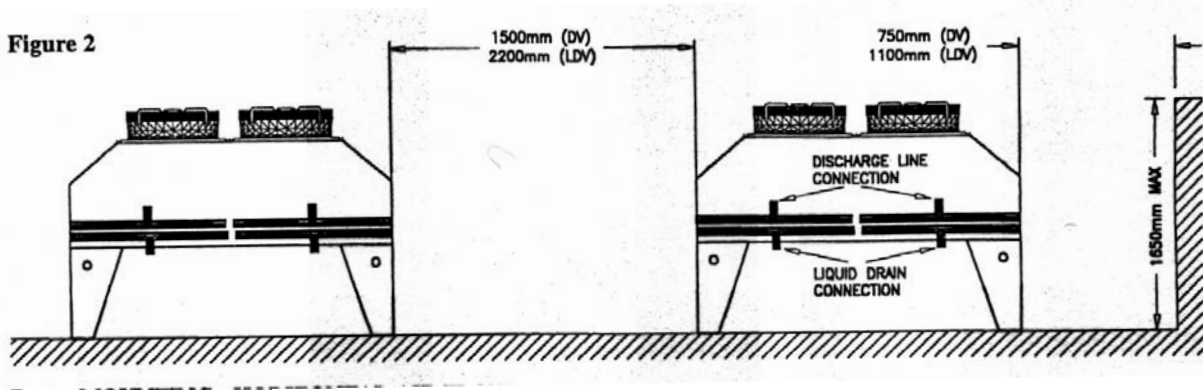


Figure 2

B. MOUNTING - HORIZONTAL AIR FLOW

Horizontal air flow condensers are shipped ready for installation.

Place condenser into installation location, and fix using mounting holes located in base channels.

Please Note: Minimum diameter of fixing bolts to be 9.525mm (3/8").

The use of lifting devices during installation is recommended where applicable (refer figure 3 for recommended lifting methods)..

Observe recommended condenser mounting locations as per figure 4.

Ensure that condenser is installed level, to avoid liquid locking within coil.

Refrigeration piping connections should be carried out in accordance with the current "Refrigeration Code of Good Practice"*. (Beware of **HOT** surfaces present during welding procedure)

Refer to figure 3 for refrigeration piping connection points.

Figure 3

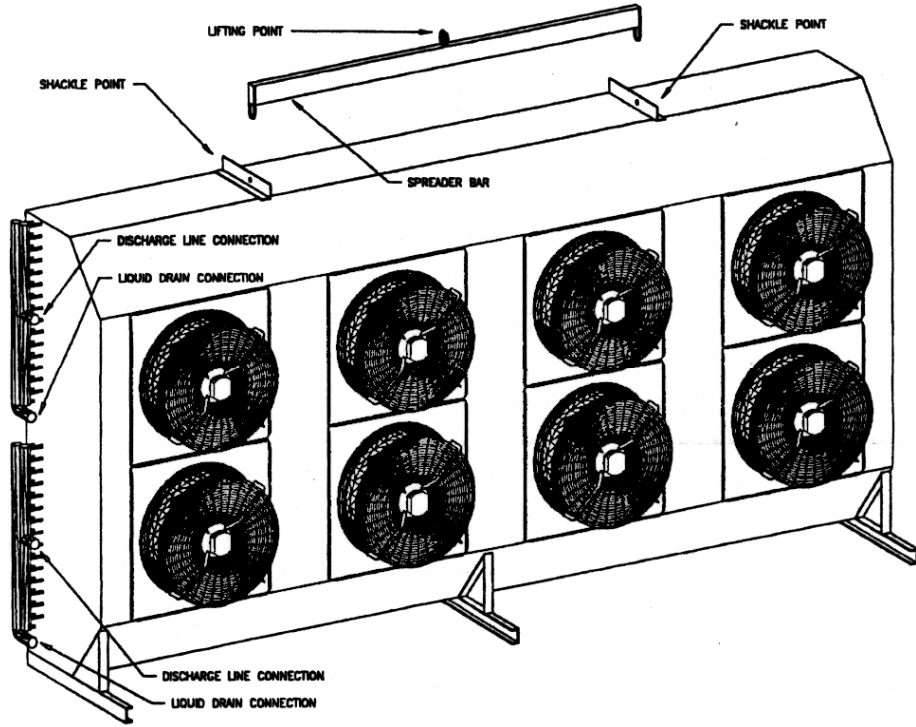
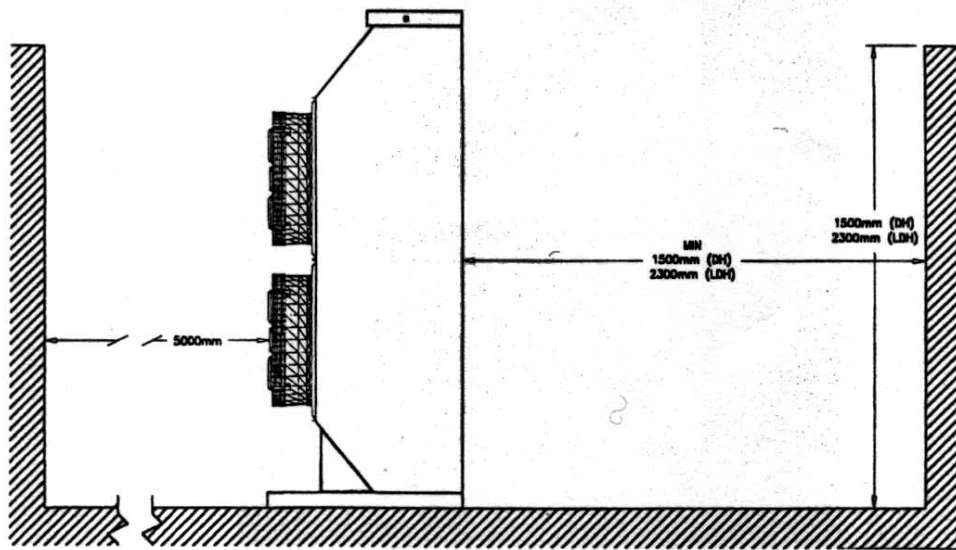


Figure 4

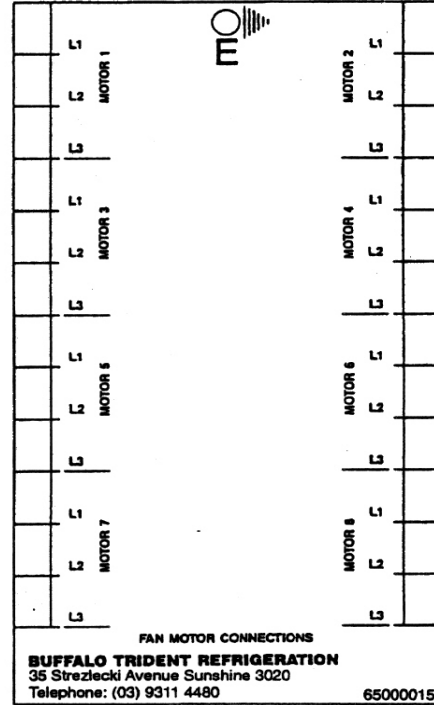
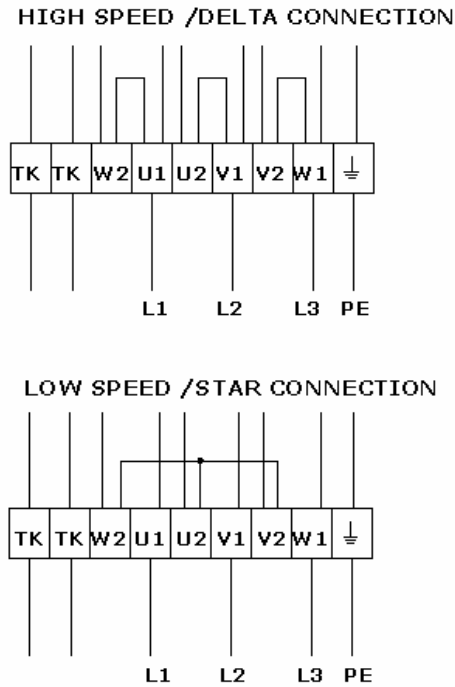


5. ELECTRICAL CONNECTIONS

Fan motors are suitable for 415 Volt 50 Hz operations only.

All fan motors are pre-wired to an electrical junction box mounted on condenser. (High Speed)

Wiring to be carried out as per drawing IM0124.



6. COMMISSIONING INSTRUCTIONS

Leak testing should be carried out in accordance with the current "Refrigeration Code of Good Practice".

Following leak testing, the system should be evacuated using accepted refrigeration practices. The vacuum pump should be connected to both the high and low pressure sides of the system with all shut-off valves open.

Refrigerant charging should be carried out in liquid form, directly into the condenser or receiver.

Extreme care should be taken to avoid direct contact with liquid refrigerant. (Freeze Burns)

Ensure that electrical wiring is in accordance with previously mentioned drawings, and that fan motor direction is correct.

7. MAINTENANCE INSTRUCTIONS

Buffalo Trident condensers require low maintenance, apart from regular cleaning of the fin face. Frequency is dependant upon the operating environment of the condenser.

It is recommended that fin surfaces are cleaned using a soft bristle brush and/or low pressure water, taking care to avoid all electrical components. **(Electrical power must be isolated prior to cleaning)**

All fan motors contain sealed bearings and are maintenance free.

8. DECOMMISSIONING INSTRUCTIONS

Pump down refrigeration system into the receiver or suitable container. (As per “Refrigeration Code of Good Practice”*)

Isolate power, and remove electrical wiring (**Remove earth wire last**) and associated components where necessary.

Disconnect refrigeration piping, and seal both the system and condenser connections. (**Ensure that positive/negative pressure does not exist in condenser prior to disconnection**)

Condenser can now be removed from location. (The use of lifting devices during removal is recommended where applicable)

* “Code of Good Practice” produced in conjunction with AFCAM.



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