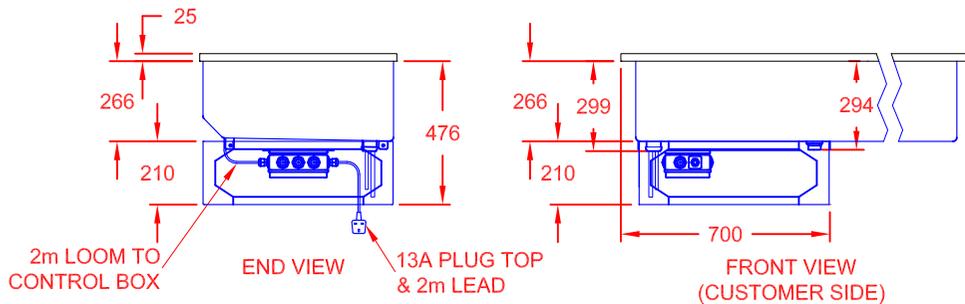
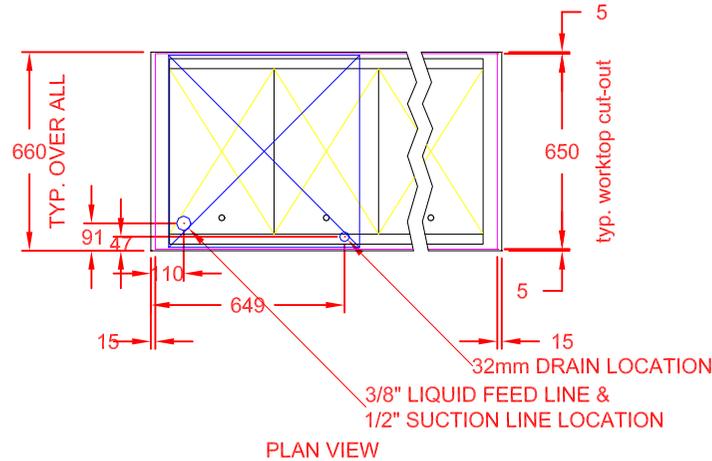
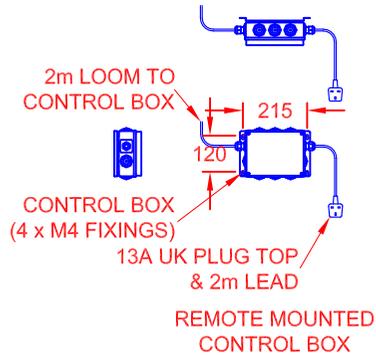


**Display Performance Considerations**

- 1) Do not site the display within 2m of ceiling mounted air conditioning grilles.
- 2) Do not site the display beneath a high level of direct sunlight.
- 3) Display will operate in a 24 hour environment.



**Designline & Kubus Cold Displays - Remote Refrigeration.**

Designline & Kubus chilled models are suitable for use with remote R448A/R449A refrigerated central plant.

- 1) The units are supplied with a 210mm deep condensing unit transportation cradle attached, to protect the refrigerant liquid & suction line stubs & to house the electrical control box. \*\*
- 2) Once installed, the cradle can be retained or removed and the electrical control box re-housed locally, if necessary.
- 3) The following refrigeration components are supplied:
  - 1 x 1/4" schrader valve (CED7645),
  - 1 x Danfoss TE2-R448A expansion valve (CED7650),
  - 1 x Danfoss No.1 orifice (CED7651),
  - 1 x Danfoss 3/8" ODS EVR6 solenoid (CED7652),
  - 1 x Danfoss 10W solenoid coil (CED7653),
  - 1 x H07 0.75mm 3 core cable.
 (These items are not covered by warranty)
- 4) The single feed evaporator coil is supplied pressure tested to 25 bar with dry nitrogen.
- 5) 32mm site drainage for evaporator defrost water removal, is required for these models.
- 6) The following waste connection items are also supplied - 1 x 32mm bottle trap, 1m length of 32mm waste pipe.
- 7) A separate 13A 50Hz 230V SPN+E electrical supply is required to serve display lighting in addition to any supply provided for the remote condensing unit.
- 8) \*\* Electrical control box is supplied with 1.5m plug top and lead.

**Calculating the R448A/R449A condensing unit size required:**

Prior to installation of the central plant/condensing unit, a refrigeration engineer would:

- 1) Calculate the size of the condensing unit required based on the distance away & the route of the refrigeration lines to and from the unit (i.e. every bend in the refrigeration pipe work through floors etc. changes the flow rate of the gas).
- 2) The amount of R448A/R449A refrigerant needed. The above would be calculated in conjunction with the information on the remote refrigeration specification R448A/R449A sheet, which can be downloaded from our website, i.e.:
- 3) Evaporating temperature (-10deg C),
- 4) Specific maximum cooling duty per model.

**Multiple chilled units - remote refrigeration**

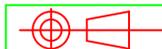
If the central plant/condensing unit is to serve other chilled units as well as the CED model, the above information would need to be calculated for the other models, in order to arrive at a suitably sized condensing unit. To allow for a central plant unit that may be serving more chilled units than the CED model, CED program the control panel to ignore high/low pressure alarm, which would be fitted to the central plant/condensing unit.



CED FABRICATIONS LTD  
 UNITS A1-A4, FALCON COURT  
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**DESCRIPTION:**

TYPICAL INFORMATION FOR DROP-IN  
 REMOTE REFRIGERATION

SCALE: 1 : 25 @ A4 REV No: B

PRODUCT CODE: R448A/R449A