



## **Chiller installation, contractor's scope of work:**

See complete DTS O&M Manual for further details

### **Pre-planning:**

#### **Provide installation surface**

**Either, ground level concrete pad** 5'W x 12'L x min 4" depth, w/less than ½" slope per 10' or shim to level or, **rooftop curbing** per your local building code specifications.

Chiller weight: DTSWO5000CT17 – WO5000 dry 900lbs; operational 1300lbs

Ensure placement is 5 feet from walls and min 8 foot overhead clearance. For rooftop installations, max 65 feet vertical distance down to MRI SEC cabinet. Contact DTS at 800-968-5665 if installation will fall outside this distance.

#### **Arrange for rigging**

Unit and filter kit will ship LTL box truck. The freight carrier will need to know if lift gate delivery is required.

#### **Provide fluid piping**

1.5" diameter, copper is advised. Max run equivalent to 500 linear feet; flex connectors are advised at chiller inlet and outlets. Chiller ports: 1.5" NPTF connections. \*see pg 7 of manual for pressure loss for piping elbows and fittings

- Do not use galvanized piping as glycol will remove its zinc coating. PVC is not recommended due to brittleness that can occur over long term exposure to UV and outdoor temp extremes.

**\*Each chiller is supplied with a filter and analog flow meter kit, shipped loose, to be installed indoors, inline, prior to the Siemens SEP cabinet inlet.**

**\*Optional Manual Bypass – if this piece has been ordered, it is to be installed between the Siemens MRI SEP cabinet and it's cryogen compressor. 22' ½" hoses and multi connector fittings are included. The alternate water source can be either city water or central chiller. If city water is used, supply a drain and a backflow preventer in the city water supply line.**



### **Provide Power drop**

**Chiller** WO5000 is provided with an 80 amp, fused, rotary, lockable disconnect; Max over current protection: 30 amps; FLA 18.2 amps

### **Provide ¾" conduit with pull string from chiller to MRI operator's work station**

A Carel remote panel with 150' connector cord is included with each shipment, located within the electrical enclosure.

### **Chiller fluid**

**If purchased with the chiller:** 65 gallons of 100% concentrate inhibited propylene glycol will arrive with the chiller delivery (this is an option offered. Check with Siemens to see if you need to provide this)

**Dilute to 40 to 50% glycol/de-mineralized\* water** at the site, and fill as part of the installation process.

**Procure 65 to 95 gallons of de-mineralized water.**

- Chiller has a 48 gallon tank. System will require 48 gallons of mixed fluid + 1 additional gallon per every 6 linear feet of 1.5" piping length)

\*de-mineralized water can be selected as distilled, reverse osmosis, or DI water. **Do not use tap water.** The naturally occurring minerals and sediments in tap water will cause the fluid to fall outside the water purity specification required by MRI equipment.

## **Installation**

### **Rig and anchor chiller at four corner feet**

- For rooftop installations, if directly above the MRI equipment, vibration isolators are available, in set of 8, anchor all 8 feet
- All DTS Medical chiller designs have undergone and passed Seismic Shake Table testing

### **Connect fluid piping, and fill reservoir via the fill tube/site glass**

**Connect power drop and check for proper polarity** – phase monitor is included and should be lit with green light. The pumps and compressors are wired and tested at DTS to be in phase with one another. When powering up to eliminate air from piping, check the pump rotation and switch incoming power polarity if needed.



### **Connect remote Carel Display**

- Run ¾" flex conduit between the chiller and the MR operator's work station
- Draw included 150' cord through conduit.
- Wall-mount the remote display, viewable for MRI Operator
- Connect the phone style connectors at the chiller electrical enclosure and the remote display

**Power unit on to verify proper pump rotation direction, allow pumps to run for 5-10 minutes to purge air in the fluid piping.** Add more water/glycol blend to fill to between high and low marks on the site glass

### **The Chiller package purchase includes the following DTS Koolant Koolers provided service package:**

- 1) Initial start-up visit, to commence with cryo compressor initialization\*
- 2) commissioning/sign off start-up visit, to commence with Siemens sign off visit, recheck of complete operation while under scanning heat loads
- 3) Preventive maintenance visit during 12 month parts and labor warranty

DTS uses the services of local certified HVAC contractors that have passed and agreed to meet the Siemens qualifying requirements. Contact DTS at [medservice@dimplexthermal.com](mailto:medservice@dimplexthermal.com) if interested in joining this network

\*Advise the Siemens Project Manager with expected date of readiness. DTS requires 72 hour notice to meet start-up visit appointment requests.

### **Split Systems with remote condensers**

**\* Split systems are shipped with a nitrogen charge only, so that refrigerant cannot be accidentally released into the air when opening the circuits to connect them. The installation contractor will need to supply 407c refrigerant to charge the chiller once the installation is complete. Be certain to include this in your scope of work and installation fees.**

**\*\*Max allowable distance between the indoor and outdoor cabinets is 250'**

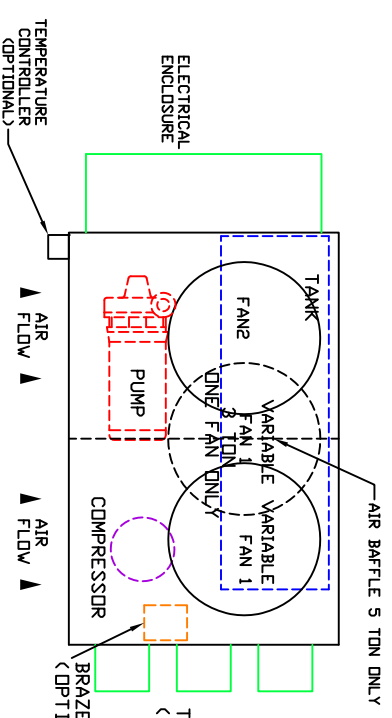
DTS split systems will include multiple cabinets. The indoor cabinet will include compressors, evaporators, pumps, reservoir, and controls. The outdoor cabinet(s) will include the air cooled condensers and fans. Anchor all pieces as part of the installation.



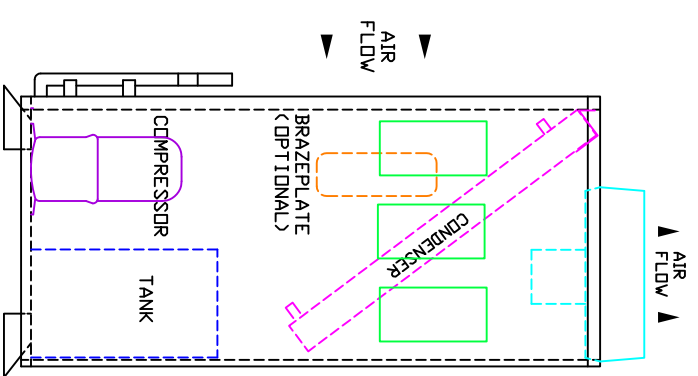
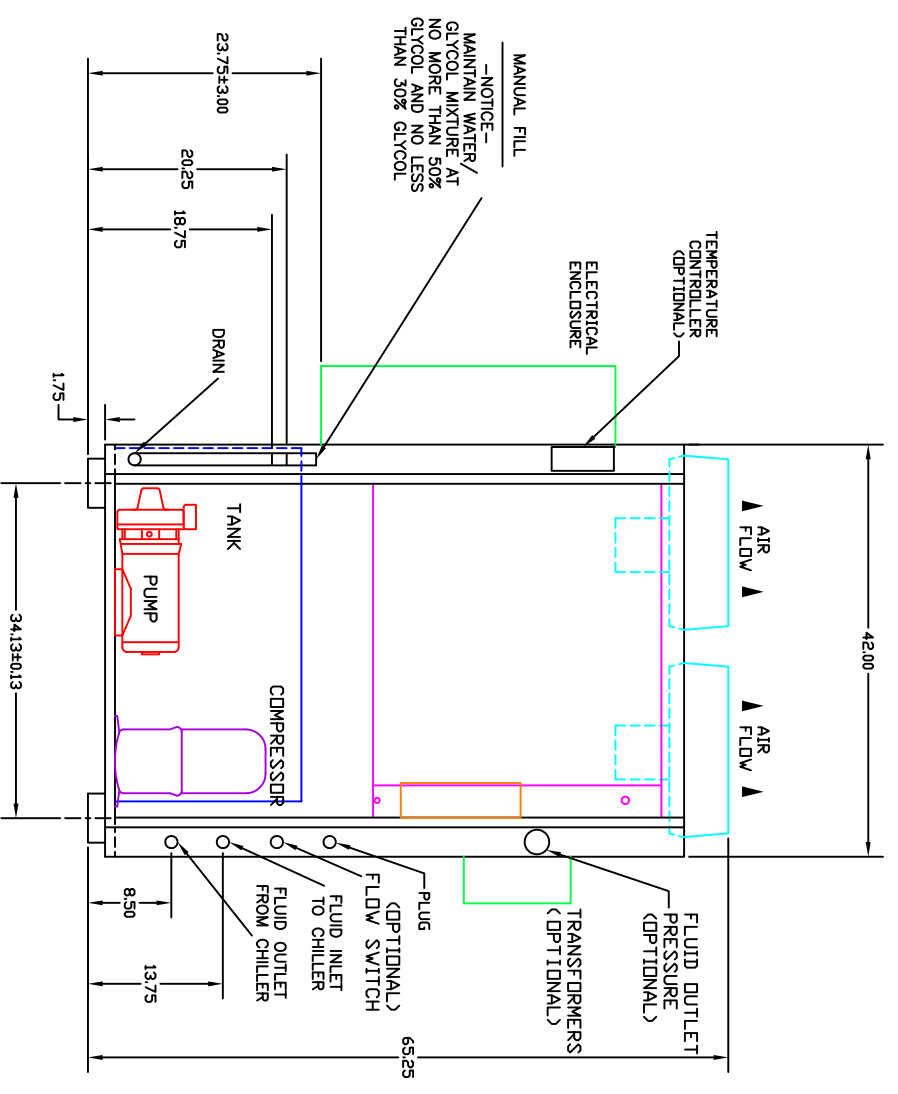
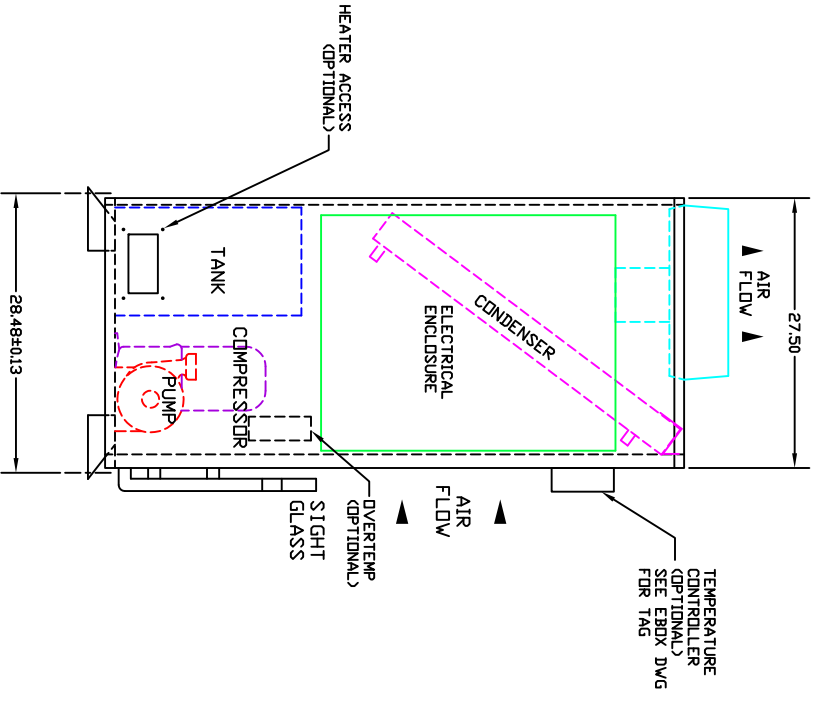
Interconnective refrigerant piping: Max distance is 250'. Include one U bend oil collector per every 12 feet of vertical rise.

Run conduit from main chiller to remote condenser(s) for fan controls.

Rev. 10-21-13



3 TON CHILLER REQUIRES ONE VARIABLE SPEED FAN ONLY. 5 TON CHILLER REQUIRES ONE VARIABLE SPEED AND ONE FAN CYCLING.



SEE PIPING PRINT FOR PURT INFORMATION

ALL DIMENSIONS ARE IN INCHES

12/17/08	UPDATED FROM 2 TO 3 TONERS	MAR	
08/20/08	REMOVED TAGS	AJD	
07-17-07	ADDED OPTIONAL CONTROLLER	BKS	
7-11-07	ADDED OPTIONAL HEATER ACCESS	JMK	
10/30/06	ADDED OPTIONAL TRANSFORMERS	JPM	
02-28-06	ADDED TAGS	BKS	
12-13-05	ADDED OPTIONAL BRAZE PLATE	JMK	
	DESCRIPTION OF REVISION	APPROVED BY	

**Dimplex**  
Thermal Solutions

**SCHNEIDER**  
ELECTRIC

DESIGN BY: BRIAN  
DRAWN BY: BRIAN  
DATE: 10-20-05  
PAGE 1 OF 1  
WWW.DIMPLEXTHERMAL.COM  
KALAMAZOO, MI  
PH (800) 968-5665

HWO 3,000/5000

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