

WATER BYPASS PANEL OPERATING MANUAL



DTS Part Number: _____

DTS Serial Number: _____

REVISION HISTORY

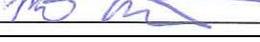
LEVEL	DATE	REVISION DESCRIPTION	SIGNATURES
1	31 March 2010	Draft	_____
2	20 August 2010	Updated photos	_____
3	17 June 2011	Updated drawing	_____
4	12 December	Updated photo	 1-3-12  7-12
5			_____
6			_____
7			_____

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FOR YOUR SAFETY

1. Signs and Symbols:

Throughout the operating manual, the information and notices below are identified by graphical symbols.



DANGER!

Safety note indicating imminent danger. Failure to heed the warning may result in serious bodily injury and even death.



CAUTION!

Safety note indicating the presence of potential hazard. Failure to heed the safety notice may result in minor bodily injury or damage to the equipment.



INFORMATION!

This symbol identifies important information or a useful tip concerning the application or service of the unit.

2. Safety Notes:

For the installation and operation of the water bypass panel, the following regulations and safety notes have to be observed.



Any work on the Water bypass panel may only be performed by qualified personnel. All relevant accident prevention regulations have to be observed.



Any national regulations applicable in the country of installation must be observed.

INSTALLATION

1. The Water Bypass Panel consists of valving to switch cooling fluid source from the Heat Exchanger Cabinet (HEC) to an Alternate Cooling Fluid Supply. The Alternate Cooling Fluid Supply is typically city water but may also be derived from the building central chilled water supply.¹



Figure 1

2. The Water Bypass Panel is designed to be installed in the equipment room indoors only. The Water Bypass Panel must be installed in the piping connecting the HEC to the Cryogenic Compressor. An assortment of hose and fittings are included to complete the fluid connections needed for typical installations (Figure 2).



Figure 2

¹ If the source is potable water then a backflow preventer must be installed on the Alternate Fluid Supply line.

- Fluid supply pressure gage, temperature gage and a flow rate meter are included in the panel. See the Cryogenic Compressor Owner's Manual for fluid temperature and flow requirements to determine a proper fluid source and return (return/drain).



Caution: Make sure all piping is clean before installation.

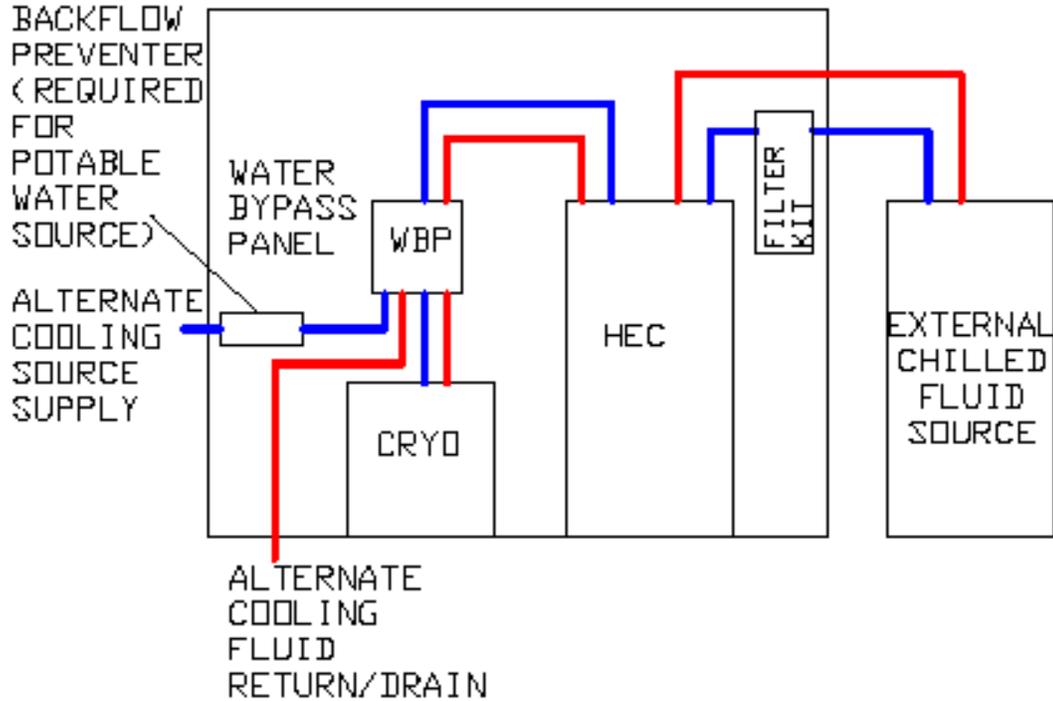


Figure 3

OPERATION

- To switch to Alternate Cooling Water Supply the panel door must be opened.
- Manually operate the valve set according to the valve position label. The valve must be quickly operated to the full stroke valve position to prevent mixing of the Alternate Cooling Fluid Source into the dedicated cooling fluid that comes from the HEC.



Figure 4



Figure 5

3. Observe the fluid flow on the meter provided. If the alternate fluid is city water, monitor the drain to make sure that drain capacity exceeds the Alternate Cooling Fluid Source flow rate.
4. When the dedicated cooling fluid source is re-established switch the valves quickly back to the HEC supply position. Check the glycol concentration of the external chilled fluid source (Heat Exchanger)².

MAINTENANCE

Clean the fluid strainer one hour after initial use then annually or as required.



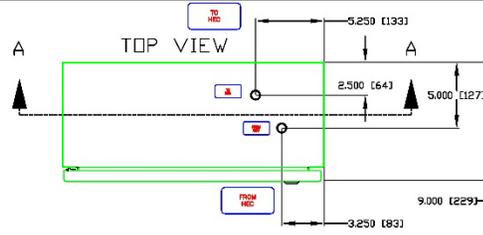
For flow rates up to 2 gallon/minute the Water Bypass Panel will have a pressure drop of 3 psid clean, the strainer should be cleaned when the pressure drop exceeds 5 psid.

² The glycol concentration should be maintained according to the Heat Exchanger Owner's Manual.

HEC = MAIN (NORMAL) COOLING SOURCE
ALTERNATE SUPPLY = BACKUP COOLING SOURCE
CRYO = EQUIPMENT TO BE COOLED

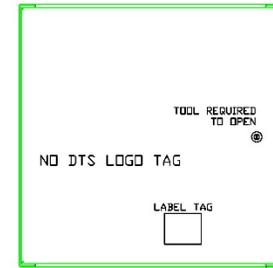
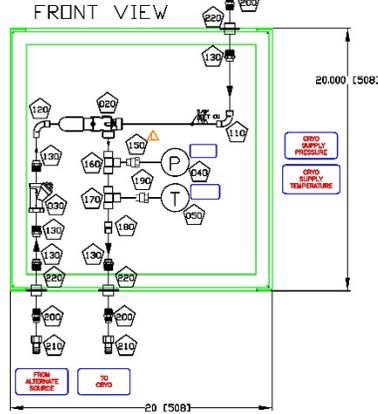
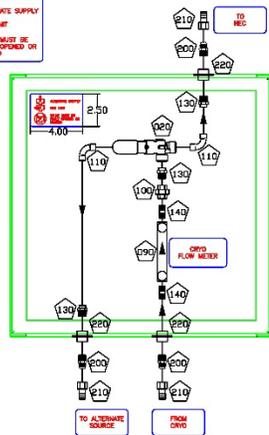
SECTION A-A

THIS PIPING IS LOCATED BEHIND THE PIPING SHOWN IN "FRONT VIEW"



SOLDER WITH SOFT SOLDER
JW HARRIS 'BRIDGIT' TYPE
1) WELD FULL COUPLINGS TO COUPLING WASHER AND MOUNT TO INSIDE OF BOX.

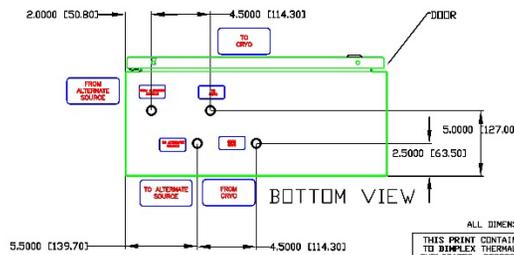
ALTERNATE SUPPLY
HEC LIMIT
VALVE MUST BE FULLY OPENED OR CLOSED



WEIGHT = 46 LBS

VALVE HANDLES WILL BE CONNECTED BY A MECHANICAL LINKAGE

COVER THREADED ROD WITH HEAT SHRINK TUBING.



ALL DIMENSIONS ARE IN INCHES
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QTY	TYPE	DESCRIPTION	PART#
1	ASSY	FILTER INTERFACE PANEL	445629
1	PC	INSULATION BOX NOM 4 1/2 20X20X8	5004383
2	PC	1/2" SH BRK 3-WAY VALVE 70-SRS-01	4113066
1	PC	1/2" SH 100 MESH STRAINER BRK/PC	4083009
1	PC	GAUGE PIPING CHG C-160 PST/BR	4246016
1	PC	303993-2 THERMOMETER SP. DIA.	4282103
2	PC	640642 BALL JOINT FITTING 1/4"-20	7789797
1	PC	RND 1/4"-28 UNSC STD 6-11 UNF	7712007
1	PC	1/2" X 1/2" X 1/2" BRK/PC	3002418
1	PC	F-40376-N-3 FLOW METER 0.2-2.0 GPM	4290035
1	PC	UNION 1/2" FPT BRK	7504400
1	PC	W-2725 ELB 90 5/8 C X C LR	7305381
1	PC	W-2822 ELB 90 5/8 FFG X C LR	7305321
0	PC	WB-1151 ADAPTER 5/8 C X 1/2 NPT	7305101
2	PC	NIPPLE 1/2" NPT X P BRK	7904020
1	PC	A 01480K ADAPTER 1/2" FFG X 1/4" FPT	5001599
1	PC	W-4006 Tee 5/8 C X 1/2 C	7305390
1	PC	W-4041 Tee 7/8 X 5/8 X 7/8 C	7307402
1	PC	W-1505 COUPLER 1/2" FFG X 3/8 C	7307140
1	PC	W-1547 ADAPTER 1/2" FFG X 1/2" FPT	7307130
1	PC	A-7488 ADAPTER 1/2" FFG X 1/2" NPT	7540400
6	PC	DISBURB 1/2" FFG X 1/2" NPT BRK	7504915
6	PC	PIPE WASHER FLUSH MOUNT	442705
8	FT	TUBING 1/2" HARD COPPER ABR	7200910
4	PC	NUT 1/4"-28 HEX	7714021

10/30/15 UPDATED ERG FROM 5000214 TO 5004389 SR(N, 7705)
3/8/19 HEAT SHRINK WAS 3802850, RC JMK(N, 8231)
4/28/16 FITTINGS FOR PG CHANGED JMK(L, 2449)
* PARTS NOT SHOWN IN DRAWING DETAIL

DATE	DESCRIPTION OF REVISION	APPROVED BY
4/7/16	BOX WAS 3444008, NEW PRE PUNCH	JMKK, 8268
02/03/15	DESCRIPTION WAS WATER BYPASS PANEL 1/2"	JK, 61140
02/18/15	ITEM #10 - DTS WAS 4, NEW 3	CEP, 12
02/25/15	CLIP FOR NEW INSULATION STD	HAS, 10
02/21/15	ADDED ITEM 250	CJSG, 5852
05/02/15	REVISION NOTES	HAS, 12
02/07/15	REVISION ABOUT SHIP KEY	HAS, 10
02/22/15	REVISION BAR CODE TAG	HAS, 10
02/11/15	LAID IN HEIGHT OF PANEL	HAS, 10
02/02/15	ADDED UNIONS FOR SERVICEABILITY	RMS, 10
07/12/10	REMOVED SHIP LOCK TIE ROD	HAS, 10

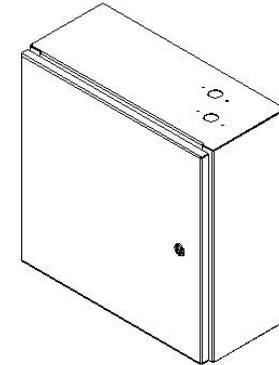
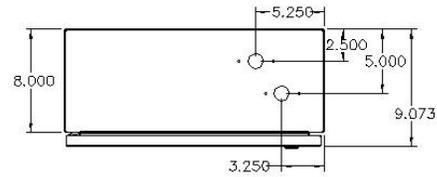
Dimplex Thermal Solutions

DESIGN BY: RMS
DRAWN BY: RMS
DATE: 07/07/10
PAGE 1 OF 1

KALANZOO, NE
PH: 603-769-3565
WWW.DIMPLEXTHERMAL.COM

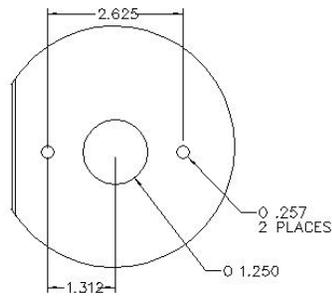
FILTER INTERFACE PANEL
PIPING

DRAWING NO: 445629

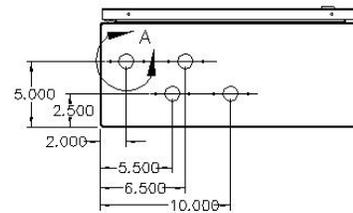
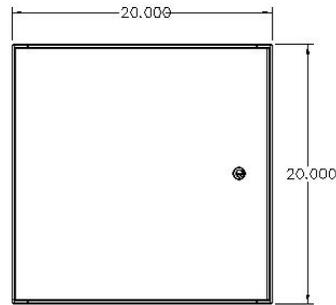


MODIFIED VERSION OF SAGINAW BOX
SCE-20EL2008LP

- NOTES:
1. DO NOT INSTALL THE PANEL MOUNTING STUDS.
 2. DO NOT INSTALL THE DOOR GROUND STUD OR THE GROUND STUD INSIDE OF THE BOX
 3. DO NOT INSTALL THE DRAWING MOUNTING POCKET OR POCKET STUDS.
 4. PUNCH THE HOLES SHOWN.
 5. BOX TO BE POWDERED COATED SCE-09 STANDARD GRAY INSIDE AND OUTSIDE



DETAIL A
6 PLACES



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DESIGN: B/bovashburn		DRAWN: B/bovashburn		Koolant Coolers, LLC P.O. Box 5505 www.dimplexthermal.com	
DATE: 11/25/14		PAGE: 1 OF 1		ENCLOSURE 20X20X8	
07/24/14 UPDATE NOTES		JMK -CB-			
11/25/14 INITIAL RELEASE		CHV -CIS-		APPROVED BY	
DATE	DESCRIPTION OF REVISION	APPROVED BY			

