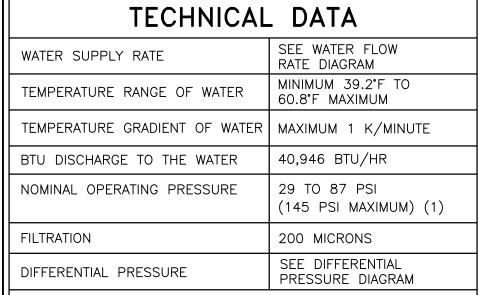


MECHANICAL PLAN

SCALE: 1/4" = 1'-0"



#### WATER QUALITY

THE WATER MUST BE OF DRINKABLE QUALITY. IF THE WATER IS OF LESSER QUALITY A FILTER WITH A MESH OF 200 MICRONS IS REQUIRED IN THE ON-SITE INLET.

#### | ANTIFREEZE

AN ANTIFREEZE AGENT MAY BE ADDED, BY THE TECHNICIAN WHO WILL START THE SYSTEM, TO THE ON-SITE CIRCUIT TO PROVIDE PROTECTION FOR TEMPERATURES TO -13°F WITH A MIXTURE OF 40% ANTIFREEZE. TO COMPENSATE FOR THE RESULTING REDUCTION IN COOLING CAPACITY. THE WATER FLOW RATE WILL HAVE TO BE INCREASED. WATER WITH ANTIFREEZE FROM THE ON-SITE CHILLED WATER MUST BE BETWEEN 39.2° F AND 57.2° F. ONLY WATER AT THIS TEMPERATURE MAY FLOW THROUGH THE WATER/WATER COOLING SYSTEM. ANTIFREEZE TO BE SUPPLIED BY THE CUSTOMER/CONTRACTOR. CHILLER MANUFACTURER'S SPECIFICATIONS MAY DIFFER, VERIFY WITH SIEMENS PROJECT

1) TO GUARANTEE THE LIMIT OF THE MAXIMUM WATER PRESSURE OF 145 PSI, THE ON-SITE COOLING WATER SYSTEM MUST PROVIDE A SUITABLE SAFETY DEVICE, EX. PRESSURE RELIEF

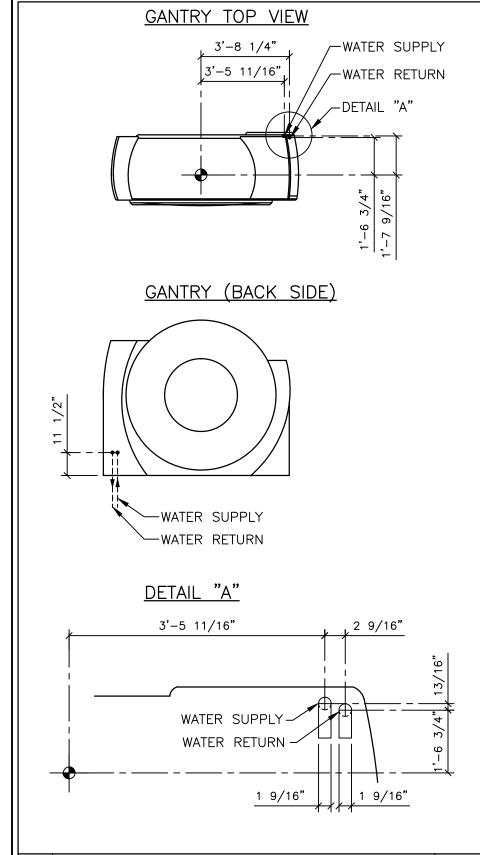
# **ENVIRONMENTAL REQUIREMENTS** TEMPERATURE (°F) 0 10 20 30 40 50 60 707580 90 100 % RELATIVE HUMIDITY TEMPERATURE, HUMIDITY, DUST, AIR

**CONTAMINATION:** REFER TO THE CLIMATOGRAM ABOVE FOR THE PERMITTED

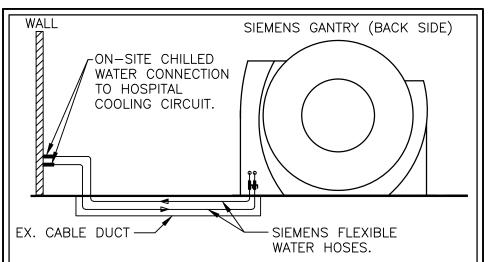
CLIMATE RANGE. THE MAXIMUM TEMPERATURE GRADIENT IS 6 K/HR.

THE ENVIRONMENTAL REQUIREMENTS FOR THE OPERATOR AND THE SYSTEM IS 64 TO 82 °F WITH A RELATIVE HUMIDITY OF 20-75% AND A BAROMETRIC PRESSURE OF 11.6 TO 15.4 PSI. EXTERIOR AIR VENTS SHOULD BE EQUIPPED WITH A FILTRATION SYSTEM OF THE FILTER CLASS MERV 8 TO FILTER DUST PARTICLES >10 um.

THE ROOM AIR SHOULD BE PROTECTED AGAINST CONTAMINATION BY HYDROGEN SULPHIDE, EVEN IN SMALL AMOUNTS. IF A DANGER OF SUCH CONTAMINATION EXISTS, CORRECTIVE ACTIONS HAVE TO BE TAKEN. E.G., EXTRACTOR FANS, SIPHON, MODIFICATION OF VENTILATION INTAKE, ETC.



# GANTRY HOSE CONNECTION SCALE



ON-SITE CHILLED WATER REQUIREMENTS THE COOLING SYSTEM IS INTEGRATED WITHIN THE GANTRY. THE ON-SITE CHILLED WATER SUPPLY AND RETURN ARE CONNECTED DIRECTLY TO THE GANTRY.

WATER TEMPERATURE: MINIMUM 39.2°F TO 60.8°F MAXIMUM NOMINAL OPERATING

PRESSURE: 29 TO 87 PSI (145 PSI MAXIMUM) FLOW RATE: DEPENDS ON WATER TEMPERATURE DIFFERENTIAL PRESSURE: AS RELATES TO WATER CIRCULATION A 3/4" HOSE BIB AND A WATER DRAIN (EX. SINK) MUST BE AVAÍLABLE NEAR THE GANTRY FOR FILLING THE CÓOLING

### CHILLED WATER HOSES

THE SIEMENS FLEXIBLE CHILLED WATER HOSES HAVE TO BE ORDERED SEPARATELY AND WILL BE SUPPLIED IN THE FOLLOWING THREE LENGTHS ONLY: 31 FEET, 64 FEET AND 96 FEET. THE MIN. ACCEPTABLE BENDING RADIUS OF THE HOSES IS 6". THE OUTER DIAMETER OF THE WATER HOSES IS 1-9/16". CUSTOMER/CONTRACTOR TO INSULATE NON-INSULATED WATER HOSES WITH 1/2" ARMAFLEX INSULATION. INSULATED WATER HOSES ARE AVAILABLE THROUGH SIEMENS. THESE INSULATED HOSES ARE USABLE FOR ON-SITE WATER TEMPERATURE RANGES GREATER THAN OR EQUAL TO 46.4 °F TO 60.8 °F. ADDITIONAL INSULATION MUST BE SUPPLIED AND APPLIED TO THE HOSES BY THE CUSTOMER/CONTRACTOR FOR ON-SITE WATER TEMPERATURE RANGES 39.2° F TO <46.4° F. THIS MAY REQUIRE AN INCREASE IN THE CONDUIT/DUCT SIZE FOR HOSES.

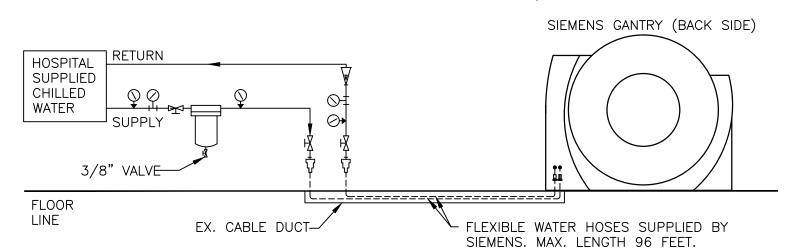
> SCALE: NONE CHILLED WATER



PIPING AND HOSE SCHEMATIC CLOSED LOOP CHILLED WATER PIPING AND FIXTURES TO BE SPECIFIED BY THE MECHANICAL ENGINEER OF RECORD AND TO BE SUPPLIED AND INSTALLED BY THE MECHANICAL CONTRACTOR.

RECOMMENDED PIPE SIZE FOR TOTAL LENGTH OF PIPING LOOP IS USUALLY 1". THE MECHANICAL ENGINEER MUST DETERMINE THE ACTUAL PIPE SIZE REQUIRED FOR THE TOTAL LENGTH OF THE RUN. THE ON-SITE PIPES ARE TO BE INSULATED WITH 1/2" ARMAFLEX INSULATION BY THE CUSTOMER/CONTRACTOR. SIEMENS NON-INSULATED FLEXIBLE WATER HOSES ARE TO BE INSULATED WITH 1/2" ARMAFLEX INSULATION BY THE CUSTOMER/CONTRACTOR. INSULATED WATER HOSES ARE AVAILABLE THROUGH SIEMENS. THESE INSULATED HOSES ARE USABLE FOR ON-SITE WATER TEMPERATURE RANGES GREATER THAN OR EQUAL TO 46.4 °F TO 60.8 °F. ADDITIONAL INSULATION MUST BE SUPPLIED AND APPLIED TO THE HOSES BY THE CUSTOMER/CONTRACTOR FOR ON-SITE WATER TEMPERATURE RANGES 39.2° F TO <46.4° F. THIS MAY REQUIRE AN INCREASE IN THE CONDUIT/DUCT SIZE FOR HOSES.

THE CHILLED WATER DELIVERY SYSTEM MUST BE INSTALLED AND CHARGED PRIOR TO EQUIPMENT DELIVERY,



ALL COMPONENTS SUPPLIED BY MECHANICAL CONTRACTOR AT A CONVENIENT HEIGHT FOR SERVICING. ALL ITEMS IN THE FIXTURE LEGENDS CAN BE ORDERED FROM PROCAM CONTROLS, (800) 333-2556 OR FAX (214) 422-6262

## REQUIRED FIXTURE LEGEND

₩ 1" MALE NPT

FILTER W/200 MICRON BAG OR EQUAL THAT MEETS SPECIFICATION.

#### RECOMMENDED ADDITIONAL FIXTURE LEGEND

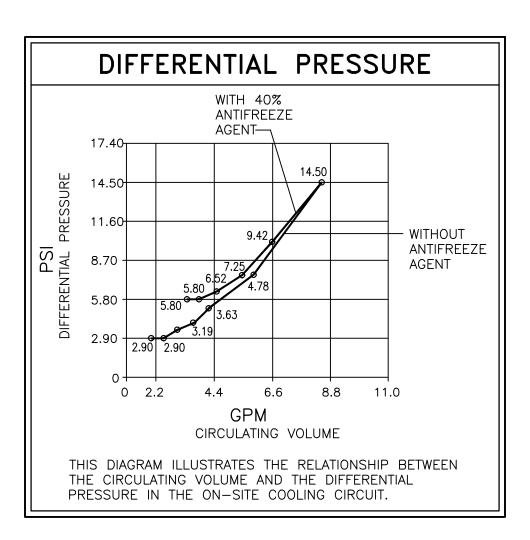
- √ VISUAL FLOW GAUGE F-451002LHN (2-20 GPM) → BALL VALVE (BRONZE) B6080
- THERMOMETER  $(20^{\circ}-120^{\circ}F)$  TG-1, 530-30005
- PRESSURE GAUGE 530-2005 (LIQUID FILLED 0-160 PSI)

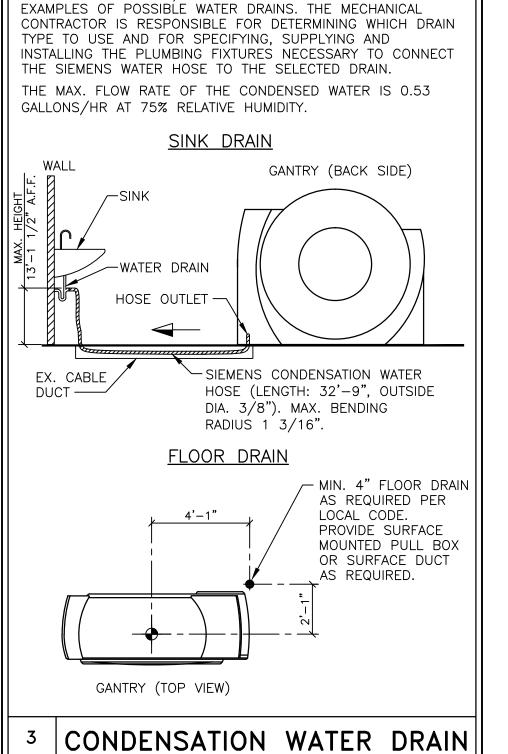
A WATER DRAIN IS REQUIRED TO BE SUPPLIED AND INSTALLED BY THE CUSTOMER/CONTRACTOR TO DRAIN CONDENSED WATER FROM THE GANTRY. THE DRAIN MUST BE WITHIN 32'-9" OF

THE GANTRY. THE HOSE MAY BE EXTENDED ON-SITE UP TO

65'-7" BY CUSTOMER/CONTRACTOR. BELOW ARE SOME

# WATER FLOW RATE WITHOUT ANTIFREEZE AGENT -WITH 40% ANTIFREEZE AGENT TEMPERATURE OF CHILLED WATER AT INLET THIS DIAGRAM ILLUSTRATES THE DEPENDENCY OF THE MINIMUM CIRCULATING VOLUME ON CHILLED WATER TEMPERATURE.





DEFINITION AS REV 8

FOR INFO ONLY

- THIS DRAWING IS DESIGNED TO CONFORM TO FEATURES AND EQUIPMENT REQUIREMENTS PRESENTED

- IT IS RECOMMENDED THAT THE SIEMENS DRAWINGS BE INCORPORATED WITH THE CONSTRUCTION

-ALL DIMENSIONS SHOWN ON THIS DRAWING ARE FROM FINISHED SURFACES. THIS DRAWING DOES NOT PROVIDE RADIATION SHIELDING REQUIREMENTS FOR X-RAY AND ASSOCIATED EQUIPMENT. THE CUSTOMER IS RESPONSIBLE FOR CONSULTING WITH A REGISTERED RADIATION PHYSICIST TO SPECIFY RADIATION PROTECTION.

FINISHED ROOM HEIGHT

CAREVISION MONITOR/CEILING MOUNT | MIN. 8'-6 3/8" MAX. 12'-1 11/16

MINIMUM 7'-6 9/16"

FOR CT GANTRY ONLY

**SIEMENS** VMAIL: (800) 228-5462 EXT: 1227 FAX: (402) 502-3001 MAIL: JWITHROW@CASSLING.COM SIOUX FALLS VAMC 2501 W 22ND ST, SIOUX FALLS, SD 57117 CT SCAN ROOM - SOMATOM DEFINITION AS 64 THE USE OR REPRODUCTION OF THIS TITLE BLOCK WITHOUT SIEMENS AUTHORIZATION WILL 1603123 R-101RA VERSION DATED 08/11/16 RESULT IN PROSECUTION UNDER APPROVED BY CUSTOMER FOR FINAL FULL EXTENT OF THE LAW. ALL RIGHTS ARE RESERVED. DATE DESCRIPTION SCALE: AS NOTED -ISSUE BLOCK-12/27/16

ATTENTION: AT THE TIME OF THEIR PREPARATION. MODIFICATION, THEY ARE NOT TO BE USED FOR CONSTRUCTION PURPOSES. - THIS SET OF PLANS REPRESENTS A COMPLETE SET OF DETAILS AND SHOULD NOT BE SEPARATED. DOCUMENTS FOR REFERENCE.

REF. #: 30175141

