

**GENERAL SPECIFICATIONS**

**GENERAL**

**15101 CODES AND PERMITS**

- 1. THE FOLLOWING CODES WILL BE COMPLIED WITH WHEN DESIGNING AND INSTALLING COMPONENTS AND SYSTEMS UNDER DIVISION 15 - MECHANICAL: OSHA, BOCA, IMC ASHRAE, SMACNA, NFPA, STATE AND LOCAL PLUMBING CODES.
- 2. STATE AND LOCAL MECHANICAL PERMITS WILL BE THE RESPONSIBILITY OF CONTRACTOR

**15102 DESIGN CONDITIONS**

- 1. CLIMATIC DESIGN CONDITIONS WILL BE BASED ON PORTLAND, MAINE AND THE SURROUNDING ARE AS FOLLOWS:  
WINTER: -10° F  
SUMMER: 87° F DB AND 71° F WB

INTERIOR CONDITIONS:  
70 DEG F +/-2

**15110 BASIC MECHANICAL REQUIREMENTS**

- 1. ALL MOTORS FURNISHED SHALL MEET NEMA REQUIREMENTS AND SHALL HAVE AN OPERATING TEMPERATURE OF NOT TO EXCEED 40° C ABOVE AMBIENT TEMPERATURE AND BE SO MARKED. EXCEPT AS NOTED ALL MOTORS SHALL BE OF THE OPEN DRIP-PROOF TYPE. MOTORS MAY BE FURNISHED OF THE FULLY ENCLOSED TYPE IF IT IS THE STANDARD EQUIPMENT.
- 2. NAMEPLATES BEARING MANUFACTURER'S NAME OR IDENTIFIABLE TRADEMARK SHALL BE SECURELY AFFIXED IN A CONSPICUOUS PLACE ON EQUIPMENT, OR OTHERWISE PERMANENTLY MARKED.
- 3. FLEXIBLE METAL CONDUIT SHALL BE USED FOR ALL CONNECTIONS TO MOTORS AND VIBRATING EQUIPMENT.
- 4. CIRCULATION PUMPS TO BE SIZED WITH A MINIMUM OF A 10% SAFETY FACTOR IN FLOW RATES.
- 5. THESE DRAWINGS ARE DIAGRAMMATIC; IT IS THE INSTALLER'S RESPONSIBILITY TO VERIFY ALL CONDITIONS IN THE FIELD TO INSURE THE SYSTEMS CAN BE INSTALLED AS SHOWN, ANY CONFLICTS WITH STRUCTURE OR OTHER BUILDING SYSTEMS MUST BE RESOLVED PRIOR TO COMMENCING WORK
- 6. IT IS THE INTENT OF THESE DRAWINGS TO SHOW A COMPLETE HVAC SYSTEM INSTALLED IN ACCORDANCE WITH ALL APPLICABLE CODES AND REGULATIONS ANY DISCREPANCIES SHOULD BE BROUGHT TO THE ENGINEERING DEPT. ATTENTION.
- 7. EQUIPMENT MUST BE INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURE'S RECOMMENDATIONS ANY DISCREPANCIES SHOULD BE BROUGHT TO THE ENGINEERING DEPT. ATTENTION.

**SECTION 15302  
PIPING AND ACCESSORIES**

**A. PIPING MATERIAL AND INSTALLATION**

- 1. ALL CWS AND CWR DISTRIBUTION PIPING SHALL BE SCHEDULE 80 PVC
- 2. ALL CWS AND CWR DISTRIBUTION PIPING ON ROOF TO BE INSULATED WITH 1 INCH FIBERGLASS AND WRAPPED WITH 0.16 EMBOSSED ALUMINUM JACKET
- 3. ALL DISTRIBUTION PIPING INSIDE BUILDING TO BE INSULATED WITH 1/2" ARMAFLEX PIPE INSULATION
- 4. ALL PIPING SHALL BE INSTALLED IN ACCORDANCE WITH:
  - A. ALL APPLICABLE CODES AND STANDARDS
  - B. MANUFACTURERS RECOMMENDATIONS
  - C. CURRENT INDUSTRY STANDARDS

**B. HANGER AND SUPPORT INSTALLATION**

- 1. VERTICAL PIPING: MSS TYPE 8 OR TYP3 42, CLAMPS.
- 2. INDIVIDUAL, STRAIGHT, HORIZONTAL PIPING RUNS: ACCORDING TO THE FOLLOWING:
  - A. 100 FEET OR LESS: MSS TYPE 1, ADJUSTABLE, STEEL CLEVIS HANGERS.
  - B. LONGER THAN 100 FEET: MSS TYPE 43, ADJUSTABLE ROLLER HANGERS.
- 3. INDIVIDUAL, STRAIGHT, HORIZONTAL PIPING RUNS: ACCORDING TO THE FOLLOWING:
- 4. ROD DIAMETER MAY BE REDUCED 1 SIZE FOR DOUBLE-ROD HANGERS, WITH 3/8" MINIMUM. RODS.
- 5. INSTALL HANGERS FOR COPPER PIPING WITH THE FOLLOWING MAXIMUM HORIZONTAL SPACING AND MINIMUM ROD DIAMETERS:
  - A. NPS 1-1/2 AND NPS 2: 60 INCHES WITH 3/8" ROD.
  - B. NPS 3: 60 INCHES WITH 1/2" ROD.
  - C. NPS 4 AND NPS 5: 60 INCHES WITH 5/8" ROD
  - D. NPS 6: 60 INCHES WITH 3/4" ROD.
  - E. NPS 8 TO NPS 12: 60 INCHES WITH 7/8" ROD
  - F. SPACING FOR 10 FOOT LENGTHS MAY BE INCREASED TO 10 FEET. SPACING FOR FITTINGS IS LIMITED TO 60 INCHES.

- 6. INSTALL SUPPORTS FOR VERTICAL COPPER PIPING EVERY 15 FEET.
- 7. SUPPORT PIPING AND TUBING NOT LISTED ABOVE ACCORDING TO MSS SP-69 AND MANUFACTURER'S WRITTEN INSTRUCTIONS.

**C. PIPING SUPPORTS**

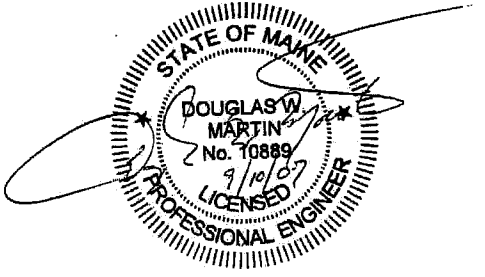
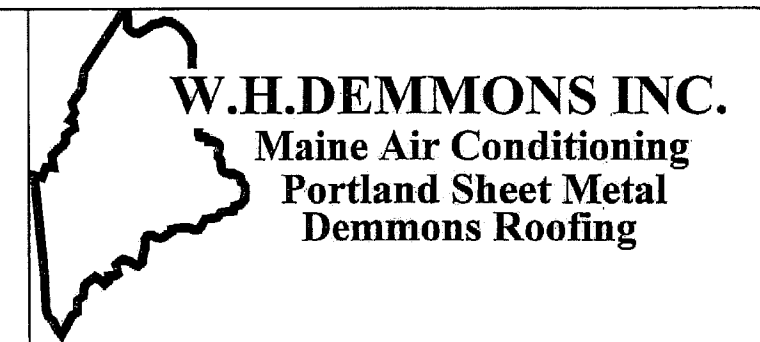
- 1. HORIZONTAL PIPING SHALL BE SUPPORTED BY FORGED STEEL ADJUSTABLE CLEVIS TYPE "CARPENTER & PATTERSON" FIG# 100 OR 100SH OR APPROVED EQUAL.
- 2. HANGER RODS AND MAXIMUM SPACING SHALL BE AS FOLLOWS:
 

PIPE SIZE	ROD DIAMETER	MAXIMUM SPACING
1 1/4" & BELOW	3/8"	6'-0"
1 1/2" & 2"	3/8"	8'-0"
2 1/2" & 3"	1/2"	8'-0"

- 3. PROVIDE ADDITIONAL SUPPORTS AT CHANGE OF DIRECTION, RUNOUTS, AND CONCENTRATED LOADS DUE TO VALVES, ETC.
- 4. VERTICAL PIPING SHALL BE SUPPORTED WITH BEARING PLATE ON STRUCTURAL SUPPORT. PROVIDE GUIDES AT EVERY SECOND FLOOR (SPACING NOT TO EXCEED 25 FT.). SUPPORT AT TOP SHALL BE PROVIDED WITH SPRING HANGER HAVING A PROVISION FOR EXPANSION.

**SECTION 15985  
CONTROLS**

- 1. EACH FAN COIL UNIT WILL BE INDIVIDUALLY CONTROLLED WITH A LOCAL THERMOSTAT IN EACH APARTMENT UNIT.
- 2. THE THERMOSTATS WILL BE OF THE DIGITAL NON-PROGRAMMABLE TYPE WITH THE CAPABILITY OF CONTROLLING BOTH THE HEATING AND COOLING SYSTEMS; SWITCHOVER AT THE THERMOSTATS FROM HEATING TO COOLING MODE WILL BE MANUAL



**75 STATE STREET  
PORTLAND, ME  
HARBORSIDE SOUTH**

**SPECIFICATIONS**

PROJECT NUMBER:	42096
ISSUED:	9-10-07
DRAWN BY:	MGR
CHECKED BY:	DWM / CB
FILENAME:	.DWG

**M-6**