

DOMESTIC WATER HEATER SCHEDULE (DWH)

TAG	TYPE	FUEL	DOMESTIC HEATING		INPUT CAPACITY (MBH)	TEMP SETPOINT (F)	STORAGE (GAL)	CONNECTIONS		ELECTRICAL DATA			SIZE		MANUFACTURER & MODEL	NOTES
			1ST HR	RECOVERY				DCWDHW	FUEL	VOLTS	PH	HZ	DIA	H		
			GALS	GPH												
DWH-1	NG HEAT	NG	432	349	300	140	119	1-1/2"	1-1/2"	120	1	60	33.125	75.75	AOSMITH BTH-300 MXI	
DWH-2	INDIRECT	NA	NA	603	500	NA	119	2"	NA	NA	NA	NA	30.5	60	THERMAL SOLUTIONS H2OMAX H119	1

NOTES:
1. HEATING WATER FLOW AT 30 GPM RESULTS IN 0.3 FT OF HEAD.

EXPANSION TANK SCHEDULE - PLUMBING (ET)

TAG	TYPE	SYSTEM VOLUME GAL	FLUID	MIN FILL TEMP	MAX TEMP	FILL PRESSURE	MAX PRESSURE	CALC. SYSTEM EXPANSION	TANK VOLUM.	TANK ACCEPTANCE	SIZE				MANUFACTURER & MODEL	NOTES
				F	F	PSI	PSI	GAL	GAL	GAL	DIA. (IN)	H (IN)	EMPTY WEIGHT (LBS)	FULL WEIGHT (LBS)		
				F	F	PSI	PSI	GAL	GAL	GAL	DIA. (IN)	H (IN)	EMPTY WEIGHT (LBS)	FULL WEIGHT (LBS)		
ET-DHW-1	BUTYL DIAPHRAGM	800	100% WATER - DOMESTIC	40	140	20	100	11.4	22	12	16	40	150	250	TACO PAX-84	ALL

NOTES:
1. RATED FOR DOMESTIC WATER
2. ASME RATED FOR 125 PSI

PUMP SCHEDULE - PLUMBING (P)

TAG	SERVES	FLOW	HEAD	MOTOR	NPSH	SPEED	MOTOR	FLUID		ELEC.		WEIGHT LBS	MFG & MODEL	NOTES
		GPM	FT	BHP	FT HD	RPM	HP	TYPE	AVG TEMP. F	AMPS	V / HZ / PH			
P-DHW1	DOMESTIC HEATER CIRCULATOR	40	15				276 W	100% WATER	150	2.45	120/60/1	45	GRUNDFOS MAGNA3 40-80	
P-DHWR	DOMESTIC HOT WATER RECIRC	12	30				178 W	100% WATER	140	1.6	120/60/1	25	GRUNDFOS MAGNA3 32-100	1, 2

NOTES:
1. PUMP TO RUN CONTINUOUSLY.
2. DOMESTIC WATER RATED

PLUMBING PIPE INSULATION SCHEDULE

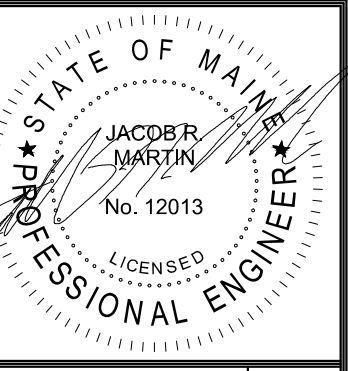
(SEE NOTES, INSULATION TYPE SPECIFICATIONS & ABBREVIATIONS BELOW THIS SCHEDULE)

PIPING SYSTEM	PIPING MATERIAL	FLUID OPERATING TEMPERATURE RANGE (DEG F)	INSULATION CONDUCTIVITY RANGE (BTU-IN/HR-FT2 DEG F)	MEAN TEMPERATURE RATING (DEG F)	NOMINAL PIPE OR TUBE SIZE (INCHES)						INSULATION MATERIAL	VAPOR BARRIER REQUIRED	
					PIPE BRANCH RUN OUTS (SEE NOTE 2 BELOW)								
					< 1	1 TO < 1-1/2	1-1/2 TO < 4	4 TO < 8	8 TO > 8				
						INSULATION THICKNESS (INCHES)							
HORIZONTAL ROOF DRAIN LEADERS		< 40	0.21 - 0.27	75	N/A	0.5	1	1	1	1	1	MF	NO
DOMESTIC COLD WATER (ABOVE SLAB)		40-60	0.21 - 0.27	75	N/A	0.5	0.5	0.5	N/A	N/A	N/A	MF or FC	YES
DOMESTIC HW & HWR (ABOVE SLAB)		105-140	0.22 - 0.28	100	N/A	1	1	1.5	N/A	N/A	N/A	MF	NO
DOMESTIC COLD WATER (BELOW SLAB)		40-60	0.21 - 0.27	75	N/A	0.5	0.5	0.5	N/A	N/A	N/A	FC	YES
DOMESTIC HW & HWR (BELOW SLAB)		105-140	0.22 - 0.28	100	N/A	1	1	1.5	N/A	N/A	N/A	FC	YES
CONDENSATE DRAINS		40-60				0	0						

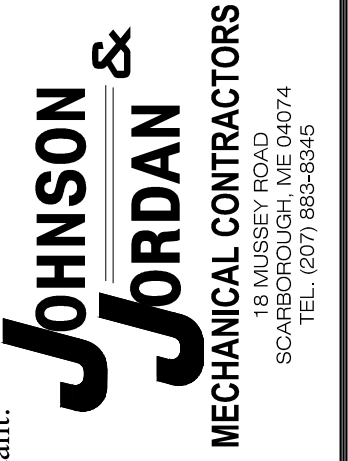
NOTES:
1. THE TABLE ABOVE APPLIES TO METALLIC PIPES AND SCHEDULE 80 OR LESS NON-METALLIC PIPES. THE BASIS OF THE ABOVE SCHEDULE IS ECONOMIC THICKNESS, PREVENTION OF CONDENSATION, AND COMPLIANCE WITH ASHRAE 90.1-2013 MINIMUM INSULATION THICKNESSES. ASHRAE 90.1-2013 DOES NOT PROVIDE REDUCED INSULATION THICKNESS FOR BRANCH RUNOUTS.
2. PIPING INSULATION THICKNESSES MAY BE REDUCED AS INDICATED ABOVE FOR BRANCH RUNOUTS BETWEEN COIL CONTROL VALVE AND THE COIL WHEN THE CONTROL VALVE IS LOCATED WITHIN 4 FEET OF THE COIL AND THE PIPE SIZE IS 1 INCH OR LESS.
3. FOR OUTDOOR ABOVEGROUND REFRIGERANT PIPING, INSULATION REQUIREMENTS SHALL BE THE SAME AS FOR INDOOR ABOVEGROUND REFRIGERANT PIPING, WITH THE FOLLOWING EXCEPTION: INSULATION SHALL BE JACKED WITH FLEXCAD-250, OR APPROVED EQUAL, ALUMINUM JACKETING SYSTEM, INSTALLED PER THE MANUFACTURER'S RECOMMENDATIONS.

PIPE INSULATION SPECIFICATIONS:
FLEXIBLE ELASTOMERIC INSULATION (FC): CLOSED-CELL, FIBER-FREE, ELASTOMERIC FOAM RUBBER TUBULAR INSULATION, ARMSTRONG AP ARMAFLEX, OR APPROVED EQUAL. COMPLY WITH ASTM C 534, TYPE 1 FOR TUBULAR MATERIALS WITH FLAME SPREAD INDEX LESS THAN 25 AND SMOKE DEVELOPED INDEX LESS THAN 50. INSTALL INSULATION PER THE MANUFACTURER'S RECOMMENDATIONS.
MINERAL-FIBER PREFORMED PIPE INSULATION (MF): TYPE 1, MINERAL OR GLASS FIBERS BONDED WITH A THERMOSETTING RESIN. COMPLY WITH ASTM C 547, TYPE 1, GRADE A. INSULATION SHALL HAVE A FACTORY-APPLIED ALL-SERVICE JACKET (ASJ). JACKET SHALL BE WHITE, KRAFT-PAPER, FIBERGLASS-REINFORCED SCRIM WITH ALUMINUM-FOIL BACKING, COMPLYING WITH ASTM C 1136, TYPE 1. FOR INDOOR EXPOSED PIPING REQUIRING FIBERGLASS INSULATION, PROVIDE A WHITE HIGH-IMPACT RESISTANT PVC JACKET COMPLYING WITH ASTM D 1784 CLASS 16354-C. INSTALL INSULATION PER THE MANUFACTURER'S RECOMMENDATIONS

ABBREVIATIONS: (APPLIES TO PIPE INSULATION THICKNESS SCHEDULES & PIPE INSULATION SPECIFICATIONS ON THIS DRAWING)
FC - FLEXIBLE CLOSED-CELL
MF - MINERAL FIBER
N/A - NOT APPLICABLE



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PLUMBING SCHEDULES

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