PACKAGED ROOFTOP UNIT PERFORMANCE SCHEDULE

* - (NET) AT 95°F AMBIENT

TAG	NOMINAL COOLING (TONS)	TOTAL COOLING (MBH)*	SENSIBLE COOLING (MBH)	EDB/EWB (°F)	LDB/LWB (°F)	TOTAL AIRFLOW (CFM)	E.S.P. (IN.WG.)	SUPPLY FAN RPM	MINIMUM O.A. (CFM)	MINIMUM EXHAUST (CFM)	FUEL INPUT (MBH)	HEATING OUTPUT (MBH)	HEATING EAT (°F)	HEATING LAT (°F)	SEER (BTUH/WATT)	WEIGHT W/ CURB (LBS)	TYPE OF REFRIG-ERANT	FUEL	ELECTRICAL REQUIREMENTS				BASIS OF DESIGN - TRANE	
																			HP	MCA	MOCP	V/PH/HZ	SERVICE	MODEL
HVAC-1	4.0	49.1	32.1	79.9/68.4	58.6/51.0	1310	0.75	857	540	-	120	96	37.1	105.1	11.5	1300	R-410a	NAT GAS	-	13.7	20.0	460/3/60	FUNCTION	YHC047
HVAC-2	6.0	70.6	54.9	77.9/65.0	56.1/54.6	2200	0.75	1002	615	-	120	97	47.1	88.3	-	1700	R-410a	NAT GAS	-	18.1	25.0	460/3/60	KITCHEN	YHC074
HVAC-3	3.0	35.5	24.5	81.1/68.7	59.3/57.5	960	0.50	747	585	-	100	80	21.2	98.5	11.5	1050	R-410a	NAT GAS	-	23.3	30.0	208/3/60	DINING	YHC037
HVAC-4	3.0	32.7	24.3	77.1/64.0	55.0/52.7	960	0.50	746	195	-	60	48	53.6	100.1	11.5	1050	R-410a	NAT GAS	-	23.3	30.0	208/3/60	BAR	YHC037

PROVIDE ALL UNITS WITH DUAL ENTHALPY ECONOMIZERS, HOT GAS REHEAT, STAINLESS STEEL HEAT EXCHANGERS (WHERE AVAILABLE) AND TWO STAGE OR MODULATING HEAT (WHERE AVAILABLE)

ENERGY RECOVERY VENTILATOR PERFORMANCE SCHEDULE

* - AT A.R.I. STANDARD CONDITIONS.

TAG	MINIMUM O.A. (CFM)	MAXIMUM O.A. (CFM)	FAN	DRIVE	AIRFLOW (CFM)	T.S.P. (IN.WG.)	E.S.P. (IN.WG.)	ELECTRICAL REQUIREMENTS						TAG HEAT RECOV.	FURNACE INPUT (MBH)	FURNACE OUTPUT (MBH)	FURNACE FUEL	WT. (LBS.)	BASIS OF DESIGN - GREENHECK	
								HP	BHP	PREHEAT KW	MCA	MOCP	V/PH/HZ						SERVICE	MODEL
ERV-1	1600	1600	SUPPLY	BELT	1600	1.61	0.75	1.5	1.19	4.1	37.5	50.0	208/3/60	ERV-1	100	80	NAT GAS	2500	ANNEX CORRIDOR/RESTROOMS	ERCH-20-30L
			EXHAUST	BELT	1600	0.89	0.75	1.5	1.28											
ERV-2, ERV-3, ERV-4, ERV-5	6310	6310	SUPPLY	BELT	6310	1.153	0.75	5.0	3.33	15.5	98.8	100.0	208/3/60	ERV-2	400	320	NAT GAS	4000	MULTIPURPOSE ASSEMBLY	ERCH-90-30L
			EXHAUST	BELT	6310	0.88	0.75	5.0	3.79											

PROVIDE ALL UNITS WITH VARIABLE FREQUENCY DRIVES ON BOTH SUPPLY AND EXHAUST FANS, MODULATING GAS HEAT WITH DIRECT SPARK IGNITION AND MODULATING WHEEL ECONOMIZER
PROVIDE ERV-1 WITH PACKAGED DX-COOLING, 51.5 MBH TOTAL AND 38.2 MBH SENSIBLE CAPACITY (77.1°F/65.4°F EDB/EWB, 55.1°F/55.0°F LDB/LWB)

ENERGY RECOVERY WHEEL PERFORMANCE SCHEDULE

BASIS OF DESIGN = GREENHECK

TAG	AIR STREAM	AIRFLOW (CFM)	S.P. (IN.WG.)	WINTER OPERATION						SUMMER OPERATION						WEIGHT (LBS)	TAG AHU
				E.D.B.(°F)	E.W.B.(°F)	R.H.(%)	L.D.B.(°F)	L.W.B.(°F)	EFF.(%)	E.D.B.(°F)	E.W.B.(°F)	R.H.(%)	L.D.B.(°F)	L.W.B.(°F)	EFF.(%)		
ERW-1	OUTSIDE AIR	1600	-	-10.0	-11.0	-	53.0	42.2	78.8	87.8	73.3	-	77.7	65.4	78.8	-	ERV-1
	EXHAUST AIR	1600	-	70.0	-	25.0	7.0	6.6		75.0	*	50.0	85.1	71.5			
ERW-2	OUTSIDE AIR	6310	-	-10.0	-11.0	-	52.7	42.0	78.4	87.8	73.3	-	77.8	65.1	78.4	-	ERV-*
	EXHAUST AIR	6310	-	70.0	-	25.0	7.3	6.8		75.0	*	50.0	85.0	71.4			

GAS UNIT HEATER PERFORMANCE SCHEDULE

TAG	INPUT (MBH)	OUTPUT (MBH)	THERMAL EFF. %	AIRFLOW (CFM)	FUEL	ELECTRICAL REQUIREMENTS				BASIS OF DESIGN = REZNOR		
						HP	FLA	MOCP	V/PH/HZ	SERVICE	ARRANGEMENT	MODEL
GFUH-1	260	239	92	4430	NAT GAS	1/4	6.3	15.0	115/1/60	MULTIFUNCTION SPACE	HORIZONTAL	UEAS-260

FAN PERFORMANCE SCHEDULE

TAG	AIRFLOW (CFM)	T.S.P (IN.WG.)	NOISE (SONES)	RPM	DRIVE	ELECTRICAL REQUIREMENTS					BASIS OF DESIGN = (G) GREENHECK, (C) CAPTIVEAIRE		
						HP	BHP	WATTS	AMPS	V/PH/HZ	SERVICE	ARRANGEMENT	MODEL
EF-1	1260	0.75	10.5	1067	BELT	0.5	0.4	-	-	460/3/60	KITCHEN HOOD (KH-1)	UPBLAST	(C) NCA14FA
EF-2	3525	1.50	19	939	BELT	2.0	1.5	-	-	460/3/60	KITCHEN HOOD (KH-2)	UPBLAST	(C) NCA24HPFA
EF-3	3225	1.50	17.9	921	BELT	2.0	1.4	-	-	460/3/60	KITCHEN HOOD (KH-3)	UPBLAST	(C) NCA24HPFA
EF-4	1000	0.50	13.1	1357	BELT	0.5	0.3	-	-	120/1/60	DISHWASHER HOOD (KH-4)	UPBLAST	(C) DU50HFA
EF-5	150	0.50	5.6	1107	DIRECT	1/10	-	-	2.6	120/1/60	KITCHEN RESTROOM/JANITOR	DOWNBLAST	(G) G-070-VG

MAKE-UP AIR HANDLER PERFORMANCE SCHEDULE

BASIS OF DESIGN = CAPTIVEAIRE

TAG	AIRFLOW (CFM)	MIN.O.A. (CFM)	E.S.P (IN.WG.)	FUEL	RPM	COOLING COIL				CONDENSER						HEATING				ELECTRICAL REQUIREMENTS							WEIGHT (POUNDS)	MODEL
						EDB/EWB	LDB/LWB	TOTAL (MBH)	SENSIBLE (MBH)	SEER	NOMINAL (TONS)	REFRIGERANT	MCA	MOCP	VOLTAGE	E.D.B. (°F)	L.D.B. (°F)	INPUT CAP (MBH)	OUTPUT CAP (MBH)	HP	BHP	VFD	MCA	LRA	MOCP	VOLTAGE		
MAU-1	1134	1134	0.35	NAT GAS	823	84/70	72/65	21.8	15.3	14.0	3.0	R-410a	7.7	15.0	460/3/60	-5	66	95	87	1.0	0.3	NO	-	-	-	460/3/60	1550	A1-D250-G10-MPU
MAU-2	6074	6074	0.50	NAT GAS	911	84/70	72/64	131.9	92.5	14.0	5.0, 5.0, 5.0	R-410a	8.5/8.5/8.5	15/15/15	460/3/60	-5	66	510	465	5.0	4.1	NO	-	-	-	460/3/60	3000	A3-D500-G18-MPU

CONDENSING UNITS ARE PART OF MAU BUT REQUIRE SEPARATE POWER (EACH) - MAU-1 HAS ONE CONDENSER, MAU-2 HAS THREE CONDENSERS
PROVIDE WITH 25-1 MODULATING GAS HEAT, ROOM OVERRIDE SENSOR.

ELECTRIC WALL HEATER PERFORMANCE SCHEDULE

TAG	OUTPUT (MBH)	AIRFLOW (CFM)	MTG.HT. AFF (IN)	ELECTRICAL REQUIREMENTS		BASIS OF DESIGN = BERKO	
				KW	V/PH/HZ	SERVICE	MODEL
WH-1	5.1	100	12"	2.0	120/1/60	MULTIPLE	HTI50295

ELECTRIC CABINET UNIT HEATER PERFORMANCE SCHEDULE

TAG	OUTPUT (MBH)	AIRFLOW (CFM)	MTG.HT. AFF (IN)	ELECTRICAL REQUIREMENTS		BASIS OF DESIGN = BERKO	
				KW	V/PH/HZ	SERVICE	MODEL
CUH-1	34.1	500	6"	10.0	480/3/60	VESTIBULE	CUH5945

PADDLE FAN PERFORMANCE SCHEDULE

TAG	AIRFLOW (CFM)	RPM	QTY BLADES & DIA(IN)	ELECTRICAL REQUIREMENTS			BASIS OF DESIGN - BIG ASS FANS		
				WATTS	AMPS	V/PH/HZ	SERVICE	ARRANGEMENT	MODEL
PF-1	-	56	8, 168"	-	1.00	208/1/60	MULTIFUNCTION	AIRFOIL BLADES	ESSENCE 14FT

PROVIDE WITH 'SMARTSENSE' CONTROLLER INSTALLED IN LOCKABLE COVER

BFP PERFORMANCE SCHEDULE

TAG	SIZE	FLOW RATE (GPM)	W.P.D (PSI)	MAX. WORK'G. TEMPERATURE (DEGREES F)	MAX. WORK'G. PRESSURE (PSI)	TESTABLE (Y) OR (N)	BASIS OF DESIGN = ZURN-WILKINS		
							BODY STYLE*	SERVICE	MODEL
BFP-1	1-½"	65.0	14.0	180	175	Y	RPZ	WATER ENTRANCE	975XL2
BFP-2	1-½"	65.0	14.0	180	175	Y	RPZ	WATER ENTRANCE	975XL2

TEMPERATURE MIXING VALVE PERFORMANCE SCHEDULE

TAG	FLOW RATE (GPM)	INLET CONNECTION (INCHES)	OUTLET CONNECTION (INCHES)	W.P.D (PSIG)	SET POINT (DEGREES F.)	PROVIDE SPARE CARTRIDGE (Y) OR (N)	BASIS OF DESIGN = SYMMONS		
							SERVICE	ARRANGEMENT	MODEL
TMV-1	35.0	1"	1-¼"	9.0	110°F	Y	DOM HW	WALL	7-500-W

PUMP PERFORMANCE SCHEDULE

TAG	FLOW RATE (GPM)	HEAD (FT.WG)	IMPEL. SIZE	RPM	EFF %	ELECTRICAL REQUIREMENTS					BASIS OF DESIGN = TACO		
						HP	BHP	WATTS	AMPS	V/PH/HZ	SERVICE	ARRANGEMENT	MODEL
CP-1	4.0	10.0	-	3250	-	1/25	-	-	0.84	120/1/60	DOM HW RECIRC	CARTRIDGE	00885

CP-1 SHALL BE STAINLESS STEEL CONSTRUCTION

GAS WATER HEATER PERFORMANCE SCHEDULE

TAG	STORAGE (GALS)	INPUT (MBH)	W.P.D (FT.WG)	RECOVERY @100°F RISE (GPH) *	WORKING PRESSURE (PSIG)	INLET CW TEMP (DEG F)	OUTLET HW TEMP (DEG F)	ELECTRICAL REQUIREMENTS			BASIS OF DESIGN = A.O. SMITH		
								AMPS	WATTS	V/PH/HZ	SERVICE	FUEL	MODEL
GWH-1	100.0	250.0	-	291.0	150.0	40.0	140.0	6.2	-	120/1/60	BUILDING DHW	NAT GAS	BTH250A

MECHANICAL AND PLUMBING SYMBOLS AND ABBREVIATIONS LEGEND

NOTE - USE SYMBOLS AND ABBREVIATIONS AS APPLICABLE FOR THIS MECHANICAL DRAWING SET.
SOME SYMBOLS AND ABBREVIATIONS IN THIS LEGEND MAY NOT APPLY.

SYMBOL	DESCRIPTION
CA	COMPRESSED AIR PIPING (CA)
C	CONDENSATE DRAIN PIPING (C)
CTR	COOLING TOWER RETURN PIPING (CTR)
CTS	COOLING TOWER SUPPLY PIPING (CTS)
CWR	CHILLED WATER RETURN PIPING (CWR)
CWS	CHILLED WATER SUPPLY PIPING (CWS)
FOR	FUEL OIL RETURN PIPING (FOR)
FOS	FUEL OIL SUPPLY PIPING (FOS)
G	GAS PIPING (G)
HWR	HOT WATER RETURN PIPING (HWR)
HWS	HOT WATER SUPPLY PIPING (HWS)
RL	REFRIGERANT LIQUID PIPING (RL)
RG	REFRIGERANT GAS PIPING (RG)
SAN	SANITARY PIPING BELOW FLOOR (SAN)
SAN	SANITARY PIPING ABOVE FLOOR (SAN)
	SANITARY VENT PIPING
RWL	RAINWATER LEADER ABOVE SLAB (RWL)
CW	COLD WATER PIPING (CW)
HW	HOT WATER PIPING (HW)
RHW	RECIRCULATED HOT WATER PIPING (RHW)
	PIPE CAP
	DIRECTION OF FLUID FLOW
	ELBOW UP
	ELBOW DOWN
	PIPE TEE UP
	PIPE TEE DOWN
	PIPE REDUCER
	PIPE WITH GUIDE
	PIPE WITH ANCHOR
	BUTTERFLY VALVE
	OS & Y GATE VALVE

SYMBOL	DESCRIPTION
	BACKFLOW PREVENTER (BFP)
	CHECK VALVE
	BALANCING VALVE (ADJUSTABLE)
	AUTOMATIC FLOW CONTROL VALVE
	RELIEF VALVE (RV)
	BALL VALVE
	BALL VALVE
	3/4" BALL VALVE WITH 3/4" HOSE END
	GATE VALVE
	PRESSURE REDUCING VALVE
	FUSIBLE VALVE
	STRAINER W/BLOWDOWN BALL VALVE
	2-WAY CONTROL VALVE
	SOLENOID VALVE
	3-WAY CONTROL VALVE
	3-WAY CONTROL VALVE (TOP VIEW)
	4-WAY CONTROL VALVE (TOP VIEW)
	2 BUTTERFLY VALVES W/SINGLE ACTUATOR
	BUTTERFLY VALVE W/ACTUATOR
	TRIPLE-DUTY VALVE
	UNION
	PIPE FLANGE
	PUMP WITH FLANGES
	BASE MOUNTED PUMP
	CARTRIDGE TYPE INLINE PUMP
	VERTICAL INLINE PUMP
FC	FLEXIBLE PIPE CONNECTION (FC)
	PITCH DOWN
	PETCOCK

SYMBOL	DESCRIPTION
PG	PRESSURE GAGE WITH GAGE COCK
T	THERMOMETER IN WELL
PF	WATER FLOW SWITCH
PS	PRESSURE SWITCH OR SENSOR
T	EMURSION TEMPERATURE SENSOR
SD	DUCT MOUNTED SMOKE DETECTOR
TS	ROOM TEMPERATURE SENSOR
TS	THERMOSTAT OR SENSOR ON WALL
TG	TSTAT OR SENSOR W/ TAMPERPROOF GUARD
V	MANUAL AIR VENT
2	NOTE TAG (NUMBER)
A 250	AIR DEVICE TAG (LETTER) WITH CFM
12	ROOM NUMBER
	TURNING VANES
	DUCT W/MANUAL DAMPER
	DUCT W/FLEXIBLE CONNECTION (FC)
	LAGGED DUCT
	DUCT W/ACOUSTIC LINING
	DUCT W/SQUARE-TO-ROUND TRANSITION
	FLEXIBLE DUCT
MOD	MOTOR OPERATED DAMPER
	AIRFLOW OUT
	AIRFLOW IN
ϕ	DIAMETER OR FLAT OVAL
	FIRE DAMPER
	ROUND OR FLAT OVAL DUCT DOWN
	ROUND OR FLAT OVAL DUCT UP
	SUPPLY DIFFUSER
	RETURN GRILLE
	STEAM TRAP
	WATER HAMMER ARRESTOR

ABBREVIATION	DESCRIPTION
AAV	AUTOMATIC AIR VENT
AD	ACCESS DOOR
AFF	ABOVE FINISHED FLOOR
AHU-*	AIR HANDLING UNIT TAG
AMS	AIRFLOW MONITORING STATION
AMPS	AMPERES
AP	ACCESS PANEL
APD	AIR PRESSURE DROP
AS-*	AIR SEPARATOR TAG
ATC	AUTOMATIC TEMPERATURE CONTROL
BD-*	BYPASS DAMPER TAG
BFP-*	BACKFLOW PREVENTER TAG
BHP	BRAKE HORSEPOWER
BTUH	BRITISH THERMAL UNITS PER HOUR
CC-*	COOLING COIL TAG
CFM	CUBIC FEET PER MINUTE
CO	CLEANOUT
CP-*	CIRCULATING PUMP TAG
Cv	VALVE COEFFICIENT
CW	COLD WATER
DB	DRY BULB
dB RE	DECIBELS RELATIVE TO
DC	DOUBLE CHECK
DCA	DOUBLE CHECK ATMOSPHERIC
DEG F	DEGREES FAHRENHEIT
DIA	DIAMETER
DIW	DOWN IN WALL
DN	DOWN
EA	EXHAUST AIR
EAT	ENTERING AIR TEMPERATURE

ABBREVIATION	DESCRIPTION
EDB	ENTERING DRY BULB
EDC-*	ELECTRIC DUCT COIL TAG
EER	ENERGY EFFICIENCY RATIO
EF-*	EXHAUST FAN TAG
EFF	EFFICIENCY
ESP	EXTERNAL STATIC PRESSURE
ET-*	EXPANSION TANK TAG
EWB	ENTERING WET BULB
EWH-*	ELECTRIC WATER HEATER TAG
EWT	ENTERING WATER TEMPERATURE
EXG	EXISTING
EXH	EXHAUST
FC	FLEXIBLE CONNECTION
FCO	FLOOR CLEANOUT
FD	FIRE DAMPER
FD-*	FLOOR DRAIN TAG
FLA	FULL LOAD AMPS
FPHB	FROST PROOF HOSE BIBB
FPM	FEET PER MINUTE
FSD	COMBINATION FIRE & SMOKE DAMPER
FT	FEET
GA.	GAGE
GAL	GALLONS
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
HC-*	HEATING COIL TAG
HP	HORSEPOWER
HRV-*	HEAT RECOVERY VENTILATOR TAG
HW	HOT WATER
HWS/R	HOT WATER SUPPLY AND RETURN

ABBREVIATION	DESCRIPTION
I=B=R	INSTITUTE OF BOILER AND RADIATOR MANUFACTURERS
IN.	INCHES
L-*	LOUVER TAG
LAT	LEAVING AIR TEMPERATURE
LB	POUNDS
LWS/R	LOOP WATER SUPPLY/RETURN
LRA	LOCKED ROTOR AMPS
LWCO	LOW WATER CUTOUT
LWT	LEAVING WATER TEMPERATURE
MAX	MAXIMUM
MBH	THOUSANDS OF BTU PER HOUR
MCA	MINIMUM CIRCUIT AMPACITY
MIN	MINIMUM
NC	NOISE CRITERION
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
OA	OUTSIDE AIR
OBD	OPPOSED BLADE DAMPER
O.D.	OUTSIDE DIAMETER
OED	OPEN ENDED DUCT
OPD	OVERCURRENT PROTECTIVE DEVICE
P-*	PLUMBING FIXTURE TAG
PENET'N	PENETRATION
PF-*	PADDLE FAN TAG
PSIA	POUNDS PER SQUARE INCH ABSOLUTE
PSIG	POUNDS PER SQUARE INCH GAGE
PVC	POLYVINYL CHLORIDE (PIPE)
RA	RETURN AIR
RD	ROOF DRAIN
RDE	RECOMMENDED DUAL ELEMENT FUSE AMPS
RHW	RECIRCULATED HOT WATER

ABBREVIATION	DESCRIPTION
RLA	RUNNING LOAD AMPS
RPM	REVOLUTIONS PER MINUTE
RPS	REVOLUTIONS PER SECOND
RPZ	REDUCED PRESSURE ZONE
RTU	ROOM TEMPERATURE SENSOR
RV	RELIEF VALVE
RWL	RAINWATER LEADER
SA	SUPPLY AIR
SAN	SANITARY (DRAIN & WASTE)
SD	SMOKE DAMPER
SEER	SEASONAL ENERGY EFFICIENCY RATIO
SF	SUPPLY FAN
SP	STATIC PRESSURE
SQFT	SQUARE FEET
ΔT	TEMPERATURE DIFFERENTIAL
TEMP.	TEMPERATURE
TCP	TEMPERATURE CONTROL PANEL
TMV-*	THERMOSTATIC MIXING VALVE TAG
TSP	TOTAL STATIC PRESSURE
TYP	TYPICAL
UH-*	UNIT HEATER TAG
VB	VACUUM BREAKER
VFD	VARIABLE FREQUENCY INVERTER DRIVE
VTR	VENT THRU ROOF
V/PH/HZ	VOLTS/PHASES/HERTZ
WB	WET BULB
WCO	WALL CLEANOUT
WG	WATER GAGE
WPD	WATER PRESSURE DROP
WSA	WIRE SIZING AMPS
WTD	WATER TEMPERATURE DROP
W/	WITH

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Revisions:
1 | 08/04/2016 | ISSUED FOR PERMIT

Date: 08-04-2016
Scale: AS NOTED

MECHANICAL SCHEDULES AND LEGEND

M3.01

Reviewed for Code Compliance
Inspections Division
Portland, Maine
Date: 11/22/16