

	SUPPLY AIR DIFFUSER
	RETURN AIR DIFFUSER
	EXHAUST AIR DIFFUSER
	DIRECTIONAL AIR FLOW
	MANUAL VOLUME DAMPER
	SUPPLY AIR DUCT UP & DOWN
	RETURN AIR DUCT UP & DOWN
	EXHAUST OR OUTSIDE AIR DUCT UP & DOWN
	SUPPLY AIR DUCT UP & DOWN
	RETURN AIR DUCT UP & DOWN
	EXHAUST OR OUTSIDE AIR DUCT UP & DOWN
	WAV TERMINAL UNIT W/ REHEAT COIL
(D)	DEMOLISH
(E)	EXISTING
	CONNECT TO EXISTING
T-F-?	THERMOSTAT
(S)	TEMPERATURE SENSOR
?	NOTE
XX ?	EQUIPMENT DESIGNATOR
	GATE VALVE
	CHECK VALVE
	BALANCING VALVE
	THERMOMETER
	DIRECTION OF FLOW
	PUMP
	STRAINER
	PRESSURE GAUGE
T	PETE'S PLUG
	DOUBLE CHECK ASSEMBLY
	PRESSURE REDUCING VALVE
	UNION
	2-WAY CONTROL VALVE
	3-WAY CONTROL VALVE
	CAP
	MOTORIZED DAMPER
	BALL SHUT OFF VALVE
	FIRE DAMPER
	FIRE / SMOKE DAMPER
	SMOKE DAMPER
	AFF ABOVE FINISH FLOOR
	AHU AIR HANDLING UNIT
	B.D. BOTTOM OF DUCT
	BHP BRAKE HORSEPOWER
	BOG BOTTOM OF GRILLE
	BTU BRITISH THERMAL UNITS
	CFM CUBIC FEET PER MINUTE
	CONN. CONNECTION
	CONT. CONTINUATION
	CW DOMESTIC COLD WATER
	DB DRY BULB
	DIA. DIAMETER
	DIST. DISTRIBUTION
	EXH EXHAUST AIR
	EDB ENTERING DRY BULB TEMPERATURE
	EWB ENTERING WET BULB TEMPERATURE
	EWT ENTERING WATER TEMPERATURE
	FF FINISH FLOOR
	FIXT. FIXTURE
	F.O.B. FLAT ON BOTTOM
	FM FEET PER MINUTE
	FPS FEET PER SECOND
	FT. FEET / FOOT
	GA. GAUGE
	GEXH GREASE EXHAUST AIR DUCT
	GPM GALLONS PER MINUTE
	H HEIGHT
	HP HORSEPOWER
	I.D. INSIDE DIAMETER
	IN. INCHES
	L LENGTH
	LBS. POUNDS
	LDB LEAVING DRY BULB
	LWB LEAVING WET BULB
	LWT LEAVING WATER TEMPERATURE
	MA MAKE UP AIR
	MAX. MAXIMUM
	MBH THOUSANDS OF BTUs PER HOUR
	MD MOTORIZED DAMPER
	MIN. MINIMUM
	MVD MANUAL VOLUME DAMPER
	NC NOISE CRITERIA
	N.C. NORMALLY CLOSED
	N.I.M. NOT IN MECHANICAL
	NO. NUMBER
	N.O. NORMALLY OPEN
	O.A. OUTSIDE AIR
	P PERSON
	PSI POUNDS PER SQUARE INCH
	P/T PRESSURE / TEMPERATURE
	R.A. RETURN AIR
	RECT. RECTANGULAR
	REQ'D REQUIRED
	S.A. SUPPLY AIR
	S.P. STATIC PRESSURE
	SQ. SQUARE
	TEMP. TEMPERATURE
	TYP. TYPICAL
	VAV VARIABLE AIR VOLUME
	W WIDTH
	WB WET BULB
	WPD WATER PRESSURE DROP
	Ø DIAMETER
	— HWS — (HWS) HEATING WATER SUPPLY
	— HWR — (HWR) HEATING WATER RETURN
	— HWRR — (HWRR) HEATING WATER REVERSE RETURN
	— CHS — (CHS) CHILLED WATER SUPPLY
	— CHR — (CHR) CHILLED WATER RETURN
	— PC — PUMPED CONDENSATE
	— S — (HPS) HIGH PRESSURE STEAM
	— -/- — -/- (HT) HEAT TRACED DOMESTIC HOT WATER

BOTTOM DUCT

TOP DUCT

DUCT CROSSING

TURNING VANES IN ALL SQUARE ELBOWS AND TEES

LINED DUCTWORK

DOUBLE WALL DUCT

RECT. TO RECT.

RECT. TO ROUND

SPECIFICATION REFERENCE
SA = SUPPLY DIFFUSER
RA = MATCHED RETURN
EXH = EXH GRILLE

TRANSITIONS

RETURN AIR CEILING DIFFUSER PRICE PDDR OR APPROVED EQUAL

ARROWS INDICATE DIRECTION OF AIR FLOW

SUPPLY AIR CEILING DIFFUSER PRICE SMCD OR APPROVED EQUAL BRANCH DUCT

SPIN-IN FITTING WHERE APPLICABLE. GENFLEX SM-1DEL (WITH DAMPER AND 45° EXTRACTOR) OR APPROVED EQUAL

10X6 SA (W" x "H") SA MAIN DUCT

AIR TERMINALS

NECK SIZE

BALANCED AIRFLOW, CFM

SIDEWALL DIFFUSER SEE PLANS

SOFFIT WALL

TRANSITION FROM RECTANGULAR TO ROUND (MIN. CROSS-SECTIONAL AREA TO MATCH ROUND)

MANUAL VOLUME DAMPER; LOCATE BY MAIN DUCT IN ACCESSIBLE LOCATION

ROUND DUCT TRANSITION W/ SPIN-IN FITTING OFF TOP OF RECTANGULAR MAIN

ELBOWS

ROUND OR RECTANGULAR MAIN

6"

8" SA/RA-ROUND SA/RA DUCT

1"

ROUND DUCT W/ CONICAL FITTING

SMOOTH RADIUS ELBOW, W/O VANES
 $R/W = 1.0$

$15^\circ < A < 90^\circ$

MITERED ELBOW
 $A < 15^\circ$

MARK NUMBER		RTU 1	RTU 2	RTU 3	RTU 4
SYSTEM		DRY GOODS AND RESTROOMS	GAMING	DINING	KITCHEN
TYPE					
SUPPLY FAN	TOTAL CFM	5,645	2,995	2,400	2,000
	MIN. OSA (CFM)	1,740	1,185	1020	185
	EXTERNAL S.P., "H2O (EXCL. FILTER)	1.25"	1.0	1.0	1.0
	RPM	938	949	836	1,464
	BHP	3.53	1.63	1.77	1.62
2-SPEED(VFD) (NOTE 2)		YES	NO	NO	NO
POWER EXH. FAN		YES	YES	YES	YES
POWER EXH. FAN TYPE		CENTRIFUGAL	PROPELLER	PROPELLER	PROPELLER
ECONOMIZER 100%		YES	YES	YES	YES
FILTER TYPE		30%	30%	30%	30%
HEATING	GAS HEATING INPUT, MBH	336/268	188/151	150/105	150/105
	HEATING STAGES	2	2	2	2
	THERMAL EFFICIENCY, %	81	81	82	82
COOLING	NOMINAL CAPACITY (TONS)	15	7.5	6	5
	STAGES	2	2	1	1
	NET TOTAL/SENSIBLE COOLING(MBH)	169/150	86.5/81.7	69/68	57/46
	ENT. EVAP AIR TEMP (DB/WB.)	81/63	83/63	83/63	78/64
	AMBIENT AIR (°F)	95	95	95	95
	IEER	13.5	13.0	13.0	15.2 SEER
	REFRIGERANT TYPE	R-410A	R-410A	R-410A	R-410A
DESIGN WEIGHT WITH CURB (LBS.)		2,635	1,300	1,110	835
SMOKE DETECTOR IN RETURN DUCT		YES	YES	YES	YES
REMOTE CO2 SENSOR		NO	YES	YES	NO
FLUE DEFLECTOR		YES	YES	YES	YES
VIBRATION ISOLATION CURB		YES	YES	NO	NO
BASIS OF DESIGN IS CARRIER 48HC		17B	08B	07B	06B

NOTES:

1. CONTROLS SHALL BE PACKAGED THERMOSTATS;
2. PROVIDE FAN CONTROL TO REDUCE SUPPLY AIRFLOW TO 2/3 OF FULL FAN SPEED WHEN COOLING DEMAND IS LESS THAN OR EQUAL TO 50% PER OEEC 2014, 503.2.10.3.2.

TYPE	DUCTED	DUCTED
SYSTEM	BANQUET	OFFICES
INDOOR UNIT MARK NUMBER	IHP 1	IHP 2
OUTDOOR UNIT MARK NUMBER	OHP 1	OHP 2
NOMINAL CAPACITY (TON)	1.5	1.5
OUTSIDE AIR CFM	170	170
NOMINAL COOLING CAPACITY, BTUH	18,000	18,000
NOMINAL HEATING CAPACITY, BTUH	20,000	20,000
DRY AIRFLOW (LOW/MED/HIGH)	529/582/635	529/582/635
CONDENSATE PUMP	YES	YES
REFRIGERANT TYPE	R-410A	R-410A
SEER	17.5	17.5
HSPF	10.6	10.6
MAX PIPING LENGTH (FT.)	164	164
MAX PIPING ELEV. CHANGE (FT.)	98	98
INDOOR UNIT DESIGN WT.	80	80
OUTDOOR UNIT DESIGN WT.	150	150
OUTDOOR UNIT MOUNTING KIT	WALL	WALL
BASIS OF DESIGN: DAIKIN	RZQ18PVJ9J/FBQ18PVJU	RZQ18PVJ9J/FBQ18PVJU

GENERAL NOTES FOR OHP-1 & OHP-2 :

1. PROVIDE OUTDOOR HEAT PUMP WITH CRANKCASE HEATER, TXV, LOW AMBIENT CONTROL, WINTER START CONTROL, HI-LOW PRESSURE SWITCH, WIND BAFFLE AND ISOLATION RELAY.
2. PROVIDE WIRELESS WALL MOUNTED THERMOSTAT.
3. PROVIDE UNIT WITH A DAIKIN KRP1C74 ADAPTER BOARD TO CONTROL 2-POSITION OSA INTAKE DAMPER TO OPEN/CLOSE WITH FAN OPERATION.

MARK NUMBER	EF 1	EF 2
DESIGN ELEVATION, FEET	3,200	3,200
TYPE	ROOF	CEILING
SYSTEM	RESTROOMS	RESTROOM 129
CFM	1,475	100
TOTAL S.P. (IN H2O)	0.5	0.3
DRIVE	DIRECT	DIRECT
SOLID STATE SPEED CONTROL	YES	YES
FAN RPM	1,443	704
MOTOR HP	1/2	48W
CONTROLLED BY	CONTINUOUS	LIGHT SWITCH
INTERLOCK WITH	RTU-1	---
WHEEL TYPE	B.I.	F.C.
MOTORIZED DAMPER	YES	BACKDRAFT ONLY
ISOLATION	YES	YES
DESIGN WEIGHT (LBS)	51	21
MOUNTING	ROOF CURB	CEILING
MAX. SONES	12.8	2
DISCHARGE/CONFIGURATION	DOWNBLAST/ROOF	WALL LOUVER
MOTOR OUT OF AIR STREAM	YES	NO
BASIS OF DESIGN: GREENHECK	G	SP

MARK NUMBER	EH 1	EH 2	EH 3	EH 4	EH 5	
TYPE	CEILING	CEILING	WALL**	CEILING	CEILING	
SYSTEM	SHOWER	SHOWER	RISER ROOM	VESTIBULE 120	VESTIBULE 141, 146, 101	
KW (120V)	0.5	1.0	1.5	1.0	1.5	
CONTROLLED BY:	TIMER SWITCH*	TIMER SWITCH*	BUILT IN THERMOSTAT	BUILT IN THERMOSTAT	BUILT IN THERMOSTAT	
SWITCH LOCATION	WALL (48"A.F.F.)	WALL (48"A.F.F.)	---	---	---	
DESIGN WEIGHT (LBS)	10	10	10	10	10	
BASIS OF DESIGN: QMARK	QCH1101F	QCH1101F	CWH115	QCH1101F	QCH1151F	
ELECTRICAL CONNECTION	120V	120V	120V	120V	120V	

* 30 MINUTE TIMER SWITCH, SEE ELECTRICAL
** MOUNT ON WALL @ 6" A.F.F.

No.	Description	Date
1	Owner/CMGC Revisions	10/19/2016