

MECHANICAL LEGEND

	SUPPLY AIR DIFFUSER	AFH	ABOVE FINISH FLOOR
	RETURN AIR GRILLE	AHU	AIR HANDLING UNIT
	EXHAUST AIR GRILLE	B.D.	BOTTOM OF DUCT
	PERFORATED RETURN AIR PANEL	BHP	BRAKE HORSEPOWER
	DIRECTIONAL AIR FLOW	BTU	BRITISH THERMAL UNITS
	MANUAL VOLUME DAMPER	CFM	CUBIC FEET PER MINUTE
	SUPPLY OR OUTSIDE AIR DUCT UP & DOWN	CONN.	CONNECTION
	RETURN AIR DUCT UP & DOWN	CONT.	CONTINUATION
	EXHAUST AIR DUCT UP & DOWN	CW	DOMESTIC COLD WATER
	VAV TERMINAL UNIT	DB	DRY BULB
	WT TERMINAL UNIT	DIA.	DIAMETER
	EXISTING	DIST.	DISTRIBUTION
	CONNECT TO EXISTING	EA	EXHAUST AIR
	THERMOSTAT OR TEMP. SENSOR	EDB	ENTERING DRY BULB TEMPERATURE
	NOTE	EWB	ENTERING WET BULB TEMPERATURE
	EQUIPMENT DESIGNATOR	EWT	ENTERING WATER TEMPERATURE
	BALL VALVE	FF	FINISH FLOOR
	GATE VALVE	FIXT.	FIXTURE
	CHECK VALVE	FPM	FEET PER MINUTE
	BALANCING VALVE	FPS	FEET PER SECOND
	THERMOMETER	FT.	FEET / FOOT
	DIRECTION OF FLOW	GA.	GALLONS PER MINUTE
	PUMP	GPM	GALLONS PER MINUTE
	STRAINER	H	HEIGHT
	PRESSURE GAUGE	HP	HORSEPOWER
	PETE'S PLUG	I.D.	INSIDE DIAMETER
	DOUBLE CHECK ASSEMBLY	IN.	INCHES
	PRESSURE REDUCING VALVE	L	LENGTH
	UNION	LBS.	POUNDS
	2-WAY CONTROL VALVE	LDB	LEAVING DRY BULB
	3-WAY CONTROL VALVE	LWB	LEAVING WET BULB
	CAP	LWT	LEAVING WATER TEMPERATURE
	SMOKE DETECTOR	MAX.	MAXIMUM
	MOTORIZED DAMPER	MBH	THOUSANDS OF BTUS PER HOUR
	SEISMIC BRACING	MIN.	MINIMUM
	LATERAL BRACING	NC	NOISE CRITERIA
	LONGITUDINAL BRACING	N.C.	NORMALLY CLOSED
	LONGITUDINAL & LATERAL BRACING	N.I.M.	NOT IN MECHANICAL
	NEW WORK	NO.	NUMBER
	HWS (HWS) HEATING WATER SUPPLY	N.O.	NORMALLY OPEN
	HWR (HWR) HEATING WATER RETURN	O.A.	OUTSIDE AIR
	FIRE DAMPER	P	PERSON
	FIRE / SMOKE DAMPER	PSI	POUNDS PER SQUARE INCH
	SMOKE DAMPER	P/T	PRESSURE / TEMPERATURE
	SEISMIC BRACING	R.A.	RETURN AIR
	LATERAL BRACING	RECT.	RECTANGULAR
	LONGITUDINAL BRACING	REQ'D	REQUIRED
	LONGITUDINAL & LATERAL BRACING	S.A.	SUPPLY AIR
	LONGITUDINAL & LATERAL BRACING	S.P.	STATIC PRESSURE
	LONGITUDINAL & LATERAL BRACING	SO.	SQUARE
	LONGITUDINAL & LATERAL BRACING	TEMP.	TEMPERATURE
	LONGITUDINAL & LATERAL BRACING	TYP.	TYPICAL
	LONGITUDINAL & LATERAL BRACING	VAV	VARIABLE AIR VOLUME
	LONGITUDINAL & LATERAL BRACING	W	WIDTH
	LONGITUDINAL & LATERAL BRACING	WB	WET BULB
	LONGITUDINAL & LATERAL BRACING	WPD	WATER PRESSURE DROP
	LONGITUDINAL & LATERAL BRACING	Ø	DIAMETER

PACKAGE HP-ERV UNIT

MARK NUMBER	DOAS-1 7.5 TON	RTU-1 7.5 TON	RTU-2 7.5 TON	RTU-3 7.5 TON
SYSTEM	BUILDING VENTILATION	MULTIPURPOSE #1	MULTIPURPOSE #2	MULTIPURPOSE #3
TYPE	CV ENERGY RECOVERY UNIT	VAV ENERGY RECOVERY UNIT	VAV ENERGY RECOVERY UNIT	VAV ENERGY RECOVERY UNIT
SUPPLY FAN				
TOTAL SA CFM	3000	3000	3000	3000
MIN. CFM	3000	1200	1200	1200
OSA	100%	1056 CFM	890 CFM	1300 CFM
CO2 CONTROL/MIN OSA	NA	YES/100	YES/100	YES/200
FAN BHP/MOTOR HP	2.83/4.0	2.24/4.0	2.91/4.0	2.91/4.0
TOTAL SP. (*H2O)	3.9	3.1"	3.1"	3.1"
VFD/PRESSURE CONTROL	YES*	YES	YES	YES
EXHAUST FAN				
TOTAL EXHAUST CFM	3000	3000	3000	3000
MIN. CFM	3000	3000	3000	3000
FAN BHP/MOTOR HP	1.5/4.0	1/4.0	1/4.0	1/4.0
EXTERNAL SP. (*H2O)	1.25"	1.25"	1.25"	1.25"
VFD	YES*	YES	YES	YES
FILTER SIZE	TO FIT UNIT	TO FIT UNIT	TO FIT UNIT	TO FIT UNIT
FILTER TYPE - EXHAUST	2"- 30%	2"- 30%	2"- 30%	2"- 30%
FILTER TYPE - SUPPLY	4"- MERV 13	4"- MERV 13	4"- MERV 13	4"- MERV 13
HEATING				
GAS INPUT (MBH)	200 MBH	200 MBH	200 MBH	200 MBH
EFF.	80%	80%	80%	80%
MODULATING	5:1 TURNDOWN	5:1 TURNDOWN	5:1 TURNDOWN	5:1 TURNDOWN
HEAT PUMP-HEAT-COOL				
TOTAL CLG. (TONS)	7.5	7.5	7.5	7.5
SENSIBLE CLG. (MBH)	84.3	88.3	88.3	88.3
ENT. EVAP AIR TEMP (DB/WB.)	81/64.7	82.1/63.1	82.1/63.1	82.1/63.1
LVG. EVAP AIR TEMP (DB/WB.)	55.3/54.9	55.2/52.9	55.2/52.9	55.2/52.9
AMBIENT AIR (°F)	95	95	95	95
SEER/EER	12.3 EER/19.6 IEER	12.3 EER/19.6 IEER	12.3 EER/19.6 IEER	12.3 EER/19.6 IEER
REFRIGERANT	410A	410A	410A	410A
COMPRESSOR	(1)INVERTOR/(1)FIXED	(1)INVERTOR/(1)FIXED	(1)INVERTOR/(1)FIXED	(1)INVERTOR/(1)FIXED
HP HEATING. (MBH)	96.8	55.3	55.3	55.3
ENT. EVAP AIR TEMP (DB.)	57.9	57.9	57.9	57.9
LVG. EVAP AIR TEMP (DB.)	87.4	74.8	74.8	74.8
AMBIENT AIR (°F)	47	22	22	22
HEAT WHEEL				
RETURN AIR TEMP, SUMMER	75/62	NONE		
RETURN AIR TEMPS, WINTER	70/92			
SUMMER LEAVING AIR TEMP	81/67			
WINTER LEAVING AIR TEMP	54.5/48.4			
SUMMER EFFECTIVENESS TOTAL/SENS.	0.67/0.68			
HEATING EFFECTIVENESS TOTAL/SENS	0.67/0.68			
COOLING CAPACITY	53.4			
HEATING CAPACITY	163.7			
BY-PASS/STOP WHEEL	NO/YES			
DESIGN WEIGHT (LBS.)	2910			
SMOKE DETECTOR (RETURN/EXHAUST DUCT)	YES			
ROOF CURB - VERTICAL DISCHARGE	YES			
SUPPLY DUCT DISCHARGE THERMOSTAT	YES			
BASIS OF DESIGN - DAIKIN REBEL	DPS007A			

*FOR BALANCING

OUTDOOR UNITS - HEAT PUMPS

MARK NUMBER	HP 1	HP 2
SYSTEM - VRV - HEAT RECOVERY	WHOLE BUILDING	WHOLE BUILDING
TYPE	HEAT RECOVERY HEAT PUMP	HEAT RECOVERY HEAT PUMP
DAIKIN MODEL (BASIS OF DESIGN)	REYQ264TTJU	REYQ264TTJU
DAIKIN UNIT COMBINATION	REYQ120 & REYQ144	REYQ120 & REYQ144
NORMAL COOLING CAPACITY	22 TONS	22 TONS
NORMAL HEATING CAPACITY	297,000 BTUH	297,000 BTUH
MAX PIPING LENGTH	540 FT	540 FT
REFRIGERANT	410 A	410 A
REFRIGERANT CHARGE	25.8+25.8 LBS	25.8+25.8 LBS
OUTDOOR DESIGN TEMPS	92/22	92/22
WEIGHT	1483	1483
EER - NON DUCTED	--	--
IEER - NON DUCTED/DUCTED	21.6/18.1	21.6/18.1
HEATING COP - NON / DUCTED	3.6/3.4	3.6/3.4
HEATING COP 17F - NON / DUCTED	2.4/2.3	2.4/2.3
POWER - VOLTS/HZ/PH	208-230/60/3	208-230/60/3
COMPRESSOR TYPE	INVERTOR	INVERTOR
MCA	43 + 55	43 + 55
MOC	50+70	50+70
RLA	(15.0+15.0)+(16.2+22.6)	(15.0+15.0)+(16.2+22.6)
HEIGHT	67"	67"
WIDTH	97"	97"
DEAPTH	30.5"	30.5"

WALL/CEILING HUNG AIR CONDITIONER

SYSTEM	DATA ROOM
INDOOR UNIT MARK NUMBER	IAC 1
TYPE (INDOOR UNIT)	WALL HUNG
OUTDOOR UNIT MARK NUMBER	OAC 1
TYPE (OUTDOOR UNIT)	WALL HUNG PLATFORM
COOLING CAPACITY	12,000 BTU/HR
CFM (HIGH/MED/LOW)	290/260/212
EFFICIENCY (SEER)	17
MAX PIPING LENGTH	65 FT
MAX PIPING ELEV. CHANGE	23 FT.
INDOOR UNIT DESIGN WT.	20 LBS.
OUTDOOR UNIT DESIGN WT.	75 LBS.
INDOOR UNIT MOUNTING HT.	54" *
PUMPED CONDENSATE	YES - **
BOD: DAIKIN	

* - COORDINATE EXACT MOUNTING LOCATION AND HEIGHT WITH DATA ROOM EQUIPMENT.
** - ROUTE CONDENSATE TO FLOOR DRAIN

ELECTRIC WALL HEATER

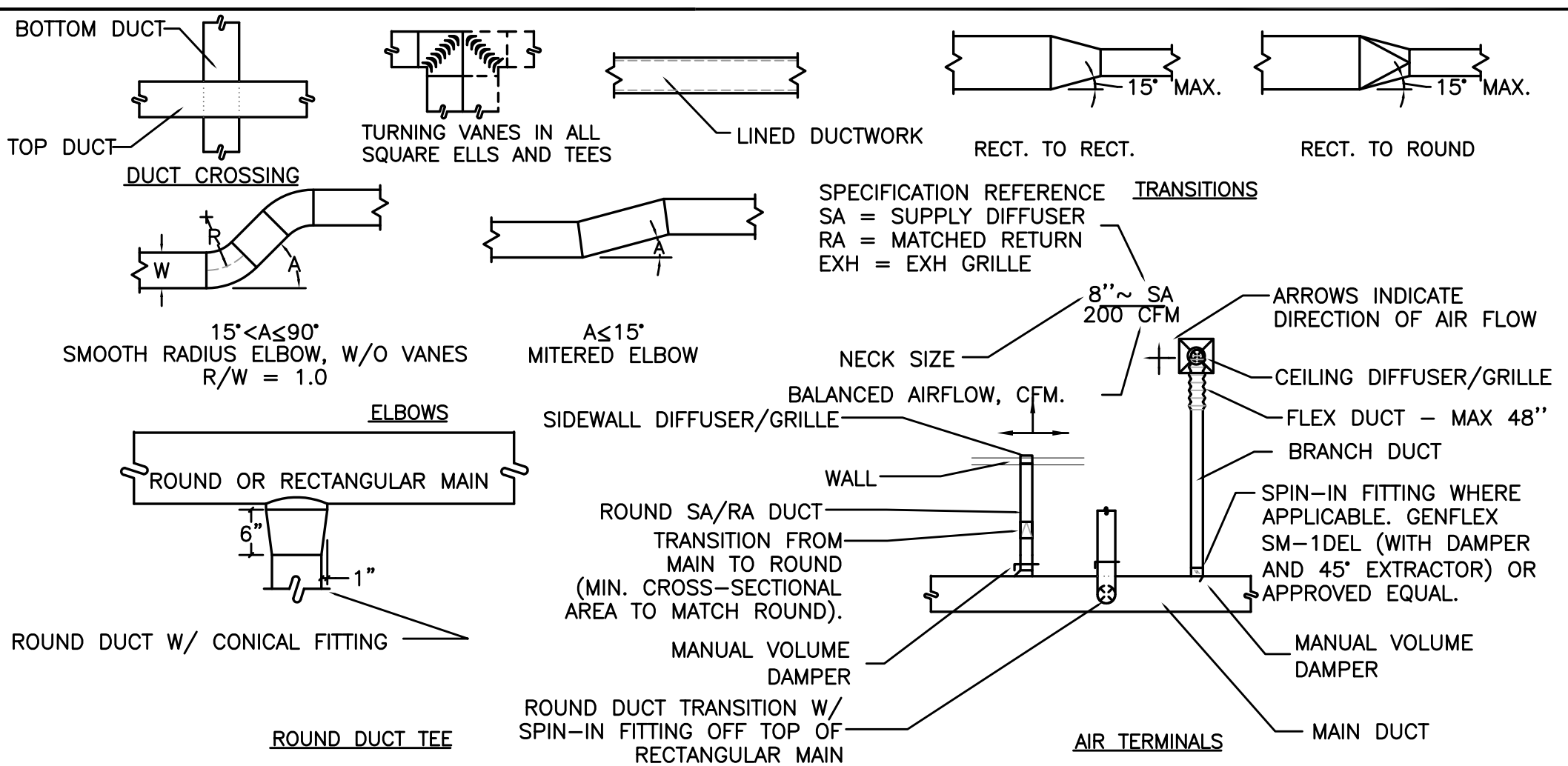
MARK NUMBER	EH 1	EH 2
SERVICE	STAIR 2	WOMEN 202
TYPE	WALL MOUNT	WALL MOUNT
OUTPUT	1.5 KW	1.5 KW
MOUNTING HEIGHT	18" A.F.F.	18" A.F.F.
CONTROL	INTEGRAL T-STAT	INTEGRAL T-STAT
BASIS OF DESIGN: QMARK		
TEMP SET POINT	65°F	65°F

EXHAUST FANS

MARK NUMBER	EF 1
TYPE	CEILING
SYSTEM	BATTERY STORAGE/ELECT. 133
CFM	100
TOTAL S.P. (IN H2O)	0.3
DRIVE	DIRECT
SOLID STATE SPEED CONTROL	YES
FAN RPM	704
MOTOR HP	48W
WHEEL TYPE	F.C.
MOTORIZED DAMPER	BACKDRAFT ONLY
ISOLATION	YES
DESIGN WEIGHT (LBS)	21
MOUNTING	CEILING
MAX. SONES	2
DISCHARGE/CONFIGURATION	WALL LOUVER
MOTOR OUT OF AIR STREAM	NO
BASIS OF DESIGN: GREENHECK	SP

EXHAUST FAN TO OPERATE 24/7 CONTINUOUSLY PER OSMC 608.6.1, 2. A SAIL SWITCH IS PROVIDED IN THE DISCHARGE DUCT TO SEND SIGNAL TO FIRE-ALARM UPON FAN FAILURE. CONNECT BOTH SAIL SWITCH & FAN TO EMERGENCY POWER.

AIR DISTRIBUTION DETAILS



EXHAUST/SUPPLY FANS

MARK NUMBER	SF 1
TYPE	PROP-HOOD * DIRECT DRIVE
SYSTEM	SMOKE PURGE
CFM	20,000
TOTAL SP. (IN H2O)	0.25
RPM	701
TIP SPEED (FPM)	8815
MOTOR WATTS/HP	5 HP/2.65 BHP
CONTROLLED BY	FIRE ALARM
INTERLOCK WITH	LOBBY LOUVERS
FAN SPEED CONTROLLER	VFD **
WHEEL TYPE	PROP
DAMPER	24 V
ISOLATION	OSHPD ***
DESIGN WEIGHT (LBS)	1100
MAX. SONES	32.0
ELECTRICAL ****	208/60/3
BASIS OF DESIGN:	GREENHECK RCS3-48-623

* - PROPELLER HOODED ROOF DIRECT DRIVE SUPPLY FAN WITH CAST ALUMINUM PROPELLER. UNIT TO INCLUDE ROOF CURB WITH INTEGRAL 24 V DAMPER/ACTUATOR.
** - VFD WITH INTEGRAL STARTER/DISCONNECT, VFD TO RAMP FAN TO FULL SPEED OVER 30 SECOND TIME INTERVAL.
*** - FAN TO BE OSHPD SEISMIC CERTIFIED
**** - ELECTRICAL DATA LISTED FOR REFERENCE ONLY. SEE ELECTRICAL DRAWINGS FOR SPECIFICS OF ELECTRICAL REQUIREMENTS FOR VOLTAGE/PHASE/MCA/MCOP.

BRANCH SELECTOR BOX

MARK NUMBER	BS 1.1	BS 1.2	BS 1.3	BS 2.1	BS 2.2	BS 2.3	BS 2.4	BS 2.5
TYPE	MULTI PORT	MULTI PORT	MULTI PORT	MULTI PORT	MULTI PORT	MULTI PORT	MULTI PORT	MULTI PORT
VRV SYSTEM	HP-1	HP-2	HP-2	HP-2	HP-2	HP-2	HP-2	HP-2
MAX. CONNECT LOAD	144,000 BTUH	144,000 BTUH	144,000 BTUH	216,000 BTUH	216,000 BTUH	216,000 BTUH	216,000 BTUH	216,000 BTUH
HEIGHT	11.75"	11.75"	11.75"	11.75"	11.75"	11.75"	11.75"	11.75"
WIDTH	15"	15"	15"	19"	19"	19"	19"	19"
LENGTH	19"	19"	19"	22"	22"	22"	22"	22"
WEIGHT	50	50	50	70	70	70	70	70
POWER VOLTS/HZ/PHASE	208-230/60/1	208-230/60/1	208-230/60/1	208-230/60/1	208-230/60/1	208-230/60/1	208-230/60/1	208-230/60/1
MCA	0.40	0.40	0.40	0.60	0.60	0.60	0.60	0.60
MOP	15	15	15	15	15	15	15	15
CONDENSATE	NONE	NONE	NONE	NONE	NONE	NONE	NONE	NONE
DAIKIN MODEL	BS4Q54TVJ	BS4Q54TVJ	BS4Q54TVJ	BS6Q54TVJ	BS6Q54TVJ	BS6Q54TVJ	BS6Q54TVJ	BS6Q54TVJ
# OF PORTS	4	4	4	4	4	4	4	4
HEAT RECOVERY	YES	YES	YES	YES	YES	YES	YES	YES

HOLST

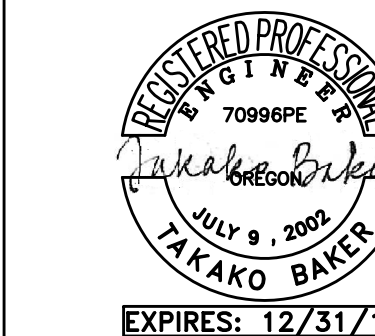
110 SE 8TH AVE.
PORTLAND, OR
97214

HOLSTARCH.COM

ASIAN HEALTH & SERVICE CENTER

SE 91ST AVE & SE FOSTER RD.
PORTLAND OR 97266

JOB NO. 15043.00



M Consulting Engineers
2007 S.E. Ash St.
Portland, OR 97214
PH: (503) 234-0548
FAX: (503) 234-0877
CONTACT: TAKAKO BAKER

PERMIT SET

07.22.2016

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