DOAS/ ENERGY RECOVERY VENTILATOR (BASED ON TEMPEFF)

TAG	MANUFACTURER	MODEL	S/A FAN L/S	S/A FAN CFM	SUPPLY FAN	SUPPLY E.S.P. PA	SUPPLY E.S.P. IN WC	MOTOR kW	MOTOR HP	E/A FAN L/S	E/A FAN CFM	EXHAUST FAN	EXHAUST E.S.P. PA	EXHAUST E.S.P. IN WC	MOTOR kW	MOTOR HP	WINTER: DESIGN S/A FLOW L/S	DESIGN S/A FLOW CFM	DESIGN E/A FLOW L/S	DESIGN E/A FLOW CFM	MIN E/A FLOW L/S	MIN E/A FLOW CFM	DESIGN F/A INLET TEMP °C	DESIGN F/A INLET TEMP °F	DESIGN E/A INLET TEMP °C	DESIGN E/A INLET TEMP °F	F/A DISCHARGE TEMP °C	F/A DISCHARGE TEMP °F	EFFICIENCY WINTER (%)	SUMMER: DESIGN S/A FLOW L/S	DESIGN S/A FLOW CFM	DESIGN E/A FLOW L/S	DESIGN E/A FLOW CFM	DESIGN F/A INLET TEMP (DB) °C	DESIGN F/A INLET TEMP (DB) °F	DESIGN F/A INLET TEMP (WB) °C	DESIGN F/A INLET TEMP (WB) °F	DESIGN E/A INLET TEMP (DB) °C	DESIGN E/A INLET TEMP (DB) °F	DESIGN E/A INLET TEMP (WB) °C	DESIGN E/A INLET TEMP (WB) °F	F/A DISCHARGE TEMP (DB) °C	F/A DISCHARGE TEMP (DB) °F	F/A DISCHARGE TEMP (WB) °C	F/A DISCHARGE TEMP (WB) °F	EFFICIENCY SUMMER (%)	ELECTRICAL VOLTAGE	FLA	MCA	MOP	LENGTH MM	LENGTH IN	WIDTH MM	WIDTH IN	HEIGHT MM	HEIGHT IN	WEIGHT KG	WEIGHT LB	COMMENTS
ERV-1	TEMPEFF	RGP 3000 (TYPE 1)	1746	3700	COMEFRI-ANPA14 (packaged w/ unit)	249	1	3.73	5	1746	3700	COMEFRI-ANPA16 (packaged w/ unit)	249	1	1.49	2	1133	2400	1133	2400	854	1810	-40	-40	16.7	62	11	51.8	90.1	1746	3700	1258	2665	31.7	89	22.8	73	25.6	78	17.5	63.5	28.1	82.6	21.7	71.1	58.6	208/3ø/60	21.5	26	40	2870	113	1299	51.125	2308	90.875	1496	3298	VERTICAL ORIENTATION SHALL BE AS PER THE MECHANICAL DRAWINGS, WITH ACCESS AS SHOWN. MERV 13 F/A FILTER SECTION. CONNECT CONDENSATE DRAIN TO NEAREST SUITABLE DRAIN LINE. PROVIDE F/A & E/A FILTERS, TEMP LOW LIMIT INTERLOCKED WITH CHANGEOVER DAMPER, & OPTIONAL DAMPER END SWITCH FOR SHUT-DOWN OF UNIT. UNIT TO BE SUPPLIED W/ PACKAGED BLOWERS C/W FACTORY SUPPLIED VARIABLE SPEED DRIVES (VSDs). COORDINATE FINAL REQUIREMENTS W/ CONTROLS CONTRACTOR & ELECTRICAL DIVISIONS.

COOLING & HEATING COILS (BASED ON DAIKIN)

TAG	SYSTEM	FUNCTION	MODEL	FLUID	DUCT SIZE MM	DUCT SIZE IN	FIN SIZE MM	FIN SIZE IN	AIR FLOW (MAX) L/S	AIR FLOW (MAX) CFM	HEADER SIZE MM	HEADER SIZE IN	FACE VELOCITY m/s	FACE VELOCITY FPM	AIR PD Pa	AIR PD in wg	EAT (DRY BULB) °C	EAT (DRY BULB) °F	EAT (WET BULB) °C	EAT (WET BULB) °F	LAT (DRY BULB) °C	LAT (DRY BULB) °F	LAT (WET BULB) °C	LAT (WET BULB) °F	EWT °C	EWT °F	LWT °C	LWT °F	TOTAL CAPACITY kW	TOTAL CAPACITY MBH	LATENT CAPACITY kW	LATENT CAPACITY MBH	SENSIBLE CAPACITY kW	SENSIBLE CAPACITY MBH	FLUID FLOW L/S	FLUID FLOW GPM	FLUID PD kPa	FLUID PD ft.	FLUID VELOCITY m/s	FLUID VELOCITY FPS	FIN SPACING (fins/in)/Rows	COMMENTS
H/CC-1	FRESH AIR FROM ERV-1	COOLING	5WL1008B	100% WATER	800x400	32x16	1200x750	48x30	1746	3700	50	2	1.9	370	154	0.62	28.1	82.6	21.7	71.1	8.9	48	8.9	48	5.6	42	11.1	52	76.37	260.66	35.740	121.98	40.634	138.68	3.306	52.4	29.6	9.9	1.128	3.7	10FPI/8R	COPPER COIL C/W CORRUGATED ALUMINUM FINS MOUNTED IN FRAME SUITABLE FOR DUCT CONNECTIONS. COIL TO BE MOUNTED IN ERV-1 F/A SUPPLY DUCT. MAX WATER SIDE PD = 10FT (29.9kPa); MAX AIR SIDE PD = 0.5"w.c. (125Pa). HEATING/COOLING COIL TO BE CONTROLLED VIA THE CENTRAL DDC SYSTEM BY DUCT MOUNTED TEMPERATURE SENSOR(S) SUPPLIED BY CONTROLS CONTRACTOR & AS SHOWN ON THE MECH. DRAWINGS; COORDINATE FINAL REQUIREMENTS W/ CONTROLS CONTRACTOR.
		HEATING							1133	2400			1.2	240	95	0.38	2	35.6	N/A	N/A	25.6	78	N/A	N/A	48.9	120	32.2	90	32.18	109.82	N/A	N/A	N/A	N/A	0.416	6.6	4.2	1.4	0.427	1.4		
HC-VAV-3	LIBRARY SERVICES & OPEN LIBRARY	HEATING	5BS1202B	100% WATER	350x300	14x12	500x375	20x15	453	960	15	0.5	2.3	460.8	47	0.19	21.1	70.0	N/A	N/A	32.4	90.3	N/A	N/A	48.9	120	37.6	99.7	6.26	21.351	N/A	N/A	N/A	N/A	0.133	2.10	18.8	6.3	0.671	2.2	12FPI/2R	COPPER COIL C/W CORRUGATED ALUMINUM FINS MOUNTED IN FRAME SUITABLE FOR DUCT CONNECTIONS. COIL TO BE LOCATED DOWNSTREAM OF EACH RESPECTIVE VAV TERMINAL. MAX WATER SIDE PD = 10FT (29.9kPa); MAX AIR SIDE PD = 0.5"w.c. (125Pa). HEATING COIL TO BE CONTROLLED VIA THE CENTRAL DDC SYSTEM BY ZONE MOUNTED TEMPERATURE SENSOR(S) SUPPLIED BY CONTROLS CONTRACTOR & AS SHOWN ON THE MECH. DRAWINGS; COORDINATE FINAL REQUIREMENTS W/ CONTROLS CONTRACTOR.
HC-VAV-9	MPR ROOM	HEATING	5BS1002C	100% WATER	350x300	14x12	350x300	14x12	208	440	15	0.5	1.9	377.1	47	0.19	21.1	70.0	N/A	N/A	32.4	90.3	N/A	N/A	48.9	120	37.6	99.7	2.86	9.757	N/A	N/A	N/A	N/A	0.061	1.0	3.0	1.0	0.305	1.0	10FPI/2R	
CC-TF-2	ELECTRICAL ROOM	COOLING	5WH0904B	100% WATER	350x350	14x14	500X375	20X15	448	950	40	1.5	2.3	456.0	87	0.35	30	86			20.3	68.5			13.9	57	16.7	62	6.12	20.9	0.79	2.7	5.34	18.217	0.524	8.3	3.3	1.1	0.549	1.8	9FPI/4R	COPPER COIL C/W CORRUGATED ALUMINUM FINS MOUNTED IN FRAME SUITABLE FOR DUCT CONNECTIONS. COIL TO BE LOCATED DOWNSTREAM OF EACH RESPECTIVE TRANSFER FAN. MAX WATER SIDE PD = 10FT (29.9kPa); MAX AIR SIDE PD = 0.5"w.c. (125Pa). HEATING COIL TO BE CONTROLLED VIA THE CENTRAL DDC SYSTEM BY ZONE MOUNTED TEMPERATURE SENSOR(S) SUPPLIED BY CONTROLS CONTRACTOR & AS SHOWN ON THE MECH. DRAWINGS; COORDINATE FINAL REQUIREMENTS W/ CONTROLS CONTRACTOR.
HC-TF-3	SOFFIT/OVERHANG	HEATING	5BS1202B	100% WATER	250ø	10ø	375x300	15x12	189	400	15	0.5	1.6	320.0	27	0.11	20	68	N/A	N/A	32.2	90	N/A	N/A	48.9	120	37.8	100	2.88	9.813	N/A	N/A	N/A	N/A	0.062	0.98	3.3	1.1	0.305	1.0	12FPI/2R	
HC-TF-4	SOFFIT/OVERHANG	HEATING	5BS1102C	100% WATER	200ø	8ø	300x225	12x9	94	200	15	0.5	1.4	266.7	30	0.12	20	68	N/A	N/A	32.2	90	N/A	N/A	48.9	120	37.8	100	1.39	4.752	N/A	N/A	N/A	N/A	0.030	0.48	0.6	0.2	0.152	0.5	11FPI/2R	

AIR COOLED CHILLER (BASED ON DAIKIN)

TAG	MAKE	MODEL	NOMINAL FLUID FLOW L/S	NOMINAL FLUID FLOW GPM	EVAPORATOR PRESSURE DROP kPa	EVAPORATOR PRESSURE DROP ft.	EVAPORATOR PRESSURE DROP W/ FIELD INSTALLED STRAINER kPa	EVAPORATOR PRESSURE DROP W/ FIELD INSTALLED STRAINER ft.	EWT °C	EWT °F	LWT °C	LWT °F	DESIGN AMBIENT °C	DESIGN AMBIENT °F	COOLING CAPACITY KW	COOLING CAPACITY MBH	CAPACITY TONS	EFFICIENCY (EER) BTU/W*HR	EFFICIENCY DPLV.IP (EER) BTU/W*HR	POWER INPUT kW	ELECTRICAL VOLTAGE	MCA	MAX FUSE	LENGTH MM	LENGTH IN	WIDTH MM	WIDTH IN	HEIGHT MM	HEIGHT IN	WEIGHT KG	WEIGHT LB	COMMENTS
ACH-1	DAIKIN	AGZ040E	5.892	93.4	43.0	14.4	48.1	16.1	11.1	52	5.6	42	35	95	137.4	468.96	39.08	11.44	17.17	40.98	208/3ø/60	167.8	200	2395	94.3	2235	88	2545	100.2	1291	2846	AIR-COOLED SCROLL COMPRESSOR CHILLER C/W REMOTE EVAPORATOR/HEAT EXCHANGER & R-410A REFRIGERANT. ASHRAE 90.1 COMPLIANT, cETL APPROVAL,. PROVIDE C/W FOLLOWING OPTIONS: FACTORY INSTALLED HOT GAS BY-PASS; WATER FLOW SWITCH FOR CHILLED WATER LINE TO PREVENT EVAPORATOR FREEZE-UP AT LOW FLOW CONDITIONS (FOR FIELD INSTALL); BAS BACnet INTERFACE; SINGLE POINT ELECTRICAL CONNECTION; HIGH SHORT CIRCUIT CURRENT RATING (HSCCR) 65kA @ 208V; VIBRATION ISOLATORS (FOR FIELD INSTALL); PROTECTIVE VINYL-COATED, WELDED-WIRE BASE GUARDS; EVAPORATOR INSULATION; LOW NOISE OPTION W/ SOUND REDUCTION COMPRESSOR BLANKETS; FACTORY MOUNTED REFRIGERANT LINE SHUT-OFF VALVES; EVAPORATOR WATER STRAINER KIT C/W Y STRAINER & BLOWDOWN VALVE (FOR FIELD INSTALL); FACTORY INSTALLED FILTER DRIER W/ REPLACEABLE CORE. PROVIDE C/W OPTIONAL REMOTE EVAPORATOR SECTION INSTALLED IN MECHANICAL/BOILER ROOM. MECHANICAL CONTRACTOR TO CONNECT REFRIGERANT PIPING FROM REMOTE EVAPORATOR TO AIR COOLED CHILLER MODULE LOCATED OUTDOORS BESIDE MECHANICAL ROOM.

IN-FLOOR HEATING/COOLING MANIFOLDS DESIGN SUMMARY

TAG	HEATING: ENTERING FLUID TEMP (EWT) °C	EWT °F	LEAVING FLUID TEMP (LWT) °C	LWT °F	DESIGN ΔT °C	DESIGN ΔT °F	CAPACITY (UP) Btu/ft²/hr	LOSS Btu/ft²/hr	TOTAL Btu/hr	SPACE SET-POINT TEMP °C	SPACE SET-POINT TEMP °F	SURFACE TEMP °C	SURFACE TEMP °F	FLOW RATE L/S	FLOW RATE GPM	COOLING: ENTERING FLUID TEMP (EWT) °C	EWT °F	LEAVING FLUID TEMP (LWT) °C	LWT °F	DESIGN ΔT °C	DESIGN ΔT °F	CAPACITY Btu/ft²/hr	GAIN Btu/ft²/hr	TOTAL Btu/hr	SPACE SET-POINT TEMP °C	SPACE SET-POINT TEMP °F	SURFACE TEMP °C	SURFACE TEMP °F	FLOW RATE L/S	FLOW RATE GPM	LOOP LENGTH ft	# LOOPS	TUBE SPACING in.	APPROX AREA COVERED M²	APPROX AREA COVERED FT²	SYSTEM HEAD LOSS ft H2O	TUBE TYPE	COMMENTS (TYPICAL FOR ALL IN-FLOOR HEATING/COOLING PIPING & MANIFOLDS)
MANIFOLD #1	43.3	110	36.7	98	6.7	12	34.8	-2.2	26091	21.1	70	30.6	87	0.271	4.3	13.9	57	16.7	62	2.8	5	14.1	-2.6	11172	25.6	78	18.9	66	0.252	4	243	6	6	62.15	669	3.8	hePEX 5/8"	IN-FLOOR PIPING 3-WAY VALVE, SHUT-OFF VALVES, & BALANCING VALVES SHALL BE FULLY ACCESSIBLE FROM MANIFOLD CABINET. FLUID IS 100% WATER. MANIFOLD CABINET SHALL BE WHITE/PRIME COAT FINISH SUITABLE FOR FIELD PAINTING BY OTHERS. PROVIDE EPS RIGID INSULATION MAT BENEATH ALL IN FLOOR HEATING/COOLING PIPING, BASED ON HEAT-SHEET MODEL HS-R6, 1-7/8" TTL THICKNESS, 1" NOMINAL PANEL THICKNESS, 7/8" GRID HEIGHT, MINIMUM AVERAGE THERMAL RESISTANCE = R-6; REFER TO SPECIFICATIONS. PROVIDE MEANS OF ADDITIONAL SUPPORT FOR PIPING AS REQUIRED TO SUIT PIPING INSTALLATION; SUCH AS PLASTIC STAPLES AT BENDS/TURNS, OR OTHER APPROVED MEANS. APPLY FOAM FRIENDLY ADHESIVE BETWEEN THE INSULATION PANELS AND THE HOLLOW CORE AS PER THE MANUFACTURER'S INSTRUCTIONS.
MANIFOLD #2	43.3	110	36.7	98	6.7	12	23.4	-5.3	66128	21.1	70	30	86	0.694	11	13.9	57	16.7	62	2.8	5	13	-2.6	28735	25.6	78	19.4	67	0.694	11	328	12	6	171.13	1842	7.5	hePEX 5/8"	
MANIFOLD #3	43.3	110	36.7	98	6.7	12	29.2	-5.3	40711	21.1	70	30	86	0.429	6.8	13.9	57	16.7	62	2.8	5	13	-2.6	17690	25.6	78	19.4	67	0.448	7.1	247	10	6	105.35	1134	3.5	hePEX 5/8"	
MANIFOLD #4	43.3	110	36.7	98	6.7	12	29.2	-5.3	35182	21.1	70	30	86	0.372	5.9	13.9	57	16.7	62	2.8	5	13	-2.6	15288	25.6	78	19.4	67	0.385	6.1	238	9	6	91.04	980	3.2	hePEX 5/8"	
MANIFOLD #5A	43.3	110	36.7	98	6.7	12	23.4	-5.3	80990	21.1	70	30	86	0.852	13.5	13.9	57	16.7	62	2.8	5	13	-2.6	35194	25.6	78	19.4	67	0.889	14.1	346	12	6	209.59	2256	11.6	hePEX 5/8"	
MANIFOLD #5B	43.3	110	36.7	98	6.7	12	23.4	-5.3	80990	21.1	70	30	86	0.852	13.5	13.9	57	16.7	62	2.8	5	13	-2.6	35194	25.6	78	19.4	67	0.889	14.1	404	12	6	209.59	2256	12.6	hePEX 5/8"	
MANIFOLD #6 (MPR)	43.3	110	36.7	98	6.7	12	29.2	-5.3	37157	21.1	70	30	86	0.391	6.2	13.9	57	16.7	62	2.8	5	13	-2.6	16146	25.6	78	19.4	67	0.410	6.5	227	10	6	96.15	1035	2.8	hePEX 5/8"	
MANIFOLD #6 (MPR STORAGE)	43.3	110	36.7	98	6.7	12	29.2	-5.3	5959	21.1	70	30	86	0.063	1.0	13.9	57	16.7	62	2.8	5	13	-2.6	2590	25.6	78	19.4	67	0.063	1.0	186	2	6	15.42	166	1.7	hePEX 5/8"	
MANIFOLD #7	43.3	110	36.7	98	6.7	12	29.2	-5.3	13247	21.1	70	30	86	0.139	2.2	13.9	57	16.7	62	2.8	5	13	-2.6	5756	25.6	78	19.4	67	0.145	2.3	204	4	6	34.28	369	2.2	hePEX 5/8"	

TRANSFER FAN SCHEDULE (BASED ON GREENHECK)

TAG	DESCRIPTION	SERVES/ LOCATION	MANUFACTURER	MODEL	FLOW RATE L/S	FLOW RATE CFM	E.S.P. PA	E.S.P. IN. W.C.	OPERATING POWER W	OPERATING POWER BHP	MOTOR POWER W	MOTOR POWER HP	SONES	ELECTRICAL VOLTAGE	ELECTRICAL FLA	COMMENTS
TF-1	INLINE MOUNTED TRANSFER FAN	LIBRARY OPEN AREAS & CRAWLSPACE	GREENHECK	SQ-120-VG	731	1550	124	0.5	268.6	0.36	373.0	0.5	11.9 (inlet) 6.2 (radiated)	115/1ø/60	–	C/W BACKDRAFT DAMPER, INSULATED HOUSING, SPRING HANGING ISOLATORS & BRACKETS, FLEX DUCT CONNECTIONS, ULC LISTED. IN-LINE, STRAIGHT THROUGH CONFIGURATION. PROVIDE VARI-GREEN EC MOTOR W/ FAN MOUNTED POTENTIOMETER DIAL ON EXTERIOR OF FAN HOUSING FOR BALANCING OF FAN; PROVIDE C/W FACTORY MOUNTED 24V TRANSFORMER FOR REMOTE SPEED OPERATION VIA 0-10 VDC SIGNAL FROM THE DDC SYSTEM. EXHAUST DISCHARGE AS PER DRWGS.
TF-2	INLINE MOUNTED TRANSFER FAN	ELECTRICAL ROOM COOLING	GREENHECK	SQ-100-VG	448	950	124	0.5	111.9	0.15	186.5	0.3	8.3 (inlet) 4.1 (radiated)	115/1ø/60	–	C/W BACKDRAFT DAMPER, INSULATED HOUSING, MOTOR COVER, INLET GUARD, SPRING HANGING ISOLATORS & BRACKETS, FLEX DUCT CONNECTIONS, ULC LISTED. IN-LINE, STRAIGHT THROUGH CONFIGURATION. PROVIDE VARI-GREEN EC MOTOR W/ FAN MOUNTED POTENTIOMETER DIAL ON EXTERIOR OF FAN HOUSING FOR BALANCING OF FAN.. EXHAUST DISCHARGE AS PER DRWGS.
TF-3	INLINE SOFFIT TRANSFER FAN	SOUTH OVERHANG SOFFIT	PANASONIC	WhisperLine FV-40NLF1	191	405	100	0.4	–	–	128	0.2	2.1	120/1ø/60	–	C/W INSULATED HOUSING, SPRING HANGING ISOLATORS & BRACKETS, FLEX DUCT CONNECTIONS, ULC LISTED. IN-LINE, STRAIGHT THROUGH, CONFIGURATION. PROVIDE FAN SPEED CONTROLLER FOR BALANCING OF FAN, INSTALLED IN CEILING SPACE NEXT TO FAN. PROVIDE TEMPERATURE SENSOR MOUNTED IN SOFFIT SPACE FOR CONTROL.
TF-4	INLINE SOFFIT TRANSFER FAN	SOUTH/EAST OVERHANG SOFFIT	PANASONIC	WhisperLine FV-20NLF1	94	200	100	0.4	–	–	55	0.1	1.4	120/1ø/60	–	C/W INSULATED HOUSING, SPRING HANGING ISOLATORS & BRACKETS, FLEX DUCT CONNECTIONS, ULC LISTED, ENERGY STAR. IN-LINE, STRAIGHT THROUGH, CONFIGURATION. PROVIDE FAN SPEED CONTROLLER FOR BALANCING OF FAN, INSTALLED IN CEILING SPACE NEXT TO FAN. PROVIDE TEMPERATURE SENSOR MOUNTED IN SOFFIT SPACE FOR CONTROL.

FAN COIL UNITS (BASED ON JAGA)

TAG	SYSTEM	FUNCTION	MAKE	SERIES	MODEL	AIR FLOW L/S	AIR FLOW CFM	EAT (DRY BULB) °C	EAT (DRY BULB) °F	EAT (WET BULB) °C	EAT (WET BULB) °F	LAT (DRY BULB) °C	LAT (DRY BULB) °F	LAT (WET BULB) °C	LAT (WET BULB) °F	EWT °C	EWT °F	LWT °C	LWT °F	TOTAL CAPACITY (Sensible) kW	TOTAL CAPACITY (Sensible) MBH	FLUID FLOW L/S	FLUID FLOW GPM	FLUID PD kPa	FLUID PD ft.	FLUID VELOCITY m/s	FLUID VELOCITY FPS	FAN MOTOR W	FAN MOTOR HP	ELECTRICAL VOLTAGE	ELECTRICAL Amps	COMMENTS
FC-1	MPR ROOM	COOLING	JAGA	BRIZZA 22 HYBRID	L125 – BABC/BT	306	648	25.6	78.0	17.5	63.5	16.8	62.2	–	–	13.9	57	16.7	62	3.24	11.07	0.279	4.4	–	–	–	–	79	0.11	115/1ø/60	0.64	CEILING SUSPENDED CONFIGURATION C/W VIBRATION ISOLATORS. BOTTOM FILTER ACCESS C/W SPARE FILTER. STANDARD AIR INLET/OUTLET. C/W STANDARD CONDENSATE DRAIN PAN & OPTIONAL SECONDARY DRAIN PAN. FLUID IS 100% WATER. PROVIDE RECTORSEAL MODEL EZT 150 EZ TRAP ULTRA WATERLESS TRAP KIT FOR DRAIN PAN CONDENSATE.
		HEATING						20	68.0	–	–	–	105.5	–	–	48.9	120	37.8	100	7.69	26.23	0.165	2.6	–	–	–	–					
FC-2	LIVING ROOM	COOLING	JAGA	BRIZZA 22 HYBRID	L125 – BABC/BT	306	648	25.6	78.0	17.5	63.5	16.8	62.2	–	–	13.9	57	16.7	62	3.24	11.07	0.279	4.4	–	–	–	–	79	0.11	115/1ø/60	0.64	SAME AS FC-1.
		HEATING						20	68.0	–	–	–	105.5	–	–	48.9	120	37.8	100	7.69	26.23	0.165	2.6	–	–	–	–					

CIRULATION PUMPS

TAG	SYSTEM	MANUFACTURER	SERIES	MODEL	FLOW (HEATING MIN) L/S	FLOW (HEATING MIN) GPM	FLOW (HEATING MAX) L/S	FLOW (HEATING MAX) GPM	FLOW (COOLING) L/S	FLOW (COOLING) GPM	HEAD KPA	HEAD FT WC	POWER W	POWER HP	ELECTRICAL VOLTAGE	PUMP WEIGHT KG	PUMP WEIGHT LB	SUCTION SIZE MM	SUCTION SIZE IN	DISCHARGE SIZE MM	DISCHARGE SIZE IN	COMMENTS
CP-1A	BOILER/CHILLER HEATING & COOLING LOOP SYSTEM	GRUNDFOS	MAGNA 3	100-120F(N)	4.416	70	5.949	94.3	6.498	103	1.956	31	1576	2.11	208/1ø/60	37	82	100	4	100	4	PUMPS TO BE IN-LINE MOUNTED, PERMANENT MAGNET MOTOR, WET-ROTOR CIRCULATOR PUMP. C/W PACKAGED VARIABLE SPEED DRIVE SUPPLIED INTEGRAL TO PUMP UNIT C/W AUTOADAPT FUNCTION & INTEGRATED FREQUENCY CONVERTER. PROVIDE C/W SUCTION GUIDE/DIFFUSERS & TRIPLE DUTY VALVE. C/W STAINLESS STEEL FLANGE & PUMP HOUSING. COORDINATE ALL ELECTRICAL REQUIREMENTS WITH ELECTRICAL DIVISION 26 00 00. PROVIDE FLOW SENSORS(S) FOR MAIN HEATING LOOP AS REQUIRED; REFER ALSO TO HEATING SCHEMATIC. FLUID IS 100% WATER. PROVIDE C/W OPTIONAL INSULATING SHELL FOR PUMP FOR COOLING APPLICATIONS (SILICON SEALANT SHALL BE USED ON INSIDE OF INSULATION SHELL TO ENSURE ALL AIR GAPS ARE ELIMINATED BETWEEN THE SHELL & PUMP HOUSING TO PREVENT CONDENSATION INSIDE THE SHELL.)
CP-1B	BOILER/CHILLER HEATING & COOLING LOOP SYSTEM	GRUNDFOS	MAGNA 3	100-120F(N)	4.416	70	5.949	94.3	6.498	103	1.956	31	1576	2.11	208/1ø/60	37	82	100	4	100	4	SAME AS CP-1A
CP-2A	ERV-1 HEATING/COOLING COIL	GRUNDFOS	MAGNA 3	40-180F(N)	0.416	6.6	1.236	19.6	3.343	53	1.703	27	614	0.82	115/1ø/60	19	41	40	1.5	40	1.5	SAME AS CP-1A
CP-2B	ERV-1 HEATING/COOLING COIL	GRUNDFOS	MAGNA 3	40-180F(N)	0.416	6.6	1.236	19.6	3.343	53	1.703	27	614	0.82	115/1ø/60	19	41	40	1.5	40	1.5	SAME AS CP-1A
CP-3A	RADIANT HEAT/COOLING LOOP	GRUNDFOS	MAGNA 3	65-150F(N)	3.987	63.2	5.614	89	6.498	103	2.839	45	1301	1.74	208/1ø/60	28	61	65	2.5	65	2.5	SAME AS CP-1A
CP-3B	RADIANT HEAT/COOLING LOOP	GRUNDFOS	MAGNA 3	65-150F(N)	3.987	63.2	5.614	89	6.498	103	2.839	45	1301	1.74	208/1ø/60	28	61	65	2.5	65	2.5	SAME AS CP-1A
RCP-1	DOMESTIC HOT WATER RECIRC.	GRUNDFOS	ALPHA 2	15-55SF	0.158	2.5	–	–	–	–	26.90	9	45	0.06	115/1ø/60	–	–	15	0.625	15	0.625	PUMPS TO BE IN-LINE MOUNTED, PERMANENT MAGNET MOTOR, WET-ROTOR CIRCULATOR PUMP. C/W PACKAGED VARIABLE SPEED DRIVE SUPPLIED INTEGRAL TO PUMP UNIT C/W AUTOADAPT FUNCTION & INTEGRATED FREQUENCY CONVERTER. PROVIDE C/W SUCTION GUIDE/DIFFUSERS & TRIPLE DUTY VALVE. C/W STAINLESS STEEL FLANGE & PUMP HOUSING. COORDINATE ALL ELECTRICAL REQUIREMENTS WITH ELECTRICAL DIVISION 26 00 00. PROVIDE C/W OPTIONAL INSULATING SHELL FOR PUMP.

TOWER PROJECT NO. : 181335
TOWER ENGINEERING GROUP
UNIT 1-1140 WAVERLEY ST. WINNIPEG, MB R3T 0P4
TEL: (204) 925-1150 FAX: (204) 925-1155
EMAIL: towereng@towereng.ca WEB: www.towereng.ca
• WINNIPEG • CALGARY

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No.	Date	Issue / Revision	By
1	July 08, 2019	Issued For Construction	JAC

Drawn By: JChimko

Printing Date: July 16, 2019

LM Architectural Group
500-136 Market Ave
Winnipeg Manitoba
Canada R3B 0P4
t: (204) 942.0681
f: (204) 943.8676
www.lm-architects.com

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Tower Engineering Group
No. 4156 Expiry: April 30, 2020

PROVINCE OF MANITOBA
J. A. CHIMKO
Member
23356
2019-07-08
REGISTERED PROFESSIONAL ENGINEER

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Winnipeg

Bill and Helen Norrie Library

Project No.: 2017-082
Tender No.: 542-2019
Address: 15 Poseidon Bay, Winnipeg, MB.

MECHANICAL EQUIPMENT SCHEDULES

Comm. No.: 1847

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