

GRILLES / DIFFUSERS / REGISTERS / LOUVRES	
(Based on E. H. Price unless noted otherwise.) Note: All face and neck sizes are shown on the drawings.	
TYPE	DESCRIPTION
S1	MODEL LBP256/500/C LINEAR BAR SUPPLY GRILLE. 1/2" (13) WIDE SPACED BARS & 0° DEFLECTION. 1/2" (13) BORDER WITH SUITABLE FOR SIDEWALL MOUNTING. CONCEALED FASTENING SUITABLE FOR SIDEWALL MOUNTING W/ OPTIONS NOTED. PROVIDE C/W MODEL DV1 DIRECTION VANES & VCS3 OPPOSED BLADE DAMPER. PROVIDE SUITABLE MOUNTING, ALIGNMENT PINS/SPICE PLATES, FRAMING, ETC. TO FORM ONE CONTINUOUS LOOKING STRIP OF BAR GRILLE WHERE USED IN OPEN LIBRARY LOBBY SPACE. INSTALL APPROXIMATELY AS SHOWN ON DRAWINGS & COORDINATE FINAL INSTALLATION ON SITE WITH ALL OTHER DISCIPLINES. SIZES SHOWN ON DRAWINGS. BLACK COLOUR FINISH. FINAL COLOUR/FINISH SHALL BE CONFIRMED BY INTERIOR DESIGNER & ARCHITECT.
S2	MODEL SDGE/DD/L/A/--, SPIRAL DUCT SUPPLY GRILLE, DOUBLE DEFLECTION COMPLETE WITH OPTIONAL MODEL VCS3 OPPOSED BLADE VOLUME DAMPER. FRONT BLADES PARALLEL TO LONG DIMENSION. SIZES AS SHOWN ON DRAWINGS. FINISH SHALL BE SUITABLE FOR PAINTING ON SITE BY OTHERS (WHITE PRIME COAT, OR EQUIVALENT); FINAL COLOUR/FINISH TO BE CONFIRMED BY INTERIOR DESIGNER & ARCHITECT.
S3	MODEL LBP256/500/C LINEAR BAR SUPPLY GRILLE. 1/2" (13) WIDE SPACED BARS & 0° DEFLECTION. 1/2" (13) BORDER WITH SUITABLE FOR SIDEWALL MOUNTING. CONCEALED FASTENING SUITABLE FOR SIDEWALL MOUNTING W/ OPTIONS NOTED. PROVIDE C/W MODEL DV1 DIRECTION VANES & VCS3 OPPOSED BLADE DAMPER. INSTALL APPROXIMATELY AS SHOWN ON DRAWINGS & COORDINATE FINAL INSTALLATION ON SITE WITH ALL OTHER DISCIPLINES. SIZES SHOWN ON DRAWINGS. FINISH SUITABLE FOR PAINTING ON SITE BY OTHERS (WHITE PRIME COAT, OR EQUIVALENT); FINAL COLOUR/FINISH SHALL BE CONFIRMED BY INTERIOR DESIGNER & ARCHITECT.
S4	MODEL RCDA/-- STEEL ADJUSTABLE ROUND CONE DIFFUSER. FULLY ADJUSTABLE FROM FULL HORIZONTAL TO FULL VERTICAL PATTERN. SIZES AS SHOWN ON DRAWINGS. WHITE COLOUR; FINAL COLOUR/FINISH TO BE CONFIRMED BY INTERIOR DESIGNER & ARCHITECT.
E1	MODEL 90/F/--, EGG CRATE RETURN/ EXHAUST AIR GRILLE. CEILING MOUNTED EGGOGRATE GRILLE C/W SCREW MOUNTING & FLAT BORDER SUITABLE FOR DRYWALL/GYPSUM CEILINGS. SIZES AS SHOWN ON DRAWINGS. WHITE COLOUR FINISH; FINAL COLOUR/FINISH TO BE CONFIRMED BY INTERIOR DESIGNER & ARCHITECT.
E2/14	MODEL S320/F/L/A/--, LOUVERED RETURN GRILLE. FRONT BLADES PARALLEL TO LONG DIMENSION. 45° 1/2"(13) BLADE SPACING. SIZES AS SHOWN ON DRAWINGS. WHITE COLOUR FINISH; FINAL COLOUR/FINISH TO BE CONFIRMED BY INTERIOR DESIGNER & ARCHITECT.
T1	MODEL 10/F(SW)/--, PERFORATED FACE STEEL RETURN/TRANSFER AIR GRILLE. SIDEWALL MOUNTED GRILLE C/W FLAT BORDER & MODEL VCS3 STEEL OPPOSED BLADE DAMPER. SIZES AS SHOWN ON DRAWINGS. WHITE COLOUR FINISH; FINAL COLOUR/FINISH SHALL BE CONFIRMED BY INTERIOR DESIGNER & ARCHITECT.
T2	MODEL 10/F(SW)/--, PERFORATED FACE STEEL RETURN/TRANSFER AIR GRILLE. SIDEWALL MOUNTED GRILLE C/W FLAT BORDER & MODEL VCS3 STEEL OPPOSED BLADE DAMPER. SIZES AS SHOWN ON DRAWINGS. FINISH SUITABLE FOR PAINTING ON SITE BY OTHERS (WHITE PRIME COAT, OR EQUIVALENT); FINAL COLOUR/FINISH SHALL BE CONFIRMED BY INTERIOR DESIGNER & ARCHITECT.
T3	MODEL S102/F/L/A/--, LOUVERED RETURN GRILLE. FRONT BLADES PARALLEL TO LONG DIMENSION. 0° DEFLECTION. 3/4"(20) BLADE SPACING. SIZES AS SHOWN ON DRAWINGS. FINAL COLOUR/FINISH TO BE CONFIRMED BY INTERIOR DESIGNER & ARCHITECT.
L1	PRICE MODEL DE635, DRAINABLE, EXTRUDED ALUMINUM LOUVER C/W BIRD SCREEN & BUG SCREEN. 6" (102MM) DEEP. 35° BLADE. SIZES SHOWN ON DRAWINGS. FINAL COLOUR/FINISH TO BE CONFIRMED BY INTERIOR DESIGNER & ARCHITECT.

RADIANT PANELS (BASED ON PRICE)

TAG	MODEL	LENGTH	WIDTH	MOUNTING	NUMBER OF TUBES	HEATING CAPACITY		COOLING CAPACITY		HEATING EWT		COOLING EWT		FLUID FLOW (HEATING)		FLUID FLOW (COOLING)		COMMENTS						
						WATTS/M	BTU/HR/FT	WATTS/M ²	BTU/HR/FT ²	°C	°F	°C	°F	°C	°F	L/S	GPM		L/S	GPM				
RP-1	RPLA	2.438	8	0.610	2	EXPOSED	8	132	137	88	28	48.9	120	37.8	100	13.9	57	16.7	62	0.007	0.11	0.011	0.18	PROVIDE C/W SMOOTH FACE FINISH, THERMAL INSULATION, & TOP COVER FOR FREE HANGING EXPOSED INSTALLATION. FLUID IS 100% WATER.
RP-2	RPL	1.829	6	0.610	2	T-BAR	8	132	137	88	28	48.9	120	37.8	100	13.9	57	16.7	62	0.005	0.08	0.008	0.13	PROVIDE C/W SMOOTH FACE FINISH. INSULATION SHALL BE PROVIDED ON TOP OF PANEL BY MECHANICAL CONTRACTOR. FLUID IS 100% WATER.

VAV BOXES (BASED ON PRICE)

TAG	SERVICE	UNIT SIZE/MODEL	VAV BOX INLET SIZE		VAV BOX OUTLET (DUCT) SIZE		HEATING AIRFLOW (MAXIMUM)		COOLING AIRFLOW (MAXIMUM)		F/A VENTILATION MINIMUM AIRFLOW		MATCHING HEATING COIL TAG NO.	COMMENTS
			MM	IN	MM	IN	L/S	CFM	L/S	CFM	L/S	CFM		
VAV-1	STAFF ROOM 1:08	4	100#	4#	305x203	12x8	24	51	42	90	24	51	HC-VAV-9	VAV BOX TO BE E.H. PRICE MODEL SDV8000 (OR EQUIVALENT) C/W 36" (914MM) DISCHARGE ATTENUATOR SECTION PROVIDED AS INTEGRAL EXTENSION TO UNIT. ALL CONTROLS BY CONTROLS CONTRACTOR. 24 VAC TRANSFORMER FOR CONTROLLER SHALL BE PROVIDED BY THE CONTROLS CONTRACTOR (120V LINE VOLTAGE POWER TO TRANSFORMER BY ELECTRICAL DIVISION; REFER TO ELECTRICAL DRAWINGS).
VAV-2	LIBRARY SERVICES WORKROOM 1:04	4	100#	4#	305x203	12x8	24	51	35	75	24	51	N/A	SAME AS ABOVE.
VAV-3	LIBRARY SERVICES AREA 1:02, SERVICE DESK 1:03, SELF CHECKOUT AREA 1:02A, PRINT/COPY AREA 1:02B, & OPEN LIBRARY (INTERIOR) 1:18	10	250#	10#	350x318	14x12-1/2	453	960	563	1194	349	740	HC-VAV-3	SAME AS ABOVE.
VAV-4	TUTORIAL ROOM A 1:15	4	100#	4#	305x203	12x8	18	38	41	87	18	38	N/A	SAME AS ABOVE.
VAV-5	TUTORIAL ROOM B 1:16	4	100#	4#	305x203	12x8	18	38	41	87	18	38	N/A	SAME AS ABOVE.
VAV-6	BRANCH HEAD OFFICE 1:22	4	100#	4#	305x203	12x8	13	27	24	50	13	27	N/A	SAME AS ABOVE.
VAV-7	CHILDREN'S AREA 1:17	7	175#	7#	305x254	12x10	151	320	234	495	71	150	N/A	SAME AS ABOVE.
VAV-8	OPEN LIBRARY (SOUTH) 1:18 & LIVING ROOM 1:19	8	200#	8#	305x254	12x10	210	444	351	743	89	189	N/A	SAME AS ABOVE.
VAV-9	MPR ROOM 1:20 & MPR STORAGE 1:21	9	225#	9#	350x318	14x12-1/2	207	438	414	877	67	143	N/A	SAME AS ABOVE.
TOTAL							1117	2367	1745	3698	673	1427		

ACTIVE CHILLED BEAMS (BASED ON PRICE)

TAG	MODEL	LENGTH		WIDTH		ORIENTATION	MOUNTING	F/A INLET SIZE		NOZZLE SIZE	AIRFLOW (MINIMUM)		AIRFLOW (MAXIMUM)		HEATING EWT		COOLING EWT		COOLING LWT		FLUID FLOW (HEATING)		FLUID FLOW (COOLING)		COMMENTS		
		M	FT	M	FT			MM	IN		L/S	CFM	L/S	CFM	°C	°F	°C	°F	°C	°F	°C	°F	L/S	GPM		L/S	GPM
ACB-1	ACBL-HE	2.438	8	0.610	2	1-WAY	EXPOSED	125#	5#	20	12	26	18	38	48.9	120	37.8	100	13.9	57	16.7	62	0.063	1.0	0.063	1.0	PROVIDE C/W PERFORATED FACE & 2-PIPE CONFIGURATION. PROVIDE C/W OPTIONAL PATTERN CONTROLLER (PC), VALVE & CONTROLS ENCLOSURE (ABS) FOR ACCESS FROM BELOW. WINGS (WNG) AND CASING (EXP) FOR EXPOSED MOUNTING; 24V VAV FLOATING POINT ACTUATED DAMPER, DOUBLE HOSE W/ SHUT-OFFS & AUTO BALANCER (DHAB) OPTION C/W MODULATING ACTUATOR CONTROL. PROVIDE CONDENSATE SENSOR ON INCOMING CHS LINE AS PER SCHEMATIC & CONTROLS SPEC. FLUID IS 100% WATER.
ACB-2	ACBL-HE	3.048	10	0.610	2	1-WAY	T-BAR	125#	5#	20	11	24	28	60	48.9	120	37.8	100	13.9	57	16.7	62	0.063	1.0	0.063	1.0	SAME AS ACB-1, EXCEPT NO WINGS (WNG) & CASING (EXP).
ACB-3	ACBL-HE	1.829	6	0.610	2	1-WAY	T-BAR	125#	5#	50	18	38	41	87	48.9	120	37.8	100	13.9	57	16.7	62	0.063	1.0	0.063	1.0	SAME AS ACB-1, EXCEPT NO WINGS (WNG) & CASING (EXP).
ACB-4	ACBL-HE	1.829	6	0.610	2	1-WAY	T-BAR	125#	5#	10	13	27	24	50	48.9	120	37.8	100	13.9	57	16.7	62	0.063	1.0	0.063	1.0	SAME AS ACB-1, EXCEPT NO WINGS (WNG) & CASING (EXP).
ACB-5	ACBL-HE	2.438	8	0.305	1	1-WAY	DRYWALL BULKHEAD	125#	5#	50	30	64	47	99	48.9	120	37.8	100	13.9	57	16.7	62	0.063	1.0	0.063	1.0	SAME AS ACB-1, EXCEPT NO WINGS (WNG) & CASING (EXP).
ACB-6	ACBL-HE	1.829	6	0.610	2	1-WAY	DRYWALL BULKHEAD	125#	5#	40	16	33	27	58	48.9	120	37.8	100	13.9	57	16.7	62	0.063	1.0	0.063	1.0	SAME AS ACB-1, EXCEPT NO WINGS (WNG) & CASING (EXP).
ACB-7	ACBL-HE	3.048	10	0.610	2	1-WAY	DRYWALL BULKHEAD	125#	5#	40	25	54	46	97	48.9	120	37.8	100	13.9	57	16.7	62	0.063	1.0	0.063	1.0	SAME AS ACB-1, EXCEPT NO WINGS (WNG) & CASING (EXP).

SILENCER SCHEDULE (BASED ON PRICE)

TAG	MODEL	WIDTH		HEIGHT		LEG A		LEG B		CENTRELINE LENGTH		AIRFLOW	PRESSURE DROP	PRESSURE DROP W/ SYSTEM EFFECT	VELOCITY	WEIGHT	MOUNTING	DYNAMIC INSERTION LOSS (dB)								COMMENTS					
		MM	IN	MM	IN	MM	IN	MM	IN	MM	IN							MM	IN	L/S	CFM	Pa	in wg	Pa	in wg		m/s	FPM	KG	LB	63 Hz
SI-1	ERM/DX48/2F	508	20	1016	40	1016	40	1016	40	1219	48	1746	3700	17	0.07	25	0.10	3.4	666	98	217	ELBOW/ANGLE	9	17	23	29	39	48	36	22	SILENCER TO BE ABSORPTIVE ELBOW FILM LINED EXTENDED CASING TYPE. FIBERGLASS ACOUSTIC MEDIA MATERIAL C/W POLYMER FILM LINER & ACOUSTIC STANDOFF. 18 GAUGE GALVANIZED CASING, 22 GAUGE GALVANIZED PERFORATED LINER, CLASS 2 (18 GA.) CONSTRUCTION CLASS. 2" FLANGES ATTACHED INLET DUCT CONNECTION, 2" FLANGES ATTACHED OUTLET DUCT CONNECTION. FORWARD FLOW DIRECTION.

RECOVERY HEAT PIPE (BASED ON HEAT PIPE TECHNOLOGY (HPT))

TAG	SYSTEM	FUNCTION	SERIES	MODEL	TYPE	AIRFLOW		EAT (DRY BULB)		EAT (WET BULB)		COIL SIZE (L x H)		ROWS	LAT (DRY BULB)		LAT (WET BULB)		HEAT TRANSFERRED	AIR PD	FACE VELOCITY	FNS/IN	TUBE OD		COMMENTS			
						L/S	CFM	°C	°F	°C	°F	MM	IN		°C	°F	°C	°F					KW	MBH		Pa	in wg	m/s
RHP-1	ERV-1 F/A (SUPPLY)	RE-HEATING	HRM-V	HA-AMC-10812A-020 00-04000-000F-040 00-DXS (HRM-V SERIES)	OPTIMIZED FOR RE-HEATING DURING COOLING OPERATION	1746	3700	8.9	48.0	8.9	48.0	1000x500	40x20	8	16.4	61.59	12.1	53.80	16.14	55.072	333	1.34	3.4	666.5	12	15	0.5	AHRI CERTIFIED. R-410a REFRIGERANT, ElectroFIn E-COAT EPOXY POLYMER CORROSION-RESISTANT COIL COATING, COPPER TUBES, ALUMINUM FINS. PROVIDE DRAIN PAN BENEATH ENTIRE COIL ASSEMBLY FOR BOTH COILS (REFER TO MECH. DRAWINGS). PROVIDE C/W OPTIONAL MODULATING CONTROL VALVE FEATURE ON EACH CIRCUIT LOCATED ON THE LOWER LIQUID LINE. COORDINATE WITH ELECTRICAL TO PROVIDE POWER AS REQUIRED. CONTROL VALVES SHALL BE CONTROLLED VIA THE CENTRAL DDC SYSTEM BY DUCT MOUNTED TEMPERATURE SENSOR(S) SUPPLIED BY CONTROLS CONTRACTOR & AS SHOWN ON THE MECH DRAWINGS & CONTROLS SPECS. COORDINATE FINAL REQUIREMENTS W/ CONTROLS CONTRACTOR.
RHP-2	ERV-1 E/A (EXHAUST)	RE-CLAM	HRM-V	HA-AMC-10812A-020 00-04000-000F-040 00-DXS (HRM-V SERIES)	OPTIMIZED FOR RE-HEATING DURING COOLING OPERATION	1258	2665	25.6	78.0	17.4	63.34	1000x500	40x20	8	14.5	58.03	13.4	56.16	16.14	55.072	179	0.72	2.3	451.7	12	15	0.5	

EXPANSION TANKS (BASED ON AMTROL)

TAG	SYSTEM	MODEL	TOTAL VOLUME		ACCEPTANCE VOLUME		SYSTEM CONNECTION		HEIGHT		DIAMETER		COMMENTS
			L	GAL	L	GAL	MM	IN	MM	IN	MM	IN	
ET-1	HEATING & COOLING LOOP SYSTEM	AX-40(H)	82.1	21.7	42.8	11.3	15	0.5	762	30	406	16	EXTROL SERIES, ASME Section VII, Division I, C/W BUTYL/EPDM DIAPHRAGM DESIGN, HORIZONTAL MODEL. EXPANSION TANK W/ SIDE CONNECTION & PROJECTION-WELDED AIR STEM. PROVIDE C/W OPTIONAL SIGHT GLASS & RESTRAINTS. THE SIZE IS ESTIMATED; PROVIDE STOP & WASTE VALVE AND UNION ADJACENT TO TANK FIELD. ADJUSTABLE W/ SHREAKER AIR VALVE. EXPANSION TANK SHALL BE RESIZED BY THE CONTRACTOR/SUPPLIER WHEN FINAL SYSTEM VOLUMES ARE MORE ACCURATELY KNOWN. FLUID IS 100% WATER.
ET-2	DOMESTIC HOT/COLD WATER	ST-5C (V)	7.6	2	3.4	0.9	20	0.8	356	14	203	8	TERM-X-TROL SERIES C/W DIAPHRAGM DESIGN, VERTICAL MODEL, ASME DESIGN.

HOT WATER TANKS (BASED ON BRADFORD WHITE)

TAG	MODEL	FLUID CAPACITY		RECOVERY CAPACITY @ 100°F		ELECTRICAL		HEIGHT		DIAMETER		APPROX. SHIP WEIGHT		COMMENTS	
		L	GAL	L/H	GPH	VOLTAGE	KW	# OF ELEMENTS (NON-SIMULTANEOUS)	MM	IN	MM	IN	KG		LB
HWT-1	M-2-HE40-56DS	151.42	40	71.92	19	208/3A/60	4.5	2 @ 4.5KW	1216	47.875	508	20	54	118	PORCELAIN GLASS LINED TANK C/W PROTECTIVE MAGNESIUM ANODE ROD. TANK SHALL HAVE A WORKING PRESSURE RATING OF 150PSI AND SHALL BE EQUIPPED WITH "SCREW-IN" TYPE IMMERSION ELEMENTS. TANK SHALL BE INSULATED WITH NON-CFC RIGID POLYURETHANE FOAM INSULATION & SHALL BE EQUIPPED WITH A SURFACE MOUNTED THERMOSTATS WITH INTEGRAL MANUAL RESET, HIGH LIMIT CONTROL, HYDROJET TOTAL PERFORMANCE SYSTEM SEDIMENT REDUCING DEVICE, FACTORY INSTALLED HEAT TRAPS. TANK SHALL BE COMPLETE WITH ASME TEMPERATURE AND PRESSURE RELIEF VALVE, TERMINAL BLOCK, BRASS DRAIN VALVE, SHUT-OFFS, UNIONS, DRIP PAN (INDIRECTLY DRAINED TO FLOOR DRAIN IN SERVICE RM), PIPE TEMPERATURE AND PRESSURE RELIEF VALVE FULL OUTLET SIZE TO POSITIVE DRAIN. THE UNIT SHALL BE ETL LISTED, CSA CERTIFIED, ASHRAE 90.1 COMPLIANT. COORDINATE ALL ELECTRICAL REQUIREMENTS WITH DIVISION 260000.

HUMIDIFIER (BASED ON NORTEC)

TAG	MAKE	MODEL	CORRESPONDING UNIT	CAPACITY		ELECTRICAL			COMMENTS					
				KG/HR	LB/HR	KW	VOLTAGE	AMPS	MAX FUSE	HUMIDIFIER TO BE C/W SHORT ABSORPTION DUCT MOUNTED STEAM DISTRIBUTOR/MANFOLD TO SUIT DUCTWORK SIZES. TP MODULATION CONTROL. END OF SEASON AUTO DRAIN, WATER SKIMMER, CONTROL CABINET, TIMER-OPERATED DRAIN & FLUSH, REMOVABLE COVER, AUTO FLUSH & DRAIN. PROVIDE DRAIN & WATER CONNECTIONS AS PER DRAWINGS. PROVIDE SUITABLE MOUNTING/BRAKETS AS REQUIRED FOR MOUNTING ON MECHANICAL ROOM WALL AS SHOWN ON THE MECHANICAL DRAWINGS. ACCESSORIES: AIR FLOW PROVING SWITCH, HIGH LIMIT HUMIDISTAT, IN-LINE WATER FILTER (PLUS REPLACEMENT FILTERS), DRAIN AIR GAP REDUCER, CONDENSATE TRAP, DRAIN WATER COOLER, BAGNET COMPATIBLE DIGITAL COMMUNICATION PROTOCOL FOR CONNECTION TO DDC CONTROL SYSTEM. COORDINATE ELECTRICAL INSTALLATION W/ DIVISION 260000. UNIT SHALL BE SUPPLIED C/W INTERNAL FILL CUP C/W AIR GAP AS MEANS OF BACKFLOW PREVENTION TO C&W STANDARDS; ALL OTHER CONFIGURATIONS WILL NOT BE ACCEPTED.				
H-1	NORTEC	NH-EL-100	ERV-1	45.5	100	34	208/3A/60	94.4	125					

GAS-FIRED CONDENSING BOILERS (BASED ON CAMUS)

TAG	MAKE	MODEL	FUNCTION	INPUT		MAX OUTPUT		ELECTRICAL		LENGTH		WIDTH		HEIGHT		SHIPPING WEIGHT		COMMENTS			
				KW	MBH	KW	MBH	VOLTAGE	FLA	MCCP	MM	IN	MM	IN	MM	IN	MM		IN	KG	LB
B-1	DYNAMAX	0391	LEAD/MASTER	23.44	116.9	80	399	56.80	371	120/19/60	6	15	813	32	610	24	1197	47.125	184	405	PACKAGED CIRCULATION PUMP, FLOW PROVING DEVICE, WATER FLOW SWITCH, CONDENSATE COLLECTION BOX TO TRAP & NEUTRALIZE FLUE PRODUCT CONDENSATE. S/S BURNER & HEAT EXCHANGER. A PRESSURE RELIEF VALVE OF 50psi SHALL BE FURNISHED WITH THE BOILER. PROVIDE EXTERNAL LOW WATER CUTOFF PIPED IN ACCORDANCE WITH THE REQUIREMENTS OF THE MANITOBA DEPARTMENT OF LABOUR. C/W ALARMS FOR LOW WATER, HIGH/LOW TEMP, PRESSURE, FAILURE, ETC. PROVIDE C/W CONCENTRIC VENT SUITABLE FOR DIRECT VENT APPLICATION.
B-2	DYNAMAX	0391	LAC	23.44	116.9	80	399	56.80	371	120/19/60	6	15	813	32	610	24	1197	47.125	184	405	SAME