SYMBOL	MANUFACTURER	CATALOG#	DESCRIPTION				
CD-A	KRUEGER	1400	STEEL HIGH PERFORMANCE CEILING DIFFUSER. MAXIMUM CORE VELOCITY: 550 FPM. MAXIMUM NOISE CRITERIA: 30 NC. SURFACE MOUNTED WITH FRAMES AND BORDERS SUITABLE FOR THE CONSTRUCTION IN WHICH THEY WILL BE INSTALLED, CONTRACTOR TO COORDINATE. BAKED ENAMEL FINISH, COLOR SELECTED BY ARCHITECT. 4—WAY DEFLECTION UNLESS OTHERWISE NOTED ON PLANS. 24" x 24" MODULE SIZE. ALL DIFFUSERS SHALL BE EQUIPPED WITH OPPOSED BLADE VOLUME DAMPER. CFM RANGE: NECK SIZE: 0-100 \$ 6"\$ 0 101-200 \$ 8"\$ 0 101-200 \$ 8"\$ 0 10"\$ 0 1				
RR-A ER-A ER-B RG-A	KRUEGER	S80H/S580	STEEL RETURN/EXHAUST REGISTER WITH ¾ FIXED BLADE SPACING. MAXIMUM CORE VELOCITY: 500 FPM. MAXIMUM NOISE CRITERIA: 25 NC. SURFACE MOUNTED 35' FIXED DEFLECTION BLADES. BLADES PARALLEL TO LONG DIMENSION UNLESS OTHERWISE NOTED. BAKED ENAMEL FINISH, COLOR SELECTED BY ARCHITECT. REGISTERS SHALL HAVE FRAMES AND BORDERS SUITABLE FOR THE CONSTRUCTION IN WHICH THEY WILL BE INSTALLED, CONTRACTOR TO COORDINATE. REGISTERS SHALL BE PROVIDED WITH OPPOSED BLADE VOLUME DAMPERS. UNLESS OTHERWISE NOTED ON PLANS REGISTERS AND GRILLES SHALL BE SIZED PER SCHEDULE. ER-B ONLY, SHALL BE S580 (ALUMINUM CONSTRUCTION). CFM RANGE: 0-150 > 8"x8" 151-250 > 10"x10" 251-350 > 12"x12" 351-725 > 18"x18" 726-1125 > 24"x24"				
RG-B	KRUEGER	EGC5	EGGCRATE RETURN GRILLE WITH ALUMINUM BORDER AND CORE. 24" x 24" MODULE SIZE. EXTRUDED ALUMINUM 1½" WIDE BORDER WITH ½"½"½" ALUMINUM GRID. BAKED ENAMEL FINISH, COLOR SELECTED BY ARCHITECT. MAXIMUM NOISE CRITERIA = 20 NC. MAXIMUM CORE VELOCITY = 700 FPM. GRILLE SHALL HAVE FRAMES AND BORDERS SUITABLE FOR THE CONSTRUCTION IN WHICH THEY WILL BE INSTALLED, CONTRACTOR TO COORDINATE.				
FD	RUSKIN	DIBD2	1-1/2 HOUR UL555 RATED, SUITABLE FOR INSTALLATION IN WALL AND FLOOR PARTITIONS WITH FIRE RATINGS OF LESS THAN 3 HOURS. DAMPER SHALL BE A COMPLETE FACTORY PACKAGE INCLUDING UL APPROVED ANGLES, WALL SLEEVE, AND BREAKAWAY CONNECTIONS. DAMPER SHALL BE RATED FOR DYNAMIC AIRFLOW CONDITIONS OF 2,000 FPM AND 4.0" ESP. 165°F FUSIBLE LINK. ALL FIRE DAMPERS IN DUCTWORK SERVING AUDITORIUM SHALL HAVE BLADES OUT OF AIRSTREAM. CFM RANGE: NECK SIZE:				
CD-B	KRUEGER	RM1	STEEL, ROUND CEILING DIFFUSER WITH (3) CONES AND 360° DISCHARGE PATTERN. DIFFUSERS SHALL HAVE ROUND NECK INLETS AND (2) HORIZONTAL DISCHARGE SETTINGS. BAKED ENAMEL FINISH, COLOR SELECTED BY ARCHITECT. MAXIMUM NECK VELOCITY: 600 FPM. MAXIMUM NOISE CRITERIA: 25 NC. PROVIDE NECK MOUNTED OPPOSED BLADE VOLUME DAMPER. CFM RANGE: 0-100				
DL-A DL-B DL-C	KRUEGER	DMD	ALUMINUM DIRECT SPIRAL DUCT MOUNTED ADJUSTABLE DOUBLE DEFLECTION DRUM LOUVER WITH ROTATING DRUM. MAXIMUM CORE VELOCITY: 550 MAXIMUM NOISE CRITERIA: 30 NC. SURFACE MOUNTED WITH FRAMES AND BORDERS SUITABLE FOR THE CONSTRUCTION IN WHICH THEY WILL BE INSTALLED, CONTRACTOR TO COORDINATE. COLOR SELECTED BY ARCHITECT. PROVIDE WITH FLOW EXTRACTOR. DL—A SHALL HAVE NOMINAL 24"X6" DUCT SIZE, DL—B SHALL HAVE 48"x6" DUCT SIZE AND DL—C SHALL HAVE 12"x6" NOMINAL DUCT SIZE.				
VFD	ABB	-	UNLESS PROVIDED AS PART OF EQUIPMENT BY MANUFACTURER, VARIABLE FREQUENCY DRIVES SHALL BE BASED ON ABB WITH BACNET IP-MS/TP COMMUNICATION FACTORY INSTALLED. THE VFD SHALL BE IN A NEMA 1 TYPE ENCLOSURE WITH A CIRCUIT BREAKER DISCONNNECT SWITCH, INDUSTRIAL RATED OPERATOR CONTROLS, USER TERMINAL STRIP CONNECTIONS AND BYPASS CONTROLS. POWER CIRCUIT CONFIGURATION SHALL BE "POWER Y CIRCUIT". VFD SHALL BE COMPLETE WITH: HAND-OFF-AUTO SWITCH AND MANUAL SPEED POTENTIOMETER, IEC-RATED ISOLATION AND BYPASS CONTACTORS WITH MECHANICAL AND ELECTRICAL INTERLOCKING AND A CLASS 20 OVERLOAD RELAY, 120 V FUSED CONTROL TRANSFORMER AND CIRCUIT BREAKER WITH LOCKOUT/TAG CAPABILITY, AFC-OFF-BYPASS SWITCH, TEST-NORMAL SWITCH, PILOT LIGHT CLUSTER "BO8" (POWER ON, AFC RUN, BYPASS RUN AND AFC FAULT), LINE ISOLATION CONTACTOR AND "HO9" ANALOG OUTPUT. PROVIDE AUXILIARY CONTACTS FOR "STATUS/RUN", "FAULT", AND ANALOG OUTPUT FOR "SPEED".				
М	RUSKIN	CD40	UNLESS PROVIDED WITH A SPECIFIC PIECE OF EQUIPMENT MOTORIZED DAMPERS SHALL BE CONSTRUCTED OF 4" DEEP EXTRUDED ALUMINUM AIRFOIL DAMPER BLADES. DAMPER SHALL HAVE OPPOSED BLADES, MOTOR AND LINKAGE. PROPORTIONAL DAMPER ACTUATORS SHALL BE 24VAC/60Hz., MAXIMUM 6 WATTS RUNNING AND 2 WATTS HOLDING POWER CONSUMPTION, COMPLETE WITH DISCONNECT SWITCH AND END SWITCH KITS, SIMILAR TO BELIMO NF24—SR. PROVIDE 120V TO 24V TRANSFORMER. MOTORIZED DAMPER FOR L—1 SHALL BE TIED TO OWNER PROVIDED BOILER TO ONLY ALLOW BOILER TO OPERATE ONCE DAMPER HAS BEEN PROVEN OPEN.				
EQUIPMENT SUPPORT RAILS	THYBAR	TEMS-3	24" HIGH EQUIPMENT SUPPORT RAIL CONSTRUCTED OF WELDED 18 GAUGE GALVANIZED STEEL SHELL, BASE PLATE AND COUNTER FLASHING WITH FACTORY INSTALLED 2"x4" WOOD NAILERS AND INTERNAL BULKHEAD REINFORCEMENT. RAIL LENGTH TO EXTEND 6" ON BOTH ENDS OF EQUIPMENT. EQUIPMENT SUPPORT RAILS SHALL BE PROVIDED BY THE MECHANICAL CONTRACTOR AND INSTALLED BY THE GENERAL CONTRACTOR.				
TIME CLOCK	TORK	7100	24 HOUR, SKIP—A—DAY, ELECTROMECHANICAL TIME CLOCK WITH MANUAL OVERRIDE. 120 VOLT, 40 AMP, SPST GENERAL PURPOSE CONTACTS. METAL, INDOOR, NEMA 1 ENCLOSURE. 3 WATTS POWER CONSUMPTION.				
EH-1	QMARK	MSPH154324L	PLENUM HEATER. CAPACITY: 5,000 WATTS, 17,060 BTUH, 1000 CFM. ELECTRICAL: 480V/3Ø, 6.51 AMPS. HEATER SHALL HAVE: DIRECT DRIVE MOTOR, ACOUSTICALLY INSULATED WITH FIBERGLASS, ACCESS PANELS ON FRONT OF UNIT, DISCONNECT SWITCH, FILTER RACK ON INLET, INLET AND OUTLET SCREENS, THERMAL SAFETY CUTOUTS, FAN DELAY CONTROL AND CONCEALED TAMPER—PROOF SINGLE STAGE THERMOSTAT. HEATER SHALL HAVE ZERO CLEARANCE TO COMBUSTIBLE MATERIALS. PROVIDE PERMANENT WASHABLE FILTER.				
EH-2	BROMIC HEATING	BH0420035	TUNGSTEN SMART HEAT, CEILING HUNG ELECTRIC INFRARED HEATER. CAPACITY: 6,000 WATTS, 20,470 BTUH. ELECTRICAL: 277V/1ø, 21.7 AMPS. HEATER SHALL HAVE: DOUBLE HEATING ELEMENTS, STAINLESS STEEL CONSTRUCTION, SPECTRAL REFLECTOR, 36" LONG TUBE SUSPENSION KIT, WIRELESS ON/OFF CONTROLLER WITH BUILT—IN TIMER AND REMOTE. REMOTE SHALL BE PAIRED TO CONTROL (3) HEATERS FROM EACH REMOTE AND CREATE (4) ZONES OF HEATING. CONTRACTOR SHALL CONTACT BROMIC HEATING TECHNICAL SUPPORT TO COORDINATE THE SET—UP OF THE TIMER FUNCTION OF THE CONTROLLER. EACH ZONE OF HEATERS SHALL OPERATE FOR A SET AMOUNT OF TIME. CONTRACTOR SHALL COORDINATE DESIRED TIME WITH OWNER. REMOTES SHALL BE INSTALLED TO WALL WITH LOCKDOWN BRACKET. REFER TO ARCHITECTURAL PLANS FOR MOUNTING HEIGHT.				
EH-3	BERNER	ARD12-4144E	CEILING MOUNTED, ELECTRIC HEATED AIR CURTAIN. CURTAIN SHALL HAVE (4) 1/2 HP DIRECT-DRIVE, CONTINUOUS-DUTY, TEN SPEED MOTORS, ADJUSTABLE AIR DIRECTIONAL VANES, CUSTOM COLOR POWDER COATING FINISH AND BE 149" IN LENGTH. HEATER CAPACITY: 56,000 WATTS, 28" TEMPERATURE RISE AND 6,348 CFM. ELECTRICAL: DUAL CIRCUIT 480V/3ø, 44.2/33.7 AMPS. FINISH SHALL BE SELECTED BY OWNER. HEATER SHALL HAVE: INTELLISWITCH DIGITAL CONTROLLER, THERMAL CUT-OUT, POWER ON/OFF SWITCH, TEMPERATURE PROBE, HANDHELD REMOTE CONTROLLER WITH LOCKDOWN BRAKCET, DISCONNECT SWITCHES, AND (4) MAGNETIC REED DOOR SWITCHES.				
EH-4	BERKO	HUHAA324	HORIZONTAL/VERTICAL UNIT HEATER. CAPACITY: 3,000 WATTS, 10,230 BTUH, 350 CFM. ELECTRICAL: 240V/1ø, 12.5 AMPS. HEATER SHALL HAVE: CONCEALED TAMPER-PROOF THERMOSTAT, MANUAL RESET, TWO-STAGE ELEMENT CONTROL, BIRD SCREEN, INDIVIDUAL ADJUSTABLE LOUVERS WITH 30° DOWNWARD STOPS, 18 GAUGE CABINET, WALL SWIVEL MOUNTING BRACKETS, AND DISCONNECT SWITCH.				
EH-5	BERKO	FRC4027FNW	ARCHITECTURAL, HEAVY-DUTY, FAN FORCED WALL HEATER. CAPACITY: 1500 WATTS, 5120 BTUH, 100 CFM. ELECTRICAL: 277V/1ø, 6.3 AMPS. FINISH SHALL BE NORTHERN WHITE. HEATER SHALL HAVE: CONCEALED TAMPER-PROOF THERMOSTAT, MANUAL RESET THERMAL CUT-OUT, CONCEALED POWER ON/OFF SWITCH, BACK BOX, SURFACE MOUNTING FRAME, DISCONNECT SWITCH, AND 14 GAUGE SECURITY FRONT COVER.				
MUA-1	CAPTIVE AIRE	A3-D.500-24D	DIRECT GAS FIRED MAKE-UP AIR UNIT WITH 24" DIRECT DRIVE FAN. MOTOR CHARACTERISTICS: 7.5HP, 460V/3\$\(\phi\)/60Hz, 9.6 FLA, PREMIUM EFFICIENCY. SUPPLY PERFORMANCE: MAXIMUM CFM 5250, MINIMUM CFM 3500, 1426 RPM, 1.2" ESP, 5.3 BHP, 9°F EAT, 66°F TEMPERATURE RISE, GAS INPUT 387.9 MBH, AND GAS OUTPUT 356.9 MBH. UNIT SHALL BE COMPLETE WITH: 0°-150°F DISCHARGE TEMPERATURE CONTROL, SLOPED FILTERED INTAKE WITH METAL MESH FILTERS, 24" HIGH INSULATED ROOF CURB, MOTORIZED BACKDRAFT DAMPER, LOW FIRE START, INLET AND MANIFOLD GAS PRESSURE GAUGES, AND SEPARATE 120V WIRING PACKAGE.				
HVAC-1	DAIKIN	FTQ24TAVJDU	HEAT PUMP AIR HANDLER UNIT. NOMINAL COOLING 2 TON (24,000 BTUH), HEATING 27,000 BTUH @ 5° OAT, HIGH EFFICIENT MULTI-SPEED BLOWER MOTOR, DISCONNECT SWITCH, DRAIN PAN LEVEL SENSOR, AND FILTER. 800 CFM @ .9" W.C. (10.3 EER). REFRIGERANT R-410A - 208V/1, 4.9 MCA, AND 15 MOCP.				
HP-1	DAIKIN	RZQ24TAVJUA	COMPRESSOR/CONDENSER HEAT PUMP UNIT WITH INVERTER COMPRESSOR. NOMINAL COOLING 2 TON, HEATING 27,000 BTUH @ 5° OAT. PROVIDE WITH NEMA 3-R DISCONNECT SWITCH AND EEV VALVE. (15.2 SEER)/(10.7 HSPF). REFRIGERANT R-410A - 208V/1, 16.5 MCA AND 20 MOCP.				
L-1	RUSKIN	ELF6375DX	EXTRUDED ALUMINUM, DRAINABLE STATIONARY LOUVER. FRAME: 6" DEEP, EXTRUDED ALUMINUM WITH 0.081" NOMINAL WALL THICKNESS. BLADES: EXTRUDED ALUMINUM, DRAINABLE, 0.081" NOMINAL WALL THICKNESS, AND 37.5" BLADE ANGLE. LOUVER SHALL HAVE 54% FREE AREA. LOUVER SHALL HAVE MILL FINISH, BIRD SCREEN, EXTENDED SILL AND INSTALLATION ANGLE. LOUVER SIZE: 36"x30" WITH 3.97 FT ² FREE AREA. LOUVER SHALL BEAR THE AMCA SEAL.				
AC-1	DAIKIN	FCQ24TAVJU	CEILING CASSETTE, 4-WAY AIRFLOW PATTERN, INDOOR UNIT WITH BUILT-IN CONDENSATE PUMP. UNIT SHALL BE COMPLETE WITH DISCONNECT SWITCH, AND BRC1E73 REMOTE CONTROLLER. PERFORMANCE: 777 CFM, 24,000 BTUH COOLING CAPACITY AT 80°F DB/67°F WB EAT AND 95°F AMBIENT, 27,000 BTUH HEATING CAPACITY AT 70°F DB/60°F WB EAT AND 47° AMBIENT. ELECTRICAL: 208V/1¢/60Hz.				
CP-1	BELL & GOSSETT	WC6-20B	SIMPLEX CONDENSATE PUMP SET. CAPACITY 6,000 EDR, PUMPING 9 GPM AT 22 PSI DISCHARGE PRESSURE. CAST IRON RECEIVER WITH 6 GALLON CAPACITY. MOTORS SHALL BE 1/3 HP, 3500 RPM, 120V/1ø/60Hz. SYSTEM SHALL BE COMPLETE WITH: BASKET INLET STRAINER, CLOSE COUPLED BRONZE FITTED PUMP, RENEWABLE BRONZE WEAR RING, STAINLESS STEEL MOTOR SHAFT, CARBON SEAL FACES, DOUBLE POLE FLOAT SWITCH, AND NEMA-3R DISCONNECT SWITCH.				

FAN SCHEDULE									
DESIGNATION	EF-1	EF-2	EF-3	EF-4	EF-5	EF-6	EF-7	EF-8	
LOCATION	ROOF								
AREA SERVED	KITCHEN EXHAUST HOOD	DISHWASHER EXHAUST HOOD	REFER TO PLANS	REFER TO PLANS	KITCHEN 117	LAB 105FOOM	ELEC. 116	IT ROOM	
MODEL	DU240HFA	DU50HFA	G-100-VG	G-120-VG	G-100-VG	G-09-VG	G-095-VG	G-080-VG	
CFM (MAX./MIN.)	6,000/-	1,000/-	500/-	1,350/-	850/-	150/-	250/-	150/-	
ВНР	2.85	.13	0.15	0.37	0.23	0.05	0.1	0.03	
HP	5	1/2	1/4	1/2	1/4	1/4	1/6	1/10	
RPM (MAX./MIN.)	994/-	1081-	1535/-	1595/-	1574/-	1404/-	1671/-	1319/-	
ESP (IN H₂O)	1.3"	.5"	0.88"	1.0"	0.91"	0.56"	0.78"	0.39	
VOLTS/Ø	460/3	115/1	115/1	115/1	115/1	115/1	115/1	115/1	
STARTER TYPE	NEMA 3R DISCONNECT SWITCH								
SOUND DATA (dBA/SONES)	-/21	-/8.6	52/6.4	65/13.2	57/8.4	52/6.1	60/11.1	51/6.1	

NOTES:

- FANS EXCEPT EF-1 AND EF-2 BASED ON GREENHECK. EXHAUST FANS EF-1 AND EF-2 BASED ON CAPTIVE AIRE.
 ALL MOTORS 1 HP AND LARGER SHALL BE PREMIUM EFFICIENCY. FANS PROVIDED WITH VARIABLE FREQUENCY DRIVES WITH DISCONNECT SWITCHES, SHALL HAVE INVERTER RATED PREMIUM EFFICIENCY MOTORS SUITABLE FOR VARIABLE SPEED AND TORQUE APPLICATIONS. VARIABLE FREQUENCY DRIVES SHALL BE CAPABLE OF BY-PASS OPERATION. TURN DOWN RATIO OF 10:1. VFD TO BE PURCHASED BY MECHANICAL CONTRACTOR AND INSTALLED BY ELECTRICAL CONTRACTOR.
- 3. ALL MOTORS TO INCLUDE THERMAL OVERLOAD.
 4. PROVIDE ONE EXTRA SET OF BELTS FOR EACH BELT DRIVEN FAN. ALL BELT DRIVEN FANS SHALL HAVE VARIABLE PITCH
 - ALL FANS SHALL BE PROVIDED WITH MOTORIZED BACKDRAFT DAMPERS CONSTRUCTED OF A GALVANIZED STEEL FRAME AND
- ALUMINUM BLADES WITH SEALS. MOTORIZED DAMPER VOLTAGE SHALL BE 120 VOLTS. NOT REQUIRED FOR EF-1.

 6. EXHAUST FANS 3,4,5,6,7 AND 8 SHALL BE PROVIDED WITH THE FOLLOWING: VARI-GREEN EC MOTOR WITH MOUNTED POTENTIOMETER DIAL, BIRDSCREEN, CURB SEAL AND 24" HIGH ROOF CURB WITH DAMPER TRAY.
- 7. EXHAUST FAN EF-1 SHALL BE PROVIDED WITH THE FOLLOWING: GREASE CLASSIFICATION TESTING, UL 705 AND UL 762. 24" HIGH VENTED AND HINGED ROOF CURB, AND GREASE CUP.
- 8. EXHAUST FAN EF-2 SHALL BE PROVIDED WITH THE FOLLOWING: BIRDSCREEN, 24" HIGH VENTED AND HINGED ROOF CURB WITH DAMPER TRAY, AND ECM EXHAUST WIRING PACKAGE.

 9. PROVIDE MANUAL ON/OFF LOCAL SWITCH FOR EF-6 CONTROL.
- 10. ALL FANS SHALL BE PROVIDED WITH DISCONNECT SWITCH AT UNIT FOR SERVICE. OUTDOOR DISCONNECT SWITCHES SHALL BE
- 11. EF-7 AND EF-8 SHALL BE CONTROLLED BY ROOM MOUNTED LINE VOLTAGE THERMOSTAT.

 12. ROOF CURBS AND EQUIPMENT SUPPORT RAILS SHALL BE PROVIDED BY MECHANICAL CONTRACTOR AND INSTALLED BY GENERAL CONTRACTOR.

MINIMUM DUCT INSULATION

COMMERCIAL

ALL SUPPLY AND RETURN AIR DUCTS AND PLENUMS SHALL BE INSULATED WITH A MINIMUM OF R-6 INSULATION WHEN LOCATED IN UNCONDITIONED SPACES AND WITH A MINIMUM OF R-12 INSULATION WHEN LOCATED OUTSIDE THE BUILDING ENVELOPE. WHEN LOCATED WITHIN A BUILDING ENVELOPE ASSEMBLY, THE DUCT OR PLENUM SHALL BE SEPARATED FROM THE BUILDING EXTERIOR OR UNCONDITIONED OR EXEMPT SPACES BY A MINIMUM OF R-12 INSULATION.

EXCEPTIONS:

 WHEN LOCATED WITHIN EQUIPMENT.
 WHEN THE DESIGN TEMPERATURE DIFFERENCE BETWEEN THE INTERIOR AND EXTERIOR OF THE DUCT OR PLENUM DOES NOT EXCEED 15°F

ALL JOINTS, LONGITUDINAL AND TRANSVERSE SEAMS, AND CONNECTIONS IN DUCTWORK, SHALL BE SECURELY FASTENED AND SEALED WITH WELDS, GASKETS, MASTICS (ADHESIVES), MASTIC-PLUS- EMBEDDED FABRIC SYSTEMS OR TAPES. TAPES AND MASTICS USED TO SEAL DUCTWORK SHALL BE LISTED AND LABELED IN ACCORDANCE WITH UL 181A OR UL 181B. DUCT CONNECTIONS TO FLANGES OF AIR DISTRIBUTION SYSTEM EQUIPMENT SHALL BE SEALED AND MECHANICALLY FASTENED. UNLISTED DUCT TAPE IS NOT PERMITTED AS A SEALANT ON ANY METAL DUCTS.

NOTE:

DUCT INSULATION, COVERINGS AND LINING MATERIALS AND ADHESIVES SHALL HAVE A FLAME SPREAD INDEX OF NOT MORE THAN 25, AND A SMOKE DEVELOPED INDEX OF NOT MORE THAN 50, IN ACCORDANCE WITH 2020 MECHANICAL CODE OF NEW YORK STATE SECTION 604.3.

NOTE:

1. ARCHITECT SHALL SELECT FINISH COLORS FOR ALL MECHANICAL EQUIPMENT VISIBLE WITHIN FINISHED SPACES OR ON EXTERIOR OF BUILDING. COLOR CHOICES FOR SELECTION SHALL BE MANUFACTURER'S FULL RANGE OF BOTH STANDARD AND CUSTOM COLOR/FINISHES UNLESS OTHERWISE NOTES.

•5 YEAR COMPRESSOR PARTS WARRANTY.

•10 YEAR GAS HEAT EXCHANGER PARTS WARRANTY.

•INTELLIGENT EQUIPMENT MODULE FOR REMOTE WEB ACCESS.

• COMPARATIVE ENTHALPY ECONOMIZER. • STAINLESS STEEL DRAIN PANS.

LOW AMBIENT CONTROL.24" HIGH ROOF CURB.

• INVERTER RATED PREMIUM EFFICIENCY MOTORS SUITABLE FOR VARIABLE SPEED AND TORQUE APPLICATIONS.

5. ALL UNITS SHALL BE PROVIDED WITH VARIABLE FREQUENCY DRIVES AND POWERED, MODULATING EXHAUST FANS.

6. RTU-1, RTU-2, RTU-3, RTU-5 AND RTU-6 SHALL BE PROVIDED WITH BY-PASS DAMPER FOR ENERGY RECOVERY WHEEL. 7. RTU-3 AND RTU-5 SHALL BE SUPPLIED WITH OUTDOOR AIR MONITORING STATION.

• COMBO DIGITAL TEMP AND HUMIDITY SENSOR W/ADJ SETPOINT AND TENENT OVERRIDE

4. ROOF CURBS SHALL BE TURNED OVER TO THE GENERAL CONTRACTOR FOR INSTALLATION.

DESIGNATION	RTU-1	RTU-2	RTU-3	RTU-4	RTU-5	RTU-6
AREA SERVED	REFER TO PLANS	REFER TO PLANS	REFER TO PLANS	REFER TO PLANS	REFER TO PLANS	REFER TO PLANS
MODEL NUMBER	DPS020A	DPS015A	DPS016A	DPS015A	DPS012A	DPS020A
NOMINAL CAPACITY (TONS)	20	15	16	15	12	20
WEIGHT OF UNIT (POUNDS)	4441	2951	4441	2711	2788	4524
EER/IEER	11.0/19.6	10.8/17.5	11.9/20.1	10.8/17.5	11.2/17.6	11.0/19.6
DESIGN DATA:						
SUPPLY AIR (CFM)	6,400	4,350	6,400	4,800	4,000	8,000
OUTDOOR AIR (CFM)	3,510	2,400	3,040	1,800	2,400	3,000
CONDENSER DATA:						
COMPRESSOR No./TYPE	1/SCROLL	2/SCROLL	1/SCROLL	2/SCROLL	2/SCROLL	1/SCROLL
CAPACITY CONTROL	MODULATING	MODULATING	MODULATING	MODULATING	MODULATING	MODULATING
REFRIGERANT TYPE	R-410A	R-410A	R-410A	R-410A	R-410A	R-410A
COMPRESSOR (AMPS) EACH	30.1	7.9/12.8	22.9	7.9/12.8	6.8/7.9	30.1
No. OF FANS/No. OF MOTORS	1/1	2/2	1/1	2/2	2/2	1/1
FAN FLA (AMPS) EACH	3.5	1.8	3.5	1.8	1.8	3.5
No. OF ROWS/FPI	1/23	1/21	1/23	1/21	1/23	1/23
AMBIENT TEMPERATURE (°F)	95	95	95	95	95	95
FILTER DATA:						
TYPE	2" MERV 8 & 4" MERV 14	2" MERV 8 & 4" MERV 14	2" MERV 8 & 4" MERV 14	2" MERV 8 & 4" MERV 14	2" MERV 8 & 4" MERV 14	2" MERV 8 & 4" MERV 14
FACE AREA (SQ.FT.)	27.0	18.0	27.0	18.0	18.0	27.0
QUANTITY/SIZE (In.)	9/18x24x2 9/18x24x4	6/18x24x2 6/18x24x4	9/18x24x2 9/18x24x4	6/18x24x2 6/18x24x4	6/18x24x2 6/18x24x4	9/18x24x2 9/18x24x4
EVAPORATOR COIL DATA:	,	,	,	,	,	,
FACE AREA (SQ. FT.)	21.4	15.4	18.9	15.4	15.4	21.4
No. OF ROWS/FPI	4/15	6/15	4/15	6/15	4/15	4/15
EAT (*F) DB/WB	79.0/66.2	79.8/66.4	77.4/64.6	81.4/67.1	79.8/66.6	77.4/64.8
LAT (*F) DB/WB	53.1/53.1	53.4/53.4	55.0/54.9	55.2/55.2	54.5/54.5	54.4/54.2
FACE VELOCITY (FPM)	299.1	281.9	338.6	311.1	259.2	373.8
TOTAL/SENSIBLE CAP. (MBH)	252.1/180.5	172.4/125.6	185.9/156.4	176.9/137.2	148.7/110.7	255.3/202.0
GAS HEATING DATA:						
INPUT (MBH)	600	400	600	300	400	600
CAPACITY (MBH)	480	320	480	240	320	480
EAT/LAT (°F) DB	29.4/98.5	29.1/96.9	33.8/102.9	40.6/86.7	26.0/99.7	40.6/95.9
CAPACITY CONTROL	MODULATING 12:1	MODULATING 10:1	MODULATING 12:1	MODULATING 10:1	MODULATING 10:1	MODULATING 12:1
EFFICIENCY	80%	80%	80%	80%	80%	80%
HOT GAS REHEAT COIL DATA	\ :					
FACE AREA (SQ. FT.)	21.6	14.6	21.6	14.6	14.6	21.6
TOTAL CAPACITY (MBH)	116.8	78.3	103.8	76.8	67.1	135.8
LAT (°F) DB/WB	70.0/59.5	70.0/59.6	70.0/60.4	70.0/60.6	70.0/60.2	70.0/60.1
ENERGY RECOVERY WHEEL	DATA:					
EXHAUST AIR (CFM)	3,510	1,575	1,520	_	1.750	3,100
OUTDOOR AIR (CFM)	3,510	2,400	3,040	_	2,400	3,000
PRESSURE DROP (IN H ₂ O)	0.67	0.57	0.58	_	0.57	0.57
MOTOR HP	0.17	0.17	0.17	_	0.17	0.17
MOTOR FLA (AMPS)	0.4	0.4	0.4	_	0.4	0.4
ENERGY RECOVERY WHEEL	FILTER DATA:					
TYPE	2" MERV 8	2" MERV 8	2" MERV 8	_	2" MERV 8	2" MERV 8
FACE AREA (SQ.FT.)	6.0	6.0	6.0	_	6.0	6.0
QUANTITY/SIZE (In.)	2/18x24x2	2/18x24x2	2/18x24x2	_	2/18x24x2	2/18x24x2
ENERGY RECOVERY WHEEL	SUMMER DATA:	ı	1	<u> </u>	1	ı
OUTDOOR AIR EAT (*F) DB/WB	92.0/74.0	92.0/74.0	92.0/74.0	_	92.0/74.0	92.0/74.0
RETURN AIR EAT (°F) DB/WB	75.0/62.5	75.0/62.5	75.0/62.5	_	75.0/62.5	75.0/62.5
WHEEL LEAVING T (*F) DB/WB	82.3/69.0	83.7/69.4	85.1/70.0	_	83.1/69.1	81.5/68.5
MIXED AIR T (°F) DB/WB	79.0/66.2	79.8/66.4	79.8/66.2	_	79.8/66.6	77.4/64.8
CAPACITY RECOVERED (MBH)	68.7	43.3	47.7	_	45.7	63.6
EFFECTIVENESS (TOTAL/SENS.)	0.47/0.57	0.67/0.74	0.78/0.81	_	0.64/0.72	0.51/0.62
ENERGY RECOVERY WHEEL	<u> </u>	ı	1	ı	1	ı
OUTDOOR AIR EAT (*F) DB/WB	0.0/0.0	0.0/0.0	0.0/0.0	_	0.0/0.0	0.0/0.0
RETURN AIR EAT (°F) DB/WB	70.0/52.5	70.0/52.5	70.0/52.5	_	70.0/52.5	70.0/52.5
WHEEL LEAVING T (*F) DB/WB	43.3/36.1	35.1/30.8	28.9/26.4	_	38.0/32.7	45.9/37.8
MIXED AIR T (°F) DB/WB	55.4/44.1	50.8/41.5	50.5/41.4	_	50.8/41.4	61.0/47.4
CAPACITY RECOVERED (MBH)	199.4	112.7	119.2	_	121.3	180.5
EFFECTIVENESS (TOTAL/SENS.)	0.59/0.62	0.76/0.76	0.84/0.83	_	0.73/0.74	0.63/0.66
SUPPLY FAN DATA:		1, 5 5	1, 3.33	<u> </u>	1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	1
SUPPLY AIRFLOW (CFM)	6,400	4,350	6,400	4,800	4,000	8,000
JOITEL AINTLOW (CFM)	1.7/4.0	1.75/3.8	2.5/4.8	2.1/3.2	2.4/4.3	2.1/4.6
FSP/TSP (IN H=O)	6.4/10.0	4.2/8.0	7.75/10.0	3.9/8.0	4.5/8.0	8.9/15
ESP/TSP (IN H ₂ O)	0.7/10.0	1599		,		
ВНР/НР	1507	1.599	1646	1539	1660	1699
BHP/HP RPM	1527		10.5	C 4	1	
BHP/HP RPM FLA (AMPS)	12.5	6.1	12.5	6.1	6.1	17.7
BHP/HP RPM FLA (AMPS) SINGLE POINT POWER CONN	12.5 IECTION ELECTRICA	6.1 AL DATA:				
BHP/HP RPM FLA (AMPS)	12.5	6.1	12.5 460/3/60 42.9/70.0	6.1 460/3/60 32.6/45.0	6.1 460/3/60 26.6/35.0	460/3/60 59.3/90.0

TT P. ZIEGLER

Revisions:

PERMIT SET
10/15/21

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MIDDLETOWN, NY 10941

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File No. 4155201 M702

M7.02