

FAN COIL SCHEDULE

NUMBER	37-FC-1.1	37-FC-1.2	37-FC-1.3 AND 37-FC-1.4	37-FC-1.5 AND 37-FC-1.7	37-FC-1.6	37-FC-1.7	37-FC-1.8	37-FC-1.9	37-FC-1.10	37-FC-1.11	37-FC-1.12	37-FC-1.13	37-FC-1.14	37-FC-1.15	37-FC-1.16	37-FC-1.18 THRU 37-FC-1.21	37-FC-1.22	37-FC-1.23	37-FC-2.1 AND 37-FC-2.4	37-FC-2.2 AND 37-FC-2.5	37-FC-2.3	37-FC-2.6	37-FC-2.7	37-FC-2.8	37-FC-2.9	37-FC-2.10	37-FC-2.11			
TYPE	CONCEALED CEILING	CEILING CASSETTE	CEILING CASSETTE	CEILING CASSETTE	CONCEALED CEILING	CONCEALED CEILING	CONCEALED CEILING	CONCEALED CEILING	CONCEALED CEILING	CONCEALED CEILING	CONCEALED CEILING	WALL MOUNTED	CONCEALED CEILING	WALL MOUNTED	CONCEALED CEILING	CONCEALED CEILING	CONCEALED CEILING	CONCEALED CEILING												
MOUNTING	ATTIC	ATTIC	ATTIC	ATTIC	ATTIC	ATTIC	ATTIC	ATTIC	ATTIC	ATTIC	ATTIC	ATTIC	ATTIC	ATTIC	ATTIC	ATTIC	ATTIC	ATTIC	ATTIC	ATTIC	ATTIC	ATTIC	ATTIC	ATTIC	ATTIC	ATTIC	ATTIC	ATTIC	ATTIC	
VOLTS/PHASE	208/1	208/1	208/1	208/1	208/1	208/1	208/1	208/1	208/1	208/1	208/1	208/1	208/1	208/1	208/1	208/1	208/1	208/1	208/1	208/1	208/1	208/1	208/1	208/1	208/1	208/1	208/1	208/1	208/1	
FLA/MCA	-/2.9	-/2.9	-/2.9	-/2.9	-/2.9	-/2.9	-/2.9	-/2.9	-/2.9	-/2.9	-/2.9	-/2.9	-/2.9	-/2.9	-/2.9	-/2.9	-/2.9	-/2.9	-/2.9	-/2.9	-/2.9	-/2.9	-/2.9	-/2.9	-/2.9	-/2.9	-/2.9	-/2.9	-/2.9	
M.O.C.P.	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	
HSPF/SEER	-/SEE NOTE	-/SEE NOTE	-/SEE NOTE	-/SEE NOTE	-/SEE NOTE	-/SEE NOTE	-/SEE NOTE	-/SEE NOTE	-/SEE NOTE	-/SEE NOTE	-/SEE NOTE	-/SEE NOTE	-/SEE NOTE	-/SEE NOTE	-/SEE NOTE	-/SEE NOTE	-/SEE NOTE	-/SEE NOTE	-/SEE NOTE	-/SEE NOTE	-/SEE NOTE	-/SEE NOTE	-/SEE NOTE	-/SEE NOTE	-/SEE NOTE	-/SEE NOTE	-/SEE NOTE	-/SEE NOTE	-/SEE NOTE	
B WATTS	1130/HI	460/HI	460/HI	460/HI	315/HI	335/HI	1370/HI	2040/HI	2540/HI	460/HI	630/HI	460/HI	335/HI	315/HI	1370/HI	460/HI	460/HI	635/HI	460/HI	460/HI	460/HI	630/HI	635/HI	880/HI	315/HI	1370/HI	2040/HI	2540/HI		
L SUPPLY CFM/SPEED	0.4	0	0	0	0.4	0.2	0.4	0.4	0.4	0.4	0.4	0.2	0.4	0.4	0.4	0.4	0	0	0	0	0	0	0	0	0.4	0.4	0.4	0.4	0.4	
O E.S.P. (IN. WC.)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
W RPM	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT	DIRECT
R MIN. O.A. (CFM)	200	85	30	30	100	0	105	80	525	60	110	30	45	385	25	95	30	0	30	30	30	95	0	95	40	250	220	220	220	
C TOTAL CAP. (MBH)	33.4	9.0	8.9	8.5	7.2	11.6	41.6	58.4	89.9	9.6	17.5	10.2	11.9	7.2	45.8	8.2	8.8	18.0	8.8	9.0	9.3	17.4	18.0	26.8	7.3	42.4	61.3	61.3	61.3	
O SENS. CAP. (MBH)	28.8	9.0	8.1	8.0	6.7	7.5	33.1	54.9	73.4	7.8	14.3	10.1	9.7	6.1	39.6	8.1	8.1	18.0	8.1	8.2	8.2	14.0	18.0	25.7	8.0	37.7	56.7	56.7	56.7	
O E.A. DB/WB (°F)	80.7/65.0	81.9/65.7	77.6/65.2	77.5/64.2	81.8/66.1	75.7/46.1	77.4/63.2	76.9/61.6	81.5/65.2	78.0/68.7	80.4/66.3	78.3/62.9	82.9/66.8	79.5/66.2	83.5/65.7	77.1/63.3	77.7/65.0	75.8/46.1	77.7/65.0	77.9/65.5	77.8/66.4	79.8/66.1	75.8/46.1	83.3/65.9	79.4/66.6	82.0/63.7	79.2/62.8	79.2/62.8	79.2/62.8	
L.A. DB/WB (°F)	103.5	103.5	103.5	103.5	103.5	103.5	103.5	103.5	103.5	103.5	103.5	103.5	103.5	103.5	103.5	103.5	103.5	103.5	103.5	103.5	103.5	103.5	103.5	103.5	103.5	103.5	103.5	103.5	103.5	103.5
I AMBIENT TEMP. (°F)	103.5	103.5	103.5	103.5	103.5	103.5	103.5	103.5	103.5	103.5	103.5	103.5	103.5	103.5	103.5	103.5	103.5	103.5	103.5	103.5	103.5	103.5	103.5	103.5	103.5	103.5	103.5	103.5	103.5	103.5
N COIL TYPE	DIRECT EXP.	DIRECT EXP.	DIRECT EXP.	DIRECT EXP.	DIRECT EXP.	DIRECT EXP.	DIRECT EXP.	DIRECT EXP.	DIRECT EXP.	DIRECT EXP.	DIRECT EXP.	DIRECT EXP.	DIRECT EXP.	DIRECT EXP.	DIRECT EXP.	DIRECT EXP.	DIRECT EXP.	DIRECT EXP.	DIRECT EXP.	DIRECT EXP.	DIRECT EXP.	DIRECT EXP.	DIRECT EXP.	DIRECT EXP.	DIRECT EXP.	DIRECT EXP.	DIRECT EXP.	DIRECT EXP.	DIRECT EXP.	DIRECT EXP.
R REFRIGERANT	R-410A	R-410A	R-410A	R-410A	R-410A	R-410A	R-410A	R-410A	R-410A	R-410A	R-410A	R-410A	R-410A	R-410A	R-410A	R-410A	R-410A	R-410A	R-410A	R-410A	R-410A	R-410A	R-410A	R-410A	R-410A	R-410A	R-410A	R-410A	R-410A	
H HEATING CAP. (MBH)	45.1	12.1	11.2	11.1	9.8	13.5	57.8	84.2	125.9	11.2	22.9	14.3	15.7	9.4	62.9	11.0	11.1	22.2	11.1	11.2	22.2	22.2	38.9	9.2	62.3	88.1	88.1	88.1	88.1	
E E.A. DB (°F)	62.5	60.0	66.1	66.1	60.4	69.7	66.1	67.8	61.3	66.2	62.8	66.3	59.1	64.3	55.5	67.1	66.8	—	66.8	66.2	66.3	64.2	—	62.9	65.0	62.5	65.2	65.2	65.2	
A	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
OPER. WT. (LBS.)	110	60	60	60	60	60	110	330	330	60	90	60	60	110	60	60	40	60	60	60	90	40	90	40	90	60	110	330	330	
MANUFACTURER	DAIKIN	DAIKIN	DAIKIN	DAIKIN	DAIKIN	DAIKIN	DAIKIN	DAIKIN	DAIKIN	DAIKIN	DAIKIN	DAIKIN	DAIKIN	DAIKIN	DAIKIN	DAIKIN	DAIKIN	DAIKIN	DAIKIN	DAIKIN	DAIKIN	DAIKIN	DAIKIN	DAIKIN	DAIKIN	DAIKIN	DAIKIN	DAIKIN	DAIKIN	
MODEL	FXM036PVJU	FXG09PVJU	FXG09PVJU	FXG09PVJU	FXM022PVJU	FXM022PVJU	FXM048PVJU	FXM022PVJU	FXM022PVJU	FXM022PVJU	FXM022PVJU	FXM022PVJU	FXM022PVJU	FXM022PVJU	FXM022PVJU	FXM022PVJU	FXM022PVJU	FXM022PVJU	FXM022PVJU	FXM022PVJU	FXM022PVJU	FXM022PVJU								

NOTES:  
 1. PROVIDE FACTORY TEMPERATURE SENSOR WITH COMMUNICATION TO MAIN CONTROLLER AND CONNECTION TO EMS.  
 2. PROVIDE FILTER DIFFERENTIAL PRESSURE SWITCH AND CONNECT TO EMS.  
 3. PROVIDE FACTORY CONDENSATE PUMP CAPABLE OF LIFTING CONDENSATE A MINIMUM OF 24".  
 4. PROVIDE REFRIGERANT LINE SIZE AND CONNECTIONS DIAGRAMS PRIOR TO INSTALLATION.  
 5. FC/ODU SYSTEM SHALL BE EQUAL TO SEER OF 17 AND COP OF 3.3 OR BETTER.  
 6. FC-1.7, FC-1.23 AND FC-2.7 SHALL BE SET TO COOL AT TEMPERATURES ABOVE 85°F, AND HEATING FUNCTION SHALL BE DISABLED.  
 7. UNITS MOUNTED ABOVE CEILING SHALL BE MOUNTED A MAXIMUM OF 12" ABOVE FINISHED CEILING. CEILING SHALL BE TAGGED WITH LABEL SHOWING ARROW AND UNIT NUMBER TO SHOW WHICH CEILING TILE IS TO BE REMOVED FOR UNIT ACCESS. CEILING WIRES FOR THIS TILE SHALL BE ANGLED SLIGHTLY OUTWARD FROM REMOVABLE PANEL FOR EASE OF ACCESS. PROVIDE ACCESS PANELS AS REQUIRED IN HARD CEILINGS.  
 8. CONTRACTOR SHALL COMPLETE MANUFACTURERS INSTALLATION TRAINING PRIOR TO INSTALLING ANY SPLIT SYSTEM EQUIPMENT AND MANUFACTURER SHALL PROVIDE FACTORY OPERATION AND MAINTENANCE TRAINING FOR (2) OWNER REPRESENTATIVES.  
 9. PROVIDE A CEILING OR DUCT SMOKE DETECTOR IN THE SUPPLY AIR DUCT TO SHUT OFF THE UNIT POWER UPON DETECTION OF SMOKE. WIRING BY ELECT. MECH. CONTRACTOR TO PROVIDE DETECTOR AND INSTALL IN DUCT. INSTALL IN STRICT ACCORDANCE WITH CURRENT CODES.  
 10. EQUAL UNITS MANUFACTURED BY TRANE OR MITSUBISHI SHALL BE ACCEPTABLE.  
 11. UNITS SHALL BE PROVIDED WITH SENSOR IN CONDENSATE DRAIN PAN THAT SHUTS OFF UNIT AND SENDS AN ALARM TO THE MAIN CONTROL PANEL WHEN CONDENSATE LEVEL IS TOO HIGH. NO SECONDARY DRAIN IS REQUIRED.  
 12. COORDINATE WITH GENERAL CONTRACTOR TO PROVIDE ACCESS IN ABOVE CEILING WALL FRAMING AS REQUIRED.  
 13. MOTOR ENCLOSURES AND EFFICIENCIES SHALL MEET OR EXCEED SPEC. SECT. 23 05 12, 2.1 MOTORS.  
 14. UNITS SHALL BE PROVIDED WITH (3) SETS OF FILTERS: (1) MERV 8 FOR DURING CONSTRUCTION - UNIT NOT RUNNING, (1) MERV 13 FOR LEED PURGE AND (1) MERV 13 FOR FINAL OCCUPANCY. UNIT SHALL BE PROVIDED WITH FACTORY FIELD INSTALLED MERV 13 FILTER KIT. SEE SPEC. SECT. 01 81 11 FOR ADDITIONAL FLUSH OUT REQUIREMENTS.  
 15. ALL UNITS SHALL BE DESIGNED FOR LESS THAN NC-35 SOUND RATING.  
 16. FC-1.7, 1.23 AND 2.7 SHALL BE ON EMERGENCY POWER.  
 17. FC-1.23 & 2.7 IS POWERED THRU OUTDOOR UNIT.  
 18. FC-1.1, 1.10, 1.12 & 1.14 SHALL HAVE CO2 SENSOR LOCATED NEXT TO TEMP. SENSOR AND SEND ALARM THRU EMS IF CO2 LEVEL RISES ABOVE 1000 PPM.  
 19. FC-1.8, 1.10, 2.8 & 2.10 SHALL HAVE HUMIDITY SENSOR LOCATED NEXT TO TEMP. SENSOR TO CONTROL WATER VAPOR PRESSURE TO 0.277 PSI OR BELOW AT STANDARD PRESSURE.

### KITCHEN HOOD

NUMBER	37-KH-1.1
TYPE	DUCTED
AMPS	3.0
VOLTS/PHASE	120/1
CFM	300
SIZE	30"
SERVICE	SEE PLAN
MANUFACTURER	BROAN
MODEL	Q53

NOTES:  
 1. 1/2" DIA. DUCT CONNECTION.  
 2. PROVIDE APPROVED ROOF CAP AND FLASHING ASSEMBLY.  
 3. PROVIDE BACKDRAFT DAMPER.  
 4. INSTALL TO PROVIDE 30" CLEARANCE ABOVE COOKTOP PER C.M.C.  
 5. OWNER TO APPROVE MODEL AND COLOR PRIOR TO ORDERING & INSTALLATION.  
 6. 4-SPEED FAN WITH BOOST MODE AND HEAT SENSOR.

### COOLING TOWER SCHEDULE

NUMBER	37-CT-1	37-CT-2
CFM	11700	11700
GPM	87	87
LWT (°F)	95.0	95.0
DESIGN WET BULB (°F)	85.0	85.0
HORSE POWER	5	5
VOLTS/PHASE	460/3	460/3
MANUFACTURER AND MODEL (BASE DESIGN)	RECOLD JWL-25A	RECOLD JWL-25A
OPERATING WT. (LBS.)	3000	3000

NOTES:  
 1. PROVIDE VFD'S ON FAN MOTORS.  
 2. PROVIDE SPRING ISOLATION SYSTEM WITH ENGINEER CALCS FOR ATTACHMENT TO PLATFORM.  
 3. PROVIDE AUTOMATIC CHEMICAL FEED SYSTEM.  
 4. PROVIDE A WATER METER ON THE CONDENSER WATER & TOWER MAKE-UP LINE AND CONNECT TO EMS.

### PUMP SCHEDULE

NUMBER	37-P-1	37-P-2
TYPE	CENTRIFUGAL	CENTRIFUGAL
MOUNTING	VERT. IN-LINE	VERT. IN-LINE
HORSEPOWER/BHP	3.0/1.92	3.0/1.92
VOLTS/PHASE	460/3	460/3
RPM	2977	2977
GPM/TDH (FT. WC.)	87/50	87/50
SERVICE	MAIN DIST.	MAIN DIST.
OPER. WT. (LBS.)	240	240
MANUFACTURER	ARMSTRONG	ARMSTRONG
MODEL	4300-0206-003.0	4300-0206-003.0

NOTES:  
 1. PROVIDE BUILT-IN VARIABLE FREQUENCY DRIVES (VFD) FOR PUMPS IN WEATHER TIGHT ENCLOSURE, REMOTE MOUNT ON RACK, SEE SHEET MH230 FOR LOCATION.  
 2. PROVIDE TEFC AND PREMIUM EFFICIENCY MOTORS.

### ENERGY RECOVERY VENTILATOR

NUMBER	37-ERV-1	37-ERV-2
USE	SEE PLAN	SEE PLAN
VOLTS/PHASE	208/1	208/1
HP (OA FAN/EA FAN)	1.5/1.0	0.5/0.5
BHP (OA FAN/EA FAN)	1.46/0.89	0.47/0.19
EFF. (SA/EA)	66.4/76.2	63.1/84.4
MCA/MAX. OCC.	6.6/15	12.8/15
CFM (OA/EA)	2065/1800	870/650
ESP IN. WG (OA/EA)	1.07/0.75	1.07/0.75
FILTER SIZE (IN.)	MERV 13	MERV 13
FILTER TYPE	SEE NOTES	SEE NOTES
ACCESSORIES	SEE NOTES	SEE NOTES
OPER. WT. (LBS.)	950	430
MANUFACTURER	GREENHECK	GREENHECK
MODEL	ERV-20-30H	ERV-10-20H

NOTES:  
 1. PROVIDE FACTORY OA AND EXH. AIR FILTERS.  
 2. INTERLOCK FAN WITH ODU. ERV SHALL BE SET TO RUN WHEN ODU IS ON.  
 3. MOTOR ENCLOSURES AND EFFICIENCIES SHALL MEET OR EXCEED SPEC. SECT. 23 05 12, 2.1 MOTORS.  
 4. PROVIDE A DUCT SMOKE DETECTOR IN THE SUPPLY AIR DUCT TO SHUT OFF THE UNIT POWER UPON DETECTION OF SMOKE. WIRING BY ELECT. MECH. CONTRACTOR TO PROVIDE DETECTOR AND INSTALL IN DUCT. INSTALL IN STRICT ACCORDANCE WITH CURRENT CODES.  
 5. PROVIDE OUTSIDE AIR SENSOR TO MONITOR QUANTITY OF AIR FLOW AND CONNECT TO EMS.  
 6. PROVIDE MANUFACTURER PRE-SLOPED ROOF CURB (MIN. 16" HIGH) FOR 1/2" PER FOOT SLOPED ROOF.  
 7. UNITS SHALL BE PROVIDED WITH (3) SETS OF FILTERS: (1) MERV 8 FOR DURING CONSTRUCTION - UNIT NOT RUNNING, (1) MERV 13 FOR 2-WEEK PURGE AND (1) MERV 13 FOR FINAL OCCUPANCY.

### AIR DISTRIBUTION SCHEDULE

SYMBOL	TYPE	DESCRIPTION
A	CEILING SUPPLY	MODULAR CORE DIFFUSER WITH FRAME FOR LAY-IN T-BAR CEILING, FLUSH FACE MOUNTING. TITUS MODEL MCD-3
B	FILTER RETURN	SINGLE DEFLECTION 3/4" BLADE SPACING, STEEL CONSTRUCTION, 2" THICK FILTERS FOR T-BAR MOUNTING. PROVIDE 20"x20" FILTERS FOR USE IN 24"x24" T-BAR FRAME. TITUS MODEL 350RF2-3.
C	CEILING SUPPLY	MODULAR CORE DIFFUSER WITH FRAME FOR SURFACE FLUSH FACE MOUNTING. TITUS MODEL MCD-1.
D	CEILING RETURN/EXHAUST	1/2X1/2X1/2 EGGRATE GRILLE, STEEL CONSTRUCTION WITH FRAME FOR SURFACE FLUSH FACE MOUNTING. TITUS MODEL 50F-1.
E	FILTER RETURN	SINGLE DEFLECTION 3/4" BLADE SPACING, STEEL CONSTRUCTION, 2" THICK FILTERS FOR SURFACE MOUNTING. PROVIDE 20"x20" FILTERS. TITUS MODEL 350RF2-1.
F	SIDEWALL SUPPLY/EXHAUST	DOUBLE DEFLECTION LOUVERED FACE, 1/2" SPACING, 5' DOWN FRONT BLADES. TITUS MODEL 1700.
G	CEILING EXHAUST	PERFORATED FACE GRILLE WITH FRAME FOR T-BAR CEILING FLUSH FACE MOUNTING. TITUS MODEL PAR-3

NOTES:  
 1. EQUIVALENT MODELS OF KRUEGER, TITUS, PRICE, OR J&J ARE ACCEPTABLE. REFER TO THE FLOOR PLANS FOR NECK SIZE, CFM, AIR DIFFUSION PATTERN AND FIRE DAMPER, IF REQUIRED.  
 2. PROVIDE AIR CONTROL GRID FOR TYPE 'A' & 'C' CEILING SUPPLY DIFFUSERS SET AT 90°. PROVIDE AIR CONTROL GRID FOR TYPE 'E' & 'G' CEILING SUPPLY DIFFUSERS SET AT 90°. PROVIDE AIR CONTROL GRID FOR TYPE 'B' & 'D' CEILING SUPPLY DIFFUSERS SET AT 90°. PROVIDE AIR CONTROL GRID FOR TYPE 'F' & 'H' CEILING SUPPLY DIFFUSERS SET AT 90°. PROVIDE AIR CONTROL GRID FOR TYPE 'I' & 'J' CEILING SUPPLY DIFFUSERS SET AT 90°. PROVIDE AIR CONTROL GRID FOR TYPE 'K' & 'L' CEILING SUPPLY DIFFUSERS SET AT 90°. PROVIDE AIR CONTROL GRID FOR TYPE 'M' & 'N' CEILING SUPPLY DIFFUSERS SET AT 90°. PROVIDE AIR CONTROL GRID FOR TYPE 'O' & 'P' CEILING SUPPLY DIFFUSERS SET AT 90°. PROVIDE AIR CONTROL GRID FOR TYPE 'Q' & 'R' CEILING SUPPLY DIFFUSERS SET AT 90°. PROVIDE AIR CONTROL GRID FOR TYPE 'S' & 'T' CEILING SUPPLY DIFFUSERS SET AT 90°. PROVIDE AIR CONTROL GRID FOR TYPE 'U' & 'V' CEILING SUPPLY DIFFUSERS SET AT 90°. PROVIDE AIR CONTROL GRID FOR TYPE 'W' & 'X' CEILING SUPPLY DIFFUSERS SET AT 90°. PROVIDE AIR CONTROL GRID FOR TYPE 'Y' & 'Z' CEILING SUPPLY DIFFUSERS SET AT 90°. PROVIDE AIR CONTROL GRID FOR TYPE 'AA' & 'AB' CEILING SUPPLY DIFFUSERS SET AT 90°. PROVIDE AIR CONTROL GRID FOR TYPE 'AC' &amp