

HOOD INFORMATION

HOOD NO	TAG	MODEL	MANUFACTURER	LENGTH	MAX COOKING TEMP	TYPE	APPLIANCE DUTY	DESIGN CFM/FT	TOTAL EXH CFM	EXHAUST PLENUM RISER(S)							HOOD CONSTRUCTION	HOOD CONFIG	
										WIDTH	LENG	HEIGHT	DIA	CFM	VEL	SP		END TO END	ROW
1	H-1	4824 ZVS-ND-2	Z-VENTILATION	4' 0"	450 DEG	I	MEDIUM	250	1000			4'	10"	1000	1833	-0.340'	430 SS WHERE EXPOSED	ALONE	ALONE

HOOD INFORMATION

HOOD NO	TAG	FILTER(S)					LIGHT(S)			UTILITY CABINET(S)					FIRE SYSTEM PIPING	HOOD HANGING WEIGHT	
		TYPE	QTY	HEIGHT	LENGTH	EFFICIENCY @ 7 MICRONS	QTY	TYPE	WIRE GUARD	LOCATION	SIZE	FIRE SYSTEM		ELECTRICAL			SWITCHES
												TYPE	SIZE	MODEL #			QUANTITY
1	H-1	SS BAFFLE WITH HANDLES	2	20'	20'	30%	2	L55 SERIES E26	NO	LEFT	12"x48"x24"	ANSUL R102 UTIL CABINET PARTS	3.0	SC-110110FP	1 LIGHT 1 FAN	NO	352 LBS

HOOD OPTIONS

HOOD NO	TAG	OPTION
1	H-1	FIELD WRAPPER 12.00" HIGH FRONT, LEFT, RIGHT. SENSOR-CV. INSULATION FOR BACK OF HOOD.

FIRE SYSTEM INFORMATION

FIRE SYSTEM NO	TAG	TYPE	SIZE	FLOW POINTS	INSTALLATION	
					SYSTEM	LOCATION ON HOOD
1	FS-1	ANSUL R102 UTIL CABINET PARTS	3.0	0	FIRE CABINET LEFT	LEFT, HOOD 1

FIRE SYSTEM PARTS LIST KEY

FIRE SYSTEM NO	TAG	KEY NUMBER - PART DESCRIPTION	QTY BY FACTORY	QTY BY DIST
1	FS-1	0 - 0 - TANK STRAP TANK STRAP - USED FOR ANSUL TANKS.	1	0
		0 - 0 - UCTANKBRACKET TANK BRACKET FOR FIRE SYSTEM TANK INSTALLATION IN UTILITY CABINETS.	1	0
		1 - 1 - AT - 3.0 TANK(#1B) - 3.0 GALLON SS TANK (FOR USE WITH AUTOMAN RELEASE, ACTUATOR, OR SS ENCLOSURE (UL/ULC)) MACOLA # 01-429862.	0	1
		3 - 3 - ANS-DEM REGULATED RELEASE - ANSUL REGULATED MECHANICAL RELEASE/BRAKET ASSEMBLY, DEM, R-102, CARTRIDGE DETECTION INCLUDED, ANSUL PART # 79493.	1	0
		5 - 5 - LIQ-3.0 AGENT - ANSULEX LOW PH WET CHEMICAL AGENT, 3 GALLON (UL) 79372.	0	1
		7 - 7 - 101-20 CARTRIDGE - CARBON DIOXIDE 101-20, 3 GALLON CARTRIDGE (R-102).	0	1
		10 - 10 - TLINK LINK - TEST LINK (1 TEST LINK) ANSUL PART # 24916, MACOLA # 20-24916.	0	1
		11 - 11 - MICRO-SDA MICROSWITCH KIT- INCLUDES 2 SWITCHES AND MOUNTING HARDWARE. SINGLE DUAL ELECTRIC SWITCH, ONE STANDARD SWITCH, ONE ALARM DUTY SWITCH ANSUL PART # 437155, MACOLA # 08-437155.	1	0
		27 - 27 - QPSA-1/2 PULLEY SEAL - 1/2" HOOD SEAL (UL) ANSUL PART # 423253, MACOLA # 32-79768.	0	1
		34 - 34 - RPS-A REMOTE PULL STATION - RED COMPOSITE (WITHOUT WIRE ROPE) 434618 (OLD MACOLA #06-4835).	0	1
		35 - 35 - PE-LT PULLEY ELBOW - LOW TEMP. PULLEY ELBOW, SET SCREW TYPE ANSUL PART # 415670, MACOLA # 11-415671.	0	2
		36 - 36 - PE-HT PULLEY ELBOW - HIGH TEMP PULLEY ELBOW, COMPRESSION TYPE, ANSUL PART # 423251, MACOLA # 10-45771.	0	1
		ADDITIONAL PARTS TO BE DETERMINED...		

ZVS HOODS ARE
BUILT IN COMPLIANCE WITH





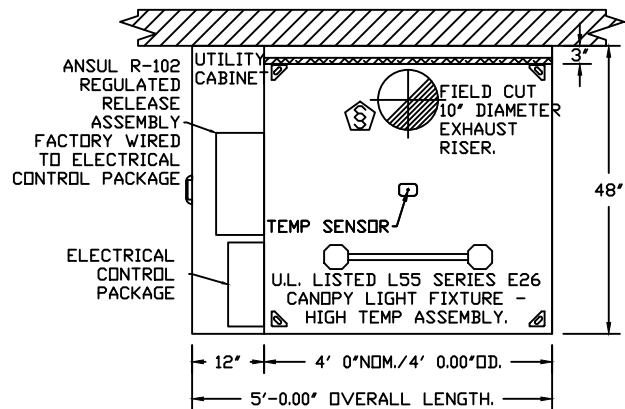
NFPA #96
NSF
UL 710 & ULC710 STANDARDS
E.T.L. LISTED 3054804-001

ETL LISTING DESCRIPTION BLOCK
THE Z-VENTILATION SOLUTIONS
MODEL ZVS-ND-2 HAS BEEN E.T.L.
TESTED, LISTED, AND APPROVED
TO EXHAUST A MINIMUM OF
150 CFM PER LINEAR FOOT OVER
450 DEGREE COOKING EQUIPMENT

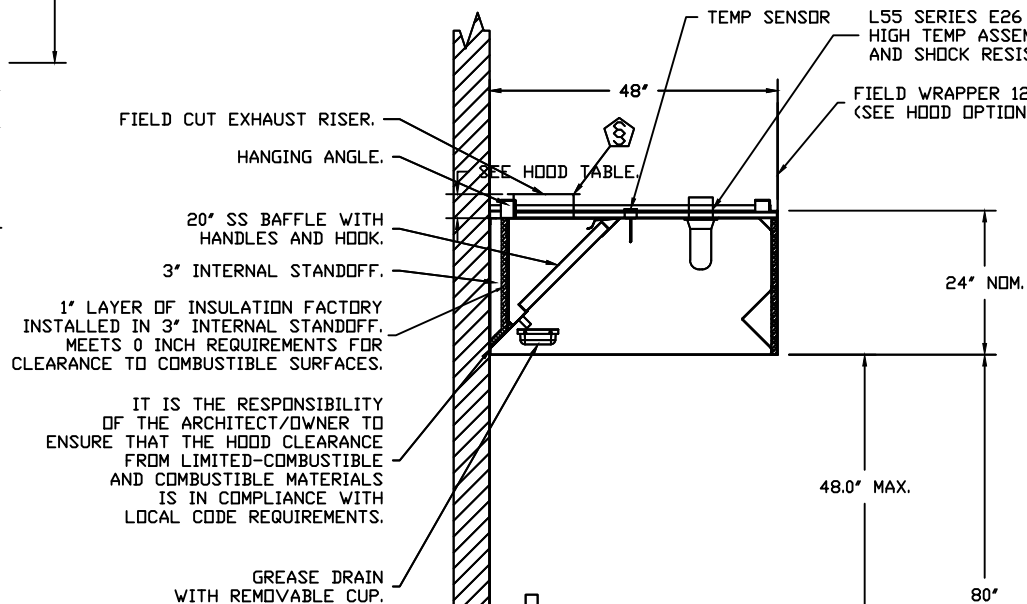


ZVentilation
SOLUTIONS

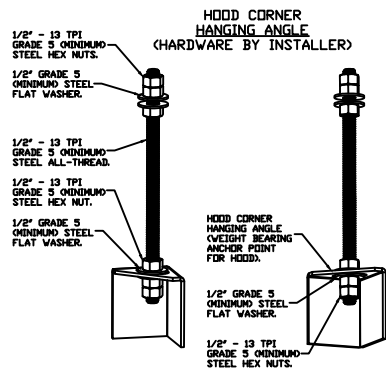
JOB 9800	
LOCATION	
DATE	JOB #
DWG # 1	DRAWN BY
REV.	SCALE NOT TO SCALE



PLAN VIEW - HOOD #1 (H-1)
4' 0.00" LONG 4824ZVS-ND-2



SECTION VIEW - MODEL 4824ZVS-ND-2
HOOD - #1 (H-1)



ASSEMBLY INSTRUCTIONS

HANGING ANGLE MUST BE SUPPORTED WITH 1/2" - 13 TPI GRADE 5 (MINIMUM) ALL-THREAD, SANDWICH HANGING ANGLES AND CEILING ANCHOR POINTS WITH 1/2" GRADE 5 (MINIMUM) STEEL FLAT WASHERS AND 1/2" - 13 TPI GRADE 5 (MINIMUM) HEX NUTS AS SHOWN. MUST USE DOUBLED HEX NUT CONFIGURATION BENEATH HOOD HANGING ANGLES AND ABOVE CEILING ANCHORS, MAINTAIN 1/4" OF EXPOSED THREADS BENEATH BOTTOM HEX NUT. TORQUE ALL HEX NUTS TO 57 FT-LBS.



ZVentilation
SOLUTIONS

JOB 9800	
LOCATION	
DATE	JOB #
DWG # 2	DRAWN BY
REV.	SCALE 3/8" = 1'-0"

EXHAUST FAN INFORMATION

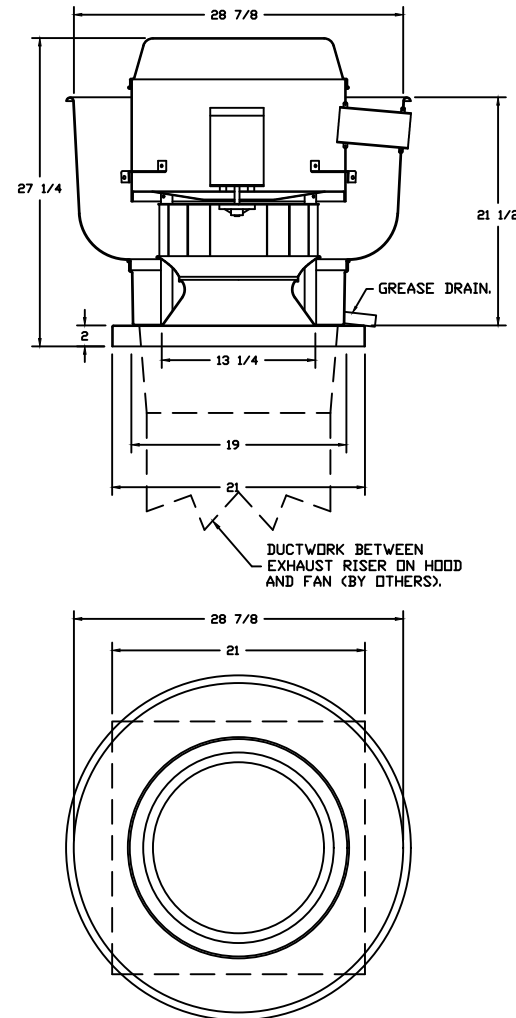
FAN UNIT NO	TAG	QTY	FAN UNIT MODEL #	MANUFACTURER	CFM	ESP	RPM	MOTOR ENCL	HP	BHP	PHASE	VOLT	FLA	DISCHARGE VELOCITY	WEIGHT (LBS)	SONES
1	KEF-1	1	ZVS-DU50HFA	Z-VENTILATION	600	0.500	1031	TEAD-ECM	0.500	0.1130	1	115	6.3	228 FPM	75	10.4

FAN OPTIONS

FAN UNIT NO	TAG	QTY	DESCRIPTION
1	KEF-1	1	GREASE BOX (BY CURB MANUFACTURER).
		1	FAN BASE CERAMIC SEAL - INSTALLED AT PLANT - FOR GREASE DUCTS.
		1	HINGE KIT (BY CURB MANUFACTURER).
		1	REMOVE HINGE KIT LABEL FROM THE FAN BASE.
		1	WALL MOUNT CONSTRUCTION FOR FAN.
		1	ECM WIRING PACKAGE - EXHAUST - MODBUS CONTROL -MSC- (TELCD), CCW ROTATION.
		1	2 YEAR PARTS WARRANTY.

FAN ACCESSORIES

FAN UNIT NO	TAG	EXHAUST			SUPPLY			
		GREASE CUP	GRAVITY DAMPER	WALL MOUNT	SIDE DISCHARGE	GRAVITY DAMPER	MOTORIZED DAMPER	WALL MOUNT
1	KEF-1	YES		YES				

FAN #1 ZVS-DU50HFA - EXHAUST FAN (KEF-1)**TOP VIEW****FEATURES:**

- DIRECT DRIVE CONSTRUCTION (NO BELTS/PULLEYS).
- ROOF MOUNTED FANS.
- RESTAURANT MODEL.
- UL705 AND UL762 AND ULC-S645
- VARIABLE SPEED CONTROL.
- INTERNAL WIRING.
- THERMAL OVERLOAD PROTECTION (SINGLE PHASE).
- HIGH HEAT OPERATION 300°F (149°C).
- GREASE CLASSIFICATION TESTING.
- NEMA 3R SAFETY DISCONNECT SWITCH.

NORMAL TEMPERATURE TEST

EXHAUST FAN MUST OPERATE CONTINUOUSLY WHILE EXHAUSTING AIR AT 300°F (149°C) UNTIL ALL FAN PARTS HAVE REACHED THERMAL EQUILIBRIUM, AND WITHOUT ANY DETERIORATING EFFECTS TO THE FAN WHICH WOULD CAUSE UNSAFE OPERATION.

ABNORMAL FLARE-UP TEST

EXHAUST FAN MUST OPERATE CONTINUOUSLY WHILE EXHAUSTING BURNING GREASE VAPORS AT 600°F (316°C) FOR A PERIOD OF 15 MINUTES WITHOUT THE FAN BECOMING DAMAGED TO ANY EXTENT THAT COULD CAUSE AN UNSAFE CONDITION.

OPTIONS

GREASE BOX.
FAN BASE CERAMIC SEAL - INSTALLED AT PLANT - FOR GREASE DUCTS.
HINGE KIT - SHIPS LOOSE FOR CURB SUPPLIED BY OTHERS.
REMOVE HINGE KIT LABEL FROM THE FAN BASE.
WALL MOUNT CONSTRUCTION FOR FAN.
ECM WIRING PACKAGE - EXHAUST - MODBUS CONTROL -MSC- (TELCD), CCW ROTATION.
2 YEAR PARTS WARRANTY.



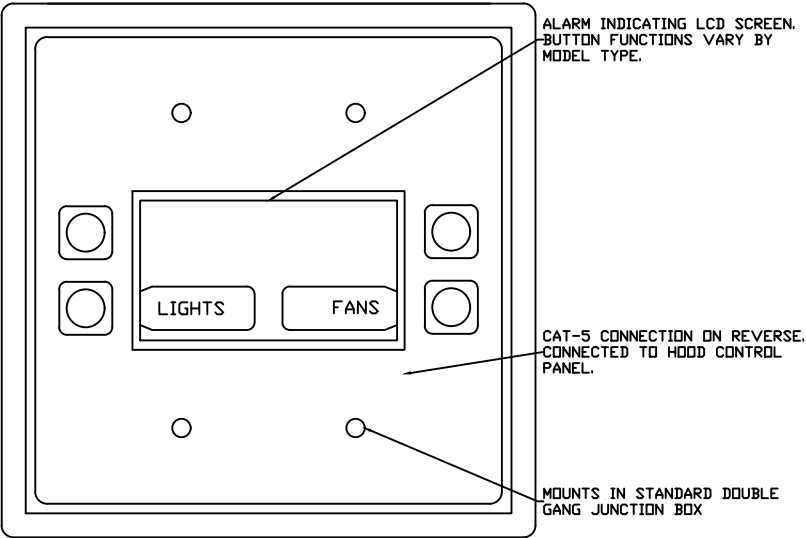
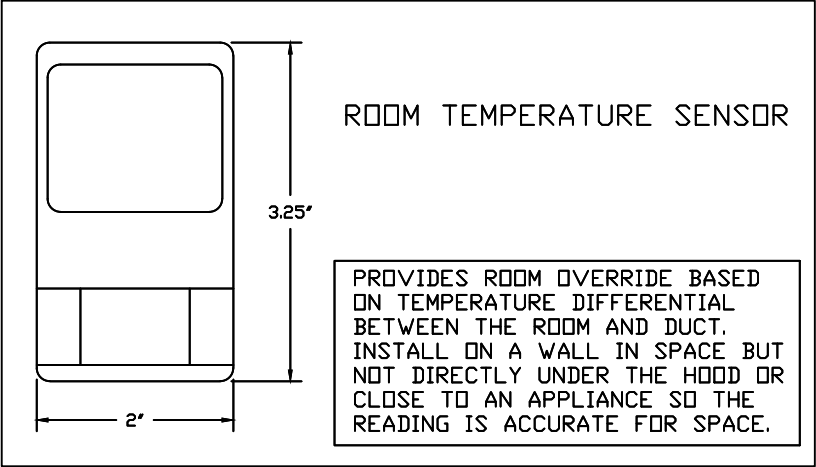
ZVentilation
SOLUTIONS

JOB 9800**LOCATION****DATE****DWG # 3****REV.****JOB #****DRAWN BY****SCALE NOT TO SCALE**

Exhaust Fan Wiring			JOB
DRAWING NUMBER	EXH4824206-1	SHIP DATE	
MODEL		ZVS-DU50HFA	
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 MSC 10V 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 240 241 242 243 244 245 246 247 248 249 250 251 252 253 254 255 256 257 258 259 260 261 262 263 264 265 266 267 268 269 270 271 272 273 274 275 276 277 278 279 280 281 282 283 284 285 286 287 288 289 290 291 292 293 294 295 296 297 298 299 300 301 302 303 304 305 306 307 308 309 310 311 312 313 314 315 316 317 318 319 320 321 322 323 324 325 326 327 328 329 330 331 332 333 334 335 336 337 338 339 340 341 342 343 344 345 346 347 348 349 350 351 352 353 354 355 356 357 358 359 360 361 362 363 364 365 366 367 368 369 370 371 372 373 374 375 376 377 378 379 380 381 382 383 384 385 386 387 388 389 390 391 392 393 394 395 396 397 398 399 400 401 402 403 404 405 406 407 408 409 410 411 412 413 414 415 416 417 418 419 420 421 422 423 424 425 426 427 428 429 430 431 432 433 434 435 436 437 438 439 440 441 442 443 444 445 446 447 448 449 450 451 452 453 454 455 456 457 458 459 460 461 462 463 464 465 466 467 468 469 470 471 472 473 474 475 476 477 478 479 480 481 482 483 484 485 486 487 488 489 490 491 492 493 494 495 496 497 498 499 500 501 502 503 504 505 506 507 508 509 510 511 512 513 514 515 516 517 518 519 520 521 522 523 524 525 526 527 528 529 530 531 532 533 534 535 536 537 538 539 540 541 542 543 544 545 546 547 548 549 550 551 552 553 554 555 556 557 558 559 560 561 562 563 564 565 566 567 568 569 570 571 572 573 574 575 576 577 578 579 580 581 582 583 584 585 586 587 588 589 590 591 592 593 594 595 596 597 598 599 600 601 602 603 604 605 606 607 608 609 610 611 612 613 614 615 616 617 618 619 620 621 622 623 624 625 626 627 628 629 630 631 632 633 634 635 636 637 638 639 640 641 642 643 644 645 646 647 648 649 650 651 652 653 654 655 656 657 658 659 660 661 662 663 664 665 666 667 668 669 670 671 672 673 674 675 676 677 678 679 680 681 682 683 684 685 686 687 688 689 690 691 692 693 694 695 696 697 698 699 700 701 702 703 704 705 706 707 708 709 710 711 712 713 714 715 716 717 718 719 720 721 722 723 724 725 726 727 728 729 730 731 732 733 734 735 736 737 738 739 740 741 742 743 744 745 746 747 748 749 750 751 752 753 754 755 756 757 758 759 760 761 762 763 764 765 766 767 768 769 770 771 772 773 774 775 776 777 778 779 780 781 782 783 784 785 786 787 788 789 790 791 792 793 794 795 796 797 798 799 800 801 802 803 804 805 806 807 808 809 810 811 812 813 814 815 816 817 818 819 820 821 822 823 824 825 826 827 828 829 830 831 832 833 834 835 836 837 838 839 840 841 842 843 844 845 846 847 848 849 850 851 852 853 854 855 856 857 858 859 860 861 862 863 864 865 866 867 868 869 870 871 872 873 874 875 876 877 878 879 880 881 882 883 884 885 886 887 888 889 890 891 892 893 894 895 896 897 898 899 900 901 902 903 904 905 906 907 908 909 910 911 912 913 914 915 916 917 918 919 920 921 922 923 924 925 926 927 928 929 930 931 932 933 934 935 936 937 938 939 940 941 942 943 944 945 946 947 948 949 950 951 952 953 954 955 956 957 958 959 960 961 962 963 964 965 966 967 968 969 970 971 972 973 974 975 976 977 978 979 980 981 982 983 984 985 986 987 988 989 990 991 992 993 994 995 996 997 998 999 1000 1001 1002 1003 1004 1005 1006 1007 1008 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1209 1210 1211 1212 1213 1214 1215 1216 1217 1218 1219 1220 1221 1222 1223 1224 1225 1226 1227 1228 1229 1230 1231 1232 1233 1234 1235 1236 1237 1238 1239 1240 1241 1242 1243 1244 1245 1246 1247 1248 1249 1250 1251 1252 1253 1254 1255 1256 1257 1258 1259 1260 1261 1262 1263 1264 1265 1266 1267 1268 1269 1270 1271 1272 1273 1274 1275 1276 1277 1278 1279 1280 1281 1282 1283 1284 1285 1286 1287 1288 1289 1290 1291 1292 1293 1294 1295 1296 1297 1298 1299 1300 1301 1302 1303 1304 1305 1306 1307 1308 1309 1310 1311 1312 1313 1314 1315 1316 1317 1318 1319 1320 1321 1322 1323 1324 1325 1326 1327 1328 1329 1330 1331 1332 1333 1334 1335 1336 1337 1338 1339 1340 1341 1342 1343 1344 1345 1346 1347 1348 1349 1350 1351 1352 1353 1354 1355 1356 1357 1358 1359 1360 1361 1362 1363 1364 1365 1366 1367 1368 1369 1370 1371 1372 1373 1374 1375 1376 1377 1378 1379 1380 1381 1382 1383 1384 1385 1386 1387 1388 1389 1390 1391 1392 1393 1394 1395 1396 1397 1398 1399 1400 1401 1402 1403 1404 1405 1406 1407 1408 1409 1410 1411 1412 1413 1414 1415 1416 1417 1418 1419 1420 1421 1422 1423 1424 1425 1426 1427 1428 1429 1430 1431 1432 1433 1434 1435 1436 1437 1438 1439 1440 1441 1442 1443 1444 1445 1446 1447 1448 1449 1450 1451 1452 1453 1454 1455 1456 1457 1458 <			

ELECTRICAL PACKAGE

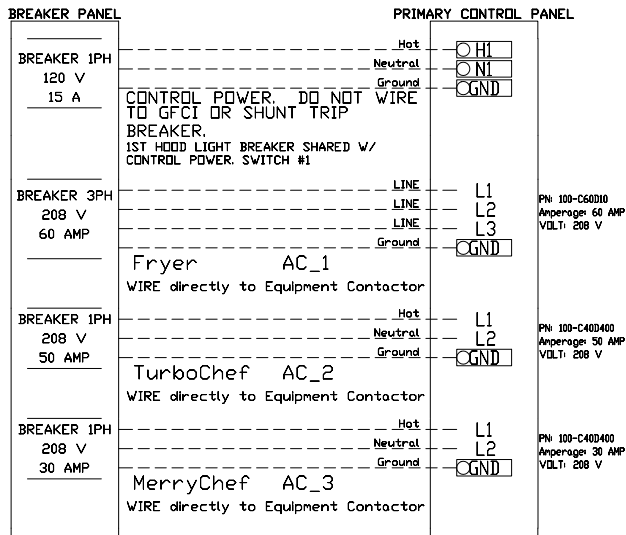
NO	TAG	PACKAGE #	LOCATION	SWITCHES		OPTION	FANS CONTROLLED					
				LOCATION	QUANTITY		FAN TAG	TYPE	Φ	HP	VOLT	FLA
				03 - UTILITY CABINET LEFT	1 LIGHT		KEF-1	EXHAUST	1	0.500	115	6.3
1	ECP-1	SC-110110FP	UTILITY CABINET LEFT	HOOD # 1	1 FAN	SMART CONTROLS THERMOSTATIC CONTROL						



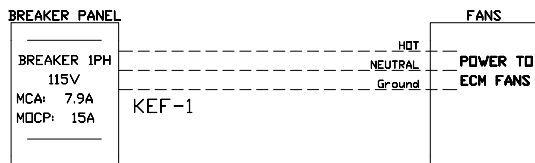
JOB NO	MODEL NUMBER	SC-110110FP	DRAWN BY	SCHEMATIC TYPE	DESCRIPTION OF OPERATION: 120V 1 Phase w/ control for 1 Exhaust Fan, Exhaust on in Fire, Lights out in Fire, Fan(s) On/Off Thermostatically Controlled. Room temperature sensor shipped loose for field installation.
	JOB NAME		DATE	DWG NO ECP #1-1	

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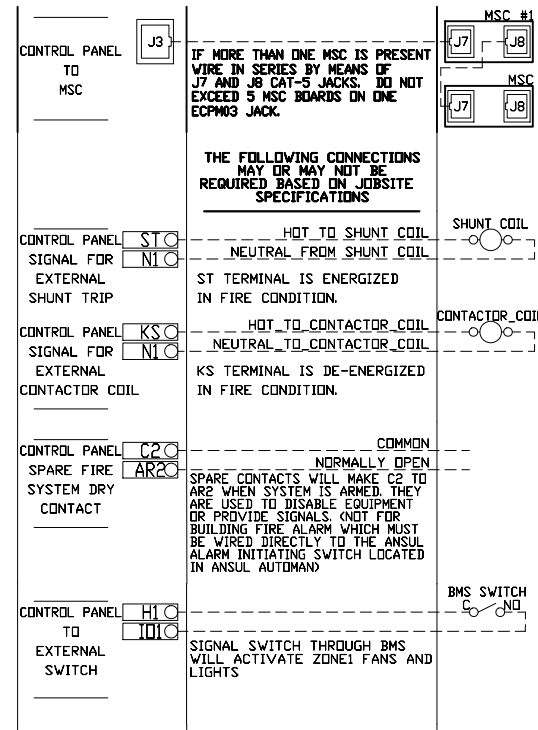
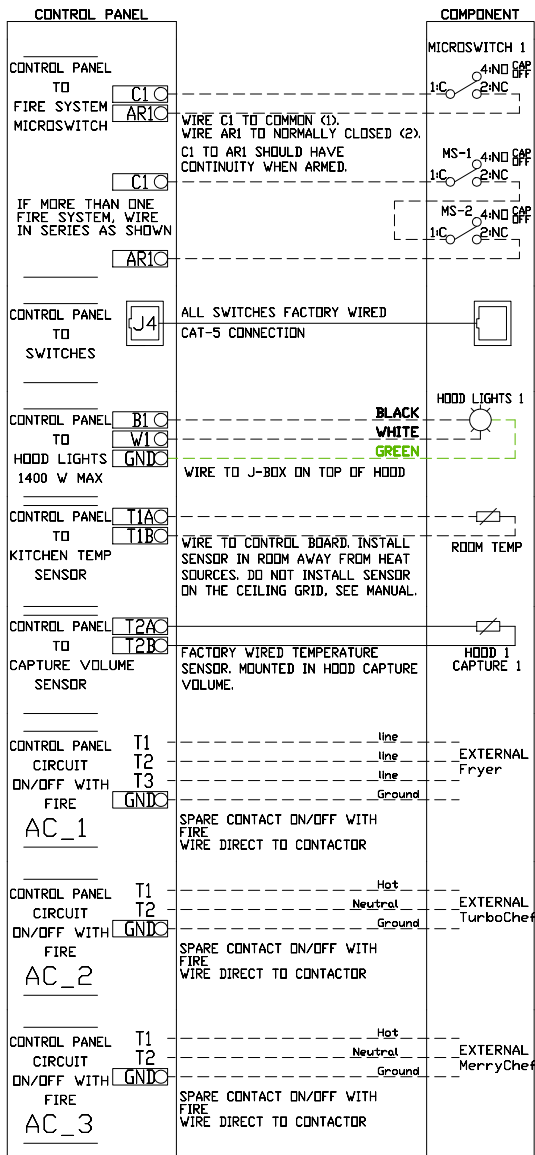
BREAKER PANEL TO PRIMARY CONTROL PANEL
Responsibility: Electrician
BREAKER SIZE SHOWN IS THE MAXIMUM ALLOWED



BREAKER PANEL TO FANS
Responsibility: Electrician



CONTROL PANEL TO ACCESSORY ITEMS
Responsibility: Electrician



UNLESS SPECIFIED OTHERWISE, ALL FACTORY AC WIRING 16 AWG. ALL FACTORY DC WIRING 18 AWG.

1 J9 120V

NI	1	WH	2x	ON	CONTROL INPUT
ARI	2	BK		AR	120V HI=LINE, NI=NEUTRAL, 15A BREAKER. DO NOT CONNECT TO SHUNT TRIP BREAKER. SEE SCHEMATIC FOR ADDITIONAL REQ.
GAS	3	BK		GA	
KTS	4				
KS	5	BK		OK	
ST	6	BK		ST	
PCU	7				
HI	8	BK	2x	HI	
				CI	

PANEL LID: GR

2

J7 120V

IDI	1	BK		DI	BK 14AWG RD-1 4' 6" BK HI
BI	2	BK		BI	HOOD LIGHTS W/IC JUMPER WH NI
EFI	3	BK		EFI	
SFI	4	BK		SFI	
DVI	5				

3

4

5

6

DC+ BL (8) RD-1 (7) PR RD1

7

8

MAKE UP AIR INTERLOCK. JUMPER JUMPER

J10 J10 ECPM03 ECPM03

9

10

D

24V J6

8 9 10 11 12 13 14

1 2 3 4 5 6 7

BL DC+ RD1

E

NOTE: All items on ECPM03 J3 line to be daisy chained from one component to the next, with EDL120A at end of line. Place PN: EDL120A in empty RJ45 port.

ECPM03/DAISY CHAIN

J4 J3 J5

100V (EJECT) MAPPER MSC-01

J7

J8

F

G

H

I

MOTOR POWER CIRCUIT

DRY CONTACTS (SHOWN DE-ENERGIZED)

14 AWG RA-1-1 ON/OFF WITH FIRE

14 AWG RA-2-1 ON/OFF WITH SUP

14 AWG RA-2-2

• JOB NAME	
DRAWING TITLE SC-11010FF	
DESCRIPTION OF OPERATION 120V 1 Phase w/ control for 1 Exhaust Fan, Exhaust on In Fire, Lights out In Fire, Fan(s) On/Off Thermatically Controlled, Room temperature sensor, shoged loose for Field installation.	
JOB NO	DRAWN BY
TYPE FACTORY	DATE
DWG NO ECP #1-2	

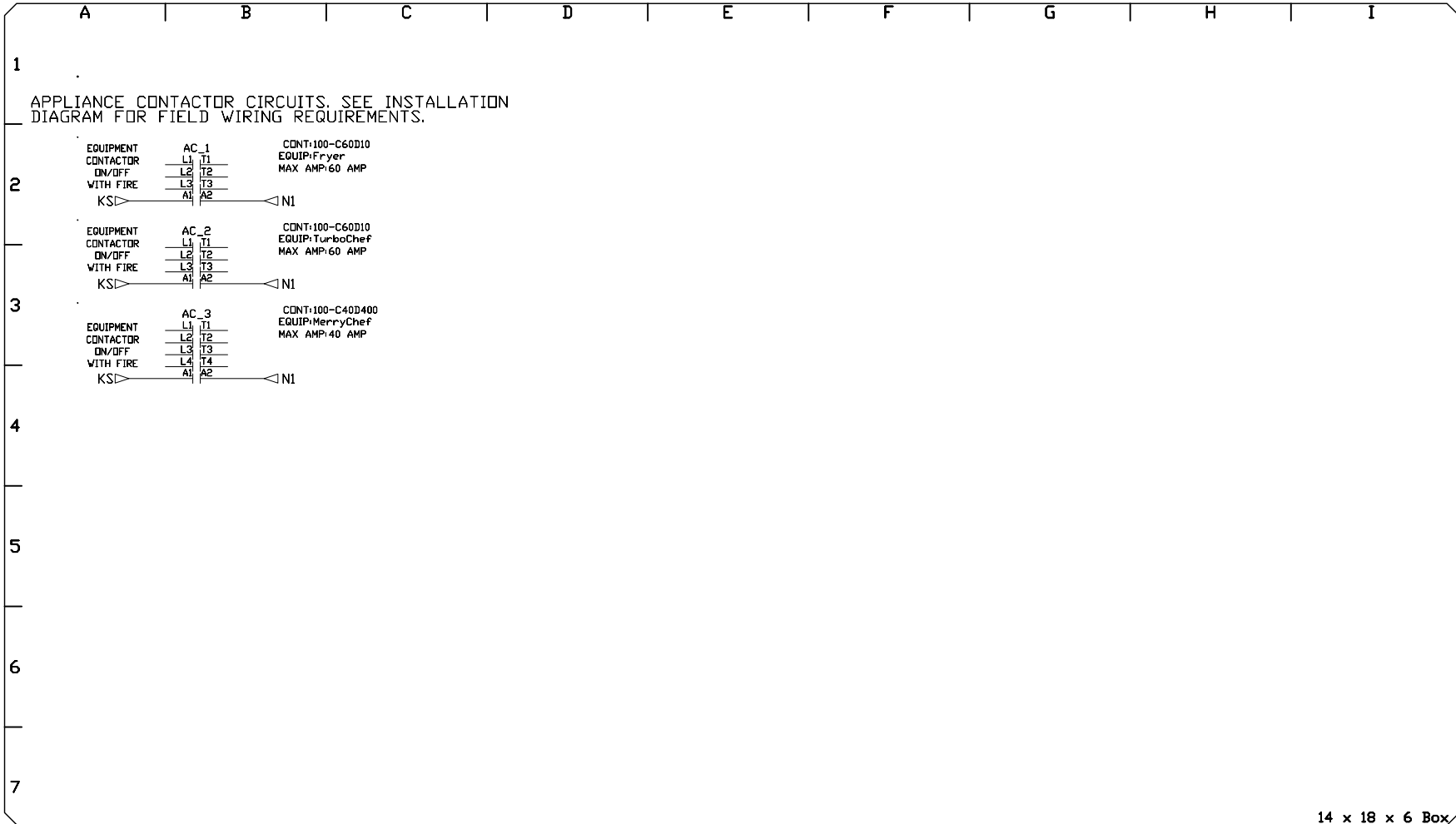
14 AWG RA-1-1

ON/OFF WITH FIRE

14 AWG RA-2-1

ON/OFF WITH SUP

14 AWG RA-2-2



FACTORY WIRING
SCHEMATIC
CIRCUIT BOARDS
DCV Rev. 2.10.00
HMI Rev. 2.10.00

RA-X 120 VAC RELAY	RD-X 24 VDC RELAY
NO 4 3	NO 4 3
NC 2 1	NC 2 1
COIL 8 7	COIL 8 7
COM 6 5	COM 6 5

COMPONENT LIST	
LABEL	DESCRIPTION
ST-X	Starter varies
C-X	Contactor varies
SM-X	VFD varies

LEGEND	
---	FIELD WIRING
---	FACTORY WIRING
BL- BLACK	YW- YELLOW
BL- BLUE	GY- GREY
BR- BROWN	PR- PURPLE
OR- ORANGE	RD- RED
WH- WHITE	GR- GREEN
DR/BL- DR/BL STRIPE	
BL/RD- BL/RD STRIPE	
RD/ON- RD/ON STRIPE	
WH/BL- WH/BL STRIPE	

JOB NAME	
DRAWING TITLE SC-110110FP	
DESCRIPTION OF OPERATION 120V 1 Phase w/ control For 1 Exhaust Fan, Exhaust on in Fire. Lights out in Fire, Fans On/Off Thermostatically Controlled. Room temperature sensor shipped loose for field installation.	
JOB NO	DRAWN BY
TYPE FACTORY	DATE
DWG NO ECP #1-3	

14 x 18 x 6 Box