Reviewed for Code Compliance
Inspections Division
Portland, Maine
Date: 08/30/16

GASVALVES AND STRAINERS

	GAS VALVE SIZING							GAS VALVE DIMENSIONS						INSTALLATION	PART NUMBERS		
	TYPE	SIZE	VOLTAGE	MIN. INLET PRESSURE	MAX. INLET PRESSURE	FLOW AT 1 IN.W.C. DROP NATURAL GAS	FLOW AT 1 IN.W.C. DROP PROPANE	DIM "A"	DIM "B"	DIM "C"	DIM "D"	DIM "F"	DIM "G"	MOUNTING ORIENTATION	GAS VALVE PART NUMBER	STRAINER PART NUMBER	GAS VALVE/STRAINER KIT
GAS VALVE FOR FS#1 →	MECHANICAL	1"	N/A	0 PSI (0 IN.W.C.)	10 PSI (277 IN.W.C.)	1,288,000 BTU/HR	835,764 BTU/HR	5-1/2"	3-3/4"	4-7/8"	5-3/16"	10-5/8"	9-5/8"	HORIZONTAL	25-55601	4417K65	MGVA1

ELECTRIC GAS VALVES ONLY

3/4" THROUGH 2" VALVES CAN BE MOUNTED WITH THE SOLENOID IN ANY POSITION ABOVE HORIZONTAL
2-1/2" THROUGH 3" VALVES MUST BE MOUNTED WITH THE SOLENOID VERTICAL AND UPRIGHT

ALL GAS VALVES/STRAINERS

PROPER CLEARANCE MUST BE PROVIDED IN ORDER TO SERVICE THE STRAINERS A MINIMUM OF 4" CLEARANCE DISTANCE MUST BE PROVIDED AT THE BASE OF THE STRAINER CUSTOMER MUST VERIFY BTU CONSUMPTION AS WELL AS PRESSURE RATING
SPECIFIC GRAVITY OF NATURAL GAS = 0.64, SPECIFIC GRAVITY OF LP = 1.52

CALCULATIONS

TO CALCULATE GAS FLOW FOR OTHER THAN 1 IN.W.C. PRESSURE DROP
NEW BTU/HR = (BTU/HR AT 1 IN.W.C. PRESSURE DROP) X NEW PRESSURE DROP$^{0.5}$
TO CALCULATE GAS FLOW FOR OTHER THAN 0.64 SPECIFIC GRAVITY
NEW BTU/HR = (BTU/HR AT 0.64) X (0.64 / NEW SPECIFIC GRAVITY)$^{0.5}$

HOOD AND ANSUL SYSTEM SEQUENCE OF OPERATION

THE HOOD WILL BE EQUIPPED WITH AN ANSUL R-102 SYSTEM THAT HAS FUSEABLE LINKS FOR AUTOMATIC DETECTION OF A FIRE. THESE LINKS ARE SET TO MELT AT A PREDETERMINED TEMPERATURE AND WILL ACTIVATE THE ANSUL SYSTEM ONCE THAT TEMPERATURE IS EXCEEDED. THE ANSUL SYSTEM CAN ALSO BE ACTIVATED BY PULLING THE REMOTE PULL STATION HANDLE. ONCE ONE OF THESE TWO EVENTS HAVE OCCURRED, THE FOLLOWING SEQUENCE WILL TAKE PLACE.

1. TENSION IN THE WIRE CABLE THAT CONNECTS THE FUSEABLE LINKS, REMOTE PULL STATION, AND THE MECHANICAL GAS VALVE TO THE ANSUL REGULATED RELEASE ASSEMBLY WILL BE RELEASED. AT THIS TIME THE FOLLOWING WILL TAKE PLACE.
   A. THE GAS VALVE WILL SHUT OFF THE FLOW OF GAS TO THE COOKING APPLIANCES
   B. THE REGULATED RELEASE ASSEMBLY WILL ALLOW THE SYSTEM TO START SPRAYING THE ANSULEX LOW PH LIQUID FIRE SUPPRESSANT INTO THE PLENUM AREA, THE FILTERS, COOKING SURFACE, AND THE EXHAUST DUCT SYSTEM AT A PREDETERMINED FLOW RATE TO SUPPRESS THE FIRE.
   C. THE REGULATED RELEASE ASSEMBLY WILL CHANGE THE STATE OF A SET OF MICRO SWITCHES THAT ARE WIRED TO THE HOODS ELECTRICAL CONTROL PACKAGE.

2. ONCE THE MICRO SWITCHES CHANGE STATE THE FOLLOWING EVENTS WILL TAKE PLACE.
   A. THE EXHAUST FAN WILL TURN ON IF IT WAS OFF OR REMAIN RUNNING IF IT WAS ON AT THE TIME THE FIRE OCCURRED.
   B. THE MAKE UP AIR FAN WILL SHUT DOWN
   C. THE SHUNT TRIP DEVICE WIRED TO THE ELECTRICAL CONTROL PACKAGE WILL RECEIVE A SIGNAL TO SHUT DOWN THE APPLIANCES WIRED TO IT SO THAT THERE IS NO ELECTRICAL APPLIANCE UNDER THE HOOD RECEIVING POWER FROM THE BUILDING.
   D. ADDITIONAL EVENTS MAY ALSO OCCUR AT THIS TIME DEPENDING ON LOCAL CODES SUCH AS A SIGNAL BEING SENT TO ACTIVATE THE BUILDING ALARM OR THE LIGHTS IN THE HOOD WILL TURN OFF.

ANSUL MICROSWITCH DETAIL

REVISIONS

	DESCRIPTION	DATE:
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DATE: 5/16/2016

DWG.#: 2658653

DRAWN BY: BFC-21

SCALE: 3/4" = 1'-0"

MASTER DRAWING

SHEET NO. 3