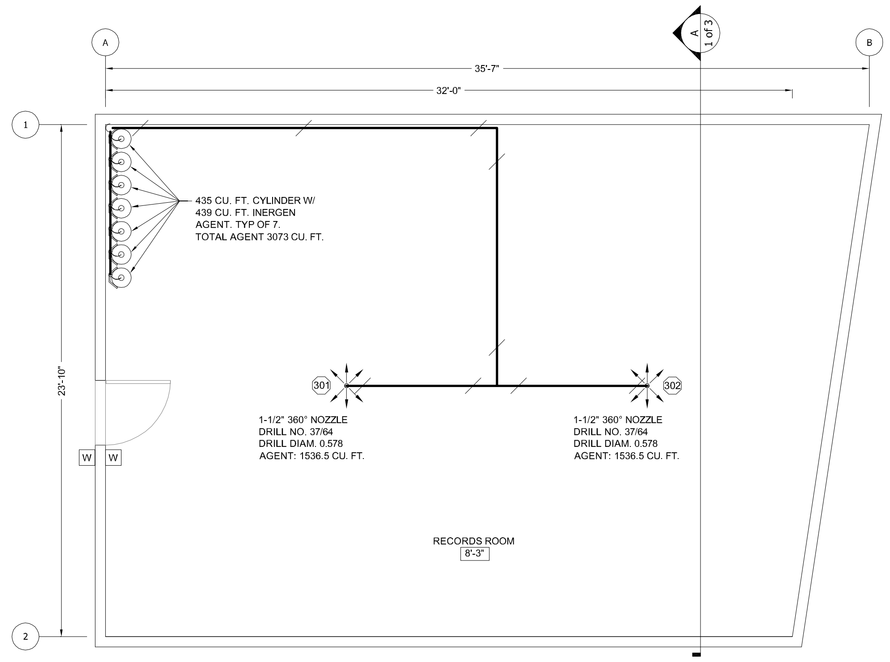
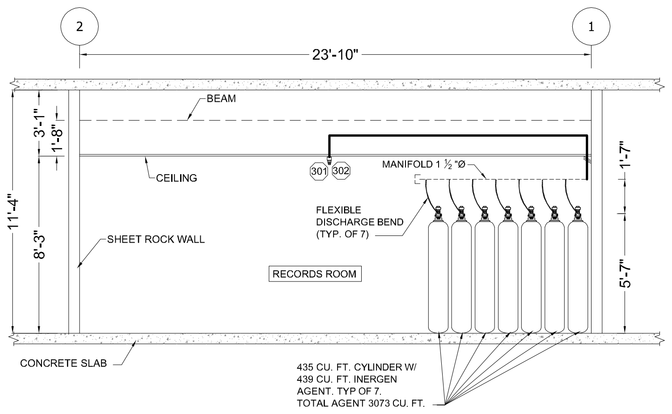
BERNSTEIN, SHUR, SAWYER & NELSON; INFORMATION:

1. FUNCTION: RECORDS ROOM
RECORDS ROOM VOLUME: 6704.9 CU. FT.

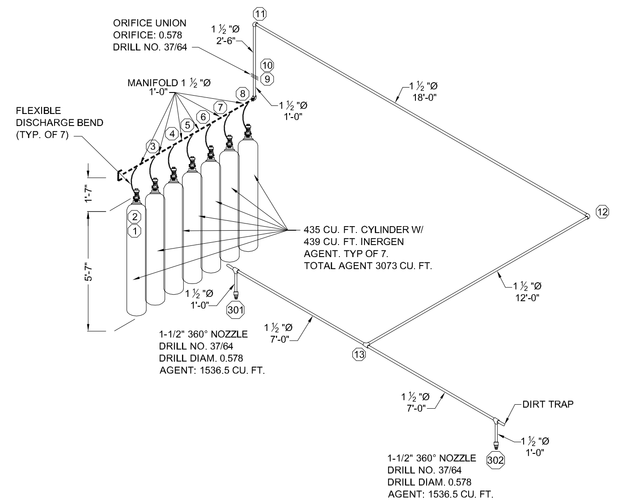
AREA		HEIGHT		VOLUME
812.71 SQ.FT.	x	8.25 FT.	=	6704.9 CU.FT.



FLOOR PLAN-MECHANICAL SCALE: 1/4"=1'-0"



SECTION "A" SCALE: 1/4"=1'-0"



PIPING ISOMETRIC SCALE: 1/4"=1'-0"

GENERAL NOTES:

A. PIPE LENGTHS ON THE ISOMETRIC OF THE PIPE SYSTEM ARE APPROXIMATE ONLY, AND SHOULD BE VERIFIED IN THE FIELD BY PIPE INSTALLER.
B. ALL THREADED PIPE BEYOND THE PRESSURE REDUCER TO BE BLACK IRON OR GALVANIZED; ASTM A-106/A-53 SEAMLESS, GRADE B FOR SCH. 40 PIPE AND ASTM A-106 SEAMLESS, GRADE C FOR SCH. 80 PIPE.
C. ALL THREADED PIPE USED TO CONSTRUCT THE MANIFOLD, INCLUDING PIPE BEFORE THE PRESSURE REDUCER TO BE BLACK IRON OR GALVANIZED; ASTM A-106/A-53 SEAMLESS GRADE B FOR SCH. 80 PIPE.
D. ALL PIPE 2 1/2" AND SMALLER BEYOND THE PRESSURE REDUCER SHALL BE SCH. 40., ALL 3" AND LARGER BEYOND THE PRESSURE REDUCER SHALL BE SCH. 80.
E. ALL PIPE USED TO CONSTRUCT THE MANIFOLD, INCLUDING PIPE BEFORE THE PRESSURE REDUCER SHALL BE: 3" AND SMALLER; SCH. 80., 4" AND LARGER: SCH. 160.
F. FITTINGS BEYOND THE PRESSURE REDUCER TO BE 300 LB. ANSI B-16.3, BLACK MALLEABLE IRON OR GALVANIZED THREADED FITTINGS, CLASS 300 MALLEABLE IRON UNIONS OR STREET ELBOWS SHALL NOT BE USED.
G. FITTINGS TO CONSTRUCT THE MANIFOLD AND BEFORE THE PRESSURE REDUCER, TO BE BLACK IRON OR GALVANIZED 2000 OR 3000 PSI ANSI B -16.11.
H. ALL PIPING TO BE THOROUGHLY CLEANED AFTER CUTTING AND THREADING.
I. ALL PIPING SHALL BE SECURELY BRACED TO THE BUILDING USING RIGID PIPE HANGERS, BRACES, AND SUPPORTS. THE PIPE SYSTEM SHALL BE FREE FROM ANY LATERAL OR VERTICAL MOVEMENT DURING DISCHARGE.
J. ALL PIPE SIZE REDUCTIONS ARE TO BE MADE USING CONCENTRIC REDUCING FITTINGS. REDUCING BUSHINGS AND FITTINGS WITH REDUCING PLATES ARE NOT ACCEPTABLE.
K. ACCEPTABLE PIPE JOINT METHODS INCLUDE THREADED, WELDED, FLANGED, AND CUT-GOOVED FITTINGS. PIPE DOPE OR TEFLON TAPE SHOULD BE USED ON ALL THREADED CONNECTIONS. DO NOT ADD TO THE FIRST TWO THREADS NEAREST THE END OF THE PIPE.
L. ALL PIPE AND BRACING INSTALLATION IS TO BE DONE IN ACCORDANCE WITH CURRENT NFPA STANDARD 2001, ED. 2008.
M. ALL EQUIPMENT SHOULD BE SEMI FLUSH. (WHENEVER POSSIBLE) CONTROL PANEL SHOULD BE INSTALLED AT 60" AFF (CENTERLINE). ALL SWITCHES BETWEEN 42"-48" A.F.F.. ALL AUDIBLE DEVICES AT 80" ABOVE FINISHED OR 6" BELOW CEILING (WHICHEVER IS LOWER)
N. UPON COMPLETION OF THE INSTALLATION, A FINAL ACCEPTANCE TEST OF THE FIRE SUPPRESSION RELEASING SERVICE SHOULD BE PERFORMED IN ACCORDANCE WITH NFPA 72,ED. 2010 CHAPTERS 14 AND 23, AND IN THE PRESENCE OF THE LOCAL FIRE CODE OFFICIAL.
O. MINIMUM VENT AREA TO BE VERIFIED WITH A FAN TEST.
P. INSTALL LABELING ON PIPING, EXTINGUISHING-AGENT CONTAINERS, OTHER EQUIPMENT, AND PANELS ACCORDING TO NFPA 2001 AND DIVISION 21 SECTION "COMMON WORK RESULTS FOR FIRE SUPPRESSION.

SCOPE OF WORK:

INSTALLATION OF INERGEN FIRE SUPPRESSION SYSTEM TO PROTECT EXISTING RECORDS ROOM.

GENERAL INFORMATION

PARTS LIST - MECHANICAL

QTY.	PART NO.	M.R.F.	DESCRIPTION
7	426259	ANSUL	435 CU.FT. CYLINDER W/CV98 VALVE-CR W/439 CU.FT. AGENT PER TANK
7	427082	ANSUL	200 BAR FLEX HOSE
1	79327	ANSUL	HF ELECTRIC ACT. SHIP ASM
1	426949	ANSUL	BOOSTER ACTUATOR SHIP ASM
1	70846	ANSUL	LVR ACT HOUP/N
1	832936	ANSUL	ACTUATION HOSE, SWIVEL, STAINLESS BRAIDED, 24 IN., 1/4 IN. FEMALE
1	416681	ANSUL	1-1/2" ORIFICE UNION ASM
1	846250	ANSUL	PRESSURE SWITCH DPST
1	416265	ANSUL	INERGEN ALARM NAMEPLATE INSIDE
1	416266	ANSUL	INERGEN ALARM NAMEPLATE OUTSIDE
2	417866	ANSUL	1-1/2" NOZZLE ASSEMBLY, 360 DEGREE
2	417720	ANSUL	NOZZLE DEFLECTOR SHIELD, INERGEN, 1- 1/2 IN.
1	879638	ANSUL	BACK FRAME ASSSEMBLY FOR TWO CYLINDERS
1	879641	ANSUL	BACK FRAME ASSSEMBLY FOR FIVE CYLINDERS
2	873091	ANSUL	CYLINDER CLAMP FOR TWO
1	873092	ANSUL	CYLINDER CLAMP FOR THREE
4	418502	ANSUL	CARRIAGE BOLT W/LOCK WASHERS
3	873257	ANSUL	UPRIGHT
1	418508	ANSUL	UPRIGHT FOOT, CENTER
3	871683	ANSUL	WEIGH RAIL SUPPORT-SINGLE ROW
1	873853	ANSUL	SINGLE CYLINDER, FT. LS
1	873854	ANSUL	SINGLE CYLINDER, FT. RS

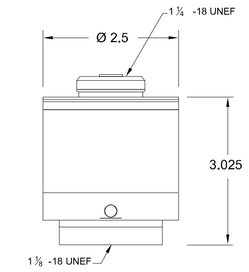
PARTS LIST - ELECTRICAL

QTY.	PART NO.	M.R.F.	DESCRIPTION
1	4004-9802	SIMPLEX	4004 R RELEASING PANEL
1	4004-9860	SIMPLEX	AUXILIARY RELAY MODULE (2 MAX)
2	2081-9272	SIMPLEX	6.2 AH BATTERY
1	2081-9046	SIMPLEX	2 AMP. COIL SUPERVISORY MODULE
1	2080-9057	SIMPLEX	ABORT SWITCH
1	2080-9060	SIMPLEX	MAINTENANCE SWITCH
1	2099-9149	SIMPLEX	MANUAL PULL STATION
1	4099-9802	SIMPLEX	PULL STATION LABEL KIT
8	MT-24MCW-AR	WHEELOCK	HORN/STROBE A/V MULTITONE RED-AGENT

SYSTEM SYMBOL LIST

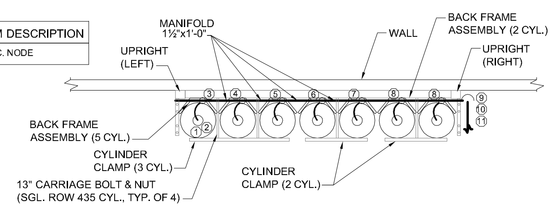
SYMBOL	DESCRIPTION
FSSP	FIRE SUPPRESSION SYSTEM PANEL
F	AGENT PULL STATION
A	ABORT STATION
	HANGER
	HORN STROBE
	TANK / CYLINDER
	360° NOZZLE
M	MAINTENANCE SWITCH
R	ELECTRIC ACTUATOR
W	WARNING SIGNS
	PRESSURE SWITCH
V_P	VLP-012 VESDA LASERPLUS DET.

PART LIST AND SYMBOL LIST

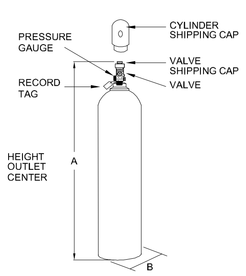


BOOSTER ACTUATOR DETAIL N.T.S.

SYMBOL	ITEM DESCRIPTION
X	CALC. NODE

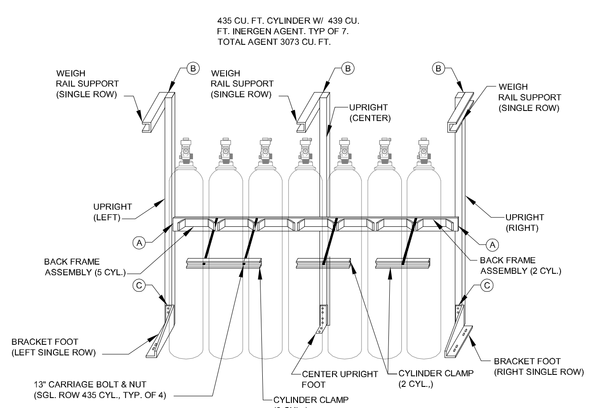


MANIFOLD DETAIL N.T.S.



SHIPPING ASSEMBLY PART NO.		NOMINAL CYLINDER SIZE. (FT.3)	ACTUAL INERGEN AGENT QUANTITY (FT.3)	APPROXIMATE WEIGHT (LB)	DIMENSION "A" (IN.)	DIMENSION "B" (IN.)
RED STORD	RED CR					
426147	426256	200	205	128	52.7	8.5
426148	426257	250	266	169	57.7	9.3
426149	426258	350	355	217	59.7	10.7
426620	426621	LC-350	355	217	60.2	10.5
426594	426595	LC-425	429	246	70.5	10.5
426150	426259	435	439	260	66.9	11

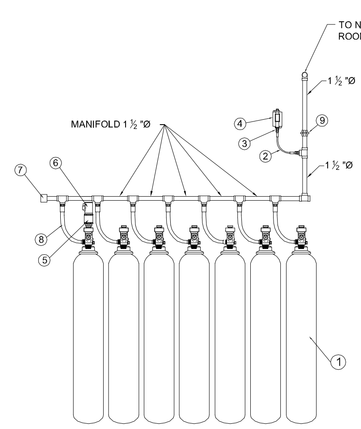
TANK DETAIL N.T.S.



NOTE:
- SOME DRILLING REQUIRED FOR ASSEMBLY OF FEET, BACKFRAMES, AND WEIGH RAILS.
- WHEN BOLTING COMPONENTS TOGETHER, USE THE FOLLOWING SIZE BOLTS, NUTS, FLATWASHERS, AND LOCKWASHERS:

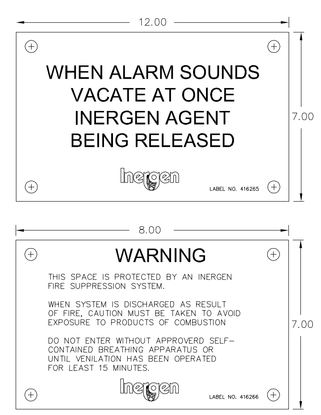
(A) - BACKFRAME TO UPRIGHT-ONE 2 1/2" X 1/2" DIAMETER BOLT, NUT FLATWASHER, AND LOCKWASHER (9/16" CLEARANCE HOLE REQUIRED).
(B) - WEIGH RAIL SUPPORT TO UPRIGHT-TWO 1 1/2" X 7/16" DIAMETER BOLTS, NUTS, FLATWASHERS, AND LOCKWASHERS (15/32" CLEARANCE HOLES REQUIRED).
(C) - BRACKET FOOT TO UPRIGHT-TWO 1 1/2" X 7/16" DIAMETER BOLTS, NUTS, FLATWASHERS, AND LOCKWASHERS (15/32" CLEARANCE HOLES REQUIRED).
(D) - BACKFRAME CONNECTOR TO BACKFRAME-TWO 1 1/2" X 7/16" DIAMETER BOLTS, NUTS FLATWASHERS, AND LOCKWASHERS (N/A FOR THIS PROYECT).

TANK BRACKETING DETAIL N.T.S.

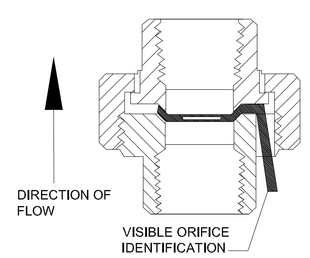


ITEM	DESCRIPTION
1	435 CU. FT CYLINDER W/ CV98 VALVE-CR (TYP.7)
2	ACTUATION HOSE
3	MALE ADAPTOR
4	PRESSURE SWITCH
5	BOOSTER ACTUATOR
6	HF ELECTRIC ACTUATOR
7	HEADER VENT PLUG
8	FLEXIBLE DISCHARGE BEND (TYP.7)
9	ORIFICE UNION 1-1/2"

TANK INSTALLATION DETAIL N.T.S.

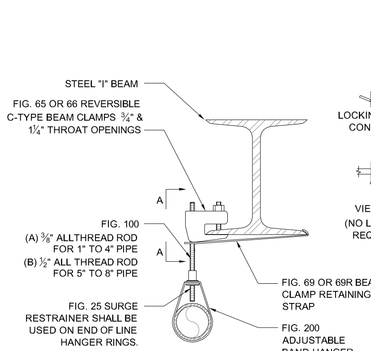


WARNING SIGNS N.T.S.

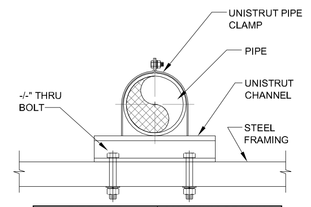


COMPONENT	MATERIAL	THREAD SIZE	APPROVALS
PRESSURE REDUCER/ UNION	BODY: FORGED STEEL ORIFICE PLATE: STAINLESS STEEL	1/2, 3/4, 1, 1-1/4, 1-1/2, 2 IN. NPT	FM APPROVED UL LISTED (EX-4510)

PRESSURE REDUCER/UNION DETAIL N.T.S.

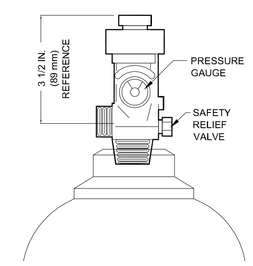


I-BEAM HANGER DETAIL N.T.S.

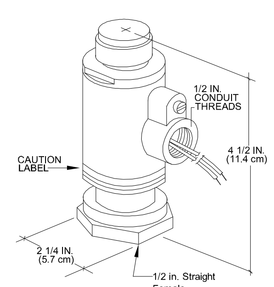


PIPE SIZE	MAXIMUM SPACING
IN	FT
3/8	5
3/4	6
1	7
1 1/4	8
1 1/2	9
2	11
3	12
4	14
6	17

HANGER DETAIL N.T.S.



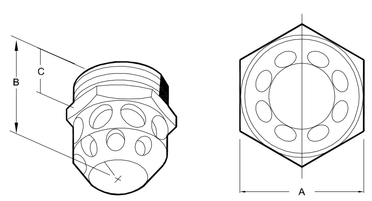
CV-98 VALVE DETAIL N.T.S.



Shipping Assembly Part No.	Material	Approvals	Nominal Voltage	Rated Voltage	
				Minimum	Maximum
73327	Body: Brass Plunger Stainless / Steel	UL (EX-2968) FM Approved	12 VDC @ 0.57 amps	10.4 VDC*	14.0 VDC

*Minimum operating voltage is 9.0 VDC.

HF ELECTRIC ACTUATOR N.T.S.



SIZE	A - INCH	B - INCH	C - INCH
1/4 IN.	5/8	1 9/16	21/32
3/8 IN.	3/4	1 5/8	23/32
1/2 IN.	15/16	1 31/32	27/32
3/4 IN.	1 1/8	2 5/32	7/8
1 IN.	1 13/32	2 29/32	1
1 1/4 IN.	1 3/4	2 3/4	1 1/16
1 1/2 IN.	2	2 31/32	1 1/16
2 IN.	2 3/8	3	1
2 1/2 IN.	3	3 1/2	1
3 IN.	3 1/2	4 1/8	1 1/4

NOZZLE DETAIL N.T.S.

DETAILS

tyco / Fire & Security / SimplexGrinnell

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DIRECT: (207) 482-2343

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NO.	DATE	REVISION DESCRIPTION	CHKD BY

INERGEN–FIRE SUPPRESSION–SYSTEM

BERNSTEIN, SHUR, SAWYER & NELSON
100 MIDDLE STREET
WEST TOWER PORTLAND, ME. 04104-5025

DRAWN BY: SEFP	DATE: MAY 23, 2013
DESIGNED BY: SEFP	DATE: MAY 23, 2013
APPROVED BY:	DATE:
PROJECT NUMBER:	
SHEET TITLE: INERGEN-FIRE SUPPRESSION-SYSTEM	
SHEET NUMBER: 1 OF 3	