



Hiller New England Fire Protection, Inc.

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Phone: (978) 657-5550 FAX: (978) 657-0016
Sapphire™ Designer Program - ANSL3.61b
UL: EX4510 FM: 3014140
Project: Lan Room
File Name: A-2576-1r0; Lan Room.FLC

**Consolidated Report
Customer Information**

Company Name: Unum
Address: 2211 Congress St.
Portland, ME

Phone:
Contact:
Title:

Project Data

Project Name: Lan Room
Designer: Engineering Department
Number: NE2576
Account:
Location:
Description:



Consolidated Report Enclosure Information

Elevation: 0 ft (relative to sea level)
Atmospheric Correction Factor: 1

Enclosure Number: 1
Name: Lan Room
Enclosure Temperature...
Minimum: 65 F
Maximum: 75 F
Maximum Concentration: 4.869 %
Design Concentration...
Adjusted: 4.773 %
Minimum: 4.700 %
Minimum Agent Required: 372.9 lbs
Width: 48.2 ft
Length: 21.5 ft
Height: 9.4 ft

Volume: 9741.2 cubic ft
Non-permeable: 1104.0 cubic ft

Total Volume: 8637.2 cubic ft
Adjusted Agent Required: 379.0 lbs
Number of Nozzles: 2



Consolidated Report Agent Information

Agent: Novec / Propellant N2
(Novec is a trademark of 3M)

Adjusted Agent Required: 379.0 lbs
Container Name: 850 lb Cylinder Assembly
Container Part Number: 570586
Number of Main Containers: 1
Number of Reserve Containers: 0
Manifold: No Manifold

Starting Pressure: 360 psig
Pipe Take Off Direction: Horizontal
Agent Per Container: 379.0 lbs
Fill Density: 31.3 lbs / cubic ft
Container Empty Weight: 456.0 lbs
Weight, All Containers + Agent: 835.0 lbs
Floor Area Per Container: 3.14 square ft
Floor Loading Per Container: 266 lbs / square ft

Pipe Network

Part 1 - Pipe		Pipe				
Description	Start	End	Type	Diameter	Length	Elevation
Main Cyl. X 1	0	1		3 in	4.81 ft	4.81 ft
Adaptor	1	2		3 in	0.42 ft	0.00 ft
Pipe	2	3	40T	1-1/2 in	5.25 ft	5.25 ft
Pipe	3	4	40T	1-1/2 in	12.75 ft	0.00 ft
Pipe	4	5	40T	1-1/2 in	1.33 ft	1.33 ft
Pipe	5	6	40T	1-1/2 in	25.50 ft	0.00 ft
Pipe	6	7	40T	1-1/2 in	22.00 ft	0.00 ft
Pipe	7	8	40T	1-1/2 in	2.00 ft	0.00 ft
Pipe/E1-N2	8	9	40T	1-1/2 in	4.00 ft	-4.00 ft
Pipe	6	10	40T	1-1/4 in	2.00 ft	0.00 ft

Page: 3 of 6

Calculation Date/Time: Thursday, November 08, 2012, 9:44:39 AM

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Consolidated Report

Part 1 - Pipe

Description	Start	End	Type	Diameter	Pipe Length	Elevation
Pipe/E1-N1	10	11	40T	1-1/4 in	4.00 ft	-4.00 ft

Part 2 - Equivalent Length

Start	End	90	45	Thru	Side Union	Other	Added	Total
0	1	0	0	0	0	0	0.00 ft	85.0 ft
1	2	0	0	0	0	0 3inAdapNPT	0.00 ft	1.8 ft
2	3	1	0	0	0	0	0.00 ft	9.6 ft
3	4	1	0	0	0	0	0.00 ft	17.1 ft
4	5	1	0	0	0	0	0.00 ft	5.6 ft
5	6	1	0	0	0	0	0.00 ft	29.8 ft
6	7	0	0	1	0	0	0.00 ft	24.7 ft
7	8	1	0	0	0	0	0.00 ft	6.3 ft
8	9	1	0	0	0	0	0.00 ft	8.3 ft
6	10	0	0	0	1	0	0.00 ft	9.5 ft
10	11	1	0	0	0	0	0.00 ft	7.7 ft

Part 3 - Nozzles

Start	End	Flow	Name	Size	Type	Nozzle Area
0	1	379.0 lbs				
1	2	379.0 lbs				
2	3	379.0 lbs				
3	4	379.0 lbs				
4	5	379.0 lbs				
5	6	379.0 lbs				
6	7	265.0 lbs				
7	8	265.0 lbs				
8	9	265.0 lbs	E1-N2	1-1/2 in	16 Port - BR	0.9273 square in
6	10	114.0 lbs				
10	11	114.0 lbs	E1-N1	1-1/4 in	16 Port - BR	0.5471 square in

Parts Information



Consolidated Report

Total Agent Required: 379.0 lbs
Container Name: 850 lb Cylinder Assembly (Part: 570586)
Number Of Containers: 1
Field1

Nozzle	Type	Diameter	Nozzle Area	Part Number
E1-N1	16 Port - BR	1-1/4 in	0.5471 square in	570605
E1-N2	16 Port - BR	1-1/2 in	0.9273 square in	570606

Nozzle	Drill Diameter	Drill Size
E1-N1	0.2087 inches	5.30 mm
E1-N2	0.2717 inches	6.90 mm

Pipe:	Type	Diameter	Length
	40T	1-1/4 in	6.00 ft
	40T	1-1/2 in	72.83 ft

'Other' Items:

1 - 3 in Flared to NPT Valve Adapter (Part: 69470)

List of 90 degree elbows:

6 - 1-1/2 in

1 - 1-1/4 in

List of Tees:

1 - 1-1/2 in

System Acceptance

System Discharge Time: 9.8 seconds
Percent Agent In Pipe: 36.0%
Percent Agent Before First Tee: 23.9%

Enclosure Number: 1
Enclosure Name: Lan Room

Minimum Design Concentration: 4.700%
Adjusted Design Concentration: 4.773%
Predicted Concentration: 4.773%

Page: 5 of 6

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Consolidated Report

Maximum Expected Agent Concentration: 4.869% (At 75 F)

Nozzle	Minimum Agent Required	Adjusted Agent Required	Predicted Agent Delivered	Nozzle Pressure (Average)
E1-N1	112.2 lbs	114.0 lbs	113.4 lbs	126 psig
E1-N2	260.7 lbs	265.0 lbs	265.6 lbs	109 psig

Drawing View: 1

