BLOCK 702 LOT 5 QUALIFICATION CODE C10·00 2258 ADDRESS (SITE) _____ PERMIT NO. 10-1857

FURGE Pond Golf Course

CONSTRUCTION PERMIT APPLICATION

RECD JUN 23 2010

Applicant Completes: Sections I, II, III (optional), IV, VI, and VII

I. IDENTIFICATION

1. Proposed Work Site at: 301 CHAMBERSBRIDGE ROAD
2. Name of Owner in Fee: COUNTY OF OCEAN
   Tel. (732) 920-4733 e-mail _____
   Address 301 CHAMBERSBRIDGE ROAD (street) municipality zip code
3. Ownership in Fee: Public _____ Private _____
4. Principal Contractor: _____ Tel. (____) _____
   Address _____ e-mail _____
   License No. OR, if new home, Builder Reg. No. _____ Exp. Date _____
   Home Improvement Contractor Registration No. or Exemption Reason (if applicable): _____
   Federal Emp. ID No. _____ FAX: (____) _____
5. Architect or Engineer N/A Contact _____
   Address _____ e-mail _____
   Tel. (____) _____ FAX: (____) _____
6. Responsible Person in Charge once Work has Begun SCOTT BINKLEY
   Tel. (732) 920-4733 FAX: (732) 477-2757

V. FEE SUMMARY (for office use only)

		Update	Update
1. Building	$ X	✓	
2. Electrical			
3. Plumbing			
4. Fire Protection			
5. Elevator Devices			
6. Subtotal			
7. Less 20% for State Plan Review	$		
8. Subtotal	$		
9. State Permit Surcharge Fee			
10. Subtotal	$		
11. Cert. of Occupancy			
12. Other			
13. TOTAL	$		

EXEMPT

VI. BUILDING/SITE CHARACTERISTICS

	(office use only)
1. Number of Stories 1	
2. Height of Structure 8.5 ft.	
3. Area — Largest Floor 208 sq. ft.	
4. New Building Area 208 sq. ft.	
5. Volume of New Structure 1768 cu. ft.	
6. Max. Live Load 250PSF	
7. Max. Occupancy Load 0	
8. If Industrialized Building: State Approved ____ HUD ____	
9. Total Land Area Disturbed 208 sq. ft.	
10. Flood Hazard Zone _____	
11. Base Flood Elevation _____ ft.	
12. Wetlands yes ____ no X	

COMMERCIAL B

IIa. PROPOSED WORK

- ☐ Minor Work
- ☒ New Building
- ☐ Addition
- ☐ Demolition
- ☐ Repair
- ☐ Alteration
- ☐ Renovation
- ☐ Reconstruction
- ☐ Asbestos Abat. -Subch. 8
- ☐ Lead Hazard Abatement
- ☐ Radon Remediation
- ☐ Annual Permit

IIb. SUBCODES

(Check all that apply)

FOR OFFICE USE ONLY (Optional)

	Est. Cost	Plans Rec'd by	Date Rec'd	Rejection Date	Approval Date	Re-viewer	Resubmission Dates Approval	Resubmission Dates Rejection	Re-viewer
☒ Building	30,000				7/2/10	~~MA~~			
☒ Electrical					7-7-10	07			
☐ Plumbing									
☒ Fire Protection				7-6-10	~~7-6-10~~	08	7-15-10	~~MA~~	08
☐ Elevator									
TOTAL COST									

VII. DESCRIPTION OF BUILDING USE

A. RESIDENTIAL *(primary use)*
1. State Specific Use: _____
2. Use Group, Proposed: _____
3. Change in Use Group, Indicate Present: _____
4. No. of dwelling units: *Total Units* *Income restricted*
   Gained, Sale _____
   Gained, Rental _____
   Lost, Sale _____
   Lost, Rental _____

B. NON-RESIDENTIAL *(primary use)*
1. State Specific Use: STORAGE
2. Use Group, Proposed: _____
3. Change in Use Group, Indicate Present:

C. MIXED USE -List secondary use(s): _____

D. Construct. Classification: Present _____ Proposed _____

III. PLAN REVIEW (optional)

DO YOU WANT:
1. ☐ Partial Releases
2. ☐ Prototype Processing

IV. DOES OR WILL YOUR BUILDING CONTAIN ANY OF THE FOLLOWING?

1. ☐ Elevators/Escalators/Lifts/ Dumbwaiters/Moving Walks
2. ☐ High Pressure Boilers
3. ☐ Pressure Vessels
4. ☐ Refrigeration Systems
5. ☐ Cross-Connections/Backflow Preventers
6. ☐ Hazardous Uses/Places of Assembly
7. ☐ Sprinklers
8. ☐ Smoke Control Systems in Open Wells
9. ☐ Underground Storage Tanks
10. ☐ Swimming Pools, Spas and Hot Tubs
11. ☐ LPGas Tanks

CERTIFICATION IN LIEU OF OATH

I. OWNER SECTION (to be completed if the applicant is the owner in fee)

I hereby certify that I am the owner in fee of the property listed on Page 1.

Mark the following applicable boxes:

A. ( ) I further certify that a new home (private residence) will be constructed on this property for my own use and occupancy. This dwelling is to be occupied by myself and is not to be used for any purpose other than single family residential use. I attest that all construction, plumbing, or electrical work will be done, in whole or in part, by me or by subcontractors under my supervision, in accordance with all applicable laws; and, I further acknowledge that said new home is not covered under the New Home Warranty and Builders Registration Act (N.J.S.A. 46:3B-1 et seq.) and that such fact shall be disclosed to any person purchasing this property within ten years of the date of issuance of a certificate of occupancy.

I UNDERSTAND THAT IN MARKING BOX A, I ACKNOWLEDGE THAT I AM ASSUMING RESPONSIBILITY FOR THE WORK DONE ON SAID PROPERTY, THE CONDITION OF THE PROPERTY PRIOR TO, DURING, AND AFTER ANY WORK PERFORMED, AND FOR THE PERFORMANCE OF THE SUBCONTRACTORS I HIRE, EMPLOY, OR OTHERWISE CONTRACT OR WITH WHOM I MAKE AGREEMENTS TO PERFORM WORK. I AM VOLUNTARILY AND KNOWINGLY ASSUMING THIS RESPONSIBILITY.

B. ( ) I further certify the following as required by the New Jersey Uniform Construction Code, N.J.A.C. 5:23-2.15(e)1.ix:

I personally prepared the plans submitted for: 1) the new home referred to in A.; or, 2) an addition, alteration, renovation, or repair to an existing single family residence owned and occupied by myself and located on the property listed on Page 1; or, 3) a new structure that will be physically separate from, but that will be deemed part of, an existing single family residence that is owned and occupied by myself and located on the property listed on Page 1.

C. ( ) I further certify that I will perform or supervise the following work:
C.1. ( ) Building C.2. ( ) Fire Protection

I further certify that I will perform the following work:
C.3. ( ) Electrical C.4. ( ) Plumbing

D. ( ) I agree to advise all contractors on this project that they are required to be registered with the New Jersey Division of Taxation and to comply with all New Jersey tax laws.

I further certify the following as required by the Uniform Construction Code, N.J.A.C. 5:23-2.15(a)5: All required State, county, and local prior approvals have been given, including such certification as the construction official may require.

I understand that if any of the above statements are willfully false, I am subject to punishment.

Signature _____ Date _____

II. AGENT SECTION (to be completed if the applicant is not the owner in fee)

I hereby certify the following as required by the Uniform Construction Code, N.J.A.C. 5:23-2.15(d): the proposed work is authorized by the owner in fee; and I have been authorized by the owner in fee to make this application as his agent.

I further certify the following as required by the Uniform Construction Code, N.J.A.C. 5:23-2.15(a)5: All required State, county, and local prior approvals have been given, including such certification as the construction official may require.

I agree to advise all contractors on this project that they are required to be registered with the New Jersey Division of Taxation and to comply with all New Jersey tax laws.

I understand that if any of the above statements are willfully false, I am subject to punishment.

( ) Check if contractor.

Agent Name SCOTT BINKLEY

Address 301 CHAMBERSBRIDGE RD BRICK

Telephone (732) 920-4733

Signature Scott Binkley

III. ( ) LEAD HAZARD ABATEMENT: Include Homeowner or Building Owner Affidavit as per N.J.A.C. 5:17.

OFFICE DATE RECEIVED: _____

VIII. PRIOR APPROVALS CHECKLIST (office use only)	LOCAL APPROVAL		COUNTY APPROVAL		REGIONAL APPROVAL		STATE APPROVAL		COMMENTS
	Prelimin. Initial	Final Date	Prelimin. Initial	Final Date	Prelimin. Initial	Final Date	Prelimin. Initial	Final Date	
☐ Zoning Officer									
☐ Planning Board									
☐ Zoning Board									
☐ Sewer Authority									
☐ Water Authority									
☐ Police Department									
☐ Health Department									
☐ Soil Conservation									
☐ N.J. Department of Community Affairs									
☐ N.J. Department of Transportation									
☐ N.J. Department of Environmental Protection									
☐ Utility Dig No.									
☐									
☐									

Need journeyman license for plumb for Golf course

IX. SUBCODES AND SPECIAL REGULATIONS APPLICABLE

Name of Code & Edition

Building _____
Electrical _____
Plumbing _____
Fire Protection _____
Mechanical _____

_____ Other _____
_____
_____
_____
_____

X. CERTIFICATES ISSUED (office use only)

				DATE REISSUED	DATE EXPIRED
☐ Temporary Certificate of Occupancy	No.				
☐ Temporary Certificate of Compliance	No.				
☐ Continued Certificate of Occupancy	No.				
☐ Certificate of Compliance	No.				
☐ Certificate of Occupancy	No.				
☐ Certificate of Approval	No.				
☐ Lead Abatement Clearance Certificate	No.				

Brick Township
401 Chambersbridge Rd
Brick, NJ 08723

Date Issued 06/15/2011
Control Number C-10-002258
Permit Number 10-1857
Permit Issue Date 07/16/2010
Certificate Number 10-1857

Certificate

Construction Code Division

(Certificate of Approval)

Identification

Work Site Location: 301 CHAMBERS BRIDGE RD. Brick Township, NJ Block: 702 Lot: 5 Qual:

Owner in Fee: OCEAN COUNTY

Owner Address: 101 HOOPER AVE TOMS RIVER NJ 08753

Telephone: (732) 920-4733

Contractor OCEAN COUNTY

Address 101 HOOPER AVE TOMS RIVER NJ 08753

Telephone: (732) 920-4733 Fax:

License Number or Builders Registration Number: Federal Emp. Number:

Home Warranty Number:

Type of Warranty Plan: ☐ State ☐ Private

Use Group: B Construction Classification:

Maximum Live Load: 0 Maximum Occupancy Load: 0

Description of Work/Use: NEW COMMERCIAL STRUCTURE CONSTRUCTION OF SLAB FOR INSTALLATION OF PRE-FABRICATED PESTICIDE STORAGE BUILDING CONTAINING SELF-CONTAINED FIRE SUPPRESSION.

Certificate Comments:

☐ **Certificate of Occupancy**
This serves notice that said building or structure has been constructed in accordance with the New Jersey Uniform Construction Code and is approved for occupancy.

☑ **Certificate of Approval**
This serves notice that the work completed has been constructed or installed in accordance with the New Jersey Uniform Construction Code and is approved. If the permit was issued for minor work, this certificate was based upon what was visible at the time of inspection.

☐ **Certificate of Continued Occupancy**
This serves notice that based on a general inspection of the visible parts of the building there are no imminent hazards and the building is approved for continued occupancy.

☐ **Temporary Certificate of Compliance**
The following conditions must be met no later than
or the owner will be subject to fine or order to vacate:
This certificate has an expiration date of:
Conditions to be met:

☐ **Certificate of Clearance - Lead Abatement 5:17**
This serves notice that based on written certification, lead abatement was performed as per NJAC5:17 to the following extent.

☐ Total removal of lead-based paint hazards in scope of work
☐ Partial or limited time period (years); see file

☐ **Certificate of Clearance - Asbestos Abatement**
This serves notice that based on written certification, asbestos abatement was performed to the following extent.

☐ Total removal of asbestos hazards in scope of work
☐ Partial or limited time period (years); see file

☐ **Certificate of Compliance**
This serves notice that said potentially hazardous equipment has been installed and/or maintained in accordance with the New Jersey Uniform Construction Code and is approved for use until

☐ **Temporary Certificate of Occupancy**
The following conditions must be met no later than:
or the owner will be subject to fine or order to vacate:
This certificate has an expiration date of:
Conditions to be met:

Construction Official

Fee: $0.00
Check Number:
Collected By:

Date Printed: 06/15/2011 U.C.C. F260 (rev. 08/05)

CONSTRUCTION PERMIT

Date Issued 7/16/10
Control # C-10-002258
Permit # 10-1857

IDENTIFICATION Block: 702 Lot: 5 Qualifier
Work Site Location: 301 CHAMBERS BRIDGE RD. Brick Township, NJ
Owner in Fee: OCEAN COUNTY, 101 HOOPER AVE TOMS RIVER NJ 08753
Telephone: (732) 920-4733

Contractor: OCEAN COUNTY
Address: 101 HOOPER AVE TOMS RIVER NJ 08753
Telephone: (732) 920-4733
Lic. No. or Bldrs. Reg. No.
Federal Employee. No.

Is hereby granted permission to perform the following work:

- [x] BUILDING
- [ ] PLUMBING
- [ ] LEAD HAZARD ABATEMENT
- [x] ELECTRICAL
- [x] FIRE PROTECTION
- [ ] DEMOLITION
- [ ] ELEVATOR DEVICES
- [ ] ASBESTOS ABATEMENT (Subchapter 8 only)
- [ ] OTHER

DESCRIPTION OF WORK:

NEW COMMERCIAL STRUCTURE CONSTRUCTION OF SLAB FOR INSTALLATION OF PRE-FABRICATED PESTICIDE STORAGE BUILDING CONTAINING SELF-CONTAINED FIRE SUPPRESSION.

Note: If constuction does not commence within one (1) year of date of issuance, or if construction ceases for a period of six (6) months, this permit is void.

Estimated Cost of Work $31,001

Construction Official

7-16-10
Date

PAYMENTS (Office Use Only)

Building	$0
Electrical	$0
Plumbing	$0
Fire Protection	$0
Elevator Devices	$0
Other	$0.00
DCA Training Fee	$0
CO Fee	
Other	$0
Total	$0
Check No.	
Cash	$0
Credit	$0
Collected By	

U.C.C. F170
equiv (rev 8/03)

1 WHITE - INSPECTOR **2 CANARY - OFFICE** 3 PINK - TAX ASSESSOR 4 GOLD - APPLICANT

REQUIRED INSPECTIONS

Construction work must be inspected in accordance with the State Uniform Construction Code Regulations N.J.A.C. 5:23-2.18. This agency will carry out such periodic inspections during the progress of work as are necessary to insure that the work installed conforms with the requirements of the Uniform Construction Code.

The owner or other responsible person in charge of work must notify this agency when work is ready for any required inspections specified below. Requests for inspections must be made at least 24 hours prior to the time the inspection is desired. Inspections will be performed within three business days of the time for which they are requested. The work must not proceed in a manner which will preclude the inspection until it has been made and approval granted.

- [ ] Required inspections for all subcodes for one- and two-family dwellings are as follows:
  1. The bottom of footing trenches before placement of footings, except that in cases of pile foundations, inspections shall be made in accordance with the requirements of the building subcode.
  2. Foundations and all walls up to grade level prior to back filling.
  3. All structural framing, connections, wall and roof sheathing and insulation; electrical rough wiring, panel and service installation; rough plumbing. The framing inspection shall take place after the rough electrical and plumbing inspections and after the installation of the heating, ventilation and /or air conditioning duct system. The insulation inspection shall be performed after all other subcode rough inspections and prior to the installation of any interior finish material.
  4. Installation of all finished materials, sealings of exterior joints, plumbing piping, trim and fixtures; electrical wiring, devices and fixtures; mechanical systems equipment.

  Additional required inspections for all subcodes of construction, for other than one- and two-family dwellings, are fire suppression systems, heat producing devices and Barrier Free subcode accessibility, if applicable.

- [ ] Required special inspections. The applicant by accepting the permit will be deemed to have consented to these requirements:

- [ ] A final inspection is required for each applicable subcode area before a final Certificate of Occupancy or Approval may be issued. The final inspections include the installation of all interior and exterior finish materials, sealing of exterior joints, mechanical system and other required equipment; electrical wiring, devices and fixtures; plumbing pipes, trim and fixtures; tests required by any provision of the adopted subcodes, Barrier Free accessibility, if applicable; and verification of compliance with NJAC 5:23-3.5, "Posting structures".

- [ ] A complete copy of released plans must be kept on the job site.

If you do not understand any of this information, please ask.

FIRE PROTECTION SUBCODE
TECHNICAL SECTION

Date Received 10-1857
Control # C10-002398
Date Issued 7/16/10
Permit #

A. IDENTIFICATION—APPLICANT: COMPLETE ALL APPLICABLE INFORMATION. WHEN CHANGING CONTRACTORS, NOTIFY THIS OFFICE. CALL UTILITY DIG NO: 1-800-272-1000.

Block 702 Lot 5 Qualification Code
Work Site Location 301 CHAMBERSBRIDGE ROAD BRICK 08723
Owner in Fee OCEAN COUNTY GOLF COURSE AT FORGE POND
Address 301 CHAMBERSBRIDGE ROAD BRICK 08723

Tel (732) 920-4733
Contractor ALLIED FIRE & SAFETY 908-879-6110
Address PO. BOX 607- 517 GREEN GROVE RD. NEPTUNE, NJ 07754
Tel (732) 922-3399 FAX (732) 918-8668
Fire Protection Equipment, NJ Div of Fire Safety Permit No. P00166
Fire Protection Equipment, NJ Div of Fire Safety Installer No. P00166
Fire Alarm Contractor No. P00166
Federal Emp. No. 22-2040877

B. FIRE PROTECTION CHARACTERISTICS

Use Group: Present ____ Proposed ____ Fire Alarm System: [X] New OR [ ] Existing
Constr. Class: Present ____ Proposed ____ Location of Panel: ____
Heating System: [X] New OR [ ] Existing [ ] HVAC Fire Suppression/Standpipe System:
Type: [ ] Gas [ ] Oil [X] Electric [ ] Solar [X] New OR [ ] Existing
[ ] Other ____ Location of Main Control Valve: ____
Location: ____

Fuel Storage Tank:
Fuel Type: [ ] Flammable OR [ ] Combustible *Capacity* ____

Total Cost of Fire Protection Work $ ____

JOB SUMMARY (Office Use Only)

PLAN REVIEW
[ ] No Plans Required
Joint Plan Review Required:
[ ] Building [ ] Plumbing
[ ] Electric [ ] Elevator
[X] Fire Plans Approved
Date: 7-15-10
Approved by:

SUBCODE APPROVAL
[ ] CO [ ] CCO [X] CA
Date: 5-13-11
Approved by:

INSPECTIONS Type:	Dates (Month/Day) Failure	Failure	Approval	Initial
Alarm System			7-15-10	
Suppression Sys.				
Standpipe				
Fire Pump				
Pre-Eng. System				
Mechanical				
Smoke Control				
TCO				
Flam/Combust Tanks				
Fireplace Venting				
Final			7-15-11	
Other				

C. CERTIFICATION IN LIEU OF OATH

I hereby certify that I am the ~~(agent of)~~ owner of record and am authorized to make this application.
Applicant's Signature/Contractor's Signature
[X] Certified Contractor [ ] Exempt Applicant

D. TECHNICAL SITE DATA

DESCRIPTION OF WORK: PLACE FACTORY INSTALLED DRY CHEM. INTO SERVICE.
Water Supply Source ____
Method of Alarm/Suppression System Supervision ____

	NUMBER	FEE (Office Use Only)
Flammable/Combustible Tanks		
Alarm Systems		
[ ] System		
[ ] 110v Interconnected		
[ ] CO Detectors/110v		
Alarm Devices (i.e., smoke, heat, pulls, water/flow)		
Supervisory Devices (i.e., tampers, low/high air)		
Signaling Devices (i.e., horn/strobes, bells)		
Other Devices ____		
TOTAL		
Suppression Systems		
Fire Pump ____ GPM Type ____		
Dry Pipe/Alarm Valves		
Pre-action Valves		
Sprinkler Heads (Dry and Wet)	1	
Standpipes		
Pre-engineered Systems		
Wet Chemical		
Dry Chemical	1	
CO_2 Suppression		
Foam Suppression		
FM200 Suppression		
Other ____		
Other Systems		
Kitchen Hood Exhaust System		
Smoke Control System		
Fired Appliances [ ] Gas or [ ] Oil		X
Fireplace Venting/Metal Chimney		
Other ____		by code

Administrative Surcharge $ ____
Minimum Fee $ ____
State Permit Surcharge Fee $ ____
TOTAL FEE $ ____

ELECTRICAL SUBCODE
TECHNICAL SECTION

Date Received Control # 10-1857

Date Issued Permit # 7/16/10

A. IDENTIFICATION—APPLICANT: COMPLETE ALL APPLICABLE INFORMATION. WHEN CHANGING CONTRACTORS, NOTIFY THIS OFFICE. CALL UTILITY DIG NO: 1-800-272-1000.

Block 702 Lot 5 Qualification Code

Work Site Location 301 CHAMBERSBRIDGE ROAD BRICK 08723

Owner in Fee: OCEAN COUNTY GOLF COURSE AT FORGE POND

Tel. (732) 920-4733 e-mail SBINKLEY@CO.OCEAN.NJ.US

Address 301 CHAMBERSBRIDGE ROAD (street) BRICK (municipality) 08723 (zip code)

Contractor: Tel. ( )

Address e-mail

Contractor License No. Exp. Date

Home Improvement Contractor Registration No. or Exemption Reason (if applicable):

Federal Emp. ID No. FAX: ( )

B. ELECTRICAL CHARACTERISTICS

Use Group Present Proposed

[ ] Pole/Pad # [ ] Temporary [ ] Other

Building Occupied as STORAGE Utility Co.

Est. Cost of Elec. Work $

JOB SUMMARY (Office Use Only)

PLAN REVIEW

[✓] No Plans Required

[ ] Partial -Underslab Utilities Approved

Date: Approved by:

[ ] Electric Plans Approved

Date: Approved by:

Joint Plan Review Required:
[ ] Bldg. [ ] Plumb. [ ] Fire. [ ] Elev.

SUBCODE APPROVAL for PERMIT
Date: 7-1-10
Approved by: SJ

SUBCODE APPROVAL for CERTIFICATE
[ ] CO [ ] CCO [ ] CA
Date: 5-17-11
Approved by: SJ

INSPECTIONS

Type:	Failure	Failure	Approval	Initial
Rough				
Barrier-Free				
Trench			2.22.11	AM
Temp. Serv.				
Constr. Serv.				
TCO				
Other				
Service				
Final			5.13.11	DD
Barrier-Free				

Temp. Cut-in-Card Date Issued

Final Cut-in-Card Date Issued

Annual Pool Inspection

Date of Grounding and Bonding Certification

C. CERTIFICATION IN LIEU OF OATH

I hereby certify that I am the (agent of) owner of record and am authorized to make this application and perform the work listed on this application. Scott Binkley

Applicant's Signature/Contractor's Seal and Signature

[ ] Licensed Elec. Contractor [ ] Certif'd Landscape Irrigation Cont'r [ ] Exempt Applicant

D. TECHNICAL SITE DATA

DESCRIPTION OF WORK
CONNECT MAINTENANCE BUILDING TO PREFABRICATED STORAGE BUILDING

QTY.	SIZE	ITEMS	FEE (Office Use Only)
3		Lighting Fixtures	
1		Receptacles	
1		Switches	
		Detectors	
		Light Poles	
		Motors—Fract. HP	
		Emergency & Exit Lights	
		Communications Points	
		Alarm Devices/F.A.C. Panel	
		TOTAL NUMBERS	$
		Pool Permit/with UW Lights	
		Storable Pool/Spa/Hot Tub	
		KW Elec. Range/Receptacle	
		KW Oven/Surface Unit	
		KW Elec. Water Heater	
		KW Elec. Dryer/Receptacle	
		KW Dishwasher	
		HP Garbage Disposal	
		KW Central A/C Unit	
1		HP/KW Space Heater/Air Handler	
		KW Baseboard Heat	
		HP Motors 1/+ HP	
		KW Transformer/Generator	
1	100	AMP Service	
		AMP Subpanels	
		AMP Motor Control Center	
		KW Elec. Sign/Outline Light	

Administrative Surcharge $

Minimum Fee $

State Permit Surcharge Fee $

TOTAL FEE $

APRIL 2009

U.C.C. F120 (rev. 12/07) 1 White = Inspector Copy 2 Canary = Office Copy 3 Pink = Office Copy 4 Gold = Applicant Copy

BUILDING SUBCODE
TECHNICAL SECTION

Date Received / Control # 7/16/10

Date Issued / Permit # 10-857

A. IDENTIFICATION—APPLICANT: COMPLETE ALL APPLICABLE INFORMATION. WHEN CHANGING CONTRACTORS, NOTIFY THIS OFFICE. CALL UTILITY DIG NO: 1-800-272-1000.

Block 702 Lot 5 Qualification Code

Work Site Location 301 CHAMBERSBRIDGE ROAD
BRICK NJ 08723

Owner in Fee: COUNTY OF OCEAN

Tel. (732) 920-4733 e-mail SBUKLEY@CO.OCEAN.NJ.US

Address (street) (municipality) (zip code)

Contractor: FORGE POND GOLF COURSE Tel. ( )

Address e-mail

Contractor License No. or Builder Registration No. Exp. Date

Home Improvement Contractor Registration No. or Exemption Reason (if applicable):

Federal Emp. ID No. FAX: ( )

C. CERTIFICATION IN LIEU OF OATH

I hereby certify that I am the (agent of) owner of record and am authorized to make this application.

Signature

D. TECHNICAL SITE DATA

DESCRIPTION OF WORK

CONSTRUCTION OF SLAB FOR INSTALLATION OF PRE-FABRICATED PESTICIDE STORAGE BUILDING CONTAINING SELF CONTAINED FIRE SUPPRESSION.

JOB SUMMARY (Office Use Only)

PLAN REVIEW	Date	Initial
[ ] No Plans Required		
[ ] All		
[ ] Footings/Foundations		
[ ] Structural/Framework		
[ ] Exterior		
[X] Interior	7/21/10	[illegible]

Joint Plan Review Required:
[ ] Elec. [ ] Plumb. [ ] Fire [ ] Elevator

SUBCODE APPROVAL for PERMIT
Date:
Approved by:

SUBCODE APPROVAL for CERTIFICATE
[ ] CO [ ] TCO [X] CA
Date: 5/19/11
Approved by: [illegible]

INSPECTIONS Type:	Failure	Failure	Approval	Initial
Footing				
Footing Bonding				
Foundation				
Slab			12/1/10	G.P.
Frame				
Truss Sys./Bracing				
Barrier-Free				
Insulation				
Finishes -Base Layer				
Finishes -Final				
Energy				
Mechanical				
TCO				
Other				
Final			5/18/11	G.P.
Barrier-Free				

(Dates (Month/Day))

TYPE OF WORK:
- [X] New Building
- [ ] Addition
- [ ] Rehabilitation
- [ ] Roofing
- [ ] Siding
- [ ] Fence _____ Height (exceeds 6')
- [ ] Sign _____ Sq. Ft.
- [ ] Pool
- [ ] Retaining Wall _____ Sq. Ft.
- [ ] Asbestos Abatement Subchapter 8
- [ ] Lead Haz. Abatement NJAC 5:17
- [ ] Radon Remediation
- [ ] Other _____
- [ ] Demolition

FEE (Office Use Only)
$

Administrative Surcharge $
Minimum Fee $
State Permit Surcharge Fee $
TOTAL FEE $

B. BUILDING CHARACTERISTICS

Use Group Present _____ Proposed _____
No. of Stories _____ 1
Height of Structure _____ 8.5 ft.
Area — Largest Floor _____ 208 sq. ft.
New Bldg. Area/All Floors _____ 208 sq. ft.
Volume of New Structure _____ 1768 cu. ft.
Max. Live Load _____ 250 PSF
Max. Occupancy Load _____ 0

Constr. Class Present _____ Proposed _____

If Industrialized Building:
State Approved _____ HUD _____

Est. Cost of Bldg. Work:
1. New Bldg: $
2. Rehabilitation $
3. Total (1+ 2) $

U.C.C. F110
(rev. 12/07)

1 White = Inspector Copy 2 Canary = Office Copy
3 Pink = Office Copy 4 Gold = Applicant Copy

BUILDING SUBCODE
TECHNICAL SECTION

Date Received 7/16/10
Control #
Date Issued
Permit #

A. IDENTIFICATION—APPLICANT: COMPLETE ALL APPLICABLE INFORMATION. WHEN CHANGING CONTRACTORS, NOTIFY THIS OFFICE. CALL UTILITY DIG NO: 1-800-272-1000.

Block 702 Lot 5 Qualification Code

Work Site Location 301 CHAMBERSBRIDGE ROAD
BRICK NJ 08723

Owner in Fee: COUNTY OF OCEAN

Tel. (732) 920-4733 e-mail SBINKLEY@CO.OCEAN.NJ.US

Address
street municipality zip code

Contractor: Tel. ( )

Address e-mail

Contractor License No. or Builder Registration No. Exp. Date

Home Improvement Contractor Registration No. or Exemption Reason (if applicable):

Federal Emp. ID No. FAX: ( )

JOB SUMMARY (Office Use Only)

PLAN REVIEW	Date	Initial
[ ] No Plans Required		
[ ] All		
[ ] Footings/Foundations		
[ ] Structural/Framework		
[ ] Exterior		
[X] Interior	7/21/10	BA

Joint Plan Review Required:
[ ] Elec. [ ] Plumb. [ ] Fire [ ] Elevator

SUBCODE APPROVAL for PERMIT
Date:
Approved by:

SUBCODE APPROVAL for CERTIFICATE
[ ] CO [ ] CCO [ ] CA
Date:
Approved by:

INSPECTIONS Type:	Failure	Failure	Approval	Initial
	Dates (Month/Day)			
Footing				
Footing Bonding				
Foundation				
Slab				
Frame				
Truss Sys./Bracing				
Barrier-Free				
Insulation				
Finishes -Base Layer				
Finishes -Final				
Energy				
Mechanical				
TCO				
Other				
Final				
Barrier-Free				

B. BUILDING CHARACTERISTICS

Use Group Present Proposed
No. of Stories 1
Height of Structure 8.5 ft.
Area — Largest Floor 208 sq. ft.
New Bldg. Area/All Floors 208 sq. ft.
Volume of New Structure 1768 cu. ft.
Max. Live Load 250 PSF
Max. Occupancy Load Ø

Constr. Class Present Proposed

If Industrialized Building:
State Approved HUD

Est. Cost of Bldg. Work:
1. New Bldg. $
2. Rehabilitation $
3. Total (1+ 2) $

C. CERTIFICATION IN LIEU OF OATH

I hereby certify that I am the (agent of) owner of record and am authorized to make this application.

Signature

D. TECHNICAL SITE DATA

DESCRIPTION OF WORK
CONSTRUCTION OF SLAB FOR INSTALLATION OF PRE-FABRICATED PESTICIDE STORAGE BUILDING CONTAINING SELF CONTAINED FIRE SUPPRESSION.

TYPE OF WORK:
[X] New Building
[ ] Addition
[ ] Rehabilitation
[ ] Roofing
[ ] Siding
[ ] Fence Height (exceeds 6')
[ ] Sign Sq. Ft.
[ ] Pool
[ ] Retaining Wall Sq. Ft.
[ ] Asbestos Abatement Subchapter 8
[ ] Lead Haz. Abatement NJAC 5:17
[ ] Radon Remediation
[ ] Other
[ ] Demolition

FEE (Office Use Only)
$

Administrative Surcharge $
Minimum Fee $
State Permit Surcharge Fee $
TOTAL FEE $

U.C.C. F110
(rev. 12/07)

1 White = Inspector Copy 2 Canary = Office Copy
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BUILDING SUBCODE
TECHNICAL SECTION

Date Received Control # 7/16/10

Date Issued
Permit #

A. IDENTIFICATION—APPLICANT: COMPLETE ALL APPLICABLE INFORMATION. WHEN CHANGING CONTRACTORS, NOTIFY THIS OFFICE. CALL UTILITY DIG NO: 1-800-272-1000.

Block 702 Lot 5 Qualification Code

Work Site Location 20 CHAMBERSBRIDGE ROAD
BRICK NJ 08723

Owner in Fee: COUNTY OF OCEAN

Tel. (732) 929-4733 e-mail SPARKILL@CO.OCEAN.NJ.US

Address
street municipality zip code

Contractor: Tel. ( )

Address e-mail

Contractor License No. or Builder Registration No. Exp. Date

Home Improvement Contractor Registration No. or Exemption Reason (if applicable):

Federal Emp. ID No. FAX: ( )

JOB SUMMARY (Office Use Only)

PLAN REVIEW	Date	Initial
[ ] No Plans Required		
[ ] All		
[ ] Footings/Foundations		
[ ] Structural/Framework		
[ ] Exterior		
[X] Interior	7/21/10	KA

Joint Plan Review Required:
[ ] Elec. [ ] Plumb. [ ] Fire [ ] Elevator

SUBCODE APPROVAL for PERMIT
Date:
Approved by:

SUBCODE APPROVAL for CERTIFICATE
[ ] CO [ ] CCO [ ] CA
Date:
Approved by:

INSPECTIONS Type:	Failure	Failure	Approval	Initial
	Dates (Month/Day)			
Footing				
Footing Bonding				
Foundation				
Slab				
Frame				
Truss Sys./Bracing				
Barrier-Free				
Insulation				
Finishes -Base Layer				
Finishes -Final				
Energy				
Mechanical				
TCO				
Other				
Final				
Barrier-Free				

B. BUILDING CHARACTERISTICS

Use Group Present Proposed

No. of Stories 1

Height of Structure 0.5 ft.

Area — Largest Floor 208 sq. ft.

New Bldg. Area/All Floors 208 sq. ft.

Volume of New Structure 1768 cu. ft.

Max. Live Load 150 PSF

Max. Occupancy Load 0

Constr. Class Present Proposed

If Industrialized Building:
State Approved HUD

Est. Cost of Bldg. Work:
1. New Bldg. $
2. Rehabilitation $
3. Total (1+ 2) $

C. CERTIFICATION IN LIEU OF OATH

I hereby certify that I am the (agent of) owner of record and am authorized to make this application.

Signature

D. TECHNICAL SITE DATA

DESCRIPTION OF WORK

CONSTRUCTION OF SLAB FOR INSTALLATION OF PRE FABRICATED PESTICIDE STORAGE BUILDING CONTAINING SELF CONTAINED FIRE SUPPRESSION.

TYPE OF WORK:
[X] New Building
[ ] Addition
[ ] Rehabilitation
[ ] Roofing
[ ] Siding
[ ] Fence Height (exceeds 6')
[ ] Sign Sq. Ft.
[ ] Pool
[ ] Retaining Wall Sq. Ft.
[ ] Asbestos Abatement Subchapter 8
[ ] Lead Haz. Abatement NJAC 5:17
[ ] Radon Remediation
[ ] Other
[ ] Demolition

FEE (Office Use Only)
$

Administrative Surcharge $
Minimum Fee $
State Permit Surcharge Fee $
TOTAL FEE $

U.C.C. F110
(rev. 12/07)

1 White = Inspector Copy 2 Canary = Office Copy
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ELECTRICAL SUBCODE
TECHNICAL SECTION

Date Received
Control # 10-1857

Date Issued
Permit # 7/16/10

A. IDENTIFICATION—APPLICANT: COMPLETE ALL APPLICABLE INFORMATION. WHEN CHANGING CONTRACTORS, NOTIFY THIS OFFICE. CALL UTILITY DIG NO: 1-800-272-1000.

Block 702 Lot 5 Qualification Code

Work Site Location 301 CHAMBERSBRIDGE ROAD BRICK 08723

Owner in Fee: OCEAN COUNTY GOLF COURSE AT FORGE POND

Tel. (732) 920-4733 e-mail SBINKLEY@CO.OCEAN.NJ.US

Address 301 CHAMBERSBRIDGE ROAD (street) BRICK (municipality) 08723 (zip code)

Contractor: Tel. ( )

Address e-mail

Contractor License No. Exp. Date

Home Improvement Contractor Registration No. or Exemption Reason (if applicable):

Federal Emp. ID No. FAX: ( )

B. ELECTRICAL CHARACTERISTICS

Use Group Present Proposed

[ ] Pole/Pad # [ ] Temporary [ ] Other

Building Occupied as STORAGE Utility Co.

Est. Cost of Elec. Work $

JOB SUMMARY (Office Use Only)

PLAN REVIEW

[✓] No Plans Required

[ ] Partial -Underslab Utilities Approved
Date: Approved by:

[ ] Electric Plans Approved
Date: Approved by:

Joint Plan Review Required:
[ ] Bldg. [ ] Plumb. [ ] Fire. [ ] Elev.

SUBCODE APPROVAL for PERMIT
Date: 7-1-10
Approved by: SJ

SUBCODE APPROVAL for CERTIFICATE
[ ] CO [ ] CCO [ ] CA
Date:
Approved by:

INSPECTIONS Type:	Failure	Failure	Approval	Initial
Rough				
Barrier-Free				
Trench				
Temp. Serv.				
Constr. Serv.				
TCO				
Other				
Service				
Final				
Barrier-Free				

Dates (Month/Day)

Temp. Cut-in-Card Date Issued

Final Cut-in-Card Date Issued

Annual Pool Inspection

Date of Grounding and Bonding Certification

C. CERTIFICATION IN LIEU OF OATH

I hereby certify that I am the (agent of) owner of record and am authorized to make this application and perform the work listed on this application. Scott Binkley

Applicant's Signature/Contractor's Seal and Signature

[ ] Licensed Elec. Contractor [ ] Certif'd Landscape Irrigation Cont'r [ ] Exempt Applicant

D. TECHNICAL SITE DATA

DESCRIPTION OF WORK
CONNECT MAINTENANCE BUILDING TO PREFABRICATED STORAGE BUILDING

QTY.	SIZE	ITEMS	FEE (Office Use Only)
3		Lighting Fixtures	
1		Receptacles	
1		Switches	
		Detectors	
		Light Poles	
		Motors—Fract. HP	
		Emergency & Exit Lights	
		Communications Points	
		Alarm Devices/F.A.C. Panel	
		TOTAL NUMBERS	$
		Pool Permit/with UW Lights	
		Storable Pool/Spa/Hot Tub	
		KW Elec. Range/Receptacle	
		KW Oven/Surface Unit	
		KW Elec. Water Heater	
		KW Elec. Dryer/Receptacle	
		KW Dishwasher	
		HP Garbage Disposal	
		KW Central A/C Unit	
1		HP/KW Space Heater/Air Handler	
		KW Baseboard Heat	
		HP Motors 1/+ HP	
		KW Transformer/Generator	
1	100	AMP Service	
		AMP Subpanels	
		AMP Motor Control Center	
		KW Elec. Sign/Outline Light	

Administrative Surcharge	$
Minimum Fee	$
State Permit Surcharge Fee	$
TOTAL FEE	$

APRIL 2009

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ELECTRICAL SUBCODE
TECHNICAL SECTION

Date Received
Control # 10-1857

Date Issued
Permit # 7/16/10

A. IDENTIFICATION—APPLICANT: COMPLETE ALL APPLICABLE INFORMATION. WHEN CHANGING CONTRACTORS, NOTIFY THIS OFFICE. CALL UTILITY DIG NO: 1-800-272-1000.

Block 702 Lot 5 Qualification Code

Work Site Location 301 CHAMBERSBRIDGE ROAD
BRICK 08723

Owner in Fee: OCEAN COUNTY GOLF COURSE AT FORGE POND

Tel. (732) 920-4733 e-mail SPINKLEY@COCEAN.NJ.US

Address 201 CHAMBERSBRIDGE ROAD BRICK 08723
street municipality zip code

Contractor: Tel. ( )

Address e-mail

Contractor License No. Exp. Date

Home Improvement Contractor Registration No. or Exemption Reason (if applicable):

Federal Emp. ID No. FAX: ( )

B. ELECTRICAL CHARACTERISTICS

Use Group Present Proposed

[ ] Pole/Pad # [ ] Temporary [ ] Other

Building Occupied as STORAGE Utility Co.

Est. Cost of Elec. Work $

JOB SUMMARY (Office Use Only)

PLAN REVIEW

[✓] No Plans Required

[ ] Partial -Underslab Utilities Approved
Date: Approved by:

[ ] Electric Plans Approved
Date: Approved by:

Joint Plan Review Required:
[ ] Bldg. [ ] Plumb. [ ] Fire. [ ] Elev.

SUBCODE APPROVAL for PERMIT
Date: 7-1-10
Approved by: SP

SUBCODE APPROVAL for CERTIFICATE
[ ] CO [ ] CCO [ ] CA
Date:
Approved by:

INSPECTIONS — Dates (Month/Day)

Type:	Failure	Failure	Approval	Initial
Rough				
Barrier-Free				
Trench				
Temp. Serv.				
Constr. Serv.				
TCO				
Other				
Service				
Final				
Barrier-Free				

Temp. Cut-in-Card Date Issued
Final Cut-in-Card Date Issued
Annual Pool Inspection
Date of Grounding and Bonding Certification

C. CERTIFICATION IN LIEU OF OATH

I hereby certify that I am the (agent of) owner of record and am authorized to make this application and perform the work listed on this application. Scott Binkley
Applicant's Signature/Contractor's Seal and Signature

[ ] Licensed Elec. Contractor [ ] Certif'd Landscape Irrigation Cont'r [ ] Exempt Applicant

D. TECHNICAL SITE DATA

DESCRIPTION OF WORK
CONNECT MAINTENANCE BUILDING TO REFRIGERATED STORAGE BUILDING

QTY.	SIZE	ITEMS	FEE (Office Use Only)
3		Lighting Fixtures	
1		Receptacles	
1		Switches	
		Detectors	
		Light Poles	
		Motors—Fract. HP	
		Emergency & Exit Lights	
		Communications Points	
		Alarm Devices/F.A.C. Panel	
		TOTAL NUMBERS	$
		Pool Permit/with UW Lights	
		Storable Pool/Spa/Hot Tub	
		KW Elec. Range/Receptacle	
		KW Oven/Surface Unit	
		KW Elec. Water Heater	
		KW Elec. Dryer/Receptacle	
		KW Dishwasher	
		HP Garbage Disposal	
		KW Central A/C Unit	
1		HP/KW Space Heater/Air Handler	
		KW Baseboard Heat	
		HP Motors 1/+ HP	
		KW Transformer/Generator	
1	100	AMP Service	
		AMP Subpanels	
		AMP Motor Control Center	
		KW Elec. Sign/Outline Light	

Administrative Surcharge $
Minimum Fee $
State Permit Surcharge Fee $
TOTAL FEE $

APRIL 2007

U.C.C. F120 (rev. 12/07) 1 White = Inspector Copy 2 Canary = Office Copy 3 Pink = Office Copy 4 Gold = Applicant Copy

FIRE PROTECTION SUBCODE
TECHNICAL SECTION

Date Received / Control # 10-1857

Date Issued / Permit # 7/16/10

A. IDENTIFICATION—APPLICANT: COMPLETE ALL APPLICABLE INFORMATION. WHEN CHANGING CONTRACTORS, NOTIFY THIS OFFICE. CALL UTILITY DIG NO: 1-800-272-1000.

Block 702 Lot 5 Qualification Code

Work Site Location 301 CHAMBERSBRIDGE ROAD BRICK 08723

Owner in Fee OCEAN COUNTY GOLF COURSE AT FORGE POND

Address 301 CHAMBERSBRIDGE ROAD BRICK 08723

Tel (732) 920-4733

Contractor ALLIED FIRE & SAFETY

Address PO BOX 607 517 CHERRY GROVE RD NEWTOWN, NJ 07754

Tel (732) 922-3399 FAX (732) 918-8668

Fire Protection Equipment, NJ Div of Fire Safety Permit No. P00166

Fire Protection Equipment, NJ Div of Fire Safety Installer No. P00166

Fire Alarm Contractor No. P00166

Federal Emp. No. 22-2040857

B. FIRE PROTECTION CHARACTERISTICS

Use Group: Present ____ Proposed ____

Constr. Class: Present ____ Proposed ____

Heating System: [X] New OR [ ] Existing [ ] HVAC

Type: [ ] Gas [ ] Oil [X] Electric [ ] Solar [ ] Other ____

Location: ____

Fire Alarm System: [X] New OR [ ] Existing

Location of Panel: ____

Fire Suppression/Standpipe System: [X] New OR [ ] Existing

Location of Main Control Valve: ____

Fuel Storage Tank:

Fuel Type: [ ] *Flammable* OR [ ] *Combustible* *Capacity* ____

Total Cost of Fire Protection Work $ ____

JOB SUMMARY (Office Use Only)

PLAN REVIEW

[ ] No Plans Required

Joint Plan Review Required:

[ ] Building [ ] Plumbing

[ ] Electric [ ] Elevator

[X] Fire Plans Approved

Date: 7-15-10

Approved by: DB

SUBCODE APPROVAL

[ ] CO [ ] CCO [ ] CA

Date: ____

Approved by: ____

INSPECTIONS Type:	Failure	Failure	Approval	Initial
Alarm System				
Suppression Sys.				
Standpipe				
Fire Pump				
Pre-Eng. System				
Mechanical				
Smoke Control				
TCO				
Flam/Combust Tanks				
Fireplace Venting				
Final				
Other				

Dates (Month/Day)

C. CERTIFICATION IN LIEU OF OATH

I hereby certify that I am the (agent of) owner of record and am authorized to make this application.

Applicant's Signature/Contractor's Signature

[X] Certified Contractor [ ] Exempt Applicant

D. TECHNICAL SITE DATA

DESCRIPTION OF WORK: PLACE FACTORY INSTALLED DRY CHEM. INTO SERVICE.

Water Supply Source ____

Method of Alarm/Suppression System Supervision ____

	NUMBER	FEE (Office Use Only)
Flammable/Combustible Tanks		
Alarm Systems		
[ ] System		
[ ] 110v Interconnected		
[ ] CO Detectors/110v		
Alarm Devices (i.e., smoke, heat, pulls, water/flow)		
Supervisory Devices (i.e., tampers, low/high air)		
Signaling Devices (i.e., horn/strobes, bells)		
Other Devices ____		
TOTAL		
Suppression Systems		
Fire Pump ____ GPM Type ____		
Dry Pipe/Alarm Valves		
Pre-action Valves		
Sprinkler Heads (Dry and Wet)	8	
Standpipes		
Pre-engineered Systems		
Wet Chemical		
Dry Chemical	1	
CO_2 Suppression		
Foam Suppression		
FM200 Suppression		
Other ____		
Other Systems		
Kitchen Hood Exhaust System		
Smoke Control System		
Fired Appliances [ ] Gas or [ ] Oil		X
Fireplace Venting/Metal Chimney		
Other ____		
Administrative Surcharge $		
Minimum Fee $		
State Permit Surcharge Fee $		
TOTAL FEE $		

FIRE PROTECTION SUBCODE
TECHNICAL SECTION

Date Received
Control # 10-1857

Date Issued 7/16/10
Permit #

A. IDENTIFICATION—APPLICANT: COMPLETE ALL APPLICABLE INFORMATION. WHEN CHANGING CONTRACTORS, NOTIFY THIS OFFICE. CALL UTILITY DIG NO: 1-800-272-1000.

Block 702 Lot 5 Qualification Code ______
Work Site Location 201 Chambersbridge Road
Brick 08723
Owner in Fee Ocean County Golf Course at Forge Pond
Address 201 Chambersbridge Road Brick 08723

Tel (732) 920-4733
Contractor Allied Fire + Safety
Address PO Box 607 517 Green Grove Rd
Neptune, NJ 07754
Tel (732) 922-3399 FAX (732) 918-8668
Fire Protection Equipment, NJ Div of Fire Safety Permit No. P00166
Fire Protection Equipment, NJ Div of Fire Safety Installer No. P00166
Fire Alarm Contractor No. P00166
Federal Emp. No. 22-2640857

B. FIRE PROTECTION CHARACTERISTICS
Use Group: Present ______ Proposed ______
Constr. Class: Present ______ Proposed ______
Heating System: [✓] New OR [ ] Existing [ ] HVAC
Type: [ ] Gas [ ] Oil [✓] Electric [ ] Solar
[ ] Other ______
Location: ______

Fire Alarm System: [X] New OR [ ] Existing
Location of Panel: ______
Fire Suppression/Standpipe System:
[X] New OR [ ] Existing
Location of Main Control Valve: ______

Fuel Storage Tank:
Fuel Type: [ ] *Flammable* OR [ ] *Combustible* *Capacity* ______
Total Cost of Fire Protection Work $ ______

JOB SUMMARY (Office Use Only)
PLAN REVIEW
[ ] No Plans Required
Joint Plan Review Required:
[ ] Building [ ] Plumbing
[ ] Electric [ ] Elevator
[✓] Fire Plans Approved
Date: 7-15-10
Approved by: [signature]
SUBCODE APPROVAL
[ ] CO [ ] CCO [ ] CA
Date: ______
Approved by: ______

INSPECTIONS Type:	Failure	Failure	Approval	Initial
Alarm System				
Suppression Sys.				
Standpipe				
Fire Pump				
Pre-Eng. System				
Mechanical				
Smoke Control				
TCO				
Flam/Combust Tanks				
Fireplace Venting				
Final				
Other				

Dates (Month/Day)

C. CERTIFICATION IN LIEU OF OATH
I hereby certify that I am the (~~agent of~~) owner of record and am authorized to make this application. ______
Applicant's Signature/Contractor's Signature
[✓] Certified Contractor [ ] Exempt Applicant

D. TECHNICAL SITE DATA
DESCRIPTION OF WORK: Place factory installed dry chem. into service.
Water Supply Source ______
Method of Alarm/Suppression System Supervision ______

	NUMBER	FEE (Office Use Only)
Flammable/Combustible Tanks		
Alarm Systems		
[ ] System		
[ ] 110v Interconnected		
[ ] CO Detectors/110v		
Alarm Devices (i.e., smoke, heat, pulls, water/flow)		
Supervisory Devices (i.e., tampers, low/high air)		
Signaling Devices (i.e., horn/strobes, bells)		
Other Devices		
TOTAL		
Suppression Systems		
Fire Pump ___ GPM Type ___		
Dry Pipe/Alarm Valves		
Pre-action Valves		
Sprinkler Heads (Dry and Wet)		
Standpipes		
Pre-engineered Systems		
Wet Chemical		
Dry Chemical	1	
CO_2 Suppression		
Foam Suppression		
FM200 Suppression		
Other		
Other Systems		
Kitchen Hood Exhaust System		
Smoke Control System		
Fired Appliances [ ] Gas or [ ] Oil		x
Fireplace Venting/Metal Chimney		
Other		

Administrative Surcharge $ ______
Minimum Fee $ ______
State Permit Surcharge Fee $ ______
TOTAL FEE $ ______

U.C.C. F140
(rev. 1/04)

1 White = Inspector Copy
3 Pink = Office Copy
2 Canary = Office Copy
4 Gold = Applicant Copy

ANSUL®
I-101™ INDUSTRIAL
GENERAL PURPOSE: TOTAL FLOODING/LOCAL APPLICATION
FIRE SUPPRESSION SYSTEM
TECHNICAL MANUAL

ANSUL PART NO. 435239

UNDERWRITERS LABORATORIES FILE NO. EX 1727

JULY 1, 2007

ANSUL

Table of Contents

General Purpose: Total Flooding/Local Application

Table of Contents

Table of Contents

Installation

CONTROL HEAD INSTALLATION (Continued)

Multiple Tank Installations (Continued)

MULTIPLE TANK ACTUATION USING MODEL PAC-10 OR PAC-200 PNEUMATIC ACTUATION TANK (Continued)

In order to actuate the agent tanks from a Model PAC-10/200 Pneumatic Actuation Tank, a 3/4 in. NPT x 1/4 in. NPT bushing must be screwed into the pneumatic tank's discharge port. A 1/4 in. NPT x 45° 1/4 in. flare type fitting (conforming to SAE J513c) must then be screwed into this bushing. The male straight connector (Part No. 32338) is used with stainless steel actuation hose. Also, a Model PDA-D2 Pneumatic Discharge Adaptor must be installed on the valve of each agent tank. Pneumatic tubing is then used to connect the PAC-10/200 pneumatic tank to the PDA-D2 of each agent tank valve. See Figure 5.

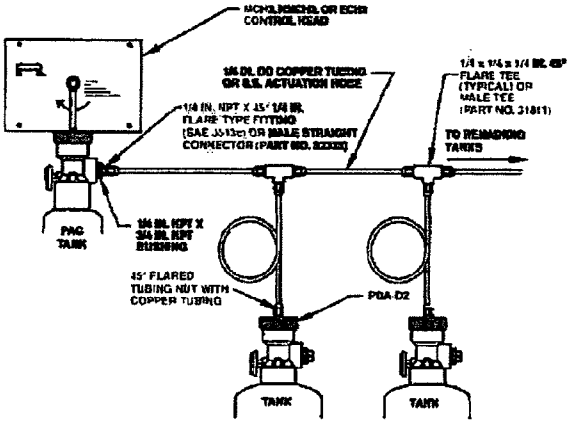

FIGURE 5

NOTE

Pneumatic tubing used for remote tank actuation shall have an outside diameter of 1/4 in. with a minimum wall thickness of 1/32 in. This is commonly known as refrigeration-type copper tubing. All tubing fittings shall be of the 1/4 in., 45° flare type conforming to SAE J513c. Compression **type fittings are not acceptable.**

The Model PAC-10 pneumatic tank can actuate a maximum of ten (10) agent tanks with a maximum of 100 ft (30.5 m) of pneumatic tubing.

The Model PAC-200 pneumatic tank can actuate a maximum of twenty (20) agent tanks with a maximum of 200 ft (61 m) of pneumatic tubing.

MULTIPLE TANK ACTUATION USING TWO CONTROL HEADS

If the system design requires the use of two control heads for multiple tank actuation, a maximum of 25 ft (7.6 m) of tubing or stainless steel actuation hose is allowed between the two control heads and the PAC-10 tank. See Figure 6. If a PAC-10 tank is not utilized, there is a maximum of 25 ft (7.6 m) of tubing or stainless steel actuation hose for the two control heads and up to 4 tanks or a maximum of 18 ft (5.4 m) of tubing or stainless steel actuation hose for the two control heads and 5 tanks.

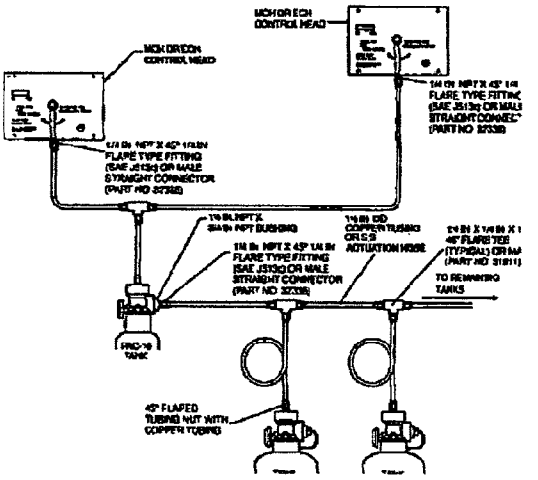

FIGURE 6

Installation

CONTROL HEAD INSTALLATION (Continued)

Multiple Tank Installations (Continued)

MULTIPLE TANK ACTUATION USING MCH3/ECH3/NMCH3 CONTROL HEAD (Continued)

In order to actuate the agent tank(s) from a control head, a 1/4 in. NPT x 45° 1/4 in. flare type fitting (conforming to SAE J513c) or male straight connector (Part No. 32338) must be screwed into the base of the control head actuator. Also, a Model PDA-D2 Pneumatic Discharge Adaptor must be installed on the valve of each agent tank. Pneumatic tubing or stainless steel actuation hose is then used to connect the control head to the PDA-D2 of each agent tank valve. See Figure 3.

NOTE

Pneumatic tubing used for remote tank actuation shall have an outside diameter of 1/4 in. with a minimum wall thickness of 1/32 in. This is commonly known as refrigeration-type copper tubing. All tubing fittings shall be of the 1/4 in., 45° flare type conforming to SAE J513c. Compression **type fittings are not acceptable.**

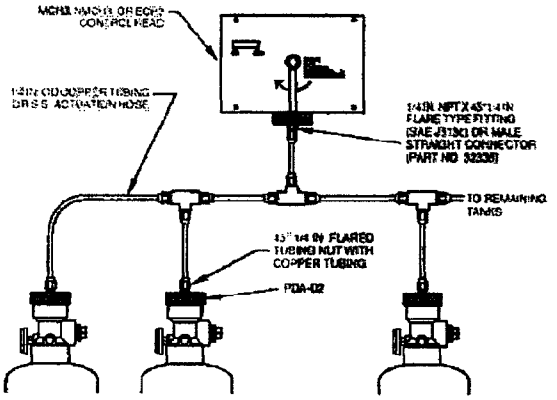

FIGURE 3
002872PC

A single Model MCH3/ECH3/NMCH3 Control Head can actuate:

1. Up to four (4) tanks with a maximum of 25 ft (7.6 m) of copper or stainless steel pneumatic tubing or stainless steel actuation hose when using an O-ring (Part No. 55531) installed in place of the Teflon washer and the 16 gram CO_2 cartridge.
2. Up to five (5) tanks with a maximum of 18 ft (5.4 m) of copper or stainless steel pneumatic tubing or stainless steel actuation hose when using an O-ring (Part No. 55531) installed in place of the Teflon washer and the 16 gram CO_2 cartridge.

⚠ CAUTION

Confirm the Teflon washer in the control head actuator assembly has been replaced with the O-ring (Part No. 55531) and the 16 gram CO_2 cartridge is installed for 4 and 5 tank single control head actuation.

The actuation line must be tested for any leaks by using a hand held or electric vacuum pump. The pump should be used to draw a vacuum on the actuation line at the fitting closest to the control head. A vacuum should be pulled to 20 inches of mercury. Leaks exceeding 5 inches of mercury within 30 seconds are not allowed. If the gauge on the vacuum pump indicates a leak in the line, examine the actuation line for loose fittings or damage. Correct any leaks and retest.

MULTIPLE TANK ACTUATION USING MODEL PAC-10 OR PAC-200 PNEUMATIC ACTUATION TANK

The Model PAC-10 or PAC-200 Pneumatic Actuation Tank must be used if more than five (5) agent tanks require simultaneous actuation. The Model PAC-10/200 must be used in conjunction with a Model MCH3/ECH3/NMCH3 Control Head. The control head is mounted on the Model PAC-10/200 valve assembly.

The Model PAC-10/200 is shipped complete with a mounting bracket. The tank must be mounted vertically with the nameplate facing out. The bracket must be securely anchored to the wall using bolts or lag screws. The wall to which the bracket is attached must be sufficiently strong to support the pneumatic tank. The bracket should never be fastened to dry wall or similar material. If this type of wall is encountered, studs must be located and the bracket fastened to them. See Figure 4.

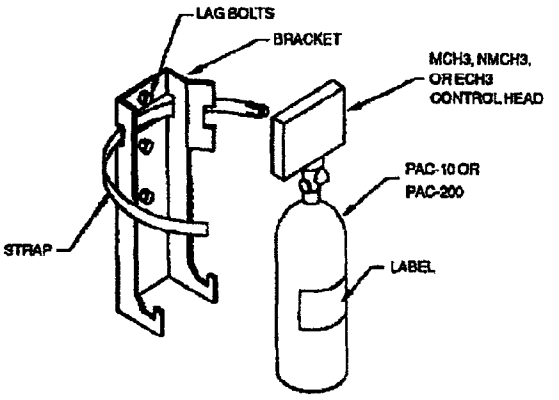

FIGURE 4
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General Purpose: Total Flooding/Local Application

Installation

This chapter will detail the basic information necessary for proper installation of the ANSUL® Industrial Fire Suppression System. However, before attempting any installation it is necessary to attend a Factory Certification Training Class and become Certified to install the ANSUL Industrial Fire Suppression System.

Pipe and fittings for the discharge piping, conduit (EMT), pipe straps, pipe hangers, mounting bolts, and other miscellaneous equipment are not furnished as part of the ANSUL Industrial Fire Suppression System. These items must be furnished by the installer.

Before attempting any installation, unpack the entire system and check that all necessary parts are on hand. Inspect parts for damage. Verify that tank pressure is within the acceptable range as shown on the gauge.

TANK INSTALLATION

The tank and valve assembly is shipped with an anti-recoil plug in the valve discharge port.

⚠ CAUTION

The anti-recoil plug must remain in the valve discharge port until the discharge piping is connected to the valve.

The tank must be mounted vertically with the discharge port facing either left or right. The Models A-17 and A-25 tanks must be mounted using a Model MB-15 Mounting Bracket Kit. The Model A-35, A-50, A-70, and tanks must be mounted using a Model MB-1 Mounting Bracket Kit.

The bracket must be securely anchored to the wall using bolts or lag screws. The wall to which the bracket is attached must be sufficiently strong to support the tank. The bracket should never be fastened to dry wall or similar material. If this type of wall is encountered, studs must be located and the bracket fastened to them. See Figure 1.

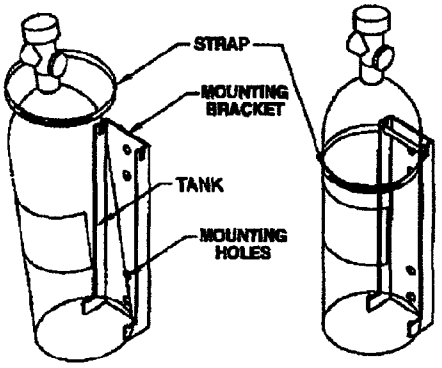


FIGURE 1

CONTROL HEAD INSTALLATION

Single Tank Installations

For single tank system installations the Model MCH3/ECH3/NMCH3 Control Head can be installed directly onto the tank valve. When the control head is properly aligned in the desired position, tighten the knurled locking ring to secure the assembly. See Figure 2.

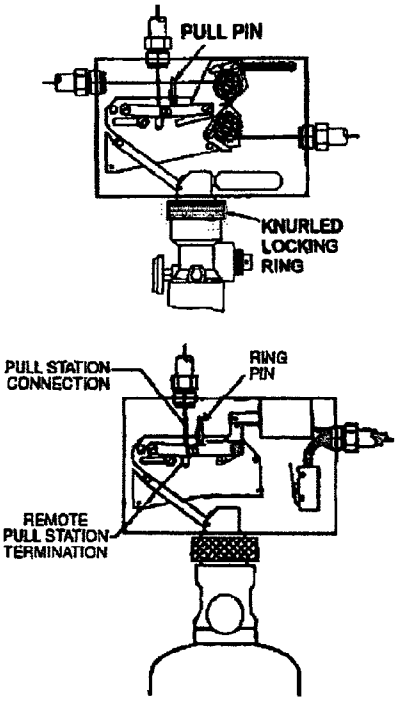


FIGURE 2

Multiple Tank Installations

MULTIPLE TANK ACTUATION USING MCH3/ECH3/NMCH3 CONTROL HEAD

The Model MCH3/ECH3/NMCH3 Control Head can be used to pneumatically actuate a maximum of five (5) agent tanks with a 16 gram CO_2 cartridge. When a control head is used for multiple tank actuation, it cannot be mounted directly onto a tank valve. The control head must be installed remotely using a Model MB-P2 Control Head Mounting Bracket. The bracket must be anchored to the wall using bolts or lag screws.

⚠ CAUTION

Do not screw the control head directly to a wall as this will warp the control head, not allowing the mechanism to actuate.

Design

DETECTOR PLACEMENT.

Thermal detectors are required in all hazard areas protected by the ANSUL Industrial Fire Suppression Systems if automatic system operation is required. Either mechanical or electrical thermal detectors can be used for automatic system operation. Mechanical detectors (fusible links) are used in conjunction with the ANSUL Models MCH3 and NMCH3 control devices. Electrical detectors are used in conjunction with the ANSUL Models ECH3-24 and ECH3-120 Control Heads.

TOTAL FLOODING (DETECTOR SPACING) – THERMAL

Ceiling Height	Spacing
Up to 14 ft (4.2 m) Height	15 ft (4.5 m) maximum between detectors 7 ft 6 in (2.3 m) maximum from wall 225 ft² (20.9 m²) maximum coverage per detector
Greater than 14 ft (4.2 m) up to 20 ft (6.1 m) height	13 ft (3.9 m) maximum between detectors 6 ft. 6 in. (1.9 m) maximum from wall 169 ft² (15.7 m²) maximum coverage per detector
Greater than 20 ft (6.9 m) up to 24 ft (7.3 m)	11 ft (3.4 m) maximum between detectors 5 ft. 6 in. (1.7 m) maximum from wall 121 ft² (11.2 m²) maximum coverage per detector
Greater than 24 ft (7.3 m) up to 30 ft (9.1 m)	9 ft (2.7 m) maximum between detectors 4 ft 6 in (1.4 m) maximum from wall 81 ft² (7.5 m²) maximum coverage per detector

NOTE: For sloped ceiling (peaked type or shed type) installations, refer to NFPA-72, "National Fire Alarm Code" for detailed spacing requirements.

LOCAL APPLICATION – OVERHEAD (DETECTOR SPACING) – Maximum spacing per detector is 100 ft² (9.3 m²) or 5 ft (1.5 m) from edge of hazard and 10 ft (3.1 m) between detectors. When detectors are mounted below the ceiling in an open area, heat traps are recommended.

LOCAL APPLICATION – TANKSIDE (DETECTOR SPACING) – Detectors can be located either near the inner tank wall and flammable liquid surface or above the tank. If located above the tank, the rules for local application overhead would apply. If located on the tank wall, the detectors can be mounted horizontally or vertically in the freeboard area, but must be protected from damage during normal working operations. The maximum spacing per detector is 5 ft (1.5 m) from edge of hazard and 10 ft (3.1 m) between detectors.

A temperature survey must be performed to determine the maximum ambient temperature of the hazard survey. See Temperature Chart in Section II – Components.

TOTAL FLOODING (DETECTOR SPACING) – FUSIBLE LINKS

Ceiling Height	Spacing
Up to 14 ft (4.2 m) Height	10 ft (3.0 m) maximum detectors 5 ft (1.5 m) maximum from a wall* 100 ft² (9.2 m²) maximum coverage per detector
Greater than 14 ft (4.2 m) up to 20 ft (6.1 m) height	8 ft (2.4 m) maximum between detectors 4 ft (1.2 m) maximum from wall 64 ft² (5.9 m²) maximum coverage per detector

NOTE: For sloped ceiling (peaked type or shed type) installations, refer to NFPA-72, "National Fire Alarm Code" for detailed spacing requirements.

LOCAL APPLICATION – OVERHEAD (DETECTOR SPACING) – Maximum spacing per fusible link detector is 36 ft² (3.3 m²) or 3 ft (0.9 m) from edge of hazard and 6 ft (1.8 m) between fusible link detectors.

When a detector(s) is mounted more than 1 ft (0.3 m) below ceiling or in an open area, heat trap(s) is recommended. Detectors should be mounted overhead at nozzle height or as close to the hazard as possible without interference, not to exceed 10 ft (3 m).

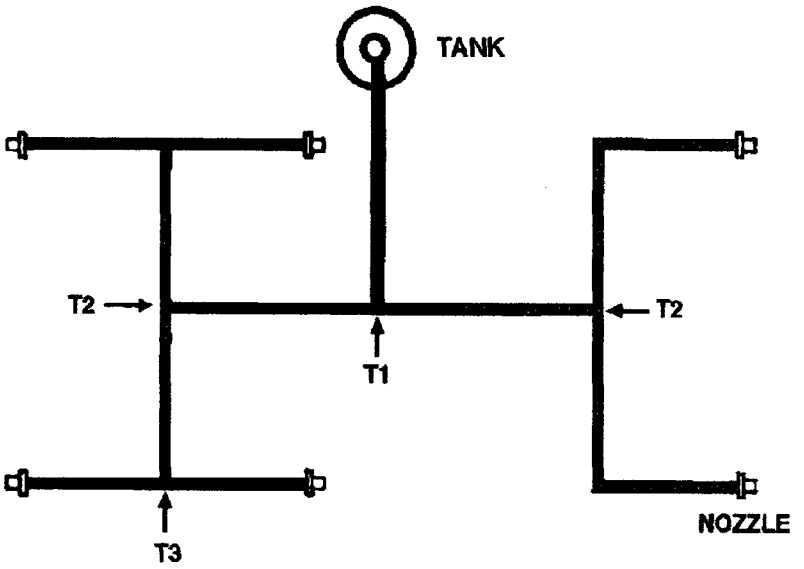
Detectors should not be located where they will be susceptible to damage during the normal work operation.

LOCAL APPLICATION – TANKSIDE (DETECTOR SPACING) – Detectors can be located either near the inner tank wall and flammable liquid surface or above the tank. If located above the tank, the rules for local application overhead would apply. If located on the tank wall, the detectors can be mounted horizontally or vertically in the freeboard area but must be protected from damage during normal working operation. Detectors should be located at a maximum spacing per detector of 3 ft (0.9 m) from edge of hazard and 6 ft (1.8 m) between detectors on the long side of the tank.

*For 14 ft (4.3 m) wide booths with maximum height of 12 ft (3.7 m), the detector location off the side wall can be a maximum of 7 ft (2.1 m).

Design

A-70ABC WITH 6 NOZZLES



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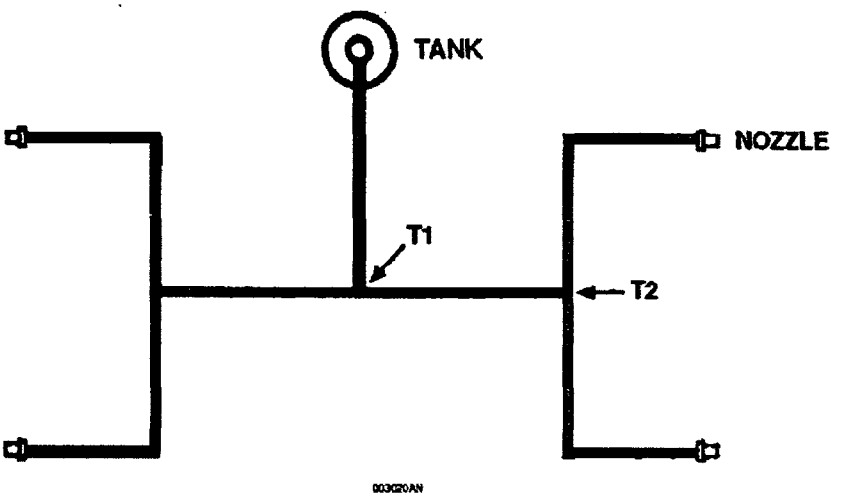
Tank Size	Maximum Nozzle Quantity	Nozzle Type	Piping Section	Size	Length Maximum	Elbows Maximum
A-70ABC	6	N-SCR, N-OTF	Tank to T1	1 in.	18 ft (5.5 m)	3
			T1 to T2 (4 Nozzle Side)	1 in.	14 ft (4.3 m)	1
			T2 to T3	3/4 in.	4 ft (1.2 m)	0
			T3 to Nozzle	3/4 in.	6 ft (1.8 m)	2
			T1 to T2 (2 Nozzle Side)	1 in.	14 ft (4.3 m)	2
			T2 to Nozzle	3/4 in.	6 ft (1.8 m)	2

NOTE:

1. These limitations apply to A-70ABC using six nozzles (2-N-SCR, 4 N-OTF, or 6 N-OTF).
2. System piping must be balanced. Balanced piping is that in which the difference between the shortest actual pipe length from T1 to nozzle and the longest actual pipe length from T1 to nozzle does not exceed 10% of the longest actual pipe length from T1 to nozzle. T2 to nozzle on the same branch must not exceed 10% of each other. The number and type of fittings for all last tee to nozzle sections must be equal.
3. A Main/Reserve Swing Check Valve, Part No. 417788, may be located between the tank and T1.
4. When using the 2-N-SCR, 4-N-OTF nozzle combination, the 2-N-SCRs must be located on the two nozzle side of the piping layout.

Design

A-70ABC WITH 4 NOZZLES



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Total Flooding Piping Limits A-70ABC

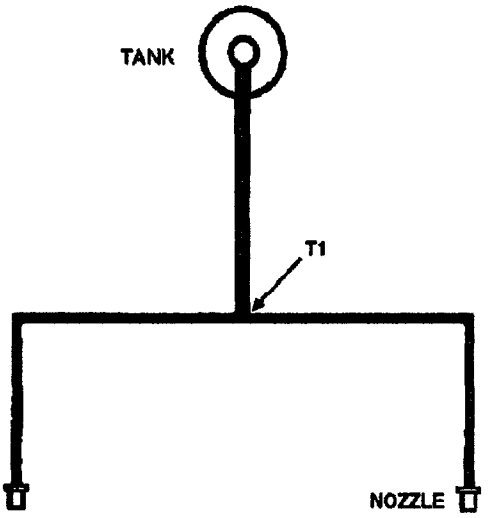
Tank Size	Maximum Nozzle Quantity	Nozzle Type	Piping Section	Size	Length Maximum	Elbows Maximum
A-70ABC	4	NF-ABC	Tank to T1	1 in.	30 ft (9.1 m)	3
			T1 to T2	1 in.	14 ft (4.3 m)	2
			T2 to Nozzle	3/4 in.	9 ft (2.7 m)	2

NOTE:

1. A-70ABC must always use four (4) NF-ABC nozzles.
2. System piping must be balanced. Balanced piping is that in which the difference between the shortest actual pipe length from T1 to nozzle and the longest actual pipe length from T1 to nozzle does not exceed 10% of the longest actual pipe length from T1 to nozzle. T2 to nozzle on the same branch must not exceed 10% of each other. The number and type of fittings from all last tee to nozzle sections must be equal.
3. A Main/Reserve Swing Check Valve, Part No. 417788, may be located between the tank and T1.

Design

A-35ABC WITH 2 NOZZLES



Total Flooding Piping Limits A-35ABC

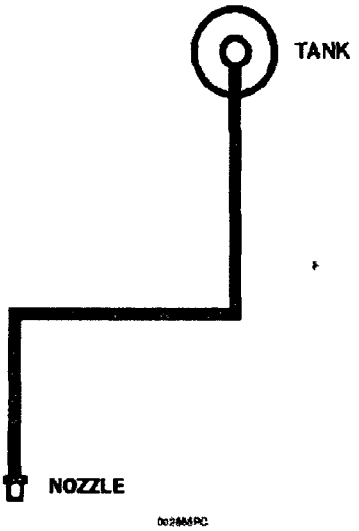
Tank Size	Maximum Nozzle Quantity	Nozzle Type	Piping Section	Size	Length Maximum	Elbows Maximum
A-35ABC	2	NF-ABC	Tank to T1	3/4 in.	30 ft (9.1 m)	4
			T1 to Nozzle	3/4 in.	9 ft (2.7 m)	2

NOTE:

1. A-35ABC must always use two (2) NF-ABC nozzles.
2. System piping must be balanced. Balanced piping is that in which the difference between the shortest actual pipe length from T1 to nozzle and the longest actual pipe length from T1 to nozzle does not exceed 10% of the longest actual pipe length from T1 to nozzle. The number and type of fittings from all last tee to nozzle sections must be equal.
3. A Main/Reserve Swing Check Valve, Part No. 417788, may be located between the tank and T1.

Design

A-17ABC WITH 1 NOZZLE



Total Flooding Piping Limits A-17ABC

Tank Size	Nozzle Quantity	Nozzle Type	Piping Section	Size	Length Maximum	Elbows Maximum
A-17ABC	1	NF-ABC	Tank to Nozzle	3/4 in.	30 ft (9.1 m)	4

NOTE:

1. A-17ABC uses one (1) NF-ABC nozzle.
2. A Main/Reserve Swing Check Valve, Part No. 417788, may be located between the tank and T1.

TABLE 1
TOTAL FLOODING NOZZLE PROTECTION CHART

Maximum Dimensions in feet/nozzle for one (1) Model NF-ABC

Side 1 ft (m)	Nozzle Height ft m	Maximum Side 2 ft m
3 (0.91)	8 (2.4)	16.70 (5.1)
	9 (2.7)	16.70 (5.1)
	10 (3.0)	16.70 (5.1)
	11 (3.4)	16.70 (5.1)
	12 (3.7)	16.70 (5.1)
	13 (4.0)	16.70 (5.1)
	14 (4.3)	16.70 (5.1)
	15 (4.6)	16.70 (5.1)
	16 (4.9)	16.70 (5.1)
	17 (5.2)	16.70 (5.1)
	18 (5.5)	16.70 (5.1)
	19 (5.8)	16.70 (5.1)
	20 (6.1)	16.70 (5.1)
4 (1.2)	8 (2.4)	16.49 (5.0)
	9 (2.7)	16.49 (5.0)
	10 (3.0)	16.49 (5.0)
	11 (3.4)	16.49 (5.0)
	12 (3.7)	16.49 (5.0)
	13 (4.0)	16.49 (5.0)
	14 (4.3)	16.49 (5.0)
	15 (4.6)	16.49 (5.0)
	16 (4.9)	16.49 (5.0)
	17 (5.2)	16.49 (5.0)
	18 (5.5)	16.49 (5.0)
	19 (5.8)	16.49 (5.0)
	20 (6.1)	16.20 (4.9)
5 (1.5)	8 (2.4)	16.22 (4.9)
	9 (2.7)	16.22 (4.9)
	10 (3.0)	16.22 (4.9)
	11 (3.4)	16.22 (4.9)
	12 (3.7)	16.22 (4.9)
	13 (4.0)	16.22 (4.9)
	14 (4.3)	16.22 (4.9)
	15 (4.6)	16.22 (4.9)
	16 (4.9)	16.20 (4.9)
	17 (5.2)	15.25 (4.6)
	18 (5.5)	14.40 (4.4)
	19 (5.8)	13.64 (4.2)
	20 (6.1)	12.96 (3.9)
6 (1.8)	8 (2.4)	15.87 (4.8)
	9 (2.7)	15.87 (4.8)
	10 (3.0)	15.87 (4.8)
	11 (3.4)	15.87 (4.8)
	12 (3.7)	15.87 (4.8)
	13 (4.0)	15.87 (4.8)
	14 (4.3)	15.43 (4.7)
	15 (4.6)	14.40 (4.4)
	16 (4.9)	13.50 (4.1)
	17 (5.2)	12.71 (3.9)
	18 (5.5)	12.00 (3.7)
	19 (5.8)	11.37 (3.5)
	20 (6.1)	10.80 (3.3)

Side 1 (feet)	Nozzle Height ft m	Maximum Side 2 ft m
7 (2.1)	8 (2.4)	15.46 (4.7)
	9 (2.7)	15.46 (4.7)
	10 (3.0)	15.46 (4.7)
	11 (3.4)	15.46 (4.7)
	12 (3.7)	15.43 (4.7)
	13 (4.0)	14.24 (4.3)
	14 (4.3)	13.22 (4.0)
	15 (4.6)	12.34 (3.7)
	16 (4.9)	11.57 (3.5)
	17 (5.2)	10.89 (3.3)
	18 (5.5)	10.29 (3.1)
	19 (5.8)	9.74 (3.0)
	20 (6.1)	9.26 (2.8)
8 (2.4)	8 (2.4)	14.97 (4.6)
	9 (2.7)	14.97 (4.6)
	10 (3.0)	14.97 (4.6)
	11 (3.4)	14.73 (4.5)
	12 (3.7)	13.50 (4.1)
	13 (4.0)	12.46 (3.8)
	14 (4.3)	11.57 (3.5)
	15 (4.6)	10.80 (3.3)
	16 (4.9)	10.13 (3.1)
	17 (5.2)	9.53 (2.9)
	18 (5.5)	9.00 (2.7)
	19 (5.8)	8.53 (2.6)
	20 (6.1)	8.10 (2.5)
9 (2.7)	8 (2.4)	14.39 (4.4)
	9 (2.7)	14.39 (4.4)
	10 (3.0)	14.39 (4.4)
	11 (3.4)	13.09 (4.0)
	12 (3.7)	12.00 (3.7)
	13 (4.0)	11.08 (3.4)
	14 (4.3)	10.29 (3.1)
	15 (4.6)	9.60 (2.9)
	16 (4.9)	9.00 (2.7)
	17 (5.2)	8.47 (2.6)
	18 (5.5)	8.00 (2.4)
	19 (5.8)	7.58 (2.3)
	20 (6.1)	7.20 (2.2)
10 (3.0)	8 (2.4)	13.71 (4.2)
	9 (2.7)	13.71 (4.2)
	10 (3.0)	12.96 (4.0)
	11 (3.4)	11.78 (3.6)
	12 (3.7)	10.80 (3.3)
	13 (4.0)	9.97 (3.0)
	14 (4.3)	9.26 (2.8)
	15 (4.6)	8.64 (2.6)
	16 (4.9)	8.10 (2.5)
	17 (5.2)	7.62 (2.3)
	18 (5.5)	7.20 (2.2)
	19 (5.8)	6.82 (2.1)
	20 (6.1)	6.48 (2.0)

Side 1 (feet)	Nozzle Height ft m	Maximum Side 2 ft m
11 (3.4)	8 (2.4)	12.92 (3.9)
	9 (2.7)	12.92 (3.9)
	10 (3.0)	11.78 (3.6)
	11 (3.4)	10.71 (3.3)
	12 (3.7)	9.82 (3.0)
	13 (4.0)	9.06 (2.8)
	14 (4.3)	8.42 (2.6)
	15 (4.6)	7.85 (2.4)
	16 (4.9)	7.36 (2.2)
	17 (5.2)	6.93 (2.1)
	18 (5.5)	6.55 (2.0)
	19 (5.8)	6.20 (1.9)
	20 (6.1)	5.89 (1.8)
12 (3.7)	8 (2.4)	12.00 (3.7)
	9 (2.7)	12.00 (3.7)
	10 (3.0)	10.80 (3.3)
	11 (3.4)	9.82 (3.0)
	12 (3.7)	9.00 (2.7)
	13 (4.0)	8.31 (2.5)
	14 (4.3)	7.71 (2.4)
	15 (4.6)	7.20 (2.2)
	16 (4.9)	6.75 (2.1)
	17 (5.2)	6.35 (1.9)
	18 (5.5)	6.00 (1.8)
	19 (5.8)	5.68 (1.7)
	20 (6.1)	5.40 (1.6)
13 (4.0)	8 (2.4)	10.91 (3.3)
	9 (2.7)	10.91 (3.3)
	10 (3.0)	9.97 (3.0)
	11 (3.4)	9.06 (2.8)
	12 (3.7)	8.31 (2.5)
	13 (4.0)	7.67 (2.3)
	14 (4.3)	7.12 (2.2)
	15 (4.6)	6.65 (2.0)
	16 (4.9)	6.23 (1.9)
	17 (5.2)	5.86 (1.8)
	18 (5.5)	5.54 (1.7
	19 (5.8)	5.25 (1.6)
	20 (6.1)	4.98 (1.5)
14 (4.3)	8 (2.4)	9.59 (2.9)
	9 (2.7)	9.59 (2.9)
	10 (3.0)	9.26 (2.8)
	11 (3.4)	8.42 (2.6)
	12 (3.7)	7.71 (2.4)
	13 (4.0)	7.12 (2.2)
	14 (4.3)	6.61 (2.0)
	15 (4.6)	6.17 (1.9)
	16 (4.9)	5.79 (1.8)
	17 (5.2)	5.45 (1.7)
	18 (5.5)	5.14 (1.6)
	19 (5.8)	4.87 (1.5)
	20 (6.1)	4.63 (1.4)

Side 1 (feet)	Nozzle Height ft m	Maximum Side 2 ft m
15 (4.6)	8 (2.4)	7.94 (2.4)
	9 (2.7)	7.94 (2.4)
	10 (3.0)	7.94 (2.4)
	11 (3.4)	7.85 (2.4)
	12 (3.7)	7.20 (2.2)
	13 (4.0)	6.65 (2.0)
	14 (4.3)	6.17 (1.9)
	15 (4.6)	5.76 (1.8)
	16 (4.9)	5.40 (1.6)
	17 (5.2)	5.08 (1.5)
	18 (5.5)	4.80 (1.5)
	19 (5.8)	4.55 (1.4)
	20 (6.1)	4.32 (1.3)
16 (4.9)	8 (2.4)	5.66 (1.7)
	9 (2.7)	5.66 (1.7)
	10 (3.0)	5.66 (1.7)
	11 (3.4)	5.66 (1.7)
	12 (3.7)	5.66 (1.7)
	13 (4.0)	5.66 (1.7)
	14 (4.3)	5.66 (1.7)
	15 (4.6)	5.40 (1.6)
	16 (4.9)	5.06 (1.5)
	17 (5.2)	4.76 (1.4)
	18 (5.5)	4.50 (1.4)
	19 (5.8)	4.26 (1.3)
	20 (6.1)	4.05 (1.2)

Design

GUIDELINES (Continued)

Total Flooding with ABC

Tanks: The Models A-17ABC, A-35ABC, and A-70ABC tanks can be used for ABC total flooding applications.

Nozzles: The Model NF-ABC is used for all ABC total flooding applications.

The Model A-17ABC can support one (1) Model NF-ABC nozzle.

The Model A-35ABC can support two (2) Model NF-ABC nozzles.

The Model A-70ABC can support four (4) Model NF-ABC nozzles.

Temperature Ranges: The operating temperature range for ABC total flooding applications is –20 °F to 120 °F (–28 °C to 48 °C).

Piping Requirements: Piping diagrams include limitations on pipe length and fittings.

Nozzle: The nozzle is to be mounted in the center of the protected area, with the discharge holes in the nozzle no greater than six (6) in (15.29 cm) from the ceiling. See Figure 4.

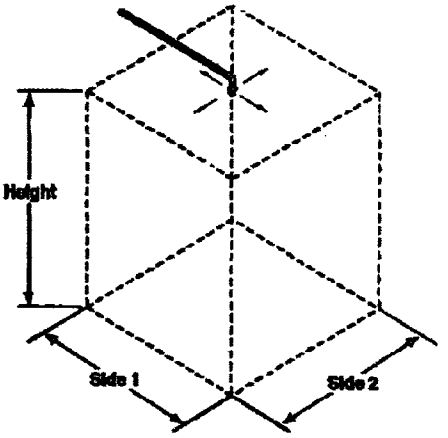


FIGURE 4
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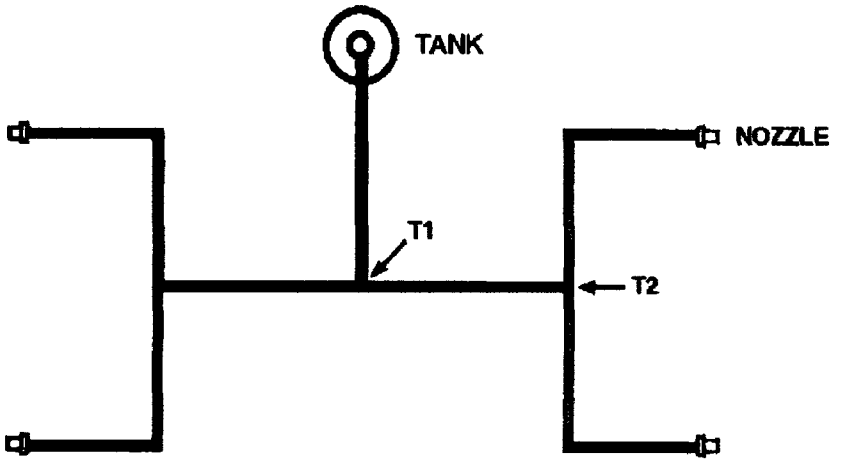
Nozzle Coverages:

Protection	Nozzle	Specifications Maximum	Nozzle Location Within Protection Zone Length Width Height	Nozzle Offset	Nozzle Orientation
Flooding Area	NF-ABC	Volume – 1296 ft² (120.4 m²) See Table 3-1	Length–Center Width–Center Height–20 ft (6.1 m) maximum	0 – 6 in. (0-15.29 cm)	Vertical
Flooding Area	N-OTF	Volume – 768 ft² (71.3 m²) 8 x 8 x 12 ft (2.4 m x 2.4 m x 3.7 m)	Length–Center Width–Center Height–12 ft (3.7 m) maximum	0 – 6 in. (0-15.29 cm)	Vertical
Screen Area	N-SCR	8 x 12 ft (2.4 m x 3.7 m)	Length–Center Width–Center Height–12 ft (3.7 m) maximum	0 – 6 in. (0-15.29 cm)	Vertical

Design

A-50ABC/BC WITH 4 NOZZLES



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Local Overhead Piping Limits A-50ABC

Tank Size	Maximum Nozzle Quantity	Nozzle Type	Piping Section	Size	Length Maximum	Elbows Maximum	Length Minimum	Elbows Minimum
A-50ABC	4	N-LA-ABC	Tank to T1	1 in.	25 ft (7.6 m)	4	5 ft (1.5 m)	1
			T1 to T2	3/4 in.	10 ft (3.1 m)	2	2.5 ft (0.8 m)	0
			T2 to Nozzle	3/4 in.	8 ft (2.4 m)	2	2.5 ft (0.8 m)	1
			Total Tank to Nozzle		43 ft (13.1 m)	8	20 ft (6.1 m)	3

Local Overhead Application Piping Limits A-50BC

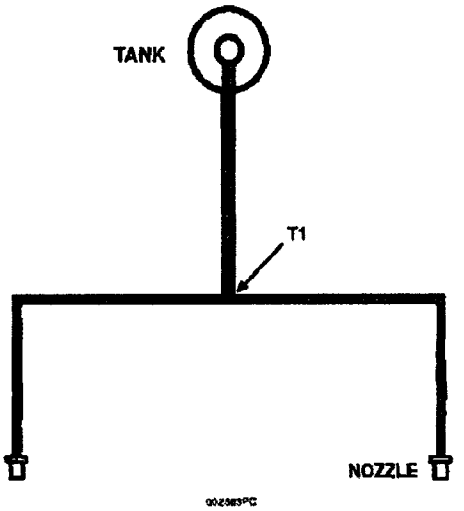
Tank Size	Maximum Nozzle Quantity	Nozzle Type	Piping Section	Size	Length Maximum	Elbows Maximum	Length Minimum	Elbows Minimum
A-50BC	4	N-LA-BC	Tank to T1	1 in.	35 ft (10.7 m)	4	15.5 ft (4.7 m)	1
			T1 to T2	3/4 in.	12 ft (3.7 m)	2	2.5 ft (0.8 m)	0
			T2 to Nozzle	3/4 in.	12 ft (3.7 m)	3	2.5 ft (0.8 m)	1
			Total Tank to Nozzle		59 ft (18 m)	9	30 ft (9.1 m)	4

NOTE:

1. A-50ABC must always use four (4) N-LA-ABC nozzles.
2. A-50BC must always use four (4) N-LA-BC nozzles.
3. System piping must be balanced. Balanced piping is that in which the difference between the shortest actual pipe length from T1 to nozzle and the longest actual pipe length from T1 to nozzle does not exceed 10% of the longest actual pipe length from T1 to nozzle. T2 to nozzle on the same branch must not exceed 10% of each other. The number and type of fittings from all last tee to nozzle sections must be equal.
4. A Main/Reserve Swing Check Valve, Part No. 417788, may be located between the tank and T1.
5. Minimum requirements for piping and fittings do not apply to systems protecting hazards with no splashable hazard. A splashable hazard exists where liquid fuel in depth greater than 1/4 in. is present.

Design

A-25ABC/BC WITH 2 NOZZLES



Local Overhead Application Piping Limits A-25ABC

Tank Size	Maximum Nozzle Quantity	Nozzle Type	Piping Section	Size	Length Maximum	Elbows Maximum	Length Minimum	Elbows Minimum
A-25ABC	2	N-LA-ABC	Tank to T1	3/4 in.	28 ft (8.5 m)	5	5 ft (1.5 m)	1
			T1 to Nozzle	3/4 in.	25 ft (7.6 m)	4	2.5 ft (0.8 m)	1
			Total Tank to Nozzle		53 ft (16.2 m)	9	25 ft (7.6 m)	4

Local Overhead Application Piping Limits A-25BC

Tank Size	Maximum Nozzle Quantity	Nozzle Type	Piping Section	Size	Length Maximum	Elbows Maximum	Length Minimum	Elbows Minimum
A-25BC	2	N-LA-BC	Tank to T1	3/4 in.	35 ft (10.7 m)	4	12.5 ft (3.8 m)	1
			T1 to Nozzle	3/4 in.	12 ft (3.7 m)	3	2.5 ft (0.8 m)	1
			Total Tank to Nozzle		47 ft (14.3 m)	7	24.5 ft (7.5 m)	4

NOTE:

1. A-25ABC must always use two (2) N-LA-ABC nozzles.
2. A-25BC must always use two (2) N-LA-BC nozzles.
3. System piping must be balanced. Balanced piping is that in which the difference between the shortest actual pipe length from T1 to nozzle and the longest actual pipe length from T1 to nozzle does not exceed 10% of the longest actual pipe length fromT1 to nozzle. The number and type of fittings from all last tee to nozzle sections must be equal.
4. A Main/Reserve Swing Check Valve, Part No. 417788, may be located between the tank and T1.
5. Minimum requirements for piping and fittings do not apply to systems protecting hazards with no splashable hazard. A splashable hazard exists where liquid fuel in depth greater than 1/4 in. is present.

GUIDELINES (Continued)

Local Application Overhead (Indoor Use Only)

Tanks: The Model A-25BC, A-25ABC, A-50BC, and A-50ABC can be used for local overhead applications.

Nozzles: The Model N-LA-ABC nozzle is used for both the A-25ABC and A-50ABC systems. The maximum nozzle height of the Model N-LA-ABC nozzle is 10 ft (3.0 m). The minimum nozzle height of the Model N-LA-ABC nozzle is 7.5 ft (2.3 m).

The Model N-LA-BC nozzle is used for both the A-25BC and A-50BC systems. The maximum nozzle height of the Model N-LA-BC nozzle is 11 (3.3 m). The minimum nozzle height of the Model N-LA-BC nozzle is 7.5 ft (2.3 m).

Note: Nozzle height is measured from the hazard surface to the closest point of the nozzle in the installed position.

Flow Restrictor: A Model FR-25sBC flow restrictor is required to be placed directly before each Model N-LA-BC nozzle when used with the A-25BC system for local overhead applications at any of the allowable nozzle heights. See Figure 2. No flow restrictors are required for A-25ABC, A-50ABC, or A-50BC systems.

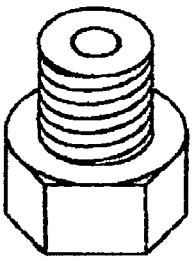


FIGURE 2

Temperature Range: The operating temperature range for the dry chemical tank assembly used for local overhead applications is 32 °F to 120 °F (0 °C to 48 °C).

Piping Requirements: Piping diagrams include limitations on pipe length and fittings.

Note: All listed piping diagrams represent maximum number of nozzles allowed. In applications that do not require the maximum number of nozzles, the quantity of nozzles can be reduced.

In applications of this type, along with the already listed limitations (notes included with each maximum layout), the following limitations apply:

- On the reduced nozzle side of the piping layout, the largest listed size pipe on the standard configuration layout must be utilized from T1 to nozzle.
- The maximum length of the reduced nozzle side must be the original combination from T1 to T2, and T2 to nozzle. **Note:** In systems utilizing a T3 split, the maximum length of the reduced nozzle side must be the original combination from T1 to T2, T2 to T3, and T3 to nozzle.
- The maximum number of elbows must be the original combiantion from T1 to T2, and T2 to nozzle. **Note:** In systems utilizing a T3 split, the maximum number of elbows must be the original combination from T1 to T2, T2 to T3, and T3 to nozzle.

Nozzle Placement and Coverage: The Models N-LA-ABC and N-LA-BC nozzles have been developed to provide local application of extinguishing agent from an overhead position. Both nozzles will protect a hazard area of 25 ft^2 (2.3 m^2) with a 5 ft (1.5 m) maximum side. Proper nozzle placement is shown in Figure 3.

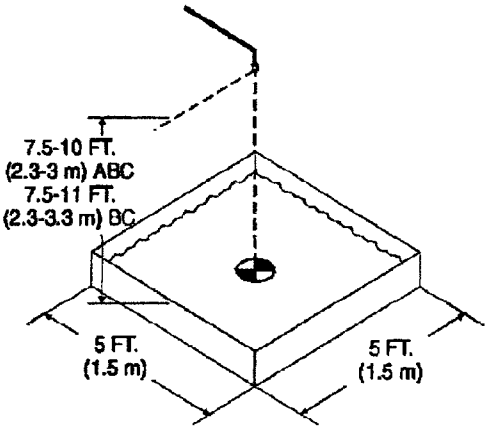
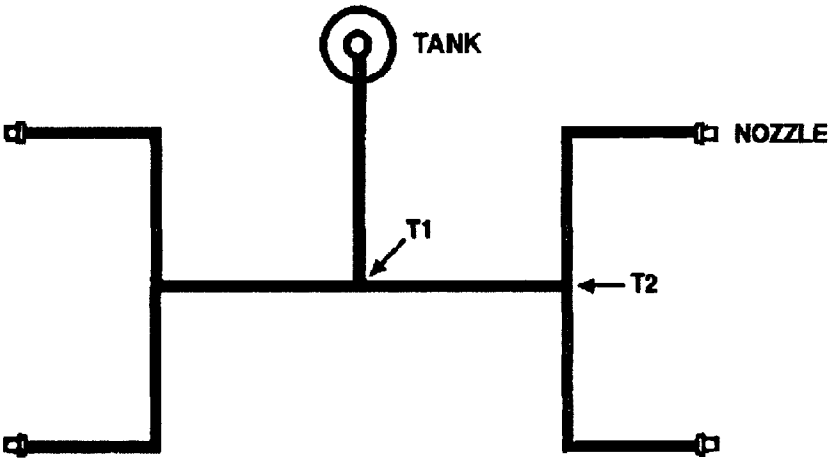


FIGURE 3

Note: Minimum nozzle height of 7.5 ft (2.3 m) is only required when splashable liquid of 1/4 in. or greater is located in the hazard area.

Design

A-50ABC/BC WITH 4 NOZZLES



Tankside Piping Limits A-50ABC

Tank Size	Maximum Nozzle Quantity	Nozzle Type	Piping Section	Size	Length Maximum	Elbows Maximum	Length Minimum	Elbows Minimum
A-50ABC	4	N-TS	Tank to T1	1 in.	53 ft (16.2 m)	6	6 ft (1.8 m)	1
			T1 to T2	3/4 in.	6 ft (1.8 m)	2	2 ft (0.6 m)	1
			T2 to Nozzle	3/4 in.	6 ft (1.8 m)	4	2 ft (0.6 m)	1
			Total Tank to Nozzle		65 ft (19.8 m)	10	16 ft (4.9 m)	4

Tankside Piping Limits A-50BC

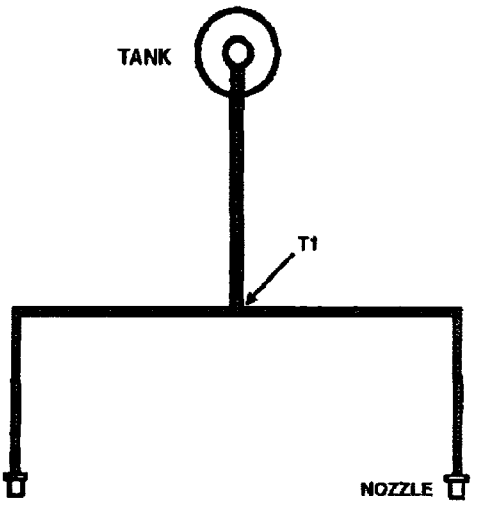
Tank Size	Maximum Nozzle Quantity	Nozzle Type	Piping Section	Size	Length Maximum	Elbows Maximum	Length Minimum	Elbows Minimum
A-50BC	4	N-TS	Tank to T1	1 in.	65 ft (19.8 m)	8	5 ft (1.5 m)	2
			T1 to T2	3/4 in.	15 ft (4.6 m)	4	2 ft (0.6 m)	0
			T2 to Nozzle	3/4 in.	15 ft (4.6 m)	4	2 ft (0.6 m)	1
			Total Tank to Nozzle		95 ft (29 m)	14	16 ft (4.9 m)	3

NOTE:

1. A-50ABC/BC must always use four (4) N-TS nozzles.
2. System piping must be balanced. Balanced piping is that in which the difference between the shortest actual pipe length from T1 to nozzle and the longest actual pipe length from T1 to nozzle does not exceed 10% of the longest actual pipe length from T1 to nozzle. T2 to nozzle on the same branch must not exceed 10% of each other. The number and type of fittings from all last tee to nozzle sections must be equal.
3. A Main/Reserve Swing Check Valve, Part No. 417788, may be located between the tank and T1.
4. Minimum requirements for piping and fittings do not apply to systems protecting hazards with no splashable hazard. A splashable hazard exists where liquid fuel in depth greater than 1/4 in. is present.

Design

A-25ABC WITH 2 NOZZLES



Tankside Piping Limits A-25ABC

Tank Size	Maximum Nozzle Quantity	Nozzle Type	Piping Section	Size	Length Maximum	Elbows Maximum	Length Minimum	Elbows Minimum
A-25ABC	2	N-TS	Tank to T1	3/4 in.	31 ft (9.5 m)	6	5 ft (1.5 m)	1
			T1 to Nozzle	3/4 in.	16 ft (4.9 m)	4	3 ft (0.9 m)	1
			Total Tank to Nozzle		47 ft (14.3 m)	10	20 ft (6.1 m)	4

Tankside Piping Limits A-25BC

Tank Size	Maximum Nozzle Quantity	Nozzle Type	Piping Section	Size	Length Maximum	Elbows Maximum	Length Minimum	Elbows Minimum
A-25BC	2	N-TS	Tank to T1	3/4 in.	28 ft (8.5 m)	6	5 ft (1.5 m)	1
			T1 to Nozzle	3/4 in.	25 ft (7.6 m)	4	3 ft (0.9 m)	1
			Total Tank to Nozzle		53 ft (16.2 m)	10	25 ft (7.6 m)	4

NOTE:

1. A-25ABC/BC must always use two (2) N-TS nozzles.
2. System piping must be balanced. Balanced piping is that in which the difference between the shortest actual pipe length from T1 to nozzle and the longest actual pipe length from T1 to nozzle does not exceed 10% of the longest actual pipe length from T1 to nozzle. The number and type of fittings from all last tee to nozzle sections must be equal.
3. A Main/Reserve Swing Check Valve, Part No. 417788, may be located between the tank and T1.

Design

SYSTEM TYPES (Continued)

Total Flooding: A supply of dry chemical agent is discharged into an enclosure surrounding the hazard by an arrangement of discharge nozzles. This type of system is used where there is a permanent enclosure surrounding the hazard that adequately enables the required concentration of agent to be built up. Typical applications include but are not limited to hazardous storage containers, computer rooms, generator rooms, and warehouses where sprinkler protection is unavailable. Total flooding systems require that an enclosure be present around the hazard area to allow the system to build up the proper concentration of agent within the hazard area. All total flooding systems utilize ABC (monoammonium phosphate-based) chemical only. ABC (monoammonium phosphate-based) chemical is utilized to suppress fires of "A" class combustible material (ordinary solid carbonaceous combustibles), "B" class combustible material (flammable liquids) and "C" class combustible material (electrical).

GUIDELINES

Where an enclosure is suitable for allowing total flooding protection depends on the unclosable opening percentage of the enclosure. Unclosable opening percentage is calculated as the area of the opening divided by the total surface area of the enclosure (area of the sides, top, and bottom of the enclosure.).

Total Flooding (0-5% Unclosable Opening)

Total flooding protection is qualified for use on hazards whose enclosure has up to 5% unclosable opening. For enclosures that have greater than 5% unclosable opening, screening is required.

NFPA 17, "Dry Chemical Extinguishing Systems," makes an exception to the one pound of dry chemical per square foot of opening size not exceeding 15% of the total volume surface area which reads "a system that is listed by a testing laboratory for or including protection of unclosable openings may be used in lieu of the above."

Total Flooding (Greater than 5% Unclosable Opening)

This system can utilize the N-OTF total flood nozzle(s) and the N-SCR screening nozzle(s). The design is approved to a maximum hazard height of 12 ft (3.6 m) with no maximum unclosable opening.

Tanks: The Models A-15ABC, A-25ABC, A-35ABC, A-50ABC, and A-70ABC tanks can be used for total flood greater than 5% unclosable opening.

Nozzles: Four nozzles are available:

Nozzle	Application
N-SCR	Screening the opening
N-OTF	Work Area (Overhead Position)
N-PLU	Plenum Area (Overhead Position)
N-DCT	Duct

Temperature Range: The operating temperature range is 32 °F to 120 °F (0 °C to 48 °C).

Local Application Tankside (Indoor Use Only)

Tanks: The Models A-25BC, A-25ABC,A-50BC, and A-50ABC can be used for tankside applications.

Nozzles: The Model N-TS nozzle is used for all tankside applications.

Temperature Range: The operating temperature range for the dry chemical tank assembly used for tankside applications is –20 °F to 120 °F (–28 °C to 48 °C).

Piping Requirements: When using the Model A-25BC or A-50BC systems, each nozzle protects a maximum of 36 ft^2 (3.3 m^2) with a maximum side dimension of 6 ft (1.8 m).

When using the Model A-25ABC or A-50ABC systems, each nozzle protects a maximum of 20.25 ft^2 (1.9 m^2) with a maximum side dimension of 4 ft 6 in. (1.4 m).

The Model N-TS nozzle must be mounted 3-8 in. (7.6-20.3 cm) above the liquid surface, at least 1 in. (2.5 cm) below the lip of the pan. See Figure 1.

Piping Requirements: Piping diagrams below include limitations on pipe length and fittings.

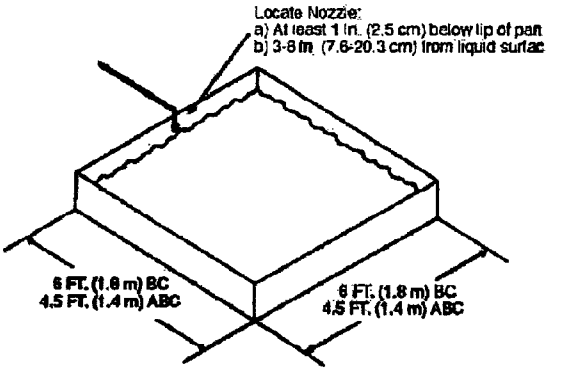


FIGURE 1
00303MAN

General Purpose: Total Flooding/Local Application

Design

GENERAL

ANSUL® Industrial Fire Suppression Systems may be used on a variety of hazards in many types of applications. The guidelines listed in this chapter deal with the limitations and parameters of various system configurations. It is the responsibility of the Certified installer to ensure that the proper system is being utilized, and that the system meets the limitations and parameters listed in this chapter. Before attempting to design any system it is necessary to attend a Factory Certification Training Class and become Certified to install ANSUL Industrial Fire Suppression Systems.

CHOOSING THE PROPER AGENT

It is necessary for the system designer to consider the combustible material found in the hazard area to ensure proper protection. The agent used in the system must be approved for the hazard class of the combustible material. The following are the hazard classes:

"A" Class: Ordinary solid carbonaceous combustibles. These include wood, paper, cloth, fiberglass, and plastics

"B" Class: Flammable liquids and gases. These include paints, solvents, gasoline, oils, and hydraulic fluids.

"C" Class: Electrical appliances. These include computers, power generators, and power transformers.

"D" Class: Combustible metals such as sodium, potassium, magnesium, titanium, and zirconium. The ANSUL Industrial Fire Suppression System is not intended to protect Class D hazards.

The following guidelines should be used for determining the proper agent:

ABC (monoammonium phosphate-based): for use with all "A," "B," and "C" Class hazards.

BC (sodium bicarbonate-based): for use with "B" and "C" Class hazards.

As per NFPA 17, pre-engineered dry chemical systems are not approved for deep-seated or burrowing fires (such as ordinary combustibles where the agent cannot reach the point of combustion), or on chemicals that contain their own oxygen supply (such as cellulose nitrate). Do not mix different types of agents, or agents from different manufacturers. Chemical reactions may occur when incompatible chemicals are mixed. **Keep in mind that the agent used for each system must be acceptable to the Authority Having Jurisdiction.**

CHOOSING THE PROPER TYPE OF SYSTEM

It is necessary for the system designer to consider the physical characteristics and layout of the hazard area to ensure proper protection. The hazard area must meet the criteria for a particular system for that system to be effective. The hazard area must be protected in accordance with NFPA 17 for proper protection. The following are lists of system types and the guidelines that are used to determine the proper type of system for that hazard:

SYSTEM TYPES

Local Application – Tankside: A supply of dry chemical agent is discharged directly onto a fire through an arrangement of discharge nozzles. This system is used for applying agent across a hazard area from the side of the area. Typical applications include but are not limited to dip tanks, quench tanks, and solvent tanks where overhead obstructions are present. Tankside applications require that the liquid tank have at least 4 in. of freeboard space above the liquid surface.

Tankside local application systems can utilize either BC (sodium bicarbonate-based) or ABC (monoammonium phosphate-based) suppression chemical.

BC (sodium bicarbonate-based) chemical is utilized to suppress fires of "B" class combustible material (flammable liquids). Class C protection only acceptable if total flooding.

ABC (monoammonium phosphate-based) chemical is utilized to suppress fires of "A" class combustible material (ordinary solid carbonaceous combustibles), "B" class combustible material (flammable liquids). Class C protection only acceptable if total flooding.

Local Application – Overhead – A supply of dry chemical agent is discharged directly onto a fire through an arrangement of discharge nozzles. This system is used for applying agent to an area from above the area. Typical applications include but are not limited to dip tanks, power generators, conveyors, belt driven machinery and transformers. The maximum nozzle height for overhead protection is 10.5 ft (3.2 m) for ABC coverage, and 11 ft (3.3 m) for BC coverage.

Overhead local application systems can utilize either BC (sodium bicarbonate-based) or ABC (monoammonium phosphate-based) suppression chemical.

BC (sodium bicarbonate-based) chemical is utilized to suppress fires of "B" class combustible material (flammable liquids).

ABC (monoammonium phosphate-based) chemical is utilized to suppress fires of "A" class combustible material (ordinary solid carbonaceous combustibles), "B" class combustible material (flammable liquids).

Components

NOTES:

Components

COMPONENT LIST – GENERAL PURPOSE: TOTAL FLOODING/LOCAL APPLICATION (Continued)

Model No.	Description	Part No.
Solenoid Monitor 24	24VDC Solenoid Monitor	435264
Solenoid Monitor 120	120VAC Solenoid Monitor	435263
TD-140	140 °F (60 °C) Thermal Detector	550351
TD-190	190 °F (87.8 °C) Thermal Detector	550352
TD-225	225 °F (107.2 °C) Thermal Detector	550353
TD-325	325 °F (162.8 °C) Thermal Detector	550354
TD-450	450 °F (232.2 °C) Thermal Detector	550355
TD-600	600 °F (315.6 °C) Thermal Detector	550356
EGVSO-75	3/4 in. Electric Gas Valve	550358
EGVSO-100	1 in. Electric Gas Valve	550359
EGVSO-125	1 1/4 in. Electric Gas Valve	550360
EGVSO-150	1 1/2 in. Electric Gas Valve	550361
EGVSO-200	2 in. Electric Gas Valve	550362
EGVSO-250	2 1/2 in. Electric Gas Valve	550363
EGVSO-300	3 in. Electric Gas Valve	550385
MS-SPDT	Micro-Switch – Single Pole Double Throw	551154
MS-DPDT	Micro-Switch – Double Pole Double Throw	551155
MS-3PDT	Micro-Switch – 3 Pole Double Throw	551156
MS-4PDT	Micro-Switch – 4 Pole Double Throw	551157
– – –	Alarm Initiating Switch	550077
PS-SPDT-XP	Pressure Switch – Single Pole Double Throw	550052
CO2-6	6 x CO_2 Cartridge	551059
CBP-1	Compression Bearing Corner Pulley	423250
SBP-1	Screw Bearing Corner Pulley	415670
WBP-10	Weather Proof Corner Pulley (10 Per Package)	550983
TP-1	Tee Pulley	550166
WC-100	Oval Sleeve Crimps (100 Per Package)	550122
– – –	Stop Sleeves (Pack of 10)	24919
– – –	Valve – Piston O-Ring	550636
– – –	Valve – Stem Washer	550284
– – –	Valve – Seat Washer	550021
– – –	Valve – Stem Head	550020
– – –	Valve – Body O-Ring	550029
– – –	Valve – Pressure Gauge	550025
– – –	Valve – Stem	550806
– – –	Valve – Stem O-Ring	550028
– – –	Valve – Conical Spring	550022
– – –	Valve – Piston	550805
FR-25sBC	Flow Restrictor	550235
– – –	Pressure Bleed Down Adaptor Assembly	551736
– – –	Dry Valve Rebuilding Kit	550037
– – –	Recharge Adaptor Kit (Dry)	550130
– – –	Dry Valve Hydrotest Kit	552182

Components

COMPONENT LIST – GENERAL PURPOSE: TOTAL FLOODING/LOCAL APPLICATION

Model No.	Description	Part No.
A-15ABC	15 lb (6.8 kg) ABC Tank and Valve Assembly	435031
A-17ABC	17 lb (7.7 kg) ABC Tank and Valve Assembly	435028
A-25BC	25 lb (11.3 kg) BC Tank and Valve Assembly	435033
A-25ABC	25 lb (11.3 kg) ABC Tank and Valve Assembly	435032
A-35ABC	35 lb (15.9 kg) ABC Tank and Valve Assembly	435029
A-50BC	50 lb (22.7 kg) BC Tank and Valve Assembly	435035
A-50ABC	50 lb (22.7 kg) ABC Tank and Valve Assembly	435034
A-70ABC	70 lb (31.8 kg) ABC Tank and Valve Assembly	435030
RC-50ABC	50 lb (22.7 kg) Pail ABC Dry Chemical	435245
PAC-10	Pneumatic Actuating Tank	435267
PAC-200	Pneumatic Actuating Tank	435270
MB-P2	Control Head Mounting Bracket	550853
MB-15	Mounting Bracket (A-15,17,25 Tanks)	550054
MB-1	Mounting Bracket (A-35,70 Tanks)	550053
MB-U8	8 in. (20.3 cm) Unistrut Mounting Bracket	550324
MB-U10	10 in. (25.4 cm) Unistrut Mounting Bracket	550383
MB-U12	12 in. (30.5 cm) Unistrut Mounting Bracket	550638
MCH3	Mechanical Control Head	435016
NMCH3	Mechanical Control Head	435015
ECH3-24	24VDC Electrical Control Head	435017
ECH3-120	120VDC Electrical Control Head	435018
– – –	8 in. (20.3 cm) S.S. Actuation Hose	417582
– – –	16 in. (40.6 cm) S.S. Actuation Hose	31809
– – –	24 in. (60.9 cm) S.S. Actuation Hose	32336
– – –	42 in. (106.7 cm) S.S. Actuation Hose	430815
– – –	Male Elbow	31810
– – –	Male Tee	31811
– – –	Male Straight Connector	32338
PDA-D2	Pneumatic Actuating Adaptor	550829
– – –	Swing Check Valve	417788
NF-ABC	Nozzle Assembly	551678
N-LA-ABC	Nozzle Assembly	550646
N-LA-BC	Nozzle Assembly	550342
N-TS	Nozzle Assembly	550337
RPS-M	Remote Mechanical Pull Station	435257
RPS-E2	Remote Electric Pull Station	551166
FKL-1	10 in. (25.4 cm) Fusible Link Bracket	550131
FKL-1A	8 in. (20.3 cm) Fusible Link Bracket	550132
FLH-25	Fusible Link Hanger (25)	550876
FL-165	165 °F (73.9 °C) Fusible Link	550368
FL-212	212 °F (100 °C) Fusible Link	550365
FL-280	280 °F (137.8 °C) Fusible Link	550366
FL-360	360 °F (182.2 °C) Fusible Link	550009
FL-450	450 °F (232.2 °C) Fusible Link	550367
FL-500	500 °F (260 °C) Fusible Link	56816

Components

STAINLESS STEEL ACTUATION HOSE

The Stainless Steel Actuation Hose is used to connect the actuation line compression tees and can also be connected end to end. The hose has the same thread, 7/16-20, as the fittings. See Figure 27.

Hose Part No.	Length
417582	8 in. (20 cm)
31809	16 in. (41 cm)
32336	24 in. (61 cm)
430815	42 in. (107 cm)

Fitting Part No.	Description
31810	Male Elbow (7/16-20 x 1/4 in. NPT)
31811	Male Tee (7/16-20 x 7/16-20 x 1/4 in. NPT)
32338	Male Straight Connector (7/16-20 x 1/4 in. NPT)

FIGURE 27
000433

PRESSURE SWITCHES

Model PS-SPDT-XP

The Model PS-SPDT-XP is an explosion proof (NEMA 4; 7; 9) electrical pressure switch which can be field mounted in the discharge piping as shown in Figure 28. The switch is UL Listed (CCN: NOWT) and must be installed in accordance with the instructions contained with the switch and this manual. The switch provides one set of NO/NC dry contacts. It is intended for use with electric power shut-off devices (dealer supplied), electric gas valves, alarms, bells, lights, contactors, and other electrical devices designed to shut off or turn on upon system actuation. It is rated for 15 amps @ 125/250 VAC.

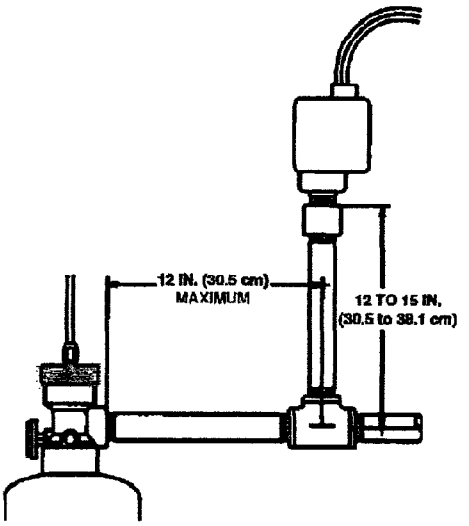


FIGURE 28
003025FC

PRESSURE BLEED DOWN ADAPTOR ASSEMBLY

The Pressure Bleed Down Adaptor Assembly, Part No. 551736, is required to open the valve stem on the tank when bleeding the tank down for six-year maintenance. See Figure 29.

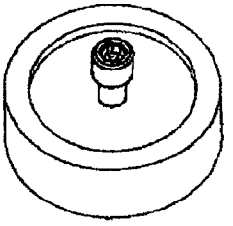


FIGURE 29
004265

FLOW RESTRICTOR

A Model FR-25sBC flow restrictor is required to be placed directly before each Model N-LA-BC nozzle when used with the A-25BC system for local overhead applications at any of the allowable nozzle heights. See Figure 30.

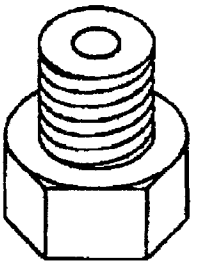


FIGURE 30
002952FC

Components

ELECTRICAL SWITCHES

The electrical switches are intended for use with electric gas valves, alarms, contactors, lights, contractor supplied electric power shut-off devices and other electrical devices that are designed to shut off or turn on when the system is actuated.

Switches are available in kits: One Switch Kit, Part No. 551154; Two Switch Kit, Part No. 551155; Three Switch Kit, Part No. 551156, and Four Switch Kit, Part No. 551157. Mounting hardware and 12 in. wire assemblies are provided with each kit. Each switch has a set of single-pole, double-throw contacts rated:

UL/cUL/CSA Rating	ENEC Rating
250 VAC, 21A Resistive	IE4T105μ Approved
250 VAC, 2 HP	250V, 21A Resistive
125 VAC, 1 HP	8A Motor Load

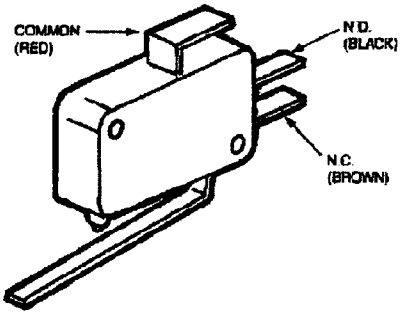


FIGURE 24

The Alarm Initiating Switch Kit, Part No. 550077, can be field mounted within the control head. This switch must be used to close a supervised alarm circuit to the building main fire alarm panel when the control head actuates. This action will signal the fire alarm panel that there was a system actuation in the hazard area. The switch kit contains all necessary mounting components along with a mounting instruction sheet. The switch is rated 50 mA, 28 VDC.

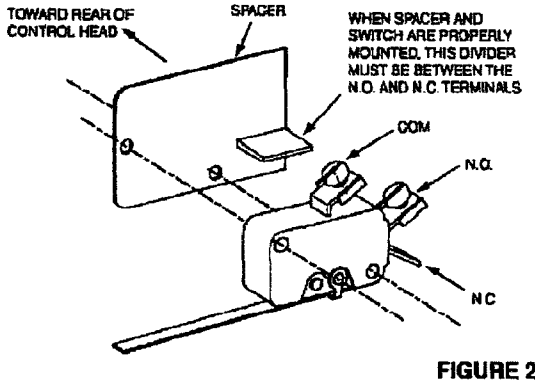


FIGURE 25

See NFPA 72, "National Fire Alarm Code," Initiating Devices section, for the correct method of wiring connection to the fire alarm panel.

SOLENOID MONITOR 120/24

The Solenoid Monitor 120/24 is used in conjunction with the Model ECH3 control head to supervise the actuation and detection circuits. In the event of a problem in the circuit, a light on the monitor goes out. The Solenoid Monitor 120 is used with the Model ECH3-120 control head. The Solenoid Monitor 24 is used with the Model ECH3-24 control head. Two sets of NO/NC dry contacts are provided. The unit mounts directly to a three gang wall outlet box. The Solenoid Monitor 120 acts as a reset relay when used with an electric gas valve. Electric gas valve wiring instructions are provided in the installation section of this manual. See Figure 26.

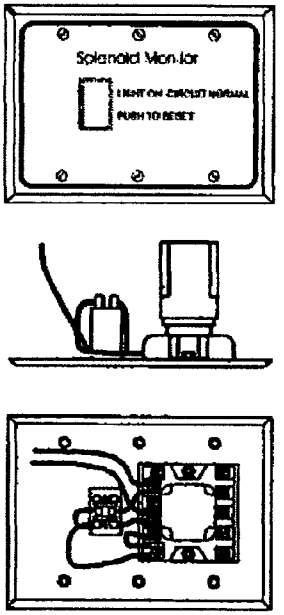


FIGURE 26

PIPE AND FITTINGS

Pipe and fittings must be furnished by the installer. Schedule 40 black, galvanized, chrome plated, or stainless steel pipe must be used. Standard weight malleable, galvanized, chrome plated, or stainless steel fittings must also be used.

Components

CORNER PULLEYS

Model SBP-1

A corner pulley is used whenever a change in stainless steel cable direction is required. The Model SBP-1 corner pulley is equipped with a set screw fitting for connection to 1/2 in. EMT. See Figure 19.

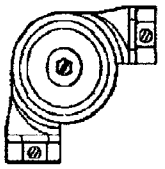


FIGURE 19
000189

MODEL CBP-1

A corner pulley is used whenever a change in stainless cable direction is required. The Model CBP-1 is a grease-tight corner pulley designed for areas likely to experience excessive deposit build-up. It is equipped with a compression fitting for connection to 1/2 in. EMT. See Figure 20.

Note: The Model CBP-1 is not a liquid tight sealing device.

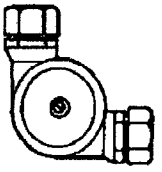


FIGURE 20
000191

Model WBP-1

A corner pulley is used whenever a change in stainless cable direction is required. The Model WBP-1 is a liquid-tight corner pulley designed for areas likely to experience excessive moisture build-up. It is equipped with a female pipe thread for connection to 1/2 in. rigid conduit. See Figure 21.

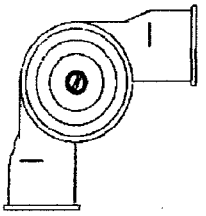


FIGURE 21
066194PC

TEE PULLEY

The Model TP-1 tee pulley is used to connect two remote mechanical pull stations to a single control head. The tee pulley replaces two standard 90° corner pulleys. See Figure 22.

⚠ CAUTION

The Tee Pulley must never be used to connect multiple fusible link lines to a single control head.

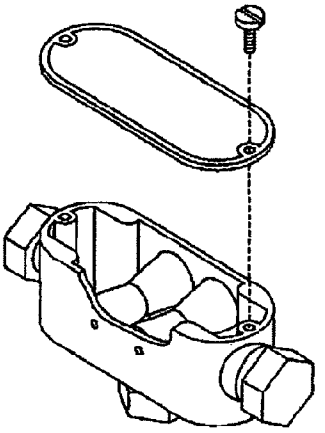


FIGURE 22
032657PC

SWING CHECK VALVE

The Swing Check Valve, Part No. 417788, is required when piping a main and reserve Monarch tank on the same distribution piping. It allows the dry chemical agent to discharge through the agent piping leading to the discharge nozzles, while preventing it from flowing into the piping from the other tank. The swing check valve body is constructed of brass with a 1 in. NPT female thread. See Figure 23.

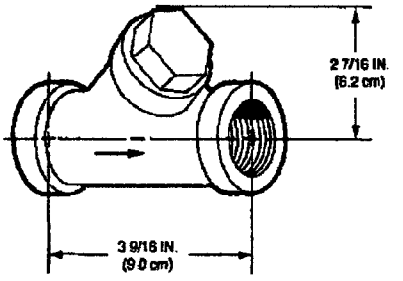


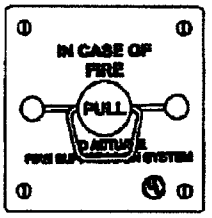
FIGURE 23
000430

Components

REMOTE MECHANICAL PULL STATION

Model RPS-M

Remote manual control for system releasing devices is provided by the Model RPS-M remote mechanical pull station. It is connected to the system releasing device by stainless steel cable. This cable is enclosed in 1/2 in. EMT with corner pulleys at each change in direction. The remote mechanical pull station shall be located at the point of egress from the hazard area. See Figure 16.



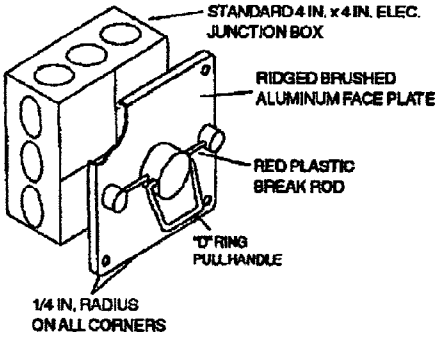
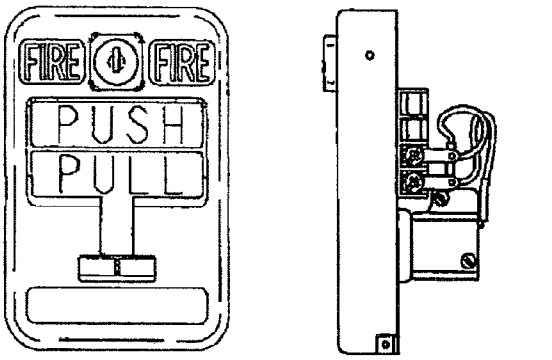


FIGURE 16
002652PC

Model RPS-E2

Remote manual actuation for the Model ECH control head is provided by the Model RPS-E2 remote electric pull station. Installation instructions are provided in the installation section of this manual. The remote electric pull station shall be located at the point of egress.



FRONT VIEW SIDE VIEW

FIGURE 17
008587PC

Electric Gas Shut-Off Valve

A gas shut-off valve is required on all systems used to protect a gas fueled appliance to stop gas flow in the event of system actuation. A UL Listed electric gas valve can be used with either the Model MCH3, NMCH3 or ECH3 control head. The valves are rated for natural and LP gas. Valves are available in 120 VAC. Electric gas valves are available in the following sizes:

Model No.	Valve Size	Maximum Operating Pressure
EGVSO-75	3/4 in.	50 psi (3.4 bar)
EGVSO-100	1 in.	25 psi (1.7 bar)
EGVSO-125	1-1/4 in.	25 psi (1.7 bar)
EGVSO-150	1-1/2 in.	25 psi (1.7 bar)
EGVSO-200	2 in.	25 psi (1.7 bar)
EGVSO-250	2-1/2 in.	25 psi (1.7 bar)
EGVSO-300	3 in.	25 psi (1.7 bar)

Note: A UL Listed manual reset relay is required when using an electric gas valve. The ANSUL Model SM-120 solenoid monitor may be used for this purpose.

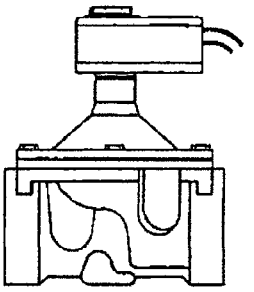


FIGURE 18
005544PC

DETECTION EQUIPMENT (Continued)

Model FLK-1A

The Model FLK-1A fusible link kit includes an 8 in. (20.3 cm) steel bracket, two (2) 1/2 in. EMT connectors, two (2) cable crimps, and two (2) "S" hooks. Fusible links must be ordered separately.

Model FLH-1

The Model FLH-1 fusible link hanger is an accessory designed to simplify the installation of fusible links in the fusible link line. It can be used with the Model FLK-1/1A fusible link kits (kits must be ordered separately). The Fusible Link Hanger makes it possible to install fusible links without cutting and crimping loops in the fusible link line for each link. They are available in packages of 25 (FLH-25) only. See Figure 13.

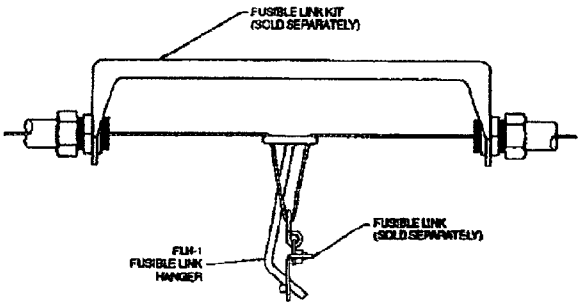


FIGURE 13
002630PC

Fusible Links

The fusible link is designed to separate at a specific temperature, releasing tension from the fusible link line, causing system actuation. See Figure 14.

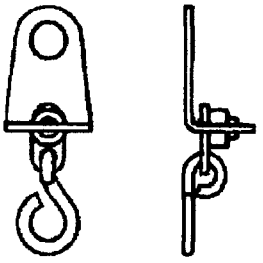


FIGURE 14
002631PC

After determining the maximum ambient temperature at the fusible link location, select the correct fusible link according to the temperature condition chart below:

Fusible Link Model No.	Maximum Ambient Temperature
FL-165	100 °F (38 °C)
FL-212	150 °F (66 °C)
FL-280	225 °F (107 °C)
FL-360	290 °F (143 °C)
FL-450	360 °F (182 °C)
FL-500	400 °F (204 °C)

Thermal Detectors

Rate compensated temperature thermal detectors are normally open, mechanical contact closure switches designed to operate at a factory preset temperature. They are available in six preset temperatures which meet NFPA standards and are UL Listed and FM Approved.

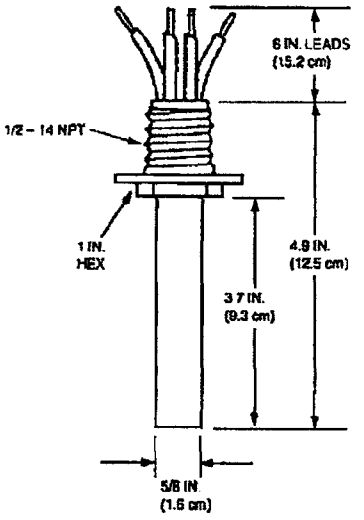


FIGURE 15
007454

After determining the maximum ambient temperature at the thermal detector location, select the correct thermal detector according to the temperature condition chart below:

Thermal Detector Model No.	Maximum Ambient Temperature
TD-140	100 °F (38 °C)
TD-190	150 °F (66 °C)
TD-225	185 °F (85 °C)
TD-325	285 °F (141 °C)
TD-450	410 °F (210 °C)
TD-600	560 °F (293 °C)

Components

MODEL PDA-D2 PNEUMATIC ACTUATING ADAPTOR

The Model PDA-D2 Pneumatic Actuating Adaptor is used to open the tank valve when the system is actuated. It must be installed on the valve of each tank unless a control head has been mounted on the tank valve. See Figure 9.

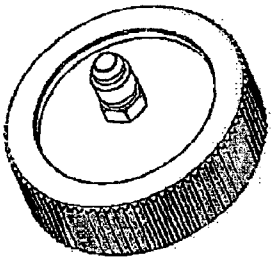


FIGURE 9
005882PC

PNEUMATIC ACTUATING TANKS

Model PAC-10

The Model PAC-10 is a pneumatic actuating tank that can actuate a maximum of ten (10) agent tanks simultaneously. The Model PAC-10 includes a DOT 4BA350 tank pressurized with dry nitrogen to 350 psi (24.1 bar) @ 70 °F (21.1 °C), a brass valve with pressure gauge, and a wall mounting bracket. A Model MCH3, NMCH3 or ECH3 control head must be purchased separately and connected to the PAC-10 to open the valve. See Figure 10.

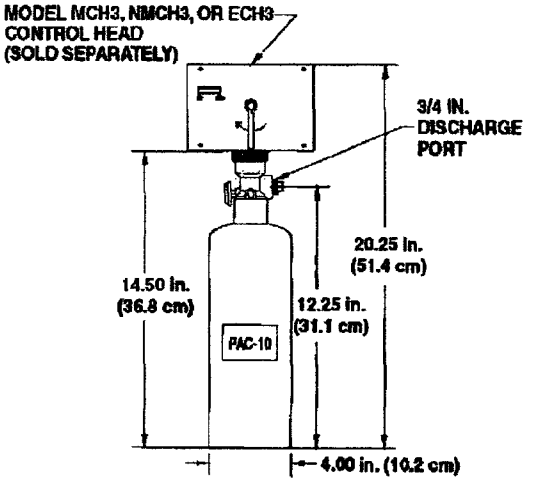


FIGURE 10
002847PC

Model PAC-200

The Model PAC-200 is a pneumatic actuating tank that can actuate a maximum of twenty (20) agent tanks simultaneously. The Model PAC-200 includes a DOT 4BA350 tank pressurized with dry nitrogen to 350 psi (24.1 bar) @ 70 °F (21.1 °C), a brass valve with pressure gauge, and a wall mounting bracket. A Model MCH3, NMCH3 or ECH3 control head must be purchased separately and connected to the PAC-200 to open the valve. See Figure 11.

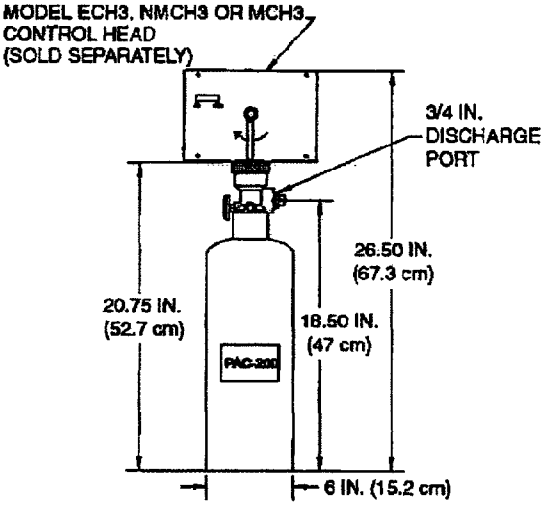


FIGURE 11
002848PC

DETECTION EQUIPMENT

Model FLK-1

The Model FLK-1 fusible link kit includes a 10 in. (25.4 cm) steel bracket, two (2) 1/2 in. EMT connectors, two (2) cable crimps, and two (2) "S" hooks. Fusible links must be ordered separately. See Figure 12.

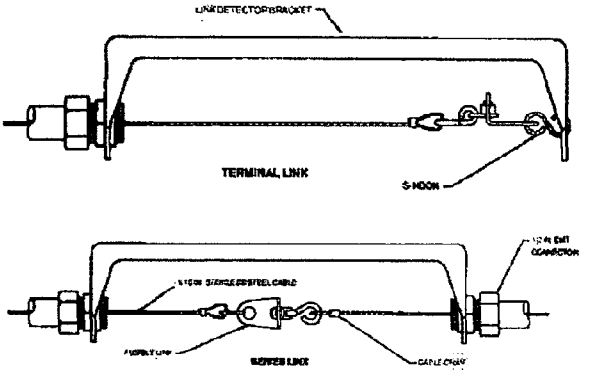


FIGURE 12
002849PC

Components

MODEL MCH3 – MECHANICAL CONTROL HEAD

The Model MCH3 mechanical control head is a fully mechanical control head which can be connected to the A-15/17/25/35/50/70 tank valve. This control head will support a fusible link detection system, a remote mechanical pull station (Model RPS-M), and an electric gas shut-off valve. A micro switch (Model MS-SPDT, MS-DPDT, MS-3PDT, or MS-4PDT) can be ordered separately and field installed. It is equipped with a local manual control handle that allows for mechanical system actuation. Operation of the local manual control requires removing the pull pin and rotating the handle clockwise. The Model MCH3 control head can actuate a maximum of five (5) tanks. See Figure 5.

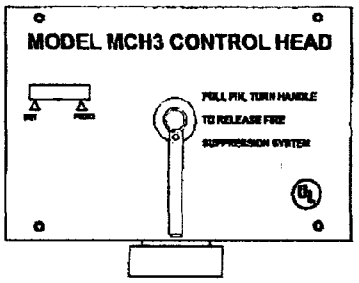


FIGURE 5
004760PC

MODEL ECH3 – ELECTRIC CONTROL HEAD

The Model ECH3 electric control head is an electrically operated control head which can be connected to the A-15/17/25/35/50/70 tank valve. This control head will support an electric thermal detection system, a remote mechanical pull station (Model RPS-M), and an electric gas shut-off valve. It will not support a fusible link detection system. A micro switch (Model MS-DPDT) is included. The Model ECH3 control head is available in both 120 VAC (Model ECH3-120) and 24 VDC (Model ECH3-24). It is equipped with a local manual control handle that allows for mechanical system actuation. Operation of the local manual control requires removing the pull pin and rotating the handle clockwise. The Model ECH3 control head can actuate a maximum of five (5) tanks. See Figure 6.

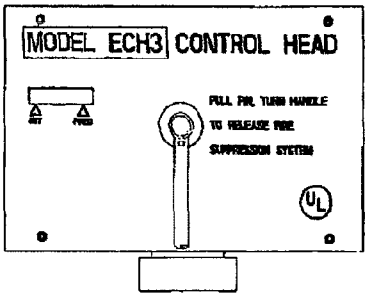


FIGURE 6
004769PC

MODEL NMCH3 – MECHANICAL CONTROL HEAD

The Model NMCH3 Mechanical Control Head is a fully mechanical control head which can be connected to the A-15/17/25/35/50/70 tank valve. This control head will support a fusible link detection system, a remote mechanical pull station (Model RPS-M), and an electric shut-off valve. A micro switch (Model MS-SPDT, MS-DPDT, MS-3PDT, or MS-4PDT) can be ordered separately and field installed. There is no local manual actuation for the Model NMCH3. The Model NMCH3 control head can actuate a maximum of five (5) tanks. See Figure 7.

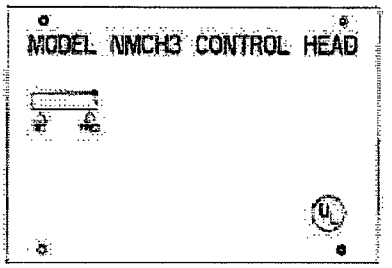


FIGURE 7
003845PC

MODEL MB-P2 – CONTROL HEAD MOUNTING BRACKET

The Model MB-P2 mounting bracket must be used to mount the Model MCH3, NMCH3 or ECH3 control head if the control head is not mounted directly on a tank valve. See Figure 8.

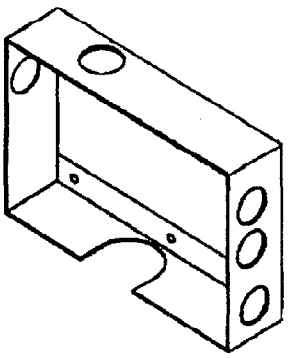


FIGURE 8
003846PC

CAUTION

Do not screw the control head directly to a wall as this will warp the control head, not allowing the mechanism to actuate.

Components

TANKS AND VALVE (Continued)

A-50ABC: This system is charged with 50 lb (22.7 kg) of monoammonium phosphate based dry chemical, ANSUL Part No. 435245. It is Listed for use in local overhead and local tankside applications. It is rated to protect Class "A," "B," and "C" hazards.

A-70ABC: This system is charged with 70 lb (31.8 kg) of monoammonium phosphate based dry chemical, ANSUL Part No. 435245. It is Listed for use in total flooding applications. It is rated to protect Class "A," "B," and "C" hazards.

The dimensions of the A-15/17/25/35/50/70 tank and valve assemblies are shown in Figure 1. The tank is manufactured, tested, and marked in accordance with DOT specification 4BW350.

The valve shown in Figure 2 is a pressure sealed, poppet type valve. It is used on the A-15/17/25/35/50/70, PAC-10, and PAC-200 tanks. The valve discharge port is 3/4 in. NPT.

NOZZLES

Nozzles have been developed for total flooding, local application overhead, and local application tankside. The Model NF-ABC nozzle is used for total flooding protection. The Model N-SCR nozzle is used for screening the opening. The Model N-OTF nozzle is used for overhead total flooding application in the work area. The Model N-PLU nozzle is used for overhead application in the plenum area. The Model N-DCT nozzle is used for exhaust duct protection. The Models N-LA-ABC and N-LA-BC nozzles are used for local overhead application. The Model N-TS nozzle is used for local tankside application. See Figure 3.

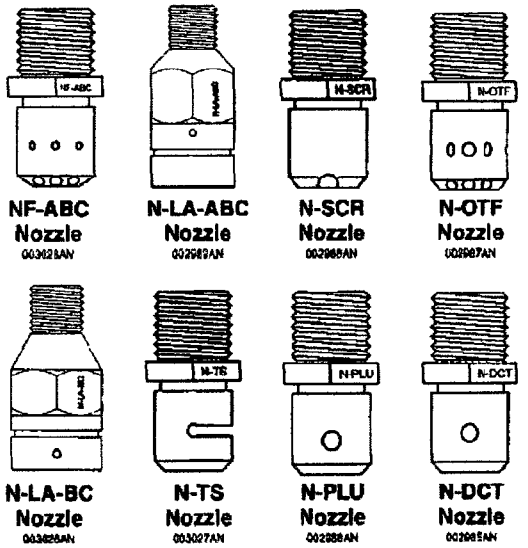


FIGURE 3

TANK BRACKETING

Vertical wall mounting for the A-15ABC, A-17ABC, and A-25BC/ABC, is provided by the Model MB-15 mounting bracket kit. Vertical wall mounting for the A-35ABC, A-50BC/ABC and A-70ABC is provided by the Model MB-1 mounting bracket kit. See Figure 4.

For vertical floor mounting of the A-15ABC, A-17ABC, A-25BC and A-25ABC, an 8 in. (20.3 cm) unistrut type mounting bracket is available, the Model MB-U8.

For vertical floor mounting of the A-35ABC, A-50BC, and A-50ABC, a 10 in. (25.4 cm) unistrut type mounting bracket is available, the Model MB-U10.

For vertical floor mounting of the A-70ABC, a 12 in. (30.5 cm) unistrut type mounting bracket is available, the Model MB-U12.

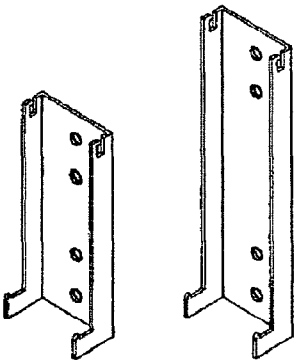


FIGURE 4

General Purpose: Total Flooding/Local Application

Components

TANKS AND VALVE

ANSUL® automatic dry chemical systems are supplied in 17 lb (7.7 kg), 25 lb (11.3 kg), 35 lb (15.9 kg), 50 lb (22.7 kg), and 70 lb (31.8 kg) capacity tanks. They are the Models A-15ABC, A-17ABC, A-25BC, A-25ABC, A-35ABC, A-50BC, A-50ABC, and A-70ABC. Each tank must be separately piped to its own nozzles. All models are charged with dry nitrogen to 350 psi (24.1 bar) @ 70 °F (21.1 °C). These systems are for indoor hazard protection only. The particular models are as follows:

A-15ABC: This system is charged with 12.5 lb (5.7 kg) of monoammonium phosphate-based dry chemical, ANSUL Part No. 435245. It is Listed for use in total flooding applications. It is rated to protect Class "A," "B," and "C" hazards.

A-17ABC: This system is charged with 17 lb (7.7 kg) of monoammonium phosphate based dry chemical, ANSUL Part No. 435245. It is Listed for use in total flooding applications. It is rated to protect Class "A," "B," and "C" hazards.

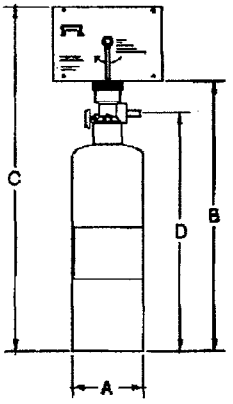
A-25BC: This system is charged with 25 lb (11.3 kg) of regular sodium bicarbonate based dry chemical, ANSUL Part No. 435245. It is Listed for use in local overhead and local tankside applications. It is rated to protect only Class "B" and "C" hazards.

A-25ABC: This system is charged with 25 lb (11.3 kg) of monoammonium phosphate based dry chemical, ANSUL Part No. 435245. It is Listed for use in local overhead and local tankside applications. It is rated to protect Class "A," "B," and "C" hazards.

PCI-35ABC: This system is charged with 35 lb (15.9 kg) of monoammonium phosphate based dry chemical, ANSUL Part No. 435245. It is Listed for use in total flooding applications. It is rated to protect Class "A," "B," and "C" hazards.

A-50BC: This system is charged with 50 lb (22.7 kg) of regular sodium bicarbonate based dry chemical, ANSUL Part No. 435245. It is Listed for use in local overhead and local tankside applications. It is rated to protect only Class "B" and "C" hazards.

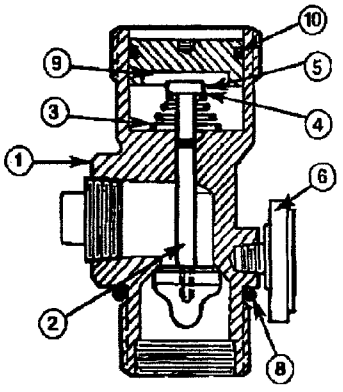
TANK AND VALVE ASSEMBLIES



MODEL NO.	A IN (cm)	B IN (cm)	C IN (cm)	D IN (kg)	LB (kg) WEIGHT	MOUNTING BRACKET USED
A-15ABC	6.00 (15.24)	21.44 (54.46)	27.19 (69.06)	18.69 (47.47)	30 (13.6)	MB-15
A-17ABC	8.00 (20.3)	24.81 (63.01)	30.56 (77.62)	22.06 (56.03)	50 (22.7)	MB-15
A-25ABC/BC	8.00 (20.3)	24.81 (63.01)	30.56 (77.62)	22.06 (56.03)	58 (26.3)	MB-15
A-35ABC	10.00 (25.4)	29.94 (76.05)	35.69 (90.65)	27.18 (69.04)	71 (32.2)	MB-1
A-50ABC/BC	10.00 (25.4)	29.94 (76.05)	35.69 (90.65)	27.18 (69.04)	86 (39.0)	MB-2
A-70ABC	12.00 (30.5)	35.31 (89.69)	41.06 (104.29)	32.56 (82.70)	130 (59.0)	MB-1

FIGURE 1
002841A2

VALVE CROSS SECTION



ITEM	PART NO.	DESCRIPTION
1	– – –	VALVE BODY
2	– – –	VALVE STEM & CAP ASSEMBLY
3	550022	CONICAL SPRING
4	550261	RETAINING WASHER
5	550024	E-RING
6	550025	PRESSURE GAUGE
7	550026	HIGH TEMPERATURE RELIEF PLUG
8	550029	VALVE BODY O-RING
9	550805	PISTON
10	550636	PISTON O-RING

FIGURE 2
002842PC

INTRODUCTION

ANSUL® automatic dry chemical fire suppression systems are of the pre-engineered type as defined by the NFPA Standard for Dry Chemical Extinguishing Systems, NFPA-17. The extinguishing units described in this manual are intended to be installed, inspected, and maintained in accordance with NFPA-17. Limitations detailed in this manual have been established through extensive testing by Underwriters Laboratories, Inc. Installation and maintenance of the system must conform to the limitations detailed in this manual and be performed by an Authorized ANSUL dealer.

The ANSUL Industrial Fire Suppression System utilizes a either a sodium bicarbonate based dry chemical agent (specifically designed to suppress liquid, gas or electrical fires) or a monoammonium phosphate based dry chemical agent (specifically designed to suppress carbonaceous solid, liquid, gas or electrical fires). The system provides mechanical or electrical automatic actuation and can be manually actuated through a remote mechanical pull station. Upon actuation, the system discharges a pre-determined amount of agent to the hazard area.

The shutdown of fuel and power to the hazard area is required upon system actuation. Exhaust fan(s) in the ventilation system must be shut off during system discharge to allow the proper concentration of agent to build up in the hazard area.

TEMPERATURE LIMITATIONS

The operating temperature ranges of the ANSUL System are:

Monoammonium Phosphate (ABC) Total Flooding Systems: –20 °F (–28 °C) minimum to 120 °F (49 °C) maximum.

Local Application – Overhead Systems: 32 °F (0 °C) minimum to 120 °F (49 °C) maximum.

Local Application – Tankside Systems: –20 °F (–28 °C) minimum to 120 °F (49 °C) maximum.

UL LISTING

The ANSUL Industrial Fire Suppression System has been tested to the UL Standard for Pre-Engineered Dry Chemical Extinguishing System Units, UL1254 (Revised Sept. 29, 1998), and Listed by Underwriters Laboratories, Inc.

Installation

FUSIBLE LINK DETECTOR INSTALLATION

Fusible links are always used in conjunction with the Model MCH3 Mechanical Control Head. After mounting the tank and control head, the fusible link line can be installed. The first step to installing the fusible link line is to install the detector bracket(s). These brackets must be installed in the plenum area, hazard area, and in each duct. See Chapter III for detector placement guidelines.

Note: Only ML-style Fusible Links can be used.

Fusible Link Installation Without Hangers

Begin installing links at the terminal bracket. The link is connected to the far side of the terminal bracket using an "S" hook. The "S" hook must be crimped closed after the link is installed. A tight loop is then made in the cable and secured by the crimp provided. This loop is connected to the other side of the terminal link (see Figure 7) and the cable fed through the conduit to the next bracket. The cable [illegible]

Installation

FUSIBLE LINK DETECTOR INSTALLATION (Continued)

Fusible Link Installation Without Hangers (Continued)

The fusible link line can now be put into a set position by applying tension to the fusible link line. This is accomplished by using a 1/2 in. hex wrench on the fusible link line ratchet wheel. The ratchet wheel will be ratcheted in a clockwise direction until the spring plate makes contact with the top of the control head box. The fusible link line is now in a set position. See Figure 9.

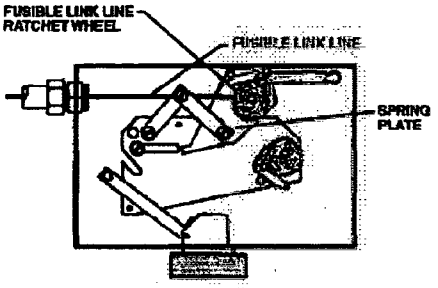


FIGURE 9
002876PC

Fusible Link Installation Using Model FLH-1 Fusible Link Hangers

Beginning at the control head, feed the stainless steel cable through the conduit and brackets to the terminal bracket in one continuous length. Allow approximately 2.5 in. (6.4 cm) of slack at each bracket for the installation of the Fusible Link Hangers. At the terminal link, a tight loop is made in the cable and secured by the crimp provided. The cable is attached to the far side of the terminal bracket using an "S" hook. The "S" hook must be crimped closed after the cable is installed. See Figure 10.

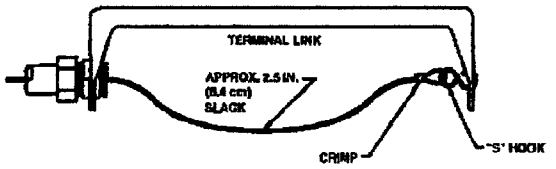


FIGURE 10
002877PC

Begin installing the Fusible Link Hangers at the terminal bracket and work toward the control head. Loop the cable through the oval opening in the hanger and hook the fusible link on the loop. See Figure 11.

Note: Only ML-style Fusible Links can be used

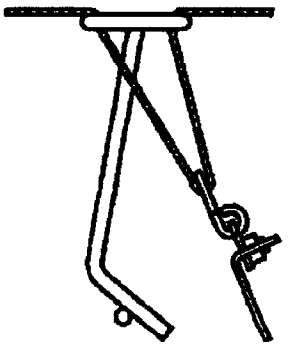


FIGURE 11
002878PC

Hook the bottom of the link onto the bottom leg of the hanger. See Figure 12.

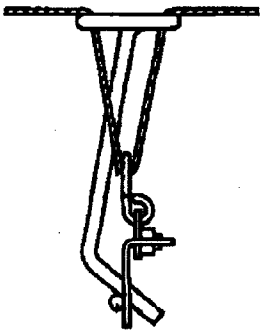


FIGURE 12
002879PC

Center the hanger/link in the fusible link bracket by sliding it along the link line. This is easily accomplished before any tension is applied to the link line. Repeat this procedure for all fusible links.

After the last hanger/link in the series is connected, the cable should be fed through the hole in the fusible link ratchet wheel. The line must then be crimped, and the crimp positioned inside the center of the ratchet wheel.

NOTE

Crimps must always be used in conjunction with two (2) cable lengths. Loops are the accepted method of connecting the cable to mechanical components. The crimp must never be used on a single cable. Exception: Single cable crimp allowed in detection and gas valve ratchet wheel using stop sleeve, Part No. 26317 (packages of 10: Part No. 24919).

Installation

FUSIBLE LINK DETECTOR INSTALLATION (Continued)

Fusible Link Installation Using Model FLH-1 Fusible Link Hangers (Continued)

The fusible link line can now be put into a set position by applying tension to the fusible link line. This is accomplished by using a 1/2 in. hex wrench on the fusible link line ratchet wheel. The ratchet wheel will be ratcheted in a clockwise direction until the spring plate makes contact with the top of the control head box. The fusible link line is now in a set position. See Figure 9. Check to ensure that the fusible link hanger(s) remain centered in the bracket after the fusible link line is set. See Figure 13.

THERMAL DETECTOR INSTALLATION

Thermal detectors are always used in conjunction with the Model ECH3 Electrical Control Head. After mounting the tank and control head, the thermal detector(s) can be installed. See Section III for detector placement guidelines. Follow the instructions included with the detector for proper detector mounting procedures.

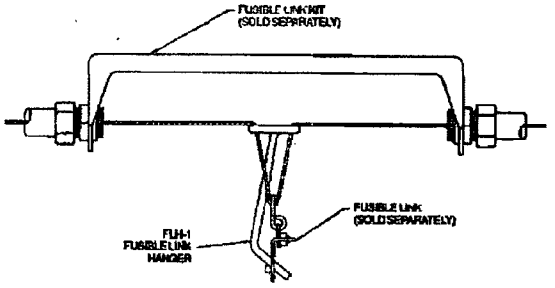


FIGURE 13
002650PC

SETTING THE CONTROL HEAD

Model MCH3/NMCH3 Mechanical Control Head

Once the fusible link line is set, the control head can be placed in the set position. To set the control head, the slide plate is moved from right to left, ensuring the bolt extending from the cam arm is in the slot provided in the slide plate. Continue moving the slide plate to the left until the latching arm is in the locked position. Insert the pull pin into the hole in the slide plate above the latching arm. This will lock the control head in the set position, eliminating accidental actuation during the rest of the installation procedure. See Figure 14.

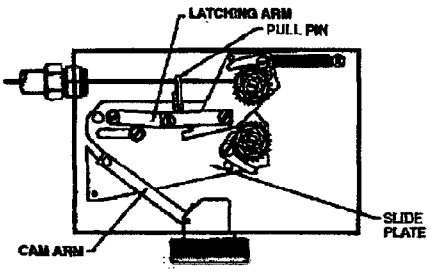


FIGURE 14
002660PC

Model ECH3 Electrical Control Head

Once the thermal detectors have been installed, the control head can be placed in the set position. To set the control head, the slide plate is moved from right to left, ensuring the bolt extending from the cam arm is in the slot provided in the slide plate. Continue moving the slide plate to the left until the latching arm is in the locked position. Insert the pull pin into the hole in the slide plate above the latching arm. This will lock the control head in the set position, eliminating accidental actuation during the rest of the installation procedure.

Once the Model ECH Electrical Control Head is in the set position, it can be connected to the detection/actuation circuit.

NOTE

No electrical connections shall be made inside the control head. All electrical wiring shall exit the control head through the knock-out on the side of the box. All electrical connections must be made in an approved electrical box.

Connect one of the black wires on the solenoid in the control head to the red wire of the Model MS-SPDT Micro Switch. The brown wire from the micro switch is then connected to one side of the first thermal detector in series. Connect the other side of the first thermal detector in series and the remaining black wire on the solenoid in the control head to the appropriate power source after installing the Model SM-24/120 Solenoid Monitor.

⚠ CAUTION

The solenoid must never be wired "hot" (not through the micro-switch). If wired this way, the non-field replaceable solenoid will be damaged and the complete control head will require replacement.

SETTING THE CONTROL HEAD (Continued)

Model ECH3 Electrical Control Head (Continued)

NOTE

A Solenoid Monitor 120/24 must always be used with an Electrical Control Head to supervise the actuation/detection circuit.

The Model ECH3-24 Electrical Control Head requires a UL Listed 24VDC power supply with a minimum 2A rating. The Model ECH3-120 Electrical Control Head requires a 1A, 120VAC power supply.

SOLENOID MONITOR INSTALLATION

Solenoid Monitor Installation In Detection Circuit

After installing the thermal detectors and the control head, the Solenoid Monitor 120/24 can be installed. The Solenoid Monitor is connected to the wires leading from the last thermal detector. It should be mounted in a location where it can be readily observed.

The Solenoid Monitor is an end-of-line device that supervises the actuation/detection circuit. It is comprised of a push-type switch with a built-in indicator light, a plug-type relay, a relay socket, and a cover plate. The light, when illuminated, indicates that the detection/actuation circuit is in the normal condition. The Solenoid Monitor also provides two sets of dry contacts. The Solenoid Monitor's cover plate is used to mount the Solenoid Monitor in a standard 6 in. x 4 in. x 3 in. deep electrical box (See Figure 15).

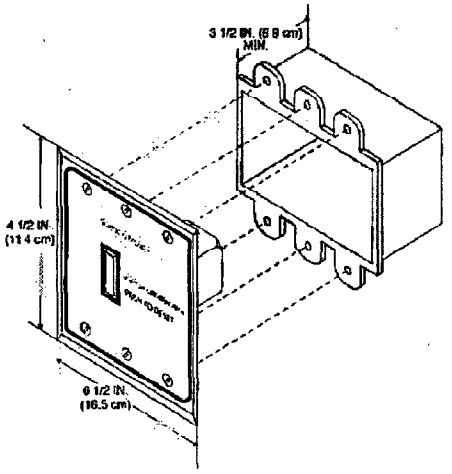


FIGURE 15

All wire for circuits using the Solenoid Monitor 24 shall be 18 gauge minimum, or as required by local code. All wire for circuits using the Solenoid Monitor 120 shall be 14 gauge minimum, or as required by local code. The basic wiring diagram for both Solenoid Monitors is shown in Figure 16.

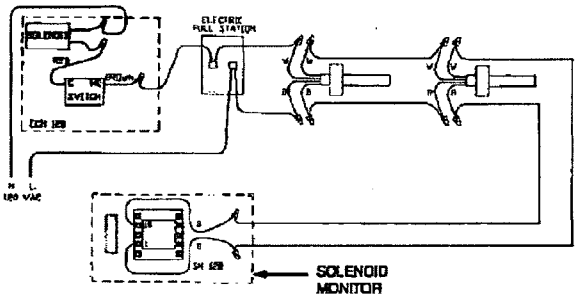


FIGURE 16

After the Solenoid Monitor has been installed, the detection/actuation circuit can be connected to the appropriate power source and energized. To energize the detector/actuation circuit, depress the switch on the Solenoid Monitor. The light will illuminate to indicate that the circuit is properly installed. If the light fails to illuminate, the wiring must be checked.

Solenoid Monitor When Used As A Reset Relay

The Model SM-24/120 can be used as a reset relay when required. A reset relay is required whenever an electrical gas shut-off valve is used in conjunction with the ANSUL Booth Industrial Fire Suppression System. For typical wiring connections, see Figure 17.

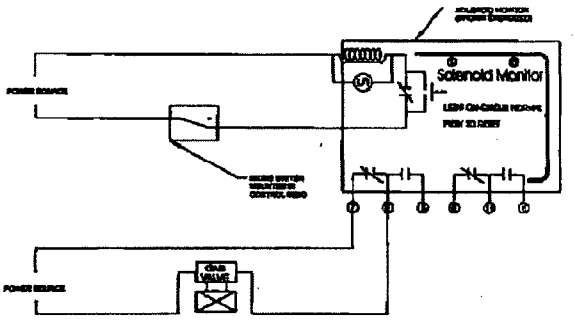


FIGURE 17

Installation

REMOTE PULL STATION INSTALLATION

Model RPS-M

The Model RPS-M Remote Mechanical Pull Station is used for remote mechanical actuation of the Model MCH3/ECH3/NMCH3 Control Head. It is to be located near an exit in the path of egress from the hazard area no more than 4 ft (1.2 m) above the floor.

NOTE

A Model RPS-M Remote Mechanical Pull Station must be used for manual actuation of a Model NMCH3 Releasing Device.

The Pull Station can be surface mounted or recessed. It is connected to the control head using 1/16 in. diameter stainless steel cable. The cable enters the pull station box from the bottom, top, either side, or back. The cable enters the control head through the top-center knockout. The cable must be enclosed in 1/2 in. conduit with an ANSUL corner pulley at each change in conduit direction. Maximum limitations for the Model RPS-M Remote Mechanical Pull Station are as follows:

Model RPS-M Cable Run Limitations When Used With Model MCH3, ECH3, and NMCH3 Control Heads and Part No. 415670 and 423250 Pulley Elbows

Maximum length of cable: 150 ft (45.7 m)

Maximum # of pulleys: 40

After mounting the pull station box and conduit, feed the stainless steel cable from the control head, through the conduit, and into the pull station box. Insert the bushing into the pull station's cover plate and secure it with the locknut provided. Feed the cable through the bushing and into the pull handle ensuring that the cable fully crosses the set screw hole. Fasten the cable to the pull handle with the set screw (see Figure 18).

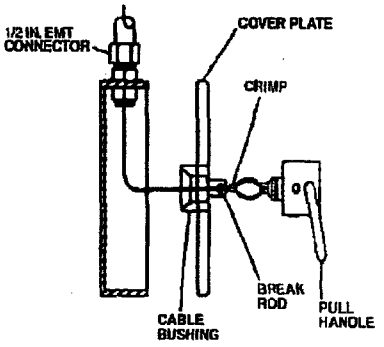


FIGURE 18

NOTE

Crimps must always be used in conjunction with two (2) cable lengths. Loops are the accepted method of connecting the cable to mechanical components. **The crimp must never be used on a single cable.** Exception: Single cable crimp allowed in detection and gas valve ratchet wheel using stop sleeve, Part No. 26317 (packages of 10: Part No. 24919).

Cut and thread the cable through the hole in the latching arm of the control head and pull the cable tight. Crimp the cable 6 in. (15.2 cm) below the latching arm.

Pull the pull handle until the crimp touches the latching arm. Coil the excess cable in the pull box and attach the cover plate with the four screws provided. Insert the pull handle into the cover plate and insert the pull pin through the bushing and the pull handle. Secure the pull pin with the nylon tie provided. See Figure 19.

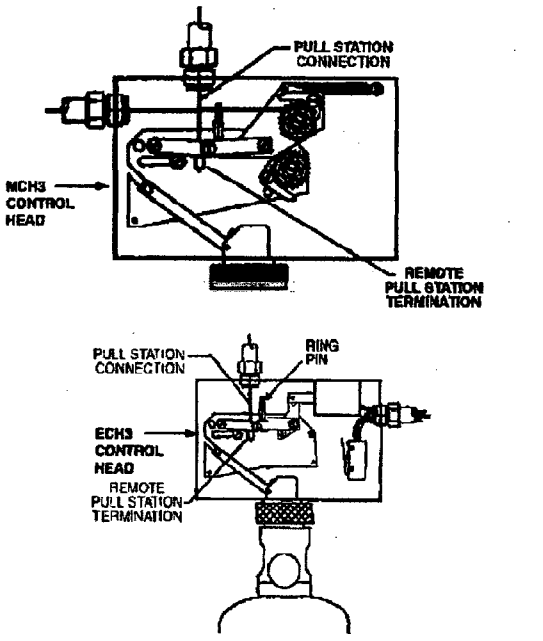


FIGURE 19

Installation

REMOTE PULL STATION INSTALLATION (Continued)

Model RPS-E2

The Model RPS-E2 remote electrical pull station is used for remote actuation of the Model ECH3 Control Head. It is to be located near an exit in the path of egress from the hazard area no more than 4 ft (1.2 m) above the floor. The Model RPS-E2 is installed in the detection/actuation circuit and wired in accordance with the instructions included. See Figure 16 for typical circuit wiring.

ELECTRICAL GAS SHUT-OFF VALVE INSTALLATION

The Model MCH3/ECH3/NMCH3 Control Head is used to operate the electrical gas shut-off valve. This valve is located in the fuel gas supply line. The valve body has an arrow which indicates direction of gas flow through the valve. A reset relay must always be used with an electrical gas shut-off valve. For proper wiring of the electrical gas shut-off valve, see Figure 17.

TEE PULLEY INSTALLATION

The Model TP-1 Tee Pulley is used to connect two (2) remote mechanical pull stations to a single control head. The cable proceeding from the control head must always enter the branch of the tee pulley. See Figure 20.

⚠ CAUTION

The tee pulley must never be used to connect multiple fusible link lines to a single control head.

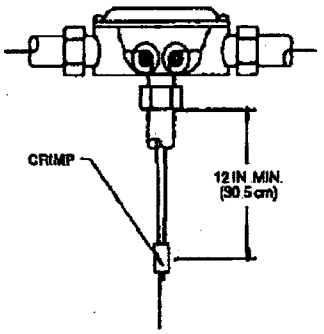


FIGURE 20
002668PC

MICRO SWITCH INSTALLATION

See NFPA 72, "National Fire Alarm Code," Initiating Devices section, for the correct method of wiring connection to the fire alarm panel.

The Model MS-SPDT, MS-DPDT, MS-3PDT, or MS-4PDT Micro Switch is available for use where an electrical output is required. These switches can be field installed in the control head. See Figure 21 and Figure 22 and refer to Instruction Sheet, Part No. 551159, included with switch shipping assembly, for detailed mounting instructions.

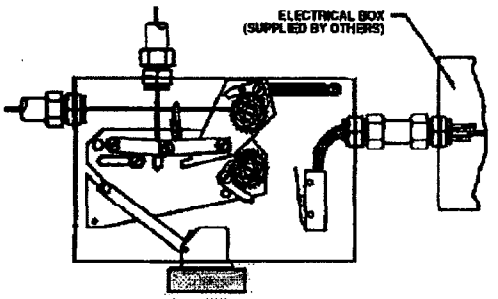


FIGURE 21
002669PC

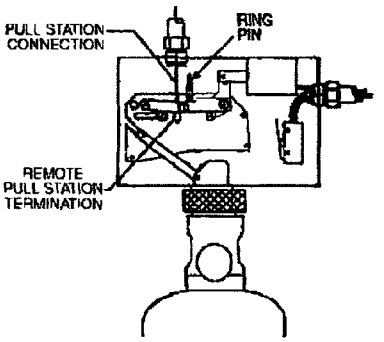


FIGURE 22
003847PC

NOTE

The Model ECH3 Control Head is supplied with a Model MS-DPDT Micro Switch. This switch can be used in the actuation/detection circuit and for electrical output.

Installation

MICRO SWITCH INSTALLATION (Continued)

These switches may be used to provide an electrical signal to the main breaker and/or operate electrical accessories provided the rating of the switch is not exceeded. Wiring connections are shown in Figure 23. The contact ratings for the switches are as follows:

Contact Ratings For Micro Switches

21 amps, 1 HP, 125, 250, 277 VAC or 2 HP, 250, 277 VAC

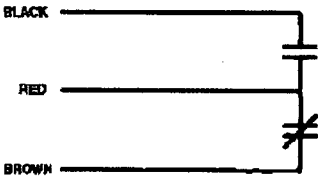


FIGURE 23

The Alarm Initiating Switch, Part No. 550077, must be used to close a supervised alarm circuit to the building main fire alarm panel when the control head actuates. This will signal the fire alarm panel that there was a system actuation in the hazard area. This switch can be field installed in the control head. Refer to Instruction Sheet, Part No. 550081, included with the switch shipping assembly, for detailed mounting instructions. Wiring connections are shown in Figure 24. The switch is rated at 50mA, 28VDC.

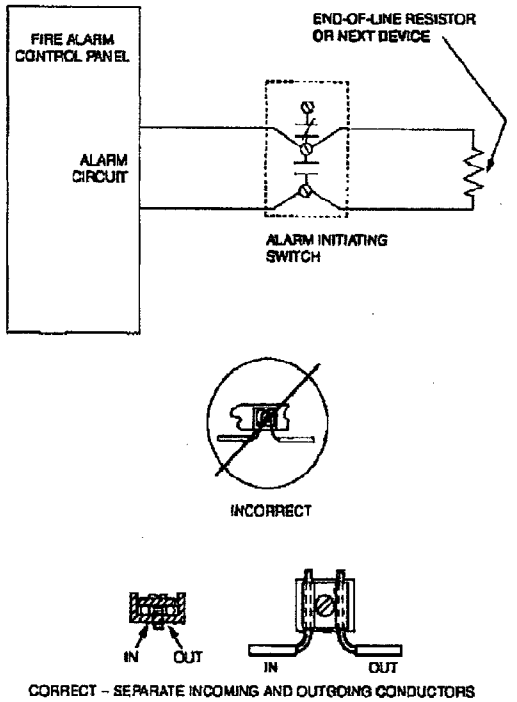


FIGURE 24

PIPE AND NOZZLE INSTALLATION

General Piping Requirements

1. Use Schedule 40 black iron (if used in a relatively non-corrosive atmosphere), galvanized, chrome-plated, or stainless steel pipe conforming to ASTM A120, A53, or A106. Fittings must be a minimum of 150 lb Class. However, the A 35, 50, and 70 lb tanks must have a minimum of two (2) nozzles per tank to utilize the 150 lb Class fittings. If the A 35, 50, or 70 lb tank has one (1) nozzle, then a 300 lb Class fitting must be used. The remaining Monarch tanks have no limitations for the 150 lb Class fittings. Distribution pipe sizes are 3/4 in. or 1 in. depending on number of nozzles.
2. Pipe unions are acceptable.
3. Use reducing tees for all pipe splits.
4. Reducing bushings are not acceptable.
5. Cast iron pipe and fittings are not acceptable.
6. **Pipe thread sealant or pipe joint compound is not allowed for distribution piping.**
7. Bell Reducer or any non-restrictive fittings are allowed.
8. Before assembling the pipe and fittings, make certain all ends are carefully reamed and blown clear of chips and scale. Inside of pipe and fittings must be free of oil and dirt.
9. If Teflon tape is used on threaded ends, start at the second male thread and wrap the tape clockwise around the threads, away from the pipe opening.
10. All system piping must comply with Section A-5-9.1 of NFPA-17.

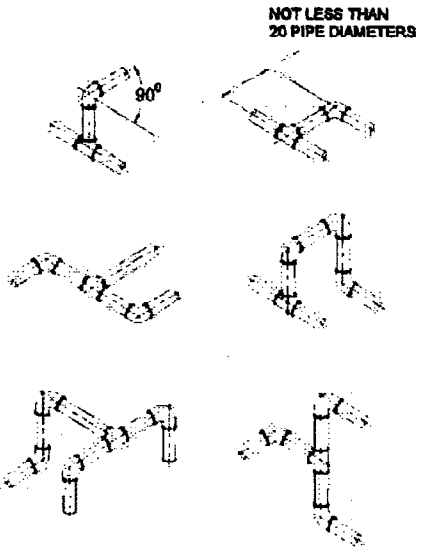


FIGURE 25

PIPE AND NOZZLE INSTALLATION (Continued)

General Piping Requirements (Continued)

> **⚠ CAUTION**
>
> Do not apply Teflon tape to cover or overlap the pipe opening, as the pipe and nozzles could become blocked and prevent the proper flow of agent.

TEE POSITIONING

In order to obtain equal distribution at a tee, the dry chemical must enter the side port of the tee and exit through the two end ports. See Figure 26.

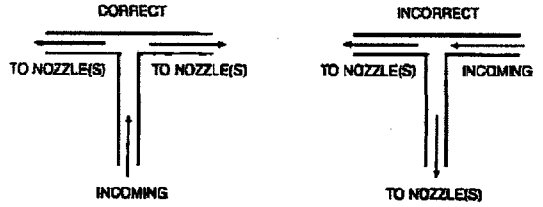


FIGURE 26

Hanger/Support Installation

The hanger/supports must be installed in conjunction with the pipe and fittings. The spacing requirements for hangers/supports depend on the pipe size being utilized; refer to the Spacing Guidelines Chart.

PIPE HANGER SPACING GUIDELINES CHART

Distribution Pipe Size	Maximum Spacing Distance Hanger to Hanger	
in.	ft	m
1/4	4	(1.2)
1/2	6	(1.8)
3/4	8	(2.4)
1	12	(3.6)

Other factors that influence hanger/support spacing are:

Hanger/Support must be placed within 1 ft (0.3 m) of the discharge nozzle.

Hanger/Support must be placed between elbows when distance is greater than 2 ft (0.6 m).

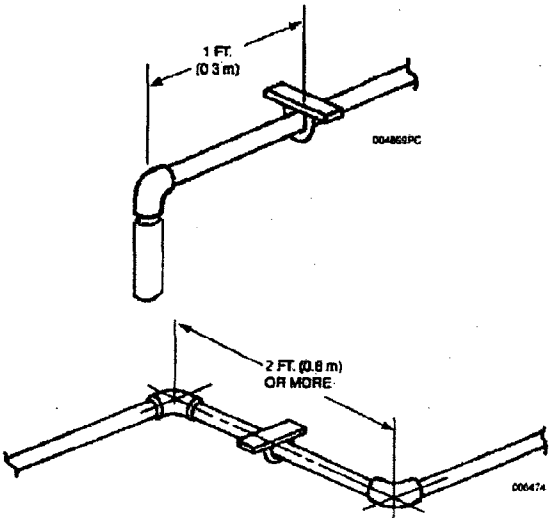


FIGURE 27

MAIN/RESERVE SYSTEM

When a reserve system is being utilized, two 1 in. swing check valves, Part No. 417788, must be installed in the distribution piping network. They should be positioned as close as possible to the "Y" fitting joining the piping from the main and reserve tanks to one common supply pipe. See Figure 28. **Note:** Make certain to install swing check valves in the direction of dry chemical flow as shown with an arrow stamped on the valve body.

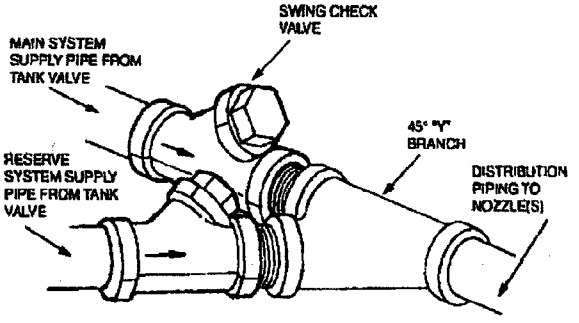


FIGURE 28

Installation

PRESSURE SWITCH INSTALLATION

The Model PS-SPDT-X Pressure Switch is available for use when an electrical output is required. It must be installed in the discharge piping within 12 in. (30.5 cm) of the valve discharge port as shown in Figure 29. An inline tee is used for the installation. The switch is isolated from the chemical by a 12 in. to 15 in. (30.5 to 38.1 cm) column of air in the form of a vertical pipe nipple. The switch is then mounted at the top of this nipple.

NOTE

Piping for pressure switch must be included in total tank to T1 piping limitations. The fitting used to connect the pressure switch to the distribution piping counts as one (1) elbow in that section.

As an alternate, the switch may be connected directly to the copper tubing of a remotely mounted control head or a PAC tank. The PS-SPDT-X counts as one tank in this section, and the limitations on copper tubing and/or pipe previously stated in this manual apply.

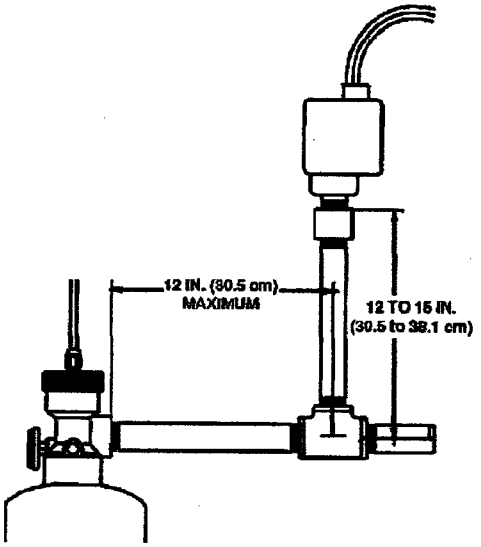


FIGURE 29
08302SPC

SYSTEM CHECKOUT AFTER INSTALLATION

Model MCH3 Mechanical Control Head

Before putting the system into service, all components must be checked for proper operation. During this checkout, assure that the carbon dioxide pilot cartridge is not installed in the control head actuator. Remove the pull pin from the hole in the slide plate.

To check satisfactory operation of the control head, cut the terminal link or the "S" hook holding the link. This will relieve all tension on the fusible link line and operate the control head. The slide plate will move fully to the right. The gas valve cable will be released, causing the gas valve to close. Any auxiliary equipment connected to the dry contacts of the solenoid monitor and/or the Micro Switch in the control head will operate.

If any of these events fail to occur, the problem must be investigated and repaired.

Repair the terminal link and put the fusible link line back into the set position. This is accomplished by using a 1/2 in. hex wrench on the fusible link line ratchet wheel. The ratchet wheel will be ratcheted in a clockwise direction until the spring plate makes contact with the top of the control head box.

Once the fusible link line is set, the control head can be placed in the set position. To set the control head, the slide plate is moved from right to left, ensuring the bolt extending from the cam arm is in the slot provided in the slide plate. Continue moving the slide plate to the left until the latching arm is in the locked position.

Once the control head is set, pull the pull handle on the remote pull station to assure that the control head operates. If the control head operates normally, the control head can be reset as described above. Insert the pull pin into the hole in the slide plate above the latching arm. Replace the pull station handle, pull pin, and nylon tie.

Using a felt-tipped marker, write the date of installation on the carbon dioxide pilot cartridge. Screw the cartridge into the control head actuator until hand-tight. **Never use a wrench to tighten the cartridge into the actuator.**

Remove the pull pin from the hole in the slide plate and install the control head cover. Insert the pull pin through the local manual control handle and into the bushing. Secure the pull pin with the nylon tie provided.

Installation

SYSTEM CHECKOUT AFTER INSTALLATION (Continued)

Model ECH3-24/120 Electrical Control Head

Before putting the system into service, all components must be checked for proper operation. During this checkout, assure that the CO_2 pilot cartridge is not installed in the control head actuator. Remove the pull pin from the hole in the slide plate.

⚠ CAUTION

Make certain to remove the CO_2 cartridge. Failure to do so during testing will result in system actuation.

TESTING THERMAL DETECTORS

1. Remove the electric control head cover.
2. Test each detector individually and recock release mechanism after each test.
3. Using a heat gun positioned approximately 12 in. (30.5 cm) from the detector, apply heat to the detector for about one minute. Overheating will cause damage to the detector. Applying heat to the detector will cause the control head to operate. When the control head operates, the following will take place: a) The slide plate will move fully to the right; b) The indicator light on the solenoid monitor will go out; and c) Any auxiliary equipment connected to the dry contacts of the solenoid monitor and/or the micro switch in the control head will operate. If any of these events fail to occur, the problem must be investigated and repaired.
4. After all the thermal detectors have cooled, the control head can be placed in the set position. To set the control head, the slide plate must be moved from right to left, ensuring the bolt extending from the cam arm is in the slot provided in the slide plate. Continue moving the slide plate to the left until the latching arm is in the locked position.

TESTING REMOTE PULL STATION

1. Once the control head is set, pull the pull handle on the remote pull station to assure that the control head operates. If the control head operates normally, the control head can be reset as described in Step 4 above.
2. Insert the pull pin into the hole in the slide plate above the latching arm.
3. Replace the pull station handle, pull pin, and break rod.

COMPLETING SYSTEM CHECKOUT

1. Energize the actuation/detection circuit by depressing the push button on the solenoid monitor.
2. Using a felt-tipped marker, write the date of installation on the CO_2 pilot cartridge. Ensure that the actuator has an O-ring installed, and screw the cartridge into the control head actuator until hand tight. **Never use a wrench to tighten the cartridge into the actuator.**
3. Remove the pull pin from the hole in the slide plate and install the control head cover. Insert the pull pin through the local manual control handle and into the bushing. Secure the pull pin with the tie provided.

NOTE

Refer to NFPA-17 for additional inspection requirements.

Installation

NOTES:

GENERAL

This chapter will detail the basic information necessary for proper maintenance of the ANSUL® Industrial Fire Suppression System. However, before attempting any system maintenance, it is necessary to attend a Factory Certification Training Class and become Certified to install and maintain the ANSUL Industrial Fire Suppression System.

MAINTENANCE AFTER SYSTEM DISCHARGE

System Cleanup

The hazard area cleanup after a system discharge is very basic. The dry chemical agent should be cleaned up by either sweeping or vacuuming. Residual dry chemical should be wiped off effected surfaces with a damp cloth.

System Tank Recharge

⚠ CAUTION

Protective eye goggles and protective footwear must be worn when performing system maintenance.

1. Remove the tank from the control head or pneumatic adaptors and inspect for visual damage. If there is any damage the tank must be hydrostatically tested before being refilled. If there is no damage, the tank can be recharged.
2. Reset all pneumatic actuators (Models PDA-D2) by depressing the check valve on top and relieving the pressure. Remove the pneumatic actuator or control head from the valve and use any 1/4-20 UN screw or bolt to screw into the top of the piston. Pull up on the piston until the piston is flush with the top of the valve body and remove the screw or bolt from the piston.
3. Remove the valve and siphon tube assembly from the tank and unscrew the siphon tube from the valve.
4. Inspect the valve to make sure no mechanical damage has occurred. If there is evidence of any damage to the seals, rebuild the valve using the Dry Valve Rebuilding Kit (ANSUL Part Number 550037).
5. Screw the siphon tube back into the valve.
6. Refill the tank with agent. Use the table below for easy reference.

Tank	Recharge
A-15ABC	12.5 lb ABC
A-17ABC	17 lb ABC
A-25BC	25 lb BC
A-25ABC	25 lb ABC
A-35ABC	35 lb ABC
A-50BC	50 lb BC
A-50ABC	50 lb ABC
A-70ABC	70 lb ABC

The Model RC-50ABC (Part No. 435245) is a 50 lb pail of ABC dry chemical recharge agent available from ANSUL. The Model RC-50BC (Part No. 435247) is a 50 lb pail of BC dry chemical recharge agent available from ANSUL.

7. Insert the siphon tube into the tank, and screw the valve onto the tank. Make sure that the valve is screwed completely into the tank.
8. Attach the Recharge Adaptor (ANSUL Part No. 550130) to the discharge port of the valve. The adaptor O-ring should be completely inside the discharge port. Attach a source of dry nitrogen to the adaptor.

   Charge the tank with dry nitrogen to 350 psi at 70 °F.

   NOTE

   1. The pressure gauge attached to the tank valve should not be used to determine when the charging pressure has been reached. A pressure regulator should be used.
   2. Higher pressure may be needed during the initial charging stage to blow the agent out of the siphon tube. Secure the tank during this stage, as it may jump as the agent is blown from the siphon tube.
9. Slowly disconnect the nitrogen source from the Recharge Adaptor. The tank valve will close when the Recharge Adaptor is depressurized. When the valve is closed and the nitrogen source is disconnected from the Recharge Adaptor, remove the recharge adaptor from the valve discharge port. Immediately screw the recoil preventer into the discharge port.

⚠ CAUTION

The recoil preventer must remain in the valve discharge port until the tank is attached to the piping network.

Recharge/Maintenance

MAINTENANCE AFTER SYSTEM DISCHARGE (Continued)

System Tank Recharge (Continued)

10. Reinstall the tank to the piping network. Reattach the control head or pneumatic adaptor.
11. Install new CO_2 cartridge in control head.

Piping and Nozzles

Piping should be blown out with air or dry nitrogen. Nozzle blow off caps should be replaced.

System Reset

All fusible links should be replaced. The fusible link line can now be put into a set position by applying tension to the fusible link line. This is accomplished by using a 1/2 in. hex wrench on the fusible link line ratchet wheel. The ratchet wheel will be ratcheted in a clockwise direction until the spring plate makes contact with the top of the control head box. The fusible link line is now in a set position.

After setting the fusible link line, the system can be put back into service by following the SYSTEM CHECKOUT AFTER INSTALLATION Section of Section IV.

REGULAR SYSTEM MAINTENANCE

Six (6) Month Maintenance

1. Check that the hazard has not changed.
2. Check that all nylon ties are in place and the system has not been tampered with.
3. Check the entire system for mechanical damage.
4. Check the solenoid monitor.
5. Disconnect the control head or pneumatic tubing from each agent tank. Remove the carbon dioxide pilot cartridge and exercise the control head to ensure it is functioning properly. Make sure the gas shut-off valve and the remote pull station are functioning properly.

NOTE

Before continuing, remove the cover from the control head and insert the pull pin in the hole in the slide plate above the latching arm. This will secure the system, preventing accidental discharge.

6. Inspect fusible link detectors for excessive buildup. Clean or replace links if necessary. Visually inspect thermal detectors.

NOTE

Methods and frequency of inspection, testing and maintenance of detectors should be in accordance with NFPA-72.

7. Reinstall the carbon dioxide pilot cartridge and replace the control head cover and nylon tie.

⚠ CAUTION

Before screwing the carbon dioxide pilot cartridge into the actuator, ensure that the actuator has an O-ring installed.

8. Inspect the tank pressure. Tap the gauge lightly to ensure the needle is moving freely. If the gauge shows a loss in pressure indicated by the needle being below the green band, the tank should be removed and recharged per the SYSTEM TANK RECHARGE section of Section V (System Maintenance) in this manual.

Annual Maintenance

1. Inspect as per six (6) month maintenance instructions.
2. Disconnect and remove the discharge piping from the system. Using air or nitrogen, blow out the discharge piping. Replace all nozzle caps.
3. Fixed temperature sensing elements of the fusible alloy type shall be replaced at least annually or more frequently, if necessary, to assure proper operation of the system.
4. Test thermal detectors and remote pull station per SYSTEM CHECKOUT AFTER INSTALLATION section located in Chapter IV (System Installation) of this manual. Per NFPA 72, two (2) or more detectors per circuit should be tested. Note individual detector location and date of testing. Within 5 years, all detectors in system must be tested.
5. Replace the carbon dioxide pilot cartridge, recording the date of installation on the cartridge with a felt-tipped marker.

⚠ CAUTION

Before screwing the carbon dioxide pilot cartridge into the actuator, ensure that the actuator has an O-ring installed.

Six (6) Year Maintenance

1. Inspect as per annual maintenance instructions.
2. Examine the dry chemical. If there is evidence of caking, the dry chemical shall be discarded.

Hydrostatic Testing

The dry chemical agent tank(s) and pneumatic tank(s) shall be hydrostatically tested at least every twelve (12) years as per NFPA-17.

NOTE

Refer to NFPA-17 for additional maintenance requirements.

Brick Township
401 Chambersbridge Rd
Brick, NJ 08723
(732) 262-1027

Subcode Official Review

To: 101 HOOPER AVE TOMS RIVER, NJ 08753 CC:

RE: Fire Subcode
Block: 702 Lot: 5 Qual:
301 CHAMBERS BRIDGE RD.
Permit Number: Control Number: C-10-002258
Last Submit Date: Friday, July 02, 2010

Date: Tuesday, July 06, 2010

Dear OCEAN COUNTY,
Your request is hereby denied based upon the following infractions.

Need spec. guide on system being installed.

Sincerely,

Ron Piszar, Subcode Official

****
*** FAX TX REPORT ***
****

TRANSMISSION OK

JOB NO.	2322
DESTINATION ADDRESS	97324772757
PSWD/SUBADDRESS	
DESTINATION ID	
ST. TIME	07/06 08:16
USAGE T	00'19
PGS.	1
RESULT	OK

Brick Township
401 Chambersbridge Rd
Brick, NJ 08723
(732) 262-1027

Subcode Official Review

To: 101 HOOPER AVE TOMS RIVER, NJ 08753 CC:

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Ron Piszar, Subcode Official

' REQUIREMENTS

drawings cover the following models: AG4800FR4

uilding is of Non-combustible construction. Building walls, ump, and doors are of all steel construction.

uilding is capable of withstanding, as a minimum, a 120 MPH Exposure D oad and a downward vertical snow load of 30 PSF, plus its own weight.

oor support system shall be capable of supporting a load of SF under dry conditions.

k-tight sump, capable of containing at least 25 percent of quid storage capacity of the building shall be provided.

ing designed for natural or mechanical ventilation at a rate of ft./min./sq. ft. of floor area. Vent quantity and location vary based on option placement.

chemical storage building shall be grounded. The individual containers shall be grounded while dispensing. Consult codes for grounding building. 5/16" ground bolts and weld are supplied on building. Order Securall's Part Number OP0023 3' ground rod & clamp, 10'-#6 copper cable & terminal.

ILDING DESIGN NOTES:

Ground weld nuts & bolts conveniently located.
2-Exterior
15-Interior

Finish is a two-part chemical resistant aliphatic polyurethane.

ATERIAL SPECIFICATIONS

Material stating CRS QC shall conform to ASTM A366
Tensile strength = 42-58 ksi, Yield Strength = 28-44 ksi
Elongation % in 2" = 28-44, Rockwell B Hardness 38-60

. Material stating HRS QC shall conform to ASTM A569
Tensile strength = 45-60 ksi, Yield strength = 30-45 ksi
Elongation % in 2" =23-41, Rockwell B Hardness 50-70

. Material stating galvanneal shall conform to ASTM A653, tensile strength =42-58 ksi, yield strength =28-48 ksi

. R-11 glass fiber batt placed in wall and ceiling cavity areas.

5. 4 Hour fire rated wall has (4) layers of 3/4" thick Ultracode Gypsum on inside of 12 Ga. studs and 3 hour fire rated roof has (2) layers of 3/4" thick Ultracode Gypsum. Glass fiber or mineral wool batt material bearing UL Classification Marking to fill stud cavity.

6. Door and vent dampers are 3 hour fire protected.

SPECIAL CONDITIONS / LIMITATIONS

- Building is not a habitable structure
- Chemical storage in sealed or closed containers only and not opened during normal operations. suitable for storage of Class I, II and IIIA flammable or combustible liquids in sealed containers.
- Use group: H3
- Construction type: IIB
- Complies with:
  2006 International Mechanical Code w/ New Jersey amendments
  2006 International Building Code w/ New Jersey amendments
  2005 National Electrical Code w/ New Jersey amendments
- Setbacks: over 5' from rear, front, and both side elevations to the property line or mid way between two buildings on the same property.
- Manual emergency alarm system shall be provided outside and near the exit access door by others in the field if required.
- Handicapped accessibility by others in the field if required.
- Structure is capable of withstanding, as a minimum:
  Ground Snow load: 30 psf
  Wind Load: 120 mph (Exp. D)
  Internal Pressure Coefficient: GPpi = +/- 18
  Enclosed Building / Wind Pressure: 33.5 psf
  Seismic: Ss=0.2 & S1=0.04

WIRING NOTES

1. All wiring methods are in accordance to the latest NEC adopted by the state, including Article 500 & 501 and are subject to the Authority having jurisdiction.
2. Models BL and B200 thru B8000 wiring methods for the interior of the building are designed for Class I, Dvision I Hazardous Locations.
3. Location and quantity of devices, fixtures and conduit may vary based on customer's requirements, Authority having jurisdiction & Electrician's recommendations.
4. B/BL Models
   Conductor: 12 - 10 - 8 AWG THHN
   Reference Table 310-16 in National Electrical Code Handbook for allowable ampacities.

   Conduit:
   Type: Threaded rigid metal conduit
   Sizes: 1/2", 3/4" & 1"
   No. of Conductors in Conduit: Reference Table C8 in the National Electrical Code Handbook.
5. All devices are UL Listed.
6. Type of Circuit Protection Required:
   Air Conditioner: Time-delayed UL Listed HACR circuit breaker
   Exhaust: Standard UL Listed circuit breaker or fuse
   Light: Standard UL Listed circuit breaker or fuse
   Receptacle: Standard UL Listed circuit breaker or fuse
7. Electrical Service Panel Switch to be a maximum of 6'-7" from Grade.

Fire Suppression System is designed and installed in accordance with the National Fire Protection Association (NFPA 17) "Standard for Dry Chemical Extenguishing Systems".

SECURALL Storage Buildings provide ANSUL IND-X Industrial Fire Suppression Systems and are listed by Underwriter's Laboratories and approved by Factory Mutual Research Corporation.

Location of Dry Chemical Enclosure may vary based on number of building accessories.

Detectors may increase based on Manufacturer's reccommendation and location of accessories.

Dry Chemical System is subject to the Authority having jurisdiction.

Fan automatically shuts down when Dry Chem activates.

General Piping Requirements:

1. Use schedule 40 Galvanized Pipe conforming to ASTM A120, A53, or A106. All Fittings must be 300 lb. Class minimum unless otherwise noted.
2. Before assembling, pipe ends and fittings shall be reamed, and inside blown clear of chips.
3. Inside of pipe and fittings shall be free of oil and dirt.
4. Minimum allowed nipple on tank outlet shall be 1" dia. x 3" long.

T. R. ARNOLD & ASSOCIATES, INC.
P. O. BOX 1081
ELKHART, IN 46515
State (s) NJ-IBC
Accredited Evaluation and Inspection Agency
This document is certified as being in conformance with State Building Codes
Date MAY 28 2009
Approval of this document does not authorize or approve any omission or deviation from the requirements of applicable State Laws.

TOWNSHIP OF
RELEASED FOR PERMIT
Building Subcode 7/2/10
Plumbing Subcode
Fire Subcode
Electrical Subcode

INDEX

Model AG4800FR4	
Exterior Dimensions	102Hx312Wx96D
55 gal Drum Capacity	48
Interior Dimensions	85Hx300Wx84D
Interior Area (sq.ft.)	175
Sump Capacity (gal)	763

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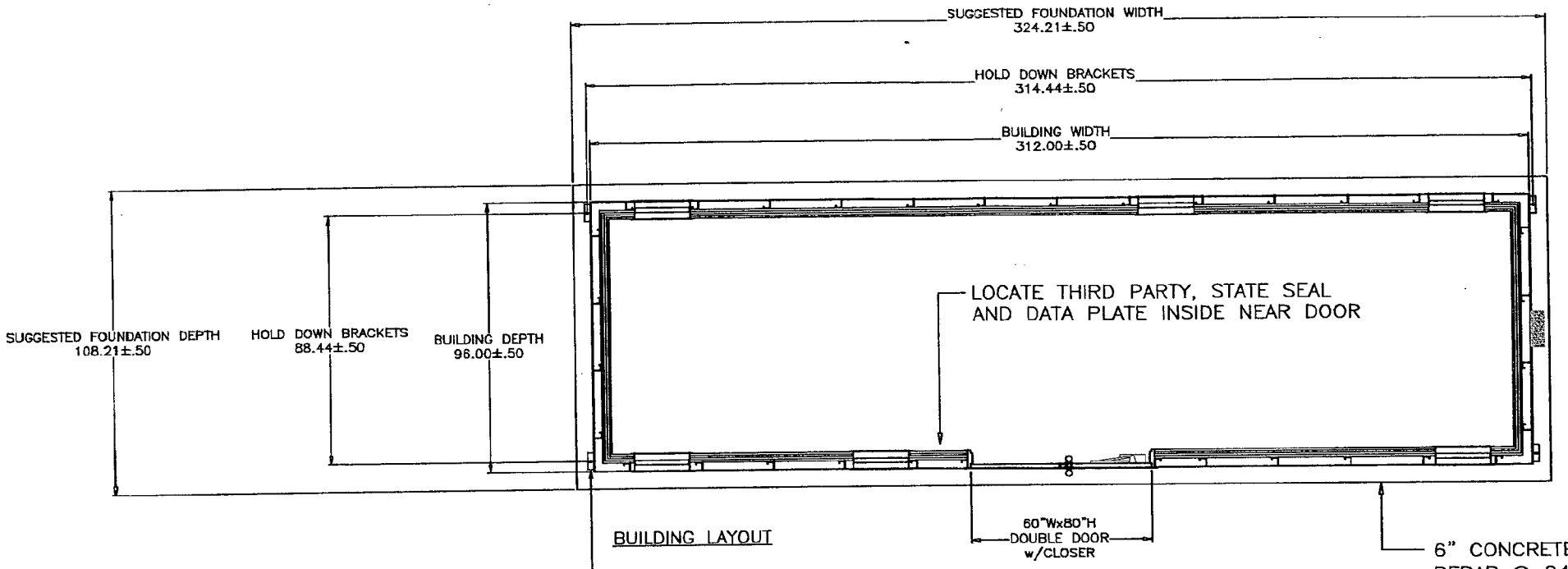
SPACE RESERVED FOR STAMPS OF APPROVAL

5-27-09

SITE LOCATION:
PARKS & RECREATION DEPT.
FORGE POND GOLF COURSE
301 CHAMBERSBRIDGE ROAD
BRICK, NJ 08724

DRAWN MP	DATE 09/5/08	A & A SHEET METAL PRODUCTS, INC. LA PORTE, INDIANA 46350	
CHECKED	DATE	SE-CUR-ALL CABINETS	SERIAL NO. 809004 / SUB-DIR. BUILDINGS
SALES REP KK	DATE	TITLE CUSTOMER DRAWING	
CHIEF DES	DATE	PART NUMBER AG4800FR4	REVISION
MANUFCT.	DATE	SCALE Not To Scale	SHEET NUMBER 1 OF 10



BUILDING LAYOUT

6" CONCRETE PAD WITH #4
REBAR @ 24" O.C. EACH WAY

5.188" X 6" (7 GA.) GALVANNEAL ANGLE WITH7/8" HOLE, WELDED TO BASE FRAME WITH CONTINUOUS WELD. SECURE TO CONCRETE WITH 5/8" X 5-1/2" LONG 303-5.5 RAWL CHEM STUDS OR EQUIVELANT EMBEDED 4" IN 3000 PSI CONCRETE (TYPICAL FOR FOUR CORNERS)

SUGGESTED FOUNDATION

Notes:
1. Concrete based on 3000 psi minimum
2. Soil based on 2000 pfs minimum
3. Foundation details are typical. Actual foundation is the responsibility of others and subject to inspection by the local building official.

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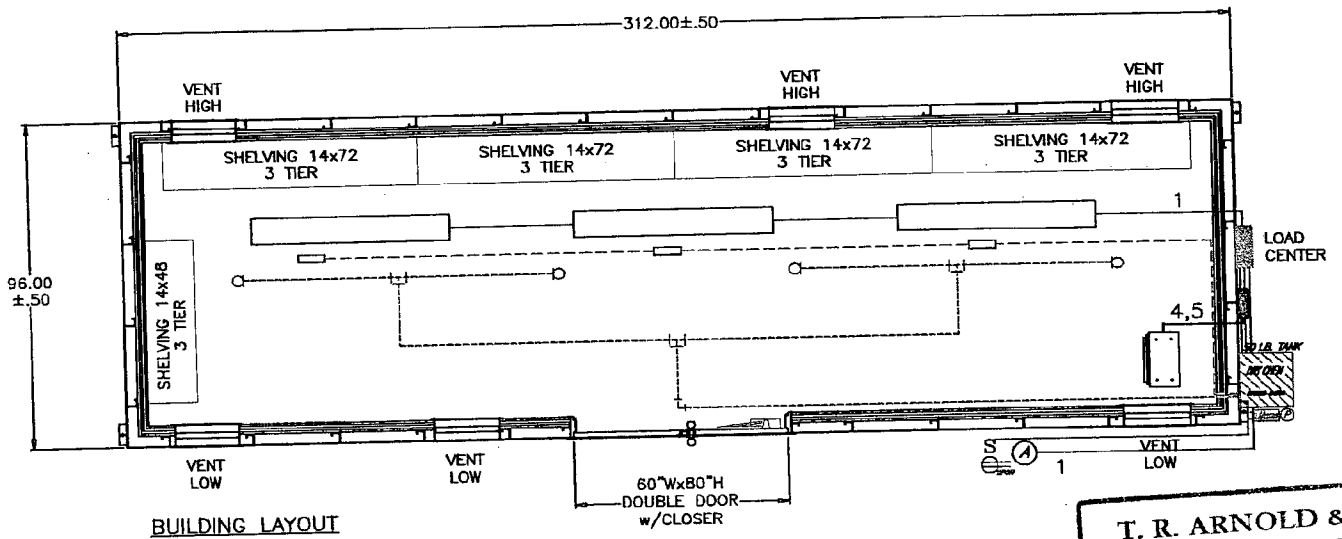
CHIEF EXEC	DATE	PART NUMBER AG4800FR4 · REVISION
MANUFACT.	DATE	SCALE Not To Scale · SHEET NUMBER 2 OF 10



BUILDING LAYOUT

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State(s) NJ-IBC
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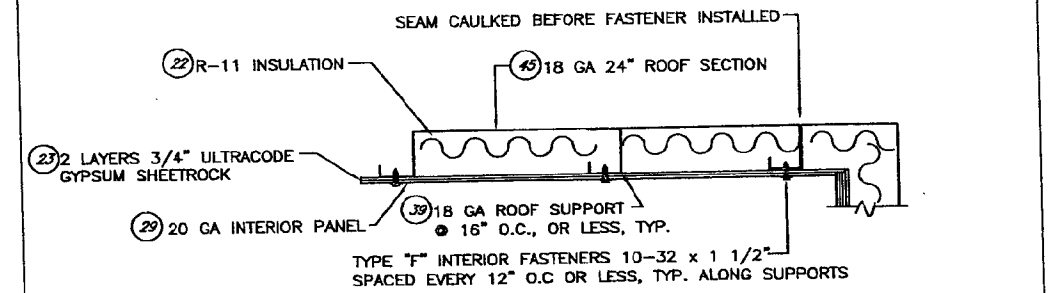
Date MAY 28 2009
Approval of this document does not authorize or approve any omission or deviation from the requirements of applicable State Laws.

GEND

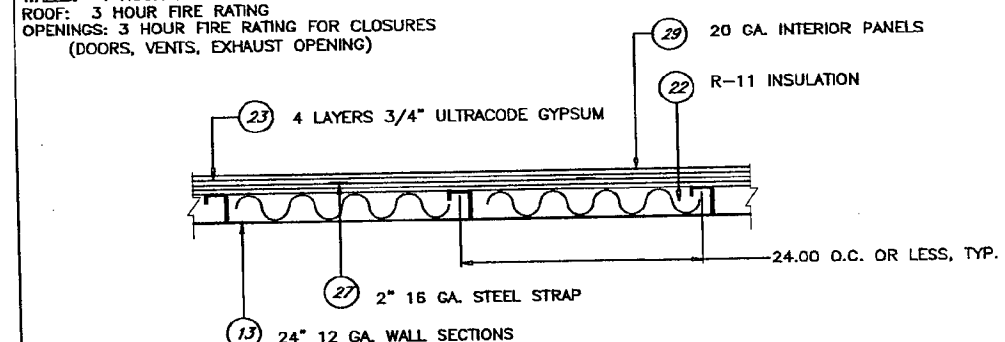
- FAN FORCED UNIT HEATER W/ THERMOSTAT 5kW, 24,000 BTU, 24 A, 208 V, 60Hz, 350 CFM
- DUST/VAPOR PROOF FLUOSCENT LIGHT FIXTURE .73 A, 120 V
- LOAD CENTER NEMA 3R, 120/240 V
- S SWITCH IN WEATHER PROOF ENCLOSURE 15 A, 120 VAC
- (A) EXPLOSION PROOF LIGHT FIXTURE W/PHOTOCELL 0.83 A, 120 V
- WEATHER PROOF RECEPTACLE 20 A, 125 V,
- Alarm DRY CHEMICAL SYSTEM ALARM, .25 A
- (P) REMOTE PULL STATION P/N 54011
- TOTAL FLOODING NOZZLE, TFN 3/4"
- FUSIBLE LINK DETECTOR, P/N 56838 CLIP-ON STYLE
- DRY CHEMICAL FIRE SUPPRESSION SYSTEM ENCLOSURE TANK ASSEMBLY BRACKET ASSEMBLY SAFETY RELIEF VALVE AUTOMAN MECHANICAL RELEASE
- CONTACTOR IN NEMA 3R ENCLOSURE 120 V INPUT, 240 V OUTPUT

FM ROOF APPROVAL 6049 3 HOUR FIRE RATED



FM APPROVAL 6049 4 HOUR FIRE RATED WALL (FR4)

FR4 FIRE RATING:
WALLS: 4 HOUR FIRE RATING
ROOF: 3 HOUR FIRE RATING
OPENINGS: 3 HOUR FIRE RATING FOR CLOSURES (DOORS, VENTS, EXHAUST OPENING)



1. FIRST LAYER #6-1.25" TYPE "F" FASTENERS SPACED APPROX. 24" O.C., OR LESS HORIZONTALLY ALONG STUDS.
2. SECOND LAYER #6-1.875" TYPE "F" FASTENERS STAGGERED & SPACED APPROX. 24" O.C., OR LESS HORIZONTALLY ALONG STUDS.
3. THIRD LAYER #6-1.875" TYPE "F" FASTENERS SPACED APPROX. 24" O.C., OR LESS, INTO 2" 16 GA. STEEL STRAPS.
4. FOURTH LAYER #8-2.375" TYPE "F" FASTENERS SPACED APPROX. 24" O.C. OR LESS, INTO 2" 16 GA. STEEL STRAPS AND SPACED EVERY 12" VERTICALLY ALONG STRAPS.

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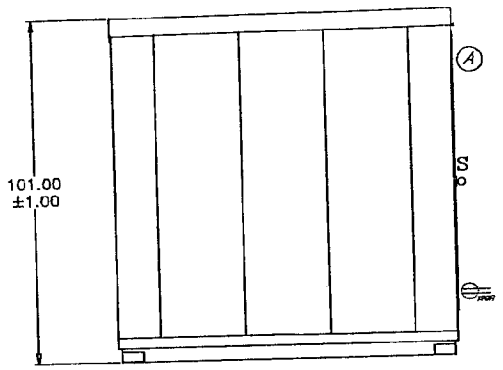
SPACE RESERVED FOR STAMPS OF APPROVAL

5-27-09

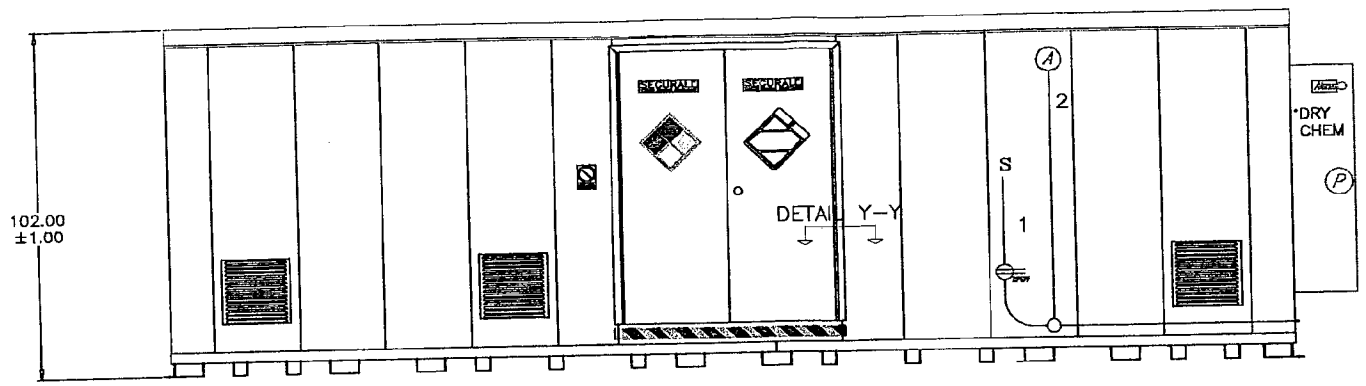
SITE LOCATION:
PARKS & RECREATION DEPT.
FORGE POND GOLF COURSE
301 CHAMBERSBRIDGE ROAD
BRICK, NJ 08724

DRAWN MP	DATE 08/5/08	A & A SHEET METAL PRODUCTS, INC. LA PORTE, INDIANA 46350
CHECKED	DATE	SE-CUR-ALL CABINETS SERIAL NO. 809004 SUB-DIR. BUILDINGS
SALES REP KK	DATE	TITLE BUILDING LAYOUT, WALL & ROOF DETAIL
CHIEF ENG	DATE	PART NUMBER AG4800FR4 REVISION
MANUFACT.	DATE	SCALE Not To Scale SHEET NUMBER 3 OF 10

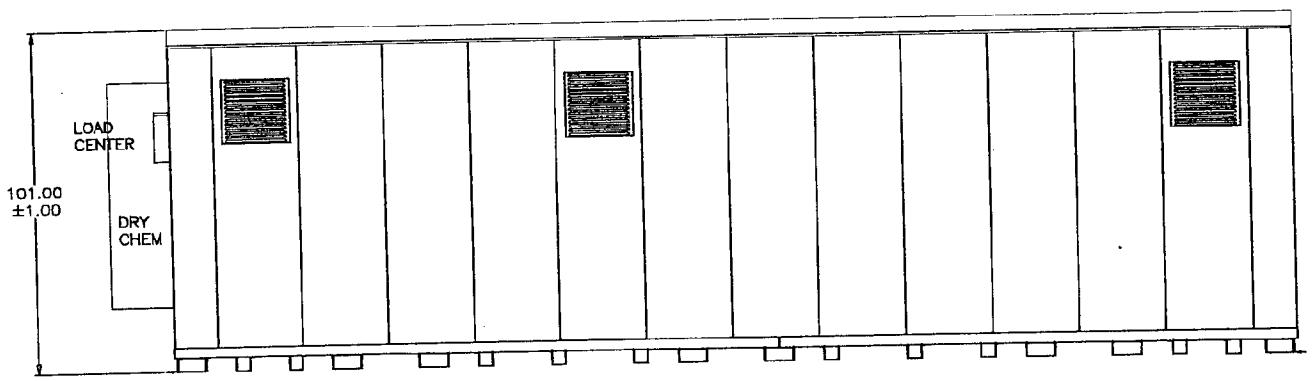
NOTE:
ALL CONDUIT 1/2" UNLESS OTHERWISE NOTED.



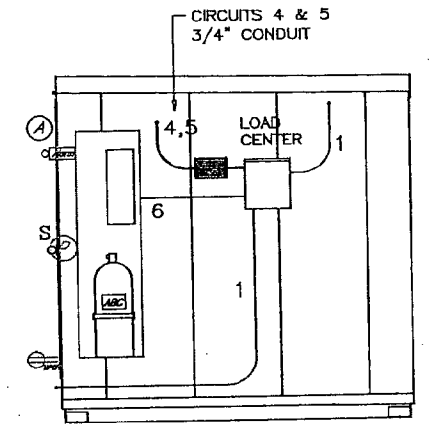
LEFT ELEVATION



FRONT ELEVATION



REAR ELEVATION



RIGHT ELEVATION

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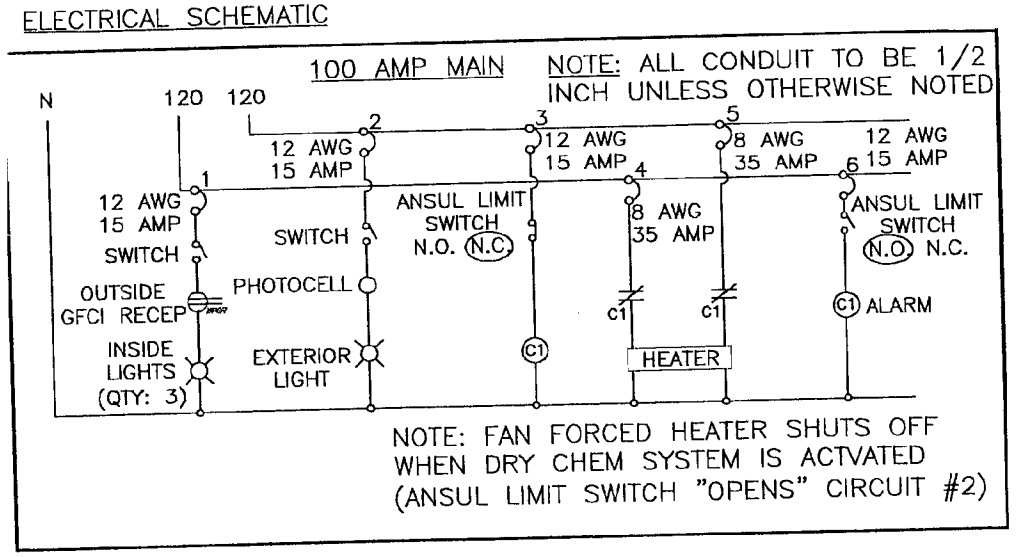
ELECTRICAL SCHEMATIC



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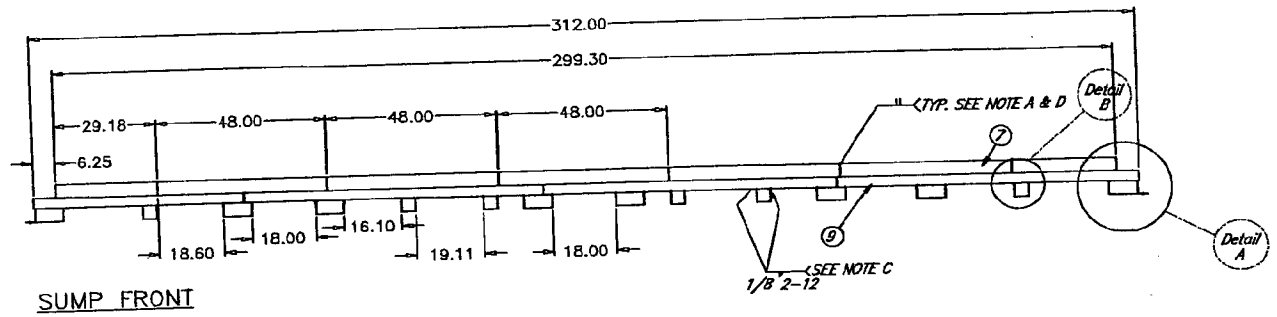
SPACE RESERVED FOR STAMPS OF APPROVAL

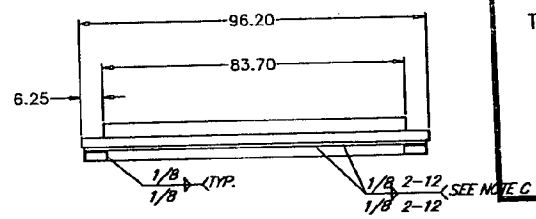
5-27-09

SITE LOCATION:
PARKS & RECREATION DEPT.
FORGE POND GOLF COURSE
301 CHAMBERSBRIDGE ROAD
BRICK, NJ 08724

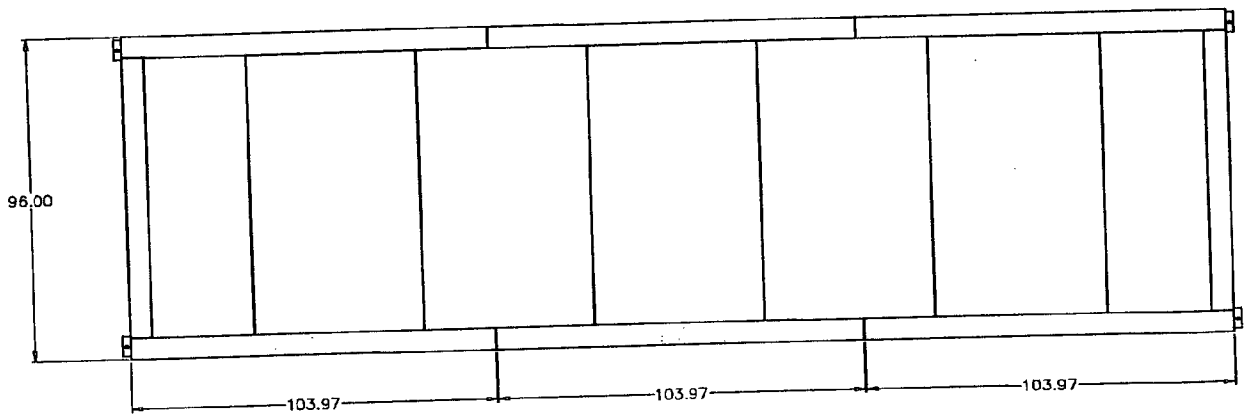
DRAWN MP	DATE 05/5/08	A & A SHEET METAL PRODUCTS, INC. LA PORTE, INDIANA 46350
CHECKED	DATE	SE-CUR-ALL CABINETS SERIAL NO. 809004 SUB-DIR. BUILDINGS
SALES REP KK	DATE	TITLE EXTERIOR ELEVATIONS & ELECTRICAL SCHEMATIC
CHIEF ENG	DATE	PART NUMBER AG4800FR4 REVISION
MANUFACT.	DATE	SCALE Not To Scale SHEET NUMBER 4 OF 10



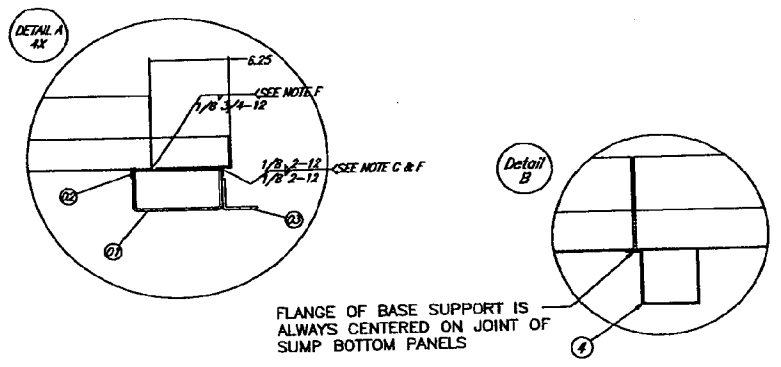
SUMP FRONT



SUMP SIDE



SUMP LAYOUT



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SITE LOCATION:
PARKS & RECREATION DEPT.
FORGE POND GOLF COURSE
301 CHAMBERSBRIDGE ROAD
BRICK, NJ 08724

DESIGN MP	DATE 09/5/08	
CHECKED	DATE	
SALES REP KK	DATE	
CHIEF ENG	DATE	
MANUFACT.	DATE	

A & A SHEET METAL PRODUCTS, INC.
LA PORTE, INDIANA 46350

SE-CUR-ALL CABINETS
SERIAL NO. 809004
SUB-DIR. BUILDINGS
TITLE SUMP LAYOUT
PART NUMBER AG4800FR4
REVISION
SCALE Not To Scale
SHEET NUMBER 5 OF 10

BILL OF MATERIALS

REFERENCE ORDER NUMBER: *809004* | QUANTITY TO CUT: *1* | DATE: *10/2/08*

MODEL: *AG4800FR4* | OUTSIDE DIMENSIONS (H x W x D) *102 x 312 x 96*

BILL OF MATERIALS

ITEM	DESCRIPTION	MATERIAL TYPE	MATERIAL BLANK	NOTE	QTY
SUMP COMPONENTS					
01	Forklift Channels	12 Ga. Galvanneal	94.5 x 15.625	Cover Style	8
02	Forklift Cover	12 Ga. Galvanneal	94.5 x 9.875	Cover Style	8
03	Hold Down Bracket	7 Ga. HRS	5.188 x 6	*	4
04	Base Support	12 Ga. Galvanneal	94.5 x 12.4375	*	6
05	Sump Bottom Panel	12 Ga. Galvanneal	97.37 x 36.017	Left & Right	2
06	Sump Bottom Panel	12 Ga. Galvanneal	97.37 x 48	*	5
07	Wall Bottom Angle - Sides	12 Ga. Galvanneal	96 x 9.08	Notch Each End	2
08	Wall Bottom Angle - Front & Rear	12 Ga. Galvanneal	103.97 x 9.08	*	6
09	Floor Grating Support	14 Ga. Galvanized	*	*	*
10	Safety Planks	12 Ga. Galvanized	*	*	*
WALL COMPONENTS					
12	Wall Section - 24" M-F	12 Ga. Galvanneal	93 x 34.843	4 Panels Punch	17
13	Wall Section - 24" M-F	12 Ga. Galvanneal	24.438 x 34.843	XP Panel	6
14	Wall Section - 24" F-F	12 Ga. Galvanneal	24.438 x 35.093	XP Panel	6
15	Wall Section - 24" M-M	12 Ga. Galvanneal	93 x 34.5	*	3
16	Wall Section - 17" M-M	12 Ga. Galvanneal	93 x 27.5	*	1
17	Wall Section - 17" M-F	12 Ga. Galvanneal	93 x 27.843	*	1
18	Wall Section 12" M-F Corner	12 Ga. Galvanneal	93 x 34.796	*	4
19	Wall Top Plate - Front	12 Ga. Galvanneal	104 x 6.938	2 x 3 1/4 x 2	3
20	Wall Top Plate - Rear	18 Ga. Galvanneal	104 x 6.063	2 x 3 1/8 x 2	3
21	Wall Top Plate - Sides	18 Ga. Galvanneal	96 x 6.063	Notch 1 End Each	2
22	Unfaced Insulation	R-11	3 1/2 T x 24" W	*	*
23	Ultracode Gypsum Sheetrock	3/4" Gypsum	48 x 96	*	*
24	Drywall Fasteners - Type "F"	#6 - 1.25"	*	*	*
25	Drywall Fasteners - Type "F"	#6 - 1.875"	*	*	*
26	Drywall Fasteners - Type "F"	#6 - 2.375"	*	*	*
27	Steel Straps - 2" wide Drywall Attaching	16 Ga. Galvanized	*	*	*
28	Drywall Fastener	10-32 x 1 1/2"	*	*	*
29	Interior Panel	20 Ga. CRS QC	See Individual BOM	*	*
30	Vent - Formed	18 Ga. Galvanneal	*	*	4
31	Grounding Weld Nut	5/16 - 18	*	*	6
32	Ground Bolt	5/16 - 18 x 1/2	*	*	6
33	Fire Damper	3 Hr.	18 x 18	FR3	6
34	Fire Damper Sleeve	See Individual BOM	18 x 18	FR3	6
DOOR COMPONENTS					
35	Door Header	12 Ga. Galvanneal	62 x 7.266	Two Piece	2
36	Door Sill Inner	12 Ga. Galvanneal	62 x 8.875	*	1
37	Door Sill Outer	12 Ga. Galvanneal	62 x 11.875	*	1
38	Door - Double 60"W x 80"H	18 Ga. Galvanneal		FR3	1

ITEM	DESCRIPTION	MATERIAL	BLANK	NOTE	QTY
ROOF COMPONENTS					
39	Roof End	18 Ga. Galvanneal	17 x 107	*	2
40	Roof Section - 24" M-F	18 Ga. Galvanneal	35.156 x 107	*	12
41	Roof Riser	18 Ga. Galvanneal	6 x 4.156	*	6
42	Roof Section - 12" M-M	18 Ga. Galvanneal	22.375 x 107	*	1
43	Roof Gutter Front	18 Ga. Galvanneal	8.5625 x 104.08	*	3
44	Roof End Rear	18 Ga. Galvanneal	5.75 x 104.08	*	3
45	Roof Supports	18 Ga. Galvanneal	7.25 x 94.5	*	12
EXPLOSION RELIEF PANELS: 48" W x 48" H					
46	Explosion Relief Panel	22 Ga.Galvanneal	See Individual BOM	*	3
47	Explosion Relief Frame	16 Ga.Galvanneal	See Individual BOM	*	3
48	Explosion Relief Fastener	*	*	*	6
49	Explosion Relief Expanded	#9 Flattened	45.5 x 45.5	*	3
50	Fender Washer	3/8 x 1 1/4	*	*	18
51	Explosion Panel Fastener	5/16 - 18 x 2 1/2	*	*	6
52	Explosion Panel Nut	5/16 - 18	*	*	6
53	Wall Fastener	5/16 - 18 x 1 1/2	*	*	6
54	Straight Link Chain	1/0 Zinc	*	Quantity in Feet	8
55	Sleeve for Chain	Plastic	*	Quantity in Feet	6
56	Explosion Relief Frame Fastener	10 - 16 x 3/4"	*		90

T. R. ARNOLD & ASSOCIATES, INC.
P. O. BOX 1081
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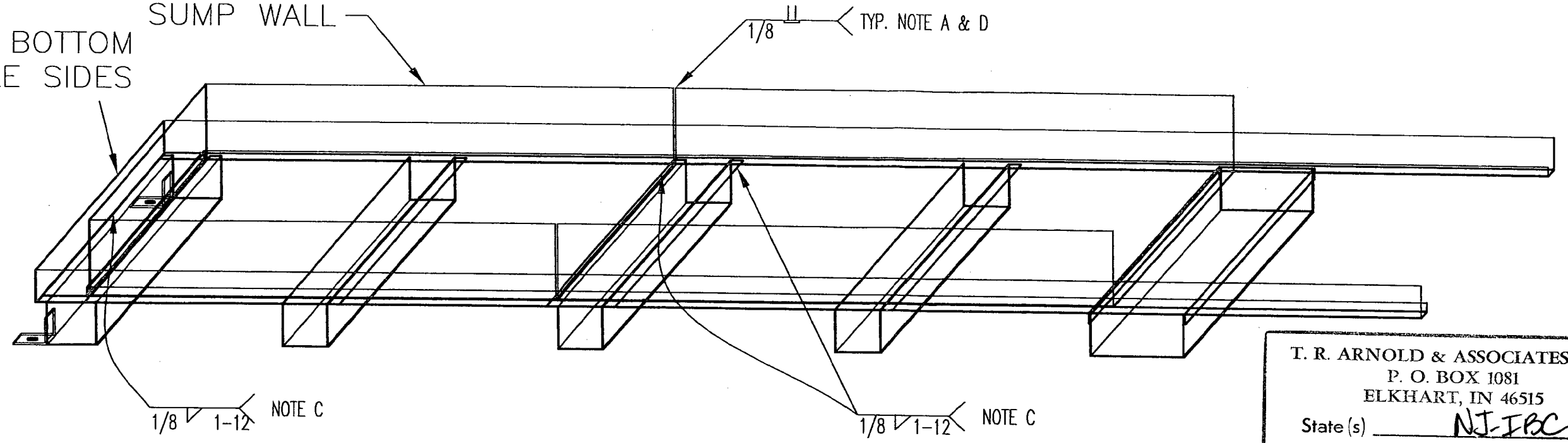
5-27-09

SITE LOCATION:
PARKS & RECREATION DEPT.
FORGE POND GOLF COURSE
301 CHAMBERSBRIDGE ROAD
BRICK, NJ 08724

DRAWN MP	DATE 08/5/08	A & A SHEET METAL PRODUCTS, INC. LA PORTE, INDIANA 46350
CHECKED	DATE	SE-CUR-ALL CABINETS — SERIAL NO. 809004 — SUB-DIR. BUILDINGS
SALES REP KK	DATE	TITLE BILL OF MATERIALS
CHIEF ENG	DATE	PART NUMBER AG4800FR4 — REVISION
MANUFACT.	DATE	SCALE Not To Scale — SHEET NUMBER 6 OF 10



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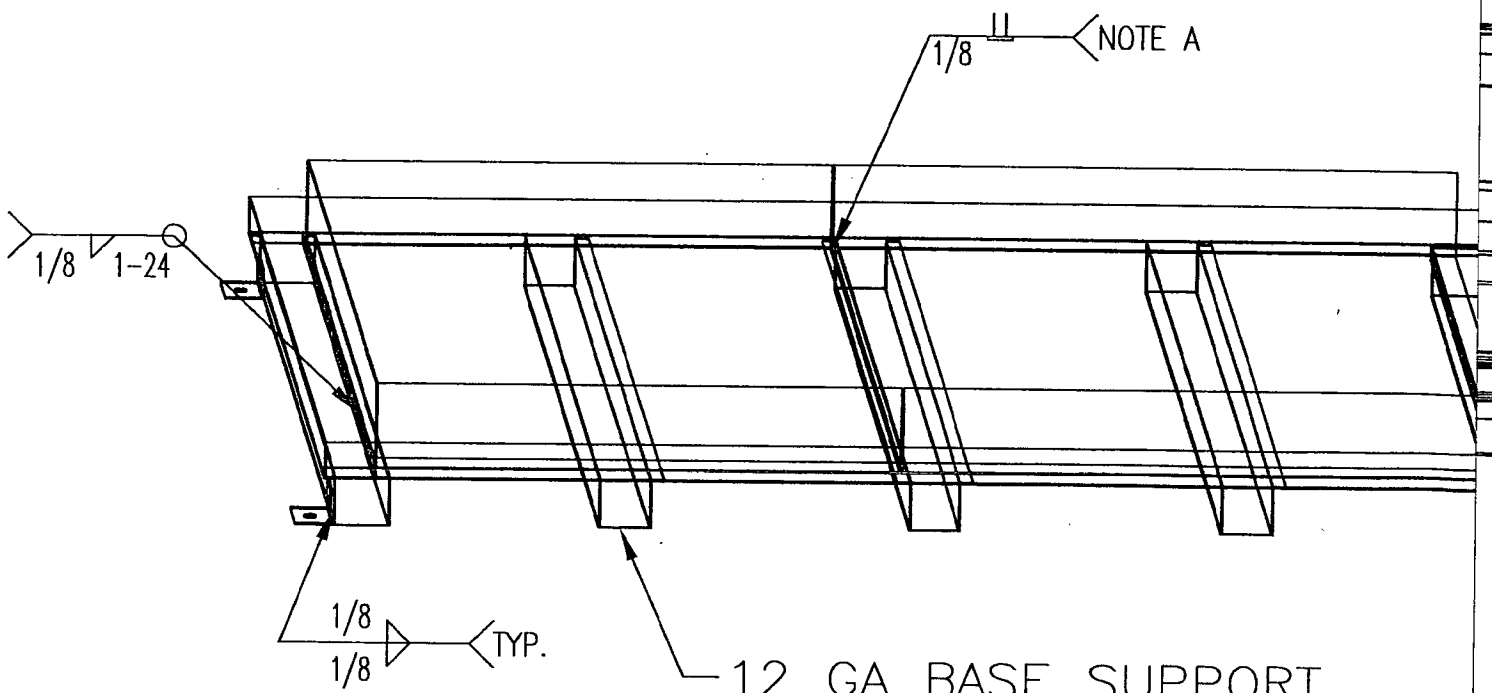
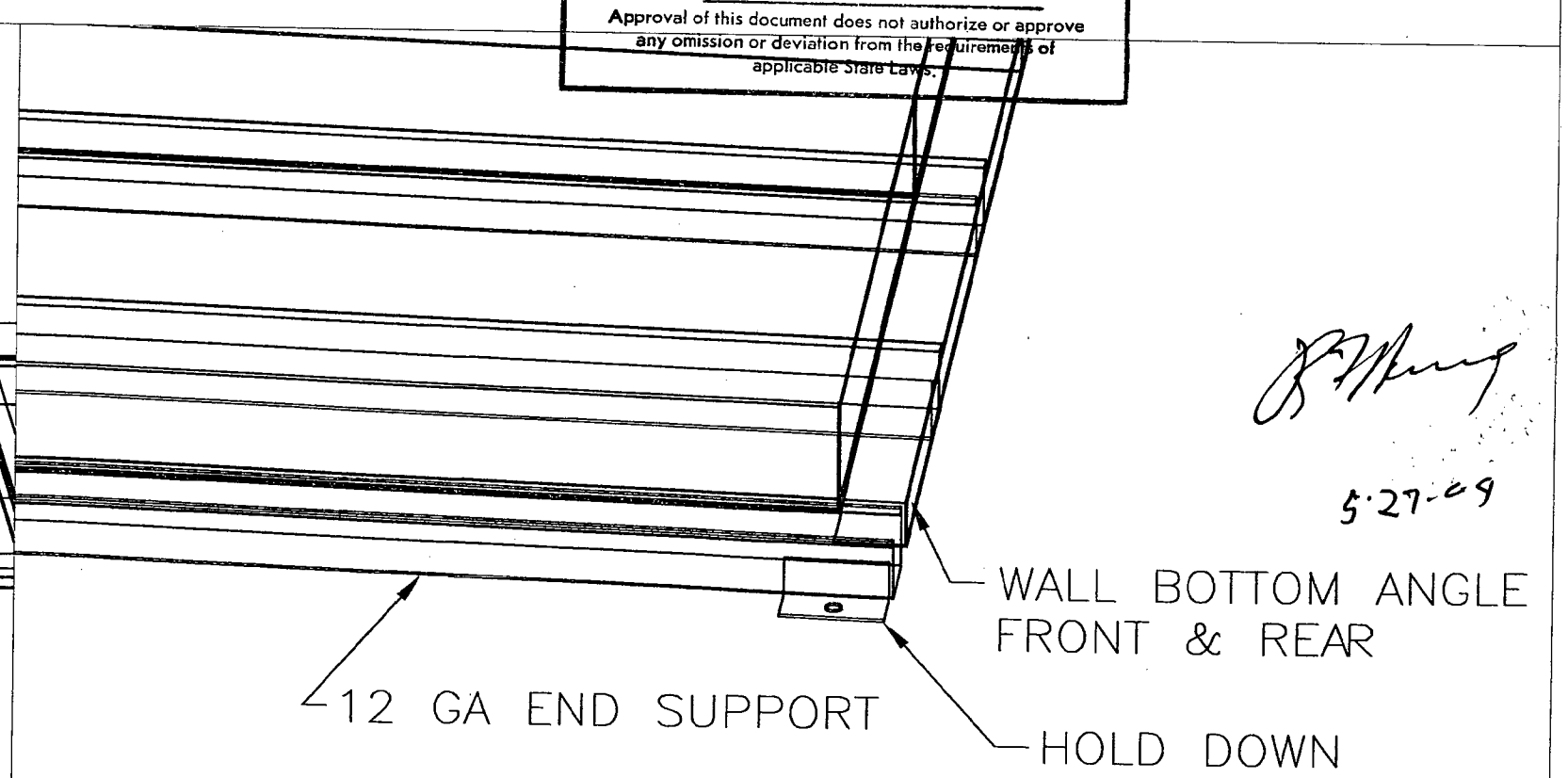
A & A SHEET METAL PRODUCTS, INC.
LA PORTE, INDIANA 46350
SECUR-ALE CABINETS
CAD DWG NO. 809004
SUB-DIR. BUILDINGS
TITLE SUMP_WELD_NOTES
PART NUMBER AC4800FR4
REVISION
SCALE Not To Scale
SHEET NUMBER 7 OF 10
TOLERANCES





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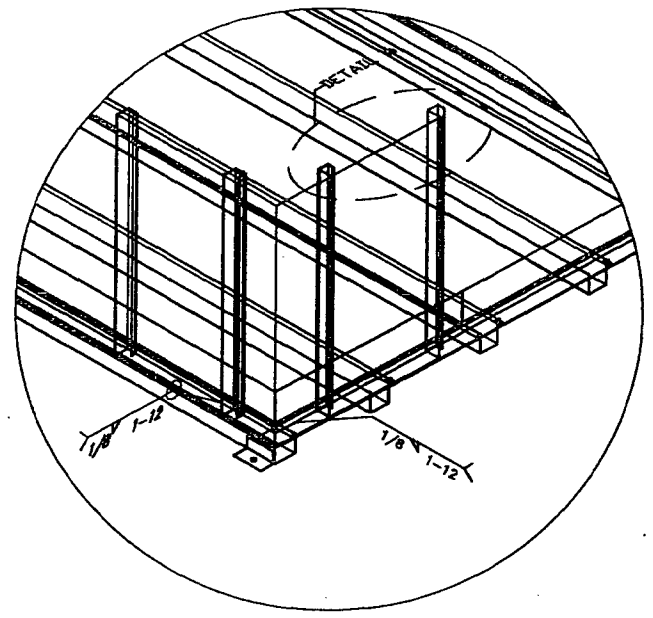
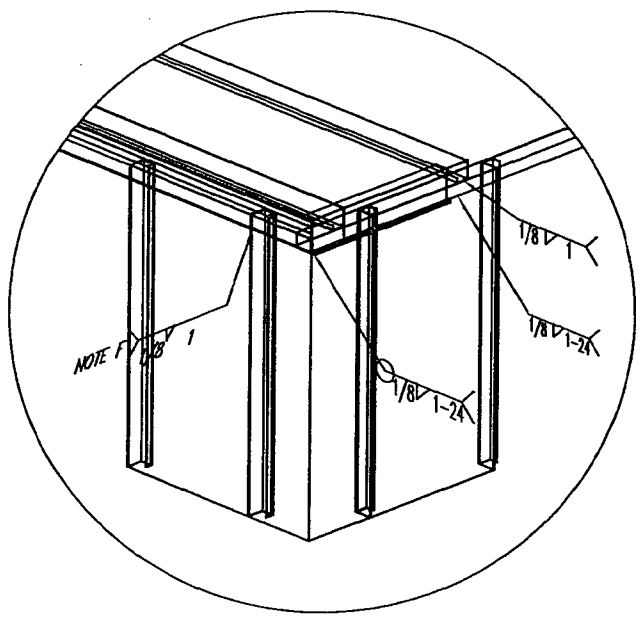


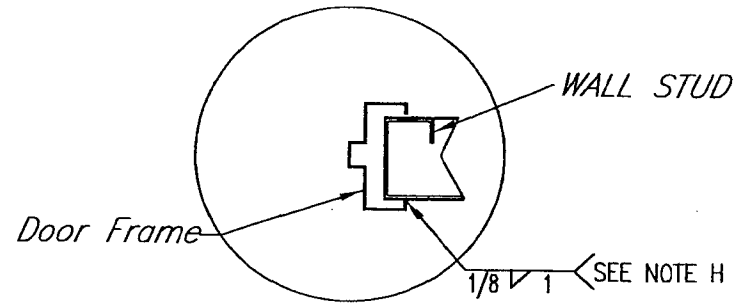
WALL ASSEMBLY



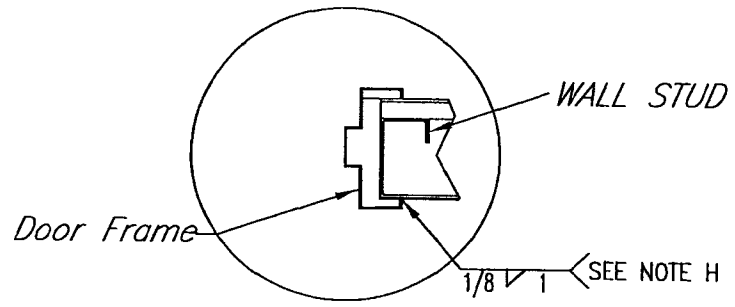
ROOF ASSEMBLY

DOOR DETAIL

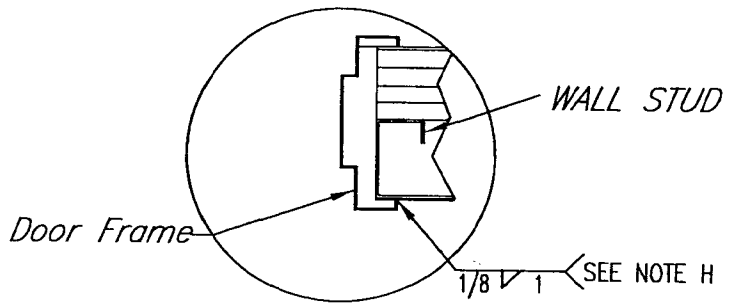
SECTION Y–Y



NON RATED



FR2



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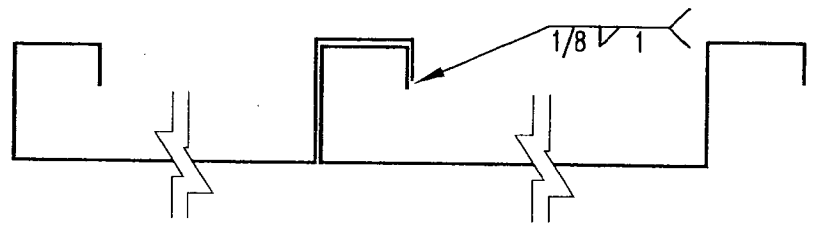

DETAIL A

WALL SECTION WELDING

WELDING PERFORMED TO AWS STANDARDS AND INSPECTED BY CERTIFIED WELDERS. CERTIFICATION INFORMATION CAN BE PROVIDED UPON REQUEST.

WELDING NOTES MIG WELDING– 0.035ø WIRE, WD–ER–70S–6 WELDING WIRE

A. ALL SPLICE WELDS FULL PENETRATION WITH BACKING, LEAVE BACK BAR.
B. 1 ¼" x ⅞" SLOT FOR PLUG WELD, FRONT & REAR WALL BOTTOM ANGLE, 26.5" OR LESS TYP. BETWEEN SLOTS.
C. WHEN FLOOR SPLICE LANDS ON FORKLIFT CHANNEL OR BASE SUPPORT, OMIT FILLET ON SEAM SIDE.
D. SEAL PASS AFTER WALL INSTALLED OR SUMP LEVELED.
E. SEAL PASS CORNERS AND ROOF SEAMS AFTER ROOF INSTALLED.
F. EACH CONNECTION, ALL STUDS BOTH SIDES, BOTTOM.
G. ALL FLASHING TACK WELD ONLY AT EACH STUD OR 24".
H. WELD AT CORNER AND EACH HINGE AREA TYP.
I. SUB ASSEMBLY

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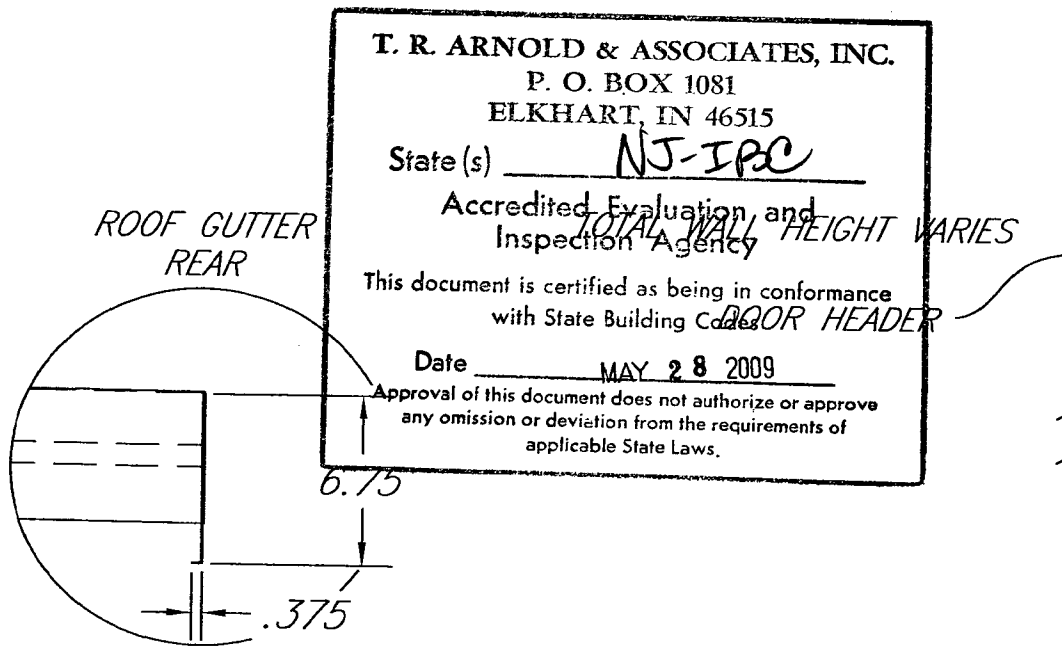

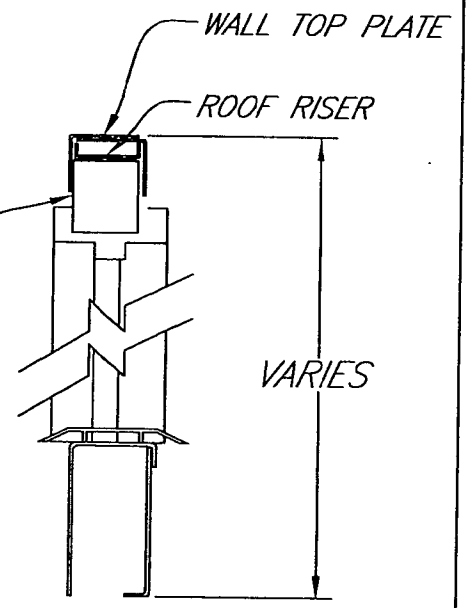

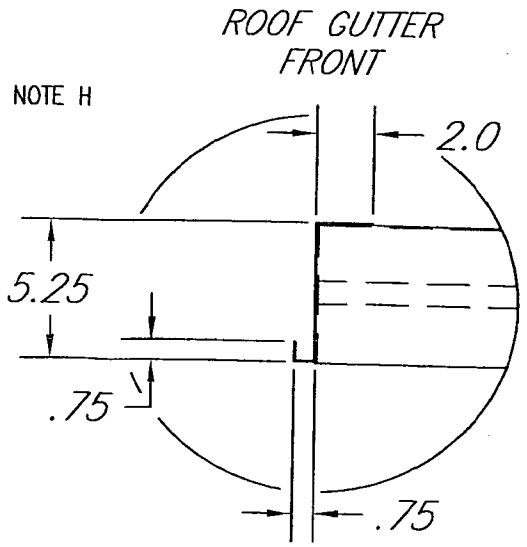

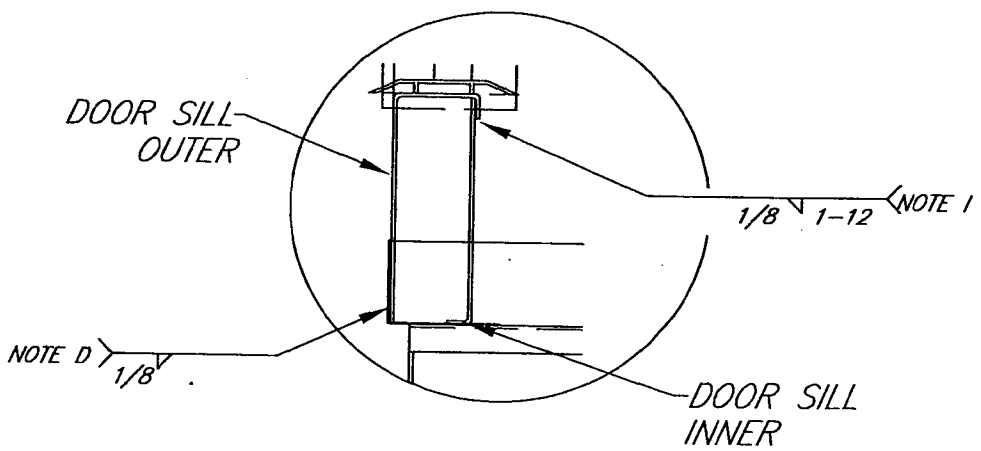

MATERIAL: ASTM 653 COMMERCIAL QUALITY

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DO NOT SCALE		A & A SHEET METAL PRODUCTS, INC. LA PORTE, INDIANA 46350			
TOLERANCES		SE-KIR-ALE CABINETS	CAD DWG NO. 809004	SUB-DIR. BUILDINGS	
		TITLE BUILDING ASSEMBLY W/ WELDING NOTES			
		PART NUMBER AG4800FR4	REVISION		
		SCALE Not To Scale	SHEET NUMBER 8 OF 10		

ELECTRICAL LOAD CALCULATION FORM:

Model		AG4800FR4						Date:	10/2/2008	
	A.	Lighting Loads								
		1	Interior lighting loads (use actual lighting load if greater than calculated load):							
			Continuous Lighting Load:							
					(Based on internal area)					
			175	ft² x	0.8	VA/ft²		=	140	VA
			or Actual Lighting Load (if applicable)							
			3	x	88	WATTS x 125%		=	330	VA
		2	Exterior Lighting Loads:							
			0.83	A x 120 V	1	Fixtures x 125%		=	124.5	VA
	B.	Receptacle Loads								
			Noncontinuous Duty:							
			1	(number of receptacles) x 180				=	180	VA
	C.	Heating, A/C and Motor Loads								
		2	Larger of heating or A/C load					=	4992	VA
			1	Heater Load		4992	VA			
			0	A/C load		0	VA			
		2	Motor loads (use VA rating on motor if provided							
			Continuous motor load:							
			2.1	Ax	115	V x 125%	0	=	0	
						TOTAL VA		=	5626.5	VA
						TOTAL AMPS		=	23	A
			120/240V Panel board with main breaker rated				100	A	is suitable	

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5-27-09

SITE LOCATION:
PARKS & RECREATION DEPT.
FORGE POND GOLF COURSE
301 CHAMBERSBRIDGE ROAD
BRICK, NJ 08724

DRAWN MP	DATE 09/5/08	A & A SHEET METAL PRODUCTS, INC. LA PORTE, INDIANA 46350
CHECKED	DATE	SE-CUR-ALL CABINETS SERIAL NO. 809004 SUB-DIR. BUILDINGS
SALES REP KK	DATE	TITLE ELECTRICAL LOAD CALCULATIONS
CHIEF ENG	DATE	PART NUMBER AG4800FR4 REVISION
MANUFACT.	DATE	SCALE Not To Scale SHEET NUMBER 9 OF 10

CHEMICAL STORAGE BUILDING DRY CHEMICAL CALCULATION

General Information

		Height	Width	Depth			Height	Width	Depth	
Part Number	AG4800FR4									Date: 10/2/2008
	Building Dimensions (inches)	102	312	96						
	Explosion Relief Panel Size (	48	48							By: MP
Calculations for Buildings up to 12' High and 10' Deep					Walls		93	312	96	
	Explosion Relief (Yes/No)	NO	# Req.	0	Roof		n/a	312	96	
	Fire Rating (NR, FR2, FR4)	FR4			Explosion Relief Area:	27.917	square feet			
Interior Volume	1395.85	cubic ft								
Interior Area	119.00	sq ft	Door Quantity	1	Door	18	80	60	n/a	

Calculations:

1 HAZARD TYPE:

Chemical Storage building suitable for storing agricultural chemicals.

2 HAZARD ATMOSPHERE:

Exhaust shall shut down before dry chemical system activates
Exhaust opening protected with fire damper - 165°F Fusible Link
Vent opening protected with Fire Damper - 165°F Fusible Link

3 DETERMINE PERCENT OF UNCLOSABLE OPENINGS:

Building Surface area			(ft)		(ft)						
	Ceiling		26	x	8			=	208.0	square feet
	Floor		26	x	8			=	208.0	square feet
	Wall Front & Rear		26	x	8.5	x	2	=	442.0	square feet
	Wall Sides		8	x	8.5	x	2	=	136.0	square feet
					Total Surface Area			=	994.0	square feet
Door Opening										
	Door design allows for automatic closing									
	Door		6.7	x	5.0	(x1)		=	33.5	square feet
	Calculation		33.5	/	994.0	x	100%	=	3.4	
		Door Opening		is less than		5%	Acceptable			
							(DOORS ARE EQUIPPED WITH DOOR CLOSERS)			

4 HAZARD VOLUME:

Building Volume = 1395.9 cubic ft

5 AREA OF COVERAGE:

Building Area = 119.0 square ft

6 DETERMINE NUMBER OF TANKS REQUIRED:

A. Area of Coverage Method		Maximum Area per	50	lb Tank	=	288	square feet	
		50	lb Tank	Acceptable				
B. Hazard Volume		Maximum Area per	50	lb Tank	=	1,396	cubic feet	
		50	lb Tank	Acceptable				
C. Longest Side per Nozzle								
	Number of Nozzle(s) (Nozzle Spacing Method)	=	2					
	Number of Nozzle(s) (Area/sq ft Method)	=	1					
	Number of Nozzle(s) Required for System		2					
	Length (Width) Direction	=	13.0	ft				
	13.0	is less than	16 ft	Acceptable				
	Depth Direction	=	4	ft				
	4	is less than	16 ft	Acceptable				

7 DETERMINE NUMBER OF DETECTORS REQUIRED:

Number of Detector(s) by Area Method	100 sq ft per Detector					
	2	Detector(s)				
Spacing Between Detectors Method	10 ft Maximum Between Detectors					
Length (Width) Direction	=	6.5	ft			
6.5	is less than or equal to	10 ft	Acceptable			
Number of Detectors Required		4				
Spacing from Wall Method	5 ft maximum from Wall					
Depth Direction	=	4	ft			
4	is less than	5 ft	Acceptable			
Number of Detectors Required in Depth		1				
Number of Detector(s) Required for System		2				

8 SYSTEM REQUIREMENTS:

Tank Size	50	lb using Foray
Nozzle(s)	4	TFN-3/4 Total Flooding Nozzles
Detector(s)	3	Clip-on Style Detectors

T. R. ARNOLD & ASSOCIATES, INC.
P. O. BOX 1081
ELKHART, IN 46515
State(s) NJ-IBC
Accredited Evaluation and Inspection Agency
This document is certified as being in conformance with State Building Codes
Date MAY 28 2009
Approval of this document does not authorize or approve any omission or deviation from the requirements of applicable State Laws.

FM APPROVALS

FM APPROVALS
NO CHANGES ARE TO BE MADE WITHOUT NOTIFICATION TO AND APPROVAL FROM FACTORY MUTUAL RESEARCH CORPORATION

SPACE RESERVED FOR STAMPS OF APPROVAL

5-27-09

SITE LOCATION:
PARKS & RECREATION DEPT.
FORGE POND GOLF COURSE
301 CHAMBERSBRIDGE ROAD
BRICK, NJ 08724

DESIGN MP	DATE 09/5/08	A & A SHEET METAL PRODUCTS, INC. LA PORTE, INDIANA 46350
CHECKED	DATE	SE-CUR-AL CABINETS SERIAL NO. 809004 SUB-DIR. BUILDINGS
SALES REP KK	DATE	TITLE DRY CHEMICAL CALCULATIONS
CHIEF ENG	DATE	PART NUMBER AG4800FR4 REVISION
MANUFACT.	DATE	SCALE Not To Scale SHEET NUMBER 10 OF 10

RECEIVING CLERK _____
DATE REC'D _____

ZONING PERMIT APPLICATION

PERMIT # 7/16/10
DATE ISSUED ZP-DD-516

BLOCK: 702 LOT: 5 QUALIFIER: _____ SITE ADDRESS: 301 Chambers Bridge Rd

IDENTIFICATION:

1. NAME OF OWNER IN FEE: County of Ocean
   COMPLETE ADDRESS: 301 Chambers Bridge Rd
   Brick, NJ 08723
   PHONE # 732-920-4733 EMAIL: _____

2. NAME OF APPLICANT: County of Ocean
   APPLICANT ADDRESS: 301 Chambers Bridge Rd
   Brick, NJ 08723
   PHONE # _____ EMAIL: _____

3. RESPONSIBLE PERSON FOR WORK: Scott Binckley
   PHONE# 732-920-4733 FAX# 732-477-2757

4. SIGNATURE OF APPLICANT: _____

FOR OFFICE USE ONLY

FEE SUMMARY:

APPLICATION FEE: $ Exempt
OTHER: $ _____
TOTAL: $ _____

REQUIRED BY APPLICANT

RESIDENTIAL: _____
COMMERCIAL: _____
EXISTING USE: _____
PROPOSED USE: _____

BOARD APPROVAL: ___ PB ___ ZB
RESOLUTION#: _____
APPROVAL DATE: _____

COMMERCIAL

PROJECT DESCRIPTION: (PLEASE CHECK APPLICABLE WORK & DESCRIBE)
*NEW BUILDING: ✓ *ADDITION _____ *ALTERATION _____ *PORCH _____ *DECK _____

POOL: ABOVE GROUND _____ IN GROUND _____ FENCE: HEIGHT _____ TYPE _____

HEIGHT: 8.5' (*IF APPLICABLE)

OTHER _____

DESCRIPTION: Slab for Pre-fab pesticides Storage Building

ZONING REVIEW:
DATE REVIEWED: 7/15/10 DATE DENIED: _____ DATE APPROVED: 7/15/10 INTLS: MAC

(SEE BACK PAGE)

TOWNSHIP OF BRICK ZONING CHECKLIST

1) **Two (2) copies of plot plan containing:**

- All existing and proposed structures
- All dimensions of the lot and structures
- All setbacks from the structures to the property lines
- All adjacent streets and waterways
- If applicable, include a copy of the Zoning Board of Adjustment Resolution, the date that the map was signed, and/or the date that the subdivision map was filed with the Ocean County Clerk, along with the file map and number.

2) **Two copies of the plans with dimensions and heights noted:**

- Floor plans and elevations
- Signed site plans
- Property map
- Survey map

Choose which is applicable for submission

3) **Plot plans and building plans must match for complete review**

NOTE: NO PARTIAL, TAPED, FAXED, REDUCED OR ENLARGED COPIES CAN BE ACCEPTED

01/2010

245 Attachment 5

Township of Brick

SCHEDULE OF AREA, YARD AND BUILDING REQUIREMENTS
Township of Brick
Ocean County, New Jersey

[Amended 6-26-1979 by Ord. No. 354-2B-79; 4-22-1980 by Ord. No. 354-2H-80; 10-14-1980 by Ord. No. 354-2N-80; 9-23-1980 by Ord. No. 354-1B-80; 8-25-83 by Ord. No. 354-2SS-83; 11-5-1984 by Ord. No. 354-2-AAA-84; 11-5-1984 by Ord. No. 354-2CCC-84; 6-24-1986 by Ord. No. 354-2WWW-86; 9-13-1988 by Ord. No. 354-2TTTT-88; 9-27-1988 by Ord. No. 354-2XXXX-88; 9-12-2000 by Ord. No. 354-2EE-00; 5-9-2000 by Ord. No. 354-2Z-00; 3-26-2002 by Ord. No. 354-2C-02; 11-26-2002 by Ord. No. 354-2L-02; 3-25-2003 by Ord. No. 354-2D-03; 6-13-2006 by Ord. No. 19-06]

Zone	Minimum Lot Size						Minimum Required Yard Depth						Maximum Lot Coverage by Building	Maximum Building Height				Minimum Floor/ Building Area (square feet) 2 stories/1 story	Maximum Allowable Impervious Coverage
	Interior Lots			Corner Lots			Principal Building				Accessory Building								
	Area (square feet)	Width (feet)	Depth (feet)	Area (square feet)	Width (feet)	Depth (feet)	Front Yard (feet)	Side Yard, Each (feet)	Both Sides Combined (feet)	Rear Yard (feet)	Side Yard (feet)	Rear Yard[3] (feet)		Stories	Eaves (feet)	Feet	Ridge (feet)		
R-R	40,000	150	150	40,000	150	150	50	25		50	25	25	25%	–	25			–	
RR-2	See § 245-90.																		
RR-3	See § 245-103.																		
R-20	20,000	100	125	25,000	100	125	40	15	–	40	10	10	25%	–	25	35	38.5	–	
R-15	15,000	100	115	17,250	100	115	35	12	–	35	10	10	25%	–	25	35	38.5	–	
R-10	10,000	90	100	10,500	100	100	30	6	20	20	5	5	30%	–	25	35	38.5	–	
R-7.5	7,500	75	90	9,000	75	90	25	6	15	15	5	5	30%	–	25	35	38.5	–	
R-5	5,000	50	75	6,000	50	75	20	5	12	15	5	5	35%	–	25	35	38.5	–	
O-P	15,000	100	150	15,000	100	150	50	10	–	50	20	50	35%[2]	2	–	35	38.5	1,500	70%
B-1	10,000	100	90	12,500	100	125	30	10	–	20	10	20	30%[2]	2	–	35	38.5	1,000	60%
B-2	20,000	125	125	20,000	125	125	50	10	–	50	10	50	30%[2]	2	–	35	38.5	2,000	65%
B-3	2 acres	200	200	2 acres	200	200	75	30	–	50	20	50	25%[2]	–	–	35	38.5	2,000	65%
B-4	5 acres	300	300	–	–	–	100	50(150[1])	–	100(150[1])	20	50	25%	3	–	35	38.5	30,000	70%
M-1	5 acres	300	300	5 acres	300	300	100	50	–	150	75	150	30%[2]	–	–	35	38.5	5,000	65%
R-M	25 acres	350	200	–	–	–	50	50	–	30	30	30	20%	–	25	35	38.5	–	65%
O-P-T	40,000	150	150	40,000	150	150	50	20	–	50	20	50	25%[2]	2	–	35	38.5	2,000	50%
H-S	See § 245-261.													–	–	–	–		70%

NOTES:
1 If adjacent to residential zone or use.
2 The maximum lot coverage shall refer only to that percentage of an affected lot which is suitable for building.
3 For rear yard setback requirements for accessory buildings on waterfront property, see § 245-10D.

OFFICE USE ONLY

ZONING REVIEW:

DATE REVIEWED: _____ DATE DENIED: _____ DATE APPROVED: _____ INTLS: _____

DATE:	COMMENTS:	INITIALS:

Brick Township
401 Chambers Bridge Rd.

Brick, NJ 08723
(732) 262-1027

Date Issued:
Application Number: ZA-10-00718
Application Date: 07/15/2010
Project Number:
Permit Number:
Fee: $0

Zoning Permit

Worksite **301 CHAMBERS BRIDGE RD.**
Location: **Brick Township, NJ**

Block: **702**
Lot: **5**
Qualifier:
Zone: **R-R**

Owner: **OCEAN COUNTY**
Address: **101 HOOPER AVE**
TOMS RIVER, NJ 08753

Applicant: **County of Ocean - Forge Pond Golf Course**
Address: **301 Chambers Bridge Road**
Brick , NJ 08723

Application Approved Date: 07/15/2010

This Certifies that an application for the issuance of a Zoning Permit has been examined.

Use is: Public
Nonconforming Use is:

Work Description:
Shed - Construct 8' x 26' prefabricated shed for pesticide storage as per Capital Project Approval Resolutiion R-24-09, dated April 22, 2009.

Upon review it was determined that:

- ☑ Use is permitted by Ordinance
- ☐ Use is permitted by Variance approved on:
- ☐ Valid Nonconforming Use is established by
  - ☐ Zoning Board of Adjustment
  - ☐ Zoning Officer

Office of Zoning, Michael P. Fowler — 07/15/2010
Date

Michael P. Fowler, Township Planner — 7/15/10
Date

OCEAN COUNTY PARKS & RECREATION

Ocean County Golf Course at Atlantis
Country Club Boulevard
Township of Little Egg Harbor, N.J. 08087
(609) 296-2444

Ocean County Golf Course at Forge Pond
301 Chambers Bridge Road
Brick, N.J. 08723
(732) 920-8899

Ms. Nelson,

I have enclosed plans for our new chemical storage unit at the Forge Pond County Golf Course Maintenance Facility on Chambersbridge Road. They include an architectural drawing noting the location of the unit on the property, as well as specifications from the manufacturer. Our unit is the AG4800 model measuring 8'X26'. It is complete with self contained fire suppression, explosion proof lighting and many more safety features bringing us in line with DEP regulations for pesticide storage.

If you have any questions or need further information please do not hestate to call me at 732-920-4733.

Regards,

Scott Binkley

Scott Binkley
Golf Superintendent
Forge Pond County Golf Course

BRICK TOWNSHIP PLANNING BOARD

CAPITAL PROJECT APPROVAL RESOLUTION

RESOLUTION R-24 -09

April 22, 2009

File
OC PrR
BusAd
Council
Zoning

WHEREAS, the **Forge Pond Golf Course Maintenance Facility, Ocean County Parks & Recreation,** intends to construct a chemical storage unit at the facility located on Block 702, Lot 5, necessitating the expenditure of public funds: and

WHEREAS, pursuant to N.J.S.A. 40:55D-31, this proposed action as described above was referred to the Planning Board for its recommendation; and

WHEREAS, Scott Binkley, Golf Superintendent, Forge Pond County Golf Course, presented to the Planning Board certain information and materials relating to the construction, installation and necessity of these improvements;

NOW, THEREFORE, the Board does, based upon the foregoing information, make the following findings:

1. The proposal is consistent with the Master Plan and in particular those aspects of the Master Plan relating to the development of public facilities and the location thereof.

NOW, THEREFORE, be it resolved by the Brick Township Planning Board on this 22nd day of April, 2009 that it favorably recommends the undertaking and completion of this project by the Ocean County Parks and Recreation.

MOVED BY: Ms. Tabor

SECONDED BY: Councilman Toth

VOTING IN THE AFFIRMATIVE: Mr. Liloia, Mr. Marra, Ms. Tabor, Councilman Toth, Mr.Rappoccio, Mr. Palmieri, Mr. Coakley, Mr. Hahn, Mr. Catalano

VOTING IN THE NEGATIVE:

INELIGIBLE TO VOTE: Mr. Patterson

ABSTAINING:

ABSENT: Mr. Underwood

CERTIFICATION

I, JUDITH FOX NELSON, Clerk of the Planning Board of the Township of Brick, County of Ocean, State of New Jersey, do herby certify that I am duly authorized to certify Resolutions. I certify that the forgoing Resolution was adopted by the Planning Board of the Township of Brick at a meeting held on the 22nd day of April, 2009.

Judith Fox Nelson

JUDITH FOX NELSON
CLERK OF THE PLANNING BOARD

Building Specifications
Hazmat Buildings
Pesticide Buildings
Custom Buildings
Accessories
Order Online
Shipping Policy
Frequently Asked Questions

Approved By
FM Approved · UL Listed · NFPA · OSHA
US Safety Regualtions

Standard Features (Pesticide and Agri-Chemical Storage Buildings)

Models AG Buildings

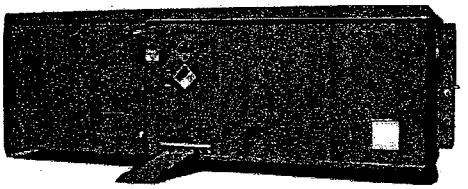
Securall® Chemical Storage Buildings are designed with a wide variety of standard features to help our customers gain compliance with hazmat storage codes quickly and easily. Pesticide Storage Buildings are designed for outdoor storage of hazardous agricultural and turf-management chemicals.

Securall's quality cannot be beat with standard features such as corrosion-resistant, galvannealed steel construction, tornado and hurricane resistant walls, and interlocking wall panels designed for superior strength and durability.

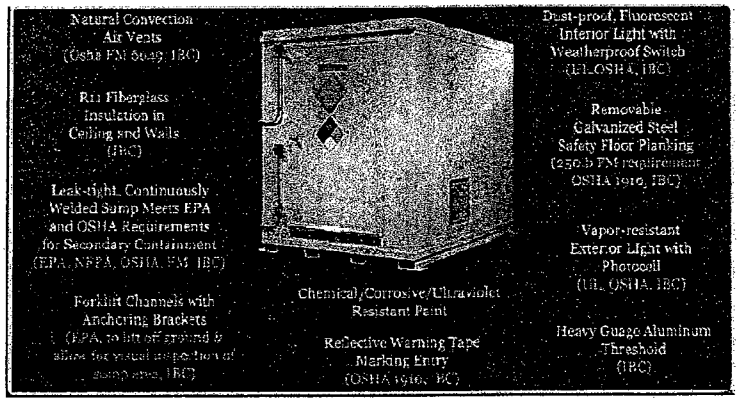
All models are FM approved, include UL listed electrical accessories, and are EPA and OSHA compliant.

Design Features

- R-11 Fiberglass insulation in ceiling and walls
- Commercial grade lockset
- Vapor Resistant Exterior Light with Photocell
- GFCI Duplex receptacle with weatherproof cover
- Steel shelving (3 Tiers) with raised edges
- Chemical/corrosive/ultraviolet resistant paint
- Leak-tight continuously welded sump
- Heavy gauge aluminum threshold
- Warning labels
- Safety posters
- Dust Proof/Fluorescent Interior Light with Weatherproof Switch
- Forklift channels with anchoring brackets
- Natural convection air vents
- Removable Galvanized Steel Safety Flooring
- Reflective warning tape marking entryway



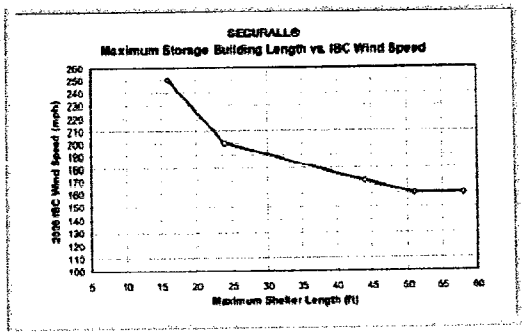
Pesticide and Agri-Chemical Storage Buildings



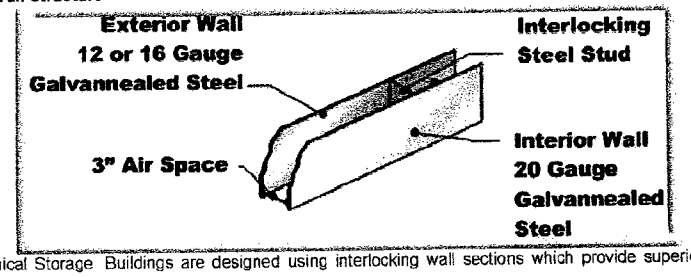
Exclusively Securall®

Tornado Resistant Walls

SECURALL Buildings have been tested to determine the amount of force they can withstand and were shown to withstand F-4 tornado force winds of 250 mph. The chart below demonstrates the wind speed that a particular length of wall will resist.



Interlocking Wall Structure



Securall Chemical Storage Buildings are designed using interlocking wall sections which provide superior strength and durability.

Exterior Wall Construction
SECURALL AG Buildings are all-welded using 12 gauge **(AG1600X-AG8000X Models)** and 16 gauge **(AG200X-AG1200X Models)** galvannealed steel outer walls and 20 gauge cold rolled steel inner walls provide maximum durability, weather resistance, and rigidity..

Fire Rating according to FM
2 Hour Fire Rated wall construction built with 1 hour fire rated roof construction, 1.5 hour fire rated door construction, and 1 layer of ¾" gypsum ultracode wallboard. Air inlet vents with UL Listed and labeled fire damper with louvers. Dampers have a galvanized steel frame, curtain-type galvanized steel blades and a UL Listed 165° F fusible link.

4 Hour Fire Rated wall construction built with 3 hour fire rated roof construction, 3 hour fire rated door construction, and 2 layers of ¾" gypsum ultracode wallboard. Air inlet vents with UL Listed and labeled fire damper with louvers. Dampers have a galvanized steel frame, curtain-type galvanized steel blades and a UL Listed 165° F fusible link.

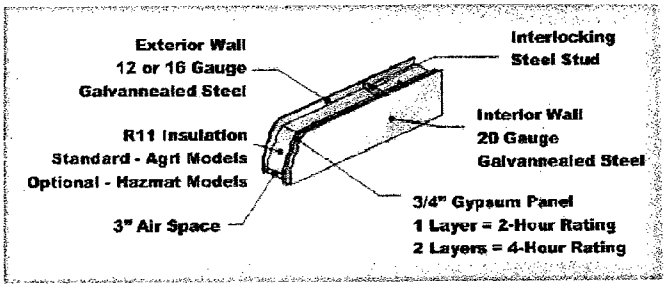
Safety Floor Planking
Slip resistant planking 13" wide, 12 gauge galvanized steel with raised perforated buttons and debossed holes protruding down. Galvanized steel floor planking above sump area for maximum corrosion resistance. Floor planking designed to sustain a minimum uniformly distributed load of 250 pounds per square foot. Floor planking and supports are removable to facilitate sump cleaning in the event of a spill.

Door Style
Door for **AG200-AG400** Provide one **(42" wide x 62.5")** and **AG600-AG1200** Provide one **(42" wide x 80")** high door to facilitate the unloading and loading of hazardous material within the building. Installed with a UL Classified commercial grade keyed lockset. The door shall serve as personnel entrance and exit.

Door for **AG1600-AG8000** Provide one 60" wide x 80" high double door to facilitate the unloading and loading of hazardous material within the building. Installed with a UL Classified commercial grade keyed lockset. The double door shall have one active leaf to serve as personnel entrance and exit. The active leaf must be equipped with a door closer. Available on B600-B1200 upgrade.

Explosion Relief Panels
Used in the construction of buildings designed to store Class IA and Class IB flammables. Explosion relief panels limit the damage within an enclosed hazardous location. When the panel(s) are subjected to an explosive force, the pressure relieving panel quickly vents the force before it causes major damage. The panels are designed to release at 20 psf.

Fire-Rated Buildings



Securall® Fire-Rated Storage Buildings (8'6"H X 42'W X 9'D Max Dimensions) carry the Factory Mutual System Approval label and are constructed based upon UL Fire Resistance Ratings classification criteria. In addition, all Fire-Rated Buildings come with hydraulic operated self-closing, fire-rated doors and fire dasmper protected vents.

Models AG Buildings

Hazmat Buildings | Chemical Buildings | Accessories | Standard Features: Hazmat/Chemical | Fire Rating
Hurricane Rating | Custom Buildings | Order Now | Get a Quote | Contact us | Home

TOWNSHIP OF BRICK ZONING PERMIT APPLICATION

(Please Type or Print Neatly in Ink, Not Pencil)

Applications missing any of the following information will delay processing and may be returned to you.

BLOCK 702 LOT 5 QUALIFIER _____

PROPERTY ADDRESS 301 CHAMBERSBRIDGE ROAD

PERSONAL NAME OF APPLICANT SCOTT BINKLEY

BUSINESS NAME OF APPLICANT COUNTY OF OCEAN, FORGE POND GOLF COURSE

MAILING ADDRESS OF APPLICANT 301 CHAMBERSBRIDGE ROAD

PROPERTY OWNER'S FULL NAME COUNTY OF OCEAN

PRESENT USE OF PROPERTY (check all that apply)

☐ Vacant Lot ☐ Single-family dwelling ☐ Multi-family dwelling
☒ Commercial (please describe) GOLF COURSE

PROPOSED USE OF PROPERTY (check all that apply)

☐ Vacant Lot ☐ Single-family dwelling ☐ Multi-dwelling
☒ Commercial (please describe) GOLF COURSE

PROPOSED CONSTRUCTION (check all that apply)

☐ New Building (please describe) _____ Height _____
☐ Addition - Height _____
☐ Alteration
☐ Porch or deck - Height _____
☐ Shed - Height _____
☐ Fence - Type _____ Height _____
☐ Swimming Pool ☐ in-ground ☐ above-ground
☒ Other (please describe) INSTALLATION OF PRE-FABRICATED STORAGE BUILDING

CHECKLIST

☐ All information completed above
☐ Two (2) copies of a plot plan containing:
☐ All existing and proposed structures
☐ All dimensions of the lot and structures
☐ All setbacks from the structures to the property lines
☐ All adjacent streets and waterways

Note: No partial, taped, faxed, reduced or enlarged copies can be accepted.

☐ If applicable, include a copy of the Zoning Board of Adjustment Resolution, the date that the map was signed, and/or the date that the subdivision map was filed with the Ocean County Clerk, along with the file map and number.

The applicant certifies that all statements and information made and provided as part of this application are true to the best of the applicant's knowledge, information and belief. The applicant further states that the applicant will comply with all other Municipal approvals and ordinances, and all County, State, and Federal Regulations.

SIGNATURE OF APPLICANT Scott Binkley Date _____

Reviewed by Zoning Office _____ Date _____ ( ) Approved ( ) Denied

March 2003

COPY