

areo

Hans Kristian Grani
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@hkgrani



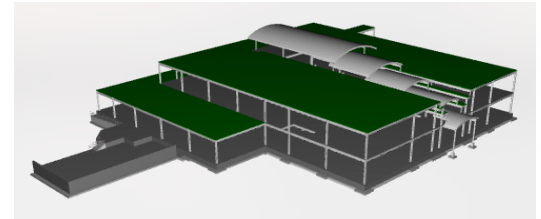
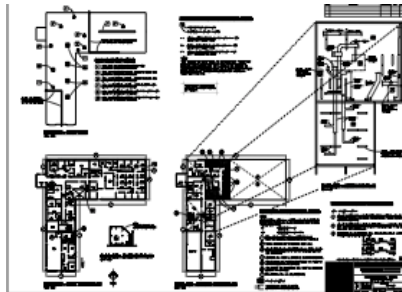
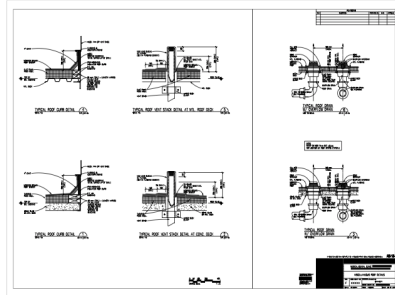
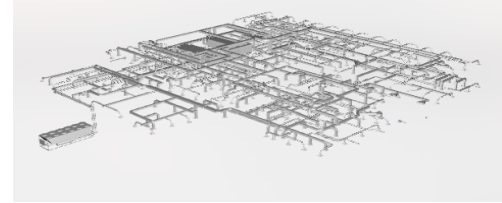
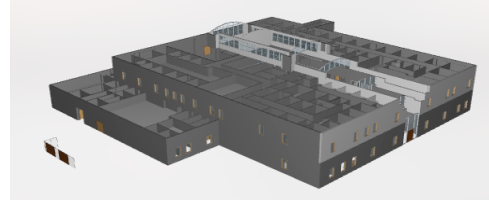
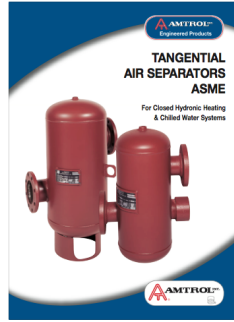
FDVU / FM - Show and tell

buildingSMART Norge medlemsmøte 17. september 2015

Byggeprosess

Eiendoms-
forvaltning

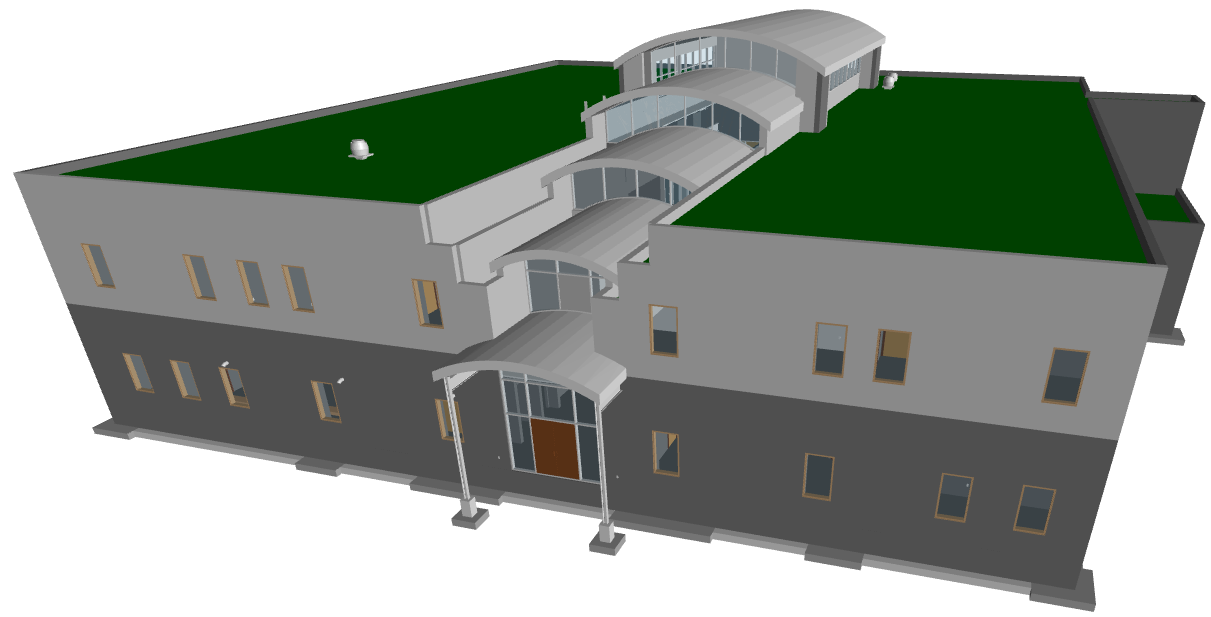




Navigation icons: Home, Share, Layers, Stack, Zoom (+, -, =, X)

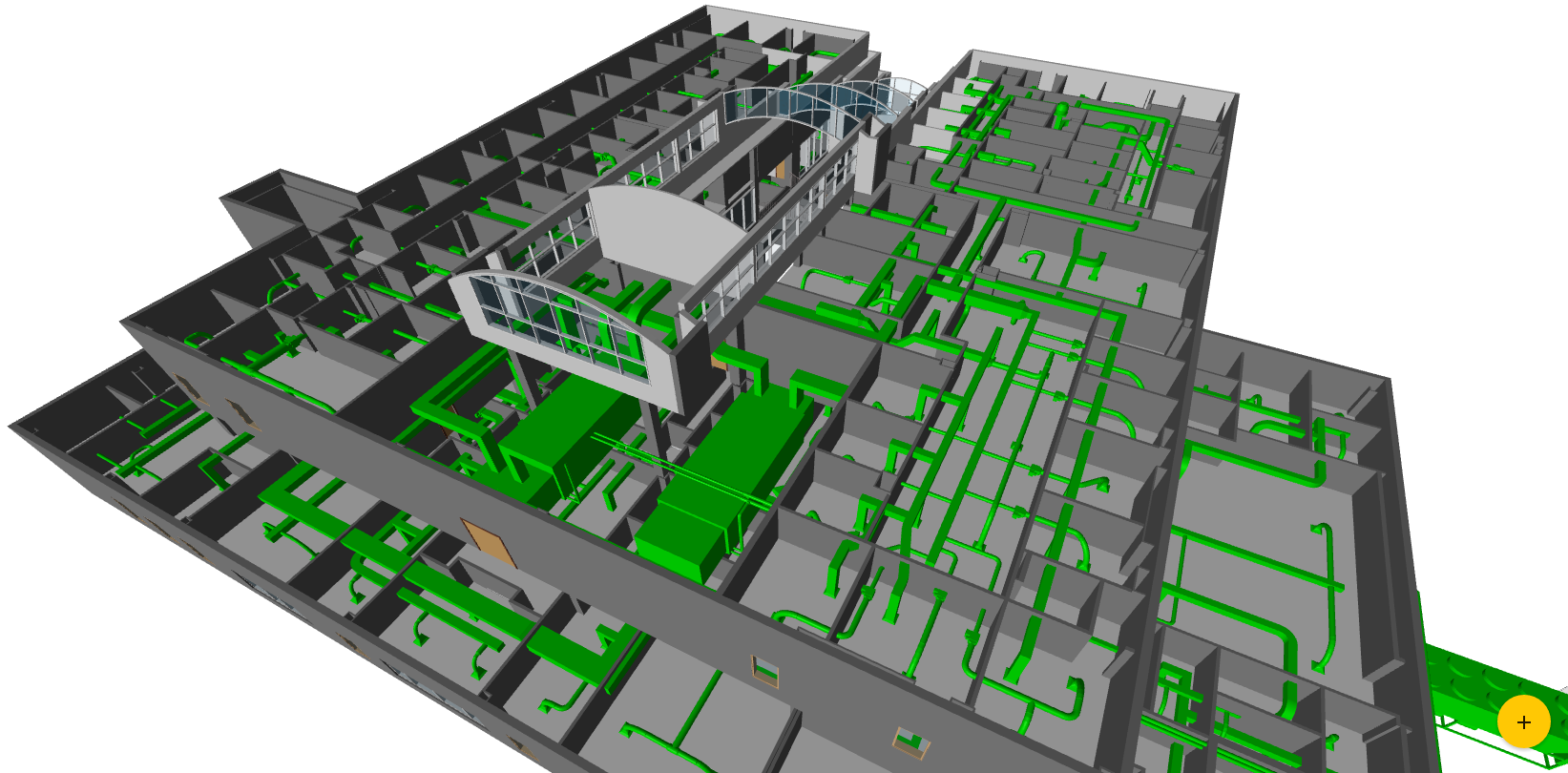
View controls: Eye icon, Orientation icons (Cube, Camera, Grid), Full Screen icon

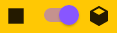
- > Roof - Main (67)
- > Second Floor (2828)
- > First Floor (3842)
- > TOF Footing (202)
- > undefined (9941)
- > Level 2 (936)
- > Roof - Mech (4)
- > Level 1 (1181)



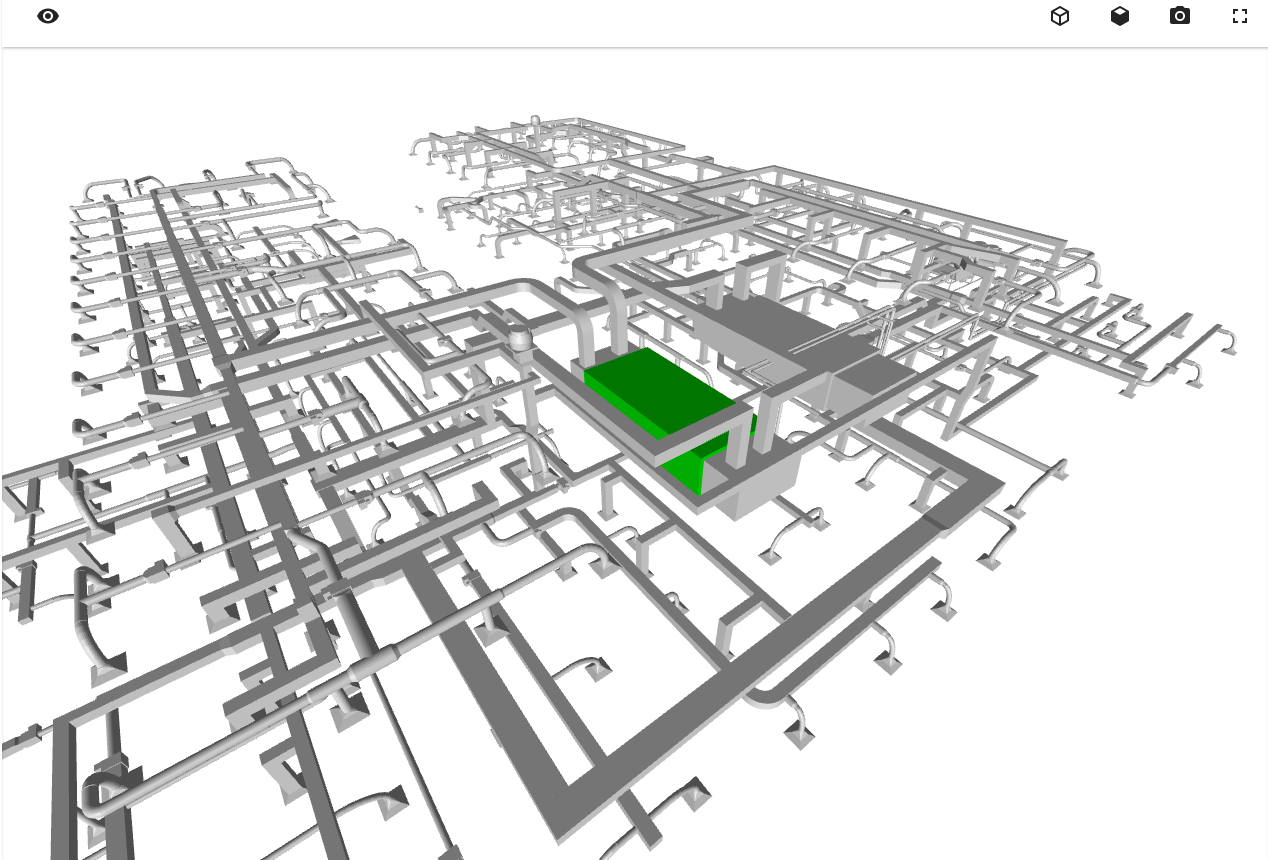
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- > Roof - Main (37)
- > Second Floor (2442)
- > First Floor (3379)
- > TOF Footing (5)
- > undefined (9834)
- > Roof - Mech (4)





- > Roof - Mech (10)
- > Second Floor (1705)
- > First Floor (2249)
- > TOF Footing (3)
- > undefined (8222)



M_Air Handling Unit - Split System - Ho...

DETAILS **PROPERTIES** RELATED

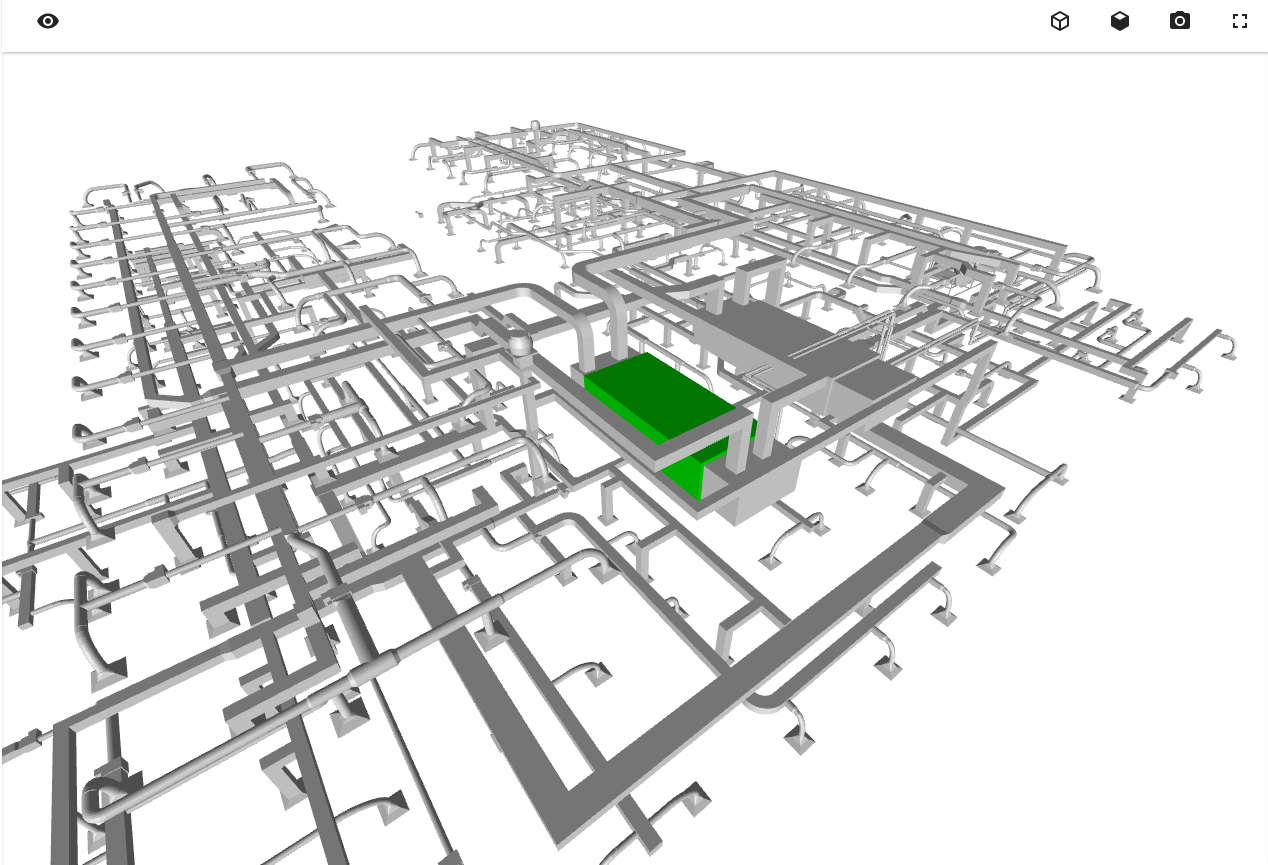
Constraints	
Host	Level : Second Floor
Offset	0
Level	Level: Second Floor

Mechanical - Flow	
Supply Airflow	74.7099431826452
Return Airflow	65.0771615410247

Mechanical	
External Static Pressure	37.7952
System Name	Hydronic Return 1,Hydronic Supply 1,Mechanical Return Air 1,Mechanical Supply Air 1
System Classification	Power,Hydronic Return,Hydronic Supply,Return Air,Supply Air

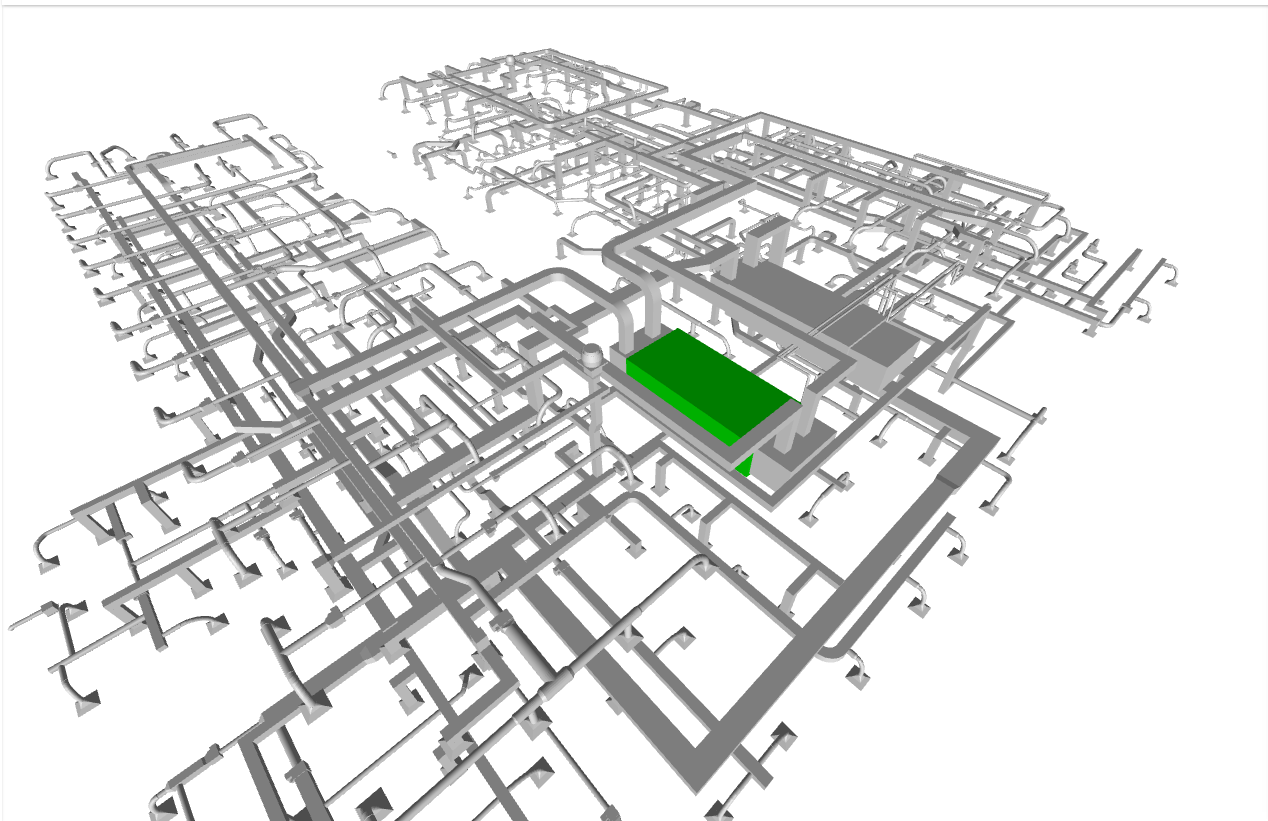
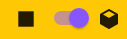
Electrical - Loads	
Panel	
Circuit Number	

- Roof - Mech (10)
- Second Floor (1705)
- First Floor (2249)
- TOF Footing (3)
- undefined (8222)



Other	
ProductionYear	2012
ReplacementCost	\$10,000
ModelReference	39MN-17
WarrantyGuarantorParts	TBD
AccessibilityPerformance	N/A
ExpectedLife	25 years
Size	Unit Size 17
Grade	A
WarrantyDurationParts	TBD
NominalLength	6.85m
AssetAccountingType	FIXED
Features	Filters, Heating/Cooling Coils, Fan
Material	Galvanized Steel
Reference	Internet
WarrantyGuarantorLabor	TBD
WarrantyDurationLabor	TBD
NominalWidth	3.2m
Shape	Rectangular
NominalHeight	1.8m
WarrantyDescription	TBD
CodePerformance	15854
Constituents	N/A
Finish	Baked Enamel





- > Roof - Mech (10)
- > Second Floor (1705)
- > First Floor (2249)
- > TOF Footing (3)
- > undefined (8222)

M_Air Handling Unit - Split System - Ho...

- DETAILS
- PROPERTIES
- RELATED**

Documents

- AHU Product Data
- Air Handling Units Manufacturers Equipment Information
- Air Handling Units Preventative Maintenance Procedures
- Air Handling Units Product Data
- Air Handling Units-Damper Leakage Test
- Field Test Report-Air Handling Units-Preliminary Tests
- Lubrication Schedule-Air Handling Units
- Manufacturers Equipment Information-Air Handling Units
- Operations and Maintenance Data-Central Station Air Handling Units
- Operator Servicing Requirements-Central Station Air Handling Units





Markup

< 1/1 >

Air Handling Units Pr...

Medical/Dental Clinic

Preventive Maintenance Schedule

System: Central Station Air Handling Units

Maintenance Task Description	Frequency *	Skill Level **	Time Hours ***
Clean fan bearings. Clean grease lines.	Q	A	0.25
Lubricate fan bearings.	Q	A	0.25
Check fan sheeve alignment	Q	A	0.25
Check fan belt tension and adjust if required	Q	A	0.25
Inspect and test damper operating linkages with AHU operation	SA	A	0.25
Inspect coils and clean if required	SA	A	0.25
Inspect inside unit casing for mold or dirt and clean if required	A	A	0.5
Inspect and clean air flow measuring stations in supply, return & O.A.	A	A	0.5
Lubricate fan motors	A	A	0.25
Clean fan wheel and shaft	A	A	0.5
Inspect & tighten electrical power and control wiring connections	A	A	0.25
Inspect gasketing on access doors and unit casing anc repair or replace if damaged	A	A	0.25
Inspect flexible connection at fan outlet/inlet and replace if damaged	A	A	0.25

See Filter Section for Filter Service

* Frequency Legend

D	Daily
W	Weekly
M	Monthly
Q	Quarterly
SA	Semi-Annually
A	Annually

** Skill Level Legend

O	Unskilled Laborer
A	Apprentice Mechanic
J	Journeyman Mechanic
M	Master Mechanic
FT	Factory Trained Tech.

*** The time indicated is for the required to service one unit

Name
Air Handling Units Preventative Maintenance Procedures

ACL
 hkgrani

Subject

Type
Report

Asset
 M_Air Handling Unit - Split System - Horizontal:63300000 J:63300000 J:630076

Member

File
Click or drag to upload document

FORM 100.09-NOM1

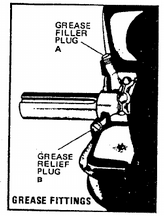
TABLE 1 – RELUBRICATABLE TYPE FAN BEARING CONDITIONS AND GREASING INTERVALS

SPEED	TEMPERATURE	CLEANLINESS	GREASING INTERVAL
500 RPM	Up to 150°F	Clean	2 to 6 Months
1000 RPM	Up to 210°F	Clean	2 Weeks to 2 Months
1500 RPM	Over 210°F	Clean	Weekly
Any Speed	Up to 150°F	Dirty	1 Week to 1 Month
Any Speed	Over 150°F	Dirty	Daily to 2 Weeks
Any Speed	Any Temp.	Very Dirty	Daily to 1 Week

TABLE 2 – MOTOR RELUBRICATION SCHEDULE

MOTOR ENCLOSURE TYPE	FRAME SIZE	STANDARD SERVICE	SEVERE SERVICE
O.D.P.R. OPEN DRIP PROOF	182T THRU 404T	18 MCS.	6 MOS.
T.E.F.C. TOTALLY ENCLOSED FAN COOLED	254T THRU 405T	1 YEAR	4 MOS.

NOTE: High Efficiency Motor Frame Sizes may vary from Frame Specifications Listed.



VARIABLE INLET VANES

If the unit contains variable inlet vanes, inspect the linkages where necessary. Lubricate the bearings at each end of the VIV blades with SAE 30 oil after cleaning any dust or dirt from around each bearing.

HUMIDIFIERS

Humidifiers should be controlled by a humidistat or other means to avoid over-humidification. Whenever steam or raw water is discharged into a system, high-limit humidistat should be used to control the humidifier.

When the system is new, the strainer screen should be inspected at least twice during the first 100 hours of operation.

BELTS

Belts should be checked again after 24 hours of operation. On multiple belt adjustable pulleys, the pitch depth should be checked to insure identical belt travel, power transfer and wear. Adjustable motor bases are provided for belt adjustment. Refer to Figure 34.

CAUTION: Motor pulleys, both adjustable pitch and fixed pitch and blower shaft pulleys are locked in position with either set screws or split taper lock bushings. All set screws and / or taper lock bolts must be checked for tightness and alignment before putting equipment into operation.

Name
Operations and Maintenance Data-Central Station Air Handling Units

ACL
hkgrani

Subject

Type

Asset
M_Air Handling Unit - Split System - Horizontal:63300000 J:63300000 J:630076

Member

File
Click or drag to upload document



6-year-defect-report-4.jpg



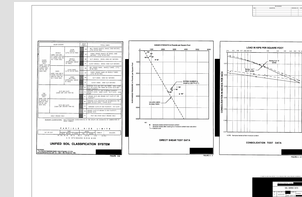
21024-K501-360P01_Frekvensomformer.pdf



21024-K501-360P02_Frekvensomformer.pdf



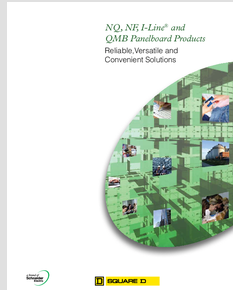
Building-Defects-Report-Perth.jpg



Clinic_018_Soil Boring Data.pdf



Fan-CentrifugalRoofExhauster-Upblast-ProductData.pdf



PanelBoard-ProductData.pdf



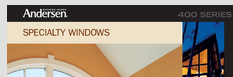
SmokeDetector-AudibleBase-ProductData.pdf



AirSeparator-ProductData.pdf

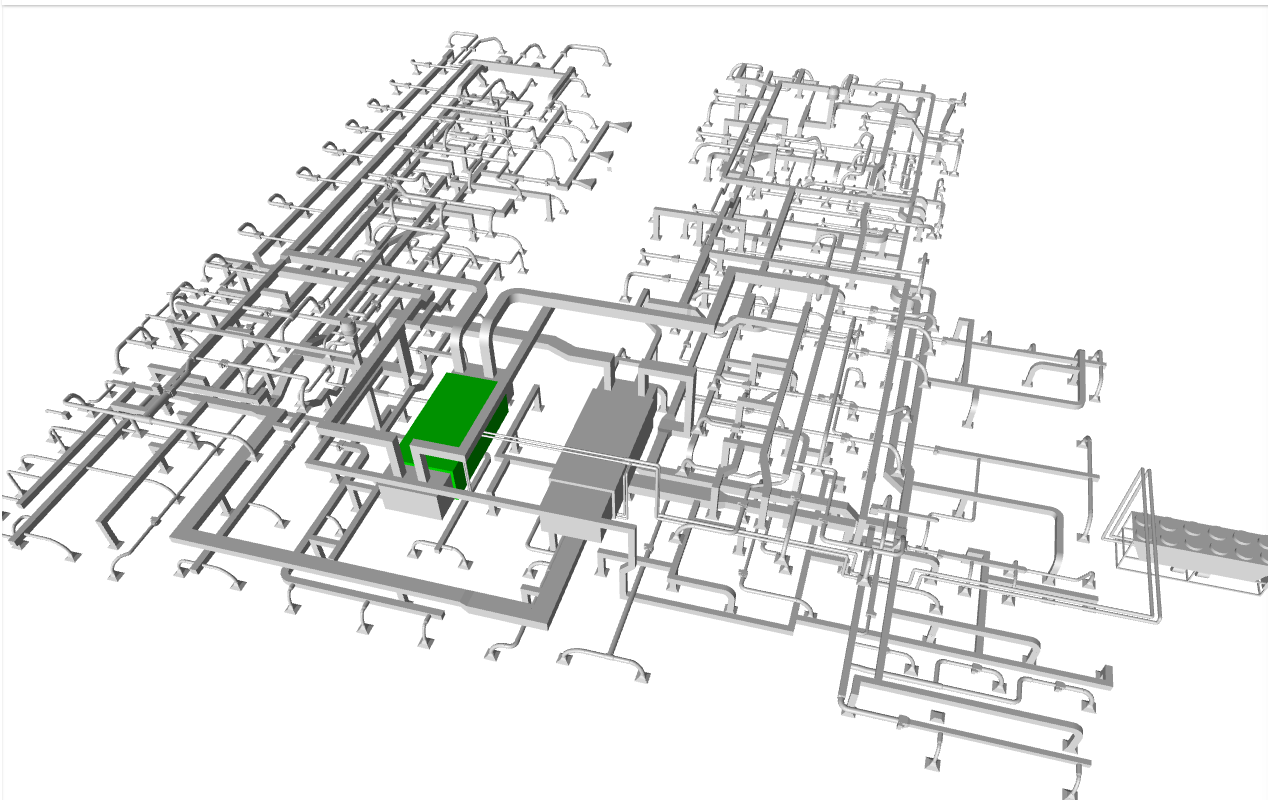


Door Type C_ProductData.pdf



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- > Roof - Mech (10)
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- Air Handling Units-Damper Leakage Test
- Field Test Report-Air Handling Units-Preliminary Tests
- Lubrication Schedule-Air Handling Units
- Manufacturers Equipment Information-Air Handling Units
- Operations and Maintenance Data-Central Station Air Handling Units
- Operator Servicing Requirements-Central Station Air Handling Units
- Preventative Maintenance Procedures-Air Handling Units
- Safety Instructions-Air Handling Units and AC Units
- Sound Vibration and Seismic Control-AirHandlingUnits

Processes

- Kvartalsvis vedlikehold **Completed**
- Halvårlig vedlikehold **Completed**
- Dårlig luftkvalitet **Open**

- Clean fab bearing. Clean grease lines
- Lubricate fan bearings
- Check fan sheeve alignment
- Check fan belt tesion and adjust if required
- Inspect and test damper operating linkages with AHU operation
- Inspect coils and clean if required

New action item [ADD](#)

Instruksjoner

Click or drag to upload document



Service utført.png

Kommentarer



Hans Kristian Grani 7 minutes ago
Forebyggende vedlikehold utført etter plan. Ingen avvik



Comment

ALL AVVENT FORESPURT ÅPEN FERDIGSTILT KANSELLERT

	★	Name	Lokasjon	Utstyr	Ordretype	Kategori	Frist	Prioritet	Sjekkliste	Status	V	Actions
<input type="checkbox"/>	★	Bytte filter ventilasjonsanlegg			Preventivt	Ventilasjon	Normal	Middels		Åpen	7	⋮
<input type="checkbox"/>	★	Innregulering av tilluft			Forespurt	Ventilasjon	ASAP	Middels		Åpen	7	⋮
<input type="checkbox"/>	★	Boning av gulv			Preventivt	Renhold	Normal	Middels		Forespurt	6	⋮
<input type="checkbox"/>	★	Tett sluk i dusj			Forespurt	Rør	ASAP	Kritisk		Forespurt	7	⋮
<input type="checkbox"/>	★	Reparere punktert vindu			Forespurt	Tømrer	Normal	Middels		Forespurt	5	⋮
<input type="checkbox"/>	★	Lekkasje i kjøkkenkran - byttes			Forespurt	Rør	ASAP	Middels		Åpen	8	⋮
<input type="checkbox"/>	★	Montere hyller på lab			Forespurt	Tømrer	Normal	Middels		Avvent	2	⋮
<input type="checkbox"/>	★	Sette opp skillevegg i kontor	📁 1E10		Forespurt	Tømrer	ASAP	Middels		Forespurt	19	⋮
<input type="checkbox"/>	★	Skifte lyspærer i atrium	📁 1CS3		Preventivt	Vaktmester	Ingen hast	Middels		Åpen	8	+

	★	Name	Lokasjon	Utstyr	Ordretype	Kategori	Frist	Prioritet	Sjekkliste	Status	V	Actions
<input type="checkbox"/>	★	Boning av gulv			Preventivt	Renhold	Normal	Middels		Forespurt	6	⋮
<input type="checkbox"/>	★	Tett sluk i dusj			Forespurt	Rør	ASAP	Kritisk		Forespurt		<ul style="list-style-type: none"> 🗑️ kanseller 👍 godkjenn — avvent ✕ Delete
<input type="checkbox"/>	★	Reparere punktert vindu			Forespurt	Tømrer	Normal	Middels		Forespurt		
<input type="checkbox"/>	★	Sette opp skillevegg i kontor		📁 1E10	Forespurt	Tømrer	ASAP	Middels		Forespurt		

Åpen

- Bytte filter ventilasjonsanlegg 7 ☆
A Arbeidsordre created by Hans Kristian ...
Sep 16, 2015
- Innregulering av tilluft 7 ☆
A Arbeidsordre created by Hans Kristian ...
Sep 16, 2015
- Lekkasje i kjøkkenkran - byttes 8 ☆
A Arbeidsordre created by Hans Kristian ...
Sep 16, 2015
- Skifte lyspærer i atrium 8 ☆
A Arbeidsordre created by Hans Kristian ...
Sep 16, 2015

Forespurt

- Boning av gulv 6 ☆
A Arbeidsordre created by Hans Kristian ...
Sep 16, 2015
- Tett sluk i dusj 7 ☆
A Arbeidsordre created by Hans Kristian ...
Sep 16, 2015
- Reparere punktert vindu 5 ☆
A Arbeidsordre created by Hans Kristian ...
Sep 16, 2015
- Sette opp skillevegg i kontor 19 ☆
A Arbeidsordre created by Hans Kristian ...
Sep 16, 2015

Avvent

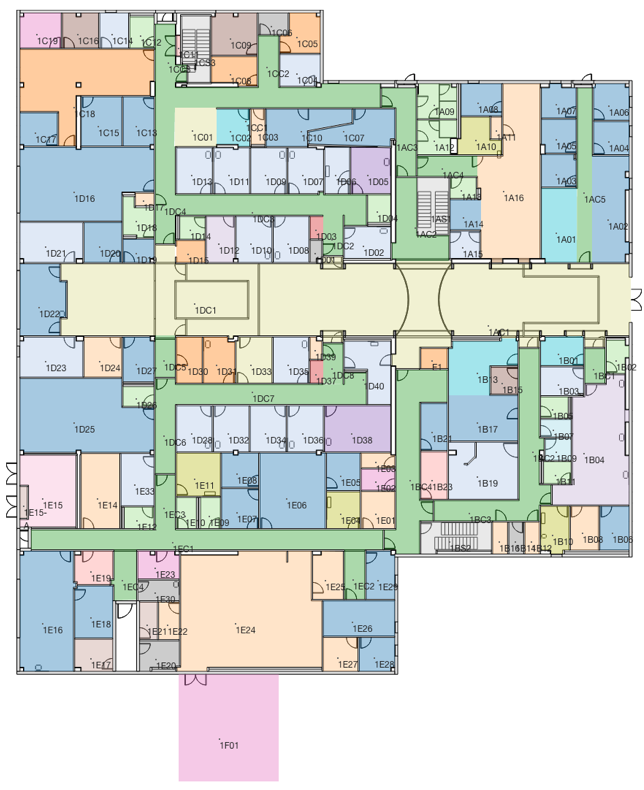
- Montere hyller på lab 2 ☆
A Arbeidsordre created by Hans Kristian ...
Sep 16, 2015

Ferdigstilt

Kansellert



- Furniture (118)
- Furnituretype (71)
- Member (534)
- Membertype (274)
- Openingelement (403)
- Plate (172)
- Platetype (102)
- Project (1)
- Railing (9)
- Sanitaryterminaltype (13)
- Site (1)
- Slab (3)
- Space (269)
 - No object type (269)
 - 1D21
 - 1C01
 - 1D07
 - 1DC3
 - 3R04
 - 1CC1
 - 3R03
 - 1BC4
 - 3D01
 - 1C09
 - 2B25
 - 1EC3
 - 2B10



1D21

DETAILS PROPERTIES RELATED

PSet_Revit_Identity Data	
Number	1D21
Name	GROUP IS
OmniClass Table 13 Category	13-41 41 99: Other Healing Spaces

PSet_Revit_Constraints	
Level	First Floor
Upper Limit	First Floor
Limit Offset	2.8
Base Offset	0

PSet_Revit_Dimensions	
Area	19.19172149999998
Perimeter	18.16099999999997
Unbounded Height	2.8
Volume	50.18309519999964

PSet_Revit_Phasing	
Phase	New Constructio



areo api documentation

description of the api

[Contact the developer](#)

api

Show/Hide | List Operations | Expand Operations | Raw

GET	/api/avatar/{type}/{urn}/{ownerUrn?}	Get avatar by type, urn, ownerUrn
GET	/api/files/{path*}	Endpoint to access files
PATCH	/api/orgs/{id}	Patch an existing org
POST	/api/orgs/{orgUrn}/teams	Add a team to the organization
DELETE	/api/orgs/{orgUrn}/teams/{teamUrn}	Delete a team
DELETE	/api/orgs/{urn}	Delete an existing organization
POST	/api/owners/{ownerUrn}/repos/{repoUrn}/query	Query endpoint
GET	/api/owners/{ownerUrn}/repos/{repoUrn}/search	Search endpoint
POST	/api/query	Query endpoint
POST	/api/repos/{ownerUrn}/{repoUrn}/assets	Post a new asset
GET	/api/repos/{ownerUrn}/{repoUrn}/assets	Get all asset
GET	/api/repos/{ownerUrn}/{repoUrn}/assets/{id}	Get an existing asset
PATCH	/api/repos/{ownerUrn}/{repoUrn}/assets/{id}	Patch an existing asset
GET	/api/repos/{ownerUrn}/{repoUrn}/components/{id}	Get one component
GET	/api/repos/{ownerUrn}/{repoUrn}/componentsByContainment	Components ordered by containment
GET	/api/repos/{ownerUrn}/{repoUrn}/componentsBySystem	Components ordered by system
GET	/api/repos/{ownerUrn}/{repoUrn}/documents	Get all document
POST	/api/repos/{ownerUrn}/{repoUrn}/documents	Post a new document
DELETE	/api/repos/{ownerUrn}/{repoUrn}/documents/{id}	Remove an existing document
GET	/api/repos/{ownerUrn}/{repoUrn}/documents/{id}	Get an existing document
PATCH	/api/repos/{ownerUrn}/{repoUrn}/documents/{id}	Patch an existing instance
POST	/api/repos/{ownerUrn}/{repoUrn}/documents/{id}/comments	Add a comment to an existing instance

- PATCH** /api/repos/{ownerUrn}/{repoUrn}/facilities/{facilityName}/assets/{id} Patch an existing asset
- GET** /api/repos/{ownerUrn}/{repoUrn}/ifc/{globalId}/documents Get all document
- POST** /api/repos/{ownerUrn}/{repoUrn}/processes Post a new process
- GET** /api/repos/{ownerUrn}/{repoUrn}/processes Get all process

Implementation Notes

Returns all process for the logged in user in the given repo

Parameters

Parameter	Value	Description	Parameter Type	Data Type
ownerUrn	<input type="text" value="areobygg"/>	Name of the owner	path	string
repoUrn	<input type="text" value="stranda10"/>	Name of the repo	path	string

[Try it out!](#) [Hide Response](#)

Request URL

```
http://localhost:8000/api/repos/areobygg/stranda10/processes
```

Response Body

```
{
  "context": "tilstand",
  "type": "process",
  "repository": {
    "_id": "14339770-5c2c-11e5-9c01-d3fca51be39a",
    "type": "repository",
    "name": "Stranda Sykehus",
    "urn": "stranda10",
    "ownerUrn": "areobygg",
    "avatar": "md_file_folder",
    "context": "repository"
  },
  "status": "",
  "name": "Løse takplater. NB! Asbest",
  "description": "Eternittplater løsner. Krever asbestsanering",
  "assignedTo": {
    "name": "Terje Tømmer",
    "_id": "e0469a40-e41f-11e4-a472-5936de52951d",
    "type": "user"
  },
  "_id": "3c817c60-5c31-11e5-85e5-937b86fb43e4",
```

Response Code

```
200
```



eller



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info@areo.io