PHILIPS

Healthcare

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Revision History

Note for Architects and/or Contractors: If revisions are listed, these drawings must be thoroughly reviewed so that all changes can be incorporated into your project.

Rev. Level	Date	Revision Description	By

Table of Contents

- Standard Reference Drawing-
Not Site Specific
Multi Diagnost Eleva - Flat Detector

Date | Order Number

Drawn By | Quote Number

Drawing Number
N-SRD050012

C1
Sheet 1 of 22

General Specifications

1. Responsibility
The customer shall be solely responsible, at its expense for preparation of site, including any required structural alterations. The site preparation shall be in accordance with plans and specifications provided by Philips. Compliance with all safety, electrical, and building codes relevant to the equipment and its installation is the customer's responsibility. Sufficiency of such plans and specifications, specifically including, but not limited to the accuracy of the dimensions described therein, shall be the sole responsibility of customer. The customer shall advise Philips of conditions at or near the site which could adversely affect the carrying out of the installation work and shall ensure that such conditions are corrected and that the site is fully prepared and available to Philips before the installation work is due to begin. The customer shall provide all necessary plumbing, carpentry work, or conduit wiring required to attach and install products ready for use.

2. Permits
Customer shall obtain all permits and licenses required by federal, state/provincial or local authorities in connection with the construction, installation and operation of the products and shall bear any expense in obtaining same or in complying with any related rules, regulations, ordinances and statutes.

3. Radiation Protection
The customer or his contractor, at his own expense, shall obtain the service of a licensed radiation physicist to specify radiation protection. (X-Ray Output 150KVp max.)

4. Asbestos and Other Toxic Substances
Philips assumes no hazardous waste (i.e., pcb's in existing transformers) exists at the site. If any hazardous materials are found, it shall be the sole responsibility of the customer to properly remove and dispose of this material at its expense. Any delays caused in the project for this special handling shall result in Philips time period for completion being extended by like period of time. Philips assumes that no asbestos material is involved in this project in any ceilings, walls or floors. If any asbestos material is found anywhere on the site, it shall be the customer's sole responsibility to properly remove and/or make safe this condition, at the customer's sole expense.

5. Labor
In the event local labor conditions make it impossible or undersirable to use Philips' regular employees for such installation and connection, such work shall be performed by laborers supplied by the customer, or by an independent contractor chosen by the customer at the customer's expense, and in such case, Philips agrees to furnish adequate engineering supervision for proper completion of the installation.

6. Schedule
The general contractor should provide Philips with a schedule of work to assist in the coordination of delivery of Philips supplied products which are to be installed by the contractor and delivery of the primary equipment.

7. Extended Installation or Turnkey Work by Philips.
Any room preparation requirements for Philips equipment indicated on these drawings is the responsibility of the customer. If an extended installation or turnkey contract exists between Philips and the customer for room preparation work required by the equipment represented on these drawings, then some of the responsibilities of the customer as depicted in these drawings may be assumed by Philips. In the event of a conflict between the work described in the turnkey contract workscope and these drawings, the turnkey contract workscope shall govern.

(05.0)

HVAC Requirement for General Equipment Locations

Heating, ventilation, air conditioning requirement for general equipment locations must maintain temperature between 72° +/- 5° fahrenheit (22° +/- 3° celsius) and non-condensing relative humidity at 20% - 80%.

(05.0)

Electrical Requirements
Velara 65 / 80 with PDU 4000

Supply Configuration: 3 phase, 3 wire power & grround, Delta or Wye
3 phase, 4 wire power with neutral & ground, Wye

Nominal Line Voltage: 400, 440, 460, or 480 VAC, 60 HZ.

Branch Power Requirement: 167 KVA

Circuit Breaker: 3 pole, 100 amperes (@ 480 V)

(06.0)

Minimum Site Preparation Requirements
(06.0)

A smooth efficient installation is vital to Philips and their customers. Understanding what the minimum site preparation requirements are will help achieve this goal. The following list clearly defines the requirements which must be fulfilled before the installation can begin.

1. Walls to be painted or covered, baseboards installed, floors to be tiled and/or covered, ceiling shall have grid tiles and lighting fixtures installed and operational.

2. Doors and windows, especially radiation protection barriers, installed and finished with locksets operational.

3. All electrical convenience, conduit, raceway and junction boxes installed and operational.

4. Incoming mains power operational and connected to room x-ray breaker.

5. 115v convenience outlets operational.

6. All support structures correctly installed. All channels, pipes, beams and/or other supporting devices should be level, parallel, and free of lateral or longitudinal movements.

7. All contractor supplied cables pulled and terminated.

8. A dust-free environment in and around the procedure room.

9. All HVAC (heating, ventilating and air conditioning) installed and operational as per specifications.

10. Architectural features such as computer floor, wood floor, casework, bulkheads, installed and finished. When technical cabinets are installed in a closet with doors, it is suggested that the customer install a temperature alarm in the event of an air conditioning failure.

11. All plumbing installed and finished.

12. Philips does not install or connect developing tanks, automatic processors or associated equipment, built in illuminators, cassette pass boxes, loading benches and cabinets, lead protective screens, panels or lead glass window and frame. This is to be done by the customer/contractor.

13. Refer to Transport Detail Page for clear door openings and corridor widths.

14. Internet access is required to be available in the control area priori to delivery of the system for the Web FSE Access. See Sheet N1 of the final drawing package for details.

Note
Once Philips has moved equipment into the suite and started the installation, the contractor shall schedule his work around the Philips installation team on site. It is suggested that a telephone be provided in the room to receive telephone calls. This would alleviate facility staff from answering calls for Philips personnel.

Remote Service Diagnostics
Medical imaging equipment to be installed by Philips is equipped with a service diagnostic feature which allows for remote and on site service diagnostics. To establish this feature, a RJ45 type ethernet 10/100/1000 Mbit network connector must be installed as shown on plan. Access to the customer's network via thier remote access server is needed for Remote Service Network (RSN) connectivity. All cost with this feature are the responsibility of the customer.

PHILIPS

- Standard Reference Drawing-
Not Site Specific
Multi Diagnost Eleva - Flat Detector

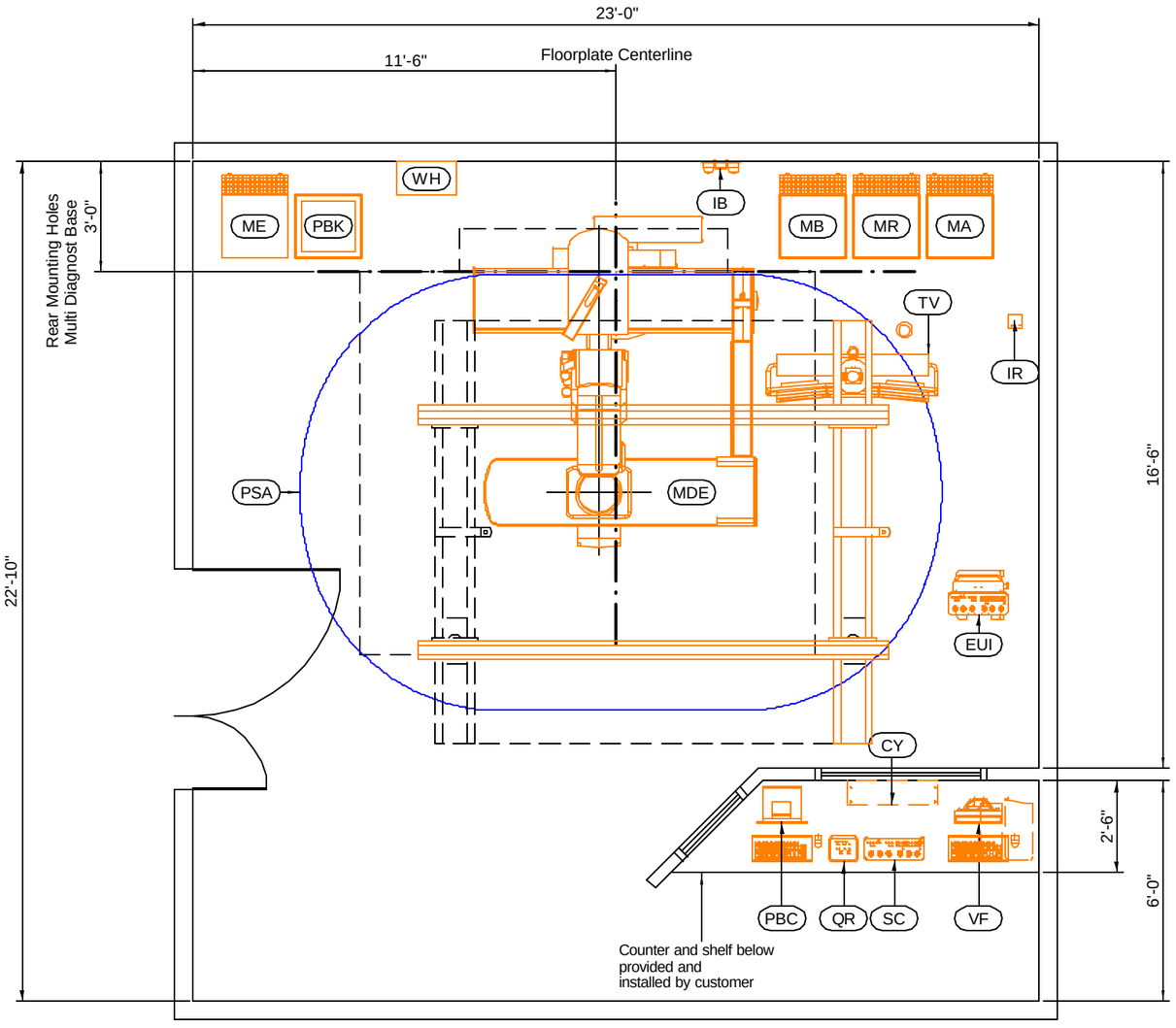
Date | Order Number

Drawn By | Quote Number

Drawing Number
N-SRD050012

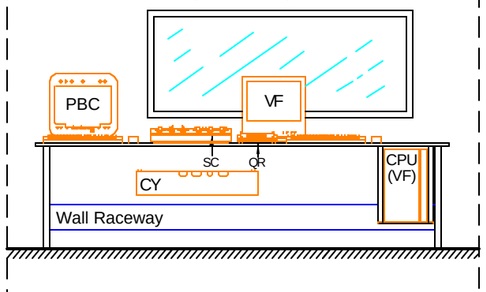
AN
Sheet 2 of 22

 01.01.09



Connection Box Mounting Options

Not Site Specific
(Not to scale)



Equipment Layout

Minimum Ceiling Height: 9' - 1/4" (2750mm)
Recommended Ceiling Height : 10' - 2" (3100mm)
See Ceiling Height Planning Guide - Sheet A2

Reported Ceiling Height: None

Ceiling heights (From top of floorplate to bottom of Unistrut) other than recommended may impact equipment functionality; consult with Philips.

0 1' 2' 4' 8'

Equipment Legend

A Furnished and installed by Philips
B Furnished by customer/contractor and installed by customer/contractor
C Installed by customer/contractor
D Furnished by Philips and installed by contractor
E Existing
F Future
G Optional item furnishd by Philips

	Equipment Designation	Description	Weight (lbs)	Heat Load (btu/hr)	Detail Sheet
A	MDE	Multi Diagnost Eleva FD (Right Version)	2923	3754	AD1
A	ME	Velara 80 Generator Cabinet (40E Rack)	521	1536	AD2
A	MB	Imaging Cabinet (40E Rack)	454	3412	AD2
A	MR	Peripheral Cabinet (40E Rack)	373	734	AD2
A	MA	Main Cabinet (40E Rack)	668	1194	AD2
A	PBK	PDU 4000/UPS	860	2450	AD2
A	EUI	Exam Room User Interface	57	41	AD2
A	IB	Indication Box	7	38	AD3
A	QR	Quick Review Console	3	7	AD3
A	SC	Stand Control	9	41	AD3
A	IR	Infra Red Receiver	1	3	AD3
A	PBC	Examination Control Console	24	136	AD3
A	VF	ViewForum Workstation - 18" LCD Monitor - Keyboard & Mouse - APC Smart UPS 1400 (Located on shelf under counter) - CPU (Located on shelf under counter)	146	1000	AD3
A	CY	Control Room Connection Box (Mounted under countertop)	22	31	AD3
A	WH	Cooling Unit 510 LN	45	2048	AD4
A	TV	Three LCD Monitor Suspension (BEST)	585	512	AD4
	PSA	Patient Safety Area	-	-	A2

PHILIPS

- Standard Reference Drawing-
Not Site Specific
Multi Diagnost Eleva - Flat Detector

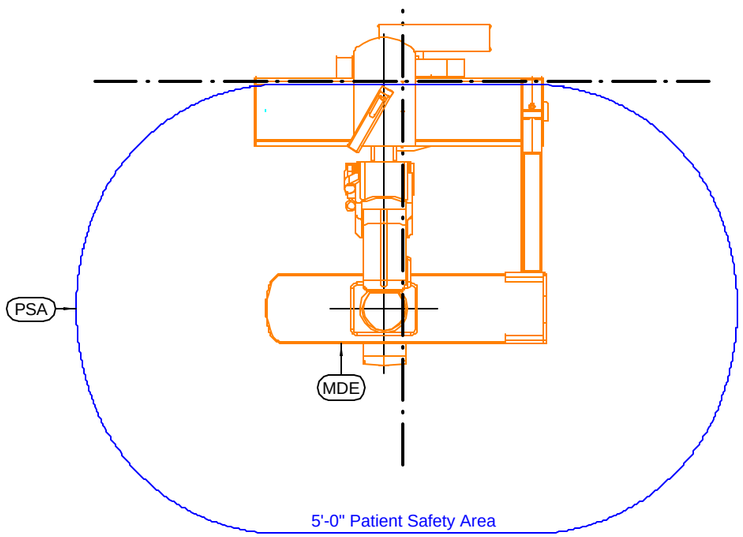
01.01.09

Date
Order Number
Drawn By
Quote Number
Drawing Number
N-SRD050012

A1
Sheet 3 of 22

Detail - Patient Safety Area (In Case of Angio Only)

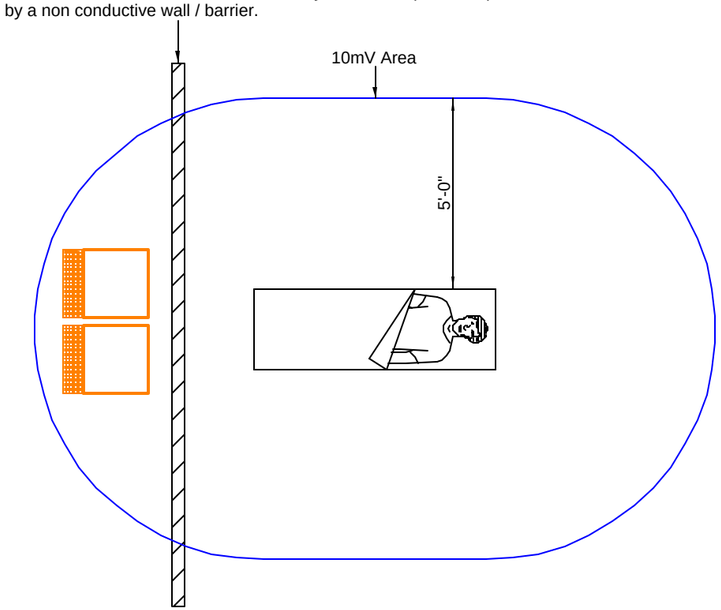
(08.0)



Only for interventional applications:
It is not allowed to place cabinets in the Patient Safety Area unless a non-conductive wall/ barrier is used.

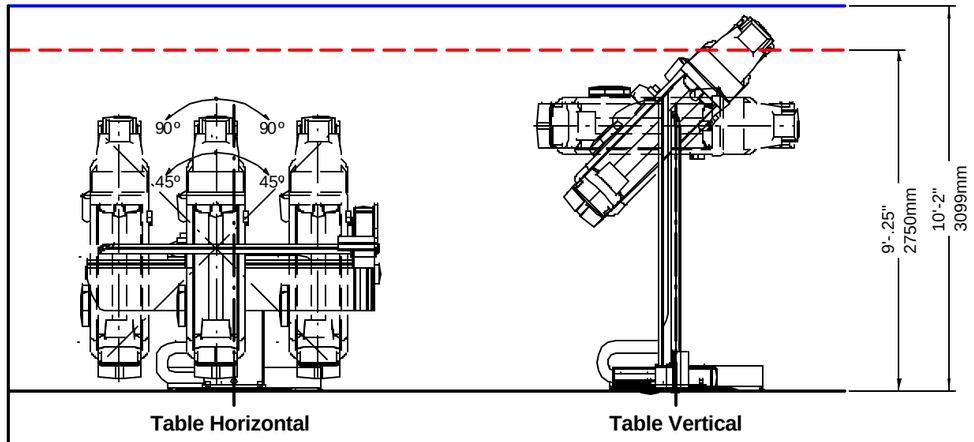
The patient safety area protects against the possibility of any electrical current transfer from the cabinets to the patient during an interventional procedure.
A potential difference between the patient table and any equipment not properly grounded (i.e. "leakage" between racks and table or different grounding potentials) may create sufficient current to harm the patient. Verify all safety issues with current codes and customer requirements.

Cabinets are allowed inside Patient Safety Area when patient is protected by a non conductive wall / barrier.



Detail - Ceiling Height Planning Guide

(08.0)



Ceiling Height Specification

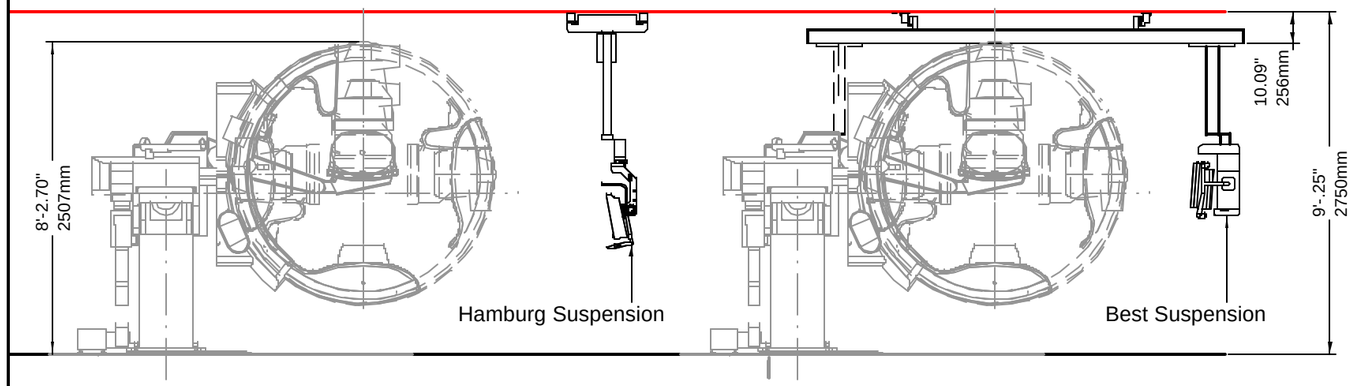
Minimum: 9' - 1/4"

Recommended: 10' - 2"

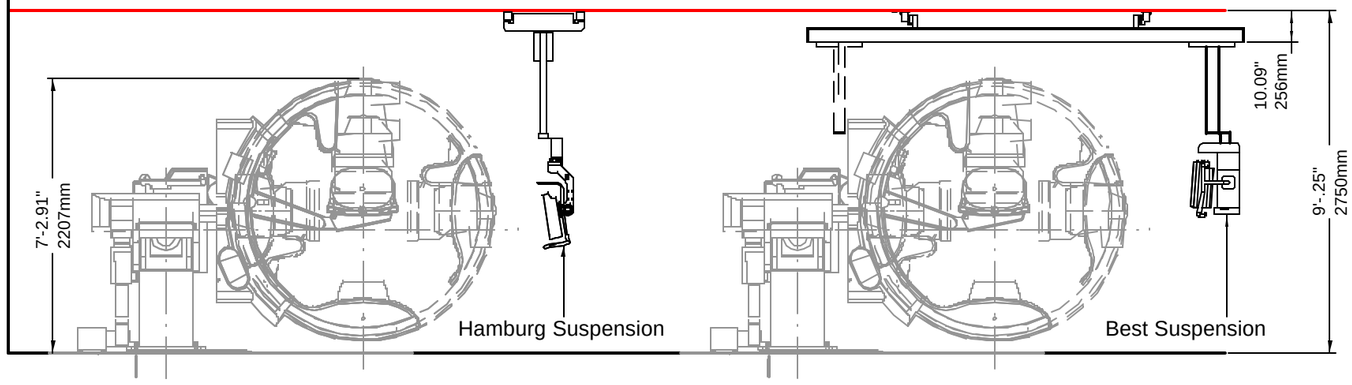
Maximum: 10' - 9 15/16"

* Between 9' - 1/4" & 10' - 2" software can be used to limit movement and avoid collision.

Front Views



Side Views - Highest Horizontal Position



Side Views - Lowest Horizontal Position

- Standard Reference Drawing- Not Site Specific Multi Diagnost Eleva - Flat Detector

Date

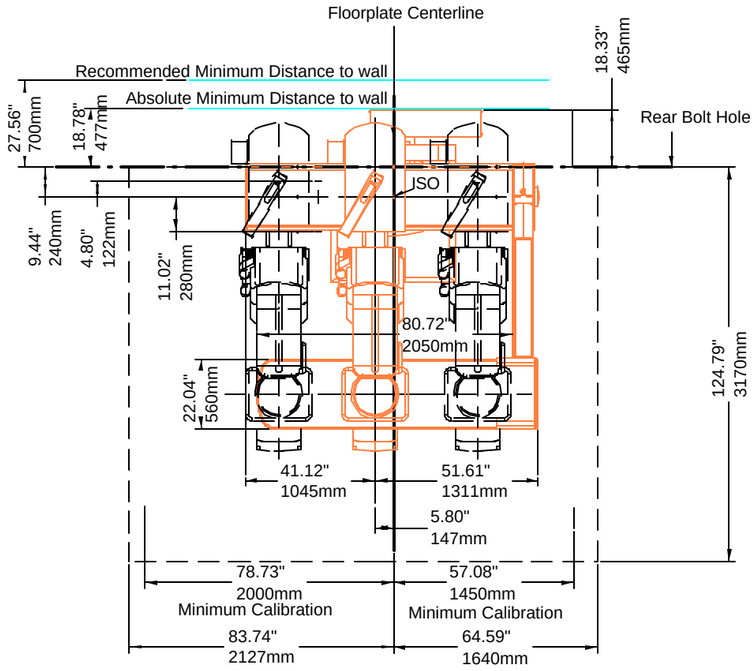
Order Number

Drawn By

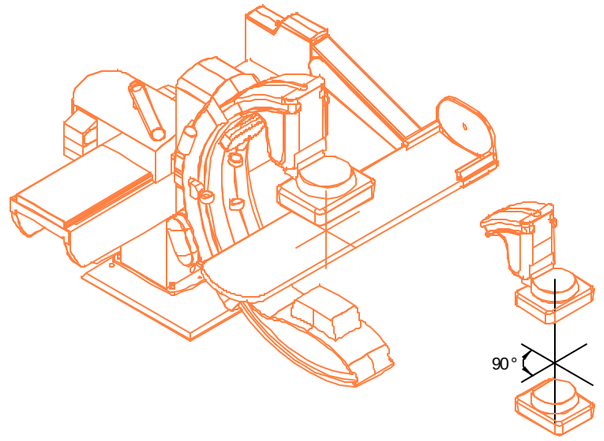
Quote Number

Drawing Number N-SRD050012

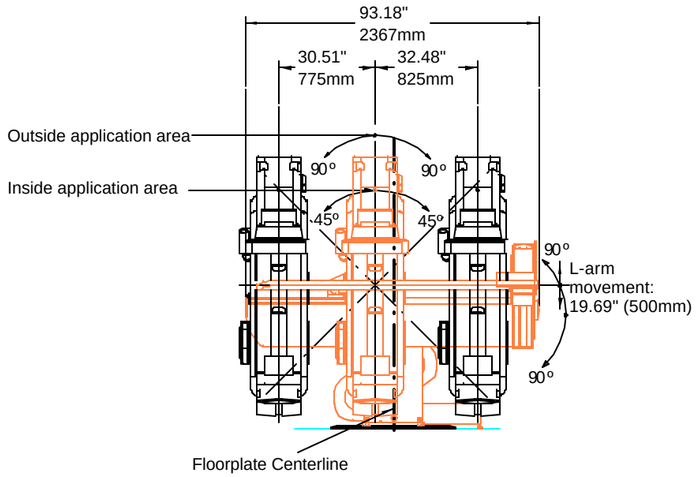
A2



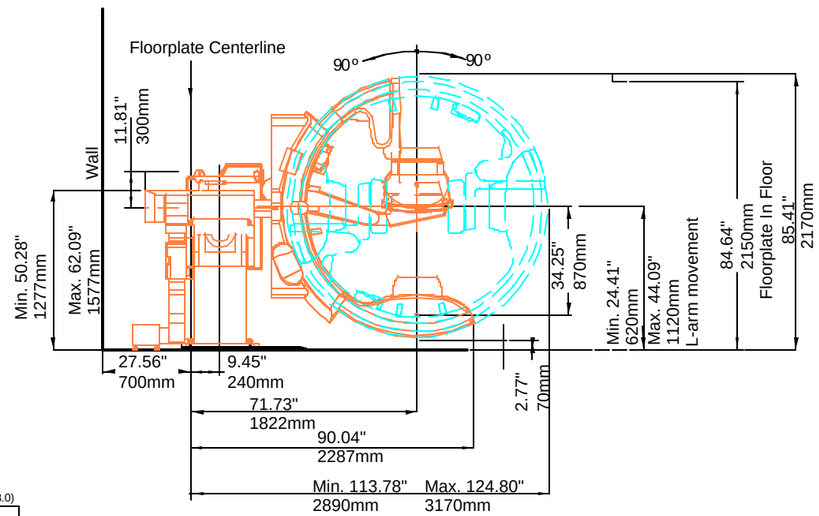
Top



ISO



Front



Side

Ceiling/floor collision controlled by protection software.

A ceiling height of 9'-6" (2896mm) will provide proper viewing height for monitors on ceiling suspension.

Heat dissipation shown below is during operation.

(08.0)

MDE	Multi Diagnost Eleva Flat Detector (Right Version)	
Weight	2923 lbs	(1326 kg)
Heat Dissipation	3754 Btu/hr	(946 kcal/hr)

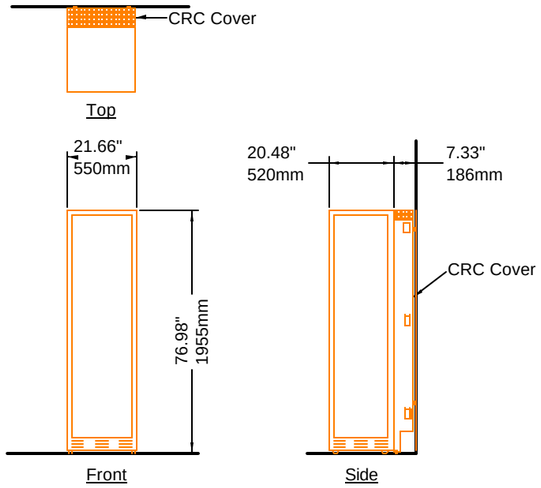
- Standard Reference Drawing- Not Site Specific Multi Diagnost Eleva - Flat Detector

Date	Order Number
Drawn By	Quote Number

Drawing Number N-SRD050012

AD1

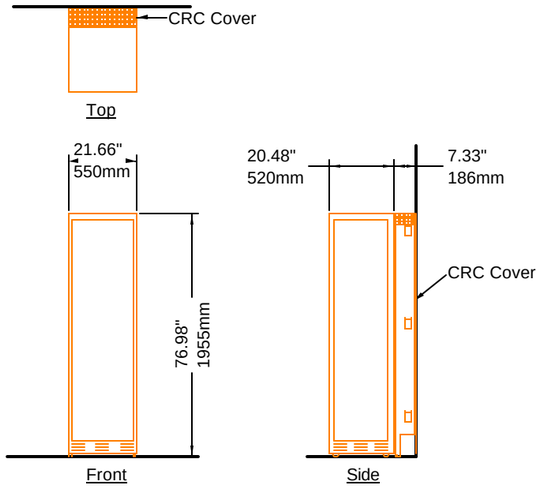
Sheet 5 of 22



The CRC cover should be attached to the 40E rack only, not to the wall.

(05.0)

MR	Peripheral Cabinet	
Weight	373 lbs	(169 kg)
Heat Dissipation	734 Btu/hr	(185 kcal/hr)

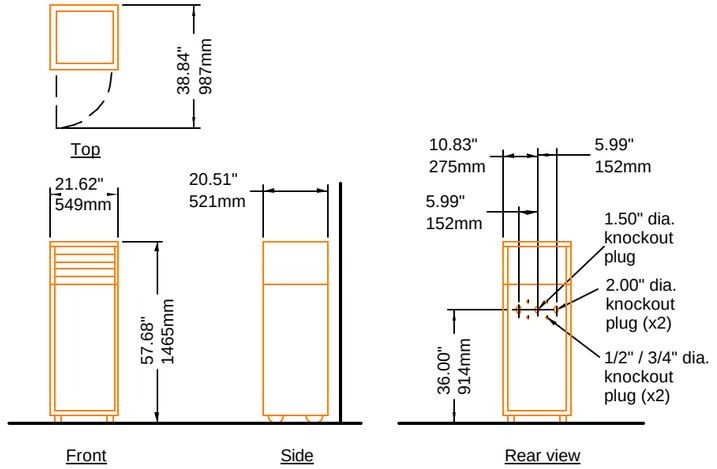


The CRC cover should be attached to the 40E rack only, not to the wall.

Noise measured @ 1 meter distance in 1 meter height over floor = < 55 dB (A).

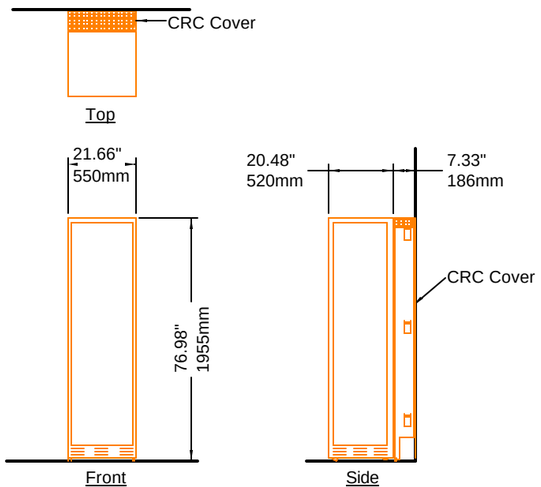
(05.0)

ME	Velara Generator Cabinet	
Weight	521 lbs	(237 kg)
Heat Dissipation	1536 Btu/hr	(387 kcal/hr)



(00.0)

PBK	PDU 4000/UPS	
Weight	860 lbs	(391 kg)
Heat Dissipation	2450 Btu/hr	(617 kcal/hr)

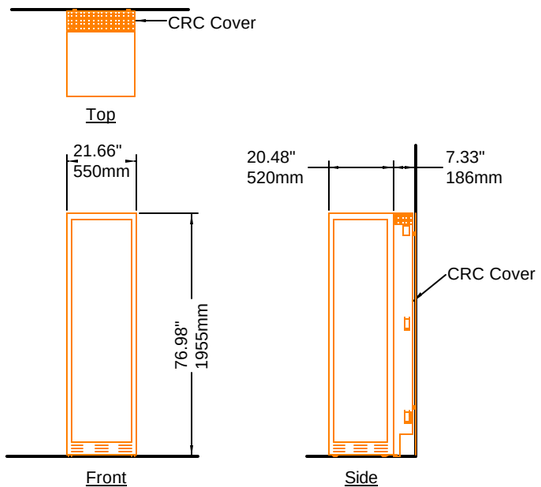


The CRC cover should be attached to the 40E rack only, not to the wall.

Noise measured @ 1 meter distance in 1 meter height over floor = < 51 dB (A).

(05.0)

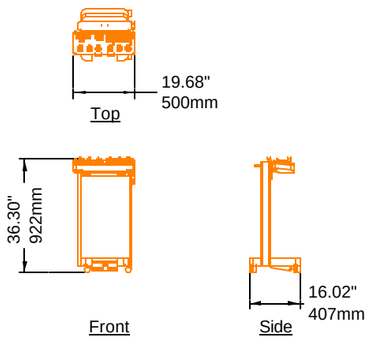
MB	Imaging Cabinet	
Weight	454 lbs	(206 kg)
Heat Dissipation	3412 Btu/hr	(860 kcal/hr)



The CRC cover should be attached to the 40E rack only, not to the wall.

(05.0)

MA	Main Cabinet	
Weight	668 lbs	(303 kg)
Heat Dissipation	1194 Btu/hr	(301 kcal/hr)



(03.0)

EUI	Examination Room User Interface	
Weight	57 lbs	(26 kg)
Heat Dissipation	41 Btu/hr	(10 kcal/hr)

- Standard Reference Drawing- Not Site Specific Multi Diagnost Eleva - Flat Detector

Date

Order Number

Drawn By

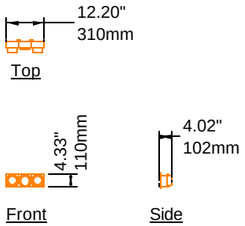
Quote Number

Drawing Number N-SRD050012

AD2

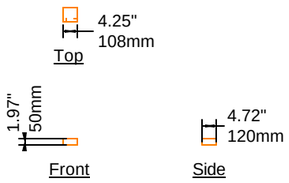
Sheet 6 of 22

01.01.09



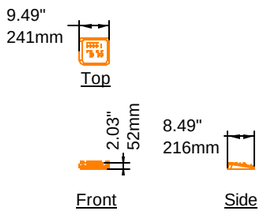
(04.1)

IB	Indication Box	
Weight	7 lbs	(3.1kg)
Heat Dissipation	38 Btu/hr	(10 kcal/hr)



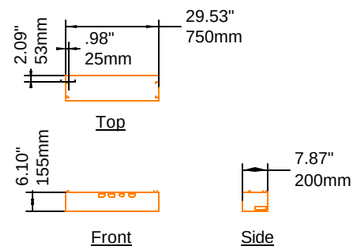
(04.0)

IR	Infra Red Receiver	
Weight	1 lbs	(0.45 kg)
Heat Dissipation	3 Btu/hr	(0.76 kcal/hr)



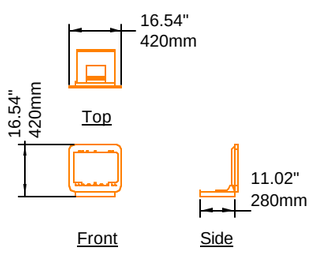
(03.0)

QR	Quick Review	
Weight	3 lbs	(1kg)
Heat Dissipation	7 Btu/hr	(2 kcal/hr)



(03.0)

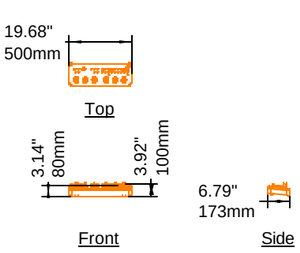
CY	Control Connection Box	
Weight	22 lbs	(10 kg)
Heat Dissipation	31 Btu/hr	(8 kcal/hr)



*** Keyboard and mouse included with PBC ***

(03.0)

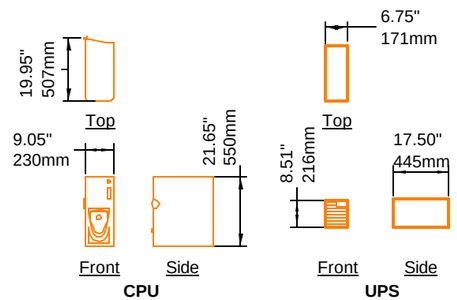
PBC	Examination Control Console	
Weight	24 lbs	(11 kg)
Heat Dissipation	136 Btu/hr	(34 kcal/hr)



(03.0)

SC	Stand Control	
Weight	9 lbs	(4.2 kg)
Heat Dissipation	41 Btu/hr	(10 kcal/hr)

	Width W"(mm)	Height H"(mm)	Depth D"(mm)
18" TFT LCD Monitor (Standard)	16.14" (410mm)	17.05" (433mm)	7.81" (198mm)
17" Viewing Monitor (Optional)	15.87" (403mm)	12.91" (328mm)	18.23" (463mm)
17" Digital Monitor (Optional)	15.65" (397mm)	16.14" (410mm)	16.43" (417mm)



*** Keyboard and mouse included with ViewForum ***

(04.0)

VF	ViewForum	
Weight	146 lbs	(66 kg)
Heat Dissipation	1000 Btu/hr	(252 kcal/hr)

- Standard Reference Drawing- Not Site Specific Multi Diagnost Eleva - Flat Detector

Date | Order Number

Drawn By | Quote Number

Drawing Number N-SRD050012

AD3

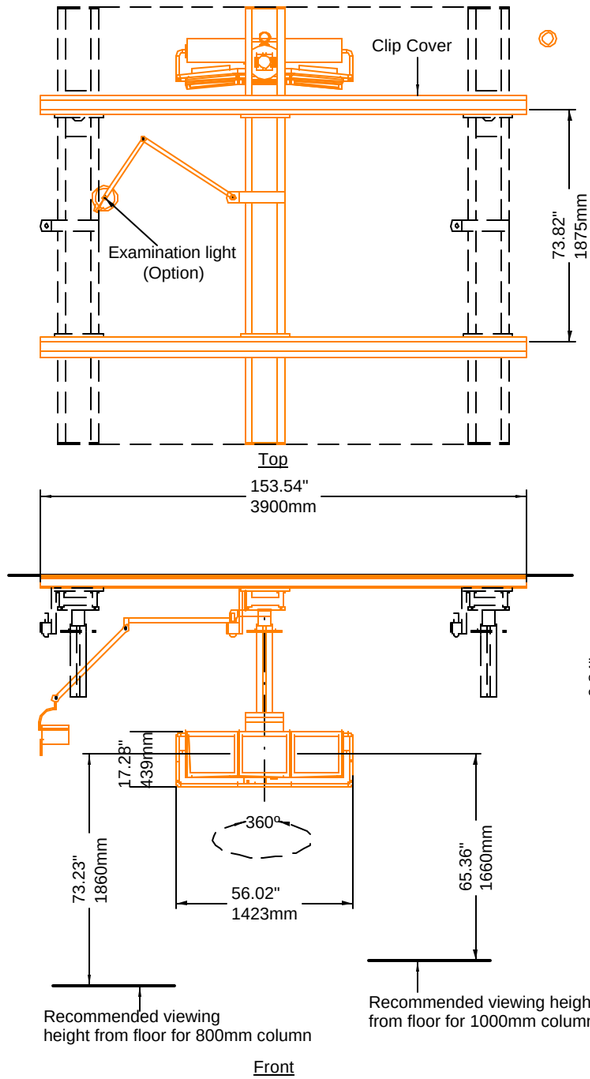
Sheet 7 of 22

01.01.09

** Heat dissipation shown below is during operation **
** Heat dissipation on Standby = 342 Btu/hr (86 kcal/hr) **

(05.1)

WH	Cooling Unit 510LN (with Soundproof Case)	
Weight	45 lbs	(20.5 kg)
Heat Dissipation	2049 Btu/hr**	(516 kcal/hr**)



Fixed column is available in two heights: 2' - 7 1/2" (800mm) and 3' - 3 3/8"(1000mm)

(07.0)

TV	Three LCD Monitor Suspension (BEST)	
Weight	585 lbs	(265 kg)
Heat Dissipation	512 Btu/hr	(129 kcal/hr)

- Standard Reference Drawing-
Not Site Specific
Multi Diagnost Eleva - Flat Detector

Date | Order Number

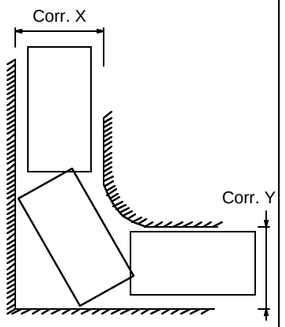
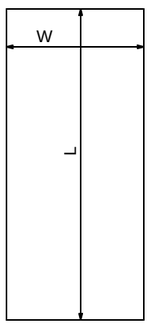
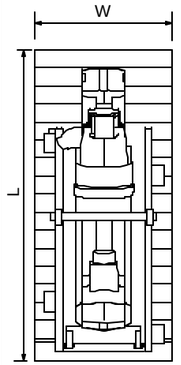
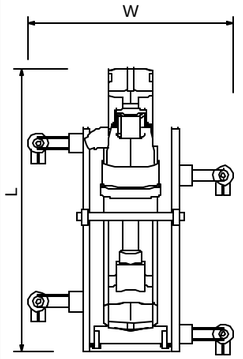
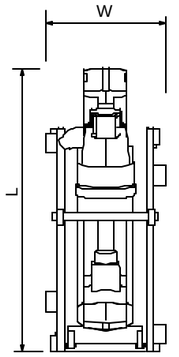
Drawn By | Quote Number

Drawing Number
N-SRD050012

AD4
Sheet 8 of 22

01.01.09

Detail - MD Eleva (C-ARM) Transport Detail

	Transport Possibilities			
	Crate	**Pallet**	**Clickwheels**	**Skate Boards**
Length (L)	98.43" (2500mm)	98.43" (2500mm)	89.53" (2274mm)	89.53" (2274mm)
Width (W)	43.31" (1100mm)	43.31" (1100mm)	64.91" (1649mm)	37.80" (960mm)
Height	77.95" (1980mm)	76.22" (1936mm)	69.02" (1753mm)	77.76" (1975mm)
Weight	2050 lb (930kg)	1940 lb (880kg)	2061 lb (935kg)	1764 lb (800kg)
					
Corridor X measured	64.96" (1650mm)	64.96" (1650mm)	64.96" (1650mm)	64.96" (1650mm)
Corridor Y must be	65.43" (1662mm)	65.43" (1662mm)	95.79" (2433mm)	52.09" (1323mm)

PHILIPS

- Standard Reference Drawing-
Not Site Specific
Multi Diagnost Eleva - Flat Detector

Drawn By	Date
Quote Number	Order Number

Drawing Number
N-SRD050012

AD5
Sheet 9 of 22

01.01.09

Equipment Support Information

1. General
The customer shall be solely responsible, at its expense, for preparation of the site, including any required structural alterations. The site preparation shall be in accordance with this plan and specifications, the architectural/construction drawings and in compliance with all safety and building codes. The customer shall be solely responsible for obtaining all construction permits from jurisdictional authority.

2. Equipment Anchorage
Philips provides, with this plan and specifications, information relative to equipment size, weight, shape, anchoring hole locations and forces which may be exerted on anchoring fasteners. The customer shall be solely responsible, through the engineer of record for the building, to provide on the architectural/construction drawings, information regarding the approved method of equipment anchoring to floors, wall and/or ceiling of the building. Any anchorage test required by local authority shall be the customer's responsibility. Stud type anchor bolts should not be specified as they hinder equipment removal for service. Consult with Philips service prior to specifying anchor methods.

3. Floor Loading and Surface
Philips provides, with this plan and specifications, information relative to size, weight and shape of floor mounted equipment. The customer shall be solely responsible, through the engineer of record for the building, to provide on the architectural/construction drawings confirmation of the structural adequacy of the floor upon which the equipment will be placed. Any load test required by local authority, shall be the customer's responsibility.
The floor surface upon which Philips equipment is to be placed/anchored shall be flat and level to within plus or minus 1/16 inch (2mm) over a length of 39" (1m).

4. Ceiling Support Apparatus
a. Philips provides, with this plan and specifications, information relative to size, weight and shape of ceiling supported equipment. The customer shall be solely responsible, through the engineer of record for the building, to provide on the architectural/construction drawings, information regarding the approved method of structural support apparatus, fasteners and anchorage to which Philips will attach equipment. Any anchorage and/or load test required by local authority shall be the customer's responsibility.

b. Contractor to clearly mark Philips equipment longitudinal centerline on bottom of each structural support.

c. The structural support apparatus surface to which Philips equipment is to be attached, shall have horizontal equipment attachment surfaces parallel, square and level to within plus or minus 1/16 inch (2mm).

d. Any drilling and/or tapping of holes required to attach Philips equipment to the structural support apparatus shall be the responsibility of the customer.

e. Fasteners/anchors (i.e., bolts, spring nuts, lock and flat washers) and strip closures shall be provided by the customer.

5. Lighting
Lighting fixtures shall be placed in such a position that they are not obscured by equipment or its movement, nor shall they interfere with Philips ceiling rails and equipment movement or otherwise adversely affect the equipment. Such lighting fixture locations shall be the sole responsibility of the customer.

6. Ceiling Obstructions
There shall be no obstructions that project below the finished ceiling in the area covered by ceiling suspended equipment travel.

7. Seismic Anchorage (For Seismic Zones Only)
All seismic anchorage hardware, including brackets, backing plates, bolts, etc., shall be supplied and installed by the customer/contractor unless otherwise specified within the support legend on this sheet. Installation of electronic cabinets to meet seismic anchorage requirements must be accomplished using flush mounted expansion type anchor/bolt systems to facilitate the removal of a cabinet for maintenance. Do not use threaded rod/adhesive anchor systems. Consult with Philips regarding any anchor system issues.

8. Floor Obstructions/ Floor Coverings
There shall be no obstructions on the floor (sliding door tracks, etc.) in front of the Philips technical cabinets. Floor must be clear to allow cabinets to be pulled away from the wall for service.

Contractor to verify with Philips the preferred floor covering installation method.

05.0

PHILIPS

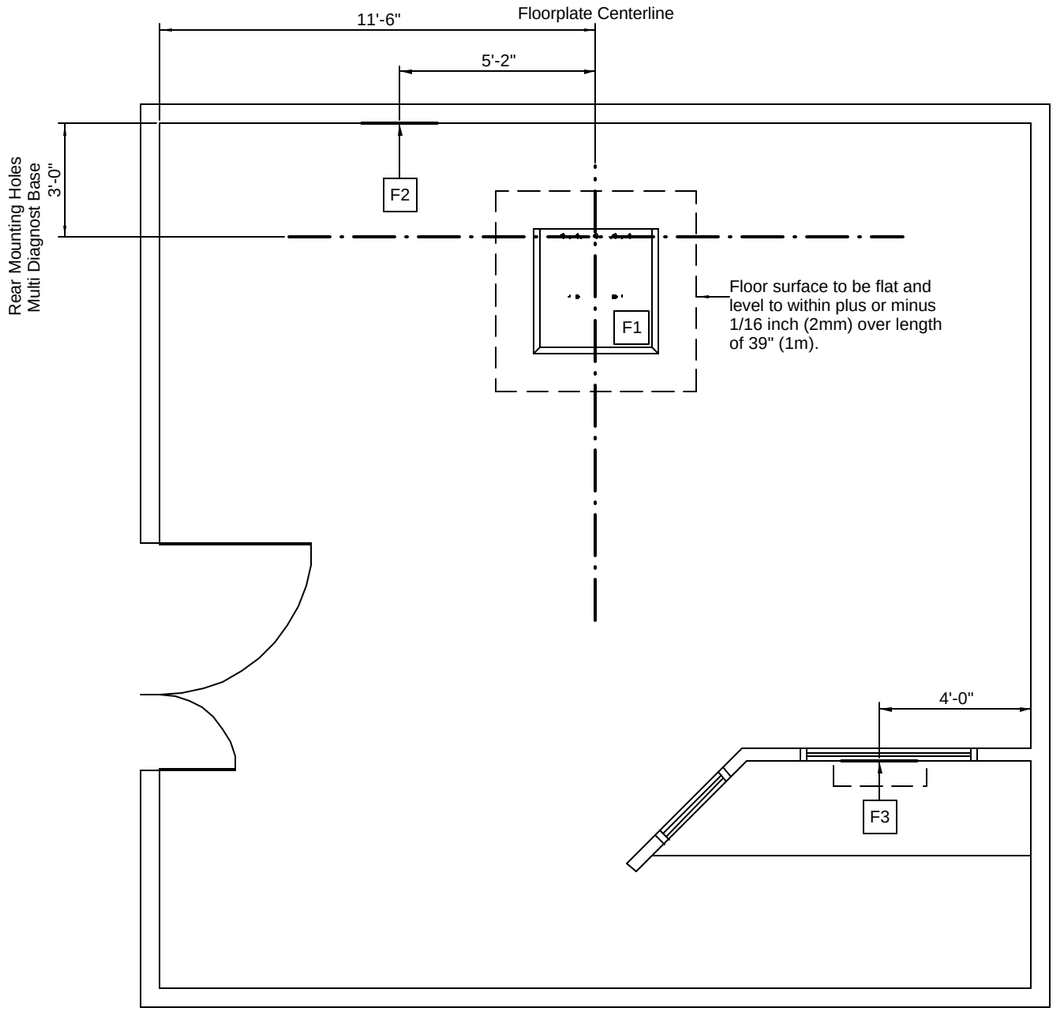
- Standard Reference Drawing-
Not Site Specific
Multi Diagnost Eleva - Flat Detector

Date	Order Number
Drawn By	Quote Number

Drawing Number
N-SRD050012

SN

01.01.09



Floor & Wall Support Legend

A Furnished and installed by Philips
B Furnished by customer/contractor and installed by customer/contractor
C Installed by customer/contractor
D Furnished by Philips and installed by contractor
E Existing
F Future
G Optional

	Item Number	Description	Detail Sheet
D	F1	Multi Diagnost Eleva Floorplate	SD1
B	F2	Anchorage in wall for Cooling Unit 510 LN (WH)	SD1
B	F3	Anchorage in wall for Control Room Connection Box (CY)	SD1

CUSTOMER / CONTRACTOR SHALL RECOMMEND AND / OR PROVIDE EQUIPMENT ANCHORING SYSTEMS (I.E. "HILTI", "REDHEAD", ETC) BASED UPON SPECIFIED "PULL" FORCES AND WALL / CEILING / FLOOR COMPOSITIONS.

All dimensions must be off the final finished wall.

If a wall is furred-out to hide electrical duct or boxes, the dimensions included in this plan must come off the finished furred wall.

Floor & Wall Support Layout

Minimum Ceiling Height: 9' - 1/4" (2750mm)
Recommended Ceiling Height : 10' - 2" (3100mm)
See Ceiling Height Planning Guide - Sheet A2

0 1' 2' 4' 8'

PHILIPS

- Standard Reference Drawing-
Not Site Specific
Multi Diagnost Eleva - Flat Detector

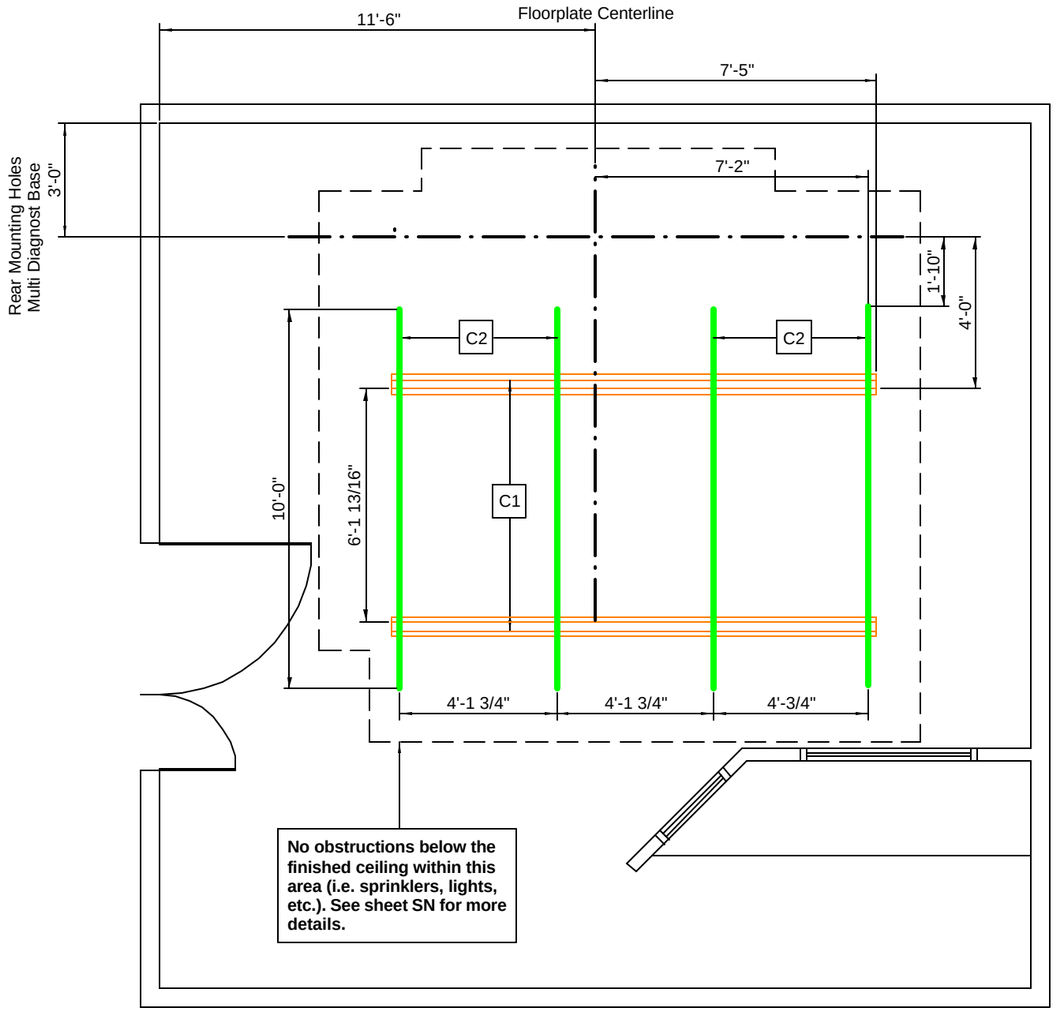
01.01.09

Date | Order Number

Drawn By | Quote Number

Drawing Number
N-SRD050012

S1
Sheet 11 of 22



Ceiling Support Layout

Minimum Ceiling Height: 9' - 1/4" (2750mm)
Recommended Ceiling Height : 10' - 2" (3100mm)
See Ceiling Height Planning Guide - Sheet A2

0 1' 2' 4' 8'

Ceiling Support Legend

A Furnished and installed by Philips
B Furnished by customer/contractor and installed by customer/contractor
C Installed by customer/contractor
D Furnished by Philips and installed by contractor
E Existing
F Future
G Optional

	Item Number	Description	Detail Sheet
A	C1	Philips Equipment Rails	SD2
B	C2	Unistrut (or equal) mounted flush with finished ceiling.	SD2

All dimensions must be off the final finished wall.

If a wall is furred-out to hide electrical duct or boxes, the dimensions included in this plan must come off the finished furred wall.

- Standard Reference Drawing-
Not Site Specific
Multi Diagnost Eleva - Flat Detector

01.01.09

Date | Order Number

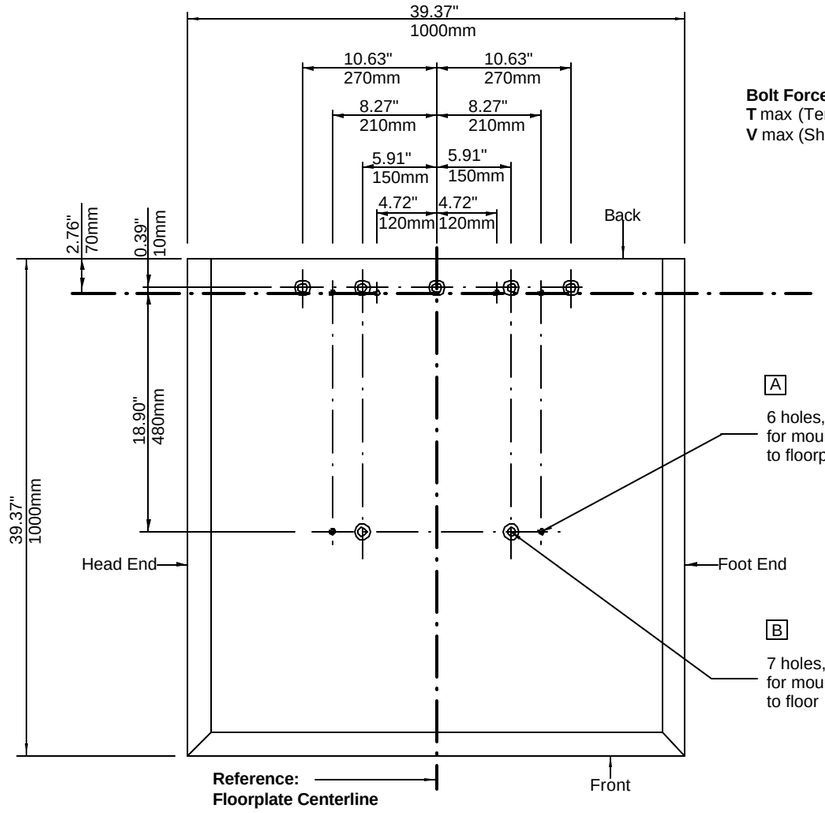
Drawn By | Quote Number

Drawing Number
N-SRD050012

S2
Sheet 12 of 22

F1 Detail - Multi Diagnost Eleva Flat Detector Floorplate

(Not to scale)



Bolt Forces:
T max (Tension) = 1931 lbs/bolt
V max (Shear) = 1082 lbs/bolt

Reference: Rear Bolt Holes Multi Diagnost Base

A
6 holes, M12
for mounting base
to floorplate

B
7 holes, 18 mm diam.
for mounting floorplate
to floor

CUSTOMER / CONTRACTOR SHALL RECOMMEND AND / OR PROVIDE EQUIPMENT ANCHORING SYSTEMS
(I.E. "HILTI", "REDHEAD", ETC) BASED UPON SPECIFIED "PULL" FORCES AND WALL / CEILING / FLOOR COMPOSITIONS.

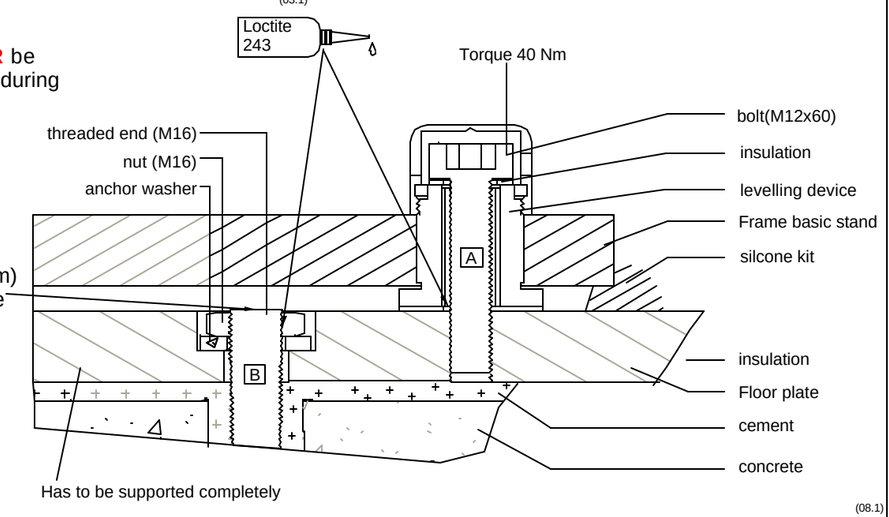
Detail - Multi Diagnost Eleva Floorplate Section

(Not to scale)
(03.1)

Floor anchors must **NEVER** be filed down and/or modified during installation.

Floor plate on floor surface is allowed. (Min. table height is 13/16" (20mm) higher)

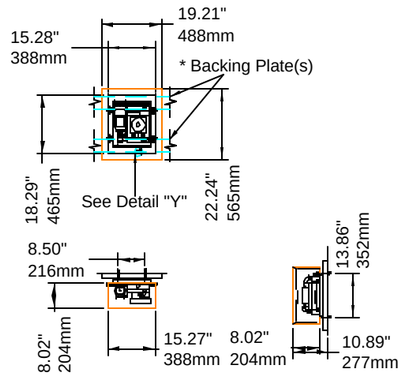
Max protrusion of 1/4" (7mm) for bolts attaching floorplate to floor.



(08.1)

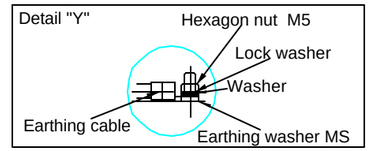
F2 Detail - Cooling Unit 510 LN (WH) Mounting

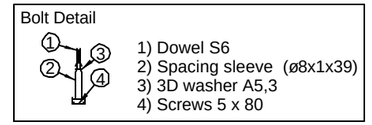
(Not to scale)



Bolt Forces:
(Tension) **T**max = 20 lbs/scew
(Shear) **V**max = 25 lbs/screw

The customer's architect/engineer of record shall specify wall backing plate(s) sufficient for the bolt forces shown.



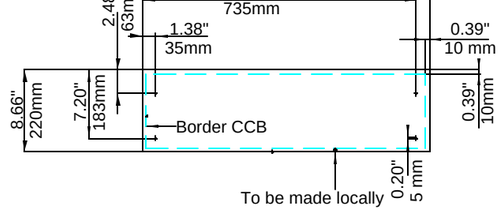


Two cooling hoses, 1023" (85'-3"or 26 m) are supplied.
Cooling unit should be mounted above level of X-ray tube at the tube's highest point of travel.
Vertical distance between cooling unit and lowest position of the X-ray tube should never exceed 98" (8'-2" or 2.5 m)
Mount WH at 9' - 6" AFF to top of unit for Omni Diagnost
Mount WH at 8' - 5" AFF to top of unit for Multi Diagnost

(08.1)

F3 Detail - Connection Box (CY) Mounting Template

(Not to scale)



(08.1)

PHILIPS

- Standard Reference Drawing-
Not Site Specific
Multi Diagnost Eleva - Flat Detector

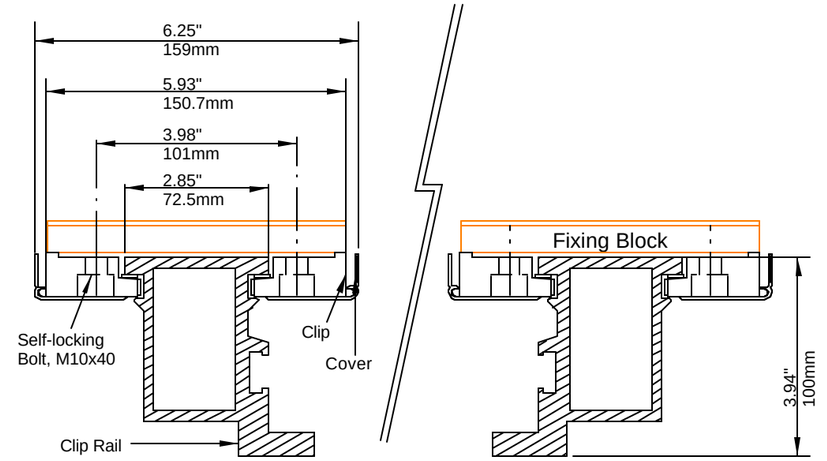
01.01.09

Date | Order Number
Drawn By | Quote Number
Drawing Number N-SRD050012

SD1
Sheet 13 of 22

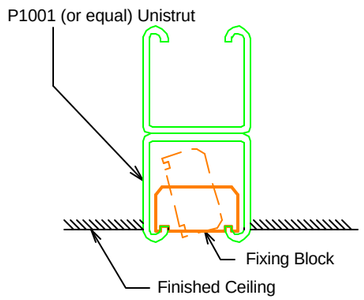
Detail - Clip Rail Cross-section

(Not to scale)



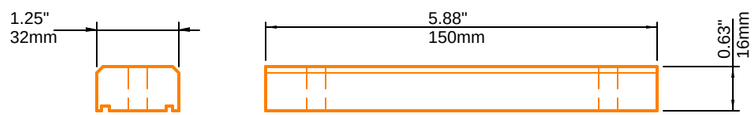
Detail - Fixing Block for Philips Ceiling Rails (Clip Rails)

(Not to scale)



Notes:

* Philips does not specify the overhead equipment support structure. Unistrut (or equal) may or may not be used. If Unistrut are used, it is up to Unistrut and the structural engineer for the project to determine which of its products are appropriate for each project.
* The finished ceiling must **NOT** be lower than the bottom of the Unistrut in order to prevent damage to the finished ceiling during the installation of clip rails.
* Nothing that would interfere with positioning of the fixing block shall be attached to the Unistrut with any fastener that protrudes into the Unistrut.
* Fixing blocks for Philips ceiling rails (clip rails) are designed to be used in P1001 Unistrut or equivalent.
* The inside of the Unistrut must be clear of obstructions, including paint.
* Unistrut elements must be rigid and comply with the ceiling structure requirements. See SN sheet, line #4 "Ceiling Support Apparatus".



Monitor Suspension Support Forces

2 Monitor Suspension (Best)	(Tension) **T**max = 601 lbs/support (Shear) **V**max = 136 lbs/support
3 Monitor Suspension (Best)	(Tension) **T**max = 784 lbs/support (Shear) **V**max = 177 lbs/support
2 LCD Monitor Suspension (Best)	(Tension) **T**max = 565 lbs/support (Shear) **V**max = 128 lbs/support
3 LCD Monitor Suspension (Best)	(Tension) **T**max = 608 lbs/support (Shear) **V**max = 137 lbs/support
1 Monitor Suspension (Hamburg)	(Tension) **T**max = 501 lbs/support (Shear) **V**max = 120 lbs/support
2 Monitor Suspension (Hamburg)	(Tension) **T**max = 773 lbs/support (Shear) **V**max = 192 lbs/support
1 LCD Monitor Suspension (Hamburg)	(Tension) **T**max = 463 lbs/support (Shear) **V**max = 111 lbs/support
2 LCD Monitor Suspension (Hamburg)	(Tension) **T**max = 658 lbs/support (Shear) **V**max = 163 lbs/support

Tube Crane Support Forces

	Tension Forces	Shear Forces
CS2 / CS4	956 lbs per support (4250 N per support)	585 lbs per support (2600 N per support)
CS2 / CS4 with Trauma Attachment	1068 lbs per support (4750 N per support)	585 lbs per support (2600 N per support)

(Support = 2 Screws into each Fixing Block)

C1 C2

(08.1)

- Standard Reference Drawing- Not Site Specific Multi Diagnost Eleva - Flat Detector

Date

Order Number

Drawn By

Quote Number

Drawing Number N-SRD050012

SD2

Sheet 14 of 22

General Electrical Information

1. General
The customer shall be solely responsible, at its expense, for preparation of the site, including any required electrical alterations. The site preparation shall be in accordance with this plan and specifications, the architectural/construction drawings and in compliance with all safety and electrical codes, the customer shall be solely responsible for obtaining all electrical permits from jurisdictional authority.

2. Materials and Labor
The customer shall be solely responsible, at its expense, to provide and install all electrical ducts, boxes, conduit, cables, wires, fittings, bushing, etc., As separately specified herein.

3. Electrical Ducts and Boxes
Electrical ducts and boxes shall be accessible and have removable covers. Floor ducts and boxes shall have watertight covers. Ducts shall be divided into as many as three separate channels by metal dividers, separately specified herein, to separate wiring and/or cables into groups as follows: Group a: power wiring and/or cables. Group b: signal and/or data and protective ground wiring and/or cables. Group c: X-ray high voltage cables, the use of 90 deg. ells is not acceptable. On ceiling duct and wall duct use 45 deg. bends at all corners. All intersecting points in duct to have cross over tunnels supplied and installed by contractor to maintain separation of cables.

4. Conduit
Conduit point - to - point runs shall be as direct as possible. Empty conduit runs used for cables may require pull boxes located along the run. Consult with Philips. A pull wire or cord shall be installed in each conduit run. All conduits which enter duct prior to their termination point must maintain separation from other cables via use of dividers, cross over tunnels, or conduit supplied and installed by contractor from entrance into duct to exit from duct. Do not use flex conduit unless approved by Philips Service.

5. Conductors
All conductors, separately specified, shall be 75° c stranded copper, rung out and marked.

6. Disconnecting Means
A disconnecting means shall be provided as separately specified.

7. Warning Lights and Door Switches
"X-ray on" warning lights and x-ray termination door switches should be provided at all entrances to x-ray rooms as required by code.

8. Dimmer Switches
X-ray room lights should be provided with dimmer switches.

(03.0)

Electrical Notes

1. The contractor will supply & install all breakers, shunt trip and incoming power to the breakers. The exact location of the breakers and shunt trips will be determined by the architect or contractor.

2. The contractor shall supply & install all pull boxes, raceways, conduit runs, stainless steel covers, etc. Conduit/raceways must be free from burrs and sharp edges over its entire length. A Greenlee pull string/measuring tape (part no. 435, or equivalent) shall be provided with conduit runs.

3. All pre - terminated, cut to length cables, will be supplied and installed by Philips Medical Systems. All cables to the breakers, will be supplied and installed by the contractor, subject to local arrangements.

4. Provide and install 4 - 2" (50 mm) dia . Chase nipples between adjacent wall boxes. (not required if raceway installed above and below wall boxes)

5. Electrical raceway shall be installed with removable covers. The raceway should be accessible for the entire length. In case of non - accessible floors, walls and ceilings, an adequate number of access hatches should be supplied to enable installation of cabling. Approved conduits may be substituted. All raceways will be designed in a manner that will not allow cables to fall out of the raceway when the covers are removed. In most cases, this will require above - ceiling raceway to be installed with the covers removable from the top. Raceway system as illustrated on this drawing are based upon length of furnished cables. Any changes in routing of raceway system could exceed maximum allowable length of furnished cables. Conduit or raceway above - ceiling must be kept as near to finished ceiling as possible.

6. Conduit sizes shall be verified by the architect, electrical engineer or contractor, in accordance with local or National Electrical Codes, whichever govern.

7. Convenience outlets are not illustrated. Their number and location are to be specified by the customer/architect.

8. Electrical contractor shall install ground bond wires at conduit openings within wall boxes as required by national and local electrical codes. Ground bond wires and lugs shall be installed in such a way to prevent the inadvertent contact with the installed Philips equipment to maintain the Philips Equipotential Grounding Configuration and maintain patient safety. Install a #6 AWG stranded ground wire in the conduits from the Main Disconnect (CB) to the PDU and from the PDU to the ME wall box.

9. If the Philips system includes a PDU, the PDU is a "Separately Derived Source" by NEC standards, and must be ground according to NEC article 250-30.

10. Philips equipment must be electrically isolated from conduits, raceway, duct, etc.

(03.0)

Electrical Requirement Notes for Systems with PDU

Electrical power distribution at the facility shall comply with:

Utilization voltages per ANSI C84.1 - 1982 range A.

Voltage to be supplied is 3 phase, delta or wye.

Phase conductors to be sized for instantaneous voltage drop per NEC 517 - 73 and Philips recommendations.

On systems with a PDU, the ground conductor for the power feeder shall never be less than 1/2 the cross-sectional area of the phase conductors and never smaller than #5 AWG.

Metal conduit shall not be used as the equipment ground conductor.

ANSI / NFPA 70 - National Electrical Code
Article 250 - grounding
Article 517 - health care facilities
ANSI / NFPA 99 - health care facilities
NEMA standard XR9 - power supply guideline for x-ray machines

Power Quality Guidelines

1. Power supplied to medical imaging equipment must be separate from power feeds to air conditioning, elevators, outdoor lighting, and other frequently switched or motorized loads. Such loads can cause waveform distortion and voltage fluctuations that can hinder high quality imaging.

2. Equipment that utilizes the facility power system to transmit control signals (especially clock systems) may interfere with medical imaging equipment, thus requiring special filtering.

3. The following devices provide a high impedance, nonlinear voltage source, which may affect image quality:
Static UPS systems, Series filters, Power conditioners, and Voltage regulators.

Do not install such devices at the mains supply to medical imaging equipment without consulting Philips installation or service personnel.

4. Line impedance is the combined resistance and inductance of the electrical system and includes the impedence of the power source, the facility distribution system, and all phase conductors between the source and the imaging equipment. Philips publishes recommended conductor sizes based on equipment power requirements, acceptable voltage drops, and assumptions about the facility source impedance. The minimum conductor size is based on the total line impedance and NEC requirements. Unless impedance calculations are performed by an electrical engineer, the recommended values must be used.

(08.0)

- Standard Reference Drawing-
Not Site Specific
Multi Diagnost Eleva - Flat Detector

Date | Order Number

Drawn By | Quote Number

Drawing Number
N-SRD050012

EN
Sheet 15 of 22

 01.01.09

Electrical Legend

A Furnished and installed by Philips
B Furnished by customer/contractor and installed by customer/contractor
C Installed by customer/contractor
D Furnished by Philips and installed by contractor
E Existing
F Future
G Optional

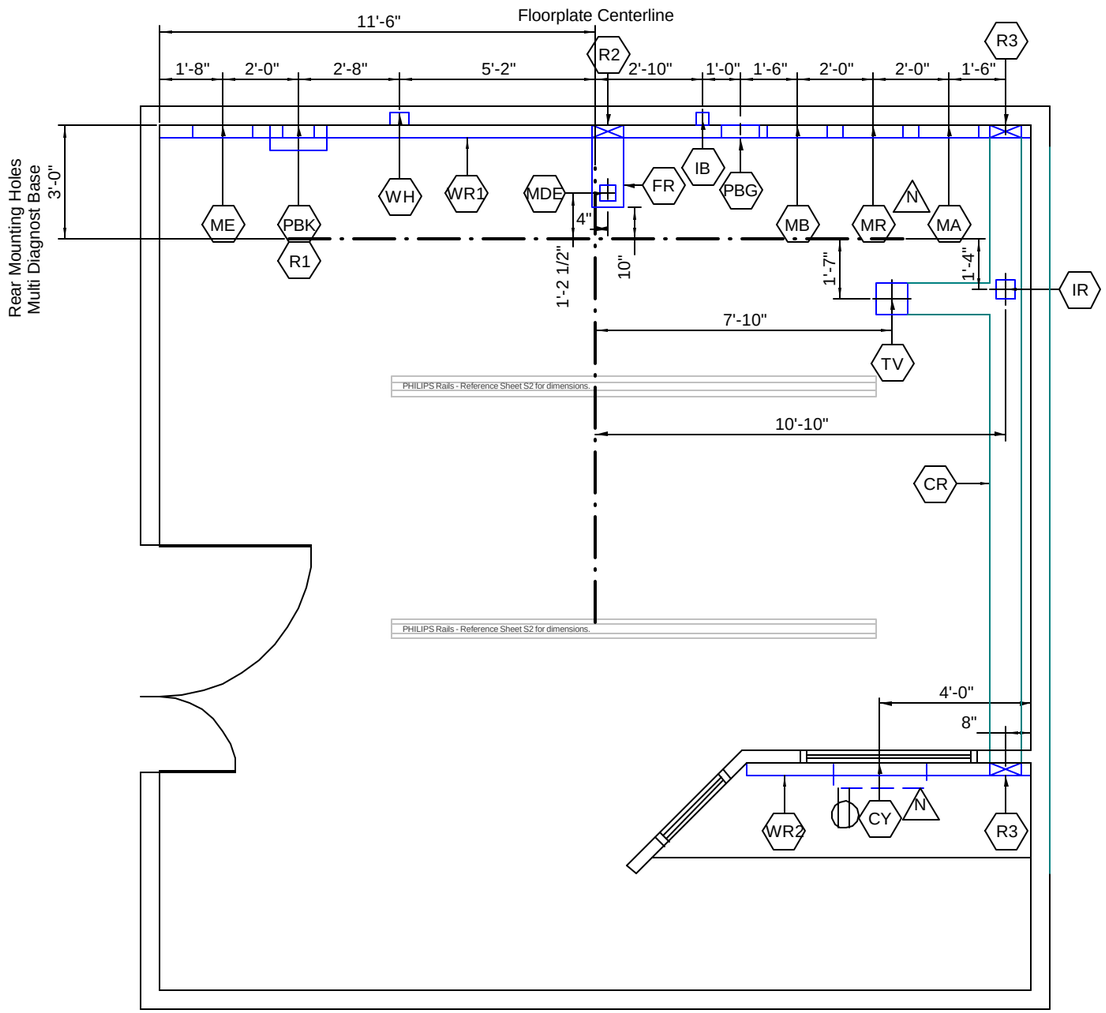
	Item Number	Description	Detail Sheet
B	CB	480, 3 phase 100 AMP circuit with shunt trip. Run power from breaker to "PBK" leaving an 8' tail at "PBK" and from "PBK" to "ME", leaving an 8' tail at each end. See "Sheet EN" for power quality requirements. Location per local code or owner requirements. (Not shown on plan)	ED1
B	ST	Shunt trip (emergency off) - large mushroom-head button on remote control station with contacts to operate feature of "CB". Location per local code or owner requirements (mandatory for VA and D.O.D. installations). (Not shown on plan)	
D	ME, MA, MR, MB	19 1/4"W x 67"H x 4"D flanged-edge terminal wall box with removable screw-type cover plate, surface mounted 75" A.F.F. to top of box. General contractor to cut top and/or bottom of box as required.	ED1
B	PBK	18"W x 18"H x 8"D flanged-edge terminal wall box box with removable screw-type cover plate, surface mounted 24" A.F.F. to bottom of box. Provide (1) 1 1/2" and (2) 2" conduits through "PBK" cover plate to PDU cabinet.	ED2
B	PBG	Central ground busbar mounted in a 12"W x 12"H x 4"D pull box with hinged cover, surface mounted on top of "WR1".	ED2
B	MDE	5"W x 5"L grommetted cable opening on "FR".	
B	CY	Grommetted opening on "WR2". Exact size to be determined by local Philips service. Location shown is recommended and may be changed - verify relocation with local Philips service.	
B	TV	10"W x 10"L x 6"D ceiling box, flush mounted with removable screw-type cover plate.	
B	R1, R2, R3	10"W x 3 1/2"D riser duct, surface mounted with removable screw-type cover plate. "R1" from "WR1" to "PBK", "R2" from "FR" to "WR1", and "R3" from "WR1" and "WR2" to "CR".	ED1
B	WR1, WR2	10"W x 3 1/2"D wall raceway, surface mounted 6" above finished floor with removable screw-type cover plate.	ED1
B	FR	10"W x 3 1/2"D floor raceway, flush mounted with removable 1/4" thick steel cover plate.	ED1
B	CR	10"W x 3 1/2"D ceiling raceway, mounted above finished ceiling line with removable screw-type cover plate accessible from top.	ED1
B	WH	6"W x 6"H x 4"D wall box with removable screw-type cover plate, flush mounted 89" A.F.F. to bottom of box. Location shown is recommended and may be changed - verify relocation with local Philips service.	SD1
B	IB	4"W x 4"H x 4"D wall box with removable screw-type cover plate, flush mounted 84" A.F.F. to bottom of box. Location shown is recommended and may be changed - verify relocation with local Philips service.	
B	IR	6"W x 6"L x 4"D ceiling box, flush mounted with removable screw-type cover plate. Mount I.R. to box cover. Location shown is recommended and may be changed - verify relocation with local Philips service.	
B	WL	Warning Light - Provide a flush mounted light fixture above door to indicate when x-ray is on. Provide a 115V, 15A normally open relay in this fixture. (Not shown on plan)	
B	DS	Door Switch - 120V, 5A switch limited to open when door is open. Mount in upper corner on strike of main entry door(s) (Cooper no. 1665 or equivalent), if required by local code or physicist of record. (Not shown on plan)	
B	PHY	Stub up point for physiological monitoring cables. Run conduit to customer's physiological console location. Contact manufacturer for power requirements, etc. (Not shown on plan)	
B	N	RJ45 type ethernet 10/100/1000 Mbit network connector. Access through customer's network to VPN device capable of connecting to the Philips Remote Service Network (RSN) Datacenter is needed. Refer to "Sheet N1" for RSN connectivity options. Locate within 10' of network card. Network fiber optic and ethernet cabling, connectors, wall boxes, patch panels, etc, are the responsibility of the purchaser. Philips asumes no responsibility for procurement, installation, or maintenance of the components.	N1
B		120V/20A dedicated duplex outlet (for ViewForum).	

- Standard Reference Drawing-
Not Site Specific
Multi Diagnost Eleva - Flat Detector

Date | Order Number
Drawn By | Quote Number

Drawing Number
N-SRD050012

EL



Electrical Layout

Minimum Ceiling Height: 9' - 1/4" (2750mm)
Recommended Ceiling Height : 10' - 2" (3100mm)
See Ceiling Height Planning Guide - Sheet A2

0 1' 2' 4' 8'

Refer to Electrical Legend - Sheet EL
Refer to Raceway/Conduit Information - Sheet E2

All dimensions must be off the final finished wall.

If a wall is furred-out to hide electrical duct or boxes, the dimensions included in this plan must come off the finished furred wall.

- Standard Reference Drawing- Not Site Specific
Multi Diagnost Eleva - Flat Detector

01.01.09

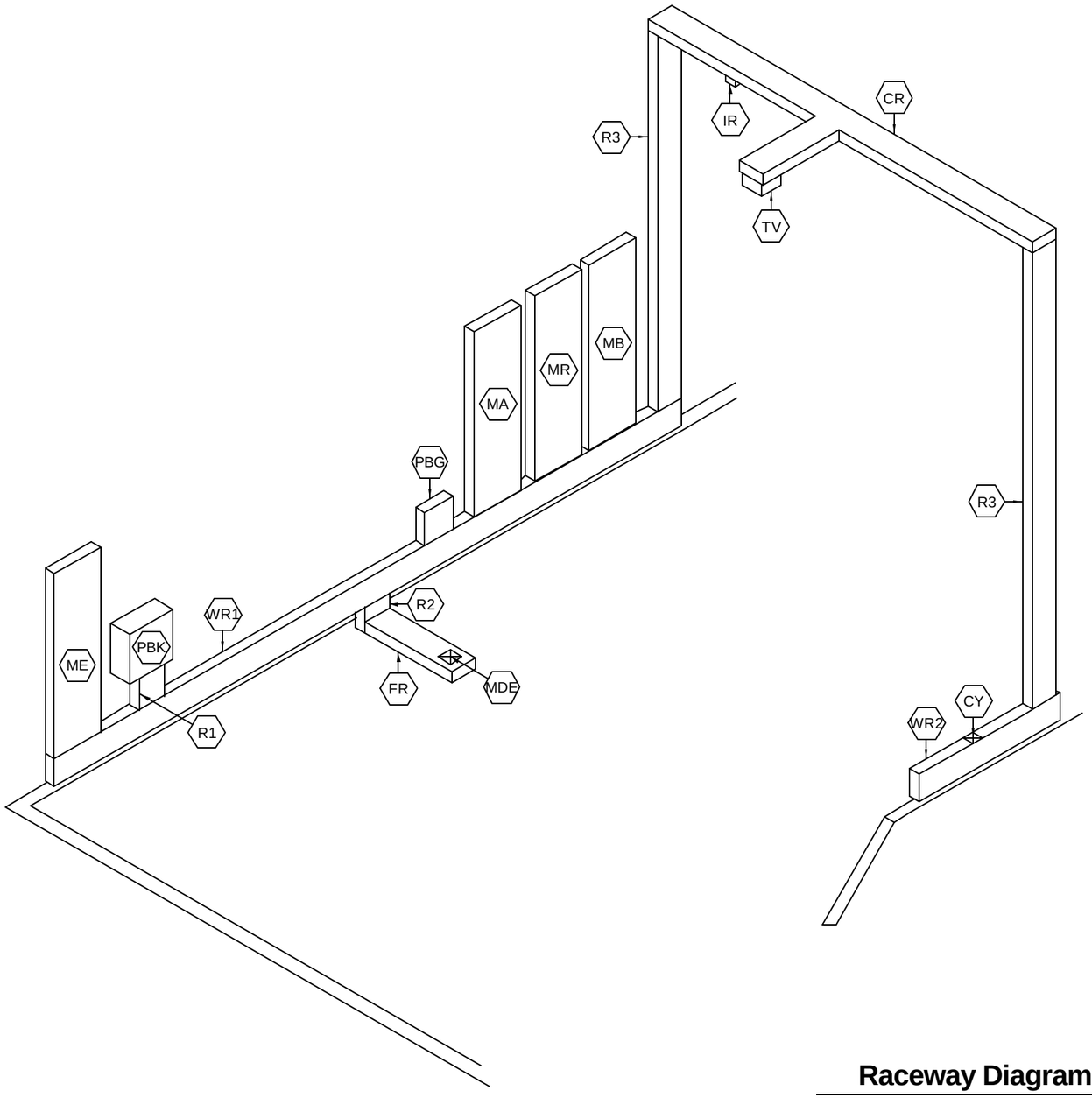
Date | Order Number

Drawn By | Quote Number

Drawing Number N-SRD050012

E1

Sheet 17 of 22



Raceway Diagram

Not to Scale

Refer to Electrical Legend - Sheet EL and Electrical Plan - Sheet E1

The use of 90 degree ells is not acceptable; use 45 degree bends at all raceway corners. The use of crossover tunnels at all applicable locations is required.

Conduit Required

General Notes

1. All conduit runs must take most direct route point to point.
2. All conduit runs must have a pull string.

A Conduit supplied/installed by contractor - Philips cables installed by Philips
B Conduit supplied/installed by contractor - Philips cables installed by contractor
C Conduit and cables supplied and installed by contractor
D Conduit existing - cables supplied and installed by Philips
E Conduit existing - cables supplied by Philips, installed by contractor
F Conduit existing - cables supplied and installed by contractor
G Optional equipment, verify with local Philips Service

* Cable Type
F Fiber Optic
H High Tension Power Cables
P Power / Ground Cables
S Signal Cables
V Video Cables

	Conduit Run No.	Conduit From	Conduit To	Conduit Quantity (*)	Minimum Conduit Size	Maximum Conduit Length	Special Requirements
C	1	Hosp. Pwr Pnl	CB	1 (P)	Per N.E.C.	Per N.E.C.	
A	2	CB	PBK	1 (P)	2'	50'	
C	3	CB	ST	1 (P)	3/4"	50'	
B	4	PBK	PDU 4000	1 (P)	1 1/2"	-	See PBK detail on Sheet ED2.
B	5	PBK	PDU 4000	2 (P)	2'	-	See PBK detail on Sheet ED2.
C	6	GE	PBK	1 (P)	3/4"	25'	
C	7	PBG	Room Outlets	1 (P)	3/4"	-	
A	8	MDE	WH	2 (C)	1 1/2"	32'	Cooling Hoses.
C	9	CY	Loud Speaker	1 (S)	1/2"	59'	Loud speaker for communication with patient during remote function (Optional).
A	10	MA	IB	1 (S)	2 1/2"	64'	
A	11	MB	IR	1 (S)	2 1/2"	42'	Via raceway where possible.
A	12	MB	IR	1 (P)	2 1/2"	42'	Via raceway where possible.
A	13	ME	WH	1 (P)	2'	49'	
A	14	ME	WH	1 (S)	2'	49'	
C	15	PHY	MDE	1 (P)	2 1/2"	-	Verify with manufacturer.
C	16	PHY	PHY Monitor	1 (P)	2'	-	Verify with manufacturer.
C	17	WL	MA	1 (P)	1/2"	50'	
C	18	DS	MA	1 (P)	1/2"	50'	
A	19	MDE	MB	2 (C)	2 1/2"	42'	Flat Detector Hoses.

- Standard Reference Drawing- Not Site Specific
Multi Diagnost Eleva - Flat Detector

Date | Order Number

Drawn By | Quote Number

Drawing Number N-SRD050012

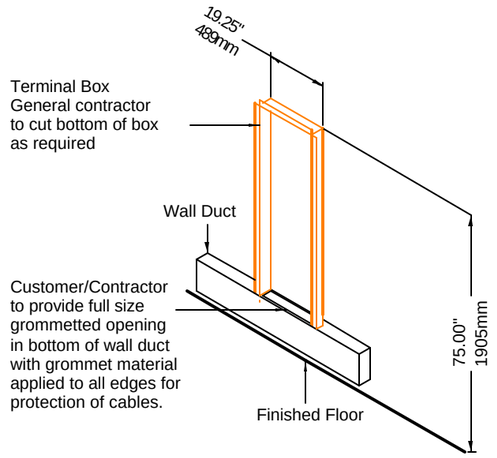
E2

Sheet 18 of 22

01.01.09

Detail - Wall Box Mounting Detail

(Not to scale)



ME MR MA MB

(08.1)

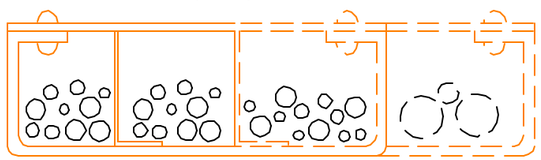
Detail - Cable Trough Divisions

(Not to scale)

(03.0)

Troughs or ducts must be separated by metal barriers into three sections:

1. High voltage (H.T.) cables to be run separately from all other cables.
2. Power cables and ground cables can be run together.
3. Signal cables and data cables can be run together but must be separated from power cables.
4. Video cables to be run separately from all other cables.



5. It is important that all cables are placed in the appropriate trough and at no given point do any cables from one division cross with cables from another. Trough separation must be continuous from the beginning to the end of the run. Utilize crossover tunnels as appropriate - please see example below
6. Trough or ducts: steel with steel dividers grounded to building ground.
7. Contractor to provide cable restraints in all troughs.

WR1 WR2 R1 R2 R3 FR CR

Power Quality Requirements

Velara 80 KW Generator with PDU 4000

Power Output:	80 KW
Supply Configuration:	3 phase, 3 wire power and ground, Delta OR 3 phase, 4 wire power with neutral and ground, Wye
Nominal Line Voltage:	400, 440, 460, or 480 VAC, 60 Hz
Line Voltage Variation:	±10% steady-state
Line Voltage Balance:	2% maximum of nominal voltage between phases
Frequency Variation:	±1.0 Hz
Voltage Surges:	To 110% of steady-state voltage 100 msecs. Maximum duration, 6 per hour maximum
Voltage Sags:	To 90% of steady-state voltage 100 msecs. Maximum duration, 6 per hour maximum
Line Impulses:	1000VPK above phase-neutral RMS absolute max. No more than 1 impulse per hour to exceed 500 VPK.
Neutral-ground voltage:	2.0 volts maximum RMS value
Neutral-ground impulses:	No more than 1 per hour that exceeds 25 volts and 1 Mjoule
High frequency noise:	3.0 volts steady-state maximum. Over 3.0 volts permitted for 100 msec. maximum, 1 per hour max.
Ground conductor impedance:	0.1 Ohms @ 60 Hz. max.

Branch Circuit and Wire Gauge Requirements

Velara 80 KW Generator with PDU 4000

(06.0)

Branch Power:	167 KVA
Circuit Breaker:	3 pole, 100 amperes (@ 480 V)
Maximum Instantaneous Power: (Short Term)	160 KVA @ 100 KVP, 800 mA
Maximum Stand-By Current:: (Long Term)	< 8 Amps @ 3 mA, 110 KVP continuous

Recommended conductor sizes for 1% impedance of branch conductors to circuit breaker (CB). Based on 20°C copper conductors:

	400 VAC	440 VAC	460 VAC	480 VAC
#1 AWG	66 ft	80 ft	87 ft	95 ft
1/0 AWG	83 ft	100 ft	110 ft	119 ft
2/0 AWG	104 ft	126 ft	138 ft	150 ft
3/0 AWG	132 ft	160 ft	175 ft	190 ft
4/0 AWG	168 ft	204 ft	222 ft	242 ft
250 KCM	197 ft	238 ft	260 ft	283 ft
300 KCM	236 ft	286 ft	312 ft	340 ft
Max. Inst. Current @ CB panel	230 A	210 A	200 A	192 A
Max. Phase-phase impedance @ CB panel	0.095 Ω	0.120 Ω	0.135 Ω	0.150 Ω
Max. load voltage drop @ CB panel	21.9 V	25.2 V	27.0 V	28.8 V
Percent Regulation at Maximum Load @ CB panel	5.5 %	5.7 %	5.9 %	6.0 %

Output Voltage PDU 4000:	380VAC +/- 10 %
Max. Inst. Current @ PDU output:	240 A
Max. Phase-Phase Impedance:	0.120 Ω @ PDU output
Max. Load Voltage Drop:	28.8 V @ PDU output
Percent Regulation at Max. Load:	7.6 % @ PDU output

Minimum copper wire size, circuit breaker to PDU: #2 - Maximum 50' in length.

CB

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Multi Diagnost Eleva - Flat Detector

01.01.09

Date | Order Number

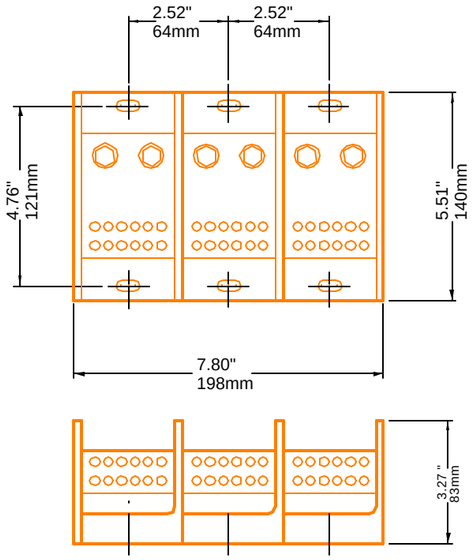
Drawn By | Quote Number

Drawing Number
N-SRD050012

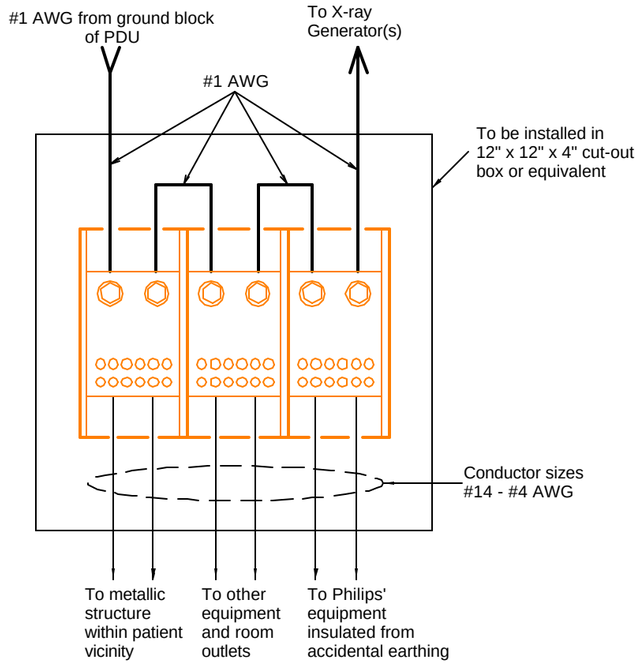
ED1

Detail - Ground Busbar Application

(Not to scale)
(07.0)



1. Furnished and installed by Customer / Contractor
2. Purchase from local Ferraz Shawmut distributor, catalog #69143.
3. For name of local distributor, visit http://gouldshawmut.com/contact/corp_directory.html



Invasive Procedures

This equipment may be used for invasive procedures; therefore, the area to be installed is classified as critical care area per NFPA-99 and NFPA-70 (NEC). These documents specify maximum touch voltages and ground impedance in these areas.

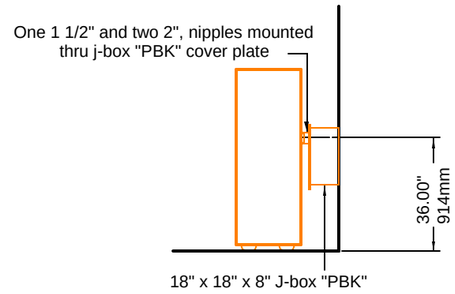
Test performed by Philips service ensure that these specifications are met by the Philips equipment. It is the facility's responsibility to ensure that these specifications are met by the wall outlets, facility structure, and other equipment not installed by Philips.

The Philips specified "Central Ground Busbar" serves as a ground reference for Philips equipment. It may also serve as the "Reference Grounding Point" of the room as defined in NFPA-99 (3-5.2.1.2) for non-Philips equipment.

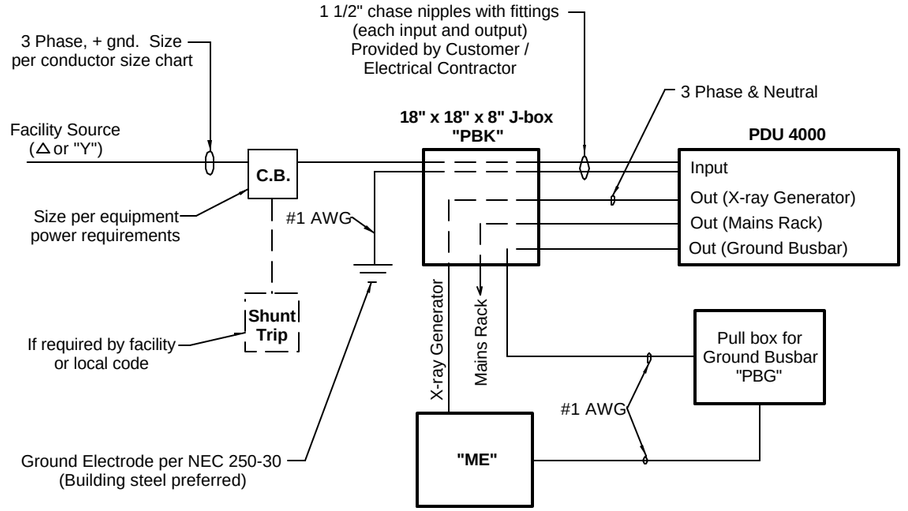
PBG

Detail - PDU 4000 Mounting Detail

J-box "PBK", nipples and other mounting hardware must be supplied by customer as required.



PDU 4000 with J-box "PBK" flush or surface mounted behind unit.



Note: Conductors, destinations, and number of conduit runs from PDU to J-box "PBK" and from J-box to equipment will vary from system to system. Consult individual site plans for detailed conduit schedules.

Diagram - PDU 4000 Electrical Interface

(00.0)

PBK

- Standard Reference Drawing-
Not Site Specific
Multi Diagnost Eleva - Flat Detector

Date | Order Number

Drawn By | Quote Number

Drawing Number N-SRD050012

ED2

Sheet 20 of 22

01.01.09

Philips Healthcare Remote Services Network (RSN)

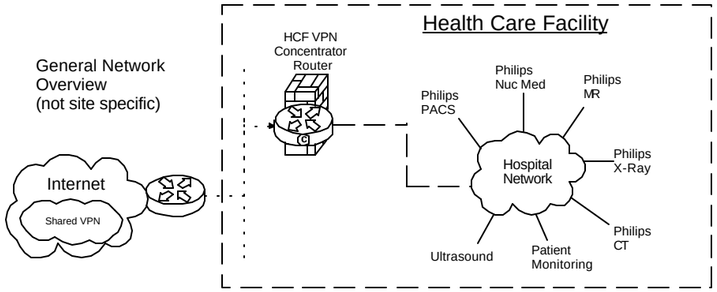
Secure broadband connection required for Philips remote technical support, diagnostics, and applications assistance

Broadband Site-to-Site Connectivity (Preferred)

This connectivity method is designed for customers who prefer a connection from the RSN Data Center to the Health Care Facility (HCF) utilizing their existing VPN equipment.

Connectivity Details:

- A Site-to-Site connection from the RSN data center's Cisco router will be established to the HCF's VPN concentrator
- The VPN Tunnel will be an IPSEC, 3DES encrypted Tunnel using IKE as standard, but alternative standards are also available, such as AES, MD5, SHA, Security Association lifetime and Encryption Mode
- Every system that we will be servicing remotely will have a static NAT IP that we configure on the RSN Data center side.



Action Required by Hospital:

- Review and approve connection details
- Complete appropriate Site Checklist
- Configure and allow Site-to-Site access prior to setting up connectivity depending on the access criteria that the HCF decides to implement (ex: Source IP filtering, destination IP filtering, NAT assignment, etc.)
- Route traffic from within the hospital network with destination addresses 192.68.48.0/22 to the designed IP provided by Philips

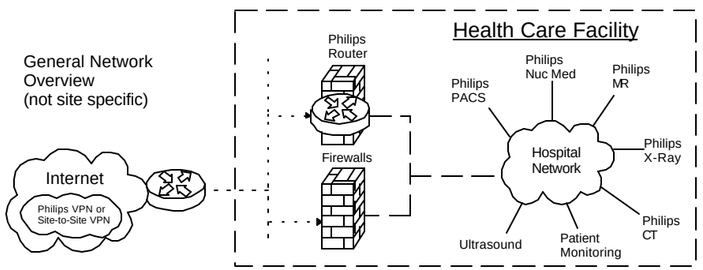
Broadband Router Installed at Health Care Facility

This connectivity method is designed for customers who have a dedicated high speed connection for Philips equipment.

Connectivity Details:

- An RSN Cisco 1711 or 1712 router will be preconfigured and installed at the HCF by Philips in conjunction with the HCF IT representative.
- The VPN Tunnel will be an IPSEC, 3DES encrypted Tunnel using IKE and will be established from the RSN-DC and terminated at the RSN Router on-site
- One to One NAT is used to limit access to Philips eqiupment only
- Router Config and IP auditing is enabled for Customer IT to view via website 24/7
- Dedicated DSL connections are also supported

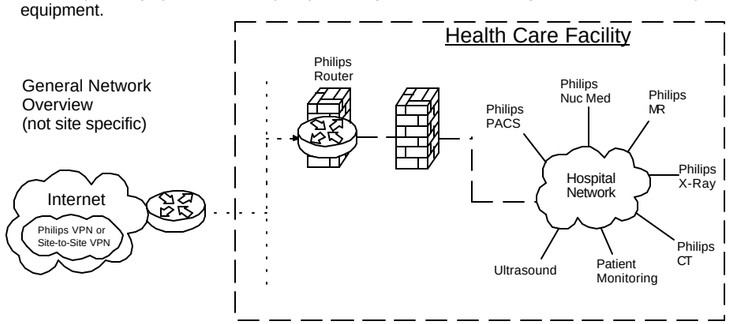
Option 1: Parallel to HCF Firewall Connectivity Method
This connectivity method is designed for customers who prefer a Philips RSN Router installed on site utilizing all the security features provided and managed by Philips.



Action Required by Hospital:

- Assign a fixed public IP Address from the ISP to be configured on the Philips router. This is the DOTTED link on the picture connected to the firewall.
- Assign a Back end IP for the Philips router on the Hospital Network
- Complete appropriate Site Checklist
- Route traffic from within the hospital network with destination addresses 192.68.48.0/22 to internal Philips router Ethernet interface. This is the DASHED line connected to the firewall.

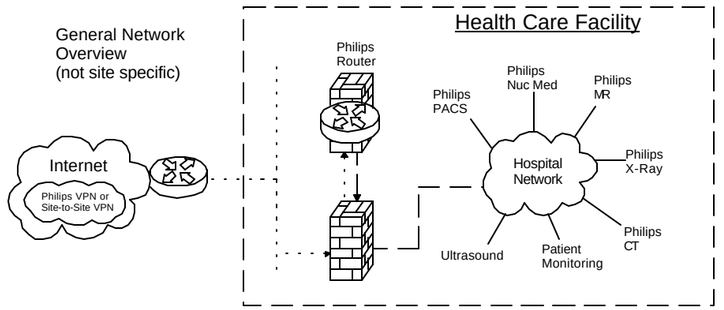
Option 2: Back End Connected to the HCF Firewall Connectivity Method
This connectivity method is designed for customers who prefer a Philips RSN Router installed on site by setting up an IP-Based policy allowing access thru existing HCF Firewall to Philips equipment.



Action Required by Hospital:

- Assign a fixed public IP Address from the ISP to be configured on the Philips router. This is the DOTTED link on the picture connected to the firewall.
- Assign a Back end IP for the Philips router on the Hospital Network
- Complete appropriate Site Checklist
- Route traffic from within the hospital network with destination addresses 192.68.48.0/22 to internal Philips router Ethernet interface. This is the DASHED line connected to the firewall.
- Configure and allow on the firewall on the DASHED line interface access between the IP address allocated by the hospital to the Philips internal Ethernet router interface and the target modality IP address.

Option 3: Router Installed Inside the HCF's DZM
This connectivity method is designed for customers who prefer the RSN Router installed inside and existing, or new DMZ, allowing access to Philips equipment.



Action Required by Hospital:

- Assign a fixed public IP Address from the ISP to be configured on the Philips router. This is the DOTTED link on the picture connected to the firewall.
- Assign a Back end IP for the Philips router on the Hospital Network
- Complete appropriate Site Checklist
- Route traffic from within the hospital network with destination addresses 192.68.48.0/22 to internal Philips router Ethernet interface. This is the DASHED line connected to the firewall.
- Configure and allow on the firewall on the DASHED line interface IPSec protocol communication by opening protocol 500, 50, 51, 47 and port 23 + TACACS. Traffic should be between external IP Address located on the Philips router and the RSN Data center IP address 192.68.48/24 and IP address AOSN TACAS
- Configure and allow on the firewall on the DASHED line interface access between the IP address allocated by the hospital to the Philips internal Ethernet router interface and the target modality IP address

- Standard Reference Drawing-
Not Site Specific
Multi Diagnost Eleva - Flat Detector

Date | Order Number
Drawn By | Quote Number
Drawing Number N-SRD050012
N1
Sheet 21 of 22

 01.01.09

Instructions

This form is to be used by Project Manager, Contractor and Service Engineer.

Information is used to develop and determine site ready date.

Items listed are go/no go items for delivery unless noted as delay only items.

Items identified with *** as delayed items must be completed after hours or on weekend. These items cannot be accomplished while installation is in progress. Also, these items must be completed within two days of installation start or they may stop installation.

Site Readiness Checklist

Modality: _____

OA#: _____

Site Name: _____

Location: _____

Contact Name: _____

Contact Phone Number: _____

- ☐ Customer site preparation verified in general against the Philips final planning drawings.
- ☐ Walls finished including painting.
- ☐ Doors installed.
- ☐ Floor leveled according to Philips drawings and specifications.
- ☐ Floors are tiled/covered finished. Flooring is covered with protective covering (scratch protection).
- ☐ Ceiling lights installed.
- ☐ Cable conduit and ductwork installed and clean. Position checked. Duct covers in place but not finally closed. Cable opening are clear, without sharp edges. Pull strings in conduit. Installation per Philips specifications.
- ☐ HVAC environmental equipment installed and working according to Philips specifications.
- ☐ Ceiling installation completed.
- ☐ Electrical preparation according to Philips specifications.
- ☐ All network cabling, drops installed according to Philips specifications (including hardcopy cameras).
- ☐ All pre-cabling identified on Philips drawings has been installed.
- ☐ Pre-move survey completed - Delivery route identified.
- ☐ Lead glass installed ***.
- ☐ X-ray warning lights installed ***.
- ☐ Dedicated phone line for modem use***.
- ☐ Room has been cleaned ***.
- ☐ Cabinets and casework installed***.
- ☐ RSN Surveys completed and submitted
- ☐ Philips RSN Champion contacted.

Approved for Delivery

Project Manager **Date**

Service Engineer **Date**

Items specific for the GXR modality

- ☐ Unistrut Installed and Level according to Philips Specifications
- ☐ Blocking Support for Wall Bucky
- ☐ Wall Support for Wall Bucky
- ☐ Conduit lengths measured according to Philips specifications. NOTE: Specifications is from source box to destination box (not just conduit run length)
- ☐ Floor Plates Installed and Level according to Philips Specifications
- ☐ All Cover plates have holes punched and nipples required and bushings installed

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- Standard Reference Drawing-
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Multi Diagnost Eleva - Flat Detector

Date | Order Number

Drawn By | Quote Number

Drawing Number
N-SRD050012

CHK
Sheet 22 of 22

01.01.09