



APPLICATION FOR PREAPPROVAL SPECIAL SEISMIC CERTIFICATION OF EQUIPMENT AND COMPONENTS

For Office Use Only

APPLICATION NO.
OSP – 0179-10

Check whether application is: NEW RENEWAL

1.0 Hill-Rom, Inc. Rick Schuman
Manufacturer *Manufacturer's Technical Representative*

1225 Crescent Green, Suite 300, Cary, NC 27518
Mailing Address

919-854-3380
Telephone

Rick.schuman@hill-rom.com
E-mail Address

2.0 NaviCare Nurse Call Control and Power Equipment Nurse Call System
Product Name *Product Type*

NaviCare Nurse Call System Control and Power Equipment in Chatsworth Wall-Mount Rack 11996-748
NaviCare Nurse Call System Control and Power Equipment in Chatsworth Floor-Mount Rack 11972-712
Room Control Box mounted directly on wall or in Room Box

Product Model No. (List all unique product identification numbers and/or serial numbers)

General Description: NaviCare Nurse Call System control and power are provided by Hill-Rom POE switches, VOIP server, Message Processing Controller, and APC Smart UPS in a Chatsworth floor- or wall-mounted rack; Hill-Rom Room Control Box mounted on wall or in wall-mounted Room Box. System allows patients to place locatable calls to nurses.

3.0 Hill-Rom, Inc. Rick Schuman
Applicant Company Name *Contact Person*

1225 Crescent Green, Suite 300, Cary, NC 27518
Mailing Address

919-854-3380
Telephone

Rick.schuman@hill-rom.com
E-mail Address

I hereby agree to reimburse the Office of Statewide Health Planning and Development for the actual costs incurred by the department for review.

Signature of Applicant

4/6/2011
Date

Director Systems Engineering
Title

Hill-Rom
Company Name

Registered Design Professional Preparing the Report



4.0 Forell/Elsesser Engineers
Company Name

Carlos Sempere, PE C75648
Contact Name *California License Number*

160 Pine St., 6th Flr., San Francisco, CA 94111
Mailing Address

415-837-0700 c.sempere@forell.com
Telephone *E-mail Address*

California Licensed Structural Engineer Review and Acceptance of the Report

5.0 Forell-Elsesser Engineers, Inc.
Company Name

Marco Scanu, SE S4454
Contact Name *California License Number*

160 Pine St., 6th Flr., San Francisco, CA 94111
Mailing Address

415-837-0700 m.scanu@forell.com
Telephone *E-mail Address*

Anchorage Pre-Approval

6.0

Anchorage is pre-approved under OPA-
 (Separate application for anchorage pre-approval is required)

Anchorage is not Pre-approved

Certification Method

7.0 Testing in accordance with: ICC-ES AC-156 Other (Please Specify):

Analysis

Experience data

Combination of Testing, Analysis, and/or Experience Data (Please Specify):

Testing Laboratory (if applicable)

8.0 National Technical Systems Don Bennett
Company Name *Contact Name*

1536 E. Valencia Dr., Fullerton, CA 92831
Mailing Address

714-879-6110 don.bennett@ntscorp.com
Telephone *E-mail:*

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Approval Parameters

9.0

Design in accordance with ASCE 7-05 Chapter 13: Yes No

Design Basis of Equipment or Components (F_p/W_p) = 2.28g

S_{DS} (Spectral response acceleration at short period) = 3.04g

a_p (In-structure equipment or component amplification factor) = 2.5

R_p (Equipment or component response modification factor) = 6.0

I_p (Importance factor) = 1.5

z/h (Height factor ratio) = 1.0

Equipment or Component fundamental period(s) = See attachment, "Resonant Frequency Summary"

Building period limits (if any) = n/a

Overall dimensions and weight (or range thereof) = See attachment, "Product Range Summary"

Equipment or Components @ grade designed in accordance with ASCE 7-05 Chapter 15: Yes No

Design Basis of Equipment or Components (V/W) =

S_{DS} (Spectral response acceleration at short period) =

S_1 (Spectral response acceleration at 1 second period) =

R (Response modification coefficient) = 1.0

Ω_0 (System overstrength factor) = 1.0

C_d (Deflection amplification factor) = 1.0

I_p (Importance factor) = 1.5

Height to Center of Gravity above base =

Equipment or Component fundamental period(s) = Sec

Overall dimensions and weight (or range thereof) =

Tank(s) designed in accordance with ASME BPVC, 2007: Yes No

10.0 List of attachments supporting the special seismic certification of equipment or components:

- Test Report
- Drawings
- Manufacturer's Catalog
- Calculations
- Other (Please Specify): Product Range Summary & Checklist

11.0 OSHPD Approval (For Office Use Only)

Chris Tokas
Signature & Date

4/6/2011

December 31, 2016

Chris Tokas, SHFR

S_{DS} (g) = 3.04 z/h = 1.0

Name & Title

Approval Expiration Date

Condition of Approval (if any): Total weight (including content) of Chatsworth CUBE-iT (11996-X48) Wall-Mtd Rack (24"Wx30"Dx48"H) shall not exceed 403 lbs and floor mounted (11972-X12) Chatsworth Seismic Frame (19"W x 36"D x 84"H) shall not exceed 623 lbs.

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OSP APPLICATION
 Fuel Oil Systems - Control Panels
 Product Range Summary

Hill-Rom - NaviCare Nurse Call System Product Range Summary
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	Mounting	Width	Depth	Height	Weight	Notes
Room Control Box (RCB)						
Hill-Rom RCB, Gen. 1 (P2599NNC1A00)	Wall or Room Box	8 in	1.6 in	9 in	5.0 lbs	1
Hill-Rom RCB, Gen. 2 (P2599NNC1B00)	Room Box only	8 in	1.6 in	9 in	8.5 lbs	2, 3

- Notes**
1. May be mounted directly to wall, with or without plastic RCB cover
 2. Must be installed in wall-mounted 12"x12"x4.25" sheet metal Room Box enclosure (Hill-Rom P2549A03)
 3. Weight includes Room Box weight

	Mounting	Width	Depth	Height	Weight	Notes
Cabinets						
Chatsworth CUBE-iT PLUS 11996-748	Wall	24 in	30 in	48 in	151 lbs	1,2,3
Chatsworth Seismic Frame 11972-712	Floor	19 in	36 in	84 in	376 lbs	4,5

- Notes**
1. All cabinets are for interior use (NEMA Type 1)
 2. 14ga carbon steel w/ aluminum rails, steel front door
 3. Includes Chatsworth Rear Rail Kit 12787-548
 4. Carbon steel interior frame w/ aluminum outer frame and rails
 5. Tested with metal side panels and perforated front & back doors in place

INTERNAL COMPONENTS	Part #	Quantity Tested	
		Wall-Mtd	Floor-Mtd
Hill-Rom PoE Switch, Nurse Call 24-Port	P2519NNC1A24	2	2
Hill-Rom Message Processing Center	P2577NNC1A00	1	1
APC Smart UPS (APC # SUA1500RM2U)	P2521A02	2	1
APC Smart UPS (APC # SMT1500RM2U)	P2521A02	1	2
Middle Atlantic PD-915R 15A Power Unit	UL# E204950	1	1
VOIP Server w/ Mirroring (Comark)	P2576NNC1A01	1	1
Rack Mount Slides 30" for VOIP Server (Comark)	P005504	-	1
Rack Mount Slides 30" for VOIP Server (Comark)	P005503	1	-

FORELL/ELSESSER ENGINEERS, INC.
 160 Pine Street, 6th Floor
 San Francisco, CA 94111

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OSP APPLICATION
Hill-Rom - NaviCare Nurse Call System
Resonant Frequency Summary

4/5/2011

**Hill-Rom - NaviCare Nurse Call System
Resonant Frequency Summary**

	<u>NTS2</u> Floor-Mounted Cabinet	
Direction	Frequency	Period
Front-Back	12.0 Hz	0.08 sec
Side-Side	7.5 Hz	0.13 sec
Vertical	28.9 Hz	0.03 sec

TEST SUMMARY

Tested Unit #1a (NTS1)

NTS1

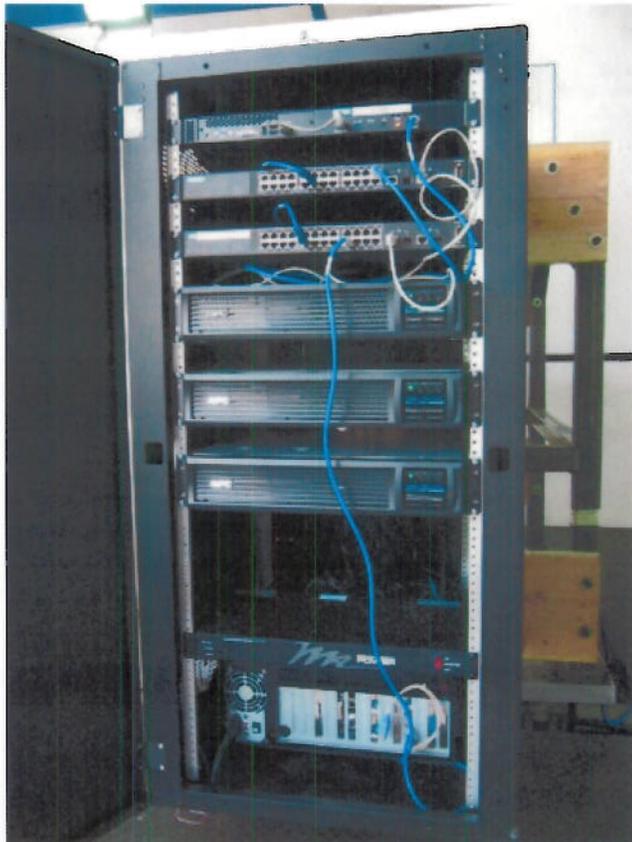
NaviCare Nurse Call System
in Chatsworth CUBE-iT Wall-Mtd Rack
24"W x 30"D x 48"H
403 lbs

Attaches to vertical surface using four lag screws at top & two at bottom.



Test configuration is shown below:

24		24
23	P2577NNC1A00 MPC	23
22		22
21	P2519NNC1A24 PoE Switch	21
20		20
19	P2519NNC1A24 PoE Switch	19
18		18
17	P2521A02 APC Smart UPS	17
16		16
14	P2521A02 APC Smart UPS	14
13		13
12		12
11	P2521A02 APC Smart UPS	11
10		10
9		9
8		8
7		7
6		6
5	UL# E204950 PD-915R Power Unit	5
4		4
3		3
2	P2576NNC1A01 VOIP Server	2
1		1



Tested Unit #1b (RCB1)

RCB 1

Room Control Board, Gen. 2

Mounted in Room Box

8"W x 1.6"D x 9"H

8.5 lbs

Attaches to Room Box w/ 3 clips



Room Box

12"W x 4.25"D x 12"H

Attaches to vertical surface with four screws.

Tested simultaneously with NTS1 (Wall-Mounted cabinet).

TEST SUMMARY

Tested Unit #2a (NTS2)

NTS2

NaviCare Nurse Call System
in Chatsworth Seismic Frame
19"W x 36"D x 84"H
623 lbs

Attaches to concrete floor surface using
four ½" anchors.

Test configuration is shown below:

42		42
41	P2577NNC1A00 MPC	41
40		40
39	P2519NNC1A24 PoE Switch	39
38		38
37	P2519NNC1A24 PoE Switch	37
36		36
35		35
34		34
33		33
32		32
31		31
30		30
29		29
28		28
27		27
26		26
25		25
24		24
23		23
22		22
21	P2576NNC1A01 VOIP Server	21
20		20
19		19
18		18
17		17
16		16
15		15
14	P2521A02 APC Smart UPS	14
13		13
12		12
11	UL# E204950 PD-915R Power Unit	11
10		10
9		9
8		8
7	P2521A02 APC Smart UPS	7
6		6
5		5
4	P2521A02 APC Smart UPS	4
3		3
2		2
1		1



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Tested Unit #2b (RCB2)

RCB 2

Room Control Board, Gen. 1

Wall-Mounted

8"W x 1.6"D x 9"H

5.0 lbs

Attaches to vertical surface with four screws.



Tested simultaneously with NTS2 (Floor-Mounted cabinet).