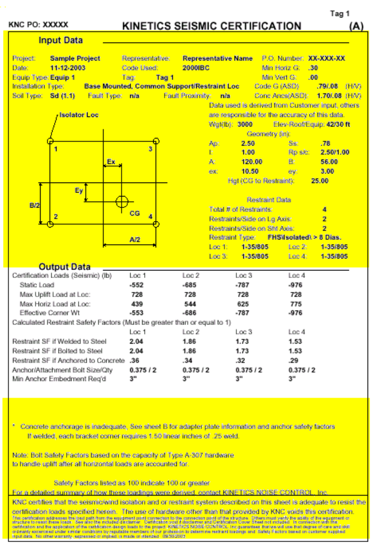
UNDERSTANDING KNC'S STANDARD CERTIFICATION OUTPUT

Most of the seismic and wind certifications performed by Kinetics Noise Control will be done using proprietary analytical software and will generate a report in the format shown on the following pages. In cases that cannot be modeled using this software, the results will be obtained using customized spreadsheet documents that will vary in format depending on the analysis involved.

This section will provide insight and understanding of the data presented using the standardized computer-generated format.

There will always be at least one output sheet per seismic calculation. If special anchorage is required, a second sheet indicating the special anchorage requirements will be added. If wind is also an issue, and a wind analysis was requested, a third document (for standard anchorage) and possibly a fourth (for special anchorage) would be included as well.

In all cases, the output documents will have three portions. The upper half of the sheet indicates the information input into the program. The second segment indicates the program outputs, and the last segment lists special notes that are applicable.



Tag 1

KNC PO: XXXXX KINETICS SEISMIC CERTIFICATION (A)

Input Data

Project: **Sample Project** Representative: **Representative Name** P.O. Number: **XX-XXX-XX**
Date: **11-12-2003** Code Used: **2000IBC** Min Horiz G: **.30**
Equip Type: **Equip 1** Tag: **Tag 1** Min Vert G: **.00**
Installation Type: **Base Mounted, Common Support/Restraint Loc** Code G (ASD) **.79/.08** (H/V)
Soil Type: **Sd (1.1)** Fault Type: **n/a** Fault Proximity: **n/a** Conc Ancs(ASD): **1.70/.08** (H/V)

Data used is derived from Customer input, others are responsible for the accuracy of this data.

Wgt(lb): **3000** Elev-Roof/Equip: **42/30 ft**

Geometry (in):

Ap:	2.50	Ss:	.78
I:	1.00	Rp s/c:	2.50/1.00
A:	120.00	B:	56.00
ex:	10.50	ey:	3.00

Hgt (CG to Restraint): **25.00**

Restraint Data

Total # of Restraints: **4**
Restraints/Side on Lg Axis: **2**
Restraints/Side on Sht Axis: **2**
Restraint Type: **FHS\Isolated\ > 8 Dias.**
Loc 1: **1-35/805** Loc 2: **1-35/805**
Loc 3: **1-35/805** Loc 4: **1-35/805**

Output Data

Certification Loads (Seismic) (lb)	Loc 1	Loc 2	Loc 3	Loc 4
Static Load	-552	-685	-787	-976
Max Uplift Load at Loc:	728	728	728	728
Max Horiz Load at Loc:	439	544	625	775
Effective Corner Wt	-553	-686	-787	-976

Calculated Restraint Safety Factors (Must be greater than or equal to 1)

	Loc 1	Loc 2	Loc 3	Loc 4
Restraint SF if Welded to Steel	2.04	1.86	1.73	1.53
Restraint SF if Bolted to Steel	2.04	1.86	1.73	1.53
Restraint SF if Anchored to Concrete	.36	.34	.32	.29
Anchor/Attachment Bolt Size/Qty	0.375 / 2	0.375 / 2	0.375 / 2	0.375 / 2
Min Anchor Embedment Req'd	3"	3"	3"	3"

* Concrete anchorage is inadequate, See sheet B for adapter plate information and anchor safety factors
If welded, each bracket corner requires 1.50 linear inches of .25 weld.

Note: Bolt Safety Factors based on the capacity of Type A-307 hardware to handle uplift after all horizontal loads are accounted for.

Safety Factors listed as 100 indicate 100 or greater

For a detailed summary of how these loadings were derived, contact KINETICS NOISE CONTROL, Inc.

KNC certifies that the seismic/wind isolation and or restraint system described on this sheet is adequate to resist the certification loads specified herein. The use of hardware other than that provided by KNC voids this certification.

Seismic Certification Document (A)
All standard seismic certifications will include the (A)-type document. It can be identified by the *(A)* in the top right corner and the word *Seismic* included in the title.

<u>Input Data</u>
Looking first at the input data, there are several key areas that are grouped together as follows:

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World Wide Web:	www.kineticsnoise.com
Email:	sales@kineticsnoise.com

KNC PO: XXXXX

Tag 1

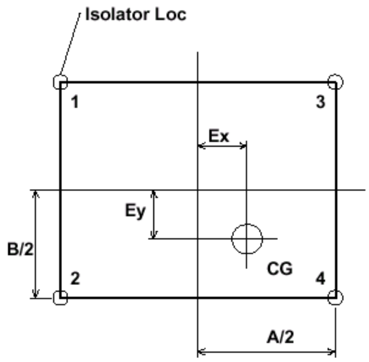
KINETICS SEISMIC CERTIFICATION (A)

Input Data

Project:	**Sample Project**	Representative:	**Representative Name**	P.O. Number:	**XX-XXX-XX**
Date:	**11-12-2003**	Code Used:	**2000IBC**	Min Horiz G:	**.30**
Equip Type:	**Equip 1**	Tag:	**Tag 1**	Min Vert G:	**.00**

Installation Type: **Base Mounted, Common Support/Restraint Loc** Code G (ASD) **.79/.08** (H/V)

Soil Type: **Sd (1.1)** Fault Type: **n/a** Fault Proximity: **n/a** Conc Ancs(ASD): **1.70/.08** (H/V)



Data used is derived from Customer input, others are responsible for the accuracy of this data.

Wgt(lb): **3000** Elev-Roof/Equip: **42/30 ft**

Geometry (in):

Ap:	**2.50**	Ss:	**.78**
I:	**1.00**	Rp s/c:	**2.50/1.00**
A:	**120.00**	B:	**56.00**
ex:	**10.50**	ey:	**3.00**

Hgt (CG to Restraint): **25.00**

Restraint Data

Total # of Restraints: **4**
Restraints/Side on Lg Axis: **2**
Restraints/Side on Sht Axis: **2**
Restraint Type: **FHS\Isolated\ > 8 Dias.**

Loc 1:	**1-35/805**	Loc 2:	**1-35/805**
Loc 3:	**1-35/805**	Loc 4:	**1-35/805**

General project data is generally across the top of the document. Included is the reference purchase order number from Kinetics Noise Control in the top left-hand corner. Below this is the name assigned to the project by Kinetics Noise Control, the representative's name, reference to the representative's purchase order number, and the date that the certification was performed.

Also listed is the code used to perform the analysis and any overriding horizontal and vertical seismic design acceleration coefficients, if specified.

For some codes, the soil type, fault type, and fault proximity come into play and if they are applicable they are listed as shown above.

The next data segment is specifically related to the particular equipment installation being certified. In the figure below, the location of this information has been indicated.

For ease of reference, the tag data listed at the top right-hand corner as well as on the third line refers to the component being evaluated.

Within the body of the text a name for the equipment is listed along with the tag identification and below this is the mounting arrangement. In this case, the mounting is identified as *Base Mounted, Common Support/Restraint Loc*. This indicates that the equipment is mounted at its base (typically to the floor) and that the restraints and supports are at the same locations (meaning that if isolated, combination isolator/restraints are used, or if hard mounted, that the unit is bolted down and restrained

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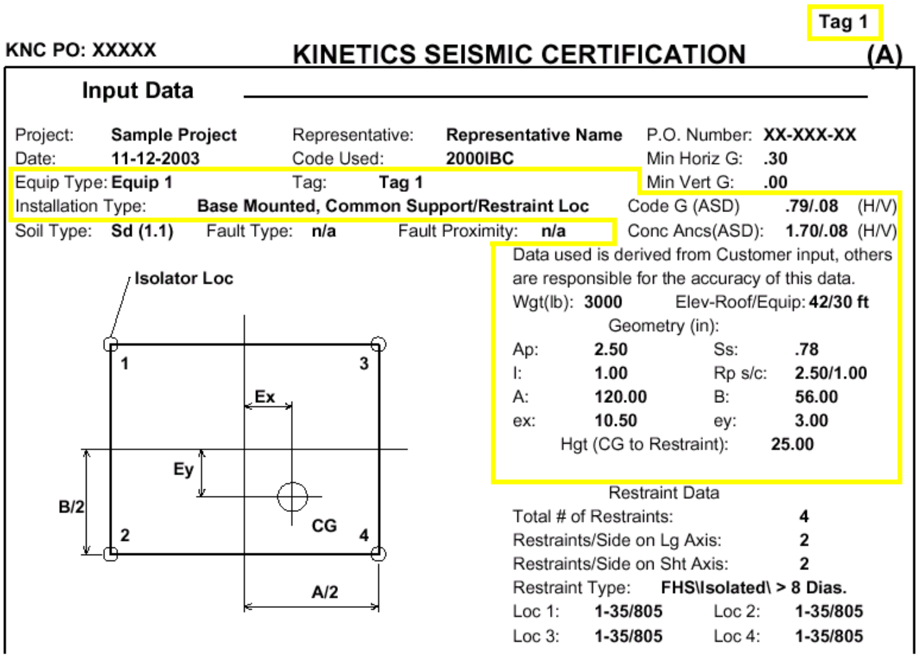
with the same hardware). Other options that may be listed are:

Base Mounted, Different Support/Restraint Loc. (for separate isolators & restraints)
Base Mounted, 4 Isolators/2 Restraints (where 2 restraints are located at the equipment centerline)
Hanging, Common Support/Restraint Loc. (where equipment is hung with 4 or more rods and is restrained at the same points)
Hanging, Different Support/Restraint Loc. (where equipment is hung with 4 or more rods and is restrained at different points)
Hanging, 2 Supports/4 Restraints (where equipment is hung on 2 hanger rods and is restrained with 4 restraint cables).


Tag 1

KNC PO: XXXXX — **KINETICS SEISMIC CERTIFICATION** (A)

Input Data

Project: **Sample Project** Representative: **Representative Name** P.O. Number: **XX-XXX-XX**
Date: **11-12-2003** Code Used: **2000IBC** Min Horiz G: **.30**
Equip Type: **Equip 1** Tag: **Tag 1** Min Vert G: **.00**
Installation Type: **Base Mounted, Common Support/Restraint Loc** Code G (ASD) **.79/.08** (H/V)
Soil Type: **Sd (1.1)** Fault Type: **n/a** Fault Proximity: **n/a** Conc Ancs(ASD): **1.70/.08** (H/V)

Data used is derived from Customer input, others are responsible for the accuracy of this data.
Wgt(lb): **3000** Elev-Roof/Equip: **42/30 ft**

Geometry (in):

Ap:	**2.50**	Ss:	**.78**
I:	**1.00**	Rp s/c:	**2.50/1.00**
A:	**120.00**	B:	**56.00**
ex:	**10.50**	ey:	**3.00**

Hgt (CG to Restraint): **25.00**

Restraint Data

Total # of Restraints: **4**
Restraints/Side on Lg Axis: **2**
Restraints/Side on Sht Axis: **2**
Restraint Type: **FHS\Isolated\ > 8 Dias.**

Loc 1:	**1-35/805**	Loc 2:	**1-35/805**
Loc 3:	**1-35/805**	Loc 4:	**1-35/805**

Listed on the right side of the certification are *Code G (ASD)* and *Conc Ancs (ASD)* values. These are the computed seismic force values used by the program to determine the forces at the restraint points expressed in ASD (Allowable Stress Design or Working Stress based) units. *Code G* is the basic design force and is used to evaluate component capacity and through-bolted anchorage. *Conc Ancs* includes additional factors that must be used to evaluate anchorage to concrete. The *(H/V)* terms are the horizontal and vertical force components.

Weight, geometry, and equipment specific seismic design factors are the last items that fall into this segment of the input data. *Wgt* (weight) is the operating weight of the equipment. *Elev-Roof/Equip* is the relative elevation of the equipment in the structure to the roof elevation and is required only by some codes.

Seismic factors A_p, S_s, I, R_p *s/c* are the factors drawn from the code and are used to

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compute the previously discussed seismic force values. The names of these terms will vary from code to code, but they will always be found in this location on the certification document. Where *s/c* appears, this indicates that different values are used for through-bolted (*s* for steel) and anchored to concrete (*c* for concrete) connections.

Values for *A, B,* e_x, and e_y are identified in the schematic. These represent the spacing between the outermost restraint elements and the assumed offset in the center of gravity of the system. When the restraint components are independent of the supports, the values *a* and *b* will also be listed. In the sketch, support points are represented by O's and restraint points by X's.

The last item that relates to the equipment data is the height (*Hgt*). The value here is the vertical distance between the equipment center of gravity and the restraint contact point. With hanging equipment, two values will be listed. The first is the vertical distance between the equipment center of gravity and the restraint connection point and the second is the distance between the restraint connection point and the elevation at which the hanger rods connect to the equipment.

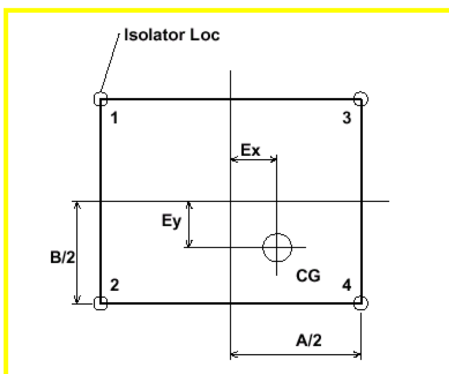
Moving on to the installation sketch:

Tag 1

KNC PO: XXXXX **KINETICS SEISMIC CERTIFICATION** (A)

Input Data

Project: **Sample Project** Representative: **Representative Name** P.O. Number: **XX-XXX-XX**
Date: **11-12-2003** Code Used: **2000IBC** Min Horiz G: **.30**
Equip Type: **Equip 1** Tag: **Tag 1** Min Vert G: **.00**
Installation Type: **Base Mounted, Common Support/Restraint Loc** Code G (ASD) **.79/.08** (H/V)
Soil Type: **Sd (1.1)** Fault Type: **n/a** Fault Proximity: **n/a** Conc Ancs(ASD): **1.70/.08** (H/V)



Data used is derived from Customer input, others are responsible for the accuracy of this data.
Wgt(lb): **3000** Elev-Roof/Equip: **42/30 ft**

Geometry (in):

Ap:	**2.50**	Ss:	**.78**
I:	**1.00**	Rp s/c:	**2.50/1.00**
A:	**120.00**	B:	**56.00**
ex:	**10.50**	ey:	**3.00**

Hgt (CG to Restraint): **25.00**

Restraint Data

Total # of Restraints: **4**
Restraints/Side on Lg Axis: **2**
Restraints/Side on Sht Axis: **2**
Restraint Type: **FHS\Isolated\ > 8 Dias.**
Loc 1: **1-35/805** Loc 2: **1-35/805**
Loc 3: **1-35/805** Loc 4: **1-35/805**

The diagram represents schematically the general layout of the equipment. Restraint points are labeled 1, 2, 3, etc. and the previously discussed dimension locations are identified. If the equipment has more than 4 restraint points, the sketch will show added restraint locations at the midpoint of the long axis; however, the actual number of restraints will be listed under the restraint data heading.

In some cases, there may be 2 restraints grouped in each corner. If this is the case the

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schematic drawing will reflect that condition.

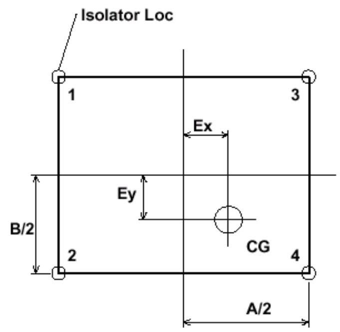
The last segment listed in the input data portion of the certification is the restraint data section.

Tag 1

KNC PO: XXXXX **KINETICS SEISMIC CERTIFICATION** (A)

Input Data

Project:	**Sample Project**	Representative:	**Representative Name**	P.O. Number:	**XX-XXX-XX**
Date:	**11-12-2003**	Code Used:	**2000IBC**	Min Horiz G:	**.30**
Equip Type:	**Equip 1**	Tag:	**Tag 1**	Min Vert G:	**.00**
Installation Type:	**Base Mounted, Common Support/Restraint Loc**			Code G (ASD)	**.79/.08** (H/V)
Soil Type:	**Sd (1.1)**	Fault Type: **n/a**	Fault Proximity: **n/a**	Conc Ancs(ASD):	**1.70/.08** (H/V)



Data used is derived from Customer input, others are responsible for the accuracy of this data.

Wgt(lb): **3000** Elev-Roof/Equip: **42/30 ft**

Geometry (in):

Ap:	**2.50**	Ss:	**.78**
I:	**1.00**	Rp s/c:	**2.50/1.00**
A:	**120.00**	B:	**56.00**
ex:	**10.50**	ey:	**3.00**

Hgt (CG to Restraint): **25.00**

Restraint Data

Total # of Restraints:	**4**		
Restraints/Side on Lg Axis:	**2**		
Restraints/Side on Sht Axis:	**2**		
Restraint Type:	**FHS\Isolated\ > 8 Dias.**		
Loc 1:	**1-35/805**	Loc 2:	**1-35/805**
Loc 3:	**1-35/805**	Loc 4:	**1-35/805**

Listed here is information on the total number of restraints and the number visible on each side (or axis). Also identified is the restraint type and assumed anchor embedment depth (in bolt diameters) for concrete anchors.

Finally, by location (as shown on the sketch) the model of the restraint is identified. If more than 4 restraints, the smallest of the remaining restraints is listed after the heading *Other*. For hard-mounted applications, the restraints will be identified as *Solid*. If cable restrained, the cable quantity and size will be identified.

Output Data

This section of the certification is broken into 2 major subdivisions. First is a summary of the design loads used at each restraint location.

Output Data

Certification Loads (Seismic) (lb)	Loc 1	Loc 2	Loc 3	Loc 4
Static Load	**-552**	**-685**	**-787**	**-976**
Max Uplift Load at Loc:	**728**	**728**	**728**	**728**
Max Horiz Load at Loc:	**439**	**544**	**625**	**775**
Effective Corner Wt	**-553**	**-686**	**-787**	**-976**

Calculated Restraint Safety Factors (Must be greater than or equal to 1)

	Loc 1	Loc 2	Loc 3	Loc 4
Restraint SF if Welded to Steel	**2.04**	**1.86**	**1.73**	**1.53**
Restraint SF if Bolted to Steel	**2.04**	**1.86**	**1.73**	**1.53**
Restraint SF if Anchored to Concrete	**.36**	**.34**	**.32**	**.29**
Anchor/Attachment Bolt Size/Qty	**0.375 / 2**	**0.375 / 2**	**0.375 / 2**	**0.375 / 2**
Min Anchor Embedment Req'd	**3"**	**3"**	**3"**	**3"**

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If more than 4 restraints are used on a piece of equipment, a final column will appear labeled *Other*. The data displayed will be the worst-case condition of those restraints not listed as 1 through 4.

Listed here is the static load (deadweight), the worst-case uplift load condition, the worst-case horizontal load condition, and the effective corner weight used when considering overturning factors. If the system is a hanging system, the maximum tensile load in the cable (based on an angle of 45 degrees to the horizontal) is listed instead of the effective corner weight. <u>All seismic forces as presented are based on the G-forces appropriate for through-bolted or welded connections.</u> Higher G-forces, as noted at the top of the sheet, are, however, used by the program when appropriate if computing safety factors for concrete anchors.

Note: If evaluating or independently analyzing special concrete anchorage conditions, where a 2:1 factor is required (IBC, 97 UBC, TI809-04), the forces listed must be increased as follows. Horizontal forces should be doubled. The effective corner weight should be <u>subtracted</u> from the maximum uplift force and the result added to the maximum uplift force to determine a new uplift component. In addition, the restraint geometry must be accounted for as the listed forces act at the snubbing location of the restraint and forces at the anchors can be considerably different. (This is only required for evaluating the anchorage.)

The effective corner weight differs from the static load in that it is the force required at that corner to " lift" the equipment (if the equipment is assumed to be rigid). For example, it will take the same force to lift the corner of a table with 4 legs as it will to lift a corner of the same table if 10 legs are added somewhere in the middle. While the centrally located legs spread the load out from a support standpoint, they do not share the load when resisting rocking motions.

The lower section of the output data segment presents restraint and hardware capacity information as shown below.

Output Data

Certification Loads (Seismic) (lb)	Loc 1	Loc 2	Loc 3	Loc 4
Static Load	**-552**	**-685**	**-787**	**-976**
Max Uplift Load at Loc:	**728**	**728**	**728**	**728**
Max Horiz Load at Loc:	**439**	**544**	**625**	**775**
Effective Corner Wt	**-553**	**-686**	**-787**	**-976**

Calculated Restraint Safety Factors (Must be greater than or equal to 1)

	Loc 1	Loc 2	Loc 3	Loc 4
Restraint SF if Welded to Steel	**2.04**	**1.86**	**1.73**	**1.53**
Restraint SF if Bolted to Steel	**2.04**	**1.86**	**1.73**	**1.53**
Restraint SF if Anchored to Concrete	**.36**	**.34**	**.32**	**.29**
Anchor/Attachment Bolt Size/Qty	**0.375 / 2**	**0.375 / 2**	**0.375 / 2**	**0.375 / 2**
Min Anchor Embedment Req'd	**3"**	**3"**	**3"**	**3"**

This information will vary depending on the restraint components used, but in general it will present safety factors for the restraint component used, through-bolt size and quantity

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(if through bolted), anchor size, quantity and embedment (if anchored to concrete), and through-bolt/anchor safety factors. If a hanging system is used, the worst-case compressive load in the hanger rod is also identified.

Data presented in the "*Other*" column reflects worst-case loading in conjunction with the smallest "*Other*" restraint and as such is a worst-case condition for the remaining components.

All safety factors listed must exceed 1.0 to have a valid installation with the following exception. In cases where only the concrete anchor safety factor is less than 1.0, an oversized base plate can be provided to allow higher capacity. In these cases, a second certification sheet labeled *(B)* will be included and will address this condition.

Notes

The final segment of the certification document is comprised of general notes and the standard disclaimer.

The notes will vary with the restraint devices used and the application, but will in general offer the following added information.

* Concrete anchorage is inadequate, See sheet B for adapter plate information and anchor safety factors
If welded, each bracket corner requires 1.50 linear inches of .25 weld.

Note: Bolt Safety Factors based on the capacity of Type A-307 hardware
to handle uplift after all horizontal loads are accounted for.

Safety Factors listed as 100 indicate 100 or greater

For a detailed summary of how these loadings were derived, contact KINETICS NOISE CONTROL, Inc.

KNC certifies that the seismic/wind isolation and or restraint system described on this sheet is adequate to resist the certification loads specified herein. The use of hardware other than that provided by KNC voids this certification.
This certification addresses the load path from the equipment point connection to the connection point of the structure. Others must verify the ability of the equipment or structure to resist these loads. See also the included disclaimer. Certification void if disclaimer and Certification Cover Sheet not included. In connection with this certification and the application of the certification design loads to the project ,KINETICS NOISE CONTROL, Inc guarantees that we will use that degree of care and skill ordinarily excercised under similar conditions by reputable members of our profession to determine restraint loadings and Safety Factors based on customer supplied input data. No other warranty, expressed or implied, is made or intended. 09/30/2003

Weld sizes that can be used as an option to bolting when appropriate for the restraint devices are listed.

When one or more of the concrete anchor safety factors is less than 1.0, a note indicating that Sheet B will be included and information addressing the need for an oversized baseplate will appear.

Additional notes relating to allowable cable angles, A-307 hardware requirements, and edge distances for concrete anchors are also included when appropriate.

General Comments on Document (A)

Often, due to a lack of comprehensive input data, Kinetics Noise Control engineers will conservatively estimate the center of gravity location. While estimating a dimension or magnitude for this isn't unreasonable, the direction of the imbalance is almost always

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unknown. Because of this, unless the direction of the imbalance is clearly stated (relative to features on the equipment that are spelled out) the worst-case computed corner restraint condition should be assumed for all corner locations.

Seismic Certification Document (B)

When appropriate and as indicated above, the seismic certifications will include the (B)-type document. It can be identified by the *(B)* in the top right corner and the word *Seismic* included in the Title.

While it is formatted in the same manner and includes much the same information as the (A) document, it contains detailed information relating to the capacity of the required oversize base plate and additional anchors.

<u>Input Data</u>

The only difference between the (A)- and (B)-documents within the input data section is that the schematic equipment layout sketch is changed to show the size and layout of the required oversize base plate.

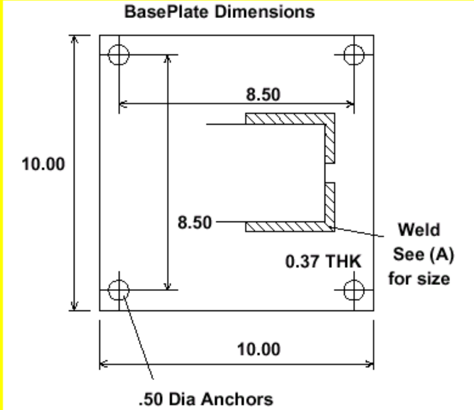
Tag 1

KNC PO: XXXXX **KINETICS SEISMIC CERTIFICATION** **(B)**

Input Data

Project:	**Sample Project**	Representative:	**Representative Name**	P.O. Number:	**XX-XXX-XX**
Date:	**11-12-2003**	Code Used:	**2000IBC**	Min Horiz G:	**.30**
Equip Type:	**Equip 1**	Tag:	**Tag 1**	Min Vert G:	**.00**
Installation Type:	**Base Mounted, Common Support/Restraint Loc**			Code G (ASD)	**.79/.08** (H/V)
Soil Type:	**Sd (1.1)**	Fault Type: **n/a**	Fault Proximity: **n/a**	Conc Ancs(ASD):	**1.70/.08** (H/V)

BasePlate Dimensions



Data used is derived from Customer input, others are responsible for the accuracy of this data.

Wgt(lb): **3000** Elev-Roof/Equip: **42/30 ft**

Geometry (in):

Ap:	**2.50**	Ss:	**.78**
I:	**1.00**	Rp s/c:	**2.50/1.00**
A:	**120.00**	B:	**56.00**
ex:	**10.50**	ey:	**3.00**

Hgt (CG to Restraint): **25.00**

Restraint Data

Total # of Restraints:	**4**
Restraints/Side on Lg Axis:	**2**
Restraints/Side on Sht Axis:	**2**
Restraint Type:	**FHS\Isolated\ > 8 Dias.**

Loc 1:	**1-35/805**	Loc 2:	**1-35/805**
Loc 3:	**1-35/805**	Loc 4:	**1-35/805**

Information on the on the bolt pattern, anchor size, overall dimensions, and weld locations are all presented in a readable format.

<u>Output Data</u>

The first portion of the output data (which indicates the loads at the restraint points) remains unchanged from the (A)-Document. Information on the modified anchorage arrangement is, however, new.

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Email: sales@kineticsnoise.com

Output Data

Seismicly Generated Loads (lb)	Loc 1	Loc 2	Loc 3	Loc 4
Static Load	**-552**	**-685**	**-787**	**-976**
Max Uplift Load at Loc:	**231**	**111**	**20**	**-150**
Max Horizontal	**439**	**544**	**625**	**775**

Calculated Restraint Factors of Safety (Must be greater than or equal to 1)

	Loc 1	Loc 2	Loc 3	Loc 4
Anchor Size Required / Qty	**0.5 / 4**	**0.5 / 4**	**0.5 / 4**	**0.5 / 4**
Min Anchor Embedment Req'd	**4"**	**4"**	**4"**	**4"**
Anchor Safety Factor in Concrete	**5.30**	**4.28**	**3.73**	**2.98**

For Restraint Locations (Loc 1, etc), see Sheet A

Listed will be the quantity and size of the anchors, the required anchor embedment depth, and the resulting anchorage safety factor for each location.

<u>Notes</u>

Additional notes are provided that relate directly to the oversized base plate and the anchors that go with them.

Wind Certification Document (A)

When requested, Kinetics Noise Control will perform an additional wind certification. It is very similar to the seismic certification and can be identified by the *(A)* in the top right corner and the words *Wind Load* included in the title.

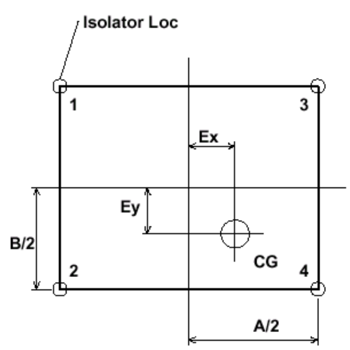
<u>Input Data</u>

Tag 1

KNC PO: XXXXX **KINETICS WIND LOAD CERTIFICATION** **(A)**

Input Data

Project: **Sample Project** Representative: **Representative Name** P.O. Number: **XX-XXX-XX**
Date: **11-12-2003** Code Used: **2000IBC**
Equip Type: **Equip 1** Tag: **Tag 1**
Installation Type: **Base Mounted, Common Support/Restraint Loc** Wind Pressure: **35.0 PSF**



Data used is derived from Customer input, others are responsible for the accuracy of this data.
Wgt(lb): **3000** Elev-Roof/Equip: **42/30 ft**
Geometry (in):

Length: **150.00** Width: **50.00**
Height: **50.00**
ex: **10.50** ey: **3.00**
Center Hgt of Area: **25.00**

Restraint Data
Total # of Restraints: **4**
Restraints/Side on Lg Axis: **2**
Restraints/Side on Sht Axis: **2**
Restraint Type: **FHS\Isolated\ > 8 Dias.**
Loc 1: **1-35/805** Loc 2: **1-35/805**
Loc 3: **1-35/805** Loc 4: **1-35/805**

The areas where there are differences between the wind load input data and the seismic load input data are indicated above.

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The seismic G-forces listed in the seismic certification are replaced by a design wind pressure. In addition, the length, width, and height of the restrained equipment are indicated.

All of the remaining input information remains the same.

<u>Output Data</u>
The output data format is exactly the same as the output data in the seismic certification. The only difference is that the values listed are the result of the wind load and not of the seismic load.

As with the seismic certification, the possibility exists in a wind application that concrete anchorage may be inadequate. If this is the case, a (B)-document similar to the (B)-seismic document is generated.

Wind Certification Document (B)
Without going into great detail, the difference between the (B)-wind certification document and the (A)-wind certification document is identical to the differences between the (B)-seismic document and the (A)-seismic document. Refer back to the earlier comments for further clarification.

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