HOW TO USE THIS MANUAL
(Overview of Chapter Contents)

Section P
Product Details

The Product Detail section is broken into several chapters, each dealing with different Seismically related products. Below you will find a listing of these Chapters and immediately after the listing, there is a summary of the material in each Chapter.

Floor/Curb Mounted
Seismic Mounting Brackets Chapter P1
Isolator/Restraints (FMS Series) Chapter P2
Isolator/Restraints (FHS/FLS/FLSS Series) Chapter P3
Elastomeric Isolator/Restraints (KRMS/RQ) Chapter P4
Seismic Bumper/Snubbers (HS Series) Chapter P5
RTU Seismic Isolation Systems (ESR/KSR/KSCR) Chapter P6

Suspended
Cable/Wire Rope Restraints Chapter P7
Other Required Components (Rod Stiffeners etc.) Chapter P8

Architectural Elements Chapter P9
Concrete Anchor Bolts Chapter P10

Seismic Mounting Brackets (P1)

The first Product Section includes information on standard attachment brackets used by Kinetics Noise Control for the direct attachment of hard or pad mounted equipment to structures. Both Geometrical and capacity data is included for each component.

General Description (P1.1)
A general description of these items is provided along with information on recommended applications.

Floor Mounted Equipment

Submittal Data (KSMS) (P1.2.1)
Design information and installation information on the KSMS (Equipment Attachment) mounting clip is provided in this section.

Submittal Data (KSMG) (P1.2.2)
Design information and installation information on the KSMG (Isolation Pad
Mounted Equipment) mounting clip is provided in this section.

**KSMS and KSMG Locating Guide (P1.2.3)**
Standard orientation and placement information for KSMS and KSMG clips can be found in this segment.

**Curb Mounted Equipment**

**Submittal Data (KSMF) (P1.3.1)**
Design information and installation information on the KSMF (Mushroom Fan mounting clip) is provided in this section.

**Submittal Data (KSCM-1) (P1.3.2)**
Design information and installation information on the KSCM-1 (Curb Mounting Kit 1 (1 piece)) Equipment mounting clip is provided in this section.

**Submittal Data (KSCM-2) (P1.3.3)**
Design information and installation information on the KSCM-2 (Curb Mounting Kit 2 (2 piece)) Equipment mounting clip is provided in this section.

**Submittal Data (KSCV) (P1.3.4)**
Design information and installation information on the KSCV (Curb Mounted Vertical Restraint Kit) Equipment restraint clip is provided in this section.

**Submittal Data (KSVR) (P1.3.5)**
Design information and installation information on the KSVR (Sheet Metal Curb Reinforcement Kit) is provided in this section.

**Clip Selection Information**

**Selection Information (P1.4)**
General component selection guidance for the above listed hardware is offered in this document.

**FMS Isolators and Restraints (P2)**

With the advent of higher restraint capacity requirements in the field, Kinetics Noise Control has developed the FMS modular isolator/restraint family. These restraints have many features that are new and different in the marketplace and can offer significant benefits to the user. This Chapter addresses this isolator/restraint in detail.

The FMS will be of interest to anyone attempting to restrain extremely heavy equipment, equipment in seismically active areas and/or equipment that is going to be attached to concrete.
General Description (P2.1)
A general description of the FMS, it’s features, functions, benefits as well as practical applications are provided in this section.

FMS Restraint Data

FMSAA Restraint Submittal Data (P2.2.1)
FMSAA Submittal and Design information data is provided in this section.

FMSA Restraint Submittal Data (P2.2.2)
FMSA Submittal and Design information data is provided in this section.

FMSB Restraint Submittal Data (P2.2.3)
FMSB Submittal and Design information data is provided in this section.

FMSC Restraint Submittal Data (P2.2.4)
FMSC Submittal and Design information data is provided in this section.

FMSD Restraint Submittal Data (P2.2.5)
FMSD Submittal and Design information data is provided in this section.

FMSE Restraint Submittal Data (P2.2.6)
FMSE Submittal and Design information data is provided in this section.

FMSF Restraint Submittal Data (P2.2.7)
FMSF Submittal and Design information data is provided in this section.

FMSG Restraint Submittal Data (P2.2.8)
FMSG Submittal and Design information data is provided in this section.

FMS Spring Coil Data

FMS 1” Deflection “A” Coil Isolator Data (P2.3.1)
Data for 1” deflection coils used in conjunction with the FMS Restraint ranging in capacity from 35 to 1600 lb is illustrated in this document.

FMS 1” Deflection “C” Coil Isolator Data (P2.3.2)
Data for 1” deflection coils used in conjunction with the FMS Restraint ranging in capacity from 250 to 14,000 lb is illustrated in this document.

FMS 2” Deflection Coil Isolator Data (P2.3.3)
Data for 2” deflection coils used in conjunction with the FMS Restraint ranging in capacity from 100 to 18,000 lb is illustrated in this document.
FMS 4” Deflection Coil Isolator Data (P2.3.4)
Data for 4” deflection coils used in conjunction with the FMS Restraint ranging in capacity from 100 to 23,200 lb is illustrated in this document.

FMS Restraint Selection Information (P2.4)
Seismic ratings and technical application data for use on FMS type Isolators.

FMS Load Spreader Plate Data (P2.5)
This section addresses application data for FMS restraints fitted with oversized baseplates.

FMS Installation Instructions (P2.6)
Comprehensive Installation Instructions for the FMS Isolators and Restraints can be found in this segment of the chapter.

FHS, FLS and FLSS Seismic Isolators (P3)
Design and selection data for the FHS, FLS and FLSS lines of Seismically rated Isolators are available here. These older isolators are used commonly throughout the industry.

Data here is of interest to specifiers, installation contractors and design professionals involved in the restraint selection process.

General Description (P3.1)
A general description of the FHS, FLS and FLSS isolators begins this chapter. Their features, functions, benefits as well as practical applications are provided in this section.

FHS Restraint Submittal Data (P3.2.1)
Design information and capacity information for the FHS Isolator line is provided in this section.

FLS Restraint Submittal Data (P3.2.2)
Design information and capacity information for the FLS Isolator line is provided in this section.

FLSS Restraint Submittal Data (P3.2.3)
Design information and capacity information for the FLSS Isolator line is provided in this section.

FLS, FLSS, FHS Selection Information (P3.3)
Design Selection and guidance information to be used in conjunction the FHS, FLS and FLSS Isolators are summarized in this document.
FHS, FLS and FLSS Load Spreader Plates (P3.4)
Load Spreader Plates and the resulting increase in performance for concrete anchorage applications are addressed in this section.

FHS, FLS and FLSS Installation Instructions (P3.5)
Comprehensive Installation Instructions for the FHS, FLS and FLSS Isolators can be found in this segment of the chapter.

KRMS and RQ Elastomeric Seismic Isolators (P4)
Design and selection data for the KRMS and RQ lines of Seismically rated Isolators/Mounts are available here.

Data here is of interest to specifiers, installation contractors and design professionals involved in the restraint selection process.

KRMS General Description (P4.1.1)
A general description of the KRMS Isolator begins this chapter. Their features, functions, benefits as well as practical applications are provided in this section.

RQ General Description (P4.1.2)
Descriptive information and specifications on the RQ Isolators are addressed here.

KRMS Restraint Submittal Data (P4.2.1)
Design information and capacity information for the KRMS Isolator line is provided in this section.

RQ Seismic Mount Submittal Data (P4.2.2)
Design information and capacity information for the RQ Mount family is provided in this section.

KRMS and RQ Selection Information (P4.3)
Design Selection and guidance information to be used in conjunction the KRMS and RQ Isolators/Mounts are summarized in this document.

KRMS and RQ Load Spreader Plates (P4.4)
Load Spreader Plates and the resulting increase in performance for concrete anchorage applications are addressed in this section.

KRMS and RQ Installation Instructions (P4.5)
Comprehensive Installation Instructions for the KRMS and RQ Isolators/Mounts can be found in this segment of the chapter.
HS Series Seismic Restraints (P5)

Design and selection data for the HS lines of Seismic Restraints/Snubbers are available here.

Data here is of interest to specifiers, installation contractors and design professionals involved in the restraint selection process.

General Description (P5.1)

A general description of the HS-2 and HS-5 Restraint/Snubbers begins this chapter. Their features, functions, benefits as well as practical applications are provided in this section.

HS-2 Restraint/Snubber Submittal Data (P5.2.1)

Design information and capacity information for the HS-2 Restraint/Snubber is provided in this section.

HS-5 Restraint/Snubber Submittal Data (P5.2.2)

Design information and capacity information for the HS-5 Restraint/Snubber family is provided in this section.

HS-2 and HS-5 Selection Information (P5.3)

Design Selection and guidance information to be used in conjunction the HS-2 and HS-5 Restraint/Snubbers are summarized in this document.

HS-2 and HS-5 Load Spreader Plates (P5.4)

Load Spreader Plates and the resulting increase in performance for concrete anchorage applications are addressed in this section.

HS-2 and HS-5 Installation Instructions (P5.5)

Comprehensive Installation Instructions for the HS-2 and HS-5 Restraint/Snubbers can be found in this segment of the chapter.

ESR / KSR / KSCR Seismically Rated Roof Curbs (P6)

Design and selection data for the ESR / KSR and KSCR Seismically rated Isolation curbs or curb isolation rails are available here.

Data here is of interest to specifiers, installation contractors and design professionals involved in the restraint selection process.

General Description (P6.1)

A general description of the ESR / KSR and KSCR begins this chapter. Their
features, functions, benefits as well as practical applications are provided in this section.

**ESR Restraint Submittal Data (P6.2.1)**
Design information and capacity information for the ESR Isolation Curb is provided in this section.

**KSR Isolation Rail Submittal Data (P6.2.2)**
Design information and capacity information for the KSR Curb-top Isolation Rail is provided in this section.

**KSCR Curb Submittal Data (P6.2.3)**
Design information and capacity information for the KSCR Isolation Curb is provided in this section.

**ESR / KSR / KSCR Selection Information (P6.3)**
Design Selection and guidance information to be used in conjunction the KRMS and RQ Isolators/Mounts are summarized in this document.

**ESR Load Spreader Plates (P6.4)**
Load Spreader Plates and the resulting increase in performance for concrete anchorage applications are addressed in this section.

**ESR / KSR / KSCR Installation Instructions (P6.5)**
Comprehensive Installation Instructions for the ESR / KSR / KSCR Curb Systems can be found in this segment of the chapter.

**Cable and Wire Rope Restraints (P7)**
Design and selection data for a wide range of Cable restraint kits and hardware is included in this section.

Data here is of interest to specifiers, installation contractors and design professionals involved in the restraint selection process.

**General Description (P7.1)**
A general description of the tradeoffs and benefits of the various different cable arrangements begins this chapter. Their features, functions as well as practical applications are provided in this section.

**Fixed Length Cable Kits (Swaged End) Submittal Data (P7.2.1 through P7.2.6)**
Design and capacity information for the wide range of cable hardware kits offered by Kinetics Noise Control is provided in these sections.
**Bulk Length Cable Kits (Not Swaged) Submittal Data (P7.3.1 through P7.3.7)**
Design and capacity information for the wide range of cable hardware kits offered by Kinetics Noise Control is provided in these sections.

**Cable Anchorage Kits Submittal Data (P7.4.1 through P7.4.4)**
Design and capacity information for the wide range of cable hardware kits offered by Kinetics Noise Control is provided in these sections.

**Cable Restraint Selection Information (P7.5)**
Design Selection and guidance information to be used in conjunction the various cable kits are summarized in this document.

**Cable Restraint Installation Instructions (P7.6)**
Comprehensive Installation Instructions to be used in conjunction the various cable kits can be found in this segment of the chapter.

**Other Hardware Required for use with Suspended Equipment (P8)**
Proper restraint design for many suspended equipment applications requires the use of additional hardware “accessory” items. Design and selection data for these components is included in this section.

Data here is of interest to specifiers, installation contractors and design professionals involved in the restraint selection process.

**General Description (P8.1)**
A general description of these pieces of hardware and their function are provided in this section.

**KHRC-A (Rod Stiffener Clamps for Angles) Submittal Data (P8.2.1)**
Design information is provided in this section.

**KHRC-P (Rod Stiffener Clamps for Pipe) Submittal Data (P8.2.2)**
Design information is provided in this section.

**KCHB (Pipe Clevis Internal Brace) Submittal Data (P8.2.3)**
Design information is provided in this section.

**KSCA (Cable/Strut Attachment Bracket) Submittal Data (P8.2.4)**
These components are included in many of the cable kits, but are also available separately. Design information is provided in this section.

**KSUA (Cable Attachment Bracket) Submittal Data (P8.2.5)**
These components are included in many of the cable kits, but are also available separately.
separately. Design information is provided in this section.

**KSCC (Cable/Strut Attachment Bracket) Submittal Data (P8.2.6)**
These components are included in many of the cable kits, but are also available separately. Design information is provided in this section.

**Cable Hardware Selection Information (P8.3)**
Design Selection and guidance information to be used in conjunction the various suspended equipment hardware components are summarized in this document.

**Cable Hardware Installation Instructions (P8.4)**
Comprehensive Installation Instructions to be used in conjunction the various hardware components can be found in this segment of the chapter.

**Restraint Components for Architectural Elements (P9)**

In acoustically or vibration sensitive buildings, often significant non-structural elements are used to prevent the transfer of noise or vibration. These components require restraint in seismically prone areas. Design and selection data for hardware to be used to accomplish this task are included in this section.

Data here is of interest to specifiers, architects, installation contractors and design professionals involved in the restraint selection process.

**General Description (P9.1)**
A general description of these pieces of hardware and their function are provided in this section.

**FFR-1 (Embedded Restraint for Jack-up Floating Floors) Submittal Data (P9.2.1)**
Design information is provided in this section.

**FFR-2 (Embedded Restraint for Roll-Out Floating Floors) Submittal Data (P9.2.2)**
Design information is provided in this section.

**Perimeter Pads (Perimeter Restraint for Floating Floors) Submittal Data (P9.2.3)**
Design information is provided in this section.

**KSWC (Ceiling Cable Restraint Kit) Submittal Data (P9.3.1)**
Design and capacity information for the KSWC cable kit offered by Kinetics Noise Control is provided in this section.

**PSB (Embedded Wall Restraint) Submittal Data (P9.4.1)**
Design information is provided in this section.
IPRB (Top of Wall Restraint Angle) Submittal Data (P9.4.2)
Design information is provided in this section.

KSWB (Seismically Rated Wall Mounting Isolation Clip Submittal Data (P9.4.3)
Design information is provided in this section.

Selection Information (P9.5)
Design Selection and guidance information to be used in conjunction the various hardware components listed above are summarized in this document.

Installation Instructions (P9.6)
Comprehensive Installation Instructions to be used in conjunction the various hardware components can be found in this segment of the chapter.

Anchor Bolts and Attachment Hardware (P10)
Design and selection data for Seismically Rated Anchorage hardware used by Kinetics Noise Control makes up this section.

Data here is of prime interest to installation contractors and design professionals involved in the restraint selection process.

General Description (P10.1)
A general description of the anchorage hardware used by Kinetics Noise Control is provided in this section.

KCAB (Wedge type Anchor Bolt) Submittal Data (P10.2.1)
Design information is provided in this section.

KUAB (Undercut type Anchor Bolt) Submittal Data (P10.2.2)
Design information is provided in this section.

TG Grommets (Anchor Bolt Adapter Grommets) Submittal Data (P10.2.3)
Design information is provided in this section.

Selection Information

KCAB Anchor Selection Information (P10.3.1)
Design Selection and guidance information to be used in conjunction the various anchors are summarized in this document.

KUAB Anchor Selection Information (P10.3.2)
Design Selection and guidance information to be used in conjunction the various anchors are summarized in this document.
Installation Instructions (P10.4)

Comprehensive Installation Instructions to be used in conjunction the various anchor types can be found in this segment of the chapter.