

SVCS-100 SEISMIC SPECIFICATION APPLICATION DRAWINGS



Seismic Applications are basically the same as Non Seismic but complicated by the need to keep equipment in place. Whenever we show our Z-1011 heavily cushioned snubbers, the input to the equipment will not exceed 4 G. All mountings, hanger-cables or snubbers are designed to resist the seismic force in any zone or specification. Many of the mountings and hangers are the same as in static locations but designated by numbers in the Selection Guide rather than letters to distinguish the two applications. We hope these illustrations will help.



Page	Equipment	Isolation Description
2S	Centrifugal Chiller	Steel Base with Height Saving Brackets, High Deflection Springs and Seismic Restraints
3S	Centrifugal Chiller	Seismically Rated Twin Sphere Air Spring Mounts
4S	Reciprocating Direct Drive Compressor	Height Saving Brackets, High Deflection Springs and Seismic Restraints
5S	Steam Generator	Directly mounted on Restrained Spring Mounts
6S	Double Suction Pump	Concrete Filled Base with Height Saving Brackets, High Deflection Springs and Seismic Restraints
7S	End Suction Pump	Steel Base with Height Saving Brackets, High Deflection Springs and Seismic Restraints
8S	End Suction Pump	Steel Base with Height Saving Brackets, Air Springs and Seismic Restraints
9S	HVAC Unit	Suspended from Hangers and restrained by Cable Assemblies in four corners
10S	HVAC Unit	Steel Base with Height Saving Brackets, High Deflection Springs and Seismic Restraints
11S	HVAC Unit	Directly mounted on 1" Deflection Springs
12S	Vertical Tank Type Compressor	Concrete Filled Base, 1" Deflection Springs and Seismic Restraints
13S	Horizontal Tank Type Compressor	Directly mounted on Restrained Spring Mounts
14S	Direct Drive Blower	Bolted to Steel Base supported by Restrained Spring Mounts
15S	Utility Blower	Directly mounted on Seismically Restrained Mounts
16S	Centrifugal Blower	Concrete Filled Base with Height Saving Brackets, High Deflection Springs and Seismic Snubbers
17S	Centrifugal Blower	Concrete Filled Base with 1" Deflection Springs, Built In Corners and Seismic Snubbers
18S	Axial Blower	Steel Base with Height Saving Brackets, High Deflection Springs and Thrust Restraints.
19S	Axial Blower	Suspended by Hangers, restrained by Cable Assemblies and Thrust Restraints
20S	Large Multi-sectioned Cooling Tower	Steel Base and Beam Supports using Restrained Air Spring Mounts
21S	Large Multi-sectioned Cooling Tower	Steel Base and Beam Supports using High Deflection Steel Spring Restrained Mounts
22S	Packaged HVAC Cooling Tower	Steel Base with Restrained Twin Sphere Air Spring Mounts
23S	Rooftop Packaged HVAC Cooling Tower	Steel Base and Restrained Spring Mounts
24S	Large Transformer	Steel Base supported by Air Spring Mounts and Seismic Restraints

NOTE: All floor mounted systems are on seismically attached Housekeeping Pads. All pipelines include Safeflex expansion joints to allow seismic movement.

CENTRIFUGAL CHILLER on WFSL Base with height saving brackets and high deflection SLF Mounts and Z-1011 Seismic Restraints. Reinforced housekeeping pad secured by HPA Anchors. **SAFEFLEX** Expansion Joints are installed in pipelines to reduce blade frequency vibration and noise and to allow for seismic displacement. WFSL BASE - WIDE FLANGE STEEL **CR - CONTROL RODS** BASE MINIMUM 6" (152mm) OR 1/10 USED ONLY WHEN SAFEFLEX LONGEST BASE DIMENSION CANNOT BE PREEXTENDED **SPECIFICATION 20** TO PRESSURIZED LENGTH DURING INSTALLATION **SLF MOUNTS** WITH SPECIFIED DEFLECTION **SPECIFICATION 5** HEIGHT SAVING BRACKETS FRICTION PAD

SAFEFLEX SFDEJ EXPANSION JOINT INSTALLED ON EQUIPMENT SIDE OF THE SHUTOFE VALVE

EQUIPMENT SIDE OF THE SHUTOFF VALVES SPECIFICATION 23

RESILIENT Z-1011 SEISMIC SNUBBERS MUST BE SECURED WITH SAB ANCHORS SPECIFICATION 17

BOLTING NOT REQUIRED

SPECIFICATION 29

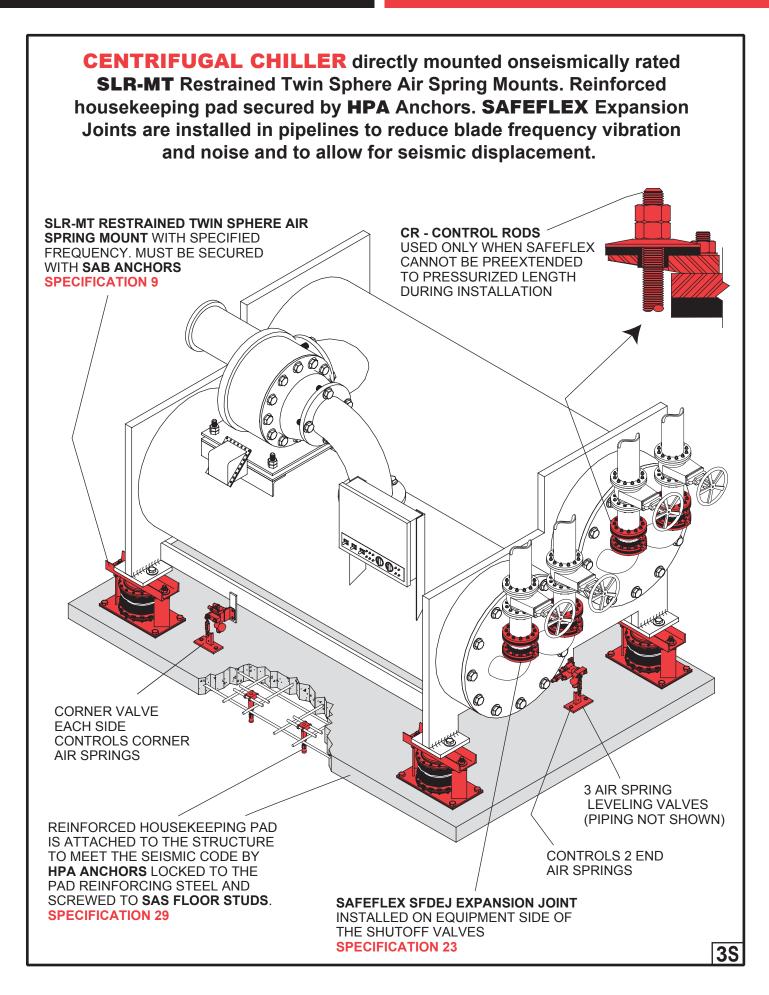
REINFORCED HOUSEKEEPING PAD

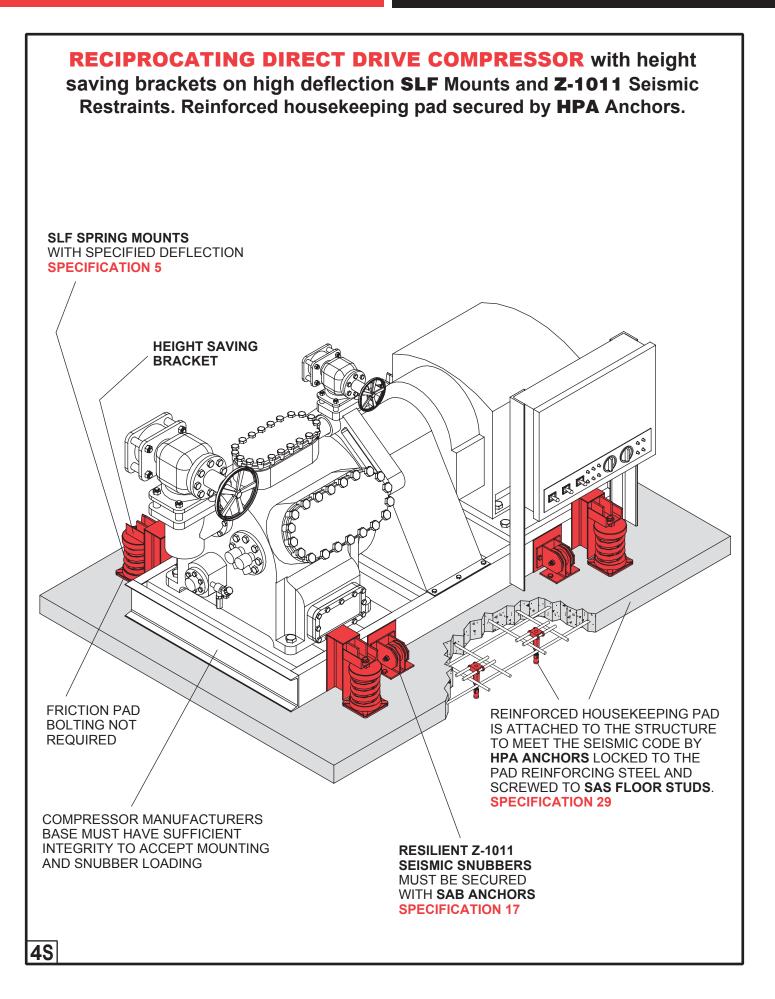
IS ATTACHED TO THE STRUCTURE

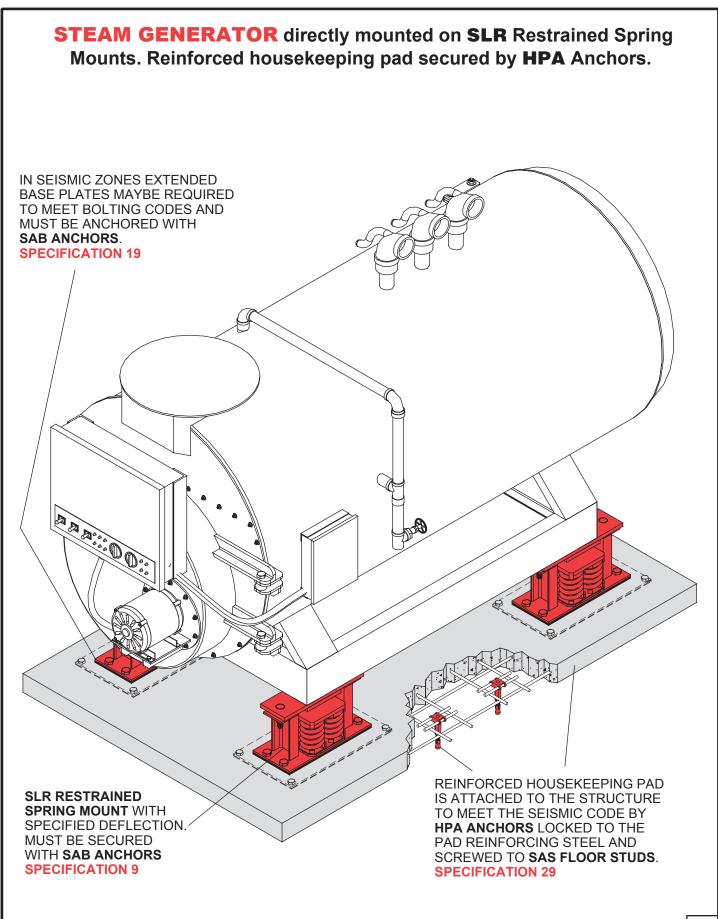
SCREWED TO SAS FLOOR STUDS.

TO MEET THE SEISMIC CODE BY

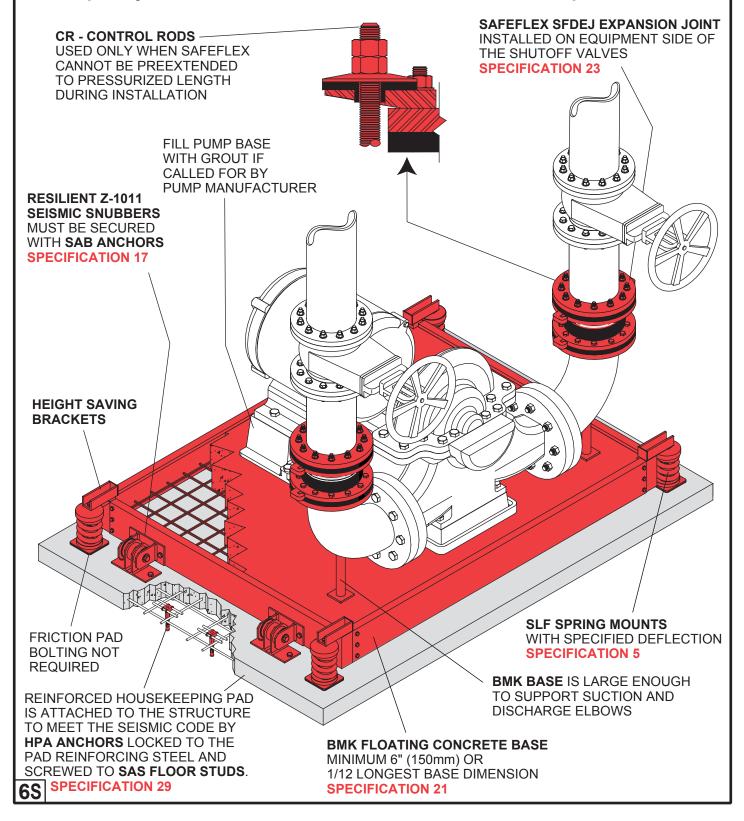
HPA ANCHORS LOCKED TO THE PAD REINFORCING STEEL AND



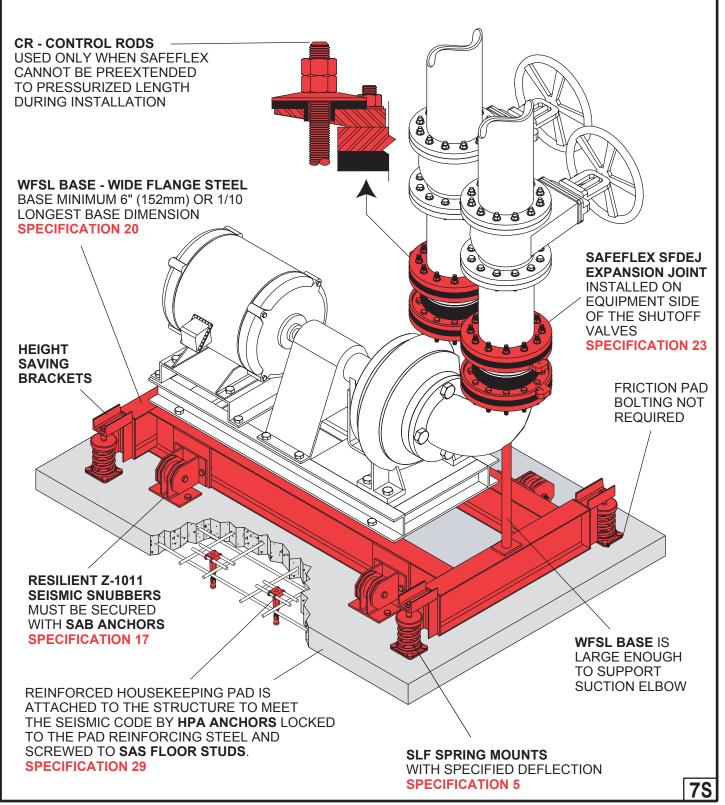




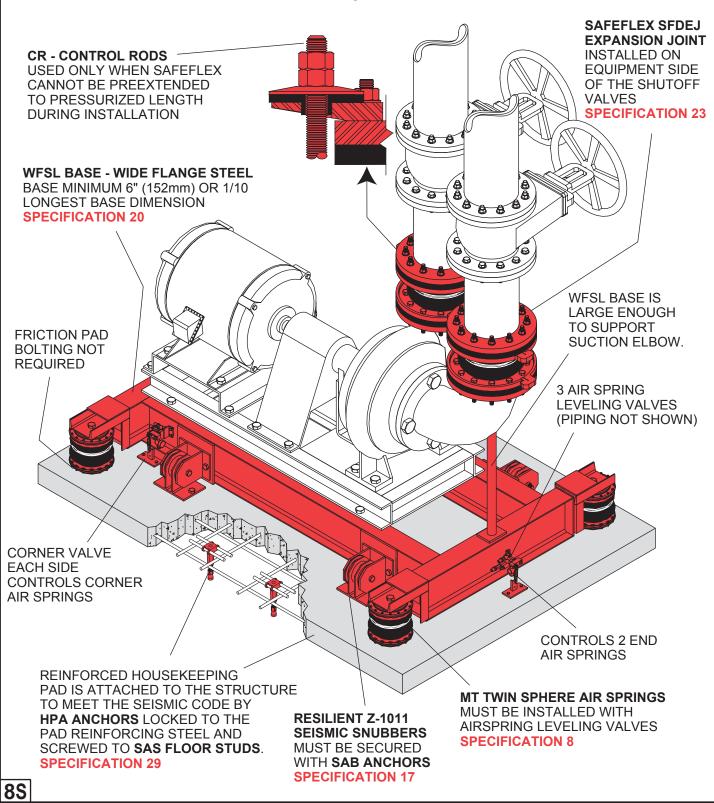
DOUBLE SUCTION PUMP on concrete filled **BMK** Base with height saving brackets, high deflection **SLF** Spring Mounts and **Z-1011** Seismic Restraints. Reinforced housekeeping pad secured by **HPA** Anchors. **SAFEFLEX** Expansion Joints are installed in pipelines to reduce blade frequency vibration and noise and to allow for seismic displacement.

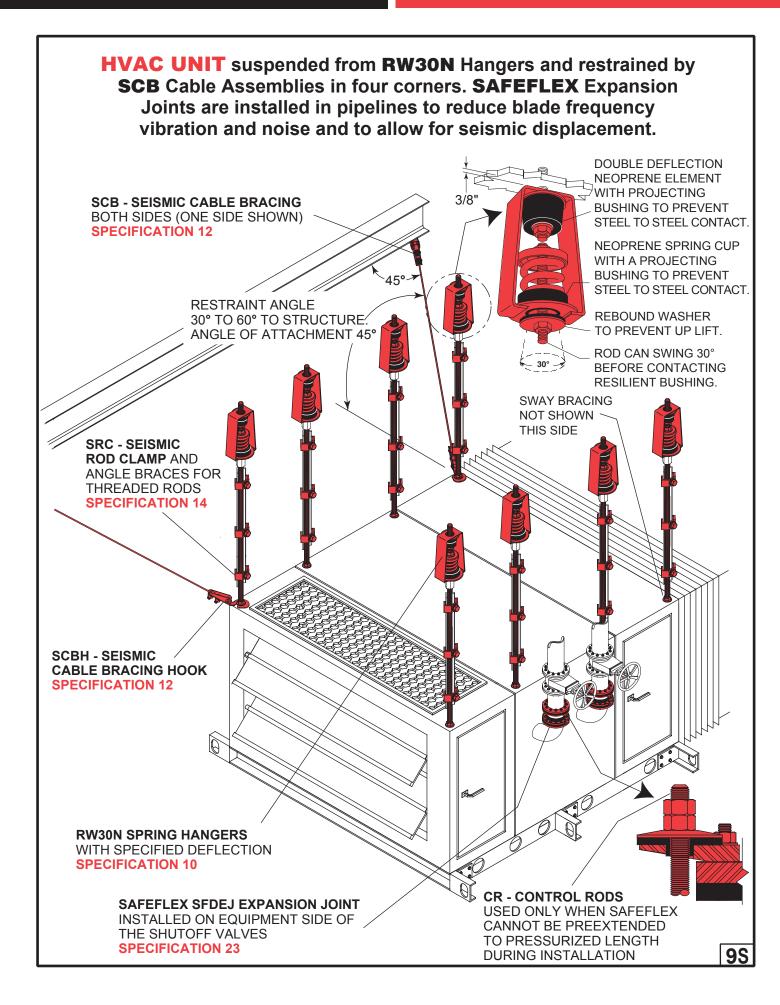


END SUCTION PUMP on **WFSL** Base with height saving brackets, high deflection **SLF** Mounts and **Z-1011** Seismic Restraints. Reinforced housekeeping pad secured by **HPA** Anchors. **SAFEFLEX** Expansion Joints are installed in pipelines to reduce blade frequency vibration and noise and to allow for seismic displacement.



END SUCTION PUMP on **WFSL** Base with height saving brackets, **MT** Air Springs and **Z-1011** Seismic Restraints. Reinforced housekeeping pad secured by **HPA** Anchors. **SAFEFLEX** Expansion Joints are installed in pipelines to reduce blade frequency vibration and noise and to allow for seismic displacement.





HVAC UNIT on steel base with height saving brackets, high deflection SLF Spring Mounts and Z-1011 Seismic Restraints. Reinforced housekeeping pad secured by HPA Anchors. SAFEFLEX Expansion Joints are installed in pipelines to reduce blade frequency vibration and noise and to allow for seismic displacement.

