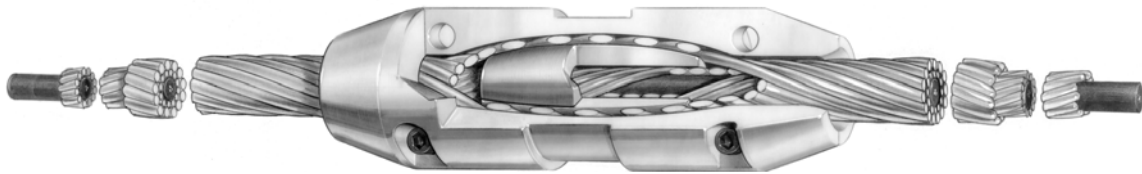


DYNA-HANGER™ Suspension System

- *Connects Cable to Paravanes, Depressors & Floats*
- *Installs Mid-Span for Unlimited Attachment Positions*
- *Eliminates Localized Clamping Stresses & Fatigue*
- *Provides Bending Protection & Superior Holding Strength*
- *Economic Edge with Reusable Hardware & No Special Tools*



DYNA-HANGER™ SUSPENSION SYSTEM APPLICATIONS

PMI's **DYNA-HANGER™ Suspension System** (DHSS) provides a means of cable attachment that is high-strength and mid-span applicable. Typical applications include:

- Suspension of tow cable depressors
- Securing of large floats to FPSO subsea cables
- Attachment of buoys to restrain cable torque & rotation
- Attachment of lines or paravanes to tow underwater cables in flank positions aft of a vessel

MID-SPAN INSTALLATION

The DHSS split hardware design with helical rods allows installation anywhere along the cable. Each DHSS kit includes: properly sized helical rod sets, a split egg-shaped insert, a split housing, fasteners, step-by-step instructions and attachment hardware.

PMI RODS PROTECT & HOLD

The PMI DHSS provides tailored bending protection and eliminates localized clamping forces through the use of helical rods. Optimal bending protection is achieved with multiple layers of preformed rods staggered so as to gradually stiffen the cable as it enters the DHSS housing. For maximum bending protection, the housing can be outfitted with PMI EVERFLEX™ Bending Strain Reliefs (reinforced or all-urethane boots).

The PMI **DYNA-HANGER™ Suspension System** offers superior holding power. Lateral loads are transferred from the DHSS housing to the PMI rods captured beneath it and then along to the cable. Loads up to 100% of the cable's rated breaking strength can be developed without slippage.

The PMI DHSS eliminates the concentrated clamping stresses and fatigue caused by conventional clamping hardware.

PMI rods gently distribute all clamping and tension stresses acting on the cable. The result is a high-performance attachment that does not degrade cable life.

EASY ASSEMBLY & REUSABLE

Assembly requires only simple tools. The PMI rods simply wrap on by hand, and the housing and attachment halves fasten together with standard fasteners. Installation time & labor is significantly less than for potted designs or complicated multi-part clamp assemblies.

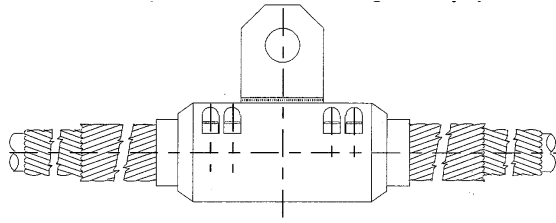
Relocating the hardware is simply a matter of moving the split hardware to a new position with new helical rods. (PMI does not recommend re-use of helical rod sets once applied and used.) Reuse of DHSS split housings and attachment hardware offers significant cost savings for ongoing operations. Retermination kits are available that include split inserts, helical rods, fasteners, and instructions.



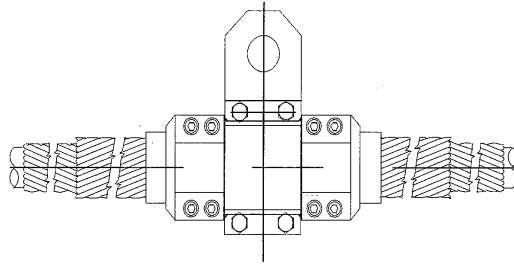
DYNA-HANGER™ Suspension System

ATTACHMENT OPTIONS

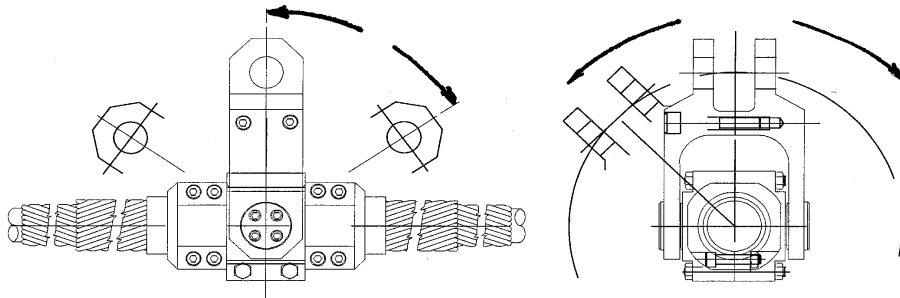
Attachment hardware is supplied to specific customer requirements. For many users, the standard attachment is a welded padeye. Added convenience and performance can be achieved with a variety of self-aligning swivel collars as shown. For deck stowage, these swivel collars can be quickly removed during cable retrieval allowing the main housing & rods to be reeled directly onto the cable drum. Should cable torque restraint be desired, the DHSS can be modified to prevent cable rotation during cable lay operations.



WELDED PADEYE, STANDARD (CABLE ROTATION PREVENTED)



SWIVEL CLAMP W/ CLEVIS (ALLOWS CABLE TO ROTATE)



ARTICULATED SWIVEL CLAP W/ CLEVIS (ALLOWS CABLE TO ROTATE & ALIGN WITH LOAD)

IMPORTANT ORDERING INFORMATION

You can help PMI's engineering group evaluate your application by supplying the following information:

- System Type w/ Cable details and/or Intended DHSS Application (Sketches are welcome)
- Various load conditions (working, impact, cycle rate)
- Load angles
- Environmental Conditions & Corrosion Requirements (Seawater, Depth, Current Velocity, H₂S)
- Life of the system
- Handling requirements (Weight, Winch Drum Diameter, Length restrictions, etc.)

For special applications that may require performance qualification, call about PMI's testing capabilities.

