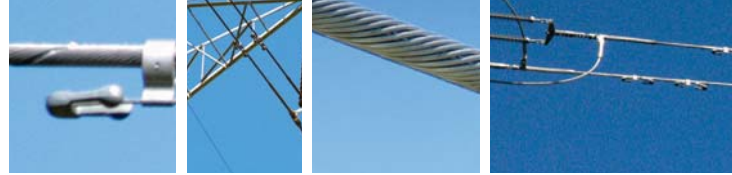


# VORTX™ Stockbridge Damper



Aeolian Vibration is a high frequency low amplitude motion caused by smooth laminar winds passing across the line. When conductors or cables are exposed to this wind a phenomenon known as eddy shedding occurs. Eddy or Vortex shedding creates an alternating pressure imbalance inducing the conductor to move up and down at right angles to the direction of air flow. These vibrations take the form of discrete standing waves that can cause support hardware breakdown, conductor fatigue, abrasion and eventually conductor failure.

The VORTX™ Damper exceeds the two response performance with a multi-response design that effectively reduces vibration over a wider range of imposing frequencies. This is accomplished by a design that has unequal messenger strand lengths enhanced in most cases with unequal weights. The weight sizes and messenger strand lengths are matched to specific conductor/cable impedance and line operating conditions that achieve optimum performance.

## Features:

- Contoured Clamp - Aluminum alloy extrusions offer a more “precision” fit to evenly capture the conductor. As a result, tightening the bolt brings the clamp components together with evenly distributed pressure along the conductor surface.
- Clamp Profile - The clamp profile is configured to hang from the conductor or cable during installation in accordance with IEC standards. Hands are free to wrench tighten and reach proper torque.
- Messenger Strand - Galvanised steel messenger strand absorbs the vibration energy efficiently with optimum manufacturing techniques.
- Weight - Galvanised modular iron weights hug the sides of the messenger strand, not enclosing it. The possibility of corrosion is reduced.
- Weight Attachment: - PLP offers a collet type or crimped attachment to secure the weights to the messenger. Both meet pull-off strength requirements in accordance with IEC and AS1154.1 standards without changing properties of the adjoining messenger.

PLP uses a proprietary computer program to make product recommendations for maximising damper performance. The program input considers many variables specific to individual lines, their designs, construction, and local operating conditions. The output recommendations include; specific model VORTX™ Damper, quantity and their placement location on the span.

# VORTX™ Vibration Damper



## VORTX™ Damper Selection Chart For AAC, AAAC, ACSR and OPGW



**VSD**

\* Represent dampers that in most cases are placed over Armor or Structural Rods.

**Note:** Final selection for weight combination at merging ranges are determined from conductor type and tension. Contact PLP technical support for further recommendations.

**Step 1: Choose conductor diameter from range below**

**Step 2: Choose clamp size from range below i.e. total diameter including armor rods if applicable**

**Step 3: Choose Corresponding part number**

Conductor Selection Choose Conductor Diameter		Clamp Range Choose overall Diameter		Part No.
min (mm)	max (mm)	min (mm)	max (mm)	
9.7	11.9	9.7	12.3	VSD-1012
		15.5	20.0	VSD-1020*
		12.3	15.5	VSD-2016
12.0	18.2	15.5	20.0	VSD-2020
		20.0	25.0	VSD-2025*
		25.0	32.0	VSD-2032*
		15.5	20.0	VSD-2520
18.3	21.7	20.0	25.0	VSD-2525
		25.0	32.0	VSD-2532*
		20.0	25.0	VSD-3525
21.8	24.9	25.0	32.0	VSD-3532*
		32.0	40.1	VSD-3540*
		40.1	50.0	VSD-3550*
		25.0	32.0	VSD-4032
25.0	33.9	32.0	40.1	VSD-4040
		40.1	50.0	VSD-4050*
		50.0	61.0	VSD-4061*
32.1	44.7	32.0	40.1	VSD-5040
		40.1	50.0	VSD-5050
		50.0	61.0	VSD-5061*

## VORTX™ Damper Structural Rods



**VDSR**

For OPGW & high temperature conductors

Part Number	Conductor Diameter Range (mm)	Rod Length (mm)	Standard Pack Quantity	Colour Code
VDSR-110	10.5 - 11.49	500	50	Green
VDSR-120	11.5 - 12.49	500	50	Purple
VDSR-130	12.5 - 13.79	500	50	Orange
VDSR-140	13.8 - 14.89	500	50	Blue
VDSR-150	14.9 - 15.49	500	30	Brown
VDSR-160	15.5 - 16.49	500	30	Yellow
VDSR-170	16.5 - 17.49	500	30	Red
VDSR-180	17.5 - 18.49	500	30	Yellow
VDSR-190	18.5 - 19.49	500	30	Yellow
VDSR-200	19.5 - 20.49	500	30	Yellow
VDSR-210	20.5 - 21.49	500	30	Blue
VDSR-320	31.5 - 32.49	700	30	Purple