



PREFORMED LINE PRODUCTS

Section 23 – Motion Control Products

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Air Flow Spoilers for Telecommunications Cables



Air Flow Spoilers

Air Flow Spoilers are designed to counteract a damaging wind-related phenomenon known as galloping. Galloping is a low frequency, high amplitude motion that can cause trip-outs, service interruptions, cable damage, and damage to the supporting structures and hardware at their point of connection.

Air Flow Spoilers are designed to maintain aerodynamic stability by continually changing the profile of the cable to the wind. The one-piece helically formed rod, made of rigid, non-corrosive, non-metallic plastic, controls motion problems that can damage lines. The three-section structure of the Air Flow Spoiler enables it to grip the cable or conductor firmly.

Air Flow Spoilers have proven effective in the field, significantly reducing galloping, abrasion and fatigue, and extending the life of the line.

Span Length		Spoilers Per Span	Span Length		Spoilers Per Span
feet	meters		feet	meters	
0-120	0-36.6	2	551-600	167.9-182.9	11
120-180	36.6-54.9	3	601-650	182.9-198.1	12
181-240	55.2-73.2	4	651-700	198.4-213.4	13
241-300	73.5-91.4	5	701-750	213.7-228.6	14
301-350	91.7-106.7	6	751-800	228.9-243.8	15
351-400	106.9-121.9	7	801-850	244.1-259.1	16
401-450	122.2-137.2	8	851-900	259.4-274.3	17
451-500	137.5-152.4	9	901-950	274.6-289.6	18
501-550	152.7-167.6	10	951-1000	289.9-304.8	19

Catalog Number	Self Supporting Single Cable Diameter Range	¼" Messenger Plus Single Telephone Cable within Range shown Below	⅝" Messenger Plus Single Telephone Cable within Range Shown Below	¾" Messenger Plus Single Telephone cable Within Range Shown Below	Multiple Lashed Cables All Messenger Sizes	Carton Quantity
5058102*	.462"-.563"	.319"-.434"	.319"-.372"	—	.448"-.574"	25
5058103*	.564"-.760"	.435"-.619"	.373"-.565"	.319"-.495"	.575"-.717"	25
5058104*	.761"-.926"	.620"-.828"	.566"-.765"	.496"-.716"	.718"-.896"	15
5058105*	.927"-.1019"	.829"-.1000"	.766"-.954"	.717"-.891"	.897"-.1041"	15
50589317	—	1.001"-.1.165"	.955"-.1.100"	.892"-.1.040"	1.042"-.1.200"	15
50588710	—	1.166"-.1.350"	1.101"-.1.280"	1.041"-.1.250"	1.201"-.1.371"	15
50589318	—	1.351"-.1.560"	1.281"-.1.480"	1.251"-.1.470"	1.372"-.1.542"	15
50589319	—	1.561"-.1.770"	1.481"-.1.670"	1.471"-.1.670"	1.543"-.1.686"	15
50588867	—	1.771"-.1.970"	1.671"-.1.850"	1.671"-.1.850"	1.687"-.1.839"	15
50589291	—	1.971"-.2.250"	1.851"-.2.150"	1.851"-.2.100"	1.840"-.2.200"	15

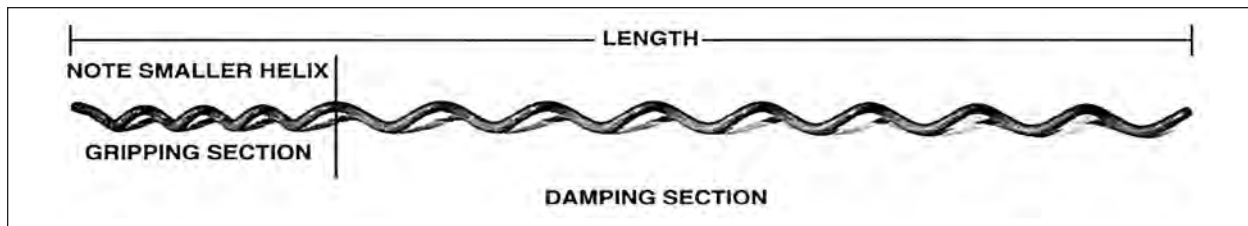
* Application Support Helix gripping sections are standard on one end of these Air Flow Spoilers. All other Air Flow Spoilers have conventional gripping sections on both ends.

* Contact PLP for recommendations on coaxial type cables.

Notes:

1. If Figure 8 cable or more than one cable is lashed to a messenger, furnish diameter of each cable (prefer dimensions taken with a diameter tape) and the messenger as well as a cross sectional diagram of the cable bundle, and PLP® will provide the catalog number of the AIR FLOW SPOILER to be used.
2. For estimating quantity purchase, approximately 100 Air Flow Spoilers are required per cable mile. In order to achieve satisfactory protection against cable dancing at least 20% of the span should be covered with Air Flow Spoilers.
3. Larger size Air Flow Spoilers are available on special orders.

Spiral Vibration Damper



NOMENCLATURE

Length: Assists in identification of conductor size, corresponding to tabular information appearing on following page.

Damping Section: Helically scaled for interplay of damper and conductor, to provide the action/reaction motion that opposes the natural vibration wave.

Gripping Section: Has a smaller helix designed to the grip conductor.

GENERAL RECOMMENDATIONS

Damping devices are designed for the single purpose of reducing vibration. This single function is entirely different from that of protecting against (1) stress concentrations, (2) fretting or abrasion, and (3) arc-over burning. Because of this, damping devices should be considered only as supplemental to WRAPLOCK® Tie, Armor Rod, Side Tie, Spool Tie, or other hardware at tangent supports. Dampers are also used as supplemental protection at dead-ends.

The degree of protection needed on a specific line depends upon a number of factors such as line design, temperature, tension, exposure to wind flow, and vibration history on similar construction in the same area.

Spiral Vibration Dampers are also effective on certain size overhead shield wires and OPGW. Consult PLP for specifics.

For damper applications on ADSS cable, refer to the FIBERLIGN® Fiber Optic Products section under motion control.

Consult your PREFORMED™ Sales Representative for placement and installation guidelines.

Material:

The solid polyvinyl chloride helical rod material is noncorrosive and has a surface hardness which does not abrade the conductor.

Application Inspection:

The Gripping Section should be installed approximately one hand's width from the ends of Armor Rod or other hardware. It is not necessary to make engineering calculations as to placement.

Standard Usage Recommendations for Standard Length Spiral Vibration Dampers on Bare Conductor, Shield Wire.

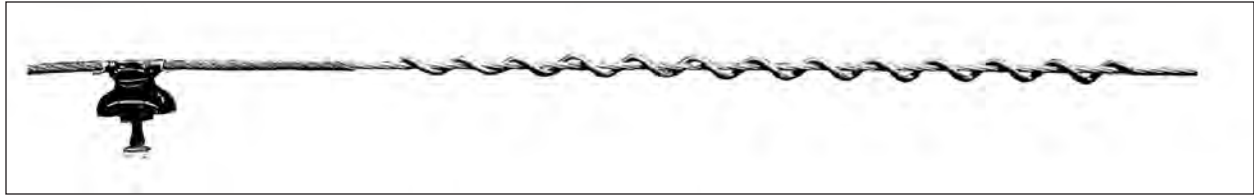
Span Length	0-800'	801'-1600'	1601'-2400'
Number of SVDs per Span	2	4	6

Note: Water/Canyon Crossings – due to the increased potential of laminar wind flow, an additional 50% more dampers per span should be added to the standard recommendations above for adequate protection.

In areas that are prone to high levels of vibration where conductor tension is in excess of 18% RBS, consult PLP for specific recommendations.



Spiral Vibration Damper



For use on:
Bare Conductors, Shield Wires

Catalog Number	Diameter Range (Inches)		Units Per Carton	Wt/Lbs Per Carton	Length (Inches)
	Min.	Max.			
5050102	.174	.249	50	29	46
5050103	.250	.326	50	31	49
5050104	.327	.461	50	34	51
5050105	.462	.563	50	36	53
5050106	.564	.760	25	50	65

Spiral Vibration Damper – High Mass

For use on: Bare Conductors, Shield Wires

The Hi Mass Spiral Vibration Damper (HMSVD) has a damping section close to double that of the standard SVD. By extending the length of the damping section, one Hi Mass SVD is designed to provide the effectiveness of two standard SVDs.

- Fewer points of installation.
- Fewer components on the line.

Catalog Number	Diameter Range (Inches)		Units Per Carton	Wt/Lbs. Per Carton	Length (Inches)
	Min.	Max.			
5050200	.250	.326	50	55	87
5050201	.327	.461	50	60	91
5050202	.462	.563	50	65	94
5050203	.564	.760	15	55	97