



**GSA Series Formed Wire Suspension**

## Formed Wire Suspension Unit

AFL is a renowned manufacturer of aluminum conductor accessories, manufacturing numerous products for the electric utility industry since the 1890s. A leader in its markets, AFL offers superior research, development and field experience resulting in experienced professionals who bring a depth of engineering, production and training to our customers. With the broadest product offering in the industry, AFL designs and manufactures a wide variety of compression accessories for all conductor types, bolted and welded substation products, as well as fiber optic hardware. In addition, AFL provides bronze substation products, Alumoweld® and Copperweld® wire and compression tools. Given our history and interest in bringing our customers the most advanced products in the industry, AFL's GSA series suspension unit is designed to supplement protection of the conductor at the point of transmission and distribution. Bringing you performance, reliability and knowledge from a company you've trusted for years, AFL is the solution for your entire transmission, distribution, substation and fiber optic accessory needs.

The GSA Series suspension unit is designed to reduce the static and dynamic stress at the support point of transmission and distribution lines. This allows the conductor to better withstand the effects of Aeolian vibration and wind-induced oscillation. The GSA unit also helps protect the conductor against flashover in the support area. It is designed for use with ACSR, AAC, AAAC, ACAR conductors and all high temperature conductors including ACCR, ACSS and ACCC.

Although the GSA unit provides improved vibration protection, dampers are still required to dissipate the damaging effects from Aeolian vibration. For more information about Aeolian vibration and vibration analysis, visit [www.Vibrec.com](http://www.Vibrec.com).



# Features

## Line Angles

Use the single GSA unit for line angles up to 30 degrees; for 30 to 60 degrees, use the double suspension unit.

## High-Voltage Applications

The rods can be tapered for Extra High Voltage (EHV) applications, 345 kV and above. Specify this requirement by adding a suffix "EHV" to the end of the part number (see ordering matrix below).

## Elevated Temperature

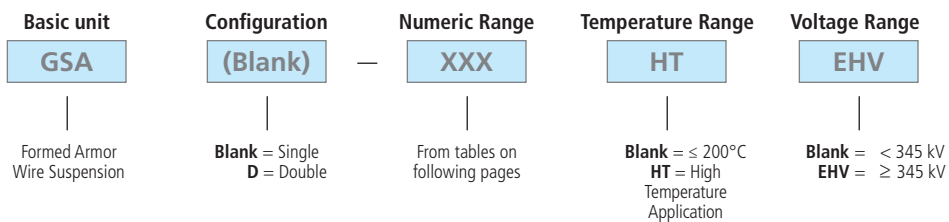
The GSA unit is rated for 200°C continuous temperature applications. The GSA high temperature (HT) unit is rated for 250°C continuous temperature applications. Contact AFL if a high temperature unit with two layers of rod sets are required.

## Technical Support

For more information about the GSA unit, placement or technical questions, contact the AFL Technical Support team at 1.800.866.7385.

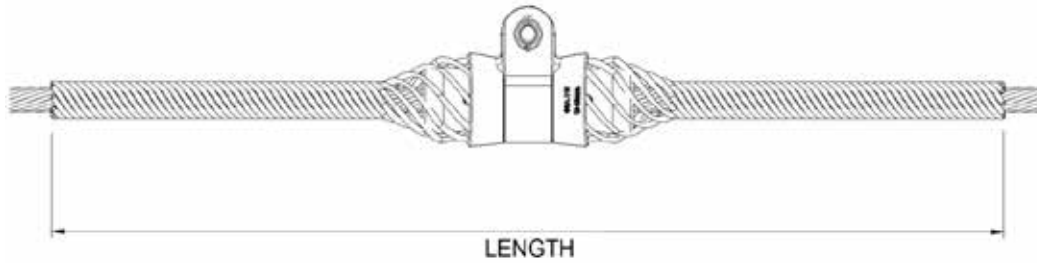


## Ordering Information



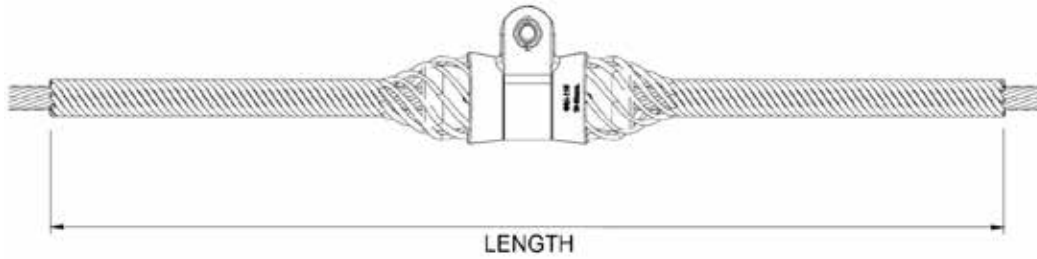
Example: For a single suspension with Aluminum Rods, conductor diameter of 1.091 to 1.118, High Temperature and Extra High Voltage, the complete catalog number is: GSA145-284HTEHV.

# Formed Wire Suspension Clamp



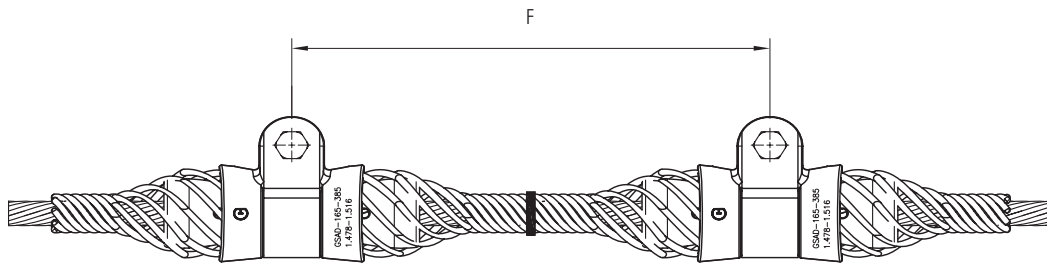
FORMED WIRE SUSPENSION	DIAMETER RANGE (IN)		RODS			COLOR CODE
	AFL NO.	MIN.	MAX.	LENGTH (IN)	ROD DIA (IN)	
GSA60-800	0.304	0.315	26	0.102	10	BROWN
GSA60-831	0.316	0.327	26	0.102	11	ORANGE
GSA60-869	0.328	0.342	26	0.102	11	PURPLE
GSA60-902	0.343	0.355	26	0.102	11	RED
GSA60-950	0.356	0.374	26	0.102	12	BLUE
GSA60-988	0.375	0.389	26	0.102	12	GREEN
GSA65-1026	0.390	0.404	36	0.128	11	YELLOW
GSA65-1062	0.405	0.418	36	0.128	11	BLACK
GSA65-1102	0.419	0.434	36	0.128	11	WHITE
GSA65-1143	0.435	0.450	36	0.128	11	BROWN
GSA65-1194	0.451	0.470	36	0.128	12	ORANGE
GSA65-1222	0.471	0.481	36	0.128	12	PURPLE
GSA80-1267	0.482	0.499	40	0.167	10	RED
GSA80-1300	0.500	0.512	40	0.167	10	BLUE
GSA80-1346	0.513	0.530	41	0.167	11	GREEN
GSA80-1377	0.531	0.542	41	0.167	11	YELLOW
GSA90-1410	0.543	0.555	44	1.820	10	BLACK
GSA90-1455	0.556	0.573	44	1.820	11	WHITE
GSA90-1509	0.574	0.594	45	1.820	11	BROWN
GSA90-1539	0.595	0.606	46	1.820	11	ORANGE
GSA90-1572	0.607	0.619	46	1.820	11	PURPLE
GSA90-1638	0.620	0.645	50	1.820	12	RED
GSA98-1709	0.646	0.673	54	0.204	11	BLUE
GSA98-1753	0.674	0.690	54	0.204	11	GREEN
GSA98-1803	0.691	0.710	54	0.204	12	YELLOW
GSA98-1857	0.711	0.731	55	0.204	12	BLACK
GSA98-1905	0.732	0.750	56	0.204	12	WHITE
GSA115-195	0.751	0.768	60	0.250	10	BROWN
GSA115-201	0.769	0.795	60	0.250	11	ORANGE
GSA115-209	0.796	0.824	61	0.250	11	PURPLE
GSA115-514	0.825	0.845	64	0.250	11	RED
GSA115-221	0.846	0.870	64	0.250	12	BLUE
GSA115-226	0.871	0.893	65	0.250	12	GREEN
GSA115-230	0.894	0.907	65	0.250	12	GREEN

# Formed Wire Suspension Clamp



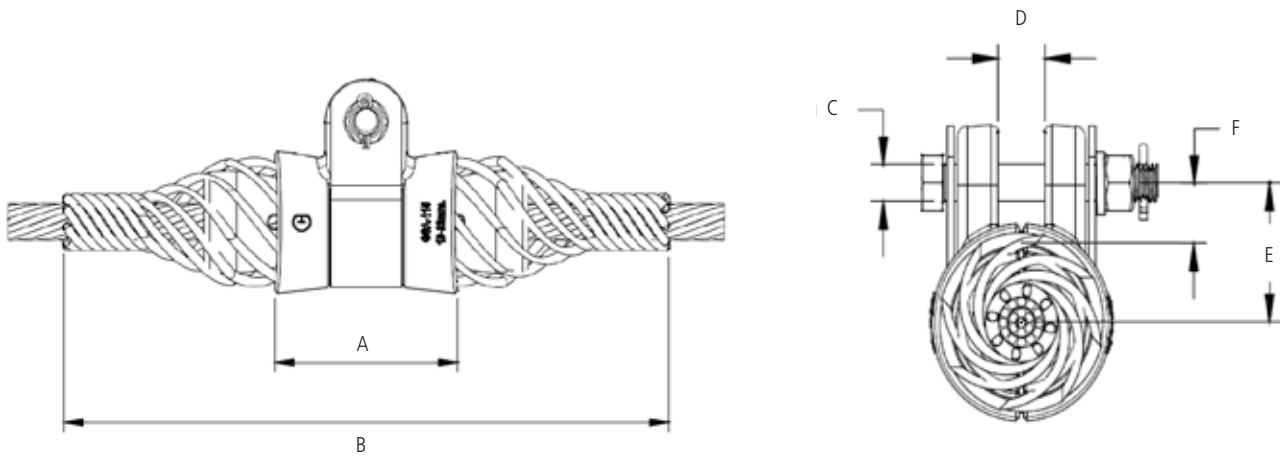
FORMED WIRE SUSPENSION	DIAMETER RANGE (IN)		RODS			COLOR CODE
	AFL NO.	MIN.	MAX.	LENGTH (IN)	ROD DIA (IN)	
GSA127-233	0.908	0.920	66	0.250	12	YELLOW
GSA127-238	0.921	0.937	66	0.250	12	BLACK
GSA127-244	0.938	0.962	67	0.250	12	WHITE
GSA127-250	0.963	0.986	68	0.250	13	BROWN
GSA127-255	0.987	1.005	69	0.250	13	ORANGE
GSA145-259	1.006	1.022	80	0.310	11	PURPLE
GSA145-264	1.023	1.040	82	0.310	11	RED
GSA145-272	1.041	1.074	82	0.310	11	BLUE
GSA145-276	1.075	1.090	82	0.310	12	GREEN
GSA145-284	1.091	1.118	82	0.310	12	YELLOW
GSA145-288	1.119	1.136	82	0.310	12	BLACK
GSA145-292	1.137	1.152	82	0.310	12	WHITE
GSA145-298	1.153	1.175	82	0.310	12	BROWN
GSA145-306	1.176	1.208	82	0.310	12	ORANGE
GSA155-311	1.209	1.226	88	0.365	11	PURPLE
GSA155-319	1.227	1.259	88	0.365	11	RED
GSA155-326	1.260	1.286	88	0.365	12	BLUE
GSA155-333	1.287	1.314	88	0.365	12	GREEN
GSA155-344	1.315	1.355	88	0.365	12	YELLOW
GSA165-354	1.356	1.394	88	0.365	12	BLACK
GSA165-359	1.395	1.416	88	0.365	13	WHITE
GSA165-366	1.417	1.442	88	0.365	13	BROWN
GSA165-375	1.443	1.477	88	0.365	13	ORANGE
GSA165-385	1.478	1.516	88	0.365	13	PURPLE
GSA165-395	1.517	1.557	88	0.365	13	RED
GSA180-401	1.558	1.579	10	0.365	14	BLUE
GSA180-409	1.580	1.612	10	0.365	14	GREEN
GSA180-419	1.613	1.650	10	0.365	14	YELLOW
GSA180-428	1.651	1.688	10	0.365	15	BLACK
GSA180-434	1.689	1.711	10	0.365	15	WHITE
GSA180-445	1.712	1.752	10	0.365	15	BROWN
GSA180-454	1.753	1.790	10	0.365	15	ORANGE
GSA180-464	1.791	1.828	10	0.365	15	PURPLE
GSA180-478	1.829	1.882	10	0.365	16	RED
GSA190-567	2.193	2.233	10	0.365	18	RED

## Formed Wire Suspension – Double

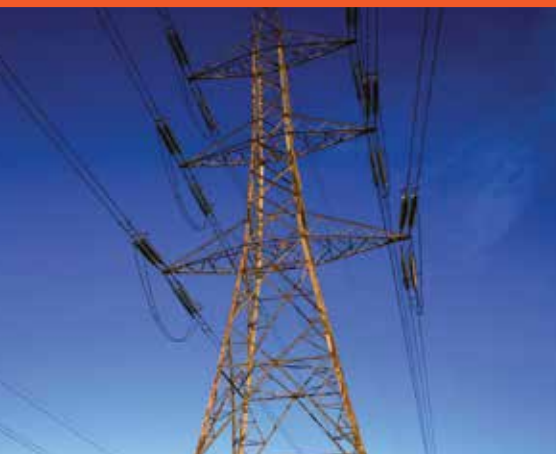


AFL NO.	DIAMETER RANGE (IN)	LENGTH, (F)
GSAD60	0.304-0.389	12"
GSAD65	0.390-0.481	12"
GSAD80	0.482-0.542	12"
GSAD90	0.543-0.645	12"
GSAD98	0.646-0.750	18"
GSAD115	0.751-0.907	18"
GSAD127	0.908-1.005	22"
GSAD145	1.006-1.208	26"
GSAD155	1.209-1.355	29"
GSAD165	1.356-1.557	32"
GSAD180	1.558-1.882	37"
GSAD190	1.883-2.233	42"

# Formed Wire Suspension – Dimensional Detail



AFL NO.	DIAMETER RANGE (IN)	DIMENSIONS						
		A	B	C	D	E	F	VERTICAL STRENGTH (LBS)
GSA60	0.304-0.389	2.362	See Catalog for Rod Lengths	5/8	0.687	2.110	1.161	15,000
GSA65	0.390-0.481	2.559		5/8	0.687	2.110	1.102	15,000
GSA80	0.482-0.542	3.149		5/8	0.656	2.150	1.024	10,000
GSA90	0.543-0.645	3.543		5/8	0.718	2.249	1.024	10,000
GSA98	0.646-0.750	3.858		5/8	0.750	2.317	1.024	15,000
GSA115	0.751-0.907	4.527		5/8	0.875	2.375	1.207	20,000
GSA127	0.908-1.005	5.000		5/8	0.875	2.677	1.024	20,000
GSA145	1.006-1.208	5.708		5/8	1.187	2.933	1.024	25,000
GSA155	1.209-1.355	6.102		3/4	1.250	3.362	1.260	25,000
GSA165	1.356-1.557	6.496		3/4	1.375	3.519	1.142	25,000
GSA180	1.558-1.882	7.086		3/4	2.250	3.811	1.142	25,000
GSA190	1.883-2.233	7.480		3/4	2.409	4.047	1.181	30,000



**AFL**

[www.AFLglobal.com](http://www.AFLglobal.com)

1.800.866.7385