Quick Compress Accessories for Maximum Conductor Operating Temperatures of 100ºC (212ºF)

In the past, three separate compression accessory series were required to connect ACSR, AAC, AAAC and ACAR. To assist utilities and distributors in reducing inventory, AFL designed one series of compression accessories that can handle all four conductor types, the Quick Compress Product Line. Quick Compress handles these conductors while maintaining the same mechanical and electrical reliability as other AFL product lines.

There are two primary characteristics that make Quick Compress different from any other accessory line. First, it is made of a high strength aluminum alloy, which has a minimum tensile strength nearly twice that of other compression accessory systems. This means that for the same conductor size, smaller connectors can be used without any fear of sacrificing strength. Secondly, Quick Compress uses an aluminum 'core grip' to hold the steel core of ACSR. This eliminates the need to have a dead end steel compression barrel or a steel sleeve for full tension ACSR joints. By eliminating the steel, only one set of dies is required for installing Quick Compress Accessories.

All compression accessories are designed to operate at a temperature 15% to 25% cooler than the conductor. Quick Compress accessories are designed for a maximum conductor operating temperature of 100ºC (212ºF). For applications exceeding 100ºC (212ºF) operating temperature, see the Standard and HiTemp® Compression Accessories sections.

Features

Installs in 40% Less Time

Quick Compress Accessories are designed to save valuable time. They are made of a high strength alloy allowing for shorter accessories resulting in fewer compression bites. The accessories come pre-filled, the steel eye is pre-compressed and a one-piece core grip is included. Compared to other two-die accessory systems, Quick Compress Accessories can be installed in 40% less time.

One-Piece Core Grip

When using ACSR conductor, the one-piece core grip eliminates the need for a dead end steel compression barrel or a steel sleeve for full tension compression joints.

Factory Installed Eye

The dead end features a steel eye that is oriented and installed at the factory. This decreases installation time and eliminates costly field errors.

Factory Pre-filled

Quick Compress dead ends, joints, terminals and jumper connectors are prefilled with AFL Filler Compound (AFC) and capped to prevent loss of compound prior to installation, eliminating an installation step.

High Voltage Applications

The end tapers of all compression accessories are supplied with a high voltage finish for die sizes 12CD and above. Corona bolts are furnished standard on 15º terminals for these section sizes. The square edges of bolted pads of the compression accessories could cause Corona. Pads with rounded edges and corners can be supplied by adding the catalog suffix 'EHV'.

Quick Reference Guide for Quick Compress Accessories for AAAC and ACAR Conductors

CONDUCTOR			COMPRESSION ACCESSORIES													
	SIZE	DIA.	DEAD END ASSEMBLIES								TERMINAL CONNECTORS					
CODE WORD	KCMIL	IN	VERT. EYE SINGLE TONGUE	HOR. EYE SINGLE TONGUE	VERT. EYE DOUBLE TONGUE	HOR. EYE DOUBLE TONGUE	ADJ. EYE SINGLE TONGUE	ADJ. CLEVIS SINGLE TONGUE	JOINT	JUMPER CONNECTOR	STRAIGHT	15°	90°	OPEN RUN TEE CONNECTOR	OPEN RUN TEE TAP	REPAIR SLEEVE
—	281.4	0.609	VES070	HES070	VED070	HED070	AES070	ACS070	CJ07	JC07	TS07	TF07	TN07	TTOC07	TTOP07	RS07
Butte	312.8	0.642	VES070	HES070	VED070	HED070	AES070	ACS070	CJ07	JC07	TS07	TF07	TN07	TTOC07	TTOP07	RS07
—	355.1	0.684	VES080	HES080	VED080	HED080	AES080	ACS080	CJ08	JC08	TS08	TF08	TN08	TTOC08	TTOP08	RS08
Canton	394.5	0.721	VES080	HES080	VED080	HED080	AES080	ACS080	CJ08	JC08	TS08	TF08	TN08	TTOC08	TTOP08	RS08
—	419.6	0.743	VES080	HES080	VED080	HED080	AES080	ACS080	CJ08	JC08	TS08	TF08	TN08	TTOC08	TTOP08	RS08
Cario	465.4	0.783	VES090	HES090	VED090	HED090	AES090	ACS090	CJ09	JC09	TS09	TF09	TN09	TTOC09	TTOP09	RS09
—	503.6	0.814	VES090	HES090	VED090	HED090	AES090	ACS090	CJ09	JC09	TS09	TF09	TN09	TTOC09	TTOP09	RS09
Darien	559.5	0.858	VES100	HES100	VED100	HED100	AES100	ACS100	CJ10	JC10	TS10	TF10	TN10	TTOC10	TTOP10	RS10
—	587.2	0.879	VES100	HES100	VED100	HED100	AES100	ACS100	CJ10	JC10	TS10	TF10	TN10	TTOC10	TTOP10	RS10
—	634.9	0.914	VES100	HES100	VED100	HED100	AES100	ACS100	CJ10	JC10	TS10	TF10	TN10	TTOC10	TTOP10	RS10
—	649.5	0.928	VES100	HES100	VED100	HED100	AES100	ACS100	CJ10	JC10	TS10	TF10	TN10	TTOC10	TTOP10	RS10
Elgin	652.4	0.927	VES100	HES100	VED100	HED100	AES100	ACS100	CJ10	JC10	TS10	TF10	TN10	TTOC10	TTOP10	RS10
—	657.3	0.930	VES100	HES100	VED100	HED100	AES100	ACS100	CJ10	JC10	TS10	TF10	TN10	TTOC10	TTOP10	RS10
Flint	740.8	0.991	VES110	HES110	VED110	HED110	AES110	ACS110	CJ11	JC11	TS11	TF11	TN11	TTOC11	TTOP11	RS11
—	853.7	1.063	VES120	HES120	VED120	HED120	AES120	ACS120	CJ12	JC12	TS12	TF12	TN12	TTOC12	TTOP12	RS12
Greeley	927.2	1.108	VES120	HES120	VED120	HED120	AES120	ACS120	CJ12	JC12	TS12	TF12	TN12	TTOC12	TTOP12	RS12
—	1024.5	1.165	VES130	HES130	VED130	HED130	AES130	ACS130	CJ13	JC13	TS13	TF13	TN13	TTOC13	TTOP13	RS13
—	1080.6	1.196	VES130	HES130	VED130	HED130	AES130	ACS130	CJ13	JC13	TS13	TF13	TN13	TTOC13	TTOP13	RS13
—	1108.6	1.212	VES130	HES130	VED130	HED130	AES130	ACS130	CJ13	JC13	TS13	TF13	TN13	TTOC13	TTOP13	RS13
—	1172.3	1.246	VES140	HES140	VED140	HED140	AES140	ACS140	CJ14	JC14	TS14	TF14	TN14	TTOC14	TTOP14	RS14
—	1534.0	1.427	VES160	HES160	VED160	HED160	AES160	ACS160	CJ16	JC16	TS16	TF16	TN16	TTOC16	TTOP16	RS16
—	1700.0	1.502	VES160	HES160	VED160	HED160	AES160	ACS160	CJ16	JC16	TS16	TF16	TN16	TTOC16	TTOP16	RS16
—	2303.5	1.750	VES190	HES190	VED190	HED190	AES190	ACS190	CJ19	JC19	TS19	TF19	TN19	TTOC19	TTOP19	RS19
—	2338.0	1.762	VES190	HES190	VED190	HED190	AES190	ACS190	CJ19	JC19	TS19	TF19	TN19	TTOC19	TTOP19	RS19
—	2493.0	1.821	VES200	HES200	VED200	HED200	AES200	ACS200	CJ20	JC20	TS20	TF20	TN20	TTOC20	TTOP20	RS20

Quick Compress Catalog Numbering System

The simplified AFL catalog numbering system for alloy compression connectors facilitates specying, ordering and inventory control. The catalog number is stamped on each compression connector for easy and positive field identification.

Example: Catalog No. VES126

TYPE OF CONNECTOR	TUBE CODE	CORE GRIP CODE
VES (see table below)	① **XX**	②③ **Y** ⑤ **Y N T**

Example:

CONDUCTOR	DEAD END	CORE GRIP	DIE SIZE	TERMINAL	DEAD END ASSEMBLY
795.26/7 ACSR	VES12	CG126	12CD	TF12	VES126
927 kcmil-6201	VES12	–	12CD	TF12	VES120
954 kcmil-1350(EC)	VESE12	–	12CD	TF12	VES120

⑦TYPE OF CONNECTOR	STANDARD U.S. SIZES			BRITISH, EUROPEAN AND STANDARD METRIC SIZES		
	ACSR	1350(EC)	ALLOY ACAR	ACSR	1350(EC)	ALLOY ACAR
Dead Ends, Vertical Eye, Single Tongue	VES	VESE	VES	VESM	VESEM	VESM
Dead Ends, Vertical Eye, Double Tongue	VED	VEDE	VED	VEDM	VEDEM	VEDM
Dead Ends, Horizontal Eye, Single Tongue	HES	HESE	HES	HESM	HESEM	HESM
Dead Ends, Horizontal Eye, Double Tongue	HED	HEDE	HED	HEDM	HEDEM	HEDM
Dead Ends, Adjustable Eye, Single Tongue	AES	AESE	AES	AESM	AESEM	AESM
Dead Ends, Adjustable Eye, Double Tongue	AED	AEDE	AED	AEDM	AEDEM	AEDM
Dead Ends, Adjustable Clevis, Single Tongue	ACS	ACSE	ACS	ACSM	ACSEM	ACSM
Dead Ends, Adjustable Clevis, Double Tongue	ACD	ACDE	ACD	ACDM	ACDEM	ACDM
Terminal Connectors, Straight Pad	TS	TS	TS	TSM	TSM	TSM
Terminal Connectors, 15° Pad ⑥	TF	TF	TF	TFM	TFM	TFM
Terminal Connectors, 45° Pad	T45	T45	T45	T45M	T45M	T45M
Terminal Connectors, 90° Pad	TN	TN	TN	TNM	TNM	TNM
Compression Joints	CJ	CJE	CJ	CJM	CJEM	CJM
Jumper Connector	JC	JC	JC	JCM	JCM	JCM
Repair Sleeve	RS	RS	RS	RSM	RSM	RSM
Core Grip	CG	–	–	CG	–	–
Tee Connector - Closed Run, Cable to Cable	TTCC	TTCC	TTCC	TTCCM	TTCCM	TTCCM
Tee Connector - Open Run, Cable to Cable	TTOC	TTOC	TTOC	TTOCM	TTOCM	TTOCM
Tee Tap - Closed Run, Cable to Pad	TTCP	TTCP	TTCP	TTCPM	TTCPM	TTCPM
Tee Tap - Open Run, Cable to Pad	TTOP	TTOP	TTOP	TTOPM	TTOPM	TTOPM

NOTES:

① The two digit number (denoted by XX) defines tube code. These numbers will be 07 through 21 inclusive.

② A single digit suffix (denoted by Y) is used to order the dead end assembly or joint assembly. This suffix also shows the core grip code. These numbers will be 0 through 7 inclusive, where 0 indicates no core grip and 1 through 7 indicates the core grip for a given tube size.

③ The dead end assembly for an ACSR consists of the prefilled aluminum dead end body precompressed onto the steel eye, the 15° terminal connector, hardware and core grip. Double tongue dead end assemblies include two terminal connectors. The joint assembly for ACSR consists of a prefilled aluminum sleeve and two core grips.

④ The dead end assembly for SAC conductors consists of the prefilled dead end body, precompressed onto the steel eye, the 15° terminal connector and hardware. Double tongue dead end assemblies include two terminal connectors.

⑤ To order dead end assembly without the jumper terminal, specify VESXXYNT. For the VES126NT, the assembly would consist of the VES12 dead end and CG126 core grip for the 795 26/7 ACSR.

⑥ The 15° terminal connectors are supplied with 1/2 inch aluminum alloy bolts, nuts and washers. Terminal sizes 12 and larger are supplied with corona bolts.

⑦ With the exception of repair sleeves, tee connectors and tee taps all of the compression barrels are prefilled with AFC.

⑧ Die code for compressors:

B – CD	Compressor Model: 12A
30 – CD	30A
60 – CD	60A
100 – CD	100A

Quick Compress Catalog Numbering System (cont.)

TUBE, CORE GRIP AND ASSEMBLY CODES FOR ACSR CONDUCTORS

CONDUCTOR SIZE			TUBE CODE XX	ASSEMBLY AND CORE GRIP CODE CG
KCMIL	MM²	STRAND		
266.8	135.2	6/7 18/1 26/7	07 07 07	075 072 076
300.0	152.0	26/7	08	085
336.4	170.5	18/1 26/7 30/7	08 08 09	082 086 096
397.5	201.4	18/1 24/7 26/7 30/7	08 09 09 10	083 095 096 106
477.0	241.7	18/1 24/7 26/7 30/7	09 09 10 11	092 095 096 106
556.5	282.0	18/1 24/7 26/7 30/7	10 10 10 11	102 105 106 117
605.0	306.8	24/7 26/7 30/19	11 11 12	115 116 126
636.0	322.3	18/1 24/7 26/7 30/19 36/1	10 11 11 12 10	103 115 116 126 101
666.8	337.7	24/7	11	115
715.5	362.6	24/7 26/7 30/19	11 12 13	115 126 138
795.0	402.8	24/7 26/7 30/19 36/1 45/7 54/7	12 12 14 11 12 12	125 126 146 111 123 125
900.0	456.1	45/7 54/7	12 13	124 135
954.0	483.4	36/1 45/7 54/7	12 13 13	121 133 135
1033.5	523.7	36/1 45/7 54/7	13 13 14	131 134 145
1113.0	583.9	45/7 54/19	14 14	143 145

TUBE, CORE GRIP AND ASSEMBLY CODES FOR ACSR CONDUCTORS (cont.)

CONDUCTOR SIZE			TUBE CODE XX	ASSEMBLY AND CORE GRIP CODE CG
KCMIL	MM²	STRAND		
1192.5	604.3	45/7 54/19	14 15	144 155
1272.0	644.5	45/7 54/19	15 15	153 153
1351.5	685.2	45/7 54/19	15 15	154 155
1431.0	725.2	45/7 54/19	16 16	163 165
1510.5	765.2	45/7 54/19	16 16	164 165
1590.0	805.8	45/7 54/19	16 17	164 175
1780.0	901.9	84/19	17	174
2034.0	1030.6	72/7	18	183
2156.0	1092.3	84/19	19	194
2167.0	1098.1	72/7	19	193
2312.0	1171.5	76/19	19	193
2515.0	1274.4	76/19	20	203

STRANDED ALUMINUM CONDUCTORS CONDUCTOR DIAMETER RANGE AND TUBE CODE

DIAMETER RANGE				TUBE CODE XX
INCHES		MILLIMETERS		
MIN.	MAX.	MIN.	MAX.	
.595	.680	15.1	17.3	07
.680	.765	17.3	19.4	08
.765	.855	19.4	21.7	09
.855	.950	21.7	24.1	10
.950	1.1045	24.1	26.5	11
1.045	1.140	26.5	29.0	12
1.140	1.235	29.0	31.4	13
1.235	1.330	31.4	33.8	14
1.330	1.425	33.8	36.2	15
1.425	1.520	36.2	38.6	16
1.520	1.615	38.6	41.0	17
1.615	1.710	41.0	43.4	18
1.710	1.805	43.4	45.8	19
1.805	1.900	45.8	48.3	20