

**VS Series  
Incoming Power Distribution  
Cable/Wire Sizing Chart**

<b>460 Volt</b>							
<b>VS-11 through VS-250 Minimum Copper Supply Wire Recommendations</b>							
<b>Model</b>	<b>kW</b>	<b>Input Voltage</b>	<b>Estimated Package Amps</b>	<b>NEC Package Amps @ 30°C</b>	<b>Minimum 75°C Copper Wire Sized @ 40°C</b>	<b>Minimum 75°C Copper Wire Sized @ 45°C</b>	<b>Notes</b>
VS 11	11	460	28	34	8	8	
VS 20	20	460	46	56	6	4	
VS 25	25	460	54	66	4	4	
VS 30	30	460	81	99	2	1	
VS 40	40	460	98	120	1/0	1/0	
VS 45	45	460	98	120	1/0	1/0	
VS 50	50	460	117	144	2/0	2/0	
VS 70	70	460	160	197	4/0	250	
VS 80	80	460	165	203	250	250	
VS 110	110	460	215	265	350 or 3/0 (2)	400 or 4/0 (2)	[1]
VS 135	135	460	215	265	350 or 3/0 (2)	400 or 4/0 (2)	[1]
VS 170	170	460	305	378	300 (2)	350 (2)	[2] [3]
VS 200	200	460	385	476	300 (2)	350 (2)	[4]
VS 250	250	460	485	601	500 (2)	500 (2)	[4]

**Notes:**

- [1] 3/0 and 4/0 wires sized with derate for 2 sets in a single conduit.
- [2] VS-170 drive is rated for 40°C ambient.
- [3] Wires sized with derate for 2 parallel sets of conductors in a single conduit.
- [4] Wires sized with derate for 2 parallel sets of conductors in 2 conduits (1set in each conduit).

The NEC requires that wire sizes be determined by using the appropriate multiplier for the conductor temperature rating at ambient temperatures other than 30°C and selecting the wire that has sufficient ampacity, after correction, to meet the load requirements shown in the "NEC Package Amps @ 30°C" column above. Wire ampacity is to be corrected, not "Package Amps." Additional correction multipliers apply based on more than three conductors in one conduit. All of the above recommended minimum wire sizes are based on all terminal connections being rated at 75°C minimum temperature rating and copper wire run lengths of 100 feet. UL-508A listed control panels are rated at 40°C.

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<b>575 Volt</b>							
<b>VS-20 through VS-170</b>							
<b>Minimum Copper Supply Wire Recommendations</b>							
<b>Model</b>	<b>kW</b>	<b>Input Voltage</b>	<b>Estimated Package Amps</b>	<b>NEC Package Amps @ 30°C</b>	<b>Minimum 75°C Copper Wire Sized @ 40°C</b>	<b>Minimum 75°C Copper Wire Sized @ 45°C</b>	<b>Notes</b>
VS 20	20	575	35	42	8	6	
VS 30	30	575	54	66	4	4	
VS 40	40	575	65	79	3	3	
VS 50	50	575	80	98	2	1	
VS 70	70	575	100	124	1/0	2/0	
VS 80	80	575	107	130	1/0	2/0	
VS 110	110	575	149	182	4/0	4/0	
VS 135	135	575	149	182	4/0	4/0	
VS 170	170	575	215	265	350 or (3/0 (2))	N/A (40°C only)	[1] [2]

**Notes:**

- [1] VS-170 drives are rated for 40°C ambient.
- [2] 3/0 wire sized for 2 parallel sets of conductors in 1 conduit at 40°C ambient.

The NEC requires that wire sizes be determined by using the appropriate multiplier for the conductor temperature rating at ambient temperatures other than 30°C and selecting the wire that has sufficient ampacity, after correction, to meet the load requirements shown in the "NEC Package Amps @ 30°C" column above. Wire ampacity is to be corrected, not "Package Amps." Additional correction multipliers apply based on more than three conductors in one conduit. All of the above recommended minimum wire sizes are based on all terminal connections being rated at 75°C minimum temperature rating and copper wire run lengths of 100 feet. UL-508A listed control panels are rated at 40°C.

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<b>230 Volt</b>							
<b>VS-20, VS-30, VS-40</b>							
<b>Minimum Copper Supply Wire Recommendations</b>							
Model	kW	Input Voltage	Estimated Package Amps	NEC Package Amps @ 30°C	Minimum 75°C Copper Wire Sized @ 40°C	Minimum 75°C Copper Wire Sized @ 45°C	Notes
VS 20	20	230	99	122	1/0	1/0	
VS 30	30	230	160	197	4/0	250	
VS 40	40	230	190	235	300 or 2/0 (2)	350 or 3/0 (2)	[1]

**Notes:**

[1] 2/0 and 3/0 wires sized for 2 parallel sets of conductors in 1 conduit.

The NEC requires that wire sizes be determined by using the appropriate multiplier for the conductor temperature rating at ambient temperatures other than 30°C and selecting the wire that has sufficient ampacity, after correction, to meet the load requirements shown in the "NEC Package Amps @ 30°C" column above. Wire ampacity is to be corrected, not "Package Amps." Additional correction multipliers apply based on more than three conductors in one conduit. All of the above recommended minimum wire sizes are based on all terminal connections being rated at 75°C minimum temperature rating and copper wire run lengths of 100 feet. UL-508A listed control panels are rated at 40°C.

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<b>200 Volt</b>							
<b>VS-20, VS-30, VS-40</b>							
<b>Minimum Copper Supply Wire Recommendations</b>							
<b>Model</b>	<b>kW</b>	<b>Input Voltage</b>	<b>Estimated Package Amps</b>	<b>NEC Package Amps @ 30°C</b>	<b>Minimum 75°C Copper Wire Sized @ 40°C</b>	<b>Minimum 75°C Copper Wire Sized @ 45°C</b>	<b>Notes</b>
VS 20	20	200	99	122	1/0	1/0	
VS 30	30	200	161	198	4/0	250	
VS 40	40	200	219	271	350 or 3/0 (2)	400 or 4/0 (2)	[1]

**Notes:**

[1] 3/0 and 4/0 wires sized for 2 parallel sets of conductors in 1 conduit.

The NEC requires that wire sizes be determined by using the appropriate multiplier for the conductor temperature rating at ambient temperatures other than 30°C and selecting the wire that has sufficient ampacity, after correction, to meet the load requirements shown in the "NEC Package Amps @ 30°C" column above. Wire ampacity is to be corrected, not "Package Amps." Additional correction multipliers apply based on more than three conductors in one conduit. All of the above recommended minimum wire sizes are based on all terminal connections being rated at 75°C minimum temperature rating and copper wire run lengths of 100 feet. UL-508A listed control panels are rated at 40°C.