# Electrical data – A, B and C enclosures

## [S2] 1 x 200-240 V AC – normal overload

| Normal overload (110% 1 min/10 min) | | | | | | | Enclosure size | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Type code | Output current (3 x 200-240 V) | | Typical shaft output power | | Continuous input current | Estimated power loss | Protection rating [IEC/UL] | | | |
| | | | | | | | IP20 | IP21 | IP55 | IP66 |
| FC-202 | Con. $I_N$ | Inter. $I_{MAX}$ (60 s) | kW @ 208 V | Hp @ 230 V | [A] | [W] | Chassis | Type 1 | Type 12 | Type 4X |
| P1K1 | 6.6 | 7.3 | 1.1 | 1.5 | 12.5 | 44 | A3 | – | A5 | A5 |
| P1K5 | 7.5 | 8.3 | 1.5 | 2.0 | 15 | 30 | – | B1 | B1 | B1 |
| P2K2 | 10.6 | 11.7 | 2.2 | 2.9 | 21 | 44 | – | B1 | B1 | B1 |
| P3K0 | 12.5 | 13.8 | 3 | 4.0 | 24 | 60 | – | B1 | B1 | B1 |
| P3K7 | 16.7 | 18.4 | 3.7 | 4.9 | 32 | 74 | – | B1 | B1 | B1 |
| P5K5 | 24.2 | 26.6 | 5.5 | 7.5 | 46.0 | 110 | – | B1 | B1 | B1 |
| P7K5 | 30.8 | 33.4 | 7.5 | 10 | 59 | 150 | – | B2 | B2 | B2 |
| P15K | 59.4 | 65.3 | 15 | 20 | 111 | 300 | – | C1 | C1 | C1 |
| P22K | 88 | 96.8 | 22 | 30 | 172 | 440 | – | C2 | C2 | C2 |

## [T2] 3 x 200-240 V AC – normal overload

| Normal overload (110% 1 min/10 min) | | | | | | | Enclosure size | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Type code | Output current (3 x 200-240 V) | | Typical shaft output power | | Continuous input current | Estimated power loss | Protection rating [IEC/UL] | | | |
| | | | | | | | IP20/21 | IP21 | IP55 | IP66 |
| FC-202 | Con. $I_N$ | Inter. $I_{MAX}$ (60 s) | kW @ 208 V | Hp @ 230V | [A] | [W] | Chassis | Type 1 | Type 12 | Type 4X |
| PK25 | 1.8 | 2 | 0.25 | 0.34 | 1.6 | 21 | A2 | A2* | A4/A5** | A4/A5** |
| PK37 | 2.4 | 2.6 | 0.37 | 0.5 | 2.2 | 29 | A2 | A2* | A4/A5** | A4/A5** |
| PK55 | 3.5 | 3.9 | 0.55 | 0.75 | 3.2 | 42 | A2 | A2* | A4/A5** | A4/A5** |
| PK75 | 4.6 | 5.1 | 0.75 | 1 | 4.1 | 54 | A2 | A2* | A4/A5** | A4/A5** |
| P1K1 | 6.6 | 7.3 | 1.1 | 1.5 | 5.9 | 63 | A2 | A2* | A4/A5** | A4/A5** |
| P1K5 | 7.5 | 8.3 | 1.5 | 2 | 6.8 | 82 | A2 | A2* | A4/A5** | A4/A5** |
| P2K2 | 10.6 | 11.7 | 2.2 | 3 | 9.5 | 116 | A2 | A2* | A4/A5** | A4/A5** |
| P3K0 | 12.5 | 13.8 | 3 | 4 | 11.3 | 155 | A3 | A3* | A5 | A5 |
| P3K7 | 16.7 | 18.4 | 3.7 | 5 | 15 | 185 | A3 | A3* | A5 | A5 |
| P5K5 | 24.2 | 26.6 | 5.5 | 7.5 | 22 | 310 | B3 | B1 | B1 | B1 |
| P7K5 | 30.8 | 33.9 | 7.5 | 10 | 28 | 310 | B3 | B1 | B1 | B1 |
| P11K | 46.2 | 50.8 | 11 | 15 | 42 | 514 | B3 | B1 | B1 | B1 |
| P15K | 59.4 | 65.3 | 15 | 20 | 54 | 602 | B4 | B2 | B2 | B2 |
| P18K | 74.8 | 82.3 | 18.5 | 25 | 68 | 737 | B4 | C1 | C1 | C1 |
| P22K | 88 | 96.8 | 22 | 30 | 80 | 845 | C3 | C1 | C1 | C1 |
| P30K | 115 | 127 | 30 | 40 | 104 | 1140 | C3 | C1 | C1 | C1 |
| P37K | 143 | 157 | 37 | 50 | 130 | 1353 | C4 | C2 | C2 | C2 |
| P45K | 170 | 187 | 45 | 60 | 154 | 1636 | C4 | C2 | C2 | C2 |

* *Requires an IP21/Type 1 kit. Available in North America only.*
** *A4 does not accept any C options*

## [T2] 3 x 200-240 V AC – high overload

| High overload (160% 1 min/10 min) | | | | | | | Enclosure size | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Type code | Output current (3 x 200-240 V) | | Typical shaft output power | | Continuous input current | Estimated power loss | Protection rating [IEC/UL] | | | |
| | | | | | | | IP20/21 | IP21 | IP55 | IP66 |
| FC-202 | Con. $I_N$ | Inter. $I_{MAX}$ (60 s) | kW @ 208 V | Hp @ 230 V | [A] | [W] | Chassis | Type 1 | Type 12 | Type 4X |
| PK25 | 1.8 | 2.7 | 0.25 | 0.34 | 1.6 | 21 | A2 | A2* | A4/A5** | A4/A5** |
| PK37 | 2.4 | 3.6 | 0.37 | 0.5 | 2.2 | 29 | A2 | A2* | A4/A5** | A4/A5** |
| PK55 | 3.5 | 5.3 | 0.55 | 0.75 | 3.2 | 42 | A2 | A2* | A4/A5** | A4/A5** |
| PK75 | 4.6 | 6.9 | 0.75 | 1 | 4.1 | 54 | A2 | A2* | A4/A5** | A4/A5** |
| P1K1 | 6.6 | 9.9 | 1.1 | 1.5 | 5.9 | 63 | A2 | A2* | A4/A5** | A4/A5** |
| P1K5 | 7.5 | 11.3 | 1.5 | 2 | 6.8 | 82 | A2 | A2* | A4/A5** | A4/A5** |
| P2K2 | 10.6 | 15.9 | 2.2 | 3 | 9.5 | 116 | A2 | A2* | A4/A5** | A4/A5** |
| P3K0 | 12.5 | 18.8 | 3 | 4 | 11.3 | 155 | A3 | A3* | A5 | A5 |
| P3K7 | 16.7 | 25 | 3.7 | 5 | 15.0 | 185 | A3 | A3* | A5 | A5 |
| P5K5 | 16.7 | 26.7 | 3.7 | 5 | 15.0 | 239 | B3 | B1 | B1 | B1 |
| P7K5 | 24.2 | 38.7 | 5.5 | 7.5 | 22 | 239 | B3 | B1 | B1 | B1 |
| P11K | 30.8 | 49.3 | 7.5 | 10 | 28 | 371 | B3 | B1 | B1 | B1 |
| P15K | 46.2 | 73.9 | 11 | 15 | 42 | 463 | B4 | B2 | B2 | B2 |
| P18K | 59.4 | 89.1 | 15 | 20 | 54 | 624 | B4 | C1 | C1 | C1 |
| P22K | 74.8 | 112 | 18.5 | 25 | 68 | 740 | C3 | C1 | C1 | C1 |
| P30K | 88 | 132 | 22 | 30 | 80 | 874 | C3 | C1 | C1 | C1 |
| P37K | 115 | 173 | 30 | 40 | 104 | 1143 | C4 | C2 | C2 | C2 |
| P45K | 143 | 215 | 37 | 50 | 130 | 1400 | C4 | C2 | C2 | C2 |

** Requires an IP21/Type 1 kit. Available in North America only.*
*** A4 does not accept any C options*

## [S4] 1 x 380-480 V AC – normal overload

| Normal overload (110% 1 min/10 min) | | | | | | | | | Enclosure size | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Type code | Output current | | | | Typical shaft output power | | Continuous input current | Estimated power loss | Protection rating [IEC/UL] | | | |
| | (3 x 380-440 V) | | (3 x 441-480 V) | | | | | | IP20/21 | IP21 | IP55 | IP66 |
| FC-202 | Con. $I_N$ | Inter. $I_{MAX}$ (60 s) | Con. $I_N$ | Inter. $I_{MAX}$ (60 s) | kW @ 400 V | Hp @ 460 V | [A] @ 400 V | [W] | Chassis | Type 1 | Type 12 | Type 4X |
| P7K5 | 16 | 17.6 | 14.5 | 15.4 | 7.5 | 10 | 33 | 300 | – | B1 | B1 | B1 |
| P11K | 24 | 26.4 | 21 | 23.1 | 11 | 15 | 48 | 440 | – | B2 | B2 | B2 |
| P18K | 37.5 | 41.2 | 34 | 37.4 | 18.5 | 25 | 78 | 740 | – | C1 | C1 | C1 |
| P37K | 73 | 80.3 | 65 | 71.5 | 37 | 50 | 151 | 1480 | – | C2 | C2 | C2 |

## [T4] 3 x 380-480 V AC – normal overload

| Normal overload (110% 1 min/10 min) | | | | | | | | | Enclosure size | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Type code | Output current | | | | Typical shaft output power | | Continuous input current | Estimated power loss | Protection rating [IEC/UL] | | | |
| | (3 x 380-440 V) | | (3 x 441-500 V) | | | | | | IP20/21 | IP21 | IP55 | IP66 |
| FC-202 | Con. $I_N$ | Inter. $I_{MAX}$ (60 s) | Con. $I_N$ | Inter. $I_{MAX}$ (60 s) | kW @ 400 V | Hp @ 460 V | [A] @ 400 V | [W] | Chassis | Type 1 | Type 12 | Type 4X |
| PK37 | 1.3 | 1.4 | 1.2 | 1.3 | 0.37 | 0.5 | 1.2 | 35 | A2 | A2* | A4/A5** | A4/A5** |
| PK55 | 1.8 | 2 | 1.6 | 1.8 | 0.55 | 0.75 | 1.6 | 42 | A2 | A2* | A4/A5** | A4/A5** |
| PK75 | 2.4 | 2.6 | 2.1 | 2.3 | 0.75 | 1 | 2.2 | 46 | A2 | A2* | A4/A5** | A4/A5** |
| P1K1 | 3 | 3.3 | 2.7 | 3 | 1.1 | 1.5 | 2.7 | 58 | A2 | A2* | A4/A5** | A4/A5** |
| P1K5 | 4.1 | 4.5 | 3.4 | 3.7 | 1.5 | 2 | 3.7 | 62 | A2 | A2* | A4/A5** | A4/A5** |
| P2K2 | 5.6 | 6.2 | 4.8 | 5.3 | 2.2 | 3 | 5.0 | 88 | A2 | A2* | A4/A5** | A4/A5** |
| P3K0 | 7.2 | 7.9 | 6.3 | 6.9 | 3 | 4 | 6.5 | 116 | A2 | A2* | A4/A5** | A4/A5** |
| P4K0 | 10 | 11 | 8.2 | 9 | 4 | 5 | 9.0 | 124 | A2 | A2* | A4/A5** | A4/A5** |
| P5K5 | 13 | 14.3 | 11 | 12.1 | 5.5 | 7.5 | 11.7 | 187 | A3 | A3* | A5 | A5 |
| P7K5 | 16 | 17.6 | 14.5 | 16 | 7.5 | 10 | 14.4 | 225 | A3 | A3* | A5 | A5 |
| P11K | 24 | 26.4 | 21 | 23.1 | 11 | 15 | 22 | 392 | B3 | B1 | B1 | B1 |
| P15K | 32 | 35.2 | 27 | 29.7 | 15 | 20 | 29 | 392 | B3 | B1 | B1 | B1 |
| P18K | 37.5 | 41.3 | 34 | 37.4 | 18.5 | 25 | 34 | 465 | B3 | B1 | B1 | B1 |
| P22K | 44 | 48.4 | 40 | 44 | 22 | 30 | 40 | 525 | B4 | B2 | B2 | B2 |
| P30K | 61 | 67.1 | 52 | 61.6 | 30 | 40 | 55 | 739 | B4 | B2 | B2 | B2 |
| P37K | 73 | 80.3 | 65 | 71.5 | 37 | 50 | 66 | 698 | B4 | C1 | C1 | C1 |
| P45K | 90 | 99 | 80 | 88 | 45 | 60 | 82 | 843 | C3 | C1 | C1 | C1 |
| P55K | 106 | 117 | 105 | 116 | 55 | 75 | 96 | 1083 | C3 | C1 | C1 | C1 |
| P75K | 147 | 162 | 130 | 143 | 75 | 100 | 133 | 1384 | C4 | C2 | C2 | C2 |
| P90K | 177 | 195 | 160 | 176 | 90 | 125 | 161 | 1474 | C4 | C2 | C2 | C2 |

* *Requires an IP21/Type 1 kit. Available in North America only.*
** *A4 does not accept any C options*

## [T4] 3 x 380-480 V AC – high overload

| High overload (160% 1 min/10 min) | | | | | | | | | Enclosure size | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Type code | Output current | | | | Typical shaft output power | | Continuous input current | Estimated power loss | Protection rating [IEC/UL] | | | |
| | (3 x 380-440 V) | | (3 x 441-500 V) | | | | | | IP20/21 | IP21 | IP55 | IP66 |
| FC-202 | Con. $I_N$ | Inter. $I_{MAX}$ (60 s) | Con. $I_N$ | Inter. $I_{MAX}$ (60 s) | kW @ 400 V | Hp @ 460 V | [A] @ 400 V | [W] | Chassis | Type 1 | Type 12 | Type 4X |
| PK37 | 1.3 | 2 | 1.2 | 1.8 | 0.37 | 0.5 | 1.2 | 35 | A2 | A2* | A4/A5** | A4/A5** |
| PK55 | 1.8 | 2.7 | 1.6 | 2.4 | 0.55 | 0.75 | 1.6 | 42 | A2 | A2* | A4/A5** | A4/A5** |
| PK75 | 2.4 | 3.6 | 2.1 | 3.2 | 0.75 | 1 | 2.2 | 46 | A2 | A2* | A4/A5** | A4/A5** |
| P1K1 | 3 | 4.5 | 2.7 | 4.1 | 1.1 | 1.5 | 2.7 | 58 | A2 | A2* | A4/A5** | A4/A5** |
| P1K5 | 4.1 | 6.2 | 3.4 | 5.1 | 1.5 | 2 | 3.7 | 62 | A2 | A2* | A4/A5** | A4/A5** |
| P2K2 | 5.6 | 8.4 | 4.8 | 7.2 | 2.2 | 3 | 5.0 | 88 | A2 | A2* | A4/A5** | A4/A5** |
| P3K0 | 7.2 | 10.8 | 6.3 | 9.5 | 3 | 4 | 6.5 | 116 | A2 | A2* | A4/A5** | A4/A5** |
| P4K0 | 10 | 15 | 8.2 | 12.3 | 4 | 5 | 9.0 | 124 | A2 | A2* | A4/A5** | A4/A5** |
| P5K5 | 13 | 19.5 | 11 | 16.5 | 5.5 | 7.5 | 11.7 | 187 | A3 | A3* | A5 | A5 |
| P7K5 | 16 | 24 | 14.5 | 21.8 | 7.5 | 10 | 14.4 | 225 | A3 | A3* | A5 | A5 |
| P11K | 16 | 25.6 | 14.5 | 23.2 | 7.5 | 10 | 14 | 291 | B3 | B1 | B1 | B1 |
| P15K | 24 | 38.4 | 21 | 33.6 | 11 | 15 | 22 | 291 | B3 | B1 | B1 | B1 |
| P18K | 32 | 51.2 | 27 | 43.2 | 15 | 20 | 29 | 379 | B3 | B1 | B1 | B1 |
| P22K | 37.5 | 60 | 34 | 54.4 | 18.5 | 25 | 34 | 444 | B4 | B2 | B2 | B2 |
| P30K | 44 | 70.4 | 40 | 64 | 22 | 30 | 40 | 547 | B4 | B2 | B2 | B2 |
| P37K | 61 | 91.5 | 52 | 78 | 30 | 40 | 55 | 570 | B4 | C1 | C1 | C1 |
| P45K | 73 | 110 | 65 | 97.5 | 37 | 50 | 66 | 697 | C3 | C1 | C1 | C1 |
| P55K | 90 | 135 | 80 | 120 | 45 | 60 | 82 | 891 | C3 | C1 | C1 | C1 |
| P75K | 106 | 159 | 105 | 158 | 55 | 75 | 96 | 1022 | C4 | C2 | C2 | C2 |
| P90K | 147 | 221 | 130 | 195 | 75 | 100 | 133 | 1232 | C4 | C2 | C2 | C2 |

* *Requires an IP21/Type 1 kit. Available in North America only.*
** *A4 does not accept any C options*

## [T6] 3 x 525-600 V AC – normal overload

| Normal overload (110% 1 min/10 min) | | | | | | | Enclosure size | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Type code | Output current (3 x 525-600 V) | | Typical shaft output power | | Continuous input current | Estimated power loss | Protection rating [IEC/UL] | | | |
| | | | | | | | IP20/21 | IP21 | IP55 | IP66 |
| FC-202 | Con. $I_N$ | Inter. $I_{MAX}$ (60 s) | kW @ 575 V | Hp @ 575 V | [A] @ 575 V | [W] | Chassis | Type 1 | Type 12 | Type 4X |
| PK75 | 1.7 | 1.9 | 0.75 | 1 | 1.7 | 35 | A3 | A3 | A5 | A5 |
| P1K1 | 2.4 | 2.6 | 1.1 | 1.5 | 2.4 | 50 | A3 | A3 | A5 | A5 |
| P1K5 | 2.7 | 3 | 1.5 | 2 | 2.7 | 65 | A3 | A3 | A5 | A5 |
| P2K2 | 3.9 | 4.3 | 2.2 | 3 | 4.1 | 92 | A3 | A3 | A5 | A5 |
| P3K0 | 4.9 | 5.4 | 3 | 4 | 5.2 | 122 | A3 | A3 | A5 | A5 |
| P4K0 | 6.1 | 6.7 | 4 | 5 | 5.8 | 145 | A3 | A3 | A5 | A5 |
| P5K5 | 9 | 9.9 | 5.5 | 7.5 | 8.6 | 195 | A3 | A3 | A5 | A5 |
| P7K5 | 11 | 12.1 | 7.5 | 10 | 10.4 | 261 | A3 | A3 | A5 | A5 |
| P11K | 18 | 20 | 11 | 15 | 16 | 300 | B3 | B1 | B1 | B1 |
| P15K | 22 | 24 | 15 | 20 | 20 | 300 | B3 | B1 | B1 | B1 |
| P18K | 27 | 30 | 18.5 | 25 | 24 | 370 | B3 | B1 | B1 | B1 |
| P22K | 34 | 37 | 22 | 30 | 31 | 440 | B4 | B2 | B2 | B2 |
| P30K | 41 | 45 | 30 | 40 | 37 | 600 | B4 | B2 | B2 | B2 |
| P37K | 52 | 57 | 37 | 50 | 47 | 740 | B4 | C1 | C1 | C1 |
| P45K | 62 | 68 | 45 | 60 | 56 | 900 | C3 | C1 | C1 | C1 |
| P55K | 83 | 91 | 55 | 75 | 75 | 1100 | C3 | C1 | C1 | C1 |
| P75K | 100 | 110 | 75 | 100 | 91 | 1500 | C4 | C2 | C2 | C2 |
| P90K | 131 | 144 | 90 | 125 | 119 | 1800 | C4 | C2 | C2 | C2 |

## [T6] 3 x 525-600 V AC – high overload

| High overload (160% 1 min/10 min) | | | | | | | Enclosure size | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Type code | Output current (3 x 525-600 V) | | Typical shaft output power | | Continuous input current | Estimated power loss | Protection rating [IEC/UL] | | | |
| | | | | | | | IP20/21 | IP21 | IP55 | IP66 |
| FC-202 | Con. $I_N$ | Inter. $I_{MAX}$ (60 s) | kW @ 575 V | Hp @ 575 V | [A] @ 575 V | [W] | Chassis | Type 1 | Type 12 | Type 4X |
| PK75 | 1.7 | 2.6 | 0.75 | 1 | 1.7 | 35 | A3 | A3 | A5 | A5 |
| P1K1 | 2.4 | 3.6 | 1.1 | 1.5 | 2.4 | 50 | A3 | A3 | A5 | A5 |
| P1K5 | 2.7 | 4.1 | 1.5 | 2 | 2.7 | 65 | A3 | A3 | A5 | A5 |
| P2K2 | 3.9 | 5.9 | 2.2 | 3 | 4.1 | 92 | A3 | A3 | A5 | A5 |
| P3K0 | 4.9 | 7.4 | 3 | 4 | 5.2 | 122 | A3 | A3 | A5 | A5 |
| P4K0 | 6.1 | 9.2 | 4 | 5 | 5.8 | 145 | A3 | A3 | A5 | A5 |
| P5K5 | 9 | 13.5 | 5.5 | 7.5 | 8.6 | 195 | A3 | A3 | A5 | A5 |
| P7K5 | 11 | 16.5 | 7.5 | 10 | 10.4 | 261 | A3 | A3 | A5 | A5 |
| P11K | 11 | 17.6 | 7.5 | 10 | 9.8 | 220 | B3 | B1 | B1 | B1 |
| P15K | 18 | 29 | 11 | 15 | 16 | 220 | B3 | B1 | B1 | B1 |
| P18K | 22 | 35 | 15 | 20 | 20 | 300 | B3 | B1 | B1 | B1 |
| P22K | 27 | 43 | 18.5 | 25 | 24 | 370 | B4 | B2 | B2 | B2 |
| P30K | 34 | 54 | 22 | 30 | 31 | 440 | B4 | B2 | B2 | B2 |
| P37K | 41 | 62 | 30 | 40 | 37 | 600 | B4 | C1 | C1 | C1 |
| P45K | 52 | 78 | 37 | 50 | 47 | 740 | C3 | C1 | C1 | C1 |
| P55K | 62 | 93 | 45 | 60 | 56 | 900 | C3 | C1 | C1 | C1 |
| P75K | 83 | 125 | 55 | 75 | 75 | 1100 | C4 | C2 | C2 | C2 |
| P90K | 100 | 150 | 75 | 100 | 91 | 1500 | C4 | C2 | C2 | C2 |

## [T7] 3 x 525-690 V AC – normal overload

| Normal overload (110% 1 min/10 min) | | | | | | | | | Enclosure size | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Type code | Output current | | | | Typical shaft output power | | Continuous input current | Estimated power loss | Protection rating [IEC]* | | |
| | (3 x 525-550 V) | | (3 x 551-690 V) | | | | | | | | |
| FC-202 | Con. $I_N$ | Inter. $I_{MAX}$ (60 s) | Con. $I_N$ | Inter. $I_{MAX}$ (60 s) | kW @ 690 V | Hp @ 575 V | [A] @ 690 V | [W] | IP20 | IP21 | IP55 |
| P1K1 | 2.1 | 2.3 | 1.6 | 1.8 | 1.1 | 1.5 | 1.4 | 44 | A3 | – | – |
| P1K5 | 2.7 | 3 | 2.2 | 2.4 | 1.5 | 2 | 2.0 | 60 | A3 | – | – |
| P2K2 | 3.9 | 4.3 | 3.2 | 3.5 | 2.2 | 3 | 2.9 | 88 | A3 | – | – |
| P3K0 | 4.9 | 5.4 | 4.5 | 5 | 3 | 4 | 4.0 | 120 | A3 | – | – |
| P4K0 | 6.1 | 6.7 | 5.5 | 6.1 | 4 | 5 | 4.9 | 160 | A3 | – | – |
| P5K5 | 9 | 9.9 | 7.5 | 8.3 | 5.5 | 7.5 | 6.7 | 220 | A3 | – | – |
| P7K5 | 11 | 12.1 | 10 | 11 | 7.5 | 10 | 9.0 | 300 | A3 | – | – |
| P11K | 14 | 15.4 | 13 | 14.3 | 11 | 15 | 14.5 | 220 | B4 | B2 | B2 |
| P15K | 19 | 20.9 | 18 | 19.8 | 15 | 20 | 19.5 | 220 | B4 | B2 | B2 |
| P18K | 23 | 25.3 | 22 | 24.2 | 18.5 | 25 | 24 | 300 | B4 | B2 | B2 |
| P22K | 28 | 30.8 | 27 | 29.7 | 22 | 30 | 29 | 370 | B4 | B2 | B2 |
| P30K | 36 | 39.6 | 34 | 37.4 | 30 | 40 | 36 | 440 | B4 | B2 | B2 |
| P37K | 43 | 47.3 | 41 | 45.1 | 37 | 50 | 48 | 740 | B4 | C2 | C2 |
| P45K | 54 | 59.4 | 52 | 57.2 | 45 | 60 | 58 | 900 | C3 | C2 | C2 |
| P55K | 65 | 71.5 | 62 | 68.2 | 55 | 75 | 70 | 1100 | C3 | C2 | C2 |
| P75K | 87 | 95.7 | 83 | 91.3 | 75 | 100 | 86 | 1500 | – | C2 | C2 |
| P90K | 105 | 115.5 | 100 | 110 | 90 | 125 | | 1800 | – | C2 | C2 |

*Note: T7 drives are not UL certified. Select T6 for UL certification.*

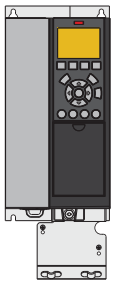
## [T7] 3 x 525-690 V AC – high overload

| High overload (160% 1 min/10 min) | | | | | | | | | Enclosure size | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Type code | Output current | | | | Typical shaft output power | | Continuous input current | Estimated power loss | Protection rating [IEC]* | | |
| | (3 x 525-550 V) | | (3 x 551-690 V) | | | | | | | | |
| FC-202 | Con. $I_N$ | Inter. $I_{MAX}$ (60 s) | Con. $I_N$ | Inter. $I_{MAX}$ (60 s) | kW @ 690 V | Hp @ 575 V | [A] @ 690 V | [W] | IP20 | IP21 | IP55 |
| P1K1 | 2.1 | 3.2 | 1.6 | 2.4 | 1.1 | 1.5 | 1.4 | 44 | A3 | – | – |
| P1K5 | 2.7 | 4.1 | 2.2 | 3.3 | 1.5 | 2 | 2.0 | 60 | A3 | – | – |
| P2K2 | 3.9 | 5.9 | 3.2 | 4.8 | 2.2 | 3 | 2.9 | 88 | A3 | – | – |
| P3K0 | 4.9 | 7.4 | 4.5 | 6.8 | 3 | 4 | 4.0 | 120 | A3 | – | – |
| P4K0 | 6.1 | 9.2 | 5.5 | 8.3 | 4 | 5 | 4.9 | 160 | A3 | – | – |
| P5K5 | 9 | 13.5 | 7.5 | 11.3 | 5.5 | 7.5 | 6.7 | 220 | A3 | – | – |
| P7K5 | 11 | 16.5 | 10 | 15 | 7.5 | 10 | 9.0 | 300 | A3 | – | – |
| P11K | 11 | 17.6 | 10 | 16 | 7.5 | 10 | 9.0 | 150 | B4 | B2 | B2 |
| P15K | 14 | 22.4 | 13 | 20.8 | 11 | 15 | 14.5 | 150 | B4 | B2 | B2 |
| P18K | 19 | 30.4 | 18 | 28.8 | 15 | 20 | 19.5 | 220 | B4 | B2 | B2 |
| P22K | 23 | 36.8 | 22 | 35.2 | 18.5 | 25 | 24 | 300 | B4 | B2 | B2 |
| P30K | 28 | 44.8 | 27 | 43.2 | 22 | 30 | 29 | 370 | B4 | B2 | B2 |
| P37K | 36 | 54 | 34 | 51 | 30 | 40 | 36 | 600 | B4 | C2 | C2 |
| P45K | 43 | 64.5 | 41 | 61.5 | 37 | 50 | 48 | 740 | C3 | C2 | C2 |
| P55K | 54 | 81 | 52 | 78 | 45 | 60 | 58 | 900 | C3 | C2 | C2 |
| P75K | 65 | 97.5 | 62 | 93 | 55 | 75 | 70 | 1100 | – | C2 | C2 |
| P90K | 87 | 130.5 | 83 | 124.5 | 75 | 100 | | 1500 | – | C2 | C2 |

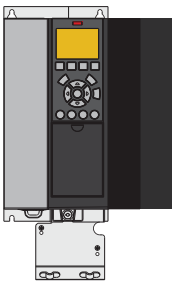
*Note: T7 drives are not UL certified. Select T6 for UL certification.*

# Dimensions enclosure sizes A, B and C

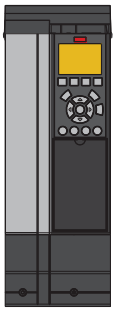
| | | VLT® AQUA Drive | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Enclosure size | | A2 | | A3 | | A4 | A5 | B1 | B2 | B3 | B4 | C1 | C2 | C3 | C4 |
| Protection rating [IEC/UL] | | IP20 Chassis | IP21 Type 1 | IP20 Chassis | IP21 Type 1 | IP55/Type 12 IP66/Type 4X | | IP21/Type 1 IP55/Type 12 IP66/Type 4X | | IP20/Chassis | | IP21/Type 1 IP55/Type 12 IP66/Type 4X | | IP20/Chassis | |
| [mm] | Height | 268 | 375 | 268 | 375 | 390 | 420 | 480 | 650 | 399 | 520 | 680 | 770 | 550 | 660 |
| | Height with decoupling plate | 374 | – | 374 | – | – | – | – | – | 420 | 595 | – | – | 630 | 800 |
| | Width | 90 | 90 | 130 | 130 | 200 | 242 | 242 | 242 | 165 | 230 | 308 | 370 | 308 | 370 |
| | Width with one C option | 130 | 130 | 170 | 170 | – | 242 | 242 | 242 | 205 | 230 | 308 | 370 | 308 | 370 |
| | Depth | 205 | 207 | 205 | 207 | 175 | 200 | 260 | 260 | 249 | 242 | 310 | 335 | 333 | 333 |
| | Depth with A, B option | 220 | 222 | 220 | 222 | 175 | 200 | 260 | 260 | 262 | 242 | 310 | 335 | 333 | 333 |
| | Depth with mains disconnect | – | – | – | – | 206 | 224 | 289 | 290 | – | – | 344 | 378 | – | – |
| [kg] | Weight | 4.9 | 5.3 | 6 | 7 | 9.7 | 14.2 | 23 | 27 | 12 | 23.5 | 45 | 64 | 35 | 50 |
| [in] | Height | 10.6 | 14.8 | 10.6 | 14.8 | 15.4 | 16.6 | 18.9 | 25.6 | 15.8 | 20.5 | 26.8 | 30.4 | 21.7 | 26 |
| | Height with decoupling plate | 14.8 | – | 14.8 | – | – | – | – | – | 16.6 | 23.5 | – | – | 24.8 | 31.5 |
| | Width | 3.6 | 3.6 | 5.2 | 5.2 | 7.9 | 9.6 | 9.6 | 9.6 | 6.5 | 9.1 | 12.2 | 14.6 | 12.2 | 14.6 |
| | Width with one C option | 5.2 | 5.2 | 6.7 | 6.7 | – | 9.6 | 9.6 | 9.6 | 8.1 | 9.1 | 12.2 | 14.6 | 12.2 | 14.6 |
| | Depth | 8.1 | 18.2 | 8.1 | 8.2 | 6.9 | 7.9 | 10.3 | 10.3 | 9.8 | 9.6 | 12.3 | 13.2 | 13 | 13 |
| | Depth with mains disconnect | – | – | – | – | 8.2 | 8.9 | 11.4 | 11.5 | – | – | 13.6 | 14.9 | – | – |
| | Depth with A, B option | 8.7 | 8.8 | 8.7 | 8.8 | 6.9 | 7.9 | 10.3 | 10.3 | 10.4 | 9.6 | 12.3 | 13.2 | 13 | 13 |
| [lb] | Weight | 10.8 | 11.7 | 14.6 | 15.5 | 21.5 | 31.5 | 50.7 | 59.6 | 26.5 | 52 | 99.3 | 143.3 | 77.2 | 110.2 |



A3 IP20/Chassis
with decoupling plate

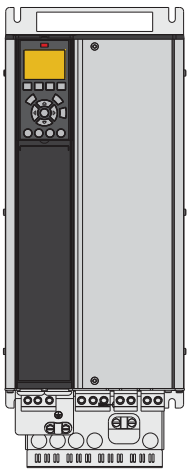


A3 IP20 with option C

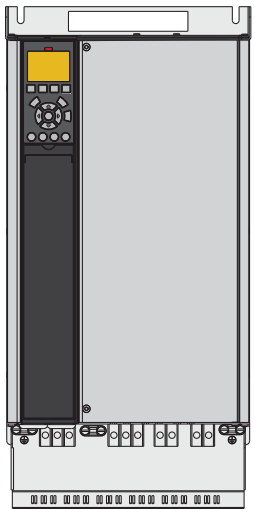


A3 with IP21/Type 12 NEMA 1 Kit

A4 IP55 with mains disconnect



B4 IP20



C3 IP20

# Ordering **typecode** for **A, B** and **C** enclosures


| **[1] Application** *(character 4-6)* | |
|---|---|
| 202 | VLT® AQUA Drive FC 202 |
| **[2] Power size** *(character 7-10)* | |
| PK25 | 0.25 kW / 0.33 Hp |
| PK37 | 0.37 kW / 0.50 Hp |
| PK55 | 0.55 kW / 0.75 Hp |
| PK75 | 0.75 kW / 1.0 Hp |
| P1K1 | 1.1 kW / 1.5 Hp |
| P1K5 | 1.5 kW / 2.0 Hp |
| P2K2 | 2.2 kW / 3.0 Hp |
| P3K0 | 3.0 kW / 4.0 Hp |
| P3K7 | 3.7 kW / 5.0 Hp |
| P4K0 | 4.0 kW / 5.5 Hp |
| P5K5 | 5.5 kW / 7.5 Hp |
| P7K5 | 7.5 kW / 10 Hp |
| P11K | 11 kW / 15 Hp |
| P15K | 15 kW / 20 Hp |
| P18K | 18.5 kW / 25 Hp |
| P22K | 22 kW / 30 Hp |
| P30K | 30 kW / 40 Hp |
| P37K | 37 kW / 50 Hp |
| P45K | 45 kW / 60 Hp |
| P55K | 55 kW / 75 Hp |
| P75K | 75 kW / 100 Hp |
| P90K | 90 kW / 125 Hp |
| **[3] AC Line Voltage** *(character 11-12)* | |
| S2 | 1 x 200/240 V AC |
| T2 | 3 x 200-240 V AC |
| S4 | 1 x 380/480 V AC |
| T4 | 3 x 380-480 V AC |
| T6 | 3 x 525-600 V AC |
| T7 | 3 x 525-690 V AC [2] |
| **[4] IP/UL protection ratings** *(character 13-15)* | |
| ***IP20 / Chassis enclosures*** | |
| E20 | IP20/Chassis |
| P20 | IP20/Chassis + backplate |
| ***IP21 / UL Type 1 enclosures*** | |
| E21 | IP21 / Type 1 |
| P21 | IP21 / Type 1 + backplate |
| ***IP55 / UL Type 12 enclosures*** | |
| E55 | IP55/Type 12 |
| P55 | IP55/Type 12 + backplate |
| Y55 | IP55/ Type 12 + backplate *(A4 enclosure, no C-options)* |
| Z55 | IP55/Type 12 *(A4 enclosure, no C-options)* |
| ***UL Type 3R enclosures*** | |
| E3R | UL Type 3R *(North America only)* |
| P3R | UL Type 3R + backplate *(North America only)* |
| ***IP66 / UL Type 4X enclosures*** | |
| E66 | IP66 / Type 4X |
| Y66 | IP66 / Type 4X + backplate *(A4 enclosure, no C-options)* |
| Z66 | IP66 / Type 4X *(A4 enclosure, no C-options)* |

| **[5] RFI filter, terminal and monitoring options – EN/IEC 61800-3** *(character 16-17)* | |
|---|---|
| H1 | RFI-Filter Class A1/B (C1) |
| H2 | RFI-Filter, Class A2 (C3) |
| H3 | RFI-Filter Class A1/B [1] |
| H4 | RFI-Filter, Class A1 (C2) |
| H5 | RFI-Filter, Class A2 (C3) Marine ruggedized |
| HX | No RFI-Filter |
| **[6] Braking and safety** *(character 18)* | |
| X | No brake IGBT |
| B | Brake IGBT |
| T | Safe Stop without brake |
| U | Brake IGBT plus Safe Torque Off |
| **[7] LCP Display** *(character 19)* | |
| X | Blank faceplate, no LCP installed |
| N | Numerical Local Control Panel (LCP 101) |
| G | Graphical Local Control Panel (LCP 102) |
| W | VLT® Wireless Communication Panel LCP 103 |
| **[8] PCB Coating – IEC 721-3-3** *(character 20)* | |
| X | Standard coated PCB Class 3C2 |
| C | Coated PCB Class 3C3 |
| **[9] Mains input** *(character 21)* | |
| X | No mains option |
| 1 | Mains disconnect *(A4, A5, B1, B2, C1 and C2 enclosures only)* |
| 8 | Mains disconnect and load sharing *(B1, B2, C1 and C2 enclosures only)* |
| D | Load sharing terminals *(B1, B2, C1, C2 enclosures only)* |
| **[10] Hardware option A** *(character 22)* | |
| X | Standard cable entries |
| O | Metric cable entry (threaded) |
| S | Imperial cable entry |
| **[11] Hardware option B** *(character 23)* | |
| X | No adaptation |
| **[12] Special version** *(character 24-27)* | |
| SXXX | Latest released standard software |
| LXX1 | Digital Cascade Controller |
| LX1X | Condition based monitoring |
| LX11 | Digital Cascade Controller + conditional based monitoring |
| **[13] LCP language** *(character 28)* | |
| X | Standard language package including English, German, French, Spanish, Danish, Italian, Finnish and others |
| ***Contact factory for other language options*** | |
| **[14] A-options: Fieldbus** *(character 29-30)* | |
| AX | No option |
| A0 | VLT® PROFIBUS DP V1 MCA 101 |
| A4 | VLT® DeviceNet MCA 104 |
| AL | VLT® PROFINET MCA 120 |
| AN | VLT® EtherNet/IP MCA 121 |
| AQ | VLT® Modbus TCP MCA 122 |
| AK | VLT® BACnet/IP MCA 125 |

| **[15] B-options** *(character 31-32)* | |
|---|---|
| BX | No option |
| BK | VLT® General Purpose MCB 101 |
| BP | VLT® Relay Option MCB 105 |
| B2 | VLT® PTC Thermistor Card MCB 112 |
| B4 | VLT® Sensor Input Card MCB 114 |
| BY | VLT® Extended Cascade Controller MCO 101 |
| **[16] C0-option** *(character 33-34)* | |
| CX | No option |
| **[17] C1-option** *(character 35)* | |
| X | No option |
| 5 | VLT® Advanced Cascade Controller MCO 102 |
| R | VLT® Extended Relay Card MCB 113 |
| **[18] C1-option software** *(character 36-37)* | |
| XX | No software option |
| **[19] D-option** *(character 38-39)* | |
| DX | No DC input installed |
| D0 | VLT® 24 V DC Supply Option MCB 107 |
| D1 | VLT® Real-time Clock Option MCB 117 |

*1) Reduced motor cable length*

*2) Note: T7 drives are not UL certified. Select T6 for UL certification.*

*Please beware that not all combinations are possible. Find help configuring your drive with the online configurator found under:* ***driveconfig.danfoss.com***

# **Enclosure** overview **D, E** and **F**

## 6-pulse

| VLT® AQUA Drive | | | T2 3 x 200-240 V | | | T4 380-480 V | | | T7 525-690 V | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| FC 200 | kW | | | | | | | | | | |
| | NO | HO | IP20 | IP21 | IP54 | IP20 | IP21 | IP54 | IP20 | IP21 | IP54 |
| N55K | 55 | 45 | D3h | D1h | D1h | | | | | | |
| N75K | 75 | 55 | | | | | | | D3h | D1h D5h D6h | D1h D5h D6h |
| N90K | 90 | 75 | D4h | D2h | D2h | | | | | | |
| N110 | 110 | 90 | | | | D3h | D1h D5h D6h | D1h D5h D6h | | | |
| N132 | 132 | 110 | | | | | | | | | |
| N160 | 160 | 132 | | | | | | | | | |
| N200 | 200 | 160 | | | | D4h | D2h D7h D8h | D2h D7h D8h | D4h | D2h D7h D8h | D2h D7h D8h |
| N250 | 250 | 200 | | | | | | | | | |
| N315 | 315 | 250 | | | | | | | | | |
| N355 | 355 | 315 | | | | E3h | E1h | E1h | | | |
| N400 | 400 | 355 | | | | | | | D4h | D2h D7h D8h | D2h D7h D8h |
| N450 | 450 | 400 | | | | | | | E3h | E1h | E1h |
| N500 | 500 | 450 | | | | E4h | E2h | E2h | | | |
| N560 | 560 | 500 | | | | | | | | | |
| N630 | 630 | 560 | | | | | | | | | |
| N710 | 710 | 630 | | | | | | | E4h | E2h | E2h |
| N800 | 800 | 710 | | | | | | | | | |
| P500 | 500 | 450 | | | | | F1/F3 | F1/F3 | | | |
| P560 | 560 | 500 | | | | | | | | | |
| P630 | 630 | 560 | | | | | | | | | |
| P710 | 710 | 630 | | | | | | | | F1/F3 | F1/F3 |
| P800 | 800 | 710 | | | | | F2/F4 | F2/F4 | | | |
| P900 | 900 | 800 | | | | | | | | | |
| P1M0 | 1000 | 900 | | | | | F2/F4 | F2/F4 | | | |
| P1M2 | 1200 | 1000 | | | | | | | | F2/F4 | F2/F4 |
| P1M4 | 1400 | 1200 | | | | | | | | | |

## 12-pulse

| VLT® AQUA Drive | | | T4 380-480 V | | | | T7 525-690 V | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| FC 200 | kW | | | | | | | | | |
| | NO | HO | IP21 | IP21 + options | IP54 | IP54 + options | IP21 | IP21 + options | IP54 | IP54 + options |
| P315 | 315 | 250 | F8 | F9 | F8 | F9 | | | | |
| P355 | 355 | 315 | | | | | | | | |
| P400 | 400 | 355 | | | | | | | | |
| P450 | 450 | 400 | | | | | F8 | F9 | F8 | F9 |
| P500 | 500 | 450 | F10 | F11 | F10 | F11 | | | | |
| P560 | 560 | 500 | | | | | | | | |
| P630 | 630 | 560 | | | | | | | | |
| P710 | 710 | 630 | | | | | | | | |
| P800 | 800 | 710 | F12 | F13 | F12 | F13 | F10 | F11 | F10 | F12 |
| P900 | 900 | 800 | | | | | | | | |
| P1M0 | 1000 | 800 | F12 | F13 | F12 | F13 | | | | |
| P1M2 | 1200 | 1000 | | | | | F12 | F13 | F12 | F13 |
| P1M4 | 1400 | 1200 | | | | | | | | |

IP20/Chassis
IP21/Type 1
IP54/Type 12

# Electrical data – D, E and F enclosures

## [T2] 3 x 200-240 V AC – normal overload

| Normal overload (110% 1 min/10 min) | | | | | | | Enclosure size | | |
|---|---|---|---|---|---|---|---|---|---|
| Type code | Output current (3 x 200-240 V) | | Typical shaft output power | | Continuous input current | Estimated power loss | Protection rating [IEC/UL] | | |
| | | | | | | | IP20 | IP21 | IP54 |
| FC-202 | Con. $I_N$ | Inter. $I_{MAX}$ (60 s) | kW | HP @ 230 V | [A] | [W] | Chassis | Type 1 | Type 12 |
| N55K | 190 | 209 | 55 | 75 | 183 | 1505 | D3h | D1h | |
| N75K | 240 | 264 | 75 | 100 | 231 | 2398 | D3h | D1h | |
| N90K | 302 | 332 | 90 | 120 | 291 | 2623 | D4h | D2h | |
| N110 | 361 | 397 | 110 | 150 | 348 | 3284 | D4h | D2h | |
| N150 | 443 | 487 | 150 | 200 | 427 | 4117 | D4h | D2h | |
| N160 | 535 | 589 | 160 | 215 | 516 | 5209 | D4h | D2h | |

## [T2] 3 x 200-240 V AC – high overload

| High overload (150% 1 min/10 min) | | | | | | | Enclosure size | | |
|---|---|---|---|---|---|---|---|---|---|
| Type code | Output current (3 x 200-240 V) | | Typical shaft output power | | Continuous input current | Estimated power loss | Protection rating [IEC/UL] | | |
| | | | | | | | IP20 | IP21 | IP54 |
| FC-202 | Con. $I_N$ | Inter. $I_{MAX}$ (60 s) | kW | HP @ 230 V | [A] | [W] | Chassis | Type 1 | Type 12 |
| N55K | 160 | 240 | 45 | 60 | 154 | 1482 | D3h | D1h | |
| N75K | 190 | 285 | 55 | 75 | 183 | 1794 | D3h | D1h | |
| N90K | 240 | 360 | 75 | 100 | 231 | 1990 | D4h | D2h | |
| N110 | 302 | 453 | 90 | 120 | 291 | 2613 | D4h | D2h | |
| N150 | 361 | 542 | 110 | 150 | 348 | 3195 | D4h | D2h | |
| N160 | 443 | 665 | 150 | 200 | 427 | 4103 | D4h | D2h | |

## [T4] 3 x 380-480 V AC – normal overload

| Normal overload (110% 1 min/10 min) | | | | | | | | | Enclosure size | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Type code | Output current | | | | Typical shaft output power | | Continuous input current | Estimated power loss | Protection rating [IEC/UL] | | |
| | (3 x 380-440 V) | | (3 x 441-500 V) | | | | | | IP20 | IP21 | IP54 |
| FC-202 | Con. $I_N$ | Inter. $I_{MAX}$ (60 s) | Con. $I_N$ | Inter. $I_{MAX}$ (60 s) | kW @ 400 V | Hp @ 460 V | [A] @ 400 V | [W] | Chassis | Type 1 | Type 12 |
| N110 | 212 | 233 | 190 | 209 | 110 | 150 | 204 | 2559 | D3h | D1h/D5h/D6h | |
| N132 | 260 | 286 | 240 | 264 | 132 | 200 | 251 | 2954 | D3h | D1h/D5h/D6h | |
| N160 | 315 | 347 | 302 | 332 | 160 | 250 | 304 | 3770 | D3h | D1h/D5h/D6h | |
| N200 | 395 | 435 | 361 | 397 | 200 | 300 | 381 | 4116 | D4h | D2h/D7h/D8h | |
| N250 | 480 | 528 | 443 | 487 | 250 | 350 | 463 | 5137 | D4h | D2h/D7h/D8h | |
| N315 | 588 | 647 | 535 | 588 | 315 | 450 | 567 | 6674 | D4h | D2h/D7h/D8h | |
| N355 | 658 | 724 | 590 | 649 | 355 | 500 | 634 | 6928 | E3h | E1h | E1h |
| N400 | 745 | 820 | 678 | 746 | 400 | 600 | 718 | 8036 | E3h | E1h | E1h |
| N450 | 800 | 880 | 730 | 803 | 450 | 600 | 771 | 8783 | E3h | E1h | E1h |
| N500 | 880 | 968 | 780 | 858 | 500 | 650 | 848 | 9473 | E4h | E2h | E2h |
| N560 | 990 | 1089 | 890 | 979 | 560 | 750 | 954 | 11102 | E4h | E2h | E2h |
| P500 | 880 | 968 | 780 | 858 | 500 | 650 | 848 | 10162 | – | F1/F3 | F1/F3 |
| P560 | 990 | 1089 | 890 | 979 | 560 | 750 | 954 | 11822 | – | F1/F3 | F1/F3 |
| P630 | 1120 | 1232 | 1050 | 1155 | 630 | 900 | 1079 | 12512 | – | F1/F3 | F1/F3 |
| P710 | 1260 | 1386 | 1160 | 1276 | 710 | 1000 | 1214 | 14674 | – | F1/F3 | F1/F3 |
| P800 | 1460 | 1606 | 1380 | 1518 | 800 | 1200 | 1407 | 17293 | – | F2/F4 | F2/F4 |
| P1M0 | 1720 | 1892 | 1530 | 1683 | 1000 | 1350 | 1658 | 19278 | – | F2/F4 | F2/F4 |

## [T4] 3 x 380-480 V AC – high overload

| High overload (150% 1 min/10 min) | | | | | | | | | Enclosure size | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Type code | Output current | | | | Typical shaft output power | | Continuous input current | Estimated power loss | Protection rating [IEC/UL] | | |
| | (3 x 380-440 V) | | (3 x 441-500 V) | | | | | | IP20 | IP21 | IP54 |
| FC-202 | Con. $I_N$ | Inter. $I_{MAX}$ (60 s) | Con. $I_N$ | Inter. $I_{MAX}$ (60 s) | kW @ 400 V | Hp @ 460 V | [A] @ 400 V | [W] | Chassis | Type 1 | Type 12 |
| N110 | 177 | 266 | 160 | 240 | 90 | 125 | 171 | 2031 | D3h | D1h/D5h/D6h | |
| N132 | 212 | 318 | 190 | 285 | 110 | 150 | 204 | 2289 | D3h | D1h/D5h/D6h | |
| N160 | 260 | 390 | 240 | 360 | 132 | 200 | 251 | 2923 | D3h | D1h/D5h/D6h | |
| N200 | 315 | 473 | 302 | 453 | 160 | 250 | 304 | 3093 | D4h | D2h/D7h/D8h | |
| N250 | 395 | 593 | 361 | 542 | 200 | 300 | 381 | 4039 | D4h | D2h/D7h/D8h | |
| N315 | 480 | 720 | 443 | 665 | 250 | 350 | 463 | 5005 | D4h | D2h/D7h/D8h | |
| N355 | 600 | 900 | 540 | 810 | 315 | 450 | 578 | 6178 | E3h | E1h | E1h |
| N400 | 658 | 987 | 590 | 885 | 355 | 500 | 634 | 6851 | E3h | E1h | E1h |
| N450 | 695 | 1043 | 678 | 1017 | 400 | 550 | 670 | 7297 | E3h | E1h | E1h |
| N500 | 800 | 1200 | 730 | 1095 | 450 | 600 | 771 | 8352 | E4h | E2h | E2h |
| N560 | 880 | 1320 | 780 | 1170 | 500 | 650 | 848 | 9449 | E4h | E2h | E2h |
| P500 | 800 | 1200 | 730 | 1095 | 450 | 600 | 771 | 9031 | – | F1/F3 | F1/F3 |
| P560 | 880 | 1320 | 780 | 1170 | 500 | 650 | 848 | 10146 | – | F1/F3 | F1/F3 |
| P630 | 990 | 1485 | 890 | 1335 | 560 | 750 | 954 | 10649 | – | F1/F3 | F1/F3 |
| P710 | 1120 | 1680 | 1050 | 1575 | 630 | 900 | 1079 | 12490 | – | F1/F3 | F1/F3 |
| P800 | 1260 | 1890 | 1160 | 1740 | 710 | 1000 | 1214 | 14244 | – | F2/F4 | F2/F4 |
| P1M0 | 1460 | 2190 | 1380 | 2070 | 800 | 1200 | 1407 | 15466 | – | F2/F4 | F2/F4 |

## [T7] 3 x 525-690 V AC – normal overload

| Normal overload (110% 1 min/10 min) | | | | | | | | | Enclosure size | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Type code | Output current | | | | Typical shaft output power | | Continuous input current | Estimated power loss | Protection rating [IEC/UL] | | |
| | (3 x 525-550 V) | | (3 x 551-690 V) | | | | | | IP20 | IP21 | IP54 |
| FC-202 | Con. $I_N$ | Inter. $I_{MAX}$ (60 s) | Con. $I_N$ | Inter. $I_{MAX}$ (60 s) | kW @ 690 V | Hp @ 575 V | [A] @ 690 V | [W] | Chassis | Type 1 | Type 12 |
| N75K | 90 | 99 | 86 | 95 | 75 | 75 | 83 | 1162 | D3h | D1h/D5h/D6h | |
| N90K | 113 | 124 | 108 | 119 | 90 | 100 | 104 | 1428 | D3h | D1h/D5h/D6h | |
| N110 | 137 | 151 | 131 | 144 | 110 | 125 | 126 | 1740 | D3h | D1h/D5h/D6h | |
| N132 | 162 | 178 | 155 | 171 | 132 | 150 | 149 | 2101 | D3h | D1h/D5h/D6h | |
| N160 | 201 | 221 | 192 | 211 | 160 | 200 | 185 | 2649 | D3h | D1h/D5h/D6h | |
| N200 | 253 | 278 | 242 | 266 | 200 | 250 | 233 | 3074 | D4h | D2h/D7h/D8h | |
| N250 | 303 | 333 | 290 | 319 | 250 | 300 | 279 | 3723 | D4h | D2h/D7h/D8h | |
| N315 | 360 | 396 | 344 | 378 | 315 | 350 | 332 | 4465 | D4h | D2h/D7h/D8h | |
| N400 | 418 | 460 | 400 | 440 | 400 | 400 | 385 | 5028 | D4h | D2h/D7h/D8h | |
| N450 | 470 | 517 | 450 | 495 | 450 | 450 | 434 | 6062 | E3h | E1h | E1h |
| N500 | 523 | 575 | 500 | 550 | 500 | 500 | 482 | 6879 | E3h | E1h | E1h |
| N560 | 596 | 656 | 570 | 627 | 560 | 600 | 549 | 8076 | E3h | E1h | E1h |
| N630 | 630 | 693 | 630 | 693 | 630 | 650 | 607 | 9208 | E3h | E1h | E1h |
| N710 | 763 | 839 | 730 | 803 | 710 | 750 | 704 | 10346 | E4h | E2h | E2h |
| N800 | 889 | 978 | 850 | 935 | 800 | 950 | 819 | 12723 | E4h | E2h | E2h |
| P710 | 763 | 839 | 730 | 803 | 710 | 750 | 704 | 9212 | – | F1/F3 | F1/F3 |
| P800 | 889 | 978 | 850 | 935 | 800 | 950 | 819 | 10659 | – | F1/F3 | F1/F3 |
| P900 | 988 | 1087 | 945 | 1040 | 900 | 1050 | 911 | 12080 | – | F1/F3 | F1/F3 |
| P1M0 | 1108 | 1219 | 1060 | 1166 | 1000 | 1150 | 1022 | 13305 | – | F2/F4 | F2/F4 |
| P1M2 | 1317 | 1449 | 1260 | 1386 | 1200 | 1350 | 1214 | 15865 | – | F2/F4 | F2/F4 |
| P1M4 | 1479 | 1627 | 1415 | 1557 | 1400 | 1550 | 1364 | 18173 | – | F2/F4 | F2/F4 |

## [T7] 3 x 525-690 V AC – high overload

| High overload (150% 1 min/10 min) | | | | | | | | | Enclosure size | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Type code | Output current | | | | Typical shaft output power | | Continuous input current | Estimated power loss | Protection rating [IEC/UL] | | |
| | (3 x 525-550 V) | | (3 x 551-690 V) | | | | | | IP20 | IP21 | IP54 |
| FC-202 | Con. $I_N$ | Inter. $I_{MAX}$ (60 s) | Con. $I_N$ | Inter. $I_{MAX}$ (60 s) | kW @ 690 V | Hp @ 575 V | [A] @ 690 V | [W] | Chassis | Type 1 | Type 12 |
| N75K | 76 | 122 | 73 | 117 | 55 | 60 | 70 | 1098 | D3h | D1h/D5h/D6h | |
| N90K | 90 | 135 | 86 | 129 | 75 | 75 | 83 | 1162 | D3h | D1h/D5h/D6h | |
| N110 | 113 | 170 | 108 | 162 | 90 | 100 | 104 | 1430 | D3h | D1h/D5h/D6h | |
| N132 | 137 | 206 | 131 | 197 | 110 | 125 | 126 | 1742 | D3h | D1h/D5h/D6h | |
| N160 | 162 | 243 | 155 | 233 | 132 | 150 | 149 | 2080 | D3h | D1h/D5h/D6h | |
| N200 | 201 | 302 | 192 | 288 | 160 | 200 | 185 | 2361 | D4h | D2h/D7h/D8h | |
| N250 | 253 | 380 | 242 | 363 | 200 | 250 | 233 | 3012 | D4h | D2h/D7h/D8h | |
| N315 | 303 | 455 | 290 | 435 | 250 | 300 | 279 | 3642 | D4h | D2h/D7h/D8h | |
| N400 | 360 | 540 | 344 | 516 | 315 | 350 | 332 | 4146 | D4h | D2h/D7h/D8h | |
| N450 | 395 | 593 | 380 | 570 | 355 | 400 | 366 | 4989 | E3h | E1h | E1h |
| N500 | 429 | 644 | 410 | 615 | 400 | 400 | 395 | 5419 | E3h | E1h | E1h |
| N560 | 523 | 785 | 500 | 750 | 500 | 500 | 482 | 6833 | E3h | E1h | E1h |
| N630 | 596 | 894 | 570 | 855 | 560 | 600 | 549 | 8069 | E3h | E1h | E1h |
| N710 | 659 | 989 | 630 | 945 | 630 | 650 | 607 | 8543 | E4h | E2h | E2h |
| N800 | 763 | 1145 | 730 | 1095 | 710 | 750 | 704 | 10319 | E4h | E2h | E2h |
| P710 | 659 | 989 | 630 | 945 | 630 | 650 | 607 | 7826 | – | F1/F3 | F1/F3 |
| P800 | 763 | 1145 | 730 | 1095 | 710 | 750 | 704 | 8983 | – | F1/F3 | F1/F3 |
| P900 | 889 | 1334 | 850 | 1275 | 800 | 950 | 819 | 10646 | – | F1/F3 | F1/F3 |
| P1M0 | 988 | 1482 | 945 | 1418 | 900 | 1050 | 911 | 11681 | – | F2/F4 | F2/F4 |
| P1M2 | 1108 | 1662 | 1060 | 1590 | 1000 | 1150 | 1022 | 12997 | – | F2/F4 | F2/F4 |
| P1M4 | 1317 | 1976 | 1260 | 1890 | 1200 | 1350 | 1214 | 15763 | – | F2/F4 | F2/F4 |


Status
Quick Menu
Main Menu
Alarm Log
Cancel
Back
Info
OK
On
Warn
Alarm
Hand On
Off
Auto On
Reset

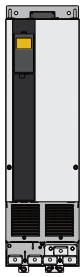
## Dimensions enclosure size D

| | | VLT® AQUA Drive | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Enclosure size | | D1h | D2h | D3h | D3h[1] | D4h | D4h[1] | D5h[2] | D6h[3] | D7h[4] | D8h[5] |
| Protection rating [IEC/UL] | | IP21 / Type 1 IP54 / Type 12 | | IP20 / Chassis | | | | IP21 / Type 1 IP54 / Type 12 | | | |
| [mm] | Height | 901.0 | 1107.0 | 909.0 | 1027.0 | 1122.0 | 1294.0 | 1324.0 | 1663.0 | 1978.0 | 2284.0 |
| | Width | 325.0 | 420.0 | 250.0 | 250.0 | 350.0 | 350.0 | 325.0 | 325.0 | 420.0 | 420.0 |
| | Depth | 378.4 | 378.4 | 375.0 | 375.0 | 375.0 | 375.0 | 381.0 | 381.0 | 386.0 | 406.0 |
| [kg] | Weight | 62.0 | 125.0 | 62.0 | 108.0 | 125.0 | 179.0 | 99.0 | 128.0 | 185.0 | 232.0 |
| [in] | Height | 35.5 | 43.6 | 35.8 | 39.6 | 44.2 | 50.0 | 52.1 | 65.5 | 77.9 | 89.9 |
| | Width | 12.8 | 12.8 | 19.8 | 9.9 | 14.8 | 13.8 | 12.8 | 12.8 | 16.5 | 16.5 |
| | Depth | 14.9 | 14.9 | 14.8 | 14.8 | 14.8 | 14.8 | 15.0 | 15.0 | 15.2 | 16.0 |
| [lb] | Weight | 136.7 | 275.6 | 136.7 | 238.1 | 275.6 | 394.6 | 218.3 | 282.2 | 407.9 | 511.5 |

*[1] dimensions with regeneration or load share terminals*
*[2] D5h is used with disconnect and/or brake chopper options*
*[3] D6h is used with contactor and/or circuit breaker options*
*[4] D7h is used with disconnect and/or brake chopper options*
*[5] D8h is used with contactor and/or circuit breaker options*

## Dimensions enclosure sizes E and F

| | | VLT® AQUA Drive | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Frame | | E1h | E2h | E3h | E4h | F1 | F2 | F3 | F4 |
| Protection rating [IEC/UL] | | IP21 / Type 1 IP54 / Type 12 | | IP20 / Chassis | | IP21 / Type 1 IP54 / Type 12 | | | |
| [mm] | Height | 2043.0 | 2043.0 | 1578.0 | 1578.0 | 2204.0 | 2204.0 | 2204.0 | 2204.0 |
| | Width | 602.0 | 698.0 | 506.0 | 604.0 | 1400.0 | 1800.0 | 2000.0 | 2400.0 |
| | Depth | 513.0 | 513.0 | 482.0 | 482.0 | 606.0 | 606.0 | 606.0 | 606.0 |
| [kg] | Weight | 295.0 | 318.0 | 272.0 | 295.0 | 1017.0 | 1260.0 | 1318.0 | 1561.0 |
| [in] | Height | 80.4 | 80.4 | 62.1 | 62.1 | 86.8 | 86.8 | 86.8 | 86.8 |
| | Width | 23.7 | 27.5 | 199.9 | 23.9 | 55.2 | 70.9 | 78.8 | 94.5 |
| | Depth | 20.2 | 20.2 | 19.0 | 19.0 | 23.9 | 23.9 | 23.9 | 23.9 |
| [lb] | Weight | 650.0 | 700.0 | 600.0 | 650.0 | 2242.1 | 2777.9 | 2905.7 | 3441.5 |



D3h/D4h

E1h

F

# Electrical data and dimensions – VLT® 12-Pulse

## [T4] 6 x 380-480 V AC – normal overload

| Normal overload (110% 1 min/10 min) | | | | | | | | | Enclosure size | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Type code | Output current | | | | Typical shaft output power | | Con-tinuous i nput current | Estimated power loss | Protection rating [IEC/UL] | | | |
| | (3 x 380-440 V) | | (3 x 441-480 V) | | | | | | IP21/Type 1 | | IP54/Type 12 | |
| FC-202 | Con. $I_N$ | Inter. $I_{MAX}$ (60 s) | Con. $I_N$ | Inter. $I_{MAX}$ (60 s) | kW @ 400 V | Hp @ 460 V | [A] @ 400 V | [W] | AC drive | + options | AC drive | + options |
| P315 | 600 | 660 | 540 | 594 | 315 | 450 | 590 | 6790 | F8 | F9 | F8 | F9 |
| P355 | 658 | 724 | 590 | 649 | 355 | 500 | 647 | 7701 | F8 | F9 | F8 | F9 |
| P400 | 745 | 820 | 678 | 746 | 400 | 600 | 733 | 8879 | F8 | F9 | F8 | F9 |
| P450 | 800 | 880 | 730 | 803 | 450 | 600 | 787 | 9670 | F8 | F9 | F8 | F9 |
| P500 | 880 | 968 | 780 | 858 | 500 | 650 | 857 | 10647 | F10 | F11 | F10 | F11 |
| P560 | 990 | 1089 | 890 | 979 | 560 | 750 | 964 | 12338 | F10 | F11 | F10 | F11 |
| P630 | 1120 | 1232 | 1050 | 1155 | 630 | 900 | 1090 | 13201 | F10 | F11 | F10 | F11 |
| P710 | 1260 | 1386 | 1160 | 1276 | 710 | 1000 | 1227 | 15436 | F10 | F11 | F10 | F11 |
| P800 | 1460 | 1606 | 1380 | 1518 | 800 | 1200 | 1422 | 18084 | F12 | F13 | F12 | F13 |
| P1M0 | 1720 | 1892 | 1530 | 1683 | 1000 | 1350 | 1675 | 20358 | F12 | F13 | F12 | F13 |

## [T4] 6 x 380-480 V AC – high overload

| High overload (150% 1 min/10 min) | | | | | | | | | Enclosure size | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Type code | Output current | | | | Typical shaft output power | | Con-tinuous input current | Estimated power loss | Protection rating [IEC/UL] | | | |
| | (3 x 380-440 V) | | (3 x 441-480 V) | | | | | | IP21/Type 1 | | IP54/Type 12 | |
| FC-202 | Con. $I_N$ | Inter. $I_{MAX}$ (60 s) | Con. $I_N$ | Inter. $I_{MAX}$ (60 s) | kW @ 400 V | Hp @ 460 V | [A] @ 400 V | [W] | AC drive | + options | AC drive | + options |
| P315 | 480 | 720 | 443 | 665 | 250 | 350 | 472 | 5164 | F8 | F9 | F8 | F9 |
| P355 | 600 | 900 | 540 | 810 | 315 | 450 | 590 | 6960 | F8 | F9 | F8 | F9 |
| P400 | 658 | 987 | 590 | 885 | 355 | 500 | 647 | 7691 | F8 | F9 | F8 | F9 |
| P450 | 695 | 1043 | 678 | 1017 | 400 | 550 | 684 | 8178 | F8 | F9 | F8 | F9 |
| P500 | 800 | 1200 | 730 | 1095 | 450 | 600 | 779 | 9492 | F10 | F11 | F10 | F11 |
| P560 | 880 | 1320 | 780 | 1170 | 500 | 650 | 857 | 10631 | F10 | F11 | F10 | F11 |
| P630 | 990 | 1485 | 890 | 1335 | 560 | 750 | 964 | 11263 | F10 | F11 | F10 | F11 |
| P710 | 1120 | 1680 | 1050 | 1575 | 630 | 900 | 1090 | 13172 | F10 | F11 | F10 | F11 |
| P800 | 1260 | 1890 | 1160 | 1740 | 710 | 1000 | 1227 | 14967 | F12 | F13 | F12 | F13 |
| P1M0 | 1460 | 2190 | 1380 | 2070 | 800 | 1200 | 1422 | 16392 | F12 | F13 | F12 | F13 |

## [T7] 6 x 525-690 V AC – normal overload

| Normal overload (110% 1 min/10 min) | | | | | | | | | Enclosure size | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Type code | Output current | | | | Typical shaft output power | | Continuous input current | Estimated power loss | Protection rating [IEC/UL] | | | |
| | (3 x 525-550 V) | | (3 x 551-690 V) | | | | | | IP21/Type 1 | | IP54/Type 12 | |
| FC-202 | Con. $I_N$ | Inter. $I_{MAX}$ (60 s) | Con. $I_N$ | Inter. $I_{MAX}$ (60 s) | kW @ 690 V | Hp @ 575 V | [A] @ 690 V | [W] | AC drive | + options | AC drive | + options |
| P450 | 470 | 517 | 450 | 495 | 450 | 450 | 434 | 5529 | F8 | F9 | F8 | F9 |
| P500 | 523 | 575 | 500 | 550 | 500 | 500 | 482 | 6239 | F8 | F9 | F8 | F9 |
| P560 | 596 | 656 | 570 | 627 | 560 | 600 | 549 | 7653 | F8 | F9 | F8 | F9 |
| P630 | 630 | 693 | 630 | 693 | 630 | 650 | 607 | 8495 | F8 | F9 | F8 | F9 |
| P710 | 763 | 839 | 730 | 803 | 710 | 750 | 711 | 9863 | F10 | F11 | F10 | F11 |
| P800 | 889 | 978 | 850 | 935 | 800 | 950 | 828 | 11304 | F10 | F11 | F10 | F11 |
| P900 | 988 | 1087 | 945 | 1040 | 900 | 1050 | 920 | 12798 | F10 | F11 | F10 | F11 |
| P1M0 | 1108 | 1219 | 1060 | 1166 | 1000 | 1150 | 1032 | 13801 | F12 | F13 | F12 | F13 |
| P1M2 | 1317 | 1449 | 1260 | 1386 | 1200 | 1350 | 1227 | 16821 | F12 | F13 | F12 | F13 |
| P1M4 | 1479 | 1627 | 1415 | 1557 | 1400 | 1550 | 1378 | 19247 | F12 | F13 | F12 | F13 |

## [T7] 6 x 525-690 V AC – high overload

| High overload (150% 1 min/10 min) | | | | | | | | | Enclosure size | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Type code | Output current | | | | Typical shaft output power | | Continuous input current | Estimated power loss | Protection rating [IEC/UL] | | | |
| | (3 x 525-550 V) | | (3 x 551-690 V) | | | | | | IP21/Type 1 | | IP54/Type 12 | |
| FC-202 | Con. $I_N$ | Inter. $I_{MAX}$ (60 s) | Con. $I_N$ | Inter. $I_{MAX}$ (60 s) | kW @ 690 V | Hp @ 575 V | [A] @ 690 V | [W] | AC drive | + options | AC drive | + options |
| P450 | 395 | 593 | 380 | 570 | 355 | 400 | 366 | 4589 | F8 | F9 | F8 | F9 |
| P500 | 429 | 644 | 410 | 615 | 400 | 400 | 395 | 4970 | F8 | F9 | F8 | F9 |
| P560 | 523 | 785 | 500 | 750 | 500 | 500 | 482 | 6707 | F8 | F9 | F8 | F9 |
| P630 | 596 | 894 | 570 | 855 | 560 | 600 | 549 | 7633 | F8 | F9 | F8 | F9 |
| P710 | 659 | 989 | 630 | 945 | 630 | 650 | 613 | 8388 | F10 | F11 | F10 | F11 |
| P800 | 763 | 1145 | 730 | 1095 | 710 | 750 | 711 | 9537 | F10 | F11 | F10 | F11 |
| P900 | 889 | 1334 | 850 | 1275 | 800 | 950 | 828 | 11291 | F10 | F11 | F10 | F11 |
| P1M0 | 988 | 1482 | 945 | 1418 | 900 | 1050 | 920 | 12524 | F12 | F13 | F12 | F13 |
| P1M2 | 1108 | 1662 | 1060 | 1590 | 1000 | 1150 | 1032 | 13801 | F12 | F13 | F12 | F13 |
| P1M4 | 1317 | 1976 | 1260 | 1890 | 1200 | 1350 | 1227 | 16719 | F12 | F13 | F12 | F13 |

## Dimensions enclosure size F

| | | VLT® AQUA Drive | | | | | |
|---|---|---|---|---|---|---|---|
| Enclosure size | | F8 | F9 | F10 | F11 | F12 | F13 |
| Protection rating [IEC/UL] | | IP21 / Type 1<br>IP54 / Type 12 | | | | | |
| [mm] | Height | 2204.0 | 2204.0 | 2204.0 | 2204.0 | 2204.0 | 2204.0 |
| | Width | 800.0 | 1400.0 | 1600.0 | 2400.0 | 2000.0 | 2800.0 |
| | Depth | 606.0 | 606.0 | 606.0 | 606.0 | 606.0 | 606.0 |
| [kg] | Weight | 447.0 | 669.0 | 893.0 | 1116.0 | 1037.0 | 1259.0 |
| [in] | Height | 86.8 | 86.8 | 86.8 | 86.8 | 86.8 | 86.8 |
| | Width | 31.5 | 55.2 | 63.0 | 94.5 | 78.8 | 110.2 |
| | Depth | 23.9 | 23.9 | 23.9 | 23.9 | 23.9 | 23.9 |
| [lb] | Weight | 985.5 | 1474.9 | 1968.8 | 2460.4 | 2286.4 | 2775.7 |

# Ordering **typecode** for **D, E** and **F** enclosures


| **[1] Application** *(character 4-6)* | |
|---|---|
| 202 | VLT® AQUA Drive FC 202 |
| **[2] Power size** *(character 7-10)* | |
| N75K | 75 kW / 100 Hp |
| N90K | 90 kW / 125 Hp |
| N110 | 110 kW / 150 Hp |
| N132 | 132 kW / 200 Hp |
| N160 | 160 kW / 250 Hp |
| N200 | 200 kW / 300 Hp |
| N250 | 250 kW / 350 Hp |
| N315 | 315 kW / 450 Hp |
| P315 | 315 kW / 450 Hp |
| N355 | 355 kW / 500 Hp |
| P355 | 355 kW / 500 Hp |
| N400 | 400 kW / 550 Hp |
| P400 | 400 kW / 550 Hp |
| N450 | 450 kW / 600 Hp |
| P450 | 450 kW / 600 Hp |
| N500 | 500 kW / 650 Hp |
| P500 | 500 kW / 650 Hp |
| N560 | 560 kW / 750 Hp |
| P560 | 560 kW / 750 Hp |
| N630 | 630 kW / 900 Hp |
| P630 | 630 kW / 900 Hp |
| N710 | 710 kW / 1000 Hp |
| P710 | 710 kW / 1000 Hp |
| N800 | 800 kW / 1200 Hp |
| P800 | 800 kW / 1200 Hp |
| P900 | 900 kW / 1250 Hp |
| P1M0 | 1.0 MW / 1350 Hp |
| P1M2 | 1.2 MW / 1600 Hp |
| P1M4 | 1.4 MW / 1900 Hp |
| **[3] AC mains voltage** *(character 11-12)* | |
| T2 | 3 x 200-240 V AC |
| T4 | 3 x 380-480 V AC |
| T7 | 3 x 525-690 V AC<br>*690 V kW. See manuals for 575 V Hp* |
| **[4] IP/UL protection ratings** *(character 13-15)* | |
| ***IP20 Chassis enclosures*** | |
| E20 | IP20 / Chassis |
| E2S | IP20 / Chassis *(D3h enclosure)* |
| C20 | IP20 / Chassis – Stainless steel back channel |
| C2S | IP20 / Chassis – Stainless steel back channel<br>*(D3h enclosure)* |
| ***IP21 / UL Type 1 enclosures*** | |
| E21 | IP21 / Type 1 |
| E2M | IP21 / Type 1 + mains shield |
| E2D | IP21 / Type 1 *(D1h, D5h, D6h enclosures)* |
| H21 | IP21 / Type 1 + space heater |
| C21 | IP21 / Type 1 – Stainless steel back channel |
| C2M | IP21 / Type 1 – Stainless steel back channel + mains shield |
| C2H | IP21 / Type 1 – Stainless steel back channel + space heater |
| L2A | IP21 / Type 1 + cabinet light + 115 V power outlet |
| L2X | IP21 / Type 1 + cabinet light + 230 V power outlet |
| R2A | IP21 / Type 1 + space heater + cabinet light + 115 V power outlet |
| R2X | IP21 / Type 1 + space heater + cabinet light + 230 V power outlet |
| C2E | IP21 / Type 1 – Stainless steel back channel + Cooling out the back |
| ***IP54 / UL Type 12 enclosures*** | |
| E54 | IP54 / Type 12 |
| E5D | IP54 / Type 12 *(D1h, D5h, D6h frames)* |
| E5M | IP54 / Type 12 + mains shield |
| E5S | IP54 / Type 12, NEMA 3R ready – Stainless steel screws + space heater (D1h, D2h frames) |
| H54 | IP54 / Type 12 + space heater + thermostat |
| C54 | IP54 / Type 12 – Stainless steel back channel |
| C5M | IP54 / Type 12 – Stainless steel back channel + mains shield |
| C5H | IP54 / Type 12 – Stainless steel back channel + space heater |
| L5A | IP54 / Type 12 + cabinet light + 115 V power outlet |
| L5X | IP54 / Type 12 + cabinet light + 230 V power outlet |
| R5A | IP54 / Type 12 + space heater + cabinet light + 115 V power outlet |
| R5X | IP54 / Type 12 + space heater + cabinet light + 230 V power outlet |
| **[5] RFI filter, terminal and monitoring options – EN/IEC 61800-3** *(character 16-17)* | |
| H2 | RFI filter, Class A2 (C3) |
| H4 | RFI filter, Class A1 (C2)<br>*(Enclosure sizes D and F only)* |
| HG | IRM for IT mains with Class A2 RFI<br>*(Enclosure sizes F1, F2, F3, F4)* |
| HE | RCD for TN/TT mains with Class A2 RFI<br>*(Enclosure sizes F1, F2, F3, F4)* |
| HX | No RFI filter |
| HF | RCD for TN/TT mains and Class A1 RFI<br>*(Enclosure sizes F1, F2, F3, F4)* |
| HH | IRM for IT mains and Class A1 RFI<br>*(Enclosure sizes F1, F2, F3, F4)* |
| ***VLT® Low Harmonic Drive*** | |
| N2 | VLT® Low Harmonic Drive, active filter based with Class A2 RFI |
| N4 | VLT® Low Harmonic Drive, active filter based with Class A1 RFI |
| ***VLT® 12-Pulse, encl. sizes F8, F9, F10, F11, F12, F13*** | |
| B2 | 12-Pulse with Class A2 RFI |
| B4 | 12-Pulse with Class A1 RFI |
| BE | 12-Pulse with RCD / A2 RFI |
| BF | 12-Pulse with RCD / A1 RFI |
| BG | 12-Pulse with IRM / A2 RFI |
| BH | 12-Pulse with IRM / A1 RFI |
| **[6] Braking and safety** *(character 18)* | |
| X | No brake IGBT |
| B | Brake IGBT |
| C | Safe Torque Off with Pilz Safety Relay<br>*(enclosure sizes F1, F2, F3, F4)* |
| D | Safe Torque Off with Pilz Safety Relay and brake IGBT<br>*(enclosure sizes F1, F2, F3, F4)* |
| E | Safe Torque Off with Pilz Safety Relay and regeneration terminals<br>*(enclosure sizes F1, F2, F3, F4)* |
| T | Safe Torque Off without brake |
| R | Regeneration terminals *(enclosure sizes D & F)* |
| S | Regeneration terminals and brake chopper |
| U | Brake IGBT plus Safe Torque Off |
| ***Enclosure sizes F3, F4*** | |
| M | IEC Emergency Stop Pushbutton<br>*(includes Pilz Relay)* |
| N | IEC Emergency Stop Pushbutton with brake IGBT and brake terminals<br>*(includes Pilz Safety Relay)* |
| P | IEC Emergency Stop Pushbutton with regeneration terminals<br>*(includes Pilz Safety Relay)* |
| **[7] LCP display** *(character 19)* | |
| X | Blank faceplate, no LCP installed |
| N | Numerical Local Control Panel (LCP 101) |
| G | Graphical Local Control Panel (LCP 102) |
| W | VLT® Wireless Communication Panel LCP 103 |
| ***Enclosure size D and E, IP21/IP54 only*** | |
| J | No Local Control Panel + USB through door |
| L | Graphical Local Control Panel (LCP 102) + USB through door |
| K | Numerical Local Control Panel (LCP 101) + USB through door |
| **[8] PCB coating – IEC 721-3-3** *(character 20)* | |
| X | Standard coated PCB Class 3C2 |
| C | Coated PCB Class 3C3 |
| R | Coated PCB Class 3C3 + ruggedized |
| **[9] Mains input** *(character 21)* | |
| X | No mains option |
| 7 | Fuses |
| A | Fuses and load sharing terminals<br>*(enclosure sizes D/IP20 and F3, F4, F9, F11, F14, F18 only)* |
| D | Load sharing terminals<br>*(enclosure sizes D/IP20 and F3, F4, F9, F11, F14, F18 only)* |
| 3 | Mains disconnect + fuse<br>*(enclosure sizes D, E and F3, F4, F9, F11, F14, F18)* |


| | |
|---|---|
| 4 | Mains contactor + fuse *(enclosure size D)* |
| 5 | Mains disconnect, fuse and load sharing *(Not available for enclosure size F18)* |
| E | Mains disconnect + contactor + fuse *(enclosure sizes D, E and F3, F4, F9, F11, F14, F18)* |
| J | Circuit breaker + fuse *(enclosure sizes D, E and F3, F4, F9, F11, F14, F18)* |
| F | Mains circuit breaker, contactor and fuses *(enclosure sizes F3, F4, F9, F11, F14, F18)* |
| G | Mains disconnect, contactor, load sharing terminals and fuses *(enclosure sizes F3, F4, F9, F11, F14, F18)* |
| H | Mains circuit breaker, contactor, load sharing terminals and fuses *(enclosure sizes F3, F4, F9, F11, F14, F18)* |
| K | Mains circuit breaker, load share and fuses *(enclosure sizes F3, F4, F9, F11, F14, F18)* |
| T | Cable connection cabinet *(enclosure size D5h/D7h only)* |
| W | Cable connection cabinet and fuse *(enclosure size D5h/D7h only)* |
| **[10] Hardware option A** *(character 22)* | |
| X | Standard cable entries |
| ***Enclosure sizes F1, F2, F3, F4, F10, F11, F12, F13, F18*** | |
| E | 30 A fuse protected power terminals |
| F | 30 A fuse protected power terminals and 2.5-4 A manual motor starter |
| G | 30 A fuse protected power terminals and 4-6.3 A manual motor starter |
| H | 30 A fuse protected power terminals and 6.3-10 A manual motor starter |
| J | 30 A fuse protected power terminals and 10-16 A manual motor starter |
| K | Two 2.5-4 A manual motor starters |
| L | Two 4-6.3 A manual motor starters |
| M | Two 6.3-10 A manual motor starters |
| N | Two 10-16 A manual motor starters |
| **[11] Hardware option B** *(character 23)* | |
| X | No adaptation |
| Q | Heat sink access panel *(enclosure size D and E only)* |

| | |
|---|---|
| ***Enclosure sizes F1, F2, F3, F4, F10, F11, F12, F13, F18*** | |
| G | 5 A 24 V supply *(customer use)* and external temperature monitoring |
| H | 5 A 24 V supply *(customer use)* |
| J | External temperature monitoring |
| K | Common motor terminals |
| L | 5 A 24 V supply + common motor terminals |
| M | External temperature monitoring + common motor terminals |
| N | 5 A 24 V supply + external temperature monitoring + common motor terminals |
| **[12] Special version** *(character 24-27)* | |
| SXXX | Latest released standard software |
| LXX1 | Digital Cascade Controller |
| LX1X | Condition based monitoring |
| LX11 | Digital Cascade Controller + conditional based monitoring |
| **[13] LCP language** *(character 28)* | |
| X | Standard language package including English, German, French, Spanish, Danish, Italian, Finnish and others |
| ***Contact factory for other language options*** | |
| **[14] A-options: Fieldbus** *(character 29-30)* | |
| AX | No option |
| A0 | VLT® PROFIBUS DP MCA 101 |
| A4 | VLT® DeviceNet MCA 104 |
| AL | VLT® PROFINET MCA 120 |
| AN | VLT® EtherNet/IP MCA 121 |
| AQ | VLT® Modbus TCP MCA 122 |
| AK | VLT® BACnet/IP MCA 125 |
| **[15] B-options** *(character 31-32)* | |
| BX | No application option |
| BK | VLT® General Purpose MCB 101 |
| BP | VLT® Relay Option MCB 105 |
| B2 | VLT® PTC Thermistor Card MCB 112 |
| B4 | VLT® Sensor Input Card MCB 114 |
| BY | VLT® Extended Cascade Controller MCO 101 |

| | |
|---|---|
| **[16] C0-option** *(character 33-34)* | |
| CX | No option |
| **[17] C1-option** *(character 35)* | |
| X | No option |
| 5 | VLT® Advanced Cascade Controller MCO 102 |
| R | VLT® Extended Relay Card MCB 113 |
| **[18] C-option software** *(character 36-37)* | |
| XX | No software option |
| **[19] D-option** *(character 38-39)* | |
| DX | No DC input installed |
| D0 | VLT® 24 V DC Supply Option MCB 107 |
| D1 | VLT® Real-time Clock Option MCB 117 |

*Please beware that not all combinations are possible. Find help configuring your drive with the online configurator found under:* ***driveconfig.danfoss.com***

# Electrical data and dimensions – Enclosed Drive

## [T5] 3 x 380-500 V AC – high overload

| High overload (150% 1 min/10 min) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Type code | Output current | | | | Typical shaft output power | | Continuous input current | Estimated power loss | Protection rating | |
| | (3 x 380-440 V) | | (3 x 441-480 V) | | | | | | IP21 | IP54 |
| FC-202 | Con. $I_N$ | Inter. $I_{MAX}$ (60 s) | Con. $I_N$ | Inter. $I_{MAX}$ (60 s) | kW @ 400 V | Hp @ 460 V | [A] @ 400 V | [W] | Type 1 | Type 12 |
| N110 | 177 | 266 | 160 | 240 | 90 | 125 | 171 | 2031 | D9h | D9h |
| N132 | 212 | 318 | 190 | 285 | 110 | 150 | 204 | 2289 | D9h | D9h |
| N160 | 260 | 390 | 240 | 360 | 132 | 200 | 251 | 2923 | D9h | D9h |
| N200 | 315 | 473 | 302 | 453 | 160 | 250 | 304 | 3093 | D10h | D10h |
| N250 | 395 | 593 | 361 | 542 | 200 | 300 | 381 | 4039 | D10h | D10h |
| N315 | 480 | 720 | 443 | 665 | 250 | 350 | 463 | 5005 | D10h | D10h |
| N355 | 600 | 900 | 540 | 810 | 315 | 450 | 578 | 6178 | E5h | E5h |
| N400 | 658 | 987 | 590 | 885 | 355 | 500 | 634 | 6851 | E5h | E5h |
| N450 | 695 | 1043 | 678 | 1017 | 400 | 550 | 718 | 7297 | E5h | E5h |
| N500 | 800 | 1200 | 730 | 1095 | 450 | 600 | 771 | 8352 | E6h | E6h |
| N560 | 880 | 1320 | 780 | 1170 | 500 | 650 | 848 | 9449 | E6h | E6h |

## [T5] 3 x 380-500 V AC – normal overload

| Normal overload (110% 1 min/10 min) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Type code | Output current | | | | Typical shaft output power | | Continuous input current | Estimated power loss | Protection rating | |
| | (3 x 380-440 V) | | (3 x 441-480 V) | | | | | | IP21 | IP54 |
| FC-202 | Con. $I_N$ | Inter. $I_{MAX}$ (60 s) | Con. $I_N$ | Inter. $I_{MAX}$ (60 s) | kW @ 400 V | Hp @ 460 V | [A] @ 400V | [W] | Type 1 | Type 12 |
| N110 | 212 | 233 | 190 | 209 | 110 | 150 | 204 | 2559 | D9h | D9h |
| N132 | 260 | 286 | 240 | 264 | 132 | 200 | 251 | 2954 | D9h | D9h |
| N160 | 315 | 347 | 302 | 332 | 160 | 250 | 304 | 3770 | D9h | D9h |
| N200 | 395 | 435 | 361 | 397 | 200 | 300 | 381 | 4116 | D10h | D10h |
| N250 | 480 | 528 | 443 | 487 | 250 | 350 | 463 | 5137 | D10h | D10h |
| N315 | 588 | 647 | 535 | 588 | 315 | 450 | 578 | 6674 | D10h | D10h |
| N355 | 658 | 724 | 590 | 649 | 355 | 500 | 634 | 6928 | E5h | E5h |
| N400 | 745 | 820 | 678 | 746 | 400 | 600 | 718 | 8036 | E5h | E5h |
| N450 | 800 | 880 | 730 | 803 | 450 | 600 | 771 | 8783 | E5h | E5h |
| N500 | 880 | 968 | 780 | 858 | 500 | 650 | 848 | 9473 | E6h | E6h |
| N560 | 990 | 1089 | 890 | 979 | 560 | 750 | 954 | 11102 | E6h | E6h |

## [T7] 3 x 525-690 V AC – high overload

| High overload (150% 1 min/10 min) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Type code | Output current | | | | Typical shaft output power | | Continuous input current | Estimated power loss | Protection rating | |
| | (3 x 525-550 V) | | (3 x 551-690 V) | | | | | | IP21 | IP54 |
| FC-202 | Con. $I_N$ | Inter. $I_{MAX}$ (60 s) | Con. $I_N$ | Inter. $I_{MAX}$ (60 s) | kW @ 690 V | Hp @ 575 V | [A] @ 690 V | [W] | Type 1 | Type 12 |
| N110 | 113 | 170 | 108 | 162 | 90 | 100 | 109 | 1479 | D9h | D9h |
| N132 | 137 | 206 | 131 | 197 | 110 | 125 | 132 | 1798 | D9h | D9h |
| N160 | 162 | 243 | 155 | 233 | 132 | 150 | 156 | 2157 | D9h | D9h |
| N200 | 201 | 302 | 192 | 288 | 160 | 200 | 193 | 2443 | D10h | D10h |
| N250 | 253 | 380 | 242 | 363 | 200 | 250 | 244 | 3121 | D10h | D10h |
| N315 | 303 | 455 | 290 | 435 | 250 | 300 | 292 | 3768 | D10h | D10h |
| N355 | 360 | 540 | 344 | 516 | 315 | 350 | 347 | 4254 | D10h | D10h |
| N400 | 395 | 593 | 380 | 570 | 355 | 400 | 381 | 4989 | E5h | E5h |
| N500 | 429 | 644 | 410 | 615 | 400 | 400 | 413 | 5419 | E5h | E5h |
| N560 | 523 | 785 | 500 | 750 | 500 | 500 | 504 | 6833 | E5h | E5h |
| N630 | 596 | 894 | 570 | 855 | 560 | 600 | 574 | 8069 | E5h | E5h |
| N710 | 659 | 989 | 630 | 945 | 630 | 650 | 635 | 8543 | E6h | E6h |
| N800 | 763 | 1145 | 730 | 1095 | 710 | 750 | 735 | 10319 | E6h | E6h |

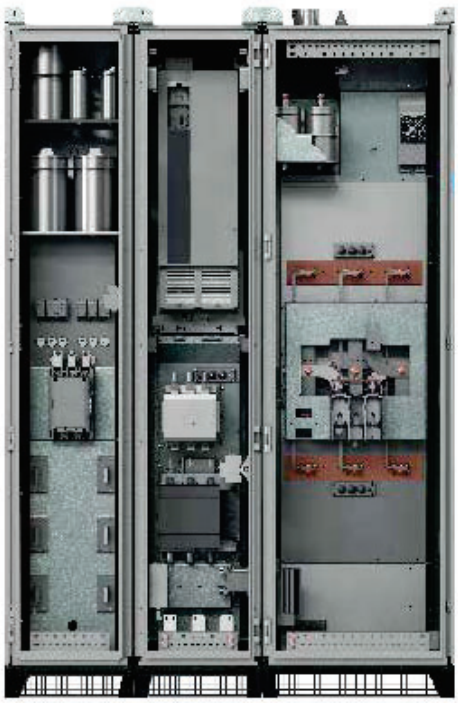
## [T7] 3 x 525-690 V AC – normal overload

| Normal overload (110% 1 min/10 min) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Type code | Output current | | | | Typical shaft output power | | Continuous input current | Estimated power loss | Protection rating | |
| | (3 x 525-550 V) | | (3 x 551-690 V) | | | | | | IP21 | IP54 |
| FC-202 | Con. $I_N$ | Inter. $I_{MAX}$ (60 s) | Con. $I_N$ | Inter. $I_{MAX}$ (60 s) | kW @ 690 V | Hp @ 575 V | [A] @ 690 V | [W] | Type 1 | Type 12 |
| N110 | 137 | 151 | 131 | 144 | 110 | 125 | 132 | 1796 | D9h | D9h |
| N132 | 162 | 178 | 155 | 171 | 132 | 150 | 156 | 2165 | D9h | D9h |
| N160 | 201 | 221 | 192 | 211 | 160 | 200 | 193 | 2738 | D9h | D9h |
| N200 | 253 | 278 | 242 | 266 | 200 | 250 | 244 | 3172 | D10h | D10h |
| N250 | 303 | 333 | 290 | 319 | 250 | 300 | 292 | 3848 | D10h | D10h |
| N315 | 360 | 396 | 344 | 378 | 315 | 350 | 347 | 4610 | D10h | D10h |
| N355 | 418 | 460 | 400 | 440 | 400 | 400 | 381 | 5150 | D10h | D10h |
| N400 | 470 | 517 | 450 | 495 | 450 | 450 | 413 | 6062 | E5h | E5h |
| N500 | 523 | 575 | 500 | 550 | 500 | 500 | 504 | 6879 | E5h | E5h |
| N560 | 596 | 656 | 570 | 627 | 560 | 600 | 574 | 8076 | E5h | E5h |
| N630 | 630 | 693 | 630 | 693 | 630 | 650 | 635 | 9208 | E5h | E5h |
| N710 | 763 | 839 | 730 | 803 | 710 | 750 | 735 | 10346 | E6h | E6h |
| N800 | 889 | 978 | 850 | 935 | 800 | 950 | 857 | 12723 | E6h | E6h |

# Dimensions for Enclosed Drive

| VLT® AQUA Drive | | | | |
|---|---|---|---|---|
| | **D9h** | **D10h** | **E5h** | **E6h** |
| **Enclosed Drive** | | | | |
| Rated power at 380–500 V [kW (hp)] | 90–132 (125–200) | 160–250 (250–350) | 315–400 (450–550) | 450–500 (600–650) |
| Rated power at 525–690 V [kW (hp)] | 90–132 (100–150) | 160–315 (200–350) | 355–560 (400–600) | 630–710 (650–950) |
| Protection rating | IP21/Type 1<br>IP54/Type 12 | IP21/Type 1<br>IP54/Type 12 | IP21/Type 1<br>IP54/Type 12 | IP21/Type 1<br>IP54/Type 12 |
| **Drive cabinet** | | | | |
| Height [mm (in)] [1] | 2100 (82.7) | 2100 (82.7) | 2100 (82.7) | 2100 (82.7) |
| Width [mm (in)] [2] | 400 (15.8) | 600 (23.6) | 600 (23.6) | 800 (31.5) |
| Depth [mm (in)] | 600 (23.6) | 600 (23.6) | 600 (23.6) | 600 (23.6) |
| Weight [kg (lb)] [2] | 280 (617) | 355 (783) | 400 (882) | 431 (950) |
| **Input filter cabinet** | | | | |
| Height [mm (in)] [1] | – | 2100 (82.7) | 2100 (82.7) | 2100 (82.7) |
| Width [mm (in)] | – | 600 (23.6) | 600 (23.6) | 600 (23.6) |
| Depth [mm (in)] | – | 600 (23.6) | 600 (23.6) | 600 (23.6) |
| Weight [kg (lb)] | – | 380 (838) | 380 (838) | 380 (838) |
| **Sine-wave filter cabinet** | | | | |
| Height [mm (in)] [1] | 2100 (82.7) | 2100 (82.7) | 2100 (82.7) | 2100 (82.7) |
| Width [mm (in)] | 600 (23.6) | 600 (23.6) | 1200 (47.2) | 1200 (47.2) |
| Depth [mm (in)] | 600 (23.6) | 600 (23.6) | 600 (23.6) | 600 (23.6) |
| Weight [kg (lb)] | | | | |
| **dV/dt filter cabinet** | | | | |
| Height [mm (in)] [1] | – | – | 2100 (82.7) | 2100 (82.7) |
| Width [mm (in)] [3] | – | – | 400 (15.8) | 400 (15.8) |
| Depth [mm (in)] | – | – | 600 (23.6) | 600 (23.6) |
| Weight [kg (lb)] | – | – | 240 (529) | 240 (529) |
| **Top entry/exit cabinet** | | | | |
| Height [mm (in)] [1] | 2100 (82.7) | 2100 (82.7) | 2100 (82.7) | 2100 (82.7) |
| Width [mm (in)] [3] | 400 (15.8) | 400 (15.8) | 400 (15.8) | 400 (15.8) |
| Depth [mm (in)] | 600 (23.6) | 600 (23.6) | 600 (23.6) | 600 (23.6) |
| Weight [kg (lb)] | 164 (362) | 164 (362) | 164 (362) | 164 (362) |

[1] *Cabinet height includes standard 100 mm (3.9 in) plinth. A 200 mm (7.9 in) or 400 mm (15.8 in) plinth is optional.*
[2] *Without options.*
[3] *The E5h and E6h enclosures contain 2 sine wave cabinets. The provided width is the total of both cabinets.*



# Ordering **typecode** for **Enclosed Drive** enclosures

| | [1] | [2] | [3] | [4] | [5] | [6] | [7] | [8] | [9] | [10] | [11] | [12] | [13] | [14] | [15] | [16] | [17] | [18] | [19] | [20] | [21] | [22] | [23] | [24] | [25] | [26] | [27] | [28] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PLV- | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| **[1] Application** *(character 4-6)* | |
|---|---|
| 202 | VLT® AQUA Drive FC 202 |
| **[2] Low harmonic filter option** *(character 7)* | |
| T | None |
| P | Passive filter, THDi=5%, 50 Hz |
| H | Passive filter, THDi=8%, 50 Hz |
| L | Passive filter, THDi=5%, 60 Hz |
| U | Passive filter, THDi=8%, 60 Hz |
| **[3] Mains voltage** *(character 8)* | |
| 4 | 380-480 V |
| 7 | 525-690 V (UL 525-600 V) |
| **[4] Norms and standards** *(character 9)* | |
| I | IEC |
| U | UL |
| **[5] Power size** *(character 10-12)* | |
| 110 | 110 kW / 150 Hp |
| 132 | 132 kW / 200 Hp |
| 160 | 160 kW / 250 Hp |
| 200 | 200 kW / 300 Hp |
| 250 | 250 kW / 350 Hp |
| 315 | 315 kW / 450 Hp |
| 355 | 355 kW / 500 Hp |
| 400 | 400 kW / 550 Hp |
| 450 | 450 kW / 600 Hp |
| 500 | 500 kW / 650 Hp |
| 560 | 560 kW / 750 Hp |
| 630 | 630 kW / 900 Hp |
| 710 | 710 kW / 1000 Hp |
| 800 | 800 kW / 1200 Hp |

| **[6] PCB coating – IEC 721-3-3** *(character 13)* | |
|---|---|
| C | Coated PCB Class 3C3 |
| R | Coated PCB Class 3C3 + ruggedized |
| **[7] Plinth** *(character 14)* | |
| 1 | 100 mm high |
| 2 | 200 mm high |
| 3 | 400 mm high |
| 4 | Marine |
| **[8] Braking and safety** *(character 15)* | |
| X | No brake IGBT |
| B | Brake IGBT |
| T | Safe Torque Off |
| U | Brake IGBT + Safe Torque Off |
| **[9] Mains input** *(character 16-17)* | |
| MX | None |
| M1 | Fusible disconnect |
| M2 | Non-fusible disconnect |
| M3 | Circuit breaker (MCCB) |
| M4 | Contactor |
| MA | Fusible disconnect + contactor |
| MB | Non-fusible disconnect + contactor |
| MC | AC reactor + fusible disconnect |
| MD | AC reactor + fusible disconnect + contactor |
| ME | AC reactor + non-fusible disconnect |
| MF | AC reactor + circuit breaker (MCCB) |
| MG | AC reactor + contactor |
| MH | AC reactor + non-fusible disconnect + contactor |

| **[10] Output filter** *(character 18)* | |
|---|---|
| X | None |
| D | dV/dt |
| S | Sine-wave |
| C | Common mode |
| 1 | Common mode + dV/dt |
| 2 | Common mode + sine-wave |
| **[11] Reserved** *(character 19)* | |
| X | None |
| **[12] Cable infeed option** *(character 20)* | |
| X | Bottom |
| T | Top |
| L | Mains top, motor bottom |
| M | Mains bottom, motor top |
| **[13] Auxiliary Power Supply** *(character 21)* | |
| 1 | 230 V AC External |
| 2 | 230 V AC Internal |
| 4 | 230 V AC Internal +24 V DC Internal |
| 5 | 230 V AC External + 24 V DC Internal |
| 6 | 120 V AC External |
| 7 | 120 V AC Internal |
| 8 | 120 V AC Internal + 24 V DC Internal |
| 9 | 120 V AC External + 24 V DC Internal |
| **[14] Back-channel cooling option** *(character 22)* | |
| X | Bottom in, top out |
| 1 | Back in, back out |
| C | Back in, top out |
| D | Bottom in, back out |
| N | None |
| **[15] Auxiliary functional option** *(character 23-24)* | |
| AX | No auxiliary options |
| A1 | AC socket+cabinet light |
| A2 | Extended I/O terminals |
| A3 | Cabinet heater |
| A4 | Motor heater control |
| A5 | Insulation monitor |
| AA | AC socket+cabinet light + extended I/O terminals |
| AB | AC socket+cabinet light + cabinet heater |
| AC | AC socket+cabinet light + motor heater control |
| AD | AC socket+cabinet light + insulation monitor |

| | [1] | [2] | [3] | [4] | [5] | [6] | [7] | [8] | [9] | [10] | [11] | [12] | [13] | [14] | [15] | [16] | [17] | [18] | [19] | [20] | [21] | [22] | [23] | [24] | [25] | [26] | [27] | [28] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| PLV- | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| | |
|---|---|
| AE | AC socket+cabinet light + extended I/O terminals + cabinet heater |
| AF | AC socket+cabinet light + extended I/O terminals + motor heater control |
| AG | AC socket+cabinet light + extended I/O terminals + insulation monitor |
| AH | AC socket+cabinet light + extended I/O terminals + cabinet heater + motor heater control |
| AI | AC socket+cabinet light + extended I/O terminals + cabinet heater + insulation monitor |
| AJ | AC socket+cabinet light + extended I/O terminals + motor heater control + insulation monitor |
| AK | AC socket+cabinet light + extended I/O terminals + cabinet heater + motor heater control + insulation monitor |
| AL | AC socket+cabinet light + cabinet heater + motor heater control |
| AM | AC socket+cabinet light + cabinet heater + insulation monitor |
| AN | AC socket+cabinet light + cabinet heater + motor heater control + insulation monitor |
| AO | AC socket+cabinet light + motor heater control + insulation monitor |
| AP | Extended I/O terminals + cabinet heater |
| AQ | Extended I/O terminals + motor heater control |
| AR | Extended I/O terminals + insulation monitor |
| AS | Extended I/O terminals + cabinet heater + motor heater control |
| AT | Extended I/O terminals + cabinet heater + insulation monitor |
| AU | Extended I/O terminals + cabinet heater + motor heater control + insulation monitor |
| AV | Extended I/O terminals + motor heater control + insulation monitor |
| AW | Cabinet heater + motor heater control |
| A8 | Cabinet heater + insulation monitor |
| AY | Cabinet heater + motor heater control + insulation monitor |
| AZ | Motor heater control + insulation monitor |
| **[16] LCP display** *(character 25)* | |
| L | LCP at door |
| N | No LCP |
| **[17] Enclosure rating** *(character 26-27)* | |
| 21 | IP21 |
| 54 | IP54 |

| | |
|---|---|
| **[18] Door-mounted option** *(character 28-29)* | |
| XX | None |
| D1 | Signal lights and reset button |
| D2 | Emergency switch off and emergency press button |
| D3 | STO with emergency press button (no functional safety) |
| D4 | STO/SS1 with emergency press button + SLS (TTL Enc) |
| D5 | STO/SS1 with emergency press button + SLS (HTL Enc) |
| DA | Signal lights and reset button + emergency switch off and emergency press button |
| DB | Signal lights and reset button + STO with emergency press button (no functional safety) |
| DC | Signal lights and reset button + STO/SS1 with emergency press button +SLS (TTL Enc) |
| DE | Signal lights and reset button + STO/SS1 with emergency press button +SLS (HTL Enc) |
| **[19] A-options: Fieldbus** *(character 30)* | |
| X | No option |
| 0 | VLT® PROFIBUS DP MCA 101 |
| 4 | VLT® DeviceNet MCA 104 |
| L | VLT® PROFINET MCA 120 |
| N | VLT® EtherNet/IP MCA 121 |
| Q | VLT® Modbus TCP MCA 122 |
| K | VLT® BACnet/IP MCA 125 |
| **[20] B-options** *(character 31)* | |
| X | No application option |
| K | VLT® General Purpose MCB 101 |
| P | VLT® Relay Option MCB 105 |
| 2 | VLT® PTC Thermistor Card MCB 112 |
| 4 | VLT® Sensor Input Card MCB 114 |
| Y | VLT® Extended Cascade Controller MCO 101 |
| **[21] C0-option** *(character 32)* | |
| X | No option |
| **[22] C1-option** *(character 33)* | |
| X | No option |
| 5 | VLT® Advanced Cascade Controller MCO 102 |
| R | VLT® Extended Relay Card MCB 113 |
| **[23] C-option software** *(character 34)* | |
| X | No software option |

| | |
|---|---|
| **[24] D-option** *(character 35)* | |
| X | No option |
| 0 | VLT® 24 V DC Supply Option MCB 107 |
| 1 | VLT® Real-time Clock Option MCB 117 |
| **[25] EMC filter** *(character 36)* | |
| 2 | (H2) RFI class A2 (C3) |
| 4 | (H4) RFI class A1 (C2) |
| 6 | IT Grid |
| **[26] Reserved** *(character 37)* | |
| X | None |
| **[27] Reserved** *(character 38-39)* | |
| XX | None |
| **[28] Documentation language** *(character 40)* | |
| X | English only |
| G | English + German |
| F | English + French |

*Please beware that not all combinations are possible. Find help configuring your drive with the online configurator found under:* ***driveconfig.danfoss.com***

# **Electrical data** – VLT® Low Harmonic Drive and VLT® Advanced Active Filters

## [T4] 3 x 380-480 V AC – VLT® Low Harmonic Drive

| High overload (150% 1 min/10 min) | | | | | | | | | Enclosure size | |
|---|---|---|---|---|---|---|---|---|---|---|
| Type code | Output current | | | | Typical shaft output power | | Continuous input current | Estimated power loss | Protection rating [IEC/UL] | |
| | (3 x 380-440 V) | | (3 x 441-480 V) | | | | | | IP21 | IP55 |
| FC-202 | Con. $I_N$ | Inter. $I_{MAX}$ (60 s) | Con. $I_N$ | Inter. $I_{MAX}$ (60 s) | kW @ 400 V | Hp @ 460 V | [A] | [W] | Type 1 | Type 12 |
| N160 | 260 | 390 | 240 | 360 | 132 | 200 | 251 | 7428 | D1n | D1n |
| N200 | 315 | 473 | 302 | 453 | 160 | 250 | 304 | 8048 | D2n | D2n |
| N250 | 395 | 593 | 361 | 542 | 200 | 300 | 381 | 9753 | D2n | D2n |
| P315 | 480 | 720 | 443 | 665 | 250 | 350 | 472 | 11587 | E9 | E9 |
| P355 | 600 | 900 | 540 | 810 | 315 | 450 | 590 | 14140 | E9 | E9 |
| P400 | 658 | 987 | 590 | 885 | 355 | 500 | 647 | 15286 | E9 | E9 |
| P450 | 695 | 1043 | 678 | 1017 | 400 | 550 | 684 | 16063 | E9 | E9 |
| P500 | 800 | 1200 | 730 | 1095 | 450 | 600 | 779 | 20077 | F18 | F18 |
| P560 | 880 | 1320 | 780 | 1170 | 500 | 650 | 857 | 21851 | F18 | F18 |
| P630 | 900 | 1485 | 890 | 1335 | 560 | 750 | 964 | 23320 | F18 | F18 |
| P710 | 1120 | 1680 | 1050 | 1575 | 630 | 900 | 1090 | 26559 | F18 | F18 |

## [T4] 3 x 380-480 V AC – VLT® Low Harmonic Drive

| Normal overload (110% 1 min/10 min) | | | | | | | | | Enclosure size | |
|---|---|---|---|---|---|---|---|---|---|---|
| Type code | Output current | | | | Typical shaft output power | | Continuous input current | Estimated power loss | Protection rating [IEC/UL] | |
| | (3 x 380-440 V) | | (3 x 441-480 V) | | | | | | IP21 | IP55 |
| FC-202 | Con. $I_N$ | Inter. $I_{MAX}$ (60 s) | Con. $I_N$ | Inter. $I_{MAX}$ (60 s) | kW @ 400 V | Hp @ 460 V | [A] | [W] | Type 1 | Type 12 |
| N160 | 315 | 347 | 302 | 332 | 160 | 250 | 304 | 8725 | D1n | D1n |
| N200 | 395 | 435 | 361 | 397 | 200 | 300 | 381 | 9831 | D2n | D2n |
| N250 | 480 | 528 | 443 | 487 | 250 | 350 | 463 | 11371 | D2n | D2n |
| P315 | 600 | 660 | 540 | 594 | 315 | 450 | 590 | 14051 | E9 | E9 |
| P355 | 658 | 724 | 590 | 649 | 355 | 500 | 647 | 15320 | E9 | E9 |
| P400 | 745 | 820 | 678 | 746 | 400 | 600 | 733 | 17180 | E9 | E9 |
| P450 | 800 | 880 | 730 | 803 | 450 | 600 | 787 | 18447 | E9 | E9 |
| P500 | 800 | 968 | 780 | 858 | 500 | 650 | 857 | 21909 | F18 | F18 |
| P560 | 990 | 1089 | 890 | 979 | 560 | 750 | 964 | 24592 | F18 | F18 |
| P630 | 1120 | 1232 | 1050 | 1155 | 630 | 900 | 1090 | 26640 | F18 | F18 |
| P710 | 1260 | 1380 | 1160 | 1276 | 710 | 1000 | 1227 | 30519 | F18 | F18 |

## [T4] 3 x 380-480 V AC VLT® Advanced Active Filter

| Normal overload (110% 1 min/10 min automatically regulated) | | | | | | | | | | | Enclosure size | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Type code | Output current | | | | | | | | Recommended fuse and disconnect rating* | Estimated power loss | Protection rating [IEC/UL] | |
| | @ 400 V | | @ 460 V | | @ 480 V | | @ 500 V | | | | IP21 | IP54 |
| AAF006 | Reactive | Harmonics | Reactive | Harmonics | Reactive | Harmonics | Reactive | Harmonics | [A] | [W] | Type 1 | Type 12 |
| A190 | 190 | 171 | 190 | 171 | 190 | 171 | 190 | 152 | 350 | 5000 | D14 | D14 |
| A250 | 250 | 225 | 250 | 225 | 250 | 225 | 250 | 200 | 630 | 7000 | E1 | E1 |
| A310 | 310 | 279 | 310 | 279 | 310 | 279 | 310 | 248 | 630 | 9000 | E1 | E1 |
| A400 | 400 | 360 | 400 | 360 | 400 | 360 | 400 | 320 | 900 | 11100 | E1 | E1 |

** Built-in options for fuses and disconnect recommended*