marathon®
Motors

# MARATHON® HIGH VOLTAGE MOTOR SERIES CATALOGUE

REGAL®

# MARATHON® HIGH VOLTAGE MOTOR SERIES



# INTRODUCTION

### HIGH VOLTAGE PRODUCT SUMMARY

Marathon® high voltage motors are made of high quality cast iron or fabricated steel frames. With an optimized construction and design, Marathon high voltage motors ensure strong, rigid frames and high power density. The laminations used in stator cores and rotor cores have premium surface insulation and low loss, which ensures higher efficiency.

The Marathon high voltage motor's insulation system is built with high quality insulation material. The high rigidity of its winding ends can endure the intensity of switching and reversing. F class insulation provides the motor with high heat stability and long insulation life.

Copper bar rotor construction is achieved by reliable welding technology, special winding technology and reliable methods to avoid broken bars. Cast aluminum rotors can also be made to specified performance requirements.

The design of bearing and motor construction focuses on motor type forces on the rotor and motor speed. Bearings and lubrication methods are chosen for performance and ease of maintenance.

The paint coating system ensures the motor has a durable coating and appearance for indoor and outdoors applications. Alternative special corrosion protection coatings are available for arduous environments.

### PRODUCT RANGE

- HCM cast iron frame IP54, IP55, IP56 2/4/6/8 pole, output 185~1800kW frame size 355~560
- HAA steel fabricated frame IP54 2/4/6/8/10/12/14/16 pole, output 220~ 9000kW,frame size 355 ~ 1000
- HDP open-type steel fabricated frame IP54 2/4/6/8/10/12 pole, output 220 ~ 10000kW, frame size 355 ~ 1000

### BASIC

- Protection class: IP23, IP54, IP55, IP56
- Cooling method: IC01 IC411 IC611
- Mounting type: B3
- Duty : S1

### AMBIENT

- Temperature range: -20°C to 40°C. Derated up to 60°C
- Ambient humidity: 90% less than relative humidity
- Altitude: less than 1000m above sea level
- Ambient condition: no causticity gas, no dust, no heavy metal pollution, no flame, no salt crystallization
- Supply power: voltage variable ±5%, frequency variable: ±2%, combine voltage and frequency variable: ±5%
- Starting method: direct start at full voltage, or start by no less than 85% full voltage. Suitable for operation on VSD - please specify starting method at time of order.

### OTHER OPTIONS

- Space heater
- Heat protector
- Vibration detector
- Special mounting dimension and shaft dimension
- Low vibration and low noise
- Bearing thermometer PT100
- Winding thermometer PT100
- Special painting
- For full list, please see the options section of the catalogue.

### INFORMATION FOR ORDERING

Please specify the motor rated output, synchronous speed, voltage, frequency, mounting type, rotation (as seen from shaft extension) and starting method. If any special requirement, for example, non standard mounting dimension, non-standard altitude, special ambient, high locked rotor torque, second shaft, water cooling, vertical mounting, very big axial force etc, please specify in enquiry or directly consult Regal.

### RATING PLATE

All nameplates are made of stainless steel, with all information printed by laser. A nameplate contains a lot of useful and important information, such as the motor type number, the rated output, the rated voltage, the rated current, frequency, degree of protection, power factor, insulation method and bearing types.

# PERFORMANCE DATA

## HCM HIGH VOLTAGE THREE PHASE ASYNCHRONOUS MOTOR

| Motor Type | Rated Output | | Rated Speed | Efficiency | Power Factor | Current 3.3kV | | Torque | | | Approx Weight | FL Current | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Full Load | Locked Rotor | Full Load | Locked Rotor | Pull Out | | 3kV | 6kV | 6.6kV |
| | kW | HP | RPM | % | % | A | %FLC | Nm | %FLT | %FLT | kg | A | A | A |
| **2 POLE MOTORS** | | | | | | | | | | | | | | |
| HCM355-2 | 185 | 250 | 2980 | 92.7 | 84.0 | 41.6 | 700 | 588 | 70 | 200 | 1900 | 45.8 | 22.9 | 20.8 |
| HCM355-2 | 200 | 270 | 2980 | 93.0 | 84.0 | 44.7 | 700 | 637 | 70 | 200 | 2000 | 49.2 | 24.6 | 22.4 |
| HCM355-2 | 220 | 295 | 2980 | 93.3 | 84.0 | 49.1 | 700 | 706 | 70 | 200 | 2100 | 54.0 | 27.0 | 24.6 |
| HCM355-2 | 250 | 335 | 2980 | 93.6 | 84.0 | 55.6 | 700 | 804 | 70 | 200 | 2200 | 61.2 | 30.6 | 27.8 |
| HCM355-2 | 280 | 375 | 2980 | 93.9 | 86.0 | 60.7 | 700 | 902 | 70 | 200 | 2350 | 66.8 | 33.4 | 30.4 |
| HCM400-2 | 315 | 420 | 2980 | 94.2 | 86.0 | 68.0 | 700 | 1010 | 70 | 200 | 2900 | 74.8 | 37.4 | 34.0 |
| HCM400-2 | 355 | 475 | 2980 | 94.5 | 86.0 | 76.4 | 700 | 1138 | 70 | 200 | 3000 | 84.0 | 42.0 | 38.2 |
| HCM400-2 | 400 | 535 | 2980 | 94.8 | 86.0 | 85.8 | 700 | 1285 | 70 | 200 | 3100 | 94.4 | 47.2 | 42.9 |
| HCM400-2 | 450 | 605 | 2980 | 95.0 | 86.0 | 96.4 | 700 | 1442 | 70 | 200 | 3200 | 106 | 53.0 | 48.2 |
| HCM450-2 | 500 | 670 | 2982 | 94.8 | 87.0 | 106 | 700 | 1598 | 70 | 200 | 3500 | 117 | 58.3 | 53.0 |
| HCM450-2 | 560 | 750 | 2982 | 95.1 | 87.0 | 118 | 700 | 1795 | 70 | 200 | 3600 | 130 | 64.9 | 59.0 |
| HCM450-2 | 630 | 845 | 2982 | 95.3 | 87.0 | 133 | 700 | 2020 | 70 | 200 | 3700 | 146 | 73.2 | 66.5 |
| HCM450-2 | 710 | 950 | 2982 | 95.5 | 87.0 | 149 | 700 | 2275 | 70 | 200 | 3850 | 164 | 82.0 | 74.5 |
| HCM500-2 | 800 | 1070 | 2982 | 95.6 | 88.0 | 166 | 700 | 2560 | 70 | 200 | 5780 | 183 | 91.3 | 83.0 |
| HCM500-2 | 900 | 1205 | 2982 | 95.8 | 88.0 | 187 | 700 | 2883 | 70 | 200 | 6050 | 206 | 103 | 93.5 |
| HCM500-2 | 1000 | 1340 | 2982 | 95.9 | 88.0 | 207 | 700 | 3207 | 70 | 200 | 6320 | 228 | 114 | 104 |
| HCM500-2 | 1120 | 1500 | 2982 | 96.0 | 88.0 | 233 | 700 | 3589 | 70 | 200 | 6600 | 256 | 128 | 117 |
| **4 POLE MOTORS** | | | | | | | | | | | | | | |
| HCM355-4 | 185 | 250 | 1485 | 93.3 | 84.0 | 41.3 | 650 | 1187 | 80 | 200 | 1900 | 45.4 | 22.7 | 20.7 |
| HCM355-4 | 200 | 270 | 1485 | 93.4 | 84.0 | 44.5 | 650 | 1285 | 80 | 200 | 2000 | 49.0 | 24.5 | 22.3 |
| HCM355-4 | 220 | 295 | 1485 | 93.6 | 84.0 | 48.9 | 650 | 1412 | 80 | 200 | 2100 | 53.8 | 26.9 | 24.5 |
| HCM355-4 | 250 | 335 | 1485 | 93.8 | 84.0 | 55.5 | 650 | 1608 | 80 | 200 | 2200 | 61.1 | 30.5 | 27.8 |
| HCM355-4 | 280 | 375 | 1485 | 94.1 | 84.0 | 62.0 | 650 | 1804 | 80 | 200 | 2300 | 68.2 | 34.1 | 31.0 |
| HCM400-4 | 315 | 420 | 1485 | 94.1 | 85.0 | 68.9 | 650 | 2030 | 80 | 200 | 3000 | 75.8 | 37.9 | 34.5 |
| HCM400-4 | 355 | 475 | 1485 | 94.3 | 85.0 | 77.5 | 650 | 2285 | 80 | 200 | 3100 | 85.3 | 42.6 | 38.8 |
| HCM400-4 | 400 | 535 | 1485 | 94.5 | 85.0 | 87.1 | 650 | 2569 | 80 | 200 | 3200 | 95.8 | 47.9 | 43.6 |
| HCM400-4 | 450 | 605 | 1485 | 94.6 | 85.0 | 97.8 | 650 | 2893 | 80 | 200 | 3300 | 108 | 53.8 | 48.9 |
| HCM450-4 | 500 | 670 | 1485 | 94.8 | 86.0 | 107 | 650 | 3511 | 80 | 200 | 3600 | 118 | 58.9 | 53.5 |
| HCM450-4 | 560 | 750 | 1485 | 95.0 | 86.0 | 120 | 650 | 3599 | 80 | 200 | 3700 | 132 | 66.0 | 60.0 |
| HCM450-4 | 630 | 845 | 1485 | 95.3 | 86.0 | 135 | 650 | 4050 | 80 | 200 | 3800 | 149 | 74.3 | 67.5 |
| HCM450-4 | 710 | 950 | 1485 | 95.5 | 86.0 | 151 | 650 | 4570 | 80 | 200 | 3950 | 166 | 83.1 | 75.5 |
| HCM500-4 | 800 | 1070 | 1488 | 95.5 | 86.0 | 170 | 650 | 5139 | 80 | 200 | 5820 | 187 | 93.5 | 85.0 |
| HCM500-4 | 900 | 1210 | 1488 | 95.7 | 86.0 | 191 | 650 | 5776 | 80 | 200 | 6100 | 210 | 105 | 95.5 |
| HCM500-4 | 1000 | 1340 | 1488 | 95.8 | 86.0 | 213 | 650 | 6423 | 80 | 200 | 6280 | 234 | 117 | 107 |
| HCM500-4 | 1120 | 1500 | 1488 | 95.9 | 86.0 | 238 | 650 | 7188 | 80 | 200 | 6420 | 262 | 131 | 119 |
| HCM560-4 | 1250 | 1680 | 1488 | 96.0 | 87.0 | 262 | 650 | 8032 | 70 | 200 | 8020 | 288 | 144 | 131 |
| HCM560-4 | 1400 | 1880 | 1488 | 96.1 | 87.0 | 293 | 650 | 8993 | 70 | 200 | 8390 | 322 | 161 | 147 |
| HCM560-4 | 1600 | 2140 | 1488 | 96.2 | 87.0 | 335 | 650 | 10277 | 70 | 200 | 8750 | 369 | 184 | 168 |
| HCM560-4 | 1800 | 2410 | 1488 | 96.3 | 87.0 | 376 | 650 | 11562 | 70 | 200 | 9100 | 414 | 207 | 188 |

*Catalogue data is provided as guidance only. Subject to change without notice*

# PERFORMANCE DATA

## HCM HIGH VOLTAGE THREE PHASE ASYNCHRONOUS MOTOR

| Motor Type | Rated Output | | Rated Speed | Efficiency | Power Factor | Current 3.3kV | | Torque | | | Approx Weight | FL Current | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Full Load | Locked Rotor | Full Load | Locked Rotor | Pull Out | | 3kV | 6kV | 6.6kV |
| | kW | HP | RPM | % | % | A | %FLC | Nm | %FLT | %FLT | kg | A | A | A |
| **6 POLE MOTORS** | | | | | | | | | | | | | | |
| HCM355-6 | 160 | 215 | 985 | 92.9 | 80.0 | 37.6 | 600 | 1549 | 80 | 200 | 2200 | 41.4 | 20.7 | 18.8 |
| HCM355-6 | 185 | 250 | 985 | 93.1 | 80.0 | 43.4 | 600 | 1795 | 80 | 200 | 2300 | 47.7 | 23.9 | 21.7 |
| HCM3556 | 200 | 270 | 985 | 93.3 | 80.0 | 46.9 | 600 | 1942 | 80 | 200 | 2400 | 51.6 | 25.8 | 23.5 |
| HCM400-6 | 220 | 295 | 988 | 93.5 | 82.0 | 50.2 | 600 | 2128 | 80 | 200 | 2900 | 55.2 | 27.6 | 25.1 |
| HCM400-6 | 250 | 335 | 988 | 93.8 | 82.0 | 56.7 | 600 | 2422 | 80 | 200 | 3000 | 62.4 | 31.2 | 28.4 |
| HCM400-6 | 280 | 375 | 988 | 94.0 | 82.0 | 63.4 | 600 | 2707 | 80 | 200 | 3200 | 69.7 | 34.9 | 31.7 |
| HCM400-6 | 315 | 420 | 988 | 94.2 | 82.0 | 71.4 | 600 | 3050 | 80 | 200 | 3400 | 78.5 | 39.3 | 35.7 |
| HCM450-6 | 355 | 475 | 988 | 94.4 | 83.0 | 79.3 | 600 | 3432 | 80 | 200 | 3500 | 87.2 | 43.6 | 39.7 |
| HCM450-6 | 400 | 535 | 988 | 94.6 | 83.0 | 89.1 | 600 | 3874 | 80 | 200 | 3600 | 98 | 49.0 | 44.6 |
| HCM450-6 | 450 | 605 | 988 | 94.8 | 83.0 | 100 | 600 | 4354 | 80 | 200 | 3700 | 110 | 55.0 | 50.0 |
| HCM450-6 | 500 | 670 | 988 | 95.0 | 83.0 | 111 | 600 | 4835 | 80 | 200 | 3820 | 122 | 61.1 | 55.5 |
| HCM500-6 | 560 | 750 | 990 | 95.1 | 83.0 | 126 | 600 | 5403 | 80 | 200 | 5610 | 139 | 69.3 | 63.0 |
| HCM500-6 | 630 | 845 | 990 | 95.2 | 83.0 | 139 | 600 | 6080 | 80 | 200 | 5790 | 153 | 76.5 | 69.5 |
| HCM500-6 | 710 | 950 | 990 | 95.3 | 83.0 | 157 | 600 | 6855 | 80 | 200 | 6010 | 173 | 86.4 | 78.5 |
| HCM500-6 | 800 | 1070 | 990 | 95.4 | 83.0 | 177 | 600 | 7718 | 80 | 200 | 6230 | 195 | 97 | 88.5 |
| HCM560-6 | 900 | 1210 | 990 | 95.5 | 84.0 | 196 | 600 | 8689 | 70 | 200 | 7650 | 216 | 108 | 98 |
| HCM560-6 | 1000 | 1340 | 990 | 95.7 | 84.0 | 218 | 600 | 9650 | 70 | 200 | 7950 | 240 | 120 | 109 |
| HCM560-6 | 1120 | 1500 | 990 | 95.8 | 84.0 | 244 | 600 | 10807 | 70 | 200 | 8250 | 268 | 134 | 122 |
| HCM560-6 | 1250 | 1680 | 990 | 95.9 | 84.0 | 271 | 600 | 12062 | 70 | 200 | 8550 | 298 | 149 | 136 |
| **8 POLE MOTORS** | | | | | | | | | | | | | | |
| HCM400-8 | 160 | 215 | 738 | 92.7 | 76.0 | 39.6 | 550 | 2069 | 80 | 200 | 3000 | 43.6 | 21.8 | 19.8 |
| HCM400-8 | 185 | 250 | 738 | 92.9 | 76.0 | 45.8 | 550 | 2393 | 80 | 200 | 3100 | 50.4 | 25.2 | 22.9 |
| HCM400-8 | 200 | 270 | 738 | 93.1 | 77.0 | 48.7 | 550 | 2589 | 80 | 200 | 3200 | 53.6 | 26.8 | 24.4 |
| HCM400-8 | 220 | 295 | 738 | 93.3 | 77.0 | 53.4 | 550 | 2844 | 80 | 200 | 3300 | 59 | 29.4 | 26.7 |
| HCM450-8 | 250 | 335 | 740 | 93.5 | 78.0 | 60.0 | 550 | 3226 | 80 | 200 | 3500 | 66 | 33.0 | 30.0 |
| HCM450-8 | 280 | 375 | 740 | 93.7 | 78.0 | 67.1 | 550 | 3619 | 80 | 200 | 3600 | 74 | 36.9 | 33.6 |
| HCM450-8 | 315 | 420 | 740 | 93.9 | 78.0 | 75.3 | 550 | 4070 | 80 | 200 | 3700 | 83 | 41.4 | 37.7 |
| HCM450-8 | 355 | 475 | 740 | 94.1 | 78.0 | 84.5 | 550 | 4580 | 80 | 200 | 3820 | 93 | 46.5 | 42.3 |
| HCM500-8 | 400 | 535 | 742 | 94.2 | 79.9 | 94 | 550 | 5148 | 80 | 200 | 5250 | 103 | 51.7 | 47.0 |
| HCM500-8 | 450 | 605 | 742 | 94.4 | 79.9 | 106 | 550 | 5796 | 80 | 200 | 5490 | 117 | 58.3 | 53.0 |
| HCM500-8 | 500 | 670 | 742 | 94.6 | 80.0 | 116 | 550 | 6443 | 80 | 200 | 5750 | 128 | 63.8 | 58.0 |
| HCM500-8 | 560 | 750 | 742 | 94.7 | 80.0 | 129 | 550 | 7208 | 80 | 200 | 6020 | 142 | 71.0 | 64.5 |
| HCM560-8 | 630 | 845 | 745 | 94.8 | 81.0 | 143 | 550 | 8081 | 70 | 200 | 7000 | 157 | 78.7 | 71.5 |
| HCM560-8 | 710 | 950 | 745 | 95.0 | 81.0 | 161 | 550 | 9110 | 70 | 200 | 7350 | 177 | 88.6 | 80.5 |
| HCM560-8 | 800 | 1070 | 745 | 95.2 | 81.0 | 181 | 550 | 10258 | 70 | 200 | 7700 | 199 | 99.6 | 90.5 |
| HCM560-8 | 900 | 1210 | 745 | 95.3 | 81.0 | 204 | 550 | 11542 | 70 | 200 | 8100 | 224 | 112 | 102 |

# PERFORMANCE DATA

## HCM 11KV HIGH VOLTAGE THREE PHASE ASYNCHRONOUS MOTOR

| Motor Type | Rated Output | | Rated Speed | Efficiency | Power Factor | Current 3.3kV | | Torque | | | Approx Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Full Load | Locked Rotor | Full Load | Locked Rotor | Pull Out | |
| | kW | HP | RPM | % | % | A | %FLC | Nm | %FLT | %FLT | kg |
| **2 POLE MOTORS** | | | | | | | | | | | |
| HCM400-2 | 220 | 295 | 2980 | 92.8 | 84 | 16.3 | 700 | 706 | 70 | 200 | 2900 |
| HCM400-2 | 250 | 335 | 2980 | 93.3 | 84 | 18.4 | 700 | 804 | 70 | 200 | 3000 |
| HCM400-2 | 280 | 375 | 2980 | 93.6 | 85 | 20.3 | 700 | 902 | 70 | 200 | 3100 |
| HCM400-2 | 315 | 420 | 2980 | 93.9 | 85 | 22.8 | 700 | 1010 | 70 | 200 | 3200 |
| HCM450-2 | 355 | 475 | 2982 | 93.8 | 86 | 25.4 | 700 | 1138 | 70 | 200 | 3500 |
| HCM450-2 | 400 | 535 | 2982 | 94.1 | 86 | 28.5 | 700 | 1285 | 70 | 200 | 3600 |
| HCM450-2 | 450 | 605 | 2982 | 94.4 | 86 | 32.0 | 700 | 1442 | 70 | 200 | 3700 |
| HCM450-2 | 500 | 670 | 2982 | 94.6 | 86 | 35.5 | 700 | 1598 | 70 | 200 | 3850 |
| HCM500-2 | 560 | 750 | 2985 | 94.7 | 87 | 39.2 | 700 | 1795 | 70 | 200 | 5500 |
| HCM500-2 | 630 | 845 | 2985 | 94.9 | 87 | 44.1 | 700 | 2020 | 70 | 200 | 5780 |
| HCM500-2 | 710 | 950 | 2985 | 95.1 | 87 | 49.5 | 700 | 2275 | 70 | 200 | 6050 |
| HCM500-2 | 800 | 1070 | 2985 | 95.3 | 88 | 55.1 | 700 | 2560 | 70 | 200 | 6320 |
| HCM500-2 | 900 | 1210 | 2985 | 95.5 | 88 | 61.8 | 700 | 2883 | 70 | 200 | 6600 |
| **4 POLE MOTORS** | | | | | | | | | | | |
| HCM400-4 | 220 | 295 | 1482 | 92.7 | 84 | 16.3 | 650 | 1422 | 80 | 200 | 3000 |
| HCM400-4 | 250 | 335 | 1482 | 93.1 | 84 | 18.5 | 650 | 1608 | 80 | 200 | 3100 |
| HCM400-4 | 280 | 375 | 1482 | 93.4 | 84 | 20.6 | 650 | 1804 | 80 | 200 | 3200 |
| HCM400-4 | 315 | 420 | 1482 | 93.6 | 84 | 23.1 | 650 | 2030 | 80 | 200 | 3300 |
| HCM450-4 | 355 | 475 | 1485 | 93.9 | 85 | 25.6 | 650 | 2285 | 80 | 200 | 3500 |
| HCM450-4 | 400 | 535 | 1485 | 94.1 | 85 | 28.9 | 650 | 2569 | 80 | 200 | 3600 |
| HCM450-4 | 450 | 605 | 1485 | 94.4 | 85 | 32.4 | 650 | 2893 | 80 | 200 | 3700 |
| HCM450-4 | 500 | 670 | 1485 | 94.6 | 86 | 35.5 | 650 | 3217 | 80 | 200 | 3800 |
| HCM450-4 | 560 | 750 | 1485 | 94.8 | 86 | 39.7 | 650 | 3599 | 80 | 200 | 3950 |
| HCM500-4 | 630 | 845 | 1488 | 94.9 | 86 | 44.6 | 650 | 4050 | 80 | 200 | 5820 |
| HCM500-4 | 710 | 950 | 1488 | 95.1 | 86 | 50.1 | 650 | 4560 | 80 | 200 | 6100 |
| HCM500-4 | 800 | 1070 | 1488 | 95.3 | 87 | 55.7 | 650 | 5139 | 80 | 200 | 6280 |
| HCM500-4 | 900 | 1210 | 1488 | 95.5 | 87 | 62.5 | 650 | 5776 | 80 | 200 | 6420 |
| HCM560-4 | 1000 | 1340 | 1488 | 95.7 | 86 | 70.2 | 650 | 6423 | 70 | 200 | 8020 |
| HCM560-4 | 1120 | 1500 | 1488 | 95.8 | 86 | 78.5 | 650 | 7188 | 70 | 200 | 8390 |
| HCM560-4 | 1250 | 1680 | 1488 | 95.9 | 87 | 86.5 | 650 | 8032 | 70 | 200 | 8750 |
| HCM560-4 | 1400 | 1880 | 1488 | 96.0 | 87 | 96.8 | 650 | 8993 | 70 | 200 | 9100 |

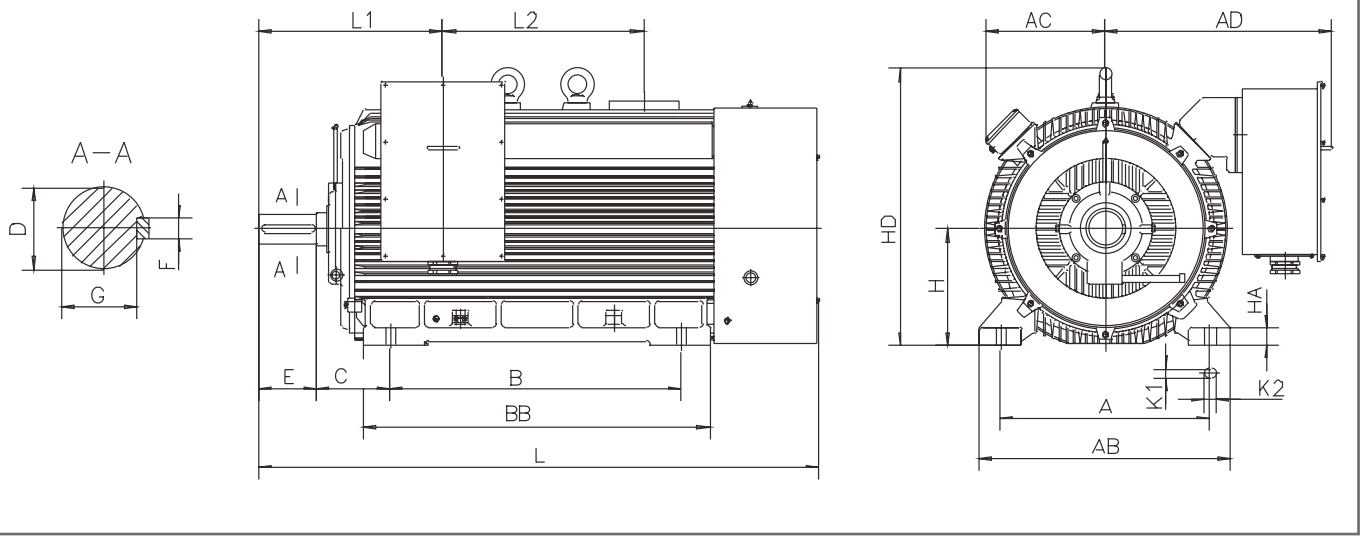
# PERFORMANCE DATA

## HCM 11KV HIGH VOLTAGE THREE PHASE ASYNCHRONOUS MOTOR

| Motor Type | Rated Output | | Rated Speed | Efficiency | Power Factor | Current 3.3kV | | Torque | | | Approx Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Full Load | Locked Rotor | Full Load | Locked Rotor | Pull Out | |
| | kW | HP | RPM | % | % | A | %FLC | Nm | %FLT | %FLT | kg |
| **6 POLE MOTORS** | | | | | | | | | | | |
| HCM450-6 | 220 | 295 | 985 | 92.8 | 82 | 16.7 | 600 | 2138 | 80 | 200 | 3400 |
| HCM450-6 | 250 | 335 | 985 | 93.0 | 82 | 18.9 | 600 | 2422 | 80 | 200 | 3500 |
| HCM450-6 | 280 | 375 | 985 | 93.2 | 82 | 21.2 | 600 | 2716 | 80 | 200 | 3600 |
| HCM450-6 | 315 | 420 | 985 | 93.4 | 82 | 23.7 | 600 | 3060 | 80 | 200 | 3700 |
| HCM450-6 | 355 | 475 | 985 | 93.6 | 82 | 26.7 | 600 | 3442 | 80 | 200 | 3820 |
| HCM500-6 | 400 | 535 | 990 | 93.7 | 83 | 29.7 | 600 | 3883 | 80 | 200 | 5450 |
| HCM500-6 | 450 | 605 | 990 | 93.9 | 83 | 33.3 | 600 | 4354 | 80 | 200 | 5610 |
| HCM500-6 | 500 | 670 | 990 | 94.2 | 83 | 36.9 | 600 | 4835 | 80 | 200 | 5790 |
| HCM500-6 | 560 | 750 | 990 | 94.4 | 83 | 41.3 | 600 | 5403 | 80 | 200 | 6010 |
| HCM500-6 | 630 | 845 | 990 | 94.7 | 83 | 46.3 | 600 | 6080 | 80 | 200 | 6230 |
| HCM560-6 | 710 | 950 | 992 | 94.8 | 83 | 52.1 | 600 | 6835 | 70 | 200 | 7400 |
| HCM560-6 | 800 | 1070 | 992 | 95.0 | 83 | 58.6 | 600 | 7708 | 70 | 200 | 7650 |
| HCM560-6 | 900 | 1210 | 992 | 95.2 | 84 | 65.0 | 600 | 8669 | 70 | 200 | 7950 |
| HCM560-6 | 1000 | 1340 | 992 | 95.4 | 84 | 72.0 | 600 | 9630 | 70 | 200 | 8250 |
| HCM560-6 | 1120 | 1500 | 992 | 95.5 | 84 | 80.6 | 600 | 10787 | 70 | 200 | 8550 |
| **8 POLE MOTORS** | | | | | | | | | | | |
| HCM450-8 | 220 | 295 | 740 | 92.5 | 78 | 17.6 | 550 | 2844 | 80 | 200 | 3600 |
| HCM450-8 | 250 | 335 | 740 | 92.8 | 78 | 20.0 | 550 | 3226 | 80 | 200 | 3700 |
| HCM450-8 | 280 | 375 | 740 | 93.0 | 78 | 22.3 | 550 | 3619 | 80 | 200 | 3820 |
| HCM500-8 | 315 | 420 | 742 | 93.2 | 78 | 25.0 | 550 | 4060 | 80 | 200 | 5250 |
| HCM500-8 | 355 | 475 | 742 | 93.5 | 78 | 28.1 | 550 | 4570 | 80 | 200 | 5490 |
| HCM500-8 | 400 | 535 | 742 | 93.7 | 79 | 31.2 | 550 | 5148 | 80 | 200 | 5750 |
| HCM500-8 | 450 | 605 | 742 | 93.9 | 79 | 35.0 | 550 | 5796 | 80 | 200 | 6020 |
| HCM560-8 | 500 | 670 | 745 | 94.1 | 80 | 38.3 | 550 | 6414 | 70 | 200 | 6650 |
| HCM560-8 | 560 | 750 | 745 | 94.3 | 80 | 42.9 | 550 | 7188 | 70 | 200 | 7000 |
| HCM560-8 | 630 | 845 | 745 | 94.5 | 81 | 47.5 | 550 | 8081 | 70 | 200 | 7350 |
| HCM560-8 | 710 | 950 | 745 | 94.7 | 81 | 53.3 | 550 | 9110 | 70 | 200 | 7700 |
| HCM560-8 | 800 | 1070 | 745 | 94.9 | 81 | 60.1 | 550 | 10258 | 70 | 200 | 8100 |

# DIMENSIONAL DATA

## HCM HIGH VOLTAGE THREE PHASE ASYNCHRONOUS MOTOR (H355-560)




### MOUNTING DIMENSIONS FOR INSTALLATION

| Frame size | Poles | Mounting Dimensions (mm) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | F | G | H | K1 | K2 |
| 355 | 2 | 630 | 900 | 254 | 75 | 140 | 20 | 67.5 | 355 | 28 | 35 |
| 400 | 2 | 710 | 1000 | 280 | 85 | 170 | 22 | 76 | 400 | 35 | 42 |
| 450 | 2 | 800 | 1120 | 280 | 95 | 170 | 25 | 86 | 450 | 35 | 42 |
| 500 | 2 | 900 | 1250 | 315 | 110 | 210 | 28 | 100 | 500 | 42 | 52 |
| 450 | 4 | 800 | 1120 | 280 | 120 | 210 | 32 | 109 | 500 | 35 | 42 |
| 500 | 4 | 900 | 1250 | 315 | 130 | 250 | 32 | 119 | 500 | 42 | 52 |
| 560 | 4 | 1000 | 1400 | 355 | 150 | 250 | 36 | 138 | 560 | 42 | 52 |
| 355 | 4~6 | 630 | 900 | 254 | 100 | 210 | 28 | 90 | 355 | 28 | 35 |
| 400 | 4~8 | 710 | 1000 | 280 | 110 | 210 | 28 | 100 | 400 | 35 | 42 |
| 450 | 6~8 | 800 | 1120 | 280 | 130 | 250 | 32 | 119 | 450 | 35 | 42 |
| 500 | 6~8 | 900 | 1250 | 315 | 140 | 250 | 36 | 128 | 500 | 42 | 52 |
| 560 | 6~8 | 1000 | 1400 | 355 | 160 | 300 | 40 | 147 | 560 | 42 | 52 |

### OUTLINE DIMENSIONS FOR INSTALLATION

| Frame Size | Poles | Outline Dimensions (mm) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | AC | AD | AB | BB | HA | HD | L1 | L2 | L |
| 355 | 2 | 445 | 775 | 790 | 1110 | 50 | 830 | 515 | 680 | 1720 |
| 400 | 2 | 480 | 900 | 870 | 120 | 50 | 960 | 585 | 720 | 1850 |
| 450 | 2 | 490 | 925 | 950 | 1340 | 56 | 1085 | 650 | 785 | 2080 |
| 500 | 2 | 520 | 980 | 1080 | 1490 | 65 | 1200 | 825 | 865 | 2500 |
| 450 | 4 | 49 | 925 | 950 | 1340 | 56 | 1085 | 690 | 785 | 2170 |
| 560 | 4 | 610 | 1030 | 1170 | 1680 | 76 | 1480 | 8/12 | 970 | 2650 |
| 355 | 4~6 | 445 | 775 | 790 | 1110 | 50 | 830 | 585 | 680 | 1825 |
| 400 | 4~ 8 | 480 | 900 | 870 | 1200 | 50 | 960 | 635 | 720 | 2010 |
| 500 | 4~ 8 | 520 | 980 | 1080 | 1490 | 65 | 1200 | 791 | 865 | 2400 |
| 450 | 6~8 | 490 | 925 | 950 | 1340 | 56 | 1085 | 730 | 785 | 2210 |
| 560 | 6~8 | 610 | 1030 | 1170 | 1680 | 76 | 1480 | 862 | 970 | 2700 |

# PERFORMANCE DATA

## HAA HIGH VOLTAGE THREE PHASE ASYNCHRONOUS MOTOR

| Motor Type | Rated Output | | Rated Speed | Efficiency | Power Factor | Current 3.3kV | | Torque | | | Approx Weight-Weight | FL Current | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Full Load | Locked Rotor | Full Load | Locked Rotor | Pull Out | | 3kV | 6kV | 6.6kV |
| | kW | HP | RPM | % | % | A | %FLC | Nm | %FLT | %FLT | kg | A | A | A |
| **2 POLE MOTORS** | | | | | | | | | | | | | | |
| HAA355-2 | 220 | 295 | 2975 | 91.7 | 85 | 27.1 | 700 | 706 | 60 | 180 | 2500 | 29.8 | 14.9 | 13.6 |
| HAA355-2 | 250 | 335 | 2975 | 92.0 | 85 | 30.8 | 700 | 804 | 60 | 180 | 2580 | 33.9 | 16.9 | 15.4 |
| HAA355-2 | 280 | 375 | 2975 | 92.5 | 85 | 34.3 | 700 | 902 | 60 | 180 | 2670 | 37.7 | 18.9 | 17.2 |
| HAA355-2 | 315 | 420 | 2975 | 92.9 | 85 | 38.3 | 700 | 1010 | 60 | 180 | 2880 | 42.1 | 21.1 | 19.2 |
| HAA400-2 | 355 | 475 | 2980 | 93.1 | 86 | 42.7 | 700 | 1138 | 60 | 180 | 2740 | 47.0 | 23.5 | 21.4 |
| HAA400-2 | 400 | 535 | 2980 | 93.5 | 86 | 47.9 | 700 | 1285 | 60 | 180 | 3000 | 52.7 | 26.3 | 24.0 |
| HAA400-2 | 450 | 605 | 2980 | 93.9 | 86 | 53.6 | 700 | 1442 | 60 | 180 | 3230 | 59.0 | 29.5 | 26.8 |
| HAA400-2 | 500 | 670 | 2980 | 94.2 | 86 | 59.4 | 700 | 1608 | 60 | 180 | 3490 | 65.3 | 32.7 | 29.7 |
| HAA450-2 | 560 | 750 | 2980 | 94.5 | 86 | 66.3 | 700 | 1795 | 60 | 180 | 4250 | 73 | 36.5 | 33.2 |
| HAA450-2 | 630 | 845 | 2980 | 94.6 | 87 | 73.6 | 700 | 2020 | 60 | 180 | 4400 | 81 | 40.5 | 36.8 |
| HAA450-2 | 710 | 950 | 2980 | 94.7 | 87 | 82.9 | 700 | 2275 | 60 | 180 | 4500 | 91 | 45.6 | 41.5 |
| HAA450-2 | 800 | 1070 | 2980 | 94.9 | 87 | 93.2 | 700 | 2569 | 60 | 180 | 4660 | 103 | 51.3 | 46.6 |
| HAA500-2 | 900 | 1210 | 2980 | 95.0 | 87 | 105 | 700 | 2883 | 60 | 180 | 6600 | 116 | 57.8 | 52.5 |
| HAA500-2 | 1000 | 1340 | 2980 | 95.1 | 87 | 116 | 700 | 3207 | 60 | 180 | 6850 | 128 | 63.8 | 58.0 |
| HAA500-2 | 1120 | 1500 | 2980 | 95.2 | 87 | 130 | 700 | 3589 | 60 | 180 | 7150 | 143 | 71.5 | 65.0 |
| HAA500-2 | 1250 | 1680 | 2980 | 95.3 | 87 | 145 | 700 | 4011 | 60 | 180 | 7400 | 160 | 79.8 | 72.5 |
| HAA560-2 | 1400 | 1880 | 2980 | 95.4 | 88 | 160 | 700 | 4491 | 60 | 180 | 8860 | 176 | 88.0 | 80.0 |
| HAA560-2 | 1600 | 2140 | 2980 | 95.5 | 88 | 183 | 700 | 5129 | 60 | 180 | 9060 | 201 | 101 | 91.5 |
| HAA560-2 | 1800 | 2410 | 2980 | 95.6 | 88 | 206 | 700 | 5776 | 60 | 180 | 9280 | 227 | 113 | 103 |
| HAA630-2 | 2000 | 2680 | 2982 | 95.7 | 88 | 229 | 700 | 6414 | 60 | 180 | 9550 | 252 | 126 | 115 |
| HAA630-2 | 2240 | 3000 | 2982 | 95.8 | 88 | 256 | 700 | 7178 | 60 | 180 | 10100 | 282 | 141 | 128 |
| HAA630-2 | 2500 | 3350 | 2982 | 95.9 | 88 | 285 | 700 | 8012 | 60 | 180 | 10600 | 314 | 157 | 143 |
| **4 POLE MOTORS** | | | | | | | | | | | | | | |
| HAA355-4 | 185 | 250 | 1485 | 91.9 | 85 | 22.8 | 650 | 1187 | 70 | 180 | 2150 | 25.1 | 12.5 | 11.4 |
| HAA355-4 | 200 | 270 | 1480 | 92.1 | 85 | 24.6 | 650 | 1294 | 70 | 180 | 2210 | 27.1 | 13.5 | 12.3 |
| HAA355-4 | 220 | 295 | 1480 | 92.4 | 85 | 27.0 | 650 | 1422 | 70 | 180 | 2300 | 29.7 | 14.9 | 13.5 |
| HAA355-4 | 250 | 335 | 1480 | 92.6 | 85 | 30.6 | 650 | 1618 | 70 | 180 | 2390 | 33.7 | 16.8 | 15.3 |
| HAA400-4 | 280 | 375 | 1485 | 92.5 | 86 | 33.8 | 650 | 1804 | 70 | 180 | 3090 | 37.2 | 18.6 | 16.9 |
| HAA400-4 | 315 | 420 | 1485 | 92.8 | 86 | 37.9 | 650 | 2030 | 70 | 180 | 3190 | 41.7 | 20.8 | 19.0 |
| HAA400-4 | 355 | 475 | 1485 | 93.1 | 86 | 42.6 | 650 | 2285 | 70 | 180 | 3290 | 46.9 | 23.4 | 21.3 |
| HAA400-4 | 400 | 535 | 1485 | 93.2 | 86 | 48.0 | 650 | 2569 | 70 | 180 | 3400 | 52.8 | 26.4 | 24.0 |
| HAA400-4 | 450 | 605 | 1485 | 93.4 | 86 | 53.9 | 650 | 2893 | 70 | 180 | 3510 | 59.3 | 29.6 | 27.0 |
| HAA450-4 | 500 | 670 | 1485 | 93.8 | 86 | 59.6 | 650 | 3217 | 70 | 180 | 3800 | 65.6 | 32.8 | 29.8 |
| HAA450-4 | 560 | 750 | 1485 | 94.0 | 86 | 66.6 | 650 | 3599 | 70 | 180 | 3890 | 73.3 | 36.6 | 33.3 |
| HAA450-4 | 630 | 845 | 1485 | 94.2 | 86 | 74.8 | 650 | 4050 | 70 | 180 | 4030 | 82.3 | 41.1 | 37.4 |
| HAA450-4 | 710 | 950 | 1485 | 94.5 | 86 | 84.0 | 650 | 4570 | 70 | 180 | 4140 | 92.4 | 46.2 | 42.0 |

# PERFORMANCE DATA

## HAA HIGH VOLTAGE THREE PHASE ASYNCHRONOUS MOTOR

| Motor Type | Rated Output | | Rated Speed | Efficiency | Power Factor | Current 3.3kV | | Torque | | | Approx Weight | FL Current | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Full Load | Locked Rotor | Full Load | Locked Rotor | Pull Out | | 3kV | 6kV | 6.6kV |
| | kW | HP | RPM | % | % | A | %FLC | Nm | %FLT | %FLT | kg | A | A | A |
| HAA500-4 | 800 | 1070 | 1485 | 94.6 | 87 | 93.5 | 650 | 5148 | 70 | 180 | 5340 | 103 | 51.4 | 46.8 |
| HAA500-4 | 900 | 1210 | 1485 | 94.7 | 87 | 105 | 650 | 5796 | 70 | 180 | 5500 | 116 | 57.8 | 52.5 |
| HAA500-4 | 1000 | 1340 | 1485 | 94.8 | 87 | 116 | 650 | 6433 | 70 | 180 | 5850 | 128 | 63.8 | 58.0 |
| HAA500-4 | 1120 | 1500 | 1485 | 94.9 | 87 | 130 | 650 | 7208 | 70 | 180 | 6120 | 143 | 71.5 | 65.0 |
| HAA560-4 | 1250 | 1680 | 1485 | 95.0 | 88 | 144 | 650 | 8041 | 60 | 180 | 7500 | 158 | 79.2 | 72.0 |
| HAA560-4 | 1400 | 1880 | 1485 | 95.1 | 88 | 161 | 650 | 9012 | 60 | 180 | 7600 | 177 | 88.6 | 80.5 |
| HAA560-4 | 1600 | 2140 | 1485 | 95,2 | 88 | 184 | 650 | 10297 | 60 | 180 | 7730 | 202 | 101 | 92.0 |
| HAA630-4 | 1800 | 2410 | 1485 | 95.3 | 88 | 207 | 650 | 11582 | 60 | 180 | 9400 | 228 | 114 | 104 |
| HAA630-4 | 2000 | 2680 | 1485 | 95.5 | 88 | 229 | 650 | 12866 | 60 | 180 | 9800 | 252 | 126 | 115 |
| HAA630-4 | 2240 | 3000 | 1485 | 95.6 | 88 | 256 | 650 | 14416 | 60 | 180 | 10300 | 282 | 141 | 128 |
| HAA710-4 | 2800 | 3730 | 1490 | 95.7 | 87 | 324 | 650 | 17956 | 50 | 180 | 12800 | 356 | 178 | 162 |
| HAA710-4 | 3150 | 4200 | 1490 | 95.8 | 87 | 364 | 650 | 20202 | 50 | 180 | 13300 | 400 | 200 | 182 |
| HAA710-4 | 3550 | 4760 | 1490 | 95.9 | 87 | 409 | 650 | 22771 | 50 | 180 | 13800 | 450 | 225 | 205 |
| HAA710-4 | 4000 | 5330 | 1490 | 96.0 | 87 | 461 | 650 | 25654 | 50 | 180 | 14300 | 507 | 254 | 231 |
| HAA710-4 | 4500 | 6000 | 1490 | 96.0 | 88 | 512 | 650 | 28861 | 50 | 180 | 14800 | 563 | 282 | 256 |
| HAA710-4 | 5000 | 6670 | 1490 | 96.1 | 88 | 569 | 650 | 32068 | 50 | 180 | 15300 | 626 | 313 | 285 |
| **6 POLE MOTORS** | | | | | | | | | | | | | | |
| HAA355-6 | 185 | 250 | 985 | 91.6 | 82 | 23.7 | 600 | 1795 | 70 | 180 | 2280 | 26.1 | 13.0 | 11.9 |
| HAA355-6 | 200 | 270 | 985 | 91.9 | 82 | 25.5 | 600 | 1942 | 70 | 180 | 2380 | 28.1 | 14.0 | 12.8 |
| HAA400-6 | 185 | 250 | 990 | 91.6 | 82 | 23.7 | 600 | 1785 | 70 | 180 | 2880 | 26.1 | 13.0 | 11.9 |
| HAA400-6 | 200 | 270 | 990 | 91.9 | 82 | 25.5 | 600 | 1932 | 70 | 180 | 2980 | 28.1 | 14.0 | 12.8 |
| HAA400-6 | 220 | 295 | 990 | 92.1 | 82 | 28.0 | 600 | 2128 | 70 | 180 | 3100 | 30.8 | 15.4 | 14.0 |
| HAA400-6 | 250 | 335 | 990 | 92.4 | 82 | 31.7 | 600 | 2412 | 70 | 180 | 3220 | 34.9 | 17.4 | 15.9 |
| HAA400-6 | 280 | 375 | 990 | 92.6 | 82 | 35.4 | 600 | 2707 | 70 | 180 | 3350 | 38.9 | 19.5 | 17.7 |
| HAA400-6 | 315 | 420 | 990 | 92.8 | 82 | 39.8 | 600 | 3040 | 70 | 180 | 3500 | 43.8 | 21.9 | 19.9 |
| HAA450-6 | 355 | 475 | 985 | 93.1 | 83 | 44.2 | 600 | 3442 | 70 | 180 | 4210 | 48.6 | 24.3 | 22.1 |
| HAA450-6 | 400 | 535 | 985 | 93.3 | 83 | 49.7 | 600 | 3883 | 70 | 180 | 4310 | 54.7 | 27.3 | 24.9 |
| HAA450-6 | 450 | 605 | 985 | 93.5 | 83 | 55.8 | 600 | 4364 | 70 | 180 | 4540 | 61.4 | 30.7 | 27.9 |
| HAA450-6 | 500 | 670 | 985 | 93.8 | 83 | 61.8 | 600 | 4854 | 70 | 180 | 4680 | 68.0 | 34.0 | 30.9 |
| HAA500-6 | 560 | 750 | 990 | 93.9 | 84 | 68.3 | 600 | 5403 | 70 | 180 | 5100 | 75.1 | 37.6 | 34.2 |
| HAA500-6 | 630 | 845 | 990 | 94.1 | 84 | 76.6 | 600 | 6080 | 70 | 180 | 5200 | 84.3 | 42.1 | 38.3 |
| HAA500-6 | 710 | 950 | 990 | 94.3 | 84 | 86.2 | 600 | 6855 | 70 | 180 | 5340 | 94.8 | 47.4 | 43.1 |
| HAA500-6 | 800 | 1070 | 990 | 94.5 | 84 | 96.9 | 600 | 7718 | 70 | 180 | 5490 | 107 | 53.3 | 48.5 |
| HAA560-6 | 900 | 1210 | 990 | 94.6 | 85 | 108 | 650 | 8689 | 70 | 180 | 7050 | 119 | 59.4 | 54.0 |
| HAA560-6 | 1000 | 1340 | 990 | 94.8 | 85 | 119 | 650 | 9650 | 70 | 180 | 7250 | 131 | 65.5 | 59.5 |
| HAA560-6 | 1120 | 1500 | 990 | 94.9 | 85 | 133 | 650 | 10807 | 70 | 180 | 7450 | 146 | 73.2 | 66.5 |
| HAA630-6 | 1250 | 1680 | 990 | 95.0 | 86 | 147 | 650 | 12062 | 70 | 180 | 9600 | 162 | 80.9 | 73.5 |

# PERFORMANCE DATA

## HAA HIGH VOLTAGE THREE PHASE ASYNCHRONOUS MOTOR

| Motor Type | Rated Output | | Rated Speed | Efficiency | Power Factor | Current 3.3kV | | Torque | | | Approx Weight | FL Current | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Full Load | Locked Rotor | Full Load | Locked Rotor | Pull Out | | 3kV | 6kV | 6.6kV |
| | kW | HP | RPM | % | % | A | %FLC | Nm | %FLT | %FLT | kg | A | A | A |
| HAA630-6 | 1400 | 1880 | 990 | 95.2 | 86 | 165 | 650 | 13514 | 70 | 180 | 10100 | 182 | 90.8 | 82.5 |
| HAA630-6 | 1600 | 2140 | 990 | 95.3 | 86 | 188 | 650 | 15445 | 70 | 180 | 10500 | 207 | 103 | 94.0 |
| HAA710-6 | 2000 | 2670 | 994 | 95.5 | 86 | 234 | 650 | 19231 | 60 | 180 | 12500 | 257 | 129 | 117 |
| HAA710-6 | 2240 | 3000 | 994 | 95.6 | 86 | 262 | 650 | 21535 | 60 | 180 | 12800 | 288 | 144 | 131 |
| HAA710-6 | 2500 | 3330 | 994 | 95.7 | 86 | 292 | 650 | 24036 | 60 | 180 | 13200 | 321 | 161 | 146 |
| HAA710-6 | 2800 | 3730 | 994 | 95.8 | 86 | 327 | 650 | 26919 | 60 | 180 | 13600 | 360 | 180 | 164 |
| HAA710-6 | 3150 | 4200 | 994 | 95.9 | 86 | 367 | 650 | 30283 | 60 | 180 | 14000 | 404 | 202 | 184 |
| HAA710-6 | 3550 | 4760 | 994 | 96.0 | 86 | 413 | 650 | 34127 | 60 | 180 | 14500 | 454 | 227 | 207 |
| **8 POLE MOTORS** | | | | | | | | | | | | | | |
| HAA400-8 | 185 | 250 | 740 | 91.6 | 78 | 24.9 | 550 | 2393 | 80 | 180 | 3230 | 27.4 | 13.7 | 12.5 |
| HAA400-8 | 200 | 270 | 740 | 91.9 | 78 | 26.8 | 550 | 2579 | 80 | 180 | 3400 | 29.5 | 14.7 | 13.4 |
| HAA400-8 | 220 | 295 | 740 | 92.1 | 78 | 29.4 | 550 | 2844 | 80 | 180 | 3560 | 32.3 | 16.2 | 14.7 |
| HAA450-8 | 250 | 335 | 740 | 92.3 | 79 | 33.0 | 550 | 3226 | 80 | 180 | 4110 | 36.3 | 18.2 | 16.5 |
| HAA450-8 | 280 | 375 | 740 | 92.6 | 79 | 36.8 | 550 | 3619 | 80 | 180 | 4350 | 40.5 | 20.2 | 18.4 |
| HAA450-8 | 315 | 420 | 740 | 92.8 | 79 | 41.3 | 550 | 4070 | 80 | 180 | 4610 | 45.4 | 22.7 | 20.7 |
| HAA450-8 | 355 | 475 | 740 | 93.0 | 79 | 46.4 | 550 | 4580 | 80 | 180 | 4850 | 51.0 | 25.5 | 23.2 |
| HAA500-8 | 400 | 535 | 740 | 93.2 | 80 | 51.6 | 550 | 5168 | 80 | 180 | 4970 | 56.8 | 28.4 | 25.8 |
| HAA500-8 | 450 | 605 | 740 | 93.4 | 80 | 57.9 | 550 | 5815 | 80 | 180 | 5140 | 63.7 | 31.8 | 29.0 |
| HAA500-8 | 500 | 670 | 740 | 93.6 | 80 | 64.2 | 550 | 6453 | 80 | 180 | 5330 | 70.6 | 35.3 | 32.1 |
| HAA500-8 | 560 | 750 | 740 | 93.9 | 80 | 71.7 | 550 | 7228 | 80 | 180 | 5520 | 78.9 | 39.4 | 35.9 |
| HAA560-8 | 630 | 845 | 740 | 94.0 | 82 | 78.6 | 600 | 8140 | 70 | 180 | 7300 | 86.5 | 43.2 | 39.3 |
| HAA560-8 | 710 | 950 | 740 | 94.2 | 82 | 88.4 | 600 | 9169 | 70 | 180 | 7525 | 97.2 | 48.6 | 44.2 |
| HAA630-8 | 900 | 1210 | 740 | 94.5 | 84 | 109 | 600 | 11621 | 70 | 180 | 9140 | 120 | 60.0 | 54.5 |
| HAA630-8 | 1000 | 1340 | 740 | 94.7 | 84 | 121 | 600 | 12915 | 70 | 180 | 9410 | 133 | 66.6 | 60.5 |
| HAA630-8 | 1120 | 1500 | 740 | 94.8 | 84 | 135 | 600 | 14465 | 70 | 180 | 9910 | 149 | 74.3 | 67.5 |
| HAA630-8 | 1250 | 1680 | 740 | 94.9 | 84 | 151 | 600 | 16142 | 70 | 180 | 10300 | 166 | 83.1 | 75.5 |
| HAA710-8 | 1600 | 2130 | 740 | 95.0 | 85 | 191 | 650 | 20663 | 60 | 180 | 12800 | 210 | 105 | 95.5 |
| HAA710-8 | 1800 | 2400 | 740 | 95.1 | 85 | 214 | 650 | 23242 | 60 | 180 | 13300 | 235 | 118 | 107 |
| HAA710-8 | 2000 | 2670 | 740 | 95.2 | 85 | 238 | 650 | 25831 | 60 | 180 | 13800 | 262 | 131 | 119 |
| HAA710-8 | 2240 | 3000 | 740 | 95.3 | 85 | 266 | 650 | 28930 | 60 | 180 | 14300 | 293 | 146 | 133 |
| HAA710-8 | 2500 | 3330 | 740 | 95.4 | 85 | 296 | 650 | 32283 | 60 | 180 | 14800 | 326 | 163 | 148 |
| HAA800-8 | 2240 | 3000 | 740 | 95.3 | 85 | 266 | 650 | 28930 | 60 | 180 | 16000 | 293 | 146 | 133 |
| HAA710-8 | 2500 | 3330 | 740 | 95.4 | 85 | 296 | 650 | 32283 | 60 | 180 | 16800 | 326 | 163 | 148 |
| HAA710-8 | 2800 | 3730 | 740 | 95.5 | 85 | 332 | 650 | 36157 | 60 | 180 | 17600 | 365 | 183 | 166 |
| HAA710-8 | 3150 | 4200 | 740 | 95.6 | 86 | 368 | 650 | 40678 | 60 | 180 | 18400 | 405 | 202 | 184 |
| HAA710-8 | 3550 | 4760 | 740 | 95.7 | 86 | 415 | 650 | 45846 | 60 | 180 | 19200 | 457 | 228 | 208 |
| HAA710-8 | 4000 | 5330 | 740 | 95.8 | 86 | 467 | 650 | 51661 | 60 | 180 | 20000 | 514 | 257 | 234 |

# PERFORMANCE DATA

## HAA 11KV HIGH VOLTAGE THREE PHASE ASYNCHRONOUS MOTOR

| Motor Type | Rated Output | | Rated Speed | Efficiency | Power Factor | Current 11kV | | Torque | | | Approx Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Full Load | Locked Rotor | Full Load | Locked Rotor | Pull Out | |
| | kW | HP | RPM | % | % | A | %FLC | Nm | %FLT | %FLT | kg |
| **2 POLE MOTORS** | | | | | | | | | | | |
| HAA400-2 | 200 | 270 | 2975 | 91.3 | 85 | 14.9 | 750 | 647 | 60 | 180 | 2995 |
| HAA400-2 | 220 | 295 | 2975 | 91.6 | 85 | 16.3 | 750 | 706 | 60 | 180 | 2995 |
| HAA400-2 | 250 | 335 | 2975 | 91.8 | 85 | 18.5 | 750 | 804 | 60 | 180 | 3100 |
| HAA450-2 | 280 | 375 | 2975 | 92.1 | 87 | 20.2 | 700 | 902 | 60 | 180 | 3500 |
| HAA450-2 | 315 | 420 | 2975 | 92.4 | 87 | 22.6 | 700 | 1010 | 60 | 180 | 3565 |
| HAA450-2 | 355 | 475 | 2980 | 92.8 | 87 | 25.4 | 700 | 1138 | 60 | 180 | 3670 |
| HAA450-2 | 400 | 535 | 2980 | 93.1 | 87 | 28.5 | 700 | 1285 | 60 | 180 | 3760 |
| HAA450-2 | 450 | 605 | 2980 | 93.5 | 87 | 31.9 | 700 | 1442 | 60 | 180 | 3850 |
| HAA450-2 | 500 | 670 | 2980 | 93.8 | 87 | 35.4 | 700 | 1608 | 60 | 180 | 3960 |
| HAA500-2 | 560 | 750 | 2980 | 93.9 | 88 | 39.1 | 700 | 1795 | 60 | 180 | 4880 |
| HAA500-2 | 630 | 845 | 2980 | 94.1 | 88 | 43.9 | 700 | 2020 | 60 | 180 | 4990 |
| HAA500-2 | 710 | 950 | 2980 | 94.2 | 88 | 49.5 | 700 | 2275 | 60 | 180 | 5120 |
| HAA500-2 | 800 | 1070 | 2980 | 94.3 | 88 | 55.7 | 700 | 2569 | 60 | 180 | 5280 |
| HAA500-2 | 900 | 1210 | 2980 | 94.4 | 88 | 62.6 | 700 | 2883 | 60 | 180 | 5420 |
| HAA560-2 | 1000 | 1340 | 2980 | 94.6 | 89 | 68.6 | 700 | 3207 | 60 | 180 | 8860 |
| HAA560-2 | 1120 | 1500 | 2980 | 94.8 | 89 | 76.6 | 700 | 3589 | 60 | 180 | 9060 |
| HAA560-2 | 1250 | 1680 | 2980 | 94.9 | 89 | 85.4 | 700 | 4011 | 60 | 180 | 9280 |
| HAA630-2 | 1400 | 1880 | 2982 | 95.0 | 89 | 95.6 | 700 | 4491 | 60 | 180 | 9560 |
| HAA630-2 | 1600 | 2140 | 2982 | 95.2 | 89 | 109 | 700 | 5129 | 60 | 180 | 9950 |
| HAA630-2 | 1800 | 2410 | 2982 | 95.3 | 89 | 123 | 700 | 5766 | 60 | 180 | 10380 |
| HAA630-2 | 2000 | 2680 | 2982 | 95.4 | 89 | 136 | 700 | 6414 | 60 | 180 | 10820 |
| **4 POLE MOTORS** | | | | | | | | | | | |
| HAA400-4 | 200 | 270 | 1485 | 91.1 | 83 | 15.3 | 700 | 1285 | 70 | 180 | 2950 |
| HAA400-4 | 220 | 295 | 1485 | 91.4 | 83 | 16.7 | 700 | 1412 | 70 | 180 | 3035 |
| HAA400-4 | 250 | 335 | 1485 | 9 1.6 | 83 | 19.0 | 700 | 1608 | 70 | 180 | 3130 |
| HAA450-4 | 280 | 375 | 1485 | 91.8 | 86 | 20.5 | 700 | 1804 | 70 | 180 | 3435 |
| HAA450-4 | 315 | 420 | 1485 | 92.1 | 86 | 23.0 | 700 | 2030 | 70 | 180 | 3495 |
| HAA450-4 | 355 | 475 | 1485 | 92.4 | 86 | 25.8 | 700 | 2285 | 70 | 180 | 3615 |
| HAA450-4 | 400 | 535 | 1485 | 92.6 | 86 | 29.0 | 700 | 2569 | 70 | 180 | 3660 |
| HAA450-4 | 450 | 605 | 1485 | 93.0 | 86 | 32.4 | 700 | 2893 | 70 | 180 | 3740 |
| HAA450-4 | 500 | 670 | 1485 | 93.3 | 86 | 36.0 | 700 | 3217 | 70 | 180 | 3880 |
| HAA500-4 | 560 | 750 | 1485 | 93.5 | 87 | 39.7 | 700 | 3599 | 70 | 180 | 5180 |
| HAA500-4 | 630 | 845 | 1485 | 93.8 | 87 | 44.5 | 700 | 4050 | 70 | 180 | 5430 |
| HAA500-4 | 710 | 950 | 1485 | 94.1 | 87 | 50.0 | 700 | 4570 | 70 | 180 | 5690 |
| HAA500-4 | 800 | 1070 | 1485 | 94.3 | 87 | 56.3 | 700 | 5148 | 70 | 180 | 5940 |
| HAA500-4 | 900 | 1210 | 1485 | 94.5 | 87 | 63.2 | 700 | 5796 | 70 | 180 | 6240 |

# PERFORMANCE DATA

## HAA 11KV HIGH VOLTAGE THREE PHASE ASYNCHRONOUS MOTOR

| Motor Type | Rated Output | | Rated Speed | Efficiency | Power Factor | Current 11kV | | Torque | | | Approx Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Full Load | Locked Rotor | Full Load | Locked Rotor | Pull Out | |
| | kW | HP | RPM | % | % | A | %FLC | Nm | %FLT | %FLT | kg |
| HAA560-4 | 1000 | 1340 | 1490 | 94.6 | 87 | 70.1 | 650 | 6414 | 60 | 180 | 8610 |
| HAA560-4 | 1120 | 1500 | 1490 | 94.7 | 87 | 78.5 | 650 | 7188 | 60 | 180 | 9010 |
| HAA560-4 | 1250 | 1680 | 1490 | 94.9 | 87 | 87.4 | 650 | 8022 | 60 | 180 | 9510 |
| HAA560-4 | 1400 | 1880 | 1490 | 95.0 | 87 | 97.8 | 650 | 8983 | 60 | 180 | 9900 |
| HAA630-4 | 1400 | 1880 | 1490 | 95.0 | 88 | 96.7 | 650 | 8983 | 60 | 180 | 9700 |
| HAA630-4 | 1600 | 2140 | 1492 | 95.1 | 88 | 110 | 650 | 10248 | 60 | 180 | 9900 |
| HAA630-4 | 1800 | 2410 | 1492 | 95.2 | 88 | 124 | 650 | 11533 | 60 | 180 | 10100 |
| HAA630-4 | 2000 | 2680 | 1492 | 95.4 | 88 | 138 | 650 | 12807 | 60 | 180 | 10300 |
| HAA710-4 | 2240 | 3000 | 1488 | 95.5 | 86 | 158 | 650 | 14386 | 60 | 180 | 11500 |
| HAA710-4 | 2500 | 3330 | 1488 | 95.6 | 86 | 176 | 650 | 16053 | 60 | 180 | 12000 |
| HAA710-4 | 2800 | 3730 | 1488 | 95.6 | 86 | 197 | 650 | 17985 | 60 | 180 | 12500 |
| HAA710-4 | 3150 | 4200 | 1488 | 95.7 | 86 | 221 | 650 | 20231 | 60 | 180 | 13000 |
| HAA710-4 | 3550 | 4760 | 1488 | 95.7 | 87 | 246 | 650 | 22477 | 60 | 180 | 13500 |
| HAA710-4 | 4000 | 5330 | 1488 | 95.8 | 87 | 277 | 650 | 25693 | 60 | 180 | 14000 |
| **6 POLE MOTORS** | | | | | | | | | | | |
| HAA450-6 | 250 | 335 | 980 | 91.6 | 82 | 19.2 | 600 | 2442 | 70 | 180 | 4990 |
| HAA450-6 | 280 | 375 | 980 | 91.9 | 82 | 21.5 | 600 | 2726 | 70 | 180 | 5140 |
| HAA450-6 | 315 | 420 | 980 | 92.2 | 82 | 24.0 | 600 | 3069 | 70 | 180 | 5300 |
| HAA450-6 | 355 | 475 | 980 | 92.4 | 82 | 27.0 | 600 | 3462 | 70 | 180 | 5520 |
| HAA500-6 | 400 | 535 | 995 | 92.5 | 84 | 29.7 | 650 | 3844 | 70 | 180 | 5010 |
| HAA500-6 | 450 | 605 | 995 | 92.8 | 84 | 33.3 | 650 | 4325 | 70 | 180 | 5160 |
| HAA500-6 | 500 | 670 | 995 | 93.1 | 84 | 36.9 | 650 | 4805 | 70 | 180 | 6350 |
| HAA500-6 | 560 | 750 | 995 | 93.4 | 84 | 41.2 | 650 | 5374 | 70 | 180 | 5540 |
| HAA500-6 | 630 | 845 | 995 | 93.7 | 84 | 46.2 | 650 | 6051 | 70 | 180 | 5750 |
| HAA560-6 | 710 | 950 | 995 | 93.9 | 85 | 51.4 | 650 | 6816 | 70 | 180 | 8260 |
| HAA560-6 | 800 | 1070 | 995 | 94.1 | 85 | 57.7 | 650 | 7688 | 70 | 180 | 8780 |
| HAA560-6 | 900 | 1210 | 995 | 94.3 | 85 | 64.8 | 650 | 8640 | 70 | 180 | 9330 |
| HAA560-6 | 1000 | 1340 | 995 | 94.5 | 85 | 71.9 | 650 | 9601 | 70 | 180 | 9820 |
| HAA630-6 | 1120 | 1500 | 995 | 94.7 | 86 | 79.4 | 600 | 10758 | 60 | 180 | 9400 |
| HAA630-6 | 1250 | 1680 | 995 | 94.9 | 86 | 88.4 | 600 | 12003 | 60 | 180 | 9900 |
| HAA630-6 | 1400 | 1880 | 995 | 95.1 | 86 | 98.8 | 600 | 13445 | 60 | 180 | 10400 |
| HAA630-6 | 1600 | 2140 | 995 | 95.2 | 86 | 113 | 600 | 15367 | 60 | 180 | 10900 |
| HAA710-6 | 1800 | 2400 | 993 | 95.4 | 84 | 130 | 650 | 17319 | 60 | 180 | 11200 |
| HAA710-6 | 2000 | 2670 | 993 | 95.5 | 84 | 144 | 650 | 19250 | 60 | 180 | 11700 |
| HAA710-6 | 2240 | 3000 | 993 | 95.5 | 84 | 161 | 650 | 21555 | 60 | 180 | 12400 |
| HAA710-6 | 2500 | 3330 | 993 | 95.6 | 84 | 180 | 650 | 24056 | 60 | 180 | 12900 |
| HAA710-6 | 2800 | 3730 | 993 | 95.7 | 84 | 201 | 650 | 26949 | 60 | 180 | 13300 |

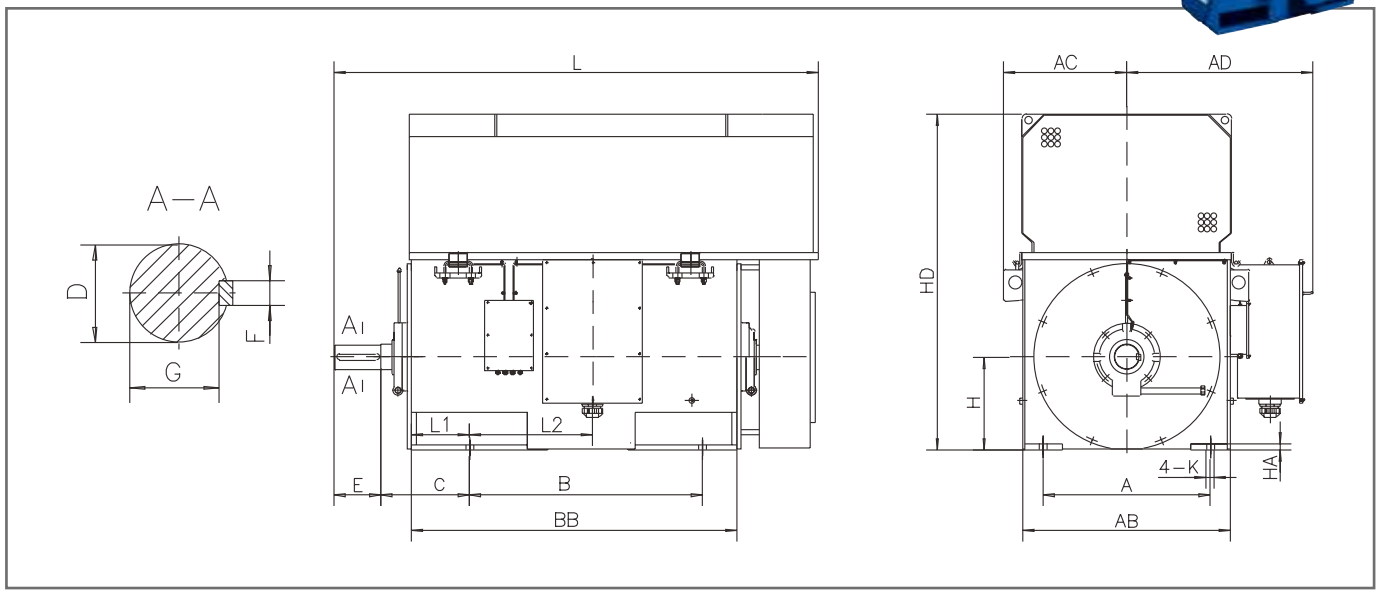
# PERFORMANCE DATA

## HAA 11KV HIGH VOLTAGE THREE PHASE ASYNCHRONOUS MOTOR

| Motor Type | Rated Output | | Rated Speed | Efficiency | Power Factor | Current 11kV | | Torque | | | Approx Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Full Load | Locked Rotor | Full Load | Locked Rotor | Pull Out | |
| | kW | HP | RPM | % | % | A | %FLC | Nm | %FLT | %FLT | kg |
| 8 POLE MOTORS | | | | | | | | | | | |
| HAA450-8 | 200 | 270 | 745 | 91.1 | 75 | 16.9 | 550 | 2569 | 70 | 180 | 4960 |
| HAA450-8 | 220 | 295 | 745 | 91.4 | 75 | 18.5 | 550 | 2824 | 70 | 180 | 5080 |
| HAA500-8 | 250 | 335 | 745 | 91.7 | 77 | 20.4 | 600 | 3207 | 70 | 180 | 5100 |
| HAA500-8 | 280 | 375 | 745 | 92.0 | 77 | 22.8 | 600 | 3589 | 70 | 180 | 5250 |
| HAA500-8 | 315 | 420 | 745 | 92.3 | 78 | 25.3 | 600 | 4040 | 70 | 180 | 5420 |
| HAA500-8 | 355 | 475 | 745 | 92.6 | 78 | 28.4 | 600 | 4550 | 70 | 180 | 5570 |
| HAA500-8 | 400 | 535 | 745 | 92.8 | 79 | 31.5 | 600 | 5129 | 70 | 180 | 5720 |
| HAA500-8 | 450 | 605 | 745 | 93.0 | 79 | 35.4 | 600 | 5776 | 70 | 180 | 5880 |
| HAA500-8 | 500 | 670 | 745 | 93.2 | 79 | 39.2 | 600 | 6414 | 70 | 180 | 6040 |
| HAA560-8 | 500 | 670 | 745 | 93.2 | 80 | 38.7 | 600 | 6414 | 70 | 180 | 7720 |
| HAA560-8 | 560 | 750 | 745 | 93.5 | 80 | 43.2 | 600 | 7188 | 70 | 180 | 8160 |
| HAA560-8 | 630 | 845 | 745 | 93.8 | 81 | 47.9 | 600 | 8081 | 70 | 180 | 8640 |
| HAA560-8 | 710 | 950 | 745 | 94.0 | 81 | 53.8 | 600 | 9110 | 70 | 180 | 9160 |
| HAA630-8 | 710 | 950 | 742 | 94.0 | 83 | 52.5 | 600 | 9140 | 70 | 180 | 8800 |
| HAA630-8 | 800 | 1070 | 742 | 94.2 | 83 | 59.1 | 600 | 10307 | 70 | 180 | 9020 |
| HAA630-8 | 900 | 1210 | 742 | 94.4 | 83 | 66.3 | 600 | 11591 | 70 | 180 | 9350 |
| HAA630-8 | 1000 | 1340 | 742 | 94.6 | 83 | 73.5 | 600 | 12876 | 70 | 180 | 9700 |
| HAA630-8 | 1120 | 1500 | 742 | 94.7 | 83 | 82.3 | 600 | 14426 | 70 | 180 | 10500 |
| HAA710-8 | 1400 | 1870 | 740 | 94.9 | 83 | 103 | 650 | 18083 | 60 | 180 | 12400 |
| HAA710-8 | 1600 | 2130 | 740 | 95.0 | 83 | 117 | 650 | 20663 | 60 | 180 | 12800 |
| HAA710-8 | 1800 | 2400 | 740 | 95.1 | 83 | 132 | 650 | 23242 | 60 | 180 | 13200 |
| HAA710-8 | 2000 | 2670 | 740 | 95.1 | 83 | 146 | 650 | 25831 | 60 | 180 | 13600 |
| HAA710-8 | 2240 | 3000 | 740 | 95.2 | 83 | 164 | 650 | 28930 | 60 | 180 | 14000 |
| HAA710-8 | 2500 | 3330 | 740 | 95.3 | 83 | 182 | 650 | 32283 | 60 | 180 | 14500 |

# DIMENSIONAL DATA

## HAA 11KV HIGH VOLTAGE THREE PHASE ASYNCHRONOUS MOTOR (H400-630)




### MOUNTING DIMENSIONS FOR INSTALLATION

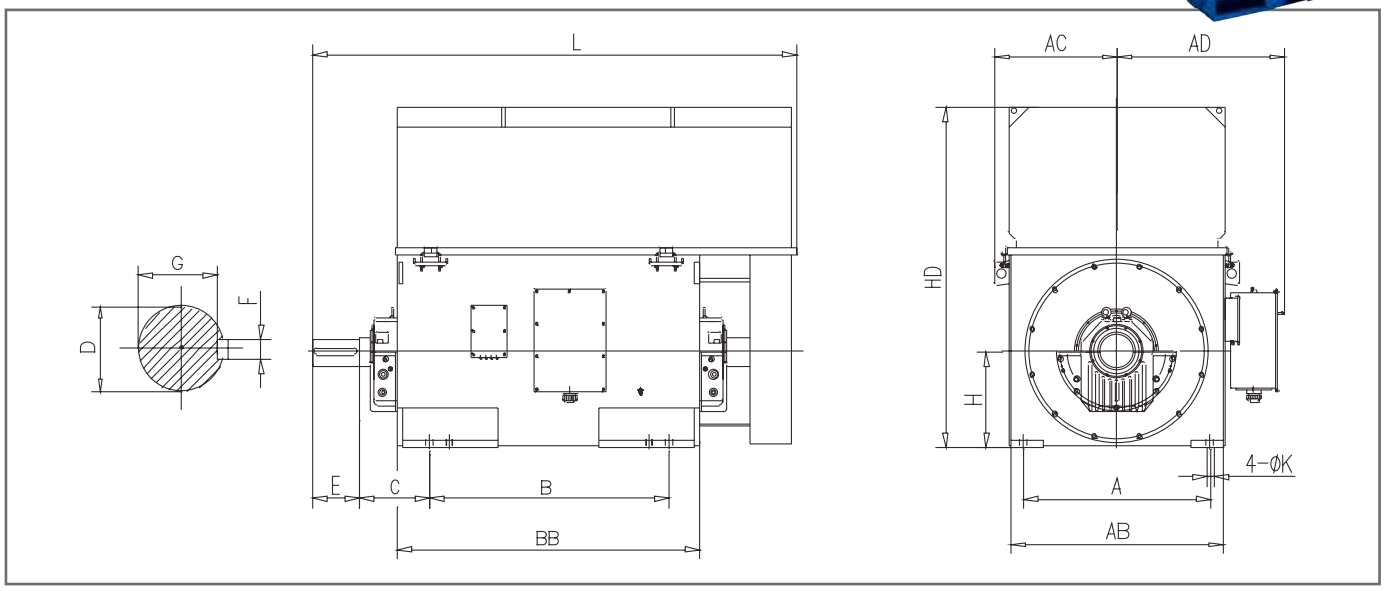
| Frame size | Poles | Mounting Dimensions (mm) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | F | G | H | K1 |
| 400 | 2 | 710 | 1000 | 375 | 80 | 170 | 22 | 71 | 400 | 35 |
| 450 | 2 | 800 | 1120 | 400 | 90 | 170 | 25 | 81 | 450 | 35 |
| 500 | 2 | 900 | 1250 | 560 | 100 | 210 | 28 | 90 | 500 | 42 |
| 560 | 2 | 1000 | 1400 | 560 | 130 | 250 | 32 | 119 | 560 | 42 |
| 630 | 2 | 1120 | 1600 | 560 | 140 | 250 | 36 | 128 | 630 | 48 |
| 500 | 4 | 900 | 1250 | 475 | 120 | 210 | 32 | 109 | 500 | 42 |
| 560 | 4 | 1000 | 1400 | 500 | 150 | 250 | 36 | 138 | 560 | 42 |
| 630 | 4 | 1120 | 1600 | 530 | 170 | 300 | 40 | 157 | 630 | 48 |
| 400 | 4~8 | 710 | 1000 | 335 | 110 | 210 | 28 | 100 | 400 | 35 |
| 450 | 4~8 | 800 | 1120 | 355 | 110 | 210 | 28 | 100 | 450 | 35 |
| 500 | 6~12 | 900 | 1250 | 475 | 130 | 250 | 32 | 119 | 500 | 42 |
| 560 | 6~12 | 1000 | 1400 | 500 | 160 | 300 | 40 | 147 | 560 | 42 |
| 630 | 6~12 | 1120 | 1600 | 530 | 180 | 300 | 45 | 165 | 630 | 48 |

### OUTLINE DIMENSIONS FOR INSTALLATION

| Frame Size | Poles | Outline Dimensions (mm) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | AC | AD | AB | BB | HA | HD | L1 | L2 | L |
| 400 | 2 | 560 | 900 | 908 | 1450 | 36 | 1455 | 249 | 606 | 2200 |
| 450 | 2 | 605 | 934 | 1000 | 1530 | 40 | 1650 | 250 | 515 | 2175 |
| 500 | 2 | 660 | 1115 | 1112 | 1720 | 50 | 2200 | 330 | 990 | 2920 |
| 560 | 2 | 740 | 1200 | 1216 | 1940 | 55 | 2500 | 270 | 1120 | 3400 |
| 630 | 2 | 850 | 1350 | 1396 | 2080 | 55 | 2900 | 265 | 1320 | 3430 |
| 500 | 4 | 660 | 1000 | 1112 | 1720 | 35 | 1805 | 310 | 669 | 2535 |
| 560 | 4 | 740 | 1050 | 1216 | 1938 | 45 | 2120 | 320 | 755 | 2840 |
| 400 | 4~6 | 560 | 900 | 900 | 1510 | 30 | 1455 | 209 | 626 | 2241 |
| 450 | 4~8 | 600 | 926 | 926 | 1638 | 32 | 1650 | 242 | 577 | 2325 |
| 630 | 4~12 | 825 | 1150 | 1150 | 2120 | 50 | 2155 | 365 | 685 | 3044 |
| 500 | 6~12 | 660 | 1000 | 1000 | 1720 | 35 | 1805 | 310 | 669 | 2572 |
| 560 | 6~12 | 740 | 1050 | 1050 | 1938 | 45 | 2120 | 320 | 755 | 2890 |

# DIMENSIONAL DATA

## HAA SERIES LARGE THREE PHASE ASYNCHRONOUS MOTOR (H710-1000)




### MOUNTING DIMENSIONS FOR INSTALLATION

| Frame Size | Poles | Mounting Dimensions (mm) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | F | G | H | K1 |
| 710 | 4~16 | 1400 | 1800 | 530 | 200 | 350 | 45 | 185 | 710 | 56 |
| 800 | 4~16 | 1600 | 200 | 530 | 220 | 350 | 50 | 203 | 800 | 56 |
| 900 | 4~16 | 1800 | 224 | 600 | 250 | 410 | 56 | 230 | 900 | 66 |
| 1000 | 4~16 | 2000 | 2500 | 600 | 280 | 470 | 63 | 260 | 1000 | 66 |

### OUTLINE DIMENSIONS FOR INSTALLATION

| Frame Size | Poles | Outline Dimensions (mm) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | AC | AD | AB | BB | HD | L | (DE) | (NDE) |
| 710 | 4 | 930 | 1350 | 1600 | 2265 | 2650 | 3600 | 18-180B | 18-180BJ |
| | 6~16 | | | | | | | 18-200B | 18-200BJ |
| 800 | 4 | 1028 | 1562 | 1800 | 2300 | 2900 | 3800 | 18-200B | 18-200BJ |
| | 6~16 | | | | | | | 22-225B | 22-225BJ |
| 900 | 4 | 1140 | 1690 | 2000 | 2600 | 3200 | 4200 | 18-200B | 18-200BJ |
| | 6~16 | | | | | | | 22-250B | 22-250BJ |
| 1000 | 4 | 1280 | 1820 | 2300 | 2900 | 3400 | 4600 | 22-250B | 22-250BJ |
| | 6~16 | | | | | | | 28-280B | 28-280BJ |

# PERFORMANCE DATA

## HDP HIGH VOLTAGE THREE PHASE ASYNCHRONOUS MOTOR

| Motor Type | Rated Output | | Rated Speed | Efficiency | Power Factor | Current 3.3kV | | Torque | | | Approx Weight | FL Current | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Full Load | Locked Rotor | Full Load | Locked Rotor | Pull Out | | 3kV | 6kV | 6.6kV |
| | kW | HP | RPM | % | % | A | %FLC | Nm | %FLT | %FLT | kg | A | A | A |
| **2 POLE MOTORS** | | | | | | | | | | | | | | |
| HDP355-2 | 220 | 295 | 2975 | 92.6 | 86 | 26.6 | 700 | 706 | 60 | 180 | 2020 | 29.3 | 14.6 | 13.3 |
| HDP355-2 | 250 | 335 | 2975 | 92.8 | 86 | 30.1 | 700 | 804 | 60 | 180 | 2200 | 33.1 | 16.6 | 15.1 |
| HDP355-2 | 280 | 375 | 2975 | 93.0 | 86 | 33.7 | 700 | 902 | 60 | 180 | 2370 | 37.1 | 18.5 | 16.9 |
| HDP355-2 | 315 | 420 | 2975 | 93.3 | 86 | 37.8 | 700 | 1010 | 60 | 180 | 2480 | 41.6 | 20.8 | 18.9 |
| HDP355-2 | 355 | 475 | 2975 | 93.6 | 86 | 42.4 | 700 | 1138 | 60 | 180 | 2700 | 46.6 | 23.3 | 21.2 |
| HDP355-2 | 400 | 535 | 2975 | 93.9 | 86 | 47.7 | 700 | 1285 | 60 | 180 | 2850 | 52.5 | 26.2 | 23.9 |
| HDP400-2 | 450 | 605 | 2980 | 94.1 | 86 | 53.5 | 700 | 1442 | 60 | 180 | 2630 | 58.9 | 29.4 | 26.8 |
| HDP400-2 | 500 | 670 | 2980 | 94.3 | 87 | 58.6 | 700 | 1608 | 60 | 180 | 2750 | 64.5 | 32.2 | 29.3 |
| HDP400-2 | 560 | 750 | 2980 | 94.5 | 87 | 65.5 | 700 | 1795 | 60 | 180 | 2880 | 72 | 36.0 | 32.8 |
| HDP400-2 | 630 | 845 | 2980 | 94.7 | 87 | 73.6 | 700 | 2020 | 60 | 180 | 3020 | 81 | 40.5 | 36.8 |
| HDP450-2 | 710 | 950 | 2980 | 94.8 | 87 | 82.8 | 700 | 2275 | 60 | 180 | 3360 | 91 | 45.5 | 41.4 |
| HDP450-2 | 800 | 1070 | 2980 | 95.0 | 87 | 93.1 | 700 | 2569 | 60 | 180 | 3510 | 102 | 51.2 | 46.6 |
| HDP450-2 | 900 | 1210 | 2980 | 95.2 | 87 | 105 | 700 | 2883 | 60 | 180 | 3600 | 116 | 57.8 | 52.5 |
| HDP450-2 | 1000 | 1340 | 2980 | 95.4 | 88 | 115 | 700 | 3207 | 60 | 180 | 3780 | 127 | 63.3 | 57.5 |
| HDP500-2 | 1120 | 1500 | 2980 | 95.4 | 88 | 128 | 700 | 3589 | 60 | 180 | 5690 | 141 | 70.4 | 64.0 |
| HDP500-2 | 1250 | 1680 | 2980 | 95.6 | 88 | 143 | 700 | 4011 | 60 | 180 | 5940 | 157 | 78.7 | 71.5 |
| HDP500-2 | 1400 | 1880 | 2980 | 95.7 | 88 | 160 | 700 | 4491 | 60 | 180 | 6190 | 176 | 88.0 | 80.0 |
| HDP500-2 | 1600 | 2140 | 2980 | 95.8 | 88 | 183 | 700 | 5129 | 60 | 180 | 6450 | 201 | 101 | 91.5 |
| HDP560-2 | 1800 | 2410 | 2980 | 95.9 | 88 | 205 | 700 | 5776 | 60 | 180 | 7250 | 226 | 113 | 103 |
| HDP560-2 | 2000 | 2680 | 2980 | 96.0 | 88 | 228 | 700 | 6414 | 60 | 180 | 7700 | 251 | 125 | 114 |
| HDP560-2 | 2240 | 3000 | 2980 | 96.1 | 88 | 255 | 700 | 7188 | 60 | 180 | 8200 | 281 | 140 | 128 |
| HDP630-2 | 2500 | 3350 | 2982 | 96.2 | 89 | 281 | 700 | 8012 | 60 | 180 | 8800 | 309 | 155 | 141 |
| HDP630-2 | 2800 | 3750 | 2982 | 96.3 | 89 | 314 | 700 | 8973 | 60 | 180 | 9100 | 345 | 173 | 157 |
| HDP630-2 | 3150 | 4220 | 2982 | 96.4 | 89 | 353 | 700 | 10091 | 60 | 180 | 9400 | 388 | 194 | 177 |
| **4 POLE MOTORS** | | | | | | | | | | | | | | |
| HDP355-4 | 185 | 250 | 1485 | 92.3 | 85 | 22.7 | 650 | 1187 | 80 | 180 | 1560 | 25.0 | 12.5 | 11.4 |
| HDP355-4 | 200 | 270 | 1485 | 92.5 | 85 | 24.5 | 650 | 1285 | 80 | 180 | 1650 | 27.0 | 13.5 | 12.3 |
| HDP355-4 | 220 | 295 | 1485 | 92.8 | 85 | 26.8 | 650 | 1412 | 80 | 180 | 1780 | 29.5 | 14.7 | 13.4 |
| HDP355-4 | 250 | 335 | 1485 | 93.0 | 85 | 30.4 | 650 | 1608 | 80 | 180 | 1900 | 33.4 | 16.7 | 15.2 |
| HDP355-4 | 280 | 375 | 1485 | 93.2 | 86 | 33.6 | 650 | 1804 | 80 | 180 | 2070 | 37.0 | 18.5 | 16.8 |
| HDP355-4 | 315 | 420 | 1485 | 93.4 | 86 | 37.7 | 650 | 2030 | 80 | 180 | 2320 | 41.5 | 20.7 | 18.9 |
| HDP400-4 | 355 | 475 | 1485 | 93.5 | 86 | 42.5 | 650 | 2285 | 80 | 180 | 2250 | 46.8 | 23.4 | 21.3 |
| HDP400-4 | 400 | 535 | 1485 | 93.7 | 86 | 47.8 | 650 | 2569 | 80 | 180 | 2320 | 52.6 | 26.3 | 23.9 |
| HDP400-4 | 450 | 605 | 1485 | 93.9 | 86 | 53.6 | 650 | 2893 | 80 | 180 | 2450 | 59.0 | 29.5 | 26.8 |
| HDP400-4 | 500 | 670 | 1485 | 94.0 | 87 | 58.8 | 650 | 3217 | 80 | 180 | 2530 | 64.7 | 32.3 | 29.4 |
| HDP400-4 | 560 | 750 | 1485 | 94.3 | 87 | 65.7 | 650 | 3599 | 80 | 180 | 2630 | 72.3 | 36.1 | 32.9 |

# PERFORMANCE DATA

## HDP HIGH VOLTAGE THREE PHASE ASYNCHRONOUS MOTOR

| Motor Type | Rated Output | | Rated Speed | Efficiency | Power Factor | Current 3.3kV | | Torque | | | Approx Weight | FL Current | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Full Load | Locked Rotor | Full Load | Locked Rotor | Pull Out | | 3kV | 6kV | 6.6kV |
| | kW | HP | RPM | % | % | A | %FLC | Nm | %FLT | %FLT | kg | A | A | A |
| HDP450-4 | 630 | 845 | 1485 | 94.5 | 87 | 73.7 | 650 | 4050 | 80 | 180 | 3390 | 81.1 | 40.5 | 36.9 |
| HDP450-4 | 710 | 950 | 1485 | 94.7 | 87 | 82.9 | 650 | 4570 | 80 | 180 | 3490 | 91.2 | 45.6 | 41.5 |
| HDP450-4 | 800 | 1070 | 1485 | 94.9 | 87 | 93.2 | 650 | 5148 | 80 | 180 | 3600 | 103 | 51.3 | 46.6 |
| HDP450-4 | 900 | 1210 | 1485 | 95.1 | 87 | 105 | 650 | 5796 | 80 | 180 | 3750 | 116 | 57.8 | 52.5 |
| HDP500-4 | 1000 | 1340 | 1485 | 95.1 | 87 | 116 | 650 | 6433 | 70 | 180 | 5000 | 128 | 63.8 | 58.0 |
| HDP500-4 | 1120 | 1500 | 1485 | 95.2 | 88 | 129 | 650 | 7208 | 70 | 180 | 5250 | 142 | 71.0 | 64.5 |
| HDP500-4 | 1250 | 1680 | 1485 | 95.4 | 88 | 143 | 650 | 8041 | 70 | 180 | 5500 | 157 | 78.7 | 71.5 |
| HDP500-4 | 1400 | 1880 | 1485 | 95.5 | 88 | 160 | 650 | 9012 | 70 | 180 | 5750 | 176 | 88.0 | 80.0 |
| HDP560-4 | 1600 | 2140 | 1485 | 95.6 | 89 | 181 | 650 | 10297 | 60 | 180 | 6050 | 199 | 99.6 | 90.5 |
| HDP560-4 | 1800 | 2410 | 1485 | 95.7 | 89 | 203 | 650 | 11582 | 60 | 180 | 6350 | 223 | 112 | 102 |
| HDP560-4 | 2000 | 2680 | 1485 | 95.9 | 89 | 225 | 650 | 12866 | 60 | 180 | 6500 | 248 | 124 | 113 |
| HDP630-4 | 2240 | 3000 | 1492 | 96.0 | 89 | 252 | 650 | 14347 | 60 | 180 | 7550 | 277 | 139 | 126 |
| HDP630-4 | 2500 | 3350 | 1492 | 96.1 | 89 | 281 | 650 | 16014 | 60 | 180 | 7910 | 309 | 155 | 141 |
| HDP630-4 | 2800 | 3750 | 1493 | 96.2 | 89 | 315 | 650 | 17927 | 60 | 180 | 8300 | 347 | 173 | 158 |
| HDP710-4 | 3150 | 4200 | 1490 | 96.3 | 87 | 362 | 650 | 20202 | so | 180 | 13500 | 398 | 199 | 181 |
| HDP710-4 | 3550 | 4760 | 1490 | 96.4 | 87 | 407 | 650 | 22771 | so | 180 | 13800 | 448 | 224 | 204 |
| HDP710-4 | 4000 | 5330 | 1490 | 96.5 | 87 | 458 | 650 | 25654 | 50 | 180 | 14000 | 504 | 252 | 229 |
| HDP710-4 | 4500 | 6000 | 1490 | 96.5 | 87 | 515 | 650 | 28861 | so | 180 | 14200 | 567 | 283 | 258 |
| HDP710-4 | 5000 | 6670 | 1490 | 96.6 | 88 | 566 | 650 | 32068 | 50 | 180 | 14500 | 623 | 311 | 283 |
| HDP710-4 | 5600 | 7470 | 1490 | 96.6 | 88 | 634 | 650 | 35922 | so | 180 | 15000 | 697 | 349 | 317 |
| **6 POLE MOTORS** | | | | | | | | | | | | | | |
| HDP355-6 | 185 | 250 | 985 | 91.7 | 82 | 23.7 | 600 | 1795 | 80 | 180 | 1860 | 26.1 | 13.0 | 11.9 |
| HDP355-6 | 200 | 270 | 985 | 92.0 | 82 | 25.5 | 600 | 1942 | 80 | 180 | 1980 | 28.1 | 14.0 | 12.8 |
| HDP355-6 | 220 | 295 | 985 | 92.3 | 82 | 28.0 | 600 | 2138 | 80 | 180 | 2070 | 30.8 | 15.4 | 14.0 |
| HDP355-6 | 250 | 335 | 985 | 92.6 | 82 | 31.7 | 600 | 2422 | 80 | 180 | 2190 | 34.9 | 17.4 | 15.9 |
| HDP400-6 | 280 | 375 | 985 | 92.8 | 83 | 35.0 | 600 | 2716 | 80 | 180 | 2810 | 38.5 | 19.3 | 17.5 |
| HDP400-6 | 315 | 420 | 985 | 93.1 | 83 | 39.2 | 600 | 3060 | 80 | 180 | 2980 | 43.1 | 21.6 | 19.6 |
| HDP400-6 | 355 | 475 | 985 | 93.3 | 83 | 44.1 | 600 | 3442 | 80 | 180 | 3170 | 48.5 | 24.3 | 22.1 |
| HDP400-6 | 400 | 535 | 985 | 93.5 | 83 | 49.6 | 600 | 3883 | 80 | 180 | 3320 | 54.6 | 27.3 | 24.8 |
| HDP450-6 | 450 | 605 | 990 | 93.7 | 84 | 55.0 | 600 | 4344 | 80 | 180 | 3170 | 60.5 | 30.3 | 27.5 |
| HDP450-6 | 500 | 670 | 990 | 94.0 | 85 | 60.2 | 600 | 4825 | 80 | 180 | 3500 | 66.2 | 33.1 | 30.1 |
| HDP450-6 | 560 | 750 | 990 | 94.2 | 85 | 67.3 | 600 | 5403 | 80 | 180 | 3750 | 74.0 | 37.0 | 33.7 |
| HDP450-6 | 630 | 845 | 990 | 94.4 | 85 | 75.6 | 600 | 6080 | 80 | 180 | 3920 | 83.2 | 41.6 | 37.8 |
| HDP500-6 | 710 | 950 | 990 | 94.5 | 85 | 85.0 | 600 | 6855 | 70 | 180 | 4520 | 93.5 | 46.8 | 42.5 |
| HDP500-6 | 800 | 1070 | 990 | 94.7 | 85 | 95.6 | 600 | 7718 | 70 | 180 | 4630 | 105 | 52.6 | 47.8 |
| HDP500-6 | 900 | 1210 | 990 | 94.9 | 85 | 107 | 600 | 8689 | 70 | 180 | 4770 | 118 | 58.9 | 53.5 |

# PERFORMANCE DATA

## HDP HIGH VOLTAGE THREE PHASE ASYNCHRONOUS MOTOR

| Motor Type | Rated Output | | Rated Speed | Efficiency | Power Factor | Current | | Torque | | | Approx Weight | FL Current | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Full Load | Locked Rotor | Full Load | Locked Rotor | Pull Out | | 3kV | 6kV | 6.6kV |
| | kW | HP | RPM | % | % | A | %FLC | Nm | %FLT | %FLT | kg | A | A | A |
| HDP500-6 | 1000 | 1340 | 990 | 95.0 | 85 | 119 | 600 | 9650 | 70 | 180 | 4920 | 131 | 65.5 | 59.5 |
| HDP560-6 | 1120 | 1500 | 991 | 95.1 | 86 | 132 | 650 | 10797 | 70 | 180 | 6030 | 145 | 72.6 | 66.0 |
| HDP560-6 | 1250 | 1680 | 991 | 95.3 | 86 | 147 | 650 | 12052 | 70 | 180 | 6280 | 162 | 80.9 | 73.5 |
| HDP560-6 | 1400 | 1880 | 991 | 95.4 | 86 | 164 | 650 | 13504 | 70 | 180 | 6440 | 180 | 90.2 | 82.0 |
| HDP630-6 | 1600 | 2140 | 993 | 95.5 | 86 | 187 | 650 | 15396 | 70 | 180 | 7400 | 206 | 103 | 93.5 |
| HDP630-6 | 1800 | 2410 | 994 | 95.6 | 86 | 210 | 650 | 17309 | 70 | 180 | 7750 | 231 | 116 | 105 |
| HDP630-6 | 2000 | 2680 | 994 | 95.7 | 86 | 234 | 650 | 19231 | 70 | 180 | 8100 | 257 | 129 | 117 |
| HDP710-6 | 2240 | 3000 | 994 | 95.8 | 86 | 262 | 650 | 21535 | 60 | 180 | 13000 | 288 | 144 | 131 |
| HDP710-6 | 2500 | 3330 | 994 | 95.9 | 86 | 292 | 650 | 24036 | 60 | 180 | 13200 | 321 | 161 | 146 |
| HDP710-6 | 2800 | 3730 | 994 | 96.0 | 86 | 326 | 650 | 26919 | 60 | 180 | 13400 | 359 | 179 | 163 |
| HDP710-6 | 3150 | 4200 | 994 | 96.1 | 86 | 367 | 650 | 30283 | 60 | 180 | 13600 | 404 | 202 | 184 |
| HDP710-6 | 3550 | 4760 | 994 | 96 .1 | 86 | 413 | 650 | 34127 | 60 | 180 | 13800 | 454 | 227 | 207 |
| HDP710-6 | 4000 | 5330 | 994 | 96 .2 | 86 | 465 | 650 | 38452 | 60 | 180 | 14000 | 512 | 256 | 233 |
| **8 POLE MOTORS** | | | | | | | | | | | | | | |
| HDP400-8 | 220 | 295 | 740 | 92.1 | 78 | 29.5 | 550 | 2844 | 80 | 180 | 2780 | 32.5 | 16.2 | 14.8 |
| HDP400-8 | 250 | 335 | 740 | 92.3 | 79 | 33.0 | 550 | 3226 | 80 | 180 | 3130 | 36.3 | 18.2 | 16.5 |
| HDP400-8 | 280 | 375 | 740 | 92.5 | 79 | 36.9 | 550 | 3619 | 80 | 180 | 3410 | 40.6 | 20.3 | 18.5 |
| HDP450-8 | 315 | 420 | 740 | 92.7 | 80 | 40.9 | 550 | 4070 | 80 | 180 | 3130 | 45.0 | 22.5 | 20.5 |
| HDP450-8 | 355 | 475 | 740 | 92.9 | 80 | 46.0 | 550 | 4580 | 80 | 180 | 3350 | 50.6 | 25.3 | 23.0 |
| HDP450-8 | 400 | 535 | 740 | 93.1 | 80 | 51.7 | 550 | 5168 | 80 | 180 | 3430 | 56.9 | 28.4 | 25.9 |
| HDP450-8 | 450 | 605 | 740 | 93.3 | 81 | 57.3 | 550 | 5815 | 80 | 180 | 3650 | 63.0 | 31.5 | 28.7 |
| HDP500-8 | 500 | 670 | 740 | 93.7 | 81 | 63.4 | 550 | 6453 | 80 | 180 | 4310 | 69.7 | 34.9 | 31.7 |
| HDP500-8 | 560 | 750 | 740 | 93.9 | 82 | 70.0 | 550 | 7228 | 80 | 180 | 4570 | 77.0 | 38.5 | 35.0 |
| HDP500-8 | 630 | 845 | 740 | 94.1 | 82 | 78.6 | 550 | 8140 | 80 | 180 | 4910 | 86.5 | 43.2 | 39.3 |
| HDP500-8 | 710 | 950 | 740 | 94.3 | 82 | 88.4 | 550 | 9169 | 80 | 180 | 5190 | 97.2 | 48.6 | 44.2 |
| HDP560-8 | 800 | 1070 | 740 | 94.4 | 84 | 97.1 | 600 | 10336 | 70 | 180 | 5920 | 107 | 53.4 | 48.6 |
| HDP560-8 | 900 | 1210 | 740 | 94.5 | 84 | 109 | 600 | 11621 | 70 | 180 | 6180 | 120 | 60.0 | 54.5 |
| HDP560-8 | 1000 | 1340 | 740 | 94.6 | 84 | 121 | 600 | 12915 | 70 | 180 | 6440 | 133 | 66.6 | 60.5 |
| HDP630-8 | 1120 | 1500 | 744 | 94.7 | 84 | 135 | 600 | 14386 | 70 | 180 | 7780 | 149 | 74.3 | 67.5 |
| HDP630-8 | 1250 | 1680 | 744 | 94.9 | 84 | 151 | 600 | 16053 | 70 | 180 | 8100 | 166 | 83.1 | 75.5 |
| HDP630-8 | 1400 | 1880 | 744 | 95.0 | 84 | 169 | 600 | 17985 | 70 | 180 | 8380 | 186 | 93.0 | 84.5 |
| HDP630-8 | 1600 | 2140 | 744 | 95.1 | 84 | 193 | 600 | 20555 | 70 | 180 | 8660 | 212 | 106 | 96.5 |
| HDP710-8 | 1800 | 2400 | 740 | 95.2 | 85 | 214 | 650 | 23242 | 60 | 180 | 13200 | 235 | 118 | 107 |
| HDP710-8 | 2000 | 2670 | 740 | 95.3 | 85 | 238 | 650 | 25831 | 60 | 180 | 13400 | 262 | 131 | 119 |
| HDP710-8 | 2240 | 3000 | 740 | 95.5 | 85 | 266 | 650 | 28930 | 60 | 180 | 13600 | 293 | 146 | 133 |
| HDP710-8 | 2500 | 3330 | 740 | 95.6 | 85 | 296 | 650 | 32283 | 60 | 180 | 13800 | 326 | 163 | 148 |
| HDP710-8 | 2800 | 3730 | 740 | 95.7 | 85 | 331 | 650 | 36157 | 60 | 180 | 14000 | 364 | 182 | 166 |

# PERFORMANCE DATA

## HDP 11KV HIGH VOLTAGE THREE PHASE ASYNCHRONOUS MOTOR

| Motor Type | Rated Output | | Rated Speed | Efficiency | Power Factor | Current | | | Torque | | | Approx Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Full Load | Locked Rotor | Locked Rotor | Full Load | Locked Rotor | Pull Out | |
| | kW | HP | RPM | % | % | A | A | %FLC | kg-m | %FLT | %FLT | kg |
| **2 POLE MOTORS** | | | | | | | | | | | | |
| HDP400-2 | 220 | 295 | 2980 | 91.9 | 85 | 14.7 | 110 | 750 | 72 | 60 | 180 | 2440 |
| HDP400-2 | 250 | 335 | 2980 | 92.1 | 85 | 16.7 | 125 | 750 | 82 | 60 | 180 | 2560 |
| HDP400-2 | 280 | 375 | 2980 | 92.4 | 85 | 18.7 | 140 | 750 | 92 | 60 | 180 | 2680 |
| HDP400-2 | 315 | 420 | 2980 | 92.7 | 85 | 21.0 | 158 | 750 | 103 | 60 | 180 | 2810 |
| HDP450-2 | 355 | 475 | 2980 | 93.1 | 87 | 23.0 | 161 | 700 | 116 | 60 | 180 | 3340 |
| HDP450-2 | 400 | 535 | 2980 | 93.4 | 87 | 25.8 | 181 | 700 | 131 | 60 | 180 | 3420 |
| HDP450-2 | 450 | 605 | 2980 | 93.7 | 87 | 29.0 | 203 | 700 | 147 | 60 | 180 | 3500 |
| HDP450-2 | 500 | 670 | 2980 | 94.1 | 87 | 32.1 | 225 | 700 | 164 | 60 | 180 | 3600 |
| HDP450-2 | 560 | 750 | 2980 | 94.3 | 87 | 35.8 | 251 | 700 | 183 | 60 | 180 | 3800 |
| HDP450-2 | 630 | 845 | 2980 | 94.5 | 87 | 40.2 | 281 | 700 | 206 | 60 | 180 | 4030 |
| HDP500-2 | 710 | 950 | 2980 | 94.5 | 88 | 44.8 | 314 | 700 | 232 | 60 | 180 | 5400 |
| HDP500-2 | 800 | 1070 | 2980 | 94.7 | 88 | 50.4 | 353 | 700 | 262 | 60 | 180 | 5590 |
| HDP500-2 | 900 | 1210 | 2980 | 94.8 | 88 | 56.6 | 396 | 700 | 294 | 60 | 180 | 5780 |
| HDP500-2 | 1000 | 1340 | 2980 | 94.9 | 88 | 62.8 | 440 | 700 | 327 | 60 | 180 | 5980 |
| HDP500-2 | 1120 | 1500 | 2980 | 95.0 | 88 | 70.43 | 492 | 700 | 366 | 60 | 180 | 6200 |
| HDP560-2 | 1250 | 1680 | 2980 | 95.2 | 89 | 77.5 | 543 | 700 | 409 | 60 | 180 | 6900 |
| HDP560-2 | 1400 | 1880 | 2980 | 95.4 | 89 | 86.5 | 606 | 700 | 458 | 60 | 180 | 7200 |
| HDP560-2 | 1600 | 2140 | 2980 | 95.5 | 89 | 99.1 | 694 | 700 | 523 | 60 | 180 | 7500 |
| HDP630-2 | 1800 | 2410 | 2982 | 95.6 | 90 | 110 | 770 | 700 | 588 | 60 | 180 | 8800 |
| HDP630-2 | 2000 | 2680 | 2982 | 95.7 | 90 | 122 | 854 | 700 | 654 | 60 | 180 | 9200 |
| HDP630-2 | 2240 | 3000 | 2982 | 95.8 | 90 | 136 | 952 | 700 | 732 | 60 | 180 | 9600 |
| **4 POLE MOTORS** | | | | | | | | | | | | |
| HDP400-4 | 185 | 250 | 1480 | 91.6 | 83 | 12.7 | 88.9 | 700 | 122 | 70 | 180 | 2480 |
| HDP400-4 | 200 | 270 | 1480 | 91.8 | 83 | 13.7 | 95.9 | 700 | 132 | 70 | 180 | 2550 |
| HDP400-4 | 220 | 295 | 1480 | 92.2 | 83 | 15.1 | 106 | 700 | 145 | 70 | 180 | 2640 |
| HDP400-4 | 250 | 335 | 1480 | 92.4 | 83 | 17.1 | 120 | 700 | 165 | 70 | 180 | 2750 |
| HDP400-4 | 280 | 375 | 1480 | 92.6 | 83 | 19.1 | 134 | 700 | 184 | 70 | 180 | 2870 |
| HDP400-4 | 315 | 420 | 1480 | 92.8 | 83 | 21.5 | 151 | 700 | 207 | 70 | 180 | 3000 |
| HDP450-4 | 355 | 475 | 1485 | 92.9 | 86 | 23.3 | 163 | 700 | 233 | 70 | 180 | 2850 |
| HDP450-4 | 400 | 535 | 1485 | 93.1 | 86 | 26.2 | 183 | 700 | 262 | 70 | 180 | 2950 |
| HDP450-4 | 450 | 605 | 1485 | 93.4 | 86 | 29.4 | 206 | 700 | 295 | 70 | 180 | 3100 |
| HDP450-4 | 500 | 670 | 1485 | 93.6 | 86 | 32.6 | 228 | 700 | 328 | 70 | 180 | 3250 |
| HDP450-4 | 560 | 750 | 1485 | 93.9 | 86 | 36.4 | 255 | 700 | 367 | 70 | 180 | 3400 |
| HDP450-4 | 630 | 845 | 1485 | 94.1 | 86 | 40.8 | 286 | 700 | 413 | 70 | 180 | 3590 |
| HDP500-4 | 710 | 950 | 1485 | 94.4 | 87 | 45.5 | 319 | 700 | 466 | 70 | 180 | 4530 |
| HDP500-4 | 800 | 1070 | 1485 | 94.6 | 87 | 51.0 | 357 | 700 | 525 | 70 | 180 | 4660 |

# PERFORMANCE DATA

## HDP 11KV HIGH VOLTAGE THREE PHASE ASYNCHRONOUS MOTOR

| Motor Type | Rated Output | | Rated Speed | Efficiency | Power Factor | Current | | | Torque | | | Approx Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Full Load | Locked Rotor | Locked Rotor | Full Load | Locked Rotor | Pull Out | |
| | kW | HP | RPM | % | % | A | A | %FLC | kg-m | %FLT | %FLT | kg |
| HDP500-4 | 900 | 1210 | 1485 | 94.8 | 88 | 56.6 | 396 | 700 | 591 | 70 | 180 | 4820 |
| HDP500-4 | 1000 | 1340 | 1485 | 94.9 | 88 | 62.8 | 440 | 700 | 656 | 70 | 180 | 5110 |
| HDP500-4 | 1120 | 1500 | 1485 | 95.1 | 88 | 70.3 | 492 | 541 | 700 | 735 | 70 | 5440 |
| HDP560-4 | 1250 | 1680 | 1485 | 95.2 | 89 | 77.5 | 543 | 700 | 820 | 70 | 180 | 5900 |
| HDP560-4 | 1400 | 1880 | 1485 | 95.3 | 89 | 87.3 | 611 | 700 | 919 | 70 | 180 | 6200 |
| HDP560-4 | 1600 | 2140 | 1485 | 95.4 | 89 | 99.1 | 694 | 700 | 1050 | 70 | 180 | 6500 |
| HDP630-4 | 1800 | 2410 | 1492 | 95.6 | 89 | 111 | 777 | 700 | 1176 | 60 | 180 | 7580 |
| HDP630-4 | 2000 | 2680 | 1493 | 95.7 | 89 | 124 | 868 | 700 | 1305 | 60 | 180 | 7950 |
| HDP630-4 | 2240 | 3000 | 1493 | 95.8 | 89 | 138 | 966 | 700 | 1462 | 60 | 180 | 8330 |
| HDP710-4 | 2500 | 3330 | 1488 | 95.9 | 86 | 159 | 1034 | 650 | 1637 | 60 | 180 | 11500 |
| HDP710-4 | 2800 | 3730 | 1488 | 96.0 | 86 | 178 | 1157 | 650 | 1834 | 60 | 180 | 12000 |
| HDP710-4 | 3150 | 4200 | 1488 | 96.1 | 86 | 200 | 1300 | 650 | 2063 | 60 | 180 | 12500 |
| HDP710-4 | 3550 | 4760 | 1488 | 96.2 | 86 | 225 | 1463 | 650 | 2292 | 60 | 180 | 13000 |
| HDP710-4 | 4000 | 5330 | 1488 | 96.3 | 87 | 250 | 1625 | 650 | 2620 | 60 | 180 | 13500 |
| HDP710-4 | 4500 | 6000 | 1488 | 96.3 | 87 | 282 | 1833 | 650 | 2947 | 60 | 180 | 14000 |
| **6 POLE MOTORS** | | | | | | | | | | | | |
| HDP450-6 | 315 | 420 | 990 | 92.5 | 82 | 21.8 | 131 | 600 | 310 | 70 | 180 | 3270 |
| HDP450-6 | 355 | 475 | 990 | 92.8 | 83 | 24.2 | 145 | 600 | 349 | 70 | 180 | 3400 |
| HDP450-6 | 400 | 535 | 990 | 93.0 | 83 | 27.3 | 164 | 600 | 394 | 70 | 180 | 3530 |
| HDP450-6 | 450 | 605 | 990 | 93.4 | 83 | 30.5 | 183 | 600 | 443 | 70 | 180 | 3680 |
| HDP500-6 | 500 | 670 | 995 | 93.4 | 83 | 33.8 | 203 | 600 | 490 | 70 | 180 | 4460 |
| HDP500-6 | 560 | 750 | 995 | 93.7 | 84 | 37.4 | 224 | 600 | 548 | 70 | 180 | 4630 |
| HDP500-6 | 630 | 845 | 995 | 93.9 | 84 | 41.9 | 251 | 600 | 617 | 70 | 180 | 4770 |
| HDP500-6 | 710 | 950 | 995 | 94.1 | 84 | 47.1 | 283 | 600 | 695 | 70 | 180 | 5000 |
| HDP500-6 | 800 | 1070 | 995 | 94.3 | 84 | 53.0 | 318 | 600 | 784 | 70 | 180 | 5400 |
| HDP560-6 | 900 | 1210 | 990 | 94.5 | 85 | 58.8 | 353 | 600 | 886 | 70 | 180 | 5700 |
| HDP560-6 | 1000 | 1340 | 990 | 94.7 | 85 | 65.2 | 391 | 600 | 984 | 70 | 180 | 5930 |
| HDP560-6 | 1120 | 1500 | 990 | 94.9 | 85 | 72.8 | 437 | 600 | 1102 | 70 | 180 | 6180 |
| HDP560-6 | 1250 | 1680 | 990 | 95.1 | 86 | 80.2 | 481 | 600 | 1230 | 70 | 180 | 6430 |
| HDP630-6 | 1400 | 1880 | 995 | 95.3 | 86 | 89.6 | 538 | 600 | 1371 | 60 | 180 | 7420 |
| HDP630-6 | 1600 | 2140 | 995 | 95.4 | 86 | 103 | 618 | 600 | 1567 | 60 | 180 | 7780 |
| HDP630-6 | 1800 | 2410 | 995 | 95.5 | 86 | 115 | 690 | 600 | 1763 | 60 | 180 | 8100 |
| HDP710-6 | 2000 | 2670 | 993 | 95.6 | 84 | 131 | 852 | 650 | 1963 | 60 | 180 | 11800 |
| HDP710-6 | 2240 | 3000 | 993 | 95.7 | 84 | 146 | 949 | 650 | 2198 | 60 | 180 | 12300 |
| HDP710-6 | 2500 | 3330 | 993 | 95.7 | 84 | 163 | 1060 | 650 | 2453 | 60 | 180 | 12800 |
| HDP710-6 | 2800 | 3730 | 993 | 95.8 | 84 | 183 | 1190 | 650 | 2748 | 60 | 180 | 13300 |
| HDP710-6 | 3150 | 4200 | 993 | 95.9 | 84 | 205 | 1332 | 650 | 3091 | 60 | 180 | 13800 |

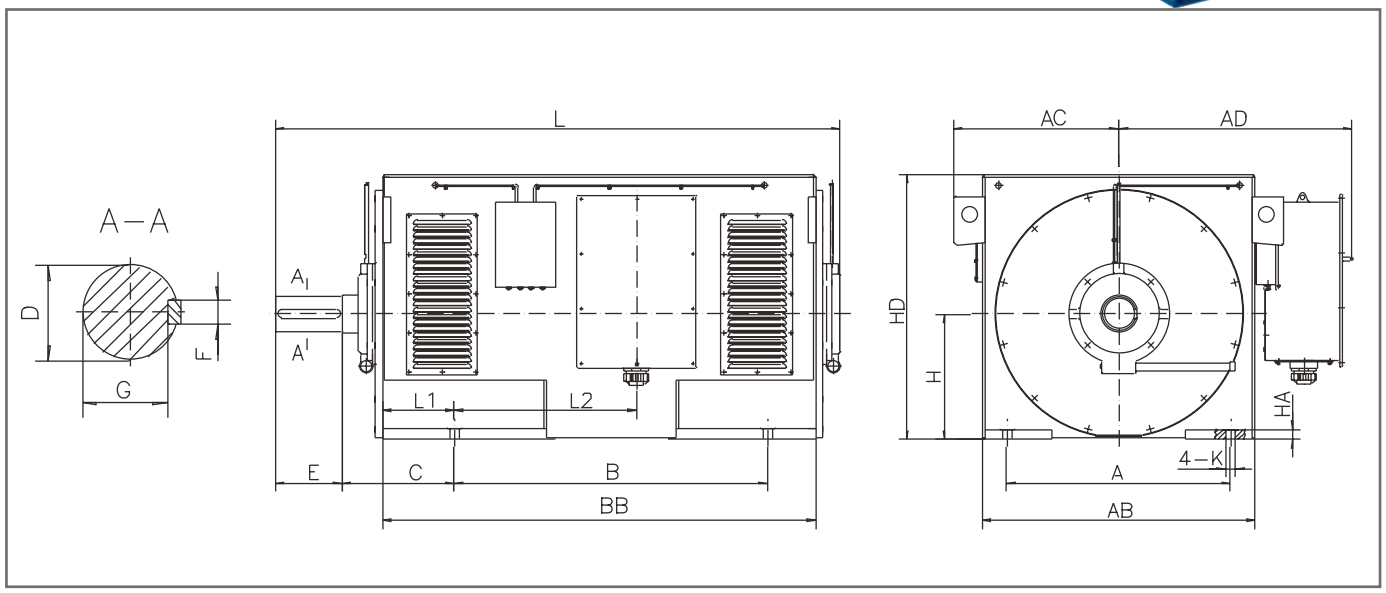
# PERFORMANCE DATA

## HDP 11KV HIGH VOLTAGE THREE PHASE ASYNCHRONOUS MOTOR

| Motor Type | Rated Output | | Rated Speed | Efficiency | Power Factor | Current | | | Torque | | | Approx Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Full Load | Locked Rotor | Locked Rotor | Full Load | Locked Rotor | Pull Out | |
| | kW | HP | RPM | % | % | A | A | %FLC | kg-m | %FLT | %FLT | kg |
| **8 POLE MOTORS** | | | | | | | | | | | | |
| HDP500-8 | 280 | 375 | 740 | 92.0 | 77 | 20.7 | 124 | 600 | 369 | 70 | 180 | 4050 |
| HDP500-8 | 315 | 420 | 740 | 92.3 | 77 | 23.3 | 140 | 600 | 415 | 70 | 180 | 4150 |
| HDP500-8 | 355 | 475 | 740 | 92.5 | 77 | 26.2 | 157 | 600 | 467 | 70 | 180 | 4470 |
| HDP500-8 | 400 | 535 | 740 | 92.7 | 78 | 29.0 | 174 | 600 | 527 | 70 | 180 | 4560 |
| HDP500-8 | 450 | 605 | 740 | 92.9 | 78 | 32.5 | 195 | 600 | 593 | 70 | 180 | 4850 |
| HDP500-8 | 500 | 670 | 740 | 93.2 | 79 | 25.6 | 214 | 600 | 658 | 70 | 180 | 4970 |
| HDP500-8 | 560 | 750 | 740 | 93.4 | 79 | 39.8 | 239 | 600 | 737 | 70 | 180 | 5120 |
| HDP560-8 | 630 | 845 | 740 | 93.8 | 82 | 43.0 | 258 | 600 | 830 | 70 | 180 | 5570 |
| HDP560-8 | 710 | 950 | 740 | 94.0 | 82 | 48.4 | 290 | 600 | 935 | 70 | 180 | 5820 |
| HDP560-8 | 800 | 1070 | 740 | 94.2 | 82 | 54.4 | 326 | 600 | 1054 | 70 | 180 | 6080 |
| HDP560-8 | 900 | 1210 | 740 | 94.4 | 82 | 61.0 | 366 | 600 | 1185 | 70 | 180 | 6350 |
| HDP630-8 | 1000 | 1340 | 744 | 94.5 | 83 | 67.0 | 402 | 600 | 1310 | 70 | 180 | 7800 |
| HDP630-8 | 1120 | 1500 | 744 | 94.7 | 83 | 74.8 | 449 | 600 | 1467 | 70 | 180 | 8100 |
| HDP630-8 | 1250 | 1680 | 745 | 94.9 | 83 | 83.3 | 500 | 600 | 1635 | 70 | 180 | 8400 |
| HDP710-8 | 1600 | 2130 | 740 | 95.0 | 83 | 106 | 689 | 650 | 2107 | 60 | 180 | 11800 |
| HDP710-8 | 1800 | 2400 | 740 | 95.0 | 83 | 120 | 780 | 650 | 2370 | 60 | 180 | 12300 |
| HDP710-8 | 2000 | 2670 | 740 | 95.1 | 83 | 133 | 865 | 650 | 2634 | 60 | 180 | 12800 |
| HDP710-8 | 2240 | 3000 | 740 | 95.2 | 83 | 149 | 969 | 650 | 2950 | 60 | 180 | 13300 |
| HDP710-8 | 2500 | 3330 | 740 | 95.3 | 83 | 165 | 1073 | 650 | 3292 | 60 | 180 | 13800 |
| HDP710-8 | 2800 | 3730 | 740 | 95.4 | 83 | 185 | 1203 | 650 | 3687 | 60 | 180 | 14300 |

# DIMENSIONAL DATA

## HDP 11KV HIGH VOLTAGE THREE PHASE ASYNCHRONOUS MOTOR (H400-630)




### MOUNTING DIMENSIONS FOR INSTALLATION

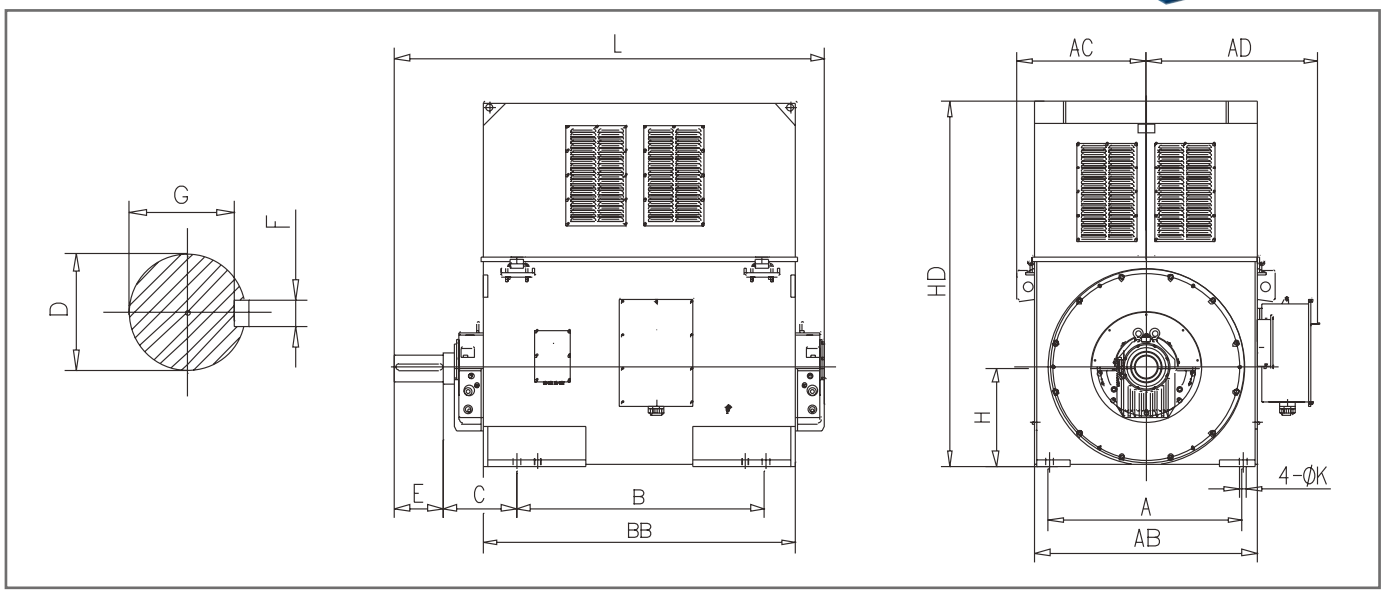
| Frame Size | Poles | Mounting Dimensions (mm) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | F | G | H | K1 |
| 400 | 2 | 710 | 1000 | 375 | 80 | 170 | 22 | 71 | 400 | 35 |
| 450 | 2 | 800 | 1120 | 400 | 90 | 170 | 25 | 81 | 450 | 35 |
| 500 | 2 | 900 | 1250 | 560 | 100 | 210 | 28 | 90 | 500 | 42 |
| 560 | 2 | 1000 | 1400 | 560 | 130 | 250 | 32 | 119 | 560 | 42 |
| 630 | 2 | 112 | 1600 | 560 | 140 | 250 | 36 | 128 | 630 | 48 |
| 500 | 4 | 900 | 1250 | 475 | 120 | 210 | 32 | 109 | 500 | 42 |
| 560 | 4 | 1000 | 1400 | 500 | 150 | 250 | 36 | 138 | 560 | 42 |
| 630 | 4 | 1120 | 1600 | 530 | 170 | 300 | 40 | 157 | 630 | 48 |
| 400 | 4~8 | 710 | 1000 | 335 | 110 | 210 | 28 | 100 | 400 | 35 |
| 450 | 4~8 | 800 | 1120 | 355 | 110 | 210 | 28 | 100 | 450 | 35 |
| 500 | 6~10 | 900 | 1250 | 475 | 130 | 250 | 32 | 119 | 500 | 42 |
| 560 | 6~12 | 1000 | 1400 | 500 | 160 | 300 | 40 | 147 | 560 | 42 |
| 630 | 6~12 | 1120 | 1600 | 530 | 180 | 300 | 45 | 165 | 630 | 48 |

### OUTLINE DIMENSIONS FOR INSTALLATION

| Frame Size | Poles | Outline Dimensions (mm) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | AC | AD | AB | BB | HA | HD | L1 | L2 | L |
| 400 | 2 | 570 | 900 | 900 | 1450 | 30 | 850 | 249 | 606 | 1830 |
| 450 | 2 | 600 | 926 | 980 | 1530 | 40 | 960 | 255 | 515 | 1910 |
| 500 | 2 | 660 | 1115 | 1112 | 1720 | 50 | 1790 | 230 | 990 | 2370 |
| 560 | 2 | 740 | 1200 | 1216 | 1940 | 55 | 1920 | 270 | 1120 | 2650 |
| 630 | 2 | 850 | 1350 | 1396 | 2100 | 55 | 2200 | 265 | 1320 | 2950 |
| 500 | 4 | 660 | 1000 | 1112 | 1720 | 35 | 1065 | 310 | 669 | 2160 |
| 560 | 4 | 740 | 1050 | 1216 | 1938 | 45 | 1185 | 320 | 815 | 2475 |
| 400 | 4~6 | 570 | 900 | 900 | 1510 | 30 | 850 | 209 | 626 | 2000 |
| 450 | 4~8 | 600 | 926 | 980 | 1638 | 32 | 960 | 242 | 657 | 2055 |
| 630 | 4~12 | 825 | 1150 | 1396 | 2080 | 50 | 1307 | 365 | 685 | 2677 |
| 500 | 6~12 | 660 | 1000 | 1112 | 1720 | 35 | 1065 | 310 | 669 | 2200 |
| 560 | 6~12 | 740 | 1050 | 1216 | 1938 | 45 | 1185 | 320 | 815 | 2525 |

# DIMENSIONAL DATA

## HDP SERIES LARGE THREE PHASE ASYNCHRONOUS MOTOR (H710)




### MOUNTING DIMENSIONS FOR INSTALLATION

| Frame Size | Poles | Mounting Dimensions (mm) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | E | F | G | | H | K1 |
| 710 | 4~16 | 1400 | 1800 | 530 | 200 | 350 | 45 | 185 | | 710 | 56 |

### OUTLINE DIMENSIONS FOR INSTALLATION

| Frame Size | Poles | Outline Dimensions (mm) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | AC | AD | AB | BB | HD | L | (DE) | (NDE) |
| 710 | 4 | 930 | 1350 | 1600 | 2265 | 2650 | 3150 | 18-180B | 18-180BJ |
| | 6~16 | | | | | | | 18-200B | 18-200BJ |

# SELECTION REFERENCE

## HIGH VOLTAGE THREE PHASE ASYNCHRONOUS MOTOR (HCM HAA HDP)

| Variant | Frame Size | | | | | | |
|---|---|---|---|---|---|---|---|
| **Mounting Arrangements** | **355** | **400** | **450** | **500** | **560** | **630** | **710** |
| Single-Shaft | S | S | S | S | S | S | S |
| Double-Shaft | R | R | R | R | R | R | R |
| B3 | S | S | S | S | S | S | S |
| B35 | R | R | R | R | R | R | R |
| V1 | R | R | R | R | R | R | R |
| Non-standard installation size (footing, shaft, flange) | R | R | R | R | R | R | R |
| **Connection Method** | | | | | | | |
| Coupling | S | S | S | S | S | S | S |
| Belt | R | R | R | R | R | R | |
| Gear | R | R | R | R | R | R | |
| **Terminal box** | | | | | | | |
| Terminal box RHS | S | S | S | S | S | S | S |
| Terminal box LHS or DE or NDE | R | R | R | R | R | R | R |
| Phase segregated terminal box | R | R | R | R | R | R | R |
| **Additional Options** | | | | | | | |
| Non-standard voltage | R | R | R | R | R | R | R |
| (5OHZ) Standard frequency | S | S | S | S | S | S | S |
| (6OHZ) Non-standard frequency | R | R | R | R | R | R | R |
| Low noise | R | R | R | R | R | R | R |
| High starting torque | R | R | R | R | R | R | R |
| Low starting current | R | R | R | R | R | R | R |
| (view from DE) Rotation direction | S | S | S | S | S | S | S |
| Application VSD (2:1 CT frequency range) | R | R | R | R | R | R | R |
| Water cooled (IC81W) | R | R | R | R | R | R | R |
| Regreasing facility | S | S | S | S | S | S | S |
| **Protection Class** | | | | | | | |
| IP23, IP54 | S | S | S | S | S | S | S |
| IP24, IP55, IP56, IP65 | R | R | R | R | R | R | R |
| **Insulation Class/ Temperature rise class** | | | | | | | |
| Insulation class F/Temperature rise class B | S | S | S | S | S | S | S |
| Insulation class H | R | R | R | R | R | R | R |
| **Bearing** | **355** | **400** | **450** | **500** | **560** | **630** | **710** |
| Ball bearing (2P) | S | S | S | S | S | S | S |
| Sleeve bearing | | | | S | S | S | S |
| Ball bearing (4P and above) | S | S | S | S | | | |
| Roller bearing (4P and above, 1 ball and 1 roller) | | | | | S | S | |
| Sliding bearing (4P and above) | | | | | | | S |
| Angular contact bearing | R | R | R | R | R | R | R |
| Insulated bearing | R | R | R | R | R | R | R |

Note: S= Included as standard
R= On request

# SELECTION REFERENCE

## HIGH VOLTAGE THREE PHASE ASYNCHRONOUS MOTOR (HCM HAA HDP)

| Variant | Frame Size | | | | | | |
|---|---|---|---|---|---|---|---|
| **Test** | **355** | **400** | **450** | **500** | **560** | **630** | **710** |
| Routine test | S | S | S | S | S | S | S |
| Routine test: witnessed | R | R | R | R | R | R | R |
| Type test: no witness | R | R | R | R | R | R | R |
| Type test: witnessed | R | R | R | R | R | R | R |
| **Startup mode** | | | | | | | |
| DOL or >85% reduced voltage start | S | S | S | S | S | S | S |
| Other starting modes | R | R | R | R | R | R | R |
| **Electrical characteristics** | | | | | | | |
| PT100 winding (single) | S | S | S | S | S | S | S |
| PT100 bearing (single) | S | S | S | S | S | S | S |
| PT100 winding (double) | R | R | R | R | R | R | R |
| PT100 bearing (double) | R | R | R | R | R | R | R |
| PT1000 winding | R | R | R | R | R | R | R |
| PT1000 bearing | R | R | R | R | R | R | R |
| Winding PTC | R | R | R | R | R | R | R |
| Space heater (220-240V) | S | S | S | S | S | S | S |
| Encoder 1024 PPR | R | R | R | R | R | R | R |
| Current transformer CT's | R | R | R | R | R | R | R |
| Lightning arrester | R | R | R | R | R | R | R |
| Over-voltage protector | R | R | R | R | R | R | R |
| SPM tube(seismic platform) | R | R | R | R | R | R | R |
| RAL 5008 | S | S | S | S | S | S | S |
| Alternative paint colour/method | R | R | R | R | R | R | R |
| **Service Factor** | | | | | | | |
| SF 1.0 - (50HZ, 60HZ) | S | S | S | S | S | S | S |
| SF 1.1, 1.15,1.2,1.25 | R | R | R | R | R | R | R |
| Independent blower | R | R | R | R | R | R | R |
| **Others** | | | | | | | |
| TH - Tropical-proof motor | R | R | R | R | R | R | R |
| W - Outdoor motor | R | R | R | R | R | R | R |
| Marine motor | R | R | R | R | R | R | R |
| Altitude 1000<X≤1500m | R | R | R | R | R | R | R |
| Altitude 1500<X≤2000m | R | R | R | R | R | R | R |
| Altitude 2000<X≤2500m | R | R | R | R | R | R | R |
| Altitude 2500<X≤3000m | R | R | R | R | R | R | R |
| Altitude 3000<X≤3500m | R | R | R | R | R | R | R |
| Altitude 3500<X≤4000m | R | R | R | R | R | R | R |
| Ambient temperature 40°C <X≤50°C | R | R | R | R | R | R | R |
| Ambient temperature 50°C <X≤55°C | R | R | R | R | R | R | R |
| Ambient temperature 55°C <X≤60°C | R | R | R | R | R | R | R |
| Stainless steel hardware | R | R | R | R | R | R | R |
| Customised steel base | R | R | R | R | R | R | R |

Note: 1 HCM footing's mounting dimension not adjustable

marathon®
Motors

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