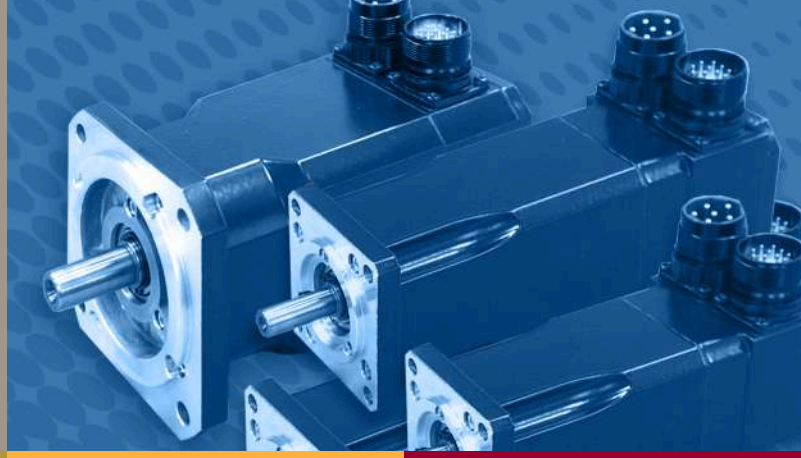
# AF SERVOMOTORS

## Natural cooling motors (12 poles)



Moog AF servo motors (12 poles) are designed for dynamic servo applications where small dimensions (especially shorter length) and high torque are required with a wide speed range and variable loads.
The servo motors can therefore be used with torques and currents substantially higher than the nominal ones.
From an electromagnetic point of view, the motors are designed for an overload capacity of 3 - 5 times the rated torque. The Moog AF servo motor series offers a large power range with standard models available with a continuous stall torque from 2.8 to 65 Nm [25 - 575 lb-in].
The modular design is supports a variety of options. Moog engineering can provide fully customized solutions (e.g. winding) designed for different voltage constants (from about 1 to 500 V.min/1000), winding system and insulation designed for different intermediate circuit voltages (12 V, 24 V, 48 V, 330 V, 560 V and 700 V DC), special rotors for high speed applications with double or triple bandage, special lightweight rotors for reduced inertia, different active lengths, different mechanical designs for flange and shaft end, bearings for special applications requiring higher radial and axial forces on the shaft end, different types of encoders, motors for special environmental requirements (higher temperature, hazardous or harsh environment) and motors with an increased IP rating.

### FEATURES

- Compact dimensions with shorter axial length (flat motors)
- High torque overload capacity
- High efficiency
- High precision production and assembly
- Long life and high operational reliability

### BENEFITS

- Space-saving installation
- High power density
- Highly customizable
- Rugged structure
- Minimal maintenance needs
- Different winding options available

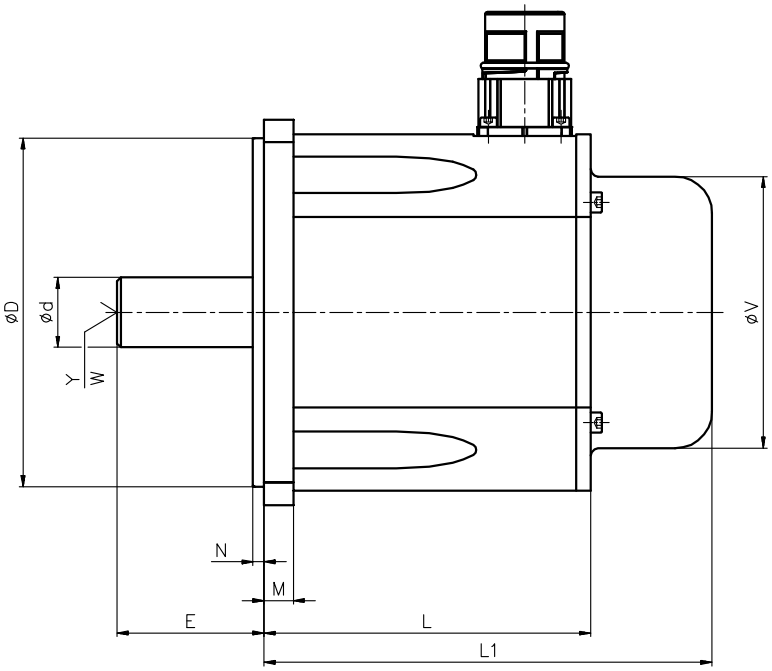
| Dimensions | Measuring Unit | AM Servo Motors |
|---|---|---|
| Continuous Stall Torque M° | Nm [lb-in] | 2.8 - 65 [25 - 575] |
| Peak Torque Mmax | Nm [lb-in] | 12.3 - 254 [109 - 2246.4] |
| Rated Speed $n_N$ | $min^{-1}$ (rpm) | 0 - 5,500 |
| Rated Power $P_N$ | kW [hp] | 0.8 - 9.4 [1.07 - 12.61] |
| Rated Torque $M_N$ | Nm [lb-ft] | 2.5 - 59.6 [22.1 - 527] |
| Moment of Inertia J | kg $m^2$ [lb-$insec^2$ x 10-4 ] | 1.8 - 130 [15.9 - 1150.3] |
| Position Transducer | Standard / Optional | Resolver / Encoder |
| Temperature Monitoring | N/A | PTC, PT1000, Thermoswitch |
| Brake | N/A | Optional |
| Rated Bus Voltage VDC | V | 300/560 (or customizable) |
| Certificate / Marks | N/A | CE |
| Cooling | N/A | Natural |

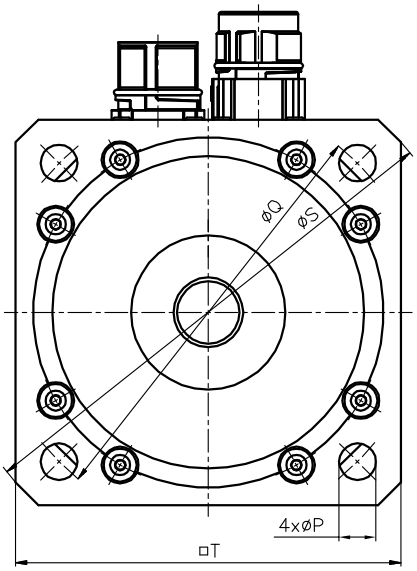
# DIMENSIONAL DETAILS

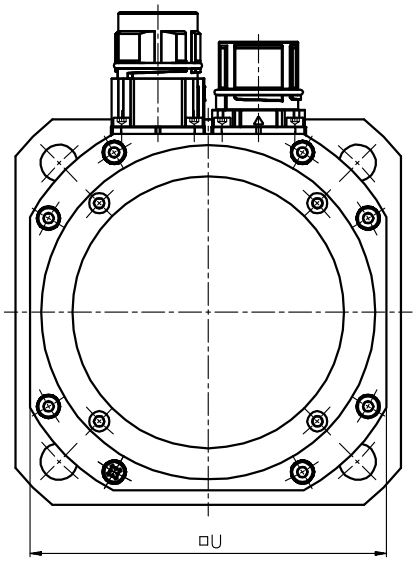
## AF SERIES

| TYPE | d | D | E | L | L1 | M | N | P | Q | S | □T | □U | V | W | Y |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | mm | | | | | | | | | | | | | | |
| **AF502** | 19k6 | 95j6 | 40 | 89 | 127 | 8 | 3 | 10 | 115 | 140 | 105 | 97 | 74 | 16 | DS M6 DIN332 |
| **AF503** | 19k6 | 95j6 | 40 | 114 | 152 | 8 | 3 | 10 | 115 | 140 | 105 | 97 | 74 | 16 | DS M6 DIN332 |
| **AF504** | 19k6 | 95j6 | 40 | 139 | 177 | 8 | 3 | 10 | 115 | 140 | 105 | 97 | 74 | 16 | DS M6 DIN332 |
| **AF632** | 24k6 | 130j6 | 50 | 93 | 126 | 10 | 3,5 | 12 | 165 | 188 | 140 | 127 | 89 | 19 | DS M8 DIN332 |
| **AF633** | 24k6 | 130j6 | 50 | 118 | 151 | 10 | 3,5 | 12 | 165 | 188 | 140 | 127 | 89 | 19 | DS M8 DIN332 |
| **AF634** | 24k6 | 130j6 | 50 | 143 | 176 | 10 | 3,5 | 12 | 165 | 188 | 140 | 127 | 89 | 19 | DS M8 DIN332 |
| **AF802** | 28k6 | 180j6 | 60 | 101 | 137 | 13 | 4 | 14,5 | 215 | 250 | 190 | 158 | 89 | 22 | DS M10 DIN332 |
| **AF803** | 28k6 | 180j6 | 60 | 126 | 162 | 13 | 4 | 14,5 | 215 | 250 | 190 | 158 | 89 | 22 | DS M10 DIN332 |
| **AF804** | 28k6 | 180j6 | 60 | 151 | 187 | 13 | 4 | 14,5 | 215 | 250 | 190 | 158 | 89 | 22 | DS M10 DIN332 |
| **AF1002** | 32k6 | 180j6 | 80 | 113 | 152 | 13 | 4 | 14,5 | 215 | 250 | 190 | 190 | 109 | 28 | DS M12 DIN332 |
| **AF1003** | 32k6 | 180j6 | 80 | 138 | 177 | 13 | 4 | 14,5 | 215 | 250 | 190 | 190 | 109 | 28 | DS M12 DIN332 |
| **AF1004** | 32k6 | 180j6 | 80 | 163 | 202 | 13 | 4 | 14,5 | 215 | 250 | 190 | 190 | 109 | 28 | DS M12 DIN332 |

L (without brake)  L1 (with brake)  The lenght of low voltage servo motors may vary.

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**This technical data is based on current available information and is subject to change at any time. Specifications for specific systems or applications may vary.**

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