

# rotor more than a motor

## Required ordering information:

- ✓ output power (kW)
- ✓ motor speed (min<sup>-1</sup>)
- ✓ mounting arrangement, (e.g. IM foot-, flange-, or foot/flange mounting\*)
- ✓ IEC motor framesize = shaftcenter height (in mm) above the baseplate
- ✓ voltage (V) and frequency (Hz)
- ✓ method of starting: D.O.L or star/delta
- ✓ use of frequency converter
- ✓ ambient temperature at the spot
- ✓ protection class (IP ..) (standard IP55)
- ✓ with- or without mounted diskbrake
- ✓ method of cooling: TEFC (IC411) or TENV (IC410) (with- or without cooling fan)
- ✓ for hazardous areas: Zone Classification and Gas Group
- ✓ please state the classification authority (e.g. ABS, BV, CCS, CCRS, DNV, GL, KR, LROS, NKK, RINA, or RMRS)
- ✓ due to essential service of motor(s) on board, survey & certification on the testfield at Rotor by one of the above mentioned classification authorities should be arranged. In this case we would like to be informed of the name of the shipyard, hull number and the driven machinery.

\*) Remark: Spigot Diameter and the Pitch Circle Diameter of the holes of flanges have to be stated for flange- and foot/flange mounted motors.



**rotor**  
b.v.

P.O. BOX 45, 7150 AA Elbergen - The Netherlands  
tel +31 (0)545 46 46 40  
fax +31 (0)545 47 50 65  
info@rotor.nl - www.rotor.nl

Office Belgium:  
Industriepark 20  
9031 Gent-Drogen, Belgium  
Phone +32 (0)9 281 11 40  
Fax +32 (0)9 281 11 45  
info@rotor.be - www.rotor.be



**rotor**  
b.v.

low voltage electric motors  
for marine and offshore



## Why should you choose rotor nl® ?

- ✓ worldwide **short-term supply** of essential- and non essential service motors, which comply with all applicable, recommended European standards
- ✓ large stock of increased safety- and flameproof motors for hazardous areas: Rotor is an ATEX certified company
- ✓ rotor nl® motors are in accordance with the requirements of the following classification authorities:  
American Bureau of Shipping, Bureau Veritas, China Classification Society, China Corp. Register of Shipping, Det Norske Veritas  
Germanischer Lloyd, Korean Register of Shipping, Lloyd's Register of Shipping, Nippon Kaiji Kyokai, Registro Italiano Navale  
Russian Maritime Register of Shipping
- ✓ protection class IP55 (standard)
- ✓ certification of essential-service motors on our testfield can be arranged for IEC framesizes 56-355 up to 315kW (continuous duty)
- ✓ insulation class F for ambient temperatures up to 50°C
- ✓ special designed motors available for ambient temperatures up to 60°C
- ✓ tropicalized motor windings
- ✓ standard: fixed bearing construction with an axial pre-loading for a longer lifetime of the bearings
- ✓ cast-iron housings from framesize IEC 100. Flanges and bearing endshields are standard cast-iron for all framesizes
- ✓ all standard marine motors are low noise types, suitable for bi-directional use
- ✓ brake motors (IP56 without fan and fan cover) for electric winches on open deck are available at short delivery time.

| Type IEC | at 400V 50Hz |                   | at 440V 60Hz |                   | Mass |
|----------|--------------|-------------------|--------------|-------------------|------|
|          | kW           | min <sup>-1</sup> | kW           | min <sup>-1</sup> | kg   |
| 56M*     | 0,2          | 2820              | 0,23         | 3375              | 4    |
| 63M      | 0,18         | 2820              | 0,21         | 3390              | 4    |
| 63M      | 0,25         | 2830              | 0,29         | 3400              | 5    |
| 71M      | 0,37         | 2800              | 0,43         | 3275              | 6    |
| 71M      | 0,55         | 2800              | 0,63         | 3360              | 7    |
| 80M      | 0,75         | 2840              | 0,86         | 3410              | 9    |
| 80M      | 1,1          | 2840              | 1,25         | 3410              | 11   |
| 90S      | 1,5          | 2870              | 1,75         | 3430              | 15   |
| 90L      | 2,2          | 2865              | 2,5          | 3450              | 16   |
| 100L     | 3            | 2890              | 3,45         | 3455              | 31   |
| 112M     | 4            | 2840              | 4,6          | 3480              | 39   |
| 112M*    | 5,5          | 2840              | 6,2          | 3495              | 48   |
| 132S     | 5,5          | 2930              | 6,3          | 3485              | 56   |
| 132S     | 7,5          | 2930              | 8,6          | 3470              | 58   |
| 160M     | 11           | 2910              | 12,3         | 3470              | 95   |
| 160M     | 15           | 2920              | 17,3         | 3490              | 110  |
| 160L     | 18,5         | 2920              | 21           | 3510              | 116  |
| 180M     | 22           | 2940              | 25,3         | 3540              | 174  |
| 200L*    | 30           | 2950              | 35           | 3560              | 235  |
| 200L     | 37           | 2950              | 42           | 3540              | 298  |
| 225M     | 45           | 2970              | 52           | 3545              | 307  |
| 250M     | 55           | 2970              | 65           | 3560              | 420  |
| 280S     | 75           | 2970              | 87           | 3573              | 550  |
| 280M     | 90           | 2970              | 103          | 3565              | 600  |
| 280M*    | 110          | 2977              | 125          | 3574              | 670  |
| 315S     | 110          | 2980              | 123          | 3575              | 746  |
| 315M     | 132          | 2980              | 150          | 3577              | 887  |
| 315L     | 160          | 2980              | 180          | 3565              | 1015 |
| 315L     | 200          | 2980              | 230          | 3578              | 1090 |

\* higher output as mentioned in IEC 72

technical data 2-pole rotor nl® marine motors  
400V 50Hz and 440V 60Hz

please call for different supply voltages

| Type IEC | at 400V 50Hz |                   | at 440V 60Hz |                   | Mass |
|----------|--------------|-------------------|--------------|-------------------|------|
|          | kW           | min <sup>-1</sup> | kW           | min <sup>-1</sup> | kg   |
| 56M*     | 0,09         | 1250              | 0,09         | 1535              | 4    |
| 63M      | 0,12         | 1380              | 0,15         | 1664              | 4    |
| 63M      | 0,18         | 1350              | 0,21         | 1610              | 5    |
| 71M      | 0,25         | 1315              | 0,29         | 1610              | 6    |
| 71M      | 0,37         | 1350              | 0,43         | 1630              | 7    |
| 80M      | 0,55         | 1380              | 0,63         | 1665              | 9    |
| 80M      | 0,75         | 1395              | 0,86         | 1660              | 10   |
| 90S      | 1,1          | 1410              | 1,3          | 1680              | 13   |
| 90L      | 1,5          | 1420              | 1,75         | 1700              | 16   |
| 100L     | 2,2          | 1420              | 2,5          | 1715              | 31   |
| 100L     | 3            | 1405              | 3,45         | 1685              | 33   |
| 112M     | 4            | 1430              | 4,6          | 1725              | 42   |
| 112M*    | 5            | 1440              | 5,5          | 1730              | 49   |
| 132S     | 5,5          | 1450              | 6,3          | 1740              | 57   |
| 132M     | 7,5          | 1450              | 8,6          | 1740              | 65   |
| 160M     | 11           | 1455              | 12,5         | 1750              | 102  |
| 160L     | 15           | 1455              | 17,3         | 1745              | 115  |
| 180M     | 18,5         | 1465              | 22           | 1755              | 166  |
| 180L     | 22           | 1460              | 25,3         | 1755              | 172  |
| 200L     | 30           | 1470              | 35           | 1760              | 283  |
| 225S     | 37           | 1476              | 42,5         | 1772              | 290  |
| 225M     | 45           | 1475              | 52           | 1775              | 320  |
| 250M     | 55           | 1480              | 63           | 1777              | 435  |
| 280S     | 75           | 1484              | 89           | 1779              | 585  |
| 280M     | 90           | 1484              | 105          | 1780              | 635  |
| 280M*    | 110          | 1485              | 127          | 1783              | 700  |
| 315S     | 110          | 1486              | 132          | 1785              | 815  |
| 315M     | 132          | 1488              | 152          | 1786              | 887  |
| 315L     | 160          | 1486              | 184          | 1786              | 1096 |
| 315L     | 200          | 1489              | 240          | 1781              | 1200 |
| 355S     | 250          | 1490              | 275          | 1785              | 1700 |
| 355M     | 315          | 1485              | 320          | 1786              | 1922 |

technical data 4-pole rotor nl® marine motors  
400V 50Hz and 440V 60Hz

please call for different supply voltages

DOC6315-1/107 subject to alterations

| Type IEC | at 400V 50Hz |                   | at 440V 60Hz |                   | Mass |
|----------|--------------|-------------------|--------------|-------------------|------|
|          | kW           | min <sup>-1</sup> | kW           | min <sup>-1</sup> | kg   |
| 56M*     | 0,06         | 870               | 0,07         | 1060              | 4    |
| 63M*     | 0,12         | 860               | 0,14         | 1040              | 5,5  |
| 71M      | 0,18         | 830               | 0,21         | 1010              | 6    |
| 71M      | 0,25         | 810               | 0,29         | 1005              | 7    |
| 80M      | 0,37         | 910               | 0,43         | 1100              | 9    |
| 80M      | 0,55         | 885               | 0,63         | 1085              | 10   |
| 90S      | 0,75         | 910               | 0,85         | 1100              | 13   |
| 90L      | 1,1          | 915               | 1,3          | 1130              | 16   |
| 100L     | 1,5          | 920               | 1,75         | 1120              | 31   |
| 112M     | 2,2          | 940               | 2,5          | 1125              | 37   |
| 132S     | 3            | 949               | 3,45         | 1140              | 54   |
| 132M     | 4            | 950               | 4,6          | 1135              | 60   |
| 132M     | 5,5          | 950               | 6,3          | 1145              | 68   |
| 160M     | 7,5          | 960               | 8,3          | 1150              | 103  |
| 160L     | 11           | 955               | 12,5         | 1145              | 124  |
| 180L     | 15           | 975               | 18           | 1165              | 150  |
| 200L     | 18,5         | 975               | 22           | 1165              | 200  |
| 200L     | 22           | 975               | 25           | 1170              | 215  |
| 225M     | 30           | 979               | 36           | 1173              | 300  |
| 250M     | 37           | 980               | 43           | 1177              | 400  |
| 250M*    | 45           | 982               | 52           | 1178              | 500  |
| 280S     | 45           | 985               | 54           | 1179              | 500  |
| 280M     | 55           | 985               | 66           | 1180              | 555  |
| 315S     | 75           | 988               | 90           | 1185              | 836  |
| 315M     | 90           | 988               | 105          | 1185              | 850  |
| 315L     | 110          | 988               | 132          | 1175              | 997  |
| 315L     | 132          | 988               | 152          | 1185              | 1100 |
| 315L     | 160          | 987               | 175          | 1180              | 1191 |
| 355M     | 200          | 995               | 230          | 1190              | 1800 |

\* higher output as mentioned in IEC 72

Several extra types (high output design) from frame size 63-355, two speed motors, different speed, voltage or frequency on request.

## Optional special executions for rotor nl® marine motors

- ✓ IPW 55 with extra shaftseals D.E. & N.D.E. + extra impregnation of the windings which protects against moisture (98% R.H.)
- ✓ IP56 (98% R.H.) without fan and fan cover TENV (IC410) for mounting on open deck
- ✓ oiltight flange constructions
- ✓ anti condensation heating (110V or 230V)
- ✓ double flange execution (IC411 - IC410) e.g. for one motor drives two separate flange-mounted pumps
- ✓ TEAO (IC418) (direct driven fan motors without cooling fan on the motor)
- ✓ hydraulic oil submerged motors (IC08)
- ✓ PT100 or KTY84-130 built-in thermo sensors
- ✓ PTC thermistors or bi-metal contacts for overheating protection and signalling
- ✓ extra (reinforced) pre-loaded bearing construction in case of extreme axial loads during operating conditions
- ✓ balancing class "R" and "S" according ISO 2373
- ✓ SPM (shock pulse measuring) nipples mounted
- ✓ automatic grease relief construction
- ✓ special coatings
- ✓ special cablegland connections deviating from metric thread on request.

DOC6315-1/107 subject to alterations