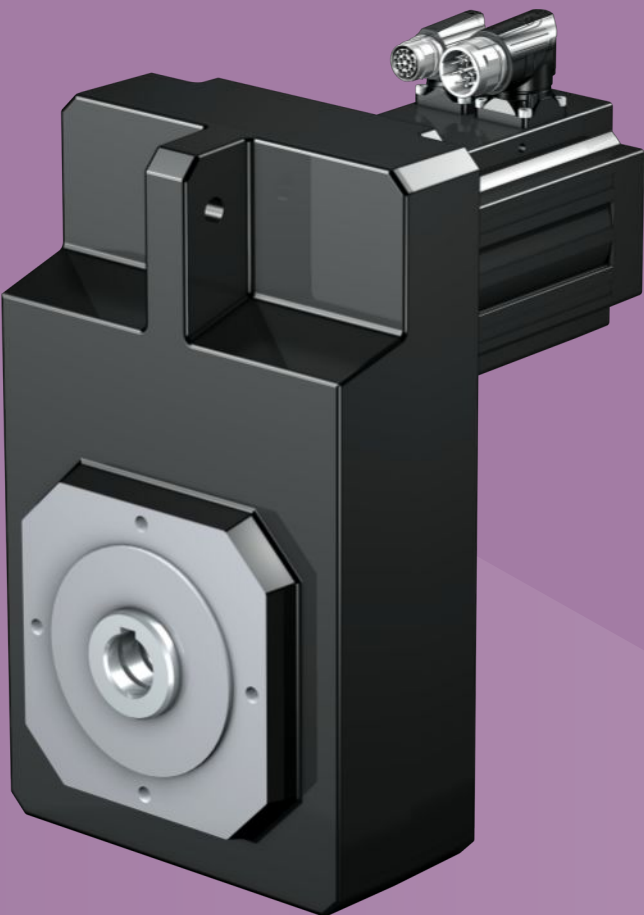




8.1 Overview

Offset helical geared motors with large axial distances

Features

- Power density ★☆☆☆☆
- Backlash ★★☆☆☆
- Price category €
- Shaft load ★★☆☆☆
- Smooth operation ★★☆☆☆
- Torsional stiffness ★★☆☆☆
- Mass moment of inertia ★★★★★
- Helical gearing ✓
- Maintenance-free ✓
- FKM seal ring at the input ✓
- Large axial distances, suitable for confined situations ✓
- Compact and highly dynamic due to direct motor attachment ✓

Key ★☆☆☆☆ good | ★★★★★ excellent  
€ Economy | €€€€€ Premium

Technical data

|                   |               |
|-------------------|---------------|
| i                 | 4.3 – 440     |
| M <sub>2acc</sub> | 21 – 1100 Nm  |
| Δφ <sub>2</sub>   | 5 – 11 arcmin |
| η <sub>get</sub>  | 96 – 97 %     |

## 8.2 Selection tables

The technical data specified in the selection tables applies to:

- Installation altitudes up to 1000 m above sea level
- Surrounding temperatures from 0 °C to 40 °C
- Drives with convection-cooled motors (e.g. EZ401U)
- Weight specification for mounting position EL1, housing design G

For the technical data on drives with forced ventilated motors (e.g. EZ401B), refer to

<https://configurator.stoeber.de/en-US/>.

An explanation of the formula symbols can be found in Chapter [▶ 20.1](#).

| n <sub>2N</sub>                                                 | M <sub>2N</sub> | M <sub>2,0</sub> | a <sub>th</sub> | S   | Type             | M <sub>2acc</sub> | M <sub>2NOT</sub> | i     | i <sub>exakt</sub> | n <sub>1max</sub>  |                | n <sub>1maxZB</sub> | J <sub>1</sub> | Δφ <sub>2</sub> | Δφ <sub>2redII</sub> | C <sub>2</sub>  | m    |
|-----------------------------------------------------------------|-----------------|------------------|-----------------|-----|------------------|-------------------|-------------------|-------|--------------------|--------------------|----------------|---------------------|----------------|-----------------|----------------------|-----------------|------|
| [rpm]                                                           | [Nm]            | [Nm]             |                 |     |                  | [Nm]              | [Nm]              |       |                    | EL1,2,3,4<br>[rpm] | EL5,6<br>[rpm] | [rpm]               | [kgcm²]        | [arcmin]        | [arcmin]             | [Nm/<br>arcmin] | [kg] |
| F1 (n <sub>1N</sub> = 3000 rpm, M <sub>2acc,max</sub> = 120 Nm) |                 |                  |                 |     |                  |                   |                   |       |                    |                    |                |                     |                |                 |                      |                 |      |
| 27                                                              | 101             | 103              | 1.6             | 1.2 | F102_1120 EZ301U | 120               | 240               | 111.9 | 2015/18            | 4000               | 4000           | 7000                | 0.21           | 11.0            | 6.0                  | 7.7             | 13   |
| 32                                                              | 84              | 86               | 1.5             | 1.4 | F102_0940 EZ301U | 120               | 240               | 93.63 | 7865/84            | 4000               | 4000           | 7000                | 0.22           | 11.0            | 6.0                  | 7.7             | 13   |
| 43                                                              | 63              | 65               | 1.3             | 1.9 | F102_0700 EZ301U | 120               | 240               | 70.06 | 1261/18            | 4000               | 4000           | 7000                | 0.23           | 11.0            | 6.0                  | 7.7             | 13   |
| 43                                                              | 108             | 114              | 2.2             | 1.1 | F102_0700 EZ302U | 120               | 240               | 70.06 | 1261/18            | 4000               | 4000           | 7000                | 0.33           | 11.0            | 6.0                  | 7.7             | 13   |
| 54                                                              | 50              | 52               | 1.1             | 2.4 | F102_0560 EZ301U | 120               | 240               | 55.97 | 2015/36            | 4000               | 4000           | 7000                | 0.25           | 11.0            | 6.0                  | 7.7             | 13   |
| 54                                                              | 86              | 91               | 1.9             | 1.4 | F102_0560 EZ302U | 120               | 240               | 55.97 | 2015/36            | 4000               | 4000           | 7000                | 0.35           | 11.0            | 6.0                  | 7.7             | 13   |
| 54                                                              | 112             | 119              | 2.5             | 1.1 | F102_0560 EZ303U | 120               | 240               | 55.97 | 2015/36            | 4000               | 4000           | 7000                | 0.46           | 11.0            | 6.0                  | 7.7             | 14   |
| 65                                                              | 42              | 43               | 1.0             | 2.9 | F102_0460 EZ301U | 120               | 240               | 46.43 | 325/7              | 4000               | 4000           | 7000                | 0.28           | 11.0            | 6.0                  | 7.7             | 13   |
| 65                                                              | 72              | 76               | 1.8             | 1.7 | F102_0460 EZ302U | 120               | 240               | 46.43 | 325/7              | 4000               | 4000           | 7000                | 0.38           | 11.0            | 6.0                  | 7.7             | 13   |
| 65                                                              | 93              | 99               | 2.3             | 1.3 | F102_0460 EZ303U | 120               | 240               | 46.43 | 325/7              | 4000               | 4000           | 7000                | 0.49           | 11.0            | 6.0                  | 7.7             | 14   |
| 86                                                              | 32              | 32               | 1.0             | 3.5 | F102_0350 EZ301U | 95                | 240               | 35.05 | 3575/102           | 4000               | 4000           | 6500                | 0.32           | 11.0            | 6.0                  | 7.7             | 13   |
| 86                                                              | 54              | 57               | 1.7             | 2.0 | F102_0350 EZ302U | 120               | 240               | 35.05 | 3575/102           | 4000               | 4000           | 6500                | 0.42           | 11.0            | 6.0                  | 7.7             | 13   |
| 86                                                              | 70              | 74               | 2.2             | 1.6 | F102_0350 EZ303U | 120               | 240               | 35.05 | 3575/102           | 4000               | 4000           | 6500                | 0.53           | 11.0            | 6.0                  | 7.7             | 14   |
| 86                                                              | 95              | 102              | 2.9             | 1.2 | F102_0350 EZ401U | 120               | 240               | 35.05 | 3575/102           | 4000               | 4000           | 6500                | 1.1            | 11.0            | 6.0                  | 7.7             | 15   |
| 107                                                             | 25              | 26               | 0.9             | 4.0 | F102_0280 EZ301U | 77                | 205               | 28.17 | 169/6              | 4000               | 4000           | 6500                | 0.37           | 11.0            | 6.0                  | 7.7             | 13   |
| 107                                                             | 43              | 46               | 1.6             | 2.3 | F102_0280 EZ302U | 120               | 205               | 28.17 | 169/6              | 4000               | 4000           | 6500                | 0.47           | 11.0            | 6.0                  | 7.7             | 13   |
| 107                                                             | 57              | 60               | 2.1             | 1.8 | F102_0280 EZ303U | 120               | 205               | 28.17 | 169/6              | 4000               | 4000           | 6500                | 0.58           | 11.0            | 6.0                  | 7.7             | 14   |
| 107                                                             | 77              | 82               | 2.8             | 1.3 | F102_0280 EZ401U | 120               | 240               | 28.17 | 169/6              | 4000               | 4000           | 6500                | 1.1            | 11.0            | 6.0                  | 7.7             | 15   |
| 130                                                             | 21              | 21               | 0.9             | 4.6 | F102_0230 EZ301U | 63                | 168               | 23.08 | 3185/138           | 3700               | 3600           | 6000                | 0.43           | 11.0            | 6.0                  | 7.7             | 13   |
| 130                                                             | 36              | 38               | 1.6             | 2.7 | F102_0230 EZ302U | 112               | 168               | 23.08 | 3185/138           | 3700               | 3600           | 6000                | 0.53           | 11.0            | 6.0                  | 7.7             | 13   |
| 130                                                             | 46              | 49               | 2.0             | 2.1 | F102_0230 EZ303U | 120               | 168               | 23.08 | 3185/138           | 3700               | 3600           | 6000                | 0.64           | 11.0            | 6.0                  | 7.7             | 14   |
| 130                                                             | 63              | 67               | 2.7             | 1.5 | F102_0230 EZ401U | 120               | 240               | 23.08 | 3185/138           | 3700               | 3600           | 6000                | 1.2            | 11.0            | 6.0                  | 7.7             | 15   |
| 163                                                             | 28              | 30               | 1.5             | 3.1 | F102_0185 EZ302U | 90                | 134               | 18.46 | 1495/81            | 3700               | 3600           | 6000                | 0.62           | 11.0            | 6.0                  | 7.7             | 13   |
| 163                                                             | 37              | 39               | 2.0             | 2.4 | F102_0185 EZ303U | 107               | 134               | 18.46 | 1495/81            | 3700               | 3600           | 6000                | 0.73           | 11.0            | 6.0                  | 7.7             | 14   |
| 163                                                             | 50              | 54               | 2.6             | 1.8 | F102_0185 EZ401U | 120               | 240               | 18.46 | 1495/81            | 3700               | 3600           | 6000                | 1.3            | 11.0            | 6.0                  | 7.7             | 15   |
| 163                                                             | 77              | 84               | 4.1             | 1.1 | F102_0185 EZ501U | 120               | 240               | 18.46 | 1495/81            | 3700               | 3600           | 6000                | 3.2            | 11.0            | 6.0                  | 7.7             | 16   |
| 163                                                             | 84              | 93               | 4.4             | 1.1 | F102_0185 EZ402U | 120               | 240               | 18.46 | 1495/81            | 3700               | 3600           | 6000                | 2.0            | 11.0            | 6.0                  | 7.7             | 16   |
| 221                                                             | 21              | 22               | 1.4             | 3.8 | F102_0135 EZ302U | 66                | 99                | 13.59 | 231/17             | 4000               | 4000           | 6500                | 0.51           | 11.0            | 8.0                  | 6.5             | 13   |
| 221                                                             | 27              | 29               | 1.9             | 2.9 | F102_0135 EZ303U | 79                | 99                | 13.59 | 231/17             | 4000               | 4000           | 6500                | 0.62           | 11.0            | 8.0                  | 6.5             | 14   |
| 221                                                             | 37              | 40               | 2.5             | 2.2 | F102_0135 EZ401U | 105               | 200               | 13.59 | 231/17             | 4000               | 4000           | 6500                | 1.1            | 11.0            | 8.0                  | 6.5             | 15   |
| 221                                                             | 57              | 62               | 3.9             | 1.4 | F102_0135 EZ501U | 105               | 200               | 13.59 | 231/17             | 4000               | 4000           | 6500                | 3.1            | 11.0            | 8.0                  | 6.5             | 16   |
| 221                                                             | 62              | 69               | 4.2             | 1.3 | F102_0135 EZ402U | 105               | 200               | 13.59 | 231/17             | 4000               | 4000           | 6500                | 1.8            | 11.0            | 8.0                  | 6.5             | 16   |
| 275                                                             | 17              | 18               | 1.6             | 3.8 | F102_0110 EZ302U | 53                | 79                | 10.92 | 273/25             | 4000               | 4000           | 6500                | 0.60           | 11.0            | 8.0                  | 6.5             | 13   |
| 275                                                             | 22              | 23               | 2.1             | 2.9 | F102_0110 EZ303U | 64                | 79                | 10.92 | 273/25             | 4000               | 4000           | 6500                | 0.71           | 11.0            | 8.0                  | 6.5             | 14   |
| 275                                                             | 30              | 32               | 2.4             | 2.5 | F102_0110 EZ401U | 90                | 200               | 10.92 | 273/25             | 4000               | 4000           | 6500                | 1.2            | 11.0            | 8.0                  | 6.5             | 15   |
| 275                                                             | 46              | 50               | 3.7             | 1.6 | F102_0110 EZ501U | 105               | 200               | 10.92 | 273/25             | 4000               | 4000           | 6500                | 3.2            | 11.0            | 8.0                  | 6.5             | 16   |
| 275                                                             | 50              | 55               | 4.1             | 1.5 | F102_0110 EZ402U | 105               | 200               | 10.92 | 273/25             | 4000               | 4000           | 6500                | 1.9            | 11.0            | 8.0                  | 6.5             | 16   |
| 275                                                             | 73              | 91               | 6.0             | 1.0 | F102_0110 EZ404U | 105               | 200               | 10.92 | 273/25             | 4000               | 4000           | 6500                | 3.3            | 11.0            | 8.0                  | 6.5             | 18   |
| 335                                                             | 14              | 15               | 1.8             | 3.8 | F102_0089 EZ302U | 43                | 65                | 8.948 | 1029/115           | 3700               | 3600           | 6000                | 0.73           | 11.0            | 8.0                  | 6.5             | 13   |
| 335                                                             | 18              | 19               | 2.3             | 2.9 | F102_0089 EZ303U | 52                | 65                | 8.948 | 1029/115           | 3700               | 3600           | 6000                | 0.84           | 11.0            | 8.0                  | 6.5             | 14   |
| 335                                                             | 24              | 26               | 2.3             | 2.9 | F102_0089 EZ401U | 74                | 200               | 8.948 | 1029/115           | 3700               | 3600           | 6000                | 1.4            | 11.0            | 8.0                  | 6.5             | 15   |
| 335                                                             | 37              | 41               | 3.6             | 1.9 | F102_0089 EZ501U | 105               | 200               | 8.948 | 1029/115           | 3700               | 3600           | 6000                | 3.3            | 11.0            | 8.0                  | 6.5             | 16   |
| 335                                                             | 41              | 45               | 3.9             | 1.7 | F102_0089 EZ402U | 105               | 200               | 8.948 | 1029/115           | 3700               | 3600           | 6000                | 2.1            | 11.0            | 8.0                  | 6.5             | 16   |
| 335                                                             | 60              | 75               | 5.8             | 1.2 | F102_0089 EZ404U | 105               | 200               | 8.948 | 1029/115           | 3700               | 3600           | 6000                | 3.4            | 11.0            | 8.0                  | 6.5             | 18   |
| 335                                                             | 64              | 69               | 6.2             | 1.1 | F102_0089 EZ502U | 105               | 200               | 8.948 | 1029/115           | 3700               | 3600           | 6000                | 5.6            | 11.0            | 8.0                  | 6.5             | 18   |
| 335                                                             | 64              | 72               | 6.2             | 1.1 | F102_0089 EZ701U | 105               | 200               | 8.948 | 1029/115           | 3700               | 3600           | 6000                | 8.9            | 11.0            | 8.0                  | 6.5             | 20   |
| 419                                                             | 11              | 12               | 2.0             | 3.8 | F102_0072 EZ302U | 35                | 52                | 7.156 | 322/45             | 3700               | 3600           | 6000                | 0.92           | 11.0            | 8.0                  | 6.5             | 13   |
| 419                                                             | 14              | 15               | 2.6             | 2.9 | F102_0072 EZ303U | 42                | 52                | 7.156 | 322/45             | 3700               | 3600           | 6000                | 1.0            | 11.0            | 8.0                  | 6.5             | 14   |
| 419                                                             | 19              | 21               | 2.3             | 3.3 | F102_0072 EZ401U | 59                | 200               | 7.156 | 322/45             | 3700               | 3600           | 6000                | 1.6            | 11.0            | 8.0                  | 6.5             | 15   |
| 419                                                             | 30              | 33               | 3.5             | 2.2 | F102_0072 EZ501U | 105               | 200               | 7.156 | 322/45             | 3700               | 3600           | 6000                | 3.5            | 11.0            | 8.0                  | 6.5             | 16   |
| 419                                                             | 33              | 36               | 3.8             | 2.0 | F102_0072 EZ402U | 105               | 200               | 7.156 | 322/45             | 3700               | 3600           | 6000                | 2.3            | 11.0            | 8.0                  | 6.5             | 16   |

## 8.2 Selection tables 8 F offset helical geared motors

| $n_{2N}$                                           | $M_{2N}$ | $M_{2,0}$ | $a_{th}$ | S   | Type             | $M_{2acc}$ | $M_{2NOT}$ | i     | $i_{exakt}$ | $n_{1maxDB}$ |       | $n_{1maxZB}$ | $J_1$                | $\Delta\varphi_2$ | $\Delta\varphi_{2redl}$ | $C_2$           | m    |
|----------------------------------------------------|----------|-----------|----------|-----|------------------|------------|------------|-------|-------------|--------------|-------|--------------|----------------------|-------------------|-------------------------|-----------------|------|
| [rpm]                                              | [Nm]     | [Nm]      |          |     |                  | [Nm]       | [Nm]       |       |             | EL1,2,3,4    | EL5,6 | [rpm]        | [kgcm <sup>2</sup> ] | [arcmin]          | [arcmin]                | [Nm/<br>arcmin] | [kg] |
| F1 ( $n_{1N} = 3000$ rpm, $M_{2acc,max} = 120$ Nm) |          |           |          |     |                  |            |            |       |             |              |       |              |                      |                   |                         |                 |      |
| 419                                                | 48       | 60        | 5.6      | 1.3 | F102_0072 EZ404U | 105        | 200        | 7.156 | 322/45      | 3700         | 3600  | 6000         | 3.6                  | 11.0              | 8.0                     | 6.5             | 18   |
| 419                                                | 51       | 56        | 6.0      | 1.3 | F102_0072 EZ502U | 105        | 200        | 7.156 | 322/45      | 3700         | 3600  | 6000         | 5.8                  | 11.0              | 8.0                     | 6.5             | 18   |
| 419                                                | 51       | 58        | 6.0      | 1.3 | F102_0072 EZ701U | 105        | 200        | 7.156 | 322/45      | 3700         | 3600  | 6000         | 9.1                  | 11.0              | 8.0                     | 6.5             | 20   |
| 464                                                | 18       | 19        | 2.2      | 3.6 | F102_0065 EZ401U | 53         | 188        | 6.462 | 84/13       | 3500         | 3000  | 6000         | 1.7                  | 11.0              | 8.0                     | 6.5             | 15   |
| 464                                                | 27       | 29        | 3.4      | 2.3 | F102_0065 EZ501U | 100        | 188        | 6.462 | 84/13       | 3500         | 3000  | 6000         | 3.7                  | 11.0              | 8.0                     | 6.5             | 16   |
| 464                                                | 29       | 33        | 3.7      | 2.1 | F102_0065 EZ402U | 100        | 188        | 6.462 | 84/13       | 3500         | 3000  | 6000         | 2.4                  | 11.0              | 8.0                     | 6.5             | 16   |
| 464                                                | 43       | 54        | 5.5      | 1.4 | F102_0065 EZ404U | 105        | 188        | 6.462 | 84/13       | 3500         | 3000  | 6000         | 3.7                  | 11.0              | 8.0                     | 6.5             | 18   |
| 464                                                | 46       | 50        | 5.9      | 1.3 | F102_0065 EZ502U | 105        | 188        | 6.462 | 84/13       | 3500         | 3000  | 6000         | 6.0                  | 11.0              | 8.0                     | 6.5             | 18   |
| 464                                                | 46       | 52        | 5.9      | 1.3 | F102_0065 EZ701U | 105        | 188        | 6.462 | 84/13       | 3500         | 3000  | 6000         | 9.3                  | 11.0              | 8.0                     | 6.5             | 20   |
| 464                                                | 61       | 70        | 7.7      | 1.0 | F102_0065 EZ503U | 105        | 188        | 6.462 | 84/13       | 3500         | 3000  | 6000         | 8.3                  | 11.0              | 8.0                     | 6.5             | 19   |
| 696                                                | 6.6      | 7.0       | 2.6      | 3.8 | F102_0043 EZ302U | 21         | 31         | 4.308 | 56/13       | 3500         | 3000  | 6000         | 1.8                  | 11.0              | 8.0                     | 6.5             | 13   |
| 696                                                | 8.7      | 9.2       | 3.3      | 2.9 | F102_0043 EZ303U | 25         | 31         | 4.308 | 56/13       | 3500         | 3000  | 6000         | 1.9                  | 11.0              | 8.0                     | 6.5             | 14   |
| 696                                                | 12       | 13        | 2.1      | 4.7 | F102_0043 EZ401U | 36         | 125        | 4.308 | 56/13       | 3500         | 3000  | 6000         | 2.4                  | 11.0              | 8.0                     | 6.5             | 15   |
| 696                                                | 18       | 20        | 3.2      | 3.0 | F102_0043 EZ501U | 67         | 125        | 4.308 | 56/13       | 3500         | 3000  | 6000         | 4.4                  | 11.0              | 8.0                     | 6.5             | 16   |
| 696                                                | 20       | 22        | 3.5      | 2.8 | F102_0043 EZ402U | 67         | 125        | 4.308 | 56/13       | 3500         | 3000  | 6000         | 3.1                  | 11.0              | 8.0                     | 6.5             | 16   |
| 696                                                | 29       | 36        | 5.1      | 1.9 | F102_0043 EZ404U | 100        | 125        | 4.308 | 56/13       | 3500         | 3000  | 6000         | 4.5                  | 11.0              | 8.0                     | 6.5             | 18   |
| 696                                                | 31       | 33        | 5.5      | 1.8 | F102_0043 EZ502U | 100        | 125        | 4.308 | 56/13       | 3500         | 3000  | 6000         | 6.7                  | 11.0              | 8.0                     | 6.5             | 18   |
| 696                                                | 31       | 35        | 5.5      | 1.8 | F102_0043 EZ701U | 84         | 125        | 4.308 | 56/13       | 3500         | 3000  | 6000         | 10                   | 11.0              | 8.0                     | 6.5             | 20   |
| 696                                                | 41       | 46        | 7.2      | 1.3 | F102_0043 EZ503U | 100        | 125        | 4.308 | 56/13       | 3500         | 3000  | 6000         | 9.1                  | 11.0              | 8.0                     | 6.5             | 19   |
| F1 ( $n_{1N} = 6000$ rpm, $M_{2acc,max} = 120$ Nm) |          |           |          |     |                  |            |            |       |             |              |       |              |                      |                   |                         |                 |      |
| 43                                                 | 83       | 94        | 1.2      | 1.5 | F102_1400 EZ203U | 120        | 240        | 139.8 | 559/4       | 4000         | 4000  | 7000         | 0.18                 | 11.0              | 6.0                     | 7.7             | 13   |
| 54                                                 | 66       | 75        | 1.0      | 1.8 | F102_1120 EZ203U | 120        | 240        | 111.9 | 2015/18     | 4000         | 4000  | 7000         | 0.19                 | 11.0              | 6.0                     | 7.7             | 13   |
| 54                                                 | 97       | 103       | 1.5      | 1.2 | F102_1120 EZ301U | 120        | 240        | 111.9 | 2015/18     | 4000         | 4000  | 7000         | 0.21                 | 11.0              | 6.0                     | 7.7             | 13   |
| 64                                                 | 55       | 63        | 1.0      | 2.2 | F102_0940 EZ203U | 120        | 240        | 93.63 | 7865/84     | 4000         | 4000  | 7000         | 0.19                 | 11.0              | 6.0                     | 7.7             | 13   |
| 64                                                 | 81       | 86        | 1.4      | 1.5 | F102_0940 EZ301U | 120        | 240        | 93.63 | 7865/84     | 4000         | 4000  | 7000         | 0.22                 | 11.0              | 6.0                     | 7.7             | 13   |
| 86                                                 | 60       | 65        | 1.3      | 1.8 | F102_0700 EZ301U | 120        | 240        | 70.06 | 1261/18     | 4000         | 4000  | 7000         | 0.23                 | 11.0              | 6.0                     | 7.7             | 13   |
| 86                                                 | 102      | 114       | 2.2      | 1.1 | F102_0700 EZ302U | 120        | 240        | 70.06 | 1261/18     | 4000         | 4000  | 7000         | 0.33                 | 11.0              | 6.0                     | 7.7             | 13   |
| 107                                                | 48       | 52        | 1.3      | 2.1 | F102_0560 EZ301U | 120        | 240        | 55.97 | 2015/36     | 4000         | 4000  | 7000         | 0.25                 | 11.0              | 6.0                     | 7.7             | 13   |
| 107                                                | 81       | 91        | 2.1      | 1.2 | F102_0560 EZ302U | 120        | 240        | 55.97 | 2015/36     | 4000         | 4000  | 7000         | 0.35                 | 11.0              | 6.0                     | 7.7             | 13   |
| 129                                                | 40       | 43        | 1.2      | 2.4 | F102_0460 EZ301U | 120        | 240        | 46.43 | 325/7       | 4000         | 4000  | 7000         | 0.28                 | 11.0              | 6.0                     | 7.7             | 13   |
| 129                                                | 68       | 76        | 2.1      | 1.4 | F102_0460 EZ302U | 120        | 240        | 46.43 | 325/7       | 4000         | 4000  | 7000         | 0.38                 | 11.0              | 6.0                     | 7.7             | 13   |
| 129                                                | 88       | 101       | 2.7      | 1.1 | F102_0460 EZ303U | 120        | 240        | 46.43 | 325/7       | 4000         | 4000  | 7000         | 0.49                 | 11.0              | 6.0                     | 7.7             | 14   |
| 171                                                | 30       | 32        | 1.2      | 2.9 | F102_0350 EZ301U | 95         | 240        | 35.05 | 3575/102    | 4000         | 4000  | 6500         | 0.32                 | 11.0              | 6.0                     | 7.7             | 13   |
| 171                                                | 51       | 57        | 2.0      | 1.7 | F102_0350 EZ302U | 120        | 240        | 35.05 | 3575/102    | 4000         | 4000  | 6500         | 0.42                 | 11.0              | 6.0                     | 7.7             | 13   |
| 171                                                | 67       | 76        | 2.6      | 1.3 | F102_0350 EZ303U | 120        | 240        | 35.05 | 3575/102    | 4000         | 4000  | 6500         | 0.53                 | 11.0              | 6.0                     | 7.7             | 14   |
| 171                                                | 78       | 95        | 3.0      | 1.1 | F102_0350 EZ401U | 120        | 240        | 35.05 | 3575/102    | 4000         | 4000  | 6500         | 1.1                  | 11.0              | 6.0                     | 7.7             | 15   |
| 213                                                | 24       | 26        | 1.1      | 3.3 | F102_0280 EZ301U | 77         | 205        | 28.17 | 169/6       | 4000         | 4000  | 6500         | 0.37                 | 11.0              | 6.0                     | 7.7             | 13   |
| 213                                                | 41       | 46        | 1.9      | 2.0 | F102_0280 EZ302U | 120        | 205        | 28.17 | 169/6       | 4000         | 4000  | 6500         | 0.47                 | 11.0              | 6.0                     | 7.7             | 13   |
| 213                                                | 54       | 61        | 2.5      | 1.5 | F102_0280 EZ303U | 120        | 205        | 28.17 | 169/6       | 4000         | 4000  | 6500         | 0.58                 | 11.0              | 6.0                     | 7.7             | 14   |
| 213                                                | 63       | 77        | 2.9      | 1.3 | F102_0280 EZ401U | 120        | 240        | 28.17 | 169/6       | 4000         | 4000  | 6500         | 1.1                  | 11.0              | 6.0                     | 7.7             | 15   |
| 260                                                | 20       | 21        | 1.1      | 3.8 | F102_0230 EZ301U | 63         | 168        | 23.08 | 3185/138    | 3700         | 3600  | 6000         | 0.43                 | 11.0              | 6.0                     | 7.7             | 13   |
| 260                                                | 34       | 38        | 1.8      | 2.3 | F102_0230 EZ302U | 112        | 168        | 23.08 | 3185/138    | 3700         | 3600  | 6000         | 0.53                 | 11.0              | 6.0                     | 7.7             | 13   |
| 260                                                | 44       | 50        | 2.4      | 1.7 | F102_0230 EZ303U | 120        | 168        | 23.08 | 3185/138    | 3700         | 3600  | 6000         | 0.64                 | 11.0              | 6.0                     | 7.7             | 14   |
| 260                                                | 51       | 63        | 2.8      | 1.5 | F102_0230 EZ401U | 120        | 240        | 23.08 | 3185/138    | 3700         | 3600  | 6000         | 1.2                  | 11.0              | 6.0                     | 7.7             | 15   |
| 325                                                | 16       | 17        | 1.1      | 4.4 | F102_0185 EZ301U | 50         | 134        | 18.46 | 1495/81     | 3700         | 3600  | 6000         | 0.52                 | 11.0              | 6.0                     | 7.7             | 13   |
| 325                                                | 27       | 30        | 1.8      | 2.6 | F102_0185 EZ302U | 90         | 134        | 18.46 | 1495/81     | 3700         | 3600  | 6000         | 0.62                 | 11.0              | 6.0                     | 7.7             | 13   |
| 325                                                | 35       | 40        | 2.3      | 2.0 | F102_0185 EZ303U | 107        | 134        | 18.46 | 1495/81     | 3700         | 3600  | 6000         | 0.73                 | 11.0              | 6.0                     | 7.7             | 14   |
| 325                                                | 41       | 50        | 2.7      | 1.7 | F102_0185 EZ401U | 120        | 240        | 18.46 | 1495/81     | 3700         | 3600  | 6000         | 1.3                  | 11.0              | 6.0                     | 7.7             | 15   |
| 325                                                | 61       | 79        | 4.0      | 1.2 | F102_0185 EZ501U | 120        | 240        | 18.46 | 1495/81     | 3700         | 3600  | 6000         | 3.2                  | 11.0              | 6.0                     | 7.7             | 16   |
| 325                                                | 63       | 88        | 4.2      | 1.1 | F102_0185 EZ402U | 120        | 240        | 18.46 | 1495/81     | 3700         | 3600  | 6000         | 2.0                  | 11.0              | 6.0                     | 7.7             | 16   |
| 442                                                | 20       | 22        | 1.7      | 3.2 | F102_0135 EZ302U | 66         | 99         | 13.59 | 231/17      | 4000         | 4000  | 6500         | 0.51                 | 11.0              | 8.0                     | 6.5             | 13   |
| 442                                                | 26       | 30        | 2.2      | 2.5 | F102_0135 EZ303U | 79         | 99         | 13.59 | 231/17      | 4000         | 4000  | 6500         | 0.62                 | 11.0              | 8.0                     | 6.5             | 14   |
| 442                                                | 30       | 37        | 2.6      | 2.1 | F102_0135 EZ401U | 105        | 200        | 13.59 | 231/17      | 4000         | 4000  | 6500         | 1.1                  | 11.0              | 8.0                     | 6.5             | 15   |
| 442                                                | 45       | 58        | 3.8      | 1.4 | F102_0135 EZ501U | 105        | 200        | 13.59 | 231/17      | 4000         | 4000  | 6500         | 3.1                  | 11.0              | 8.0                     | 6.5             | 16   |
| 442                                                | 46       | 65        | 4.0      | 1.4 | F102_0135 EZ402U | 105        | 200        | 13.59 | 231/17      | 4000         | 4000  | 6500         | 1.8                  | 11.0              | 8.0                     | 6.5             | 16   |
| 549                                                | 16       | 18        | 1.6      | 3.7 | F102_0110 EZ302U | 53         | 79         | 10.92 | 273/25      | 4000         | 4000  | 6500         | 0.60                 | 11.0              | 8.0                     | 6.5             | 13   |
| 549                                                | 21       | 24        | 2.1      | 2.8 | F102_0110 EZ303U | 64         | 79         | 10.92 | 273/25      | 4000         | 4000  | 6500         | 0.71                 | 11.0              | 8.0                     | 6.5             | 14   |
| 549                                                | 24       | 30        | 2.5      | 2.4 | F102_0110 EZ401U | 90         | 200        | 10.92 | 273/25      | 4000         | 4000  | 6500         | 1.2                  | 11.0              | 8.0                     | 6.5             | 15   |
| 549                                                | 36       | 47        | 3.7      | 1.6 | F102_0110 EZ501U | 105        | 200        | 10.92 | 273/25      | 4000         | 4000  | 6500         | 3.2                  | 11.0              | 8.0                     | 6.5             | 16   |
| 549                                                | 37       | 52        | 3.8      | 1.6 | F102_0110 EZ402U | 105        | 200        | 10.92 | 273/25      | 4000         | 4000  | 6500         | 1.9                  | 11.0              | 8.0                     | 6.5             | 16   |
| 549                                                | 55       | 83        | 5.7      | 1.1 | F102_0110 EZ502U | 105        | 200        | 10.92 | 273/25      | 4000         | 4000  | 6500         | 5.5                  | 11.0              | 8.0                     | 6.5             | 18   |
| 549                                                | 55       | 84        | 5.7      | 1.1 | F102_0110 EZ701U | 105        | 200        | 10.92 | 273/25      | 4000         | 4000  | 6500         | 8.8                  | 11.0              | 8.0                     | 6.5             | 20   |
| 671                                                | 13       | 15        | 1.7      | 4.0 | F102_0089 EZ302U | 43         | 65         | 8.948 | 1029/115    | 3700         | 3600  | 6000         | 0.73                 | 11.0              | 8.0                     | 6.5             | 13   |
| 671                                                | 17       | 20        | 2.2      | 3.1 | F102_0089 EZ303U | 52         | 65         | 8.948 | 1029/115    | 3700         | 3600  | 6000         | 0.84                 | 11.0              | 8.0                     | 6.5             | 14   |

| $n_{2N}$                                           | $M_{2N}$ | $M_{2,0}$ | $a_{th}$ | S   | Type             | $M_{2acc}$ | $M_{2NOT}$ | i     | $i_{exakt}$ | $n_{1maxDB}$ |       | $n_{1maxZB}$ | $J_1$                | $\Delta\varphi_2$ | $\Delta\varphi_{2redl}$ | $C_2$           | m    |
|----------------------------------------------------|----------|-----------|----------|-----|------------------|------------|------------|-------|-------------|--------------|-------|--------------|----------------------|-------------------|-------------------------|-----------------|------|
| [rpm]                                              | [Nm]     | [Nm]      |          |     |                  | [Nm]       | [Nm]       |       |             | EL1,2,3,4    | EL5,6 | [rpm]        | [kgcm <sup>2</sup> ] | [arcmin]          | [arcmin]                | [Nm/<br>arcmin] | [kg] |
| F1 ( $n_{1N} = 6000$ rpm, $M_{2acc,max} = 120$ Nm) |          |           |          |     |                  |            |            |       |             |              |       |              |                      |                   |                         |                 |      |
| 671                                                | 20       | 24        | 2.4      | 2.8 | F102_0089 EZ401U | 74         | 200        | 8.948 | 1029/115    | 3700         | 3600  | 6000         | 1.4                  | 11.0              | 8.0                     | 6.5             | 15   |
| 671                                                | 30       | 38        | 3.6      | 1.9 | F102_0089 EZ501U | 105        | 200        | 8.948 | 1029/115    | 3700         | 3600  | 6000         | 3.3                  | 11.0              | 8.0                     | 6.5             | 16   |
| 671                                                | 30       | 43        | 3.7      | 1.8 | F102_0089 EZ402U | 105        | 200        | 8.948 | 1029/115    | 3700         | 3600  | 6000         | 2.1                  | 11.0              | 8.0                     | 6.5             | 16   |
| 671                                                | 45       | 68        | 5.5      | 1.2 | F102_0089 EZ502U | 105        | 200        | 8.948 | 1029/115    | 3700         | 3600  | 6000         | 5.6                  | 11.0              | 8.0                     | 6.5             | 18   |
| 671                                                | 45       | 69        | 5.5      | 1.2 | F102_0089 EZ701U | 105        | 200        | 8.948 | 1029/115    | 3700         | 3600  | 6000         | 8.9                  | 11.0              | 8.0                     | 6.5             | 20   |
| 671                                                | 50       | 73        | 6.1      | 1.1 | F102_0089 EZ404U | 105        | 200        | 8.948 | 1029/115    | 3700         | 3600  | 6000         | 3.4                  | 11.0              | 8.0                     | 6.5             | 18   |
| 671                                                | 54       | 92        | 6.5      | 1.0 | F102_0089 EZ503U | 105        | 200        | 8.948 | 1029/115    | 3700         | 3600  | 6000         | 8.0                  | 11.0              | 8.0                     | 6.5             | 19   |
| 838                                                | 10       | 12        | 1.9      | 4.0 | F102_0072 EZ302U | 35         | 52         | 7.156 | 322/45      | 3700         | 3600  | 6000         | 0.92                 | 11.0              | 8.0                     | 6.5             | 13   |
| 838                                                | 14       | 16        | 2.4      | 3.1 | F102_0072 EZ303U | 42         | 52         | 7.156 | 322/45      | 3700         | 3600  | 6000         | 1.0                  | 11.0              | 8.0                     | 6.5             | 14   |
| 838                                                | 16       | 19        | 2.3      | 3.2 | F102_0072 EZ401U | 59         | 200        | 7.156 | 322/45      | 3700         | 3600  | 6000         | 1.6                  | 11.0              | 8.0                     | 6.5             | 15   |
| 838                                                | 24       | 31        | 3.4      | 2.2 | F102_0072 EZ501U | 105        | 200        | 7.156 | 322/45      | 3700         | 3600  | 6000         | 3.5                  | 11.0              | 8.0                     | 6.5             | 16   |
| 838                                                | 24       | 34        | 3.6      | 2.1 | F102_0072 EZ402U | 105        | 200        | 7.156 | 322/45      | 3700         | 3600  | 6000         | 2.3                  | 11.0              | 8.0                     | 6.5             | 16   |
| 838                                                | 36       | 54        | 5.3      | 1.4 | F102_0072 EZ502U | 105        | 200        | 7.156 | 322/45      | 3700         | 3600  | 6000         | 5.8                  | 11.0              | 8.0                     | 6.5             | 18   |
| 838                                                | 36       | 55        | 5.3      | 1.4 | F102_0072 EZ701U | 105        | 200        | 7.156 | 322/45      | 3700         | 3600  | 6000         | 9.1                  | 11.0              | 8.0                     | 6.5             | 20   |
| 838                                                | 40       | 58        | 5.9      | 1.3 | F102_0072 EZ404U | 105        | 200        | 7.156 | 322/45      | 3700         | 3600  | 6000         | 3.6                  | 11.0              | 8.0                     | 6.5             | 18   |
| 838                                                | 43       | 74        | 6.3      | 1.2 | F102_0072 EZ503U | 105        | 200        | 7.156 | 322/45      | 3700         | 3600  | 6000         | 8.2                  | 11.0              | 8.0                     | 6.5             | 19   |
| 929                                                | 14       | 18        | 2.3      | 3.4 | F102_0065 EZ401U | 53         | 188        | 6.462 | 84/13       | 3500         | 3000  | 6000         | 1.7                  | 11.0              | 8.0                     | 6.5             | 15   |
| 929                                                | 21       | 28        | 3.4      | 2.3 | F102_0065 EZ501U | 100        | 188        | 6.462 | 84/13       | 3500         | 3000  | 6000         | 3.7                  | 11.0              | 8.0                     | 6.5             | 16   |
| 929                                                | 22       | 31        | 3.5      | 2.3 | F102_0065 EZ402U | 100        | 188        | 6.462 | 84/13       | 3500         | 3000  | 6000         | 2.4                  | 11.0              | 8.0                     | 6.5             | 16   |
| 929                                                | 33       | 49        | 5.2      | 1.5 | F102_0065 EZ502U | 105        | 188        | 6.462 | 84/13       | 3500         | 3000  | 6000         | 6.0                  | 11.0              | 8.0                     | 6.5             | 18   |
| 929                                                | 33       | 50        | 5.2      | 1.5 | F102_0065 EZ701U | 105        | 188        | 6.462 | 84/13       | 3500         | 3000  | 6000         | 9.3                  | 11.0              | 8.0                     | 6.5             | 20   |
| 929                                                | 36       | 53        | 5.8      | 1.4 | F102_0065 EZ404U | 105        | 188        | 6.462 | 84/13       | 3500         | 3000  | 6000         | 3.7                  | 11.0              | 8.0                     | 6.5             | 18   |
| 929                                                | 39       | 66        | 6.2      | 1.3 | F102_0065 EZ503U | 105        | 188        | 6.462 | 84/13       | 3500         | 3000  | 6000         | 8.3                  | 11.0              | 8.0                     | 6.5             | 19   |
| 1393                                               | 6.3      | 7.0       | 2.4      | 4.0 | F102_0043 EZ302U | 21         | 31         | 4.308 | 56/13       | 3500         | 3000  | 6000         | 1.8                  | 11.0              | 8.0                     | 6.5             | 13   |
| 1393                                               | 8.2      | 9.4       | 3.1      | 3.1 | F102_0043 EZ303U | 25         | 31         | 4.308 | 56/13       | 3500         | 3000  | 6000         | 1.9                  | 11.0              | 8.0                     | 6.5             | 14   |
| 1393                                               | 9.6      | 12        | 2.1      | 4.5 | F102_0043 EZ401U | 36         | 125        | 4.308 | 56/13       | 3500         | 3000  | 6000         | 2.4                  | 11.0              | 8.0                     | 6.5             | 15   |
| 1393                                               | 14       | 18        | 3.2      | 3.0 | F102_0043 EZ501U | 67         | 125        | 4.308 | 56/13       | 3500         | 3000  | 6000         | 4.4                  | 11.0              | 8.0                     | 6.5             | 16   |
| 1393                                               | 15       | 20        | 3.3      | 3.0 | F102_0043 EZ402U | 67         | 125        | 4.308 | 56/13       | 3500         | 3000  | 6000         | 3.1                  | 11.0              | 8.0                     | 6.5             | 16   |
| 1393                                               | 22       | 33        | 4.8      | 2.0 | F102_0043 EZ502U | 100        | 125        | 4.308 | 56/13       | 3500         | 3000  | 6000         | 6.7                  | 11.0              | 8.0                     | 6.5             | 18   |
| 1393                                               | 22       | 33        | 4.8      | 2.0 | F102_0043 EZ701U | 84         | 125        | 4.308 | 56/13       | 3500         | 3000  | 6000         | 10                   | 11.0              | 8.0                     | 6.5             | 20   |
| 1393                                               | 24       | 35        | 5.4      | 1.8 | F102_0043 EZ404U | 100        | 125        | 4.308 | 56/13       | 3500         | 3000  | 6000         | 4.5                  | 11.0              | 8.0                     | 6.5             | 18   |
| 1393                                               | 26       | 44        | 5.8      | 1.7 | F102_0043 EZ503U | 100        | 125        | 4.308 | 56/13       | 3500         | 3000  | 6000         | 9.1                  | 11.0              | 8.0                     | 6.5             | 19   |
| F2 ( $n_{1N} = 3000$ rpm, $M_{2acc,max} = 270$ Nm) |          |           |          |     |                  |            |            |       |             |              |       |              |                      |                   |                         |                 |      |
| 14                                                 | 198      | 202       | 1.2      | 1.2 | F203_2220 EZ301U | 270        | 480        | 222.2 | 2444/11     | 4000         | 3900  | 6500         | 0.25                 | 11.0              | 7.0                     | 18              | 24   |
| 16                                                 | 164      | 167       | 1.1      | 1.5 | F203_1840 EZ301U | 270        | 480        | 184.3 | 16215/88    | 4000         | 3900  | 6500         | 0.25                 | 11.0              | 7.0                     | 18              | 24   |
| 21                                                 | 127      | 130       | 1.0      | 1.9 | F202_1410 EZ301U | 270        | 480        | 140.9 | 1550/11     | 4000         | 3900  | 6500         | 0.23                 | 11.0              | 6.0                     | 18              | 21   |
| 21                                                 | 217      | 230       | 1.7      | 1.1 | F202_1410 EZ302U | 270        | 480        | 140.9 | 1550/11     | 4000         | 3900  | 6500         | 0.33                 | 11.0              | 6.0                     | 18              | 22   |
| 27                                                 | 102      | 104       | 0.9      | 2.4 | F202_1130 EZ301U | 270        | 480        | 112.7 | 1240/11     | 4000         | 3900  | 6500         | 0.24                 | 11.0              | 6.0                     | 18              | 21   |
| 27                                                 | 174      | 184       | 1.5      | 1.4 | F202_1130 EZ302U | 270        | 480        | 112.7 | 1240/11     | 4000         | 3900  | 6500         | 0.34                 | 11.0              | 6.0                     | 18              | 22   |
| 27                                                 | 226      | 239       | 2.0      | 1.1 | F202_1130 EZ303U | 270        | 480        | 112.7 | 1240/11     | 4000         | 3900  | 6500         | 0.45                 | 11.0              | 6.0                     | 18              | 22   |
| 32                                                 | 85       | 86        | 0.8      | 2.8 | F202_0940 EZ301U | 255        | 480        | 93.82 | 1032/11     | 4000         | 3900  | 6500         | 0.26                 | 11.0              | 6.0                     | 18              | 21   |
| 32                                                 | 145      | 153       | 1.4      | 1.7 | F202_0940 EZ302U | 270        | 480        | 93.82 | 1032/11     | 4000         | 3900  | 6500         | 0.36                 | 11.0              | 6.0                     | 18              | 22   |
| 32                                                 | 188      | 199       | 1.8      | 1.3 | F202_0940 EZ303U | 270        | 480        | 93.82 | 1032/11     | 4000         | 3900  | 6500         | 0.47                 | 11.0              | 6.0                     | 18              | 22   |
| 43                                                 | 108      | 114       | 1.2      | 2.2 | F202_0700 EZ302U | 270        | 435        | 70.13 | 5400/77     | 4000         | 3900  | 6500         | 0.41                 | 11.0              | 6.0                     | 18              | 22   |
| 43                                                 | 141      | 149       | 1.5      | 1.7 | F202_0700 EZ303U | 270        | 435        | 70.13 | 5400/77     | 4000         | 3900  | 6500         | 0.52                 | 11.0              | 6.0                     | 18              | 22   |
| 43                                                 | 190      | 204       | 2.1      | 1.3 | F202_0700 EZ401U | 270        | 480        | 70.13 | 5400/77     | 4000         | 3900  | 6500         | 1.1                  | 11.0              | 6.0                     | 18              | 23   |
| 53                                                 | 154      | 165       | 1.9      | 1.6 | F202_0570 EZ401U | 270        | 480        | 56.73 | 624/11      | 4000         | 3900  | 6500         | 1.1                  | 11.0              | 6.0                     | 18              | 23   |
| 53                                                 | 237      | 259       | 2.9      | 1.0 | F202_0570 EZ501U | 270        | 480        | 56.73 | 624/11      | 4000         | 3900  | 6500         | 3.1                  | 11.0              | 6.0                     | 18              | 24   |
| 64                                                 | 73       | 77        | 1.0      | 3.3 | F202_0470 EZ302U | 228        | 342        | 47.05 | 1035/22     | 4000         | 3900  | 6500         | 0.52                 | 11.0              | 6.0                     | 18              | 22   |
| 64                                                 | 94       | 100       | 1.3      | 2.5 | F202_0470 EZ303U | 270        | 342        | 47.05 | 1035/22     | 4000         | 3900  | 6500         | 0.63                 | 11.0              | 6.0                     | 18              | 22   |
| 64                                                 | 128      | 137       | 1.7      | 1.9 | F202_0470 EZ401U | 270        | 480        | 47.05 | 1035/22     | 4000         | 3900  | 6500         | 1.2                  | 11.0              | 6.0                     | 18              | 23   |
| 64                                                 | 196      | 214       | 2.6      | 1.2 | F202_0470 EZ501U | 270        | 480        | 47.05 | 1035/22     | 4000         | 3900  | 6500         | 3.1                  | 11.0              | 6.0                     | 18              | 24   |
| 64                                                 | 214      | 237       | 2.9      | 1.1 | F202_0470 EZ402U | 270        | 480        | 47.05 | 1035/22     | 4000         | 3900  | 6500         | 1.9                  | 11.0              | 6.0                     | 18              | 25   |
| 85                                                 | 55       | 58        | 1.0      | 3.8 | F202_0350 EZ302U | 172        | 258        | 35.46 | 390/11      | 3800         | 3500  | 6000         | 0.65                 | 11.0              | 6.0                     | 18              | 22   |
| 85                                                 | 71       | 75        | 1.3      | 2.9 | F202_0350 EZ303U | 206        | 258        | 35.46 | 390/11      | 3800         | 3500  | 6000         | 0.76                 | 11.0              | 6.0                     | 18              | 22   |
| 85                                                 | 96       | 103       | 1.6      | 2.3 | F202_0350 EZ401U | 270        | 480        | 35.46 | 390/11      | 3800         | 3500  | 6000         | 1.3                  | 11.0              | 6.0                     | 18              | 23   |
| 85                                                 | 148      | 162       | 2.5      | 1.5 | F202_0350 EZ501U | 270        | 480        | 35.46 | 390/11      | 3800         | 3500  | 6000         | 3.3                  | 11.0              | 6.0                     | 18              | 24   |
| 85                                                 | 162      | 179       | 2.7      | 1.4 | F202_0350 EZ402U | 270        | 480        | 35.46 | 390/11      | 3800         | 3500  | 6000         | 2.0                  | 11.0              | 6.0                     | 18              | 25   |
| 107                                                | 76       | 82        | 1.6      | 2.7 | F202_0280 EZ401U | 232        | 480        | 28.11 | 4020/143    | 3800         | 3500  | 6000         | 1.4                  | 11.0              | 6.0                     | 18              | 23   |
| 107                                                | 117      | 128       | 2.4      | 1.7 | F202_0280 EZ501U | 270        | 480        | 28.11 | 4020/143    | 3800         | 3500  | 6000         | 3.4                  | 11.0              | 6.0                     | 18              | 24   |
| 107                                                | 128      | 142       | 2.6      | 1.6 | F202_0280 EZ402U | 270        | 480        | 28.11 | 4020/143    | 3800         | 3500  | 6000         | 2.1                  | 11.0              | 6.0                     | 18              | 25   |
| 107                                                | 188      | 235       | 3.9      | 1.1 | F202_0280 EZ404U | 270        | 480        | 28.11 | 4020/143    | 3800         | 3500  | 6000         | 3.5                  | 11.0              | 6.0                     | 18              | 27   |
| 107                                                | 202      | 218       | 4.1      | 1.0 | F202_0280 EZ502U | 270        | 480        | 28.11 | 4020/143    | 3800         | 3500  | 6000         | 5.7                  | 11.0              | 6.0                     | 18              | 26   |
| 107                                                | 202      | 226       | 4.1      | 1.0 | F202_0280 EZ701U | 270        | 480        | 28.11 | 4020/143    | 3800         | 3500  | 6000         | 9.0                  | 11.0              | 6.0                     | 18              | 28   |

## 8.2 Selection tables 8 F offset helical geared motors

| $n_{2N}$                                           | $M_{2N}$ | $M_{2,0}$ | $a_{th}$ | S   | Type             | $M_{2acc}$ | $M_{2NOT}$ | i     | $i_{exakt}$ | $n_{1maxDB}$ |       | $n_{1maxZB}$ | $J_1$                | $\Delta\varphi_2$ | $\Delta\varphi_{2redl}$ | $C_2$           | m    |
|----------------------------------------------------|----------|-----------|----------|-----|------------------|------------|------------|-------|-------------|--------------|-------|--------------|----------------------|-------------------|-------------------------|-----------------|------|
| [rpm]                                              | [Nm]     | [Nm]      |          |     |                  | [Nm]       | [Nm]       |       |             | EL1,2,3,4    | EL5,6 | [rpm]        | [kgcm <sup>2</sup> ] | [arcmin]          | [arcmin]                | [Nm/<br>arcmin] | [kg] |
| F2 ( $n_{1N} = 3000$ rpm, $M_{2acc,max} = 270$ Nm) |          |           |          |     |                  |            |            |       |             |              |       |              |                      |                   |                         |                 |      |
| 128                                                | 36       | 38        | 1.2      | 3.8 | F202_0230 EZ302U | 114        | 171        | 23.43 | 2320/99     | 3600         | 3100  | 6000         | 0.95                 | 11.0              | 6.0                     | 18              | 22   |
| 128                                                | 47       | 50        | 1.6      | 2.9 | F202_0230 EZ303U | 136        | 171        | 23.43 | 2320/99     | 3600         | 3100  | 6000         | 1.1                  | 11.0              | 6.0                     | 18              | 22   |
| 128                                                | 64       | 68        | 1.5      | 3.0 | F202_0230 EZ401U | 193        | 480        | 23.43 | 2320/99     | 3600         | 3100  | 6000         | 1.6                  | 11.0              | 6.0                     | 18              | 23   |
| 128                                                | 98       | 107       | 2.3      | 1.9 | F202_0230 EZ501U | 270        | 480        | 23.43 | 2320/99     | 3600         | 3100  | 6000         | 3.6                  | 11.0              | 6.0                     | 18              | 24   |
| 128                                                | 107      | 118       | 2.5      | 1.8 | F202_0230 EZ402U | 270        | 480        | 23.43 | 2320/99     | 3600         | 3100  | 6000         | 2.3                  | 11.0              | 6.0                     | 18              | 25   |
| 128                                                | 157      | 195       | 3.7      | 1.2 | F202_0230 EZ404U | 270        | 480        | 23.43 | 2320/99     | 3600         | 3100  | 6000         | 3.6                  | 11.0              | 6.0                     | 18              | 27   |
| 128                                                | 168      | 182       | 4.0      | 1.1 | F202_0230 EZ502U | 270        | 480        | 23.43 | 2320/99     | 3600         | 3100  | 6000         | 5.9                  | 11.0              | 6.0                     | 18              | 26   |
| 128                                                | 168      | 189       | 4.0      | 1.1 | F202_0230 EZ701U | 270        | 480        | 23.43 | 2320/99     | 3600         | 3100  | 6000         | 9.2                  | 11.0              | 6.0                     | 18              | 28   |
| 161                                                | 51       | 54        | 1.5      | 3.5 | F202_0185 EZ401U | 154        | 480        | 18.65 | 6360/341    | 3600         | 3100  | 6000         | 1.9                  | 11.0              | 6.0                     | 18              | 23   |
| 161                                                | 78       | 85        | 2.2      | 2.3 | F202_0185 EZ501U | 270        | 480        | 18.65 | 6360/341    | 3600         | 3100  | 6000         | 3.8                  | 11.0              | 6.0                     | 18              | 24   |
| 161                                                | 85       | 94        | 2.5      | 2.1 | F202_0185 EZ402U | 270        | 480        | 18.65 | 6360/341    | 3600         | 3100  | 6000         | 2.6                  | 11.0              | 6.0                     | 18              | 25   |
| 161                                                | 125      | 156       | 3.6      | 1.4 | F202_0185 EZ404U | 270        | 480        | 18.65 | 6360/341    | 3600         | 3100  | 6000         | 3.9                  | 11.0              | 6.0                     | 18              | 27   |
| 161                                                | 134      | 145       | 3.9      | 1.3 | F202_0185 EZ502U | 270        | 480        | 18.65 | 6360/341    | 3600         | 3100  | 6000         | 6.1                  | 11.0              | 6.0                     | 18              | 26   |
| 161                                                | 134      | 150       | 3.9      | 1.3 | F202_0185 EZ701U | 270        | 480        | 18.65 | 6360/341    | 3600         | 3100  | 6000         | 9.4                  | 11.0              | 6.0                     | 18              | 28   |
| 161                                                | 175      | 201       | 5.1      | 1.0 | F202_0185 EZ503U | 270        | 480        | 18.65 | 6360/341    | 3600         | 3100  | 6000         | 8.5                  | 11.0              | 6.0                     | 18              | 27   |
| 220                                                | 21       | 22        | 1.6      | 3.8 | F202_0135 EZ302U | 66         | 99         | 13.63 | 109/8       | 3800         | 3500  | 6000         | 0.93                 | 11.0              | 8.0                     | 16              | 22   |
| 220                                                | 27       | 29        | 2.1      | 2.9 | F202_0135 EZ303U | 79         | 99         | 13.63 | 109/8       | 3800         | 3500  | 6000         | 1.0                  | 11.0              | 8.0                     | 16              | 22   |
| 220                                                | 37       | 40        | 1.4      | 4.3 | F202_0135 EZ401U | 112        | 397        | 13.63 | 109/8       | 3800         | 3500  | 6000         | 1.6                  | 11.0              | 8.0                     | 16              | 23   |
| 220                                                | 57       | 62        | 2.1      | 2.8 | F202_0135 EZ501U | 210        | 397        | 13.63 | 109/8       | 3800         | 3500  | 6000         | 3.5                  | 11.0              | 8.0                     | 16              | 24   |
| 220                                                | 62       | 69        | 2.3      | 2.6 | F202_0135 EZ402U | 210        | 397        | 13.63 | 109/8       | 3800         | 3500  | 6000         | 2.3                  | 11.0              | 8.0                     | 16              | 25   |
| 220                                                | 91       | 114       | 3.4      | 1.7 | F202_0135 EZ404U | 210        | 397        | 13.63 | 109/8       | 3800         | 3500  | 6000         | 3.6                  | 11.0              | 8.0                     | 16              | 27   |
| 220                                                | 98       | 106       | 3.7      | 1.6 | F202_0135 EZ502U | 210        | 397        | 13.63 | 109/8       | 3800         | 3500  | 6000         | 5.8                  | 11.0              | 8.0                     | 16              | 26   |
| 220                                                | 98       | 110       | 3.7      | 1.6 | F202_0135 EZ701U | 210        | 400        | 13.63 | 109/8       | 3800         | 3500  | 6000         | 9.1                  | 11.0              | 8.0                     | 16              | 28   |
| 220                                                | 128      | 147       | 4.8      | 1.2 | F202_0135 EZ503U | 210        | 397        | 13.63 | 109/8       | 3800         | 3500  | 6000         | 8.2                  | 11.0              | 8.0                     | 16              | 27   |
| 220                                                | 159      | 190       | 5.9      | 1.0 | F202_0135 EZ702U | 210        | 400        | 13.63 | 109/8       | 3800         | 3500  | 6000         | 14                   | 11.0              | 8.0                     | 16              | 30   |
| 278                                                | 45       | 49        | 2.0      | 3.3 | F202_0110 EZ501U | 168        | 314        | 10.80 | 7303/676    | 3800         | 3500  | 6000         | 3.8                  | 11.0              | 8.0                     | 16              | 24   |
| 278                                                | 49       | 54        | 2.2      | 3.0 | F202_0110 EZ402U | 168        | 314        | 10.80 | 7303/676    | 3800         | 3500  | 6000         | 2.6                  | 11.0              | 8.0                     | 16              | 25   |
| 278                                                | 72       | 90        | 3.3      | 2.0 | F202_0110 EZ404U | 210        | 314        | 10.80 | 7303/676    | 3800         | 3500  | 6000         | 3.9                  | 11.0              | 8.0                     | 16              | 27   |
| 278                                                | 78       | 84        | 3.5      | 1.9 | F202_0110 EZ502U | 210        | 314        | 10.80 | 7303/676    | 3800         | 3500  | 6000         | 6.1                  | 11.0              | 8.0                     | 16              | 26   |
| 278                                                | 78       | 87        | 3.5      | 1.9 | F202_0110 EZ701U | 210        | 400        | 10.80 | 7303/676    | 3800         | 3500  | 6000         | 9.4                  | 11.0              | 8.0                     | 16              | 28   |
| 278                                                | 102      | 116       | 4.6      | 1.4 | F202_0110 EZ503U | 210        | 314        | 10.80 | 7303/676    | 3800         | 3500  | 6000         | 8.5                  | 11.0              | 8.0                     | 16              | 27   |
| 278                                                | 126      | 151       | 5.7      | 1.2 | F202_0110 EZ702U | 210        | 400        | 10.80 | 7303/676    | 3800         | 3500  | 6000         | 15                   | 11.0              | 8.0                     | 16              | 30   |
| 278                                                | 141      | 168       | 6.4      | 1.0 | F202_0110 EZ505U | 210        | 400        | 10.80 | 7303/676    | 3800         | 3500  | 6000         | 13                   | 11.0              | 8.0                     | 16              | 30   |
| 333                                                | 14       | 15        | 1.9      | 3.8 | F202_0090 EZ302U | 44         | 66         | 9.006 | 3161/351    | 3600         | 3100  | 6000         | 1.6                  | 11.0              | 8.0                     | 16              | 22   |
| 333                                                | 18       | 19        | 2.5      | 2.9 | F202_0090 EZ303U | 52         | 66         | 9.006 | 3161/351    | 3600         | 3100  | 6000         | 1.7                  | 11.0              | 8.0                     | 16              | 22   |
| 333                                                | 38       | 41        | 2.0      | 3.7 | F202_0090 EZ501U | 140        | 262        | 9.006 | 3161/351    | 3600         | 3100  | 6000         | 4.2                  | 11.0              | 8.0                     | 16              | 24   |
| 333                                                | 41       | 45        | 2.2      | 3.4 | F202_0090 EZ402U | 140        | 262        | 9.006 | 3161/351    | 3600         | 3100  | 6000         | 2.9                  | 11.0              | 8.0                     | 16              | 25   |
| 333                                                | 60       | 75        | 3.2      | 2.3 | F202_0090 EZ404U | 210        | 262        | 9.006 | 3161/351    | 3600         | 3100  | 6000         | 4.3                  | 11.0              | 8.0                     | 16              | 27   |
| 333                                                | 65       | 70        | 3.4      | 2.1 | F202_0090 EZ502U | 210        | 262        | 9.006 | 3161/351    | 3600         | 3100  | 6000         | 6.5                  | 11.0              | 8.0                     | 16              | 26   |
| 333                                                | 65       | 73        | 3.4      | 2.1 | F202_0090 EZ701U | 175        | 400        | 9.006 | 3161/351    | 3600         | 3100  | 6000         | 9.8                  | 11.0              | 8.0                     | 16              | 28   |
| 333                                                | 85       | 97        | 4.5      | 1.6 | F202_0090 EZ503U | 210        | 262        | 9.006 | 3161/351    | 3600         | 3100  | 6000         | 8.9                  | 11.0              | 8.0                     | 16              | 27   |
| 333                                                | 105      | 126       | 5.6      | 1.3 | F202_0090 EZ702U | 210        | 400        | 9.006 | 3161/351    | 3600         | 3100  | 6000         | 15                   | 11.0              | 8.0                     | 16              | 30   |
| 333                                                | 118      | 140       | 6.2      | 1.2 | F202_0090 EZ505U | 210        | 400        | 9.006 | 3161/351    | 3600         | 3100  | 6000         | 13                   | 11.0              | 8.0                     | 16              | 30   |
| 419                                                | 30       | 33        | 1.9      | 4.3 | F202_0072 EZ501U | 111        | 209        | 7.167 | 5777/806    | 3600         | 3100  | 6000         | 4.8                  | 11.0              | 8.0                     | 16              | 24   |
| 419                                                | 33       | 36        | 2.1      | 3.9 | F202_0072 EZ402U | 111        | 209        | 7.167 | 5777/806    | 3600         | 3100  | 6000         | 3.6                  | 11.0              | 8.0                     | 16              | 25   |
| 419                                                | 48       | 60        | 3.1      | 2.7 | F202_0072 EZ404U | 167        | 209        | 7.167 | 5777/806    | 3600         | 3100  | 6000         | 4.9                  | 11.0              | 8.0                     | 16              | 27   |
| 419                                                | 51       | 56        | 3.3      | 2.5 | F202_0072 EZ502U | 167        | 209        | 7.167 | 5777/806    | 3600         | 3100  | 6000         | 7.1                  | 11.0              | 8.0                     | 16              | 26   |
| 419                                                | 51       | 58        | 3.3      | 2.5 | F202_0072 EZ701U | 139        | 400        | 7.167 | 5777/806    | 3600         | 3100  | 6000         | 10                   | 11.0              | 8.0                     | 16              | 28   |
| 419                                                | 67       | 77        | 4.3      | 1.9 | F202_0072 EZ503U | 167        | 209        | 7.167 | 5777/806    | 3600         | 3100  | 6000         | 9.5                  | 11.0              | 8.0                     | 16              | 27   |
| 419                                                | 83       | 100       | 5.3      | 1.5 | F202_0072 EZ702U | 210        | 400        | 7.167 | 5777/806    | 3600         | 3100  | 6000         | 16                   | 11.0              | 8.0                     | 16              | 30   |
| 419                                                | 94       | 111       | 6.0      | 1.4 | F202_0072 EZ505U | 210        | 400        | 7.167 | 5777/806    | 3600         | 3100  | 6000         | 14                   | 11.0              | 8.0                     | 16              | 30   |
| 419                                                | 115      | 145       | 7.3      | 1.1 | F202_0072 EZ703U | 210        | 400        | 7.167 | 5777/806    | 3600         | 3100  | 6000         | 24                   | 11.0              | 8.0                     | 16              | 32   |
| 540                                                | 40       | 45        | 3.2      | 3.0 | F202_0056 EZ701U | 108        | 400        | 5.552 | 5341/962    | 3100         | 2600  | 5000         | 12                   | 11.0              | 8.0                     | 16              | 28   |
| 540                                                | 65       | 78        | 5.1      | 1.8 | F202_0056 EZ702U | 210        | 400        | 5.552 | 5341/962    | 3100         | 2600  | 5000         | 17                   | 11.0              | 8.0                     | 16              | 30   |
| 540                                                | 73       | 86        | 5.8      | 1.6 | F202_0056 EZ505U | 210        | 400        | 5.552 | 5341/962    | 3100         | 2600  | 5000         | 15                   | 11.0              | 8.0                     | 16              | 30   |
| 540                                                | 89       | 112       | 7.0      | 1.3 | F202_0056 EZ703U | 210        | 400        | 5.552 | 5341/962    | 3100         | 2600  | 5000         | 25                   | 11.0              | 8.0                     | 16              | 32   |
| 641                                                | 31       | 39        | 2.9      | 3.5 | F202_0047 EZ404U | 109        | 136        | 4.680 | 2616/559    | 3100         | 2600  | 5000         | 7.0                  | 11.0              | 8.0                     | 16              | 27   |
| 641                                                | 34       | 36        | 3.1      | 3.2 | F202_0047 EZ502U | 109        | 136        | 4.680 | 2616/559    | 3100         | 2600  | 5000         | 9.3                  | 11.0              | 8.0                     | 16              | 26   |
| 641                                                | 34       | 38        | 3.1      | 3.3 | F202_0047 EZ701U | 91         | 340        | 4.680 | 2616/559    | 3100         | 2600  | 5000         | 13                   | 11.0              | 8.0                     | 16              | 28   |
| 641                                                | 44       | 50        | 4.1      | 2.5 | F202_0047 EZ503U | 109        | 136        | 4.680 | 2616/559    | 3100         | 2600  | 5000         | 12                   | 11.0              | 8.0                     | 16              | 27   |
| 641                                                | 54       | 65        | 5.0      | 2.0 | F202_0047 EZ702U | 186        | 340        | 4.680 | 2616/559    | 3100         | 2600  | 5000         | 18                   | 11.0              | 8.0                     | 16              | 30   |
| 641                                                | 61       | 73        | 5.6      | 1.8 | F202_0047 EZ505U | 210        | 340        | 4.680 | 2616/559    | 3100         | 2600  | 5000         | 16                   | 11.0              | 8.0                     | 16              | 30   |
| 641                                                | 75       | 94        | 6.8      | 1.5 | F202_0047 EZ703U | 210        | 340        | 4.680 | 2616/559    | 3100         | 2600  | 5000         | 26                   | 11.0              | 8.0                     | 16              | 32   |



| $n_{2N}$                                                                       | $M_{2N}$ | $M_{2,0}$ | $a_{th}$ | S   | Type             | $M_{2acc}$ | $M_{2NOT}$ | i     | $i_{exakt}$ | $n_{1maxDB}$ |       | $n_{1maxZB}$ | $J_1$                | $\Delta\varphi_2$ | $\Delta\varphi_{2redl}$ | $C_2$           | m    |
|--------------------------------------------------------------------------------|----------|-----------|----------|-----|------------------|------------|------------|-------|-------------|--------------|-------|--------------|----------------------|-------------------|-------------------------|-----------------|------|
| [rpm]                                                                          | [Nm]     | [Nm]      |          |     |                  | [Nm]       | [Nm]       |       |             | EL1,2,3,4    | EL5,6 | [rpm]        | [kgcm <sup>2</sup> ] | [arcmin]          | [arcmin]                | [Nm/<br>arcmin] | [kg] |
| <b>F2 (<math>n_{1N} = 4500</math> rpm, <math>M_{2acc,max} = 210</math> Nm)</b> |          |           |          |     |                  |            |            |       |             |              |       |              |                      |                   |                         |                 |      |
| 330                                                                            | 126      | 202       | 5.4      | 1.1 | F202_0135 EZ505U | 210        | 400        | 13.63 | 109/8       | 3800         | 3500  | 6000         | 13                   | 11.0              | 8.0                     | 16              | 30   |
| 417                                                                            | 100      | 160       | 5.2      | 1.3 | F202_0110 EZ505U | 210        | 400        | 10.80 | 7303/676    | 3800         | 3500  | 6000         | 13                   | 11.0              | 8.0                     | 16              | 30   |
| 417                                                                            | 127      | 210       | 6.6      | 1.0 | F202_0110 EZ703U | 210        | 400        | 10.80 | 7303/676    | 3800         | 3500  | 6000         | 23                   | 11.0              | 8.0                     | 16              | 32   |
| 500                                                                            | 83       | 134       | 5.0      | 1.5 | F202_0090 EZ505U | 210        | 400        | 9.006 | 3161/351    | 3600         | 3100  | 6000         | 13                   | 11.0              | 8.0                     | 16              | 30   |
| 500                                                                            | 106      | 175       | 6.4      | 1.1 | F202_0090 EZ703U | 210        | 400        | 9.006 | 3161/351    | 3600         | 3100  | 6000         | 23                   | 11.0              | 8.0                     | 16              | 32   |
| 628                                                                            | 66       | 106       | 4.8      | 1.7 | F202_0072 EZ505U | 210        | 400        | 7.167 | 5777/806    | 3600         | 3100  | 6000         | 14                   | 11.0              | 8.0                     | 16              | 30   |
| 628                                                                            | 84       | 139       | 6.2      | 1.3 | F202_0072 EZ703U | 210        | 400        | 7.167 | 5777/806    | 3600         | 3100  | 6000         | 24                   | 11.0              | 8.0                     | 16              | 32   |
| 811                                                                            | 51       | 82        | 4.6      | 2.0 | F202_0056 EZ505U | 210        | 400        | 5.552 | 5341/962    | 3100         | 2600  | 5000         | 15                   | 11.0              | 8.0                     | 16              | 30   |
| 811                                                                            | 65       | 108       | 5.9      | 1.6 | F202_0056 EZ703U | 210        | 400        | 5.552 | 5341/962    | 3100         | 2600  | 5000         | 25                   | 11.0              | 8.0                     | 16              | 32   |
| 962                                                                            | 43       | 69        | 4.5      | 2.3 | F202_0047 EZ505U | 210        | 340        | 4.680 | 2616/559    | 3100         | 2600  | 5000         | 16                   | 11.0              | 8.0                     | 16              | 30   |
| 962                                                                            | 55       | 91        | 5.7      | 1.8 | F202_0047 EZ703U | 210        | 340        | 4.680 | 2616/559    | 3100         | 2600  | 5000         | 26                   | 11.0              | 8.0                     | 16              | 32   |
| <b>F2 (<math>n_{1N} = 6000</math> rpm, <math>M_{2acc,max} = 270</math> Nm)</b> |          |           |          |     |                  |            |            |       |             |              |       |              |                      |                   |                         |                 |      |
| 43                                                                             | 205      | 230       | 1.6      | 1.2 | F202_1410 EZ302U | 270        | 480        | 140.9 | 1550/11     | 4000         | 3900  | 6500         | 0.33                 | 11.0              | 6.0                     | 18              | 22   |
| 53                                                                             | 164      | 184       | 1.4      | 1.5 | F202_1130 EZ302U | 270        | 480        | 112.7 | 1240/11     | 4000         | 3900  | 6500         | 0.34                 | 11.0              | 6.0                     | 18              | 22   |
| 53                                                                             | 214      | 246       | 1.9      | 1.1 | F202_1130 EZ303U | 270        | 480        | 112.7 | 1240/11     | 4000         | 3900  | 6500         | 0.45                 | 11.0              | 6.0                     | 18              | 22   |
| 64                                                                             | 137      | 153       | 1.3      | 1.8 | F202_0940 EZ302U | 270        | 480        | 93.82 | 1032/11     | 4000         | 3900  | 6500         | 0.36                 | 11.0              | 6.0                     | 18              | 22   |
| 64                                                                             | 178      | 205       | 1.7      | 1.3 | F202_0940 EZ303U | 270        | 480        | 93.82 | 1032/11     | 4000         | 3900  | 6500         | 0.47                 | 11.0              | 6.0                     | 18              | 22   |
| 64                                                                             | 209      | 255       | 2.0      | 1.1 | F202_0940 EZ401U | 270        | 480        | 93.82 | 1032/11     | 4000         | 3900  | 6500         | 1.0                  | 11.0              | 6.0                     | 18              | 23   |
| 86                                                                             | 102      | 114       | 1.2      | 2.1 | F202_0700 EZ302U | 270        | 435        | 70.13 | 5400/77     | 4000         | 3900  | 6500         | 0.41                 | 11.0              | 6.0                     | 18              | 22   |
| 86                                                                             | 133      | 153       | 1.6      | 1.6 | F202_0700 EZ303U | 270        | 435        | 70.13 | 5400/77     | 4000         | 3900  | 6500         | 0.52                 | 11.0              | 6.0                     | 18              | 22   |
| 86                                                                             | 156      | 190       | 1.9      | 1.4 | F202_0700 EZ401U | 270        | 480        | 70.13 | 5400/77     | 4000         | 3900  | 6500         | 1.1                  | 11.0              | 6.0                     | 18              | 23   |
| 106                                                                            | 127      | 154       | 1.8      | 1.6 | F202_0570 EZ401U | 270        | 480        | 56.73 | 624/11      | 4000         | 3900  | 6500         | 1.1                  | 11.0              | 6.0                     | 18              | 23   |
| 106                                                                            | 187      | 242       | 2.7      | 1.1 | F202_0570 EZ501U | 270        | 480        | 56.73 | 624/11      | 4000         | 3900  | 6500         | 3.1                  | 11.0              | 6.0                     | 18              | 24   |
| 106                                                                            | 193      | 270       | 2.8      | 1.1 | F202_0570 EZ402U | 270        | 480        | 56.73 | 624/11      | 4000         | 3900  | 6500         | 1.8                  | 11.0              | 6.0                     | 18              | 25   |
| 128                                                                            | 68       | 77        | 1.2      | 2.8 | F202_0470 EZ302U | 228        | 342        | 47.05 | 1035/22     | 4000         | 3900  | 6500         | 0.52                 | 11.0              | 6.0                     | 18              | 22   |
| 128                                                                            | 89       | 103       | 1.5      | 2.1 | F202_0470 EZ303U | 270        | 342        | 47.05 | 1035/22     | 4000         | 3900  | 6500         | 0.63                 | 11.0              | 6.0                     | 18              | 22   |
| 128                                                                            | 105      | 128       | 1.8      | 1.8 | F202_0470 EZ401U | 270        | 480        | 47.05 | 1035/22     | 4000         | 3900  | 6500         | 1.2                  | 11.0              | 6.0                     | 18              | 23   |
| 128                                                                            | 155      | 201       | 2.6      | 1.2 | F202_0470 EZ501U | 270        | 480        | 47.05 | 1035/22     | 4000         | 3900  | 6500         | 3.1                  | 11.0              | 6.0                     | 18              | 24   |
| 128                                                                            | 160      | 224       | 2.7      | 1.2 | F202_0470 EZ402U | 270        | 480        | 47.05 | 1035/22     | 4000         | 3900  | 6500         | 1.9                  | 11.0              | 6.0                     | 18              | 25   |
| 169                                                                            | 52       | 58        | 1.1      | 3.4 | F202_0350 EZ302U | 172        | 258        | 35.46 | 390/11      | 3800         | 3500  | 6000         | 0.65                 | 11.0              | 6.0                     | 18              | 22   |
| 169                                                                            | 67       | 77        | 1.4      | 2.6 | F202_0350 EZ303U | 206        | 258        | 35.46 | 390/11      | 3800         | 3500  | 6000         | 0.76                 | 11.0              | 6.0                     | 18              | 22   |
| 169                                                                            | 79       | 96        | 1.7      | 2.2 | F202_0350 EZ401U | 270        | 480        | 35.46 | 390/11      | 3800         | 3500  | 6000         | 1.3                  | 11.0              | 6.0                     | 18              | 23   |
| 169                                                                            | 117      | 151       | 2.5      | 1.5 | F202_0350 EZ501U | 270        | 480        | 35.46 | 390/11      | 3800         | 3500  | 6000         | 3.3                  | 11.0              | 6.0                     | 18              | 24   |
| 169                                                                            | 120      | 169       | 2.6      | 1.4 | F202_0350 EZ402U | 270        | 480        | 35.46 | 390/11      | 3800         | 3500  | 6000         | 2.0                  | 11.0              | 6.0                     | 18              | 25   |
| 213                                                                            | 63       | 76        | 1.6      | 2.6 | F202_0280 EZ401U | 232        | 480        | 28.11 | 4020/143    | 3800         | 3500  | 6000         | 1.4                  | 11.0              | 6.0                     | 18              | 23   |
| 213                                                                            | 93       | 120       | 2.4      | 1.7 | F202_0280 EZ501U | 270        | 480        | 28.11 | 4020/143    | 3800         | 3500  | 6000         | 3.4                  | 11.0              | 6.0                     | 18              | 24   |
| 213                                                                            | 95       | 134       | 2.5      | 1.7 | F202_0280 EZ402U | 270        | 480        | 28.11 | 4020/143    | 3800         | 3500  | 6000         | 2.1                  | 11.0              | 6.0                     | 18              | 25   |
| 213                                                                            | 142      | 213       | 3.7      | 1.1 | F202_0280 EZ502U | 270        | 480        | 28.11 | 4020/143    | 3800         | 3500  | 6000         | 5.7                  | 11.0              | 6.0                     | 18              | 26   |
| 213                                                                            | 142      | 215       | 3.7      | 1.1 | F202_0280 EZ701U | 270        | 480        | 28.11 | 4020/143    | 3800         | 3500  | 6000         | 9.0                  | 11.0              | 6.0                     | 18              | 28   |
| 213                                                                            | 158      | 229       | 4.1      | 1.0 | F202_0280 EZ404U | 270        | 480        | 28.11 | 4020/143    | 3800         | 3500  | 6000         | 3.5                  | 11.0              | 6.0                     | 18              | 27   |
| 256                                                                            | 34       | 38        | 1.1      | 4.0 | F202_0230 EZ302U | 114        | 171        | 23.43 | 2320/99     | 3600         | 3100  | 6000         | 0.95                 | 11.0              | 6.0                     | 18              | 22   |
| 256                                                                            | 45       | 51        | 1.5      | 3.1 | F202_0230 EZ303U | 136        | 171        | 23.43 | 2320/99     | 3600         | 3100  | 6000         | 1.1                  | 11.0              | 6.0                     | 18              | 22   |
| 256                                                                            | 52       | 64        | 1.6      | 2.9 | F202_0230 EZ401U | 193        | 480        | 23.43 | 2320/99     | 3600         | 3100  | 6000         | 1.6                  | 11.0              | 6.0                     | 18              | 23   |
| 256                                                                            | 77       | 100       | 2.3      | 2.0 | F202_0230 EZ501U | 270        | 480        | 23.43 | 2320/99     | 3600         | 3100  | 6000         | 3.6                  | 11.0              | 6.0                     | 18              | 24   |
| 256                                                                            | 80       | 111       | 2.4      | 1.9 | F202_0230 EZ402U | 270        | 480        | 23.43 | 2320/99     | 3600         | 3100  | 6000         | 2.3                  | 11.0              | 6.0                     | 18              | 25   |
| 256                                                                            | 118      | 177       | 3.6      | 1.3 | F202_0230 EZ502U | 270        | 480        | 23.43 | 2320/99     | 3600         | 3100  | 6000         | 5.9                  | 11.0              | 6.0                     | 18              | 26   |
| 256                                                                            | 118      | 180       | 3.6      | 1.3 | F202_0230 EZ701U | 270        | 480        | 23.43 | 2320/99     | 3600         | 3100  | 6000         | 9.2                  | 11.0              | 6.0                     | 18              | 28   |
| 256                                                                            | 132      | 191       | 4.0      | 1.1 | F202_0230 EZ404U | 270        | 480        | 23.43 | 2320/99     | 3600         | 3100  | 6000         | 3.6                  | 11.0              | 6.0                     | 18              | 27   |
| 256                                                                            | 141      | 241       | 4.2      | 1.1 | F202_0230 EZ503U | 270        | 480        | 23.43 | 2320/99     | 3600         | 3100  | 6000         | 8.2                  | 11.0              | 6.0                     | 18              | 27   |
| 322                                                                            | 42       | 51        | 1.5      | 3.4 | F202_0185 EZ401U | 154        | 480        | 18.65 | 6360/341    | 3600         | 3100  | 6000         | 1.9                  | 11.0              | 6.0                     | 18              | 23   |
| 322                                                                            | 62       | 80        | 2.2      | 2.3 | F202_0185 EZ501U | 270        | 480        | 18.65 | 6360/341    | 3600         | 3100  | 6000         | 3.8                  | 11.0              | 6.0                     | 18              | 24   |
| 322                                                                            | 63       | 89        | 2.3      | 2.2 | F202_0185 EZ402U | 270        | 480        | 18.65 | 6360/341    | 3600         | 3100  | 6000         | 2.6                  | 11.0              | 6.0                     | 18              | 25   |
| 322                                                                            | 94       | 141       | 3.4      | 1.5 | F202_0185 EZ502U | 270        | 480        | 18.65 | 6360/341    | 3600         | 3100  | 6000         | 6.1                  | 11.0              | 6.0                     | 18              | 26   |
| 322                                                                            | 94       | 143       | 3.4      | 1.5 | F202_0185 EZ701U | 270        | 480        | 18.65 | 6360/341    | 3600         | 3100  | 6000         | 9.4                  | 11.0              | 6.0                     | 18              | 28   |
| 322                                                                            | 105      | 152       | 3.8      | 1.3 | F202_0185 EZ404U | 270        | 480        | 18.65 | 6360/341    | 3600         | 3100  | 6000         | 3.9                  | 11.0              | 6.0                     | 18              | 27   |
| 322                                                                            | 112      | 192       | 4.1      | 1.2 | F202_0185 EZ503U | 270        | 480        | 18.65 | 6360/341    | 3600         | 3100  | 6000         | 8.5                  | 11.0              | 6.0                     | 18              | 27   |
| 322                                                                            | 130      | 259       | 4.7      | 1.1 | F202_0185 EZ702U | 270        | 480        | 18.65 | 6360/341    | 3600         | 3100  | 6000         | 15                   | 11.0              | 6.0                     | 18              | 30   |
| 440                                                                            | 20       | 22        | 1.5      | 4.0 | F202_0135 EZ302U | 66         | 99         | 13.63 | 109/8       | 3800         | 3500  | 6000         | 0.93                 | 11.0              | 8.0                     | 16              | 22   |
| 440                                                                            | 26       | 30        | 1.9      | 3.1 | F202_0135 EZ303U | 79         | 99         | 13.63 | 109/8       | 3800         | 3500  | 6000         | 1.0                  | 11.0              | 8.0                     | 16              | 22   |
| 440                                                                            | 30       | 37        | 1.4      | 4.2 | F202_0135 EZ401U | 112        | 397        | 13.63 | 109/8       | 3800         | 3500  | 6000         | 1.6                  | 11.0              | 8.0                     | 16              | 23   |
| 440                                                                            | 45       | 58        | 2.1      | 2.8 | F202_0135 EZ501U | 210        | 397        | 13.63 | 109/8       | 3800         | 3500  | 6000         | 3.5                  | 11.0              | 8.0                     | 16              | 24   |
| 440                                                                            | 46       | 65        | 2.2      | 2.7 | F202_0135 EZ402U | 210        | 397        | 13.63 | 109/8       | 3800         | 3500  | 6000         | 2.3                  | 11.0              | 8.0                     | 16              | 25   |
| 440                                                                            | 69       | 103       | 3.2      | 1.8 | F202_0135 EZ502U | 210        | 397        | 13.63 | 109/8       | 3800         | 3500  | 6000         | 5.8                  | 11.0              | 8.0                     | 16              | 26   |
| 440                                                                            | 69       | 104       | 3.2      | 1.8 | F202_0135 EZ701U | 210        | 400        | 13.63 | 109/8       | 3800         | 3500  | 6000         | 9.1                  | 11.0              | 8.0                     | 16              | 28   |

## 8.2 Selection tables 8 F offset helical geared motors

| $n_{2N}$                                                                       | $M_{2N}$ | $M_{2,0}$ | $a_{th}$ | S   | Type             | $M_{2acc}$ | $M_{2NOT}$ | i     | $i_{exakt}$ | $n_{1maxDB}$ |       | $n_{1maxZB}$ | $J_1$                | $\Delta\varphi_2$ | $\Delta\varphi_{2redl}$ | $C_2$           | m    |
|--------------------------------------------------------------------------------|----------|-----------|----------|-----|------------------|------------|------------|-------|-------------|--------------|-------|--------------|----------------------|-------------------|-------------------------|-----------------|------|
| [rpm]                                                                          | [Nm]     | [Nm]      |          |     |                  | [Nm]       | [Nm]       |       |             | EL1,2,3,4    | EL5,6 | [rpm]        | [kgcm <sup>2</sup> ] | [arcmin]          | [arcmin]                | [Nm/<br>arcmin] | [kg] |
| <b>F2 (<math>n_{1N} = 6000</math> rpm, <math>M_{2acc,max} = 270</math> Nm)</b> |          |           |          |     |                  |            |            |       |             |              |       |              |                      |                   |                         |                 |      |
| 440                                                                            | 77       | 111       | 3.6      | 1.6 | F202_0135 EZ404U | 210        | 397        | 13.63 | 109/8       | 3800         | 3500  | 6000         | 3.6                  | 11.0              | 8.0                     | 16              | 27   |
| 440                                                                            | 82       | 140       | 3.9      | 1.5 | F202_0135 EZ503U | 210        | 397        | 13.63 | 109/8       | 3800         | 3500  | 6000         | 8.2                  | 11.0              | 8.0                     | 16              | 27   |
| 440                                                                            | 95       | 189       | 4.5      | 1.3 | F202_0135 EZ702U | 210        | 400        | 13.63 | 109/8       | 3800         | 3500  | 6000         | 14                   | 11.0              | 8.0                     | 16              | 30   |
| 555                                                                            | 24       | 29        | 1.4      | 4.8 | F202_0110 EZ401U | 89         | 314        | 10.80 | 7303/676    | 3800         | 3500  | 6000         | 1.9                  | 11.0              | 8.0                     | 16              | 23   |
| 555                                                                            | 36       | 46        | 2.0      | 3.3 | F202_0110 EZ501U | 168        | 314        | 10.80 | 7303/676    | 3800         | 3500  | 6000         | 3.8                  | 11.0              | 8.0                     | 16              | 24   |
| 555                                                                            | 37       | 51        | 2.1      | 3.2 | F202_0110 EZ402U | 168        | 314        | 10.80 | 7303/676    | 3800         | 3500  | 6000         | 2.6                  | 11.0              | 8.0                     | 16              | 25   |
| 555                                                                            | 54       | 82        | 3.1      | 2.1 | F202_0110 EZ502U | 210        | 314        | 10.80 | 7303/676    | 3800         | 3500  | 6000         | 6.1                  | 11.0              | 8.0                     | 16              | 26   |
| 555                                                                            | 54       | 83        | 3.1      | 2.1 | F202_0110 EZ701U | 210        | 400        | 10.80 | 7303/676    | 3800         | 3500  | 6000         | 9.4                  | 11.0              | 8.0                     | 16              | 28   |
| 555                                                                            | 61       | 88        | 3.5      | 1.9 | F202_0110 EZ404U | 210        | 314        | 10.80 | 7303/676    | 3800         | 3500  | 6000         | 3.9                  | 11.0              | 8.0                     | 16              | 27   |
| 555                                                                            | 65       | 111       | 3.7      | 1.8 | F202_0110 EZ503U | 210        | 314        | 10.80 | 7303/676    | 3800         | 3500  | 6000         | 8.5                  | 11.0              | 8.0                     | 16              | 27   |
| 555                                                                            | 75       | 150       | 4.3      | 1.5 | F202_0110 EZ702U | 210        | 400        | 10.80 | 7303/676    | 3800         | 3500  | 6000         | 15                   | 11.0              | 8.0                     | 16              | 30   |
| 666                                                                            | 13       | 15        | 1.8      | 4.0 | F202_0090 EZ302U | 44         | 66         | 9.006 | 3161/351    | 3600         | 3100  | 6000         | 1.6                  | 11.0              | 8.0                     | 16              | 22   |
| 666                                                                            | 17       | 20        | 2.4      | 3.1 | F202_0090 EZ303U | 52         | 66         | 9.006 | 3161/351    | 3600         | 3100  | 6000         | 1.7                  | 11.0              | 8.0                     | 16              | 22   |
| 666                                                                            | 30       | 38        | 2.0      | 3.7 | F202_0090 EZ501U | 140        | 262        | 9.006 | 3161/351    | 3600         | 3100  | 6000         | 4.2                  | 11.0              | 8.0                     | 16              | 24   |
| 666                                                                            | 31       | 43        | 2.0      | 3.6 | F202_0090 EZ402U | 140        | 262        | 9.006 | 3161/351    | 3600         | 3100  | 6000         | 2.9                  | 11.0              | 8.0                     | 16              | 25   |
| 666                                                                            | 45       | 68        | 3.0      | 2.4 | F202_0090 EZ502U | 210        | 262        | 9.006 | 3161/351    | 3600         | 3100  | 6000         | 6.5                  | 11.0              | 8.0                     | 16              | 26   |
| 666                                                                            | 45       | 69        | 3.0      | 2.4 | F202_0090 EZ701U | 175        | 400        | 9.006 | 3161/351    | 3600         | 3100  | 6000         | 9.8                  | 11.0              | 8.0                     | 16              | 28   |
| 666                                                                            | 51       | 73        | 3.4      | 2.2 | F202_0090 EZ404U | 210        | 262        | 9.006 | 3161/351    | 3600         | 3100  | 6000         | 4.3                  | 11.0              | 8.0                     | 16              | 27   |
| 666                                                                            | 54       | 93        | 3.6      | 2.0 | F202_0090 EZ503U | 210        | 262        | 9.006 | 3161/351    | 3600         | 3100  | 6000         | 8.9                  | 11.0              | 8.0                     | 16              | 27   |
| 666                                                                            | 63       | 125       | 4.2      | 1.7 | F202_0090 EZ702U | 210        | 400        | 9.006 | 3161/351    | 3600         | 3100  | 6000         | 15                   | 11.0              | 8.0                     | 16              | 30   |
| 837                                                                            | 24       | 31        | 1.9      | 4.3 | F202_0072 EZ501U | 111        | 209        | 7.167 | 5777/806    | 3600         | 3100  | 6000         | 4.8                  | 11.0              | 8.0                     | 16              | 24   |
| 837                                                                            | 24       | 34        | 2.0      | 4.2 | F202_0072 EZ402U | 111        | 209        | 7.167 | 5777/806    | 3600         | 3100  | 6000         | 3.6                  | 11.0              | 8.0                     | 16              | 25   |
| 837                                                                            | 36       | 54        | 2.9      | 2.8 | F202_0072 EZ502U | 167        | 209        | 7.167 | 5777/806    | 3600         | 3100  | 6000         | 7.1                  | 11.0              | 8.0                     | 16              | 26   |
| 837                                                                            | 36       | 55        | 2.9      | 2.8 | F202_0072 EZ701U | 139        | 400        | 7.167 | 5777/806    | 3600         | 3100  | 6000         | 10                   | 11.0              | 8.0                     | 16              | 28   |
| 837                                                                            | 40       | 58        | 3.3      | 2.5 | F202_0072 EZ404U | 167        | 209        | 7.167 | 5777/806    | 3600         | 3100  | 6000         | 4.9                  | 11.0              | 8.0                     | 16              | 27   |
| 837                                                                            | 43       | 74        | 3.5      | 2.4 | F202_0072 EZ503U | 167        | 209        | 7.167 | 5777/806    | 3600         | 3100  | 6000         | 9.5                  | 11.0              | 8.0                     | 16              | 27   |
| 837                                                                            | 50       | 99        | 4.0      | 2.0 | F202_0072 EZ702U | 210        | 400        | 7.167 | 5777/806    | 3600         | 3100  | 6000         | 16                   | 11.0              | 8.0                     | 16              | 30   |
| <b>F3 (<math>n_{1N} = 3000</math> rpm, <math>M_{2acc,max} = 450</math> Nm)</b> |          |           |          |     |                  |            |            |       |             |              |       |              |                      |                   |                         |                 |      |
| 14                                                                             | 336      | 355       | 1.4      | 1.2 | F303_2210 EZ302U | 450        | 800        | 221.2 | 191149/864  | 4000         | 3900  | 6500         | 0.36                 | 11.0              | 7.0                     | 22              | 34   |
| 16                                                                             | 281      | 297       | 1.2      | 1.4 | F303_1850 EZ302U | 450        | 800        | 184.8 | 29939/162   | 4000         | 3900  | 6500         | 0.37                 | 11.0              | 7.0                     | 22              | 34   |
| 16                                                                             | 366      | 387       | 1.6      | 1.1 | F303_1850 EZ303U | 450        | 800        | 184.8 | 29939/162   | 4000         | 3900  | 6500         | 0.48                 | 11.0              | 7.0                     | 22              | 35   |
| 21                                                                             | 217      | 229       | 1.1      | 1.8 | F302_1410 EZ302U | 450        | 603        | 140.6 | 7595/54     | 4000         | 3900  | 6500         | 0.37                 | 11.0              | 6.0                     | 22              | 29   |
| 21                                                                             | 282      | 299       | 1.4      | 1.4 | F302_1410 EZ303U | 450        | 603        | 140.6 | 7595/54     | 4000         | 3900  | 6500         | 0.48                 | 11.0              | 6.0                     | 22              | 30   |
| 21                                                                             | 382      | 409       | 1.9      | 1.0 | F302_1410 EZ401U | 450        | 603        | 140.6 | 7595/54     | 4000         | 3900  | 6500         | 1.0                  | 11.0              | 6.0                     | 22              | 31   |
| 27                                                                             | 306      | 328       | 1.7      | 1.3 | F302_1130 EZ401U | 450        | 800        | 112.8 | 3724/33     | 4000         | 3900  | 6500         | 1.0                  | 11.0              | 6.0                     | 22              | 31   |
| 32                                                                             | 254      | 273       | 1.6      | 1.6 | F302_0940 EZ401U | 450        | 800        | 93.64 | 4214/45     | 4000         | 3900  | 6500         | 1.1                  | 11.0              | 6.0                     | 22              | 31   |
| 32                                                                             | 391      | 427       | 2.4      | 1.0 | F302_0940 EZ501U | 450        | 800        | 93.64 | 4214/45     | 4000         | 3900  | 6500         | 3.1                  | 11.0              | 6.0                     | 22              | 32   |
| 43                                                                             | 191      | 205       | 1.4      | 2.1 | F302_0700 EZ401U | 450        | 800        | 70.36 | 2744/39     | 4000         | 3900  | 6500         | 1.2                  | 11.0              | 6.0                     | 22              | 31   |
| 43                                                                             | 293      | 321       | 2.1      | 1.4 | F302_0700 EZ501U | 450        | 800        | 70.36 | 2744/39     | 4000         | 3900  | 6500         | 3.2                  | 11.0              | 6.0                     | 22              | 32   |
| 43                                                                             | 321      | 355       | 2.3      | 1.2 | F302_0700 EZ402U | 450        | 800        | 70.36 | 2744/39     | 4000         | 3900  | 6500         | 1.9                  | 11.0              | 6.0                     | 22              | 32   |
| 53                                                                             | 153      | 164       | 1.2      | 2.6 | F302_0560 EZ401U | 450        | 800        | 56.49 | 4067/72     | 4000         | 3900  | 6500         | 1.3                  | 11.0              | 6.0                     | 22              | 31   |
| 53                                                                             | 236      | 258       | 1.9      | 1.7 | F302_0560 EZ501U | 450        | 800        | 56.49 | 4067/72     | 4000         | 3900  | 6500         | 3.3                  | 11.0              | 6.0                     | 22              | 32   |
| 53                                                                             | 258      | 285       | 2.1      | 1.6 | F302_0560 EZ402U | 450        | 800        | 56.49 | 4067/72     | 4000         | 3900  | 6500         | 2.0                  | 11.0              | 6.0                     | 22              | 32   |
| 53                                                                             | 378      | 471       | 3.0      | 1.1 | F302_0560 EZ404U | 450        | 800        | 56.49 | 4067/72     | 4000         | 3900  | 6500         | 3.3                  | 11.0              | 6.0                     | 22              | 34   |
| 64                                                                             | 128      | 137       | 1.1      | 3.1 | F302_0470 EZ401U | 389        | 800        | 47.19 | 1274/27     | 4000         | 3900  | 6500         | 1.4                  | 11.0              | 6.0                     | 22              | 31   |
| 64                                                                             | 197      | 215       | 1.7      | 2.0 | F302_0470 EZ501U | 450        | 800        | 47.19 | 1274/27     | 4000         | 3900  | 6500         | 3.4                  | 11.0              | 6.0                     | 22              | 32   |
| 64                                                                             | 215      | 238       | 1.9      | 1.9 | F302_0470 EZ402U | 450        | 800        | 47.19 | 1274/27     | 4000         | 3900  | 6500         | 2.1                  | 11.0              | 6.0                     | 22              | 32   |
| 64                                                                             | 316      | 394       | 2.8      | 1.3 | F302_0470 EZ404U | 450        | 800        | 47.19 | 1274/27     | 4000         | 3900  | 6500         | 3.5                  | 11.0              | 6.0                     | 22              | 34   |
| 64                                                                             | 339      | 366       | 3.0      | 1.2 | F302_0470 EZ502U | 450        | 800        | 47.19 | 1274/27     | 4000         | 3900  | 6500         | 5.7                  | 11.0              | 6.0                     | 22              | 34   |
| 64                                                                             | 339      | 380       | 3.0      | 1.2 | F302_0470 EZ701U | 450        | 800        | 47.19 | 1274/27     | 4000         | 3900  | 6500         | 9.0                  | 11.0              | 6.0                     | 22              | 35   |
| 86                                                                             | 95       | 102       | 1.1      | 3.8 | F302_0350 EZ401U | 289        | 800        | 35.03 | 7252/207    | 3700         | 3500  | 5500         | 1.7                  | 11.0              | 6.0                     | 22              | 31   |
| 86                                                                             | 146      | 160       | 1.6      | 2.5 | F302_0350 EZ501U | 450        | 800        | 35.03 | 7252/207    | 3700         | 3500  | 5500         | 3.6                  | 11.0              | 6.0                     | 22              | 32   |
| 86                                                                             | 160      | 177       | 1.8      | 2.3 | F302_0350 EZ402U | 450        | 800        | 35.03 | 7252/207    | 3700         | 3500  | 5500         | 2.4                  | 11.0              | 6.0                     | 22              | 32   |
| 86                                                                             | 234      | 292       | 2.6      | 1.5 | F302_0350 EZ404U | 450        | 800        | 35.03 | 7252/207    | 3700         | 3500  | 5500         | 3.7                  | 11.0              | 6.0                     | 22              | 34   |
| 86                                                                             | 251      | 272       | 2.8      | 1.4 | F302_0350 EZ502U | 450        | 800        | 35.03 | 7252/207    | 3700         | 3500  | 5500         | 5.9                  | 11.0              | 6.0                     | 22              | 34   |
| 86                                                                             | 251      | 282       | 2.8      | 1.4 | F302_0350 EZ701U | 450        | 800        | 35.03 | 7252/207    | 3700         | 3500  | 5500         | 9.2                  | 11.0              | 6.0                     | 22              | 35   |
| 86                                                                             | 330      | 377       | 3.7      | 1.1 | F302_0350 EZ503U | 450        | 800        | 35.03 | 7252/207    | 3700         | 3500  | 5500         | 8.3                  | 11.0              | 6.0                     | 22              | 35   |
| 106                                                                            | 77       | 82        | 1.0      | 4.4 | F302_0280 EZ401U | 233        | 800        | 28.23 | 6860/243    | 3700         | 3500  | 5500         | 2.0                  | 11.0              | 6.0                     | 22              | 31   |
| 106                                                                            | 118      | 129       | 1.6      | 2.9 | F302_0280 EZ501U | 438        | 800        | 28.23 | 6860/243    | 3700         | 3500  | 5500         | 3.9                  | 11.0              | 6.0                     | 22              | 32   |
| 106                                                                            | 129      | 142       | 1.7      | 2.6 | F302_0280 EZ402U | 438        | 800        | 28.23 | 6860/243    | 3700         | 3500  | 5500         | 2.7                  | 11.0              | 6.0                     | 22              | 32   |
| 106                                                                            | 189      | 235       | 2.5      | 1.8 | F302_0280 EZ404U | 450        | 800        | 28.23 | 6860/243    | 3700         | 3500  | 5500         | 4.0                  | 11.0              | 6.0                     | 22              | 34   |
| 106                                                                            | 203      | 219       | 2.7      | 1.7 | F302_0280 EZ502U | 450        | 800        | 28.23 | 6860/243    | 3700         | 3500  | 5500         | 6.2                  | 11.0              | 6.0                     | 22              | 34   |
| 106                                                                            | 203      | 227       | 2.7      | 1.7 | F302_0280 EZ701U | 450        | 800        | 28.23 | 6860/243    | 3700         | 3500  | 5500         | 9.5                  | 11.0              | 6.0                     | 22              | 35   |
| 106                                                                            | 266      | 304       | 3.6      | 1.3 | F302_0280 EZ503U | 450        | 800        | 28.23 | 6860/243    | 3700         | 3500  | 5500         | 8.6                  | 11.0              | 6.0                     | 22              | 35   |

| $n_{2N}$                                                                       | $M_{2N}$ | $M_{2,0}$ | $a_{th}$ | S   | Type             | $M_{2acc}$ | $M_{2NOT}$ | i     | $i_{exakt}$ | $n_{1maxDB}$ |       | $n_{1maxZB}$ | $J_1$                | $\Delta\varphi_2$ | $\Delta\varphi_{2redl}$ | $C_2$           | m    |
|--------------------------------------------------------------------------------|----------|-----------|----------|-----|------------------|------------|------------|-------|-------------|--------------|-------|--------------|----------------------|-------------------|-------------------------|-----------------|------|
| [rpm]                                                                          | [Nm]     | [Nm]      |          |     |                  | [Nm]       | [Nm]       |       |             | EL1,2,3,4    | EL5,6 | [rpm]        | [kgcm <sup>2</sup> ] | [arcmin]          | [arcmin]                | [Nm/<br>arcmin] | [kg] |
| <b>F3 (<math>n_{1N} = 3000</math> rpm, <math>M_{2acc,max} = 450</math> Nm)</b> |          |           |          |     |                  |            |            |       |             |              |       |              |                      |                   |                         |                 |      |
| 106                                                                            | 329      | 394       | 4.4      | 1.0 | F302_0280 EZ702U | 450        | 800        | 28.23 | 6860/243    | 3700         | 3500  | 5500         | 15                   | 11.0              | 6.0                     | 22              | 38   |
| 128                                                                            | 64       | 68        | 1.0      | 5.0 | F302_0240 EZ401U | 194        | 685        | 23.52 | 588/25      | 3500         | 3100  | 5000         | 2.3                  | 11.0              | 6.0                     | 22              | 31   |
| 128                                                                            | 98       | 107       | 1.5      | 3.2 | F302_0240 EZ501U | 365        | 685        | 23.52 | 588/25      | 3500         | 3100  | 5000         | 4.3                  | 11.0              | 6.0                     | 22              | 32   |
| 128                                                                            | 107      | 119       | 1.7      | 3.0 | F302_0240 EZ402U | 365        | 685        | 23.52 | 588/25      | 3500         | 3100  | 5000         | 3.0                  | 11.0              | 6.0                     | 22              | 32   |
| 128                                                                            | 157      | 196       | 2.5      | 2.0 | F302_0240 EZ404U | 450        | 685        | 23.52 | 588/25      | 3500         | 3100  | 5000         | 4.4                  | 11.0              | 6.0                     | 22              | 34   |
| 128                                                                            | 169      | 183       | 2.6      | 1.9 | F302_0240 EZ502U | 450        | 685        | 23.52 | 588/25      | 3500         | 3100  | 5000         | 6.6                  | 11.0              | 6.0                     | 22              | 34   |
| 128                                                                            | 169      | 189       | 2.6      | 1.9 | F302_0240 EZ701U | 450        | 800        | 23.52 | 588/25      | 3500         | 3100  | 5000         | 9.9                  | 11.0              | 6.0                     | 22              | 35   |
| 128                                                                            | 221      | 253       | 3.5      | 1.4 | F302_0240 EZ503U | 450        | 685        | 23.52 | 588/25      | 3500         | 3100  | 5000         | 9.0                  | 11.0              | 6.0                     | 22              | 35   |
| 128                                                                            | 274      | 329       | 4.3      | 1.2 | F302_0240 EZ702U | 450        | 800        | 23.52 | 588/25      | 3500         | 3100  | 5000         | 15                   | 11.0              | 6.0                     | 22              | 38   |
| 128                                                                            | 308      | 365       | 4.8      | 1.0 | F302_0240 EZ505U | 450        | 800        | 23.52 | 588/25      | 3500         | 3100  | 5000         | 14                   | 11.0              | 6.0                     | 22              | 38   |
| 160                                                                            | 135      | 151       | 2.5      | 2.2 | F302_0190 EZ701U | 364        | 800        | 18.77 | 4900/261    | 3500         | 3100  | 5000         | 10                   | 11.0              | 6.0                     | 22              | 35   |
| 160                                                                            | 219      | 262       | 4.1      | 1.3 | F302_0190 EZ702U | 450        | 800        | 18.77 | 4900/261    | 3500         | 3100  | 5000         | 16                   | 11.0              | 6.0                     | 22              | 38   |
| 160                                                                            | 246      | 291       | 4.6      | 1.2 | F302_0190 EZ505U | 450        | 800        | 18.77 | 4900/261    | 3500         | 3100  | 5000         | 14                   | 11.0              | 6.0                     | 22              | 38   |
| 224                                                                            | 56       | 61        | 1.4      | 4.7 | F302_0135 EZ501U | 208        | 390        | 13.38 | 7696/575    | 3700         | 3500  | 5500         | 4.2                  | 11.0              | 8.0                     | 20              | 32   |
| 224                                                                            | 61       | 68        | 1.5      | 4.3 | F302_0135 EZ402U | 208        | 390        | 13.38 | 7696/575    | 3700         | 3500  | 5500         | 2.9                  | 11.0              | 8.0                     | 20              | 32   |
| 224                                                                            | 90       | 112       | 2.2      | 2.9 | F302_0135 EZ404U | 312        | 390        | 13.38 | 7696/575    | 3700         | 3500  | 5500         | 4.3                  | 11.0              | 8.0                     | 20              | 34   |
| 224                                                                            | 96       | 104       | 2.4      | 2.7 | F302_0135 EZ502U | 312        | 390        | 13.38 | 7696/575    | 3700         | 3500  | 5500         | 6.5                  | 11.0              | 8.0                     | 20              | 34   |
| 224                                                                            | 96       | 108       | 2.4      | 2.7 | F302_0135 EZ701U | 260        | 650        | 13.38 | 7696/575    | 3700         | 3500  | 5500         | 9.8                  | 11.0              | 8.0                     | 20              | 35   |
| 224                                                                            | 126      | 144       | 3.1      | 2.1 | F302_0135 EZ503U | 312        | 390        | 13.38 | 7696/575    | 3700         | 3500  | 5500         | 8.9                  | 11.0              | 8.0                     | 20              | 35   |
| 224                                                                            | 156      | 187       | 3.9      | 1.7 | F302_0135 EZ702U | 350        | 650        | 13.38 | 7696/575    | 3700         | 3500  | 5500         | 15                   | 11.0              | 8.0                     | 20              | 38   |
| 224                                                                            | 175      | 208       | 4.4      | 1.5 | F302_0135 EZ505U | 350        | 650        | 13.38 | 7696/575    | 3700         | 3500  | 5500         | 13                   | 11.0              | 8.0                     | 20              | 38   |
| 224                                                                            | 214      | 270       | 5.3      | 1.2 | F302_0135 EZ703U | 350        | 650        | 13.38 | 7696/575    | 3700         | 3500  | 5500         | 23                   | 11.0              | 8.0                     | 20              | 40   |
| 278                                                                            | 49       | 54        | 1.5      | 5.0 | F302_0110 EZ402U | 167        | 314        | 10.79 | 1456/135    | 3700         | 3500  | 5500         | 3.5                  | 11.0              | 8.0                     | 20              | 32   |
| 278                                                                            | 72       | 90        | 2.2      | 3.4 | F302_0110 EZ404U | 251        | 314        | 10.79 | 1456/135    | 3700         | 3500  | 5500         | 4.9                  | 11.0              | 8.0                     | 20              | 34   |
| 278                                                                            | 77       | 84        | 2.3      | 3.2 | F302_0110 EZ502U | 251        | 314        | 10.79 | 1456/135    | 3700         | 3500  | 5500         | 7.1                  | 11.0              | 8.0                     | 20              | 34   |
| 278                                                                            | 77       | 87        | 2.3      | 3.2 | F302_0110 EZ701U | 209        | 650        | 10.79 | 1456/135    | 3700         | 3500  | 5500         | 10                   | 11.0              | 8.0                     | 20              | 35   |
| 278                                                                            | 101      | 116       | 3.0      | 2.4 | F302_0110 EZ503U | 251        | 314        | 10.79 | 1456/135    | 3700         | 3500  | 5500         | 9.5                  | 11.0              | 8.0                     | 20              | 35   |
| 278                                                                            | 126      | 151       | 3.7      | 2.0 | F302_0110 EZ702U | 350        | 650        | 10.79 | 1456/135    | 3700         | 3500  | 5500         | 16                   | 11.0              | 8.0                     | 20              | 38   |
| 278                                                                            | 141      | 167       | 4.2      | 1.7 | F302_0110 EZ505U | 350        | 650        | 10.79 | 1456/135    | 3700         | 3500  | 5500         | 14                   | 11.0              | 8.0                     | 20              | 38   |
| 278                                                                            | 173      | 218       | 5.2      | 1.4 | F302_0110 EZ703U | 350        | 650        | 10.79 | 1456/135    | 3700         | 3500  | 5500         | 24                   | 11.0              | 8.0                     | 20              | 40   |
| 334                                                                            | 60       | 75        | 2.3      | 3.5 | F302_0090 EZ404U | 209        | 262        | 8.986 | 5616/625    | 3500         | 3100  | 5000         | 5.6                  | 11.0              | 8.0                     | 20              | 34   |
| 334                                                                            | 65       | 70        | 2.5      | 3.2 | F302_0090 EZ502U | 209        | 262        | 8.986 | 5616/625    | 3500         | 3100  | 5000         | 7.8                  | 11.0              | 8.0                     | 20              | 34   |
| 334                                                                            | 65       | 72        | 2.2      | 3.6 | F302_0090 EZ701U | 174        | 650        | 8.986 | 5616/625    | 3500         | 3100  | 5000         | 11                   | 11.0              | 8.0                     | 20              | 35   |
| 334                                                                            | 85       | 97        | 3.2      | 2.5 | F302_0090 EZ503U | 209        | 262        | 8.986 | 5616/625    | 3500         | 3100  | 5000         | 10                   | 11.0              | 8.0                     | 20              | 35   |
| 334                                                                            | 105      | 126       | 3.6      | 2.2 | F302_0090 EZ702U | 350        | 650        | 8.986 | 5616/625    | 3500         | 3100  | 5000         | 16                   | 11.0              | 8.0                     | 20              | 38   |
| 334                                                                            | 118      | 139       | 4.1      | 2.0 | F302_0090 EZ505U | 350        | 650        | 8.986 | 5616/625    | 3500         | 3100  | 5000         | 15                   | 11.0              | 8.0                     | 20              | 38   |
| 334                                                                            | 144      | 181       | 5.0      | 1.6 | F302_0090 EZ703U | 350        | 650        | 8.986 | 5616/625    | 3500         | 3100  | 5000         | 24                   | 11.0              | 8.0                     | 20              | 40   |
| 418                                                                            | 51       | 58        | 2.2      | 4.2 | F302_0072 EZ701U | 139        | 522        | 7.172 | 208/29      | 3500         | 3100  | 5000         | 12                   | 11.0              | 8.0                     | 20              | 35   |
| 418                                                                            | 83       | 100       | 3.5      | 2.6 | F302_0072 EZ702U | 285        | 522        | 7.172 | 208/29      | 3500         | 3100  | 5000         | 18                   | 11.0              | 8.0                     | 20              | 38   |
| 418                                                                            | 94       | 111       | 3.9      | 2.3 | F302_0072 EZ505U | 350        | 522        | 7.172 | 208/29      | 3500         | 3100  | 5000         | 16                   | 11.0              | 8.0                     | 20              | 38   |
| 418                                                                            | 115      | 145       | 4.8      | 1.9 | F302_0072 EZ703U | 350        | 522        | 7.172 | 208/29      | 3500         | 3100  | 5000         | 25                   | 11.0              | 8.0                     | 20              | 40   |
| 524                                                                            | 41       | 46        | 2.1      | 4.8 | F302_0057 EZ701U | 111        | 416        | 5.720 | 143/25      | 3000         | 2600  | 4500         | 14                   | 11.0              | 8.0                     | 20              | 35   |
| 524                                                                            | 67       | 80        | 3.4      | 3.0 | F302_0057 EZ702U | 227        | 416        | 5.720 | 143/25      | 3000         | 2600  | 4500         | 19                   | 11.0              | 8.0                     | 20              | 38   |
| 524                                                                            | 75       | 89        | 3.8      | 2.6 | F302_0057 EZ505U | 333        | 416        | 5.720 | 143/25      | 3000         | 2600  | 4500         | 18                   | 11.0              | 8.0                     | 20              | 38   |
| 524                                                                            | 92       | 115       | 4.6      | 2.2 | F302_0057 EZ703U | 333        | 416        | 5.720 | 143/25      | 3000         | 2600  | 4500         | 27                   | 11.0              | 8.0                     | 20              | 40   |
| 646                                                                            | 54       | 65        | 3.3      | 3.4 | F302_0046 EZ702U | 185        | 338        | 4.644 | 4992/1075   | 3000         | 2600  | 4500         | 22                   | 11.0              | 8.0                     | 20              | 38   |
| 646                                                                            | 61       | 72        | 3.7      | 3.0 | F302_0046 EZ505U | 270        | 338        | 4.644 | 4992/1075   | 3000         | 2600  | 4500         | 20                   | 11.0              | 8.0                     | 20              | 38   |
| 646                                                                            | 74       | 94        | 4.5      | 2.5 | F302_0046 EZ703U | 270        | 338        | 4.644 | 4992/1075   | 3000         | 2600  | 4500         | 30                   | 11.0              | 8.0                     | 20              | 40   |
| 646                                                                            | 96       | 136       | 5.8      | 1.9 | F302_0046 EZ705U | 349        | 650        | 4.644 | 4992/1075   | 3000         | 2600  | 4500         | 42                   | 11.0              | 8.0                     | 20              | 45   |
| <b>F3 (<math>n_{1N} = 4500</math> rpm, <math>M_{2acc,max} = 450</math> Nm)</b> |          |           |          |     |                  |            |            |       |             |              |       |              |                      |                   |                         |                 |      |
| 159                                                                            | 260      | 419       | 4.0      | 1.1 | F302_0280 EZ505U | 450        | 800        | 28.23 | 6860/243    | 3700         | 3500  | 5500         | 13                   | 11.0              | 6.0                     | 22              | 38   |
| 191                                                                            | 217      | 349       | 3.9      | 1.3 | F302_0240 EZ505U | 450        | 800        | 23.52 | 588/25      | 3500         | 3100  | 5000         | 14                   | 11.0              | 6.0                     | 22              | 38   |
| 191                                                                            | 276      | 456       | 4.9      | 1.0 | F302_0240 EZ703U | 450        | 800        | 23.52 | 588/25      | 3500         | 3100  | 5000         | 23                   | 11.0              | 6.0                     | 22              | 40   |
| 240                                                                            | 173      | 279       | 3.7      | 1.5 | F302_0190 EZ505U | 450        | 800        | 18.77 | 4900/261    | 3500         | 3100  | 5000         | 14                   | 11.0              | 6.0                     | 22              | 38   |
| 240                                                                            | 220      | 364       | 4.7      | 1.2 | F302_0190 EZ703U | 450        | 800        | 18.77 | 4900/261    | 3500         | 3100  | 5000         | 24                   | 11.0              | 6.0                     | 22              | 40   |
| 336                                                                            | 123      | 199       | 3.5      | 1.9 | F302_0135 EZ505U | 350        | 650        | 13.38 | 7696/575    | 3700         | 3500  | 5500         | 13                   | 11.0              | 8.0                     | 20              | 38   |
| 336                                                                            | 157      | 260       | 4.5      | 1.5 | F302_0135 EZ703U | 350        | 650        | 13.38 | 7696/575    | 3700         | 3500  | 5500         | 23                   | 11.0              | 8.0                     | 20              | 40   |
| 417                                                                            | 99       | 160       | 3.4      | 2.2 | F302_0110 EZ505U | 350        | 650        | 10.79 | 1456/135    | 3700         | 3500  | 5500         | 14                   | 11.0              | 8.0                     | 20              | 38   |
| 417                                                                            | 127      | 209       | 4.3      | 1.7 | F302_0110 EZ703U | 350        | 650        | 10.79 | 1456/135    | 3700         | 3500  | 5500         | 24                   | 11.0              | 8.0                     | 20              | 40   |
| 501                                                                            | 83       | 133       | 3.3      | 2.4 | F302_0090 EZ505U | 350        | 650        | 8.986 | 5616/625    | 3500         | 3100  | 5000         | 15                   | 11.0              | 8.0                     | 20              | 38   |
| 501                                                                            | 105      | 174       | 4.2      | 1.9 | F302_0090 EZ703U | 350        | 650        | 8.986 | 5616/625    | 3500         | 3100  | 5000         | 24                   | 11.0              | 8.0                     | 20              | 40   |
| 627                                                                            | 66       | 106       | 3.2      | 2.8 | F302_0072 EZ505U | 350        | 522        | 7.172 | 208/29      | 3500         | 3100  | 5000         | 16                   | 11.0              | 8.0                     | 20              | 38   |
| 627                                                                            | 84       | 139       | 4.0      | 2.2 | F302_0072 EZ703U | 350        | 522        | 7.172 | 208/29      | 3500         | 3100  | 5000         | 25                   | 11.0              | 8.0                     | 20              | 40   |
| 787                                                                            | 53       | 85        | 3.1      | 3.3 | F302_0057 EZ505U | 333        | 416        | 5.720 | 143/25      | 3000         | 2600  | 4500         | 18                   | 11.0              | 8.0                     | 20              | 38   |



## 8.2 Selection tables 8 F offset helical geared motors

| $n_{2N}$                                                                       | $M_{2N}$ | $M_{2,0}$ | $a_{th}$ | S   | Type             | $M_{2acc}$ | $M_{2NOT}$ | i     | $i_{exakt}$ | $n_{1maxDB}$ |       | $n_{1maxZB}$ | $J_1$                | $\Delta\varphi_2$ | $\Delta\varphi_{2redl}$ | $C_2$           | m    |
|--------------------------------------------------------------------------------|----------|-----------|----------|-----|------------------|------------|------------|-------|-------------|--------------|-------|--------------|----------------------|-------------------|-------------------------|-----------------|------|
| [rpm]                                                                          | [Nm]     | [Nm]      |          |     |                  | [Nm]       | [Nm]       |       |             | EL1,2,3,4    | EL5,6 | [rpm]        | [kgcm <sup>2</sup> ] | [arcmin]          | [arcmin]                | [Nm/<br>arcmin] | [kg] |
| <b>F3 (<math>n_{1N} = 4500</math> rpm, <math>M_{2acc,max} = 450</math> Nm)</b> |          |           |          |     |                  |            |            |       |             |              |       |              |                      |                   |                         |                 |      |
| 787                                                                            | 67       | 111       | 3.9      | 2.6 | F302_0057 EZ703U | 333        | 416        | 5.720 | 143/25      | 3000         | 2600  | 4500         | 27                   | 11.0              | 8.0                     | 20              | 40   |
| 969                                                                            | 43       | 69        | 3.0      | 3.8 | F302_0046 EZ505U | 270        | 338        | 4.644 | 4992/1075   | 3000         | 2600  | 4500         | 20                   | 11.0              | 8.0                     | 20              | 38   |
| 969                                                                            | 55       | 90        | 3.8      | 3.0 | F302_0046 EZ703U | 270        | 338        | 4.644 | 4992/1075   | 3000         | 2600  | 4500         | 30                   | 11.0              | 8.0                     | 20              | 40   |
| 969                                                                            | 74       | 135       | 5.1      | 2.2 | F302_0046 EZ705U | 349        | 650        | 4.644 | 4992/1075   | 3000         | 2600  | 4500         | 42                   | 11.0              | 8.0                     | 20              | 45   |
| <b>F3 (<math>n_{1N} = 6000</math> rpm, <math>M_{2acc,max} = 450</math> Nm)</b> |          |           |          |     |                  |            |            |       |             |              |       |              |                      |                   |                         |                 |      |
| 22                                                                             | 395      | 443       | 1.4      | 1.0 | F303_2760 EZ302U | 450        | 800        | 275.6 | 32242/117   | 4000         | 3900  | 6500         | 0.35                 | 11.0              | 7.0                     | 22              | 34   |
| 27                                                                             | 317      | 355       | 1.3      | 1.3 | F303_2210 EZ302U | 450        | 800        | 221.2 | 191149/864  | 4000         | 3900  | 6500         | 0.36                 | 11.0              | 7.0                     | 22              | 34   |
| 32                                                                             | 265      | 297       | 1.2      | 1.5 | F303_1850 EZ302U | 450        | 800        | 184.8 | 29939/162   | 4000         | 3900  | 6500         | 0.37                 | 11.0              | 7.0                     | 22              | 34   |
| 32                                                                             | 346      | 398       | 1.5      | 1.2 | F303_1850 EZ303U | 450        | 800        | 184.8 | 29939/162   | 4000         | 3900  | 6500         | 0.48                 | 11.0              | 7.0                     | 22              | 35   |
| 43                                                                             | 205      | 229       | 1.0      | 2.0 | F302_1410 EZ302U | 450        | 603        | 140.6 | 7595/54     | 4000         | 3900  | 6500         | 0.37                 | 11.0              | 6.0                     | 22              | 29   |
| 43                                                                             | 267      | 307       | 1.4      | 1.5 | F302_1410 EZ303U | 450        | 603        | 140.6 | 7595/54     | 4000         | 3900  | 6500         | 0.48                 | 11.0              | 6.0                     | 22              | 30   |
| 43                                                                             | 314      | 382       | 1.6      | 1.3 | F302_1410 EZ401U | 450        | 603        | 140.6 | 7595/54     | 4000         | 3900  | 6500         | 1.0                  | 11.0              | 6.0                     | 22              | 31   |
| 53                                                                             | 252      | 306       | 1.4      | 1.6 | F302_1130 EZ401U | 450        | 800        | 112.8 | 3724/33     | 4000         | 3900  | 6500         | 1.0                  | 11.0              | 6.0                     | 22              | 31   |
| 53                                                                             | 372      | 482       | 2.1      | 1.1 | F302_1130 EZ501U | 450        | 800        | 112.8 | 3724/33     | 4000         | 3900  | 6500         | 3.0                  | 11.0              | 6.0                     | 22              | 32   |
| 53                                                                             | 383      | 536       | 2.2      | 1.0 | F302_1130 EZ402U | 450        | 800        | 112.8 | 3724/33     | 4000         | 3900  | 6500         | 1.7                  | 11.0              | 6.0                     | 22              | 32   |
| 64                                                                             | 209      | 254       | 1.3      | 1.9 | F302_0940 EZ401U | 450        | 800        | 93.64 | 4214/45     | 4000         | 3900  | 6500         | 1.1                  | 11.0              | 6.0                     | 22              | 31   |
| 64                                                                             | 309      | 400       | 1.9      | 1.3 | F302_0940 EZ501U | 450        | 800        | 93.64 | 4214/45     | 4000         | 3900  | 6500         | 3.1                  | 11.0              | 6.0                     | 22              | 32   |
| 64                                                                             | 318      | 445       | 2.0      | 1.3 | F302_0940 EZ402U | 450        | 800        | 93.64 | 4214/45     | 4000         | 3900  | 6500         | 1.8                  | 11.0              | 6.0                     | 22              | 32   |
| 85                                                                             | 157      | 191       | 1.2      | 2.3 | F302_0700 EZ401U | 450        | 800        | 70.36 | 2744/39     | 4000         | 3900  | 6500         | 1.2                  | 11.0              | 6.0                     | 22              | 31   |
| 85                                                                             | 232      | 300       | 1.8      | 1.6 | F302_0700 EZ501U | 450        | 800        | 70.36 | 2744/39     | 4000         | 3900  | 6500         | 3.2                  | 11.0              | 6.0                     | 22              | 32   |
| 85                                                                             | 239      | 334       | 1.9      | 1.5 | F302_0700 EZ402U | 450        | 800        | 70.36 | 2744/39     | 4000         | 3900  | 6500         | 1.9                  | 11.0              | 6.0                     | 22              | 32   |
| 85                                                                             | 355      | 532       | 2.8      | 1.0 | F302_0700 EZ502U | 450        | 800        | 70.36 | 2744/39     | 4000         | 3900  | 6500         | 5.5                  | 11.0              | 6.0                     | 22              | 34   |
| 85                                                                             | 355      | 539       | 2.8      | 1.0 | F302_0700 EZ701U | 450        | 800        | 70.36 | 2744/39     | 4000         | 3900  | 6500         | 8.8                  | 11.0              | 6.0                     | 22              | 35   |
| 106                                                                            | 126      | 153       | 1.2      | 2.7 | F302_0560 EZ401U | 450        | 800        | 56.49 | 4067/72     | 4000         | 3900  | 6500         | 1.3                  | 11.0              | 6.0                     | 22              | 31   |
| 106                                                                            | 186      | 241       | 1.8      | 1.8 | F302_0560 EZ501U | 450        | 800        | 56.49 | 4067/72     | 4000         | 3900  | 6500         | 3.3                  | 11.0              | 6.0                     | 22              | 32   |
| 106                                                                            | 192      | 268       | 1.8      | 1.8 | F302_0560 EZ402U | 450        | 800        | 56.49 | 4067/72     | 4000         | 3900  | 6500         | 2.0                  | 11.0              | 6.0                     | 22              | 32   |
| 106                                                                            | 285      | 427       | 2.7      | 1.2 | F302_0560 EZ502U | 450        | 800        | 56.49 | 4067/72     | 4000         | 3900  | 6500         | 5.6                  | 11.0              | 6.0                     | 22              | 34   |
| 106                                                                            | 285      | 433       | 2.7      | 1.2 | F302_0560 EZ701U | 450        | 800        | 56.49 | 4067/72     | 4000         | 3900  | 6500         | 8.9                  | 11.0              | 6.0                     | 22              | 35   |
| 106                                                                            | 318      | 460       | 3.0      | 1.1 | F302_0560 EZ404U | 450        | 800        | 56.49 | 4067/72     | 4000         | 3900  | 6500         | 3.3                  | 11.0              | 6.0                     | 22              | 34   |
| 127                                                                            | 105      | 128       | 1.2      | 3.0 | F302_0470 EZ401U | 389        | 800        | 47.19 | 1274/27     | 4000         | 3900  | 6500         | 1.4                  | 11.0              | 6.0                     | 22              | 31   |
| 127                                                                            | 156      | 201       | 1.7      | 2.0 | F302_0470 EZ501U | 450        | 800        | 47.19 | 1274/27     | 4000         | 3900  | 6500         | 3.4                  | 11.0              | 6.0                     | 22              | 32   |
| 127                                                                            | 160      | 224       | 1.8      | 2.0 | F302_0470 EZ402U | 450        | 800        | 47.19 | 1274/27     | 4000         | 3900  | 6500         | 2.1                  | 11.0              | 6.0                     | 22              | 32   |
| 127                                                                            | 238      | 357       | 2.6      | 1.3 | F302_0470 EZ502U | 450        | 800        | 47.19 | 1274/27     | 4000         | 3900  | 6500         | 5.7                  | 11.0              | 6.0                     | 22              | 34   |
| 127                                                                            | 238      | 362       | 2.6      | 1.3 | F302_0470 EZ701U | 450        | 800        | 47.19 | 1274/27     | 4000         | 3900  | 6500         | 9.0                  | 11.0              | 6.0                     | 22              | 35   |
| 127                                                                            | 265      | 384       | 2.9      | 1.2 | F302_0470 EZ404U | 450        | 800        | 47.19 | 1274/27     | 4000         | 3900  | 6500         | 3.5                  | 11.0              | 6.0                     | 22              | 34   |
| 127                                                                            | 284      | 485       | 3.1      | 1.1 | F302_0470 EZ503U | 450        | 800        | 47.19 | 1274/27     | 4000         | 3900  | 6500         | 8.1                  | 11.0              | 6.0                     | 22              | 35   |
| <b>F4 (<math>n_{1N} = 2000</math> rpm, <math>M_{2acc,max} = 550</math> Nm)</b> |          |           |          |     |                  |            |            |       |             |              |       |              |                      |                   |                         |                 |      |
| 185                                                                            | 459      | 694       | 7.8      | 1.0 | F402_0110 EZ805U | 550        | 1100       | 10.83 | 682/63      | 3500         | 3100  | 5500         | 136                  | 10.0              | 7.0                     | 39              | 81   |
| 223                                                                            | 381      | 576       | 7.6      | 1.1 | F402_0090 EZ805U | 550        | 1100       | 8.980 | 440/49      | 3200         | 2800  | 4800         | 137                  | 10.0              | 7.0                     | 39              | 81   |
| 278                                                                            | 305      | 462       | 7.3      | 1.3 | F402_0072 EZ805U | 550        | 1100       | 7.202 | 605/84      | 3200         | 2800  | 4800         | 140                  | 10.0              | 7.0                     | 39              | 81   |
| 344                                                                            | 246      | 373       | 7.1      | 1.5 | F402_0058 EZ805U | 550        | 1100       | 5.813 | 3784/651    | 2700         | 2300  | 4000         | 143                  | 10.0              | 7.0                     | 39              | 81   |
| 428                                                                            | 198      | 300       | 6.8      | 1.8 | F402_0047 EZ805U | 550        | 907        | 4.678 | 1408/301    | 2700         | 2300  | 4000         | 148                  | 10.0              | 7.0                     | 39              | 81   |
| <b>F4 (<math>n_{1N} = 3000</math> rpm, <math>M_{2acc,max} = 700</math> Nm)</b> |          |           |          |     |                  |            |            |       |             |              |       |              |                      |                   |                         |                 |      |
| 6.8                                                                            | 668      | 706       | 1.2      | 1.0 | F403_4400 EZ302U | 700        | 1400       | 439.7 | 58045/132   | 3800         | 3500  | 6000         | 0.35                 | 10.0              | 6.0                     | 39              | 42   |
| 8.2                                                                            | 556      | 587       | 1.1      | 1.3 | F403_3660 EZ302U | 700        | 1400       | 365.6 | 3290/9      | 3800         | 3500  | 6000         | 0.35                 | 10.0              | 6.0                     | 39              | 42   |
| 11                                                                             | 417      | 441       | 0.9      | 1.7 | F403_2740 EZ302U | 700        | 1400       | 274.4 | 59267/216   | 3800         | 3500  | 6000         | 0.36                 | 10.0              | 6.0                     | 39              | 42   |
| 11                                                                             | 543      | 574       | 1.2      | 1.3 | F403_2740 EZ303U | 700        | 1400       | 274.4 | 59267/216   | 3800         | 3500  | 6000         | 0.47                 | 10.0              | 6.0                     | 39              | 42   |
| 14                                                                             | 333      | 352       | 0.8      | 2.1 | F403_2190 EZ302U | 700        | 1400       | 219.2 | 94705/432   | 3800         | 3500  | 6000         | 0.38                 | 10.0              | 6.0                     | 39              | 42   |
| 14                                                                             | 434      | 459       | 1.1      | 1.6 | F403_2190 EZ303U | 700        | 1400       | 219.2 | 94705/432   | 3800         | 3500  | 6000         | 0.49                 | 10.0              | 6.0                     | 39              | 42   |
| 14                                                                             | 587      | 629       | 1.5      | 1.2 | F403_2190 EZ401U | 700        | 1400       | 219.2 | 94705/432   | 3800         | 3500  | 6000         | 1.0                  | 10.0              | 6.0                     | 39              | 44   |
| 16                                                                             | 279      | 295       | 0.8      | 2.5 | F403_1840 EZ302U | 700        | 1179       | 183.9 | 39715/216   | 3800         | 3500  | 6000         | 0.39                 | 10.0              | 6.0                     | 39              | 42   |
| 16                                                                             | 364      | 385       | 1.0      | 1.9 | F403_1840 EZ303U | 700        | 1179       | 183.9 | 39715/216   | 3800         | 3500  | 6000         | 0.50                 | 10.0              | 6.0                     | 39              | 42   |
| 16                                                                             | 492      | 527       | 1.3      | 1.4 | F403_1840 EZ401U | 700        | 1179       | 183.9 | 39715/216   | 3800         | 3500  | 6000         | 1.0                  | 10.0              | 6.0                     | 39              | 44   |
| 21                                                                             | 583      | 637       | 1.8      | 1.2 | F402_1400 EZ501U | 700        | 1400       | 139.8 | 559/4       | 3800         | 3500  | 6000         | 3.0                  | 10.0              | 5.0                     | 39              | 40   |
| 27                                                                             | 468      | 512       | 1.6      | 1.5 | F402_1120 EZ501U | 700        | 1400       | 112.3 | 1235/11     | 3800         | 3500  | 6000         | 3.1                  | 10.0              | 5.0                     | 39              | 40   |
| 32                                                                             | 389      | 426       | 1.5      | 1.8 | F402_0930 EZ501U | 700        | 1400       | 93.33 | 280/3       | 3800         | 3500  | 6000         | 3.2                  | 10.0              | 5.0                     | 39              | 40   |
| 32                                                                             | 670      | 724       | 2.6      | 1.0 | F402_0930 EZ502U | 700        | 1400       | 93.33 | 280/3       | 3800         | 3500  | 6000         | 5.5                  | 10.0              | 5.0                     | 39              | 42   |
| 32                                                                             | 670      | 751       | 2.6      | 1.0 | F402_0930 EZ701U | 700        | 1400       | 93.33 | 280/3       | 3800         | 3500  | 6000         | 8.8                  | 10.0              | 5.0                     | 39              | 44   |
| 43                                                                             | 292      | 319       | 1.3      | 2.4 | F402_0700 EZ501U | 700        | 1400       | 70.06 | 1261/18     | 3800         | 3500  | 6000         | 3.3                  | 10.0              | 5.0                     | 39              | 40   |
| 43                                                                             | 503      | 544       | 2.2      | 1.4 | F402_0700 EZ502U | 700        | 1400       | 70.06 | 1261/18     | 3800         | 3500  | 6000         | 5.6                  | 10.0              | 5.0                     | 39              | 42   |
| 43                                                                             | 503      | 564       | 2.2      | 1.4 | F402_0700 EZ701U | 700        | 1400       | 70.06 | 1261/18     | 3800         | 3500  | 6000         | 8.9                  | 10.0              | 5.0                     | 39              | 44   |
| 43                                                                             | 659      | 754       | 2.9      | 1.1 | F402_0700 EZ503U | 700        | 1400       | 70.06 | 1261/18     | 3800         | 3500  | 6000         | 8.0                  | 10.0              | 5.0                     | 39              | 43   |
| 54                                                                             | 233      | 255       | 1.2      | 3.0 | F402_0560 EZ501U | 700        | 1400       | 55.97 | 2015/36     | 3800         | 3500  | 6000         | 3.5                  | 10.0              | 5.0                     | 39              | 40   |

| $n_{2N}$                                           | $M_{2N}$ | $M_{2,0}$ | $a_{th}$ | S   | Type             | $M_{2acc}$ | $M_{2NOT}$ | i     | $i_{exakt}$ | $n_{1maxDB}$ |       | $n_{1maxZB}$ | $J_1$                | $\Delta\varphi_2$ | $\Delta\varphi_{2redl}$ | $C_2$           | m    |
|----------------------------------------------------|----------|-----------|----------|-----|------------------|------------|------------|-------|-------------|--------------|-------|--------------|----------------------|-------------------|-------------------------|-----------------|------|
| [rpm]                                              | [Nm]     | [Nm]      |          |     |                  | [Nm]       | [Nm]       |       |             | EL1,2,3,4    | EL5,6 | [rpm]        | [kgcm <sup>2</sup> ] | [arcmin]          | [arcmin]                | [Nm/<br>arcmin] | [kg] |
| F4 ( $n_{1N} = 3000$ rpm, $M_{2acc,max} = 700$ Nm) |          |           |          |     |                  |            |            |       |             |              |       |              |                      |                   |                         |                 |      |
| 54                                                 | 402      | 434       | 2.0      | 1.7 | F402_0560 EZ502U | 700        | 1400       | 55.97 | 2015/36     | 3800         | 3500  | 6000         | 5.8                  | 10.0              | 5.0                     | 39              | 42   |
| 54                                                 | 402      | 451       | 2.0      | 1.7 | F402_0560 EZ701U | 700        | 1400       | 55.97 | 2015/36     | 3800         | 3500  | 6000         | 9.1                  | 10.0              | 5.0                     | 39              | 44   |
| 54                                                 | 527      | 603       | 2.6      | 1.3 | F402_0560 EZ503U | 700        | 1400       | 55.97 | 2015/36     | 3800         | 3500  | 6000         | 8.2                  | 10.0              | 5.0                     | 39              | 43   |
| 54                                                 | 652      | 782       | 3.2      | 1.1 | F402_0560 EZ702U | 700        | 1400       | 55.97 | 2015/36     | 3800         | 3500  | 6000         | 14                   | 10.0              | 5.0                     | 39              | 46   |
| 64                                                 | 196      | 214       | 1.1      | 3.4 | F402_0470 EZ501U | 700        | 1366       | 46.94 | 845/18      | 3800         | 3500  | 6000         | 3.7                  | 10.0              | 5.0                     | 39              | 40   |
| 64                                                 | 337      | 364       | 1.9      | 2.0 | F402_0470 EZ502U | 700        | 1366       | 46.94 | 845/18      | 3800         | 3500  | 6000         | 6.0                  | 10.0              | 5.0                     | 39              | 42   |
| 64                                                 | 337      | 378       | 1.9      | 2.0 | F402_0470 EZ701U | 700        | 1400       | 46.94 | 845/18      | 3800         | 3500  | 6000         | 9.3                  | 10.0              | 5.0                     | 39              | 44   |
| 64                                                 | 442      | 505       | 2.5      | 1.5 | F402_0470 EZ503U | 700        | 1366       | 46.94 | 845/18      | 3800         | 3500  | 6000         | 8.4                  | 10.0              | 5.0                     | 39              | 43   |
| 64                                                 | 546      | 656       | 3.1      | 1.2 | F402_0470 EZ702U | 700        | 1400       | 46.94 | 845/18      | 3800         | 3500  | 6000         | 15                   | 10.0              | 5.0                     | 39              | 46   |
| 64                                                 | 615      | 729       | 3.5      | 1.1 | F402_0470 EZ505U | 700        | 1400       | 46.94 | 845/18      | 3800         | 3500  | 6000         | 13                   | 10.0              | 5.0                     | 39              | 46   |
| 86                                                 | 252      | 282       | 1.8      | 2.4 | F402_0350 EZ701U | 681        | 1400       | 35.08 | 2210/63     | 3500         | 3100  | 5500         | 9.8                  | 10.0              | 5.0                     | 39              | 44   |
| 86                                                 | 408      | 490       | 3.0      | 1.5 | F402_0350 EZ702U | 700        | 1400       | 35.08 | 2210/63     | 3500         | 3100  | 5500         | 15                   | 10.0              | 5.0                     | 39              | 46   |
| 86                                                 | 459      | 544       | 3.4      | 1.3 | F402_0350 EZ505U | 700        | 1400       | 35.08 | 2210/63     | 3500         | 3100  | 5500         | 13                   | 10.0              | 5.0                     | 39              | 46   |
| 86                                                 | 561      | 708       | 4.1      | 1.1 | F402_0350 EZ703U | 700        | 1400       | 35.08 | 2210/63     | 3500         | 3100  | 5500         | 23                   | 10.0              | 5.0                     | 39              | 48   |
| 107                                                | 201      | 225       | 1.8      | 2.8 | F402_0280 EZ701U | 543        | 1400       | 27.99 | 2015/72     | 3500         | 3100  | 5500         | 10                   | 10.0              | 5.0                     | 39              | 44   |
| 107                                                | 326      | 391       | 2.9      | 1.7 | F402_0280 EZ702U | 700        | 1400       | 27.99 | 2015/72     | 3500         | 3100  | 5500         | 16                   | 10.0              | 5.0                     | 39              | 46   |
| 107                                                | 366      | 434       | 3.2      | 1.5 | F402_0280 EZ505U | 700        | 1400       | 27.99 | 2015/72     | 3500         | 3100  | 5500         | 14                   | 10.0              | 5.0                     | 39              | 46   |
| 107                                                | 448      | 565       | 4.0      | 1.2 | F402_0280 EZ703U | 700        | 1400       | 27.99 | 2015/72     | 3500         | 3100  | 5500         | 23                   | 10.0              | 5.0                     | 39              | 48   |
| 129                                                | 167      | 187       | 1.7      | 3.1 | F402_0230 EZ701U | 450        | 1400       | 23.21 | 325/14      | 3200         | 2800  | 4800         | 11                   | 10.0              | 5.0                     | 39              | 44   |
| 129                                                | 270      | 324       | 2.8      | 1.9 | F402_0230 EZ702U | 700        | 1400       | 23.21 | 325/14      | 3200         | 2800  | 4800         | 16                   | 10.0              | 5.0                     | 39              | 46   |
| 129                                                | 304      | 360       | 3.1      | 1.7 | F402_0230 EZ505U | 700        | 1400       | 23.21 | 325/14      | 3200         | 2800  | 4800         | 15                   | 10.0              | 5.0                     | 39              | 46   |
| 129                                                | 372      | 468       | 3.8      | 1.4 | F402_0230 EZ703U | 700        | 1400       | 23.21 | 325/14      | 3200         | 2800  | 4800         | 24                   | 10.0              | 5.0                     | 39              | 48   |
| 129                                                | 480      | 680       | 5.0      | 1.1 | F402_0230 EZ705U | 700        | 1400       | 23.21 | 325/14      | 3200         | 2800  | 4800         | 36                   | 10.0              | 5.0                     | 39              | 54   |
| 129                                                | 502      | 835       | 5.2      | 1.0 | F402_0230 EZ802U | 700        | 1400       | 23.21 | 325/14      | 3200         | 2800  | 4800         | 60                   | 10.0              | 5.0                     | 39              | 62   |
| 161                                                | 134      | 150       | 1.7      | 3.6 | F402_0185 EZ701U | 361        | 1355       | 18.62 | 3575/192    | 3200         | 2800  | 4800         | 12                   | 10.0              | 5.0                     | 39              | 44   |
| 161                                                | 217      | 260       | 2.7      | 2.2 | F402_0185 EZ702U | 700        | 1355       | 18.62 | 3575/192    | 3200         | 2800  | 4800         | 17                   | 10.0              | 5.0                     | 39              | 46   |
| 161                                                | 244      | 289       | 3.0      | 2.0 | F402_0185 EZ505U | 700        | 1355       | 18.62 | 3575/192    | 3200         | 2800  | 4800         | 15                   | 10.0              | 5.0                     | 39              | 46   |
| 161                                                | 298      | 376       | 3.7      | 1.6 | F402_0185 EZ703U | 700        | 1355       | 18.62 | 3575/192    | 3200         | 2800  | 4800         | 25                   | 10.0              | 5.0                     | 39              | 48   |
| 161                                                | 385      | 545       | 4.8      | 1.3 | F402_0185 EZ705U | 700        | 1400       | 18.62 | 3575/192    | 3200         | 2800  | 4800         | 37                   | 10.0              | 5.0                     | 39              | 54   |
| 161                                                | 403      | 670       | 5.0      | 1.2 | F402_0185 EZ802U | 700        | 1400       | 18.62 | 3575/192    | 3200         | 2800  | 4800         | 61                   | 10.0              | 5.0                     | 39              | 62   |
| 161                                                | 480      | 871       | 6.0      | 1.0 | F402_0185 EZ803U | 700        | 1400       | 18.62 | 3575/192    | 3200         | 2800  | 4800         | 87                   | 10.0              | 5.0                     | 39              | 68   |
| 221                                                | 97       | 109       | 1.6      | 4.5 | F402_0135 EZ701U | 263        | 932        | 13.57 | 5984/441    | 3500         | 3100  | 5500         | 11                   | 10.0              | 7.0                     | 39              | 44   |
| 221                                                | 158      | 190       | 2.6      | 2.8 | F402_0135 EZ702U | 540        | 932        | 13.57 | 5984/441    | 3500         | 3100  | 5500         | 16                   | 10.0              | 7.0                     | 39              | 46   |
| 221                                                | 178      | 211       | 2.9      | 2.5 | F402_0135 EZ505U | 550        | 932        | 13.57 | 5984/441    | 3500         | 3100  | 5500         | 14                   | 10.0              | 7.0                     | 39              | 46   |
| 221                                                | 217      | 274       | 3.5      | 2.0 | F402_0135 EZ703U | 550        | 932        | 13.57 | 5984/441    | 3500         | 3100  | 5500         | 24                   | 10.0              | 7.0                     | 39              | 48   |
| 221                                                | 280      | 397       | 4.5      | 1.6 | F402_0135 EZ705U | 550        | 1100       | 13.57 | 5984/441    | 3500         | 3100  | 5500         | 36                   | 10.0              | 7.0                     | 39              | 54   |
| 221                                                | 294      | 488       | 4.7      | 1.5 | F402_0135 EZ802U | 550        | 1100       | 13.57 | 5984/441    | 3500         | 3100  | 5500         | 60                   | 10.0              | 7.0                     | 39              | 62   |
| 221                                                | 350      | 634       | 5.7      | 1.2 | F402_0135 EZ803U | 550        | 1100       | 13.57 | 5984/441    | 3500         | 3100  | 5500         | 86                   | 10.0              | 7.0                     | 39              | 68   |
| 277                                                | 126      | 151       | 2.5      | 3.2 | F402_0110 EZ702U | 431        | 788        | 10.83 | 682/63      | 3500         | 3100  | 5500         | 17                   | 10.0              | 7.0                     | 39              | 46   |
| 277                                                | 142      | 168       | 2.8      | 2.9 | F402_0110 EZ505U | 550        | 788        | 10.83 | 682/63      | 3500         | 3100  | 5500         | 16                   | 10.0              | 7.0                     | 39              | 46   |
| 277                                                | 173      | 218       | 3.4      | 2.3 | F402_0110 EZ703U | 550        | 788        | 10.83 | 682/63      | 3500         | 3100  | 5500         | 25                   | 10.0              | 7.0                     | 39              | 48   |
| 277                                                | 224      | 317       | 4.4      | 1.8 | F402_0110 EZ705U | 550        | 1100       | 10.83 | 682/63      | 3500         | 3100  | 5500         | 37                   | 10.0              | 7.0                     | 39              | 54   |
| 277                                                | 234      | 390       | 4.6      | 1.7 | F402_0110 EZ802U | 550        | 1100       | 10.83 | 682/63      | 3500         | 3100  | 5500         | 61                   | 10.0              | 7.0                     | 39              | 62   |
| 277                                                | 279      | 506       | 5.5      | 1.4 | F402_0110 EZ803U | 550        | 1100       | 10.83 | 682/63      | 3500         | 3100  | 5500         | 87                   | 10.0              | 7.0                     | 39              | 68   |
| 334                                                | 105      | 125       | 2.4      | 3.6 | F402_0090 EZ702U | 357        | 653        | 8.980 | 440/49      | 3200         | 2800  | 4800         | 18                   | 10.0              | 7.0                     | 39              | 46   |
| 334                                                | 118      | 139       | 2.7      | 3.2 | F402_0090 EZ505U | 523        | 653        | 8.980 | 440/49      | 3200         | 2800  | 4800         | 17                   | 10.0              | 7.0                     | 39              | 46   |
| 334                                                | 144      | 181       | 3.3      | 2.6 | F402_0090 EZ703U | 523        | 653        | 8.980 | 440/49      | 3200         | 2800  | 4800         | 26                   | 10.0              | 7.0                     | 39              | 48   |
| 334                                                | 186      | 263       | 4.2      | 2.1 | F402_0090 EZ705U | 550        | 1100       | 8.980 | 440/49      | 3200         | 2800  | 4800         | 39                   | 10.0              | 7.0                     | 39              | 54   |
| 334                                                | 194      | 323       | 4.4      | 2.0 | F402_0090 EZ802U | 550        | 1100       | 8.980 | 440/49      | 3200         | 2800  | 4800         | 63                   | 10.0              | 7.0                     | 39              | 62   |
| 334                                                | 232      | 420       | 5.3      | 1.6 | F402_0090 EZ803U | 550        | 1100       | 8.980 | 440/49      | 3200         | 2800  | 4800         | 88                   | 10.0              | 7.0                     | 39              | 68   |
| 417                                                | 84       | 101       | 2.3      | 4.2 | F402_0072 EZ702U | 286        | 524        | 7.202 | 605/84      | 3200         | 2800  | 4800         | 21                   | 10.0              | 7.0                     | 39              | 46   |
| 417                                                | 94       | 112       | 2.6      | 3.7 | F402_0072 EZ505U | 419        | 524        | 7.202 | 605/84      | 3200         | 2800  | 4800         | 19                   | 10.0              | 7.0                     | 39              | 46   |
| 417                                                | 115      | 145       | 3.2      | 3.1 | F402_0072 EZ703U | 419        | 524        | 7.202 | 605/84      | 3200         | 2800  | 4800         | 29                   | 10.0              | 7.0                     | 39              | 48   |
| 417                                                | 149      | 211       | 4.1      | 2.4 | F402_0072 EZ705U | 550        | 1100       | 7.202 | 605/84      | 3200         | 2800  | 4800         | 41                   | 10.0              | 7.0                     | 39              | 54   |
| 417                                                | 156      | 259       | 4.3      | 2.3 | F402_0072 EZ802U | 550        | 1100       | 7.202 | 605/84      | 3200         | 2800  | 4800         | 65                   | 10.0              | 7.0                     | 39              | 62   |
| 417                                                | 186      | 337       | 5.1      | 1.9 | F402_0072 EZ803U | 550        | 1100       | 7.202 | 605/84      | 3200         | 2800  | 4800         | 90                   | 10.0              | 7.0                     | 39              | 68   |
| 516                                                | 120      | 170       | 3.9      | 2.7 | F402_0058 EZ705U | 550        | 1100       | 5.813 | 3784/651    | 2700         | 2300  | 4000         | 44                   | 10.0              | 7.0                     | 39              | 54   |
| 516                                                | 126      | 209       | 4.1      | 2.6 | F402_0058 EZ802U | 550        | 1100       | 5.813 | 3784/651    | 2700         | 2300  | 4000         | 68                   | 10.0              | 7.0                     | 39              | 62   |
| 516                                                | 150      | 272       | 4.9      | 2.2 | F402_0058 EZ803U | 550        | 1100       | 5.813 | 3784/651    | 2700         | 2300  | 4000         | 94                   | 10.0              | 7.0                     | 39              | 68   |
| 641                                                | 97       | 137       | 3.8      | 3.2 | F402_0047 EZ705U | 472        | 907        | 4.678 | 1408/301    | 2700         | 2300  | 4000         | 49                   | 10.0              | 7.0                     | 39              | 54   |
| 641                                                | 101      | 168       | 4.0      | 3.0 | F402_0047 EZ802U | 454        | 907        | 4.678 | 1408/301    | 2700         | 2300  | 4000         | 73                   | 10.0              | 7.0                     | 39              | 62   |
| 641                                                | 121      | 219       | 4.7      | 2.5 | F402_0047 EZ803U | 550        | 907        | 4.678 | 1408/301    | 2700         | 2300  | 4000         | 98                   | 10.0              | 7.0                     | 39              | 68   |

## 8.2 Selection tables 8 F offset helical geared motors

| $n_{2N}$                                           | $M_{2N}$ | $M_{2,0}$ | $a_{th}$ | S   | Type             | $M_{2acc}$ | $M_{2NOT}$ | i     | $i_{exakt}$ | $n_{1maxDB}$ |       | $n_{1maxZB}$ | $J_1$                | $\Delta\varphi_2$ | $\Delta\varphi_{2redl}$ | $C_2$           | m    |
|----------------------------------------------------|----------|-----------|----------|-----|------------------|------------|------------|-------|-------------|--------------|-------|--------------|----------------------|-------------------|-------------------------|-----------------|------|
| [rpm]                                              | [Nm]     | [Nm]      |          |     |                  | [Nm]       | [Nm]       |       |             | EL1,2,3,4    | EL5,6 | [rpm]        | [kgcm <sup>2</sup> ] | [arcmin]          | [arcmin]                | [Nm/<br>arcmin] | [kg] |
| F4 ( $n_{1N} = 4500$ rpm, $M_{2acc,max} = 700$ Nm) |          |           |          |     |                  |            |            |       |             |              |       |              |                      |                   |                         |                 |      |
| 64                                                 | 646      | 1040      | 3.0      | 1.0 | F402_0700 EZ505U | 700        | 1400       | 70.06 | 1261/18     | 3800         | 3500  | 6000         | 13                   | 10.0              | 5.0                     | 39              | 46   |
| 80                                                 | 516      | 831       | 2.9      | 1.2 | F402_0560 EZ505U | 700        | 1400       | 55.97 | 2015/36     | 3800         | 3500  | 6000         | 13                   | 10.0              | 5.0                     | 39              | 46   |
| 80                                                 | 570      | 1873      | 3.2      | 1.1 | F402_0560 EZ802U | 700        | 1400       | 55.97 | 2015/36     | 3800         | 3500  | 6000         | 59                   | 10.0              | 5.0                     | 39              | 62   |
| 96                                                 | 433      | 697       | 2.8      | 1.3 | F402_0470 EZ505U | 700        | 1400       | 46.94 | 845/18      | 3800         | 3500  | 6000         | 13                   | 10.0              | 5.0                     | 39              | 46   |
| 96                                                 | 478      | 1571      | 3.1      | 1.2 | F402_0470 EZ802U | 700        | 1400       | 46.94 | 845/18      | 3800         | 3500  | 6000         | 59                   | 10.0              | 5.0                     | 39              | 62   |
| 96                                                 | 551      | 911       | 3.6      | 1.0 | F402_0470 EZ703U | 700        | 1400       | 46.94 | 845/18      | 3800         | 3500  | 6000         | 22                   | 10.0              | 5.0                     | 39              | 48   |
| 128                                                | 323      | 521       | 2.7      | 1.6 | F402_0350 EZ505U | 700        | 1400       | 35.08 | 2210/63     | 3500         | 3100  | 5500         | 13                   | 10.0              | 5.0                     | 39              | 46   |
| 128                                                | 357      | 1174      | 3.0      | 1.5 | F402_0350 EZ802U | 700        | 1400       | 35.08 | 2210/63     | 3500         | 3100  | 5500         | 59                   | 10.0              | 5.0                     | 39              | 62   |
| 128                                                | 412      | 681       | 3.5      | 1.3 | F402_0350 EZ703U | 700        | 1400       | 35.08 | 2210/63     | 3500         | 3100  | 5500         | 23                   | 10.0              | 5.0                     | 39              | 48   |
| 161                                                | 258      | 415       | 2.6      | 1.9 | F402_0280 EZ505U | 700        | 1400       | 27.99 | 2015/72     | 3500         | 3100  | 5500         | 14                   | 10.0              | 5.0                     | 39              | 46   |
| 161                                                | 285      | 937       | 2.9      | 1.7 | F402_0280 EZ802U | 700        | 1400       | 27.99 | 2015/72     | 3500         | 3100  | 5500         | 60                   | 10.0              | 5.0                     | 39              | 62   |
| 161                                                | 328      | 543       | 3.3      | 1.5 | F402_0280 EZ703U | 700        | 1400       | 27.99 | 2015/72     | 3500         | 3100  | 5500         | 23                   | 10.0              | 5.0                     | 39              | 48   |
| 161                                                | 445      | 814       | 4.5      | 1.1 | F402_0280 EZ705U | 700        | 1400       | 27.99 | 2015/72     | 3500         | 3100  | 5500         | 36                   | 10.0              | 5.0                     | 39              | 54   |
| 194                                                | 214      | 345       | 2.5      | 2.1 | F402_0230 EZ505U | 700        | 1400       | 23.21 | 325/14      | 3200         | 2800  | 4800         | 15                   | 10.0              | 5.0                     | 39              | 46   |
| 194                                                | 236      | 777       | 2.8      | 1.9 | F402_0230 EZ802U | 700        | 1400       | 23.21 | 325/14      | 3200         | 2800  | 4800         | 60                   | 10.0              | 5.0                     | 39              | 62   |
| 194                                                | 272      | 450       | 3.2      | 1.7 | F402_0230 EZ703U | 700        | 1400       | 23.21 | 325/14      | 3200         | 2800  | 4800         | 24                   | 10.0              | 5.0                     | 39              | 48   |
| 194                                                | 369      | 676       | 4.4      | 1.2 | F402_0230 EZ705U | 700        | 1400       | 23.21 | 325/14      | 3200         | 2800  | 4800         | 36                   | 10.0              | 5.0                     | 39              | 54   |
| 242                                                | 172      | 276       | 2.4      | 2.5 | F402_0185 EZ505U | 700        | 1355       | 18.62 | 3575/192    | 3200         | 2800  | 4800         | 15                   | 10.0              | 5.0                     | 39              | 46   |
| 242                                                | 190      | 623       | 2.7      | 2.2 | F402_0185 EZ802U | 700        | 1400       | 18.62 | 3575/192    | 3200         | 2800  | 4800         | 61                   | 10.0              | 5.0                     | 39              | 62   |
| 242                                                | 219      | 361       | 3.1      | 1.9 | F402_0185 EZ703U | 700        | 1355       | 18.62 | 3575/192    | 3200         | 2800  | 4800         | 25                   | 10.0              | 5.0                     | 39              | 48   |
| 242                                                | 296      | 542       | 4.2      | 1.4 | F402_0185 EZ705U | 700        | 1400       | 18.62 | 3575/192    | 3200         | 2800  | 4800         | 37                   | 10.0              | 5.0                     | 39              | 54   |
| 332                                                | 125      | 201       | 2.3      | 3.0 | F402_0135 EZ505U | 550        | 932        | 13.57 | 5984/441    | 3500         | 3100  | 5500         | 14                   | 10.0              | 7.0                     | 39              | 46   |
| 332                                                | 138      | 454       | 2.6      | 2.8 | F402_0135 EZ802U | 550        | 1100       | 13.57 | 5984/441    | 3500         | 3100  | 5500         | 60                   | 10.0              | 7.0                     | 39              | 62   |
| 332                                                | 159      | 263       | 2.9      | 2.4 | F402_0135 EZ703U | 550        | 932        | 13.57 | 5984/441    | 3500         | 3100  | 5500         | 24                   | 10.0              | 7.0                     | 39              | 48   |
| 332                                                | 216      | 395       | 4.0      | 1.8 | F402_0135 EZ705U | 550        | 1100       | 13.57 | 5984/441    | 3500         | 3100  | 5500         | 36                   | 10.0              | 7.0                     | 39              | 54   |
| 416                                                | 100      | 161       | 2.2      | 3.5 | F402_0110 EZ505U | 550        | 788        | 10.83 | 682/63      | 3500         | 3100  | 5500         | 16                   | 10.0              | 7.0                     | 39              | 46   |
| 416                                                | 110      | 362       | 2.5      | 3.2 | F402_0110 EZ802U | 550        | 1100       | 10.83 | 682/63      | 3500         | 3100  | 5500         | 61                   | 10.0              | 7.0                     | 39              | 62   |
| 416                                                | 127      | 210       | 2.8      | 2.8 | F402_0110 EZ703U | 550        | 788        | 10.83 | 682/63      | 3500         | 3100  | 5500         | 25                   | 10.0              | 7.0                     | 39              | 48   |
| 416                                                | 172      | 315       | 3.8      | 2.1 | F402_0110 EZ705U | 550        | 1100       | 10.83 | 682/63      | 3500         | 3100  | 5500         | 37                   | 10.0              | 7.0                     | 39              | 54   |
| 501                                                | 83       | 133       | 2.2      | 4.0 | F402_0090 EZ505U | 523        | 653        | 8.980 | 440/49      | 3200         | 2800  | 4800         | 17                   | 10.0              | 7.0                     | 39              | 46   |
| 501                                                | 91       | 301       | 2.4      | 3.6 | F402_0090 EZ802U | 550        | 1100       | 8.980 | 440/49      | 3200         | 2800  | 4800         | 63                   | 10.0              | 7.0                     | 39              | 62   |
| 501                                                | 105      | 174       | 2.8      | 3.2 | F402_0090 EZ703U | 523        | 653        | 8.980 | 440/49      | 3200         | 2800  | 4800         | 26                   | 10.0              | 7.0                     | 39              | 48   |
| 501                                                | 143      | 261       | 3.7      | 2.3 | F402_0090 EZ705U | 550        | 1100       | 8.980 | 440/49      | 3200         | 2800  | 4800         | 39                   | 10.0              | 7.0                     | 39              | 54   |
| 625                                                | 66       | 107       | 2.1      | 4.7 | F402_0072 EZ505U | 419        | 524        | 7.202 | 605/84      | 3200         | 2800  | 4800         | 19                   | 10.0              | 7.0                     | 39              | 46   |
| 625                                                | 73       | 241       | 2.3      | 4.2 | F402_0072 EZ802U | 550        | 1100       | 7.202 | 605/84      | 3200         | 2800  | 4800         | 65                   | 10.0              | 7.0                     | 39              | 62   |
| 625                                                | 85       | 140       | 2.7      | 3.7 | F402_0072 EZ703U | 419        | 524        | 7.202 | 605/84      | 3200         | 2800  | 4800         | 29                   | 10.0              | 7.0                     | 39              | 48   |
| 625                                                | 115      | 210       | 3.6      | 2.7 | F402_0072 EZ705U | 550        | 1100       | 7.202 | 605/84      | 3200         | 2800  | 4800         | 41                   | 10.0              | 7.0                     | 39              | 54   |
| F4 ( $n_{1N} = 6000$ rpm, $M_{2acc,max} = 700$ Nm) |          |           |          |     |                  |            |            |       |             |              |       |              |                      |                   |                         |                 |      |
| 14                                                 | 631      | 706       | 1.1      | 1.1 | F403_4400 EZ302U | 700        | 1400       | 439.7 | 58045/132   | 3800         | 3500  | 6000         | 0.35                 | 10.0              | 6.0                     | 39              | 42   |
| 16                                                 | 524      | 587       | 1.0      | 1.3 | F403_3660 EZ302U | 700        | 1400       | 365.6 | 3290/9      | 3800         | 3500  | 6000         | 0.35                 | 10.0              | 6.0                     | 39              | 42   |
| 16                                                 | 685      | 786       | 1.3      | 1.0 | F403_3660 EZ303U | 700        | 1400       | 365.6 | 3290/9      | 3800         | 3500  | 6000         | 0.46                 | 10.0              | 6.0                     | 39              | 42   |
| 22                                                 | 393      | 441       | 0.9      | 1.8 | F403_2740 EZ302U | 700        | 1400       | 274.4 | 59267/216   | 3800         | 3500  | 6000         | 0.36                 | 10.0              | 6.0                     | 39              | 42   |
| 22                                                 | 514      | 590       | 1.2      | 1.4 | F403_2740 EZ303U | 700        | 1400       | 274.4 | 59267/216   | 3800         | 3500  | 6000         | 0.47                 | 10.0              | 6.0                     | 39              | 42   |
| 22                                                 | 603      | 734       | 1.4      | 1.2 | F403_2740 EZ401U | 700        | 1400       | 274.4 | 59267/216   | 3800         | 3500  | 6000         | 1.0                  | 10.0              | 6.0                     | 39              | 44   |
| 27                                                 | 314      | 352       | 0.8      | 2.2 | F403_2190 EZ302U | 700        | 1400       | 219.2 | 94705/432   | 3800         | 3500  | 6000         | 0.38                 | 10.0              | 6.0                     | 39              | 42   |
| 27                                                 | 411      | 472       | 1.0      | 1.7 | F403_2190 EZ303U | 700        | 1400       | 219.2 | 94705/432   | 3800         | 3500  | 6000         | 0.49                 | 10.0              | 6.0                     | 39              | 42   |
| 27                                                 | 482      | 587       | 1.2      | 1.5 | F403_2190 EZ401U | 700        | 1400       | 219.2 | 94705/432   | 3800         | 3500  | 6000         | 1.0                  | 10.0              | 6.0                     | 39              | 44   |
| 33                                                 | 264      | 295       | 0.8      | 2.5 | F403_1840 EZ302U | 700        | 1179       | 183.9 | 39715/216   | 3800         | 3500  | 6000         | 0.39                 | 10.0              | 6.0                     | 39              | 42   |
| 33                                                 | 345      | 395       | 1.0      | 1.9 | F403_1840 EZ303U | 700        | 1179       | 183.9 | 39715/216   | 3800         | 3500  | 6000         | 0.50                 | 10.0              | 6.0                     | 39              | 42   |
| 33                                                 | 404      | 492       | 1.2      | 1.7 | F403_1840 EZ401U | 700        | 1179       | 183.9 | 39715/216   | 3800         | 3500  | 6000         | 1.0                  | 10.0              | 6.0                     | 39              | 44   |
| 33                                                 | 590      | 764       | 1.6      | 1.2 | F403_1820 EZ501U | 700        | 1400       | 181.5 | 4901/27     | 3800         | 3500  | 6000         | 3.1                  | 10.0              | 6.0                     | 39              | 45   |
| 43                                                 | 461      | 596       | 1.4      | 1.5 | F402_1400 EZ501U | 700        | 1400       | 139.8 | 559/4       | 3800         | 3500  | 6000         | 3.0                  | 10.0              | 5.0                     | 39              | 40   |
| 53                                                 | 370      | 479       | 1.3      | 1.9 | F402_1120 EZ501U | 700        | 1400       | 112.3 | 1235/11     | 3800         | 3500  | 6000         | 3.1                  | 10.0              | 5.0                     | 39              | 40   |
| 53                                                 | 566      | 849       | 2.0      | 1.2 | F402_1120 EZ502U | 700        | 1400       | 112.3 | 1235/11     | 3800         | 3500  | 6000         | 5.4                  | 10.0              | 5.0                     | 39              | 42   |
| 53                                                 | 566      | 860       | 2.0      | 1.2 | F402_1120 EZ701U | 700        | 1400       | 112.3 | 1235/11     | 3800         | 3500  | 6000         | 8.7                  | 10.0              | 5.0                     | 39              | 44   |
| 53                                                 | 675      | 1154      | 2.4      | 1.0 | F402_1120 EZ503U | 700        | 1400       | 112.3 | 1235/11     | 3800         | 3500  | 6000         | 7.8                  | 10.0              | 5.0                     | 39              | 43   |
| 64                                                 | 308      | 398       | 1.3      | 2.1 | F402_0930 EZ501U | 700        | 1400       | 93.33 | 280/3       | 3800         | 3500  | 6000         | 3.2                  | 10.0              | 5.0                     | 39              | 40   |
| 64                                                 | 471      | 706       | 1.9      | 1.4 | F402_0930 EZ502U | 700        | 1400       | 93.33 | 280/3       | 3800         | 3500  | 6000         | 5.5                  | 10.0              | 5.0                     | 39              | 42   |
| 64                                                 | 471      | 715       | 1.9      | 1.4 | F402_0930 EZ701U | 700        | 1400       | 93.33 | 280/3       | 3800         | 3500  | 6000         | 8.8                  | 10.0              | 5.0                     | 39              | 44   |
| 64                                                 | 561      | 960       | 2.3      | 1.2 | F402_0930 EZ503U | 700        | 1400       | 93.33 | 280/3       | 3800         | 3500  | 6000         | 7.8                  | 10.0              | 5.0                     | 39              | 43   |
| 86                                                 | 231      | 299       | 1.2      | 2.6 | F402_0700 EZ501U | 700        | 1400       | 70.06 | 1261/18     | 3800         | 3500  | 6000         | 3.3                  | 10.0              | 5.0                     | 39              | 40   |
| 86                                                 | 353      | 530       | 1.8      | 1.7 | F402_0700 EZ502U | 700        | 1400       | 70.06 | 1261/18     | 3800         | 3500  | 6000         | 5.6                  | 10.0              | 5.0                     | 39              | 42   |
| 86                                                 | 353      | 537       | 1.8      | 1.7 | F402_0700 EZ701U | 700        | 1400       | 70.06 | 1261/18     | 3800         | 3500  | 6000         | 8.9                  | 10.0              | 5.0                     | 39              | 44   |
| 86                                                 | 421      | 720       | 2.2      | 1.4 | F402_0700 EZ503U | 700        | 1400       | 70.06 | 1261/18     | 3800         | 3500  | 6000         | 8.0                  | 10.0              | 5.0                     | 39              | 43   |

| $n_{2N}$                                                                        | $M_{2N}$ | $M_{2,0}$ | $a_{th}$ | S   | Type             | $M_{2acc}$ | $M_{2NOT}$ | i     | $i_{exakt}$ | $n_{1maxDB}$ |       | $n_{1maxZB}$ | $J_1$                | $\Delta\varphi_2$ | $\Delta\varphi_{2redl}$ | $C_2$           | m    |
|---------------------------------------------------------------------------------|----------|-----------|----------|-----|------------------|------------|------------|-------|-------------|--------------|-------|--------------|----------------------|-------------------|-------------------------|-----------------|------|
| [rpm]                                                                           | [Nm]     | [Nm]      |          |     |                  | [Nm]       | [Nm]       |       |             | EL1,2,3,4    | EL5,6 | [rpm]        | [kgcm <sup>2</sup> ] | [arcmin]          | [arcmin]                | [Nm/<br>arcmin] | [kg] |
| <b>F4 (<math>n_{1N} = 6000</math> rpm, <math>M_{2acc,max} = 700</math> Nm)</b>  |          |           |          |     |                  |            |            |       |             |              |       |              |                      |                   |                         |                 |      |
| 86                                                                              | 489      | 972       | 2.5      | 1.2 | F402_0700 EZ702U | 700        | 1400       | 70.06 | 1261/18     | 3800         | 3500  | 6000         | 14                   | 10.0              | 5.0                     | 39              | 46   |
| 107                                                                             | 185      | 239       | 1.2      | 3.0 | F402_0560 EZ501U | 700        | 1400       | 55.97 | 2015/36     | 3800         | 3500  | 6000         | 3.5                  | 10.0              | 5.0                     | 39              | 40   |
| 107                                                                             | 282      | 423       | 1.8      | 2.0 | F402_0560 EZ502U | 700        | 1400       | 55.97 | 2015/36     | 3800         | 3500  | 6000         | 5.8                  | 10.0              | 5.0                     | 39              | 42   |
| 107                                                                             | 282      | 429       | 1.8      | 2.0 | F402_0560 EZ701U | 700        | 1400       | 55.97 | 2015/36     | 3800         | 3500  | 6000         | 9.1                  | 10.0              | 5.0                     | 39              | 44   |
| 107                                                                             | 337      | 576       | 2.1      | 1.7 | F402_0560 EZ503U | 700        | 1400       | 55.97 | 2015/36     | 3800         | 3500  | 6000         | 8.2                  | 10.0              | 5.0                     | 39              | 43   |
| 107                                                                             | 391      | 776       | 2.4      | 1.4 | F402_0560 EZ702U | 700        | 1400       | 55.97 | 2015/36     | 3800         | 3500  | 6000         | 14                   | 10.0              | 5.0                     | 39              | 46   |
| 128                                                                             | 155      | 200       | 1.1      | 3.4 | F402_0470 EZ501U | 700        | 1366       | 46.94 | 845/18      | 3800         | 3500  | 6000         | 3.7                  | 10.0              | 5.0                     | 39              | 40   |
| 128                                                                             | 237      | 355       | 1.7      | 2.2 | F402_0470 EZ502U | 700        | 1366       | 46.94 | 845/18      | 3800         | 3500  | 6000         | 6.0                  | 10.0              | 5.0                     | 39              | 42   |
| 128                                                                             | 237      | 360       | 1.7      | 2.2 | F402_0470 EZ701U | 700        | 1400       | 46.94 | 845/18      | 3800         | 3500  | 6000         | 9.3                  | 10.0              | 5.0                     | 39              | 44   |
| 128                                                                             | 282      | 483       | 2.0      | 1.9 | F402_0470 EZ503U | 700        | 1366       | 46.94 | 845/18      | 3800         | 3500  | 6000         | 8.4                  | 10.0              | 5.0                     | 39              | 43   |
| 128                                                                             | 328      | 651       | 2.4      | 1.6 | F402_0470 EZ702U | 700        | 1400       | 46.94 | 845/18      | 3800         | 3500  | 6000         | 15                   | 10.0              | 5.0                     | 39              | 46   |
| <b>F6 (<math>n_{1N} = 2000</math> rpm, <math>M_{2acc,max} = 1100</math> Nm)</b> |          |           |          |     |                  |            |            |       |             |              |       |              |                      |                   |                         |                 |      |
| 86                                                                              | 986      | 1492      | 6.1      | 1.0 | F602_0230 EZ805U | 1100       | 2000       | 23.27 | 1885/81     | 2900         | 2500  | 4500         | 138                  | 10.0              | 5.0                     | 77              | 108  |
| 108                                                                             | 785      | 1188      | 5.9      | 1.2 | F602_0185 EZ805U | 1100       | 2000       | 18.52 | 3445/186    | 2900         | 2500  | 4500         | 140                  | 10.0              | 5.0                     | 77              | 108  |
| 147                                                                             | 577      | 873       | 5.6      | 1.4 | F602_0135 EZ805U | 1000       | 1600       | 13.61 | 871/64      | 3300         | 2800  | 5000         | 138                  | 10.0              | 7.0                     | 73              | 108  |
| 185                                                                             | 459      | 694       | 5.4      | 1.7 | F602_0110 EZ805U | 1000       | 1600       | 10.82 | 2077/192    | 3300         | 2800  | 5000         | 141                  | 10.0              | 7.0                     | 73              | 108  |
| 222                                                                             | 381      | 577       | 5.2      | 1.9 | F602_0090 EZ805U | 1000       | 1600       | 8.995 | 1943/216    | 2900         | 2500  | 4500         | 144                  | 10.0              | 7.0                     | 73              | 108  |
| 279                                                                             | 303      | 459       | 5.0      | 2.2 | F602_0072 EZ805U | 1000       | 1385       | 7.159 | 3551/496    | 2900         | 2500  | 4500         | 149                  | 10.0              | 7.0                     | 73              | 108  |
| 353                                                                             | 240      | 364       | 4.9      | 2.6 | F602_0057 EZ805U | 881        | 1101       | 5.673 | 1407/248    | 2500         | 2100  | 3500         | 157                  | 10.0              | 7.0                     | 73              | 108  |
| 440                                                                             | 193      | 291       | 4.7      | 3.0 | F602_0045 EZ805U | 706        | 883        | 4.546 | 1273/280    | 2500         | 2100  | 3500         | 169                  | 10.0              | 7.0                     | 73              | 108  |
| <b>F6 (<math>n_{1N} = 3000</math> rpm, <math>M_{2acc,max} = 1100</math> Nm)</b> |          |           |          |     |                  |            |            |       |             |              |       |              |                      |                   |                         |                 |      |
| 14                                                                              | 886      | 968       | 1.6      | 1.2 | F603_2150 EZ501U | 1100       | 2000       | 215.4 | 1508/7      | 3500         | 3200  | 5500         | 3.2                  | 10.0              | 6.0                     | 77              | 72   |
| 17                                                                              | 743      | 812       | 1.5      | 1.5 | F603_1810 EZ501U | 1100       | 2000       | 180.6 | 8671/48     | 3500         | 3200  | 5500         | 3.2                  | 10.0              | 6.0                     | 77              | 72   |
| 21                                                                              | 583      | 637       | 1.3      | 1.9 | F602_1400 EZ501U | 1100       | 2000       | 139.8 | 559/4       | 3500         | 3200  | 5500         | 3.2                  | 10.0              | 5.0                     | 77              | 67   |
| 21                                                                              | 1003     | 1084      | 2.3      | 1.1 | F602_1400 EZ502U | 1100       | 2000       | 139.8 | 559/4       | 3500         | 3200  | 5500         | 5.5                  | 10.0              | 5.0                     | 77              | 69   |
| 21                                                                              | 1003     | 1125      | 2.3      | 1.1 | F602_1400 EZ701U | 1100       | 2000       | 139.8 | 559/4       | 3500         | 3200  | 5500         | 8.8                  | 10.0              | 5.0                     | 77              | 71   |
| 27                                                                              | 468      | 512       | 1.2      | 2.4 | F602_1120 EZ501U | 1100       | 2000       | 112.2 | 9425/84     | 3500         | 3200  | 5500         | 3.3                  | 10.0              | 5.0                     | 77              | 67   |
| 27                                                                              | 805      | 871       | 2.1      | 1.4 | F602_1120 EZ502U | 1100       | 2000       | 112.2 | 9425/84     | 3500         | 3200  | 5500         | 5.6                  | 10.0              | 5.0                     | 77              | 69   |
| 27                                                                              | 805      | 903       | 2.1      | 1.4 | F602_1120 EZ701U | 1100       | 2000       | 112.2 | 9425/84     | 3500         | 3200  | 5500         | 8.9                  | 10.0              | 5.0                     | 77              | 71   |
| 27                                                                              | 1056     | 1208      | 2.7      | 1.0 | F602_1120 EZ503U | 1100       | 2000       | 112.2 | 9425/84     | 3500         | 3200  | 5500         | 8.0                  | 10.0              | 5.0                     | 77              | 70   |
| 32                                                                              | 389      | 426       | 1.1      | 2.8 | F602_0930 EZ501U | 1100       | 1867       | 93.33 | 280/3       | 3500         | 3200  | 5500         | 3.5                  | 10.0              | 5.0                     | 77              | 67   |
| 32                                                                              | 670      | 724       | 1.9      | 1.6 | F602_0930 EZ502U | 1100       | 1867       | 93.33 | 280/3       | 3500         | 3200  | 5500         | 5.8                  | 10.0              | 5.0                     | 77              | 69   |
| 32                                                                              | 670      | 751       | 1.9      | 1.6 | F602_0930 EZ701U | 1100       | 2000       | 93.33 | 280/3       | 3500         | 3200  | 5500         | 9.1                  | 10.0              | 5.0                     | 77              | 71   |
| 32                                                                              | 878      | 1005      | 2.5      | 1.3 | F602_0930 EZ503U | 1100       | 1867       | 93.33 | 280/3       | 3500         | 3200  | 5500         | 8.2                  | 10.0              | 5.0                     | 77              | 70   |
| 32                                                                              | 1086     | 1304      | 3.1      | 1.0 | F602_0930 EZ702U | 1100       | 2000       | 93.33 | 280/3       | 3500         | 3200  | 5500         | 14                   | 10.0              | 5.0                     | 77              | 73   |
| 43                                                                              | 290      | 318       | 0.9      | 3.8 | F602_0700 EZ501U | 1081       | 1588       | 69.64 | 975/14      | 3500         | 3200  | 5500         | 3.9                  | 10.0              | 5.0                     | 77              | 67   |
| 43                                                                              | 500      | 540       | 1.6      | 2.2 | F602_0700 EZ502U | 1100       | 1588       | 69.64 | 975/14      | 3500         | 3200  | 5500         | 6.2                  | 10.0              | 5.0                     | 77              | 69   |
| 43                                                                              | 500      | 561       | 1.6      | 2.2 | F602_0700 EZ701U | 1100       | 2000       | 69.64 | 975/14      | 3500         | 3200  | 5500         | 9.5                  | 10.0              | 5.0                     | 77              | 71   |
| 43                                                                              | 655      | 750       | 2.1      | 1.7 | F602_0700 EZ503U | 1100       | 1588       | 69.64 | 975/14      | 3500         | 3200  | 5500         | 8.6                  | 10.0              | 5.0                     | 77              | 70   |
| 43                                                                              | 811      | 973       | 2.6      | 1.4 | F602_0700 EZ702U | 1100       | 2000       | 69.64 | 975/14      | 3500         | 3200  | 5500         | 15                   | 10.0              | 5.0                     | 77              | 73   |
| 43                                                                              | 912      | 1081      | 3.0      | 1.2 | F602_0700 EZ505U | 1100       | 2000       | 69.64 | 975/14      | 3500         | 3200  | 5500         | 13                   | 10.0              | 5.0                     | 77              | 73   |
| 54                                                                              | 400      | 449       | 1.5      | 2.8 | F602_0560 EZ701U | 1081       | 2000       | 55.71 | 390/7       | 3500         | 3200  | 5500         | 10                   | 10.0              | 5.0                     | 77              | 71   |
| 54                                                                              | 649      | 778       | 2.4      | 1.7 | F602_0560 EZ702U | 1100       | 2000       | 55.71 | 390/7       | 3500         | 3200  | 5500         | 15                   | 10.0              | 5.0                     | 77              | 73   |
| 54                                                                              | 730      | 865       | 2.7      | 1.5 | F602_0560 EZ505U | 1100       | 2000       | 55.71 | 390/7       | 3500         | 3200  | 5500         | 14                   | 10.0              | 5.0                     | 77              | 73   |
| 54                                                                              | 892      | 1124      | 3.3      | 1.2 | F602_0560 EZ703U | 1100       | 2000       | 55.71 | 390/7       | 3500         | 3200  | 5500         | 23                   | 10.0              | 5.0                     | 77              | 75   |
| 64                                                                              | 335      | 376       | 1.3      | 3.3 | F602_0470 EZ701U | 906        | 2000       | 46.72 | 1495/32     | 3500         | 3200  | 5500         | 10                   | 10.0              | 5.0                     | 77              | 71   |
| 64                                                                              | 544      | 653       | 2.2      | 2.0 | F602_0470 EZ702U | 1100       | 2000       | 46.72 | 1495/32     | 3500         | 3200  | 5500         | 16                   | 10.0              | 5.0                     | 77              | 73   |
| 64                                                                              | 612      | 725       | 2.4      | 1.8 | F602_0470 EZ505U | 1100       | 2000       | 46.72 | 1495/32     | 3500         | 3200  | 5500         | 14                   | 10.0              | 5.0                     | 77              | 73   |
| 64                                                                              | 748      | 943       | 3.0      | 1.5 | F602_0470 EZ703U | 1100       | 2000       | 46.72 | 1495/32     | 3500         | 3200  | 5500         | 24                   | 10.0              | 5.0                     | 77              | 75   |
| 64                                                                              | 965      | 1369      | 3.9      | 1.1 | F602_0470 EZ705U | 1100       | 2000       | 46.72 | 1495/32     | 3500         | 3200  | 5500         | 36                   | 10.0              | 5.0                     | 77              | 81   |
| 64                                                                              | 1011     | 1681      | 4.0      | 1.1 | F602_0470 EZ802U | 1100       | 2000       | 46.72 | 1495/32     | 3500         | 3200  | 5500         | 60                   | 10.0              | 5.0                     | 77              | 89   |
| 85                                                                              | 253      | 283       | 1.3      | 4.0 | F602_0350 EZ701U | 683        | 2000       | 35.21 | 845/24      | 3300         | 2800  | 5000         | 11                   | 10.0              | 5.0                     | 77              | 71   |
| 85                                                                              | 410      | 492       | 2.1      | 2.4 | F602_0350 EZ702U | 1100       | 2000       | 35.21 | 845/24      | 3300         | 2800  | 5000         | 17                   | 10.0              | 5.0                     | 77              | 73   |
| 85                                                                              | 461      | 546       | 2.3      | 2.2 | F602_0350 EZ505U | 1100       | 2000       | 35.21 | 845/24      | 3300         | 2800  | 5000         | 15                   | 10.0              | 5.0                     | 77              | 73   |
| 85                                                                              | 564      | 710       | 2.8      | 1.8 | F602_0350 EZ703U | 1100       | 2000       | 35.21 | 845/24      | 3300         | 2800  | 5000         | 25                   | 10.0              | 5.0                     | 77              | 75   |
| 85                                                                              | 727      | 1031      | 3.7      | 1.4 | F602_0350 EZ705U | 1100       | 2000       | 35.21 | 845/24      | 3300         | 2800  | 5000         | 37                   | 10.0              | 5.0                     | 77              | 81   |
| 85                                                                              | 762      | 1267      | 3.8      | 1.3 | F602_0350 EZ802U | 1100       | 2000       | 35.21 | 845/24      | 3300         | 2800  | 5000         | 61                   | 10.0              | 5.0                     | 77              | 89   |
| 85                                                                              | 908      | 1646      | 4.6      | 1.1 | F602_0350 EZ803U | 1100       | 2000       | 35.21 | 845/24      | 3300         | 2800  | 5000         | 86                   | 10.0              | 5.0                     | 77              | 95   |
| 107                                                                             | 201      | 225       | 1.2      | 4.6 | F602_0280 EZ701U | 543        | 2000       | 27.99 | 2015/72     | 3300         | 2800  | 5000         | 13                   | 10.0              | 5.0                     | 77              | 71   |
| 107                                                                             | 326      | 391       | 2.0      | 2.9 | F602_0280 EZ702U | 1100       | 2000       | 27.99 | 2015/72     | 3300         | 2800  | 5000         | 18                   | 10.0              | 5.0                     | 77              | 73   |
| 107                                                                             | 366      | 434       | 2.2      | 2.5 | F602_0280 EZ505U | 1100       | 2000       | 27.99 | 2015/72     | 3300         | 2800  | 5000         | 16                   | 10.0              | 5.0                     | 77              | 73   |
| 107                                                                             | 448      | 565       | 2.7      | 2.1 | F602_0280 EZ703U | 1100       | 2000       | 27.99 | 2015/72     | 3300         | 2800  | 5000         | 26                   | 10.0              | 5.0                     | 77              | 75   |
| 107                                                                             | 578      | 820       | 3.5      | 1.6 | F602_0280 EZ705U | 1100       | 2000       | 27.99 | 2015/72     | 3300         | 2800  | 5000         | 38                   | 10.0              | 5.0                     | 77              | 81   |
| 107                                                                             | 605      | 1007      | 3.7      | 1.5 | F602_0280 EZ802U | 1100       | 2000       | 27.99 | 2015/72     | 3300         | 2800  | 5000         | 62                   | 10.0              | 5.0                     | 77              | 89   |

## 8.2 Selection tables 8 F offset helical geared motors

| $n_{2N}$                                            | $M_{2N}$ | $M_{2,0}$ | $a_{th}$ | S   | Type             | $M_{2acc}$ | $M_{2NOT}$ | i     | $i_{exakt}$ | $n_{1maxDB}$ |       | $n_{1maxZB}$ | $J_1$                | $\Delta\varphi_2$ | $\Delta\varphi_{2redl}$ | $C_2$           | m    |
|-----------------------------------------------------|----------|-----------|----------|-----|------------------|------------|------------|-------|-------------|--------------|-------|--------------|----------------------|-------------------|-------------------------|-----------------|------|
| [rpm]                                               | [Nm]     | [Nm]      |          |     |                  | [Nm]       | [Nm]       |       |             | EL1,2,3,4    | EL5,6 | [rpm]        | [kgcm <sup>2</sup> ] | [arcmin]          | [arcmin]                | [Nm/<br>arcmin] | [kg] |
| F6 ( $n_{1N} = 3000$ rpm, $M_{2acc,max} = 1100$ Nm) |          |           |          |     |                  |            |            |       |             |              |       |              |                      |                   |                         |                 |      |
| 107                                                 | 722      | 1308      | 4.4      | 1.3 | F602_0280 EZ803U | 1100       | 2000       | 27.99 | 2015/72     | 3300         | 2800  | 5000         | 88                   | 10.0              | 5.0                     | 77              | 95   |
| 129                                                 | 271      | 325       | 1.9      | 3.2 | F602_0230 EZ702U | 926        | 1693       | 23.27 | 1885/81     | 2900         | 2500  | 4500         | 19                   | 10.0              | 5.0                     | 77              | 73   |
| 129                                                 | 305      | 361       | 2.2      | 2.9 | F602_0230 EZ505U | 1100       | 1693       | 23.27 | 1885/81     | 2900         | 2500  | 4500         | 18                   | 10.0              | 5.0                     | 77              | 73   |
| 129                                                 | 372      | 470       | 2.7      | 2.3 | F602_0230 EZ703U | 1100       | 1693       | 23.27 | 1885/81     | 2900         | 2500  | 4500         | 27                   | 10.0              | 5.0                     | 77              | 75   |
| 129                                                 | 481      | 682       | 3.4      | 1.8 | F602_0230 EZ705U | 1100       | 2000       | 23.27 | 1885/81     | 2900         | 2500  | 4500         | 39                   | 10.0              | 5.0                     | 77              | 81   |
| 129                                                 | 503      | 837       | 3.6      | 1.7 | F602_0230 EZ802U | 1100       | 2000       | 23.27 | 1885/81     | 2900         | 2500  | 4500         | 63                   | 10.0              | 5.0                     | 77              | 89   |
| 129                                                 | 600      | 1088      | 4.3      | 1.5 | F602_0230 EZ803U | 1100       | 2000       | 23.27 | 1885/81     | 2900         | 2500  | 4500         | 89                   | 10.0              | 5.0                     | 77              | 95   |
| 162                                                 | 383      | 543       | 3.3      | 2.1 | F602_0185 EZ705U | 1100       | 2000       | 18.52 | 3445/186    | 2900         | 2500  | 4500         | 42                   | 10.0              | 5.0                     | 77              | 81   |
| 162                                                 | 401      | 667       | 3.5      | 2.0 | F602_0185 EZ802U | 1100       | 2000       | 18.52 | 3445/186    | 2900         | 2500  | 4500         | 66                   | 10.0              | 5.0                     | 77              | 89   |
| 162                                                 | 478      | 866       | 4.1      | 1.7 | F602_0185 EZ803U | 1100       | 2000       | 18.52 | 3445/186    | 2900         | 2500  | 4500         | 91                   | 10.0              | 5.0                     | 77              | 95   |
| 220                                                 | 158      | 190       | 1.8      | 4.6 | F602_0135 EZ702U | 541        | 921        | 13.61 | 871/64      | 3300         | 2800  | 5000         | 19                   | 10.0              | 7.0                     | 73              | 73   |
| 220                                                 | 178      | 211       | 2.0      | 4.1 | F602_0135 EZ505U | 736        | 921        | 13.61 | 871/64      | 3300         | 2800  | 5000         | 18                   | 10.0              | 7.0                     | 73              | 73   |
| 220                                                 | 218      | 275       | 2.4      | 3.4 | F602_0135 EZ703U | 736        | 921        | 13.61 | 871/64      | 3300         | 2800  | 5000         | 27                   | 10.0              | 7.0                     | 73              | 75   |
| 220                                                 | 281      | 399       | 3.1      | 2.6 | F602_0135 EZ705U | 1000       | 1600       | 13.61 | 871/64      | 3300         | 2800  | 5000         | 39                   | 10.0              | 7.0                     | 73              | 81   |
| 220                                                 | 294      | 490       | 3.3      | 2.5 | F602_0135 EZ802U | 1000       | 1600       | 13.61 | 871/64      | 3300         | 2800  | 5000         | 63                   | 10.0              | 7.0                     | 73              | 89   |
| 220                                                 | 351      | 636       | 3.9      | 2.1 | F602_0135 EZ803U | 1000       | 1600       | 13.61 | 871/64      | 3300         | 2800  | 5000         | 89                   | 10.0              | 7.0                     | 73              | 95   |
| 277                                                 | 142      | 168       | 2.1      | 4.4 | F602_0110 EZ505U | 630        | 787        | 10.82 | 2077/192    | 3300         | 2800  | 5000         | 20                   | 10.0              | 7.0                     | 73              | 73   |
| 277                                                 | 173      | 218       | 2.5      | 3.6 | F602_0110 EZ703U | 630        | 787        | 10.82 | 2077/192    | 3300         | 2800  | 5000         | 30                   | 10.0              | 7.0                     | 73              | 75   |
| 277                                                 | 224      | 317       | 3.0      | 3.0 | F602_0110 EZ705U | 1000       | 1600       | 10.82 | 2077/192    | 3300         | 2800  | 5000         | 42                   | 10.0              | 7.0                     | 73              | 81   |
| 277                                                 | 234      | 389       | 3.2      | 2.9 | F602_0110 EZ802U | 1000       | 1600       | 10.82 | 2077/192    | 3300         | 2800  | 5000         | 66                   | 10.0              | 7.0                     | 73              | 89   |
| 277                                                 | 279      | 506       | 3.8      | 2.4 | F602_0110 EZ803U | 1000       | 1600       | 10.82 | 2077/192    | 3300         | 2800  | 5000         | 91                   | 10.0              | 7.0                     | 73              | 95   |
| 334                                                 | 118      | 140       | 2.3      | 4.4 | F602_0090 EZ505U | 524        | 655        | 8.995 | 1943/216    | 2900         | 2500  | 4500         | 23                   | 10.0              | 7.0                     | 73              | 73   |
| 334                                                 | 144      | 181       | 2.8      | 3.6 | F602_0090 EZ703U | 524        | 655        | 8.995 | 1943/216    | 2900         | 2500  | 4500         | 33                   | 10.0              | 7.0                     | 73              | 75   |
| 334                                                 | 186      | 264       | 2.9      | 3.4 | F602_0090 EZ705U | 907        | 1600       | 8.995 | 1943/216    | 2900         | 2500  | 4500         | 45                   | 10.0              | 7.0                     | 73              | 81   |
| 334                                                 | 195      | 324       | 3.1      | 3.3 | F602_0090 EZ802U | 873        | 1600       | 8.995 | 1943/216    | 2900         | 2500  | 4500         | 69                   | 10.0              | 7.0                     | 73              | 89   |
| 334                                                 | 232      | 421       | 3.7      | 2.7 | F602_0090 EZ803U | 1000       | 1600       | 8.995 | 1943/216    | 2900         | 2500  | 4500         | 94                   | 10.0              | 7.0                     | 73              | 95   |
| 419                                                 | 148      | 210       | 2.8      | 4.0 | F602_0072 EZ705U | 722        | 1385       | 7.159 | 3551/496    | 2900         | 2500  | 4500         | 50                   | 10.0              | 7.0                     | 73              | 81   |
| 419                                                 | 155      | 258       | 2.9      | 3.8 | F602_0072 EZ802U | 694        | 1385       | 7.159 | 3551/496    | 2900         | 2500  | 4500         | 74                   | 10.0              | 7.0                     | 73              | 89   |
| 419                                                 | 185      | 335       | 3.5      | 3.2 | F602_0072 EZ803U | 1000       | 1385       | 7.159 | 3551/496    | 2900         | 2500  | 4500         | 100                  | 10.0              | 7.0                     | 73              | 95   |
| 529                                                 | 117      | 166       | 2.7      | 4.7 | F602_0057 EZ705U | 572        | 1101       | 5.673 | 1407/248    | 2500         | 2100  | 3500         | 58                   | 10.0              | 7.0                     | 73              | 81   |
| 529                                                 | 123      | 204       | 2.8      | 4.4 | F602_0057 EZ802U | 550        | 1101       | 5.673 | 1407/248    | 2500         | 2100  | 3500         | 82                   | 10.0              | 7.0                     | 73              | 89   |
| 529                                                 | 146      | 265       | 3.4      | 3.7 | F602_0057 EZ803U | 798        | 1101       | 5.673 | 1407/248    | 2500         | 2100  | 3500         | 108                  | 10.0              | 7.0                     | 73              | 95   |
| 660                                                 | 117      | 213       | 3.3      | 4.3 | F602_0045 EZ803U | 639        | 883        | 4.546 | 1273/280    | 2500         | 2100  | 3500         | 120                  | 10.0              | 7.0                     | 73              | 95   |
| F6 ( $n_{1N} = 4500$ rpm, $M_{2acc,max} = 1100$ Nm) |          |           |          |     |                  |            |            |       |             |              |       |              |                      |                   |                         |                 |      |
| 48                                                  | 860      | 1385      | 2.4      | 1.3 | F602_0930 EZ505U | 1100       | 2000       | 93.33 | 280/3       | 3500         | 3200  | 5500         | 13                   | 10.0              | 5.0                     | 77              | 73   |
| 48                                                  | 951      | 3123      | 2.7      | 1.2 | F602_0930 EZ802U | 1100       | 2000       | 93.33 | 280/3       | 3500         | 3200  | 5500         | 59                   | 10.0              | 5.0                     | 77              | 89   |
| 48                                                  | 1095     | 1811      | 3.1      | 1.0 | F602_0930 EZ703U | 1100       | 2000       | 93.33 | 280/3       | 3500         | 3200  | 5500         | 22                   | 10.0              | 5.0                     | 77              | 75   |
| 65                                                  | 642      | 1034      | 2.1      | 1.7 | F602_0700 EZ505U | 1100       | 2000       | 69.64 | 975/14      | 3500         | 3200  | 5500         | 13                   | 10.0              | 5.0                     | 77              | 73   |
| 65                                                  | 709      | 2331      | 2.3      | 1.6 | F602_0700 EZ802U | 1100       | 2000       | 69.64 | 975/14      | 3500         | 3200  | 5500         | 59                   | 10.0              | 5.0                     | 77              | 89   |
| 65                                                  | 817      | 1351      | 2.7      | 1.3 | F602_0700 EZ703U | 1100       | 2000       | 69.64 | 975/14      | 3500         | 3200  | 5500         | 23                   | 10.0              | 5.0                     | 77              | 75   |
| 81                                                  | 513      | 827       | 2.0      | 2.0 | F602_0560 EZ505U | 1100       | 2000       | 55.71 | 390/7       | 3500         | 3200  | 5500         | 14                   | 10.0              | 5.0                     | 77              | 73   |
| 81                                                  | 567      | 1864      | 2.2      | 1.8 | F602_0560 EZ802U | 1100       | 2000       | 55.71 | 390/7       | 3500         | 3200  | 5500         | 60                   | 10.0              | 5.0                     | 77              | 89   |
| 81                                                  | 654      | 1081      | 2.6      | 1.6 | F602_0560 EZ703U | 1100       | 2000       | 55.71 | 390/7       | 3500         | 3200  | 5500         | 23                   | 10.0              | 5.0                     | 77              | 75   |
| 96                                                  | 431      | 693       | 2.0      | 2.2 | F602_0470 EZ505U | 1100       | 2000       | 46.72 | 1495/32     | 3500         | 3200  | 5500         | 14                   | 10.0              | 5.0                     | 77              | 73   |
| 96                                                  | 476      | 1563      | 2.2      | 2.0 | F602_0470 EZ802U | 1100       | 2000       | 46.72 | 1495/32     | 3500         | 3200  | 5500         | 60                   | 10.0              | 5.0                     | 77              | 89   |
| 96                                                  | 548      | 906       | 2.5      | 1.8 | F602_0470 EZ703U | 1100       | 2000       | 46.72 | 1495/32     | 3500         | 3200  | 5500         | 24                   | 10.0              | 5.0                     | 77              | 75   |
| 96                                                  | 743      | 1360      | 3.4      | 1.3 | F602_0470 EZ705U | 1100       | 2000       | 46.72 | 1495/32     | 3500         | 3200  | 5500         | 36                   | 10.0              | 5.0                     | 77              | 81   |
| 128                                                 | 324      | 523       | 1.9      | 2.7 | F602_0350 EZ505U | 1100       | 2000       | 35.21 | 845/24      | 3300         | 2800  | 5000         | 15                   | 10.0              | 5.0                     | 77              | 73   |
| 128                                                 | 359      | 1178      | 2.1      | 2.4 | F602_0350 EZ802U | 1100       | 2000       | 35.21 | 845/24      | 3300         | 2800  | 5000         | 61                   | 10.0              | 5.0                     | 77              | 89   |
| 128                                                 | 413      | 683       | 2.4      | 2.1 | F602_0350 EZ703U | 1100       | 2000       | 35.21 | 845/24      | 3300         | 2800  | 5000         | 25                   | 10.0              | 5.0                     | 77              | 75   |
| 128                                                 | 560      | 1025      | 3.2      | 1.6 | F602_0350 EZ705U | 1100       | 2000       | 35.21 | 845/24      | 3300         | 2800  | 5000         | 37                   | 10.0              | 5.0                     | 77              | 81   |
| 161                                                 | 258      | 415       | 1.8      | 3.1 | F602_0280 EZ505U | 1100       | 2000       | 27.99 | 2015/72     | 3300         | 2800  | 5000         | 16                   | 10.0              | 5.0                     | 77              | 73   |
| 161                                                 | 285      | 937       | 2.0      | 2.8 | F602_0280 EZ802U | 1100       | 2000       | 27.99 | 2015/72     | 3300         | 2800  | 5000         | 62                   | 10.0              | 5.0                     | 77              | 89   |
| 161                                                 | 328      | 543       | 2.3      | 2.5 | F602_0280 EZ703U | 1100       | 2000       | 27.99 | 2015/72     | 3300         | 2800  | 5000         | 26                   | 10.0              | 5.0                     | 77              | 75   |
| 161                                                 | 445      | 814       | 3.1      | 1.8 | F602_0280 EZ705U | 1100       | 2000       | 27.99 | 2015/72     | 3300         | 2800  | 5000         | 38                   | 10.0              | 5.0                     | 77              | 81   |
| 193                                                 | 214      | 345       | 1.7      | 3.6 | F602_0230 EZ505U | 1100       | 1693       | 23.27 | 1885/81     | 2900         | 2500  | 4500         | 18                   | 10.0              | 5.0                     | 77              | 73   |
| 193                                                 | 237      | 779       | 1.9      | 3.2 | F602_0230 EZ802U | 1100       | 2000       | 23.27 | 1885/81     | 2900         | 2500  | 4500         | 63                   | 10.0              | 5.0                     | 77              | 89   |
| 193                                                 | 273      | 451       | 2.2      | 2.8 | F602_0230 EZ703U | 1100       | 1693       | 23.27 | 1885/81     | 2900         | 2500  | 4500         | 27                   | 10.0              | 5.0                     | 77              | 75   |
| 193                                                 | 370      | 677       | 3.0      | 2.1 | F602_0230 EZ705U | 1100       | 2000       | 23.27 | 1885/81     | 2900         | 2500  | 4500         | 39                   | 10.0              | 5.0                     | 77              | 81   |
| 243                                                 | 189      | 620       | 1.9      | 3.7 | F602_0185 EZ802U | 1100       | 2000       | 18.52 | 3445/186    | 2900         | 2500  | 4500         | 66                   | 10.0              | 5.0                     | 77              | 89   |
| 243                                                 | 295      | 539       | 2.9      | 2.4 | F602_0185 EZ705U | 1100       | 2000       | 18.52 | 3445/186    | 2900         | 2500  | 4500         | 42                   | 10.0              | 5.0                     | 77              | 81   |
| 331                                                 | 139      | 455       | 1.8      | 4.6 | F602_0135 EZ802U | 1000       | 1600       | 13.61 | 871/64      | 3300         | 2800  | 5000         | 63                   | 10.0              | 7.0                     | 73              | 89   |
| 331                                                 | 160      | 264       | 2.0      | 4.0 | F602_0135 EZ703U | 736        | 921        | 13.61 | 871/64      | 3300         | 2800  | 5000         | 27                   | 10.0              | 7.0                     | 73              | 75   |
| 331                                                 | 216      | 396       | 2.8      | 2.9 | F602_0135 EZ705U | 1000       | 1600       | 13.61 | 871/64      | 3300         | 2800  | 5000         | 39                   | 10.0              | 7.0                     | 73              | 81   |



| $n_{2N}$                                            | $M_{2N}$ | $M_{2,0}$ | $a_{th}$ | S   | Type             | $M_{2acc}$ | $M_{2NOT}$ | i     | $i_{exakt}$ | $n_{1maxDB}$       |                | $n_{1maxZB}$ | $J_1$                | $\Delta\varphi_2$ | $\Delta\varphi_{2redII}$ | $C_2$           | m    |
|-----------------------------------------------------|----------|-----------|----------|-----|------------------|------------|------------|-------|-------------|--------------------|----------------|--------------|----------------------|-------------------|--------------------------|-----------------|------|
| [rpm]                                               | [Nm]     | [Nm]      |          |     |                  | [Nm]       | [Nm]       |       |             | EL1,2,3,4<br>[rpm] | EL5,6<br>[rpm] | [rpm]        | [kgcm <sup>2</sup> ] | [arcmin]          | [arcmin]                 | [Nm/<br>arcmin] | [kg] |
| F6 ( $n_{1N} = 4500$ rpm, $M_{2acc,max} = 1100$ Nm) |          |           |          |     |                  |            |            |       |             |                    |                |              |                      |                   |                          |                 |      |
| 416                                                 | 127      | 210       | 2.0      | 4.7 | F602_0110 EZ703U | 630        | 787        | 10.82 | 2077/192    | 3300               | 2800           | 5000         | 30                   | 10.0              | 7.0                      | 73              | 75   |
| 416                                                 | 172      | 315       | 2.7      | 3.4 | F602_0110 EZ705U | 1000       | 1600       | 10.82 | 2077/192    | 3300               | 2800           | 5000         | 42                   | 10.0              | 7.0                      | 73              | 81   |
| 500                                                 | 106      | 175       | 2.0      | 5.0 | F602_0090 EZ703U | 524        | 655        | 8.995 | 1943/216    | 2900               | 2500           | 4500         | 33                   | 10.0              | 7.0                      | 73              | 75   |
| 500                                                 | 143      | 262       | 2.6      | 3.9 | F602_0090 EZ705U | 907        | 1600       | 8.995 | 1943/216    | 2900               | 2500           | 4500         | 45                   | 10.0              | 7.0                      | 73              | 81   |
| 629                                                 | 114      | 208       | 2.5      | 4.5 | F602_0072 EZ705U | 722        | 1385       | 7.159 | 3551/496    | 2900               | 2500           | 4500         | 50                   | 10.0              | 7.0                      | 73              | 81   |