

# PO Series

# Torque Capacity table

| Oscillation Angle | Index Angle $\alpha$ (deg) | MYDEX Model Number | Cam Motion Law | No. of Rollers | Static Torque MI (N·m) | Dynamic torque Mr (N·m)      |        |        |        |        |        |        |        | Inertia Torque Self-consumed Ma (N·m) |
|-------------------|----------------------------|--------------------|----------------|----------------|------------------------|------------------------------|--------|--------|--------|--------|--------|--------|--------|---------------------------------------|
|                   |                            |                    |                |                |                        | Input Shaft Revolution (rpm) |        |        |        |        |        |        |        |                                       |
|                   |                            |                    |                |                |                        | 30                           | 40     | 50     | 60     | 75     | 100    | 150    | 200    |                                       |
| 15                | 45                         | PO- 50             | MS             | 2              | 40.2                   | 33.5                         | 30.7   | 28.7   | 27.2   | 25.4   | 23.3   | 20.6   | 18.9   | 0.067                                 |
|                   |                            | PO- 63             |                |                | 82.0                   | 54.1                         | 49.6   | 46.4   | 43.9   | 41.1   | 37.7   | 33.4   | 30.6   | 0.164                                 |
|                   |                            | PO- 80             |                |                | 146.9                  | 109.6                        | 100.5  | 94.0   | 89.0   | 83.3   | 76.4   | 67.6   | 62.0   | 0.543                                 |
|                   |                            | PO- 100            |                |                | 298.5                  | 152.8                        | 140.1  | 131.1  | 124.1  | 116.1  | 106.5  | 94.3   | 86.5   | 1.636                                 |
|                   |                            | PO- 125            |                |                | 643.5                  | 300.8                        | 276.0  | 258.1  | 244.4  | 228.5  | 209.6  | 185.6  | 170.3  | 4.065                                 |
|                   |                            | PO- 160            |                |                | 1284.0                 | 597.5                        | 548.1  | 512.6  | 485.4  | 453.9  | 416.4  | 368.7  | 338.2  | 13.175                                |
|                   |                            | PO- 200            |                |                | 2469.8                 | 1142.8                       | 1048.3 | 980.4  | 928.3  | 868.2  | 796.4  | 705.2  | 646.9  | 38.720                                |
|                   |                            | PO- 250            |                |                | 4305.2                 | 2086.2                       | 1913.7 | 1789.8 | 1694.5 | 1584.8 | 1453.8 | 1287.3 | 1180.8 | 109.486                               |
|                   | 60                         | PO- 50             | MS             | 2              | 48.8                   | 33.5                         | 30.8   | 28.8   | 27.2   | 25.5   | 23.4   | 20.7   | 19.0   | 0.038                                 |
|                   |                            | PO- 63             |                |                | 99.2                   | 54.2                         | 49.7   | 46.5   | 44.0   | 41.2   | 37.8   | 33.4   | 30.7   | 0.092                                 |
|                   |                            | PO- 80             |                |                | 177.0                  | 109.9                        | 100.8  | 94.3   | 89.2   | 83.5   | 76.6   | 67.8   | 62.2   | 0.305                                 |
|                   |                            | PO- 100            |                |                | 362.3                  | 153.1                        | 140.5  | 131.4  | 124.4  | 116.3  | 106.7  | 94.5   | 86.7   | 0.921                                 |
|                   |                            | PO- 125            |                |                | 778.2                  | 301.6                        | 276.6  | 258.7  | 244.9  | 229.1  | 210.1  | 186.1  | 170.7  | 2.286                                 |
|                   |                            | PO- 160            |                |                | 1553.6                 | 598.9                        | 549.4  | 513.8  | 486.5  | 455.0  | 417.4  | 369.6  | 339.0  | 7.411                                 |
|                   |                            | PO- 200            |                |                | 2961.1                 | 1145.5                       | 1050.8 | 982.7  | 930.4  | 870.2  | 798.2  | 706.8  | 648.4  | 21.780                                |
|                   |                            | PO- 250            |                |                | 5225.4                 | 2091.2                       | 1918.3 | 1794.1 | 1698.6 | 1588.6 | 1457.3 | 1290.4 | 1183.7 | 61.586                                |
|                   | 90                         | PO- 50             | MS             | 2              | 52.3                   | 33.6                         | 30.8   | 28.8   | 27.3   | 25.5   | 23.4   | 20.7   | 19.0   | 0.017                                 |
|                   |                            | PO- 63             |                |                | 106.1                  | 54.3                         | 49.8   | 46.6   | 44.1   | 41.3   | 37.9   | 33.5   | 30.7   | 0.041                                 |
|                   |                            | PO- 80             |                |                | 188.8                  | 110.2                        | 101.1  | 94.5   | 89.5   | 83.7   | 76.8   | 68.0   | 62.4   | 0.136                                 |
|                   |                            | PO- 100            |                |                | 386.9                  | 153.5                        | 140.8  | 131.7  | 124.7  | 116.6  | 107.0  | 94.7   | 86.9   | 0.409                                 |
|                   |                            | PO- 125            |                |                | 826.3                  | 302.4                        | 277.4  | 259.5  | 245.7  | 229.8  | 210.8  | 186.6  | 171.2  | 1.016                                 |
|                   |                            | PO- 160            |                |                | 1644.4                 | 600.6                        | 551.0  | 515.3  | 487.9  | 456.3  | 418.6  | 370.6  | 340.0  | 3.294                                 |
|                   |                            | PO- 200            |                |                | 3129.1                 | 1148.6                       | 1053.6 | 985.4  | 932.9  | 872.5  | 800.4  | 708.7  | 650.1  | 9.680                                 |
|                   |                            | PO- 250            |                |                | 5553.6                 | 2097.1                       | 1923.7 | 1799.1 | 1703.3 | 1593.0 | 1461.3 | 1294.0 | 1187.0 | 27.371                                |
|                   | 120                        | PO- 50             | MS             | 2              | 52.0                   | 33.7                         | 30.9   | 28.9   | 27.4   | 25.6   | 23.5   | 20.8   | 19.1   | 0.009                                 |
|                   |                            | PO- 63             |                |                | 105.5                  | 54.4                         | 49.9   | 46.7   | 44.2   | 41.4   | 37.9   | 33.6   | 30.8   | 0.023                                 |
|                   |                            | PO- 80             |                |                | 187.8                  | 110.3                        | 101.2  | 94.6   | 89.6   | 83.8   | 76.9   | 68.1   | 62.4   | 0.076                                 |
|                   |                            | PO- 100            |                |                | 385.2                  | 153.8                        | 141.1  | 131.9  | 124.9  | 116.8  | 107.2  | 94.9   | 87.0   | 0.230                                 |
| PO- 125           |                            | 824.0              |                |                | 302.9                  | 277.9                        | 259.9  | 246.0  | 230.1  | 211.1  | 186.9  | 171.5  | 0.572  |                                       |
| PO- 160           |                            | 1640.1             |                |                | 601.5                  | 551.8                        | 516.1  | 488.6  | 457.0  | 419.2  | 371.2  | 340.5  | 1.853  |                                       |
| PO- 200           |                            | 3124.1             |                |                | 1150.7                 | 1055.5                       | 987.2  | 934.6  | 874.1  | 801.8  | 710.0  | 651.3  | 5.445  |                                       |
| PO- 250           |                            | 5545.8             |                |                | 2100.5                 | 1926.9                       | 1802.1 | 1706.2 | 1595.7 | 1463.8 | 1296.1 | 1188.9 | 15.396 |                                       |
| 30                | 60                         | PO- 50             | MS             | 2              | 42.0                   | 32.4                         | 29.7   | 27.8   | 26.3   | 24.6   | 22.6   | 20.0   | 18.3   | 0.075                                 |
|                   |                            | PO- 63             |                |                | 85.6                   | 52.3                         | 48.0   | 44.9   | 42.5   | 39.8   | 36.5   | 32.3   | 29.6   | 0.184                                 |
|                   |                            | PO- 80             |                |                | 153.3                  | 106.1                        | 97.3   | 91.0   | 86.2   | 80.6   | 73.9   | 65.5   | 60.1   | 0.611                                 |
|                   |                            | PO- 100            |                |                | 312.0                  | 147.9                        | 135.7  | 126.9  | 120.2  | 112.4  | 103.1  | 91.3   | 83.7   | 1.841                                 |

## Notes

- The dynamic rated output torque rigidity and whether backlash driven layout installation, a guide has been calculated at 10,000 hours life expectancy every normal state.
- Static rated output torque is the maximum permissible torque acting on the output shaft.
- Internal inertia torque output shaft in the self-inertia, input shaft speed value at 100rpm.

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| Oscillation Angle | Index Angle $\alpha$ (deg) | MYDEX Model Number | Cam Motion Law | No. of Rollers | Static Torque MI (N·m) | Dynamic torque Mr (N·m)      |        |        |        |        |        |        |        | Inertia Torque Self-consumed Ma (N·m) |
|-------------------|----------------------------|--------------------|----------------|----------------|------------------------|------------------------------|--------|--------|--------|--------|--------|--------|--------|---------------------------------------|
|                   |                            |                    |                |                |                        | Input Shaft Revolution (rpm) |        |        |        |        |        |        |        |                                       |
|                   |                            |                    |                |                |                        | 30                           | 40     | 50     | 60     | 75     | 100    | 150    | 200    |                                       |
| 30                | 60                         | PO- 125            | MS             | 2              | 672.0                  | 291.5                        | 267.4  | 250.1  | 236.8  | 221.5  | 203.2  | 179.9  | 165.0  | 4.573                                 |
|                   |                            | PO- 160            |                |                | 1340.2                 | 579.6                        | 531.7  | 497.3  | 470.8  | 440.3  | 403.9  | 357.6  | 328.1  | 14.822                                |
|                   |                            | PO- 200            |                |                | 2575.0                 | 1106.9                       | 1015.4 | 949.7  | 899.1  | 840.9  | 771.4  | 683.0  | 626.5  | 43.560                                |
|                   |                            | PO- 250            |                |                | 4500.5                 | 2020.5                       | 1853.4 | 1733.4 | 1641.1 | 1534.9 | 1408.0 | 1246.7 | 1143.6 | 123.172                               |
|                   | 90                         | PO- 50             | MS             | 2              | 45.9                   | 32.7                         | 30.0   | 28.1   | 26.6   | 24.8   | 22.8   | 20.2   | 18.5   | 0.033                                 |
|                   |                            | PO- 63             |                |                | 93.2                   | 52.9                         | 48.5   | 45.4   | 42.9   | 40.2   | 36.8   | 32.6   | 29.9   | 0.082                                 |
|                   |                            | PO- 80             |                |                | 165.0                  | 107.1                        | 98.3   | 91.9   | 87.0   | 81.4   | 74.6   | 66.1   | 60.6   | 0.271                                 |
|                   |                            | PO- 100            |                |                | 337.2                  | 149.4                        | 137.0  | 128.1  | 121.3  | 113.5  | 104.1  | 92.2   | 84.5   | 0.818                                 |
|                   |                            | PO- 125            |                |                | 719.4                  | 294.4                        | 270.1  | 252.6  | 239.1  | 223.6  | 205.1  | 181.7  | 166.6  | 2.032                                 |
|                   |                            | PO- 160            |                |                | 1425.2                 | 584.9                        | 536.5  | 501.8  | 475.1  | 444.3  | 407.6  | 360.9  | 331.1  | 6.587                                 |
|                   |                            | PO- 200            |                |                | 2720.0                 | 1117.5                       | 1025.1 | 958.7  | 907.7  | 848.9  | 778.7  | 689.5  | 632.5  | 19.360                                |
|                   |                            | PO- 250            |                |                | 4820.2                 | 2040.0                       | 1871.3 | 1750.2 | 1657.0 | 1549.7 | 1421.6 | 1258.8 | 1154.7 | 54.743                                |
|                   | 120                        | PO- 50             | MS             | 2              | 45.2                   | 32.9                         | 30.2   | 28.2   | 26.7   | 25.0   | 22.9   | 20.3   | 18.6   | 0.019                                 |
|                   |                            | PO- 63             |                |                | 91.8                   | 53.2                         | 48.8   | 45.6   | 43.2   | 40.4   | 37.1   | 32.8   | 30.1   | 0.046                                 |
|                   |                            | PO- 80             |                |                | 163.4                  | 107.8                        | 98.9   | 92.5   | 87.6   | 81.9   | 75.1   | 66.5   | 61.0   | 0.153                                 |
|                   |                            | PO- 100            |                |                | 334.1                  | 138.0                        | 126.6  | 118.4  | 112.1  | 104.8  | 96.2   | 85.2   | 78.1   | 0.460                                 |
|                   |                            | PO- 125            |                |                | 713.8                  | 296.1                        | 271.6  | 254.1  | 240.5  | 225.0  | 206.4  | 182.7  | 167.6  | 1.143                                 |
|                   |                            | PO- 160            |                |                | 1418.4                 | 588.5                        | 539.8  | 504.9  | 478.0  | 447.0  | 410.1  | 363.1  | 333.1  | 3.705                                 |
|                   |                            | PO- 200            |                |                | 2707.6                 | 1124.4                       | 1031.4 | 964.6  | 913.3  | 854.1  | 783.5  | 693.8  | 636.4  | 10.890                                |
|                   |                            | PO- 250            |                |                | 4800.9                 | 2052.5                       | 1882.8 | 1760.9 | 1667.2 | 1559.2 | 1430.3 | 1266.5 | 1161.8 | 30.793                                |
| 45                | 60                         | PO- 50             | MS             | 2              | 36.9                   | 30.9                         | 28.3   | 26.5   | 25.1   | 23.4   | 21.5   | 19.0   | 17.5   | 0.113                                 |
|                   |                            | PO- 63             |                |                | 74.8                   | 49.9                         | 45.7   | 42.8   | 40.5   | 37.9   | 34.7   | 30.8   | 28.2   | 0.277                                 |
|                   |                            | PO- 80             |                |                | 132.8                  | 101.0                        | 92.7   | 86.7   | 82.1   | 76.7   | 70.4   | 62.3   | 57.2   | 0.916                                 |
|                   |                            | PO- 100            |                |                | 273.8                  | 140.9                        | 129.3  | 120.9  | 114.5  | 107.1  | 98.2   | 87.0   | 79.8   | 2.762                                 |
|                   |                            | PO- 125            |                |                | 586.9                  | 278.0                        | 255.0  | 238.5  | 225.8  | 211.2  | 193.7  | 171.5  | 157.3  | 6.859                                 |
|                   |                            | PO- 160            |                |                | 1174.2                 | 553.2                        | 507.5  | 474.6  | 449.4  | 420.3  | 385.5  | 341.4  | 313.1  | 22.233                                |
|                   |                            | PO- 200            |                |                | 2208.9                 | 1054.5                       | 967.3  | 904.6  | 856.5  | 801.0  | 734.8  | 650.6  | 596.8  | 65.340                                |
|                   |                            | PO- 250            |                |                | 3949.2                 | 1924.8                       | 1765.6 | 1651.3 | 1563.4 | 1462.2 | 1341.3 | 1187.7 | 1089.5 | 184.757                               |
|                   | 90                         | PO- 50             | MS             | 2              | 37.1                   | 31.4                         | 28.8   | 26.9   | 25.5   | 23.9   | 21.9   | 19.4   | 17.8   | 0.050                                 |
|                   |                            | PO- 63             |                |                | 75.4                   | 50.8                         | 46.6   | 43.5   | 41.2   | 38.6   | 35.4   | 31.3   | 28.7   | 0.123                                 |
|                   |                            | PO- 80             |                |                | 133.9                  | 102.8                        | 94.3   | 88.2   | 83.5   | 78.1   | 71.6   | 63.4   | 58.2   | 0.407                                 |
|                   |                            | PO- 100            |                |                | 272.9                  | 143.5                        | 131.6  | 123.1  | 116.5  | 109.0  | 100.0  | 88.5   | 81.2   | 1.227                                 |
|                   |                            | PO- 125            |                |                | 578.7                  | 282.9                        | 259.5  | 242.7  | 229.8  | 214.9  | 197.1  | 174.6  | 160.1  | 3.049                                 |
|                   |                            | PO- 160            |                |                | 1145.7                 | 562.7                        | 516.2  | 482.8  | 457.1  | 427.5  | 392.1  | 347.2  | 318.5  | 9.881                                 |
|                   |                            | PO- 200            |                |                | 2191.2                 | 1073.2                       | 984.4  | 920.7  | 871.7  | 815.2  | 747.8  | 662.2  | 607.4  | 29.040                                |
|                   |                            | PO- 250            |                |                | 3869.9                 | 1959.0                       | 1797.0 | 1680.7 | 1591.2 | 1488.2 | 1365.1 | 1208.8 | 1108.8 | 82.114                                |

## Notes

- The dynamic rated output torque rigidity and whether backlash driven layout installation, a guide has been calculated at 10,000 hours life expectancy every normal state.
- Static rated output torque is the maximum permissible torque acting on the output shaft.
- Internal inertia torque output shaft in the self-inertia, input shaft speed value at 100rpm.

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| Oscillation Angle | Index Angle $\alpha$ (deg) | MYDEX Model Number | Cam Motion Law | No. of Rollers | Static Torque MI (N·m) | Dynamic torque Mr (N·m)      |        |        |        |        |        |        |        | Inertia Torque Self-consumed Ma (N·m) |
|-------------------|----------------------------|--------------------|----------------|----------------|------------------------|------------------------------|--------|--------|--------|--------|--------|--------|--------|---------------------------------------|
|                   |                            |                    |                |                |                        | Input Shaft Revolution (rpm) |        |        |        |        |        |        |        |                                       |
|                   |                            |                    |                |                |                        | 30                           | 40     | 50     | 60     | 75     | 100    | 150    | 200    |                                       |
| 45                | 120                        | PO- 50             | MS             | 2              | 36.5                   | 31.8                         | 29.2   | 27.3   | 25.8   | 24.2   | 22.2   | 19.6   | 18.0   | 0.028                                 |
|                   |                            | PO- 63             |                |                | 74.0                   | 51.4                         | 47.1   | 44.1   | 41.7   | 39.0   | 35.8   | 31.7   | 29.1   | 0.069                                 |
|                   |                            | PO- 80             |                |                | 131.4                  | 104.1                        | 95.5   | 89.3   | 84.6   | 79.1   | 72.5   | 64.2   | 58.9   | 0.229                                 |
|                   |                            | PO- 100            |                |                | 268.6                  | 145.2                        | 133.2  | 124.6  | 118.0  | 110.3  | 101.2  | 89.6   | 82.2   | 0.690                                 |
|                   |                            | PO- 125            |                |                | 573.1                  | 286.3                        | 262.6  | 245.6  | 232.5  | 217.5  | 199.5  | 176.6  | 162.0  | 1.715                                 |
|                   |                            | PO- 160            |                |                | 1135.2                 | 569.5                        | 522.4  | 488.6  | 462.5  | 432.6  | 396.8  | 351.4  | 322.3  | 5.558                                 |
|                   |                            | PO- 200            |                |                | 2174.2                 | 1086.5                       | 996.7  | 932.1  | 882.5  | 825.4  | 757.1  | 670.4  | 615.0  | 16.335                                |
|                   |                            | PO- 250            |                |                | 3850.4                 | 1983.3                       | 1819.3 | 1701.5 | 1610.9 | 1506.6 | 1382.1 | 1223.8 | 1122.6 | 46.189                                |
| 60                | 90                         | PO- 50             | MS             | 2              | 35.5                   | 29.9                         | 27.5   | 25.7   | 24.3   | 22.7   | 20.9   | 18.5   | 16.9   | 0.067                                 |
|                   |                            | PO- 63             |                |                | 53.0                   | 48.3                         | 44.3   | 41.5   | 39.3   | 36.7   | 33.7   | 29.8   | 27.4   | 0.164                                 |
|                   |                            | PO- 80             |                |                | 94.1                   | 89.8                         | 89.8   | 84.0   | 79.5   | 74.4   | 68.2   | 60.4   | 55.4   | 0.543                                 |
|                   |                            | PO- 100            |                |                | 191.6                  | 136.7                        | 125.4  | 117.3  | 111.1  | 103.9  | 95.3   | 84.4   | 77.4   | 1.636                                 |
|                   |                            | PO- 125            |                |                | 407.3                  | 269.9                        | 247.6  | 231.5  | 219.2  | 205.0  | 188.1  | 166.5  | 152.8  | 4.065                                 |
|                   |                            | PO- 160            |                |                | 802.1                  | 537.4                        | 492.9  | 461.0  | 436.5  | 408.2  | 374.5  | 331.6  | 304.2  | 13.175                                |
|                   |                            | PO- 200            |                |                | 1538.2                 | 1022.7                       | 938.2  | 877.4  | 830.7  | 776.9  | 712.7  | 631.1  | 578.9  | 38.720                                |
|                   |                            | PO- 250            |                |                | 2718.8                 | 1866.9                       | 1712.6 | 1601.7 | 1516.4 | 1418.2 | 1301.0 | 1152.0 | 1056.7 | 109.486                               |
|                   | 120                        | MS                 | 2              | PO- 50         | 34.9                   | 30.5                         | 28.0   | 26.2   | 24.8   | 23.2   | 21.3   | 18.8   | 17.3   | 0.038                                 |
|                   |                            |                    |                | PO- 63         | 51.9                   | 49.3                         | 45.2   | 42.3   | 40.0   | 37.4   | 34.3   | 30.4   | 27.9   | 0.092                                 |
|                   |                            |                    |                | PO- 80         | 92.5                   | 91.6                         | 91.6   | 85.6   | 81.1   | 75.8   | 69.6   | 61.6   | 56.5   | 0.305                                 |
|                   |                            |                    |                | PO- 100        | 188.3                  | 139.3                        | 127.8  | 119.5  | 113.1  | 105.8  | 97.1   | 85.9   | 78.8   | 0.921                                 |
|                   |                            |                    |                | PO- 125        | 401.6                  | 274.8                        | 252.1  | 235.8  | 223.2  | 208.8  | 191.5  | 169.6  | 155.6  | 2.286                                 |
|                   |                            |                    |                | PO- 160        | 795.2                  | 574.3                        | 502.1  | 469.6  | 444.6  | 415.8  | 381.4  | 337.7  | 309.8  | 7.411                                 |
| PO- 200           | 1525.3                     | 1042.2             | 956.0          | 894.1          | 846.5                  | 791.7                        | 726.3  | 643.1  | 589.9  | 21.780 |        |        |        |                                       |
| PO- 250           | 2698.6                     | 1902.5             | 1745.2         | 1632.2         | 1545.3                 | 1445.3                       | 1325.8 | 1173.9 | 1076.9 | 61.586 |        |        |        |                                       |

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- Internal inertia torque output shaft in the self-inertia, input shaft speed value at 100rpm.