

# DATORKER® Strain Wave Gear Technical Data

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|                                       |                 |  |         |                                                                                     |
|---------------------------------------|-----------------|--|---------|-------------------------------------------------------------------------------------|
| Specification                         | DTC-32-100-PE-M |  | Diagram |  |
| Model                                 | 32              |  |         |                                                                                     |
| Ratio                                 | 100             |  |         |                                                                                     |
| Item                                  |                 |  | Value   | Unit                                                                                |
| Rated torque at input 2000rpm         |                 |  | 96      | Nm                                                                                  |
| Average torque                        |                 |  | 151     | Nm                                                                                  |
| Repeated peak torque                  |                 |  | 233     | Nm                                                                                  |
| Momentary peak torque                 |                 |  | 420     | Nm                                                                                  |
| Average input speed                   |                 |  | 3500    | rpm                                                                                 |
| Maximum input speed                   |                 |  | 4800    | rpm                                                                                 |
| Moment of inertia                     |                 |  | 1.09    | x10 <sup>-4</sup> kgm <sup>2</sup>                                                  |
| Transmission accuracy                 |                 |  | 1       | arc min                                                                             |
| Repeatability                         |                 |  | ±6      | arc sec                                                                             |
| Maximum backlash                      |                 |  | -       | arc sec                                                                             |
| Hysteresis loss                       |                 |  | 1       | arc min                                                                             |
| Lost motion                           |                 |  | 1       | arc min                                                                             |
| Torsional Stiffness K1                |                 |  | 1.8     | kgfm/arc min                                                                        |
| Torsional Stiffness K2                |                 |  | 2.3     | kgfm/arc min                                                                        |
| No load starting torque               |                 |  | 21      | cNm                                                                                 |
| No load running torque(25°C/2000rpm)  |                 |  | 39      | cNm                                                                                 |
| Weight                                |                 |  | 3.3     | kg                                                                                  |
| Crossed roller bearing specifications |                 |  |         |                                                                                     |
| Pitch circle diameter of roller       |                 |  | 0.111   | m                                                                                   |
| Offset amount                         |                 |  | 0.0168  | m                                                                                   |
| Basic dynamic load ratings            |                 |  | 38.2    | kN                                                                                  |
| Basic static load ratings             |                 |  | 65.4    | kN                                                                                  |
| Moment rigidity                       |                 |  | 29.6    | kgfm/arc min                                                                        |
| Permissible dynamic tilting moment    |                 |  | 580     | Nm                                                                                  |
| Permissible static tilting moment     |                 |  | 1000    | Nm                                                                                  |
| Permissible axial load                |                 |  | 8.17    | kN                                                                                  |
| Permissible radial load               |                 |  | 5.47    | kN                                                                                  |