

# DATORKER® Strain Wave Gear Technical Data

Date: 2025/12/30

|                                       |               |  |         |                                                                                     |
|---------------------------------------|---------------|--|---------|-------------------------------------------------------------------------------------|
| Specification                         | DTC-25-120-PE |  | Diagram |  |
| Model                                 | 25            |  |         |                                                                                     |
| Ratio                                 | 120           |  |         |                                                                                     |
| Item                                  |               |  | Value   | Unit                                                                                |
| Rated torque at input 2000rpm         |               |  | 47      | Nm                                                                                  |
| Average torque                        |               |  | 75      | Nm                                                                                  |
| Repeated peak torque                  |               |  | 117     | Nm                                                                                  |
| Momentary peak torque                 |               |  | 204     | Nm                                                                                  |
| Average input speed                   |               |  | 3500    | rpm                                                                                 |
| Maximum input speed                   |               |  | 5600    | rpm                                                                                 |
| Moment of inertia                     |               |  | 0.282   | 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                |               |  | 0.8     | kgfm/arc min                                                                        |
| Torsional Stiffness K2                |               |  | 1.1     | kgfm/arc min                                                                        |
| No load starting torque               |               |  | 8.2     | cNm                                                                                 |
| No load running torque(25°C/2000rpm)  |               |  | 17.5    | cNm                                                                                 |
| Weight                                |               |  | 1.2     | kg                                                                                  |
| Crossed roller bearing specifications |               |  |         |                                                                                     |
| Pitch circle diameter of roller       |               |  | 0.062   | m                                                                                   |
| Offset amount                         |               |  | 0.013   | m                                                                                   |
| Basic dynamic load ratings            |               |  | 9.6     | kN                                                                                  |
| Basic static load ratings             |               |  | 15.1    | kN                                                                                  |
| Moment rigidity                       |               |  | 7.2     | kgfm/arc min                                                                        |
| Permissible dynamic tilting moment    |               |  | 156     | Nm                                                                                  |
| Permissible static tilting moment     |               |  | 230     | Nm                                                                                  |
| Permissible axial load                |               |  | 2.05    | kN                                                                                  |
| Permissible radial load               |               |  | 1.38    | kN                                                                                  |