

EVT SERIES Right-angle Planetary

EVT 090 2-Stage Specifications

| Frame Size | 090 | | | | | | | | | | |
|---|----------------------|------|-------------|------|------|------|------|------|------|--|--|
| Ratio | Unit | Note | 4 | 5 | 6 | 7 | 8 | 9 | 10 | | |
| Nominal Output Torque | [Nm] | *1 | 61 | 67 | 67 | 67 | 74 | 51 | 51 | | |
| Maximum Acceleration Torque | [Nm] | *2 | 105 | 105 | 105 | 105 | 105 | 78 | 78 | | |
| Maximum Torque | [Nm] | *3 | 121 | 121 | 119 | 119 | 117 | 93 | 93 | | |
| Emergency Stop Torque | [Nm] | *4 | 170 | 220 | 220 | 220 | 220 | 170 | 170 | | |
| Nominal Input Speed | [rpm] | *5 | 3000 | | | | | | | | |
| Maximum Input Speed | [rpm] | *6 | 6000 | | | | | | | | |
| No Load Running Torque | [Nm] | *7 | 1.13 | | | | | | | | |
| Maximum Radial Load | [N] | *8 | 3300 | | | | | | | | |
| Maximum Axial Load | [N] | *9 | 1700 | | | | | | | | |
| Maximum Tilting Moment | [Nm] | *10 | 170 | | | | | | | | |
| Moment of Inertia ($\leq \varnothing 8$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | | |
| Moment of Inertia ($\leq \varnothing 14$) | [kgcm ²] | -- | 2.17 | 1.98 | 1.88 | 1.81 | 1.78 | 1.75 | 1.73 | | |
| Moment of Inertia ($\leq \varnothing 19$) | [kgcm ²] | -- | 2.50 | 2.31 | 2.21 | 2.14 | 2.10 | 2.08 | 2.06 | | |
| Moment of Inertia ($\leq \varnothing 28$) | [kgcm ²] | -- | 4.63 | 4.43 | 4.33 | 4.27 | 4.23 | 4.21 | 4.19 | | |
| Efficiency | [%] | *11 | 93 | | | | | | | | |
| Torsional Rigidity | [Nm/arcmin] | *12 | 22 | | | | | | | | |
| Maximum Torsional Backlash | [Arc-min] | -- | ≤ 4 | | | | | | | | |
| Noise Level | dB [A] | *13 | ≤ 80 | | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | | |
| Weight | [kg] | *15 | 5.1 | | | | | | | | |

EVT 090 3-Stage Specifications

| Frame Size | 090 | | | | | | | | | | |
|---|----------------------|------|-------------|------|------|------|------|------|------|--|--|
| Ratio | Unit | Note | 16 | 20 | 25 | 28 | 35 | 40 | 45 | | |
| Nominal Output Torque | [Nm] | *1 | 66 | 68 | 72 | 78 | 73 | 78 | 47 | | |
| Maximum Acceleration Torque | [Nm] | *2 | 128 | 128 | 128 | 128 | 128 | 128 | 78 | | |
| Maximum Torque | [Nm] | *3 | 128 | 128 | 128 | 128 | 128 | 128 | 78 | | |
| Emergency Stop Torque | [Nm] | *4 | 220 | 220 | 220 | 220 | 220 | 220 | 170 | | |
| Nominal Input Speed | [rpm] | *5 | 3300 | | | | | | | | |
| Maximum Input Speed | [rpm] | *6 | 6000 | | | | | | | | |
| No Load Running Torque | [Nm] | *7 | 0.55 | | | | | | | | |
| Maximum Radial Load | [N] | *8 | 3300 | | | | | | | | |
| Maximum Axial Load | [N] | *9 | 1700 | | | | | | | | |
| Maximum Tilting Moment | [Nm] | *10 | 170 | | | | | | | | |
| Moment of Inertia ($\leq \varnothing 8$) | [kgcm ²] | -- | 0.40 | 0.34 | 0.33 | 0.38 | 0.32 | 0.25 | 0.32 | | |
| Moment of Inertia ($\leq \varnothing 14$) | [kgcm ²] | -- | 0.48 | 0.41 | 0.41 | 0.45 | 0.40 | 0.33 | 0.40 | | |
| Moment of Inertia ($\leq \varnothing 19$) | [kgcm ²] | -- | 0.66 | 0.60 | 0.59 | 0.64 | 0.59 | 0.51 | 0.59 | | |
| Moment of Inertia ($\leq \varnothing 28$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | | |
| Efficiency | [%] | *11 | 88 | | | | | | | | |
| Torsional Rigidity | [Nm/arcmin] | *12 | 22 | | | | | | | | |
| Maximum Torsional Backlash | [Arc-min] | -- | ≤ 7 | | | | | | | | |
| Noise Level | dB [A] | *13 | ≤ 80 | | | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | | |
| Weight | [kg] | *15 | 4.3 | | | | | | | | |

EVT 090 3-Stage Specifications

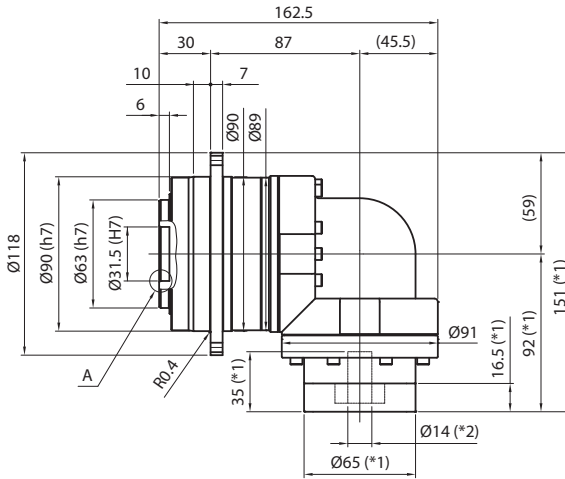
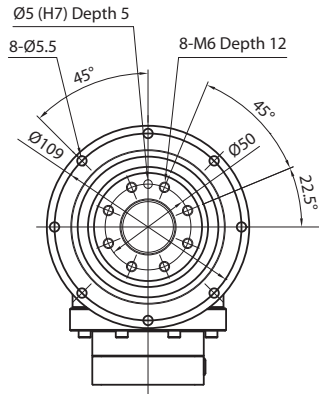
| Frame Size | 090 | | | | | | | | |
|---|----------------------|------|-------------|------|------|------|------|------|--|
| Ratio | Unit | Note | 50 | 60 | 70 | 80 | 90 | 100 | |
| Nominal Output Torque | [Nm] | *1 | 73 | 73 | 73 | 78 | 52 | 52 | |
| Maximum Acceleration Torque | [Nm] | *2 | 128 | 128 | 128 | 128 | 78 | 78 | |
| Maximum Torque | [Nm] | *3 | 128 | 128 | 128 | 128 | 78 | 78 | |
| Emergency Stop Torque | [Nm] | *4 | 220 | 220 | 220 | 220 | 170 | 170 | |
| Nominal Input Speed | [rpm] | *5 | 3300 | | | | | | |
| Maximum Input Speed | [rpm] | *6 | 6000 | | | | | | |
| No Load Running Torque | [Nm] | *7 | 0.55 | | | | | | |
| Maximum Radial Load | [N] | *8 | 3300 | | | | | | |
| Maximum Axial Load | [N] | *9 | 1700 | | | | | | |
| Maximum Tilting Moment | [Nm] | *10 | 170 | | | | | | |
| Moment of Inertia ($\leq \varnothing 8$) | [kgcm ²] | -- | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | 0.25 | |
| Moment of Inertia ($\leq \varnothing 14$) | [kgcm ²] | -- | 0.32 | 0.32 | 0.32 | 0.32 | 0.32 | 0.32 | |
| Moment of Inertia ($\leq \varnothing 19$) | [kgcm ²] | -- | 0.51 | 0.51 | 0.51 | 0.51 | 0.51 | 0.51 | |
| Moment of Inertia ($\leq \varnothing 28$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | |
| Efficiency | [%] | *11 | 88 | | | | | | |
| Torsional Rigidity | [Nm/arcmin] | *12 | 22 | | | | | | |
| Maximum Torsional Backlash | [Arc-min] | -- | ≤ 7 | | | | | | |
| Noise Level | dB [A] | *13 | ≤ 80 | | | | | | |
| Protection Class | -- | *14 | IP54 (IP65) | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | |
| Weight | [kg] | *15 | 4.3 | | | | | | |

- *1) At nominal input speed, service life is 20,000 hours
- *2) The maximum torque when starting or stopping operation. Apply Cycle Factor f_0 , found on page 468, for higher duty cycle applications
- *3) Permitted 10,000 times during service life. Based on 10% of maximum radial load and smooth output shaft
- *4) The maximum torque allowed under a stress situation. Permitted 1,000 times during service life
- *5) The average input speed at nominal input torque. Maintain housing temperature below permitted value
- *6) The maximum intermittent input speed
- *7) Torque at no load applied to the input shaft at nominal input speed
- *8) The maximum radial load that the gearbox can accept
- *9) The maximum axial load that the gearbox can accept
- *10) The moment is the maximum load at output flange surface
- *11) The efficiency at the nominal output torque rating
- *12) This does not include lost motion
- *13) Contact Nidec Drive Technology for the testing conditions and environment
- *14) Various wash-down options are available. Contact Nidec Drive Technology for more details
- *15) Weight may vary slightly between models

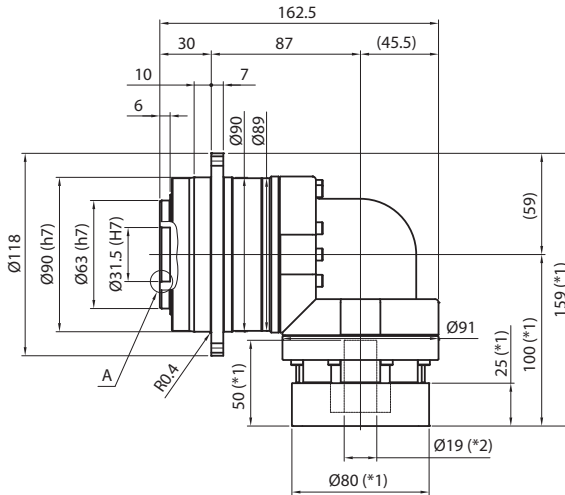
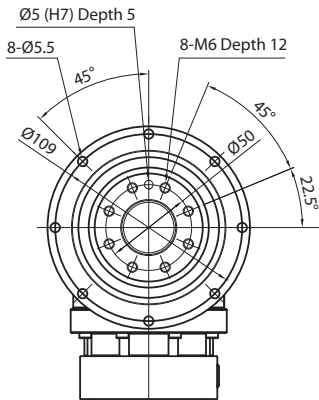
EVT SERIES Right-angle Planetary

EVT 090 2-Stage Dimensions

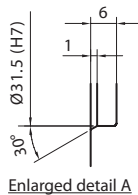
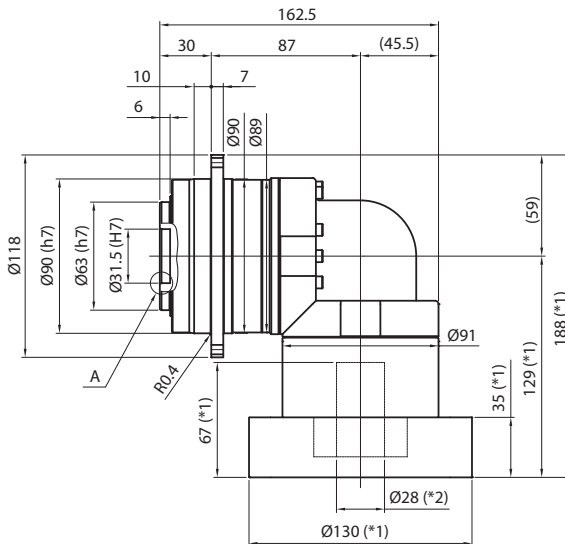
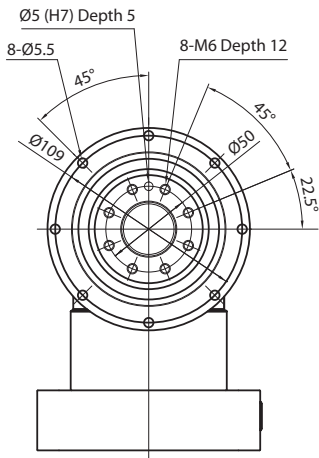
Input bore size $\leq \varnothing 14\text{mm}$



Input bore size $\leq \varnothing 19\text{mm}$



Input bore size $\leq \varnothing 28\text{mm}$

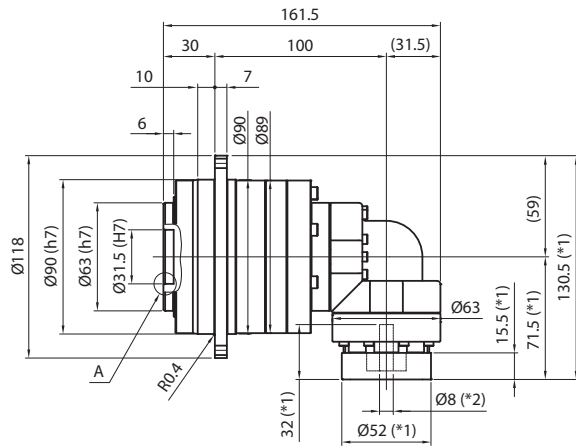
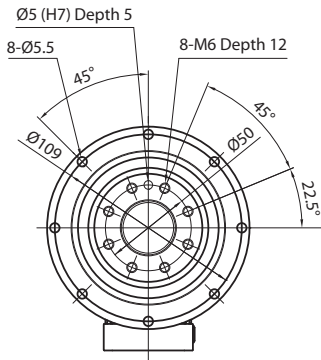


*1) Length will vary depending on motor

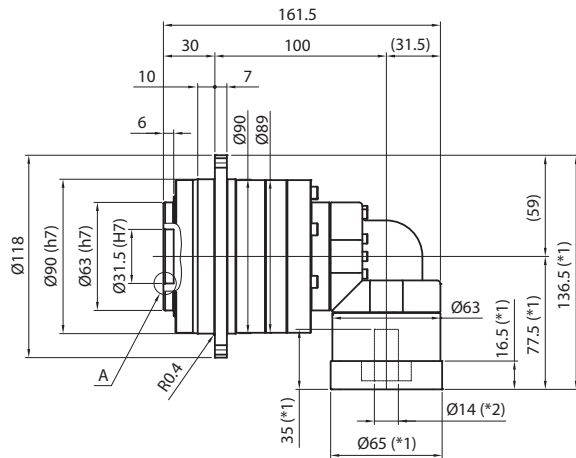
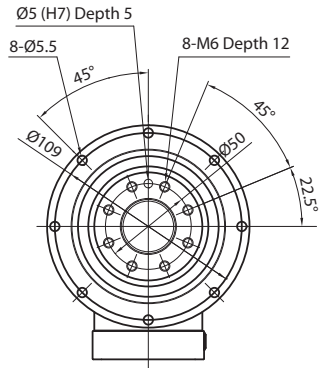
*2) Bushing will be inserted to adapt to motor shaft

EVT 090 3-Stage Dimensions

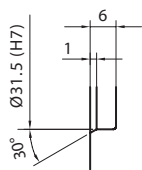
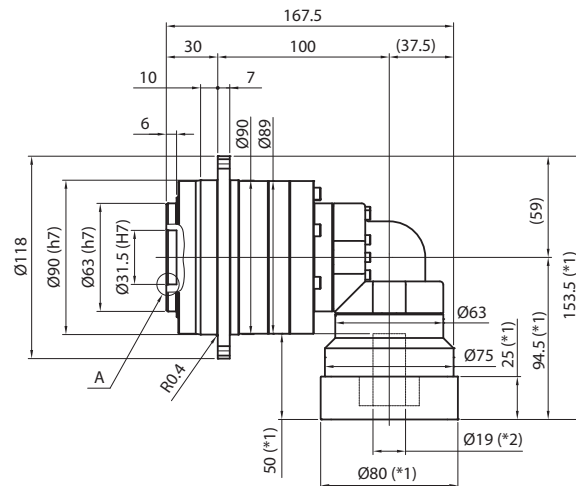
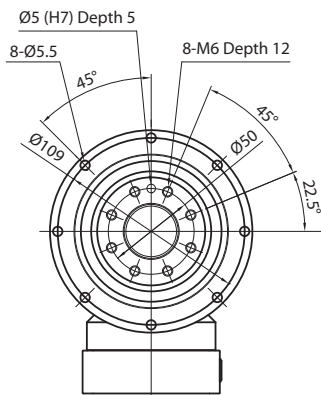
Input bore size $\leq \varnothing 8\text{mm}$



Input bore size $\leq \varnothing 14\text{mm}$



Input bore size $\leq \varnothing 19\text{mm}$



Enlarged detail A

*1) Length will vary depending on motor

*2) Bushing will be inserted to adapt to motor shaft