

VRL 205 1-Stage Specifications

| Frame Size | 205 | | | | | | | | | |
|---|----------------------|------|-------------|------|------|------|------|------|------|------|
| Ratio | Unit | Note | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| Nominal Output Torque | [Nm] | *1 | 570 | 850 | 910 | 910 | 910 | 910 | 910 | 910 |
| Maximum Acceleration Torque | [Nm] | *2 | 1300 | 1850 | 1850 | 1850 | 1850 | 1850 | 1350 | 1350 |
| Maximum Torque | [Nm] | *3 | 1450 | 2250 | 2250 | 2150 | 2150 | 2150 | 1750 | 1750 |
| Emergency Stop Torque | [Nm] | *4 | 2200 | 2750 | 2750 | 2750 | 2750 | 2750 | 2200 | 2200 |
| Nominal Input Speed | [rpm] | *5 | 1500 | 1500 | 1500 | 1500 | 2300 | 2300 | 2300 | 2300 |
| Maximum Input Speed | [rpm] | *6 | 4500 | 4500 | 4500 | 4500 | 4500 | 4500 | 4500 | 4500 |
| No Load Running Torque | [Nm] | *7 | 2.68 | | | | | | | |
| Maximum Radial Load | [N] | *8 | 15000 | | | | | | | |
| Maximum Axial Load | [N] | *9 | 14000 | | | | | | | |
| Moment of Inertia ($\leq \varnothing 19$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Moment of Inertia ($\leq \varnothing 28$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Moment of Inertia ($\leq \varnothing 38$) | [kgcm ²] | -- | 43 | 26 | 19 | 15 | 14 | 13 | 12 | 12 |
| Moment of Inertia ($\leq \varnothing 48$) | [kgcm ²] | -- | 57 | 41 | 34 | 31 | 29 | 28 | 27 | 27 |
| Moment of Inertia ($\leq \varnothing 65$) | [kgcm ²] | -- | 110 | 85 | 78 | 75 | 73 | 72 | 71 | 71 |
| Efficiency | [%] | *10 | 95 | | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *11 | 175 | | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 5 | | | | | | | |
| Noise Level | dB [A] | *12 | ≤ 67 | | | | | | | |
| Protection Class | -- | *13 | IP54 (IP65) | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | |
| Weight | [kg] | *14 | 39 | | | | | | | |

VRL 205 2-Stage Specifications

| Frame Size | 205 | | | | | | | | | |
|---|----------------------|------|-------------|------|------|------|------|------|------|------|
| Ratio | Unit | Note | 15 | 16 | 20 | 25 | 28 | 30 | 35 | 40 |
| Nominal Output Torque | [Nm] | *1 | 660 | 850 | 910 | 1100 | 1300 | 930 | 1300 | 1200 |
| Maximum Acceleration Torque | [Nm] | *2 | 1300 | 1850 | 1850 | 1850 | 1850 | 1300 | 1850 | 1850 |
| Maximum Torque | [Nm] | *3 | 1300 | 1850 | 1850 | 1850 | 1850 | 1300 | 1850 | 1850 |
| Emergency Stop Torque | [Nm] | *4 | 2200 | 2750 | 2750 | 2750 | 2750 | 2200 | 2750 | 2750 |
| Nominal Input Speed | [rpm] | *5 | 2700 | 2700 | 2700 | 2700 | 2700 | 2700 | 2700 | 2700 |
| Maximum Input Speed | [rpm] | *6 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 |
| No Load Running Torque | [Nm] | *7 | 1.39 | | | | | | | |
| Maximum Radial Load | [N] | *8 | 15000 | | | | | | | |
| Maximum Axial Load | [N] | *9 | 14000 | | | | | | | |
| Moment of Inertia ($\leq \varnothing 19$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Moment of Inertia ($\leq \varnothing 28$) | [kgcm ²] | -- | 8.8 | 11 | 8.1 | 7.9 | 11 | 4.0 | 7.6 | 3.9 |
| Moment of Inertia ($\leq \varnothing 38$) | [kgcm ²] | -- | 15 | 18 | 14 | 14 | 17 | 10 | 14 | 10 |
| Moment of Inertia ($\leq \varnothing 48$) | [kgcm ²] | -- | 30 | 33 | 29 | 29 | 32 | 25 | 29 | 25 |
| Moment of Inertia ($\leq \varnothing 65$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Efficiency | [%] | *10 | 90 | | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *11 | 175 | | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 5 | | | | | | | |
| Noise Level | dB [A] | *12 | ≤ 67 | | | | | | | |
| Protection Class | -- | *13 | IP54 (IP65) | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | |
| Weight | [kg] | *14 | 40 | | | | | | | |

VRL 205 2-Stage Specifications

| Frame Size | 205 | | | | | | | | | | |
|---|----------------------|------|-------------|------|------|------|------|------|------|--|--|
| Ratio | Unit | Note | 45 | 50 | 60 | 70 | 80 | 90 | 100 | | |
| Nominal Output Torque | [Nm] | *1 | 930 | 1300 | 1300 | 1300 | 1300 | 930 | 930 | | |
| Maximum Acceleration Torque | [Nm] | *2 | 1350 | 1850 | 1850 | 1850 | 1850 | 1350 | 1350 | | |
| Maximum Torque | [Nm] | *3 | 1350 | 1850 | 1850 | 1850 | 1850 | 1350 | 1350 | | |
| Emergency Stop Torque | [Nm] | *4 | 2200 | 2750 | 2750 | 2750 | 2750 | 2200 | 2200 | | |
| Nominal Input Speed | [rpm] | *5 | 2700 | 2900 | 2900 | 3400 | 3400 | 3400 | 3400 | | |
| Maximum Input Speed | [rpm] | *6 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | | |
| No Load Running Torque | [Nm] | *7 | 1.39 | | | | | | | | |
| Maximum Radial Load | [N] | *8 | 15000 | | | | | | | | |
| Maximum Axial Load | [N] | *9 | 14000 | | | | | | | | |
| Moment of Inertia ($\leq \varnothing 19$) | [kgcm ²] | -- | -- | 1.9 | 1.9 | 1.8 | 1.8 | 1.8 | 1.8 | | |
| Moment of Inertia ($\leq \varnothing 28$) | [kgcm ²] | -- | 7.6 | 3.8 | 3.8 | 3.8 | 3.7 | 3.7 | 3.7 | | |
| Moment of Inertia ($\leq \varnothing 38$) | [kgcm ²] | -- | 14 | 10 | 10 | 10 | 10 | 10 | 10 | | |
| Moment of Inertia ($\leq \varnothing 48$) | [kgcm ²] | -- | 29 | 25 | 25 | 25 | 25 | 25 | 25 | | |
| Moment of Inertia ($\leq \varnothing 65$) | [kgcm ²] | -- | -- | -- | -- | -- | -- | -- | -- | | |
| Efficiency | [%] | *10 | 90 | | | | | | | | |
| Torsional Rigidity | [Nm/arc-min] | *11 | 175 | | | | | | | | |
| Maximum Torsional Backlash | [arc-min] | -- | ≤ 5 | | | | | | | | |
| Noise Level | dB [A] | *12 | ≤ 67 | | | | | | | | |
| Protection Class | -- | *13 | IP54 (IP65) | | | | | | | | |
| Ambient Temperature | [°C] | -- | 0-40 | | | | | | | | |
| Permitted Housing Temperature | [°C] | -- | 90 | | | | | | | | |
| Weight | [kg] | *14 | 40 | | | | | | | | |

*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 efficiency at the nominal output torque rating

*11 This does not include lost motion

*12 Contact Nidec Drive Technology for the testing conditions and environment

*13 IP65 (wash-down) is available as an option. Contact Nidec Drive Technology for more details

*14 Weight may vary slightly between models

VRSF

PRE

PRF

VRL

VRB

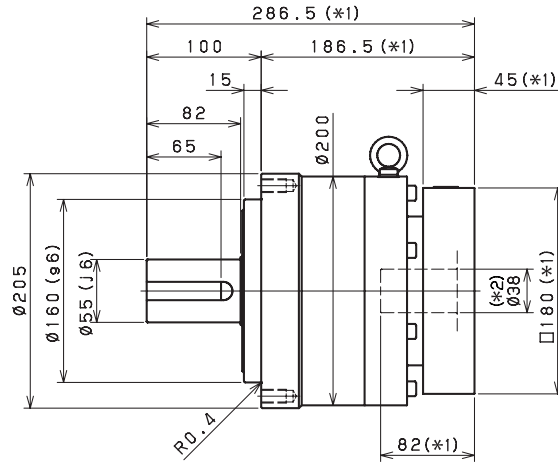
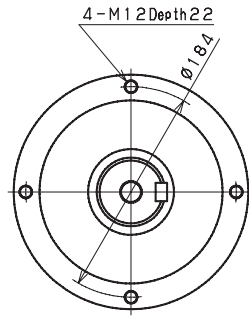
VRS

VRT

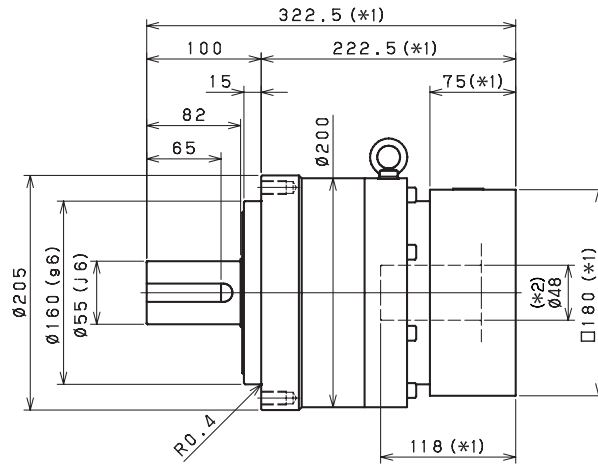
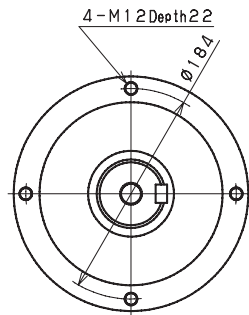
PLANETARY Inline Gear Reducers

VRL 205 1-Stage Dimensions

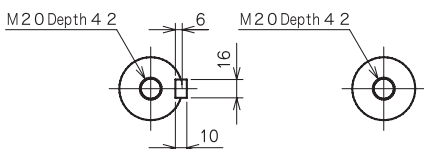
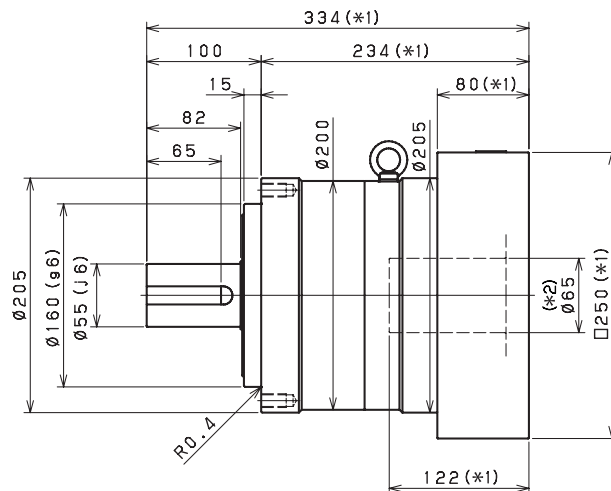
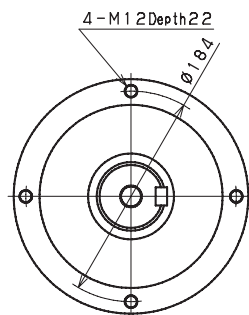
Input bore size $\leq \varnothing 38$ mm



Input bore size $\leq \varnothing 48$ mm



Input bore size $\leq \varnothing 65$ mm



Keyed shaft

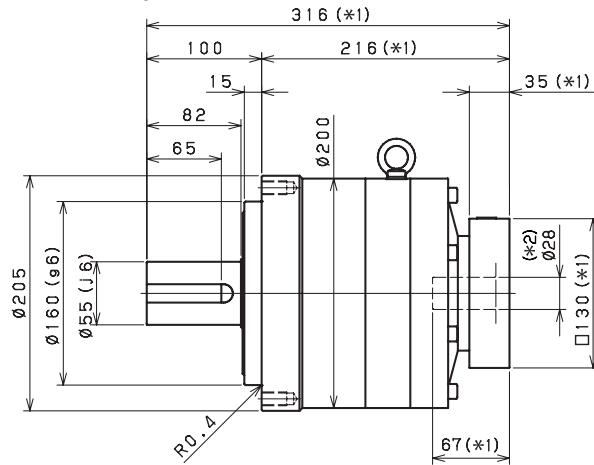
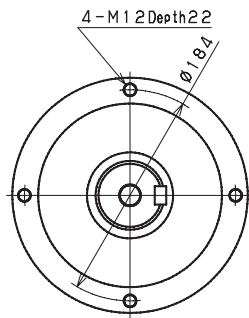
Smooth shaft

*1 Length will vary depending on motor

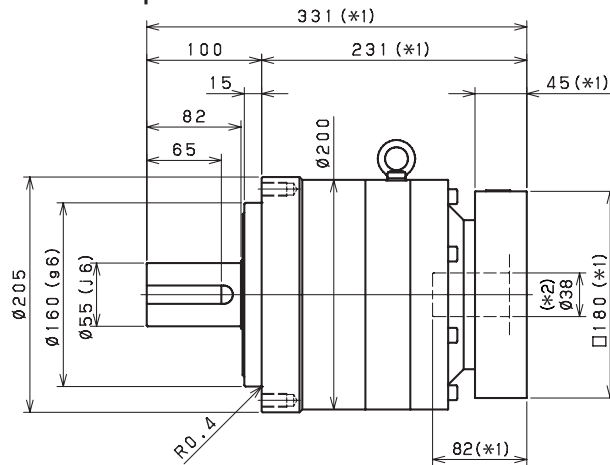
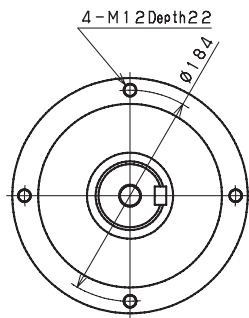
*2 Bushing will be inserted to adapt to motor shaft

VRL 205 2-Stage Dimensions

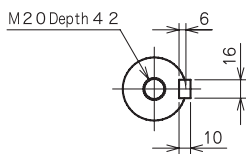
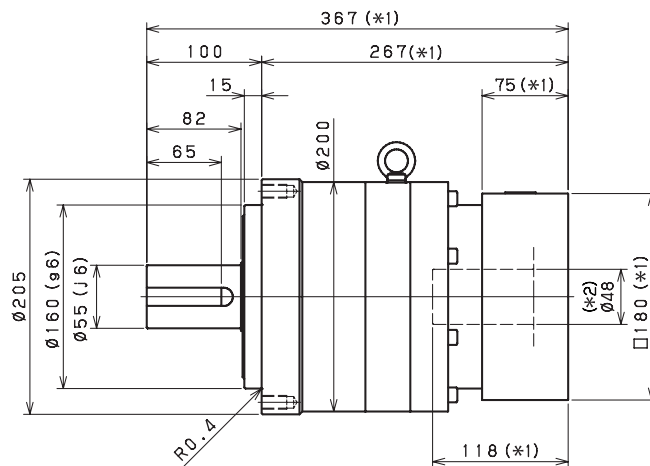
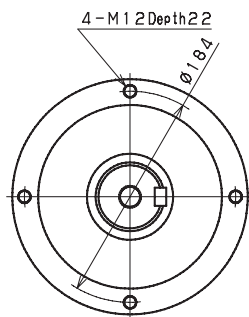
Input bore size $\cong \varnothing 28$ mm



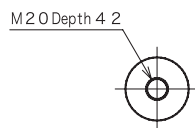
Input bore size $\cong \varnothing 38$ mm



Input bore size $\cong \varnothing 48$ mm



Keyed shaft



Smooth shaft

- *1 Length will vary depending on motor
- *2 Bushing will be inserted to adapt to motor shaft

VRSF

PRE

PRF

VRL

VRB

VRB

VRT