

## VRT 200 1-Stage Specifications

Frame Size	200					
Ratio	Unit	Note	4	5	7	10
Nominal Output Torque	[Nm]	*1	850	910	910	910
Maximum Acceleration Torque	[Nm]	*2	1850	1850	1850	1350
Maximum Torque	[Nm]	*3	2250	2250	2150	1750
Emergency Stop Torque	[Nm]	*4	2750	2750	2750	2200
Nominal Input Speed	[rpm]	*5	1500	1500	2300	2300
Maximum Input Speed	[rpm]	*6	4500	4500	4500	4500
No Load Running Torque	[Nm]	*7	1.9			
Maximum Radial Load	[N]	*8	40000			
Maximum Axial Load	[N]	*9	30000			
Maximum Tilting Moment	[Nm]	*10	5300			
Moment of Inertia ( $\leq \varnothing 19$ )	[kgcm <sup>2</sup> ]	--	--	--	--	--
Moment of Inertia ( $\leq \varnothing 28$ )	[kgcm <sup>2</sup> ]	--	--	--	--	--
Moment of Inertia ( $\leq \varnothing 38$ )	[kgcm <sup>2</sup> ]	--	53	36	23	16
Moment of Inertia ( $\leq \varnothing 48$ )	[kgcm <sup>2</sup> ]	--	68	51	37	31
Moment of Inertia ( $\leq \varnothing 65$ )	[kgcm <sup>2</sup> ]	--	110	95	81	75
Efficiency	[%]	*11	95			
Torsional Rigidity	[Nm/arcmin]	*12	610	610	550	445
Maximum Torsional Backlash	[Arc-min]	*13	Standard $\leq 3$ / Reduced $\leq 1$			
Noise Level	dB [A]	--	$\leq 67$			
Protection Class	--	*14	IP54 (IP65)			
Ambient Temperature	[°C]	--	0 - 40			
Permitted Housing Temperature	[°C]	--	90			
Weight	[kg]	*15	42			

## VRT 200 2-Stage Specifications

Frame Size	200					
Ratio	Unit	Note	16	20	25	28
Nominal Output Torque	[Nm]	*1	850	910	1100	1300
Maximum Acceleration Torque	[Nm]	*2	1850	1850	1850	1850
Maximum Torque	[Nm]	*3	1850	1850	1850	1850
Emergency Stop Torque	[Nm]	*4	2750	2750	2750	2750
Nominal Input Speed	[rpm]	*5	2700	2700	2700	2700
Maximum Input Speed	[rpm]	*6	5000	5000	5000	5000
No Load Running Torque	[Nm]	*7	1.3			
Maximum Radial Load	[N]	*8	40000			
Maximum Axial Load	[N]	*9	30000			
Maximum Tilting Moment	[Nm]	*10	5300			
Moment of Inertia ( $\leq \varnothing 19$ )	[kgcm <sup>2</sup> ]	--	--	--	--	--
Moment of Inertia ( $\leq \varnothing 28$ )	[kgcm <sup>2</sup> ]	--	13	9.2	8.6	11
Moment of Inertia ( $\leq \varnothing 38$ )	[kgcm <sup>2</sup> ]	--	19	15	15	18
Moment of Inertia ( $\leq \varnothing 48$ )	[kgcm <sup>2</sup> ]	--	34	30	30	32
Moment of Inertia ( $\leq \varnothing 65$ )	[kgcm <sup>2</sup> ]	--	--	--	--	--
Efficiency	[%]	*11	90			
Torsional Rigidity	[Nm/arcmin]	*12	585	580	570	560
Maximum Torsional Backlash	[Arc-min]	*13	Standard $\leq 3$ / Reduced $\leq 1$			
Noise Level	dB [A]	--	$\leq 67$			
Protection Class	--	*14	IP54 (IP65)			
Ambient Temperature	[°C]	--	0 - 40			
Permitted Housing Temperature	[°C]	--	90			
Weight	[kg]	*15	43			

## VRT 200 2-Stage Specifications

Frame Size	200							
Ratio	Unit	Note	35	40	50	70	100	
Nominal Output Torque	[Nm]	*1	1300	1200	1300	1300	930	
Maximum Acceleration Torque	[Nm]	*2	1850	1850	1850	1850	1350	
Maximum Torque	[Nm]	*3	1850	1850	1850	1850	1350	
Emergency Stop Torque	[Nm]	*4	2750	2750	2750	2750	2200	
Nominal Input Speed	[rpm]	*5	2700	2700	2900	3400	3400	
Maximum Input Speed	[rpm]	*6	5000	5000	5000	5000	5000	
No Load Running Torque	[Nm]	*7	1.3					
Maximum Radial Load	[N]	*8	40000					
Maximum Axial Load	[N]	*9	30000					
Maximum Tilting Moment	[Nm]	*10	5300					
Moment of Inertia ( $\leq \varnothing 19$ )	[kgcm <sup>2</sup> ]	--	--	--	2.1	1.9	1.9	
Moment of Inertia ( $\leq \varnothing 28$ )	[kgcm <sup>2</sup> ]	--	8.0	4.1	4.0	3.8	3.8	
Moment of Inertia ( $\leq \varnothing 38$ )	[kgcm <sup>2</sup> ]	--	14	10	10	10	10	
Moment of Inertia ( $\leq \varnothing 48$ )	[kgcm <sup>2</sup> ]	--	29	25	25	25	25	
Moment of Inertia ( $\leq \varnothing 65$ )	[kgcm <sup>2</sup> ]	--	--	--	--	--	--	
Efficiency	[%]	*11	90					
Torsional Rigidity	[Nm/arcmin]	*12	560	520	525	480	395	
Maximum Torsional Backlash	[Arc-min]	*13	Standard $\leq 3$ / Reduced $\leq 1$					
Noise Level	dB [A]	--	$\leq 67$					
Protection Class	--	*14	IP54 (IP65)					
Ambient Temperature	[°C]	--	0 - 40					
Permitted Housing Temperature	[°C]	--	90					
Weight	[kg]	*15	43					

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

\*15 Weight may vary slightly between models

VRSF

PRE

PRF

VRL

VRB

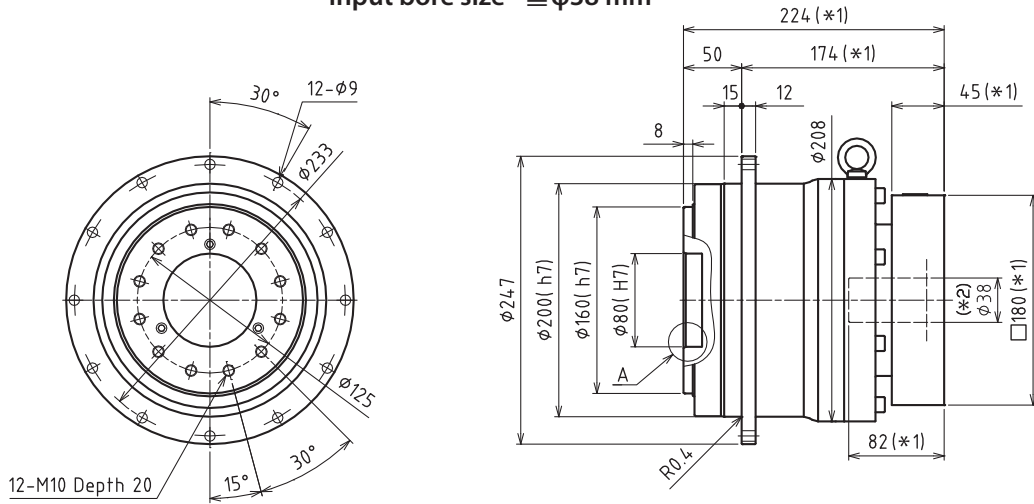
VRS

VRT

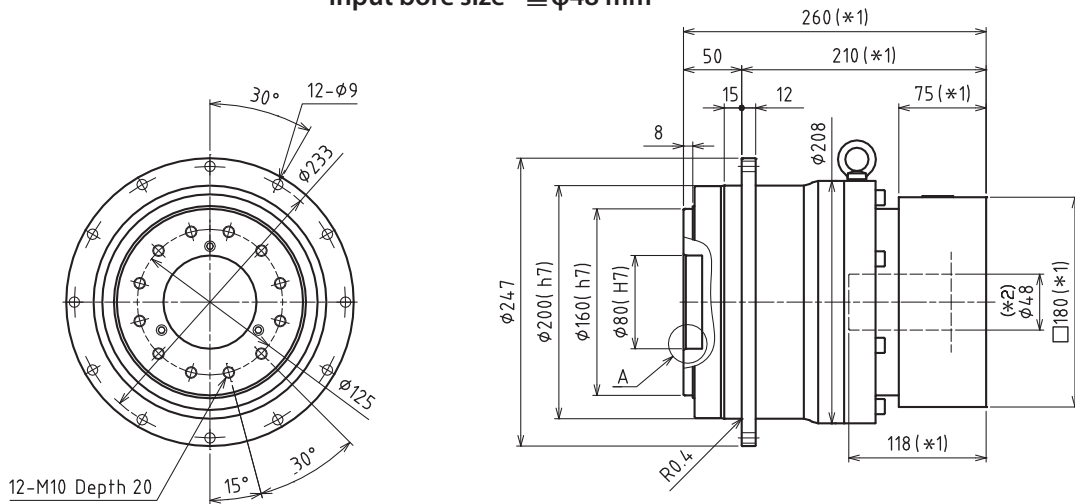
# PLANETARY Inline Gear Reducers

## VRT 200 1-Stage Dimensions

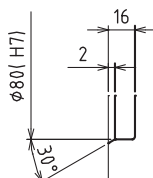
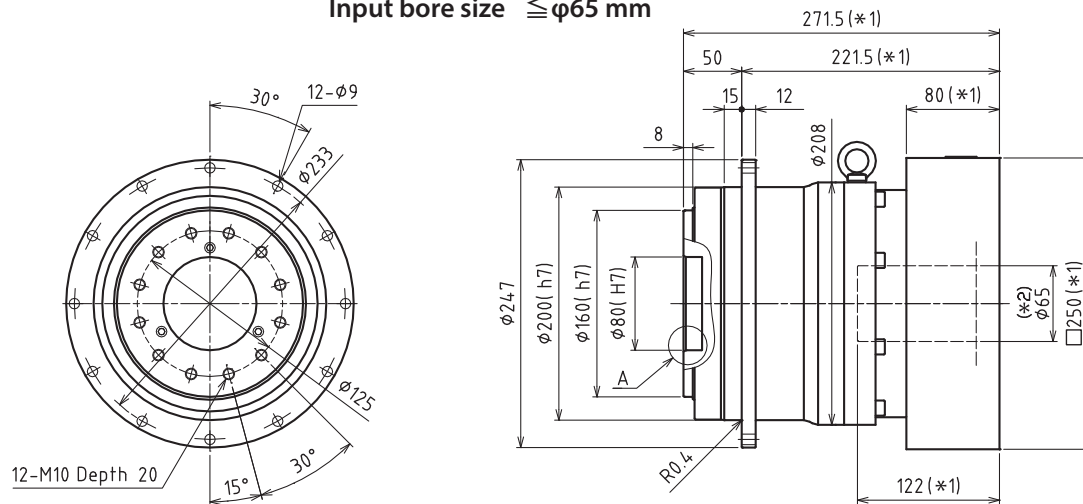
Input bore size  $\leq \phi 38$  mm



Input bore size  $\leq \phi 48$  mm



Input bore size  $\leq \phi 65$  mm



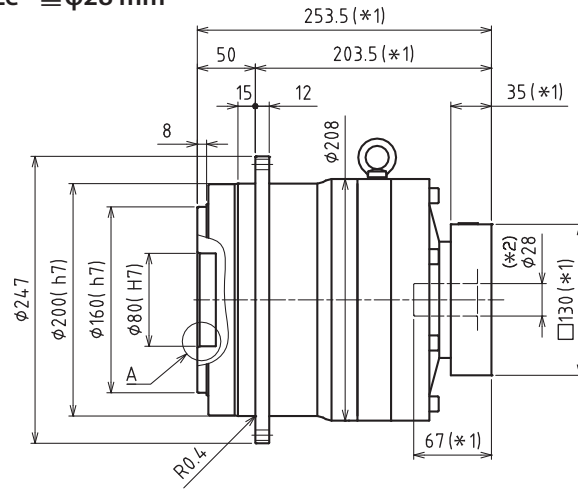
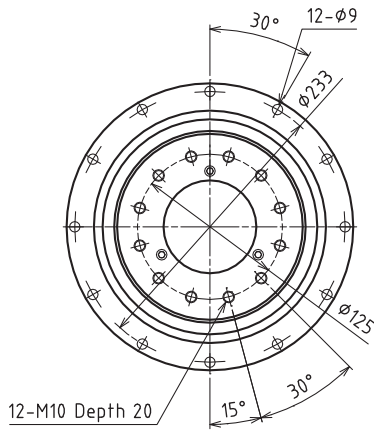
Enlarged detail A

\*1 Length will vary depending on motor

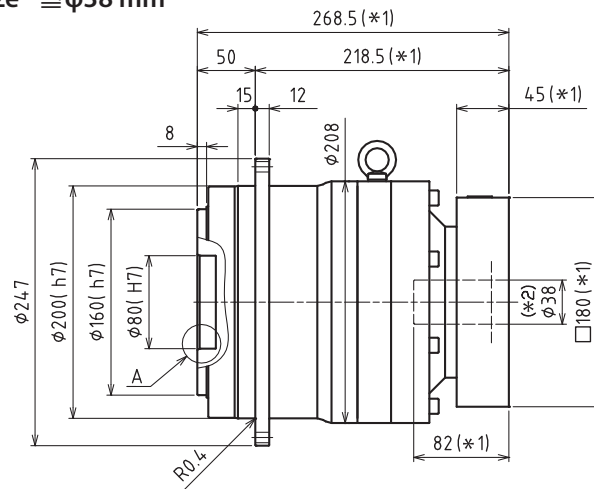
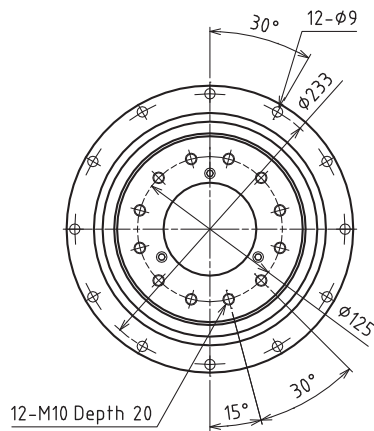
\*2 Bushing will be inserted to adapt to motor shaft

## VRT 200 2-Stage Dimensions

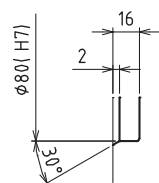
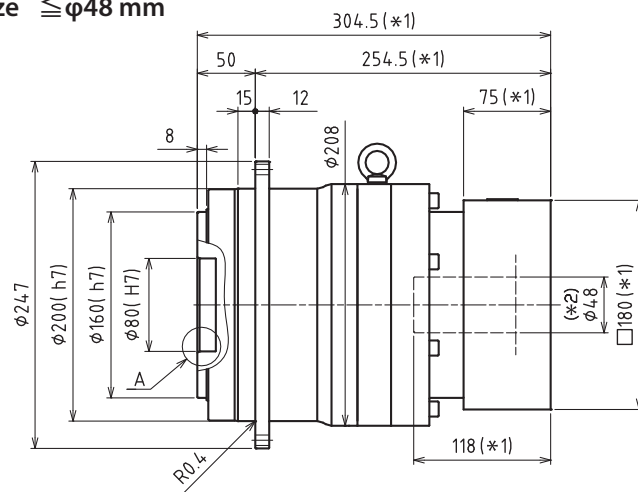
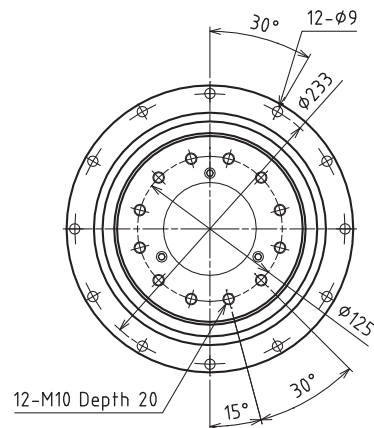
Input bore size  $\leq \varnothing 28$  mm



Input bore size  $\leq \varnothing 38$  mm



Input bore size  $\leq \varnothing 48$  mm



Enlarged detail A

\*1 Length will vary depending on motor

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

VRSF

PRE

PRF

URL

VRB

VRS

VRT