

VRT 285 1-Stage Specifications

Frame Size	285					
Ratio	Unit	Note	4	5	7	10
Nominal Output Torque	[Nm]	*1	3400	3400	3400	3400
Maximum Acceleration Torque	[Nm]	*2	6700	6700	6700	5100
Maximum Torque	[Nm]	*3	7500	7500	7500	5900
Emergency Stop Torque	[Nm]	*4	12000	12000	12000	10000
Nominal Input Speed	[rpm]	*5	900	1100	1300	1300
Maximum Input Speed	[rpm]	*6	3000	3000	3000	3000
No Load Running Torque	[Nm]	*7	2.7			
Maximum Radial Load	[N]	*8	86000			
Maximum Axial Load	[N]	*9	64000			
Maximum Tilting Moment	[Nm]	*10	18000			
Moment of Inertia ($\leq \varnothing 38$)	[kgcm ²]	--	--	--	--	--
Moment of Inertia ($\leq \varnothing 48$)	[kgcm ²]	--	--	--	--	--
Moment of Inertia ($\leq \varnothing 65$)	[kgcm ²]	--	270	190	130	96
Efficiency	[%]	*11	95			
Torsional Rigidity	[Nm/arcmin]	*12	1200	1450	1300	1200
Maximum Torsional Backlash	[Arc-min]	*13	≤ 3			
Noise Level	dB [A]	--	≤ 63			
Protection Class	--	*14	IP54 (IP65)			
Ambient Temperature	[°C]	--	0 - 40			
Permitted Housing Temperature	[°C]	--	90			
Weight	[kg]	*15	110			

VRT 285 2-Stage Specifications

Frame Size	285					
Ratio	Unit	Note	16	20	25	28
Nominal Output Torque	[Nm]	*1	2700	2900	3600	4200
Maximum Acceleration Torque	[Nm]	*2	6700	6700	6700	6700
Maximum Torque	[Nm]	*3	6700	6700	6700	6700
Emergency Stop Torque	[Nm]	*4	12000	12000	12000	12000
Nominal Input Speed	[rpm]	*5	1500	1500	1500	1500
Maximum Input Speed	[rpm]	*6	4000	4000	4000	4000
No Load Running Torque	[Nm]	*7	0.6			
Maximum Radial Load	[N]	*8	86000			
Maximum Axial Load	[N]	*9	64000			
Maximum Tilting Moment	[Nm]	*10	18000			
Moment of Inertia ($\leq \varnothing 38$)	[kgcm ²]	--	--	--	--	--
Moment of Inertia ($\leq \varnothing 48$)	[kgcm ²]	--	63	50	47	55
Moment of Inertia ($\leq \varnothing 65$)	[kgcm ²]	--	--	--	--	--
Efficiency	[%]	*11	90			
Torsional Rigidity	[Nm/arcmin]	*12	1200	1400	1450	1200
Maximum Torsional Backlash	[Arc-min]	*13	≤ 3			
Noise Level	dB [A]	--	≤ 63			
Protection Class	--	*14	IP54 (IP65)			
Ambient Temperature	[°C]	--	0 - 40			
Permitted Housing Temperature	[°C]	--	90			
Weight	[kg]	*15	120			

VRT 285 2-Stage Specifications

Frame Size	285							
	Unit	Note	35	40	50	70	100	
Nominal Output Torque	[Nm]	*1	4200	4200	4200	4200	2700	
Maximum Acceleration Torque	[Nm]	*2	6700	6700	6700	6700	3400	
Maximum Torque	[Nm]	*3	6700	6700	6700	6700	3400	
Emergency Stop Torque	[Nm]	*4	12000	12000	12000	12000	10000	
Nominal Input Speed	[rpm]	*5	1500	1500	2000	2200	2200	
Maximum Input Speed	[rpm]	*6	4000	4000	4000	4000	4000	
No Load Running Torque	[Nm]	*7	0.6					
Maximum Radial Load	[N]	*8	86000					
Maximum Axial Load	[N]	*9	64000					
Maximum Tilting Moment	[Nm]	*10	18000					
Moment of Inertia ($\leq \emptyset 38$)	[kgcm ²]	--	--	--	14	14	13	
Moment of Inertia ($\leq \emptyset 48$)	[kgcm ²]	--	45	33	32	31	31	
Moment of Inertia ($\leq \emptyset 65$)	[kgcm ²]	--	--	--	--	--	--	
Efficiency	[%]	*11	90					
Torsional Rigidity	[Nm/arcmin]	*12	1400	1200	1300	1250	1200	
Maximum Torsional Backlash	[Arc-min]	*13	≤ 3					
Noise Level	dB [A]	--	≤ 63					
Protection Class	--	*14	IP54 (IP65)					
Ambient Temperature	[°C]	--	0 - 40					
Permitted Housing Temperature	[°C]	--	90					
Weight	[kg]	*15	120					

*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

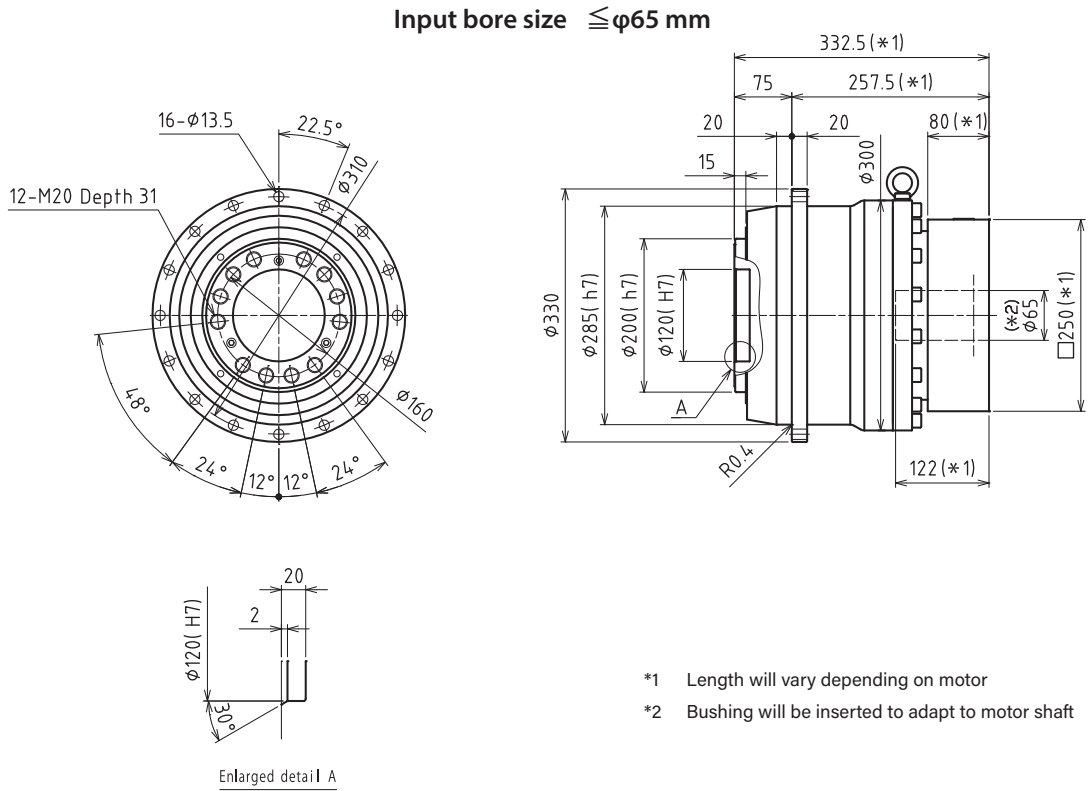
VRL

VRB

VR5

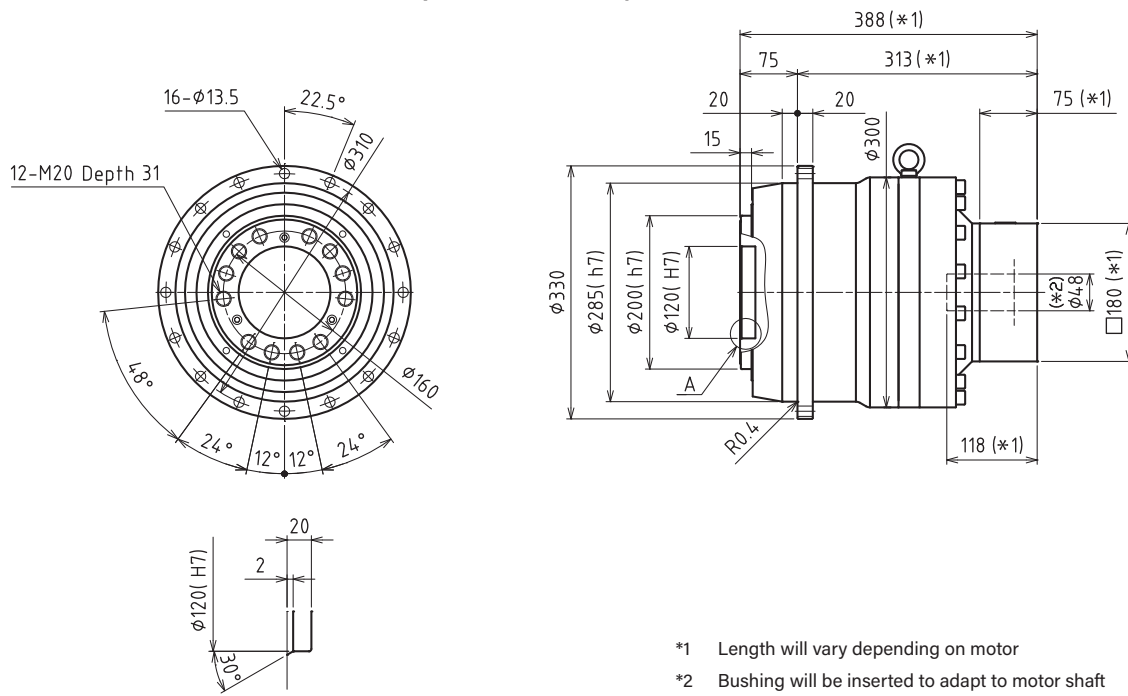
VRT

VRT 285 1-Stage Dimensions



VRT 285 2-Stage Dimensions

Input bore size $\leq \phi 48$ mm



Enlarged detail I A

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