

VRT 255 1-Stage Specifications

Frame Size	255					
Ratio	Unit	Note	4	5	7	10
Nominal Output Torque	[Nm]	*1	2400	2400	2700	2700
Maximum Acceleration Torque	[Nm]	*2	5100	5100	4800	3600
Maximum Torque	[Nm]	*3	5700	5700	5400	4100
Emergency Stop Torque	[Nm]	*4	8000	8000	8000	6000
Nominal Input Speed	[rpm]	*5	1000	1200	1500	1700
Maximum Input Speed	[rpm]	*6	3000	3000	3000	3000
No Load Running Torque	[Nm]	*7	2.5			
Maximum Radial Load	[N]	*8	64000			
Maximum Axial Load	[N]	*9	48000			
Maximum Tilting Moment	[Nm]	*10	11000			
Moment of Inertia ($\leq \varnothing 38$)	[kgcm ²]	--	--	--	--	--
Moment of Inertia ($\leq \varnothing 48$)	[kgcm ²]	--	--	--	--	--
Moment of Inertia ($\leq \varnothing 65$)	[kgcm ²]	--	180	130	100	84
Efficiency	[%]	*11	95			
Torsional Rigidity	[Nm/arcmin]	*12	840	1000	900	840
Maximum Torsional Backlash	[Arc-min]	*13	≤ 3			
Noise Level	dB [A]	--	≤ 62			
Protection Class	--	*14	IP54 (IP65)			
Ambient Temperature	[°C]	--	0 - 40			
Permitted Housing Temperature	[°C]	--	90			
Weight	[kg]	*15	84			

VRT 255 2-Stage Specifications

Frame Size	255					
Ratio	Unit	Note	16	20	25	28
Nominal Output Torque	[Nm]	*1	2400	2600	3200	3400
Maximum Acceleration Torque	[Nm]	*2	5100	5100	5100	4900
Maximum Torque	[Nm]	*3	5100	5100	5100	4900
Emergency Stop Torque	[Nm]	*4	8000	8000	8000	8000
Nominal Input Speed	[rpm]	*5	2000	2000	2000	2000
Maximum Input Speed	[rpm]	*6	4500	4500	4500	4500
No Load Running Torque	[Nm]	*7	1.0			
Maximum Radial Load	[N]	*8	64000			
Maximum Axial Load	[N]	*9	48000			
Maximum Tilting Moment	[Nm]	*10	11000			
Moment of Inertia ($\leq \varnothing 38$)	[kgcm ²]	--	--	--	--	--
Moment of Inertia ($\leq \varnothing 48$)	[kgcm ²]	--	58	47	45	53
Moment of Inertia ($\leq \varnothing 65$)	[kgcm ²]	--	--	--	--	--
Efficiency	[%]	*11	90			
Torsional Rigidity	[Nm/arcmin]	*12	840	850	950	840
Maximum Torsional Backlash	[Arc-min]	*13	≤ 3			
Noise Level	dB [A]	--	≤ 62			
Protection Class	--	*14	IP54 (IP65)			
Ambient Temperature	[°C]	--	0 - 40			
Permitted Housing Temperature	[°C]	--	90			
Weight	[kg]	*15	89			

VRT 255 2-Stage Specifications

Frame Size	255							
Ratio	Unit	Note	35	40	50	70	100	
Nominal Output Torque	[Nm]	*1	3400	3400	3400	3400	2000	
Maximum Acceleration Torque	[Nm]	*2	4900	5100	5100	4900	2500	
Maximum Torque	[Nm]	*3	4900	5100	5100	4900	2500	
Emergency Stop Torque	[Nm]	*4	8000	8000	8000	8000	6000	
Nominal Input Speed	[rpm]	*5	2000	2000	2200	2800	2800	
Maximum Input Speed	[rpm]	*6	4500	4500	4500	4500	4500	
No Load Running Torque	[Nm]	*7	1.0					
Maximum Radial Load	[N]	*8	64000					
Maximum Axial Load	[N]	*9	48000					
Maximum Tilting Moment	[Nm]	*10	11000					
Moment of Inertia ($\leq \varnothing 38$)	[kgcm ²]	--	--	--	14	13	13	
Moment of Inertia ($\leq \varnothing 48$)	[kgcm ²]	--	44	32	32	31	31	
Moment of Inertia ($\leq \varnothing 65$)	[kgcm ²]	--	--	--	--	--	--	
Efficiency	[%]	*11	90					
Torsional Rigidity	[Nm/arcmin]	*12	900	840	840	840	840	
Maximum Torsional Backlash	[Arc-min]	*13	≤ 3					
Noise Level	dB [A]	--	≤ 62					
Protection Class	--	*14	IP54 (IP65)					
Ambient Temperature	[°C]	--	0 - 40					
Permitted Housing Temperature	[°C]	--	90					
Weight	[kg]	*15	89					

- *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-SHIMPO for the testing conditions and environment
- *14) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details
- *15) Weight may vary slightly between models