VRL 070 1-Stage Specifications

Frame Size			**070**							
Ratio	Unit	Note	3	4	5	6	7	8	9	10
Nominal Output Torque	[Nm]	*1	18	27	27	27	27	27	18	18
Maximum Output Torque	[Nm]	*2	35	50	50	50	50	50	35	35
Emergency Stop Torque	[Nm]	*3	80	100	100	100	100	100	80	80
Nominal Input Speed	[rpm]	*4	3000							
Maximum Input Speed	[rpm]	*5	6000							
No Load Running Torque	[Nm]	*6	0.08							
Permitted Radial Load	[N]	*7	430	470	510	540	570	600	620	640
Permitted Axial Load	[N]	*8	310	360	390	430	460	480	510	530
Maximum Radial Load	[N]	*9	1200							
Maximum Axial Load	[N]	*10	1100							
Moment of Inertia (≤Ø 8)	[kgcm2]	--	0.14	0.095	0.077	0.068	0.062	0.059	0.057	0.056
Moment of Inertia (≤ Ø 14)	[kgcm2]	--	0.25	0.21	0.19	0.18	0.17	0.17	0.17	0.17
Moment of Inertia (≤ Ø 19)	[kgcm2]	--	0.53	0.48	0.46	0.46	0.45	0.45	0.44	0.44
Efficiency	[%]	*11	95							
Torsional Rigidity	[Nm/arcmin]	*12	3							
Maximum Torsional Backlash	[Arc-min]	--	≤ 5							
Noise Level	dB [A]	*13	≤ 66							
Protection Class	--	*14	IP54 (IP65)							
Ambient Temperature	[°C]	--	0-40							
Permitted Housing Temperature	[°C]	--	90							
Weight	[kg]	*15	1.5							

VRL 070 2-Stage Specifications

Frame Size			**070**							
Ratio	Unit	Note	15	16	20	25	28	30	35	40
Nominal Output Torque	[Nm]	*1	18	27	27	27	27	18	27	27
Maximum Output Torque	[Nm]	*2	35	50	50	50	50	35	50	50
Emergency Stop Torque	[Nm]	*3	80	100	100	100	100	80	100	100
Nominal Input Speed	[rpm]	*4	3000							
Maximum Input Speed	[rpm]	*5	6000							
No Load Running Torque	[Nm]	*6	0.04							
Permitted Radial Load	[N]	*7	740	750	810	870	910	930	980	1000
Permitted Axial Load	[N]	*8	630	650	720	790	830	860	920	970
Maximum Radial Load	[N]	*9	1200							
Maximum Axial Load	[N]	*10	1100							
Moment of Inertia (≤Ø 8)	[kgcm2]	--	0.064	0.070	0.062	0.061	0.068	0.051	0.061	0.051
Moment of Inertia (≤ Ø 14)	[kgcm2]	--	0.18	0.18	0.17	0.17	0.18	0.16	0.17	0.16
Moment of Inertia (≤ Ø 19)	[kgcm2]	--	0.45	0.46	0.45	0.45	0.46	0.44	0.45	0.44
Efficiency	[%]	*11	90							
Torsional Rigidity	[Nm/arcmin]	*12	3							
Maximum Torsional Backlash	[Arc-min]	--	≤ 5							
Noise Level	dB [A]	*13	≤ 66							
Protection Class	--	*14	IP54 (IP65)							
Ambient Temperature	[°C]	--	0-40							
Permitted Housing Temperature	[°C]	--	90							
Weight	[kg]	*15	1.7							

VRL 070 2-Stage Specifications

Frame Size			**070**						
Ratio	Unit	Note	45	50	60	70	80	90	100
Nominal Output Torque	[Nm]	*1	18	27	27	27	27	18	18
Maximum Output Torque	[Nm]	*2	35	50	50	50	50	35	35
Emergency Stop Torque	[Nm]	*3	80	100	100	100	100	80	80
Nominal Input Speed	[rpm]	*4	3000						
Maximum Input Speed	[rpm]	*5	6000						
No Load Running Torque	[Nm]	*6	0.04						
Permitted Radial Load	[N]	*7	1100	1100	1200	1200	1200	1200	1200
Permitted Axial Load	[N]	*8	1000	1100	1100	1100	1100	1100	1100
Maximum Radial Load	[N]	*9	1200						
Maximum Axial Load	[N]	*10	1100						
Moment of Inertia (≤Ø 8)	[kgcm2]	--	0.061	0.051	0.051	0.051	0.051	0.051	0.051
Moment of Inertia (≤ Ø 14)	[kgcm2]	--	0.17	0.16	0.16	0.16	0.16	0.16	0.16
Moment of Inertia (≤ Ø 19)	[kgcm2]	--	0.45	0.44	0.44	0.44	0.44	0.44	0.44
Efficiency	[%]	*11	90						
Torsional Rigidity	[Nm/arcmin]	*12	3						
Maximum Torsional Backlash	[Arc-min]	--	≤ 5						
Noise Level	dB [A]	*13	≤ 66						
Protection Class	--	*14	IP54 (IP65)						
Ambient Temperature	[°C]	--	0-40						
Permitted Housing Temperature	[°C]	--	90						
Weight	[kg]	*15	1.7						

*1) At nominal input speed, service life is 20,000 hours

*2) The maximum torque when starting or stopping operation

*3) The maximum torque allowed under a stress situation (Permitted 1,000 times during service life)

*4) The average input speed

*5) The maximum intermittent input speed

*6) Torque at no load applied to the input shaft at nominal input speed

*7) At this load and nominal input speed, service life will be 20,000 hours. (The radial load applied to the output side shaft center)

*8) At this load and nominal input speed, service life will be 20,000 hours. (The axial load applied to the output side bearing)

*9) The maximum radial load that the gearbox can accept

*10) The maximum axial load that the gearbox can accept

*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) The weight may vary slightly between models