

VRSF B-Frame 1-Stage and 2-Stage Specifications

Frame Size	B								
Stage	1-Stage					2-Stage			
Ratio	Units	Note	3	5	9	15	20	25	35
Nominal Output Torque	[Nm]	*1	3.43	2.84	2.35	4.02	5.00	6.27	3.84
Maximum Acceleration Torque	[Nm]	*2	10.3	8.53	7.25	12.2	15.0	19.0	11.5
Emergency Stop Torque	[Nm]	--	--	--	--	--	--	--	--
Nominal Input Speed	[rpm]	*3	3000			3000			
Maximum Input Speed	[rpm]	*4	5000			5000			
No Load Running Torque	[Nm]	*5	0.119			0.048			
Permitted Radial Load	[N]	*6	392	490	588	784	804	882	882
Permitted Axial Load	[N]	*7	196	245	294	392	402	441	441
Moment of Inertia ($\leq \emptyset 8$)	[kgcm ²]	--	0.081	0.059	0.052	0.057	0.056	0.056	0.052
Moment of Inertia ($\leq \emptyset 14$)	[kgcm ²]	--	0.150	0.130	0.120	0.130	0.130	0.130	0.120
Efficiency	[%]	*8	90			85			
Torsional Rigidity	[Nm/arcmin]	*9	0.8			0.8			
Backlash (Standard)	[Arc-min]	--	≤ 15			≤ 15			
Backlash (Low)	[Arc-min]	--	≤ 10			≤ 10			
Backlash (Precision)	[Arc-min]	--	≤ 3			≤ 3			
Noise Level	[dB]	*10	≤ 72			≤ 65			
Protection Class	--	*11	IP65			IP65			
Ambient Temperature	[°C]	--	0-40			0-40			
Permitted Housing Temperature	[°C]	--	90			90			
Weight ($\leq \emptyset 8$)	[kg]	*12	0.58			0.75			
Weight ($\leq \emptyset 14$)	[kg]	*12	0.7			0.86			

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

*2) The maximum torque when starting or stopping operation

*3) The average input speed

*4) The maximum intermittent input speed

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

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

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

*8) The efficiency at the nominal output torque rating

*9) This does not include lost motion

*10) Contact NIDEC-SHIMPO for the testing conditions and environment

*11) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details

*12) The weight may vary slightly between models