

VRSF E Frame 1 Stage and 2 Stage Specifications

Frame Size	E										
Stage	1 Stage					2Stage					
Ratio	Units	Note	3	5	9	15	20	25	35	45	81
Nominal Output Torque	[Nm]	*1	44.1	56.8	73.5	91.4	78.4	65.4	71	91.3	43.3
Maximum Acceleration Torque	[Nm]	*2	132	171	221	274	235	196	213	274	130
Emergency Stop Torque	[Nm]	--	--	--	--	--	--	--	--	--	--
Nominal Input Speed	[rpm]	*3	3000			3000					
Maximum Input Speed	[rpm]	*4	5000			5000					
No Load Running Torque	[Nm]	*5	1.12			0.62					
Permitted Radial Load	[N]	*6	1370	1670	1960	2350	2500	2650	3430	3520	3530
Permitted Axial Load	[N]	*7	686	833	980	1180	1250	1320	1715	1760	1765
Maximum Radial Load	[N]	*8	3530N			3530N					
Maximum Axial Load	[N]	*9	1765N			1765N					
Moment of Inertia ($\leq \emptyset 8$)	[kgcm ²]	--	--	--	0.61	0.63	0.56	0.53	0.40	0.35	0.34
Moment of Inertia ($\leq \emptyset 14$)	[kgcm ²]	--	4.40	1.90	1.20	1.10	1.10	1.00	0.90	0.85	0.84
Moment of Inertia ($\leq \emptyset 19$)	[kgcm ²]	--	6.20	3.70	2.90	3.30	3.20	3.20	2.80	2.70	2.70
Moment of Inertia ($\leq \emptyset 28$)	[kgcm ²]	--	14.00	11.00	11.00	11.00	11.00	11.00	--	--	--
Efficiency	[%]	*10	90			85					
Torsional Rigidity	[Nm/arcmin]	*11	20			20					
Backlash (Standard)	[Arc-min]	--	≤ 15			≤ 15					
Backlash (Low)	[Arc-min]	--	≤ 5			≤ 5					
Backlash (Precision)	[Arc-min]	--	≤ 3			≤ 3					
Noise Level	[dB]	*12	≤ 75			≤ 75					
Protection Class	--	*13	IP65			IP65					
Ambient Temperature	[°C]	--	0-40			0-40					
Permitted Housing Temperature	[°C]	--	90			90					
Weight ($\leq \emptyset 8$)	[kg]	*14	6.1			7.1					
Weight ($\leq \emptyset 14$)	[kg]	*14	6.5			7.5					
Weight ($\leq \emptyset 19$)	[kg]	*12	7.4			9.3					
Weight ($\leq \emptyset 28$)	[kg]	*12	9.8			11.7					

*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 maximum radial load that the gearbox can accept

*9 The maximum axial load that the gearbox can accept

*10 The efficiency at the nominal output torque rating

*11 This does not include lost motion

*12 Contact Nidec Drive Technology for the testing conditions and environment

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

*14 The weight may vary slightly between models

VRSF

PRE

PRF

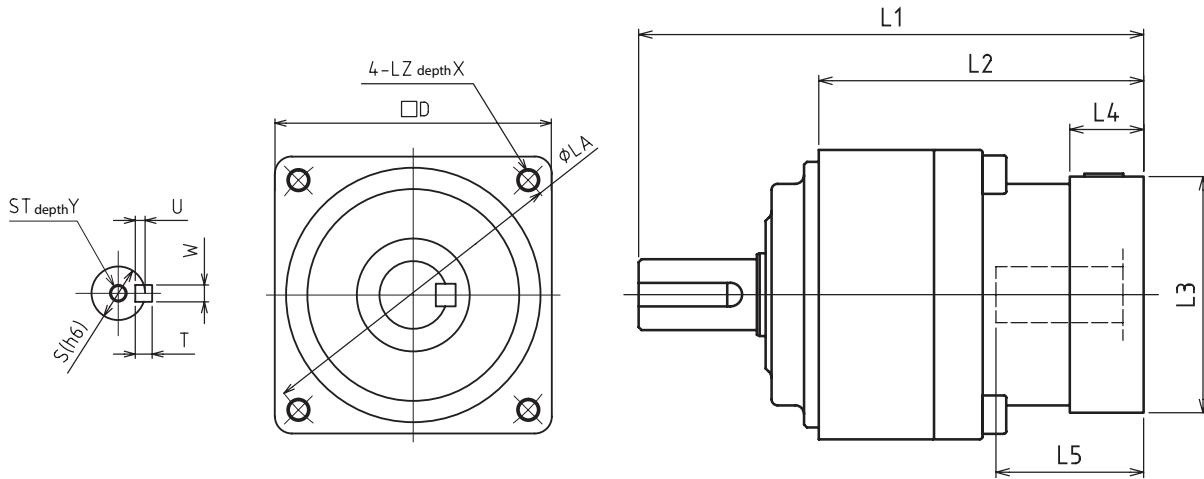
VRL

VRB

VRS

VRT

VRSF E-Frame 1 Stage and 2 Stage Dimensions



Frame Size	Ratio	Input Bore Dia. E	Dimensions															
			L	LR	S	ST	Y	Q	QM	QK	W×U	T	D	LB	LE	LA	LZ	X
E	1 Stage	≅ Ø14	189	75	32	M10	20	55	52	45	10×5	8	125	110	5	135	M10	20
		≅ Ø19	198.5															
		≅ Ø28	224															
		≅ Ø38	240															
	2 Stage	≅ Ø14	210															
		≅ Ø19	225															
		≅ Ø28	246.5															
		≅ Ø38	261.5															

VRSF

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