

## VRS HIGH SPEED SERIES



VRS

- Proven performer in high speed, continuous duty applications
- 30,000 hour service life
- Bearings and seals designed for maximum heat reduction
- Maintenance-free solution that is lubricated for life
- Industry standard mounting dimensions; precise attachment to any motor
- Assembled in the USA

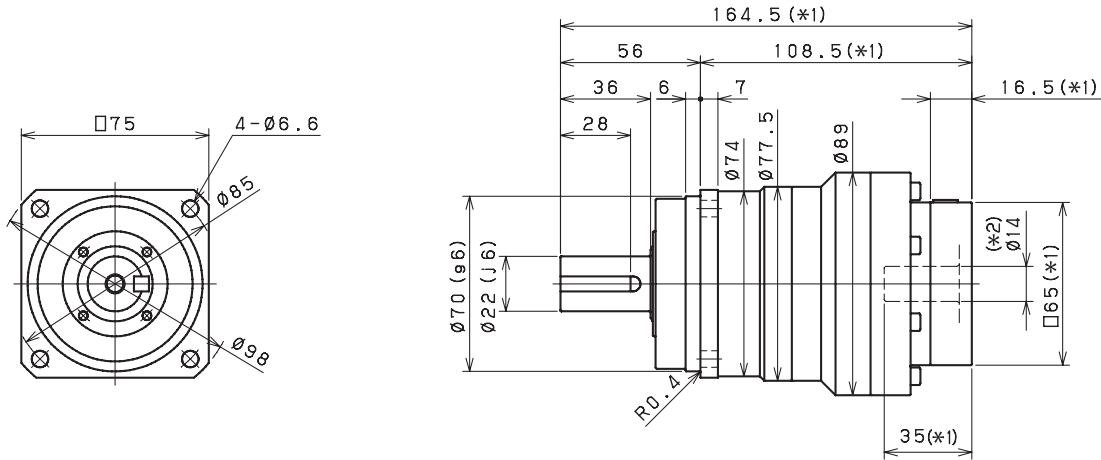
## VRS 075 1-Stage Specifications

Frame Size	075							
Ratio	Unit	Note	3	4	5	7	10	
Nominal Output Torque	[Nm]	1	41	52	52	52	53	
Maximum Acceleration Torque	[Nm]	2	68	90	90	90	70	
Emergency Stop Torque	[Nm]	3	200	250	250	250	200	
Nominal Input Speed	[rpm]	4	4500	4500	4500	4500	4500	
Maximum Input Speed	[rpm]	5	6000	6000	6000	6000	6000	
No Load Running Torque	[Nm]	6	0.35					
Maximum Radial Load	[N]	7	4300					
Maximum Axial Load	[N]	8	3900					
Moment of Inertia ( $\leq \varnothing 8$ )	[kgcm <sup>2</sup> ]	--	--	--	--	--	--	
Moment of Inertia ( $\leq \varnothing 14$ )	[kgcm <sup>2</sup> ]	--	0.68	0.48	0.39	0.32	0.29	
Moment of Inertia ( $\leq \varnothing 19$ )	[kgcm <sup>2</sup> ]	--	1.1	0.87	0.79	0.72	0.69	
Moment of Inertia ( $\leq \varnothing 28$ )	[kgcm <sup>2</sup> ]	--	2.9	2.6	2.6	2.5	2.4	
Efficiency	[%]	9	98					
Torsional Rigidity	[Nm/arc-min]	10	10					
Maximum Torsional Backlash	[arc-min]	--	$\leq 3$					
Noise Level	dB [A]	11	$\leq 67$					
Protection Class	--	12	IP54 (IP65)					
Ambient Temperature	[°C]	--	0-40					
Permitted Housing Temperature	[°C]	--	90					
Weight	[kg]	13	3.4					

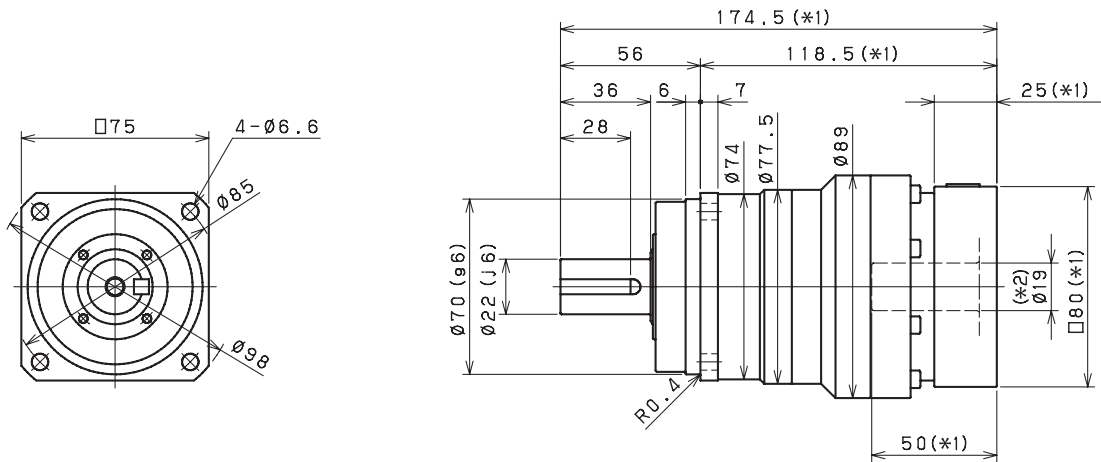
- 1) At nominal input speed, service life is 30,000 hours
- 2) The maximum torque when starting or stopping operation. Apply Cycle Factor found on page 468, for higher duty cycle applications
- 3) The maximum torque allowed under a stress situation. Permitted 1,000 times during service life
- 4) The average input speed at nominal input torque. Maintain housing temperature below permitted value
- 5) The maximum intermittent input speed
- 6) Torque at no load applied to the input shaft at nominal input speed
- 7) The maximum radial load that the gearbox can accept
- 8) The maximum axial load that the gearbox can accept
- 9) The efficiency at the nominal output torque rating
- 10) This does not include lost motion
- 11) Contact Nidec Drive Technology for the testing conditions and environment
- 12) IP65 (wash-down) is available as an option. Contact Drive Nidec Technology for more details
- 13) Weight may vary slightly between models



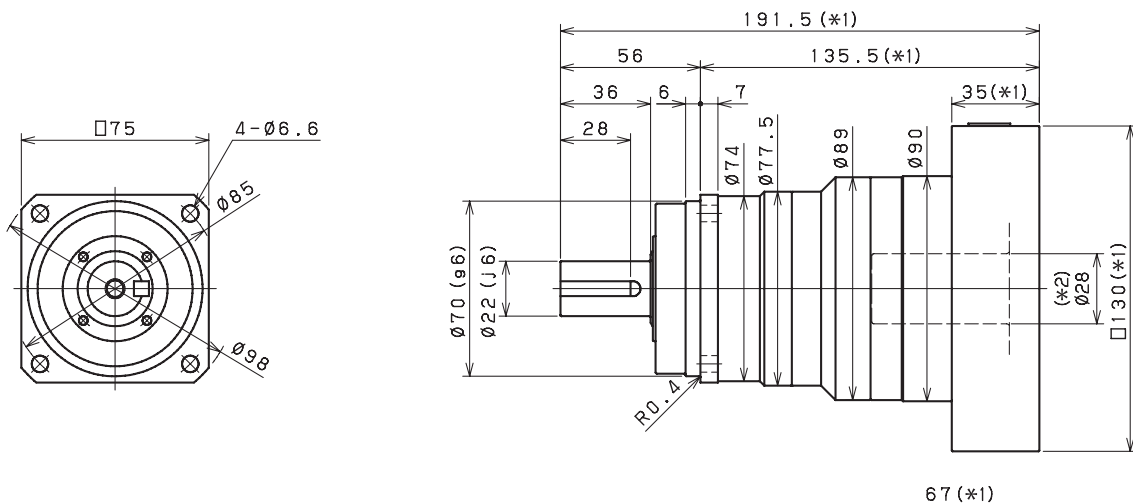
## Input bore size F·Czφ14 mm



## Input bore size F·Czφ19 mm



## Input bore size F·Czφ28 mm



## VRS 100 1-Stage Specifications

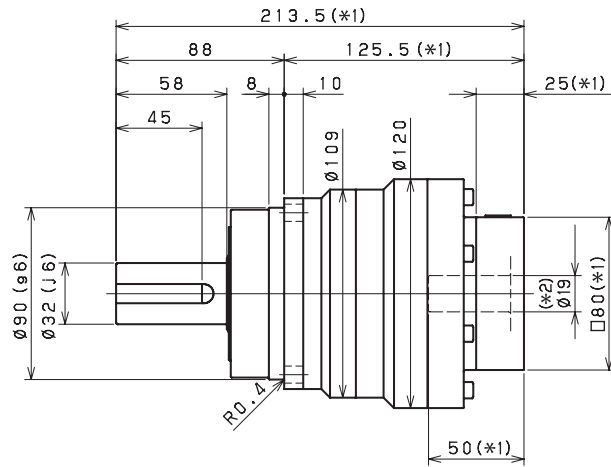
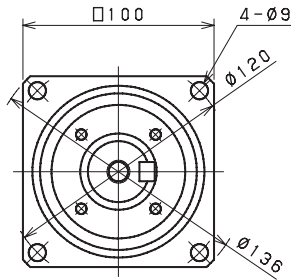
Frame Size	100						
Ratio	Unit	Note	3	4	5	7	10
Nominal Output Torque	[Nm]	1	76	95	95	95	97
Maximum Acceleration Torque	[Nm]	2	180	240	240	240	180
Emergency Stop Torque	[Nm]	3	500	625	625	625	500
Nominal Input Speed	[rpm]	4	3500	4000	4500	4500	4500
Maximum Input Speed	[rpm]	5	6000	6000	6000	6000	6000
No Load Running Torque	[Nm]	6	1.30				
Maximum Radial Load	[N]	7	7000				
Maximum Axial Load	[N]	8	6300				
Moment of Inertia ( $\leq \varnothing 8$ )	[kgcm <sup>2</sup> ]	--	--	--	--	--	--
Moment of Inertia ( $\leq \varnothing 14$ )	[kgcm <sup>2</sup> ]	--	--	--	--	--	--
Moment of Inertia ( $\leq \varnothing 19$ )	[kgcm <sup>2</sup> ]	--	3.1	1.9	1.4	1.0	0.82
Moment of Inertia ( $\leq \varnothing 28$ )	[kgcm <sup>2</sup> ]	--	5.0	3.7	3.1	2.7	2.5
Moment of Inertia ( $\leq \varnothing 38$ )	[kgcm <sup>2</sup> ]	--	12	10	9.5	9.1	8.8
Efficiency	[%]	9	98				
Torsional Rigidity	[Nm/arc-min]	10	31				
Maximum Torsional Backlash	[arc-min]	--	$\leq 3$				
Noise Level	dB [A]	11	$\leq 71$				
Protection Class	--	12	IP54 (IP65)				
Ambient Temperature	[°C]	--	0-40				
Permitted Housing Temperature	[°C]	--	90				
Weight	[kg]	13	8.1				

- 1) At nominal input speed, service life is 30,000 hours
- 2) The maximum torque when starting or stopping operation. Apply Cycle Factor found on page 468, for higher duty cycle applications
- 3) The maximum torque allowed under a stress situation. Permitted 1,000 times during service life
- 4) The average input speed at nominal input torque. Maintain housing temperature below permitted value
- 5) The maximum intermittent input speed
- 6) Torque at no load applied to the input shaft at nominal input speed
- 7) The maximum radial load that the gearbox can accept
- 8) The maximum axial load that the gearbox can accept
- 9) The efficiency at the nominal output torque rating
- 10) This does not include lost motion
- 11) Contact Nidec Drive Technology for the testing conditions and environment
- 12) IP65 (wash-down) is available as an option. Contact Nidec Drive Technology for more details
- 13) Weight may vary slightly between models

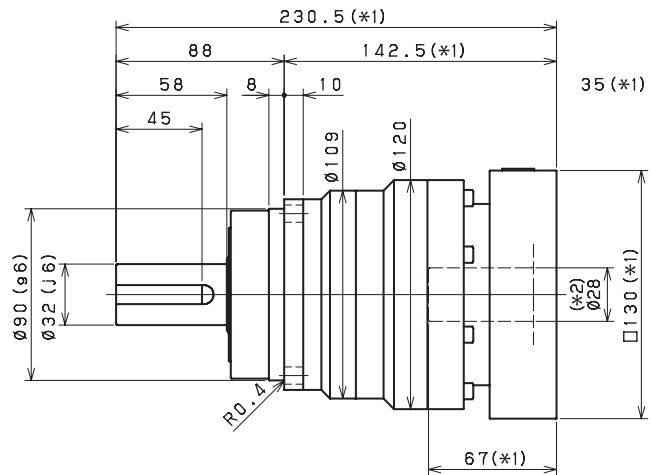
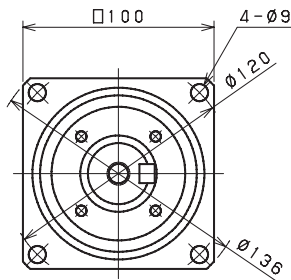


## VRS 100 1-Stage Dimensions

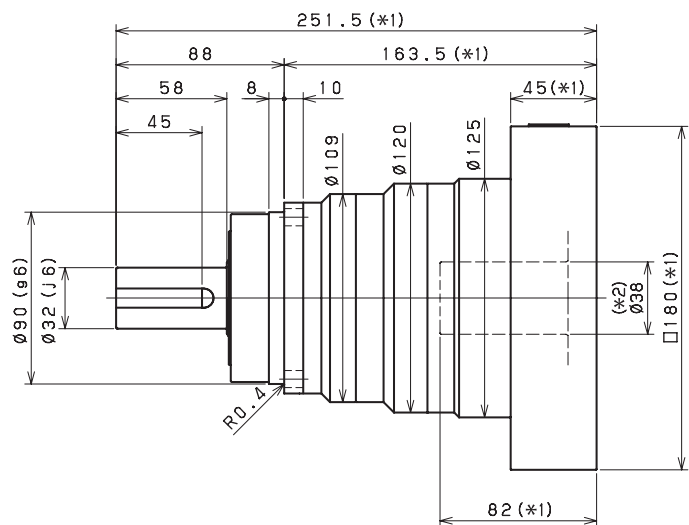
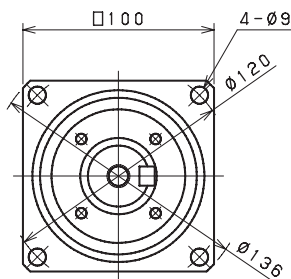
### Input bore size F·Czφ19 mm



### Input bore size F·Czφ28 mm



### Input bore size F·Czφ38 mm



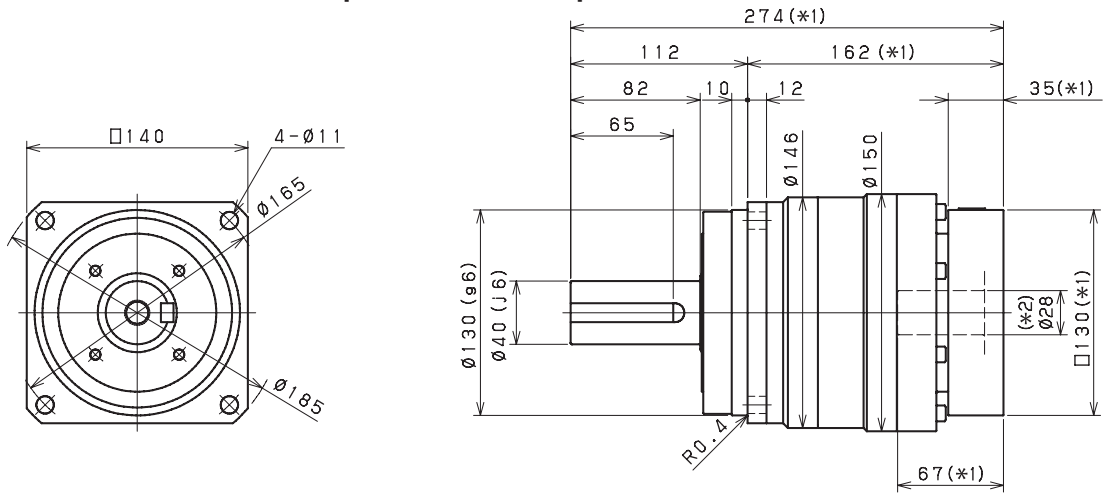
Frame Size	140						
Ratio	Unit	Note	3	4	5	7	10
Nominal Output Torque	[Nm]	1	127	195	187	187	195
Maximum Acceleration Torque	[Nm]	2	310	480	480	480	380
Emergency Stop Torque	[Nm]	3	1000	1250	1250	1250	1000
Nominal Input Speed	[rpm]	4	3000	3500	4500	4500	4500
Maximum Input Speed	[rpm]	5	6000	6000	6000	6000	6000
No Load Running Torque	[Nm]	6	1.63				
Maximum Radial Load	[N]	7	10000				
Maximum Axial Load	[N]	8	9000				
Moment of Inertia ( $\leq \emptyset 14$ )	[kgcm <sup>2</sup> ]	--	--	--	--	--	--
Moment of Inertia ( $\leq \emptyset 19$ )	[kgcm <sup>2</sup> ]	--	--	--	--	--	--
Moment of Inertia ( $\leq \emptyset 28$ )	[kgcm <sup>2</sup> ]	--	12	7.2	5.2	3.8	3.2
Moment of Inertia ( $\leq \emptyset 38$ )	[kgcm <sup>2</sup> ]	--	18	14	12	10	9.6
Moment of Inertia ( $\leq \emptyset 48$ )	[kgcm <sup>2</sup> ]	--	35	29	27	25	25
Efficiency	[%]	9	98				
Torsional Rigidity	[Nm/arc-min]	10	60				
Maximum Torsional Backlash	[arc-min]	--	$\leq 3$				
Noise Level	dB [A]	11	$\leq 67$				
Protection Class	--	12	IP54 (IP65)				
Ambient Temperature	[°C]	--	0-40				
Permitted Housing Temperature	[°C]	--	90				
Weight	[kg]	13					

- 2) The maximum torque when starting or stopping operation. Apply Cycle Factor on page 468, for higher duty cycle applications
- 3) The maximum torque allowed under a stress situation. Permitted 1,000 times during service life
- 4) The average input speed at nominal input torque. Maintain housing temperature below permitted value
- 5) The maximum intermittent input speed
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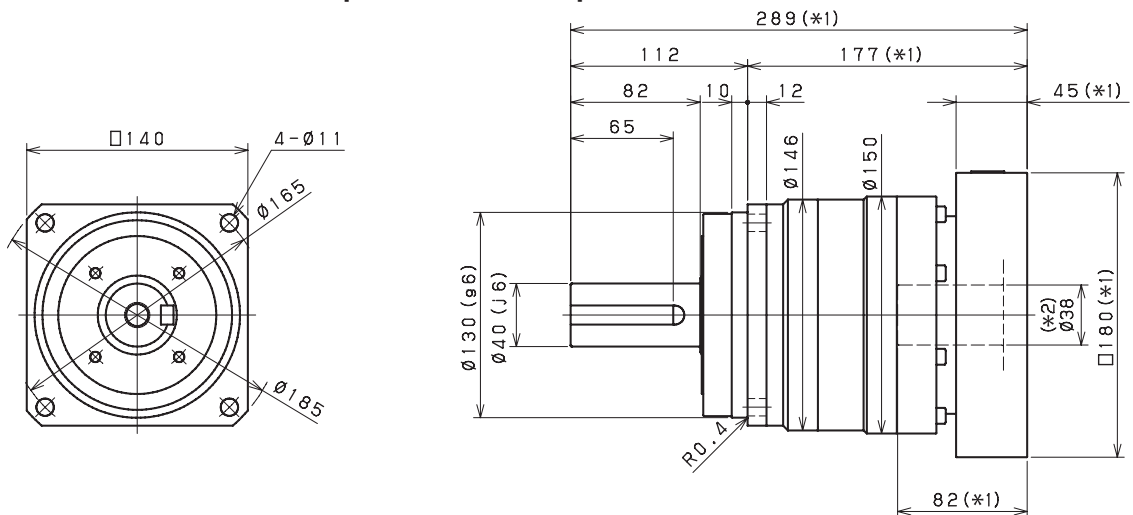


## VRS 140 1-Stage Dimensions

### Input bore size F·Czφ28 mm



### Input bore size F·Czφ38 mm



### Input bore size F·Czφ48 mm

