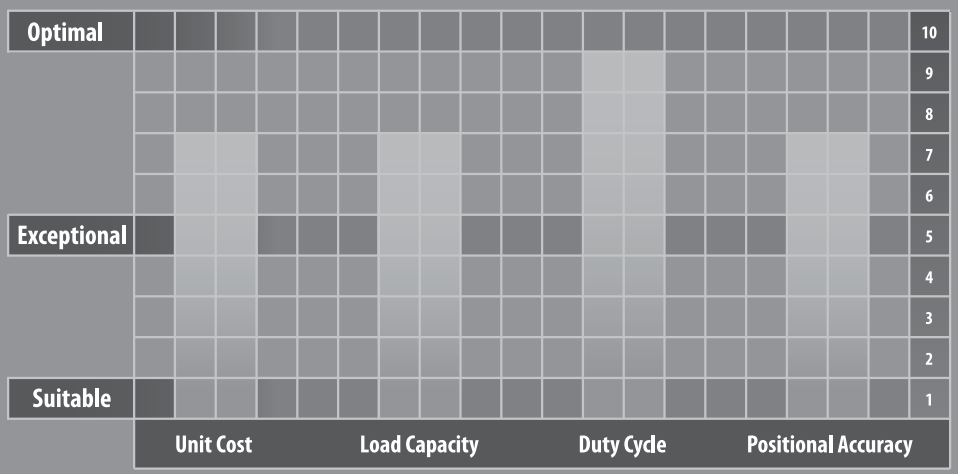
VRS-SERIES

This planetary series has exceptional load handling capabilities, and it is an ideal selection for higher speed and continuous duty applications. The tapered roller bearings at the output of the reducer allow the VRS gearbox to handle larger radial and thrust loads. This internal design provides an extremely smooth running and quiet reducer even with challenging static forces.

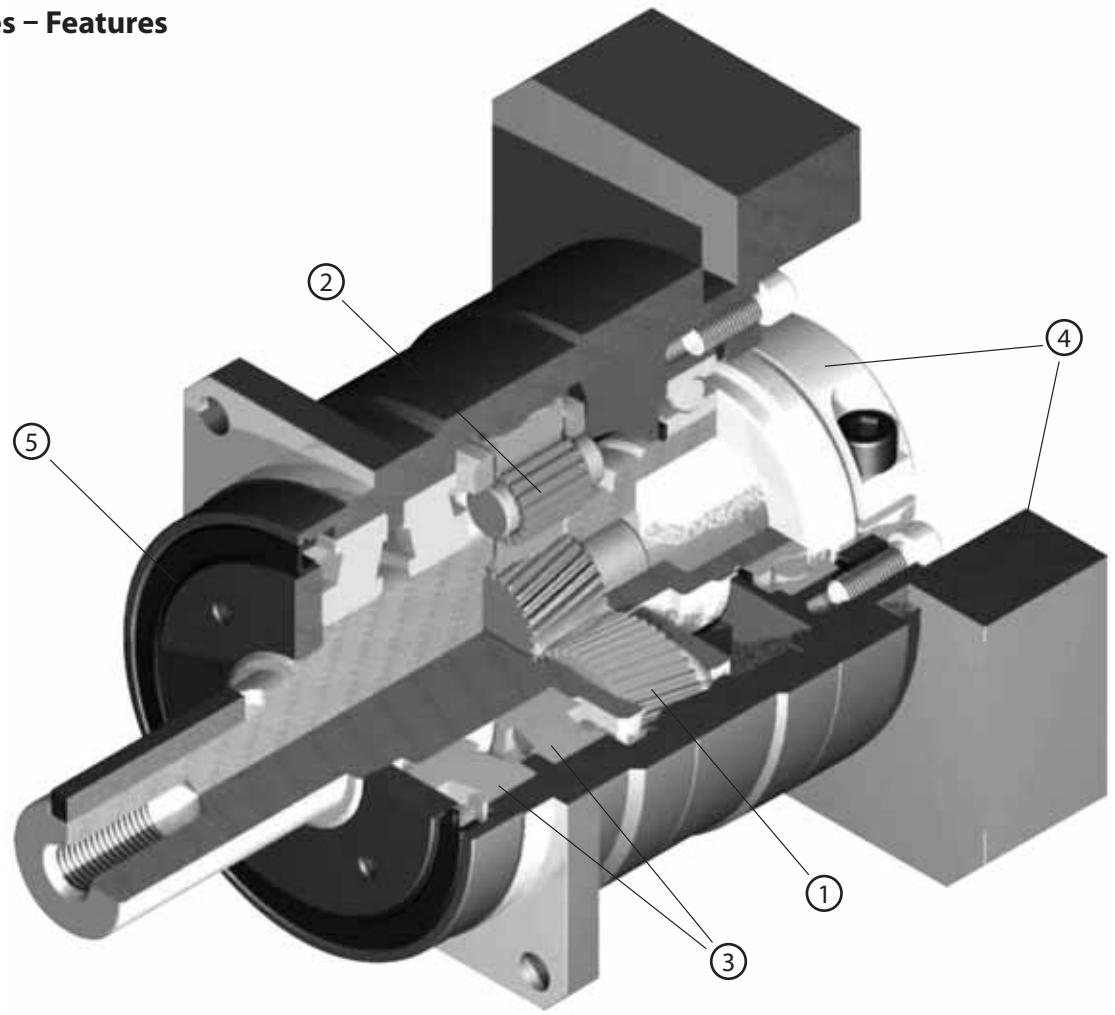
The VRS series is the premier inline series with a maximum 3 arc-min backlash rating and an output torque peaking at 3,700 Nm. The VRS series is commonly utilized in applications such as higher speed packaging and converting equipment, printing machinery and any servo application requiring very low backlash in a more demanding environment.



VRS-SERIES

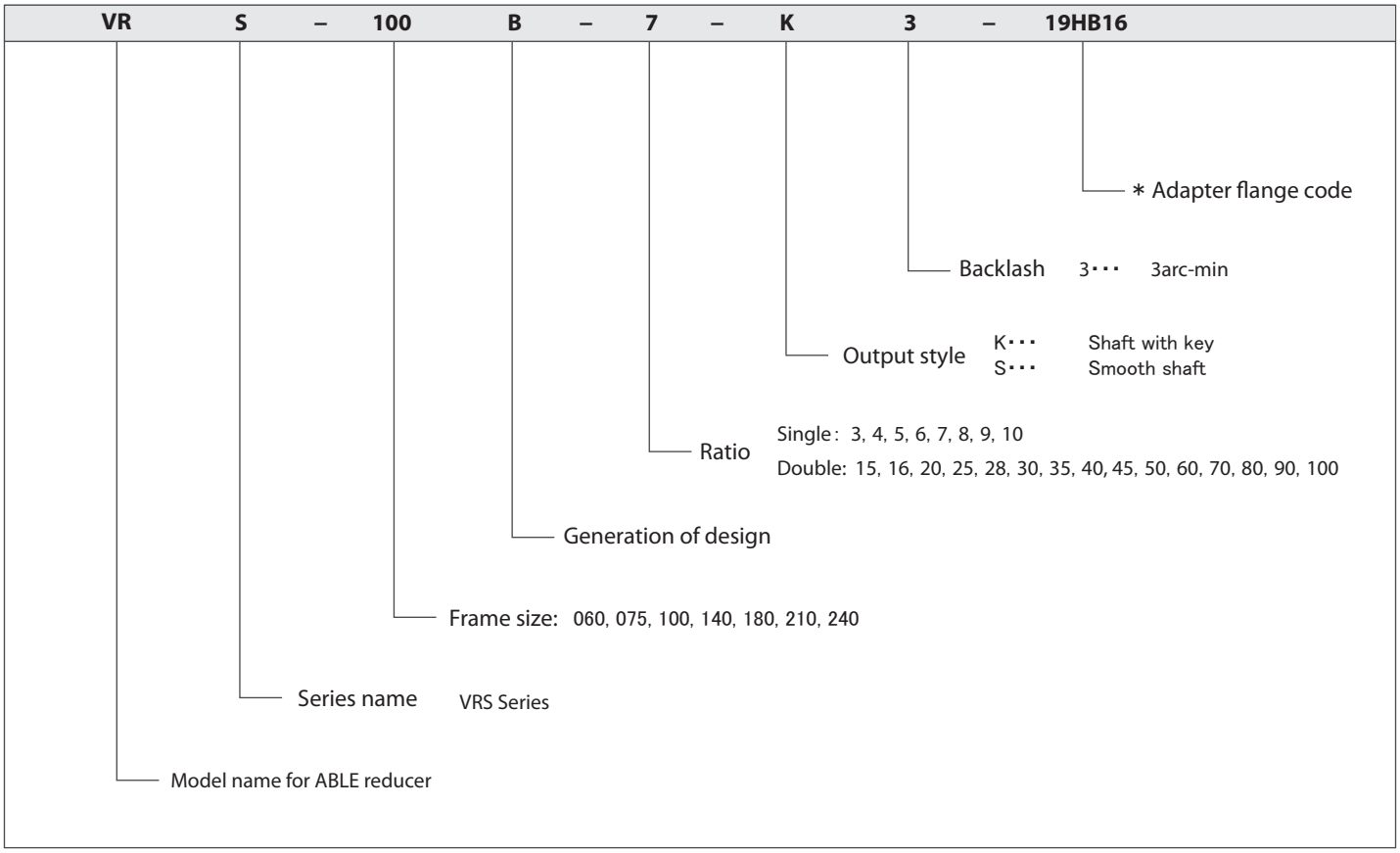
- Industry standard mounting dimensions
- Large variety of frame sizes and ratios
- Thru-bolt mounting style
- Best-in-class backlash (≤3 arc-min)
- Impressive radial and axial load ratings
- Ships in 48 hours in standard frame sizes
- Assembled in the USA

VRS-Series – Features



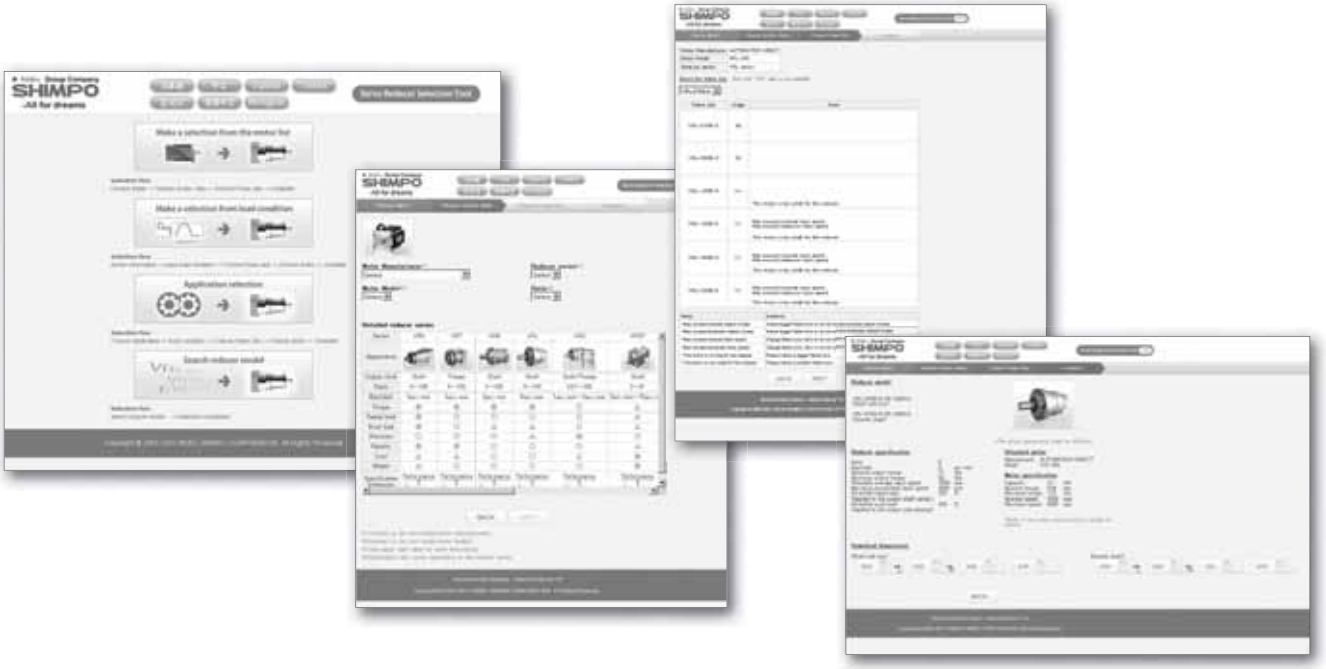
1. High precision: Standard backlash is 3 arc-min, ideal for higher levels of positional accuracy
2. High rigidity & torque: Rigidity and torque capacity are achieved by using uncaged needle roller bearings
3. High load capacity: Taper roller bearings were added to the output section to increase radial and axial load ratings
4. Adapter-bushing connection: Enables a simple, effective attachment to most servo motors
5. No leakage through the seal: High viscosity, anti-separation grease does not liquefy and does not migrate away from the gears
6. Maintenance-free: No need to replace the grease for the life of the unit. The reducer can be positioned in any orientation

VRS-Series – Model Code



*1) Adapter flange code
Adapter flange code varies depending on the motor

Contact us for additional information or refer to our online reducer selection tool.
Selection tool www.nidec-shimpo.co.jp/selection/eng



VRS-060 – 1-Stage Specifications

Frame Size	**060**									
Stage	**1-Stage**									
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 Acceleration 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	0.15							
Permitted Radial Load	[N]	*7	1700	1900	2000	2100	2200	2300	2400	2400
Permitted Axial Load	[N]	*8	2300	2500	2700	2700	2700	2700	2700	2700
Maximum Radial Load	[N]	*9	3000							
Maximum Axial Load	[N]	*10	2700							
Moment of Inertia (≤Ø 8)	[kgcm2]	--	0.150	0.100	0.080	0.070	0.064	0.060	0.058	0.056
Moment of Inertia (≤ Ø 14)	[kgcm2]	--	0.230	0.180	0.160	0.150	0.140	0.140	0.140	0.140
Moment of Inertia (≤ Ø 19)	[kgcm2]	--	0.440	0.390	0.370	0.360	0.350	0.350	0.350	0.340
Efficiency	[%]	*11	95							
Torsional Rigidity	[Nm/arc-min]	*12	3							
Maximum Torsional Backlash	[arc-min]	--	≤ 3							
Noise Level	[dB]	*13	66							
Protection Class	--	*14	IP54 (IP65)							
Ambient Temperature	[°C]	--	0-40							
Permitted Housing Temperature	[°C]	--	90							
Weight	[kg]	*15	1.6							

VRS-060 – 2-Stage Specifications

Frame Size	**060**									
Stage	**2-Stage**									
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 Acceleration 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	2800	2800	3000	3000	3000	3000	3000	3000
Permitted Axial Load	[N]	*8	2700	2700	2700	2700	2700	2700	2700	2700
Maximum Radial Load	[N]	*9	3000							
Maximum Axial Load	[N]	*10	2700							
Moment of Inertia (≤Ø 8)	[kgcm2]	--	0.055	0.057	0.054	0.053	0.055	0.049	0.053	0.049
Moment of Inertia (≤ Ø 14)	[kgcm2]	--	0.140	0.140	0.130	0.130	0.140	0.130	0.130	0.130
Moment of Inertia (≤ Ø 19)	[kgcm2]	--	--	--	--	--	--	--	--	--
Efficiency	[%]	*11	90							
Torsional Rigidity	[Nm/arc-min]	*12	3							
Maximum Torsional Backlash	[arc-min]	--	≤ 3							
Noise Level	[dB]	*13	66							
Protection Class	--	*14	IP54 (IP65)							
Ambient Temperature	[°C]	--	0-40							
Permitted Housing Temperature	[°C]	--	90							
Weight	[kg]	*15	1.8							

VRS-060 – 2-Stage Specifications

Frame Size	**060**								
Stage	**2-Stage**								
Ratio	Unit	Note	45	50	60	70	80	90	100
Nominal Output Torque	[Nm]	*1	18	27	27	27	27	18	18
Maximum Acceleration 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	3000	3000	3000	3000	3000	3000	3000
Permitted Axial Load	[N]	*8	2700	2700	2700	2700	2700	2700	2700
Maximum Radial Load	[N]	*9	3000						
Maximum Axial Load	[N]	*10	2700						
Moment of Inertia (≤Ø 8)	[kgcm2]	--	0.053	0.049	0.049	0.049	0.049	0.049	0.049
Moment of Inertia (≤ Ø 14)	[kgcm2]	--	0.130	0.130	0.130	0.130	0.130	0.130	0.130
Moment of Inertia (≤ Ø 19)	[kgcm2]	--	--	--	--	--	--	--	--
Efficiency	[%]	*11	90						
Torsional Rigidity	[Nm/arc-min]	*12	3						
Maximum Torsional Backlash	[arc-min]	--	≤ 3						
Noise Level	[dB]	*13	66						
Protection Class	--	*14	IP54 (IP65)						
Ambient Temperature	[°C]	--	0-40						
Permitted Housing Temperature	[°C]	--	90						
Weight	[kg]	*15	1.8						

*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) This is the torque at no load applied on the input shaft. The input speed is 3,000 rpm for VRS060

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

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

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

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

*11) The efficiency at the nominal torque rating

*12) This does not include the lost motion

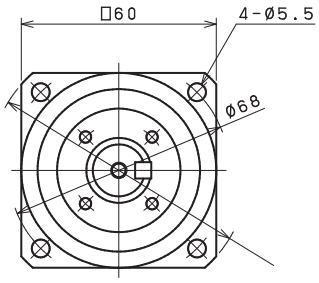
*13) Contact NIDEC-SHIMPO for the testing conditions and environment

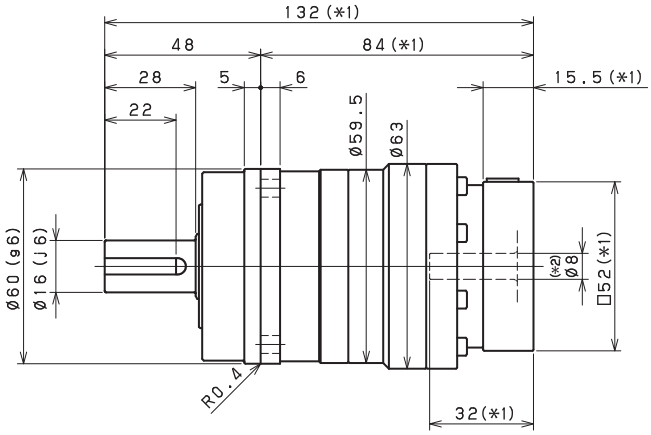
*14) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options

*15) The weight may vary slightly between models

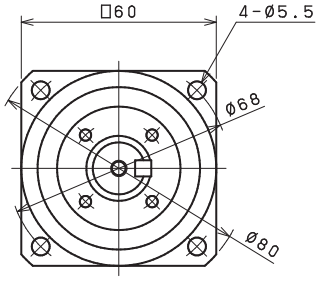
VRS-o6o – 1-Stage Dimensions

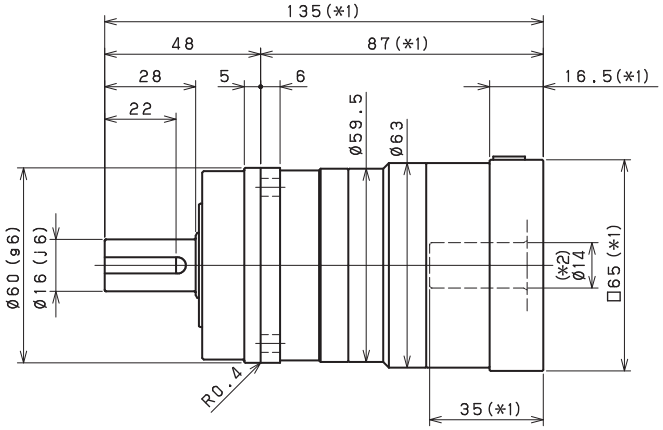
Input shaft bore ≦φ8



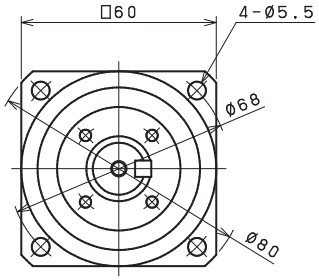


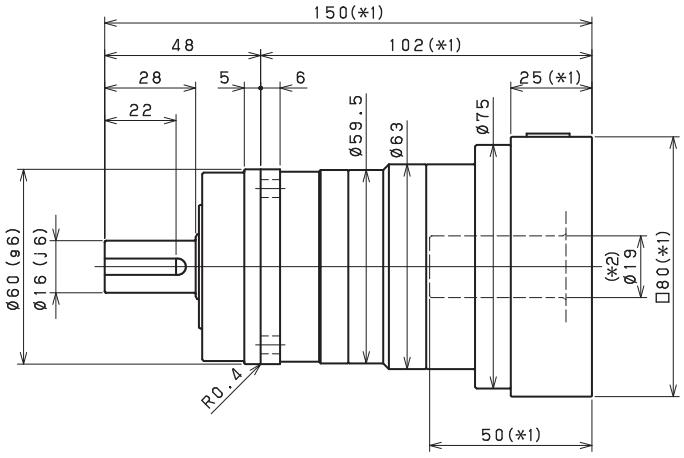
Input shaft bore ≦φ14

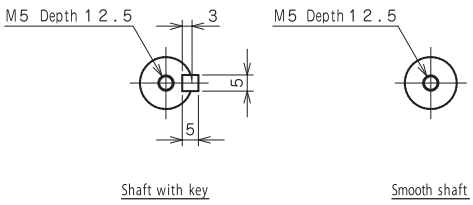




Input shaft bore ≦φ19





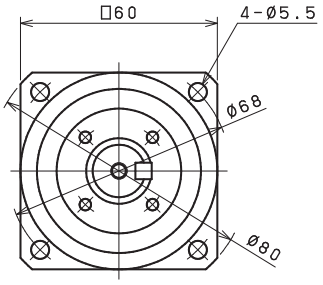


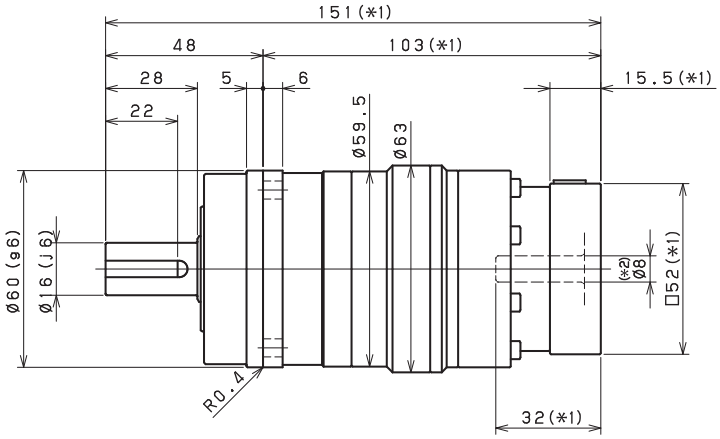
*1) Length will vary depending on motor

*2) Bushing will be inserted to adapt to motor shaft

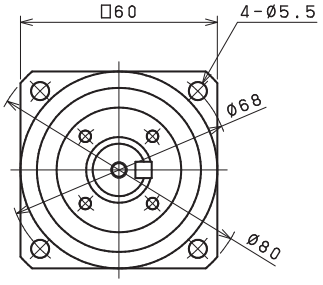
VRS-060 – 2-Stage Dimensions

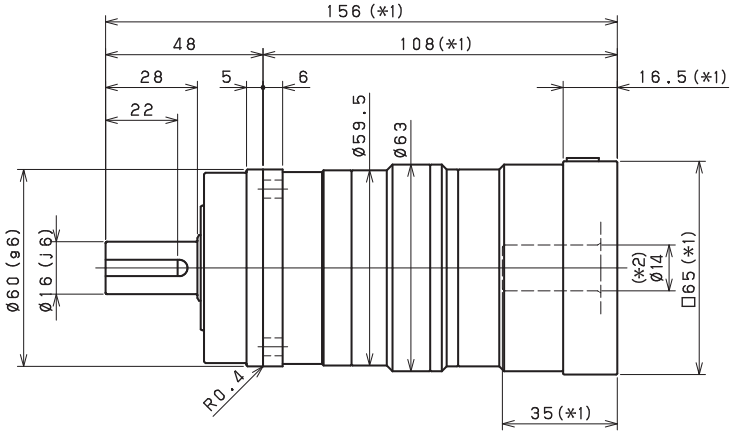
Input shaft bore ≦φ8

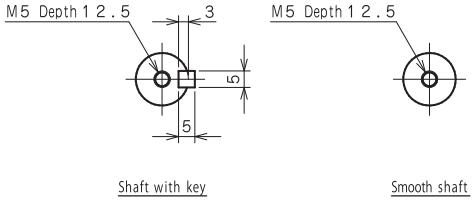




Input shaft bore ≦φ14



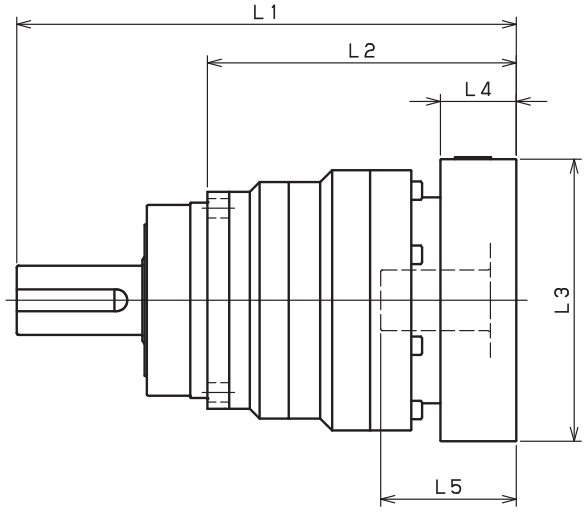




*1) Length will vary depending on motor

*2) Bushing will be inserted to adapt to motor shaft

VRS-060 – 1-Stage Adapter Dimensions



Model number	**: Adapter code	1-Stage					
		L1	L*	L2	L3	L4	L5
VRS-060-□-□-8** (Input shaft bore ≦ φ8)	AA•AC•AD•AF•AG•AL•AM•AN•AQ	132	116.5	84	□52	15.5	32
	AB•AE•AH•AJ•AK	137	116.5	89	□52	20.5	37
	BA•BB•BD•BE•BG•BH•BJ	132	116.5	84	□60	15.5	32
	BC•BF	137	116.5	89	□60	20.5	37
	CA	137	116.5	89	□70	20.5	37
VRS-060-□-□-14** (Input shaft bore ≦ φ14)	BA•BB•BD•BE•BF•BG•BH•BJ•BK•BP	135	118.5	87	□65	16.5	35
	BC•BH•BM•BN	140	118.5	92	□65	21.5	40
	BL	145	118.5	97	□65	26.5	45
	CA•CC	135	118.5	87	□70	16.5	35
	CB	140	118.5	92	□70	21.5	40
	DA•DB•DC•DD•DF•DH•DJ	135	118.5	87	□80	16.5	35
	DE•DL	140	118.5	92	□80	21.5	40
	DG•DK	145	118.5	97	□80	26.5	45
	EA•EB•EC•EF•EG•EK•EL	135	118.5	87	□90	16.5	35
	EJ•EM	140	118.5	92	□90	21.5	40
	ED•EE•EH	145	118.5	97	□90	26.5	45
	FA	135	118.5	87	□100	16.5	35
	FB	135	118.5	87	□115	16.5	35
VRS-060-□-□-19** (Input shaft bore ≦ φ19)	DA•DB•DC	150	125	102	□80	25	50
	DD	160	125	112	□80	35	60
	DE	155	125	107	□80	30	55
	EA	155	125	107	□90	30	55
	EB•ED	150	125	102	□90	25	50
	EC	160	125	112	□90	35	60
	FA	150	125	102	□100	25	50
	FB	160	125	112	□100	35	60

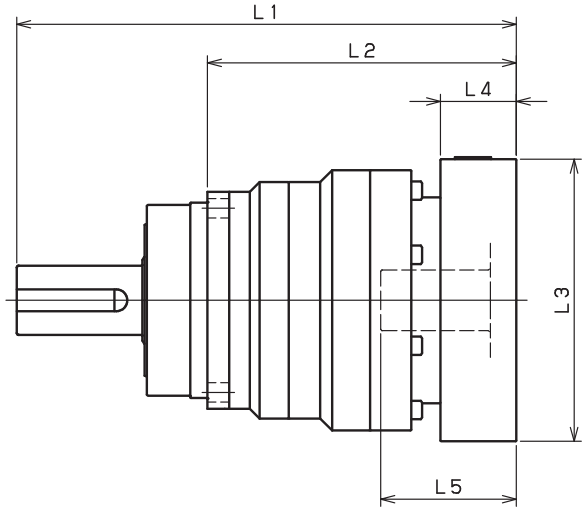
*1) Single reduction : 1/3~ 1/10

*2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

VRS-060 – 2-Stage Adapter Dimensions



Model number	**: Adapter code	2-Stage					
		L1	L*	L2	L3	L4	L5
VRS-060-□-□-8** (Input shaft bore ≦ φ8)	AA•AC•AD•AF•AG•AL•AM•AN•AQ	151	135.5	103	□52	15.5	32
	AB•AE•AH•AJ•AK	156	135.5	108	□52	20.5	37
	BA•BB•BD•BE•BG•BH•BJ	151	135.5	103	□60	15.5	32
	BC•BF	156	135.5	108	□60	20.5	37
	CA	156	135.5	108	□70	20.5	37
VRS-060-□-□-14** (Input shaft bore ≦ φ14)	BA•BB•BD•BE•BF•BG•BH•BJ•BK•BP	156	139.5	108	□65	16.5	35
	BC•BH•BM•BN	161	139.5	113	□65	21.5	40
	BL	166	139.5	118	□65	26.5	45
	CA•CC	156	139.5	108	□70	16.5	35
	CB	161	139.5	113	□70	21.5	40
	DA•DB•DC•DD•DF•DH•DJ	156	139.5	108	□80	16.5	35
	DE•DL	161	139.5	113	□80	21.5	40
	DG•DK	166	139.5	118	□80	26.5	45
	EA•EB•EC•EF•EG•EK•EL	156	139.5	108	□90	16.5	35
	EJ•EM	161	139.5	113	□90	21.5	40
	ED•EE•EH	166	139.5	118	□90	26.5	45
	FA	156	139.5	108	□100	16.5	35
	FB	156	139.5	108	□115	16.5	35
VRS-060-□-□-19** (Input shaft bore ≦ φ19)	DA•DB•DC	171	146	123	□80	25	50
	DD	181	146	133	□80	35	60
	DE	176	146	128	□80	30	55
	EA	176	146	128	□90	30	55
	EB•ED	171	146	123	□90	25	50
	EC	181	146	133	□90	35	60
	FA	171	146	123	□100	25	50
	FB	181	146	133	□100	35	60

*1) Double reduction : 1/15~ 1/100

*2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

VRS-075 – 1-Stage Specifications

Frame Size	**075**									
Stage	**1-Stage**									
Ratio	Unit	Note	3	4	5	6	7	8	9	10
Nominal Output Torque	[Nm]	*1	50	75	75	75	75	75	50	50
Maximum Acceleration Torque	[Nm]	*2	80	125	125	125	125	125	80	80
Emergency Stop Torque	[Nm]	*3	200	250	250	250	250	250	200	200
Nominal Input Speed	[rpm]	*4	3000							
Maximum Input Speed	[rpm]	*5	6000							
No Load Running Torque	[Nm]	*6	0.35							
Permitted Radial Load	[N]	*7	2300	2500	2700	2800	3000	3100	3200	3300
Permitted Axial Load	[N]	*8	3400	3700	3900	3900	3900	3900	3900	3900
Maximum Radial Load	[N]	*9	4300							
Maximum Axial Load	[N]	*10	3900							
Moment of Inertia (≤Ø 8)	[kgcm2]	--	--	--	--	--	--	--	--	--
Moment of Inertia (≤ Ø 14)	[kgcm2]	--	0.670	0.470	0.380	0.340	0.310	0.300	0.290	0.290
Moment of Inertia (≤ Ø 19)	[kgcm2]	--	1.100	0.930	0.850	0.810	0.780	0.760	0.750	0.750
Moment of Inertia (≤ Ø 28)	[kgcm2]	--	3.100	2.900	2.900	2.800	2.800	2.800	2.800	2.800
Efficiency	[%]	*11	95							
Torsional Rigidity	[Nm/arc-min]	*12	10							
Maximum Torsional Backlash	[arc-min]	--	≤ 3							
Noise Level	[dB]	*13	67							
Protection Class	--	*14	IP54 (IP65)							
Ambient Temperature	[°C]	--	0-40							
Permitted Housing Temperature	[°C]	--	90							
Weight	[kg]	*15	3.4							

VRS-075 – 2-Stage Specifications

Frame Size	**075**									
Stage	**2-Stage**									
Ratio	Unit	Note	15	16	20	25	28	30	35	40
Nominal Output Torque	[Nm]	*1	50	75	75	75	75	50	75	75
Maximum Acceleration Torque	[Nm]	*2	80	125	125	125	125	80	125	125
Emergency Stop Torque	[Nm]	*3	200	250	250	250	250	200	250	250
Nominal Input Speed	[rpm]	*4	3000							
Maximum Input Speed	[rpm]	*5	6000							
No Load Running Torque	[Nm]	*6	0.06							
Permitted Radial Load	[N]	*7	3700	3800	4000	4300	4300	4300	4300	4300
Permitted Axial Load	[N]	*8	3900	3900	3900	3900	3900	3900	3900	3900
Maximum Radial Load	[N]	*9	4300							
Maximum Axial Load	[N]	*10	3900							
Moment of Inertia (≤Ø 8)	[kgcm2]	--	0.130	0.140	0.130	0.120	0.140	0.099	0.120	0.098
Moment of Inertia (≤ Ø 14)	[kgcm2]	--	0.280	0.300	0.280	0.280	0.290	0.250	0.270	0.250
Moment of Inertia (≤ Ø 19)	[kgcm2]	--	0.720	0.730	0.720	0.710	0.730	0.700	0.710	0.690
Moment of Inertia (≤ Ø 28)	[kgcm2]	--	--	--	--	--	--	--	--	--
Efficiency	[%]	*11	90							
Torsional Rigidity	[Nm/arc-min]	*12	10							
Maximum Torsional Backlash	[arc-min]	--	≤ 3							
Noise Level	[dB]	*13	67							
Protection Class	--	*14	IP54 (IP65)							
Ambient Temperature	[°C]	--	0-40							
Permitted Housing Temperature	[°C]	--	90							
Weight	[kg]	*15	3.8							

VRS-075 – 2-Stage Specifications

Frame Size	**075**								
Stage	**2-Stage**								
Ratio	Unit	Note	45	50	60	70	80	90	100
Nominal Output Torque	[Nm]	*1	50	75	75	75	75	50	50
Maximum Acceleration Torque	[Nm]	*2	80	125	125	125	125	80	80
Emergency Stop Torque	[Nm]	*3	200	250	250	250	250	200	200
Nominal Input Speed	[rpm]	*4	3000						
Maximum Input Speed	[rpm]	*5	6000						
No Load Running Torque	[Nm]	*6	0.06						
Permitted Radial Load	[N]	*7	4300	4300	4300	4300	4300	4300	4300
Permitted Axial Load	[N]	*8	3900	3900	3900	3900	3900	3900	3900
Maximum Radial Load	[N]	*9	4300						
Maximum Axial Load	[N]	*10	3900						
Moment of Inertia (≤Ø 8)	[kgcm2]	--	0.120	0.098	0.098	0.097	0.097	0.097	0.097
Moment of Inertia (≤ Ø 14)	[kgcm2]	--	0.270	0.250	0.250	0.250	0.250	0.250	0.250
Moment of Inertia (≤ Ø 19)	[kgcm2]	--	0.710	0.690	0.690	0.690	0.690	0.690	0.690
Moment of Inertia (≤ Ø 28)	[kgcm2]	--	--	--	--	--	--	--	--
Efficiency	[%]	*11	90						
Torsional Rigidity	[Nm/arc-min]	*12	10						
Maximum Torsional Backlash	[arc-min]	--	≤ 3						
Noise Level	[dB]	*13	67						
Protection Class	--	*14	IP54 (IP65)						
Ambient Temperature	[°C]	--	0-40						
Permitted Housing Temperature	[°C]	--	90						
Weight	[kg]	*15	3.8						

*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) This is the torque at no load applied on the input shaft. The input speed is 3,000 rpm for VRS075

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

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

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

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

*11) The efficiency at the nominal torque rating

*12) This does not include the lost motion

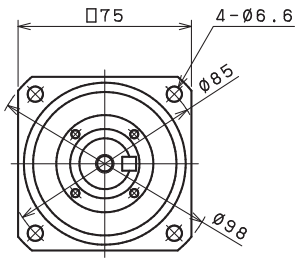
*13) Contact NIDEC-SHIMPO for the testing conditions and environment

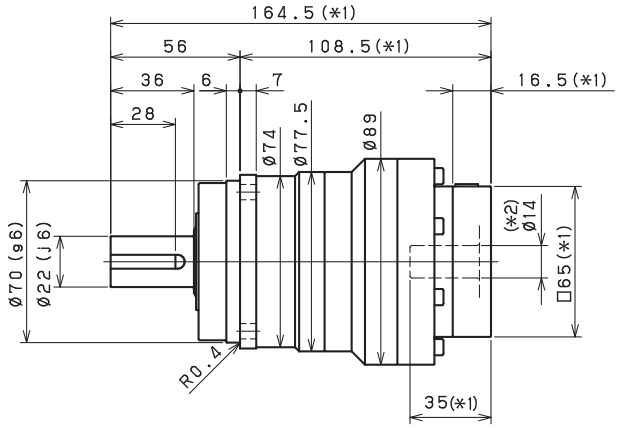
*14) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options

*15) The weight may vary slightly between models

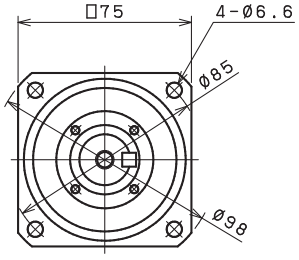
VRS-075 – 1-Stage Dimensions

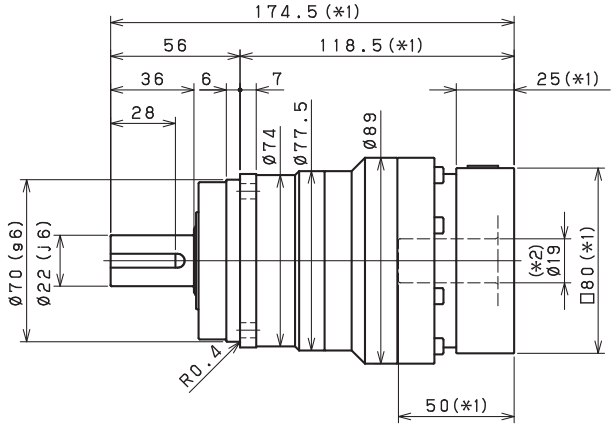
Input shaft bore ≦φ14



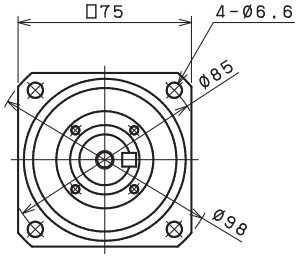


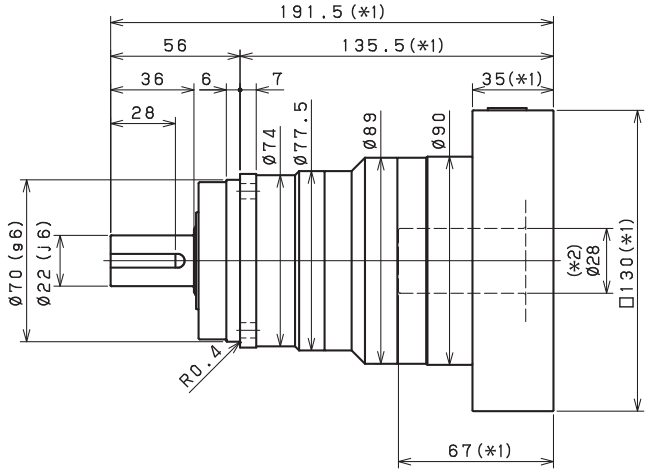
Input shaft bore ≦φ19

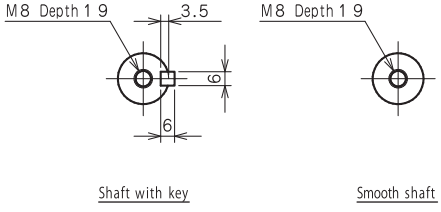




Input shaft bore ≦φ28





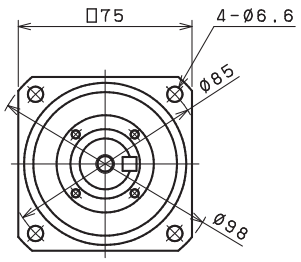


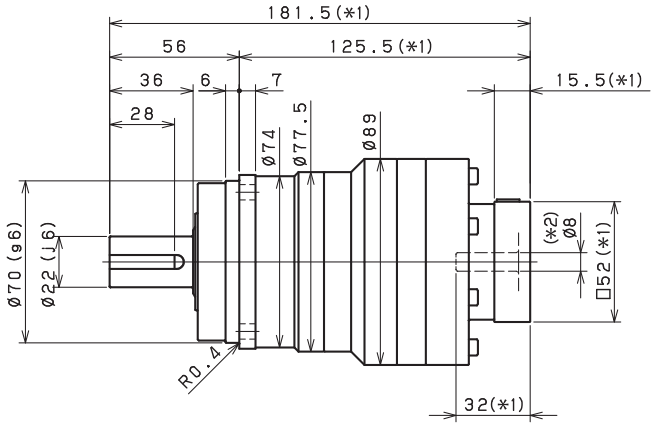
*1) Length will vary depending on motor

*2) Bushing will be inserted to adapt to motor shaft

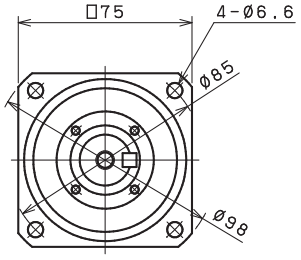
VRS-075 – 2-Stage Dimensions

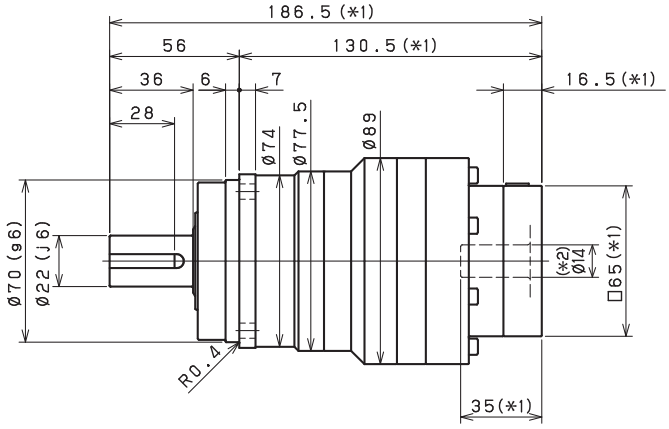
Input shaft bore ≦φ8



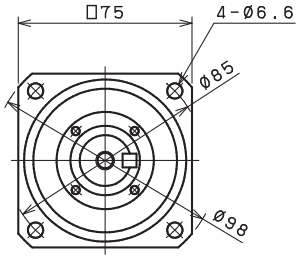


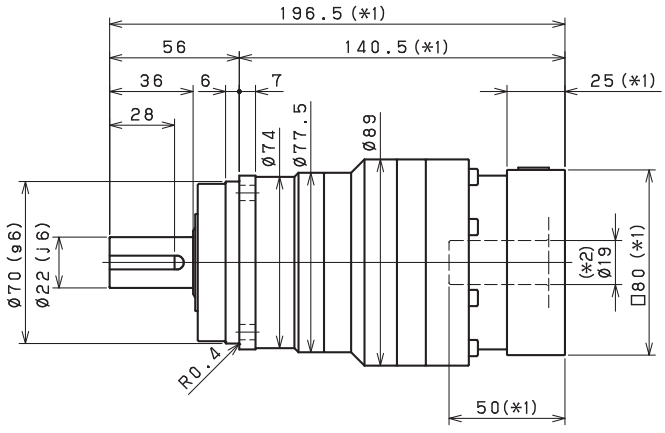
Input shaft bore ≦φ14

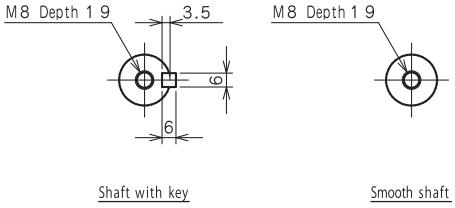




Input shaft bore ≦φ19



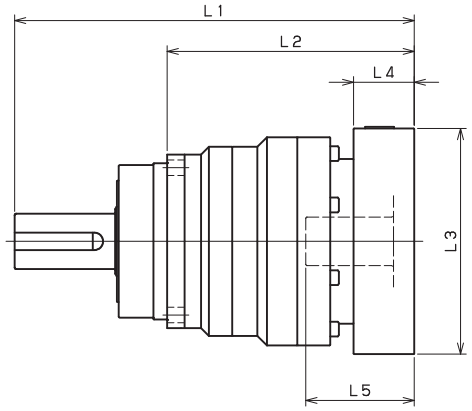




*1) Length will vary depending on motor

*2) Bushing will be inserted to adapt to motor shaft

VRS-075 – 1-Stage Adapter Dimensions



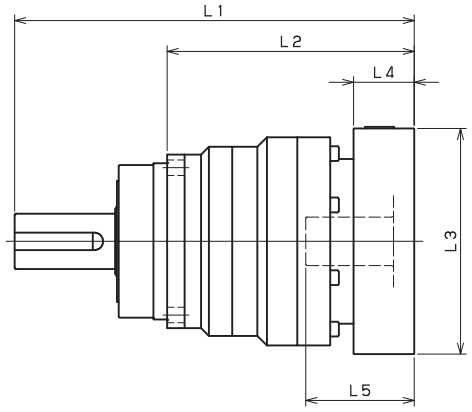
Model number	**: Adapter code	1-Stage					
		L1	L*	L2	L3	L4	L5
VRS-075-□-□-8** (Input shaft bore ≦ φ8)	AA•AC•AD•AF•AG•AL•AM•AN•AQ	--	--	--	--	--	--
	AB•AE•AH•AJ•AK	--	--	--	--	--	--
	BA•BB•BD•BE•BG•BH•BJ	--	--	--	--	--	--
	CA	--	--	--	--	--	--
VRS-075-□-□-14** (Input shaft bore ≦ φ14)	BA•BB•BD•BE•BF•BG•BH•BJ•BK•BP	164.5	148	108.5	□65	16.5	35
	BC•BH•BM•BN	169.5	148	113.5	□65	21.5	40
	CA•CC	164.5	148	108.5	□70	16.5	35
	DA•DB•DC•DD•DF•DH•DJ	164.5	148	108.5	□80	16.5	35
	EA•EB•EC•EF•EG•EK•EL	164.5	148	108.5	□90	16.5	35
	FA	164.5	148	108.5	□100	16.5	35
	FB	174.5	148	118.5	□100	26.5	45
	JA	179.5	148	123.5	□150	31.5	50
VRS-075-□-□-19** (Input shaft bore ≦ φ19)	DA•DB•DC	174.5	149.5	118.5	□80	25	50
	EB•ED	174.5	149.5	118.5	□90	25	50
	FA	174.5	149.5	118.5	□100	25	50
	FB	184.5	149.5	128.5	□100	35	60
	GA•GC•GH	179.5	149.5	123.5	□115	30	55
	GB•GD•GJ	174.5	149.5	118.5	□115	25	50
	GE•GF	184.5	149.5	128.5	□115	35	60
	HA	174.5	149.5	118.5	□130	25	50
	HB	189.5	149.5	133.5	□130	40	65
	HC•HD•HE	179.5	149.5	123.5	□130	30	55
	JA	184.5	149.5	128.5	□150	35	60
	JB	189.5	149.5	133.5	□150	40	65
VRS-075-□-□-28** (Input shaft bore ≦ φ28)	FA•FB•FC	191.5	156.5	135.5	□100	35	67
	FD•FE	186.5	156.5	130.5	□100	30	62
	GA•GB•GC•GD•GE•GF•GG•GH	191.5	156.5	135.5	□115	35	67
	HA•HC•HD	191.5	156.5	135.5	□130	35	67
	HB	201.5	156.5	145.5	□130	45	77
	HE	206.5	156.5	150.5	□130	50	82
	HF	186.5	156.5	130.5	□130	30	62
	JA•JB•JC•JF	191.5	156.5	135.5	□150	35	67
	JD	211.5	156.5	155.5	□150	55	87
	JE	201.5	156.5	145.5	□150	45	77

*1) Single reduction : 1/3~ 1/10 *2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

VRS-075 – 2-Stage Adapter Dimensions



Model number	**: Adapter code	2-Stage					
		L1	L*	L2	L3	L4	L5
VRS-075-□-□-8** (Input shaft bore ≦ φ8)	AA•AC•AD•AF•AG•AL•AM•AN•AQ	181.5	166	125.5	□52	15.5	32
	AB•AE•AH•AJ•AK	186.5	166	130.5	□52	20.5	37
	BA•BB•BD•BE•BG•BH•BJ	181.5	166	125.5	□60	15.5	32
	CA	186.5	166	130.5	□70	20.5	37
VRS-075-□-□-14** (Input shaft bore ≦ φ14)	BA•BB•BD•BE•BF•BG•BH•BJ•BK•BP	186.5	170	130.5	□65	16.5	35
	BC•BH•BM•BN	191.5	170	135.5	□65	21.5	40
	CA•CC	186.5	170	130.5	□70	16.5	35
	DA•DB•DC•DD•DF•DH•DJ	186.5	170	130.5	□80	16.5	35
	EA•EB•EC•EF•EG•EK•EL	186.5	170	130.5	□90	16.5	35
	FA	186.5	170	130.5	□100	16.5	35
	FB	196.5	170	140.5	□100	26.5	45
	JA	201.5	170	145.5	□150	31.5	50
VRS-075-□-□-19** (Input shaft bore ≦ φ19)	DA•DB•DC	196.5	171.5	140.5	□80	25	50
	EB•ED	196.5	171.5	140.5	□90	25	50
	FA	196.5	171.5	140.5	□100	25	50
	FB	206.5	171.5	150.5	□100	35	60
	GA•GC•GH	201.5	171.5	145.5	□115	30	55
	GB•GD•GJ	196.5	171.5	140.5	□115	25	50
	GE•GF	206.5	171.5	150.5	□115	35	60
	HA	196.5	171.5	140.5	□130	25	50
	HB	211.5	171.5	155.5	□130	40	65
	HC•HD•HE	201.5	171.5	145.5	□130	30	55
	JA	206.5	171.5	150.5	□150	35	60
	JB	211.5	171.5	155.5	□150	40	65
VRS-075-□-□-28** (Input shaft bore ≦ φ28)	FA•FB•FC	215.5	180.5	159.5	□100	35	67
	FD•FE	210.5	180.5	154.5	□100	30	62
	GA•GB•GC•GD•GE•GF•GG•GH	215.5	180.5	159.5	□115	35	67
	HA•HC•HD	215.5	180.5	159.5	□130	35	67
	HB	225.5	180.5	169.5	□130	45	77
	HE	230.5	180.5	174.5	□130	50	82
	HF	210.5	180.5	154.5	□130	30	62
	JA•JB•JC•JF	215.5	180.5	159.5	□150	35	67
	JD	235.5	180.5	179.5	□150	55	87
	JE	225.5	180.5	169.5	□150	45	77

*1) Double reduction : 1/15~ 1/100 *2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

VRS-100 – 1-Stage Specifications

Frame Size			**100**							
Stage			**1-Stage**							
Ratio	Unit	Note	3	4	5	6	7	8	9	10
Nominal Output Torque	[Nm]	*1	120	120	180	180	180	180	120	120
Maximum Acceleration Torque	[Nm]	*2	225	330	330	330	330	330	225	225
Emergency Stop Torque	[Nm]	*3	500	625	625	625	625	625	500	500
Nominal Input Speed	[rpm]	*4	3000							
Maximum Input Speed	[rpm]	*5	6000							
No Load Running Torque	[Nm]	*6	1.30							
Permitted Radial Load	[N]	*7	3400	3700	4000	4200	4400	4600	4800	4900
Permitted Axial Load	[N]	*8	4800	5200	5600	5900	6100	6300	6300	6300
Maximum Radial Load	[N]	*9	7000							
Maximum Axial Load	[N]	*10	6300							
Moment of Inertia (≤Ø 14)	[kgcm2]	--	--	--	--	--	--	--	--	--
Moment of Inertia (≤ Ø 19)	[kgcm2]	--	3.200	2.000	1.500	1.300	1.100	1.000	0.960	0.930
Moment of Inertia (≤ Ø 28)	[kgcm2]	--	5.200	4.000	3.600	3.300	3.100	3.000	3.000	3.000
Moment of Inertia (≤ Ø 38)	[kgcm2]	--	13.000	12.000	11.000	11.000	11.000	11.000	11.000	11.000
Efficiency	[%]	*11	95							
Torsional Rigidity	[Nm/arc-min]	*12	31							
Maximum Torsional Backlash	[arc-min]	--	≤ 3							
Noise Level	[dB]	*13	71							
Protection Class	--	*14	IP54 (IP65)							
Ambient Temperature	[°C]	--	0-40							
Permitted Housing Temperature	[°C]	--	90							
Weight	[kg]	*15	8.1							

VRS-100 – 2-Stage Specifications

Frame Size			**100**							
Stage			**2-Stage**							
Ratio	Unit	Note	15	16	20	25	28	30	35	40
Nominal Output Torque	[Nm]	*1	120	180	180	180	180	120	180	180
Maximum Acceleration Torque	[Nm]	*2	225	330	330	330	330	225	330	330
Emergency Stop Torque	[Nm]	*3	500	625	625	625	625	500	625	625
Nominal Input Speed	[rpm]	*4	3000							
Maximum Input Speed	[rpm]	*5	6000							
No Load Running Torque	[Nm]	*6	0.42							
Permitted Radial Load	[N]	*7	5600	5700	6100	6500	6700	6900	7000	7000
Permitted Axial Load	[N]	*8	6300	6300	6300	6300	6300	6300	6300	6300
Maximum Radial Load	[N]	*9	7000							
Maximum Axial Load	[N]	*10	6300							
Moment of Inertia (≤Ø 14)	[kgcm2]	--	0.420	0.480	0.400	0.380	0.440	0.290	0.370	0.280
Moment of Inertia (≤ Ø 19)	[kgcm2]	--	0.860	0.910	0.830	0.820	0.870	0.740	0.810	0.730
Moment of Inertia (≤ Ø 28)	[kgcm2]	--	2.800	2.900	2.800	2.800	2.800	2.700	2.700	2.700
Moment of Inertia (≤ Ø 38)	[kgcm2]	--	--	--	--	--	--	--	--	--
Efficiency	[%]	*11	90							
Torsional Rigidity	[Nm/arc-min]	*12	31							
Maximum Torsional Backlash	[arc-min]	--	≤ 3							
Noise Level	[dB]	*13	71							
Protection Class	--	*14	IP54 (IP65)							
Ambient Temperature	[°C]	--	0-40							
Permitted Housing Temperature	[°C]	--	90							
Weight	[kg]	*15	8.8							

VRS-100 – 2-Stage Specifications

Frame Size	**100**								
Stage	**2-Stage**								
Ratio	Unit	Note	45	50	60	70	80	90	100
Nominal Output Torque	[Nm]	*1	120	180	180	180	180	120	120
Maximum Acceleration Torque	[Nm]	*2	225	330	330	330	330	225	225
Emergency Stop Torque	[Nm]	*3	500	625	625	625	625	500	500
Nominal Input Speed	[rpm]	*4	3000						
Maximum Input Speed	[rpm]	*5	6000						
No Load Running Torque	[Nm]	*6	0.42						
Permitted Radial Load	[N]	*7	7000	7000	7000	7000	7000	7000	7000
Permitted Axial Load	[N]	*8	6300	6300	6300	6300	6300	6300	6300
Maximum Radial Load	[N]	*9	7000						
Maximum Axial Load	[N]	*10	6300						
Moment of Inertia (≤Ø 14)	[kgcm2]	--	0.370	0.280	0.280	0.280	0.280	0.270	0.270
Moment of Inertia (≤ Ø 19)	[kgcm2]	--	0.800	0.730	0.730	0.730	0.730	0.730	0.730
Moment of Inertia (≤ Ø 28)	[kgcm2]	--	2.700	2.700	2.700	2.700	2.700	2.700	2.700
Moment of Inertia (≤ Ø 38)	[kgcm2]	--	--	--	--	--	--	--	--
Efficiency	[%]	*11	90						
Torsional Rigidity	[Nm/arc-min]	*12	31						
Maximum Torsional Backlash	[arc-min]	--	≤ 3						
Noise Level	[dB]	*13	71						
Protection Class	--	*14	IP54 (IP65)						
Ambient Temperature	[°C]	--	0-40						
Permitted Housing Temperature	[°C]	--	90						
Weight	[kg]	*15	8.8						

*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) This is the torque at no load applied on the input shaft. The input speed is 3,000 rpm for VRS100

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

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

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

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

*11) The efficiency at the nominal torque rating

*12) This does not include the lost motion

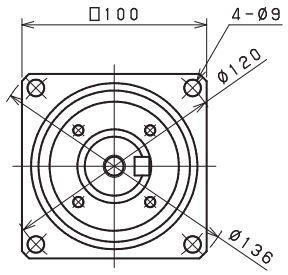
*13) Contact NIDEC-SHIMPO for the testing conditions and environment

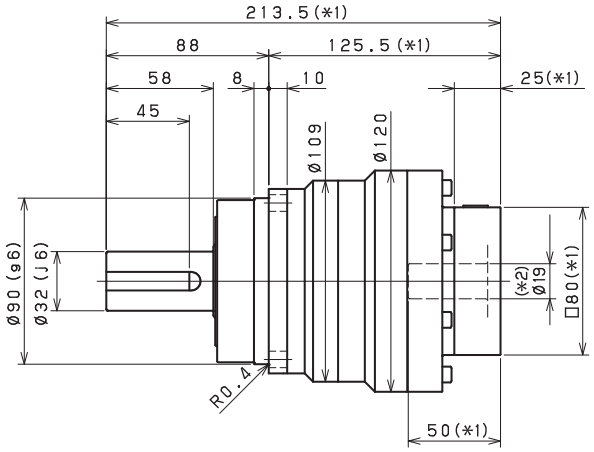
*14) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options

*15) The weight may vary slightly between models

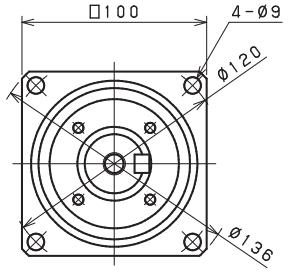
VRS-100 – 1-Stage Dimensions

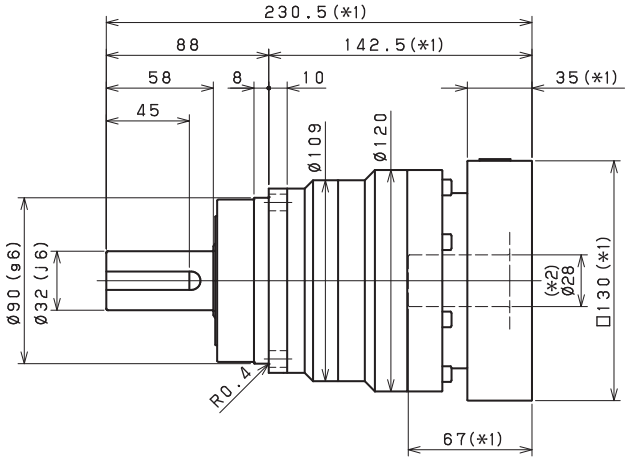
Input shaft bore ≦φ19



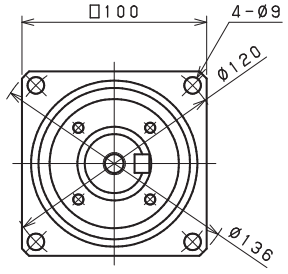


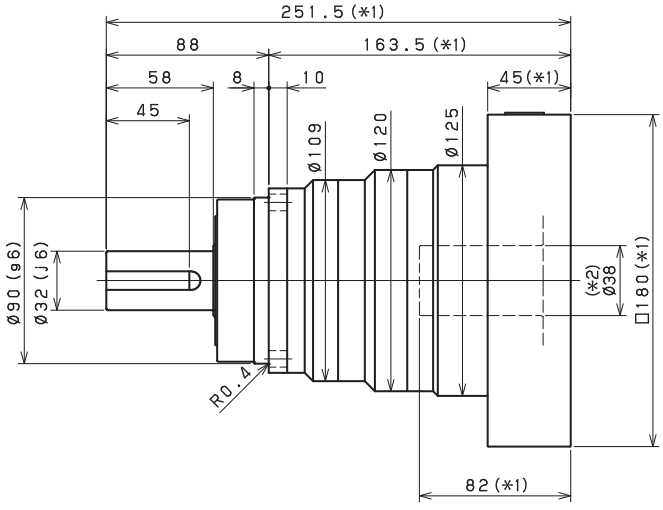
Input shaft bore ≦φ28

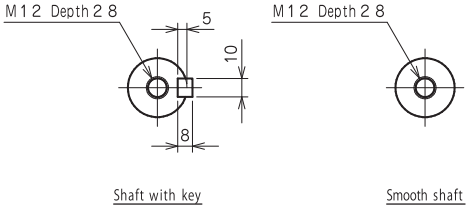




Input shaft bore ≦φ38





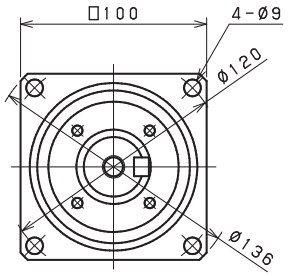


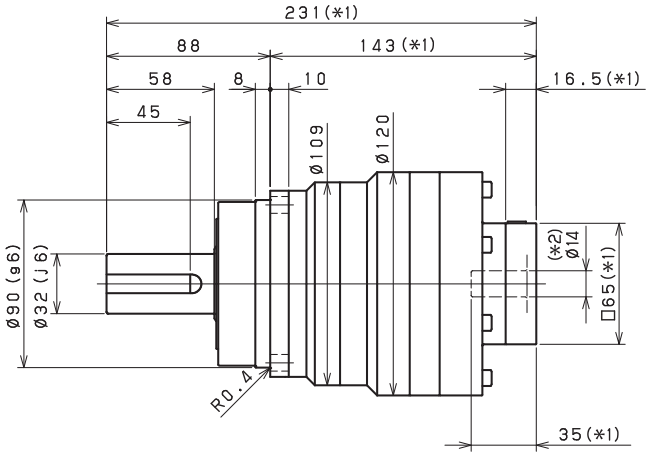
*1) Length will vary depending on motor

*2) Bushing will be inserted to adapt to motor shaft

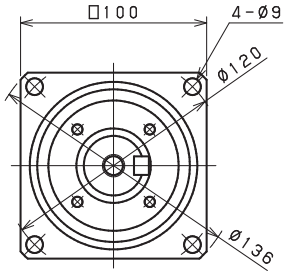
VRS-100 – 2-Stage Dimensions

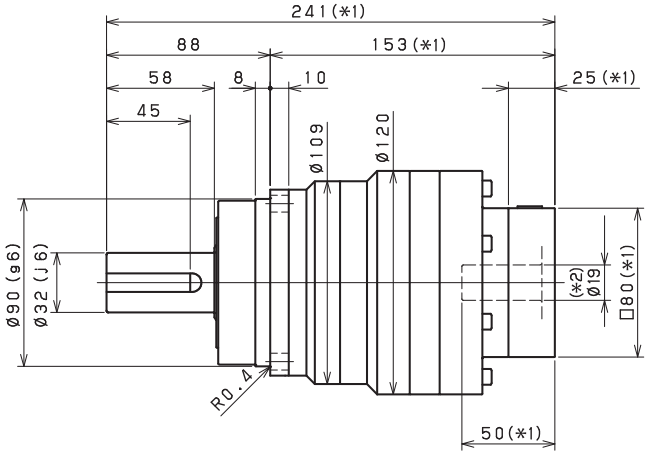
Input shaft bore ≦φ14



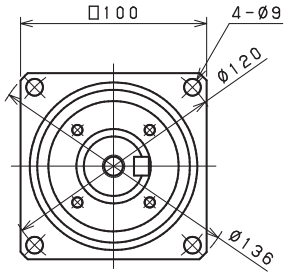


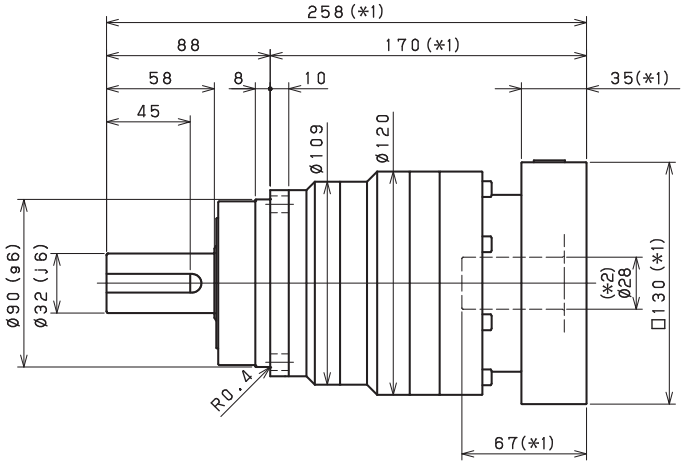
Input shaft bore ≦φ19

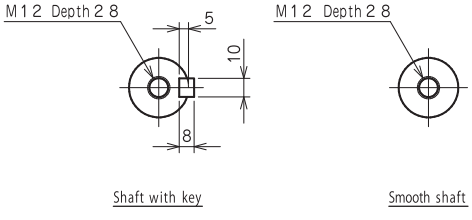




Input shaft bore ≦φ28





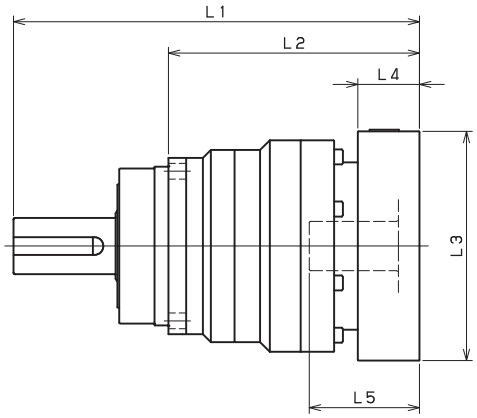


*1) Length will vary depending on motor

*2) Bushing will be inserted to adapt to motor shaft

VRS

VRS-100 – 1-Stage Adapter Dimensions



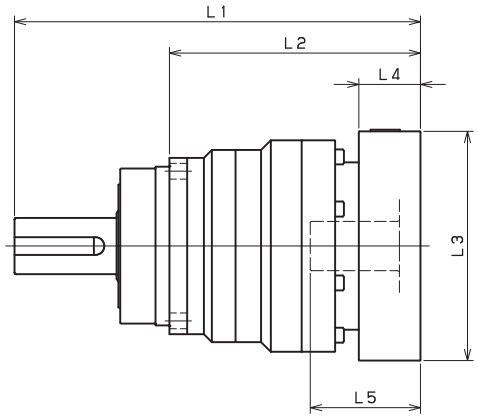
Model number	**: Adapter code	1-Stage					
		L1	L*	L2	L3	L4	L5
VRS-100-□-□-14** (Input shaft bore ≦ φ14)	BA•BB•BD•BE•BF•BG•BH•BJ•BK•BP	--	--	--	--	--	--
	BC•BH•BM•BN	--	--	--	--	--	--
	CA•CC	--	--	--	--	--	--
	DA•DB•DC•DD•DF•DH•DJ	--	--	--	--	--	--
	EA•EB•EC•EF•EG•EK•EL	--	--	--	--	--	--
	FA	--	--	--	--	--	--
	FB	--	--	--	--	--	--
	JA	--	--	--	--	--	--
VRS-100-□-□-19** (Input shaft bore ≦ φ19)	DA•DB•DC	213.5	188.5	125.5	□80	25	50
	EB	213.5	188.5	125.5	□90	25	50
	FA	213.5	188.5	125.5	□100	25	50
	FB	223.5	188.5	135.5	□100	35	60
	GB•GD	213.5	188.5	125.5	□115	25	50
	HA	223.5	188.5	135.5	□115	35	60
	--	213.5	188.5	125.5	□130	25	50
	--	228.5	188.5	140.5	□130	40	65
	--	218.5	188.5	130.5	□130	30	55
	HB	223.5	188.5	135.5	□150	35	60
VRS-100-□-□-28** (Input shaft bore ≦ φ28)	FA•FB•FC	230.5	195.5	142.5	□100	35	67
	GA•GB•GC•GD•GE•GF•GG•GH	230.5	195.5	142.5	□115	35	67
	HA•HC•HD	230.5	195.5	142.5	□130	35	67
	HB	240.5	195.5	152.5	□130	45	77
	HF	225.5	195.5	137.5	□130	30	62
	JA•JB•JC•JF	230.5	195.5	142.5	□150	35	67
	JD	250.5	195.5	162.5	□150	55	87
	JE	240.5	195.5	152.5	□150	45	77
	KA•KB•KE	230.5	195.5	142.5	□180	35	67
	KD	240.5	195.5	152.5	□180	45	77
VRS-100-□-□-38** (Input shaft bore ≦ φ38)	HA	251.5	206.5	163.5	□130	45	82
	HB•HE	246.5	206.5	158.5	□130	40	77
	JA	251.5	206.5	163.5	□150	45	82
	KA•KB•KC	251.5	206.5	163.5	□180	45	82
	KD	286.5	206.5	198.5	□180	80	117
	KE	266.5	206.5	178.5	□180	60	97

*1) Single reduction : 1/3~ 1/10 *2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

VRS-100 – 2-Stage Adapter Dimensions



Model number	**: Adapter code	2-Stage					
		L1	L*	L2	L3	L4	L5
VRS-100-□-□-14** (Input shaft bore ≦ φ14)	BA•BB•BD•BE•BF•BG•BH•BJ•BK•BP	231	214.5	143	□65	16.5	35
	BC•BH•BM•BN	236	214.5	148	□65	21.5	40
	CA•CC	231	214.5	143	□70	16.5	35
	DA•DB•DC•DD•DF•DH•DJ	231	214.5	143	□80	16.5	35
	EA•EB•EC•EF•EG•EK•EL	231	214.5	143	□90	16.5	35
	FA	231	214.5	143	□100	16.5	35
	FB	241	214.5	153	□100	26.5	45
	JA	246	214.5	158	□150	31.5	50
VRS-100-□-□-19** (Input shaft bore ≦ φ19)	DA•DB•DC	241	216	153	□80	25	50
	EB	241	216	153	□90	25	50
	FA	241	216	153	□100	25	50
	FB	251	216	163	□100	35	60
	GB•GD	241	216	153	□115	25	50
	HA	251	216	163	□115	35	60
	--	241	216	153	□130	25	50
	--	256	216	168	□130	40	65
	--	246	216	158	□130	30	55
	HB	251	216	163	□150	35	60
VRS-100-□-□-28** (Input shaft bore ≦ φ28)	FA•FB•FC	258	223	170	□100	35	67
	GA•GB•GC•GD•GE•GF•GG•GH	258	223	170	□115	35	67
	HA•HC•HD	258	223	170	□130	35	67
	HB	268	223	180	□130	45	77
	HF	253	223	165	□130	30	62
	JA•JB•JC•JF	258	223	170	□150	35	67
	JD	278	223	190	□150	55	87
	JE	268	223	180	□150	45	77
	KA•KB•KE	258	223	170	□180	35	67
	KD	268	223	180	□180	45	77
VRS-100-□-□-38** (Input shaft bore ≦ φ38)	HA	275.5	230.5	187.5	□130	45	82
	HB•HE	270.5	230.5	182.5	□130	40	77
	JA	275.5	230.5	187.5	□150	45	82
	KA•KB•KC	275.5	230.5	187.5	□180	45	82
	KD	310.5	230.5	222.5	□180	80	117
	KE	290.5	230.5	202.5	□180	60	97

*1) Double reduction : 1/15~ 1/100 *2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

VRS-140 – 1-Stage Specifications

Frame Size	**140**									
Stage	**1-Stage**									
Ratio	Unit	Note	3	4	5	6	7	8	9	10
Nominal Output Torque	[Nm]	*1	240	240	360	360	360	360	240	240
Maximum Acceleration Torque	[Nm]	*2	470	700	700	700	700	700	470	470
Emergency Stop Torque	[Nm]	*3	1000	1250	1250	1250	1250	1250	1000	1000
Nominal Input Speed	[rpm]	*4	2000							
Maximum Input Speed	[rpm]	*5	4000							
No Load Running Torque	[Nm]	*6	1.63							
Permitted Radial Load	[N]	*7	6700	7400	7900	8300	8700	9100	9400	9700
Permitted Axial Load	[N]	*8	9000	9000	9000	9000	9000	9000	9000	9000
Maximum Radial Load	[N]	*9	10000							
Maximum Axial Load	[N]	*10	9000							
Moment of Inertia (≤Ø 19)	[kgcm2]	--	--	--	--	--	--	--	--	--
Moment of Inertia (≤ Ø 28)	[kgcm2]	--	12.000	7.400	5.800	4.900	4.100	3.800	3.600	3.400
Moment of Inertia (≤ Ø 38)	[kgcm2]	--	20.000	15.000	13.000	13.000	12.000	12.000	11.000	11.000
Moment of Inertia (≤ Ø 48)	[kgcm2]	--	42.000	37.000	36.000	35.000	34.000	34.000	34.000	33.000
Efficiency	[%]	*11	95							
Torsional Rigidity	[Nm/arc-min]	*12	60							
Maximum Torsional Backlash	[arc-min]	--	≤ 3							
Noise Level	[dB]	*13	67							
Protection Class	--	*14	IP54 (IP65)							
Ambient Temperature	[°C]	--	0-40							
Permitted Housing Temperature	[°C]	--	90							
Weight	[kg]	*15	17							

VRS-140 – 2-Stage Specifications

Frame Size	**140**									
Stage	**2-Stage**									
Ratio	Unit	Note	15	16	20	25	28	30	35	40
Nominal Output Torque	[Nm]	*1	240	360	360	360	360	240	360	360
Maximum Acceleration Torque	[Nm]	*2	470	700	700	700	700	470	700	700
Emergency Stop Torque	[Nm]	*3	1000	1250	1250	1250	1250	1000	1250	1250
Nominal Input Speed	[rpm]	*4	2000							
Maximum Input Speed	[rpm]	*5	4000							
No Load Running Torque	[Nm]	*6	0.56							
Permitted Radial Load	[N]	*7	10000	10000	10000	10000	10000	10000	10000	10000
Permitted Axial Load	[N]	*8	9000	9000	9000	9000	9000	9000	9000	9000
Maximum Radial Load	[N]	*9	10000							
Maximum Axial Load	[N]	*10	9000							
Moment of Inertia (≤Ø 19)	[kgcm2]	--	1.300	1.500	1.200	1.100	1.400	0.850	1.100	0.830
Moment of Inertia (≤ Ø 28)	[kgcm2]	--	3.200	3.500	3.100	3.100	3.300	2.800	3.100	2.800
Moment of Inertia (≤ Ø 38)	[kgcm2]	--	11.000	11.000	11.000	11.000	11.000	10.000	11.000	10.000
Moment of Inertia (≤ Ø 48)	[kgcm2]	--	--	--	--	--	--	--	--	--
Efficiency	[%]	*11	90							
Torsional Rigidity	[Nm/arc-min]	*12	60							
Maximum Torsional Backlash	[arc-min]	--	≤ 3							
Noise Level	[dB]	*13	67							
Protection Class	--	*14	IP54 (IP65)							
Ambient Temperature	[°C]	--	0-40							
Permitted Housing Temperature	[°C]	--	90							
Weight	[kg]	*15	19							

VRS-140 – 2-Stage Specifications

Frame Size	**140**								
Stage	**2-Stage**								
Ratio	Unit	Note	45	50	60	70	80	90	100
Nominal Output Torque	[Nm]	*1	240	360	360	360	360	240	240
Maximum Acceleration Torque	[Nm]	*2	470	700	700	700	700	470	470
Emergency Stop Torque	[Nm]	*3	1000	1250	1250	1250	1250	1000	1000
Nominal Input Speed	[rpm]	*4	2000						
Maximum Input Speed	[rpm]	*5	4000						
No Load Running Torque	[Nm]	*6	0.56						
Permitted Radial Load	[N]	*7	10000	10000	10000	10000	10000	10000	10000
Permitted Axial Load	[N]	*8	9000	9000	9000	9000	9000	9000	9000
Maximum Radial Load	[N]	*9	10000						
Maximum Axial Load	[N]	*10	9000						
Moment of Inertia (≤Ø 19)	[kgcm2]	--	1.100	0.810	0.810	0.800	0.800	0.800	0.800
Moment of Inertia (≤ Ø 28)	[kgcm2]	--	3.000	2.800	2.800	2.800	2.800	2.800	2.800
Moment of Inertia (≤ Ø 38)	[kgcm2]	--	11.000	10.000	10.000	10.000	10.000	10.000	10.000
Moment of Inertia (≤ Ø 48)	[kgcm2]	--	--	--	--	--	--	--	--
Efficiency	[%]	*11	90						
Torsional Rigidity	[Nm/arc-min]	*12	60						
Maximum Torsional Backlash	[arc-min]	--	≤ 3						
Noise Level	[dB]	*13	67						
Protection Class	--	*14	IP54 (IP65)						
Ambient Temperature	[°C]	--	0-40						
Permitted Housing Temperature	[°C]	--	90						
Weight	[kg]	*15	19						

*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) This is the torque at no load applied on the input shaft. The input speed is 2,000 rpm for VRS140

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

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

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

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

*11) The efficiency at the nominal torque rating

*12) This does not include the lost motion

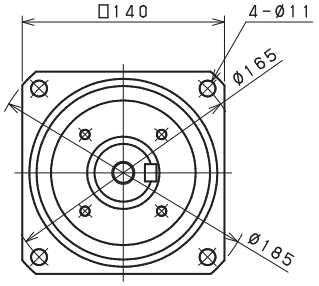
*13) Contact NIDEC-SHIMPO for the testing conditions and environment

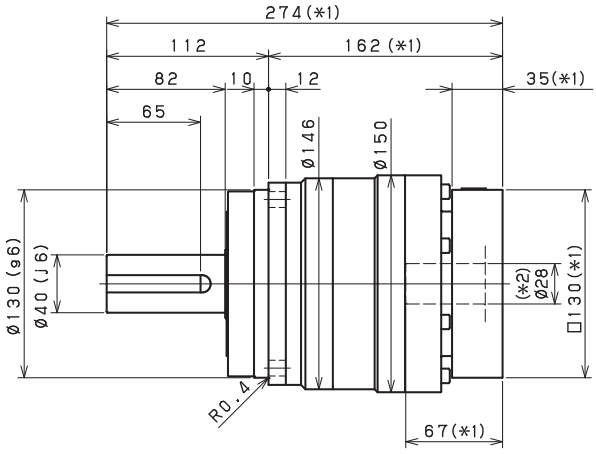
*14) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options

*15) The weight may vary slightly between models

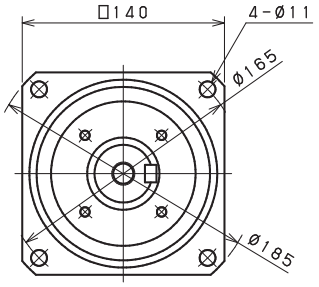
VRS-140 – 1-Stage Dimensions

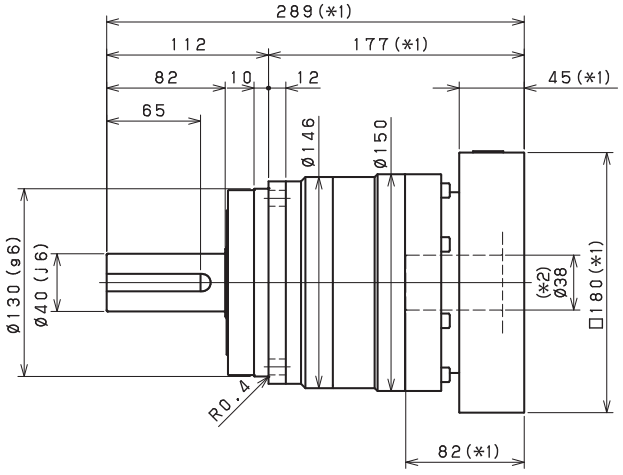
Input shaft bore ≦φ28



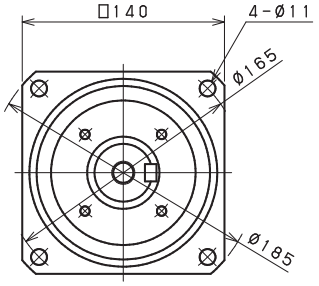


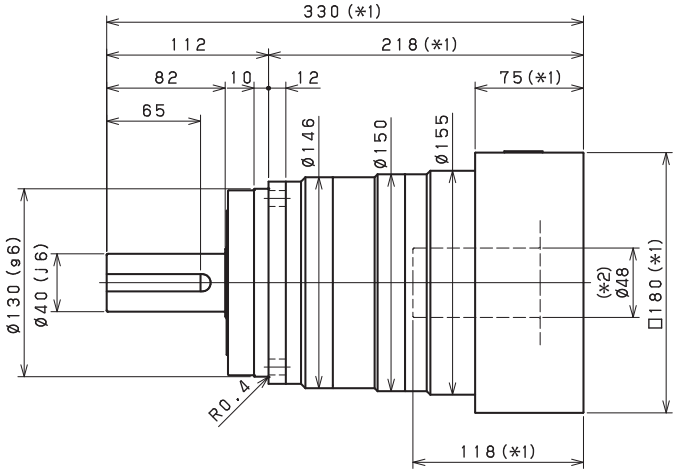
Input shaft bore ≦φ38

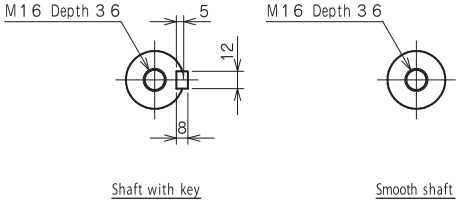




Input shaft bore ≦φ48





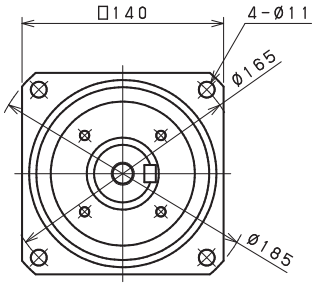


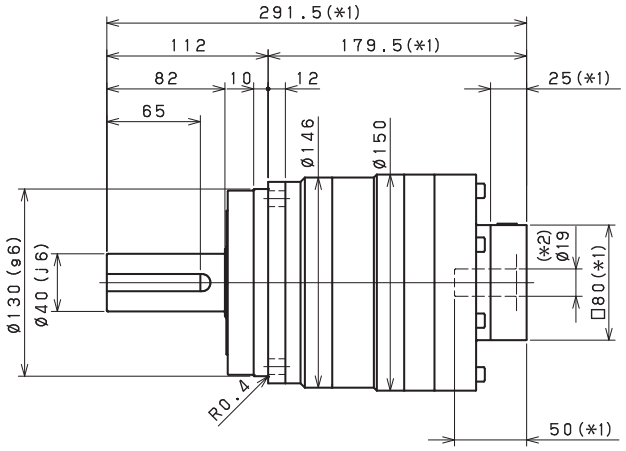
*1) Length will vary depending on motor

*2) Bushing will be inserted to adapt to motor shaft

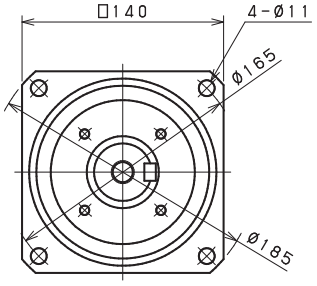
VRS-140 – 2-Stage Dimensions

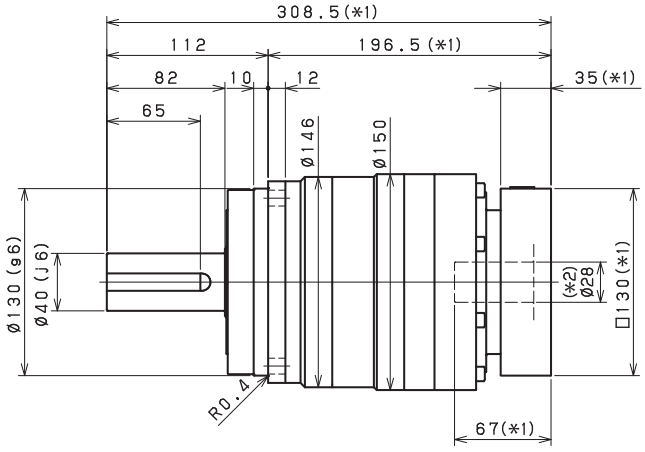
Input shaft bore ≦φ19



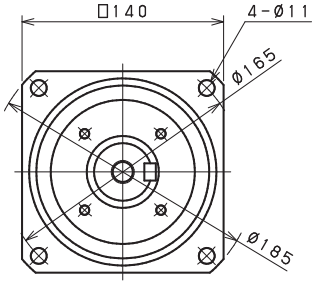


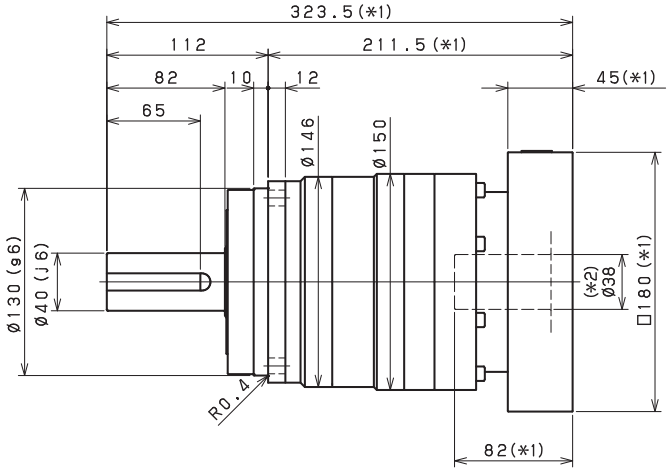
Input shaft bore ≦φ28

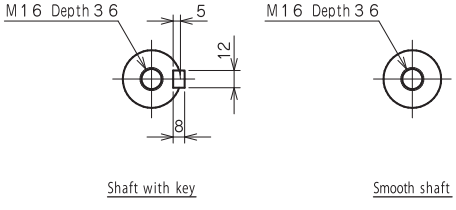




Input shaft bore ≦φ38





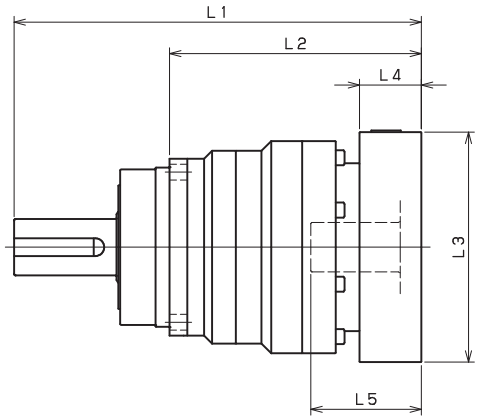


*1) Length will vary depending on motor

*2) Bushing will be inserted to adapt to motor shaft

VRS

VRS-140 – 1-Stage Adapter Dimensions



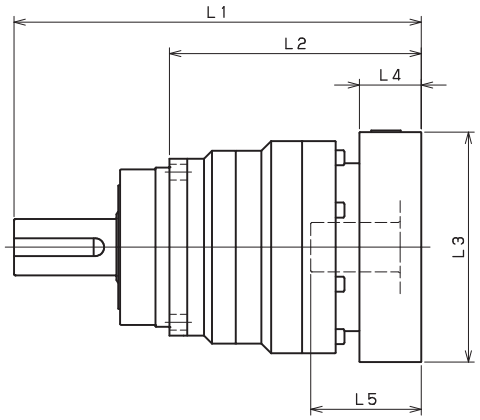
Model number	**: Adapter code	1-Stage					
		L1	L*	L2	L3	L4	L5
VRS-140-□-□-19** (Input shaft bore ≦ φ19)	DA•DB•DC	--	--	--	--	--	--
	EB•ED	--	--	--	--	--	--
	FA	--	--	--	--	--	--
	FB	--	--	--	--	--	--
	GB•GD•GJ	--	--	--	--	--	--
	HA	--	--	--	--	--	--
	HB	--	--	--	--	--	--
	JA	--	--	--	--	--	--
VRS-140-□-□-28** (Input shaft bore ≦ φ28)	FA•FB•FC	274	239	162	□100	35	67
	GA•GB•GC•GD•GE•GF•GG•GH	274	239	162	□115	35	67
	HA•HC•HD	274	239	162	□130	35	67
	HB	284	239	172	□130	45	77
	HF	269	239	157	□130	30	62
	JA•JB•JC•JF	274	239	162	□150	35	67
	KA•KB•KE	274	239	162	□180	35	67
	LA	274	239	162	□200	35	67
	LB	284	239	172	□200	45	77
	MA	274	239	162	□220	35	67
	MB	284	239	172	□220	45	77
VRS-140-□-□-38** (Input shaft bore ≦ φ38)	HA	289	244	177	□130	45	82
	HB•HE	284	244	172	□130	40	77
	JA	289	244	177	□150	45	82
	KA•KB•KC	289	244	177	□180	45	82
	KD	324	244	212	□180	80	117
	KE	304	244	192	□180	60	97
	LB	299	244	187	□200	55	92
	MA•MB	289	244	177	□220	45	82
	MC	304	244	192	□220	60	97
	MD	299	244	187	□220	55	92
VRS-140-□-□-48** (Input shaft bore ≦ φ48)	KA	330	255	218	□180	75	118
	KB•KC	310	255	198	□180	55	98
	LA	310	255	198	□200	55	98
	MA	310	255	198	□220	55	98
	MB	330	255	218	□220	75	118

*1) Single reduction : 1/3~ 1/10 *2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

VRS-140 – 2-Stage Adapter Dimensions



Model number	**: Adapter code	2-Stage					
		L1	L*	L2	L3	L4	L5
VRS-140-□-□-19** (Input shaft bore ≦ φ19)	DA•DB•DC	291.5	266.5	179.5	□80	25	50
	EB•ED	291.5	266.5	179.5	□90	25	50
	FA	291.5	266.5	179.5	□100	25	50
	FB	301.5	266.5	189.5	□100	35	60
	GB•GD•GJ	291.5	266.5	179.5	□115	25	50
	HA	291.5	266.5	179.5	□130	25	50
	HB	306.5	266.5	194.5	□130	40	65
	JA	301.5	266.5	189.5	□150	35	60
VRS-140-□-□-28** (Input shaft bore ≦ φ28)	FA•FB•FC	308.5	273.5	196.5	□100	35	67
	GA•GB•GC•GD•GE•GF•GG•GH	308.5	273.5	196.5	□115	35	67
	HA•HC•HD	308.5	273.5	196.5	□130	35	67
	HB	318.5	273.5	206.5	□130	45	77
	HF	303.5	273.5	191.5	□130	30	62
	JA•JB•JC•JF	308.5	273.5	196.5	□150	35	67
	KA•KB•KE	308.5	273.5	196.5	□180	35	67
	LA	308.5	273.5	196.5	□200	35	67
	LB	318.5	273.5	206.5	□200	45	77
	MA	308.5	273.5	196.5	□220	35	67
	MB	318.5	273.5	206.5	□220	45	77
VRS-140-□-□-38** (Input shaft bore ≦ φ38)	HA	323.5	278.5	211.5	□130	45	82
	HB•HE	318.5	278.5	206.5	□130	40	77
	JA	323.5	278.5	211.5	□150	45	82
	KA•KB•KC	323.5	278.5	211.5	□180	45	82
	KD	358.5	278.5	246.5	□180	80	117
	KE	338.5	278.5	226.5	□180	60	97
	LB	333.5	278.5	221.5	□200	55	92
	MA•MB	323.5	278.5	211.5	□220	45	82
	MC	338.5	278.5	226.5	□220	60	97
	MD	333.5	278.5	221.5	□220	55	92
VRS-140-□-□-48** (Input shaft bore ≦ φ48)	KA	364.5	289.5	252.5	□180	75	118
	KB•KC	344.5	289.5	232.5	□180	55	98
	LA	344.5	289.5	232.5	□200	55	98
	MA	344.5	289.5	232.5	□220	55	98
	MB	364.5	289.5	252.5	□220	75	118

*1) Double reduction : 1/15~ 1/100 *2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

VRS-180 – 1-Stage Specifications

Frame Size	**180**									
Stage	**1-Stage**									
Ratio	Unit	Note	3	4	5	6	7	8	9	10
Nominal Output Torque	[Nm]	*1	500	750	750	750	750	750	500	500
Maximum Acceleration Torque	[Nm]	*2	970	1400	1400	1400	1400	1400	970	970
Emergency Stop Torque	[Nm]	*3	2200	2750	2750	2750	2750	2750	2200	2200
Nominal Input Speed	[rpm]	*4	1500							
Maximum Input Speed	[rpm]	*5	3000							
No Load Running Torque	[Nm]	*6	2.68							
Permitted Radial Load	[N]	*7	12000	13000	14000	15000	16000	17000	17000	18000
Permitted Axial Load	[N]	*8	16000	17000	17000	17000	17000	17000	17000	17000
Maximum Radial Load	[N]	*9	19000							
Maximum Axial Load	[N]	*10	17000							
Moment of Inertia (≤Ø 28)	[kgcm2]	--	--	--	--	--	--	--	--	--
Moment of Inertia (≤ Ø 38)	[kgcm2]	--	42.000	27.000	21.000	18.000	16.000	15.000	14.000	14.000
Moment of Inertia (≤ Ø 48)	[kgcm2]	--	64.000	49.000	43.000	40.000	38.000	37.000	36.000	36.000
Moment of Inertia (≤ Ø 65)	[kgcm2]	--	120.000	110.000	100.000	100.000	98.000	97.000	96.000	96.000
Efficiency	[%]	*11	95							
Torsional Rigidity	[Nm/arc-min]	*12	175							
Maximum Torsional Backlash	[arc-min]	--	≤ 3							
Noise Level	[dB]	*13	67							
Protection Class	--	*14	IP54 (IP65)							
Ambient Temperature	[°C]	--	0-40							
Permitted Housing Temperature	[°C]	--	90							
Weight	[kg]	*15	39							

VRS-180 – 2-Stage Specifications

Frame Size	**180**									
Stage	**2-Stage**									
Ratio	Unit	Note	15	16	20	25	28	30	35	40
Nominal Output Torque	[Nm]	*1	500	750	750	750	750	500	750	750
Maximum Acceleration Torque	[Nm]	*2	970	1400	1400	1400	1400	970	1400	1400
Emergency Stop Torque	[Nm]	*3	2200	2750	2750	2750	2750	2200	2750	2750
Nominal Input Speed	[rpm]	*4	1500							
Maximum Input Speed	[rpm]	*5	3000							
No Load Running Torque	[Nm]	*6	1.39							
Permitted Radial Load	[N]	*7	19000	19000	19000	19000	19000	19000	19000	19000
Permitted Axial Load	[N]	*8	17000	17000	17000	17000	17000	17000	17000	17000
Maximum Radial Load	[N]	*9	19000							
Maximum Axial Load	[N]	*10	17000							
Moment of Inertia (≤Ø 28)	[kgcm2]	--	4.700	5.400	4.300	4.200	4.900	3.200	4.100	3.200
Moment of Inertia (≤ Ø 38)	[kgcm2]	--	12.000	13.000	12.000	12.000	13.000	11.000	12.000	11.000
Moment of Inertia (≤ Ø 48)	[kgcm2]	--	34.000	35.000	34.000	34.000	35.000	33.000	34.000	33.000
Moment of Inertia (≤ Ø 65)	[kgcm2]	--	--	--	--	--	--	--	--	--
Efficiency	[%]	*11	90							
Torsional Rigidity	[Nm/arc-min]	*12	175							
Maximum Torsional Backlash	[arc-min]	--	≤ 3							
Noise Level	[dB]	*13	67							
Protection Class	--	*14	IP54 (IP65)							
Ambient Temperature	[°C]	--	0-40							
Permitted Housing Temperature	[°C]	--	90							
Weight	[kg]	*15	39							

VRS-180 – 2-Stage Specifications

Frame Size	**180**								
Stage	**2-Stage**								
Ratio	Unit	Note	45	50	60	70	80	90	100
Nominal Output Torque	[Nm]	*1	500	750	750	750	750	500	500
Maximum Acceleration Torque	[Nm]	*2	970	1400	1400	1400	1400	970	970
Emergency Stop Torque	[Nm]	*3	2200	2750	2750	2750	2750	2200	2200
Nominal Input Speed	[rpm]	*4	1500						
Maximum Input Speed	[rpm]	*5	3000						
No Load Running Torque	[Nm]	*6	1.39						
Permitted Radial Load	[N]	*7	19000	19000	19000	19000	19000	19000	19000
Permitted Axial Load	[N]	*8	17000	17000	17000	17000	17000	17000	17000
Maximum Radial Load	[N]	*9	19000						
Maximum Axial Load	[N]	*10	17000						
Moment of Inertia (≤Ø 28)	[kgcm2]	--	4.000	3.100	3.100	3.100	3.100	3.100	3.100
Moment of Inertia (≤ Ø 38)	[kgcm2]	--	12.000	11.000	11.000	11.000	11.000	11.000	11.000
Moment of Inertia (≤ Ø 48)	[kgcm2]	--	34.000	33.000	33.000	33.000	33.000	33.000	33.000
Moment of Inertia (≤ Ø 65)	[kgcm2]	--	--	--	--	--	--	--	--
Efficiency	[%]	*11	90						
Torsional Rigidity	[Nm/arc-min]	*12	175						
Maximum Torsional Backlash	[arc-min]	--	≤ 3						
Noise Level	[dB]	*13	67						
Protection Class	--	*14	IP54 (IP65)						
Ambient Temperature	[°C]	--	0-40						
Permitted Housing Temperature	[°C]	--	90						
Weight	[kg]	*15	39						

*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) This is the torque at no load applied on the input shaft. The input speed is 1,5000 rpm for VRS180

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

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

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

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

*11) The efficiency at the nominal torque rating

*12) This does not include the lost motion

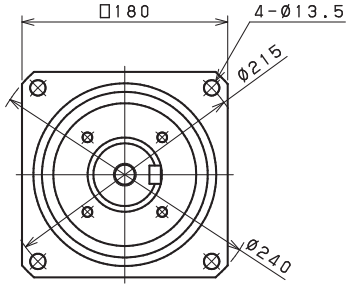
*13) Contact NIDEC-SHIMPO for the testing conditions and environment

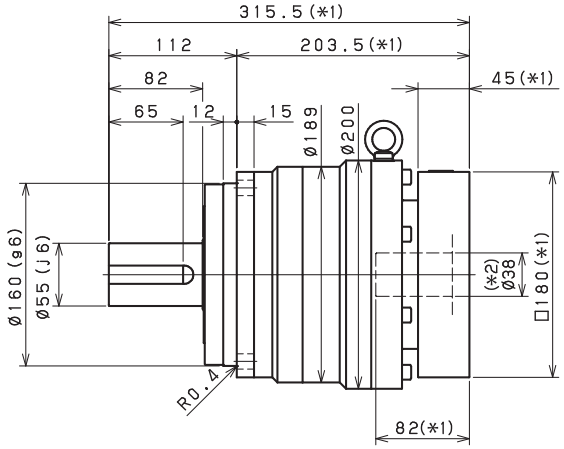
*14) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options

*15) The weight may vary slightly between models

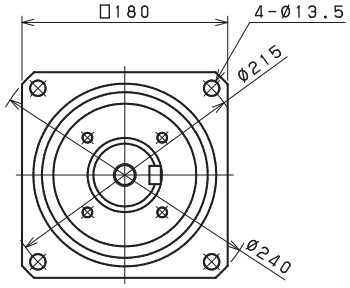
VRS-180 – 1-Stage Dimensions

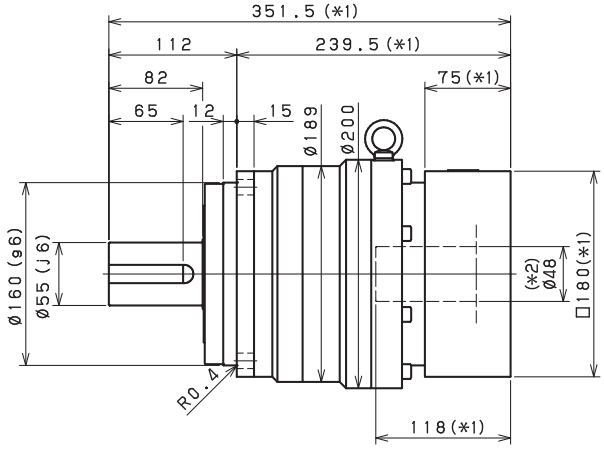
Input shaft bore ≦φ38



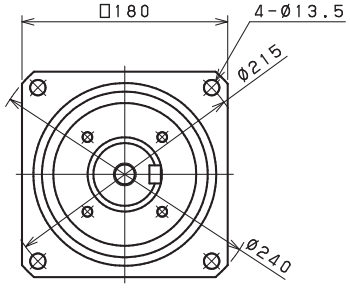


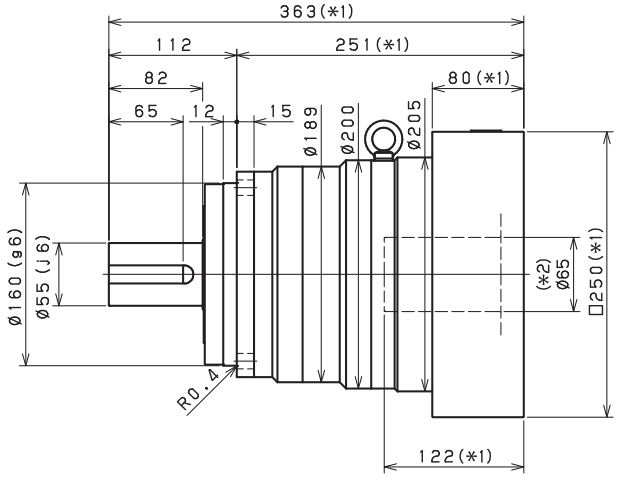
Input shaft bore ≦φ48

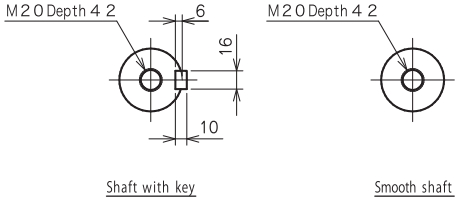




Input shaft bore ≦φ65





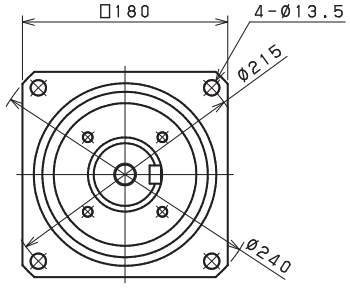


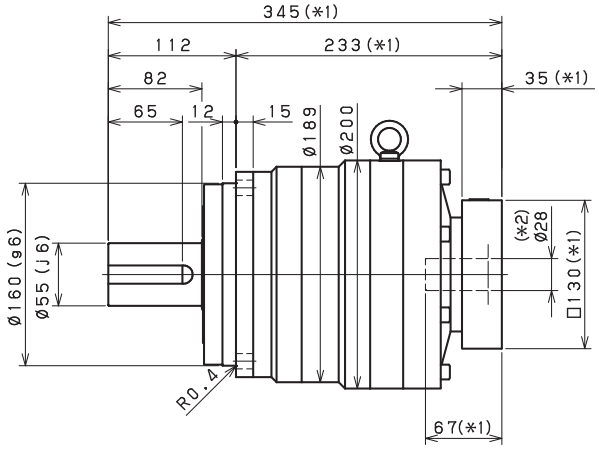
*1) Length will vary depending on motor

*2) Bushing will be inserted to adapt to motor shaft

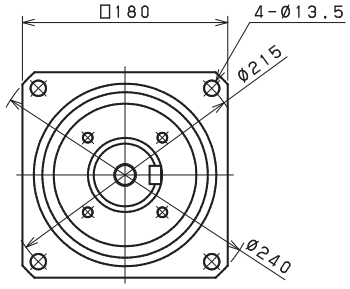
VRS-180 – 2-Stage Dimensions

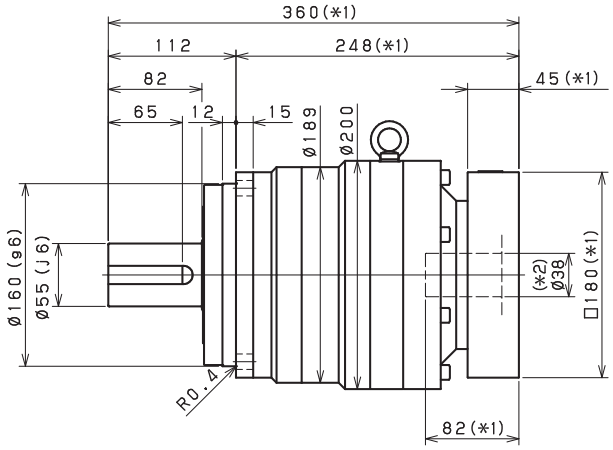
Input shaft bore ≦φ28



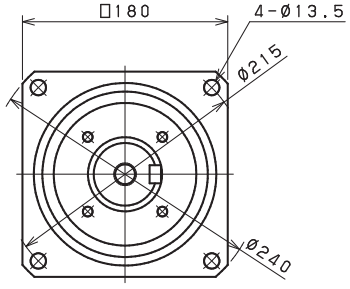


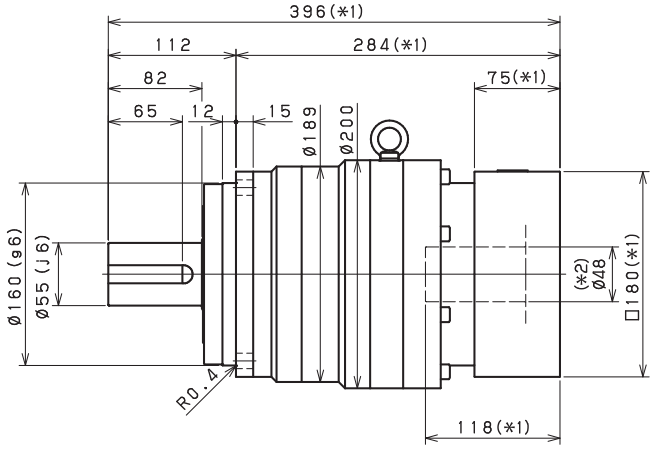
Input shaft bore ≦φ38

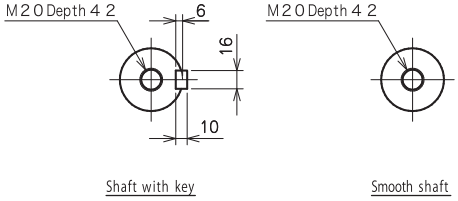




Input shaft bore ≦φ48





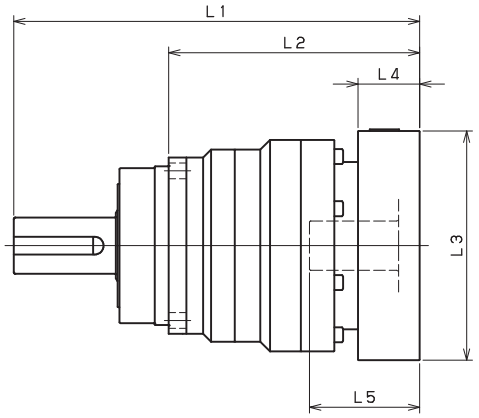


*1) Length will vary depending on motor

*2) Bushing will be inserted to adapt to motor shaft

VRS

VRS-180 – 1-Stage Adapter Dimensions



Model number	**: Adapter code	1-Stage					
		L1	L*	L2	L3	L4	L5
VRS-180-□-□-28** (Input shaft bore ≦ φ28)	FA•FB•FC	--	--	--	--	--	--
	GA•GB•GC•GD•GE•GF•GG•GH	--	--	--	--	--	--
	HA•HC•HD	--	--	--	--	--	--
	HB	--	--	--	--	--	--
	HF	--	--	--	--	--	--
	JA•JB•JC•JF	--	--	--	--	--	--
	KA•KB•KE	--	--	--	--	--	--
	LA	--	--	--	--	--	--
	LB	--	--	--	--	--	--
	MA	--	--	--	--	--	--
	MB	--	--	--	--	--	--
VRS-180-□-□-38** (Input shaft bore ≦ φ38)	HA	315.5	270.5	203.5	□130	45	82
	HB•HE	310.5	270.5	198.5	□130	40	77
	JA	315.5	270.5	203.5	□150	45	82
	KA•KB•KC	315.5	270.5	203.5	□180	45	82
	KD	350.5	270.5	238.5	□180	80	117
	KE	330.5	270.5	218.5	□180	60	97
	LB	325.5	270.5	213.5	□200	55	92
	MA•MB	315.5	270.5	203.5	□220	45	82
	MC	330.5	270.5	218.5	□220	60	97
	MD	325.5	270.5	213.5	□220	55	92
	NA	315.5	270.5	203.5	□250	45	82
VRS-180-□-□-48** (Input shaft bore ≦ φ48)	KA	351.5	276.5	239.5	□180	75	118
	KB•KC	331.5	276.5	219.5	□180	55	98
	LA	331.5	276.5	219.5	□200	55	98
	MA	331.5	276.5	219.5	□220	55	98
	MB	351.5	276.5	239.5	□220	75	118
	NA	351.5	276.5	239.5	□250	75	118
	PA	351.5	276.5	239.5	□280	75	118
VRS-180-□-□-65** (Input shaft bore ≦ φ65)	MA•MB•MC•MD	363	283	251	□220	80	122
	NA•NC	363	283	251	□250	80	122
	NB•ND	393	283	281	□250	110	152
	PA	383	283	271	□280	100	142
	PB	393	283	281	□280	110	152

*1) Single reduction : 1/3~ 1/10 *2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

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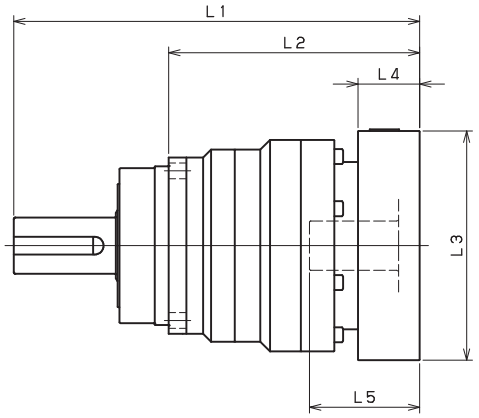
VRS-180 – 2-Stage Adapter Dimensions



Model number	**: Adapter code	2-Stage					
		L1	L*	L2	L3	L4	L5
VRS-180-□-□-28** (Input shaft bore ≦ φ28)	FA•FB•FC	345	310	233	□100	35	67
	GA•GB•GC•GD•GE•GF•GG•GH	345	310	233	□115	35	67
	HA•HC•HD	345	310	233	□130	35	67
	HB	355	310	243	□130	45	77
	HF	340	310	228	□130	30	62
	JA•JB•JC•JF	345	310	233	□150	35	67
	KA•KB•KE	345	310	233	□180	35	67
	LA	345	310	233	□200	35	67
	LB	355	310	243	□200	45	77
	MA	345	310	233	□220	35	67
	MB	355	310	243	□220	45	77
VRS-180-□-□-38** (Input shaft bore ≦ φ38)	HA	360	315	248	□130	45	82
	HB•HE	355	315	243	□130	40	77
	JA	360	315	248	□150	45	82
	KA•KB•KC	360	315	248	□180	45	82
	KD	395	315	283	□180	80	117
	KE	375	315	263	□180	60	97
	LB	370	315	258	□200	55	92
	MA•MB	360	315	248	□220	45	82
	MC	375	315	263	□220	60	97
	MD	370	315	258	□220	55	92
	NA	360	315	248	□250	45	82
VRS-180-□-□-48** (Input shaft bore ≦ φ48)	KA	396	321	284	□180	75	118
	KB•KC	376	321	264	□180	55	98
	LA	376	321	264	□200	55	98
	MA	376	321	264	□220	55	98
	MB	396	321	284	□220	75	118
	NA	396	321	284	□250	75	118
	PA	396	321	284	□280	75	118
VRS-180-□-□-65** (Input shaft bore ≦ φ65)	MA•MB•MC•MD	--	--	--	--	--	--
	NA•NC	--	--	--	--	--	--
	NB•ND	--	--	--	--	--	--
	PA	--	--	--	--	--	--
	PB	--	--	--	--	--	--

*1) Double reduction : 1/15~ 1/100 *2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

VRS-210 – 1-Stage Specifications

Frame Size	**210**									
Stage	**1-Stage**									
Ratio	Unit	Note	3	4	5	6	7	8	9	10
Nominal Output Torque	[Nm]	*1	1000	1500	1500	1500	1500	1500	1000	1000
Maximum Acceleration Torque	[Nm]	*2	1600	2300	2300	2300	2300	2200	1900	1600
Emergency Stop Torque	[Nm]	*3	4000	5000	5000	5000	5000	5000	4000	4000
Nominal Input Speed	[rpm]	*4	1000							
Maximum Input Speed	[rpm]	*5	2000							
No Load Running Torque	[Nm]	*6	2.92							
Permitted Radial Load	[N]	*7	17000	18000	20000	21000	22000	23000	24000	24000
Permitted Axial Load	[N]	*8	22000	22000	22000	22000	22000	22000	22000	22000
Maximum Radial Load	[N]	*9	24000							
Maximum Axial Load	[N]	*10	22000							
Moment of Inertia (≤Ø 38)	[kgcm2]	--	--	--	--	--	--	--	--	--
Moment of Inertia (≤ Ø 48)	[kgcm2]	--	92.000	63.000	53.000	47.000	43.000	40.000	39.000	38.000
Moment of Inertia (≤ Ø 65)	[kgcm2]	--	150.000	120.000	110.000	110.000	100.000	100.000	99.000	98.000
Efficiency	[%]	*11	97							
Torsional Rigidity	[Nm/arc-min]	*12	400							
Maximum Torsional Backlash	[arc-min]	--	≤ 3							
Noise Level	[dB]	*13	61							
Protection Class	--	*14	IP54 (IP65)							
Ambient Temperature	[°C]	--	0-40							
Permitted Housing Temperature	[°C]	--	90							
Weight	[kg]	*15	59							

VRS-210 – 2-Stage Specifications

Frame Size	**210**									
Stage	**2-Stage**									
Ratio	Unit	Note	15	16	20	25	28	30	35	40
Nominal Output Torque	[Nm]	*1	1000	1500	1500	1500	1500	1000	1500	1500
Maximum Acceleration Torque	[Nm]	*2	1600	2300	2300	2300	2300	1600	2300	2300
Emergency Stop Torque	[Nm]	*3	4000	5000	5000	5000	5000	4000	5000	5000
Nominal Input Speed	[rpm]	*4	1000							
Maximum Input Speed	[rpm]	*5	2000							
No Load Running Torque	[Nm]	*6	1.14							
Permitted Radial Load	[N]	*7	24000	24000	24000	24000	24000	24000	24000	24000
Permitted Axial Load	[N]	*8	22000	22000	22000	22000	22000	22000	22000	22000
Maximum Radial Load	[N]	*9	24000							
Maximum Axial Load	[N]	*10	22000							
Moment of Inertia (≤Ø 38)	[kgcm2]	--	14.000	16.000	14.000	14.000	15.000	12.000	13.000	12.000
Moment of Inertia (≤ Ø 48)	[kgcm2]	--	36.000	37.000	36.000	35.000	36.000	34.000	35.000	33.000
Moment of Inertia (≤ Ø 65)	[kgcm2]	--	--	--	--	--	--	--	--	--
Efficiency	[%]	*11	92							
Torsional Rigidity	[Nm/arc-min]	*12	400							
Maximum Torsional Backlash	[arc-min]	--	≤ 3							
Noise Level	[dB]	*13	61							
Protection Class	--	*14	IP54 (IP65)							
Ambient Temperature	[°C]	--	0-40							
Permitted Housing Temperature	[°C]	--	90							
Weight	[kg]	*15	60							

VRS-210 – 2-Stage Specifications

Frame Size	**210**								
Stage	**2-Stage**								
Ratio	Unit	Note	45	50	60	70	80	90	100
Nominal Output Torque	[Nm]	*1	1000	1500	1500	1500	1500	1000	1000
Maximum Acceleration Torque	[Nm]	*2	1300	2300	2300	2300	1800	1300	1200
Emergency Stop Torque	[Nm]	*3	4000	5000	5000	5000	5000	4000	4000
Nominal Input Speed	[rpm]	*4	1000						
Maximum Input Speed	[rpm]	*5	2000						
No Load Running Torque	[Nm]	*6	1.14						
Permitted Radial Load	[N]	*7	24000	24000	24000	24000	24000	24000	24000
Permitted Axial Load	[N]	*8	22000	22000	22000	22000	22000	22000	22000
Maximum Radial Load	[N]	*9	24000						
Maximum Axial Load	[N]	*10	22000						
Moment of Inertia (≤Ø 38)	[kgcm2]	--	13.000	12.000	12.000	12.000	12.000	12.000	12.000
Moment of Inertia (≤ Ø 48)	[kgcm2]	--	35.000	33.000	33.000	33.000	33.000	33.000	33.000
Moment of Inertia (≤ Ø 65)	[kgcm2]	--	--	--	--	--	--	--	--
Efficiency	[%]	*11	92						
Torsional Rigidity	[Nm/arc-min]	*12	400						
Maximum Torsional Backlash	[arc-min]	--	≤ 3						
Noise Level	[dB]	*13	61						
Protection Class	--	*14	IP54 (IP65)						
Ambient Temperature	[°C]	--	0-40						
Permitted Housing Temperature	[°C]	--	90						
Weight	[kg]	*15	60						

*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) This is the torque at no load applied on the input shaft. The input speed is 1,5000 rpm for VRS210;

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

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

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

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

*11) The efficiency at the nominal torque rating

*12) This does not include the lost motion

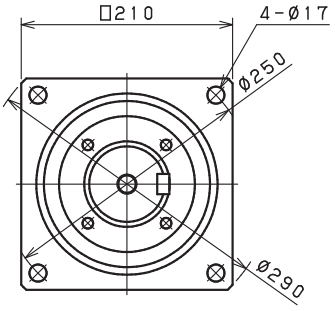
*13) Contact NIDEC-SHIMPO for the testing conditions and environment

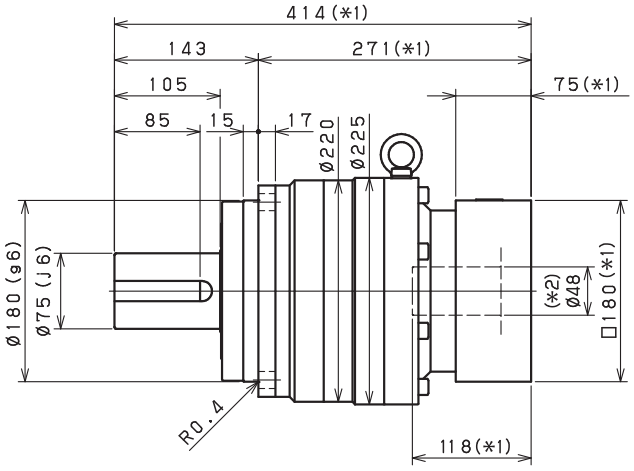
*14) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options

*15) The weight may vary slightly between models

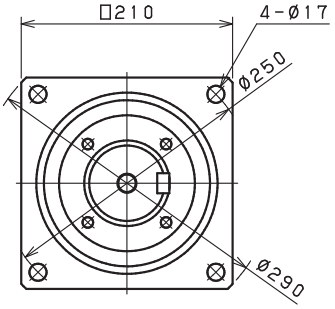
VRS-210 – 1-Stage Dimensions

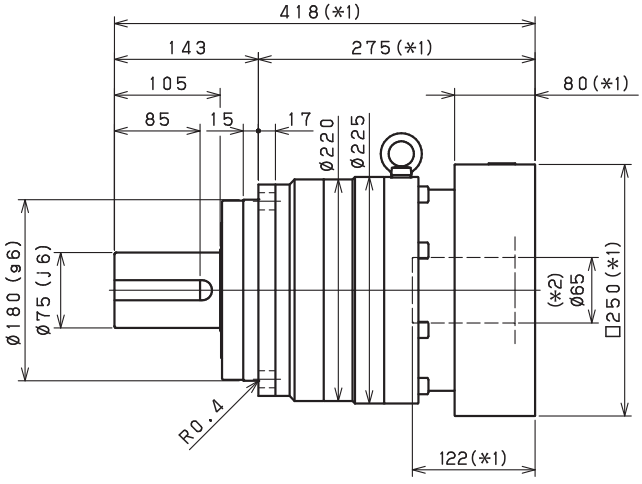
Input shaft bore ≦φ48

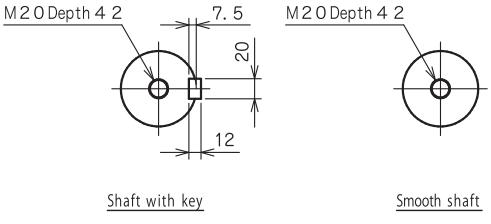




Input shaft bore ≦φ65







Shaft with key

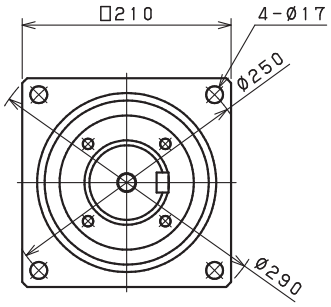
Smooth shaft

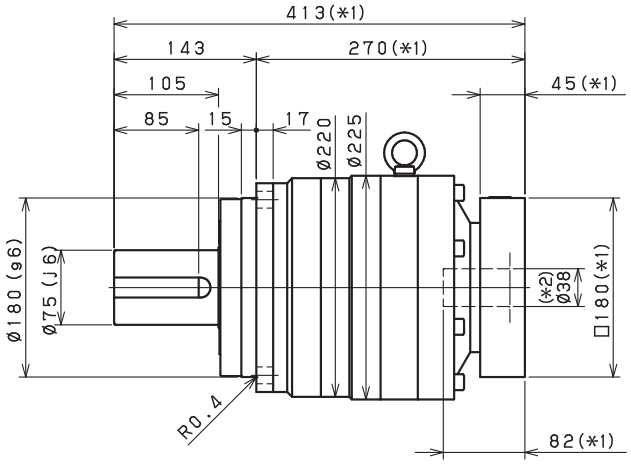
*1) Length will vary depending on motor.

*2) Bushing will be inserted to adapt to motor shaft

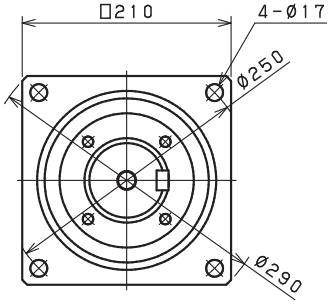
VRS-210 – 2-Stage Dimensions

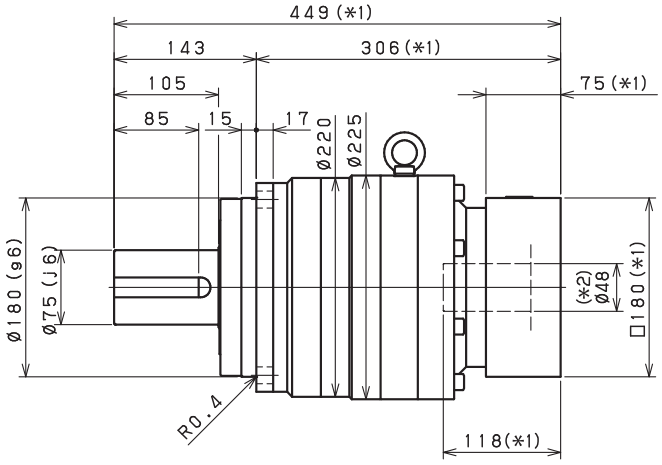
Input shaft bore ≦φ38

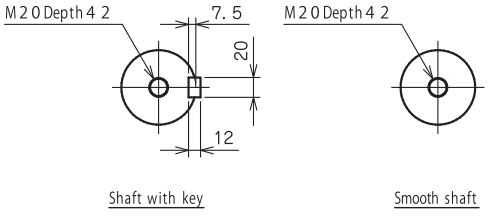




Input shaft bore ≦φ48



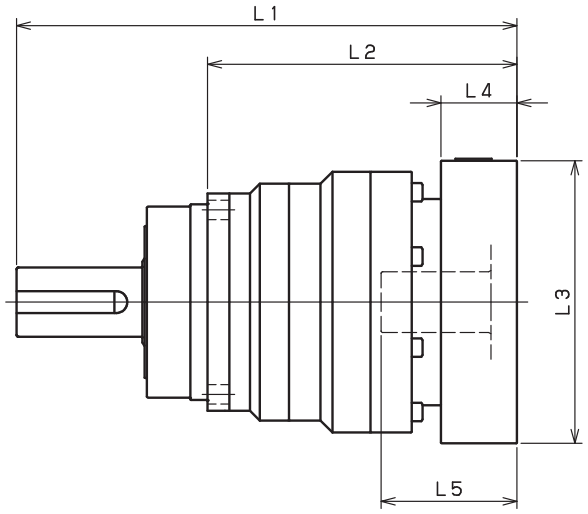




*1) Length will vary depending on motor.

*2) Bushing will be inserted to adapt to motor shaft

VRS-210 – 1-Stage Adapter Dimensions



Model number	**: Adapter code	1-Stage					
		L1	L*	L2	L3	L4	L5
VRS-210-□-□-38** (Input shaft bore ≦ φ38)	HA	--	--	--	--	--	--
	HB•HE	--	--	--	--	--	--
	JA	--	--	--	--	--	--
	KA•KB•KC	--	--	--	--	--	--
	KD	--	--	--	--	--	--
	KE	--	--	--	--	--	--
	LA	--	--	--	--	--	--
	LB	--	--	--	--	--	--
	MA•MB	--	--	--	--	--	--
	MC	--	--	--	--	--	--
	MD	--	--	--	--	--	--
	NA	--	--	--	--	--	--
VRS-210-□-□-48** (Input shaft bore ≦ φ48)	KA	414	339	271	□180	75	118
	KB•KC	394	339	251	□180	55	98
	LA	394	339	251	□200	55	98
	MA	394	339	251	□220	55	98
	MB	414	339	271	□220	75	118
	NA	414	339	271	□250	75	118
	PA	414	339	271	□280	75	118
VRS-210-□-□-65** (Input shaft bore ≦ φ65)	MA•MB•MC•MD	418	338	275	□220	80	122
	NA•NC	418	338	275	□250	80	122
	NB•ND	448	338	305	□250	110	152
	PA	438	338	295	□280	100	142
	PB	448	338	305	□280	110	152
	QA•QB	438	338	295	□320	100	142

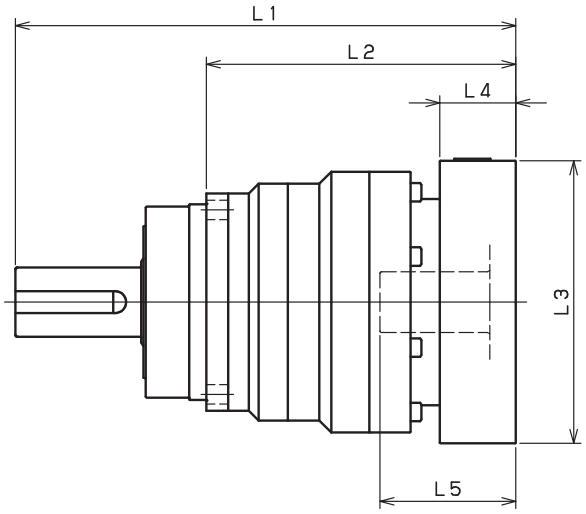
*1) Single reduction : 1/3~ 1/10

*2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

VRS-210 – 2-Stage Adapter Dimensions



Model number	**: Adapter code	2-Stage					
		L1	L*	L2	L3	L4	L5
VRS-210-□-□-38** (Input shaft bore ≦ φ38)	HA	413	368	270	□130	45	82
	HB•HE	408	368	265	□130	40	77
	JA	413	368	270	□150	45	82
	KA•KB•KC	413	368	270	□180	45	82
	KD	448	368	305	□180	80	117
	KE	428	368	285	□180	60	97
	LA	413	368	270	□200	45	82
	LB	423	368	280	□200	55	92
	MA•MB	413	368	270	□220	45	82
	MC	428	368	285	□220	60	97
	MD	423	368	280	□220	55	92
	NA	413	368	270	□250	45	82
VRS-210-□-□-48** (Input shaft bore ≦ φ48)	KA	449	374	306	□180	75	118
	KB•KC	429	374	286	□180	55	98
	LA	429	374	286	□200	55	98
	MA	429	374	286	□220	55	98
	MB	449	374	306	□220	75	118
	NA	449	374	306	□250	75	118
	PA	449	374	306	□280	75	118
VRS-210-□-□-65** (Input shaft bore ≦ φ65)	MA•MB•MC•MD	--	--	--	--	--	--
	NA•NC	--	--	--	--	--	--
	NB•ND	--	--	--	--	--	--
	PA	--	--	--	--	--	--
	PB	--	--	--	--	--	--
	QA•QB	--	--	--	--	--	--

*1) Double reduction : 1/15~ 1/100

*2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

VRS-240 – 1-Stage Specifications

Frame Size	**240**									
Stage	**1-Stage**									
Ratio	Unit	Note	3	4	5	6	7	8	9	10
Nominal Output Torque	[Nm]	*1	1600	2400	2400	2400	2400	2400	1600	1600
Maximum Acceleration Torque	[Nm]	*2	2500	3700	3700	3700	3700	3600	3000	2600
Emergency Stop Torque	[Nm]	*3	6000	8000	8000	8000	8000	8000	6000	6000
Nominal Input Speed	[rpm]	*4	1000							
Maximum Input Speed	[rpm]	*5	2000							
No Load Running Torque	[Nm]	*6	5.96							
Permitted Radial Load	[N]	*7	21000	22000	24000	25000	26000	28000	29000	29000
Permitted Axial Load	[N]	*8	27000	27000	27000	27000	27000	27000	27000	27000
Maximum Radial Load	[N]	*9	30000							
Maximum Axial Load	[N]	*10	27000							
Moment of Inertia (≤Ø 48)	[kgcm2]	--	--	--	--	--	--	--	--	--
Moment of Inertia (≤ Ø 65)	[kgcm2]	--	220.000	160.000	130.000	120.000	110.000	110.000	110.000	100.000
Efficiency	[%]	*11	97							
Torsional Rigidity	[Nm/arc-min]	*12	550							
Maximum Torsional Backlash	[arc-min]	--	≤ 3							
Noise Level	[dB]	*13	62							
Protection Class	--	*14	IP54 (IP65)							
Ambient Temperature	[°C]	--	0-40							
Permitted Housing Temperature	[°C]	--	90							
Weight	[kg]	*15	85							

VRS-240 – 2-Stage Specifications

Frame Size	**240**									
Stage	**2-Stage**									
Ratio	Unit	Note	15	16	20	25	28	30	35	40
Nominal Output Torque	[Nm]	*1	1600	2400	2400	2400	2400	1600	2400	2400
Maximum Acceleration Torque	[Nm]	*2	2500	3700	3700	3700	3700	2500	3700	3700
Emergency Stop Torque	[Nm]	*3	6000	8000	8000	8000	8000	6000	8000	8000
Nominal Input Speed	[rpm]	*4	1000							
Maximum Input Speed	[rpm]	*5	2000							
No Load Running Torque	[Nm]	*6	1.28							
Permitted Radial Load	[N]	*7	30000	30000	30000	30000	30000	30000	30000	30000
Permitted Axial Load	[N]	*8	27000	27000	27000	27000	27000	27000	27000	27000
Maximum Radial Load	[N]	*9	30000							
Maximum Axial Load	[N]	*10	27000							
Moment of Inertia (≤Ø 48)	[kgcm2]	--	40.000	43.000	39.000	39.000	41.000	35.000	38.000	35.000
Moment of Inertia (≤ Ø 65)	[kgcm2]	--	--	--	--	--	--	--	--	--
Efficiency	[%]	*11	92							
Torsional Rigidity	[Nm/arc-min]	*12	550							
Maximum Torsional Backlash	[arc-min]	--	≤ 3							
Noise Level	[dB]	*13	62							
Protection Class	--	*14	IP54 (IP65)							
Ambient Temperature	[°C]	--	0-40							
Permitted Housing Temperature	[°C]	--	90							
Weight	[kg]	*15	89							

VRS-240 – 2-Stage Specifications

Frame Size	**240**								
Stage	**2-Stage**								
Ratio	Unit	Note	45	50	60	70	80	90	100
Nominal Output Torque	[Nm]	*1	1600	2400	2400	2400	2400	1600	1600
Maximum Acceleration Torque	[Nm]	*2	2100	3700	3700	3700	2700	2100	1800
Emergency Stop Torque	[Nm]	*3	6000	8000	8000	8000	8000	6000	6000
Nominal Input Speed	[rpm]	*4	1000						
Maximum Input Speed	[rpm]	*5	2000						
No Load Running Torque	[Nm]	*6	1.28						
Permitted Radial Load	[N]	*7	30000	30000	30000	30000	30000	30000	30000
Permitted Axial Load	[N]	*8	27000	27000	27000	27000	27000	27000	27000
Maximum Radial Load	[N]	*9	30000						
Maximum Axial Load	[N]	*10	27000						
Moment of Inertia (≤Ø 48)	[kgcm2]	--	38.000	35.000	35.000	34.000	34.000	34.000	34.000
Moment of Inertia (≤ Ø 65)	[kgcm2]	--	--	--	--	--	--	--	--
Efficiency	[%]	*11	92						
Torsional Rigidity	[Nm/arc-min]	*12	550						
Maximum Torsional Backlash	[arc-min]	--	≤ 3						
Noise Level	[dB]	*13	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

*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) This is the torque at no load applied on the input shaft. The input speed is 1,000 rpm for VRS240

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

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

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

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

*11) The efficiency at the nominal torque rating

*12) This does not include the lost motion

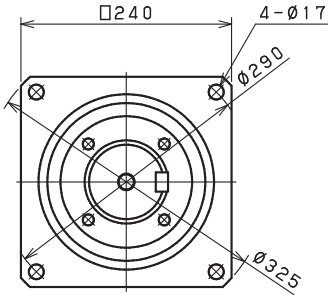
*13) Contact NIDEC-SHIMPO for the testing conditions and environment

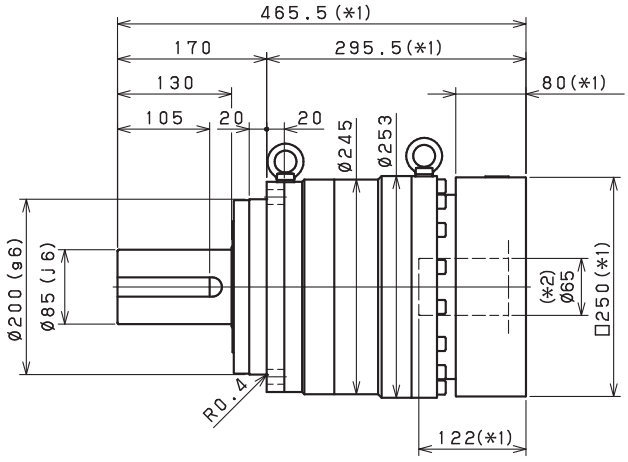
*14) IP65 (wash-down) is available as an option. Contact NIDEC-SHIMPO for more details and our food grade options

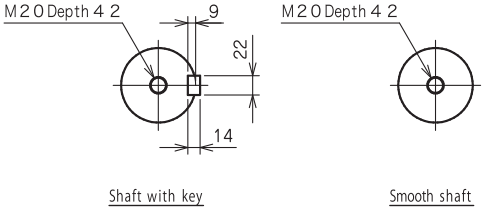
*15) The weight may vary slightly between models

VRS-240 – 1-Stage Dimensions

Input shaft bore ≦φ65





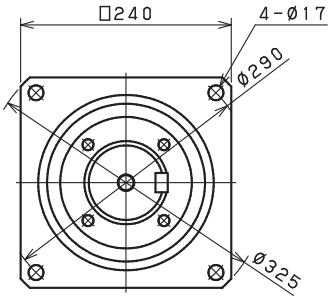


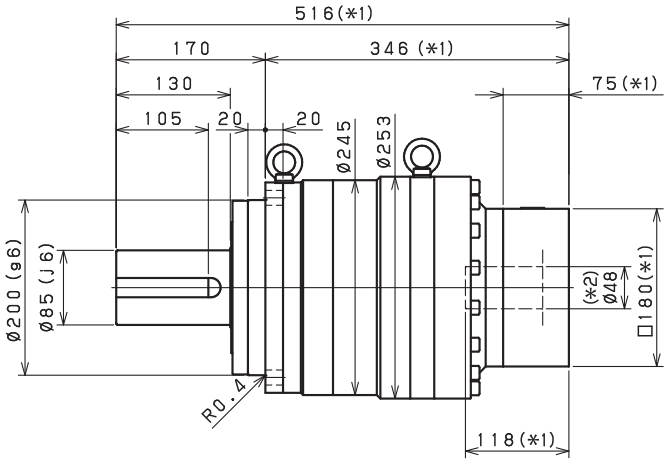
*1) Length will vary depending on motor

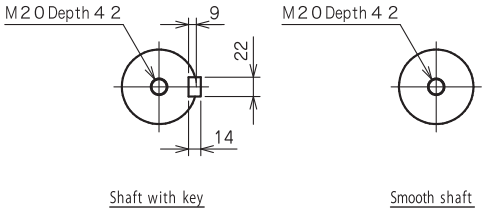
*2) Bushing will be inserted to adapt to motor shaft

VRS-240 – 2-Stage Dimensions

Input shaft bore ≦φ48



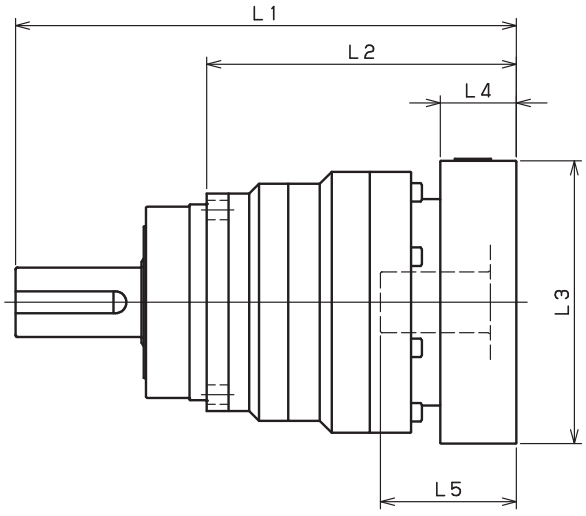




*1) Length will vary depending on motor

*2) Bushing will be inserted to adapt to motor shaft

VRS-240 – 1-Stage Adapter Dimensions



Model number	**: Adapter code	1-Stage					
		L1	L*	L2	L3	L4	L5
VRS-240-□-□-48** (Input shaft bore ≦ φ48)	KA	--	--	--	--	--	--
	KB•KC	--	--	--	--	--	--
	LA	--	--	--	--	--	--
	MA	--	--	--	--	--	--
	MB	--	--	--	--	--	--
	NA	--	--	--	--	--	--
	PA	--	--	--	--	--	--
VRS-240-□-□-65** (Input shaft bore ≦ φ65)	MA•MB•MC•MD	465.5	385.5	295.5	□220	80	122
	NA•NC	465.5	385.5	295.5	□250	80	122
	NB•ND	495.5	385.5	325.5	□250	110	152
	PA	485.5	385.5	315.5	□280	100	142
	PB	495.5	385.5	325.5	□280	110	152
	QA•QB	485.5	385.5	315.5	□320	100	142

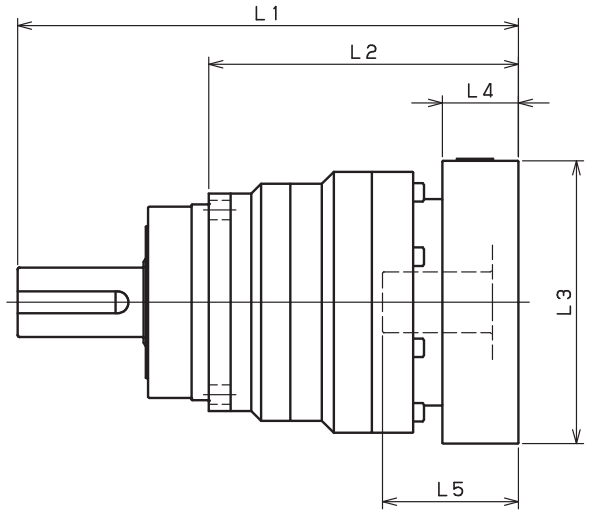
*1) Single reduction : 1/3~ 1/10

*2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.

VRS-240 – 2-Stage Adapter Dimensions



Model number	**: Adapter code	2-Stage					
		L1	L*	L2	L3	L4	L5
VRS-240-□-□-48** (Input shaft bore ≦ φ48)	KA	516	441	346	□180	75	118
	KB•KC	496	441	326	□180	55	98
	LA	496	441	326	□200	55	98
	MA	496	441	326	□220	55	98
	MB	516	441	346	□220	75	118
	NA	516	441	346	□250	75	118
	PA	516	441	346	□280	75	118
VRS-240-□-□-65** (Input shaft bore ≦ φ65)	MA•MB•MC•MD	--	--	--	--	--	--
	NA•NC	--	--	--	--	--	--
	NB•ND	--	--	--	--	--	--
	PA	--	--	--	--	--	--
	PB	--	--	--	--	--	--
	QA•QB	--	--	--	--	--	--

*1) Double reduction : 1/15~ 1/100

*2) Bushing will be inserted to adapt to motor shaft

For an explanation on the Adapter Flange Code, please turn to page 422.

A more comprehensive adapter flange offering can be found using the NIDEC-SHIMPO Online Selector Tool. The variety is constantly expanding and being updated on the Selector Tool. If you have any questions or need any support, contact NIDEC-SHIMPO.