A Nidec Group Company

SHIMPO

All for dreams

For servo motor

Reducer

ABLE REDUCER

VRS series
VRB series
VRL series

NIDEC-SHIMPO CORPORATION

Future Creation of Richer Industries - For Ceaseless Development

NIDEC-SHIMPO developed and released Ringcone CVT equipped with an independent transmission in 1952. NIDEC-SHIMPO has continued to develop products meeting customer needs and produce new products on the basis of driving technology of reducers, etc. as well as advanced electronic technology and software development. NIDEC-SHIMPO' s technical testing and reliability have been proven through the award of many prizes by the Japanese Machinery Society, including the National Invention Award. NIDEC-SHIMPO will offer ideal technologies and products by exactly meeting market demand for future development in various industries.

Reducer

Reducers and transmissions are essential as driving parts within factory automation robots, machine tools, or conveyor systems.

Measuring instrument

Tester

Used to measure "Strength" of all kinds necessary for R&D or QC, e.g. tensile strength, compression strength, switching strength, etc.

Transmission

RX CVT that was successfully developed in Japan with the first independent transmission.

Reducer & transmission

Measuring instruments

PRODUCTS

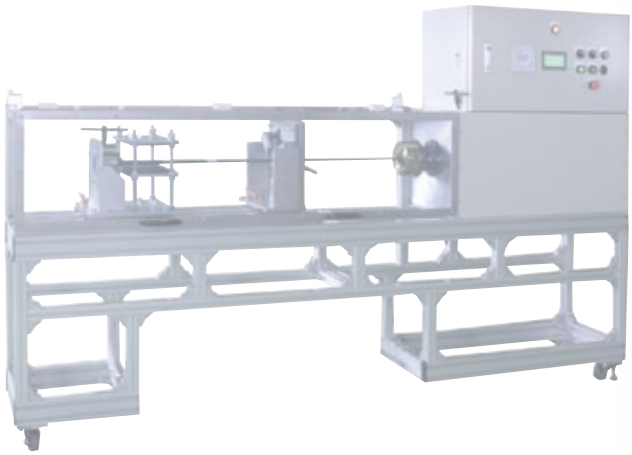
FA Machinery

Ceramic devices

Others

electric potter's wheel

NIDEC SHIMPO is also the largest maker in ceramic machinery.
It commercialized the first motor-driven pottery wheel in the world, showing market share of 80% home and 40% overseas.
Besides, NIDEC SHIMPO is manufacturing and selling various ceramic products including electric kiln, positioning as top brand of total maker.



FA machinery and testers equipped with operating or measuring technology are the major fields of SHIMPO.

INDEX

VRS series

High moment load type with high-precision

Can be mounted from the reducer side.

VRB series

High precision type

Can be mounted from the reducer side.

VRL series

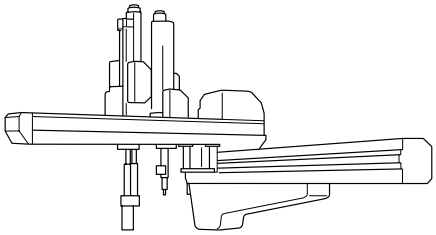
General-purpose type

Can be mounted from the customer's machine side.

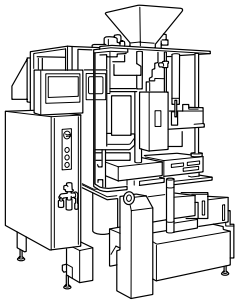
Applications

Printer

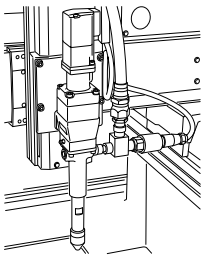
Gantry robot



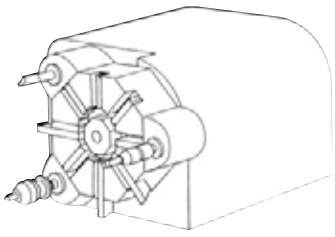
Packing machine(vertical pillow)



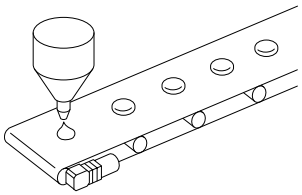
Dispenser robot



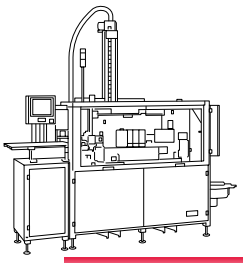
Turret head



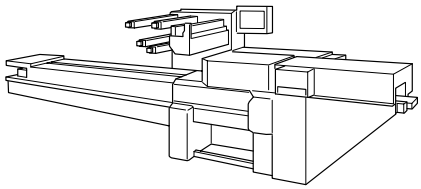
Conveyer-belt



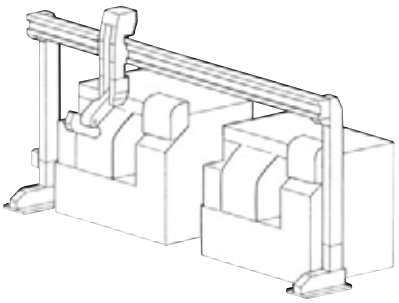
Auto packing sealing machine



Packing machine(horizontal pillow)



Loader robot



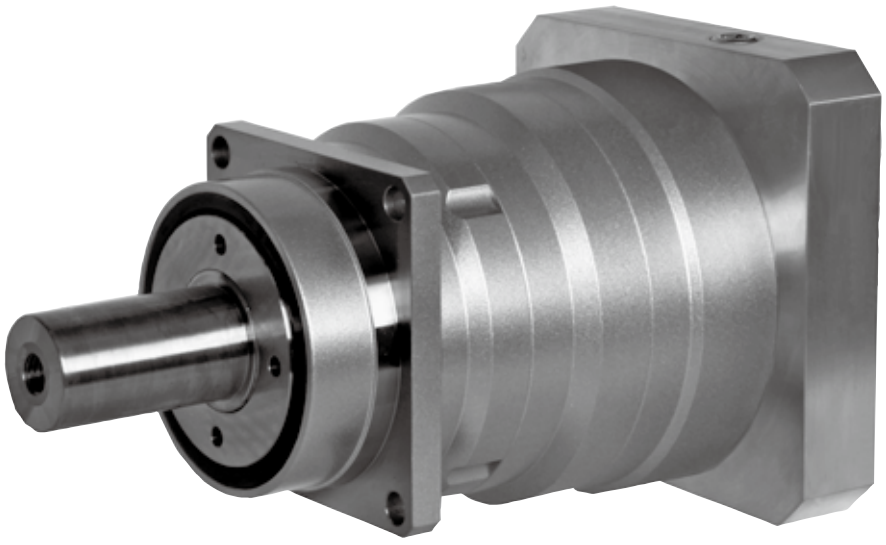
Attachable and applicable to a range of applications and devices

SHIMPO

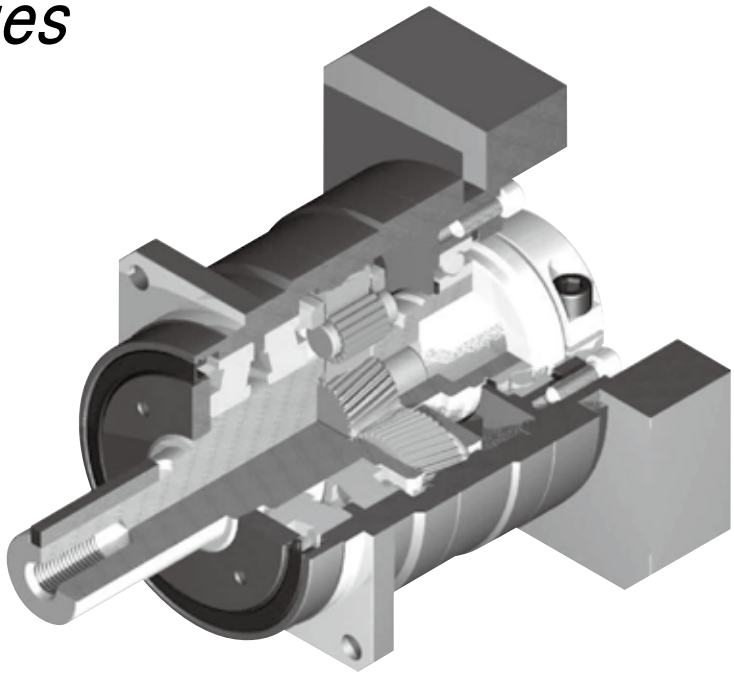
For servo motor

ABLE REDUCER

VRS Series



VRS series



High precision

Standard backlash is 3 arc-min, ideal for precision control.

High rigidity & torque

High rigidity & high torque were achived by uncaged needle roller bearings.

High load capacity

Adopting taper roller bearing for the main output shaft to increase radial and axial load.

Adapter-bushing connection

Can be attached to any motor all over the world.

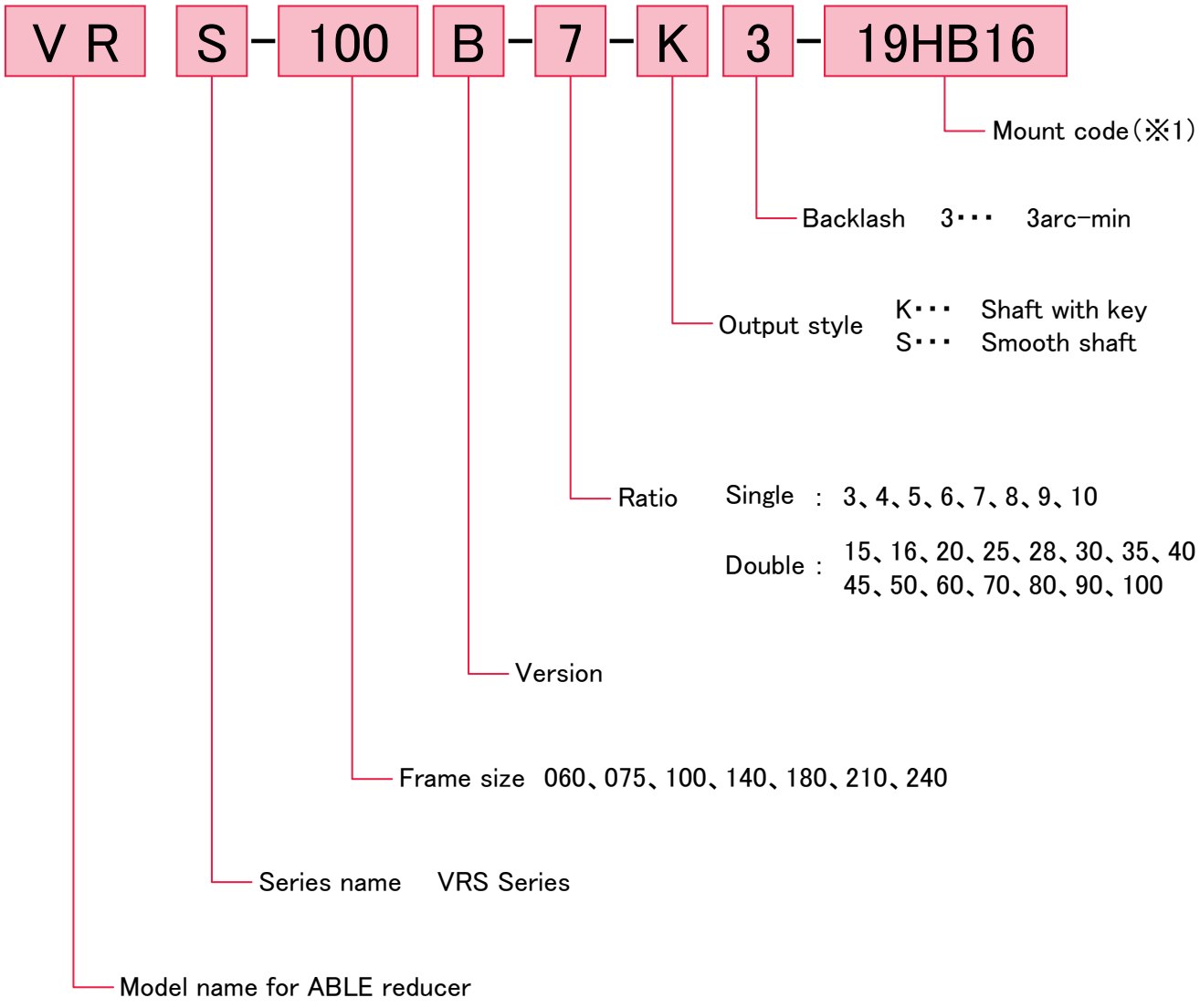
No grease leakage

Perfect solution using high viscosity anti-separation grease.

Maintenance-free

No need to replace the grease for the life of the unit.
Can be attached in any position.

VRS series



※1 Mount code

Mount code varies depending on the motor.
Please refer to reducer selection tool or contact us for more information.

Selection tool (English)
(http://www.nidec-shimpo.co.jp/selection/eng/)

VRS-060B

Frame size	Stage	Ratio	※1 Nominal output torque [Nm]	※2 Maximum output torque [Nm]	※3 Emergency stop torque [Nm]	※4 Nominal input speed [rpm]	※5 Maximum input speed [rpm]	※6 Permitted radial load [N]	※7 Permitted axial load [N]
060B	Single	3	18	35	80	3000	6000	1700	2300
		4	27	50	100	3000	6000	1900	2500
		5	27	50	100	3000	6000	2000	2700
		6	27	50	100	3000	6000	2100	2700
		7	27	50	100	3000	6000	2200	2700
		8	27	50	100	3000	6000	2300	2700
		9	18	35	80	3000	6000	2400	2700
		10	18	35	80	3000	6000	2400	2700
	Double	15	18	35	80	3000	6000	2800	2700
		16	27	50	100	3000	6000	2800	2700
		20	27	50	100	3000	6000	3000	2700
		25	27	50	100	3000	6000	3000	2700
		28	27	50	100	3000	6000	3000	2700
		30	18	35	80	3000	6000	3000	2700
		35	27	50	100	3000	6000	3000	2700
		40	27	50	100	3000	6000	3000	2700
		45	18	35	80	3000	6000	3000	2700
		50	27	50	100	3000	6000	3000	2700
		60	27	50	100	3000	6000	3000	2700
		70	27	50	100	3000	6000	3000	2700
		80	27	50	100	3000	6000	3000	2700
		90	18	35	80	3000	6000	3000	2700
		100	18	35	80	3000	6000	3000	2700

Frame size	Stage	Ratio	※8 Maximum radial load [N]	※9 Maximum axial load [N]	※10 Weight [kg]	Moment of inertia (≦φ8) [kgcm^2]	Moment of inertia (≦φ14) [kgcm^2]	Moment of inertia (≦φ19) [kgcm^2]
060B	Single	3	3000	2700	1.6	0.15	0.23	0.44
		4	3000	2700		0.10	0.18	0.39
		5	3000	2700		0.080	0.16	0.37
		6	3000	2700		0.070	0.15	0.36
		7	3000	2700		0.064	0.14	0.35
		8	3000	2700		0.060	0.14	0.35
		9	3000	2700		0.058	0.14	0.35
		10	3000	2700		0.056	0.14	0.34
	Double	15	3000	2700	1.8	0.055	0.14	–
		16	3000	2700		0.057	0.14	–
		20	3000	2700		0.054	0.13	–
		25	3000	2700		0.053	0.13	–
		28	3000	2700		0.055	0.14	–
		30	3000	2700		0.049	0.13	–
		35	3000	2700		0.053	0.13	–
		40	3000	2700		0.049	0.13	–
		45	3000	2700		0.053	0.13	–
		50	3000	2700		0.049	0.13	–
		60	3000	2700		0.049	0.13	–
		70	3000	2700		0.049	0.13	–
		80	3000	2700		0.049	0.13	–
		90	3000	2700		0.049	0.13	–
		100	3000	2700		0.049	0.13	–

※ 1 With nominal input speed, service life is 20,000 hours.
※ 2 The maximum torque when starting and stopping.
※ 3 The maximum torque when it receives shock (up to 1,000 times)
※ 4 The maximum average input speed.
※ 5 The maximum momentary input speed.
※ 6 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output shaft center, at axial load 0)
※ 7 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output side bearing, at radial load 0)
※ 8 The maximum radial load the reducer can accept.
※ 9 The maximum axial load the reducer can accept.
※10 The weight may vary slightly model to model.

VRS-075B

Frame size	Stage	Ratio	※1 Nominal output torque [Nm]	※2 Maximum output torque [Nm]	※3 Emergency stop torque [Nm]	※4 Nominal input speed [rpm]	※5 Maximum input speed [rpm]	※6 Permitted radial load [N]	※7 Permitted axial load [N]
075B	Single	3	50	80	200	3000	6000	2300	3400
		4	75	125	250	3000	6000	2500	3700
		5	75	125	250	3000	6000	2700	3900
		6	75	125	250	3000	6000	2800	3900
		7	75	125	250	3000	6000	3000	3900
		8	75	125	250	3000	6000	3100	3900
		9	50	80	200	3000	6000	3200	3900
		10	50	80	200	3000	6000	3300	3900
	Double	15	50	80	200	3000	6000	3700	3900
		16	75	125	250	3000	6000	3800	3900
		20	75	125	250	3000	6000	4000	3900
		25	75	125	250	3000	6000	4300	3900
		28	75	125	250	3000	6000	4300	3900
		30	50	80	200	3000	6000	4300	3900
		35	75	125	250	3000	6000	4300	3900
		40	75	125	250	3000	6000	4300	3900
		45	50	80	200	3000	6000	4300	3900
		50	75	125	250	3000	6000	4300	3900
		60	75	125	250	3000	6000	4300	3900
		70	75	125	250	3000	6000	4300	3900
		80	75	125	250	3000	6000	4300	3900
		90	50	80	200	3000	6000	4300	3900
		100	50	80	200	3000	6000	4300	3900

Frame size	Stage	Ratio	※8 Maximum radial load [N]	※9 Maximum axial load [N]	※10 Weight [kg]	Moment of inertia (≦φ8) [kgcm^2]	Moment of inertia (≦φ14) [kgcm^2]	Moment of inertia (≦φ19) [kgcm^2]	Moment of inertia (≦φ28) [kgcm^2]
075B	Single	3	4300	3900	3.4	–	0.67	1.1	3.1
		4	4300	3900		–	0.47	0.93	2.9
		5	4300	3900		–	0.38	0.85	2.9
		6	4300	3900		–	0.34	0.81	2.8
		7	4300	3900		–	0.31	0.78	2.8
		8	4300	3900		–	0.30	0.76	2.8
		9	4300	3900		–	0.29	0.75	2.8
		10	4300	3900		–	0.29	0.75	2.8
	Double	15	4300	3900	3.8	0.13	0.28	0.72	–
		16	4300	3900		0.14	0.30	0.73	–
		20	4300	3900		0.13	0.28	0.72	–
		25	4300	3900		0.12	0.28	0.71	–
		28	4300	3900		0.14	0.29	0.73	–
		30	4300	3900		0.099	0.25	0.70	–
		35	4300	3900		0.12	0.27	0.71	–
		40	4300	3900		0.098	0.25	0.69	–
		45	4300	3900		0.12	0.27	0.71	–
		50	4300	3900		0.098	0.25	0.69	–
		60	4300	3900		0.098	0.25	0.69	–
		70	4300	3900		0.097	0.25	0.69	–
		80	4300	3900		0.097	0.25	0.69	–
		90	4300	3900		0.097	0.25	0.69	–
		100	4300	3900		0.097	0.25	0.69	–

※ 1 With nominal input speed, service life is 20,000 hours.
※ 2 The maximum torque when starting and stopping.
※ 3 The maximum torque when it receives shock (up to 1,000 times)
※ 4 The maximum average input speed.
※ 5 The maximum momentary input speed.
※ 6 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output shaft center, at axial load 0)
※ 7 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output side bearing, at radial load 0)
※ 8 The maximum radial load the reducer can accept.
※ 9 The maximum axial load the reducer can accept.
※10 The weight may vary slightly model to model.

Performance table

VRS-100B

Frame size	Stage	Ratio	※1 Nominal output torque [Nm]	※2 Maximum output torque [Nm]	※3 Emergency stop torque [Nm]	※4 Nominal input speed [rpm]	※5 Maximum input speed [rpm]	※6 Permitted radial load [N]	※7 Permitted axial load [N]
100B	Single	3	120	225	500	3000	6000	3400	4800
		4	120	330	625	3000	6000	3700	5200
		5	180	330	625	3000	6000	4000	5600
		6	180	330	625	3000	6000	4200	5900
		7	180	330	625	3000	6000	4400	6100
		8	180	330	625	3000	6000	4600	6300
		9	120	225	500	3000	6000	4800	6300
		10	120	225	500	3000	6000	4900	6300
	Double	15	120	225	500	3000	6000	5600	6300
		16	180	330	625	3000	6000	5700	6300
		20	180	330	625	3000	6000	6100	6300
		25	180	330	625	3000	6000	6500	6300
		28	180	330	625	3000	6000	6700	6300
		30	120	225	500	3000	6000	6900	6300
		35	180	330	625	3000	6000	7000	6300
		40	180	330	625	3000	6000	7000	6300
		45	120	225	500	3000	6000	7000	6300
		50	180	330	625	3000	6000	7000	6300
		60	180	330	625	3000	6000	7000	6300
		70	180	330	625	3000	6000	7000	6300
		80	180	330	625	3000	6000	7000	6300
		90	120	225	500	3000	6000	7000	6300
		100	120	225	500	3000	6000	7000	6300

Frame size	Stage	Ratio	※8 Maximum radial load [N]	※9 Maximum axial load [N]	※10 Weight [kg]	Moment of inertia (≦φ14) [kgcm^2]	Moment of inertia (≦φ19) [kgcm^2]	Moment of inertia (≦φ28) [kgcm^2]	Moment of inertia (≦φ38) [kgcm^2]
100B	Single	3	7000	6300	8.1	–	3.2	5.2	13
		4	7000	6300		–	2.0	4.0	12
		5	7000	6300		–	1.5	3.6	11
		6	7000	6300		–	1.3	3.3	11
		7	7000	6300		–	1.1	3.1	11
		8	7000	6300		–	1.0	3.0	11
		9	7000	6300		–	0.96	3.0	11
		10	7000	6300		–	0.93	3.0	11
	Double	15	7000	6300	8.8	0.42	0.86	2.8	–
		16	7000	6300		0.48	0.91	2.9	–
		20	7000	6300		0.40	0.83	2.8	–
		25	7000	6300		0.38	0.82	2.8	–
		28	7000	6300		0.44	0.87	2.8	–
		30	7000	6300		0.29	0.74	2.7	–
		35	7000	6300		0.37	0.81	2.7	–
		40	7000	6300		0.28	0.73	2.7	–
		45	7000	6300		0.37	0.80	2.7	–
		50	7000	6300		0.28	0.73	2.7	–
		60	7000	6300		0.28	0.73	2.7	–
		70	7000	6300		0.28	0.73	2.7	–
		80	7000	6300		0.28	0.73	2.7	–
		90	7000	6300		0.27	0.73	2.7	–
		100	7000	6300		0.27	0.73	2.7	–

※ 1 With nominal input speed, service life is 20,000 hours.
※ 2 The maximum torque when starting and stopping.
※ 3 The maximum torque when it receives shock (up to 1,000 times)
※ 4 The maximum average input speed.
※ 5 The maximum momentary input speed.
※ 6 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output shaft center, at axial load 0)
※ 7 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output side bearing, at radial load 0)
※ 8 The maximum radial load the reducer can accept.
※ 9 The maximum axial load the reducer can accept.
※10 The weight may vary slightly model to model.

VRS-140B

Frame size	Stage	Ratio	※1 Nominal output torque [Nm]	※2 Maximum output torque [Nm]	※3 Emergency stop torque [Nm]	※4 Nominal input speed [rpm]	※5 Maximum input speed [rpm]	※6 Permitted radial load [N]	※7 Permitted axial load [N]
140B	Single	3	240	470	1000	2000	4000	6700	9000
		4	240	700	1250	2000	4000	7400	9000
		5	360	700	1250	2000	4000	7900	9000
		6	360	700	1250	2000	4000	8300	9000
		7	360	700	1250	2000	4000	8700	9000
		8	360	700	1250	2000	4000	9100	9000
		9	240	470	1000	2000	4000	9400	9000
		10	240	470	1000	2000	4000	9700	9000
	Double	15	240	470	1000	2000	4000	10000	9000
		16	360	700	1250	2000	4000	10000	9000
		20	360	700	1250	2000	4000	10000	9000
		25	360	700	1250	2000	4000	10000	9000
		28	360	700	1250	2000	4000	10000	9000
		30	240	470	1000	2000	4000	10000	9000
		35	360	700	1250	2000	4000	10000	9000
		40	360	700	1250	2000	4000	10000	9000
		45	240	470	1000	2000	4000	10000	9000
		50	360	700	1250	2000	4000	10000	9000
		60	360	700	1250	2000	4000	10000	9000
		70	360	700	1250	2000	4000	10000	9000
		80	360	700	1250	2000	4000	10000	9000
		90	240	470	1000	2000	4000	10000	9000
		100	240	470	1000	2000	4000	10000	9000

Frame size	Stage	Ratio	※8 Maximum radial load [N]	※9 Maximum axial load [N]	※10 Weight [kg]	Moment of inertia (≦φ19) [kgcm^2]	Moment of inertia (≦φ28) [kgcm^2]	Moment of inertia (≦φ38) [kgcm^2]	Moment of inertia (≦φ48) [kgcm^2]
140B	Single	3	10000	9000	17	–	12	20	42
		4	10000	9000		–	7.4	15	37
		5	10000	9000		–	5.8	13	36
		6	10000	9000		–	4.9	13	35
		7	10000	9000		–	4.1	12	34
		8	10000	9000		–	3.8	12	34
		9	10000	9000		–	3.6	11	34
		10	10000	9000		–	3.4	11	33
	Double	15	10000	9000	19	1.3	3.2	11	–
		16	10000	9000		1.5	3.5	11	–
		20	10000	9000		1.2	3.1	11	–
		25	10000	9000		1.1	3.1	11	–
		28	10000	9000		1.4	3.3	11	–
		30	10000	9000		0.85	2.8	10	–
		35	10000	9000		1.1	3.1	11	–
		40	10000	9000		0.83	2.8	10	–
		45	10000	9000		1.1	3.0	11	–
		50	10000	9000		0.81	2.8	10	–
		60	10000	9000		0.81	2.8	10	–
		70	10000	9000		0.80	2.8	10	–
		80	10000	9000		0.80	2.8	10	–
		90	10000	9000		0.80	2.8	10	–
		100	10000	9000		0.80	2.8	10	–

※ 1 With nominal input speed, service life is 20,000 hours.
※ 2 The maximum torque when starting and stopping.
※ 3 The maximum torque when it receives shock (up to 1,000 times)
※ 4 The maximum average input speed.
※ 5 The maximum momentary input speed.
※ 6 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output shaft center, at axial load 0)
※ 7 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output side bearing, at radial load 0)
※ 8 The maximum radial load the reducer can accept.
※ 9 The maximum axial load the reducer can accept.
※10 The weight may vary slightly model to model.

Performance table

VRS-180B

Frame size	Stage	Ratio	※1 Nominal output torque [Nm]	※2 Maximum output torque [Nm]	※3 Emergency stop torque [Nm]	※4 Nominal input speed [rpm]	※5 Maximum input speed [rpm]	※6 Permitted radial load [N]	※7 Permitted axial load [N]
180B	Single	3	500	970	2200	1500	3000	12000	16000
		4	750	1400	2750	1500	3000	13000	17000
		5	750	1400	2750	1500	3000	14000	17000
		6	750	1400	2750	1500	3000	15000	17000
		7	750	1400	2750	1500	3000	16000	17000
		8	750	1400	2750	1500	3000	17000	17000
		9	500	970	2200	1500	3000	17000	17000
		10	500	970	2200	1500	3000	18000	17000
	Double	15	500	970	2200	1500	3000	19000	17000
		16	750	1400	2750	1500	3000	19000	17000
		20	750	1400	2750	1500	3000	19000	17000
		25	750	1400	2750	1500	3000	19000	17000
		28	750	1400	2750	1500	3000	19000	17000
		30	500	970	2200	1500	3000	19000	17000
		35	750	1400	2750	1500	3000	19000	17000
		40	750	1400	2750	1500	3000	19000	17000
		45	500	970	2200	1500	3000	19000	17000
		50	750	1400	2750	1500	3000	19000	17000
		60	750	1400	2750	1500	3000	19000	17000
		70	750	1400	2750	1500	3000	19000	17000
		80	750	1400	2750	1500	3000	19000	17000
		90	500	970	2200	1500	3000	19000	17000
		100	500	970	2200	1500	3000	19000	17000

Frame size	Stage	Ratio	※8 Maximum radial load [N]	※9 Maximum axial load [N]	※10 Weight [kg]	Moment of inertia (≦φ28) [kgcm^2]	Moment of inertia (≦φ38) [kgcm^2]	Moment of inertia (≦φ48) [kgcm^2]	Moment of inertia (≦φ65) [kgcm^2]
180B	Single	3	19000	17000	39	–	42	64	120
		4	19000	17000		–	27	49	110
		5	19000	17000		–	21	43	100
		6	19000	17000		–	18	40	100
		7	19000	17000		–	16	38	98
		8	19000	17000		–	15	37	97
		9	19000	17000		–	14	36	96
		10	19000	17000		–	14	36	96
	Double	15	19000	17000	39	4.7	12	34	–
		16	19000	17000		5.4	13	35	–
		20	19000	17000		4.3	12	34	–
		25	19000	17000		4.2	12	34	–
		28	19000	17000		4.9	13	35	–
		30	19000	17000		3.2	11	33	–
		35	19000	17000		4.1	12	34	–
		40	19000	17000		3.2	11	33	–
		45	19000	17000		4.0	12	34	–
		50	19000	17000		3.1	11	33	–
		60	19000	17000		3.1	11	33	–
		70	19000	17000		3.1	11	33	–
		80	19000	17000		3.1	11	33	–
		90	19000	17000		3.1	11	33	–
		100	19000	17000		3.1	11	33	–

※ 1 With nominal input speed, service life is 20,000 hours.
※ 2 The maximum torque when starting and stopping.
※ 3 The maximum torque when it receives shock (up to 1,000 times)
※ 4 The maximum average input speed.
※ 5 The maximum momentary input speed.
※ 6 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output shaft center, at axial load 0)
※ 7 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output side bearing, at radial load 0)
※ 8 The maximum radial load the reducer can accept.
※ 9 The maximum axial load the reducer can accept.
※10 The weight may vary slightly model to model.

VRS-210B

Frame size	Stage	Ratio	※1 Nominal output torque [Nm]	※2 Maximum output torque [Nm]	※3 Emergency stop torque [Nm]	※4 Nominal input speed [rpm]	※5 Maximum input speed [rpm]	※6 Permitted radial load [N]	※7 Permitted axial load [N]
210B	Single	3	1000	1600	4000	1000	2000	17000	22000
		4	1500	2300	5000	1000	2000	18000	22000
		5	1500	2300	5000	1000	2000	20000	22000
		6	1500	2300	5000	1000	2000	21000	22000
		7	1500	2300	5000	1000	2000	22000	22000
		8	1500	2200	5000	1000	2000	23000	22000
		9	1000	1900	4000	1000	2000	24000	22000
		10	1000	1600	4000	1000	2000	24000	22000
	Double	15	1000	1600	4000	1000	2000	24000	22000
		16	1500	2300	5000	1000	2000	24000	22000
		20	1500	2300	5000	1000	2000	24000	22000
		25	1500	2300	5000	1000	2000	24000	22000
		28	1500	2300	5000	1000	2000	24000	22000
		30	1000	1600	4000	1000	2000	24000	22000
		35	1500	2300	5000	1000	2000	24000	22000
		40	1500	2300	5000	1000	2000	24000	22000
		45	1000	1300	4000	1000	2000	24000	22000
		50	1500	2300	5000	1000	2000	24000	22000
		60	1500	2300	5000	1000	2000	24000	22000
		70	1500	2300	5000	1000	2000	24000	22000
		80	1500	1800	5000	1000	2000	24000	22000
		90	1000	1300	4000	1000	2000	24000	22000
		100	1000	1200	4000	1000	2000	24000	22000

Frame size	Stage	Ratio	※8 Maximum radial load [N]	※9 Maximum axial load [N]	※10 Weight [kg]	Moment of inertia (≦φ38) [kgcm^2]	Moment of inertia (≦φ48) [kgcm^2]	Moment of inertia (≦φ65) [kgcm^2]
210B	Single	3	24000	22000	59	–	92	150
		4	24000	22000		–	63	120
		5	24000	22000		–	53	110
		6	24000	22000		–	47	110
		7	24000	22000		–	43	100
		8	24000	22000		–	40	100
		9	24000	22000		–	39	99
		10	24000	22000		–	38	98
	Double	15	24000	22000	60	14	36	–
		16	24000	22000		16	37	–
		20	24000	22000		14	36	–
		25	24000	22000		14	35	–
		28	24000	22000		15	36	–
		30	24000	22000		12	34	–
		35	24000	22000		13	35	–
		40	24000	22000		12	33	–
		45	24000	22000		13	35	–
		50	24000	22000		12	33	–
		60	24000	22000		12	33	–
		70	24000	22000		12	33	–
		80	24000	22000		12	33	–
		90	24000	22000		12	33	–
		100	24000	22000		12	33	–

※ 1 With nominal input speed, service life is 20,000 hours.
※ 2 The maximum torque when starting and stopping.
※ 3 The maximum torque when it receives shock (up to 1,000 times)
※ 4 The maximum average input speed.
※ 5 The maximum momentary input speed.
※ 6 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output shaft center, at axial load 0)
※ 7 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output side bearing, at radial load 0)
※ 8 The maximum radial load the reducer can accept.
※ 9 The maximum axial load the reducer can accept.
※10 The weight may vary slightly model to model.

Performance table

VRS-240B

Frame size	Stage	Ratio	※1 Nominal output torque [Nm]	※2 Maximum output torque [Nm]	※3 Emergency stop torque [Nm]	※4 Nominal input speed [rpm]	※5 Maximum input speed [rpm]	※6 Permitted radial load [N]	※7 Permitted axial load [N]
240B	Single	3	1600	2500	6000	1000	2000	21000	27000
		4	2400	3700	8000	1000	2000	22000	27000
		5	2400	3700	8000	1000	2000	24000	27000
		6	2400	3700	8000	1000	2000	25000	27000
		7	2400	3700	8000	1000	2000	26000	27000
		8	2400	3600	8000	1000	2000	28000	27000
		9	1600	3000	6000	1000	2000	29000	27000
		10	1600	2600	6000	1000	2000	29000	27000
	Double	15	1600	2500	6000	1000	2000	30000	27000
		16	2400	3700	8000	1000	2000	30000	27000
		20	2400	3700	8000	1000	2000	30000	27000
		25	2400	3700	8000	1000	2000	30000	27000
		28	2400	3700	8000	1000	2000	30000	27000
		30	1600	2500	6000	1000	2000	30000	27000
		35	2400	3700	8000	1000	2000	30000	27000
		40	2400	3700	8000	1000	2000	30000	27000
		45	1600	2100	6000	1000	2000	30000	27000
		50	2400	3700	8000	1000	2000	30000	27000
		60	2400	3700	8000	1000	2000	30000	27000
		70	2400	3700	8000	1000	2000	30000	27000
		80	2400	2700	8000	1000	2000	30000	27000
		90	1600	2100	6000	1000	2000	30000	27000
		100	1600	1800	6000	1000	2000	30000	27000

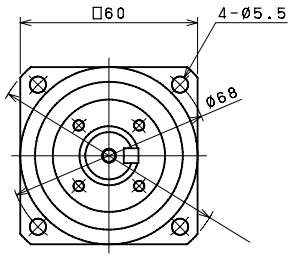
Frame size	Stage	Ratio	※8 Maximum radial load [N]	※9 Maximum axial load [N]	※10 Weight [kg]	Moment of inertia (≦ϕ48) [kgcm^2]	Moment of inertia (≦ϕ65) [kgcm^2]
240B	Single	3	30000	27000	85	–	220
		4	30000	27000		–	160
		5	30000	27000		–	130
		6	30000	27000		–	120
		7	30000	27000		–	110
		8	30000	27000		–	110
		9	30000	27000		–	110
		10	30000	27000		–	100
	Double	15	30000	27000	89	40	–
		16	30000	27000		43	–
		20	30000	27000		39	–
		25	30000	27000		39	–
		28	30000	27000		41	–
		30	30000	27000		35	–
		35	30000	27000		38	–
		40	30000	27000		35	–
		45	30000	27000		38	–
		50	30000	27000		35	–
		60	30000	27000		35	–
		70	30000	27000		34	–
		80	30000	27000		34	–
		90	30000	27000		34	–
		100	30000	27000		34	–

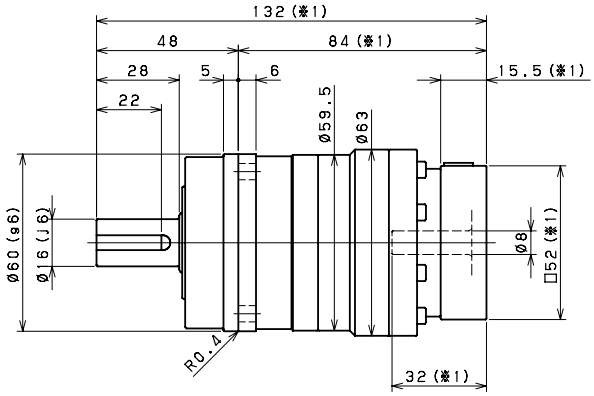
※ 1 With nominal input speed, service life is 20,000 hours.
※ 2 The maximum torque when starting and stopping.
※ 3 The maximum torque when it receives shock (up to 1,000 times)
※ 4 The maximum average input speed.
※ 5 The maximum momentary input speed.
※ 6 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output shaft center, at axial load 0)
※ 7 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output side bearing, at radial load 0)
※ 8 The maximum radial load the reducer can accept.
※ 9 The maximum axial load the reducer can accept.
※10 The weight may vary slightly model to model.

MEMO

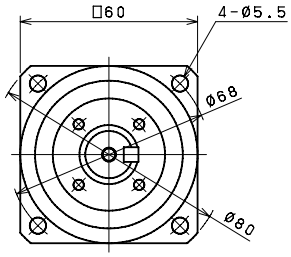
VRS-060B 1stage

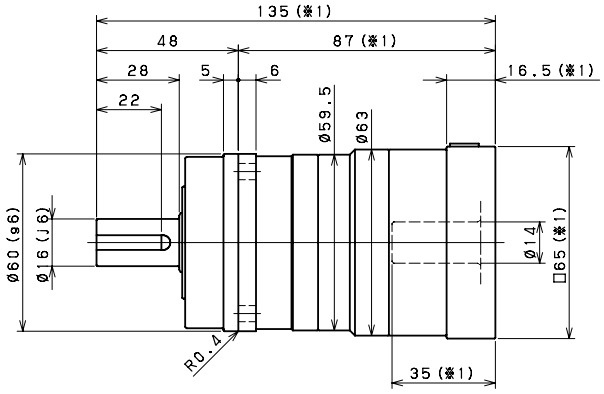
Input shaft bore ≦φ8



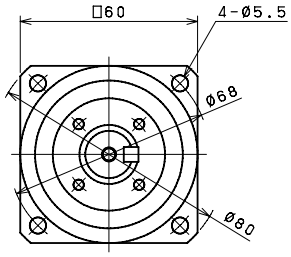


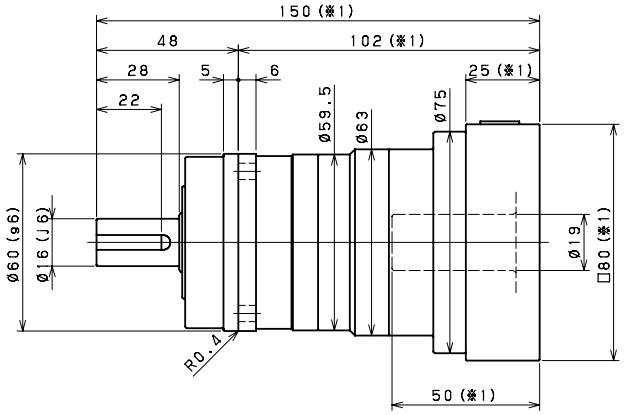
Input shaft bore ≦φ14

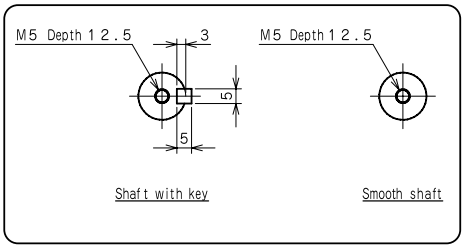




Input shaft bore ≦φ19



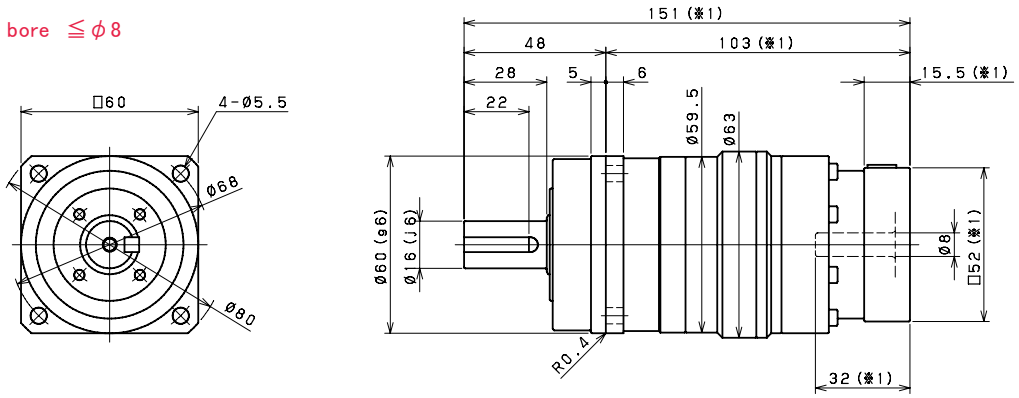




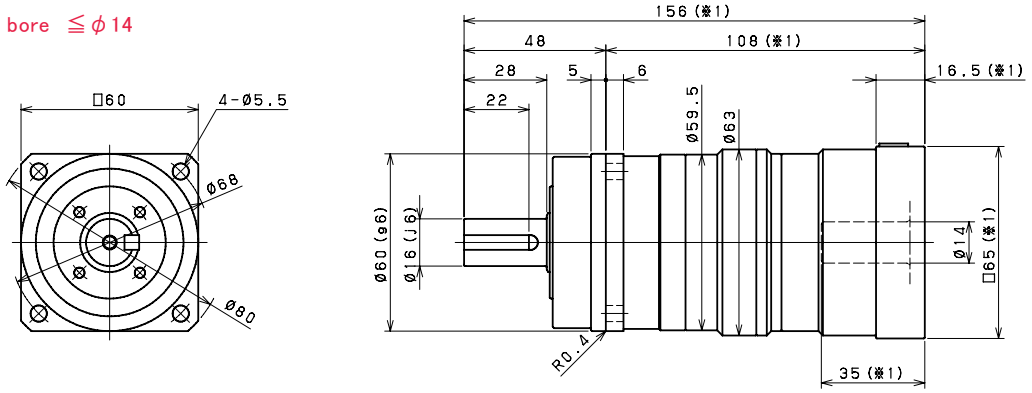
※1 Length will vary depending on motor.
※2 Bushing will be inserted to adapt to motor shaft.

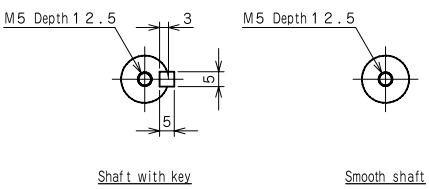
VRS-060B 2stage

Input shaft bore ≦ϕ8



Input shaft bore ≦ϕ14

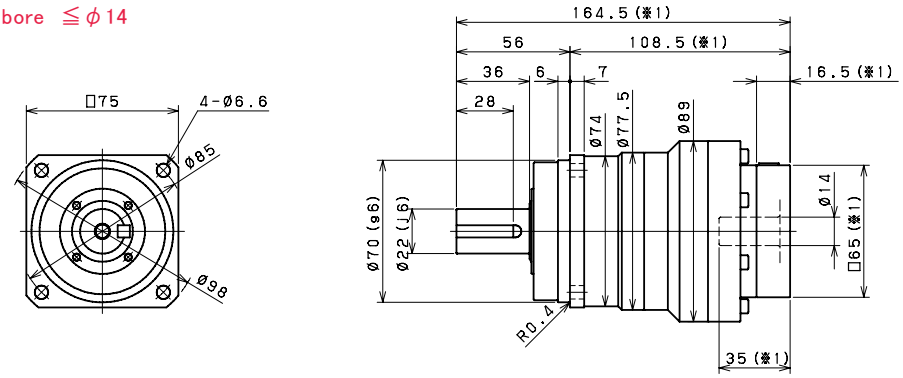




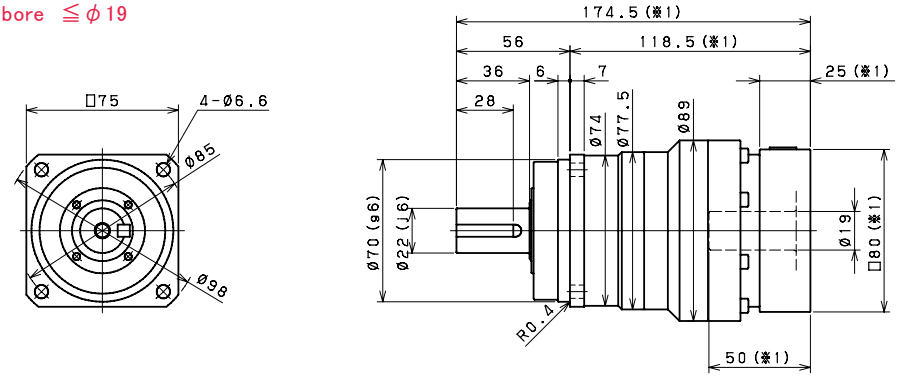
※1 Length will vary depending on motor.
※2 Bushing will be inserted to adapt to motor shaft.

VRS-075B 1stage

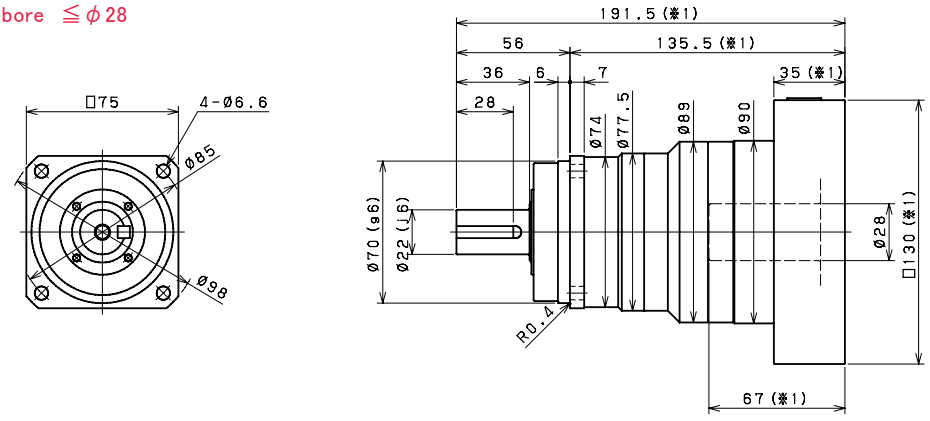
Input shaft bore ≦φ14

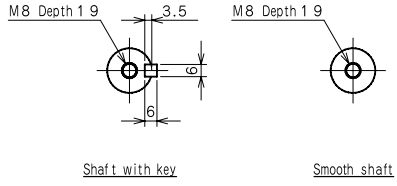


Input shaft bore ≦φ19



Input shaft bore ≦φ28

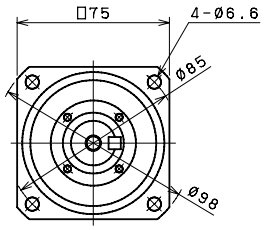


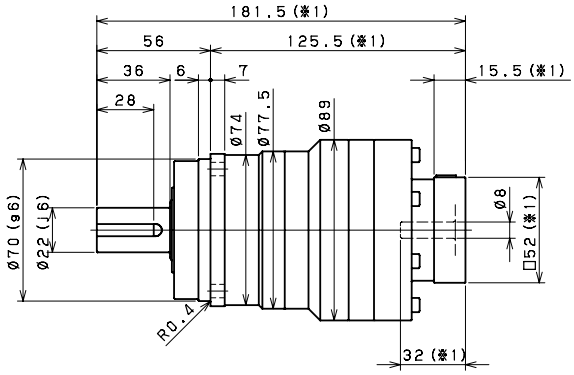


※1 Length will vary depending on motor.
※2 Bushing will be inserted to adapt to motor shaft.

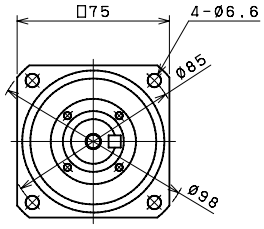
VRS-075B 2stage

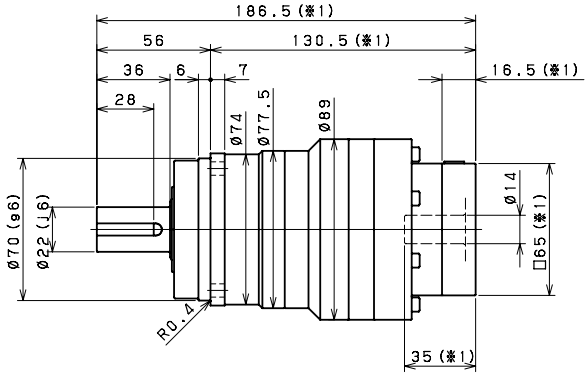
Input shaft bore ≦ϕ8



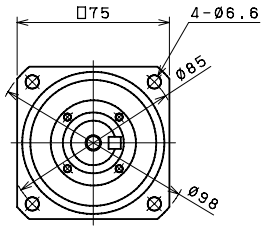


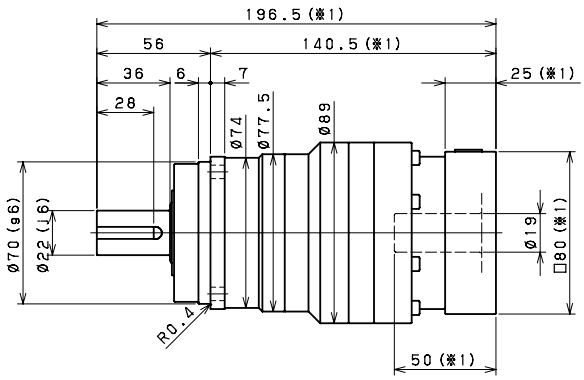
Input shaft bore ≦ϕ14

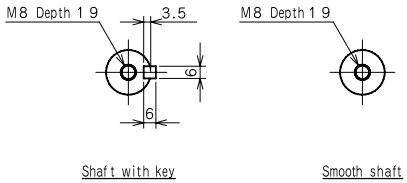




Input shaft bore ≦ϕ19



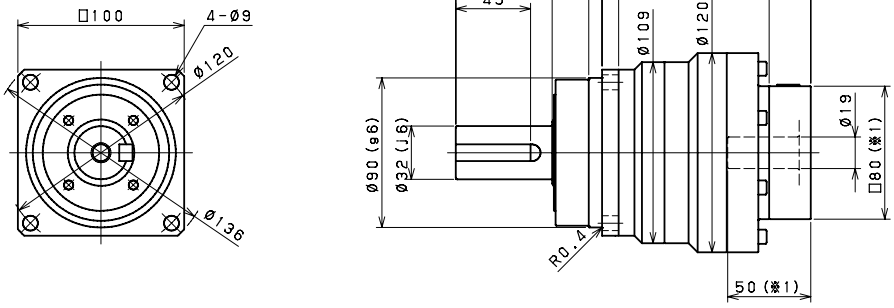




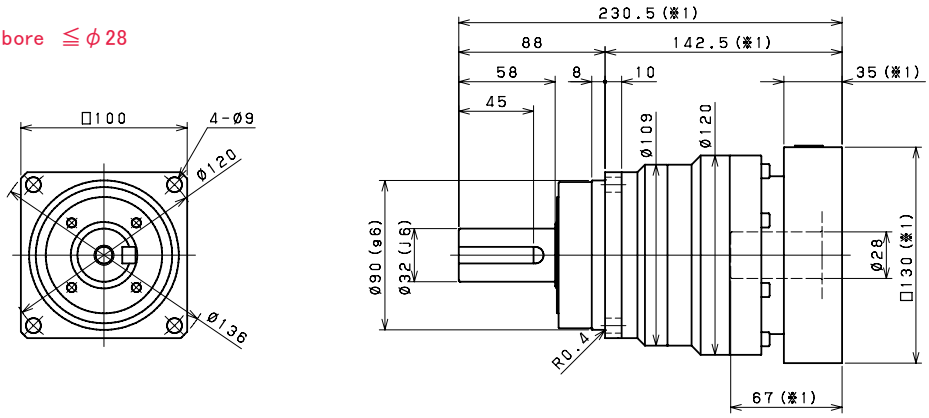
※1 Length will vary depending on motor.
※2 Bushing will be inserted to adapt to motor shaft.

VRS-100B 1stage

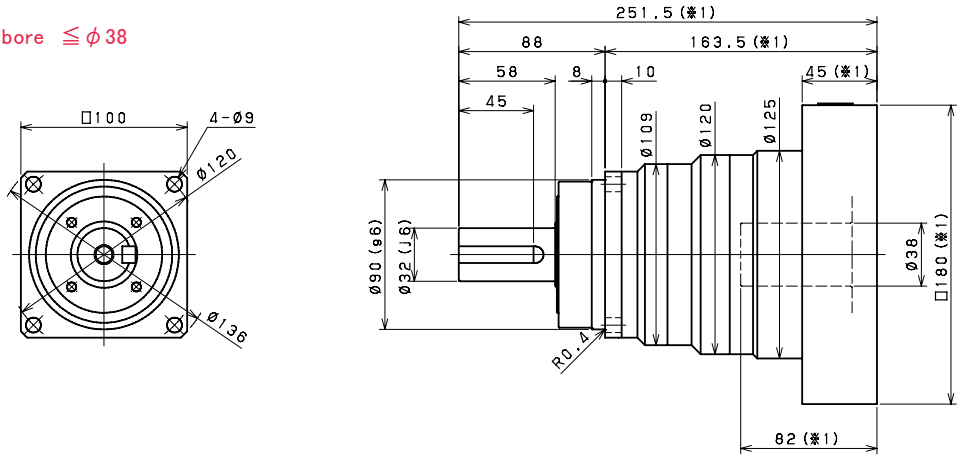
Input shaft bore ≦ϕ19

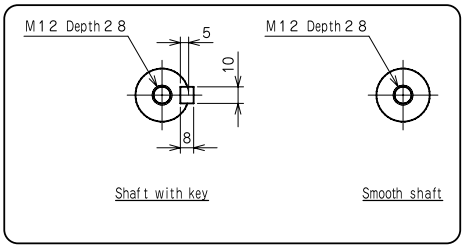


Input shaft bore ≦ϕ28



Input shaft bore ≦ϕ38

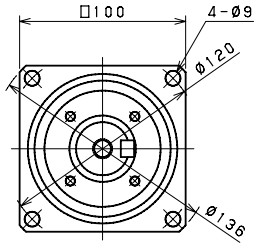


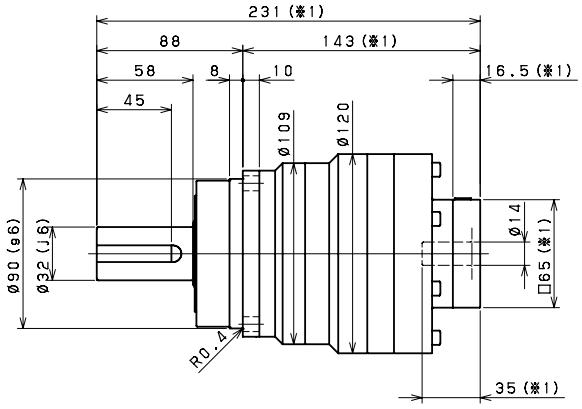


※1 Length will vary depending on motor.
※2 Bushing will be inserted to adapt to motor shaft.

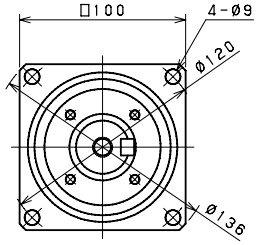
VRS-100B 2stage

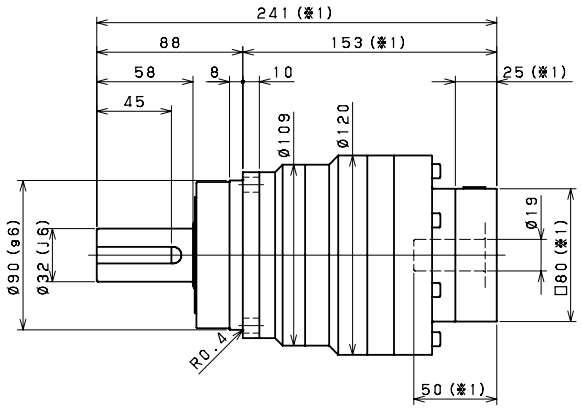
Input shaft bore ≦ϕ14



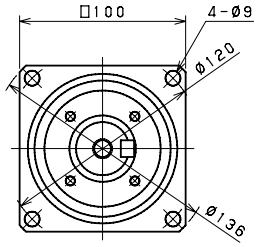


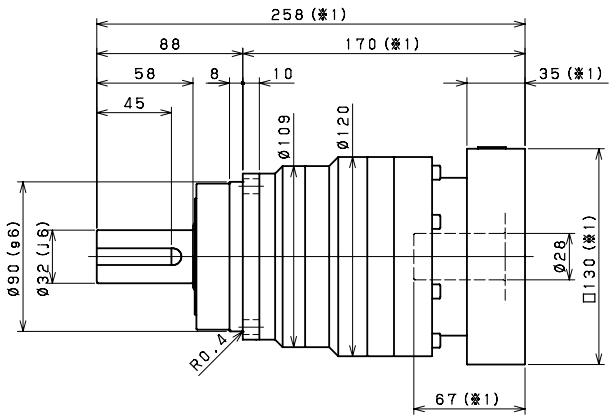
Input shaft bore ≦ϕ19

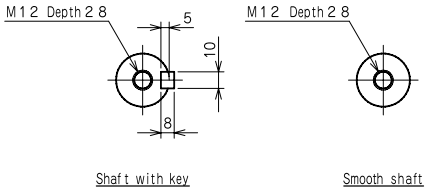




Input shaft bore ≦ϕ28



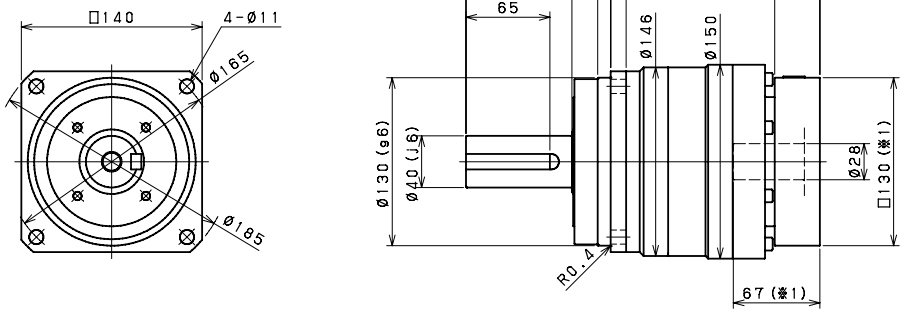




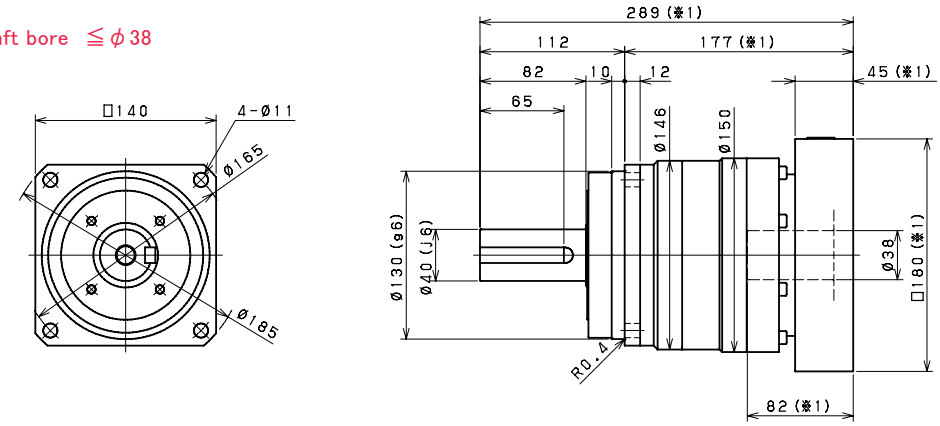
※1 Length will vary depending on motor.
※2 Bushing will be inserted to adapt to motor shaft.

VRS-140B 1stage

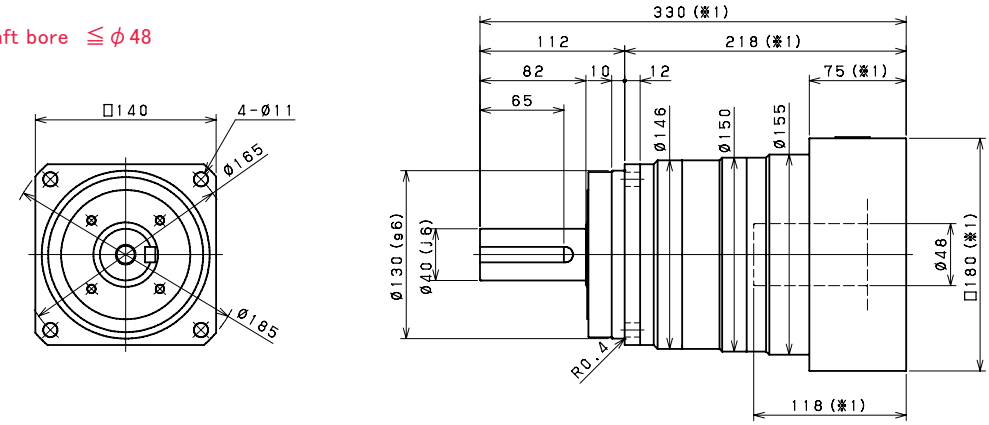
Input shaft bore ≦ϕ28

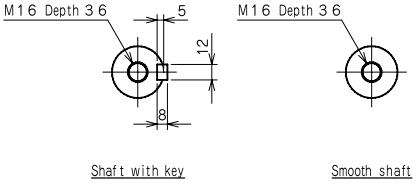


Input shaft bore ≦ϕ38



Input shaft bore ≦ϕ48

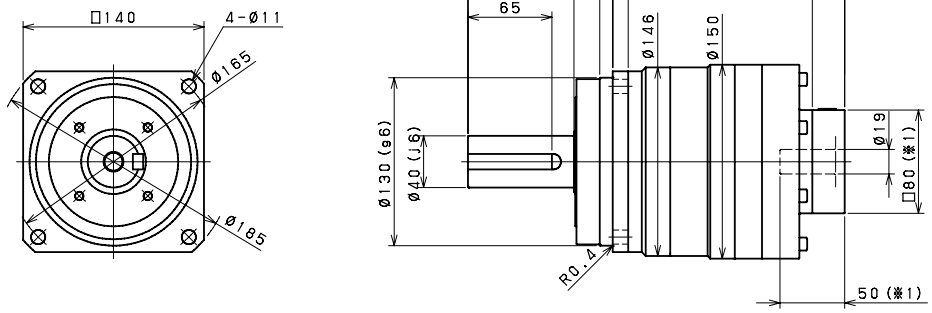




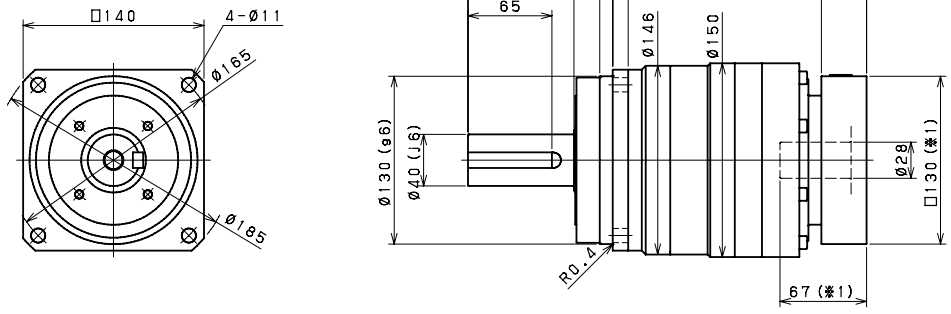
※1 Length will vary depending on motor.
※2 Bushing will be inserted to adapt to motor shaft.

VRS-140B 2stage

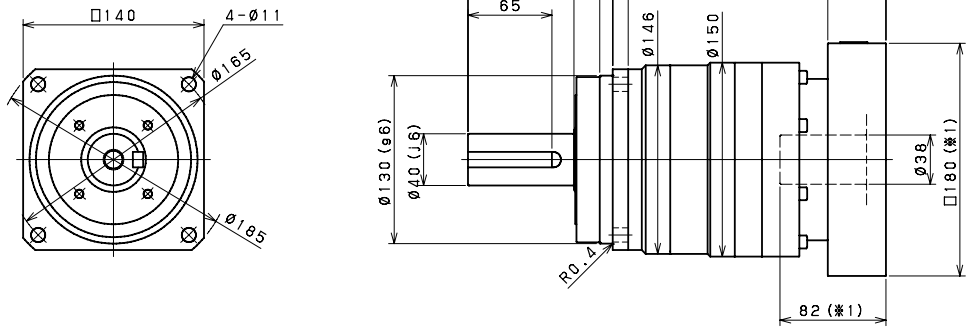
Input shaft bore ≦ϕ19

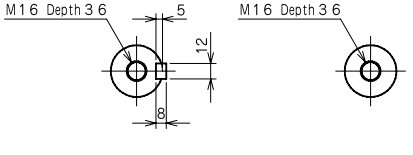


Input shaft bore ≦ϕ28



Input shaft bore ≦ϕ38

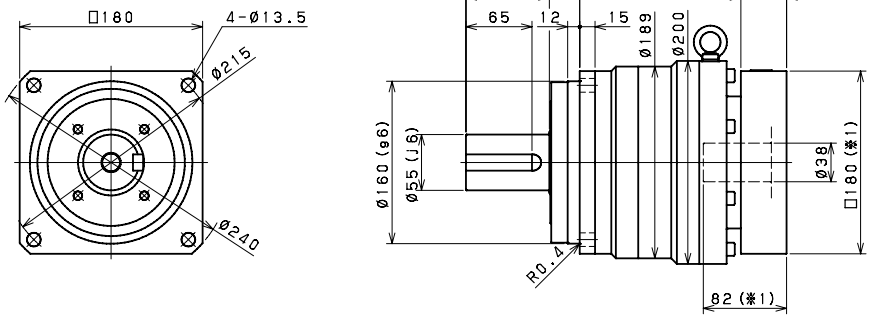




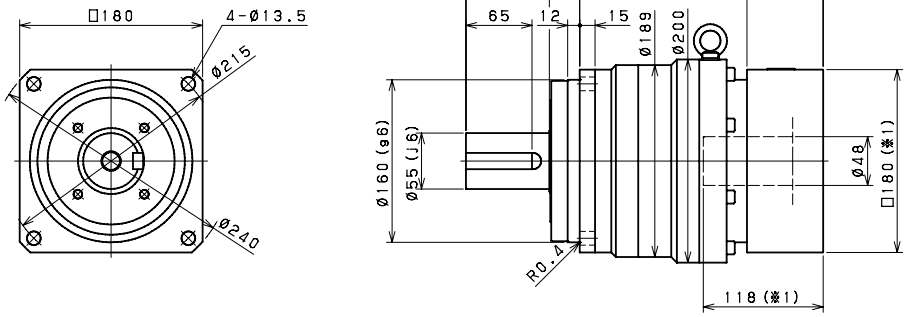
※1 Length will vary depending on motor.
※2 Bushing will be inserted to adapt to motor shaft.

VRS-180B 1stage

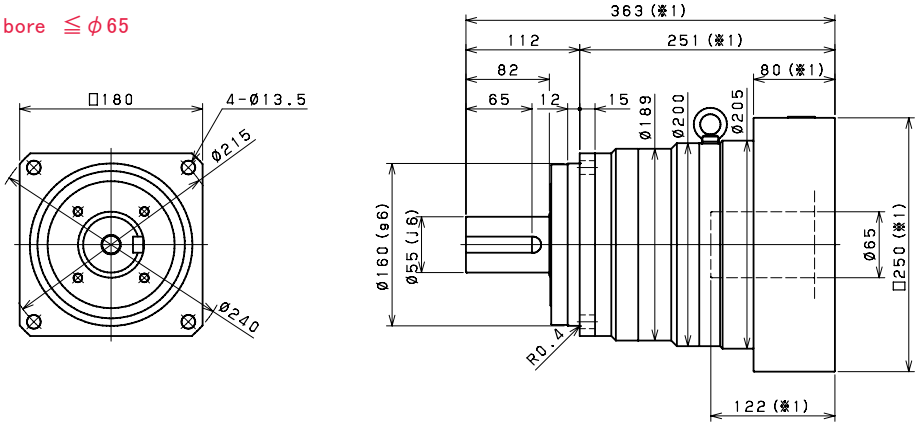
Input shaft bore ≦ϕ38

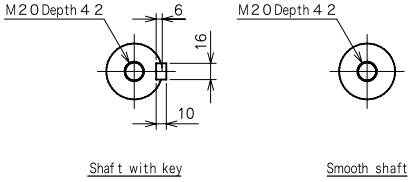


Input shaft bore ≦ϕ48



Input shaft bore ≦ϕ65

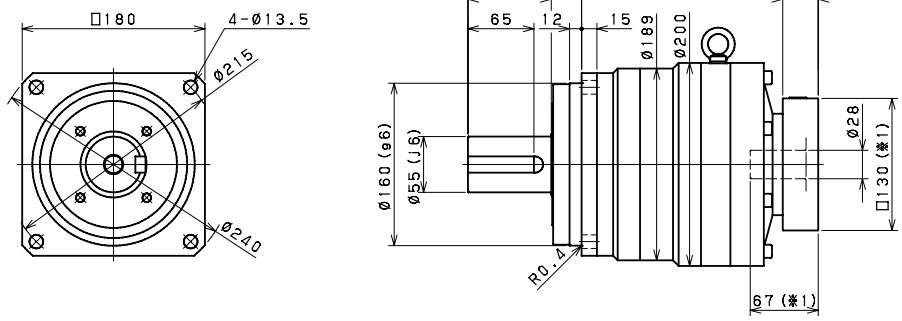




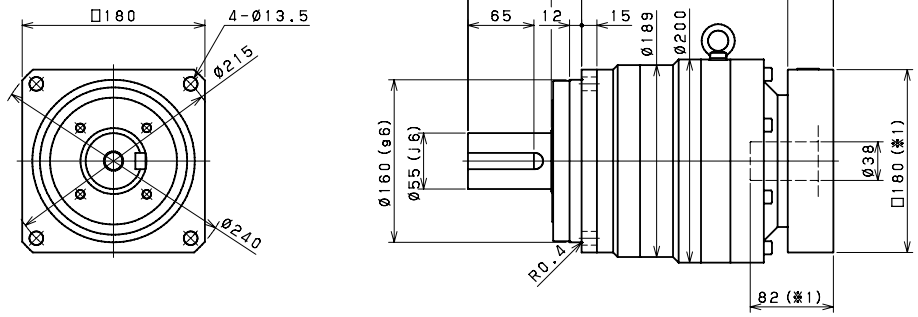
※1 Length will vary depending on motor.
※2 Bushing will be inserted to adapt to motor shaft.

VRS-180B 2stage

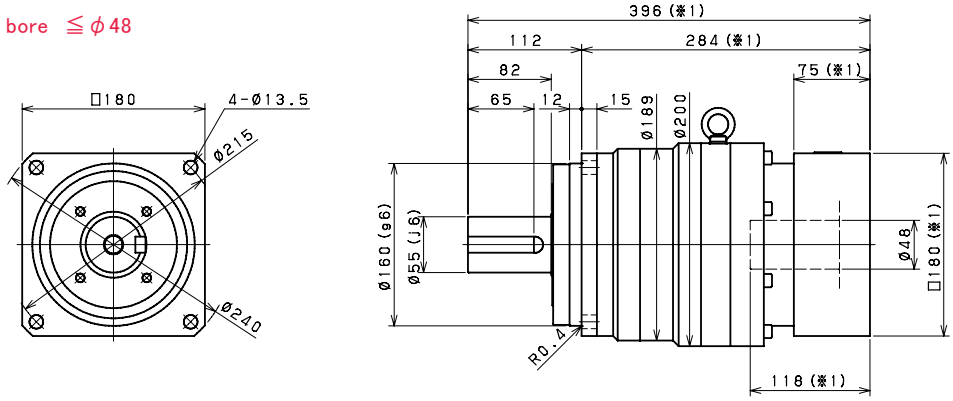
Input shaft bore ≦ϕ28

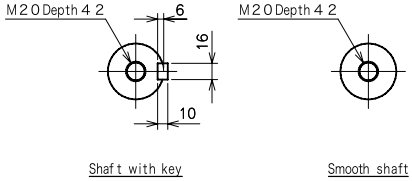


Input shaft bore ≦ϕ38



Input shaft bore ≦ϕ48

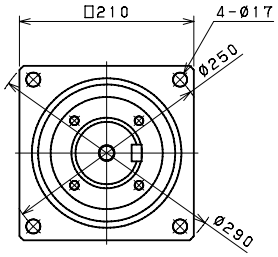


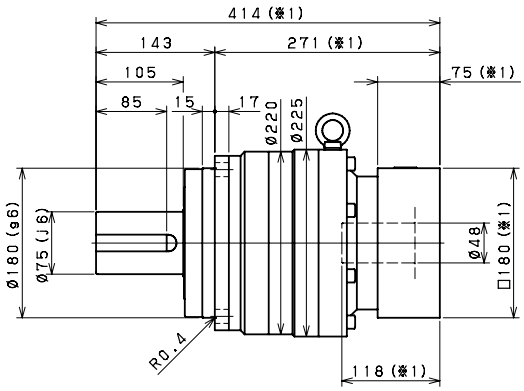


※1 Length will vary depending on motor.
※2 Bushing will be inserted to adapt to motor shaft.

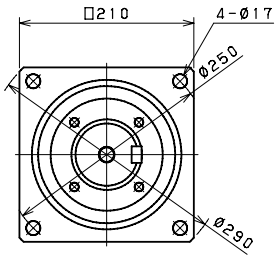
VRS-210B 1stage

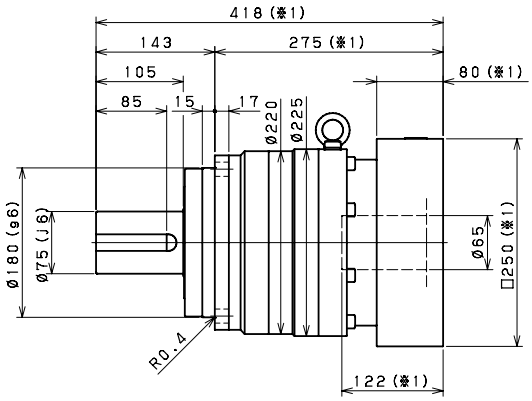
Input shaft bore ≦φ48

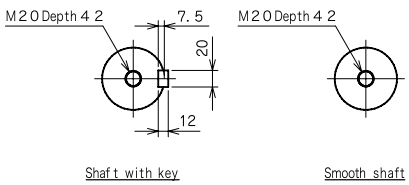




Input shaft bore ≦φ65



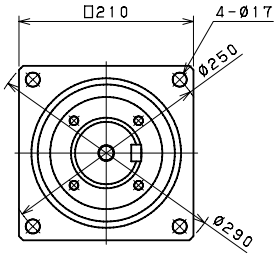


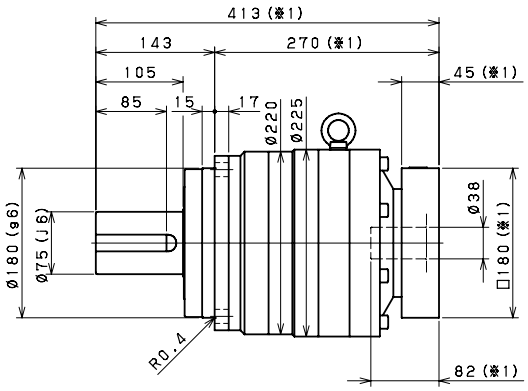


※1 Length will vary depending on motor.
※2 Bushing will be inserted to adapt to motor shaft.

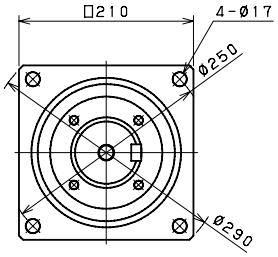
VRS-210B 2stage

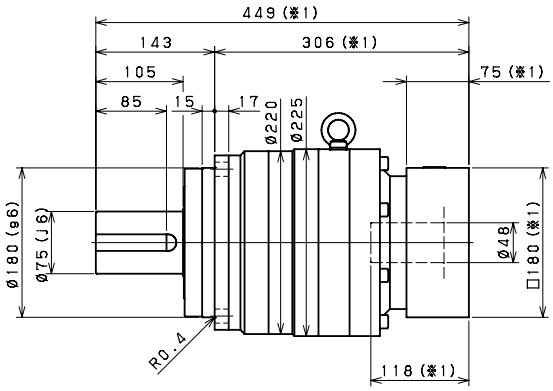
Input shaft bore ≦ϕ38

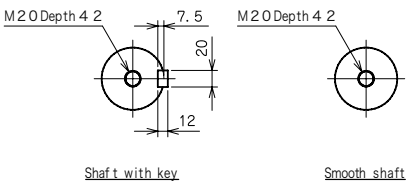




Input shaft bore ≦ϕ48



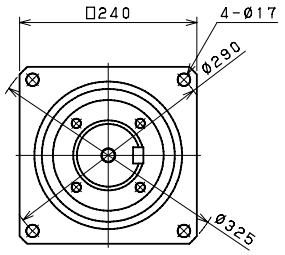


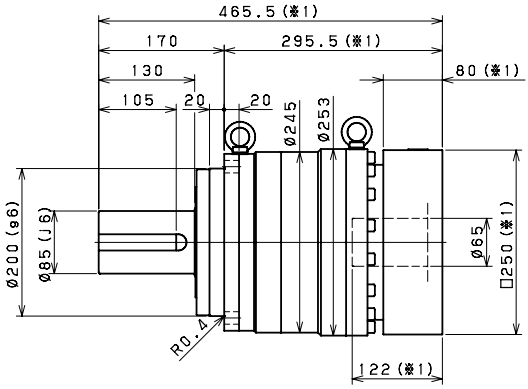


※1 Length will vary depending on motor.
※2 Bushing will be inserted to adapt to motor shaft.

VRS-240B 1stage

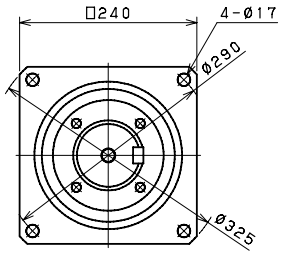
Input shaft bore ≦φ65

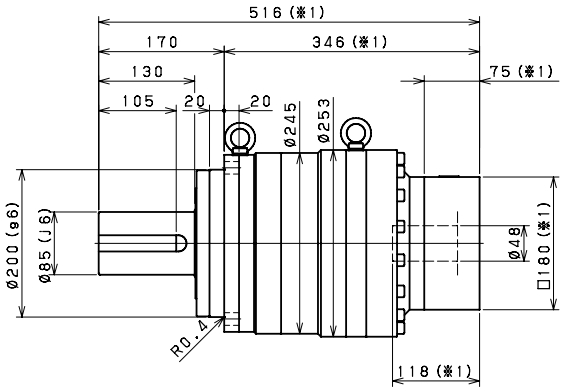


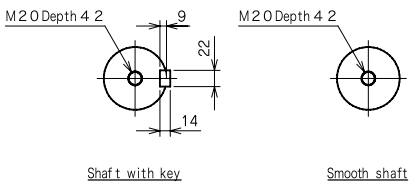


VRS-240B 2stage

Input shaft bore ≦φ48

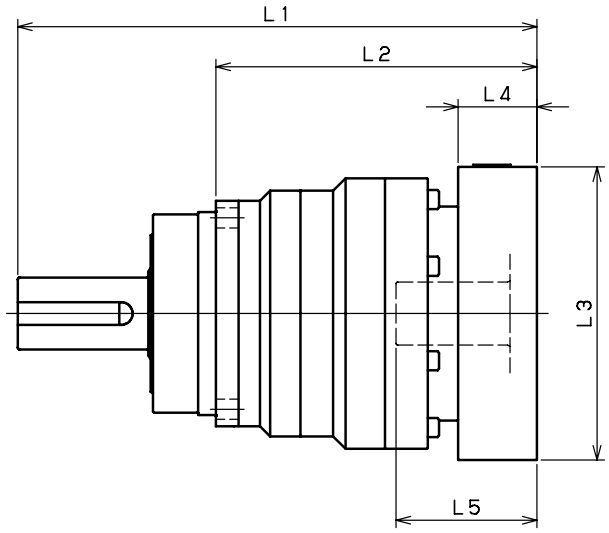






※1 Length will vary depending on motor.
※2 Bushing will be inserted to adapt to motor shaft.

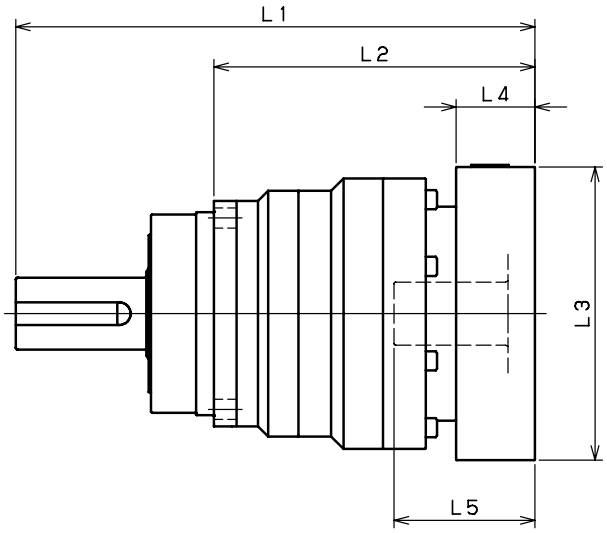
VRS-060B



Model number	**:Adapter code	Single					Double				
		L1	L2	L3	L4	L5	L1	L2	L3	L4	L5
VRS-060B-□-□-8** (Input shaft bore ≦ φ8)	AA・AC・AD・AF・AG	132	84	□52	15.5	32	151	103	□52	15.5	32
	AB・AE・AH・AJ・AK	137	89	□52	20.5	37	156	108	□52	20.5	37
	BA・BB・BD・BE	132	84	□60	15.5	32	151	103	□60	15.5	32
	BC・BF	137	89	□60	20.5	37	156	108	□60	20.5	37
	CA	137	89	□70	20.5	37	156	108	□70	20.5	37
VRS-060B-□-□-14** (Input shaft bore≦ φ14)	BA・BB・BD・BE・BF・BG・BJ・BK	135	87	□65	16.5	35	156	108	□65	16.5	35
	BC・BH・BM	140	92	□65	21.5	40	161	113	□65	21.5	40
	BL	145	97	□65	26.5	45	166	118	□65	26.5	45
	CA	135	87	□70	16.5	35	156	108	□70	16.5	35
	CB	140	92	□70	21.5	40	161	113	□70	21.5	40
	DA・DB・DC・DD・DF・DH	135	87	□80	16.5	35	156	108	□80	16.5	35
	DE	140	92	□80	21.5	40	161	113	□80	21.5	40
	DG	145	97	□80	26.5	45	166	118	□80	26.5	45
	EA・EB・EC	135	87	□90	16.5	35	156	108	□90	16.5	35
	ED	145	97	□90	26.5	45	166	118	□90	26.5	45
	FA	135	87	□100	16.5	35	156	108	□100	16.5	35
	GA	135	87	□115	16.5	35	156	108	□115	16.5	35
VRS-060B-□-□-19** (Input shaft bore≦ φ19)	DA・DB・DC	150	102	□80	25	50					
	DD	160	112	□80	35	60					
	DE	155	107	□80	30	55					
	EA	155	107	□90	30	55					
	EB	150	102	□90	25	50					
	EC	160	112	□90	35	60					
	FA	150	102	□100	25	50					
	FB	160	112	□100	35	60					
	GA・GC	155	107	□115	30	55					
	GB・GD	150	102	□115	25	50					
	HA	150	102	□130	25	50					
	HB	165	117	□130	40	65					
	HC・HD・HE	155	107	□130	30	55					

※1 Single reduction : 1/3～1/10, Double reduction : 1/15～1/100
※2 Bushing will be inserted to adapt to motor shaft.

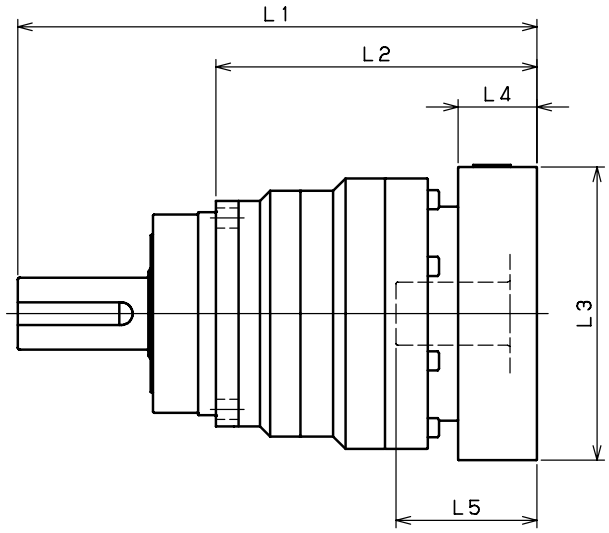
VRS-075B



Model number	**:Adapter code	Single					Double				
		L1	L2	L3	L4	L5	L1	L2	L3	L4	L5
VRS-075B-□-□-8** (Input shaft bore ≦ φ8)	AA・AC・AD・AF・AG						181.5	125.5	□52	15.5	32
	AB・AE・AH・AJ・AK						186.5	130.5	□52	20.5	37
	BA・BB・BD・BE						181.5	125.5	□60	15.5	32
	BC・BF						186.5	130.5	□60	20.5	37
	CA						186.5	130.5	□70	20.5	37
VRS-075B-□-□-14** (Input shaft bore≦ φ14)	BA・BB・BD・BE・BF・BG・BJ・BK	164.5	108.5	□65	16.5	35	186.5	130.5	□65	16.5	35
	BC・BH・BM	169.5	113.5	□65	21.5	40	191.5	135.5	□65	21.5	40
	BL	174.5	118.5	□65	26.5	45	196.5	140.5	□65	26.5	45
	CA	164.5	108.5	□70	16.5	35	186.5	130.5	□70	16.5	35
	CB	169.5	113.5	□70	21.5	40	191.5	135.5	□70	21.5	40
	DA・DB・DC・DD・DF・DH	164.5	108.5	□80	16.5	35	186.5	130.5	□80	16.5	35
	DE	169.5	113.5	□80	21.5	40	191.5	135.5	□80	21.5	40
	DG	174.5	118.5	□80	26.5	45	196.5	140.5	□80	26.5	45
	EA・EB・EC	164.5	108.5	□90	16.5	35	186.5	130.5	□90	16.5	35
	ED	174.5	118.5	□90	26.5	45	196.5	140.5	□90	26.5	45
	FA	164.5	108.5	□100	16.5	35	186.5	130.5	□100	16.5	35
	GA	164.5	108.5	□115	16.5	35	186.5	130.5	□115	16.5	35
VRS-075B-□-□-19** (Input shaft bore≦ φ19)	DA・DB・DC	174.5	118.5	□80	25	50	196.5	140.5	□80	25	50
	DD	184.5	128.5	□80	35	60	206.5	150.5	□80	35	60
	DE	179.5	123.5	□80	30	55	201.5	145.5	□80	30	55
	EA	179.5	123.5	□90	30	55	201.5	145.5	□90	30	55
	EB	174.5	118.5	□90	25	50	196.5	140.5	□90	25	50
	EC	184.5	128.5	□90	35	60	206.5	150.5	□90	35	60
	FA	174.5	118.5	□100	25	50	196.5	140.5	□100	25	50
	FB	184.5	128.5	□100	35	60	206.5	150.5	□100	35	60
	GA・GC	179.5	123.5	□115	30	55	201.5	145.5	□115	30	55
	GB・GD	174.5	118.5	□115	25	50	196.5	140.5	□115	25	50
	HA	174.5	118.5	□130	25	50	196.5	140.5	□130	25	50
	HB	189.5	133.5	□130	40	65	211.5	155.5	□130	40	65
	HC・HD・HE	179.5	123.5	□130	30	55	201.5	145.5	□130	30	55
VRS-075B-□-□-28** (Input shaft bore≦ φ28)	FA・FB・FC	191.5	135.5	□100	35	67					
	GA・GB・GC・GD・GE・GF・GG	191.5	135.5	□115	35	67					
	HA・HC・HD	191.5	135.5	□130	35	67					
	HB	201.5	145.5	□130	45	77					
	JA・JB・JC	191.5	135.5	□150	35	67					
	KA・KB	191.5	135.5	□180	35	67					
	KD	201.5	145.5	□180	45	77					
	LA	191.5	135.5	□200	35	67					
	MA	191.5	135.5	□220	35	67					

※1 Single reduction : 1/3～1/10, Double reduction : 1/15～1/100
※2 Bushing will be inserted to adapt to motor shaft.

VRS-100B

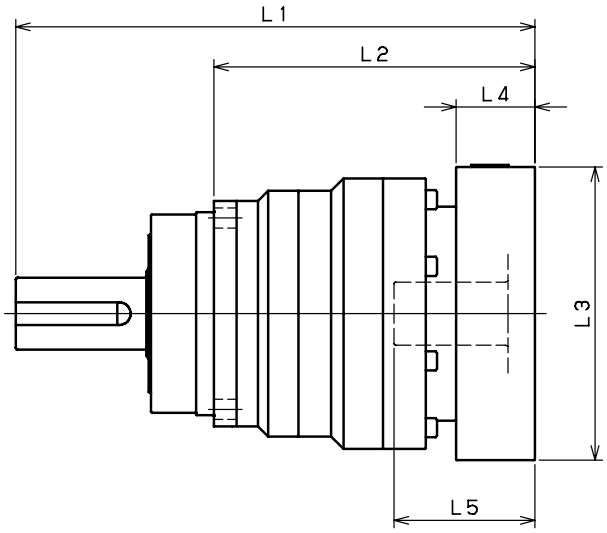


Model number	**:Adapter code	Single					Double				
		L1	L2	L3	L4	L5	L1	L2	L3	L4	L5
VRS-100B-□-□-14** (Input shaft bore≦φ14)	BA・BB・BD・BE・BF・BG・BJ・BK						231	143	□65	16.5	35
	BC・BH・BM						236	148	□65	21.5	40
	BL						241	153	□65	26.5	45
	CA						231	143	□70	16.5	35
	CB						236	148	□70	21.5	40
	DA・DB・DC・DD・DF・DH						231	143	□80	16.5	35
	DE						236	148	□80	21.5	40
	DG						241	153	□80	26.5	45
	EA・EB・EC						231	143	□90	16.5	35
	ED						241	153	□90	26.5	45
	FA						231	143	□100	16.5	35
	GA						231	143	□115	16.5	35
VRS-100B-□-□-19** (Input shaft bore≦φ19)	DA・DB・DC	213.5	125.5	□80	25	50	241	153	□80	25	50
	DD	223.5	135.5	□80	35	60	251	163	□80	35	60
	DE	218.5	130.5	□80	30	55	246	158	□80	30	55
	EA	218.5	130.5	□90	30	55	246	158	□90	30	55
	EB	213.5	125.5	□90	25	50	241	153	□90	25	50
	EC	223.5	135.5	□90	35	60	251	163	□90	35	60
	FA	213.5	125.5	□100	25	50	241	153	□100	25	50
	FB	223.5	135.5	□100	35	60	251	163	□100	35	60
	GA・GC	218.5	130.5	□115	30	55	246	158	□115	30	55
	GB・GD	213.5	125.5	□115	25	50	241	153	□115	25	50
	HA	213.5	125.5	□130	25	50	241	153	□130	25	50
	HB	228.5	140.5	□130	40	65	256	168	□130	40	65
	HC・HD・HE	218.5	130.5	□130	30	55	246	158	□130	30	55
VRS-100B-□-□-28** (Input shaft bore≦φ28)	FA・FB・FC	230.5	142.5	□100	35	67	258	170	□100	35	67
	GA・GB・GC・GD・GE・GF・GG	230.5	142.5	□115	35	67	258	170	□115	35	67
	HA・HC・HD	230.5	142.5	□130	35	67	258	170	□130	35	67
	HB	240.5	152.5	□130	45	77	268	180	□130	45	77
	JA・JB・JC	230.5	142.5	□150	35	67	258	170	□150	35	67
	KA・KB	230.5	142.5	□180	35	67	258	170	□180	35	67
	KD	240.5	152.5	□180	45	77	268	180	□180	45	77
	LA	230.5	142.5	□200	35	67	258	170	□200	35	67
	MA	230.5	142.5	□220	35	67	258	170	□220	35	67
VRS-100B-□-□-38** (Input shaft bore≦φ38)	HA	251.5	163.5	□130	45	82					
	HB	246.5	158.5	□130	40	77					
	JA	251.5	163.5	□150	45	82					
	KA・KB・KC	251.5	163.5	□180	45	82					
	LA	251.5	163.5	□200	45	82					
	LB	261.5	173.5	□200	55	92					
	MA・MB	251.5	163.5	□220	45	82					
	NA	251.5	163.5	□250	45	82					

※1 Single reduction : 1/3～1/10, Double reduction : 1/15～1/100
※2 Bushing will be inserted to adapt to motor shaft.

Dimensions (Adapter)

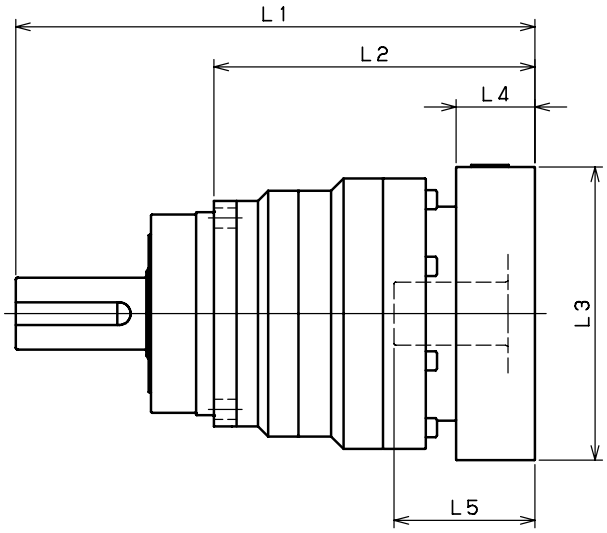
VRS-140B



Model number	**:Adapter code	Single					Double				
		L1	L2	L3	L4	L5	L1	L2	L3	L4	L5
VRS-140B-□-□-19** (Input shaft bore≦φ19)	DA・DB・DC						291.5	179.5	□80	25	50
	DD						301.5	189.5	□80	35	60
	DE						296.5	184.5	□80	30	55
	EA						296.5	184.5	□90	30	55
	EB						291.5	179.5	□90	25	50
	EC						301.5	189.5	□90	35	60
	FA						291.5	179.5	□100	25	50
	FB						301.5	189.5	□100	35	60
	GA・GC						296.5	184.5	□115	30	55
	GB・GD						291.5	179.5	□115	25	50
	HA						291.5	179.5	□130	25	50
	HB						306.5	194.5	□130	40	65
	HC・HD・HE						296.5	184.5	□130	30	55
VRS-140B-□-□-28** (Input shaft bore≦φ28)	FA・FB・FC	274	162	□100	35	67	308.5	196.5	□100	35	67
	GA・GB・GC・GD・GE・GF・GG	274	162	□115	35	67	308.5	196.5	□115	35	67
	HA・HC・HD	274	162	□130	35	67	308.5	196.5	□130	35	67
	HB	284	172	□130	45	77	318.5	206.5	□130	45	77
	JA・JB・JC	274	162	□150	35	67	308.5	196.5	□150	35	67
	KA・KB	274	162	□180	35	67	308.5	196.5	□180	35	67
	KD	284	172	□180	45	77	318.5	206.5	□180	45	77
	LA	274	162	□200	35	67	308.5	196.5	□200	35	67
	MA	274	162	□220	35	67	308.5	196.5	□220	35	67
VRS-140B-□-□-38** (Input shaft bore≦φ38)	HA	289	177	□130	45	82	323.5	211.5	□130	45	82
	HB	284	172	□130	40	77	318.5	206.5	□130	40	77
	JA	289	177	□150	45	82	323.5	211.5	□150	45	82
	KA・KB・KC	289	177	□180	45	82	323.5	211.5	□180	45	82
	LA	289	177	□200	45	82	323.5	211.5	□200	45	82
	LB	299	187	□200	55	92	333.5	221.5	□200	55	92
	MA・MB	289	177	□220	45	82	323.5	211.5	□220	45	82
	NA	289	177	□250	45	82	323.5	211.5	□250	45	82
VRS-140B-□-□-48** (Input shaft bore≦φ48)	KB・KC	310	198	□180	55	98					
	KA	330	218	□180	75	118					
	LA	310	198	□200	55	98					
	MA	310	198	□220	55	98					
	MB	330	218	□220	75	118					
	NA	330	218	□250	75	118					
	PA	330	218	□280	75	118					

※1 Single reduction : 1/3～1/10, Double reduction : 1/15～1/100
※2 Bushing will be inserted to adapt to motor shaft.

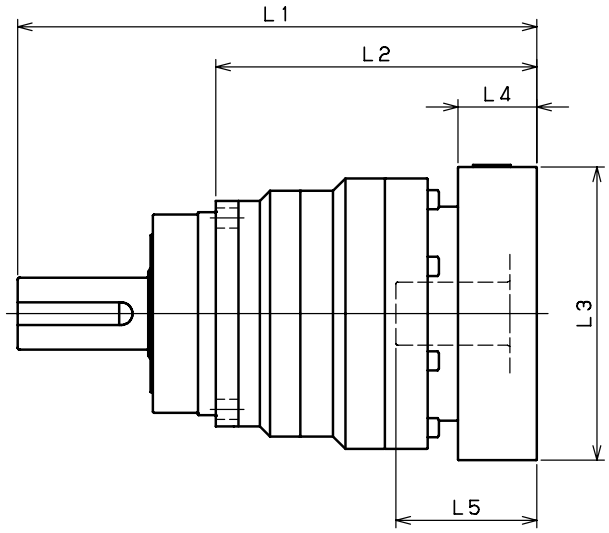
VRS-180B



Model number	**: Adapter code	Single					Double				
		L1	L2	L3	L4	L5	L1	L2	L3	L4	L5
VRS-180B-□-□-28** (Input shaft bore≦φ28)	FA・FB・FC						345	233	□100	35	67
	GA・GB・GC・GD・GE・GF・GG						345	233	□115	35	67
	HA・HC・HD						345	233	□130	35	67
	HB						355	243	□130	45	77
	JA・JB・JC						345	233	□150	35	67
	KA・KB						345	233	□180	35	67
	KD						355	243	□180	45	77
	LA						345	233	□200	35	67
	MA						345	233	□220	35	67
VRS-180B-□-□-38** (Input shaft bore≦φ38)	HA	315.5	203.5	□130	45	82	360	248	□130	45	82
	HB	310.5	198.5	□130	40	77	355	243	□130	40	77
	JA	315.5	203.5	□150	45	82	360	248	□150	45	82
	KA・KB・KC	315.5	203.5	□180	45	82	360	248	□180	45	82
	LA	315.5	203.5	□200	45	82	360	248	□200	45	82
	LB	325.5	213.5	□200	55	92	370	258	□200	55	92
	MA・MB	315.5	203.5	□220	45	82	360	248	□220	45	82
	NA	315.5	203.5	□250	45	82	360	248	□250	45	82
VRS-180B-□-□-48** (Input shaft bore≦φ48)	KB・KC	331.5	219.5	□180	55	98	376	264	□180	55	98
	KA	351.5	239.5	□180	75	118	396	284	□180	75	118
	LA	331.5	219.5	□200	55	98	376	264	□200	55	98
	MA	331.5	219.5	□220	55	98	376	264	□220	55	98
	MB	351.5	239.5	□220	75	118	396	284	□220	75	118
	NA	351.5	239.5	□250	75	118	396	284	□250	75	118
	PA	351.5	239.5	□280	75	118	396	284	□280	75	118
VRS-180B-□-□-65** (Input shaft bore≦φ65)	MA・MB・MC・MD	363	251	□220	80	122					
	NA	363	251	□250	80	122					
	PA	383	271	□280	100	142					
	PB	393	281	□280	110	152					
	QA	383	271	□320	100	142					

※1 Single reduction : 1/3～1/10, Double reduction : 1/15～1/100
※2 Bushing will be inserted to adapt to motor shaft.

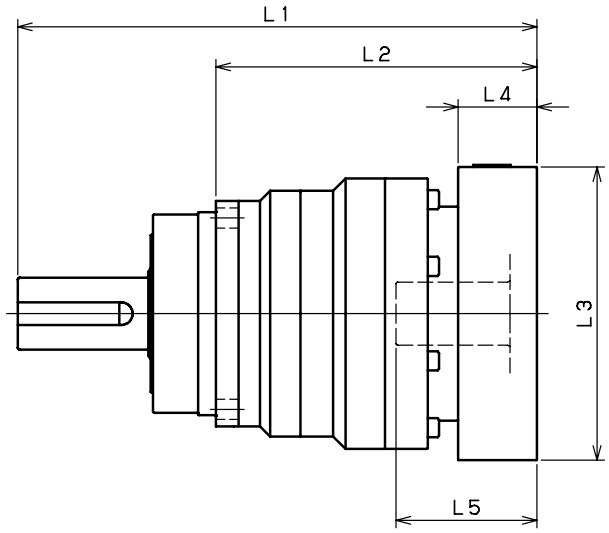
VRS-210B



Model number	**:Adapter code	Single					Double				
		L1	L2	L3	L4	L5	L1	L2	L3	L4	L5
VRS-210B-□-□-38** (Input shaft bore≦φ38)	HA						413	270	□130	45	82
	HB						408	265	□130	40	77
	JA						413	270	□150	45	82
	KA・KB・KC						413	270	□180	45	82
	LA						413	270	□200	45	82
	LB						423	280	□200	55	92
	MA・MB						413	270	□220	45	82
	NA						413	270	□250	45	82
VRS-210B-□-□-48** (Input shaft bore≦φ48)	KB・KC	394	251	□180	55	98	429	286	□180	55	98
	KA	414	271	□180	75	118	449	306	□180	75	118
	LA	394	251	□200	55	98	429	286	□200	55	98
	MA	394	251	□220	55	98	429	286	□220	55	98
	MB	414	271	□220	75	118	449	306	□220	75	118
	NA	414	271	□250	75	118	449	306	□250	75	118
	PA	414	271	□280	75	118	449	306	□280	75	118
VRS-210B-□-□-65** (Input shaft bore≦φ65)	MA・MB・MC・MD	418	275	□220	80	122					
	NA	418	275	□250	80	122					
	PA	438	295	□280	100	142					
	PB	448	305	□280	110	152					
	QA	438	295	□320	100	142					

※1 Single reduction : 1/3～1/10, Double reduction : 1/15～1/100
※2 Bushing will be inserted to adapt to motor shaft.

VRS-240B



Model number	**：Adapter code	Single					Double				
		L1	L2	L3	L4	L5	L1	L2	L3	L4	L5
VRS-240B-□-□-48** (Input shaft bore≦φ48)	KB・KC						496	326	□180	55	98
	KA						516	346	□180	75	118
	LA						496	326	□200	55	98
	MA						496	326	□220	55	98
	MB						516	346	□220	75	118
	NA						516	346	□250	75	118
	PA						516	346	□280	75	118
VRS-240B-□-□-65** (Input shaft bore≦φ65)	MA・MB・MC・MD	465.5	295.5	□220	80	122					
	NA	465.5	295.5	□250	80	122					
	PA	485.5	315.5	□280	100	142					
	PB	495.5	325.5	□280	110	152					
	QA	485.5	315.5	□320	100	142					

※1 Single reduction : 1/3～1/10, Double reduction : 1/15～1/100
※2 Bushing will be inserted to adapt to motor shaft.

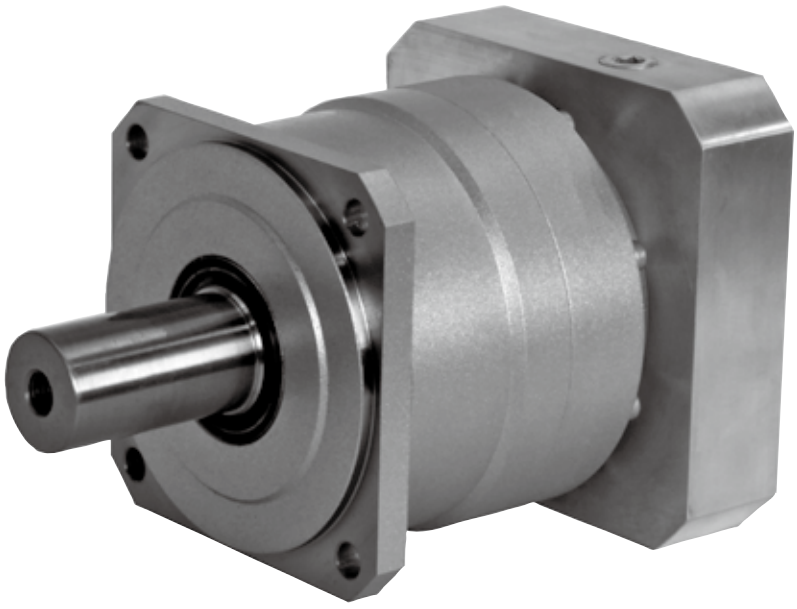
MEMO

SHIMPO

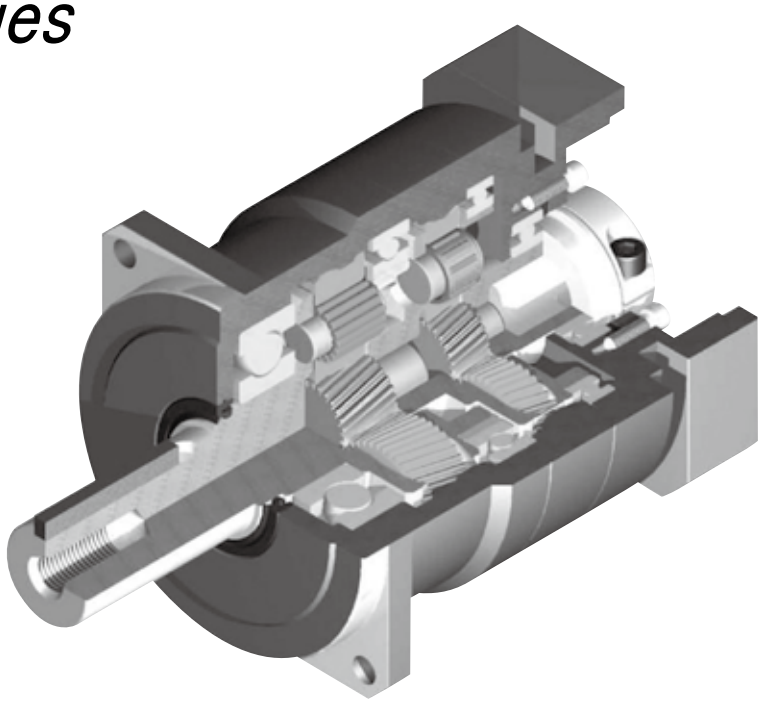
For servo motor

ABLE REDUCER

VRB Series



VRB series



Quiet operation

Helical gears contribute to reduce vibration and noise.

High precision

Standard backlash is 3 arc-min, ideal for precision control.

High rigidity & torque

High rigidity & high torque were achived by uncaged needle roller bearings.

Adapter-bushing connection

Can be attached to any motor all over the world.

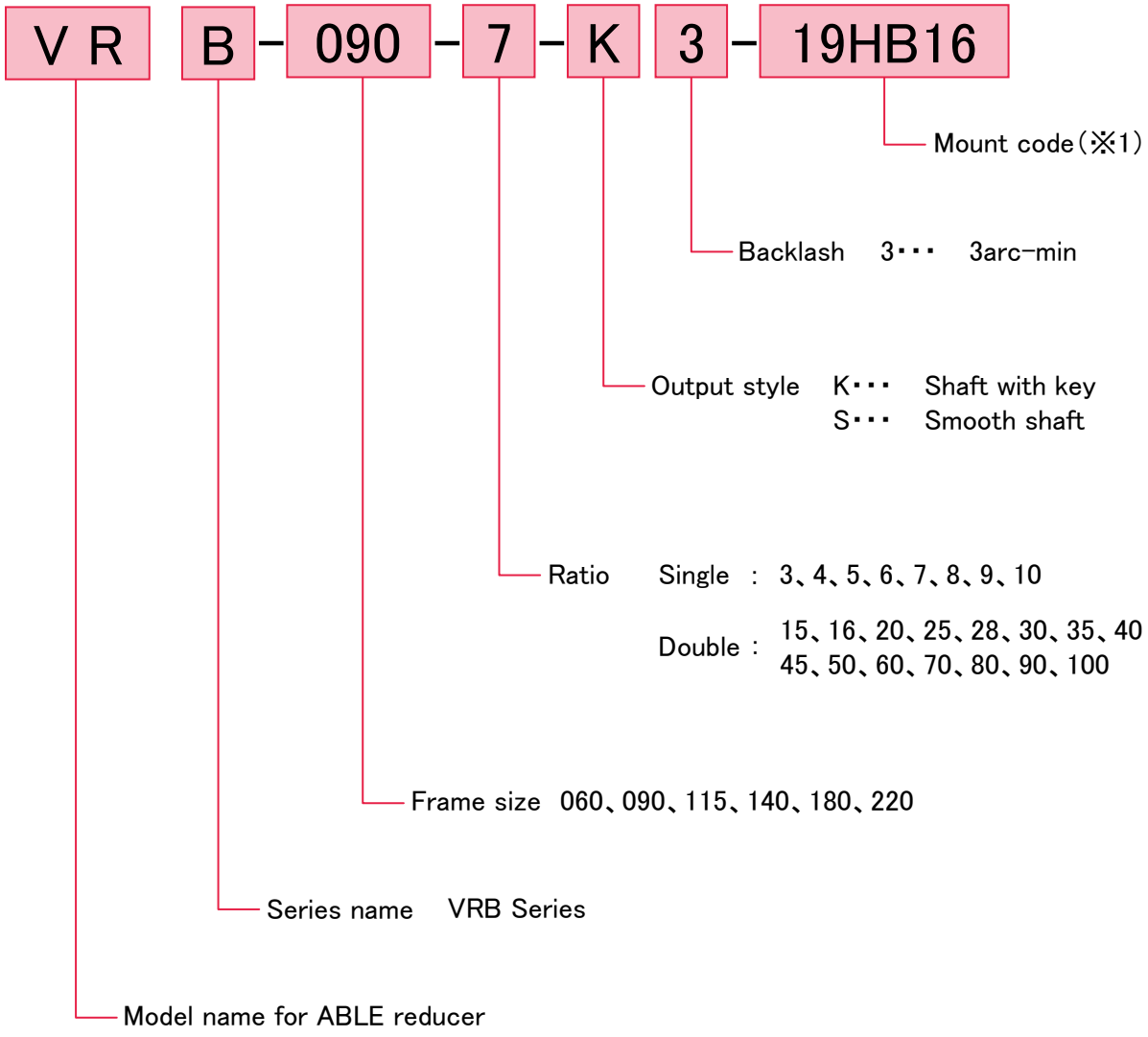
No grease leakage

Perfect solution using high viscosity anti-separation grease.

Maintenance-free

No need to replace the grease for the life of the unit.
Can be attached in any position.

VRB series



※1 Mount code

Mount code varies depending on the motor.
Please refer to reducer selection tool or contact us for more information.

Selection tool (English)
(http://www.nidec-shimpo.co.jp/selection/eng/)

VRB-060

Frame size	Stage	Ratio	※1 Nominal output torque [Nm]	※2 Maximum output torque [Nm]	※3 Emergency stop torque [Nm]	※4 Nominal input speed [rpm]	※5 Maximum input speed [rpm]	※6 Permitted radial load [N]	※7 Permitted axial load [N]
060	Single	3	18	35	80	3000	6000	430	310
		4	27	50	100	3000	6000	470	360
		5	27	50	100	3000	6000	510	390
		6	27	50	100	3000	6000	540	430
		7	27	50	100	3000	6000	570	460
		8	27	50	100	3000	6000	600	480
		9	18	35	80	3000	6000	620	510
		10	18	35	80	3000	6000	640	530
	Double	15	18	35	80	3000	6000	740	630
		16	27	50	100	3000	6000	750	650
		20	27	50	100	3000	6000	810	720
		25	27	50	100	3000	6000	870	790
		28	27	50	100	3000	6000	910	830
		30	18	35	80	3000	6000	930	860
		35	27	50	100	3000	6000	980	920
		40	27	50	100	3000	6000	1000	970
		45	18	35	80	3000	6000	1100	1000
		50	27	50	100	3000	6000	1100	1100
		60	27	50	100	3000	6000	1200	1100
		70	27	50	100	3000	6000	1200	1100
		80	27	50	100	3000	6000	1200	1100
		90	18	35	80	3000	6000	1200	1100
		100	18	35	80	3000	6000	1200	1100

Frame size	Stage	Ratio	※8 Maximum radial load [N]	※9 Maximum axial load [N]	※10 Weight [kg]	Moment of inertia (≦φ8) [kgcm^2]	Moment of inertia (≦φ14) [kgcm^2]	Moment of inertia (≦φ19) [kgcm^2]
060	Single	3	1200	1100	1.4	0.14	0.22	0.43
		4	1200	1100		0.095	0.17	0.38
		5	1200	1100		0.077	0.16	0.36
		6	1200	1100		0.068	0.15	0.36
		7	1200	1100		0.062	0.14	0.35
		8	1200	1100		0.059	0.14	0.35
		9	1200	1100		0.057	0.14	0.34
		10	1200	1100		0.056	0.14	0.34
	Double	15	1200	1100	1.6	0.055	0.14	–
		16	1200	1100		0.057	0.14	–
		20	1200	1100		0.054	0.13	–
		25	1200	1100		0.053	0.13	–
		28	1200	1100		0.055	0.14	–
		30	1200	1100		0.049	0.13	–
		35	1200	1100		0.053	0.13	–
		40	1200	1100		0.049	0.13	–
		45	1200	1100		0.053	0.13	–
		50	1200	1100		0.049	0.13	–
		60	1200	1100		0.049	0.13	–
		70	1200	1100		0.049	0.13	–
		80	1200	1100		0.049	0.13	–
		90	1200	1100		0.049	0.13	–
		100	1200	1100		0.049	0.13	–

※ 1 With nominal input speed, service life is 20,000 hours.
※ 2 The maximum torque when starting and stopping.
※ 3 The maximum torque when it receives shock (up to 1,000 times)
※ 4 The maximum average input speed.
※ 5 The maximum momentary input speed.
※ 6 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output shaft center, at axial load 0)
※ 7 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output side bearing, at radial load 0)
※ 8 The maximum radial load the reducer can accept.
※ 9 The maximum axial load the reducer can accept.
※10 The weight may vary slightly model to model.

VRB-090

Frame size	Stage	Ratio	※1 Nominal output torque [Nm]	※2 Maximum output torque [Nm]	※3 Emergency stop torque [Nm]	※4 Nominal input speed [rpm]	※5 Maximum input speed [rpm]	※6 Permitted radial load [N]	※7 Permitted axial load [N]
090	Single	3	50	80	200	3000	6000	810	930
		4	75	125	250	3000	6000	890	1100
		5	75	125	250	3000	6000	960	1200
		6	75	125	250	3000	6000	1000	1300
		7	75	125	250	3000	6000	1100	1300
		8	75	125	250	3000	6000	1100	1400
		9	50	80	200	3000	6000	1200	1500
		10	50	80	200	3000	6000	1200	1600
	Double	15	50	80	200	3000	6000	1400	1900
		16	75	125	250	3000	6000	1400	1900
		20	75	125	250	3000	6000	1500	2100
		25	75	125	250	3000	6000	1600	2200
		28	75	125	250	3000	6000	1700	2200
		30	50	80	200	3000	6000	1700	2200
		35	75	125	250	3000	6000	1800	2200
		40	75	125	250	3000	6000	1900	2200
		45	50	80	200	3000	6000	2000	2200
		50	75	125	250	3000	6000	2100	2200
		60	75	125	250	3000	6000	2200	2200
		70	75	125	250	3000	6000	2300	2200
		80	75	125	250	3000	6000	2400	2200
		90	50	80	200	3000	6000	2400	2200
		100	50	80	200	3000	6000	2400	2200

Frame size	Stage	Ratio	※8 Maximum radial load [N]	※9 Maximum axial load [N]	※10 Weight [kg]	Moment of inertia (≦φ8) [kgcm^2]	Moment of inertia (≦φ14) [kgcm^2]	Moment of inertia (≦φ19) [kgcm^2]	Moment of inertia (≦φ28) [kgcm^2]
090	Single	3	2400	2200	3.7	–	0.72	1.2	3.2
		4	2400	2200		–	0.49	0.95	3.0
		5	2400	2200		–	0.40	0.86	2.9
		6	2400	2200		–	0.36	0.82	2.8
		7	2400	2200		–	0.32	0.79	2.8
		8	2400	2200		–	0.31	0.77	2.8
		9	2400	2200		–	0.29	0.76	2.8
		10	2400	2200		–	0.29	0.75	2.8
	Double	15	2400	2200	4.2	0.13	0.28	0.72	–
		16	2400	2200		0.15	0.30	0.74	–
		20	2400	2200		0.13	0.28	0.72	–
		25	2400	2200		0.12	0.28	0.71	–
		28	2400	2200		0.14	0.29	0.73	–
		30	2400	2200		0.10	0.25	0.70	–
		35	2400	2200		0.12	0.27	0.71	–
		40	2400	2200		0.099	0.25	0.70	–
		45	2400	2200		0.12	0.27	0.71	–
		50	2400	2200		0.098	0.25	0.69	–
		60	2400	2200		0.098	0.25	0.69	–
		70	2400	2200		0.097	0.25	0.69	–
		80	2400	2200		0.097	0.25	0.69	–
		90	2400	2200		0.097	0.25	0.69	–
		100	2400	2200		0.097	0.25	0.69	–

※ 1 With nominal input speed, service life is 20,000 hours.
※ 2 The maximum torque when starting and stopping.
※ 3 The maximum torque when it receives shock (up to 1,000 times)
※ 4 The maximum average input speed.
※ 5 The maximum momentary input speed.
※ 6 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output shaft center, at axial load 0)
※ 7 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output side bearing, at radial load 0)
※ 8 The maximum radial load the reducer can accept.
※ 9 The maximum axial load the reducer can accept.
※10 The weight may vary slightly model to model.

VRB-115

Frame size	Stage	Ratio	※1 Nominal output torque [Nm]	※2 Maximum output torque [Nm]	※3 Emergency stop torque [Nm]	※4 Nominal input speed [rpm]	※5 Maximum input speed [rpm]	※6 Permitted radial load [N]	※7 Permitted axial load [N]
115	Single	3	120	225	500	3000	6000	1300	1500
		4	120	330	625	3000	6000	1500	1700
		5	180	330	625	3000	6000	1600	1900
		6	180	330	625	3000	6000	1700	2000
		7	180	330	625	3000	6000	1800	2100
		8	180	330	625	3000	6000	1900	2300
		9	120	225	500	3000	6000	1900	2400
		10	120	225	500	3000	6000	2000	2500
	Double	15	120	225	500	3000	6000	2300	3000
		16	180	330	625	3000	6000	2300	3100
		20	180	330	625	3000	6000	2500	3400
		25	180	330	625	3000	6000	2700	3700
		28	180	330	625	3000	6000	2800	3900
		30	120	225	500	3000	6000	2900	3900
		35	180	330	625	3000	6000	3000	3900
		40	180	330	625	3000	6000	3200	3900
		45	120	225	500	3000	6000	3300	3900
		50	180	330	625	3000	6000	3400	3900
		60	180	330	625	3000	6000	3600	3900
		70	180	330	625	3000	6000	3800	3900
		80	180	330	625	3000	6000	4000	3900
		90	120	225	500	3000	6000	4200	3900
		100	120	225	500	3000	6000	4300	3900

Frame size	Stage	Ratio	※8 Maximum radial load [N]	※9 Maximum axial load [N]	※10 Weight [kg]	Moment of inertia (≦φ14) [kgcm^2]	Moment of inertia (≦φ19) [kgcm^2]	Moment of inertia (≦φ28) [kgcm^2]	Moment of inertia (≦φ38) [kgcm^2]
115	Single	3	4300	3900	8	–	3.3	5.3	13
		4	4300	3900		–	2.0	4.1	12
		5	4300	3900		–	1.6	3.6	11
		6	4300	3900		–	1.3	3.3	11
		7	4300	3900		–	1.1	3.2	11
		8	4300	3900		–	1.0	3.1	11
		9	4300	3900		–	0.98	3.0	11
		10	4300	3900		–	0.95	3.0	11
	Double	15	4300	3900	8.9	0.43	0.86	2.8	–
		16	4300	3900		0.48	0.92	2.9	–
		20	4300	3900		0.40	0.83	2.8	–
		25	4300	3900		0.38	0.82	2.8	–
		28	4300	3900		0.44	0.88	2.8	–
		30	4300	3900		0.29	0.74	2.7	–
		35	4300	3900		0.37	0.81	2.7	–
		40	4300	3900		0.28	0.73	2.7	–
		45	4300	3900		0.37	0.80	2.7	–
		50	4300	3900		0.28	0.73	2.7	–
		60	4300	3900		0.28	0.73	2.7	–
		70	4300	3900		0.28	0.73	2.7	–
		80	4300	3900		0.28	0.73	2.7	–
		90	4300	3900		0.27	0.73	2.7	–
		100	4300	3900		0.27	0.73	2.7	–

※ 1 With nominal input speed, service life is 20,000 hours.
※ 2 The maximum torque when starting and stopping.
※ 3 The maximum torque when it receives shock (up to 1,000 times)
※ 4 The maximum average input speed.
※ 5 The maximum momentary input speed.
※ 6 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output shaft center, at axial load 0)
※ 7 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output side bearing, at radial load 0)
※ 8 The maximum radial load the reducer can accept.
※ 9 The maximum axial load the reducer can accept.
※10 The weight may vary slightly model to model.

VRB-140

Frame size	Stage	Ratio	※1 Nominal output torque [Nm]	※2 Maximum output torque [Nm]	※3 Emergency stop torque [Nm]	※4 Nominal input speed [rpm]	※5 Maximum input speed [rpm]	※6 Permitted radial load [N]	※7 Permitted axial load [N]
140	Single	3	240	470	1000	2000	4000	3200	2400
		4	240	700	1250	2000	4000	3500	2700
		5	360	700	1250	2000	4000	3800	3000
		6	360	700	1250	2000	4000	4000	3300
		7	360	700	1250	2000	4000	4200	3500
		8	360	700	1250	2000	4000	4400	3700
		9	240	470	1000	2000	4000	4600	3900
		10	240	470	1000	2000	4000	4700	4100
	Double	15	240	470	1000	2000	4000	5400	4900
		16	360	700	1250	2000	4000	5500	5000
		20	360	700	1250	2000	4000	6000	5500
		25	360	700	1250	2000	4000	6400	6100
		28	360	700	1250	2000	4000	6700	6400
		30	240	470	1000	2000	4000	6800	6600
		35	360	700	1250	2000	4000	7200	7000
		40	360	700	1250	2000	4000	7500	7500
		45	240	470	1000	2000	4000	7800	7900
		50	360	700	1250	2000	4000	8100	8200
		60	360	700	1250	2000	4000	8600	8200
		70	360	700	1250	2000	4000	9100	8200
		80	360	700	1250	2000	4000	9100	8200
		90	240	470	1000	2000	4000	9100	8200
		100	240	470	1000	2000	4000	9100	8200

Frame size	Stage	Ratio	※8 Maximum radial load [N]	※9 Maximum axial load [N]	※10 Weight [kg]	Moment of inertia (≦φ19) [kgcm^2]	Moment of inertia (≦φ28) [kgcm^2]	Moment of inertia (≦φ38) [kgcm^2]	Moment of inertia (≦φ48) [kgcm^2]
140	Single	3	9100	8200	16	–	12	20	42
		4	9100	8200		–	7.5	15	37
		5	9100	8200		–	5.8	14	36
		6	9100	8200		–	4.9	13	35
		7	9100	8200		–	4.1	12	34
		8	9100	8200		–	3.8	12	34
		9	9100	8200		–	3.6	11	34
		10	9100	8200		–	3.5	11	34
	Double	15	9100	8200	17	1.3	3.2	11	–
		16	9100	8200		1.5	3.5	11	–
		20	9100	8200		1.2	3.1	11	–
		25	9100	8200		1.1	3.1	11	–
		28	9100	8200		1.4	3.3	11	–
		30	9100	8200		0.85	2.8	10	–
		35	9100	8200		1.1	3.1	11	–
		40	9100	8200		0.83	2.8	10	–
		45	9100	8200		1.1	3.0	11	–
		50	9100	8200		0.81	2.8	10	–
		60	9100	8200		0.81	2.8	10	–
		70	9100	8200		0.80	2.8	10	–
		80	9100	8200		0.80	2.8	10	–
		90	9100	8200		0.80	2.8	10	–
		100	9100	8200		0.80	2.8	10	–

※ 1 With nominal input speed, service life is 20,000 hours.
※ 2 The maximum torque when starting and stopping.
※ 3 The maximum torque when it receives shock (up to 1,000 times)
※ 4 The maximum average input speed.
※ 5 The maximum momentary input speed.
※ 6 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output shaft center, at axial load 0)
※ 7 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output side bearing, at radial load 0)
※ 8 The maximum radial load the reducer can accept.
※ 9 The maximum axial load the reducer can accept.
※10 The weight may vary slightly model to model.

VRB-180

Frame size	Stage	Ratio	※1 Nominal output torque [Nm]	※2 Maximum output torque [Nm]	※3 Emergency stop torque [Nm]	※4 Nominal input speed [rpm]	※5 Maximum input speed [rpm]	※6 Permitted radial load [N]	※7 Permitted axial load [N]
180	Single	3	500	970	2200	1500	3000	5600	4300
		4	750	1400	2750	1500	3000	6200	4900
		5	750	1400	2750	1500	3000	6700	5400
		6	750	1400	2750	1500	3000	7100	5800
		7	750	1400	2750	1500	3000	7400	6300
		8	750	1400	2750	1500	3000	7800	6600
		9	500	970	2200	1500	3000	8100	7000
		10	500	970	2200	1500	3000	8400	7300
	Double	15	500	970	2200	1500	3000	9600	8700
		16	750	1400	2750	1500	3000	9800	8900
		20	750	1400	2750	1500	3000	11000	9900
		25	750	1400	2750	1500	3000	11000	11000
		28	750	1400	2750	1500	3000	12000	11000
		30	500	970	2200	1500	3000	12000	12000
		35	750	1400	2750	1500	3000	13000	13000
		40	750	1400	2750	1500	3000	13000	13000
		45	500	970	2200	1500	3000	14000	14000
		50	750	1400	2750	1500	3000	14000	14000
		60	750	1400	2750	1500	3000	15000	14000
		70	750	1400	2750	1500	3000	15000	14000
		80	750	1400	2750	1500	3000	15000	14000
		90	500	970	2200	1500	3000	15000	14000
		100	500	970	2200	1500	3000	15000	14000

Frame size	Stage	Ratio	※8 Maximum radial load [N]	※9 Maximum axial load [N]	※10 Weight [kg]	Moment of inertia (≦φ28) [kgcm^2]	Moment of inertia (≦φ38) [kgcm^2]	Moment of inertia (≦φ48) [kgcm^2]	Moment of inertia (≦φ65) [kgcm^2]
180	Single	3	15000	14000	36	–	44	66	130
		4	15000	14000		–	28	50	110
		5	15000	14000		–	22	44	100
		6	15000	14000		–	18	41	100
		7	15000	14000		–	16	38	99
		8	15000	14000		–	15	37	97
		9	15000	14000		–	14	36	97
		10	15000	14000		–	14	36	96
	Double	15	15000	14000	37	4.7	12	34	–
		16	15000	14000		5.4	13	35	–
		20	15000	14000		4.4	12	34	–
		25	15000	14000		4.2	12	34	–
		28	15000	14000		4.9	13	35	–
		30	15000	14000		3.2	11	33	–
		35	15000	14000		4.1	12	34	–
		40	15000	14000		3.2	11	33	–
		45	15000	14000		4.0	12	34	–
		50	15000	14000		3.1	11	33	–
		60	15000	14000		3.1	11	33	–
		70	15000	14000		3.1	11	33	–
		80	15000	14000		3.1	11	33	–
		90	15000	14000		3.1	11	33	–
		100	15000	14000		3.1	11	33	–

※ 1 With nominal input speed, service life is 20,000 hours.
※ 2 The maximum torque when starting and stopping.
※ 3 The maximum torque when it receives shock (up to 1,000 times)
※ 4 The maximum average input speed.
※ 5 The maximum momentary input speed.
※ 6 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output shaft center, at axial load 0)
※ 7 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output side bearing, at radial load 0)
※ 8 The maximum radial load the reducer can accept.
※ 9 The maximum axial load the reducer can accept.
※10 The weight may vary slightly model to model.

VRB-220

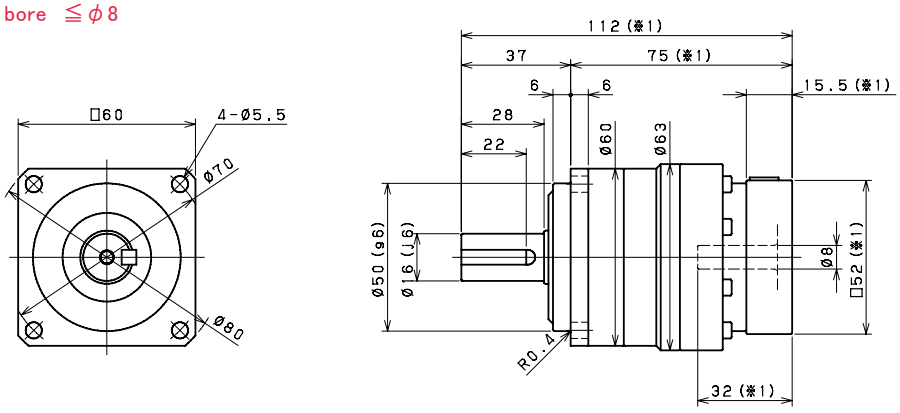
Frame size	Stage	Ratio	※1 Nominal output torque [Nm]	※2 Maximum output torque [Nm]	※3 Emergency stop torque [Nm]	※4 Nominal input speed [rpm]	※5 Maximum input speed [rpm]	※6 Permitted radial load [N]	※7 Permitted axial load [N]
220	Single	3	1000	1600	4000	1000	2000	5800	6400
		4	1500	2300	5000	1000	2000	6400	7200
		5	1500	2300	5000	1000	2000	6900	7900
		6	1500	2300	5000	1000	2000	7300	8600
		7	1500	2300	5000	1000	2000	7700	9200
		8	1500	2200	5000	1000	2000	8000	9700
		9	1000	1900	4000	1000	2000	8400	10000
		10	1000	1600	4000	1000	2000	8700	11000
	Double	15	1000	1600	4000	1000	2000	9900	13000
		16	1500	2300	5000	1000	2000	10000	13000
		20	1500	2300	5000	1000	2000	11000	14000
		25	1500	2300	5000	1000	2000	12000	14000
		28	1500	2300	5000	1000	2000	12000	14000
		30	1000	1600	4000	1000	2000	13000	14000
		35	1500	2300	5000	1000	2000	13000	14000
		40	1500	2300	5000	1000	2000	14000	14000
		45	1000	1300	4000	1000	2000	14000	14000
		50	1500	2300	5000	1000	2000	15000	14000
		60	1500	2300	5000	1000	2000	15000	14000
		70	1500	2300	5000	1000	2000	15000	14000
		80	1500	1800	5000	1000	2000	15000	14000
		90	1000	1300	4000	1000	2000	15000	14000
		100	1000	1200	4000	1000	2000	15000	14000

Frame size	Stage	Ratio	※8 Maximum radial load [N]	※9 Maximum axial load [N]	※10 Weight [kg]	Moment of inertia (≦φ38) [kgcm^2]	Moment of inertia (≦φ48) [kgcm^2]	Moment of inertia (≦φ65) [kgcm^2]
220	Single	3	15000	14000	53	–	90	150
		4	15000	14000		–	62	120
		5	15000	14000		–	52	110
		6	15000	14000		–	47	110
		7	15000	14000		–	42	100
		8	15000	14000		–	40	100
		9	15000	14000		–	39	99
		10	15000	14000		–	38	98
	Double	15	15000	14000	54	14	36	–
		16	15000	14000		16	37	–
		20	15000	14000		14	35	–
		25	15000	14000		14	35	–
		28	15000	14000		15	36	–
		30	15000	14000		12	34	–
		35	15000	14000		13	35	–
		40	15000	14000		12	33	–
		45	15000	14000		13	35	–
		50	15000	14000		12	33	–
		60	15000	14000		12	33	–
		70	15000	14000		12	33	–
		80	15000	14000		12	33	–
		90	15000	14000		12	33	–
		100	15000	14000		12	33	–

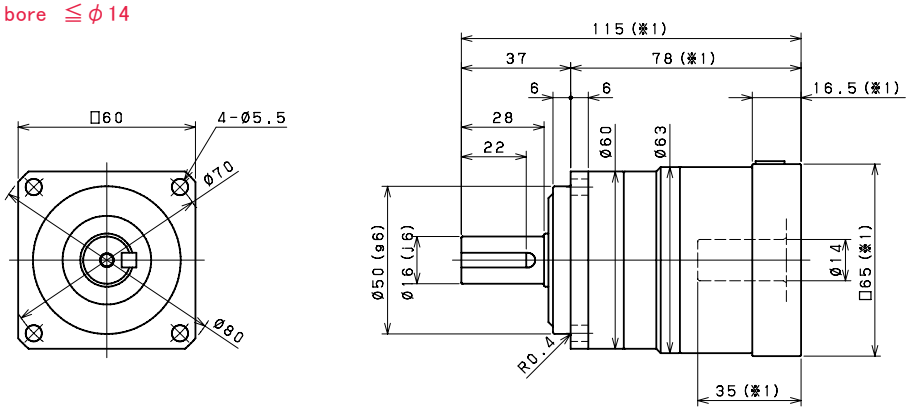
※ 1 With nominal input speed, service life is 20,000 hours.
※ 2 The maximum torque when starting and stopping.
※ 3 The maximum torque when it receives shock (up to 1,000 times)
※ 4 The maximum average input speed.
※ 5 The maximum momentary input speed.
※ 6 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output shaft center, at axial load 0)
※ 7 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output side bearing, at radial load 0)
※ 8 The maximum radial load the reducer can accept.
※ 9 The maximum axial load the reducer can accept.
※10 The weight may vary slightly model to model.

VRB-060 1stage

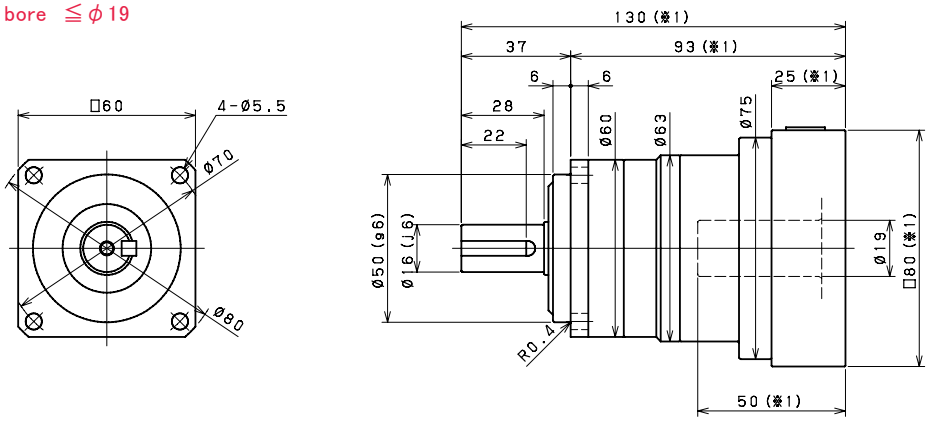
Input shaft bore ≦ϕ8

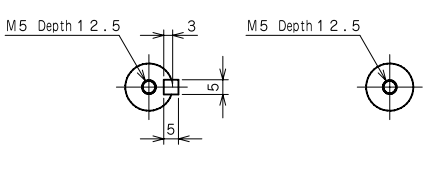


Input shaft bore ≦ϕ14



Input shaft bore ≦ϕ19

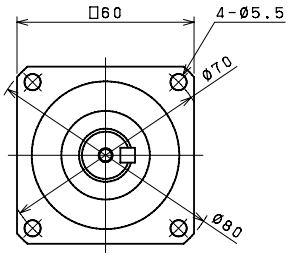


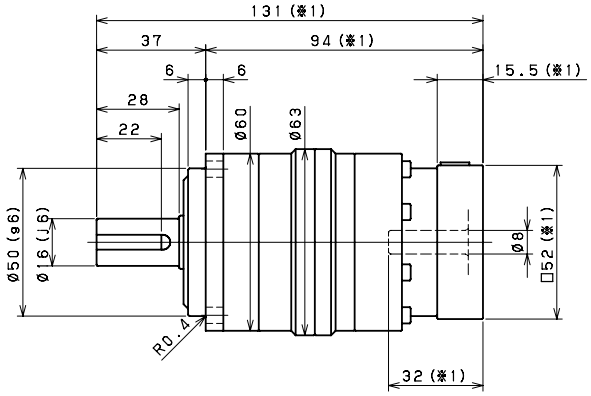


※1 Length will vary depending on motor.
※2 Bushing will be inserted to adapt to motor shaft.

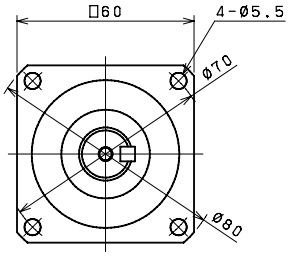
VRB-060 2stage

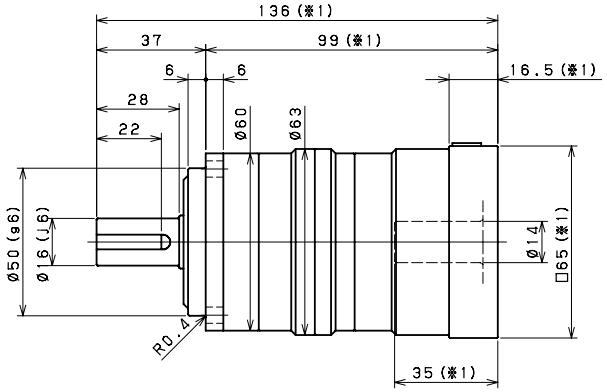
Input shaft bore ≦φ8

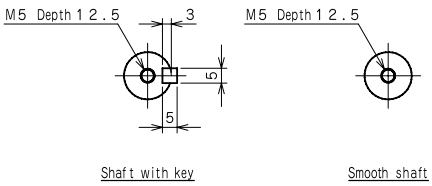




Input shaft bore ≦φ14



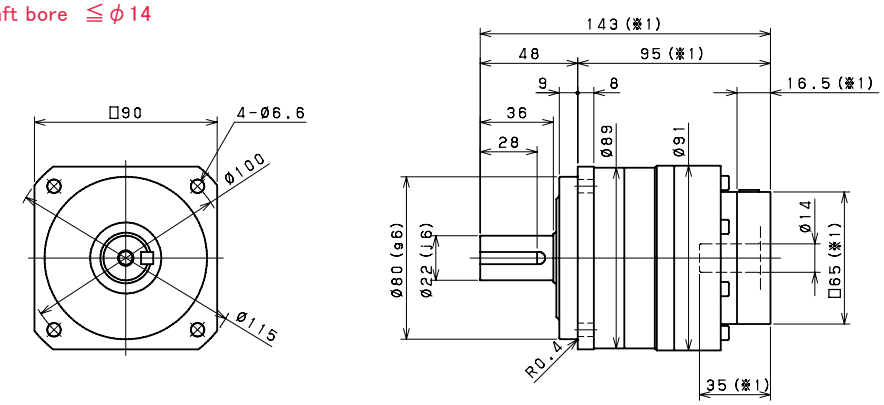




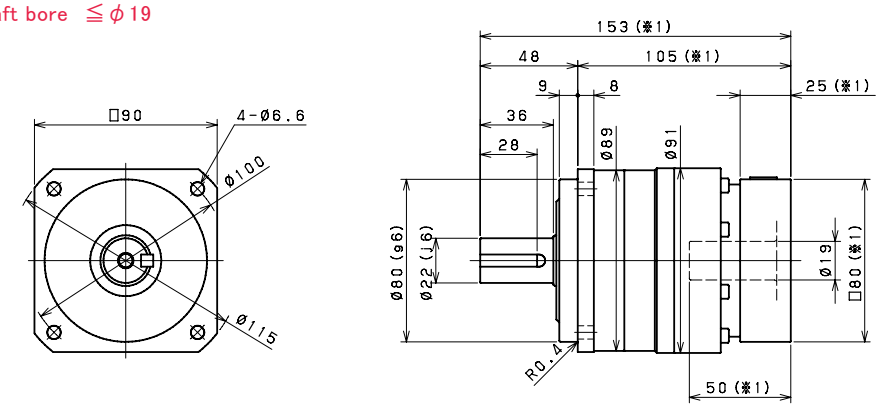
※1 Length will vary depending on motor.
※2 Bushing will be inserted to adapt to motor shaft.

VRB-090 1stage

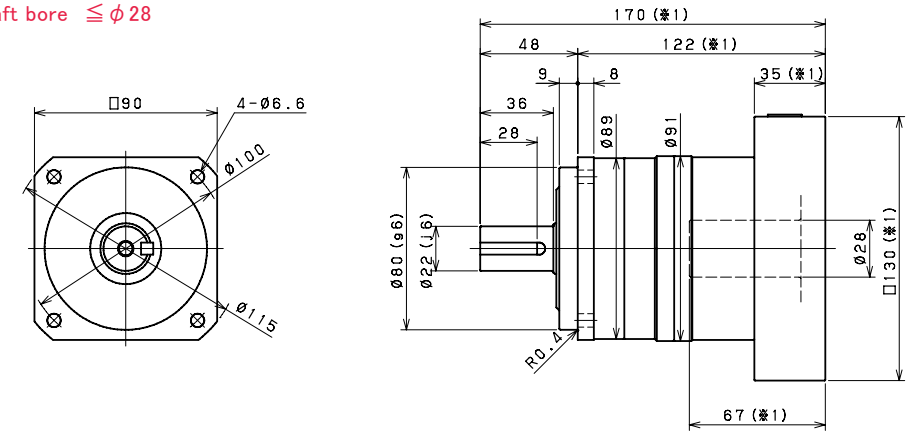
Input shaft bore ≦φ14

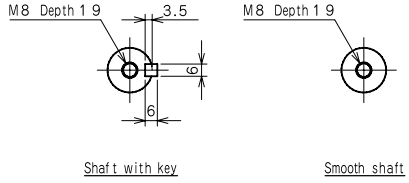


Input shaft bore ≦φ19



Input shaft bore ≦φ28

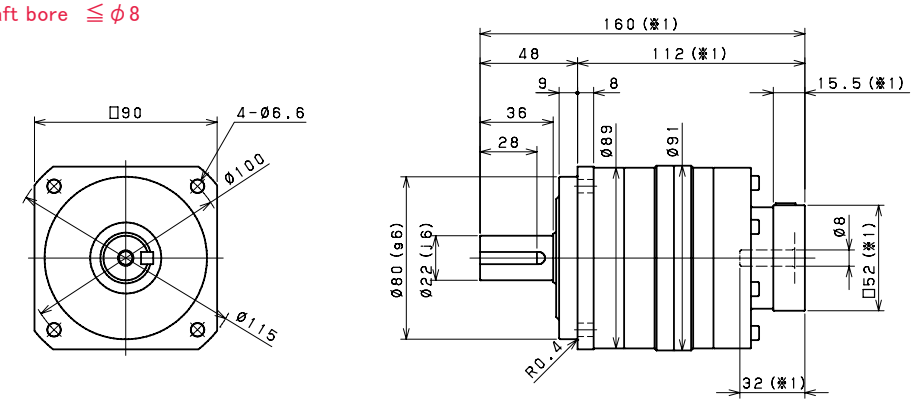




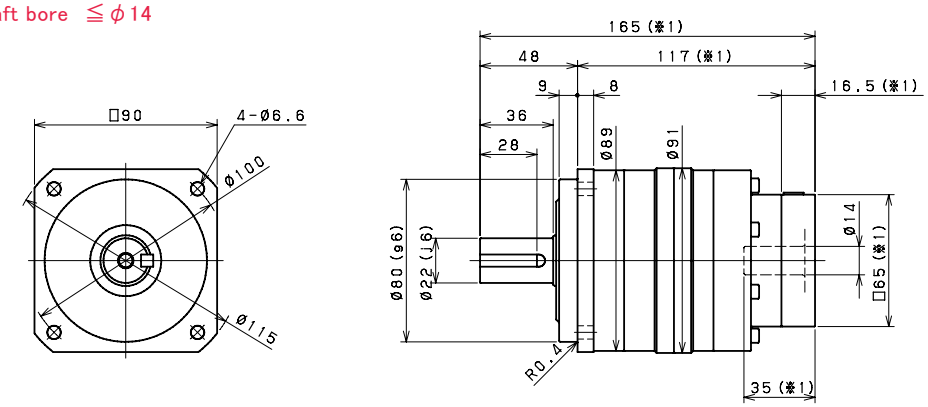
※1 Length will vary depending on motor.
※2 Bushing will be inserted to adapt to motor shaft.

VRB-090 2stage

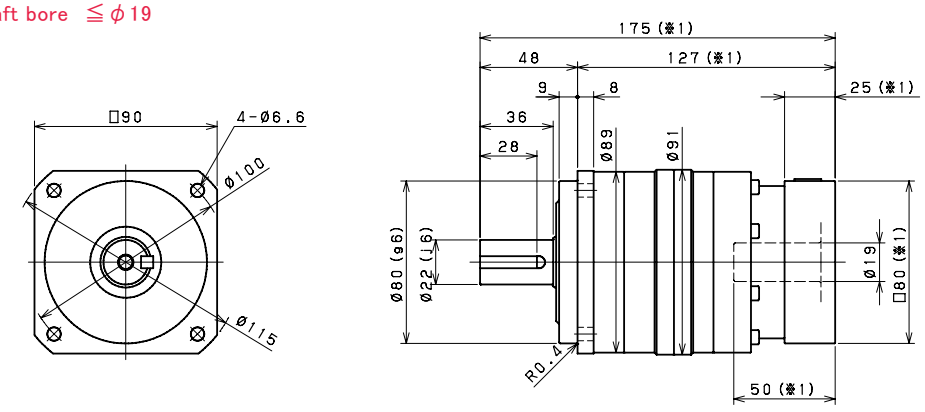
Input shaft bore ≦ϕ8

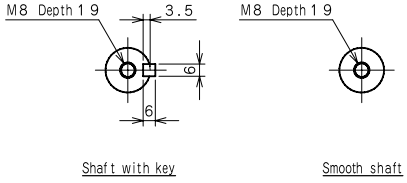


Input shaft bore ≦ϕ14



Input shaft bore ≦ϕ19

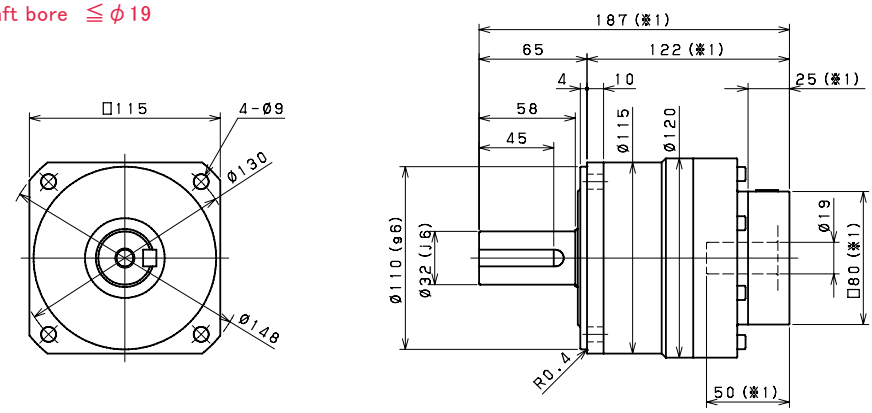




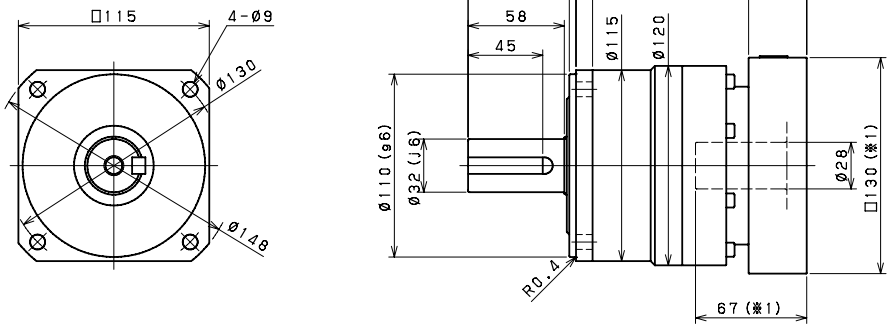
※1 Length will vary depending on motor.
※2 Bushing will be inserted to adapt to motor shaft.

VRB-115 1stage

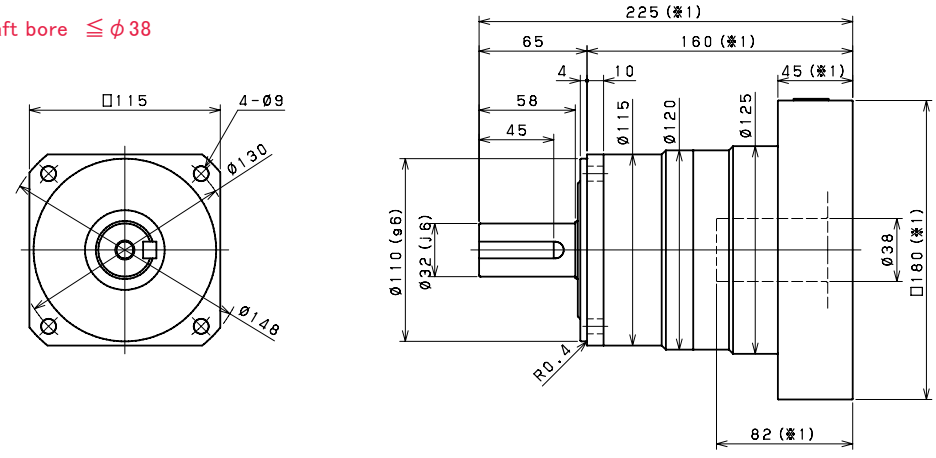
Input shaft bore ≦ϕ19

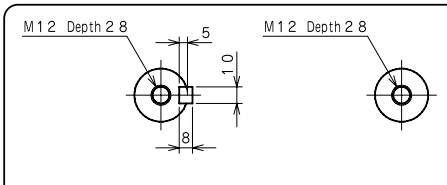


Input shaft bore ≦ϕ28



Input shaft bore ≦ϕ38

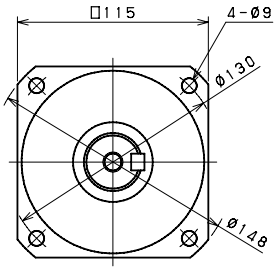


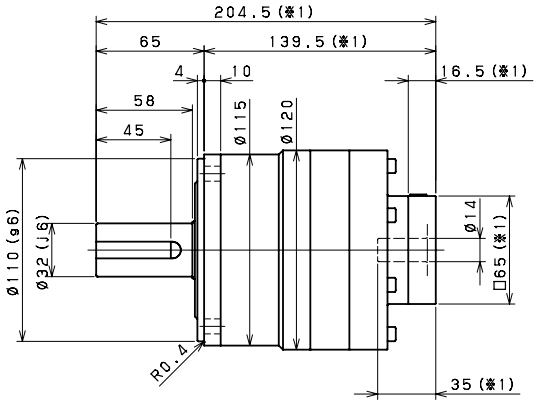


※1 Length will vary depending on motor.
※2 Bushing will be inserted to adapt to motor shaft.

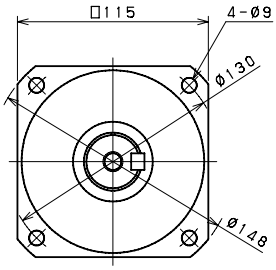
VRB-115 2stage

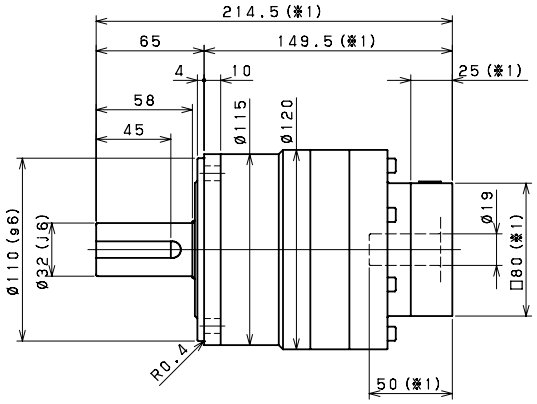
Input shaft bore ≦φ14



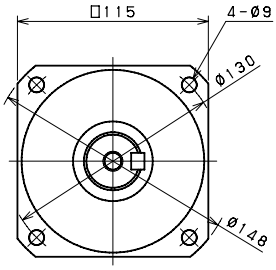


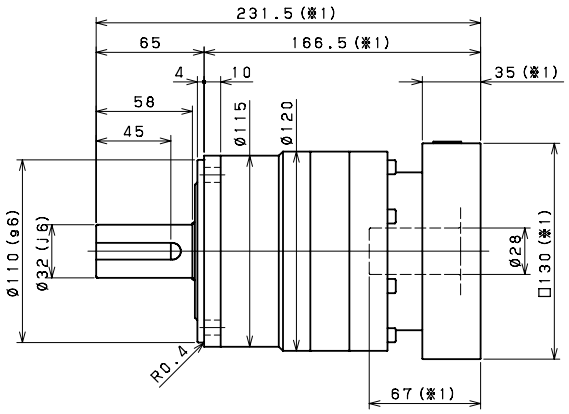
Input shaft bore ≦φ19

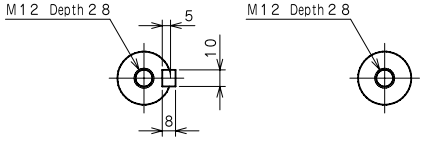




Input shaft bore ≦φ28



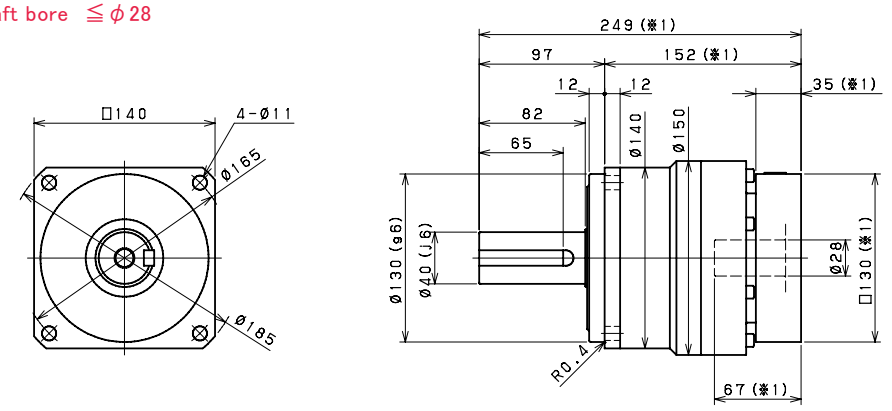




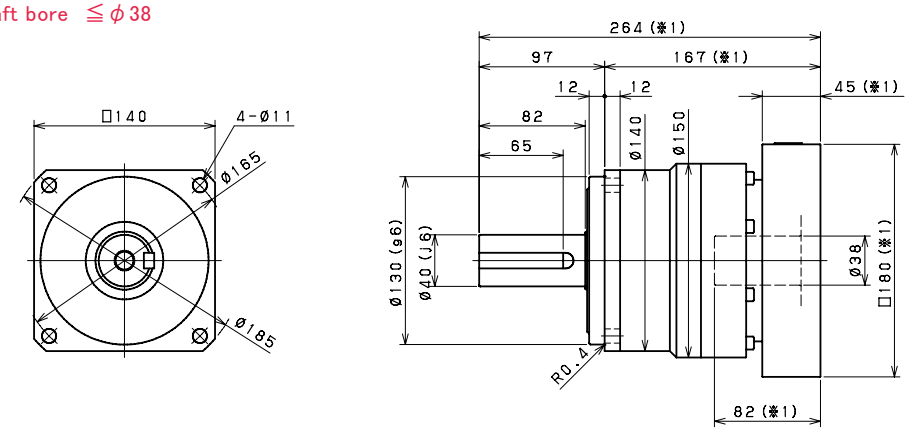
※1 Length will vary depending on motor.
※2 Bushing will be inserted to adapt to motor shaft.

VRB-140 1stage

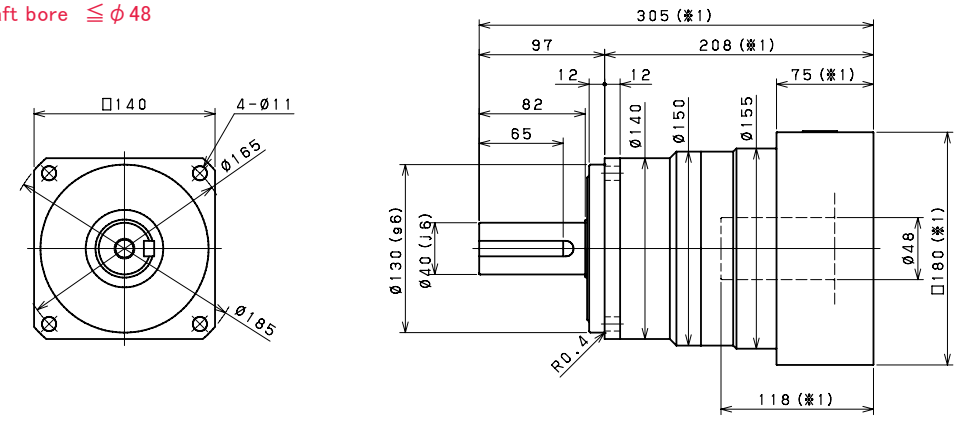
Input shaft bore ≦ϕ28

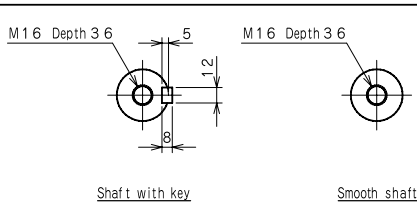


Input shaft bore ≦ϕ38



Input shaft bore ≦ϕ48

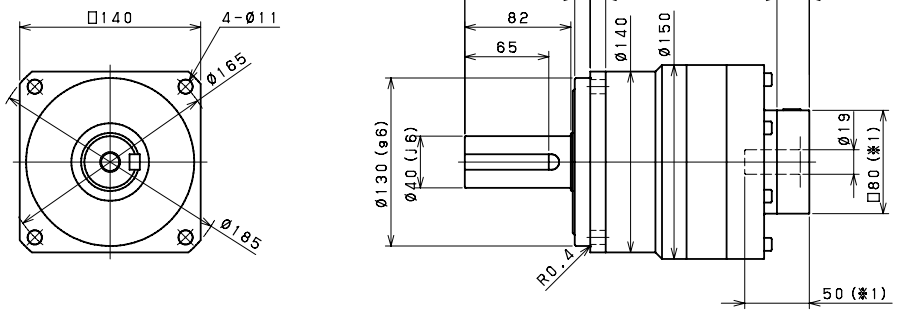




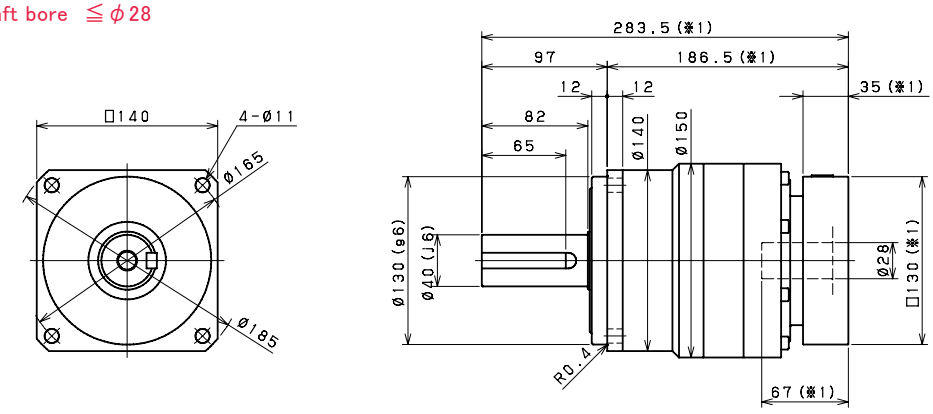
※1 Length will vary depending on motor.
※2 Bushing will be inserted to adapt to motor shaft.

VRB-140 2stage

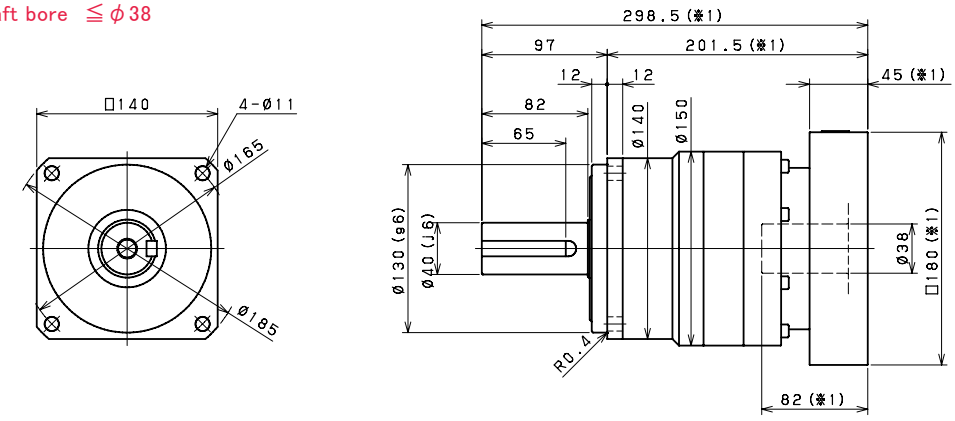
Input shaft bore ≦ϕ19

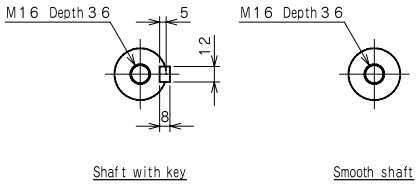


Input shaft bore ≦ϕ28



Input shaft bore ≦ϕ38

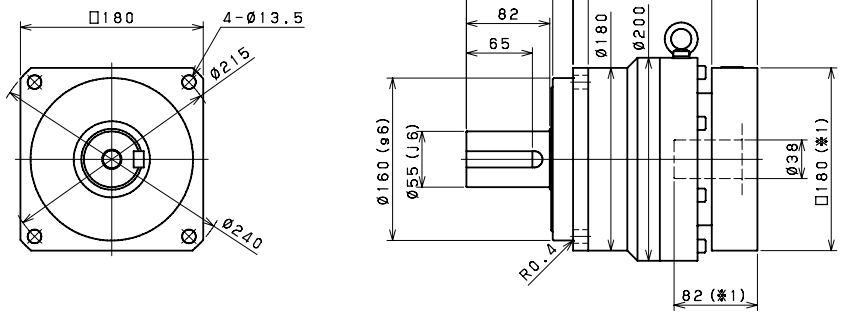




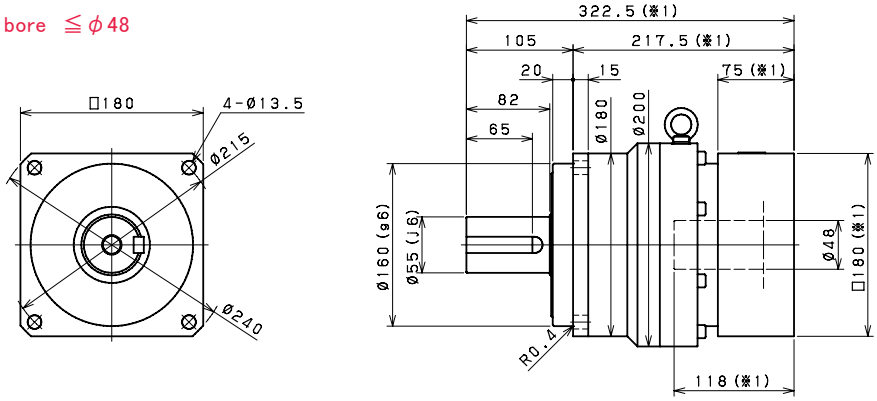
※1 Length will vary depending on motor.
※2 Bushing will be inserted to adapt to motor shaft.

VRB-180 1stage

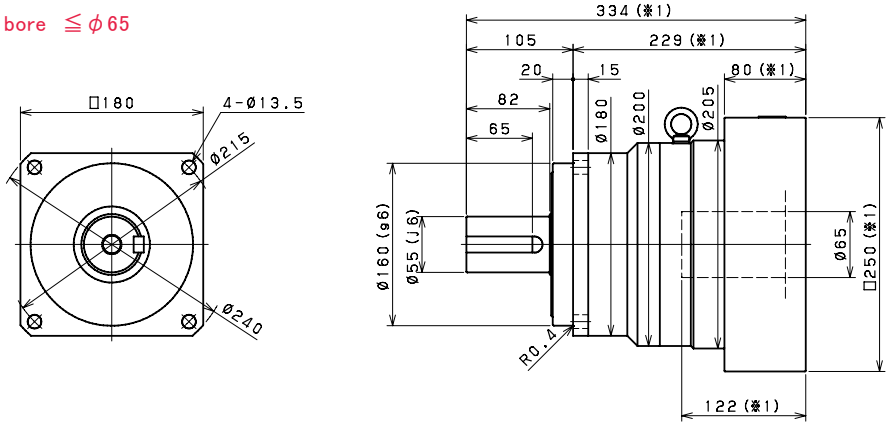
Input shaft bore ≦ϕ38

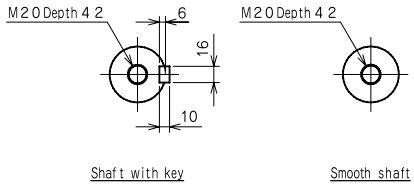


Input shaft bore ≦ϕ48



Input shaft bore ≦ϕ65

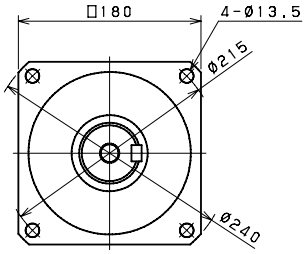


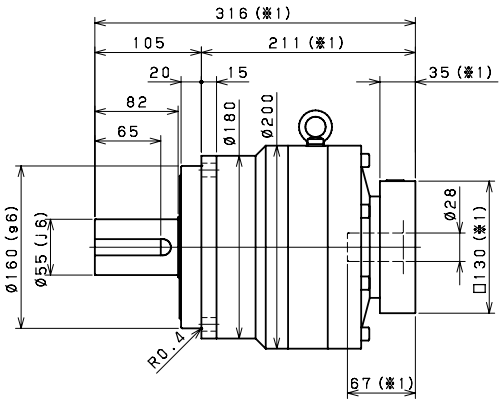


※1 Length will vary depending on motor.
※2 Bushing will be inserted to adapt to motor shaft.

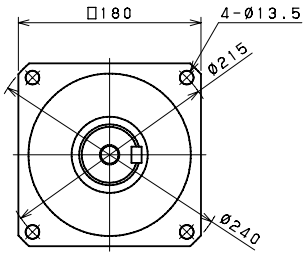
VRB-180 2stage

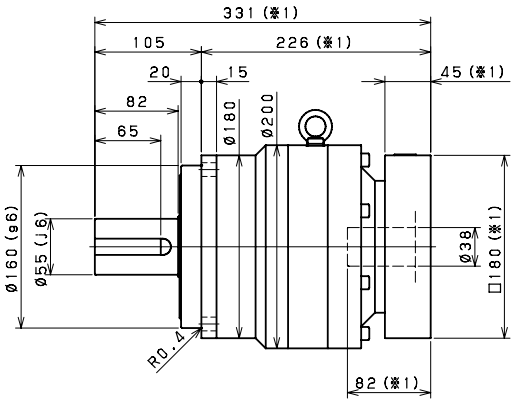
Input shaft bore ≦ϕ28



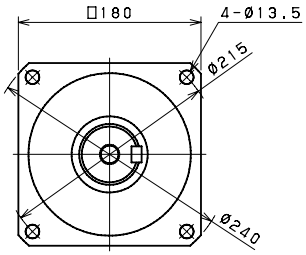


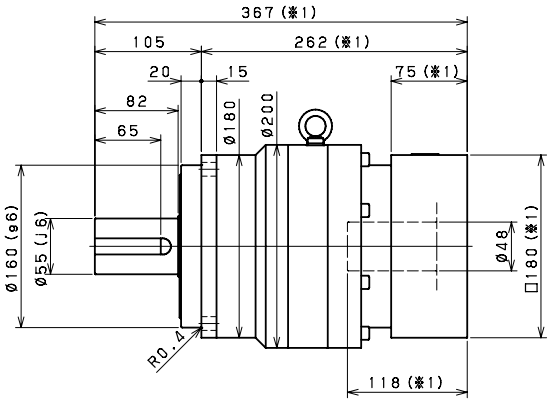
Input shaft bore ≦ϕ38

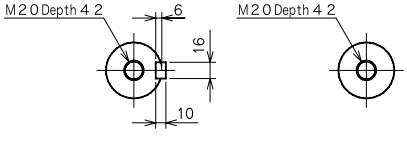




Input shaft bore ≦ϕ48



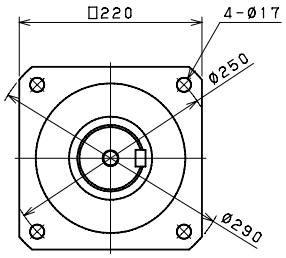


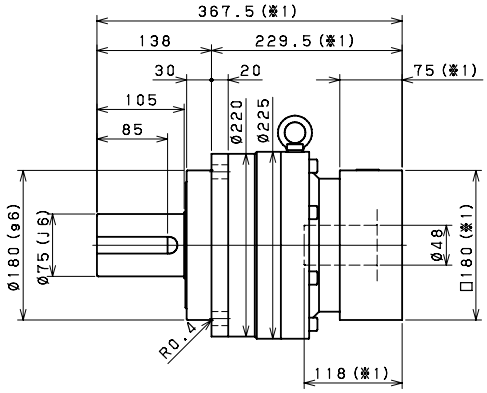


※1 Length will vary depending on motor.
※2 Bushing will be inserted to adapt to motor shaft.

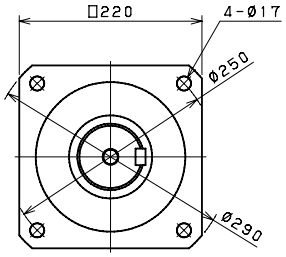
VRB-220 1stage

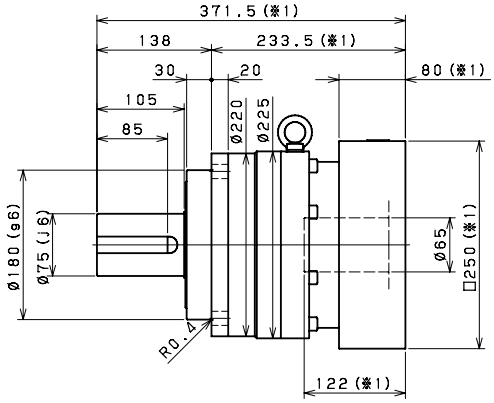
Input shaft bore ≦ϕ48

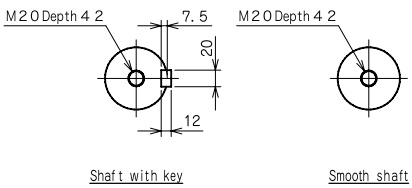




Input shaft bore ≦ϕ65



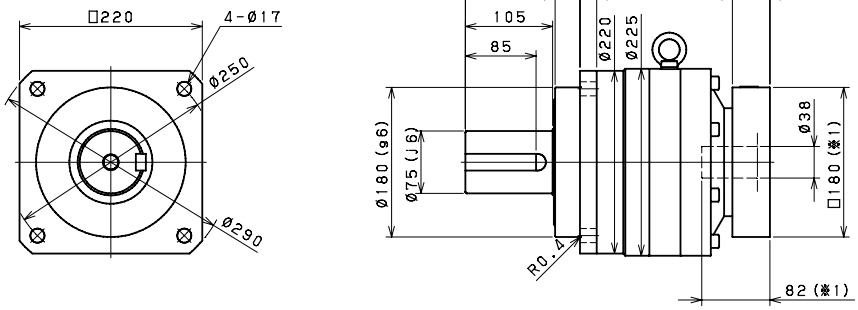




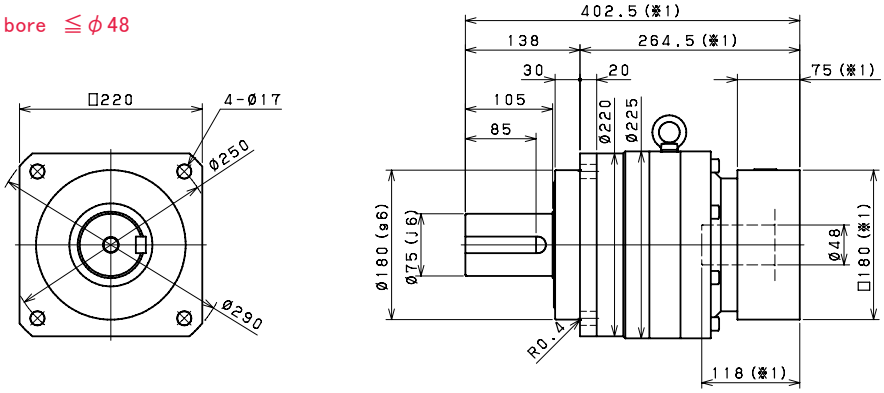
※1 Length will vary depending on motor.
※2 Bushing will be inserted to adapt to motor shaft.

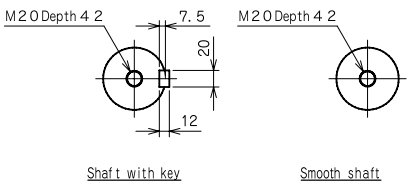
VRB-220 2stage

Input shaft bore ≦ϕ38



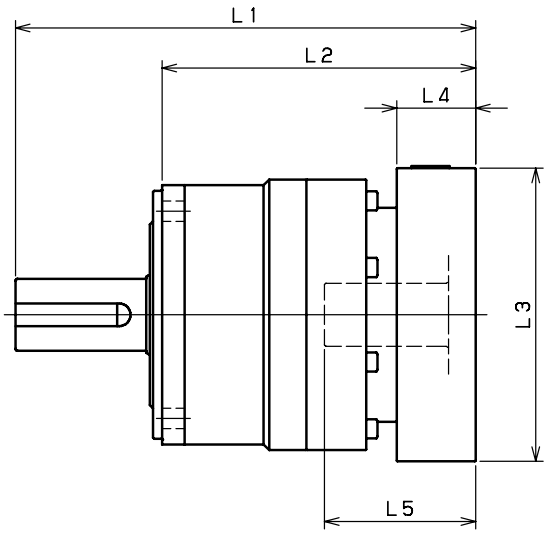
Input shaft bore ≦ϕ48





※1 Length will vary depending on motor.
※2 Bushing will be inserted to adapt to motor shaft.

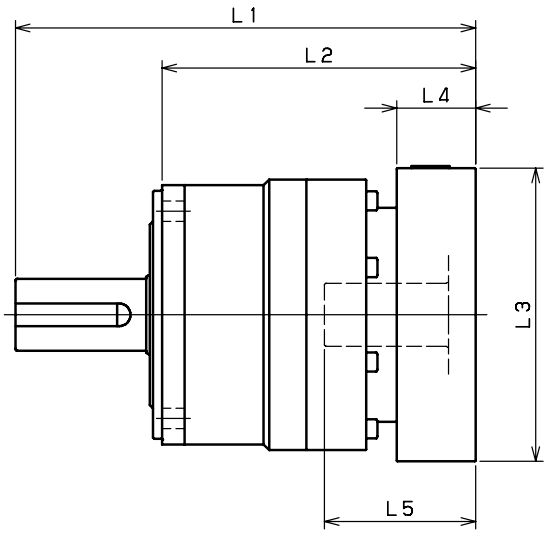
VRB-060



Model number	**: Adapter code	Single					Double				
		L1	L2	L3	L4	L5	L1	L2	L3	L4	L5
VRB-060-□-□-8** (Input shaft bore ≦ φ8)	AA・AC・AD・AF・AG	112	75	□52	15.5	32	131	94	□52	15.5	32
	AB・AE・AH・AJ・AK	117	80	□52	20.5	37	136	99	□52	20.5	37
	BA・BB・BD・BE	112	75	□60	15.5	32	131	94	□60	15.5	32
	BC・BF	117	80	□60	20.5	37	136	99	□60	20.5	37
	CA	117	80	□70	20.5	37	136	99	□70	20.5	37
VRB-060-□-□-14** (Input shaft bore ≦ φ14)	BA・BB・BD・BE・BF・BG・BJ・BK	115	78	□65	16.5	35	136	99	□65	16.5	35
	BC・BH・BM	120	83	□65	21.5	40	141	104	□65	21.5	40
	BL	125	88	□65	26.5	45	146	109	□65	26.5	45
	CA	115	78	□70	16.5	35	136	99	□70	16.5	35
	CB	120	83	□70	21.5	40	141	104	□70	21.5	40
	DA・DB・DC・DD・DF・DH	115	78	□80	16.5	35	136	99	□80	16.5	35
	DE	120	83	□80	21.5	40	141	104	□80	21.5	40
	DG	125	88	□80	26.5	45	146	109	□80	26.5	45
	EA・EB・EC	115	78	□90	16.5	35	136	99	□90	16.5	35
	ED	125	88	□90	26.5	45	146	109	□90	26.5	45
	FA	115	78	□100	16.5	35	136	99	□100	16.5	35
	GA	115	78	□115	16.5	35	136	99	□115	16.5	35
VRB-060-□-□-19** (Input shaft bore ≦ φ19)	DA・DB・DC	130	93	□80	25	50					
	DD	140	103	□80	35	60					
	DE	135	98	□80	30	55					
	EA	135	98	□90	30	55					
	EB	130	93	□90	25	50					
	EC	140	103	□90	35	60					
	FA	130	93	□100	25	50					
	FB	140	103	□100	35	60					
	GA・GC	135	98	□115	30	55					
	GB・GD	130	93	□115	25	50					
	HA	130	93	□130	25	50					
	HB	145	108	□130	40	65					
	HC・HD・HE	135	98	□130	30	55					

※1 Single reduction : 1/3～1/10, Double reduction : 1/15～1/100
※2 Bushing will be inserted to adapt to motor shaft.

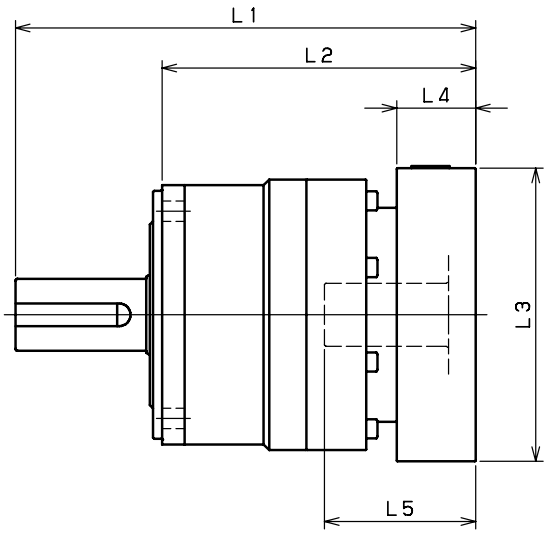
VRB-090



Model number	**:Adapter code	Single					Double				
		L1	L2	L3	L4	L5	L1	L2	L3	L4	L5
VRB-090-□-□-8** (Input shaft bore ≦ φ8)	AA・AC・AD・AF・AG						160	112	□52	15.5	32
	AB・AE・AH・AJ・AK						165	117	□52	20.5	37
	BA・BB・BD・BE						160	112	□60	15.5	32
	BC・BF						165	117	□60	20.5	37
	CA						165	117	□70	20.5	37
VRB-090-□-□-14** (Input shaft bore ≦ φ14)	BA・BB・BD・BE・BF・BG・BJ・BK	143	95	□65	16.5	35	165	117	□65	16.5	35
	BC・BH・BM	148	100	□65	21.5	40	170	122	□65	21.5	40
	BL	153	105	□65	26.5	45	175	127	□65	26.5	45
	CA	143	95	□70	16.5	35	165	117	□70	16.5	35
	CB	148	100	□70	21.5	40	170	122	□70	21.5	40
	DA・DB・DC・DD・DF・DH	143	95	□80	16.5	35	165	117	□80	16.5	35
	DE	148	100	□80	21.5	40	170	122	□80	21.5	40
	DG	153	105	□80	26.5	45	175	127	□80	26.5	45
	EA・EB・EC	143	95	□90	16.5	35	165	117	□90	16.5	35
	ED	153	105	□90	26.5	45	175	127	□90	26.5	45
	FA	143	95	□100	16.5	35	165	117	□100	16.5	35
	GA	143	95	□115	16.5	35	165	117	□115	16.5	35
VRB-090-□-□-19** (Input shaft bore ≦ φ19)	DA・DB・DC	153	105	□80	25	50	175	127	□80	25	50
	DD	163	115	□80	35	60	185	137	□80	35	60
	DE	158	110	□80	30	55	180	132	□80	30	55
	EA	158	110	□90	30	55	180	132	□90	30	55
	EB	153	105	□90	25	50	175	127	□90	25	50
	EC	163	115	□90	35	60	185	137	□90	35	60
	FA	153	105	□100	25	50	175	127	□100	25	50
	FB	163	115	□100	35	60	185	137	□100	35	60
	GA・GC	158	110	□115	30	55	180	132	□115	30	55
	GB・GD	153	105	□115	25	50	175	127	□115	25	50
	HA	153	105	□130	25	50	175	127	□130	25	50
	HB	168	120	□130	40	65	190	142	□130	40	65
	HC・HD・HE	158	110	□130	30	55	180	132	□130	30	55
VRB-090-□-□-28** (Input shaft bore ≦ φ28)	FA・FB・FC	170	122	□100	35	67					
	GA・GB・GC・GD・GE・GF・GG	170	122	□115	35	67					
	HA・HC・HD	170	122	□130	35	67					
	HB	180	132	□130	45	77					
	JA・JB・JC	170	122	□150	35	67					
	KA・KB	170	122	□180	35	67					
	KD	180	132	□180	45	77					
	LA	170	122	□200	35	67					
	MA	170	122	□220	35	67					

※1 Single reduction : 1/3～1/10, Double reduction : 1/15～1/100
※2 Bushing will be inserted to adapt to motor shaft.

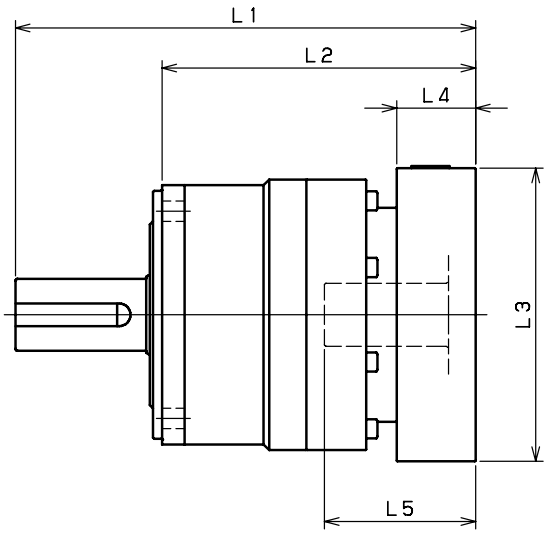
VRB-115



Model number	**:Adapter code	Single					Double				
		L1	L2	L3	L4	L5	L1	L2	L3	L4	L5
VRB-115-□-□-14** (Input shaft bore≦φ14)	BA・BB・BD・BE・BF・BG・BJ・BK						204.5	139.5	□65	16.5	35
	BC・BH・BM						209.5	144.5	□65	21.5	40
	BL						214.5	149.5	□65	26.5	45
	CA						204.5	139.5	□70	16.5	35
	CB						209.5	144.5	□70	21.5	40
	DA・DB・DC・DD・DF・DH						204.5	139.5	□80	16.5	35
	DE						209.5	144.5	□80	21.5	40
	DG						214.5	149.5	□80	26.5	45
	EA・EB・EC						204.5	139.5	□90	16.5	35
	ED						214.5	149.5	□90	26.5	45
	FA						204.5	139.5	□100	16.5	35
	GA						204.5	139.5	□115	16.5	35
VRB-115-□-□-19** (Input shaft bore≦φ19)	DA・DB・DC	187	122	□80	25	50	214.5	149.5	□80	25	50
	DD	197	132	□80	35	60	224.5	159.5	□80	35	60
	DE	192	127	□80	30	55	219.5	154.5	□80	30	55
	EA	192	127	□90	30	55	219.5	154.5	□90	30	55
	EB	187	122	□90	25	50	214.5	149.5	□90	25	50
	EC	197	132	□90	35	60	224.5	159.5	□90	35	60
	FA	187	122	□100	25	50	214.5	149.5	□100	25	50
	FB	197	132	□100	35	60	224.5	159.5	□100	35	60
	GA・GC	192	127	□115	30	55	219.5	154.5	□115	30	55
	GB・GD	187	122	□115	25	50	214.5	149.5	□115	25	50
	HA	187	122	□130	25	50	214.5	149.5	□130	25	50
	HB	202	137	□130	40	65	229.5	164.5	□130	40	65
	HC・HD・HE	192	127	□130	30	55	219.5	154.5	□130	30	55
VRB-115-□-□-28** (Input shaft bore≦φ28)	FA・FB・FC	204	139	□100	35	67	231.5	166.5	□100	35	67
	GA・GB・GC・GD・GE・GF・GG	204	139	□115	35	67	231.5	166.5	□115	35	67
	HA・HC・HD	204	139	□130	35	67	231.5	166.5	□130	35	67
	HB	214	149	□130	45	77	241.5	176.5	□130	45	77
	JA・JB・JC	204	139	□150	35	67	231.5	166.5	□150	35	67
	KA・KB	204	139	□180	35	67	231.5	166.5	□180	35	67
	KD	214	149	□180	45	77	241.5	176.5	□180	45	77
	LA	204	139	□200	35	67	231.5	166.5	□200	35	67
	MA	204	139	□220	35	67	231.5	166.5	□220	35	67
VRB-115-□-□-38** (Input shaft bore≦φ38)	HA	225	160	□130	45	82					
	HB	220	155	□130	40	77					
	JA	225	160	□150	45	82					
	KA・KB・KC	225	160	□180	45	82					
	LA	225	160	□200	45	82					
	LB	235	170	□200	55	92					
	MA・MB	225	160	□220	45	82					
	NA	225	160	□250	45	82					

※1 Single reduction : 1/3～1/10, Double reduction : 1/15～1/100
※2 Bushing will be inserted to adapt to motor shaft.

VRB-140

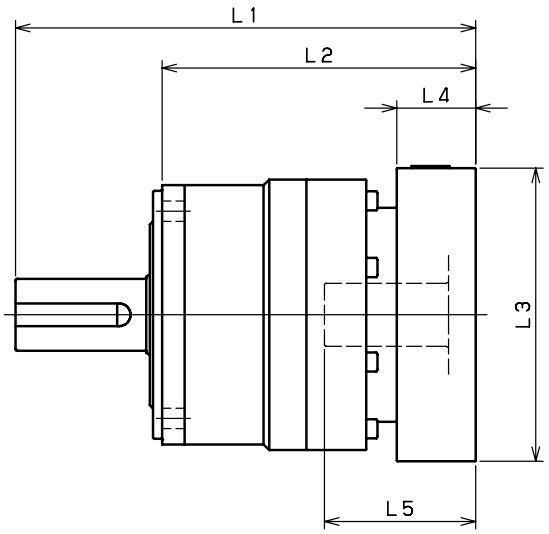


Model number	**:Adapter code	Single					Double				
		L1	L2	L3	L4	L5	L1	L2	L3	L4	L5
VRB-140-□-□-19** (Input shaft bore≦φ19)	DA・DB・DC						266.5	169.5	□80	25	50
	DD						276.5	179.5	□80	35	60
	DE						271.5	174.5	□80	30	55
	EA						271.5	174.5	□90	30	55
	EB						266.5	169.5	□90	25	50
	EC						276.5	179.5	□90	35	60
	FA						266.5	169.5	□100	25	50
	FB						276.5	179.5	□100	35	60
	GA・GC						271.5	174.5	□115	30	55
	GB・GD						266.5	169.5	□115	25	50
	HA						266.5	169.5	□130	25	50
	HB						281.5	184.5	□130	40	65
	HC・HD・HE						271.5	174.5	□130	30	55
VRB-140-□-□-28** (Input shaft bore≦φ28)	FA・FB・FC	249	152	□100	35	67	283.5	186.5	□100	35	67
	GA・GB・GC・GD・GE・GF・GG	249	152	□115	35	67	283.5	186.5	□115	35	67
	HA・HC・HD	249	152	□130	35	67	283.5	186.5	□130	35	67
	HB	259	162	□130	45	77	293.5	196.5	□130	45	77
	JA・JB・JC	249	152	□150	35	67	283.5	186.5	□150	35	67
	KA・KB	249	152	□180	35	67	283.5	186.5	□180	35	67
	KD	259	162	□180	45	77	293.5	196.5	□180	45	77
	LA	249	152	□200	35	67	283.5	186.5	□200	35	67
	MA	249	152	□220	35	67	283.5	186.5	□220	35	67
VRB-140-□-□-38** (Input shaft bore≦φ38)	HA	264	167	□130	45	82	298.5	201.5	□130	45	82
	HB	259	162	□130	40	77	293.5	196.5	□130	40	77
	JA	264	167	□150	45	82	298.5	201.5	□150	45	82
	KA・KB・KC	264	167	□180	45	82	298.5	201.5	□180	45	82
	LA	264	167	□200	45	82	298.5	201.5	□200	45	82
	LB	274	177	□200	55	92	308.5	211.5	□200	55	92
	MA・MB	264	167	□220	45	82	298.5	201.5	□220	45	82
	NA	264	167	□250	45	82	298.5	201.5	□250	45	82
VRB-140-□-□-48** (Input shaft bore≦φ48)	KB・KC	285	188	□180	55	98					
	KA	305	208	□180	75	118					
	LA	285	188	□200	55	98					
	MA	285	188	□220	55	98					
	MB	305	208	□220	75	118					
	NA	305	208	□250	75	118					
	PA	305	208	□280	75	118					

※1 Single reduction : 1/3～1/10, Double reduction : 1/15～1/100
※2 Bushing will be inserted to adapt to motor shaft.

Dimensions (Adapter)

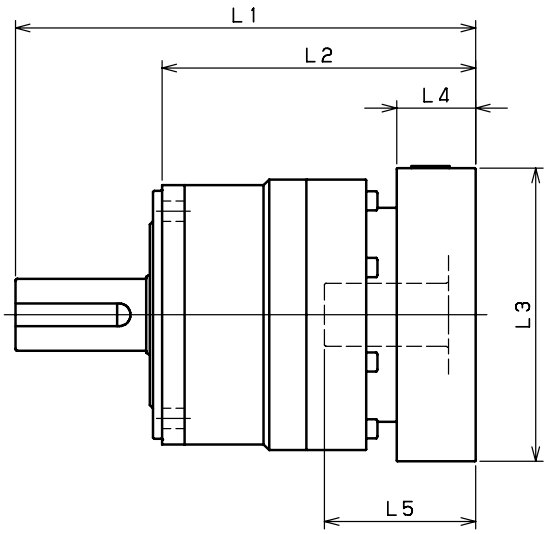
VRB-180



Model number	**: Adapter code	Single					Double				
		L1	L2	L3	L4	L5	L1	L2	L3	L4	L5
VRB-180-□-□-28** (Input shaft bore≦φ28)	FA・FB・FC						316	211	□100	35	67
	GA・GB・GC・GD・GE・GF・GG						316	211	□115	35	67
	HA・HC・HD						316	211	□130	35	67
	HB						326	221	□130	45	77
	JA・JB・JC						316	211	□150	35	67
	KA・KB						316	211	□180	35	67
	KD						326	221	□180	45	77
	LA						316	211	□200	35	67
	MA						316	211	□220	35	67
VRB-180-□-□-38** (Input shaft bore≦φ38)	HA	286.5	181.5	□130	45	82	331	226	□130	45	82
	HB	281.5	176.5	□130	40	77	326	221	□130	40	77
	JA	286.5	181.5	□150	45	82	331	226	□150	45	82
	KA・KB・KC	286.5	181.5	□180	45	82	331	226	□180	45	82
	LA	286.5	181.5	□200	45	82	331	226	□200	45	82
	LB	296.5	191.5	□200	55	92	341	236	□200	55	92
	MA・MB	286.5	181.5	□220	45	82	331	226	□220	45	82
	NA	286.5	181.5	□250	45	82	331	226	□250	45	82
VRB-180-□-□-48** (Input shaft bore≦φ48)	KB・KC	302.5	197.5	□180	55	98	347	242	□180	55	98
	KA	322.5	217.5	□180	75	118	367	262	□180	75	118
	LA	302.5	197.5	□200	55	98	347	242	□200	55	98
	MA	302.5	197.5	□220	55	98	347	242	□220	55	98
	MB	322.5	217.5	□220	75	118	367	262	□220	75	118
	NA	322.5	217.5	□250	75	118	367	262	□250	75	118
	PA	322.5	217.5	□280	75	118	367	262	□280	75	118
VRB-180-□-□-65** (Input shaft bore≦φ65)	MA・MB・MC・MD	334	229	□220	80	122					
	NA	334	229	□250	80	122					
	PA	354	249	□280	100	142					
	PB	364	259	□280	110	152					
	QA	354	249	□320	100	142					

※1 Single reduction : 1/3～1/10, Double reduction : 1/15～1/100
※2 Bushing will be inserted to adapt to motor shaft.

VRB-220



Model number	**:Adapter code	Single					Double				
		L1	L2	L3	L4	L5	L1	L2	L3	L4	L5
VRB-220-□-□-38** (Input shaft bore≦φ38)	HA						366.5	228.5	□130	45	82
	HB						361.5	223.5	□130	40	77
	JA						366.5	228.5	□150	45	82
	KA・KB・KC						366.5	228.5	□180	45	82
	LA						366.5	228.5	□200	45	82
	LB						376.5	238.5	□200	55	92
	MA・MB						366.5	228.5	□220	45	82
	NA						366.5	228.5	□250	45	82
VRB-220-□-□-48** (Input shaft bore≦φ48)	KB・KC	347.5	209.5	□180	55	98	382.5	244.5	□180	55	98
	KA	367.5	229.5	□180	75	118	402.5	264.5	□180	75	118
	LA	347.5	209.5	□200	55	98	382.5	244.5	□200	55	98
	MA	347.5	209.5	□220	55	98	382.5	244.5	□220	55	98
	MB	367.5	229.5	□220	75	118	402.5	264.5	□220	75	118
	NA	367.5	229.5	□250	75	118	402.5	264.5	□250	75	118
	PA	367.5	229.5	□280	75	118	402.5	264.5	□280	75	118
VRB-220-□-□-65** (Input shaft bore≦φ65)	MA・MB・MC・MD	371.5	233.5	□220	80	122					
	NA	371.5	233.5	□250	80	122					
	PA	391.5	253.5	□280	100	142					
	PB	401.5	263.5	□280	110	152					
	QA	391.5	253.5	□320	100	142					

※1 Single reduction : 1/3～1/10, Double reduction : 1/15～1/100
※2 Bushing will be inserted to adapt to motor shaft.

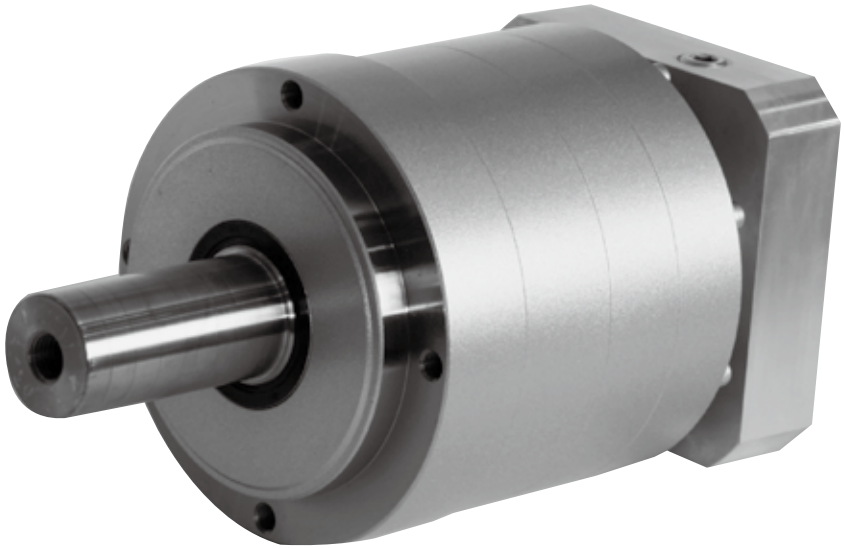
MEMO

SHIMPO

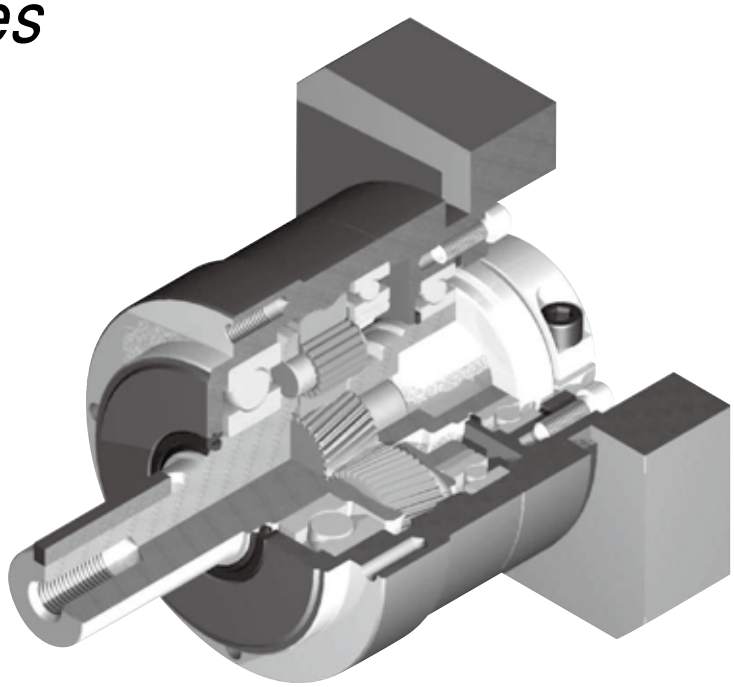
For servo motor

ABLE REDUCER

VRL Series



VRL series



Quiet operation

Helical gears contribute to reduce vibration and noise.

High precision

Standard backlash is 5 arc-min, ideal for precision control.

High rigidity & torque

High rigidity & high torque were achived by uncaged needle roller bearings.

Adapter-bushing connection

Can be attached to any motor all over the world.

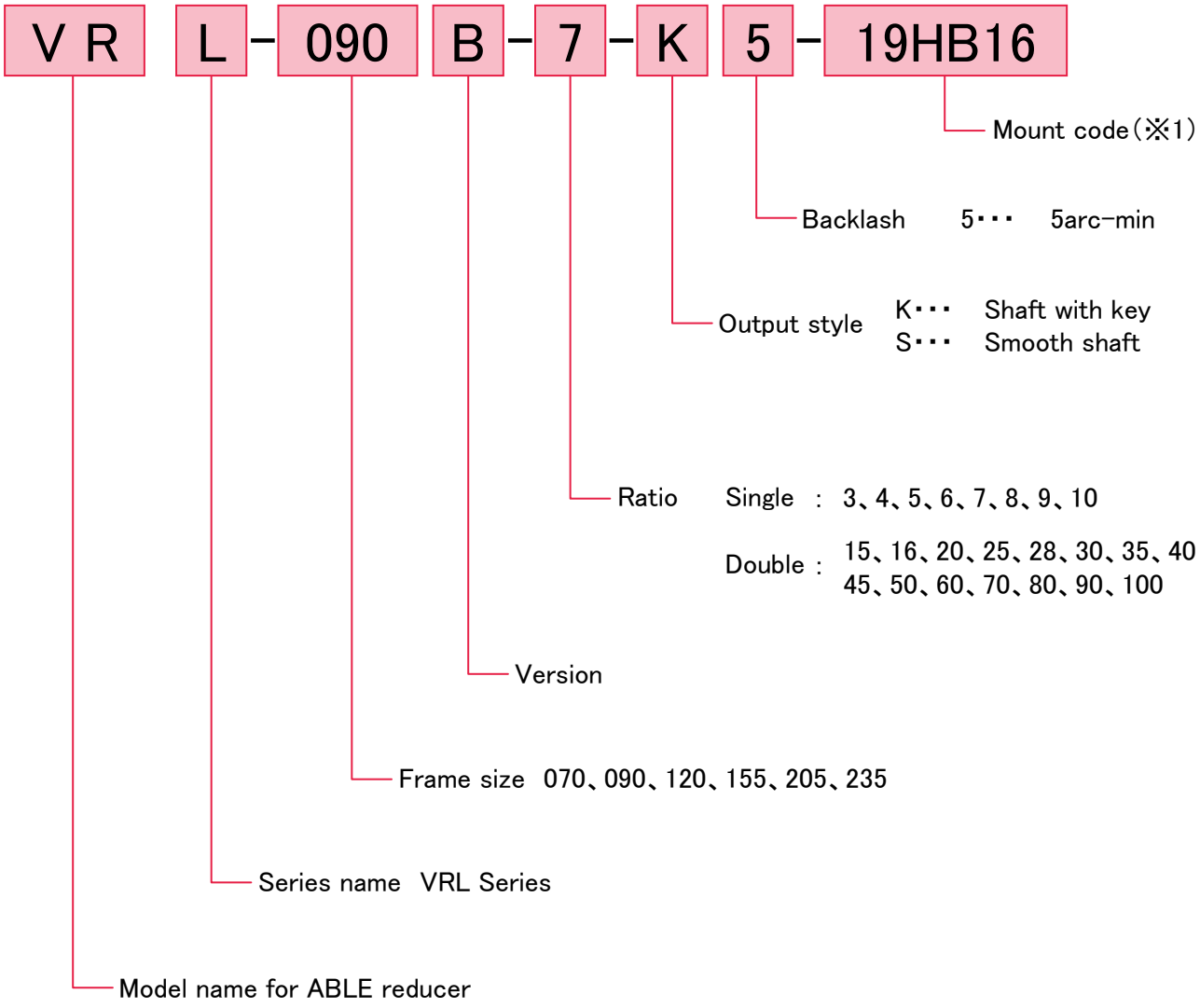
No grease leakage

Perfect solution using high viscosity anti-separation grease.

Maintenance-free

No need to replace the grease for the life of the unit.
Can be attached in any position.

VRL series



※1 Mount code

Mount code varies depending on the motor.
Please refer to reducer selection tool or contact us for more information.

Selection tool (English)
(http://www.nidec-shimpo.co.jp/selection/eng/)

VRL-070B

Frame size	Stage	Ratio	※1 Nominal output torque [Nm]	※2 Maximum output torque [Nm]	※3 Emergency stop torque [Nm]	※4 Nominal input speed [rpm]	※5 Maximum input speed [rpm]	※6 Permitted radial load [N]	※7 Permitted axial load [N]
070B	Single	3	18	35	80	3000	6000	430	310
		4	27	50	100	3000	6000	470	360
		5	27	50	100	3000	6000	510	390
		6	27	50	100	3000	6000	540	430
		7	27	50	100	3000	6000	570	460
		8	27	50	100	3000	6000	600	480
		9	18	35	80	3000	6000	620	510
		10	18	35	80	3000	6000	640	530
	Double	15	18	35	80	3000	6000	740	630
		16	27	50	100	3000	6000	750	650
		20	27	50	100	3000	6000	810	720
		25	27	50	100	3000	6000	870	790
		28	27	50	100	3000	6000	910	830
		30	18	35	80	3000	6000	930	860
		35	27	50	100	3000	6000	980	920
		40	27	50	100	3000	6000	1000	970
		45	18	35	80	3000	6000	1100	1000
		50	27	50	100	3000	6000	1100	1100
		60	27	50	100	3000	6000	1200	1100
		70	27	50	100	3000	6000	1200	1100
		80	27	50	100	3000	6000	1200	1100
		90	18	35	80	3000	6000	1200	1100
		100	18	35	80	3000	6000	1200	1100

Frame size	Stage	Ratio	※8 Maximum radial load [N]	※9 Maximum axial load [N]	※10 Weight [kg]	Moment of inertia (≦φ8) [kgcm^2]	Moment of inertia (≦φ14) [kgcm^2]	Moment of inertia (≦φ19) [kgcm^2]
070B	Single	3	1200	1100	1.5	0.14	0.22	0.43
		4	1200	1100		0.095	0.17	0.38
		5	1200	1100		0.077	0.16	0.36
		6	1200	1100		0.068	0.15	0.36
		7	1200	1100		0.062	0.14	0.35
		8	1200	1100		0.059	0.14	0.35
		9	1200	1100		0.057	0.14	0.34
		10	1200	1100		0.056	0.14	0.34
	Double	15	1200	1100	1.7	0.055	0.14	–
		16	1200	1100		0.057	0.14	–
		20	1200	1100		0.054	0.13	–
		25	1200	1100		0.053	0.13	–
		28	1200	1100		0.055	0.14	–
		30	1200	1100		0.049	0.13	–
		35	1200	1100		0.053	0.13	–
		40	1200	1100		0.049	0.13	–
		45	1200	1100		0.053	0.13	–
		50	1200	1100		0.049	0.13	–
		60	1200	1100		0.049	0.13	–
		70	1200	1100		0.049	0.13	–
		80	1200	1100		0.049	0.13	–
		90	1200	1100		0.049	0.13	–
		100	1200	1100		0.049	0.13	–

※ 1 With nominal input speed, service life is 20,000 hours.
※ 2 The maximum torque when starting and stopping.
※ 3 The maximum torque when it receives shock (up to 1,000 times)
※ 4 The maximum average input speed.
※ 5 The maximum momentary input speed.
※ 6 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output shaft center, at axial load 0)
※ 7 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output side bearing, at radial load 0)
※ 8 The maximum radial load the reducer can accept.
※ 9 The maximum axial load the reducer can accept.
※10 The weight may vary slightly model to model.

VRL-090B

Frame size	Stage	Ratio	※1 Nominal output torque [Nm]	※2 Maximum output torque [Nm]	※3 Emergency stop torque [Nm]	※4 Nominal input speed [rpm]	※5 Maximum input speed [rpm]	※6 Permitted radial load [N]	※7 Permitted axial load [N]
090B	Single	3	50	80	200	3000	6000	810	930
		4	75	125	250	3000	6000	890	1100
		5	75	125	250	3000	6000	960	1200
		6	75	125	250	3000	6000	1000	1300
		7	75	125	250	3000	6000	1100	1300
		8	75	125	250	3000	6000	1100	1400
		9	50	80	200	3000	6000	1200	1500
		10	50	80	200	3000	6000	1200	1600
	Double	15	50	80	200	3000	6000	1400	1900
		16	75	125	250	3000	6000	1400	1900
		20	75	125	250	3000	6000	1500	2100
		25	75	125	250	3000	6000	1600	2200
		28	75	125	250	3000	6000	1700	2200
		30	50	80	200	3000	6000	1700	2200
		35	75	125	250	3000	6000	1800	2200
		40	75	125	250	3000	6000	1900	2200
		45	50	80	200	3000	6000	2000	2200
		50	75	125	250	3000	6000	2100	2200
		60	75	125	250	3000	6000	2200	2200
		70	75	125	250	3000	6000	2300	2200
		80	75	125	250	3000	6000	2400	2200
		90	50	80	200	3000	6000	2400	2200
		100	50	80	200	3000	6000	2400	2200

Frame size	Stage	Ratio	※8 Maximum radial load [N]	※9 Maximum axial load [N]	※10 Weight [kg]	Moment of inertia (≦φ8) [kgcm^2]	Moment of inertia (≦φ14) [kgcm^2]	Moment of inertia (≦φ19) [kgcm^2]	Moment of inertia (≦φ28) [kgcm^2]
090B	Single	3	2400	2200	3.5	–	0.72	1.2	3.2
		4	2400	2200		–	0.49	0.95	3.0
		5	2400	2200		–	0.40	0.86	2.9
		6	2400	2200		–	0.36	0.82	2.8
		7	2400	2200		–	0.32	0.79	2.8
		8	2400	2200		–	0.31	0.77	2.8
		9	2400	2200		–	0.29	0.76	2.8
		10	2400	2200		–	0.29	0.75	2.8
	Double	15	2400	2200	4	0.13	0.28	0.72	–
		16	2400	2200		0.15	0.30	0.74	–
		20	2400	2200		0.13	0.28	0.72	–
		25	2400	2200		0.12	0.28	0.71	–
		28	2400	2200		0.14	0.29	0.73	–
		30	2400	2200		0.10	0.25	0.70	–
		35	2400	2200		0.12	0.27	0.71	–
		40	2400	2200		0.099	0.25	0.70	–
		45	2400	2200		0.12	0.27	0.71	–
		50	2400	2200		0.098	0.25	0.69	–
		60	2400	2200		0.098	0.25	0.69	–
		70	2400	2200		0.097	0.25	0.69	–
		80	2400	2200		0.097	0.25	0.69	–
		90	2400	2200		0.097	0.25	0.69	–
		100	2400	2200		0.097	0.25	0.69	–

※ 1 With nominal input speed, service life is 20,000 hours.
※ 2 The maximum torque when starting and stopping.
※ 3 The maximum torque when it receives shock (up to 1,000 times)
※ 4 The maximum average input speed.
※ 5 The maximum momentary input speed.
※ 6 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output shaft center, at axial load 0)
※ 7 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output side bearing, at radial load 0)
※ 8 The maximum radial load the reducer can accept.
※ 9 The maximum axial load the reducer can accept.
※10 The weight may vary slightly model to model.

VRL-120B

Frame size	Stage	Ratio	※1 Nominal output torque [Nm]	※2 Maximum output torque [Nm]	※3 Emergency stop torque [Nm]	※4 Nominal input speed [rpm]	※5 Maximum input speed [rpm]	※6 Permitted radial load [N]	※7 Permitted axial load [N]
120B	Single	3	120	225	500	3000	6000	1300	1500
		4	120	330	625	3000	6000	1500	1700
		5	180	330	625	3000	6000	1600	1900
		6	180	330	625	3000	6000	1700	2000
		7	180	330	625	3000	6000	1800	2100
		8	180	330	625	3000	6000	1900	2300
		9	120	225	500	3000	6000	1900	2400
		10	120	225	500	3000	6000	2000	2500
	Double	15	120	225	500	3000	6000	2300	3000
		16	180	330	625	3000	6000	2300	3100
		20	180	330	625	3000	6000	2500	3400
		25	180	330	625	3000	6000	2700	3700
		28	180	330	625	3000	6000	2800	3900
		30	120	225	500	3000	6000	2900	3900
		35	180	330	625	3000	6000	3000	3900
		40	180	330	625	3000	6000	3200	3900
		45	120	225	500	3000	6000	3300	3900
		50	180	330	625	3000	6000	3400	3900
		60	180	330	625	3000	6000	3600	3900
		70	180	330	625	3000	6000	3800	3900
		80	180	330	625	3000	6000	4000	3900
		90	120	225	500	3000	6000	4200	3900
		100	120	225	500	3000	6000	4300	3900

Frame size	Stage	Ratio	※8 Maximum radial load [N]	※9 Maximum axial load [N]	※10 Weight [kg]	Moment of inertia (≦φ14) [kgcm^2]	Moment of inertia (≦φ19) [kgcm^2]	Moment of inertia (≦φ28) [kgcm^2]	Moment of inertia (≦φ38) [kgcm^2]
120B	Single	3	4300	3900	7.8	–	3.3	5.3	13
		4	4300	3900		–	2.0	4.1	12
		5	4300	3900		–	1.6	3.6	11
		6	4300	3900		–	1.3	3.3	11
		7	4300	3900		–	1.1	3.2	11
		8	4300	3900		–	1.0	3.1	11
		9	4300	3900		–	0.98	3.0	11
		10	4300	3900		–	0.95	3.0	11
	Double	15	4300	3900	8.7	0.43	0.86	2.8	–
		16	4300	3900		0.48	0.92	2.9	–
		20	4300	3900		0.40	0.83	2.8	–
		25	4300	3900		0.38	0.82	2.8	–
		28	4300	3900		0.44	0.88	2.8	–
		30	4300	3900		0.29	0.74	2.7	–
		35	4300	3900		0.37	0.81	2.7	–
		40	4300	3900		0.28	0.73	2.7	–
		45	4300	3900		0.37	0.80	2.7	–
		50	4300	3900		0.28	0.73	2.7	–
		60	4300	3900		0.28	0.73	2.7	–
		70	4300	3900		0.28	0.73	2.7	–
		80	4300	3900		0.28	0.73	2.7	–
		90	4300	3900		0.27	0.73	2.7	–
		100	4300	3900		0.27	0.73	2.7	–

※ 1 With nominal input speed, service life is 20,000 hours.
※ 2 The maximum torque when starting and stopping.
※ 3 The maximum torque when it receives shock (up to 1,000 times)
※ 4 The maximum average input speed.
※ 5 The maximum momentary input speed.
※ 6 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output shaft center, at axial load 0)
※ 7 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output side bearing, at radial load 0)
※ 8 The maximum radial load the reducer can accept.
※ 9 The maximum axial load the reducer can accept.
※10 The weight may vary slightly model to model.

VRL-155B

Frame size	Stage	Ratio	※1 Nominal output torque [Nm]	※2 Maximum output torque [Nm]	※3 Emergency stop torque [Nm]	※4 Nominal input speed [rpm]	※5 Maximum input speed [rpm]	※6 Permitted radial load [N]	※7 Permitted axial load [N]
155B	Single	3	240	470	1000	2000	4000	3200	2400
		4	240	700	1250	2000	4000	3500	2700
		5	360	700	1250	2000	4000	3800	3000
		6	360	700	1250	2000	4000	4000	3300
		7	360	700	1250	2000	4000	4200	3500
		8	360	700	1250	2000	4000	4400	3700
		9	240	470	1000	2000	4000	4600	3900
		10	240	470	1000	2000	4000	4700	4100
	Double	15	240	470	1000	2000	4000	5400	4900
		16	360	700	1250	2000	4000	5500	5000
		20	360	700	1250	2000	4000	6000	5500
		25	360	700	1250	2000	4000	6400	6100
		28	360	700	1250	2000	4000	6700	6400
		30	240	470	1000	2000	4000	6800	6600
		35	360	700	1250	2000	4000	7200	7000
		40	360	700	1250	2000	4000	7500	7500
		45	240	470	1000	2000	4000	7800	7900
		50	360	700	1250	2000	4000	8100	8200
		60	360	700	1250	2000	4000	8600	8200
		70	360	700	1250	2000	4000	9100	8200
		80	360	700	1250	2000	4000	9100	8200
		90	240	470	1000	2000	4000	9100	8200
		100	240	470	1000	2000	4000	9100	8200

Frame size	Stage	Ratio	※8 Maximum radial load [N]	※9 Maximum axial load [N]	※10 Weight [kg]	Moment of inertia (≦φ19) [kgcm^2]	Moment of inertia (≦φ28) [kgcm^2]	Moment of inertia (≦φ38) [kgcm^2]	Moment of inertia (≦φ48) [kgcm^2]
155B	Single	3	9100	8200	16	–	12	20	42
		4	9100	8200		–	7.5	15	37
		5	9100	8200		–	5.8	14	36
		6	9100	8200		–	4.9	13	35
		7	9100	8200		–	4.1	12	34
		8	9100	8200		–	3.8	12	34
		9	9100	8200		–	3.6	11	34
		10	9100	8200		–	3.5	11	34
	Double	15	9100	8200	18	1.3	3.2	11	–
		16	9100	8200		1.5	3.5	11	–
		20	9100	8200		1.2	3.1	11	–
		25	9100	8200		1.1	3.1	11	–
		28	9100	8200		1.4	3.3	11	–
		30	9100	8200		0.85	2.8	10	–
		35	9100	8200		1.1	3.1	11	–
		40	9100	8200		0.83	2.8	10	–
		45	9100	8200		1.1	3.0	11	–
		50	9100	8200		0.81	2.8	10	–
		60	9100	8200		0.81	2.8	10	–
		70	9100	8200		0.80	2.8	10	–
		80	9100	8200		0.80	2.8	10	–
		90	9100	8200		0.80	2.8	10	–
		100	9100	8200		0.80	2.8	10	–

※ 1 With nominal input speed, service life is 20,000 hours.
※ 2 The maximum torque when starting and stopping.
※ 3 The maximum torque when it receives shock (up to 1,000 times)
※ 4 The maximum average input speed.
※ 5 The maximum momentary input speed.
※ 6 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output shaft center, at axial load 0)
※ 7 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output side bearing, at radial load 0)
※ 8 The maximum radial load the reducer can accept.
※ 9 The maximum axial load the reducer can accept.
※10 The weight may vary slightly model to model.

VRL-205B

Frame size	Stage	Ratio	※1 Nominal output torque [Nm]	※2 Maximum output torque [Nm]	※3 Emergency stop torque [Nm]	※4 Nominal input speed [rpm]	※5 Maximum input speed [rpm]	※6 Permitted radial load [N]	※7 Permitted axial load [N]
205B	Single	3	500	970	2200	1500	3000	5600	4300
		4	750	1400	2750	1500	3000	6200	4900
		5	750	1400	2750	1500	3000	6700	5400
		6	750	1400	2750	1500	3000	7100	5800
		7	750	1400	2750	1500	3000	7400	6300
		8	750	1400	2750	1500	3000	7800	6600
		9	500	970	2200	1500	3000	8100	7000
		10	500	970	2200	1500	3000	8400	7300
	Double	15	500	970	2200	1500	3000	9600	8700
		16	750	1400	2750	1500	3000	9800	8900
		20	750	1400	2750	1500	3000	11000	9900
		25	750	1400	2750	1500	3000	11000	11000
		28	750	1400	2750	1500	3000	12000	11000
		30	500	970	2200	1500	3000	12000	12000
		35	750	1400	2750	1500	3000	13000	13000
		40	750	1400	2750	1500	3000	13000	13000
		45	500	970	2200	1500	3000	14000	14000
		50	750	1400	2750	1500	3000	14000	14000
		60	750	1400	2750	1500	3000	15000	14000
		70	750	1400	2750	1500	3000	15000	14000
		80	750	1400	2750	1500	3000	15000	14000
		90	500	970	2200	1500	3000	15000	14000
		100	500	970	2200	1500	3000	15000	14000

Frame size	Stage	Ratio	※8 Maximum radial load [N]	※9 Maximum axial load [N]	※10 Weight [kg]	Moment of inertia (≦φ28) [kgcm^2]	Moment of inertia (≦φ38) [kgcm^2]	Moment of inertia (≦φ48) [kgcm^2]	Moment of inertia (≦φ65) [kgcm^2]
205B	Single	3	15000	14000	39	–	44	66	130
		4	15000	14000		–	28	50	110
		5	15000	14000		–	22	44	100
		6	15000	14000		–	18	41	100
		7	15000	14000		–	16	38	99
		8	15000	14000		–	15	37	97
		9	15000	14000		–	14	36	97
		10	15000	14000		–	14	36	96
	Double	15	15000	14000	40	4.7	12	34	–
		16	15000	14000		5.4	13	35	–
		20	15000	14000		4.4	12	34	–
		25	15000	14000		4.2	12	34	–
		28	15000	14000		4.9	13	35	–
		30	15000	14000		3.2	11	33	–
		35	15000	14000		4.1	12	34	–
		40	15000	14000		3.2	11	33	–
		45	15000	14000		4.0	12	34	–
		50	15000	14000		3.1	11	33	–
		60	15000	14000		3.1	11	33	–
		70	15000	14000		3.1	11	33	–
		80	15000	14000		3.1	11	33	–
		90	15000	14000		3.1	11	33	–
		100	15000	14000		3.1	11	33	–

※ 1 With nominal input speed, service life is 20,000 hours.
※ 2 The maximum torque when starting and stopping.
※ 3 The maximum torque when it receives shock (up to 1,000 times)
※ 4 The maximum average input speed.
※ 5 The maximum momentary input speed.
※ 6 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output shaft center, at axial load 0)
※ 7 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output side bearing, at radial load 0)
※ 8 The maximum radial load the reducer can accept.
※ 9 The maximum axial load the reducer can accept.
※10 The weight may vary slightly model to model.

VRL-235B

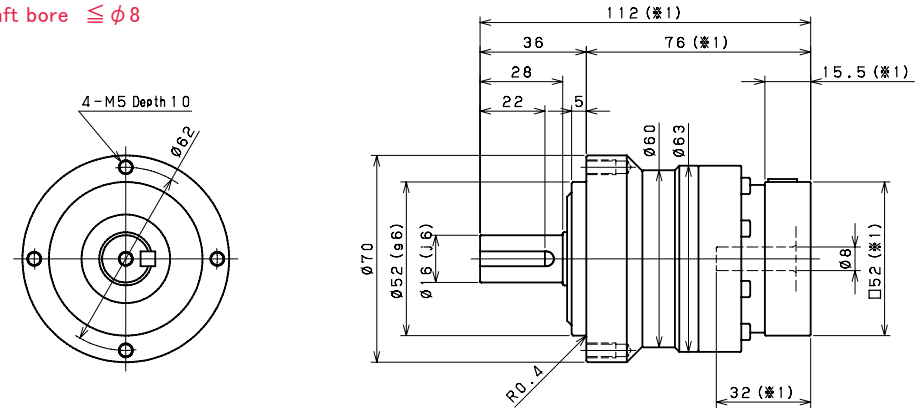
Frame size	Stage	Ratio	※1 Nominal output torque [Nm]	※2 Maximum output torque [Nm]	※3 Emergency stop torque [Nm]	※4 Nominal input speed [rpm]	※5 Maximum input speed [rpm]	※6 Permitted radial load [N]	※7 Permitted axial load [N]
235B	Single	3	1000	1600	4000	1000	2000	5800	6400
		4	1500	2300	5000	1000	2000	6400	7200
		5	1500	2300	5000	1000	2000	6900	7900
		6	1500	2300	5000	1000	2000	7300	8600
		7	1500	2300	5000	1000	2000	7700	9200
		8	1500	2200	5000	1000	2000	8000	9700
		9	1000	1900	4000	1000	2000	8400	10000
		10	1000	1600	4000	1000	2000	8700	11000
	Double	15	1000	1600	4000	1000	2000	9900	13000
		16	1500	2300	5000	1000	2000	10000	13000
		20	1500	2300	5000	1000	2000	11000	14000
		25	1500	2300	5000	1000	2000	12000	14000
		28	1500	2300	5000	1000	2000	12000	14000
		30	1000	1600	4000	1000	2000	13000	14000
		35	1500	2300	5000	1000	2000	13000	14000
		40	1500	2300	5000	1000	2000	14000	14000
		45	1000	1300	4000	1000	2000	14000	14000
		50	1500	2300	5000	1000	2000	15000	14000
		60	1500	2300	5000	1000	2000	15000	14000
		70	1500	2300	5000	1000	2000	15000	14000
		80	1500	1800	5000	1000	2000	15000	14000
		90	1000	1300	4000	1000	2000	15000	14000
		100	1000	1200	4000	1000	2000	15000	14000

Frame size	Stage	Ratio	※8 Maximum radial load [N]	※9 Maximum axial load [N]	※10 Weight [kg]	Moment of inertia (≦φ38) [kgcm^2]	Moment of inertia (≦φ48) [kgcm^2]	Moment of inertia (≦φ65) [kgcm^2]
235B	Single	3	15000	14000	55	–	90	150
		4	15000	14000		–	62	120
		5	15000	14000		–	52	110
		6	15000	14000		–	47	110
		7	15000	14000		–	42	100
		8	15000	14000		–	40	100
		9	15000	14000		–	39	99
		10	15000	14000		–	38	98
	Double	15	15000	14000	57	14	36	–
		16	15000	14000		16	37	–
		20	15000	14000		14	35	–
		25	15000	14000		14	35	–
		28	15000	14000		15	36	–
		30	15000	14000		12	34	–
		35	15000	14000		13	35	–
		40	15000	14000		12	33	–
		45	15000	14000		13	35	–
		50	15000	14000		12	33	–
		60	15000	14000		12	33	–
		70	15000	14000		12	33	–
		80	15000	14000		12	33	–
		90	15000	14000		12	33	–
		100	15000	14000		12	33	–

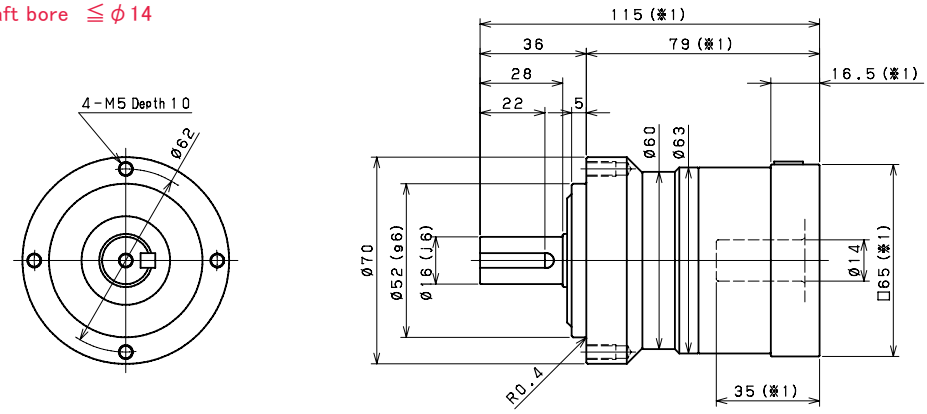
※ 1 With nominal input speed, service life is 20,000 hours.
※ 2 The maximum torque when starting and stopping.
※ 3 The maximum torque when it receives shock (up to 1,000 times)
※ 4 The maximum average input speed.
※ 5 The maximum momentary input speed.
※ 6 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output shaft center, at axial load 0)
※ 7 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output side bearing, at radial load 0)
※ 8 The maximum radial load the reducer can accept.
※ 9 The maximum axial load the reducer can accept.
※10 The weight may vary slightly model to model.

VRL-070B 1stage

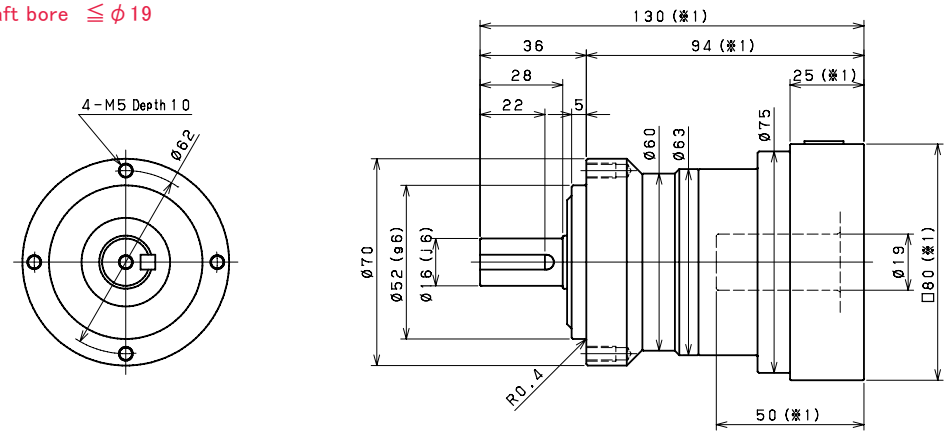
Input shaft bore ≦ϕ8

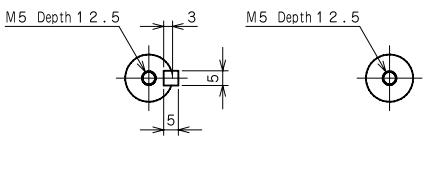


Input shaft bore ≦ϕ14



Input shaft bore ≦ϕ19

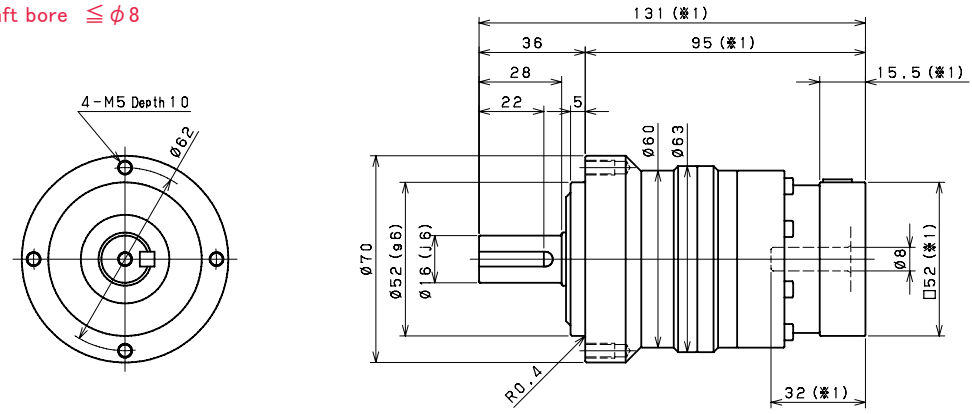




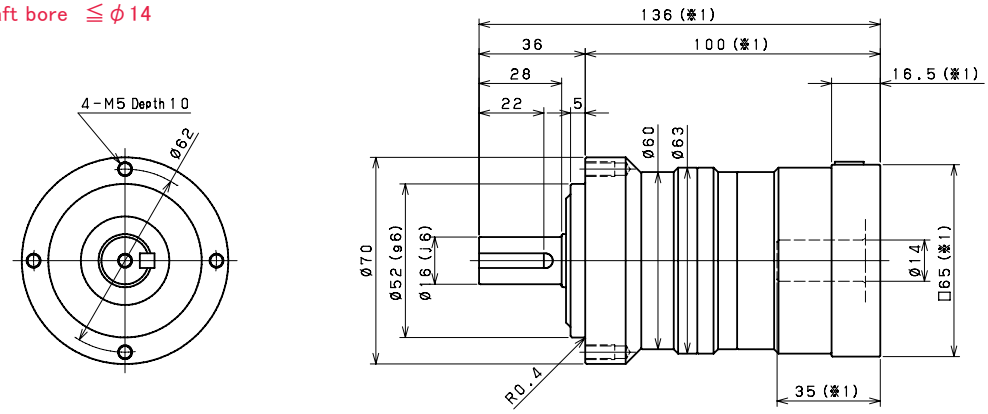
※1 Length will vary depending on motor.
※2 Bushing will be inserted to adapt to motor shaft.

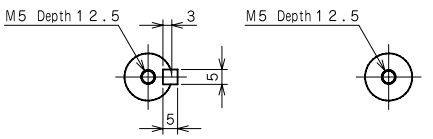
VRL-070B 2stage

Input shaft bore ≦ϕ8



Input shaft bore ≦ϕ14

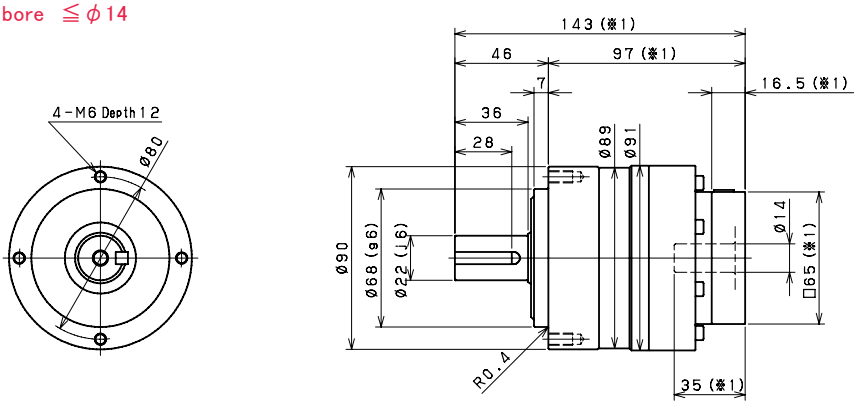




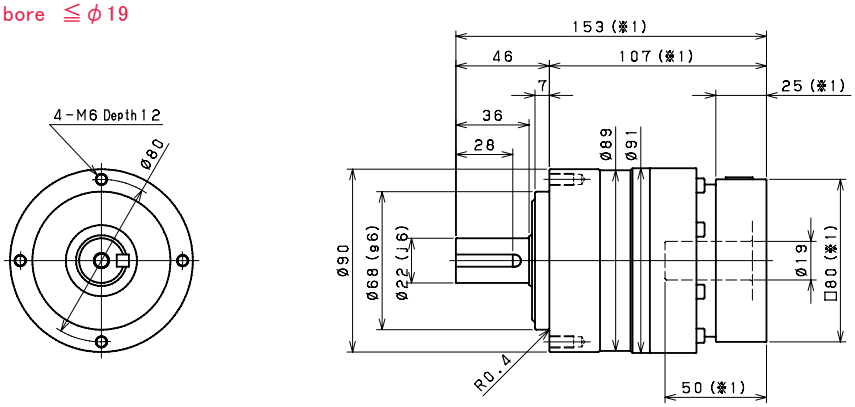
※1 Length will vary depending on motor.
※2 Bushing will be inserted to adapt to motor shaft.

VRL-090B 1stage

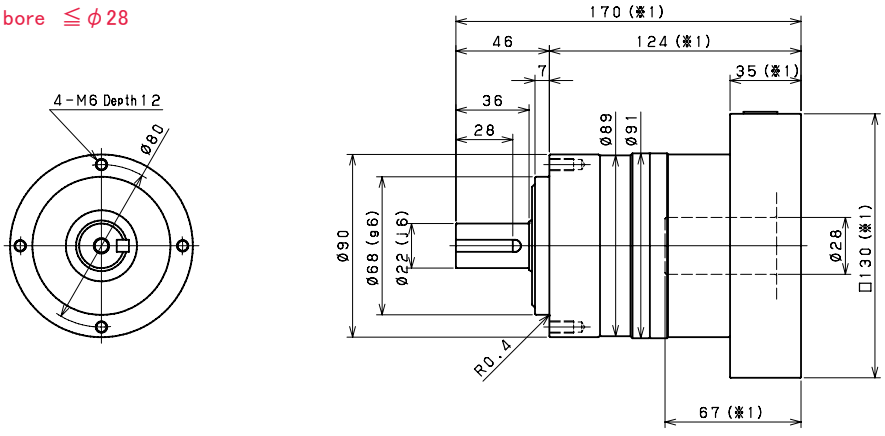
Input shaft bore ≦φ14

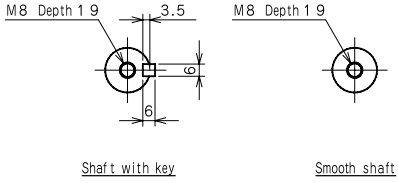


Input shaft bore ≦φ19



Input shaft bore ≦φ28

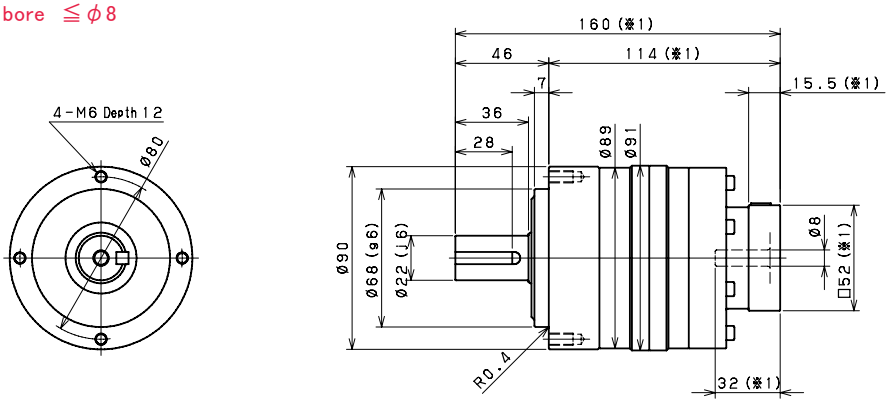




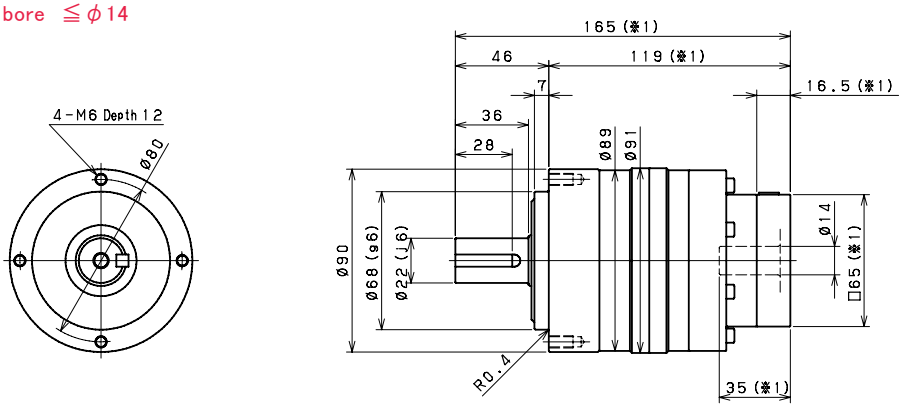
※1 Length will vary depending on motor.
※2 Bushing will be inserted to adapt to motor shaft.

VRL-090B 2stage

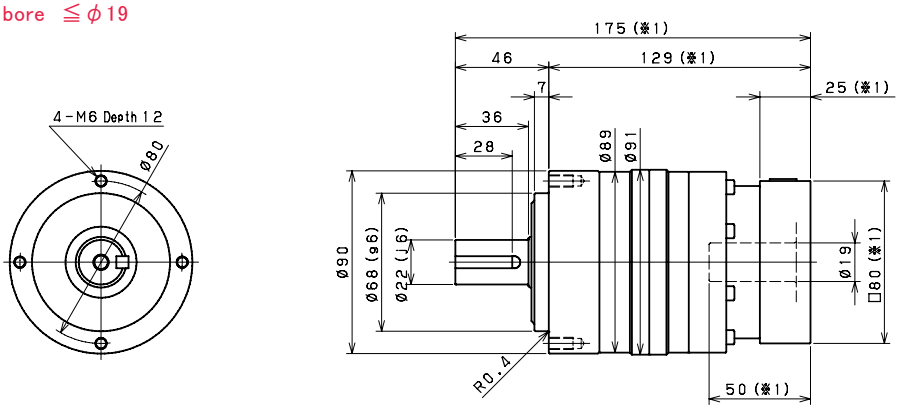
Input shaft bore ≦ϕ8

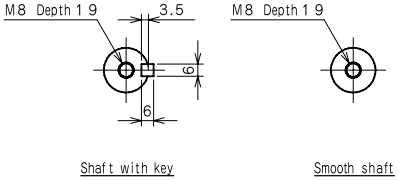


Input shaft bore ≦ϕ14



Input shaft bore ≦ϕ19

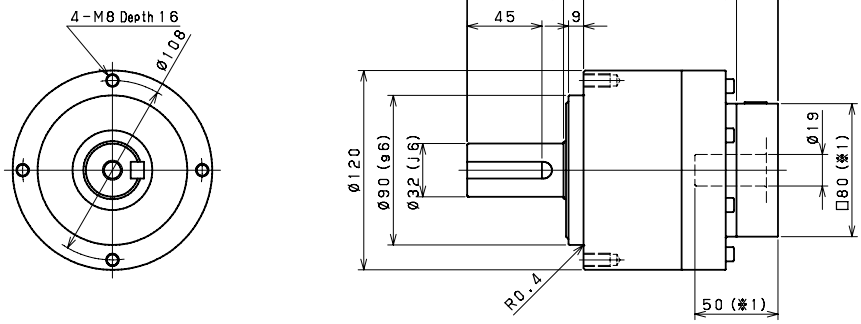




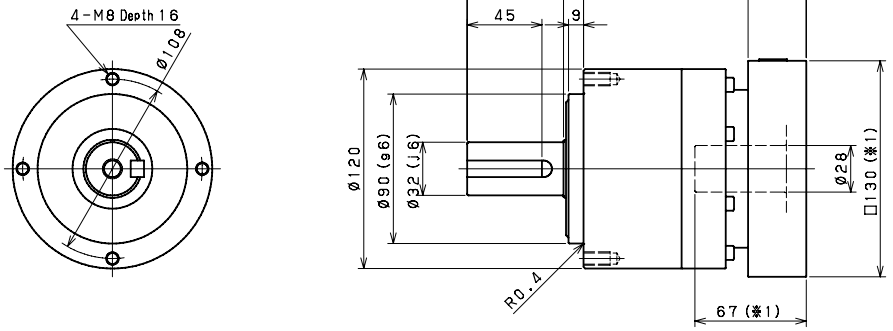
※1 Length will vary depending on motor.
※2 Bushing will be inserted to adapt to motor shaft.

VRL-120B 1stage

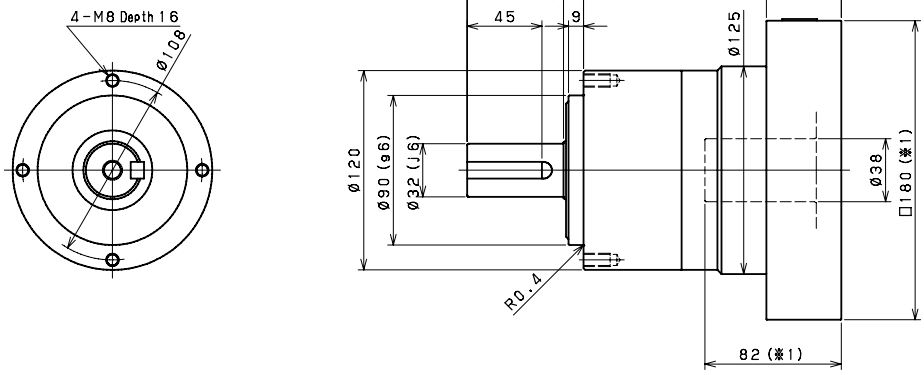
Input shaft bore ≦ϕ19

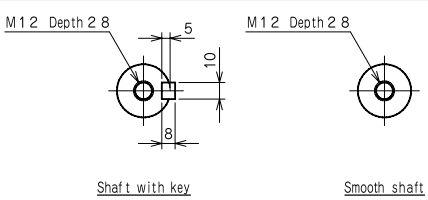


Input shaft bore ≦ϕ28



Input shaft bore ≦ϕ38

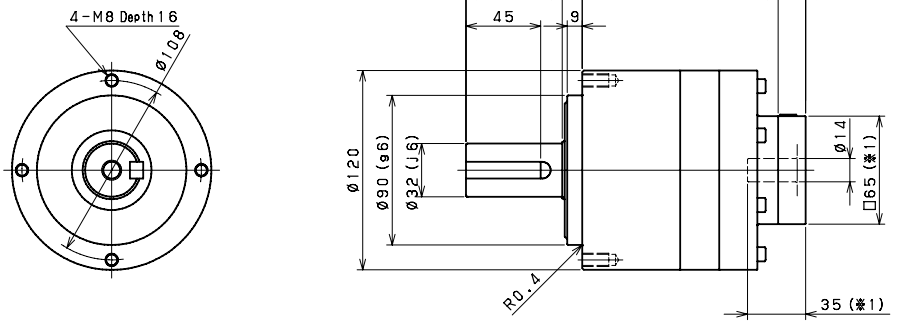




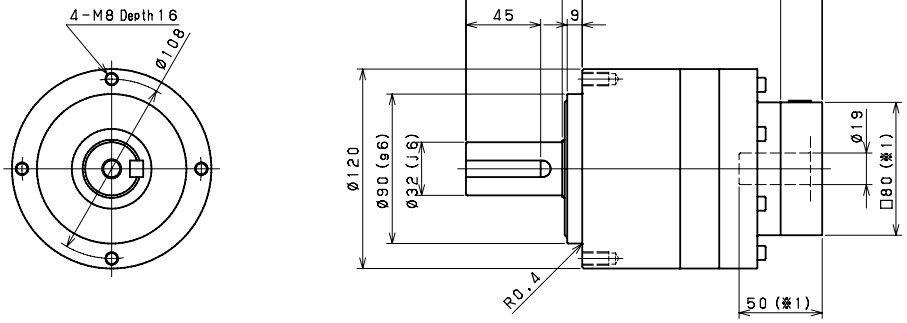
※1 Length will vary depending on motor.
※2 Bushing will be inserted to adapt to motor shaft.

VRL-120B 2stage

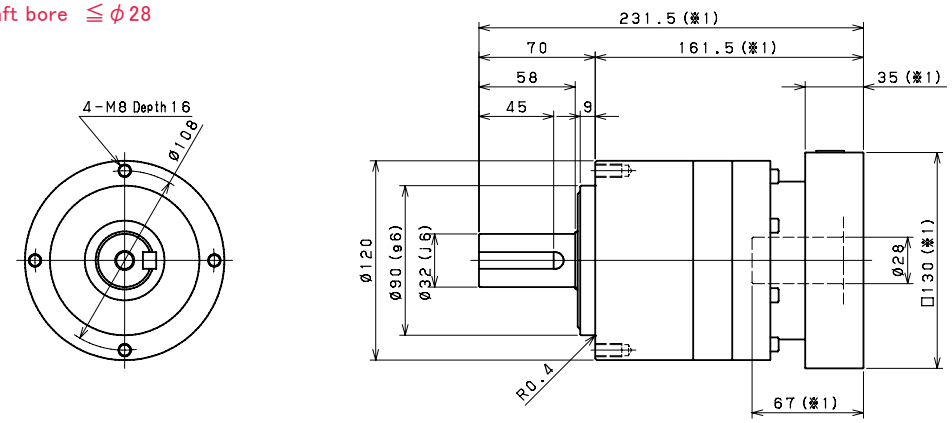
Input shaft bore ≦ϕ14

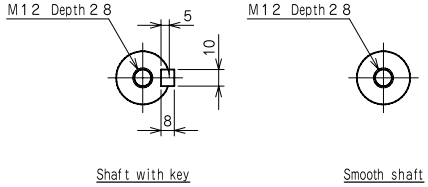


Input shaft bore ≦ϕ19



Input shaft bore ≦ϕ28

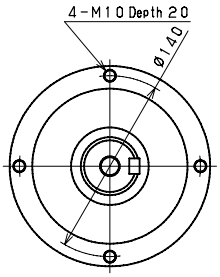


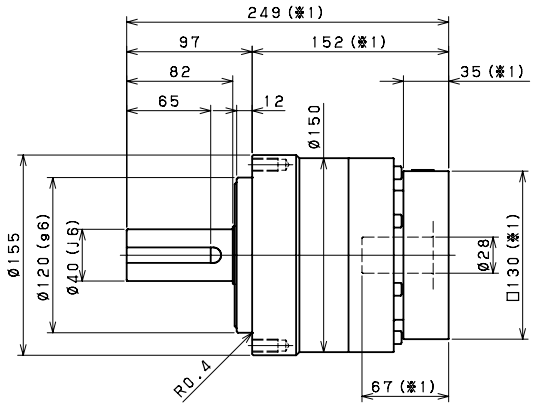


※1 Length will vary depending on motor.
※2 Bushing will be inserted to adapt to motor shaft.

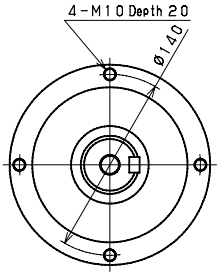
VRL-155B 1stage

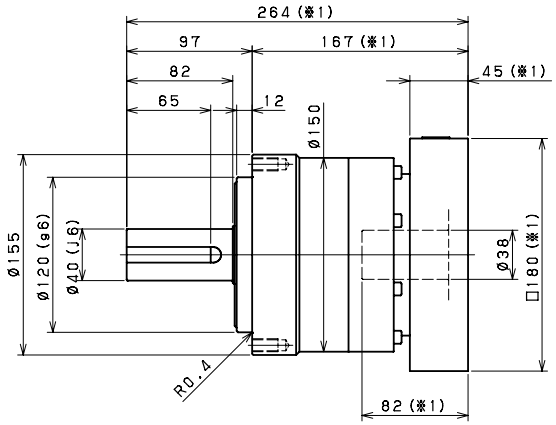
Input shaft bore ≦ϕ28



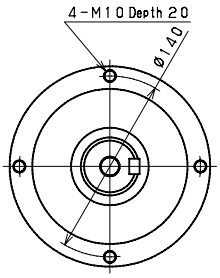


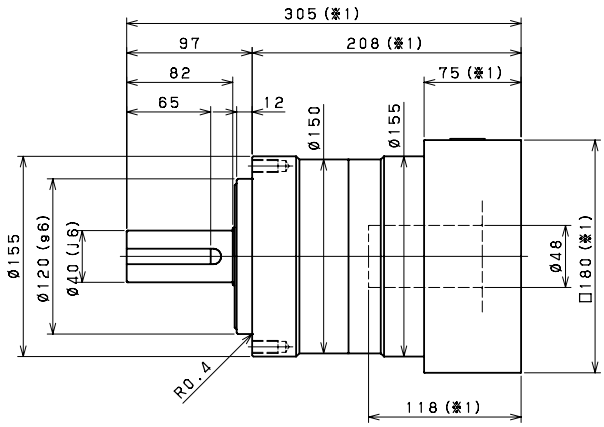
Input shaft bore ≦ϕ38

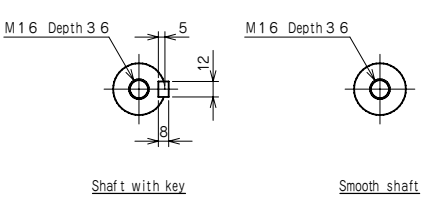




Input shaft bore ≦ϕ48



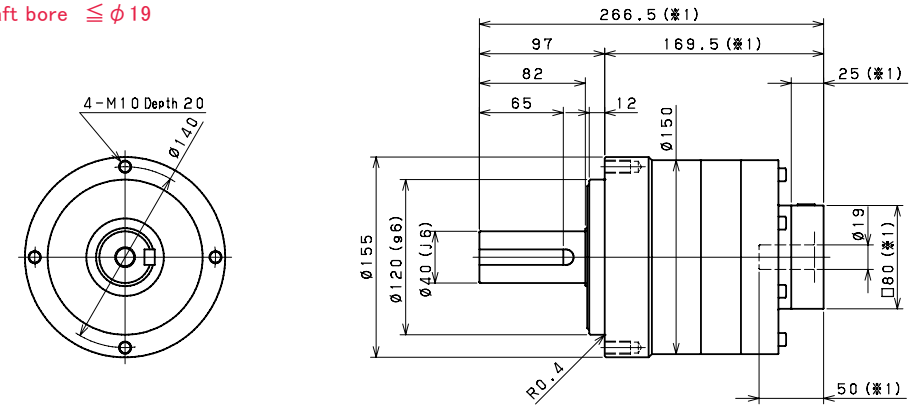




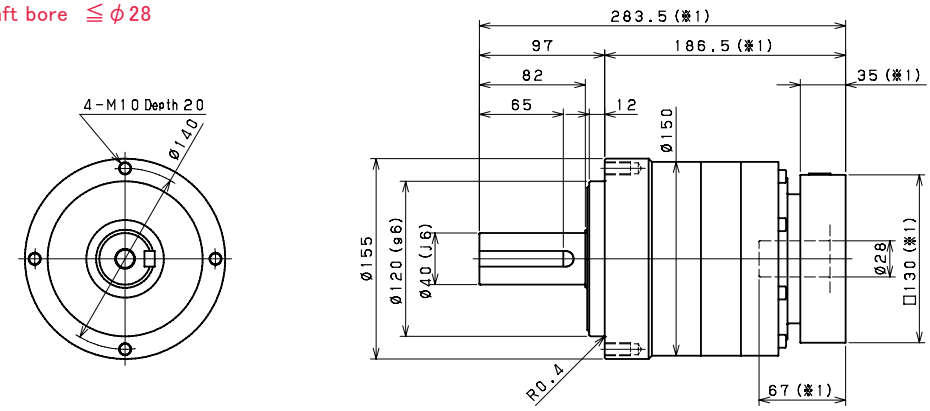
※1 Length will vary depending on motor.
※2 Bushing will be inserted to adapt to motor shaft.

VRL-155B 2stage

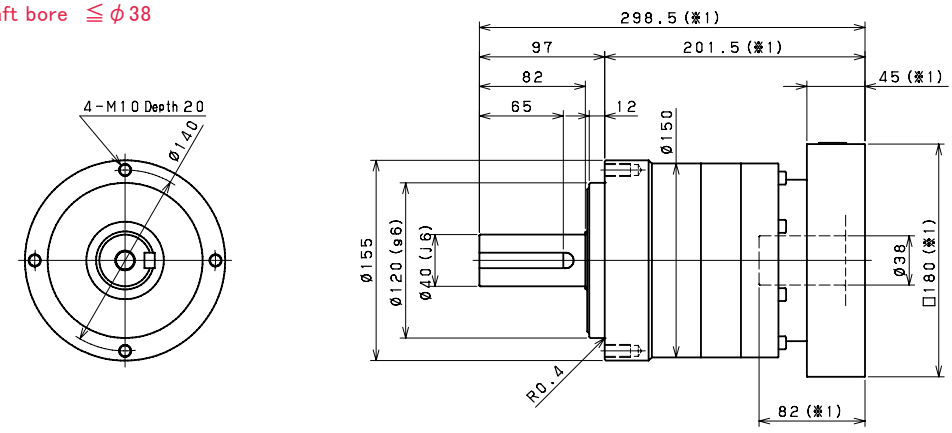
Input shaft bore ≦ϕ19

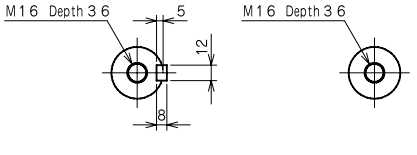


Input shaft bore ≦ϕ28



Input shaft bore ≦ϕ38

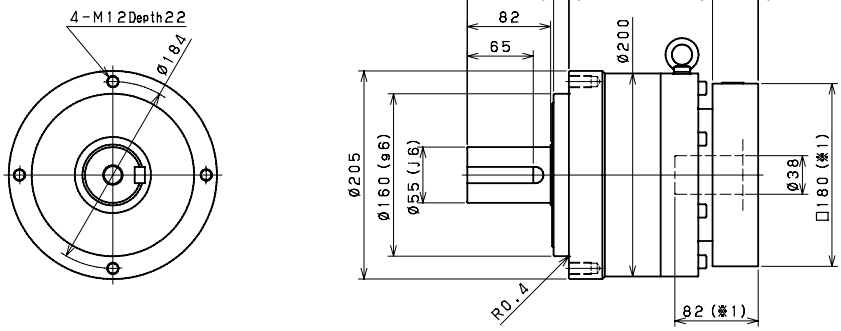




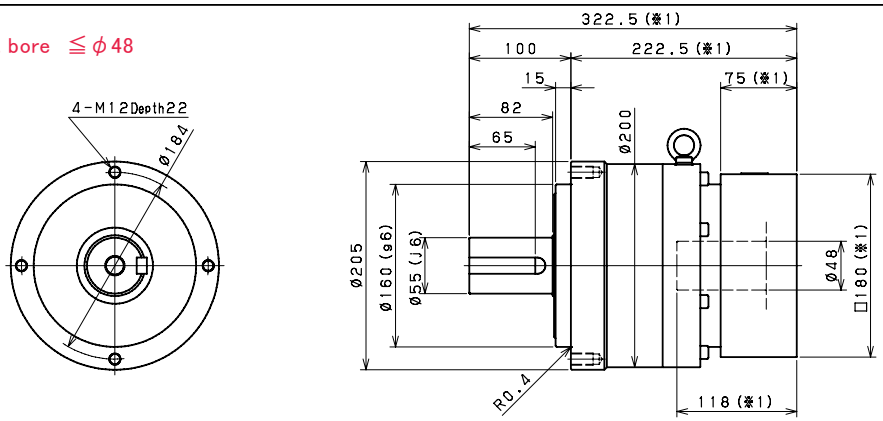
※1 Length will vary depending on motor.
※2 Bushing will be inserted to adapt to motor shaft.

VRL-205B 1stage

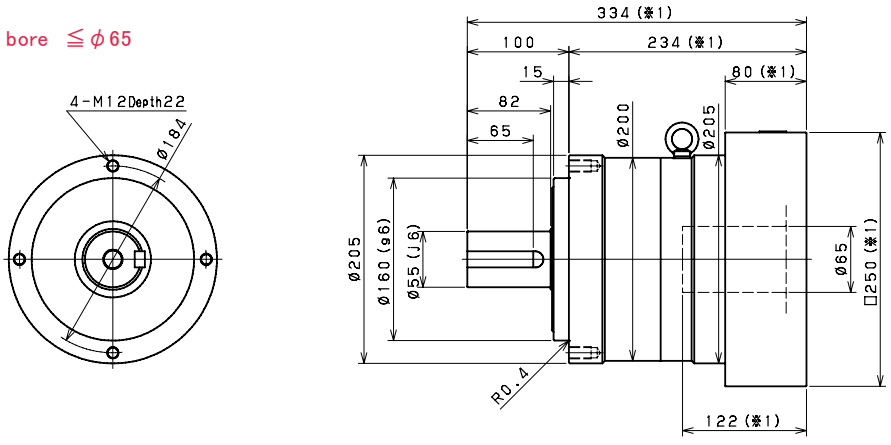
Input shaft bore ≦ϕ38

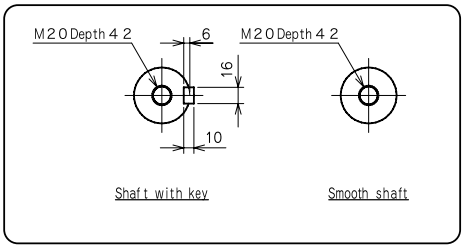


Input shaft bore ≦ϕ48



Input shaft bore ≦ϕ65

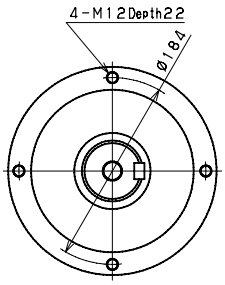


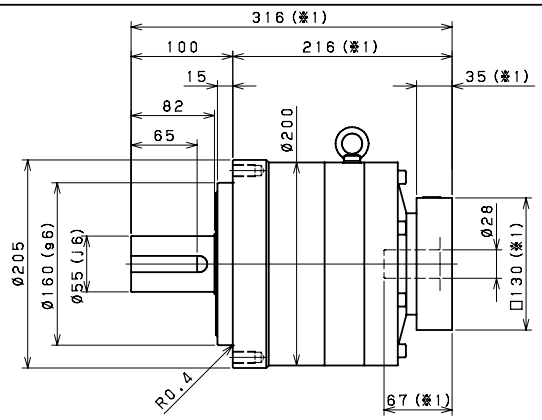


※1 Length will vary depending on motor.
※2 Bushing will be inserted to adapt to motor shaft.

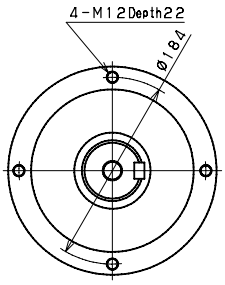
VRL-205B 2stage

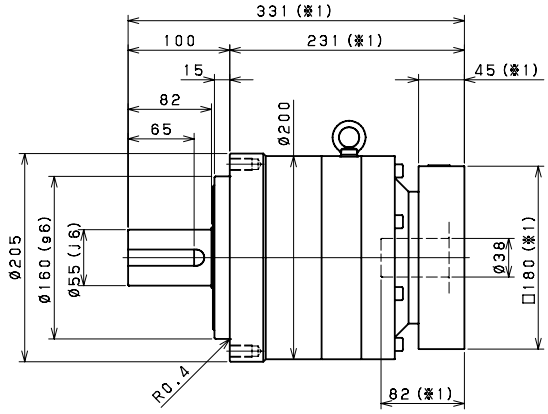
Input shaft bore ≦φ28



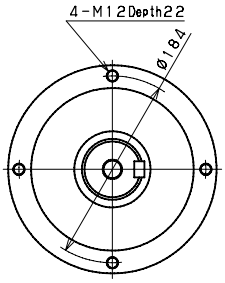


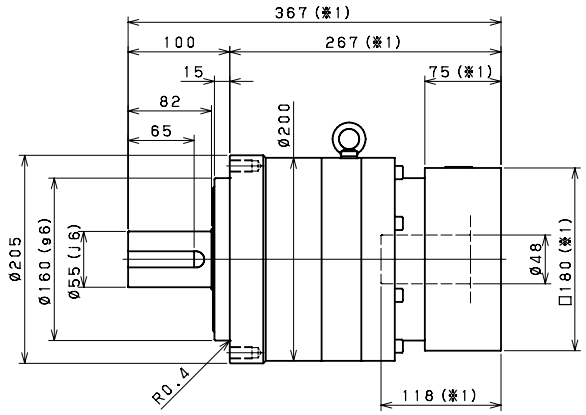
Input shaft bore ≦φ38

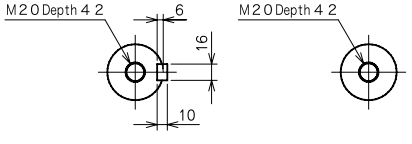




Input shaft bore ≦φ48



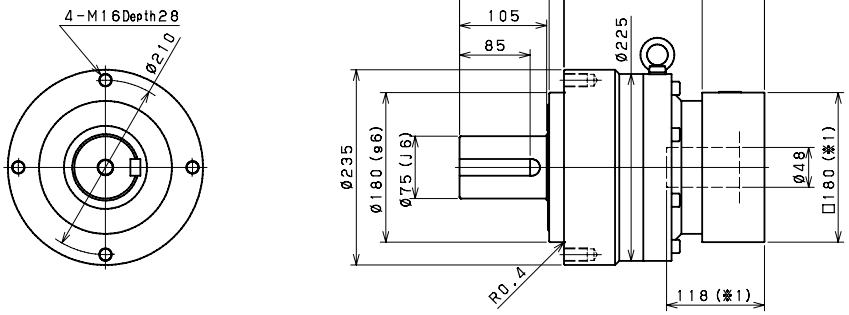




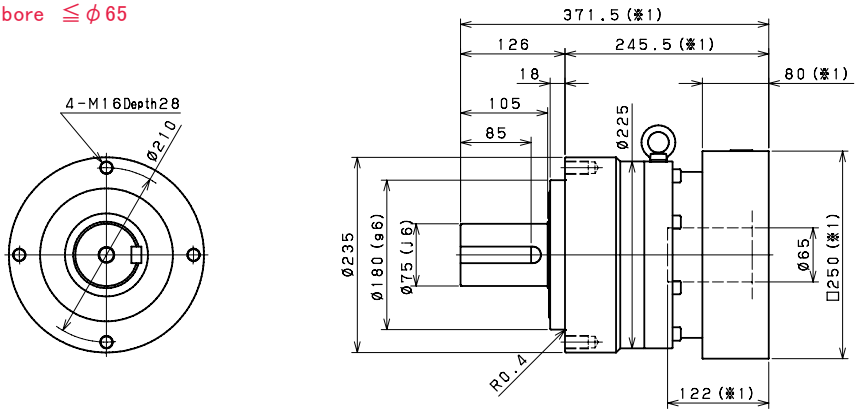
※1 Length will vary depending on motor.
※2 Bushing will be inserted to adapt to motor shaft.

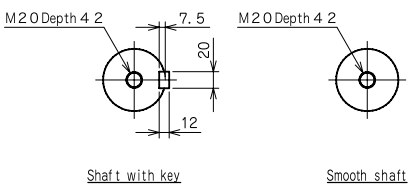
VRL-235B 1stage

Input shaft bore ≦φ48



Input shaft bore ≦φ65

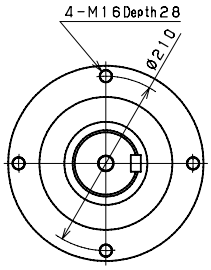


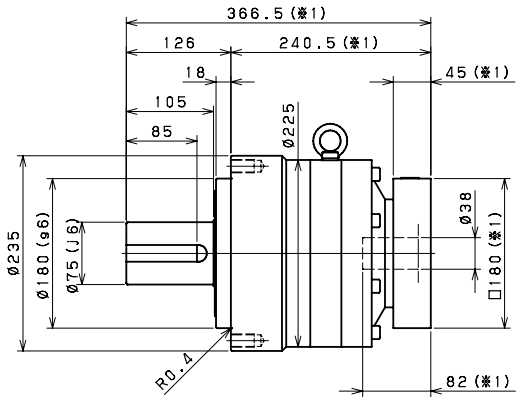


※1 Length will vary depending on motor.
※2 Bushing will be inserted to adapt to motor shaft.

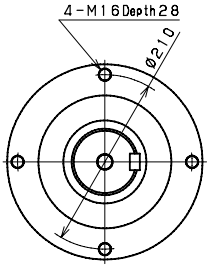
VRL-235B 2stage

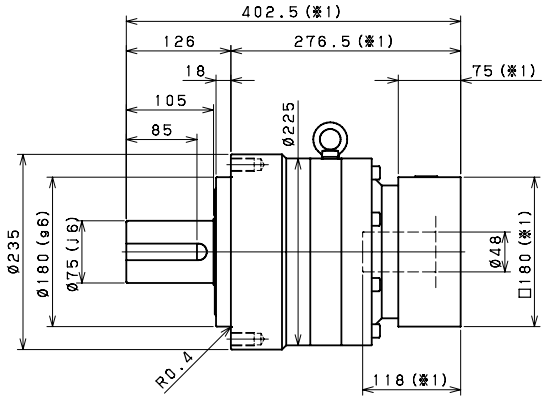
Input shaft bore ≦ϕ38

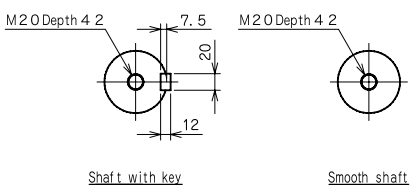




Input shaft bore ≦ϕ48



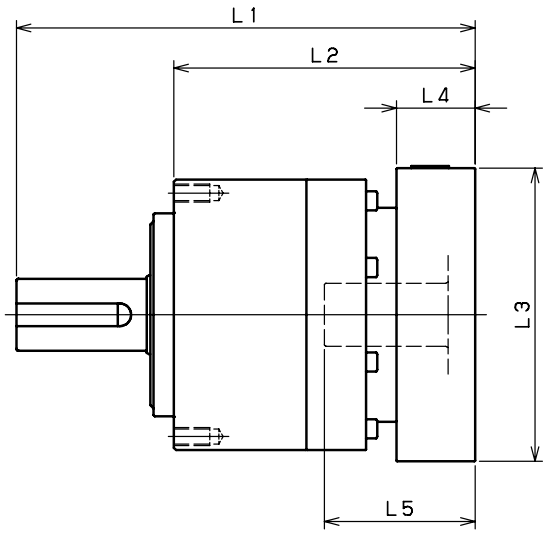




※1 Length will vary depending on motor.
※2 Bushing will be inserted to adapt to motor shaft.

Dimensions (Adapter)

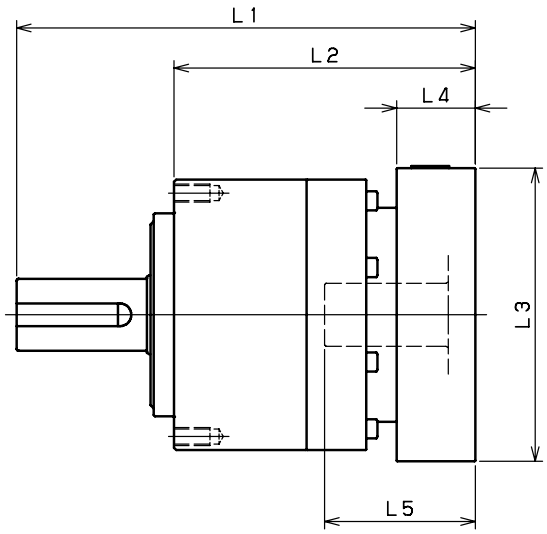
VRL-070B



Model number	**: Adapter code	Single					Double				
		L1	L2	L3	L4	L5	L1	L2	L3	L4	L5
VRL-070B-□-□-8** (Input shaft bore ≦ φ8)	AA・AC・AD・AF・AG	112	76	□52	15.5	32	131	95	□52	15.5	32
	AB・AE・AH・AJ・AK	117	81	□52	20.5	37	136	100	□52	20.5	37
	BA・BB・BD・BE	112	76	□60	15.5	32	131	95	□60	15.5	32
	BC・BF	117	81	□60	20.5	37	136	100	□60	20.5	37
	CA	117	81	□70	20.5	37	136	100	□70	20.5	37
VRL-070B-□-□-14** (Input shaft bore≦ φ14)	BA・BB・BD・BE・BF・BG・BJ・BK	115	79	□65	16.5	35	136	100	□65	16.5	35
	BC・BH・BM	120	84	□65	21.5	40	141	105	□65	21.5	40
	BL	125	89	□65	26.5	45	146	110	□65	26.5	45
	CA	115	79	□70	16.5	35	136	100	□70	16.5	35
	CB	120	84	□70	21.5	40	141	105	□70	21.5	40
	DA・DB・DC・DD・DF・DH	115	79	□80	16.5	35	136	100	□80	16.5	35
	DE	120	84	□80	21.5	40	141	105	□80	21.5	40
	DG	125	89	□80	26.5	45	146	110	□80	26.5	45
	EA・EB・EC	115	79	□90	16.5	35	136	100	□90	16.5	35
	ED	125	89	□90	26.5	45	146	110	□90	26.5	45
	FA	115	79	□100	16.5	35	136	100	□100	16.5	35
	GA	115	79	□115	16.5	35	136	100	□115	16.5	35
VRL-070B-□-□-19** (Input shaft bore≦ φ19)	DA・DB・DC	130	94	□80	25	50					
	DD	140	104	□80	35	60					
	DE	135	99	□80	30	55					
	EA	135	99	□90	30	55					
	EB	130	94	□90	25	50					
	EC	140	104	□90	35	60					
	FA	130	94	□100	25	50					
	FB	140	104	□100	35	60					
	GA・GC	135	99	□115	30	55					
	GB・GD	130	94	□115	25	50					
	HA	130	94	□130	25	50					
	HB	145	109	□130	40	65					
	HC・HD・HE	135	99	□130	30	55					

※1 Single reduction : 1/3～1/10, Double reduction : 1/15～1/100
※2 Bushing will be inserted to adapt to motor shaft.

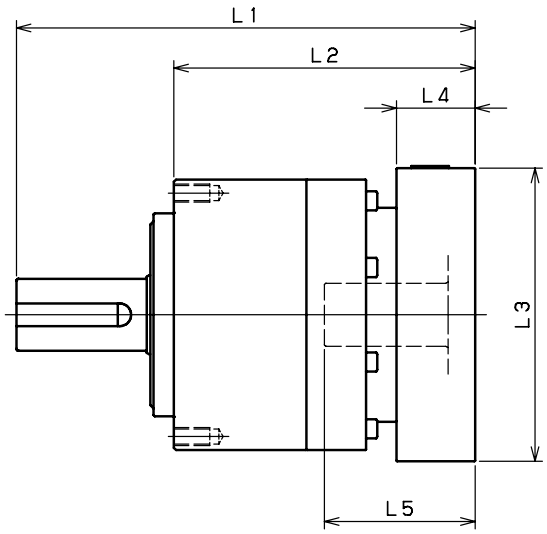
VRL-090B



Model number	**: Adapter code	Single					Double				
		L1	L2	L3	L4	L5	L1	L2	L3	L4	L5
VRL-090B-□-□-8** (Input shaft bore ≦ φ8)	AA・AC・AD・AF・AG						160	114	□52	15.5	32
	AB・AE・AH・AJ・AK						165	119	□52	20.5	37
	BA・BB・BD・BE						160	114	□60	15.5	32
	BC・BF						165	119	□60	20.5	37
	CA						165	119	□70	20.5	37
VRL-090B-□-□-14** (Input shaft bore≦ φ14)	BA・BB・BD・BE・BF・BG・BJ・BK	143	97	□65	16.5	35	165	119	□65	16.5	35
	BC・BH・BM	148	102	□65	21.5	40	170	124	□65	21.5	40
	BL	153	107	□65	26.5	45	175	129	□65	26.5	45
	CA	143	97	□70	16.5	35	165	119	□70	16.5	35
	CB	148	102	□70	21.5	40	170	124	□70	21.5	40
	DA・DB・DC・DD・DF・DH	143	97	□80	16.5	35	165	119	□80	16.5	35
	DE	148	102	□80	21.5	40	170	124	□80	21.5	40
	DG	153	107	□80	26.5	45	175	129	□80	26.5	45
	EA・EB・EC	143	97	□90	16.5	35	165	119	□90	16.5	35
	ED	153	107	□90	26.5	45	175	129	□90	26.5	45
	FA	143	97	□100	16.5	35	165	119	□100	16.5	35
	GA	143	97	□115	16.5	35	165	119	□115	16.5	35
VRL-090B-□-□-19** (Input shaft bore≦ φ19)	DA・DB・DC	153	107	□80	25	50	175	129	□80	25	50
	DD	163	117	□80	35	60	185	139	□80	35	60
	DE	158	112	□80	30	55	180	134	□80	30	55
	EA	158	112	□90	30	55	180	134	□90	30	55
	EB	153	107	□90	25	50	175	129	□90	25	50
	EC	163	117	□90	35	60	185	139	□90	35	60
	FA	153	107	□100	25	50	175	129	□100	25	50
	FB	163	117	□100	35	60	185	139	□100	35	60
	GA・GC	158	112	□115	30	55	180	134	□115	30	55
	GB・GD	153	107	□115	25	50	175	129	□115	25	50
	HA	153	107	□130	25	50	175	129	□130	25	50
	HB	168	122	□130	40	65	190	144	□130	40	65
	HC・HD・HE	158	112	□130	30	55	180	134	□130	30	55
VRL-090B-□-□-28** (Input shaft bore≦ φ28)	FA・FB・FC	170	124	□100	35	67					
	GA・GB・GC・GD・GE・GF・GG	170	124	□115	35	67					
	HA・HC・HD	170	124	□130	35	67					
	HB	180	134	□130	45	77					
	JA・JB・JC	170	124	□150	35	67					
	KA・KB	170	124	□180	35	67					
	KD	180	134	□180	45	77					
	LA	170	124	□200	35	67					
	MA	170	124	□220	35	67					

※1 Single reduction : 1/3～1/10, Double reduction : 1/15～1/100
※2 Bushing will be inserted to adapt to motor shaft.

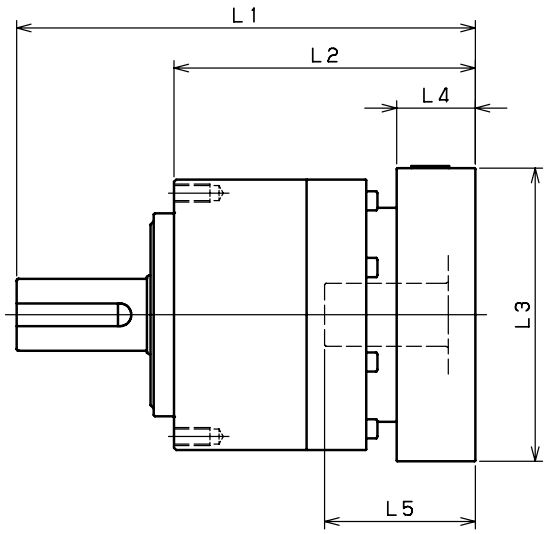
VRL-120B



Model number	**:Adapter code	Single					Double				
		L1	L2	L3	L4	L5	L1	L2	L3	L4	L5
VRL-120B-□-□-14** (Input shaft bore≦φ14)	BA・BB・BD・BE・BF・BG・BJ・BK						204.5	134.5	□65	16.5	35
	BC・BH・BM						209.5	139.5	□65	21.5	40
	BL						214.5	144.5	□65	26.5	45
	CA						204.5	134.5	□70	16.5	35
	CB						209.5	139.5	□70	21.5	40
	DA・DB・DC・DD・DF・DH						204.5	134.5	□80	16.5	35
	DE						209.5	139.5	□80	21.5	40
	DG						214.5	144.5	□80	26.5	45
	EA・EB・EC						204.5	134.5	□90	16.5	35
	ED						214.5	144.5	□90	26.5	45
	FA						204.5	134.5	□100	16.5	35
	GA						204.5	134.5	□115	16.5	35
VRL-120B-□-□-19** (Input shaft bore≦φ19)	DA・DB・DC	187	117	□80	25	50	214.5	144.5	□80	25	50
	DD	197	127	□80	35	60	224.5	154.5	□80	35	60
	DE	192	122	□80	30	55	219.5	149.5	□80	30	55
	EA	192	122	□90	30	55	219.5	149.5	□90	30	55
	EB	187	117	□90	25	50	214.5	144.5	□90	25	50
	EC	197	127	□90	35	60	224.5	154.5	□90	35	60
	FA	187	117	□100	25	50	214.5	144.5	□100	25	50
	FB	197	127	□100	35	60	224.5	154.5	□100	35	60
	GA・GC	192	122	□115	30	55	219.5	149.5	□115	30	55
	GB・GD	187	117	□115	25	50	214.5	144.5	□115	25	50
	HA	187	117	□130	25	50	214.5	144.5	□130	25	50
	HB	202	132	□130	40	65	229.5	159.5	□130	40	65
	HC・HD・HE	192	122	□130	30	55	219.5	149.5	□130	30	55
VRL-120B-□-□-28** (Input shaft bore≦φ28)	FA・FB・FC	204	134	□100	35	67	231.5	161.5	□100	35	67
	GA・GB・GC・GD・GE・GF・GG	204	134	□115	35	67	231.5	161.5	□115	35	67
	HA・HC・HD	204	134	□130	35	67	231.5	161.5	□130	35	67
	HB	214	144	□130	45	77	241.5	171.5	□130	45	77
	JA・JB・JC	204	134	□150	35	67	231.5	161.5	□150	35	67
	KA・KB	204	134	□180	35	67	231.5	161.5	□180	35	67
	KD	214	144	□180	45	77	241.5	171.5	□180	45	77
	LA	204	134	□200	35	67	231.5	161.5	□200	35	67
	MA	204	134	□220	35	67	231.5	161.5	□220	35	67
VRL-120B-□-□-38** (Input shaft bore≦φ38)	HA	225	155	□130	45	82					
	HB	220	150	□130	40	77					
	JA	225	155	□150	45	82					
	KA・KB・KC	225	155	□180	45	82					
	LA	225	155	□200	45	82					
	LB	235	165	□200	55	92					
	MA・MB	225	155	□220	45	82					
	NA	225	155	□250	45	82					

※1 Single reduction : 1/3～1/10, Double reduction : 1/15～1/100
※2 Bushing will be inserted to adapt to motor shaft.

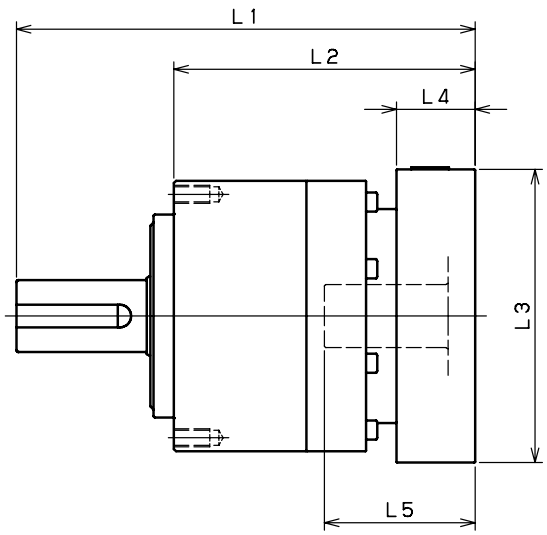
VRL-155B



Model number	**:Adapter code	Single					Double				
		L1	L2	L3	L4	L5	L1	L2	L3	L4	L5
VRL-155B-□-□-19** (Input shaft bore≦φ19)	DA・DB・DC						266.5	169.5	□80	25	50
	DD						276.5	179.5	□80	35	60
	DE						271.5	174.5	□80	30	55
	EA						271.5	174.5	□90	30	55
	EB						266.5	169.5	□90	25	50
	EC						276.5	179.5	□90	35	60
	FA						266.5	169.5	□100	25	50
	FB						276.5	179.5	□100	35	60
	GA・GC						271.5	174.5	□115	30	55
	GB・GD						266.5	169.5	□115	25	50
	HA						266.5	169.5	□130	25	50
	HB						281.5	184.5	□130	40	65
	HC・HD・HE						271.5	174.5	□130	30	55
VRL-155B-□-□-28** (Input shaft bore≦φ28)	FA・FB・FC	249	152	□100	35	67	283.5	186.5	□100	35	67
	GA・GB・GC・GD・GE・GF・GG	249	152	□115	35	67	283.5	186.5	□115	35	67
	HA・HC・HD	249	152	□130	35	67	283.5	186.5	□130	35	67
	HB	259	162	□130	45	77	293.5	196.5	□130	45	77
	JA・JB・JC	249	152	□150	35	67	283.5	186.5	□150	35	67
	KA・KB	249	152	□180	35	67	283.5	186.5	□180	35	67
	KD	259	162	□180	45	77	293.5	196.5	□180	45	77
	LA	249	152	□200	35	67	283.5	186.5	□200	35	67
	MA	249	152	□220	35	67	283.5	186.5	□220	35	67
VRL-155B-□-□-38** (Input shaft bore≦φ38)	HA	264	167	□130	45	82	298.5	201.5	□130	45	82
	HB	259	162	□130	40	77	293.5	196.5	□130	40	77
	JA	264	167	□150	45	82	298.5	201.5	□150	45	82
	KA・KB・KC	264	167	□180	45	82	298.5	201.5	□180	45	82
	LA	264	167	□200	45	82	298.5	201.5	□200	45	82
	LB	274	177	□200	55	92	308.5	211.5	□200	55	92
	MA・MB	264	167	□220	45	82	298.5	201.5	□220	45	82
	NA	264	167	□250	45	82	298.5	201.5	□250	45	82
VRL-155B-□-□-48** (Input shaft bore≦φ48)	KB・KC	285	188	□180	55	98					
	KA	305	208	□180	75	118					
	LA	285	188	□200	55	98					
	MA	285	188	□220	55	98					
	MB	305	208	□220	75	118					
	NA	305	208	□250	75	118					
	PA	305	208	□280	75	118					

※1 Single reduction : 1/3～1/10, Double reduction : 1/15～1/100
※2 Bushing will be inserted to adapt to motor shaft.

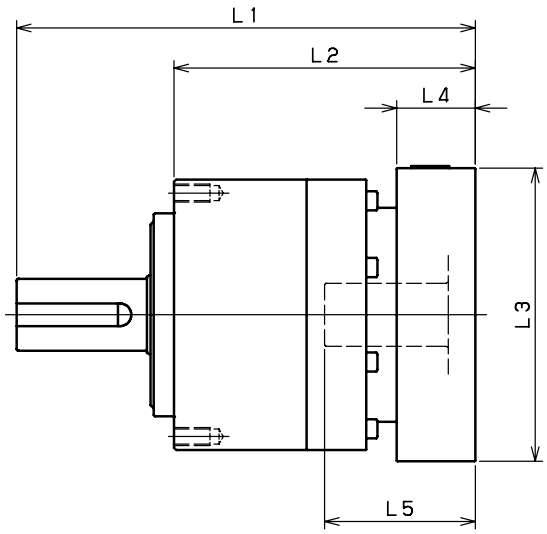
VRL-205B



Model number	**:Adapter code	Single					Double				
		L1	L2	L3	L4	L5	L1	L2	L3	L4	L5
VRL-205B-□-□-28** (Input shaft bore≦φ28)	FA・FB・FC						316	216	□100	35	67
	GA・GB・GC・GD・GE・GF・GG						316	216	□115	35	67
	HA・HC・HD						316	216	□130	35	67
	HB						326	226	□130	45	77
	JA・JB・JC						316	216	□150	35	67
	KA・KB						316	216	□180	35	67
	KD						326	226	□180	45	77
	LA						316	216	□200	35	67
	MA						316	216	□220	35	67
VRL-205B-□-□-38** (Input shaft bore≦φ38)	HA	286.5	186.5	□130	45	82	331	231	□130	45	82
	HB	281.5	181.5	□130	40	77	326	226	□130	40	77
	JA	286.5	186.5	□150	45	82	331	231	□150	45	82
	KA・KB・KC	286.5	186.5	□180	45	82	331	231	□180	45	82
	LA	286.5	186.5	□200	45	82	331	231	□200	45	82
	LB	296.5	196.5	□200	55	92	341	241	□200	55	92
	MA・MB	286.5	186.5	□220	45	82	331	231	□220	45	82
	NA	286.5	186.5	□250	45	82	331	231	□250	45	82
VRL-205B-□-□-48** (Input shaft bore≦φ48)	KB・KC	302.5	202.5	□180	55	98	347	247	□180	55	98
	KA	322.5	222.5	□180	75	118	367	267	□180	75	118
	LA	302.5	202.5	□200	55	98	347	247	□200	55	98
	MA	302.5	202.5	□220	55	98	347	247	□220	55	98
	MB	322.5	222.5	□220	75	118	367	267	□220	75	118
	NA	322.5	222.5	□250	75	118	367	267	□250	75	118
	PA	322.5	222.5	□280	75	118	367	267	□280	75	118
VRL-205B-□-□-65** (Input shaft bore≦φ65)	MA・MB・MC・MD	334	234	□220	80	122					
	NA	334	234	□250	80	122					
	PA	354	254	□280	100	142					
	PB	364	264	□280	110	152					
	QA	354	254	□320	100	142					

※1 Single reduction : 1/3～1/10, Double reduction : 1/15～1/100
※2 Bushing will be inserted to adapt to motor shaft.

VRL-235B



Model number	**:Adapter code	Single					Double				
		L1	L2	L3	L4	L5	L1	L2	L3	L4	L5
VRL-235B-□-□-38** (Input shaft bore≦φ38)	HA						366.5	240.5	□130	45	82
	HB						361.5	235.5	□130	40	77
	JA						366.5	240.5	□150	45	82
	KA・KB・KC						366.5	240.5	□180	45	82
	LA						366.5	240.5	□200	45	82
	LB						376.5	250.5	□200	55	92
	MA・MB						366.5	240.5	□220	45	82
	NA						366.5	240.5	□250	45	82
VRL-235B-□-□-48** (Input shaft bore≦φ48)	KB・KC	347.5	221.5	□180	55	98	382.5	256.5	□180	55	98
	KA	367.5	241.5	□180	75	118	402.5	276.5	□180	75	118
	LA	347.5	221.5	□200	55	98	382.5	256.5	□200	55	98
	MA	347.5	221.5	□220	55	98	382.5	256.5	□220	55	98
	MB	367.5	241.5	□220	75	118	402.5	276.5	□220	75	118
	NA	367.5	241.5	□250	75	118	402.5	276.5	□250	75	118
	PA	367.5	241.5	□280	75	118	402.5	276.5	□280	75	118
VRL-235B-□-□-65** (Input shaft bore≦φ65)	MA・MB・MC・MD	371.5	245.5	□220	80	122					
	NA	371.5	245.5	□250	80	122					
	PA	391.5	265.5	□280	100	142					
	PB	401.5	275.5	□280	110	152					
	QA	391.5	265.5	□320	100	142					

※1 Single reduction : 1/3～1/10, Double reduction : 1/15～1/100
※2 Bushing will be inserted to adapt to motor shaft.

MEMO

Installation

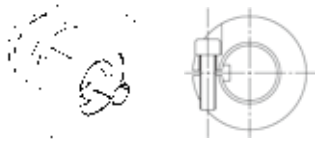
1 Mounting procedure to the motor

1 Wipe off anti-rust agent and oil on the motor shaft.

2 Remove the plug.

3 Turn the input shaft until the cap screw is seen. Make sure the cap screw is loosened.Please place reducer vertically on the flat surface so the motor mounting part faces up.

In case the bushing has been attached, Please fix it to the reducer as the drawing below.



4 Carefully insert the motor shaft into the input shaft. (It should be inserted smoothly) Make sure the motor flange is perfectly fit to the reducer's flange.
Tighten the motor installing bolts to the proper torque.(See table1)

5 Tighten the clamping bolt of the input shaft with torque wrench to the proper torque.(See table1)

6 Reinstall the plug. The procedure is done.

Table 1

Bolt size	Motor installing bolts		Clamping bolt	
	Nm	kgfm	Nm	kgfm
M3	1.1	0.11	1.9	0.18
M4	2.5	0.26	4.3	0.44
M5	5.1	0.52	8.7	0.89
M6	8.7	0.89	15	1.5
M8	21	2.1	36	3.7
M10	42	4.3	71	7.2
M12	72	7.3	125	13
M16	134	14	–	–

2 Reducer installation

After confirming the installation surface is flat and clean, tighten the bolt using a torque wrench to the proper torque.(See table2)

Table 2

Bolt size	Tightening torque	
	Nm	kgfm
M3	1.9	0.18
M4	4.3	0.44
M5	8.7	0.89
M6	15	1.5
M8	36	3.7
M10	71	7.2
M12	125	13
M16	310	32
M20	603	62

※Recommended bolt : Strength 12.9

Servo Motor Manufacturer List

■ Japanese Servo Motor Manufacturer

Panasonic Corporation	TOSHIBA MACHINE CO.,LTD.
YASKAWA Electric Corporation	FANUC CORPORATION
Mitsubishi Electric Corporation	TAMAGAWA SEIKI CO.,LTD.
FUJI ELECTRIC CO.,LTD.	Nikki Denso
OMRON Corporation	Hitachi Industrial Equipment Systems Co.,Ltd.
SANYO DENKI CO.,LTD.	Sanmei Co.,Inc.
KEYENCE CORPORATION.	NIDEC SANKYO CORPORATION

■ Global Servo Motor Manufacturer

ALLEN BRADLEY	BECKHOFF
ABB	LENZE
B&R	LUST
BALDOR	PARKER
BAUMULLER	SAMSUNG
BOSCH REXROTH	SCHNEIDER
DELTA	SIEMENS
EMERSON（CONTROL TECHNIQUES）	TECO
ESTUN	GOLDEN AGE

* For inquries for other servomotor manufacturer and servomotor series, please consult our subsidiary in your area.

Cautions for storage

Whenever temporarily keeping the product, keep the following directions:

① Keep in a clean and dry place.
② Whenever storing outdoors or in a humid place, put in a box so that it does not directly contact rain or external air and cover with a vinyl sheet(Take a measure to prevent rust.).

■Cautions for operation

■When the reducer is delivered to you・・・

When the product delivered, please confirm that you received the exact same model you have ordered.
Please wipe out the input and output shaft of the reducer which is covered by anti-corrosive oil.
※Please remove the rubber cap on the input shaft before you wipe the shafts.
※ Lubricant(grease) is already filled in the reducer.
It is available as it is.

■Fixation & installation

- Avoid use in a place where rain or water drops directly.
  - ・In case of use outdoors or in a place where dust and water drops, consult in advance.
- Install at 0℃ ~40℃ of surrounding temperature.
  - ・In case of use at temperature out of the above-mentioned range, contact the headquarters and consult on this.
- Firmly fix with a bolt onto a solid stand without vibration.
- Install in consideration of convenience in repair and inspection.

■Cautions prior to starting the operation

- Reducer can be used soon after arrival, since it has already been filled out with lubrication.
- At initial operation, check the rotating direction of the output shaft and then gradually apply load.

■Cautions during operation

- Avoid overload.
- Ensure that input speed shall not be the number of revolutions beyond the specification.
- In the following cases, stop the operation and check the following points:
  - ・If temperature sharply increases
  - ・If an abnormal noise appears sharply
  - ・If the number of revolutions becomes unstable sharply
- These may be caused by the following matters, so rapidly respond to it or contact us.
  - ・Is it under overload condition?
  - ・Is lubricant insufficient or deteriorated, or is lubricant of other type used?
  - ・Is the axis, gear, and motor side damaged?
  - ・Is jointing with other machines poor?

■Disassembly

- ABLE REDUCER is designed not to allow disassembly.

■Warranty

- A warranty period is one year after the product is delivered to you.

■Lubricant use

- The ABLE REDUCER is of grease-seal type in all models.
  A specified amount of grease is filled at factory release, so you can use as soon as it is delivered to you.
- It is impossible to exchange grease.
- In case of use at 0℃ ~40℃ of surrounding temperature at usual times, consider this in advance.

■Daily check points

- Is reducer case temperature excessively high during operation? (Up to + 50℃ is not significant.)
- Is there an abnormal noise in the bearing, gear, etc?
- Is there abnormal vibration in the reducer?
  - ＊ Upon an abnormal phenomenon, immediately stop the operation and contact us.
- Is there a lubricant leak?
  - ＊ Upon an oil leak, contact us.

■Periodic check points

- ● Are there overload and abnormal rotation?
- ● Are free, sprocket, and reducer assembling bolts loose?
- ● Is there an abnormal condition in the electric system?
- ● Checkup and repair of major parts

※ Upon an abnormal condition, immediately stop the operation and contact us.

- ● Oil leak

※ Upon an oil leak, contact us.

■Scrapping

Whenever scrapping the ABLE REDUCER, classify the parts by material into industrial wastes as specified in the laws and regulations of self-governing bodies. Material of parts can be divided into four:

① Rubber parts : Oil seal, seat packing, rubber cap, seal used for bearing on the motor flange, etc.
② Aluminum parts : Motor flange, output shaft holder
③ Grease : Wipe off grease attached to parts with dry cloth and scrap into oils.
④ Iron parts : Parts other than those mentioned in the above

WARRANTY PROVISION

・Warranty scope is limited to the use in Japan only.
・Warranty scope is the delivered product only.

■ THE EXPENSES AND LOSSES THAT MENTIONED BELOW ARE NOT INCLUDED IN WARRANTY

1)The transport charges for repairing of our products.
2)The fee for the removal operation, reinstallation and other related operation in case our product is installed to the other machine.
3)The loss of the chances of use and indirect damages caused by the interruption of the services caused by our product's defects.
4)All other secondary expenses and losses.

Servo Reducer Selection Tool

You can download the CAD drawings(2D・3D) of ABLE REDUCER VRS, VRL, VRB series.

http://www.nidec-shimpo.co.jp/en/

Choose from「Make a selection from the motor list」and「Make a selection from load condition」.

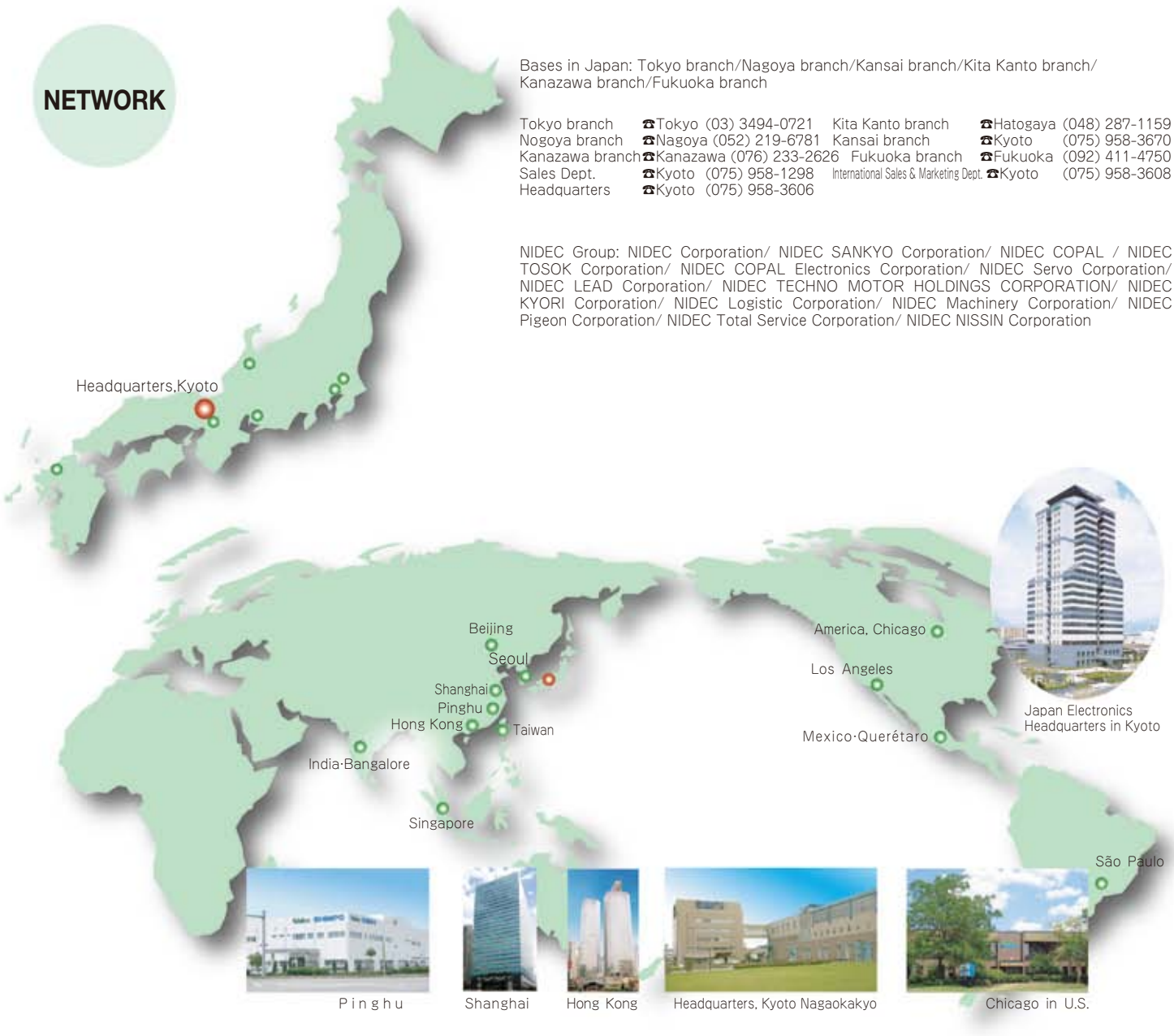
DXF, IGS, STP format data can be downloaded.

NETWORK

Bases in Japan: Tokyo branch/Nagoya branch/Kansai branch/Kita Kanto branch/ Kanazawa branch/Fukuoka branch

Tokyo branch	☎Tokyo (03) 3494-0721	Kita Kanto branch	☎Hatogaya (048) 287-1159
Nogoya branch	☎Nagoya (052) 219-6781	Kansai branch	☎Kyoto (075) 958-3670
Kanazawa branch	☎Kanazawa (076) 233-2626	Fukuoka branch	☎Fukuoka (092) 411-4750
Sales Dept.	☎Kyoto (075) 958-1298	International Sales & Marketing Dept.	☎Kyoto (075) 958-3608
Headquarters	☎Kyoto (075) 958-3606		

NIDEC Group: NIDEC Corporation/ NIDEC SANKYO Corporation/ NIDEC COPAL / NIDEC TOSOK Corporation/ NIDEC COPAL Electronics Corporation/ NIDEC Servo Corporation/ NIDEC LEAD Corporation/ NIDEC TECHNO MOTOR HOLDINGS CORPORATION/ NIDEC KYORI Corporation/ NIDEC Logistic Corporation/ NIDEC Machinery Corporation/ NIDEC Pigeon Corporation/ NIDEC Total Service Corporation/ NIDEC NISSIN Corporation



Pinghu

Shanghai

Hong Kong

Headquarters, Kyoto Nagaokakyo

Chicago in U.S.

QUALITY

We are making efforts for quality improvement on the basis of the concept of total quality control.

Deming Award to be given to enterprises practicing excellent quality control

■NIDEC-SHIMPO has obtained ISO 9001/ISO 14001 certification of quality assurance.

ISO 9001

■Range of registrations

Design, development, manufacturing, and relevant service(refurbishing) of the following products:

- ●CVT
- ●Reducer
- ●Electronic measuring instrument(Digital revolution indicator/ Stroboscope)
- ●Control units(digital controller)
- ●Ceramic devices(motor plane/kiln)

ISO 14001

■Range of registrations

Design, development, manufacturing, and refurbishing of CVT, reducer, measuring instruments, control units, ceramic devices, and other industrial devices

●Factories:

HISTORY

Japanese Machinery Society Award

National Invention Award

Ringcone CVT RC type release

Ringcone CVT SC type release

CORONET REDUCER

Digital force gauge

ABLE REDUCER

LED digital stroboscope

A Nidec Group Company

SHIMPO

All for dreams

Catalog No. 76981B