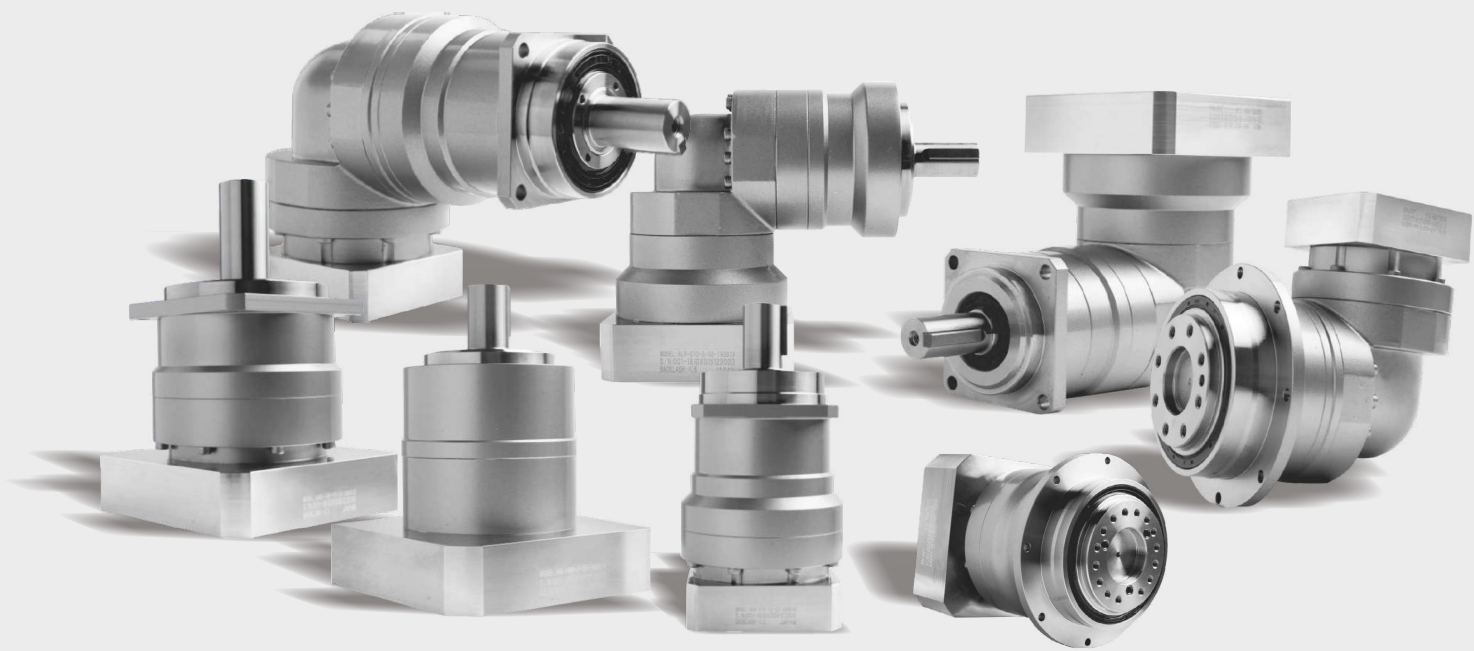




High precision
planetary gearboxes
helical teeth series

DISTRIBUTORS

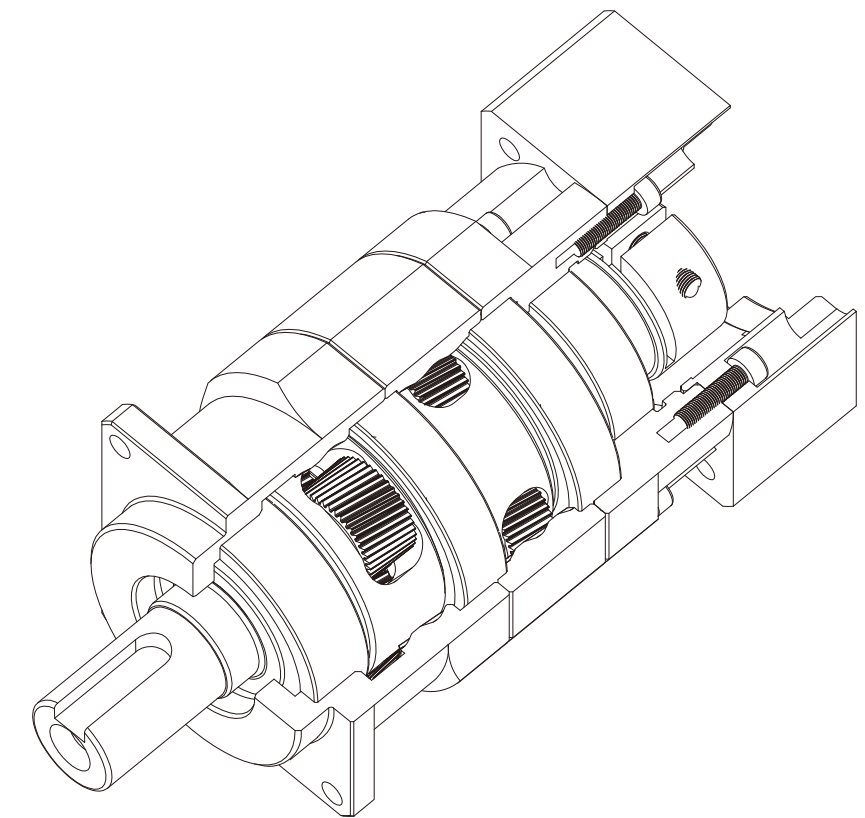
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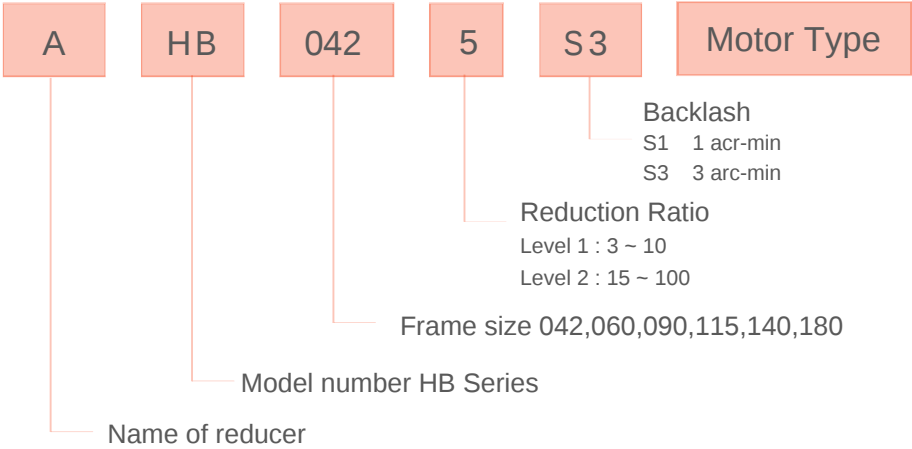
AHBSeries



Features

- 1 Helical gears contribute to reduce vibration and noise.
- 2 The backlash is less than 3 arc-min with accurate positioning.
- 3 The use of integral ball bearings greatly improves rigidity and torque.
- 4 Applicable to all kinds of motors
- 5 Effectively prevent grease leakage by using grease with high viscosity and anti-separation.
- 6 No need to change the grease during the life of the product, making installation easier

Model number



AHB042

Frame size	Model	Ratio	Φ 1			Φ 2		Φ 3	
			Nominal output torque [Nm]	Maximum output torque [Nm]	Emergency stop torque [Nm]	Nominal input speed [rpm]	Maximum input speed [rpm]	Permitted radial load [N]	Permitted axial load [N]
042	Level 1	3	7	14	35	4000	8000	250	280
		4	10	20	40	4000	8000	280	310
		5	10	20	40	4000	8000	300	340
		6	10	20	40	4000	8000	320	370
		7	10	20	40	4000	8000	330	390
		8	10	20	40	4000	8000	350	420
	Level 2	9	7	14	35	4000	8000	360	440
		10	7	14	35	4000	8000	370	460
		15	7	14	35	4000	8000	420	550
		16	10	20	40	4000	8000	430	560
		20	10	20	40	4000	8000	470	620
		25	10	20	40	4000	8000	500	650
		28	10	20	40	4000	8000	520	650
		30	7	14	35	4000	8000	530	650
		35	10	20	40	4000	8000	560	650
		40	10	20	40	4000	8000	580	650
		45	7	14	35	4000	8000	610	650
		50	10	20	40	4000	8000	630	650
		60	10	20	40	4000	8000	670	650
		70	10	20	40	4000	8000	700	650
		80	10	20	40	4000	8000	720	650
		90	7	14	35	4000	8000	720	650
		100	7	14	35	4000	8000	720	650

Frame size	Model	Ratio	Φ 4		Weight [kg]	Φ 5		Φ 6	
			Maximum radial load [N]	Maximum axial load [N]		Moment of inertia (≤ φ 8) [kgcm ²]	Moment of inertia (≤ φ 14) [kgcm ²]	Operating temperature	
042	Level 1	3	730	660	0.6	0.053	0.091	-20℃ ~ 90℃	
		4	730	660		0.041	0.079		
		5	730	660		0.036	0.074		
		6	730	660		0.034	0.072		
		7	730	660		0.032	0.071		
		8	730	660		0.031	0.070		
	Level 2	9	730	660	0.7	0.031	0.069		
		10	730	660		0.030	0.069		
		15	730	660		0.035	—		
		16	730	660		0.038	—		
		20	730	660		0.034	—		
		25	730	660		0.034	—		
		28	730	660		0.038	—		
		30	730	660		0.030	—		
		35	730	660		0.034	—		
		40	730	660		0.030	—		
		45	730	660		0.034	—		
		50	730	660		0.030	—		
		60	730	660		0.030	—		
		70	730	660		0.030	—		
		80	730	660		0.030	—		
		90	730	660		0.030	—		
		100	730	660		0.030	—		

- Φ 1 With nominal input speed, service life is 20,000 hours.
- Φ 2 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output shaft center, at axial load 0)
- Φ 3 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output side bearing, at radial load 0)
- Φ 4 The maximum radial load the reducer can accept.
- Φ 5 The maximum axial load the reducer can accept.

AHB060

Frame size	Model	Ratio	⌀ 1			⌀ 2			⌀ 3	
			Nominal output torque	Maximum output torque	Emergency stop torque	Nominal input speed	Maximum input speed	Permitted radial load	Permitted axial load	
			[Nm]	[Nm]	[Nm]	[rpm]	[rpm]	[N]	[N]	
060	Level 1	3	20	40	88	3000	6000	450	440	
		4	29	55	108	3000	6000	490	380	
		5	29	55	108	3000	6000	530	410	
		6	29	55	108	3000	6000	560	450	
		7	29	55	108	3000	6000	590	480	
		8	29	55	108	3000	6000	620	500	
		9	20	40	88	3000	6000	640	530	
		10	20	40	88	3000	6000	660	550	
	Level 2	15	20	40	88	3000	6000	760	650	
		16	29	55	108	3000	6000	770	670	
		20	29	55	108	3000	6000	830	740	
		25	29	55	108	3000	6000	890	810	
		28	29	55	108	3000	6000	930	850	
		30	20	40	88	3000	6000	950	880	
		35	29	55	108	3000	6000	1000	940	
		40	29	55	108	3000	6000	1020	990	
		45	20	40	88	3000	6000	1120	1020	
		50	29	55	108	3000	6000	1120	1120	
		60	29	55	108	3000	6000	1220	1120	
		70	29	55	108	3000	6000	1220	1120	
		80	29	55	108	3000	6000	1220	1120	
		90	20	40	88	3000	6000	1220	1120	
		100	20	40	88	3000	6000	1220	1120	
		3	1220	1120	1.4	0.14	0.22	0.43	-20℃ ~ 90℃	
		4	1220	1120		0.095	0.17	0.38		
		5	1220	1120		0.077	0.16	0.36		
		6	1220	1120		0.068	0.15	0.36		
		7	1220	1120		0.062	0.14	0.35		
		8	1220	1120		0.059	0.14	0.35		
		9	1220	1120		0.057	0.14	0.34		
		10	1220	1120		0.056	0.14	0.34		
		15	1220	1120	1.6	0.055	0.14	—		
		16	1220	1120		0.057	0.14	—		
		20	1220	1120		0.054	0.13	—		
		25	1220	1120		0.053	0.13	—		
		28	1220	1120		0.055	0.14	—		
		30	1220	1120		0.049	0.13	—		
		35	1220	1120		0.053	0.13	—		
		40	1220	1120		0.049	0.13	—		
		45	1220	1120		0.053	0.13	—		
		50	1220	1120		0.049	0.13	—		
		60	1220	1120		0.049	0.13	—		
		70	1220	1120		0.049	0.13	—		
		80	1220	1120		0.049	0.13	—		
		90	1220	1120		0.049	0.13	—		
		100	1220	1120		0.049	0.13	—		

- ⌀ 1 With nominal input speed, service life is 20,000 hours.
- ⌀ 2 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output shaft center, at axial load 0)
- ⌀ 3 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output side bearing, at radial load 0)
- ⌀ 4 The maximum radial load the reducer can accept.
- ⌀ 5 The maximum axial load the reducer can accept.

AHB090

Frame size	Model	Ratio	⌀ 1			⌀ 2			⌀ 3	
			Nominal output torque	Maximum output torque	Emergency stop torque	Nominal input speed	Maximum input speed	Permitted radial load	Permitted axial load	
			[Nm]	[Nm]	[Nm]	[rpm]	[rpm]	[N]	[N]	
090	Level 1	3	55	85	210	3000	6000	830	950	
		4	80	130	260	3000	6000	910	1120	
		5	80	130	260	3000	6000	980	1220	
		6	80	130	260	3000	6000	1020	1320	
		7	80	130	260	3000	6000	1120	1320	
		8	80	130	260	3000	6000	1120	1420	
		9	55	85	210	3000	6000	1220	1520	
		10	55	85	210	3000	6000	1220	1620	
	Level 2	15	55	85	210	3000	6000	1420	1920	
		16	80	130	260	3000	6000	1420	1920	
		20	80	130	260	3000	6000	1520	2120	
		25	80	130	260	3000	6000	1620	2220	
		28	80	130	260	3000	6000	1720	2220	
		30	55	85	210	3000	6000	1720	2220	
		35	80	130	260	3000	6000	1820	2220	
		40	80	130	260	3000	6000	1920	2220	
		45	55	85	210	3000	6000	2020	2220	
		50	80	130	260	3000	6000	2120	2220	
		60	80	130	260	3000	6000	2220	2220	
		70	80	130	260	3000	6000	2320	2220	
		80	80	130	260	3000	6000	2420	2220	
		90	55	85	210	3000	6000	2420	2220	
		100	55	85	210	3000	6000	2420	2220	
		3	2430	2230	3.7	—	0.72	1.2	3.2	
		4	2430	2230		—	0.49	0.95	3.0	
		5	2430	2230		—	0.40	0.86	2.9	
		6	2430	2230		—	0.36	0.82	2.8	
		7	2430	2230		—	0.32	0.79	2.8	
		8	2430	2230		—	0.31	0.77	2.8	
		9	2430	2230		—	0.29	0.76	2.8	
		10	2430	2230		—	0.29	0.75	2.8	
		15	2430	2230	4.2	0.13	0.28	0.72	—	
		16	2430	2230		0.15	0.30	0.74	—	
		20	2430	2230		0.13	0.28	0.72	—	
		25	2430	2230		0.12	0.28	0.71	—	
		28	2430	2230		0.14	0.29	0.73	—	
		30	2430	2230		0.10	0.25	0.70	—	
		35	2430	2230		0.12	0.27	0.71	—	
		40	2430	2230		0.099	0.25	0.70	—	
		45	2430	2230		0.12	0.27	0.71	—	
		50	2430	2230		0.098	0.25	0.69	—	
		60	2430	2230		0.098	0.25	0.69	—	
		70	2430	2230		0.097	0.25	0.69	—	
		80	2430	2230		0.097	0.25	0.69	—	
		90	2430	2230		0.097	0.25	0.69	—	
		100	2430	2230		0.097	0.25	0.69	—	

- ⌀ 1 With nominal input speed, service life is 20,000 hours.
- ⌀ 2 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output shaft center, at axial load 0)
- ⌀ 3 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output side bearing, at radial load 0)
- ⌀ 4 The maximum radial load the reducer can accept.
- ⌀ 5 The maximum axial load the reducer can accept.

AHB115

Frame size	Model	Ratio	⌀ 1			⌀ 2		⌀ 3	
			Nominal output torque	Maximum output torque	Emergency stop torque	Nominal input speed	Maximum input speed	Permitted radial load	Permitted axial load
			[Nm]	[Nm]	[Nm]	[rpm]	[rpm]	[N]	[N]
115	Level 1	3	125	230	515	3000	6000	1325	1525
		4	125	335	640	3000	6000	1525	1725
		5	185	335	640	3000	6000	1625	1925
		6	185	335	640	3000	6000	1725	2025
		7	185	335	640	3000	6000	1825	2125
		8	185	335	640	3000	6000	1925	2325
		9	125	230	515	3000	6000	1925	2425
		10	125	230	515	3000	6000	2025	2525
	Level 2	15	125	230	515	3000	6000	2325	3025
		16	185	335	640	3000	6000	2325	3125
		20	185	335	640	3000	6000	2525	3425
		25	185	335	640	3000	6000	2725	3725
		28	185	335	640	3000	6000	2825	3925
		30	125	230	515	3000	6000	2925	3925
		35	185	335	640	3000	6000	3025	3925
		40	185	335	640	3000	6000	3225	3925
		45	125	230	515	3000	6000	3325	3925
		50	185	335	640	3000	6000	3425	3925

Frame size	Model	Ratio	⌀ 4	⌀ 5	Weight	Moment of inertia (≤ ϕ 14)	Moment of inertia (≤ ϕ 19)	Moment of inertia (≤ ϕ 28)	Moment of inertia (≤ ϕ 38)
			Maximum radial load	Maximum axial load					
			[N]	[N]					
115	Level 1	3	4335	3935	8	—	3.3	5.3	13
		4	4335	3935		—	2.0	4.1	12
		5	4335	3935		—	1.6	3.6	11
		6	4335	3935		—	1.3	3.3	11
		7	4335	3935		—	1.1	3.2	11
		8	4335	3935		—	1.0	3.1	11
		9	4335	3935		—	0.98	3.0	11
		10	4335	3935		—	0.95	3.0	11
	Level 2	15	4335	3935	8.9	0.43	0.86	2.8	—
		16	4335	3935		0.48	0.92	2.9	—
		20	4335	3935		0.40	0.83	2.8	—
		25	4335	3935		0.38	0.82	2.8	—
		28	4335	3935		0.44	0.88	2.8	—
		30	4335	3935		0.29	0.74	2.7	—
		35	4335	3935		0.37	0.81	2.7	—
		40	4335	3935		0.28	0.73	2.7	—
		45	4335	3935		0.37	0.80	2.7	—
		50	4335	3935		0.28	0.73	2.7	—
		60	4335	3935		0.28	0.73	2.7	—
		70	4335	3935		0.28	0.73	2.7	—
80	4335	3935	0.28	0.73	2.7	—			
90	4335	3935	0.27	0.73	2.7	—			
100	4335	3935	0.27	0.73	2.7	—			

- ⌀ 1 With nominal input speed, service life is 20,000 hours.
- ⌀ 2 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output shaft center, at axial load 0)
- ⌀ 3 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output side bearing, at radial load 0)
- ⌀ 4 The maximum radial load the reducer can accept.
- ⌀ 5 The maximum axial load the reducer can accept.

AHB140

Frame size	Model	Ratio	⌀ 1			⌀ 2		⌀ 3	
			Nominal output torque	Maximum output torque	Emergency stop torque	Nominal input speed	Maximum input speed	Permitted radial load	Permitted axial load
			[Nm]	[Nm]	[Nm]	[rpm]	[rpm]	[N]	[N]
140	Level 1	3	245	476	1016	2000	4000	3230	2430
		4	245	706	1266	2000	4000	3530	2730
		5	365	706	1266	2000	4000	3830	3035
		6	365	706	1266	2000	4000	4030	3335
		7	365	706	1266	2000	4000	4230	3535
		8	365	706	1266	2000	4000	4430	3735
		9	245	476	1016	2000	4000	4630	3935
		10	245	476	1016	2000	4000	4730	4135
	Level 2	15	245	476	1016	2000	4000	5430	4935
		16	365	706	1266	2000	4000	5530	5035
		20	365	706	1266	2000	4000	6030	5535
		25	365	706	1266	2000	4000	6430	6135
		28	365	706	1266	2000	4000	6730	6435
		30	245	476	1016	2000	4000	6830	6635
		35	365	706	1266	2000	4000	7230	7035
		40	365	706	1266	2000	4000	7530	7535
		45	245	476	1016	2000	4000	7830	7935
		50	365	706	1266	2000	4000	8130	8235

Frame size	Model	Ratio	⌀ 4	⌀ 5	Weight	Moment of inertia (≤ ϕ 19)	Moment of inertia (≤ ϕ 28)	Moment of inertia (≤ ϕ 38)	Moment of inertia (≤ ϕ 48)
			Maximum radial load	Maximum axial load					
			[N]	[N]					
140	1级	3	9140	8240	16	—	12	20	42
		4	9140	8240		—	7.5	15	37
		5	9140	8240		—	5.8	14	36
		6	9140	8240		—	4.9	13	35
		7	9140	8240		—	4.1	12	34
		8	9140	8240		—	3.8	12	34
		9	9140	8240		—	3.6	11	34
		10	9140	8240		—	3.5	11	34
	2级	15	9140	8240	17	1.3	3.2	11	—
		16	9140	8240		1.5	3.5	11	—
		20	9140	8240		1.2	3.1	11	—
		25	9140	8240		1.1	3.1	11	—
		28	9140	8240		1.4	3.3	11	—
		30	9140	8240		0.85	2.8	10	—
		35	9140	8240		1.1	3.1	11	—
		40	9140	8240		0.83	2.8	10	—
		45	9140	8240		1.1	3.0	11	—
		50	9140	8240		0.81	2.8	10	—
		60	9140	8240		0.81	2.8	10	—
		70	9140	8240		0.80	2.8	10	—
80	9140	8240	0.80	2.8	10	—			
90	9140	8240	0.80	2.8	10	—			
100	9140	8240	0.80	2.8	10	—			

- ⌀ 1 With nominal input speed, service life is 20,000 hours.
- ⌀ 2 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output shaft center, at axial load 0)
- ⌀ 3 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output side bearing, at radial load 0)
- ⌀ 4 The maximum radial load the reducer can accept.
- ⌀ 5 The maximum axial load the reducer can accept.

AHB180

Frame size	Model	Ratio	Ø 1			Ø 2		Ø 3	
			Nominal output torque	Maximum output torque	Emergency stop torque	Nominal input speed	Maximum input speed	Permitted radial load	Permitted axial load
			[Nm]	[Nm]	[Nm]	[rpm]	[rpm]	[N]	[N]
180	Level 1	3	506	980	2220	1500	3000	5635	4335
		4	756	1410	2770	1500	3000	6235	4935
		5	756	1410	2770	1500	3000	6735	5435
		6	756	1410	2770	1500	3000	7135	5835
		7	756	1410	2770	1500	3000	7435	6335
		8	756	1410	2770	1500	3000	7835	6635
		9	506	980	2220	1500	3000	8135	7035
		10	506	980	2220	1500	3000	8435	7335
	Level 2	15	506	980	2220	1500	3000	9635	8735
		16	756	1410	2770	1500	3000	9835	8935
		20	756	1410	2770	1500	3000	11035	9935
		25	756	1410	2770	1500	3000	11035	11035
		28	756	1410	2770	1500	3000	12035	11035
		30	506	980	2220	1500	3000	12035	12035
		35	756	1410	2770	1500	3000	13035	13035
		40	756	1410	2770	1500	3000	13035	13035
		45	506	980	2220	1500	3000	14035	14035
		50	756	1410	2770	1500	3000	14035	14035
		60	756	1410	2770	1500	3000	15035	14035
		70	756	1410	2770	1500	3000	15035	14035
		80	756	1410	2770	1500	3000	15035	14035
		90	506	980	2220	1500	3000	15035	14035
		100	506	980	2220	1500	3000	15035	14035

Frame size	Model	Ratio	Ø 4		Weight	Ø 5			
			Maximum radial load	Maximum axial load		Moment of inertia (≤ ϕ 28)	Moment of inertia (≤ ϕ 38)	Moment of inertia (≤ ϕ 48)	Moment of inertia (≤ ϕ 65)
			[N]	[N]		[kgcm ²]	[kgcm ²]	[kgcm ²]	[kgcm ²]
180	Level 1	3	15050	14050	36	-	44	66	130
		4	15050	14050		-	28	50	110
		5	15050	14050		-	22	44	100
		6	15050	14050		-	18	41	100
		7	15050	14050		-	16	38	99
		8	15050	14050		-	15	37	97
		9	15050	14050		-	14	36	97
		10	15050	14050		-	14	36	96
	Level 2	15	15050	14050	37	4.7	12	34	-
		16	15050	14050		5.4	13	35	-
		20	15050	14050		4.4	12	34	-
		25	15050	14050		4.2	12	34	-
		28	15050	14050		4.9	13	35	-
		30	15050	14050		3.2	11	33	-
		35	15050	14050		4.1	12	34	-
		40	15050	14050		3.2	11	33	-
		45	15050	14050		4.0	12	34	-
		50	15050	14050		3.1	11	33	-
		60	15050	14050		3.1	11	33	-
		70	15050	14050		3.1	11	33	-
		80	15050	14050		3.1	11	33	-
		90	15050	14050		3.1	11	33	-
		100	15050	14050		3.1	11	33	-

- Ø 1 With nominal input speed, service life is 20,000 hours.
- Ø 2 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output shaft center, at axial load 0)
- Ø 3 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output side bearing, at radial load 0)
- Ø 4 The maximum radial load the reducer can accept.
- Ø 5 The maximum axial load the reducer can accept.

AHB220

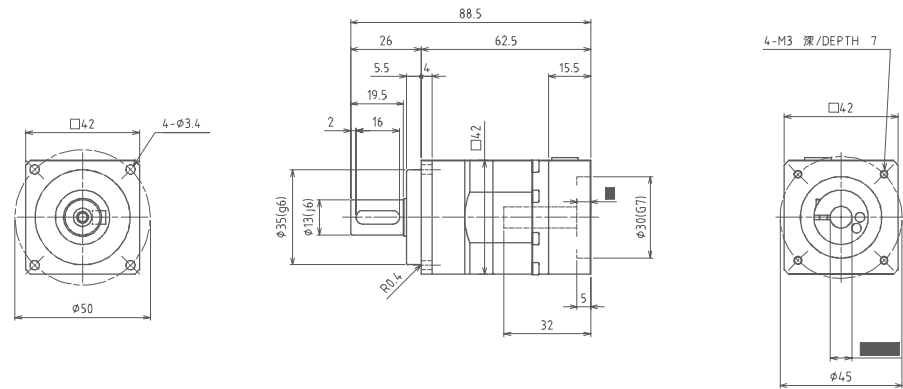
Frame size	Model	Ratio	Ø 1			Ø 2		Ø 3	
			Nominal output torque	Maximum output torque	Emergency stop torque	Nominal input speed	Maximum input speed	Permitted radial load	Permitted axial load
			[Nm]	[Nm]	[Nm]	[rpm]	[rpm]	[N]	[N]
220	Level 1	3	1000	1600	4000	1000	2000	5800	6400
		4	1500	2300	5000	1000	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
	Level 2	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	Model	Ratio	Ø 4		Weight	Ø 5		
			Maximum radial load	Maximum axial load		Moment of inertia (≤ ϕ 38)	Moment of inertia (≤ ϕ 48)	Moment of inertia (≤ ϕ 65)
			[N]	[N]		[kgcm ²]	[kgcm ²]	[kgcm ²]
220	Level 1	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
	Level 2	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	-

- Ø 1 With nominal input speed, service life is 20,000 hours.
- Ø 2 With this load and nominal input speed,service life will be 20,000 hours.
(Applied to the output shaft center, at axial load 0)
- Ø 3 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output side bearing, at radial load 0)
- Ø 4 The maximum radial load the reducer can accept.
- Ø 5 The maximum axial load the reducer can accept.
- Ø 6 Operating temperature is -20℃-175℃

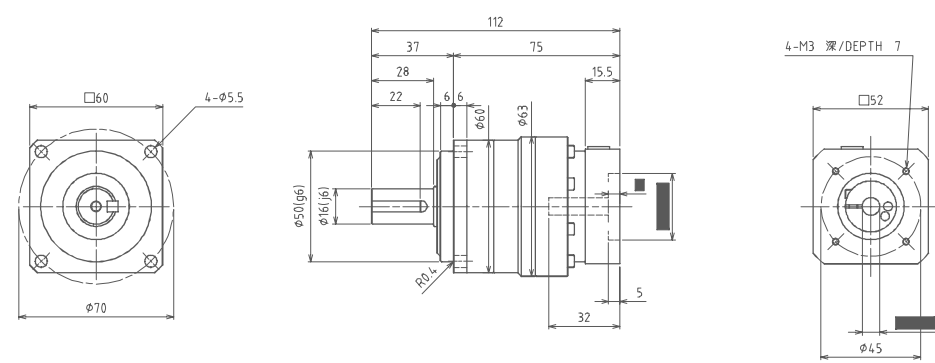
AHB-042 Level1

Input shaft bore $\leq \phi 8$

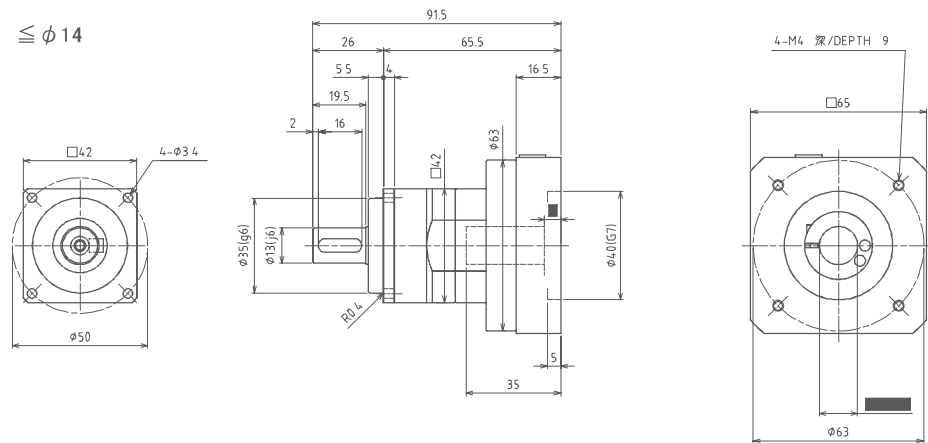


AHB-060 Level1

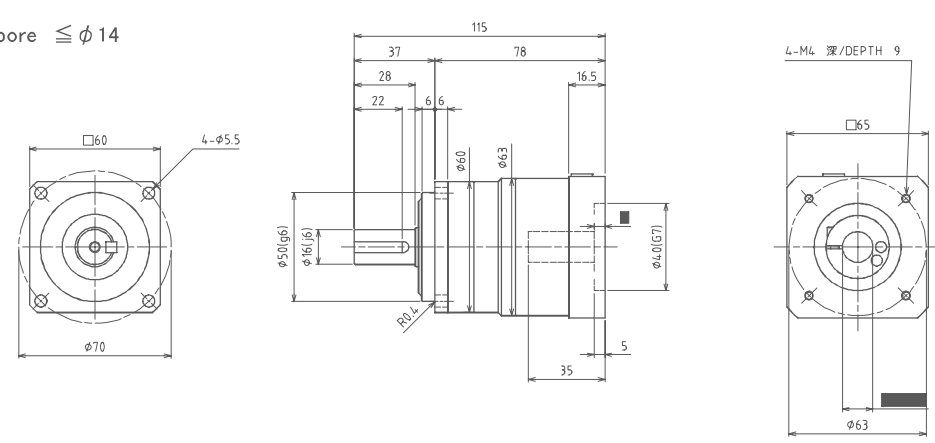
Input shaft bore $\leq \phi 8$



Input shaft bore $\leq \phi 14$

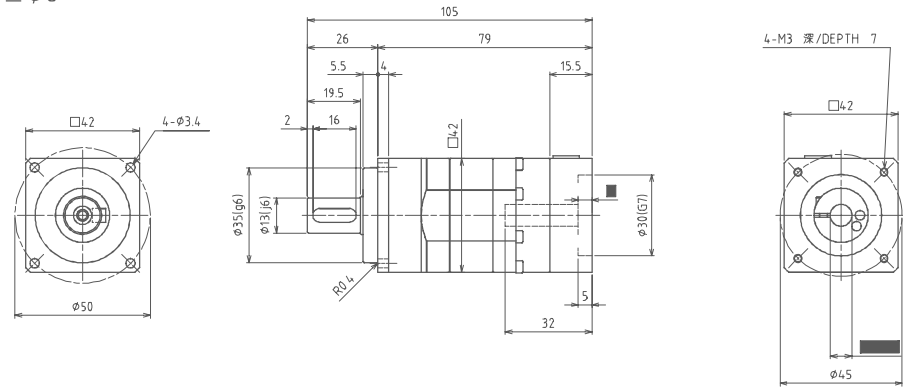


Input shaft bore $\leq \phi 14$

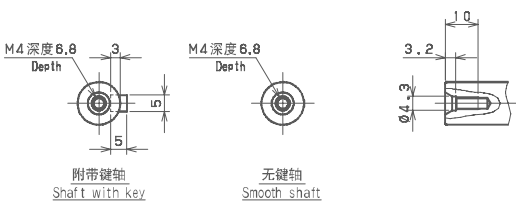
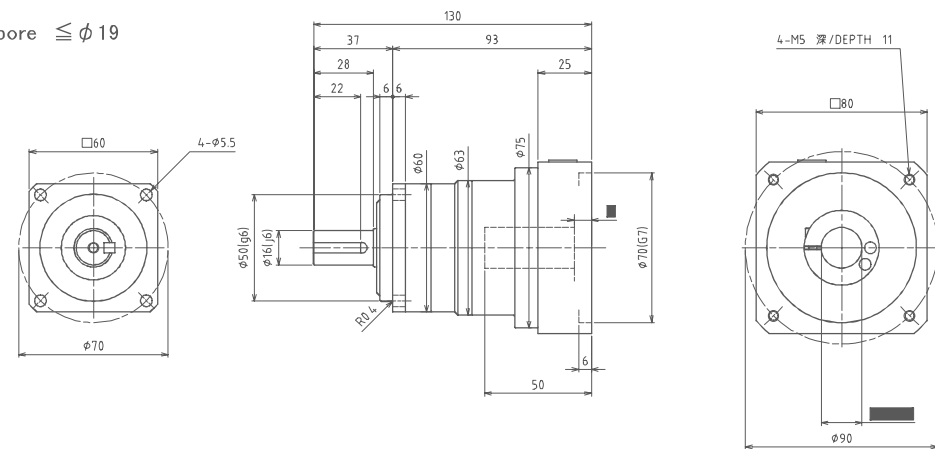


AHB-042 Level2

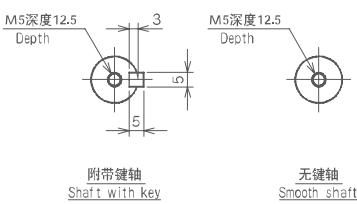
Input shaft bore $\leq \phi 8$



Input shaft bore $\leq \phi 19$

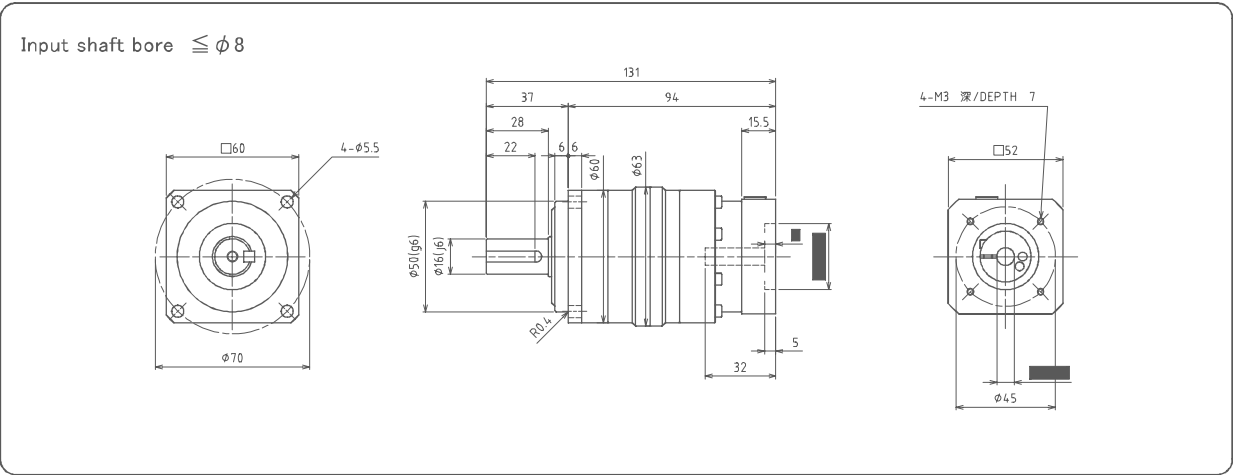


Note1: The body size varies with the installation of the motor.
Note2: When the shaft diameter of the motor is different from the input shaft diameter, the shaft sleeve can be inserted.

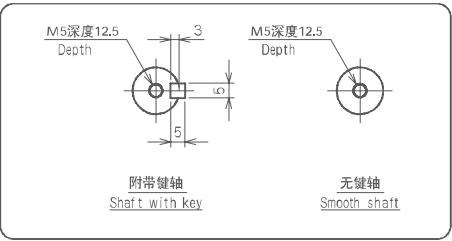
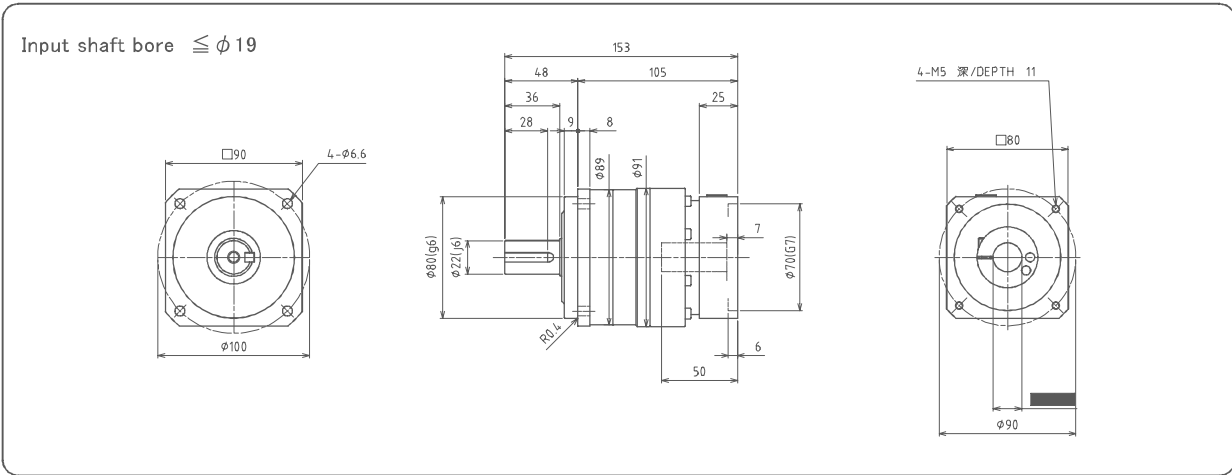
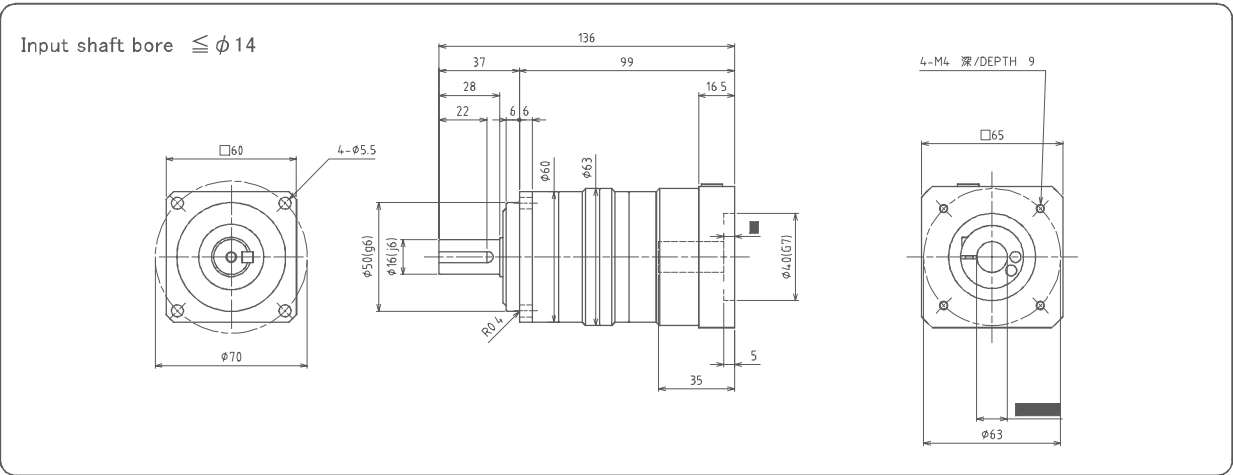
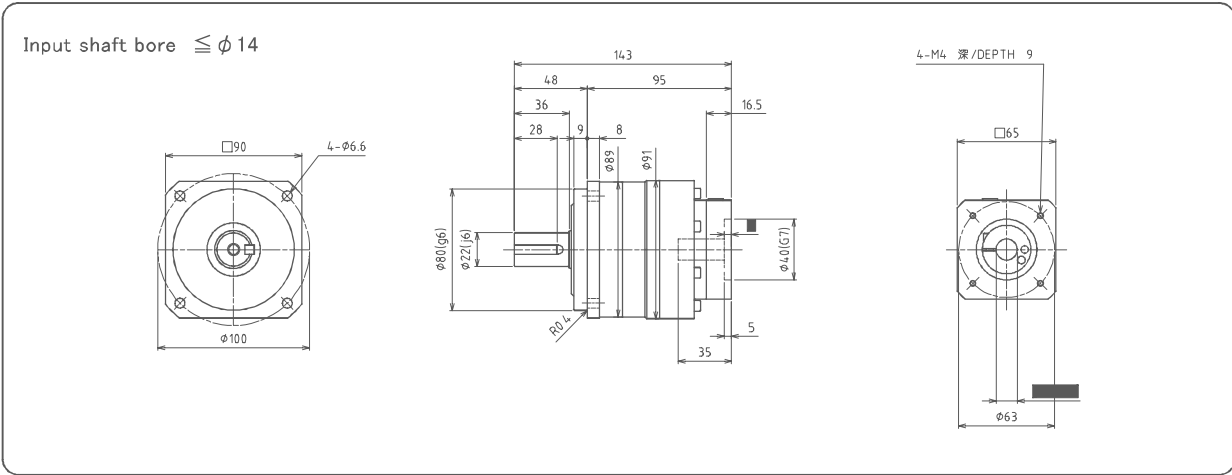


Note1: The body size varies with the installation of the motor.
Note2: When the shaft diameter of the motor is different from the input shaft diameter, the shaft sleeve can be inserted.

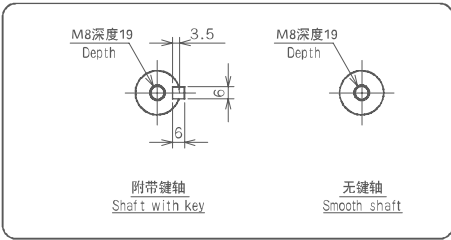
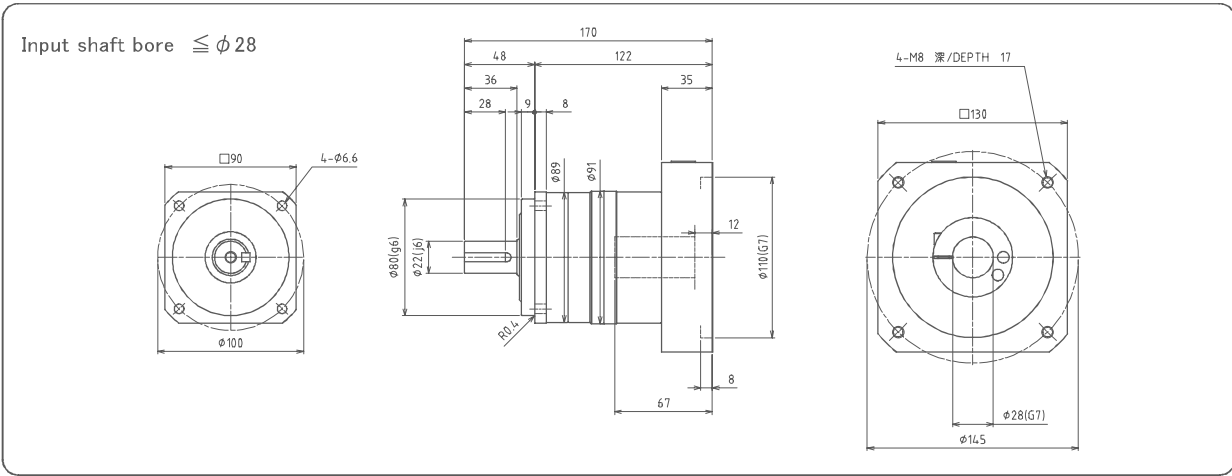
AHB-060 Level2



AHB-090 Level1



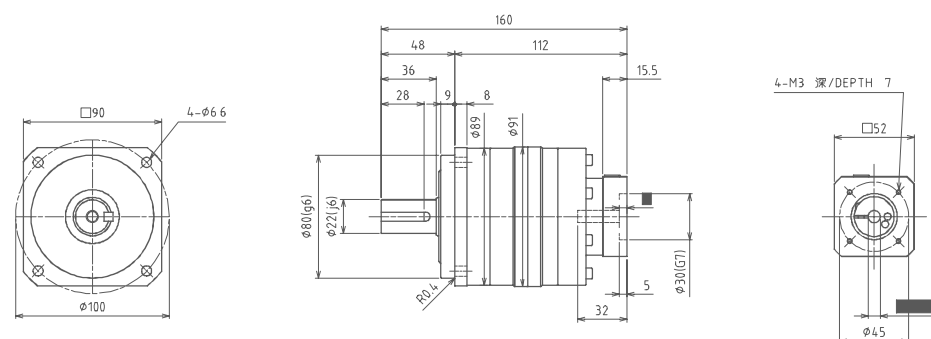
Note1: The body size varies with the installation of the motor.
Note2: When the shaft diameter of the motor is different from the input shaft diameter, the shaft sleeve can be inserted.



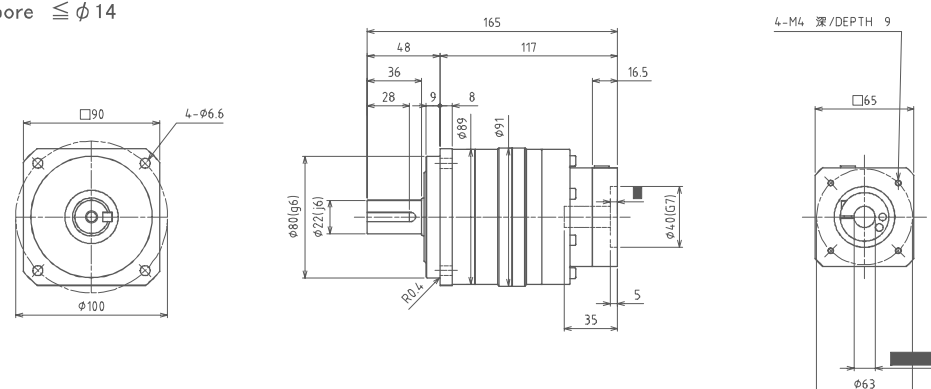
Note1: The body size varies with the installation of the motor.
Note2: When the shaft diameter of the motor is different from the input shaft diameter, the shaft sleeve can be inserted.

AHB-090 Level 2

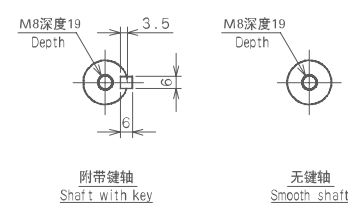
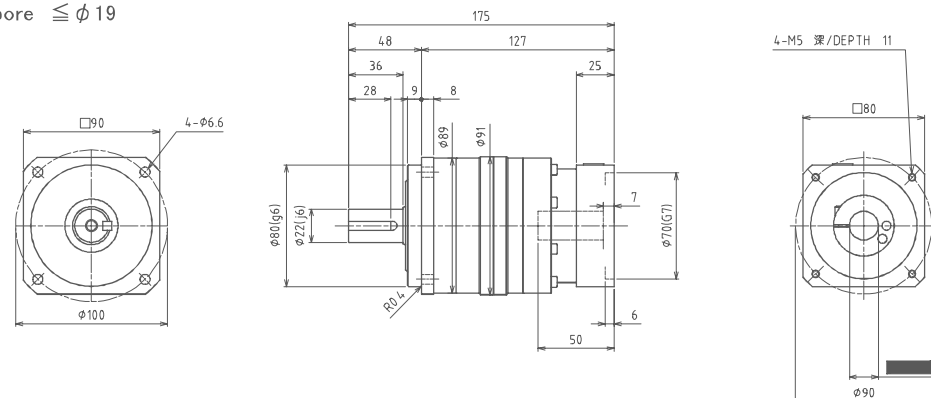
Input shaft bore $\leq \phi 8$



Input shaft bore $\leq \phi 14$



Input shaft bore $\leq \phi 19$

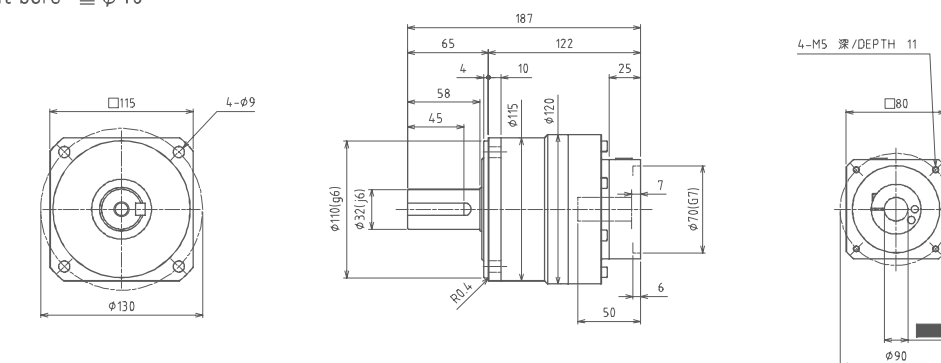


Note1: The body size varies with the installation of the motor.

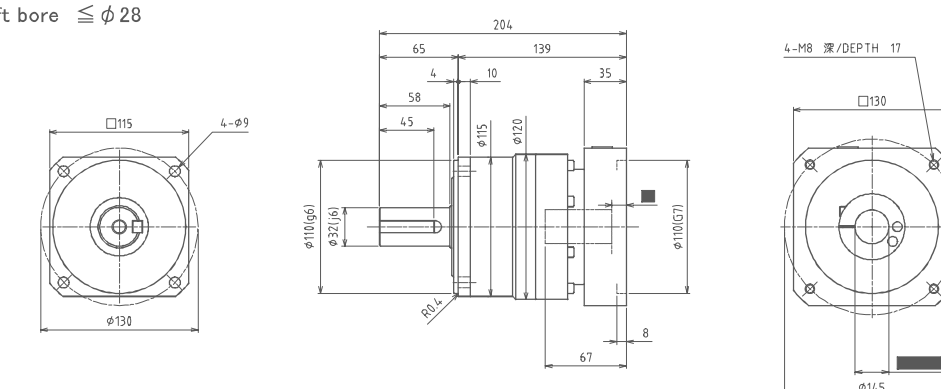
Note2: When the shaft diameter of the motor is different from the input shaft diameter, the shaft sleeve can be inserted.

AHB-115 Level 1

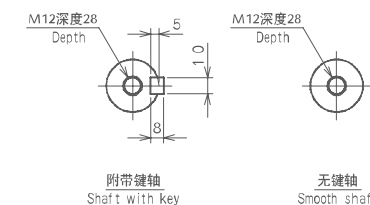
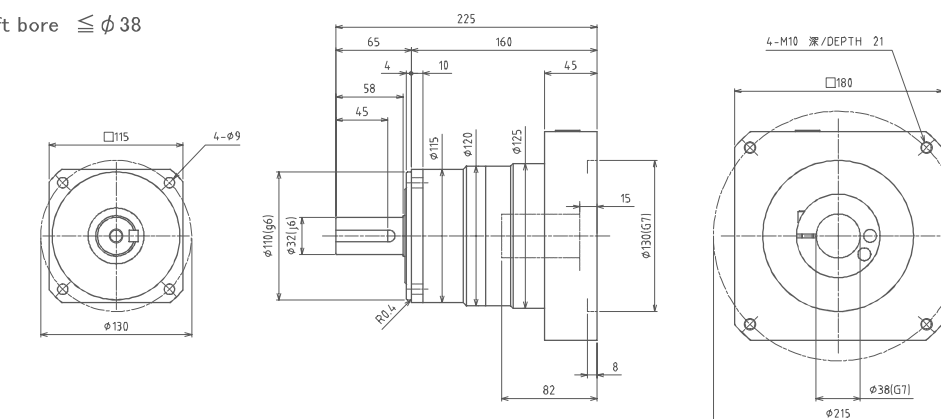
Input shaft bore $\leq \phi 19$



Input shaft bore $\leq \phi 28$



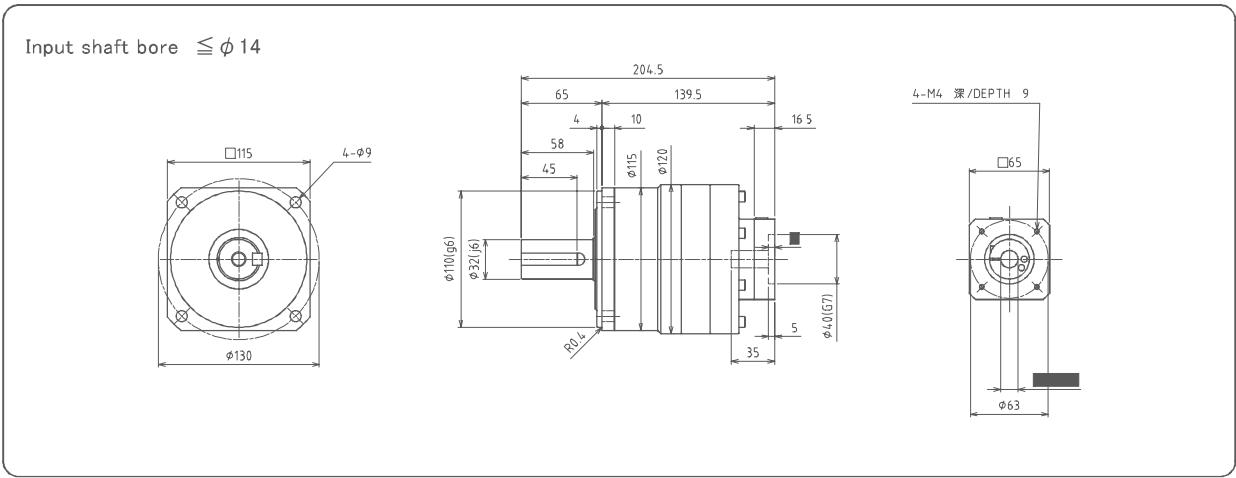
Input shaft bore $\leq \phi 38$



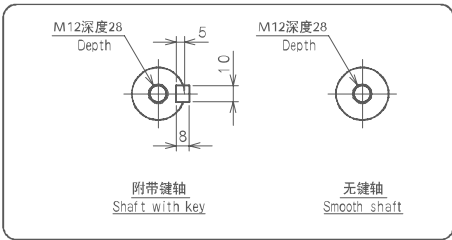
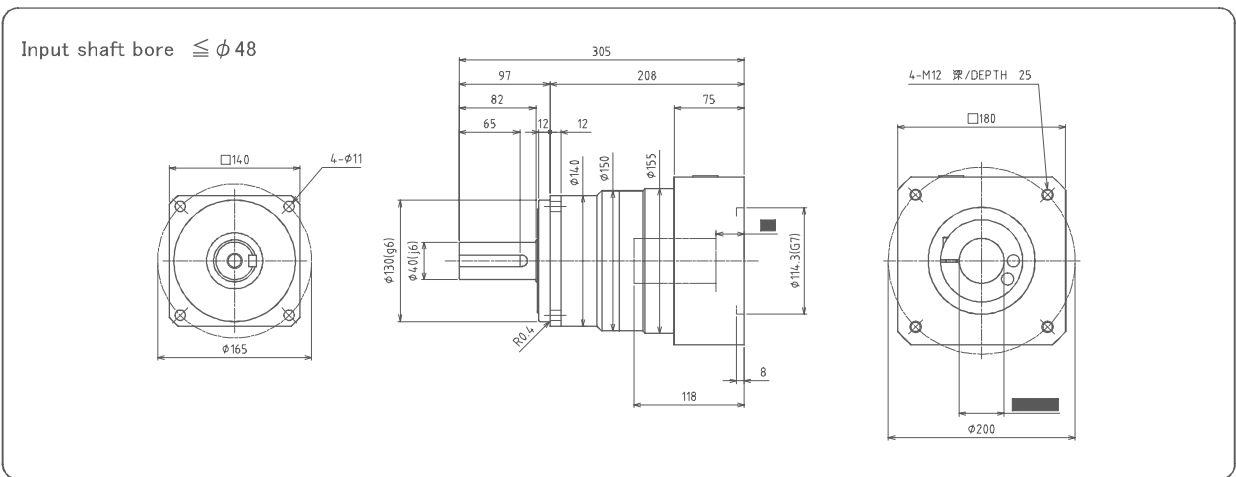
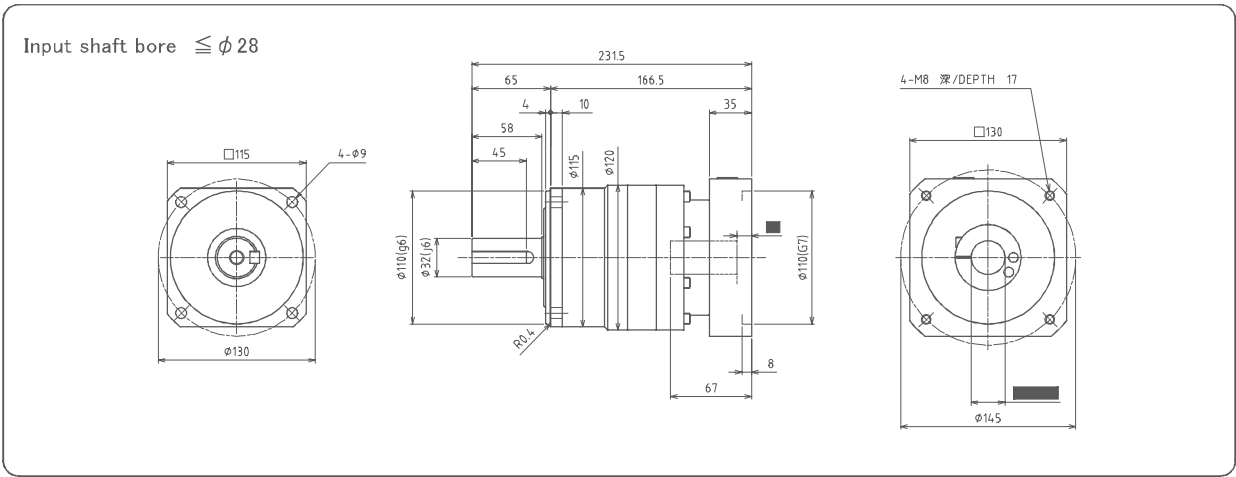
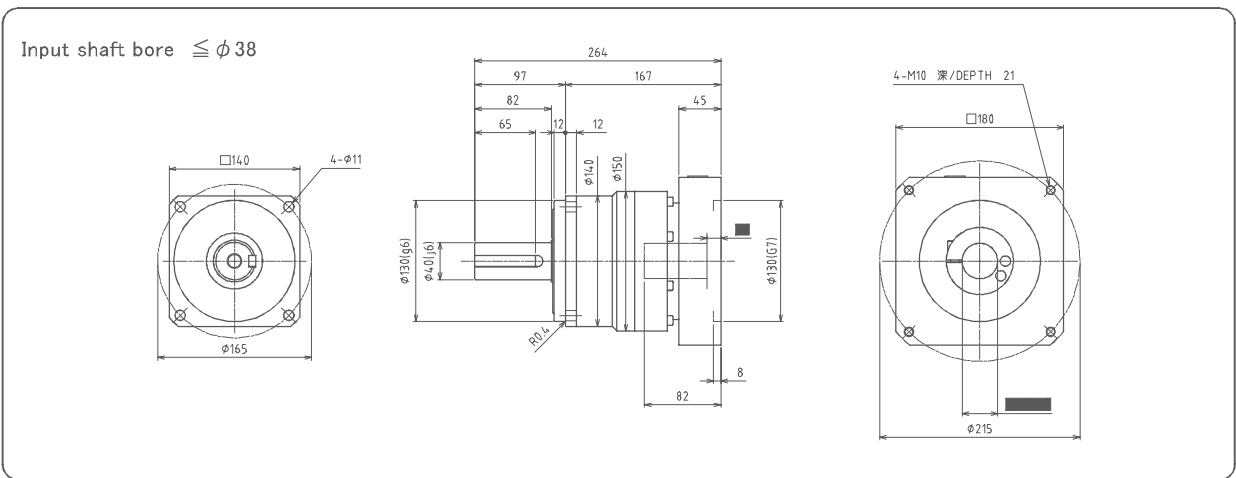
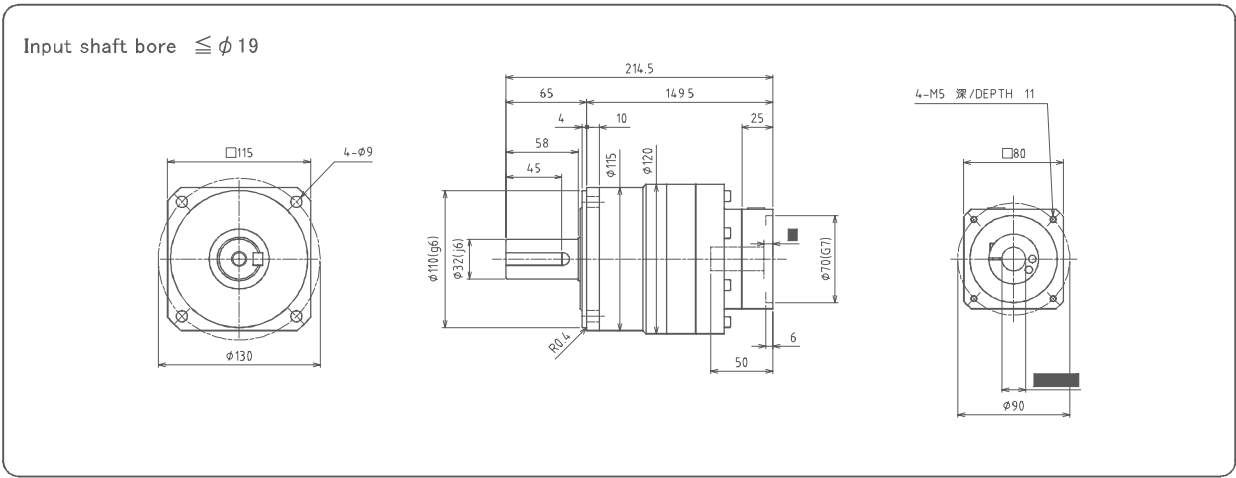
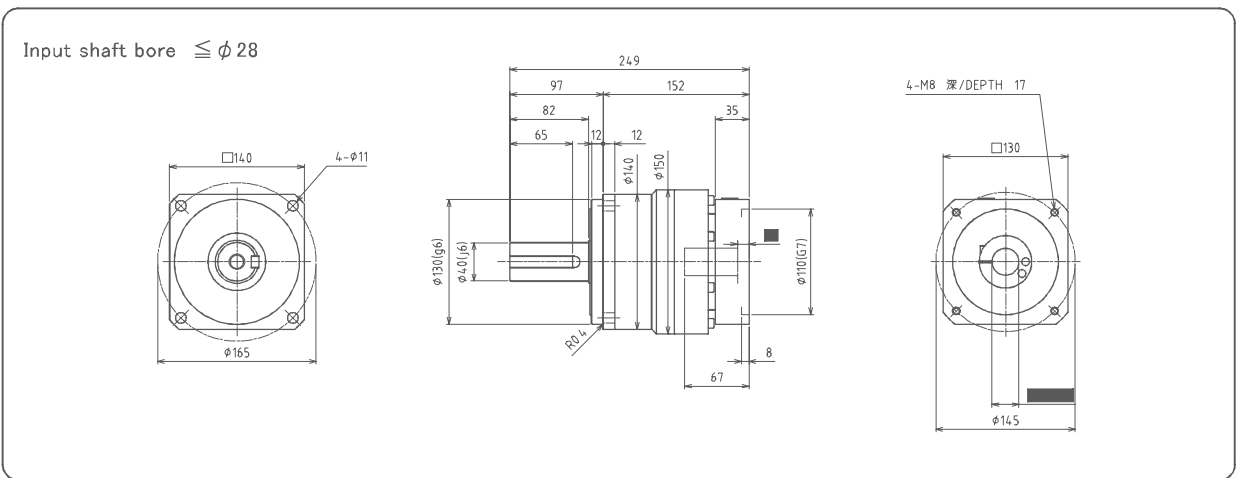
Note1: The body size varies with the installation of the motor.

Note2: When the shaft diameter of the motor is different from the input shaft diameter, the shaft sleeve can be inserted.

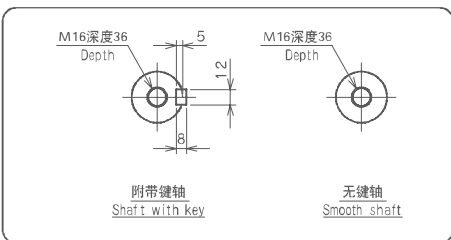
AHB-115 Level 2



AHB-140 Level 1



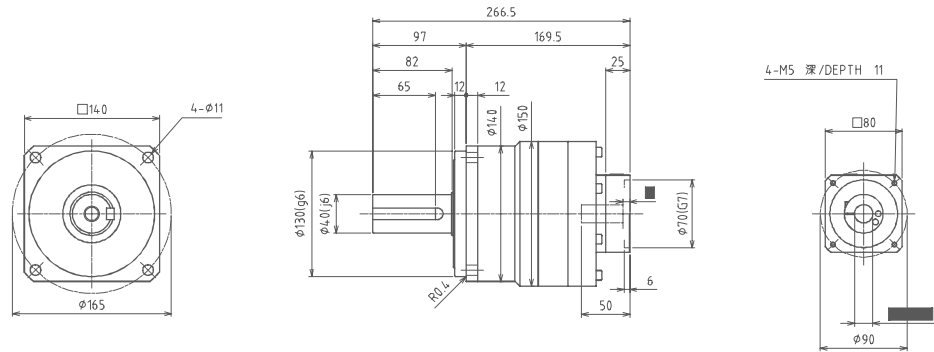
Note1: The body size varies with the installation of the motor.
Note2: When the shaft diameter of the motor is different from the input shaft diameter, the shaft sleeve can be inserted.



Note1: The body size varies with the installation of the motor.
Note2: When the shaft diameter of the motor is different from the input shaft diameter, the shaft sleeve can be inserted.

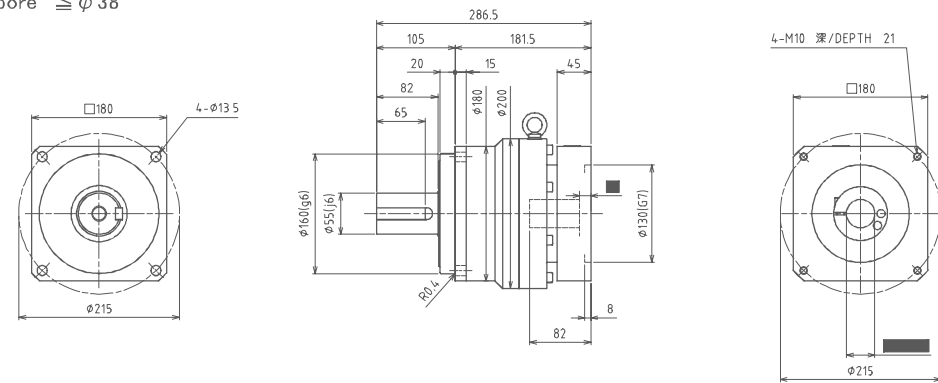
AHB-140 Level2

Input shaft bore $\leq \phi 19$

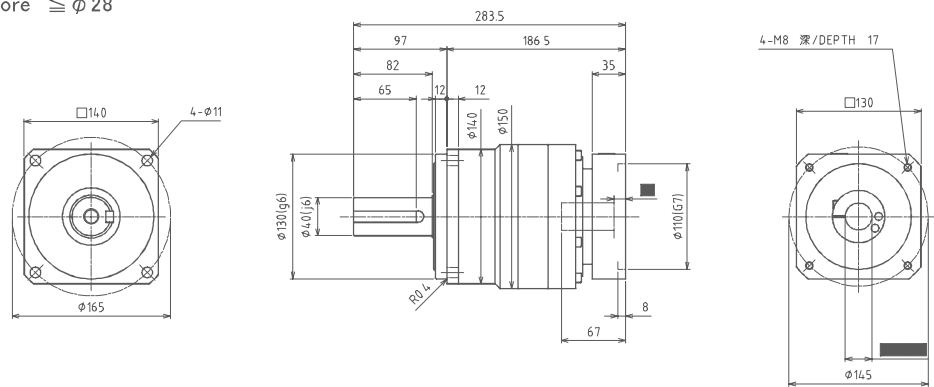


AHB-180 Level 1

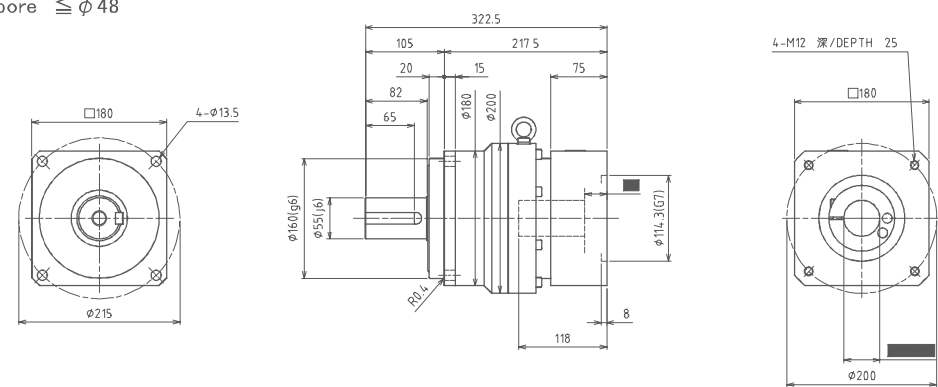
Input shaft bore $\leq \phi 38$



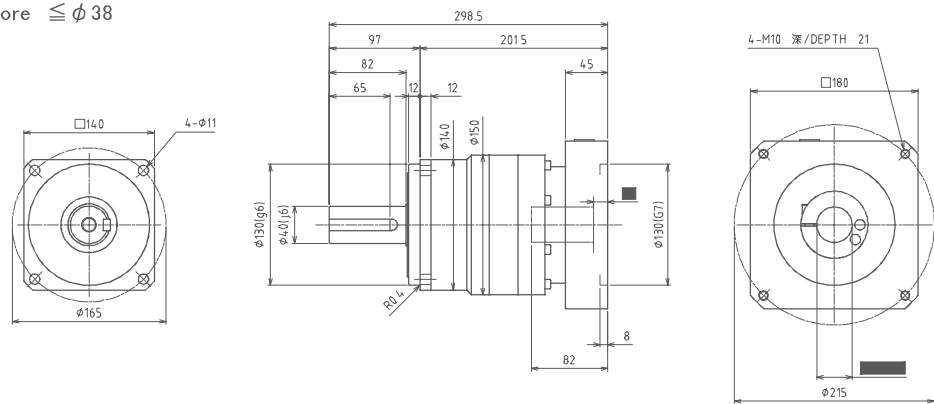
Input shaft bore $\leq \phi 28$



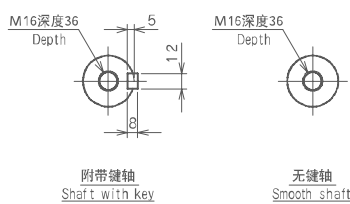
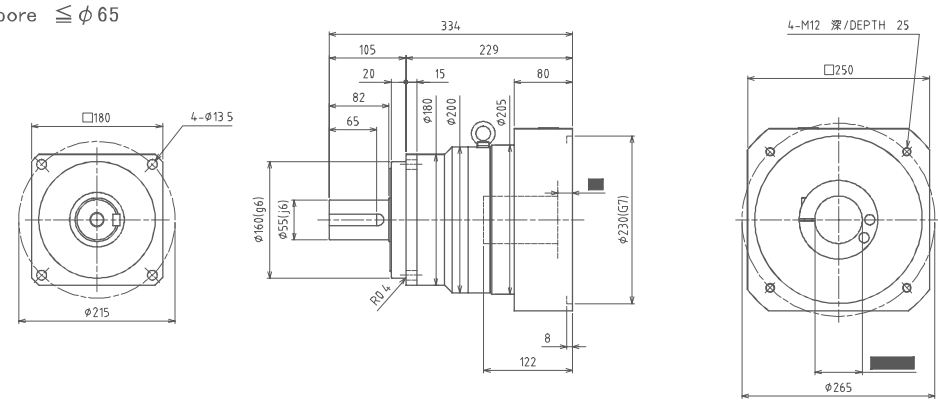
Input shaft bore $\leq \phi 48$



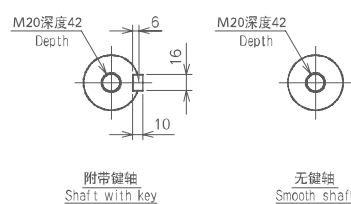
Input shaft bore $\leq \phi 38$



Input shaft bore $\leq \phi 65$

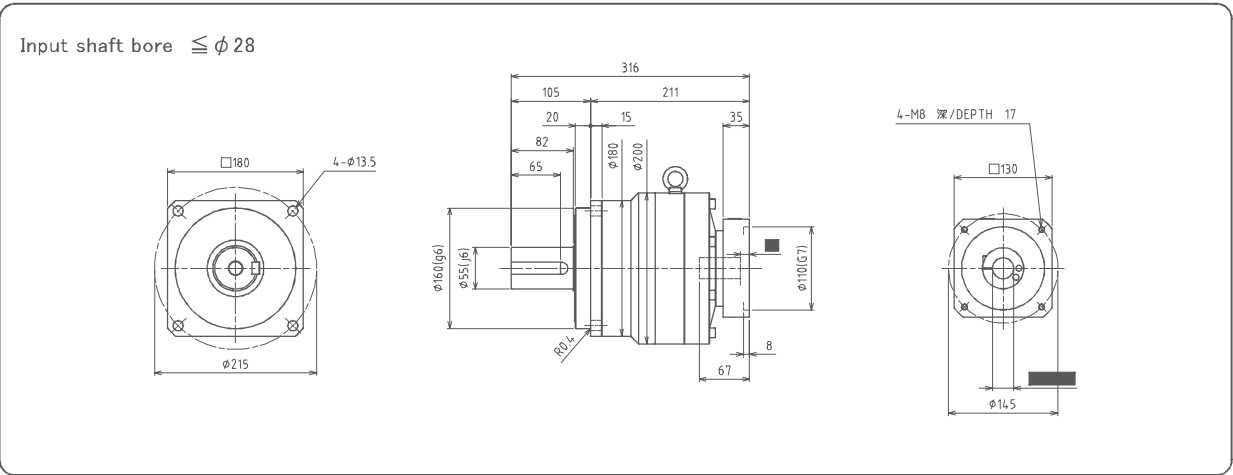


Note1: The body size varies with the installation of the motor.
Note2: When the shaft diameter of the motor is different from the input shaft diameter, the shaft sleeve can be inserted.

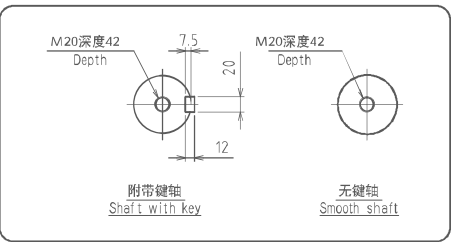
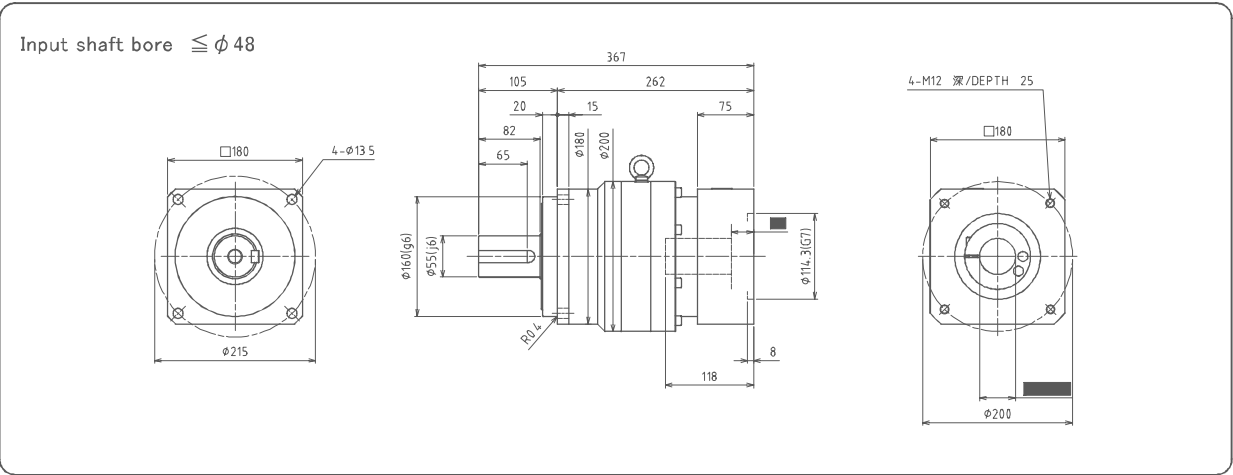
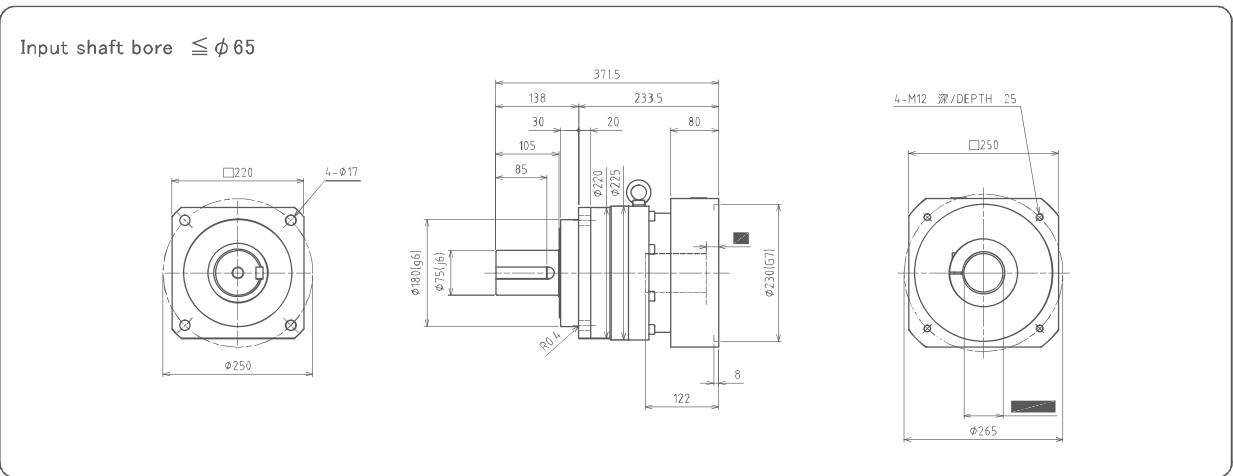
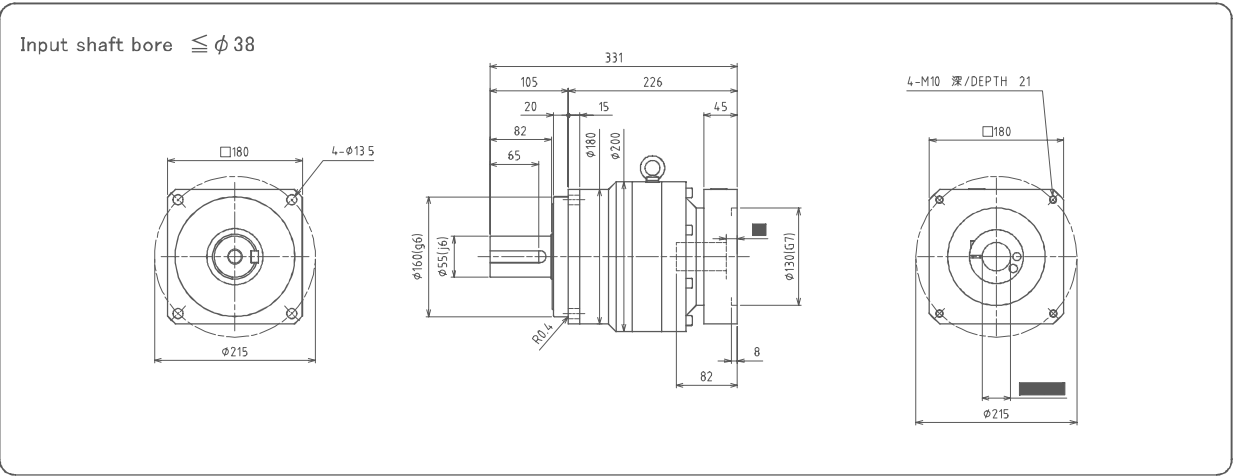
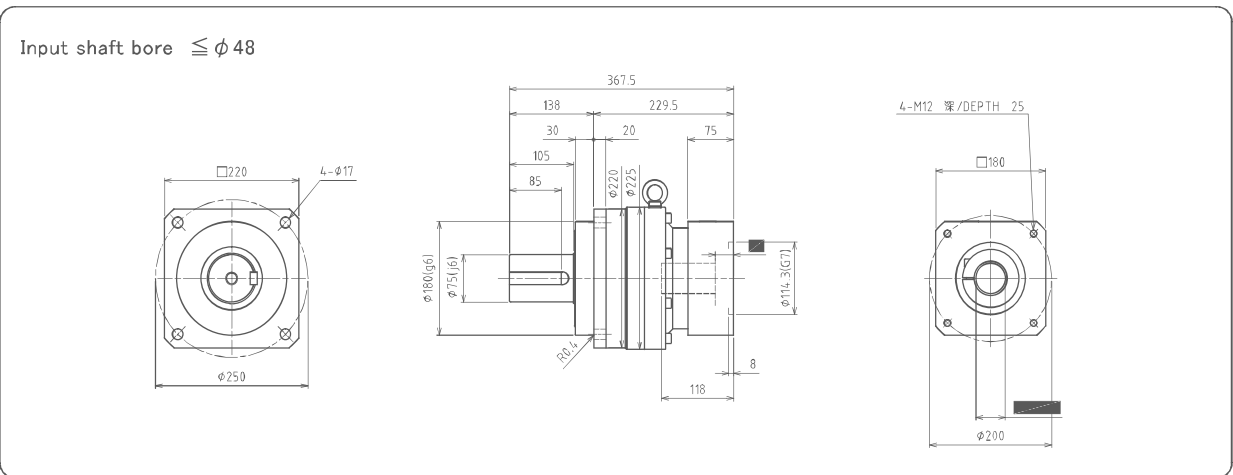


Note1: The body size varies with the installation of the motor.
Note2: When the shaft diameter of the motor is different from the input shaft diameter, the shaft sleeve can be inserted.

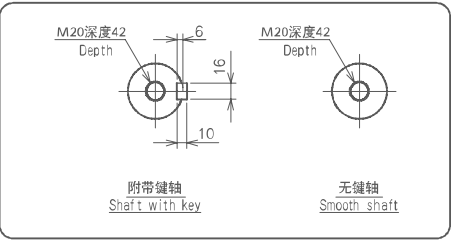
AHB-180 Level2



AHB-220 Level1

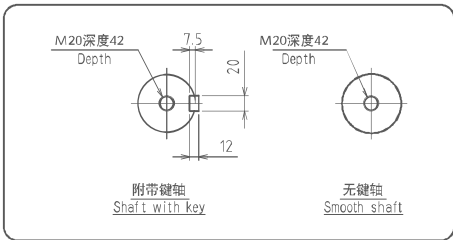
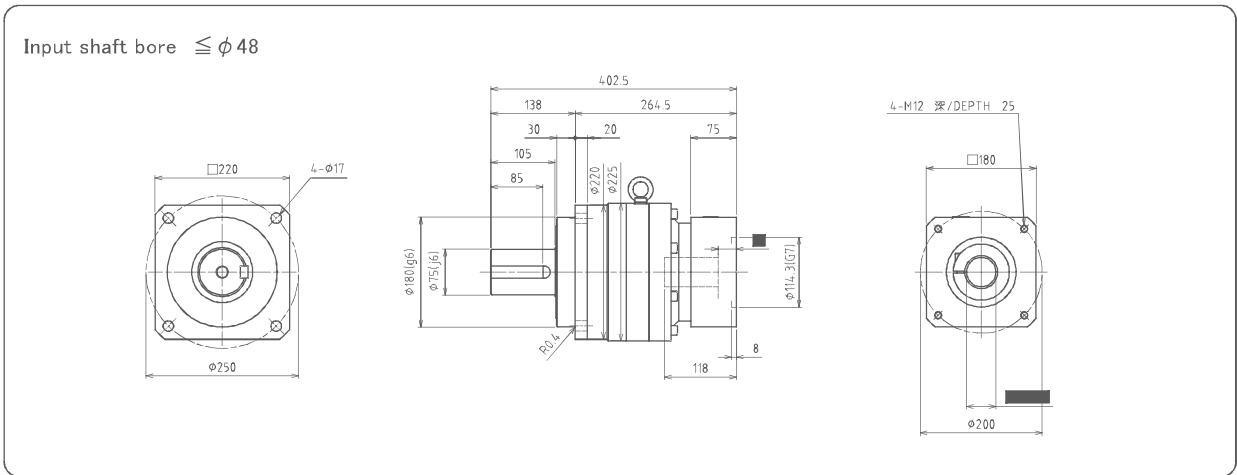
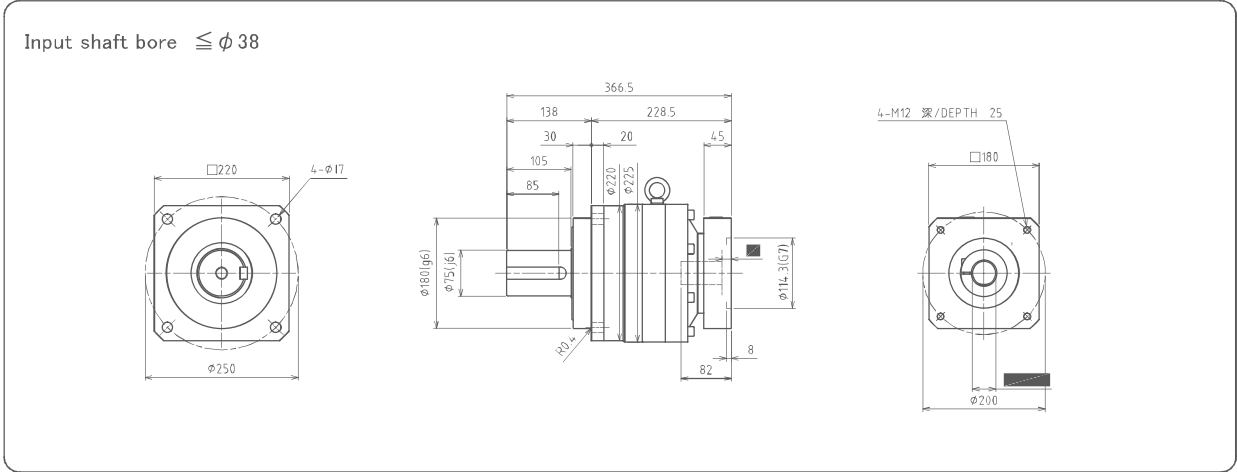


Note1: The body size varies with the installation of the motor.
Note2: When the shaft diameter of the motor is different from the input shaft diameter, the shaft sleeve can be inserted.



Note1: The body size varies with the installation of the motor.
Note2: When the shaft diameter of the motor is different from the input shaft diameter, the shaft sleeve can be inserted.

AHB-220 Level2



Note1: The body size varies with the installation of the motor.
Note2: When the shaft diameter of the motor is different from the input shaft diameter, the shaft sleeve can be inserted.

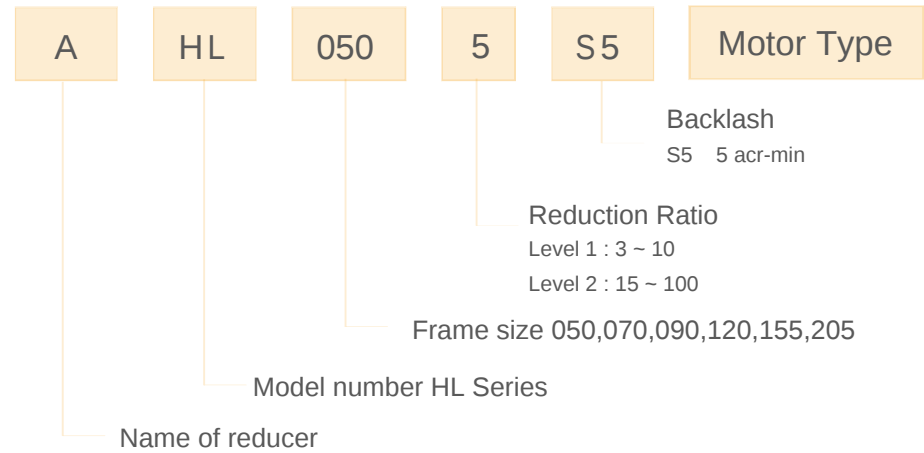
AHL Series



Features

- 1 Helical gears contribute to reduce vibration and noise.
- 2 The backlash is less than 3 arc-min with accurate positioning.
- 3 The backlash is less than 3 arc-min with accurate positioning.
- 4 Generally applicable to all kinds of motors
- 5 Effectively prevent grease leakage by using grease with high viscosity and anti-separation.
- 6 No need to change the grease during the life of the product, making installation easier

Model number



AHL050

AHL050			Ø 1			Ø 2			Ø 3	
Frame size	Model	Ratio	Nominal output torque	Maximum output torque	Emergency stop torque	Nominal input speed	Maximum input speed	Permitted radial load	Permitted axial load	
			[Nm]	[Nm]	[Nm]	[rpm]	[rpm]	[N]	[N]	
050	Level 1	3	7	14	35	4000	8000	250	280	
		4	10	20	40	4000	8000	280	310	
		5	10	20	40	4000	8000	300	340	
		6	10	20	40	4000	8000	320	370	
		7	10	20	40	4000	8000	330	390	
		8	10	20	40	4000	8000	350	420	
		9	7	14	35	4000	8000	360	440	
	Level 2	10	7	14	35	4000	8000	370	460	
		15	7	14	35	4000	8000	420	550	
		16	10	20	40	4000	8000	430	560	
		20	10	20	40	4000	8000	470	620	
		25	10	20	40	4000	8000	500	650	
		28	10	20	40	4000	8000	520	650	
		30	7	14	35	4000	8000	530	650	
		35	10	20	40	4000	8000	560	650	
		40	10	20	40	4000	8000	580	650	
		45	7	14	35	4000	8000	610	650	
		50	10	20	40	4000	8000	630	650	
		60	10	20	40	4000	8000	670	650	
		70	10	20	40	4000	8000	700	650	
80	10	20	40	4000	8000	720	650			
90	7	14	35	4000	8000	720	650			
100	7	14	35	4000	8000	720	650			

		⌀ 4		⌀ 5		⌀ 6		
Frame size	Model	Ratio	Maximum radial load	Maximum axial load	Weight	Moment of inertia (≤ ϕ 8)	Moment of inertia (≤ ϕ 14)	Operating temperature
			[N]	[N]		[kg]	[kgcm ²]	
050	Level 1	3	730	660	0.7	0.053	0.091	-20℃ ~ 90℃
		4	730	660		0.041	0.079	
		5	730	660		0.036	0.074	
		6	730	660		0.034	0.072	
		7	730	660		0.032	0.071	
		8	730	660		0.031	0.070	
		9	730	660		0.031	0.069	
	Level 2	10	730	660	0.030	0.069		
		15	730	660	0.035	—		
		16	730	660	0.038	—		
		20	730	660	0.034	—		
		25	730	660	0.034	—		
		28	730	660	0.038	—		
		30	730	660	0.030	—		
		35	730	660	0.034	—		
		40	730	660	0.030	—		
		45	730	660	0.034	—		
		50	730	660	0.030	—		
		60	730	660	0.030	—		
		70	730	660	0.030	—		
		80	730	660	0.030	—		
		90	730	660	0.030	—		
		100	730	660	0.030	—		

- ⌀ 1 With nominal input speed, service life is 20,000 hours.
- ⌀ 2 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output shaft center, at axial load 0)
- ⌀ 3 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output side bearing, at radial load 0)
- ⌀ 4 The maximum radial load the reducer can accept.
- ⌀ 5 The maximum axial load the reducer can accept.

AHL070

AHL070		Ø 1				Ø 2		Ø 3	
Frame size	Model	Ratio	Nominal output torque	Maximum output torque	Emergency stop torque	Nominal input speed	Maximum input speed	Permitted radial load	Permitted axial load
			[Nm]	[Nm]	[Nm]	[rpm]	[rpm]	[N]	[N]
070	Level 1	3	20	40	90	3000	6000	445	325
		4	29	55	110	3000	6000	485	375
		5	29	55	110	3000	6000	525	405
		6	29	55	110	3000	6000	555	445
		7	29	55	110	3000	6000	585	475
		8	29	55	110	3000	6000	615	495
		9	20	40	90	3000	6000	635	525
	Level 2	10	20	40	90	3000	6000	655	545
		15	20	40	90	3000	6000	755	645
		16	29	55	110	3000	6000	765	665
		20	29	55	110	3000	6000	825	735
		25	29	55	110	3000	6000	885	805
		28	29	55	110	3000	6000	925	845
		30	20	40	90	3000	6000	945	875
		35	29	55	110	3000	6000	995	935
		40	29	55	110	3000	6000	1015	985
		45	20	40	90	3000	6000	1115	1015
		50	29	55	110	3000	6000	1115	1115
		60	29	55	110	3000	6000	1215	1115
		70	29	55	110	3000	6000	1215	1115
		80	29	55	110	3000	6000	1215	1115
		90	20	40	90	3000	6000	1215	1115
		100	20	40	90	3000	6000	1215	1115

			⌀ 4	⌀ 5					⌀ 6
Frame size	Model	Ratio	Maximum radial load	Maximum axial load	Weight	Moment of inertia (≤ ϕ 8)	Moment of inertia (≤ ϕ 14)	Moment of inertia (≤ ϕ 19)	Operating temperature
			[N]	[N]	[kg]	[kgcm ²]	[kgcm ²]	[kgcm ²]	
070	Level 1	3	1225	1125	1.5	0.14	0.22	0.43	-20℃ ~ 90℃
		4	1225	1125		0.095	0.17	0.38	
		5	1225	1125		0.077	0.16	0.36	
		6	1225	1125		0.068	0.15	0.36	
		7	1225	1125		0.062	0.14	0.35	
		8	1225	1125		0.059	0.14	0.35	
		9	1225	1125		0.057	0.14	0.34	
	Level 2	10	1225	1125	0.056	0.14	0.34		
		15	1225	1125	0.055	0.14	—		
		16	1225	1125	0.057	0.14	—		
		20	1225	1125	0.054	0.13	—		
		25	1225	1125	0.053	0.13	—		
		28	1225	1125	0.055	0.14	—		
		30	1225	1125	0.049	0.13	—		
		35	1225	1125	0.053	0.13	—		
		40	1225	1125	0.049	0.13	—		
		45	1225	1125	0.053	0.13	—		
		50	1225	1125	0.049	0.13	—		
		60	1225	1125	0.049	0.13	—		
		70	1225	1125	0.049	0.13	—		
		80	1225	1125	0.049	0.13	—		
		90	1225	1125	0.049	0.13	—		
		100	1225	1125	0.049	0.13	—		

- ⌀ 1 With nominal input speed, service life is 20,000 hours.
- ⌀ 2 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output shaft center, at axial load 0)
- ⌀ 3 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output side bearing, at radial load 0)
- ⌀ 4 The maximum radial load the reducer can accept.
- ⌀ 5 The maximum axial load the reducer can accept.

AHL090

Frame size	Model	Ratio	⌀ 1		Emergency stop torque	⌀ 2		⌀ 3	
			Nominal output torque	Maximum output torque		Nominal input speed	Maximum input speed	Permitted radial load	Permitted axial load
			[Nm]	[Nm]		[rpm]	[rpm]	[N]	[N]
090	Level 1	3	53	85	210	3000	6000	830	950
		4	78	130	260	3000	6000	910	1120
		5	78	130	260	3000	6000	980	1220
		6	78	130	260	3000	6000	1020	1320
		7	78	130	260	3000	6000	1120	1320
		8	78	130	260	3000	6000	1120	1420
		9	53	85	260	3000	6000	1220	1520
		10	53	85	210	3000	6000	1220	1620
	Level 2	15	53	85	210	3000	6000	1420	1920
		16	78	130	260	3000	6000	1420	1920
		20	78	130	260	3000	6000	1520	2120
		25	78	130	260	3000	6000	1620	2220
		28	78	130	260	3000	6000	1720	2220
		30	53	85	210	3000	6000	1720	2220
		35	78	130	260	3000	6000	1820	2220
		40	78	130	260	3000	6000	1920	2220
		45	53	85	210	3000	6000	2020	2220
		50	78	130	260	3000	6000	2120	2220

Frame size	Model	Ratio	⌀ 4		⌀ 5		Weight	Moment of inertia (≤ ϕ 8)	Moment of inertia (≤ ϕ 14)	Moment of inertia (≤ ϕ 19)	Moment of inertia (≤ ϕ 28)
			Maximum radial load	Maximum axial load							
			[N]	[N]	[N]	[kg]	[kgcm ²]	[kgcm ²]	[kgcm ²]	[kgcm ²]	[kgcm ²]
090	Level 1	3	2430	2230	3.5			—	0.72	1.2	3.2
		4	2430	2230							
		5	2430	2230							
		6	2430	2230							
		7	2430	2230							
		8	2430	2230							
		9	2430	2230							
		10	2430	2230							
	Level 2	15	2430	2230	4			0.13	0.28	0.72	—
		16	2430	2230							
		20	2430	2230							
		25	2430	2230							
		28	2430	2230							
		30	2430	2230							
		35	2430	2230							
		40	2430	2230							
		45	2430	2230							
		50	2430	2230							

- ⌀ 1 With nominal input speed, service life is 20,000 hours.
- ⌀ 2 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output shaft center, at axial load 0)
- ⌀ 3 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output side bearing, at radial load 0)
- ⌀ 4 The maximum radial load the reducer can accept.
- ⌀ 5 The maximum axial load the reducer can accept.

AHL120

Frame size	Model	Ratio	⌀ 1		Emergency stop torque	⌀ 2		⌀ 3	
			Nominal output torque	Maximum output torque		Nominal input speed	Maximum input speed	Permitted radial load	Permitted axial load
			[Nm]	[Nm]		[rpm]	[rpm]	[N]	[N]
120	Level 1	3	124	230	515	3000	6000	1325	1525
		4	124	335	640	3000	6000	1525	1725
		5	184	335	640	3000	6000	1625	1925
		6	184	335	640	3000	6000	1725	2025
		7	184	335	640	3000	6000	1825	2125
		8	184	335	640	3000	6000	1925	2325
		9	124	230	515	3000	6000	1925	2425
		10	124	230	515	3000	6000	2025	2525
	Level 2	15	124	230	515	3000	6000	2325	3025
		16	184	335	640	3000	6000	2325	3125
		20	184	335	640	3000	6000	2525	3425
		25	184	335	640	3000	6000	2725	3725
		28	184	335	640	3000	6000	2825	3925
		30	124	230	515	3000	6000	2925	3925
		35	184	335	640	3000	6000	3025	3925
		40	184	335	640	3000	6000	3225	3925
		45	124	230	515	3000	6000	3325	3925
		50	184	335	640	3000	6000	3425	3925

Frame size	Model	Ratio	⌀ 4		Weight	Moment of inertia (≤ ϕ 14)	Moment of inertia (≤ ϕ 19)	Moment of inertia (≤ ϕ 28)	Moment of inertia (≤ ϕ 38)
			Maximum radial load	Maximum axial load					
			[N]	[N]	[kg]	[kgcm ²]	[kgcm ²]	[kgcm ²]	[kgcm ²]
120	Level 1	3	4335	3935	7.8	—	3.3	5.3	13
		4	4335	3935					
		5	4335	3935					
		6	4335	3935					
		7	4335	3935					
		8	4335	3935					
		9	4335	3935					
		10	4335	3935					
	Level 2	15	4335	3935	8.7	0.43	0.86	2.8	—
		16	4335	3935					
		20	4335	3935					
		25	4335	3935					
		28	4335	3935					
		30	4335	3935					
		35	4335	3935					
		40	4335	3935					
		45	4335	3935					
		50	4335	3935					

- ⌀ 1 With nominal input speed, service life is 20,000 hours.
- ⌀ 2 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output shaft center, at axial load 0)
- ⌀ 3 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output side bearing, at radial load 0)
- ⌀ 4 The maximum radial load the reducer can accept.
- ⌀ 5 The maximum axial load the reducer can accept.

AHL155

AHL155			Ø 1			Ø 2			Ø 3		
Frame size	Model	Ratio	Nominal output torque	Maximum output torque	Emergency stop torque	Nominal input speed	Maximum input speed	Permitted radial load	Permitted axial load		
			[Nm]	[Nm]	[Nm]	[rpm]	[rpm]	[N]	[N]		
155	Level 1	3	245	476	1016	2000	4000	3230	2430		
		4	245	706	1266	2000	4000	3530	2730		
		5	365	706	1266	2000	4000	3830	3030		
		6	365	706	1266	2000	4000	4030	3330		
		7	365	706	1266	2000	4000	4230	3530		
		8	365	706	1266	2000	4000	4430	3730		
		9	245	476	1016	2000	4000	4630	3930		
		10	245	476	1016	2000	4000	4730	4130		
		Level 2	15	245	476	1016	2000	4000	5430	4930	
			16	365	706	1266	2000	4000	5530	5030	
	20		365	706	1266	2000	4000	6030	5530		
	25		365	706	1266	2000	4000	6430	6130		
	28		365	706	1266	2000	4000	6730	6430		
	30		245	476	1016	2000	4000	6830	6630		
	35		365	706	1266	2000	4000	7230	7030		
	40		365	706	1266	2000	4000	7530	7530		
	45		245	476	1016	2000	4000	7830	7930		
	50		365	706	1266	2000	4000	8130	8230		
	60	365	706	1266	2000	4000	8630	8230			
	70	365	706	1266	2000	4000	9130	8230			
80	365	706	1266	2000	4000	9130	8230				
90	245	476	1016	2000	4000	9130	8230				
100	245	476	1016	2000	4000	9130	8230				

Frame size	Model	Ratio	⌀ 4	⌀ 5	Weight	Moment of inertia (≤ ϕ 19)	Moment of inertia (≤ ϕ 28)	Moment of inertia (≤ ϕ 38)	Moment of inertia (≤ ϕ 48)
			[N]	[N]		[kgcm ²]	[kgcm ²]	[kgcm ²]	[kgcm ²]
155	Level 1	3	9140	8240	16	–	12	20	42
		4	9140	8240		–	7.5	15	37
		5	9140	8240		–	5.8	14	36
		6	9140	8240		–	4.9	13	35
		7	9140	8240		–	4.1	12	34
		8	9140	8240		–	3.8	12	34
		9	9140	8240		–	3.6	11	34
		10	9140	8240		–	3.5	11	34
	Level 2	15	9140	8240	18	1.3	3.2	11	–
		16	9140	8240		1.5	3.5	11	–
		20	9140	8240		1.2	3.1	11	–
		25	9140	8240		1.1	3.1	11	–
		28	9140	8240		1.4	3.3	11	–
		30	9140	8240		0.85	2.8	10	–
		35	9140	8240		1.1	3.1	11	–
		40	9140	8240		0.83	2.8	10	–
		45	9140	8240		1.1	3.0	11	–
		50	9140	8240		0.81	2.8	10	–

- ⌀ 1 With nominal input speed, service life is 20,000 hours.
- ⌀ 2 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output shaft center, at axial load 0)
- ⌀ 3 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output side bearing, at radial load 0)
- ⌀ 4 The maximum radial load the reducer can accept.
- ⌀ 5 The maximum axial load the reducer can accept.

AHL205

AHL205		Ø 1				Ø 2		Ø 3	
Frame size	Model	Ratio	Nominal output torque	Maximum output torque	Emergency stop torque	Nominal input speed	Maximum input speed	Permitted radial load	Permitted axial load
			[Nm]	[Nm]	[Nm]	[rpm]	[rpm]	[N]	[N]
205	Level 1	3	505	980	2218	1500	3000	5635	4335
		4	755	1410	2768	1500	3000	6235	4935
		5	755	1410	2768	1500	3000	6735	5435
		6	755	1410	2768	1500	3000	7135	5835
		7	755	1410	2768	1500	3000	7435	6335
		8	755	1410	2768	1500	3000	7835	6635
		9	505	980	2218	1500	3000	8135	7035
		10	505	980	2218	1500	3000	8435	7335
	Level 2	15	505	980	2218	1500	3000	9635	8735
		16	755	1410	2768	1500	3000	9835	8935
		20	755	1410	2768	1500	3000	11035	9935
		25	755	1410	2768	1500	3000	11035	11035
		28	755	1410	2768	1500	3000	12035	11035
		30	505	980	2218	1500	3000	12035	12035
		35	755	1410	2768	1500	3000	13035	13035
		40	755	1410	2768	1500	3000	13035	13035
		45	505	980	2218	1500	3000	14035	14035
		50	755	1410	2768	1500	3000	14035	14035
		60	755	1410	2768	1500	3000	15035	14035
		70	755	1410	2768	1500	3000	15035	14035
80	755	1410	2768	1500	3000	15035	14035		
90	505	980	2218	1500	3000	15035	14035		
100	505	980	2218	1500	3000	15035	14035		

Frame size	Model	Ratio	⌀ 4	⌀ 5	Weight	Moment of inertia (≤ ϕ 28)	Moment of inertia (≤ ϕ 38)	Moment of inertia (≤ ϕ 48)	Moment of inertia (≤ ϕ 65)
			[N]	[N]		[kgcm ²]	[kgcm ²]	[kgcm ²]	[kgcm ²]
205	Level 1	3	15045	14045	39	–	44	66	130
		4	15045	14045		–	28	50	110
		5	15045	14045		–	22	44	100
		6	15045	14045		–	18	41	100
		7	15045	14045		–	16	38	99
		8	15045	14045		–	15	37	97
		9	15045	14045		–	14	36	97
		10	15045	14045		–	14	36	96
	Level 2	15	15045	14045	40	4.7	12	34	–
		16	15045	14045		5.4	13	35	–
		20	15045	14045		4.4	12	34	–
		25	15045	14045		4.2	12	34	–
		28	15045	14045		4.9	13	35	–
		30	15045	14045		3.2	11	33	–
		35	15045	14045		4.1	12	34	–
		40	15045	14045		3.2	11	33	–
		45	15045	14045		4.0	12	34	–
		50	15045	14045		3.1	11	33	–

- ⌀ 1 With nominal input speed, service life is 20,000 hours.
- ⌀ 2 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output shaft center, at axial load 0)
- ⌀ 3 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output side bearing, at radial load 0)
- ⌀ 4 The maximum radial load the reducer can accept.
- ⌀ 5 The maximum axial load the reducer can accept.

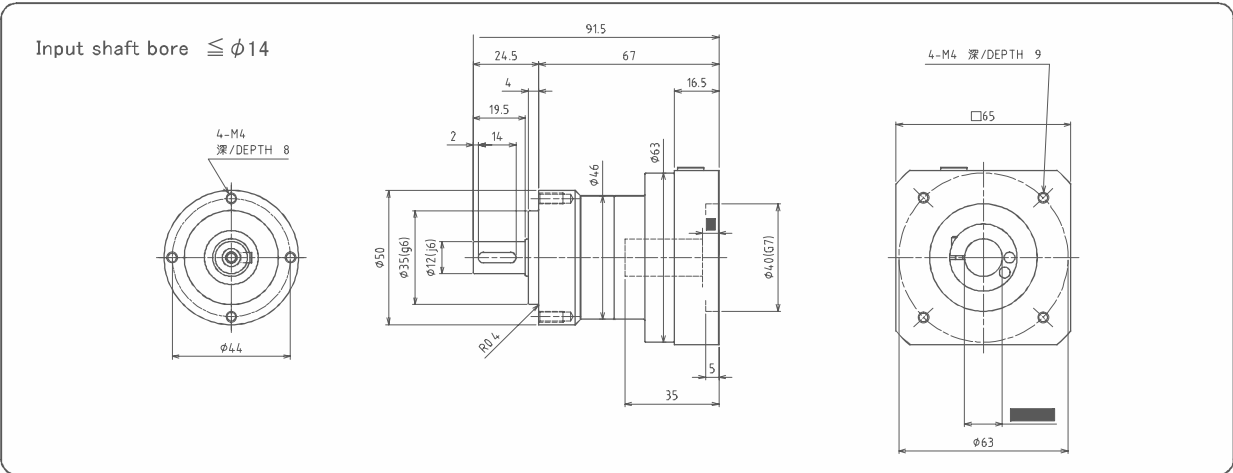
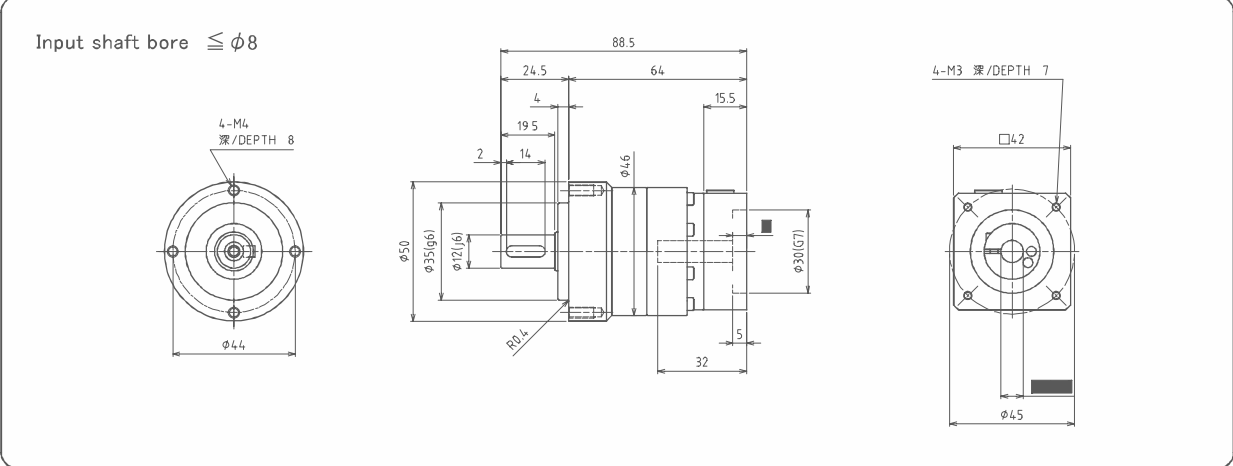
AHL235

Frame size	Model	Ratio	Ø 1			Ø 2		Ø 3	
			Nominal output torque	Maximum output torque	Emergency stop torque	Nominal input speed	Maximum input speed	Permitted radial load	Permitted axial load
			[Nm]	[Nm]	[Nm]	[rpm]	[rpm]	[N]	[N]
235	Level 1	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
	Level 2	10	1000	1600	4000	1000	2000	8700	11000
		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

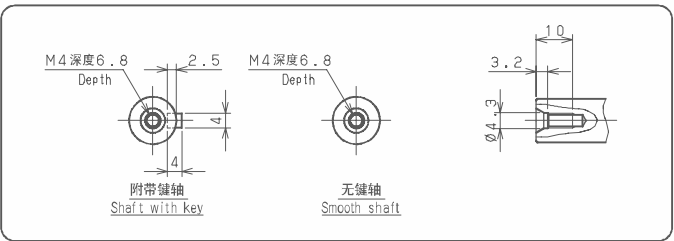
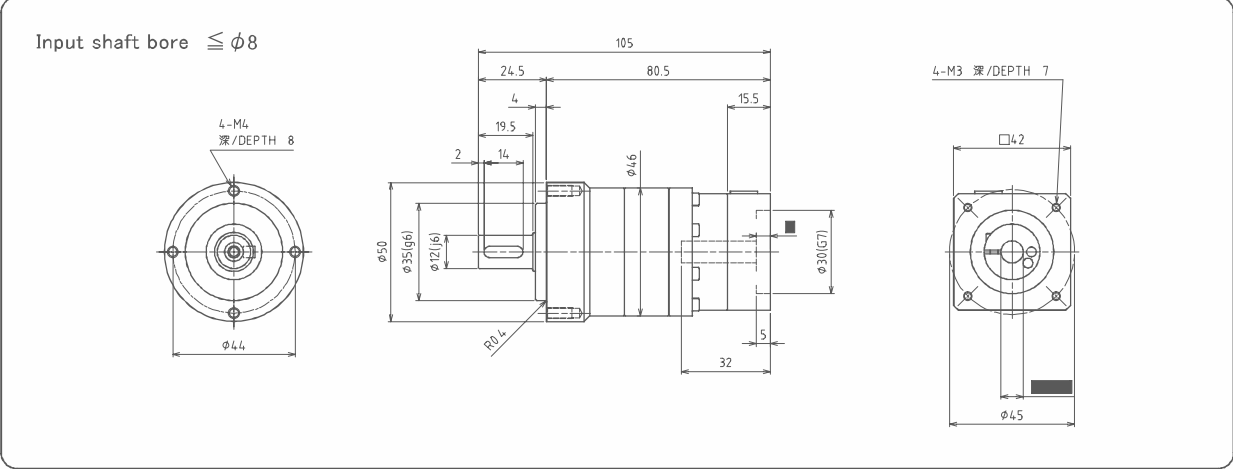
Frame size	Model	Ratio	Ø 4		Weight	Ø 5		
			Maximum radial load	Maximum axial load		Moment of inertia (≤ φ38)	Moment of inertia (≤ φ48)	Moment of inertia (≤ φ65)
			[N]	[N]		[kgcm ²]	[kgcm ²]	[kgcm ²]
235	Level 1	3	15000	14000	55	—	90	150
		4	15000	14000		—	62	120
		5	15000	14000		—	52	110
		6	15000	14000		—	47	110
		7	15000	14000		—	42	100
		8	15000	14000		—	40	100
		9	15000	14000		—	39	99
	Level 2	10	15000	14000	37	—	38	98
		15	15000	14000		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	—

- Ø 1 With nominal input speed, service life is 20,000 hours.
- Ø 2 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output shaft center, at axial load 0)
- Ø 3 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output side bearing, at radial load 0)
- Ø 4 The maximum radial load the reducer can accept.
- Ø 5 The maximum axial load the reducer can accept.
- Ø 6 Operating temperature is -20℃-175℃

AHL-050 Level1

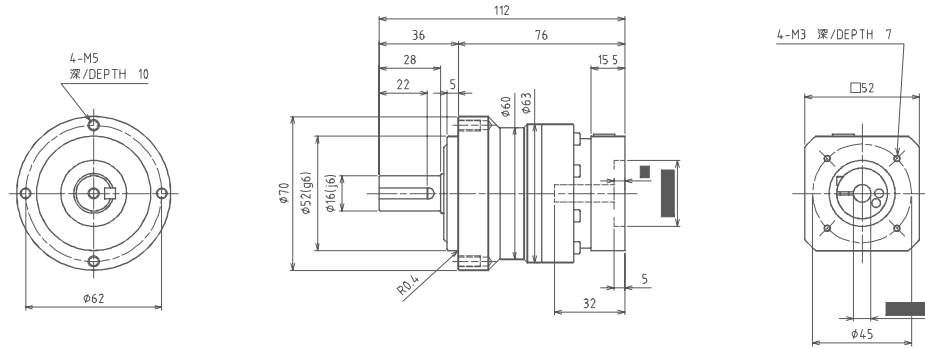


AHL-050 Level2

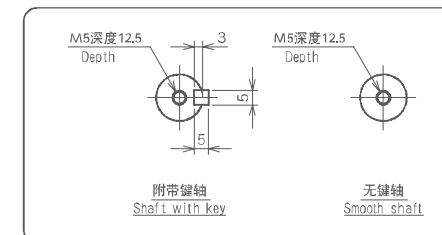
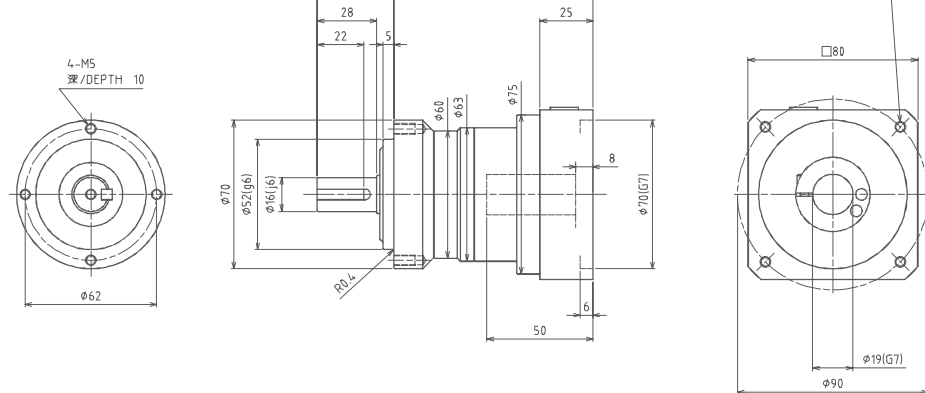
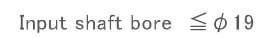
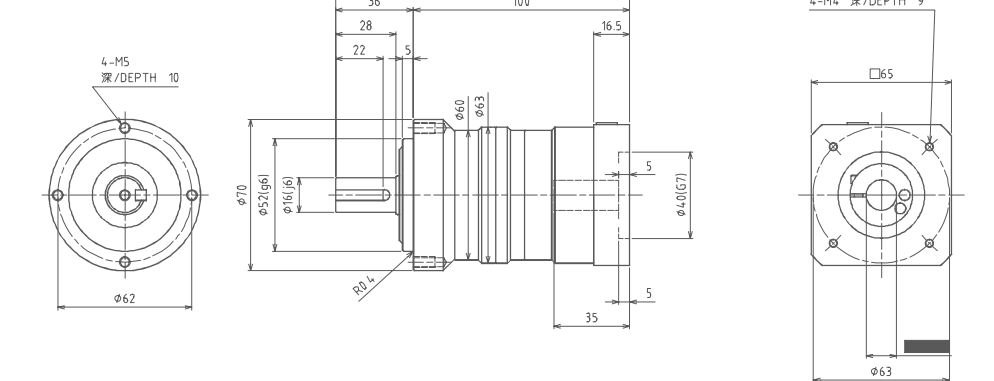
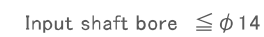
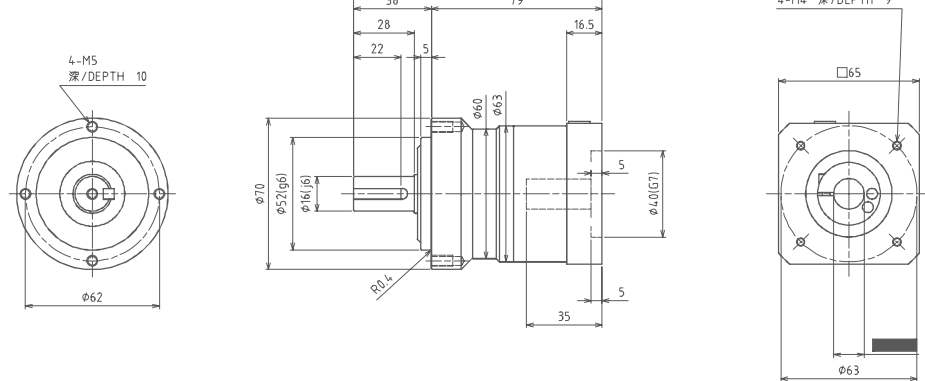
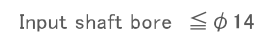
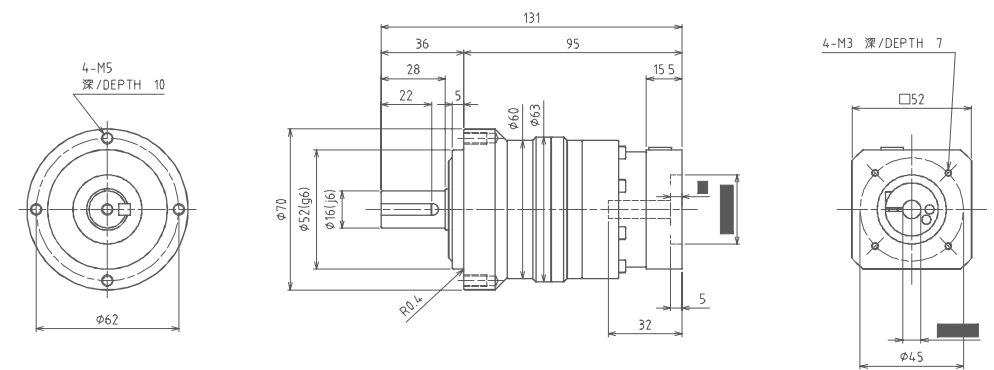


Note1: The body size varies with the installation of the motor.
Note2: When the shaft diameter of the motor is different from the input shaft diameter, the shaft sleeve can be inserted.

AHL-070 Level 1

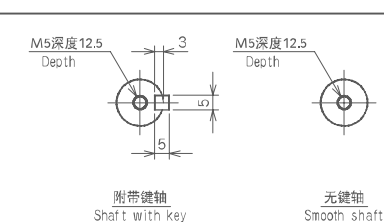


AHL-070 Level2



Note1: The body size varies with the installation of the motor.

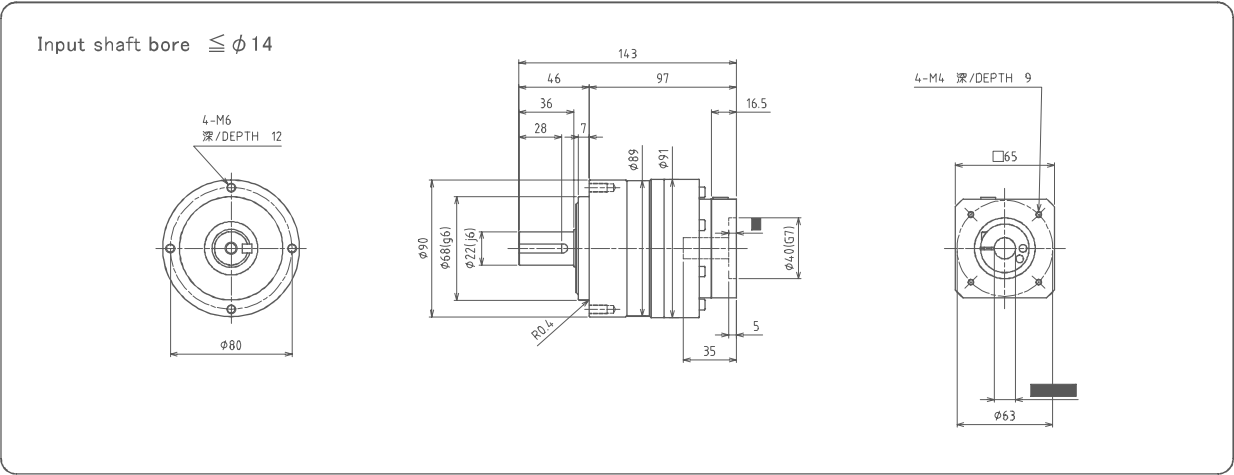
Note2: When the shaft diameter of the motor is different from the input shaft diameter, the shaft sleeve can be inserted.



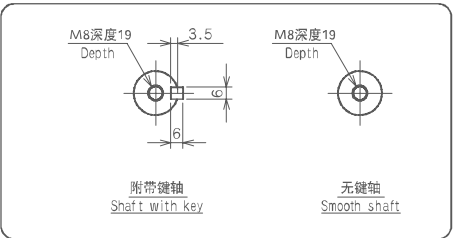
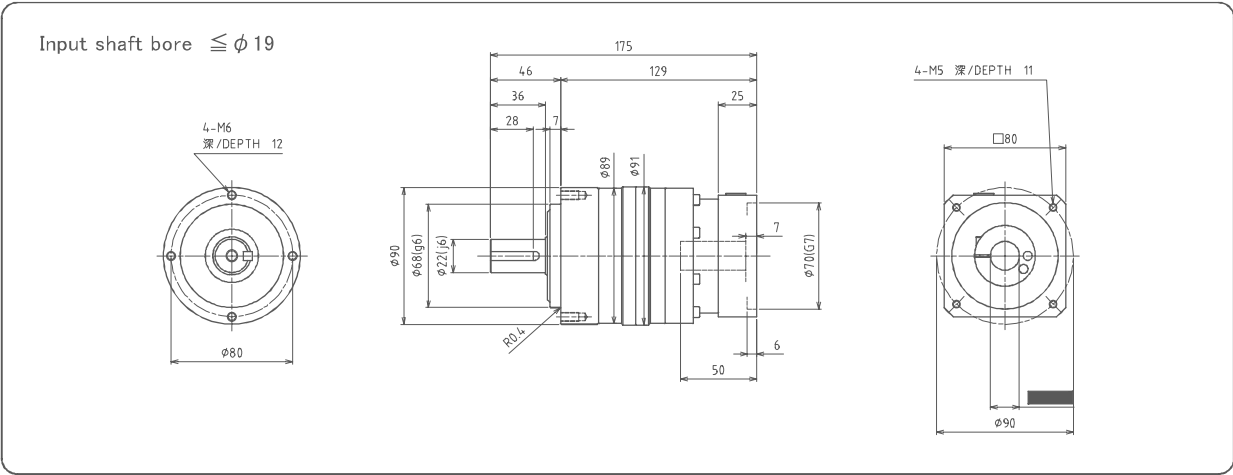
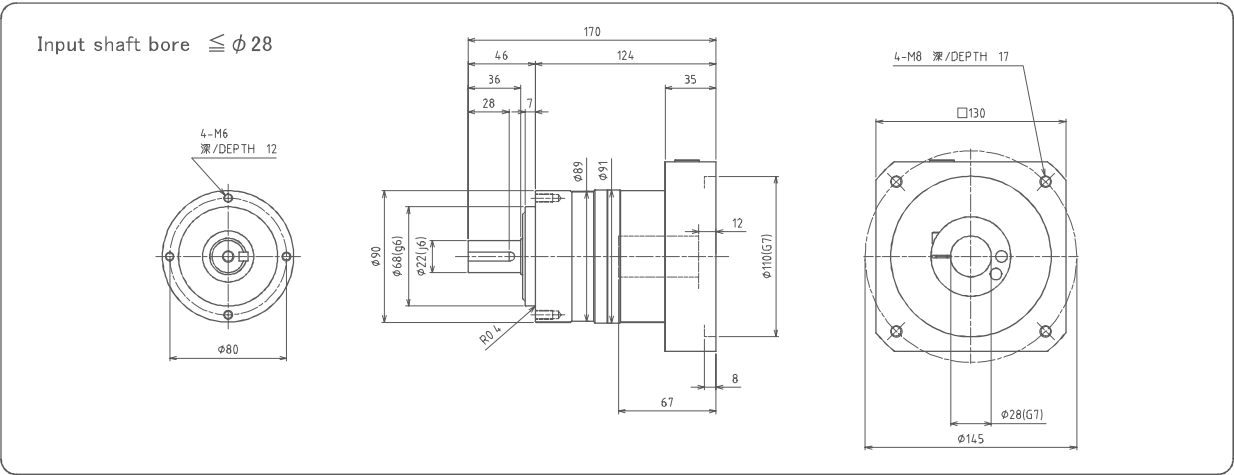
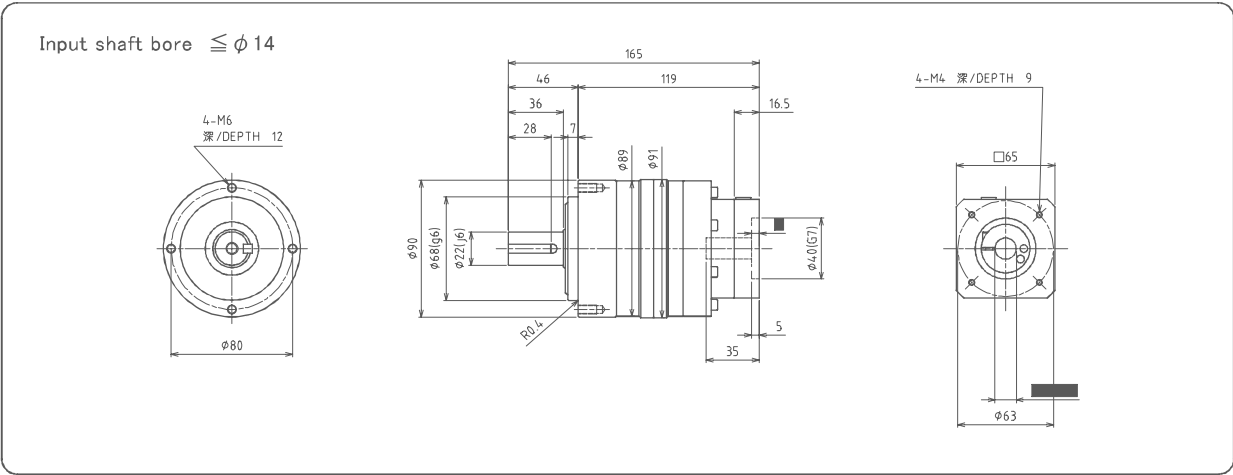
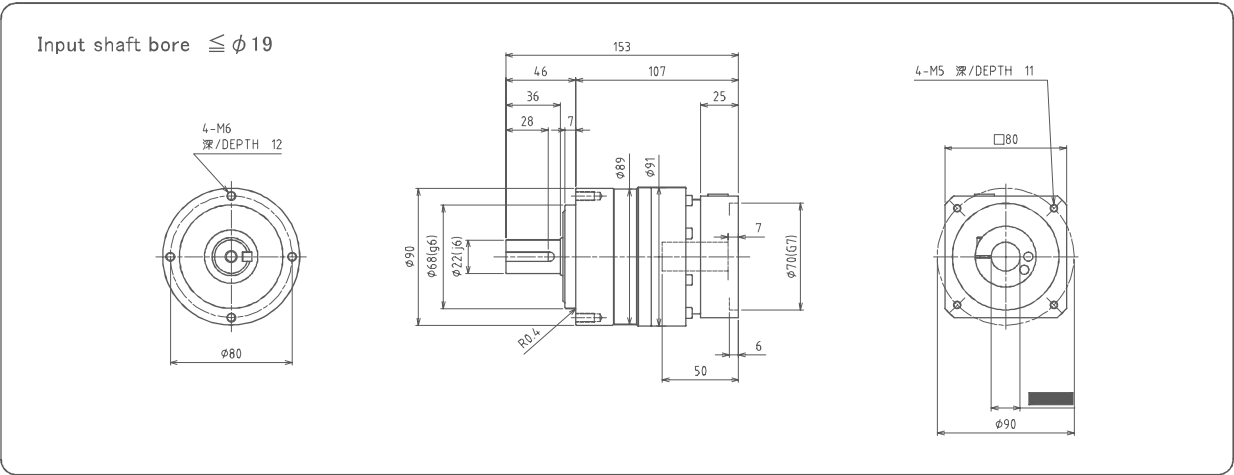
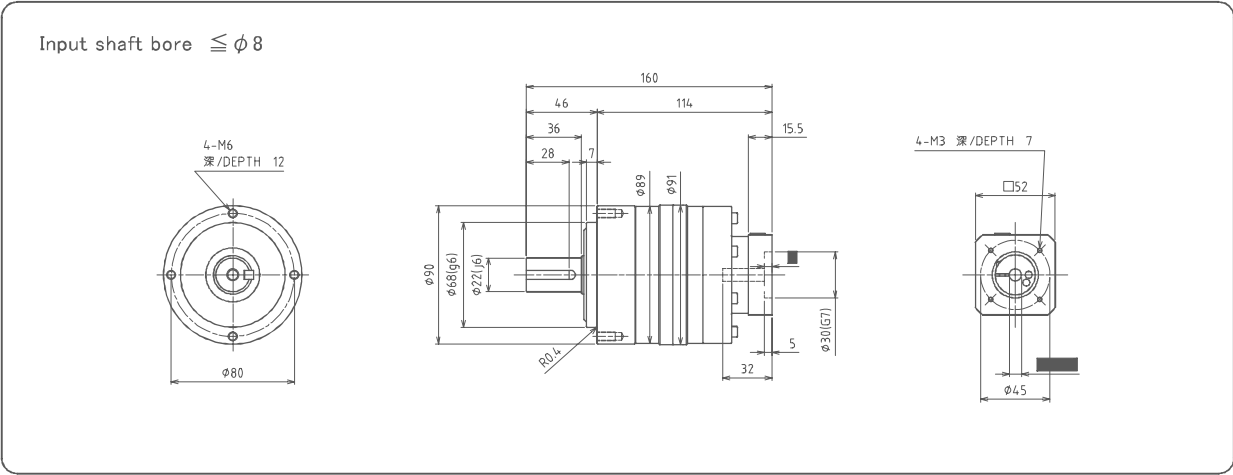
Note1: The body size varies with the installation of the motor.

Note2: When the shaft diameter of the motor is different from the input shaft diameter, the shaft sleeve can be inserted.

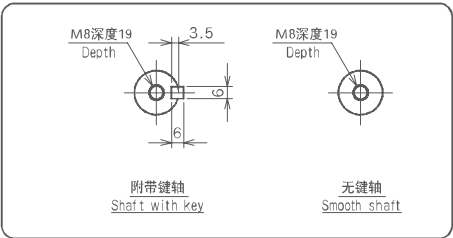
AHL-090 Level1



AHL-090 Level2

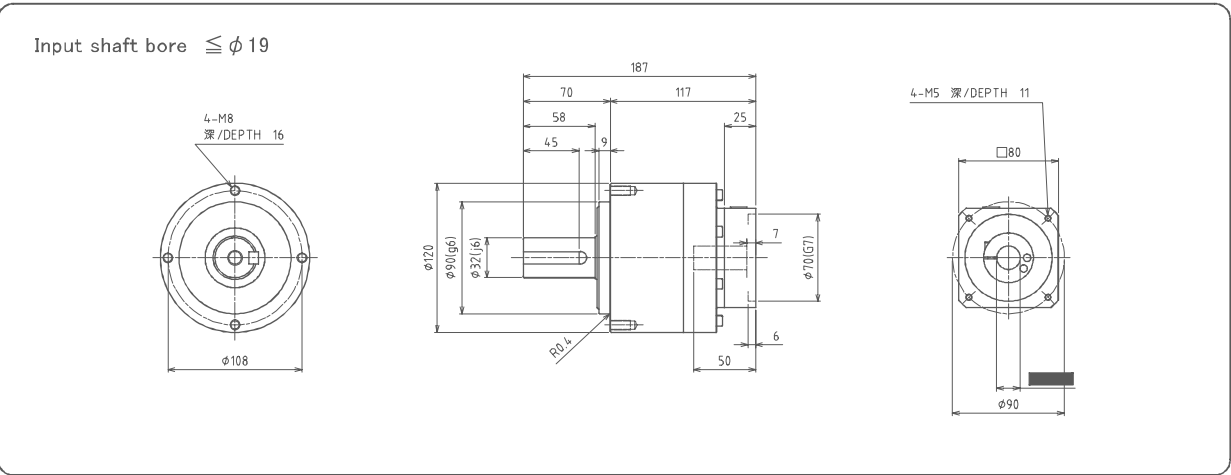


Note1: The body size varies with the installation of the motor.
Note2: When the shaft diameter of the motor is different from the input shaft diameter, the shaft sleeve can be inserted.

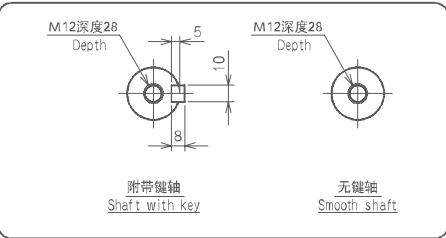
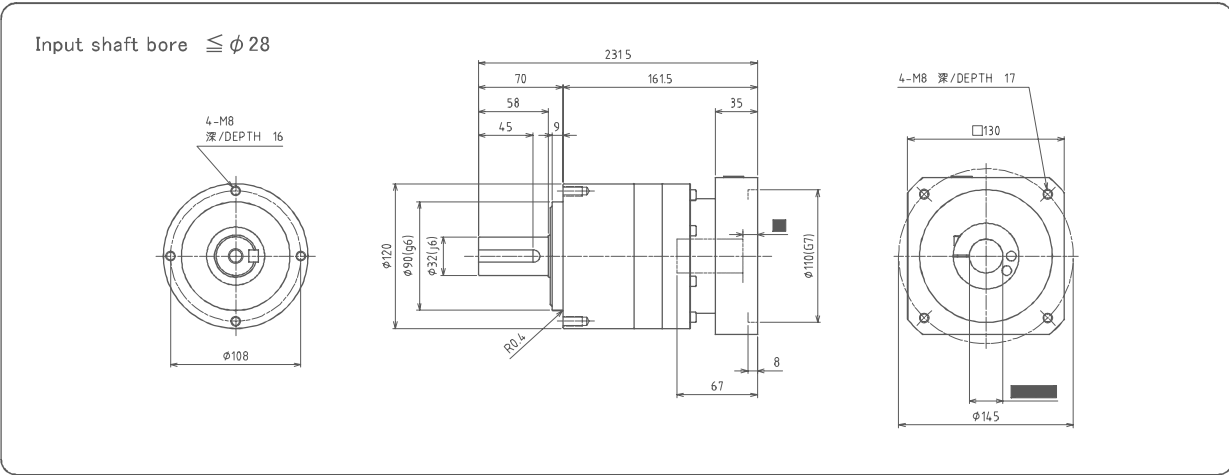
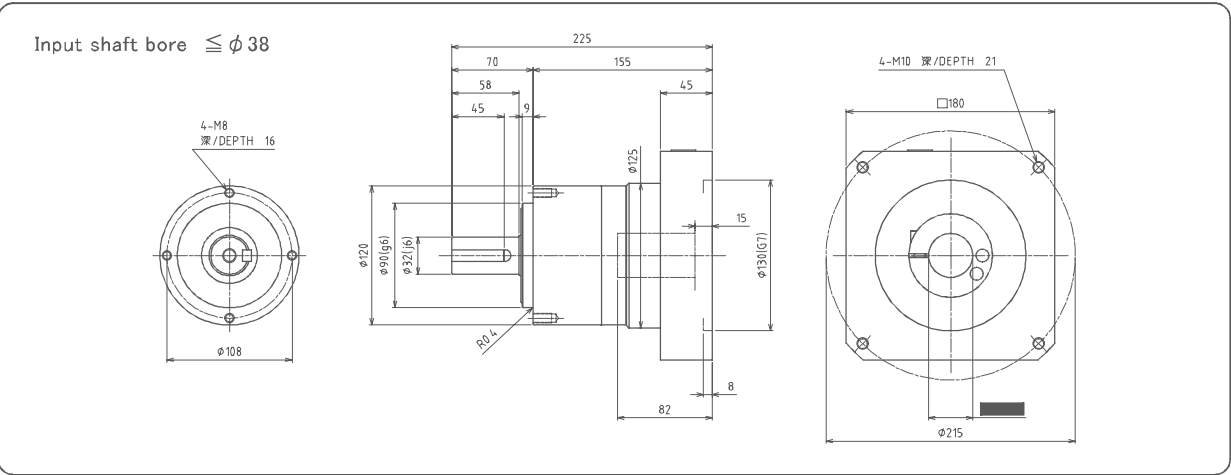
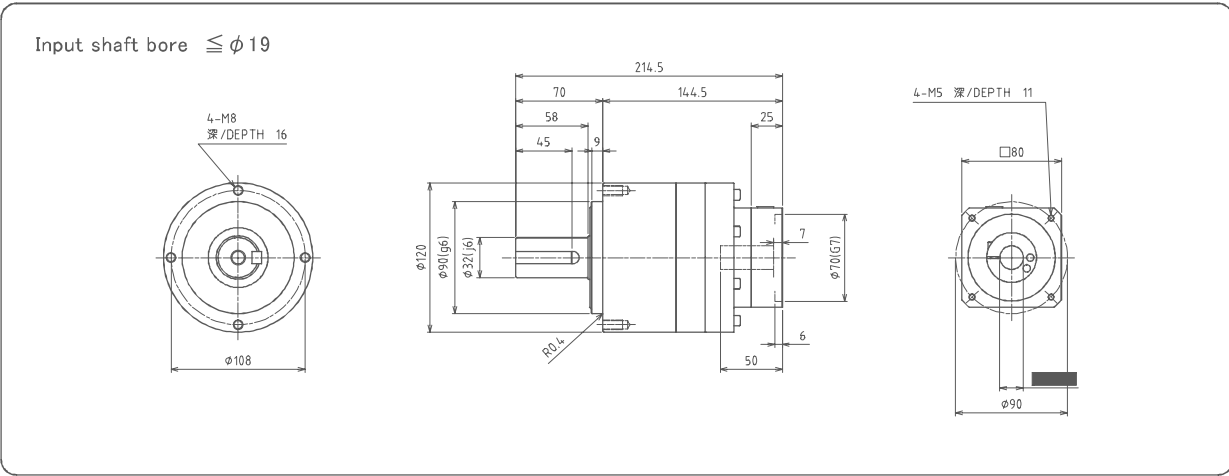
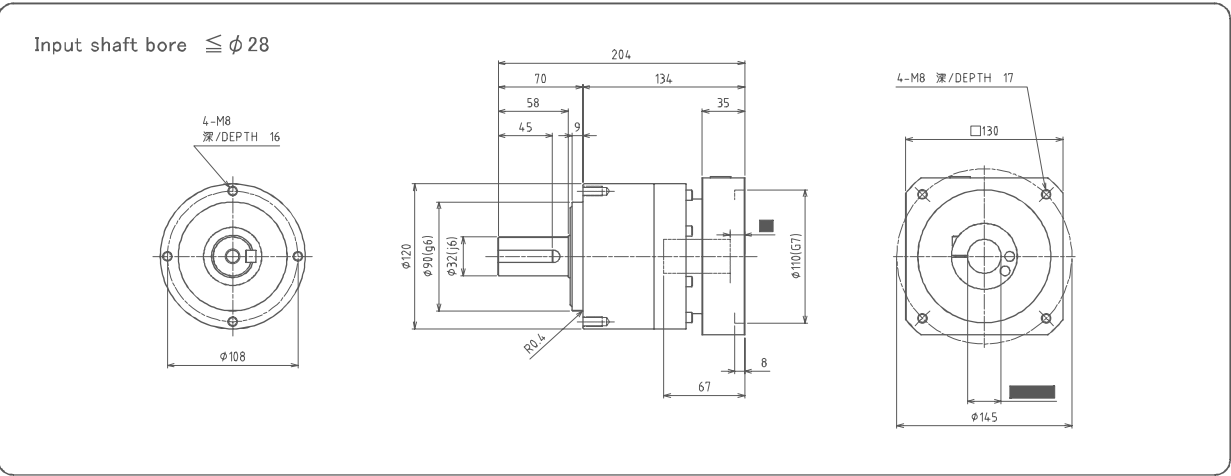
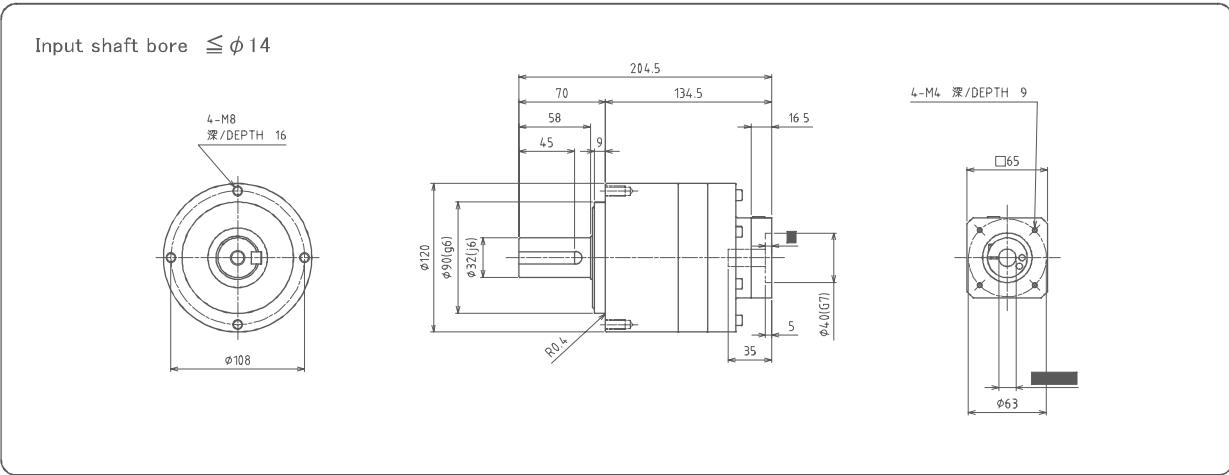


Note1: The body size varies with the installation of the motor.
Note2: When the shaft diameter of the motor is different from the input shaft diameter, the shaft sleeve can be inserted.

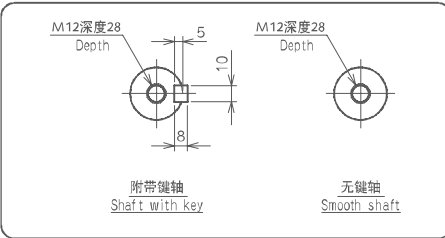
AHL-120 Level1



AHL-120 Level2

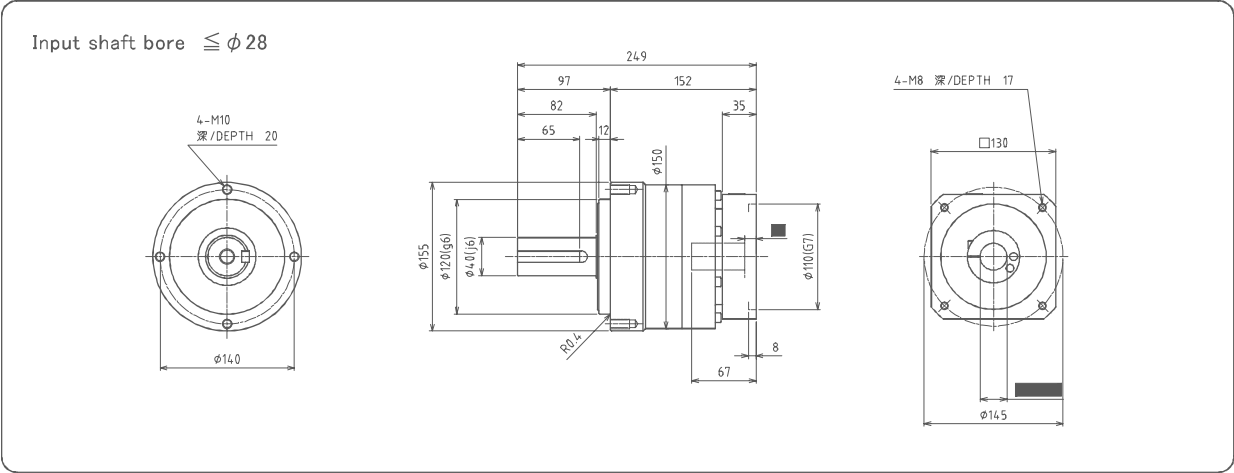


Note1: The body size varies with the installation of the motor.
Note2: When the shaft diameter of the motor is different from the input shaft diameter, the shaft sleeve can be inserted.

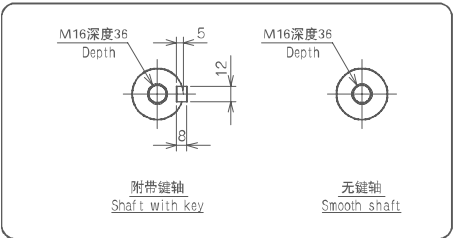
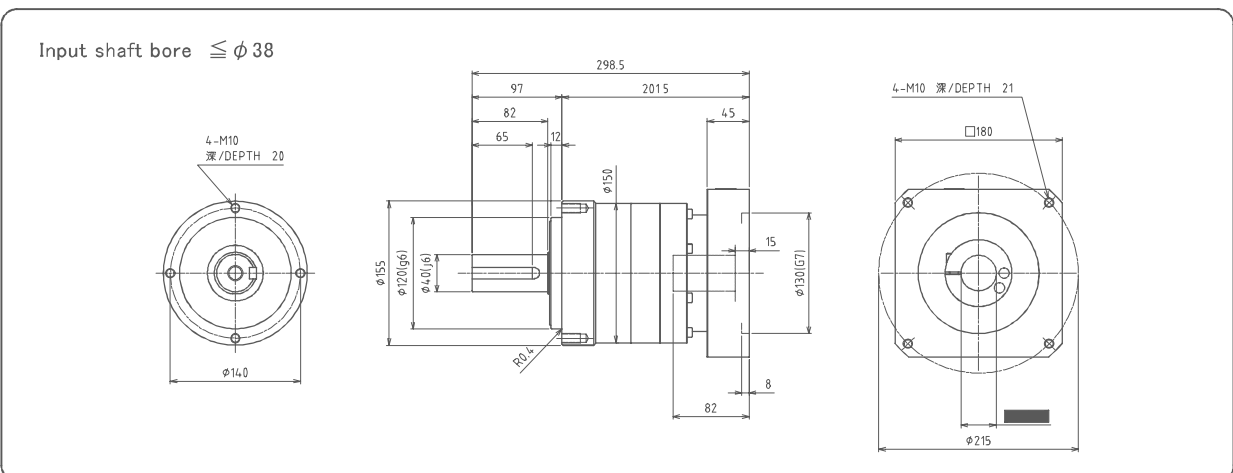
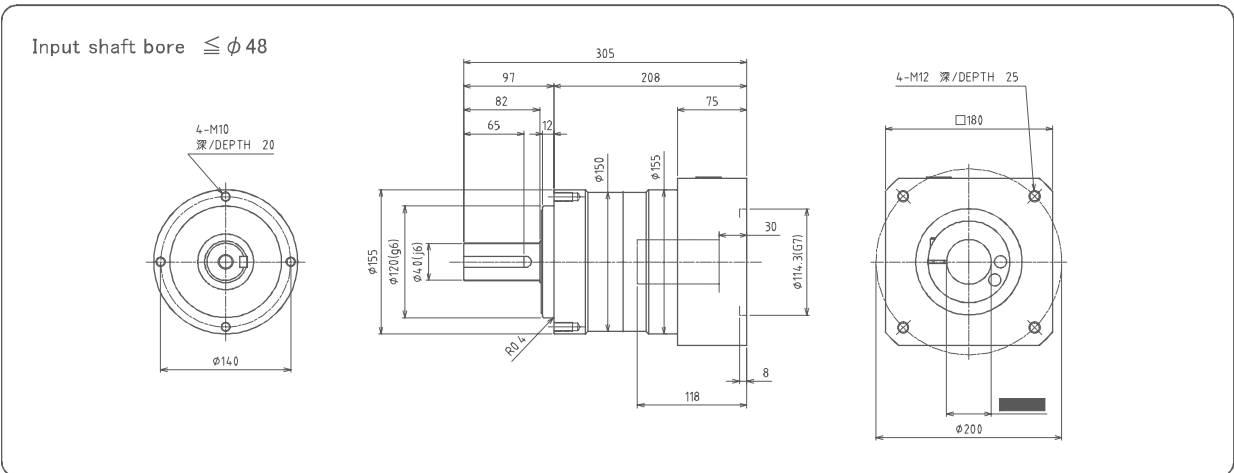
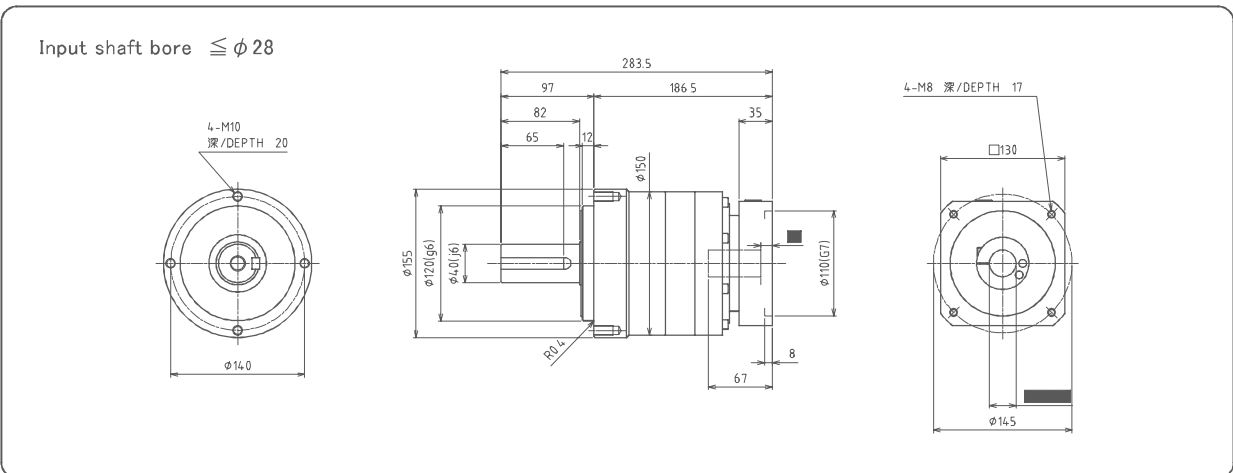
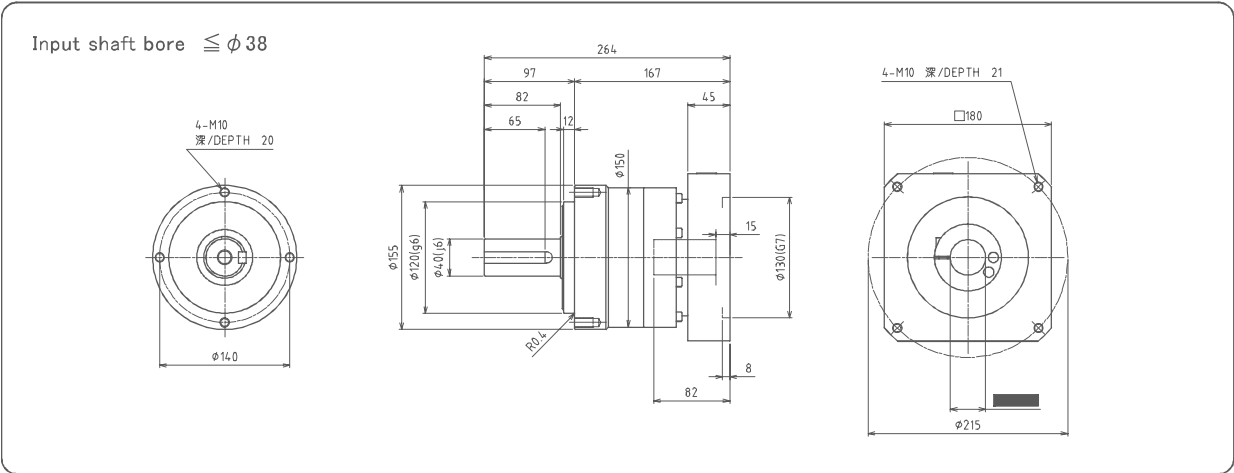
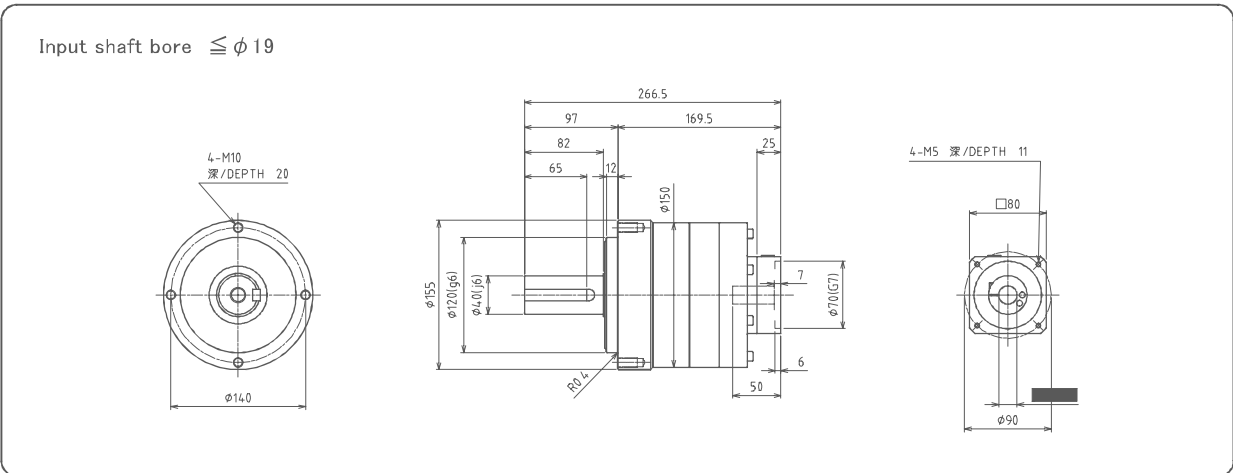


Note1: The body size varies with the installation of the motor.
Note2: When the shaft diameter of the motor is different from the input shaft diameter, the shaft sleeve can be inserted.

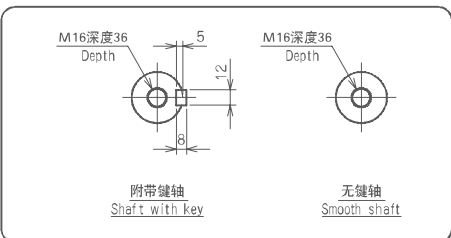
AHL-155 Level1



AHL-155 Level2

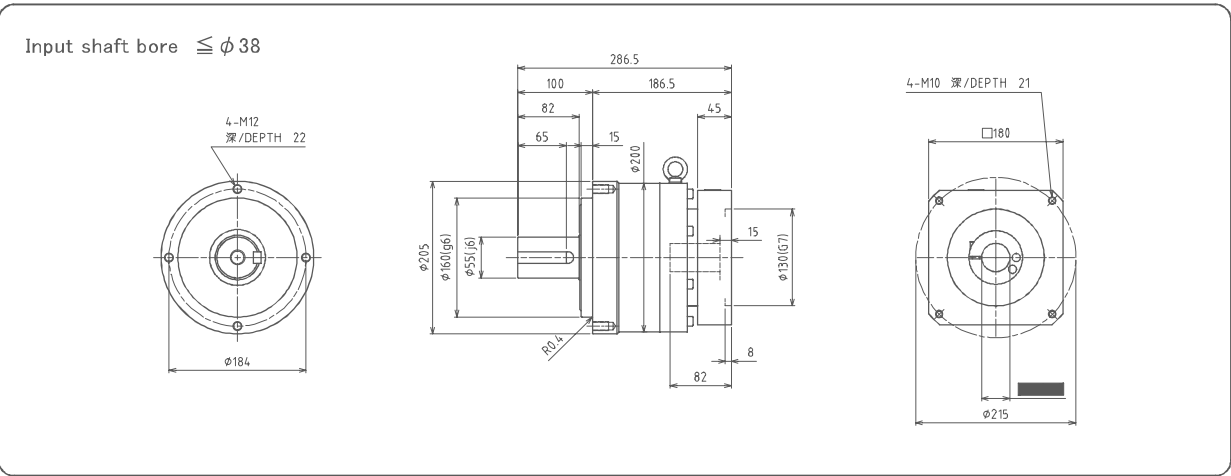


Note1: The body size varies with the installation of the motor.
Note2: When the shaft diameter of the motor is different from the input shaft diameter, the shaft sleeve can be inserted.

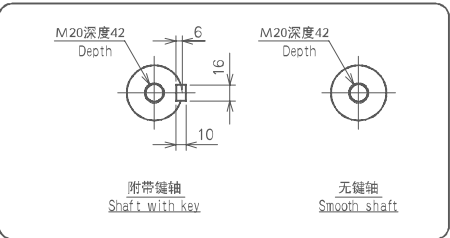
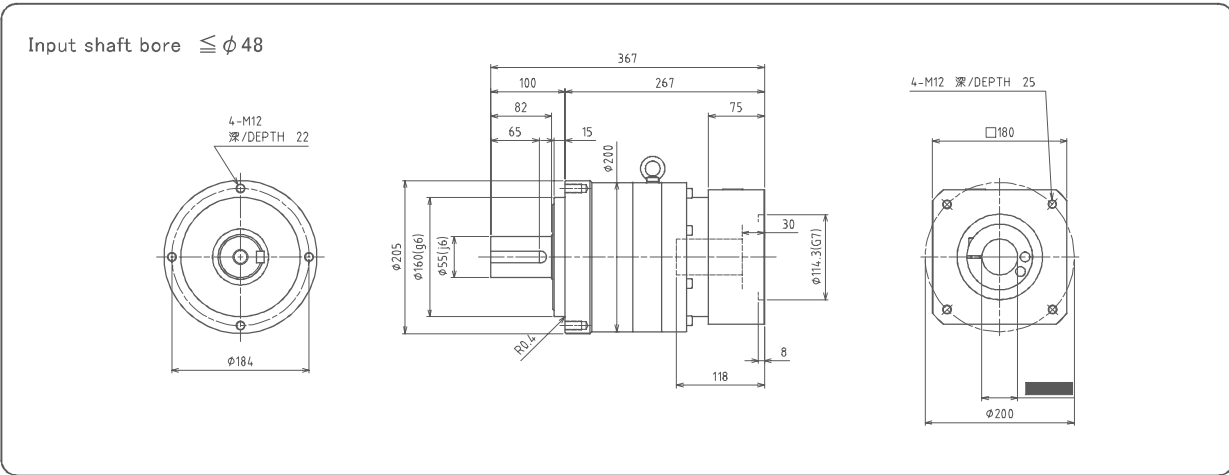
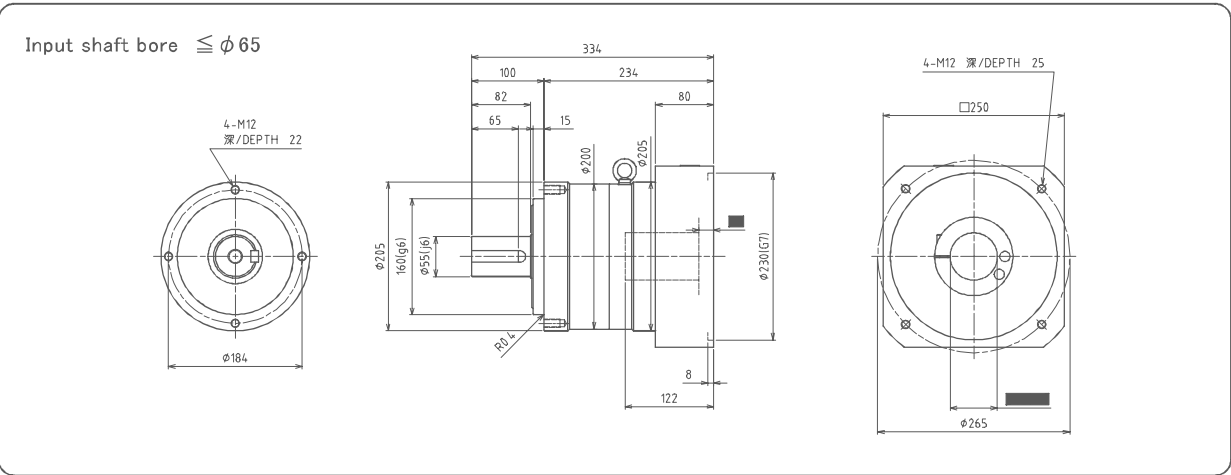
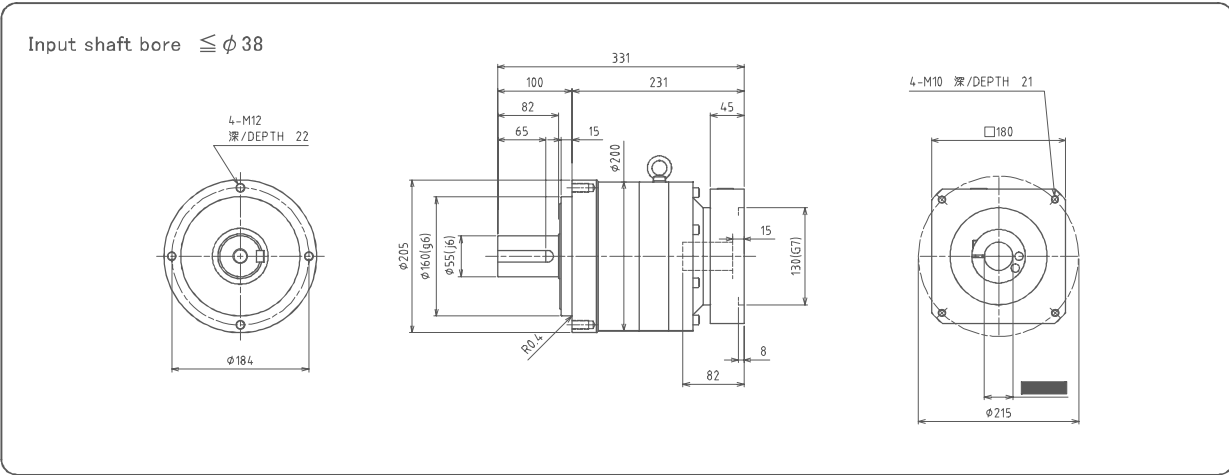
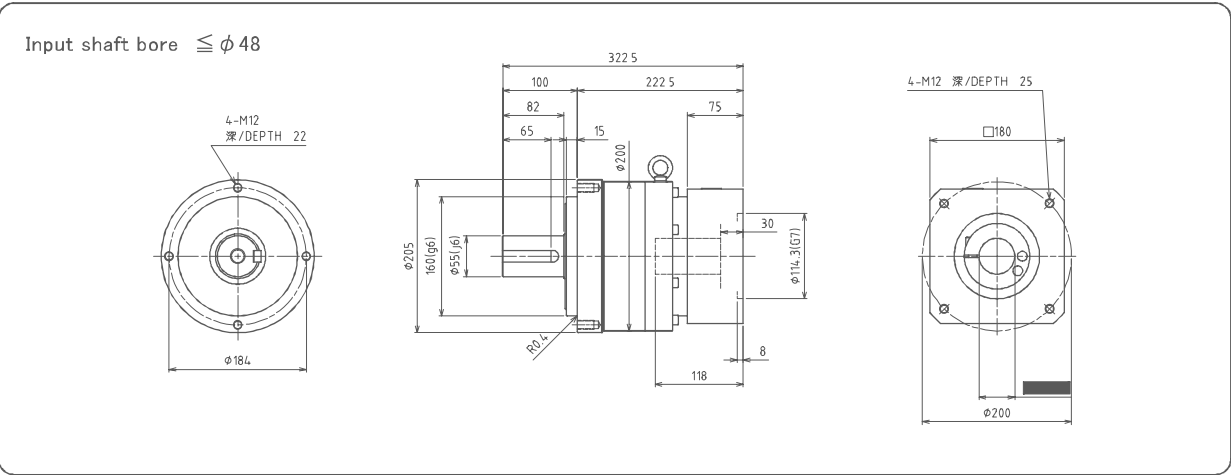
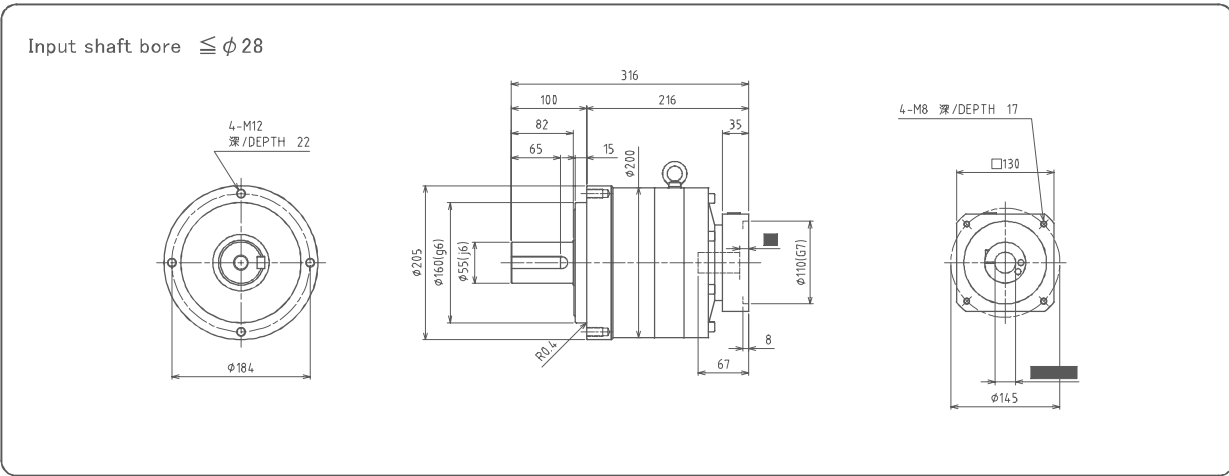


Note1: The body size varies with the installation of the motor.
Note2: When the shaft diameter of the motor is different from the input shaft diameter, the shaft sleeve can be inserted.

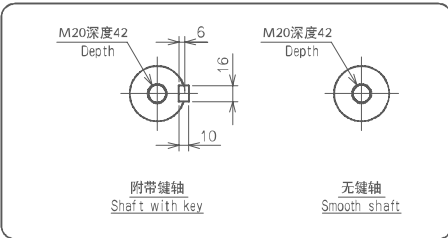
AHL-205 Level1



AHL-205 Level2

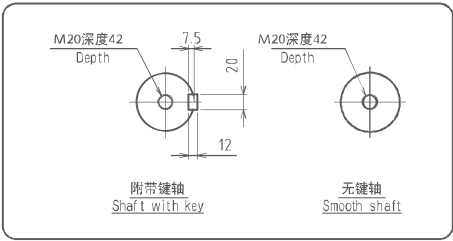
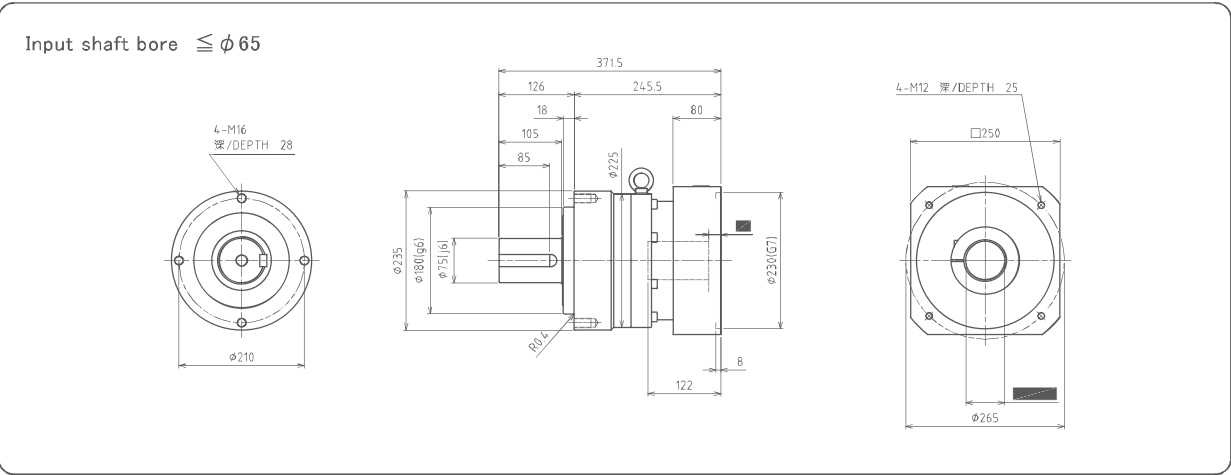
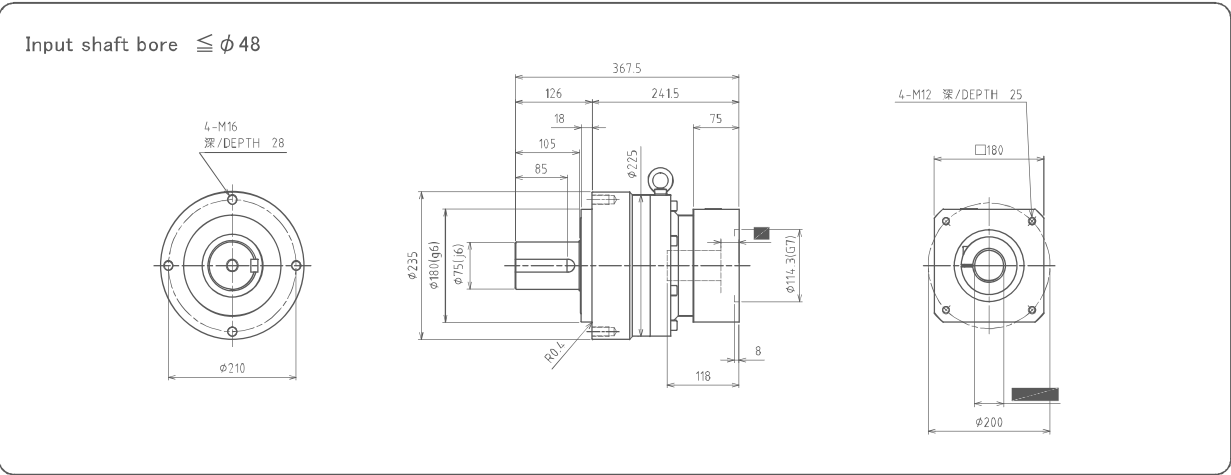


Note1: The body size varies with the installation of the motor.
Note2: When the shaft diameter of the motor is different from the input shaft diameter, the shaft sleeve can be inserted.



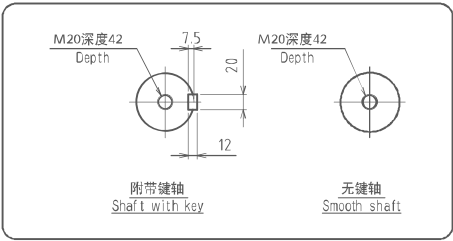
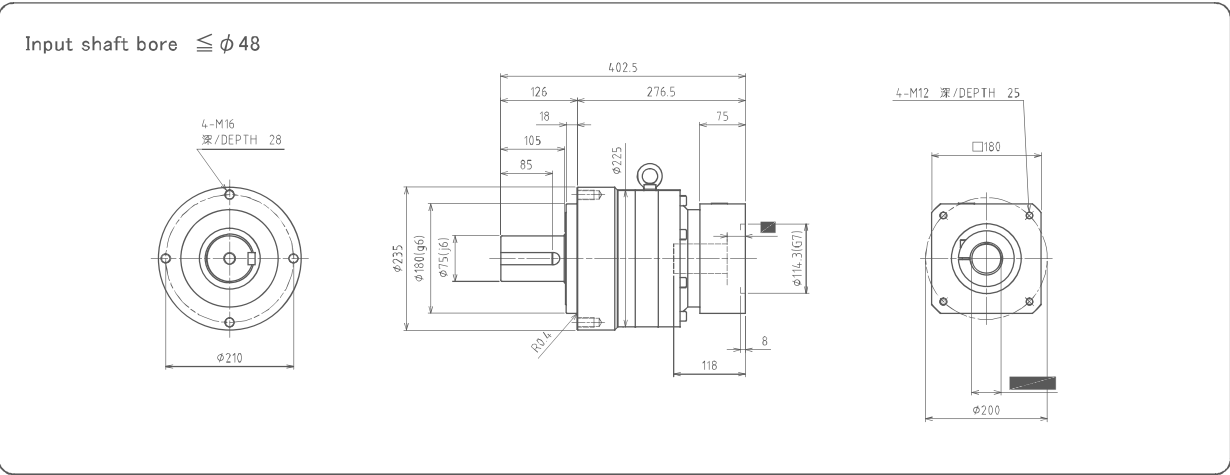
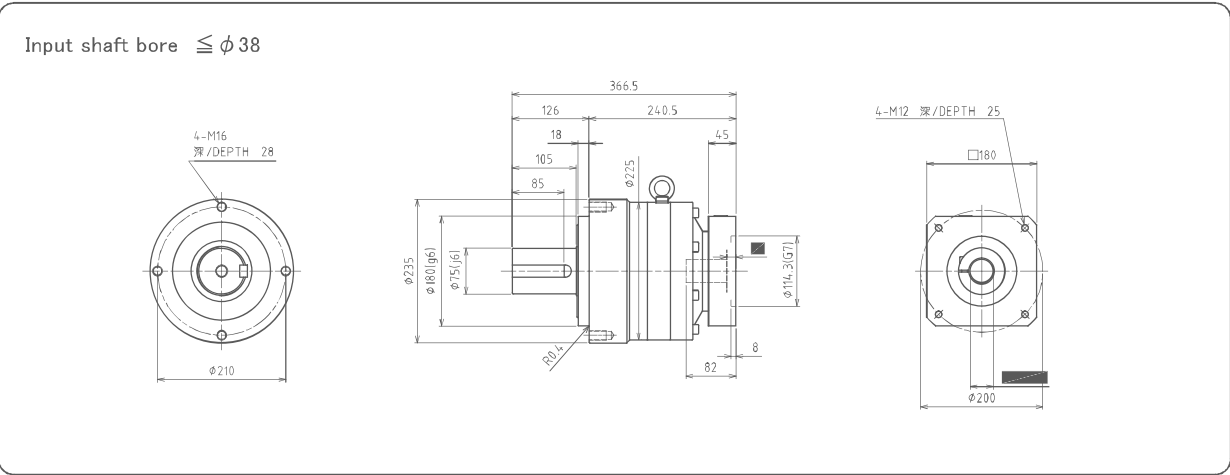
Note1: The body size varies with the installation of the motor.
Note2: When the shaft diameter of the motor is different from the input shaft diameter, the shaft sleeve can be inserted.

AHL-235 Level1



Note1: The body size varies with the installation of the motor.
Note2: When the shaft diameter of the motor is different from the input shaft diameter, the shaft sleeve can be inserted.

AHL-235 Level2



Note1: The body size varies with the installation of the motor.
Note2: When the shaft diameter of the motor is different from the input shaft diameter, the shaft sleeve can be inserted.

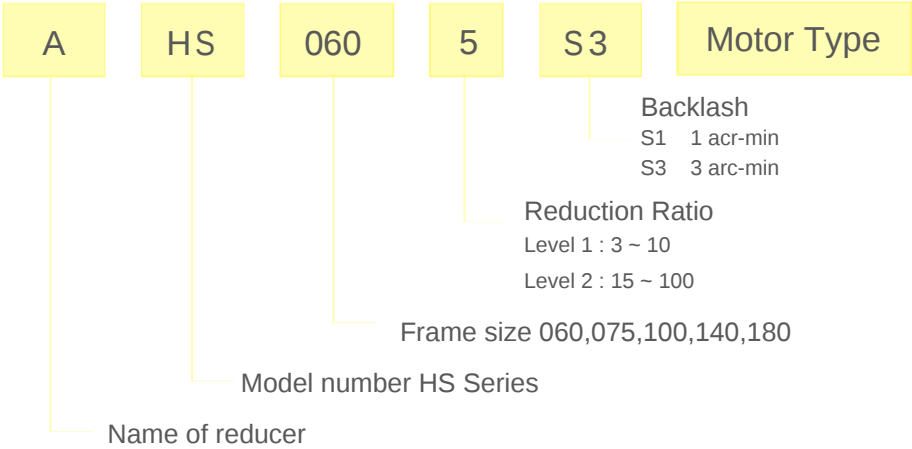
AHSSeries



Features

- 1 The main bearing uses tapered roller bearings to achieve high load capacity
- 2 The backlash is less than 3 arc-min with accurate positioning.
- 3 The use of integral ball bearings greatly improves rigidity and torque.
- 4 Applicable to all kinds of motors
- 5 Effectively prevent grease leakage by using grease with high viscosity and anti-separation.
- 6 No need to change the grease during the life of the product, making installation easier

Model number



AHS060

Frame size	Model	Ratio	φ 1			φ 2		φ 3	
			Nominal output torque [Nm]	Maximum output torque [Nm]	Emergency stop torque [Nm]	Nominal input speed [rpm]	Maximum input speed [rpm]	Permitted radial load [N]	Permitted axial load [N]
060	Level 1	3	20	40	90	3000	6000	1725	2325
		4	29	55	110	3000	6000	1925	2525
		5	29	55	110	3000	6000	2025	2725
		6	29	55	110	3000	6000	2125	2725
		7	29	55	110	3000	6000	2225	2725
		8	29	55	110	3000	6000	2325	2725
		9	20	40	90	3000	6000	2425	2725
		10	20	40	90	3000	6000	2425	2725
		15	20	40	90	3000	6000	2825	2725
		16	29	55	110	3000	6000	2825	2725
	Level 2	20	29	55	110	3000	6000	3025	2725
		25	29	55	110	3000	6000	3025	2725
		28	29	55	110	3000	6000	3025	2725
		30	20	40	90	3000	6000	3025	2725
		35	29	55	110	3000	6000	3025	2725
		40	29	55	110	3000	6000	3025	2725
		45	20	40	90	3000	6000	3025	2725
		50	29	55	110	3000	6000	3025	2725
		60	29	55	110	3000	6000	3025	2725
		70	29	55	110	3000	6000	3025	2725
		80	29	55	110	3000	6000	3025	2725
		90	20	40	90	3000	6000	3025	2725
		100	20	40	90	3000	6000	3025	2725

Frame size	Model	Ratio	φ 4		Weight [kg]	φ 5			φ 6	
			Maximum radial load [N]	Maximum axial load [N]		Moment of inertia (≤ φ 8) [kgcm ²]	Moment of inertia (≤ φ 14) [kgcm ²]	Moment of inertia (≤ φ 19) [kgcm ²]	Operating temperature	
060	Level 1	3	3030	2730	1.6	0.15	0.23	0.44	- 20℃ ~ 90℃	
		4	3030	2730		0.10	0.18	0.39		
		5	3030	2730		0.080	0.16	0.37		
		6	3030	2730		0.070	0.15	0.36		
		7	3030	2730		0.064	0.14	0.35		
		8	3030	2730		0.060	0.14	0.35		
		9	3030	2730		0.058	0.14	0.35		
		10	3030	2730		0.056	0.14	0.34		
	Level 2	15	3030	2730	1.8	0.055	0.14	—		
		16	3030	2730		0.057	0.14	—		
		20	3030	2730		0.054	0.13	—		
		25	3030	2730		0.053	0.13	—		
		28	3030	2730		0.055	0.14	—		
		30	3030	2730		0.049	0.13	—		
		35	3030	2730		0.053	0.13	—		
		40	3030	2730		0.049	0.13	—		
		45	3030	2730		0.053	0.13	—		
		50	3030	2730		0.049	0.13	—		
		60	3030	2730		0.049	0.13	—		
		70	3030	2730		0.049	0.13	—		
		80	3030	2730		0.049	0.13	—		
		90	3030	2730		0.049	0.13	—		
		100	3030	2730		0.049	0.13	—		

- φ 1 With nominal input speed, service life is 20,000 hours.
- φ 2 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output shaft center, at axial load 0)
- φ 3 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output side bearing, at radial load 0)
- φ 4 The maximum radial load the reducer can accept.
- φ 5 The maximum axial load the reducer can accept.

AHS075

Frame size	Model	Ratio	⌀ 1			⌀ 2		⌀ 3	
			Nominal output torque	Maximum output torque	Emergency stop torque	Nominal input speed	Maximum input speed	Permitted radial load	Permitted axial load
			[Nm]	[Nm]	[Nm]	[rpm]	[rpm]	[N]	[N]
075	Level 1	3	55	85	210	3000	6000	2330	3430
		4	80	130	260	3000	6000	2530	3730
		5	80	130	260	3000	6000	2730	3930
		6	80	130	260	3000	6000	2830	3930
		7	80	130	260	3000	6000	3030	3930
		8	80	130	260	3000	6000	3130	3930
		9	55	85	210	3000	6000	3230	3930
		10	55	85	210	3000	6000	3330	3930
	Level 2	15	55	85	210	3000	6000	3730	3930
		16	80	130	260	3000	6000	3830	3930
		20	80	130	260	3000	6000	4030	3930
		25	80	130	260	3000	6000	4330	3930
		28	80	130	260	3000	6000	4330	3930
		30	55	85	210	3000	6000	4330	3930
		35	80	130	260	3000	6000	4330	3930
		40	80	130	260	3000	6000	4330	3930
		45	55	85	210	3000	6000	4330	3930
		50	80	130	260	3000	6000	4330	3930

Frame size	Model	Ratio	⌀ 4	⌀ 5	Weight	Moment of inertia (≤ ϕ 8)	Moment of inertia (≤ ϕ 14)	Moment of inertia (≤ ϕ 19)	Moment of inertia (≤ ϕ 28)
			Maximum radial load	Maximum axial load		[kgcm ²]	[kgcm ²]	[kgcm ²]	[kgcm ²]
075	Level 1	3	4335	3935	3.4	–	0.67	1.1	3.1
		4	4335	3935		–	0.47	0.93	2.9
		5	4335	3935		–	0.38	0.85	2.9
		6	4335	3935		–	0.34	0.81	2.8
		7	4335	3935		–	0.31	0.78	2.8
		8	4335	3935		–	0.30	0.76	2.8
		9	4335	3935		–	0.29	0.75	2.8
		10	4335	3935		–	0.29	0.75	2.8
	Level 2	15	4335	3935	3.8	0.13	0.28	0.72	–
		16	4335	3935		0.14	0.30	0.73	–
		20	4335	3935		0.13	0.28	0.72	–
		25	4335	3935		0.12	0.28	0.71	–
		28	4335	3935		0.14	0.29	0.73	–
		30	4335	3935		0.099	0.25	0.70	–
		35	4335	3935		0.12	0.27	0.71	–
		40	4335	3935		0.098	0.25	0.69	–
		45	4335	3935		0.12	0.27	0.71	–
		50	4335	3935		0.098	0.25	0.69	–

- ⌀ 1 With nominal input speed, service life is 20,000 hours.
- ⌀ 2 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output shaft center, at axial load 0)
- ⌀ 3 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output side bearing, at radial load 0)
- ⌀ 4 The maximum radial load the reducer can accept.
- ⌀ 5 The maximum axial load the reducer can accept.

AHS100

Frame size	Model	Ratio	⌀ 1			⌀ 2		⌀ 3	
			Nominal output torque	Maximum output torque	Emergency stop torque	Nominal input speed	Maximum input speed	Permitted radial load	Permitted axial load
			[Nm]	[Nm]	[Nm]	[rpm]	[rpm]	[N]	[N]
100	Level 1	3	124	230	515	3000	6000	3435	4835
		4	124	335	640	3000	6000	3735	5235
		5	184	335	630	3000	6000	4035	5635
		6	184	335	630	3000	6000	4235	5935
		7	184	335	630	3000	6000	4435	6135
		8	184	335	630	3000	6000	4635	6335
		9	124	230	505	3000	6000	4835	6335
		10	124	230	505	3000	6000	4935	6335
	Level 2	15	124	230	505	3000	6000	5635	6335
		16	184	335	630	3000	6000	5735	6335
		20	184	335	630	3000	6000	6135	6335
		25	184	335	630	3000	6000	6535	6335
		28	184	335	630	3000	6000	6735	6335
		30	124	230	505	3000	6000	6935	6335
		35	184	335	630	3000	6000	7035	6335
		40	184	335	630	3000	6000	7035	6335
		45	124	230	505	3000	6000	7035	6335
		50	184	335	630	3000	6000	7035	6335

Frame size	Model	Ratio	⌀ 4	⌀ 5	Weight	Moment of inertia (≤ ϕ 14)	Moment of inertia (≤ ϕ 19)	Moment of inertia (≤ ϕ 28)	Moment of inertia (≤ ϕ 38)
			Maximum radial load	Maximum axial load		[kgcm ²]	[kgcm ²]	[kgcm ²]	[kgcm ²]
100	Level 1	3	7040	6340	8.1	–	3.2	5.2	13
		4	7040	6340		–	2.0	4.0	12
		5	7040	6340		–	1.5	3.6	11
		6	7040	6340		–	1.3	3.3	11
		7	7040	6340		–	1.1	3.1	11
		8	7040	6340		–	1.0	3.0	11
		9	7040	6340		–	0.96	3.0	11
		10	7040	6340		–	0.93	3.0	11
	Level 2	15	7040	6340	8.8	0.42	0.86	2.8	–
		16	7040	6340		0.48	0.91	2.9	–
		20	7040	6340		0.40	0.83	2.8	–
		25	7040	6340		0.38	0.82	2.8	–
		28	7040	6340		0.44	0.87	2.8	–
		30	7040	6340		0.29	0.74	2.7	–
		35	7040	6340		0.37	0.81	2.7	–
		40	7040	6340		0.28	0.73	2.7	–
		45	7040	6340		0.37	0.80	2.7	–
		50	7040	6340		0.28	0.73	2.7	–

- ⌀ 1 With nominal input speed, service life is 20,000 hours.
- ⌀ 2 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output shaft center, at axial load 0)
- ⌀ 3 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output side bearing, at radial load 0)
- ⌀ 4 The maximum radial load the reducer can accept.
- ⌀ 5 The maximum axial load the reducer can accept.

AHS140

Frame size	Model	Ratio	⌀ 1				⌀ 2		⌀ 3
			Nominal output torque	Maximum output torque	Emergency stop torque	Nominal input speed	Maximum input speed	Permitted radial load	Permitted axial load
			[Nm]	[Nm]	[Nm]	[rpm]	[rpm]	[N]	[N]
140	Level 1	3	245	476	1010	2000	4000	6740	9040
		4	245	706	1260	2000	4000	7440	9040
		5	365	706	1266	2000	4000	7940	9040
		6	365	706	1266	2000	4000	8340	9040
		7	365	706	1266	2000	4000	8740	9040
		8	365	706	1266	2000	4000	9140	9040
		9	245	476	1016	2000	4000	9440	9040
		10	245	476	1016	2000	4000	9740	9040
	Level 2	15	245	476	1016	2000	4000	10040	9040
		16	365	706	1266	2000	4000	10040	9040
		20	365	706	1266	2000	4000	10040	9040
		25	365	706	1266	2000	4000	10040	9040
		28	365	706	1266	2000	4000	10040	9040
		30	245	476	1066	2000	4000	10040	9040
		35	365	706	1266	2000	4000	10040	9040
		40	365	706	1266	2000	4000	10040	9040
		45	245	476	1016	2000	4000	10040	9040
		50	365	706	1266	2000	4000	10040	9040
		60	365	706	1266	2000	4000	10040	9040
		70	365	706	1266	2000	4000	10040	9040
		80	365	706	1266	2000	4000	10040	9040
		90	245	476	1016	2000	4000	10040	9040
		100	245	476	1016	2000	4000	10040	9040

Frame size	Model	Ratio	⌀ 4	⌀ 5	Weight	Moment of inertia (≤ ϕ 19)	Moment of inertia (≤ ϕ 28)	Moment of inertia (≤ ϕ 38)	Moment of inertia (≤ ϕ 48)
			Maximum radial load	Maximum axial load					
			[N]	[N]	[kg]	[kgcm ²]	[kgcm ²]	[kgcm ²]	[kgcm ²]
140	Level 1	3	10045	9045	17	–	12	20	42
		4	10045	9045		–	7.4	15	37
		5	10045	9045		–	5.8	13	36
		6	10045	9045		–	4.9	13	35
		7	10045	9045		–	4.1	12	34
		8	10045	9045		–	3.8	12	34
		9	10045	9045		–	3.6	11	34
		10	10045	9045		–	3.4	11	33
	Level 2	15	10045	9045	19	1.3	3.2	11	–
		16	10045	9045		1.5	3.5	11	–
		20	10045	9045		1.2	3.1	11	–
		25	10045	9045		1.1	3.1	11	–
		28	10045	9045		1.4	3.3	11	–
		30	10045	9045		0.85	2.8	10	–
		35	10045	9045		1.1	3.1	11	–
		40	10045	9045		0.83	2.8	10	–
		45	10045	9045		1.1	3.0	11	–
		50	10045	9045		0.81	2.8	10	–
		60	10045	9045		0.81	2.8	10	–
		70	10045	9045		0.80	2.8	10	–
		80	10045	9045		0.80	2.8	10	–
		90	10045	9045		0.80	2.8	10	–
		100	10045	9045		0.80	2.8	10	–

- ⌀ 1 With nominal input speed, service life is 20,000 hours.
- ⌀ 2 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output shaft center, at axial load 0)
- ⌀ 3 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output side bearing, at radial load 0)
- ⌀ 4 The maximum radial load the reducer can accept.
- ⌀ 5 The maximum axial load the reducer can accept.

AHS180

Frame size	Model	Ratio	⌀ 1					⌀ 2	⌀ 3
			Nominal output torque	Maximum output torque	Emergency stop torque	Nominal input speed	Maximum input speed	Permitted radial load	Permitted axial load
			[Nm]	[Nm]	[Nm]	[rpm]	[rpm]	[N]	[N]
180	Level 1	3	506	980	2218	1500	3000	12040	16040
		4	756	1410	2768	1500	3000	13040	17040
		5	756	1410	2768	1500	3000	14040	17040
		6	756	1410	2768	1500	3000	15040	17040
		7	756	1410	2768	1500	3000	16040	17040
		8	756	1410	2768	1500	3000	17040	17040
		9	506	980	2218	1500	3000	17040	17040
		10	506	980	2218	1500	3000	18040	17040
	Level 2	15	506	980	2218	1500	3000	19040	17040
		16	756	1410	2768	1500	3000	19040	17040
		20	756	1410	2768	1500	3000	19040	17040
		25	756	1410	2768	1500	3000	19040	17040
		28	756	1410	2768	1500	3000	19040	17040
		30	506	980	2218	1500	3000	19040	17040
		35	756	1410	2768	1500	3000	19040	17040
		40	756	1410	2768	1500	3000	19040	17040
		45	506	980	2218	1500	3000	19040	17040
		50	756	1410	2768	1500	3000	19040	17040
		60	756	1410	2768	1500	3000	19040	17040
		70	756	1410	2768	1500	3000	19040	17040
		80	756	1410	2768	1500	3000	19040	17040
		90	506	980	2218	1500	3000	19040	17040
		100	506	980	2218	1500	3000	19040	17040

Frame size	Model	Ratio	⌀ 4	⌀ 5	Weight	Moment of inertia (≤ ϕ 28)	Moment of inertia (≤ ϕ 38)	Moment of inertia (≤ ϕ 48)	Moment of inertia (≤ ϕ 65)
			Maximum radial load	Maximum axial load					
			[N]	[N]	[kg]	[kgcm ²]	[kgcm ²]	[kgcm ²]	[kgcm ²]
180	Leve 1	3	19050	17050	39	–	42	64	120
		4	19050	17050		–	27	49	110
		5	19050	17050		–	21	43	100
		6	19050	17050		–	18	40	100
		7	19050	17050		–	16	38	98
		8	19050	17050		–	15	37	97
		9	19050	17050		–	14	36	96
		10	19050	17050		–	14	36	96
	Leve 2	15	19050	17050	39	4.7	12	34	–
		16	19050	17050		5.4	13	35	–
		20	19050	17050		4.3	12	34	–
		25	19050	17050		4.2	12	34	–
		28	19050	17050		4.9	13	35	–
		30	19050	17050		3.2	11	33	–
		35	19050	17050		4.1	12	34	–
		40	19050	17050		3.2	11	33	–
		45	19050	17050		4.0	12	34	–
		50	19050	17050		3.1	11	33	–
		60	19050	17050		3.1	11	33	–
		70	19050	17050		3.1	11	33	–
		80	19050	17050		3.1	11	33	–
		90	19050	17050		3.1	11	33	–
		100	19050	17050		3.1	11	33	–

- ⌀ 1 With nominal input speed, service life is 20,000 hours.
- ⌀ 2 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output shaft center, at axial load 0)
- ⌀ 3 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output side bearing, at radial load 0)
- ⌀ 4 The maximum radial load the reducer can accept.
- ⌀ 5 The maximum axial load the reducer can accept.

AHS210

Frame size	Model	Ratio	⌀ 1			⌀ 2		⌀ 3	
			Nominal output torque	Maximum output torque	Emergency stop torque	Nominal input speed	Maximum input speed	Permitted radial load	Permitted axial load
			[Nm]	[Nm]	[Nm]	[rpm]	[rpm]	[N]	[N]
210	Level 1	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
		15	1000	1600	4000	1000	2000	24000	22000
		16	1500	2300	5000	1000	2000	24000	22000
	Level 2	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	Model	Ratio	⌀ 4		Weight	⌀ 5		
			Maximum radial load	Maximum axial load		Moment of inertia (≤ ϕ 38)	Moment of inertia (≤ ϕ 48)	Moment of inertia (≤ ϕ 65)
			[N]	[N]		[kgcm ²]	[kgcm ²]	[kgcm ²]
210	Level 1	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
	Level 2	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 With this load and nominal input speed,service life will be 20,000 hours.
(Applied to the output shaft center, at axial load 0)
- ⌀ 3 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output side bearing, at radial load 0)
- ⌀ 4 The maximum radial load the reducer can accept.
- ⌀ 5 The maximum axial load the reducer can accept.
- ⌀ 6 Operating temperature is -20°C - 175°C

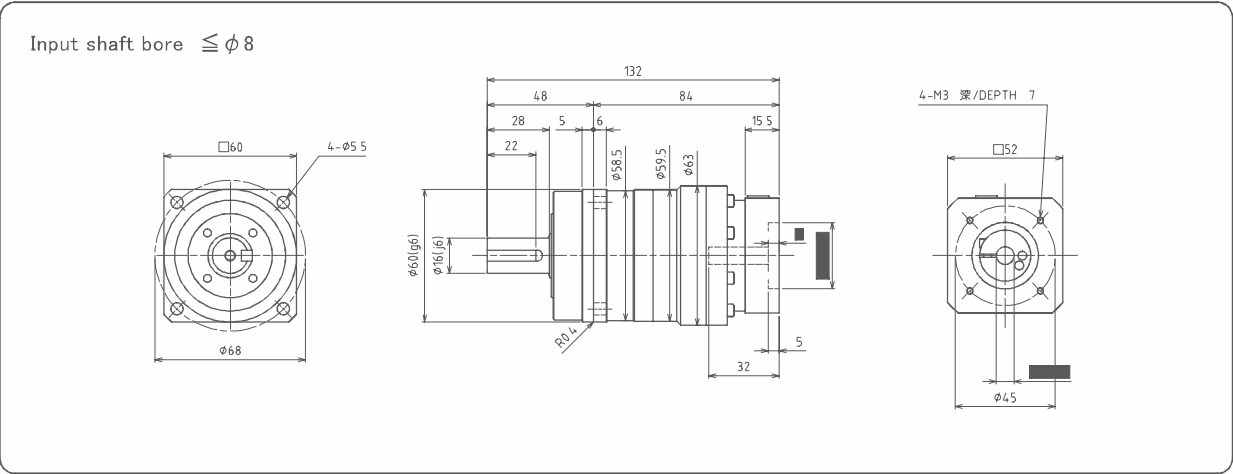
AHS240

Frame size	Model	Ratio	⌀ 1			⌀ 2		⌀ 3	
			Nominal output torque	Maximum output torque	Emergency stop torque	Nominal input speed	Maximum input speed	Permitted radial load	Permitted axial load
			[Nm]	[Nm]	[Nm]	[rpm]	[rpm]	[N]	[N]
240	Level 1	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
	Level 2	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

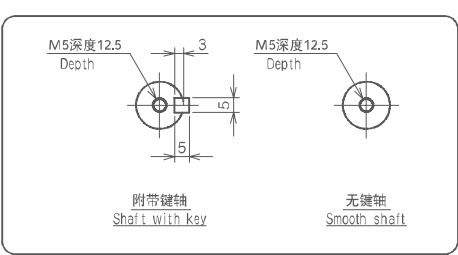
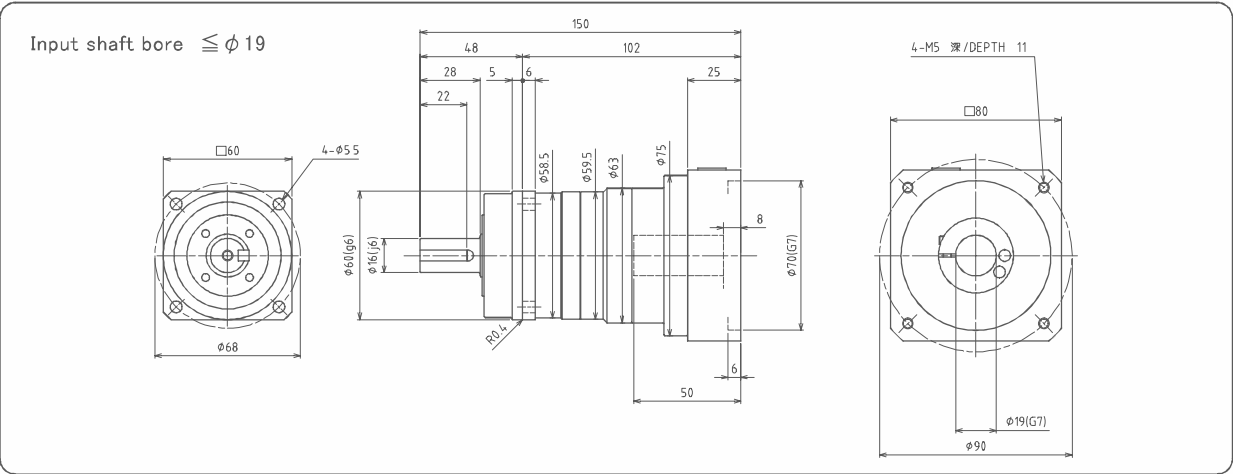
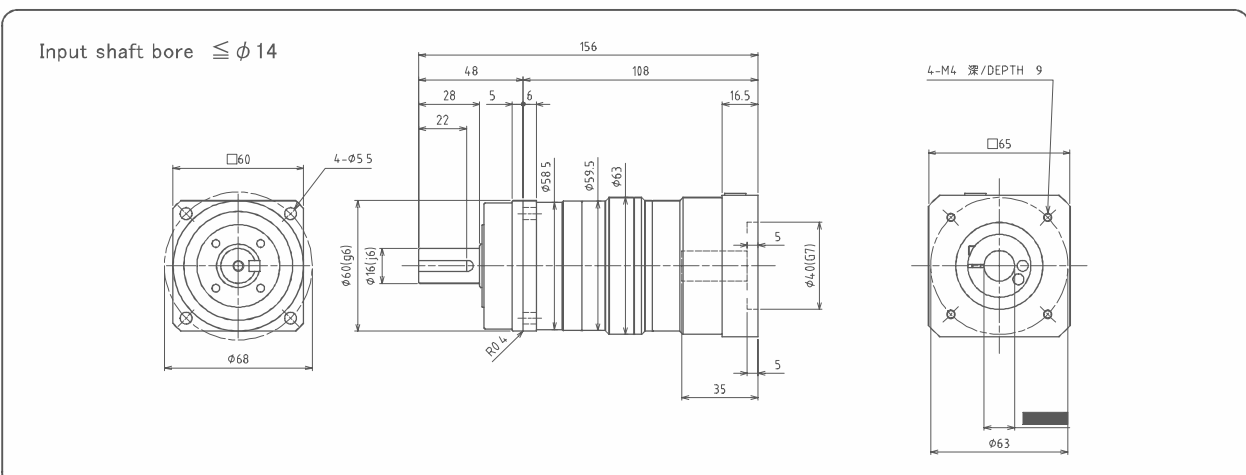
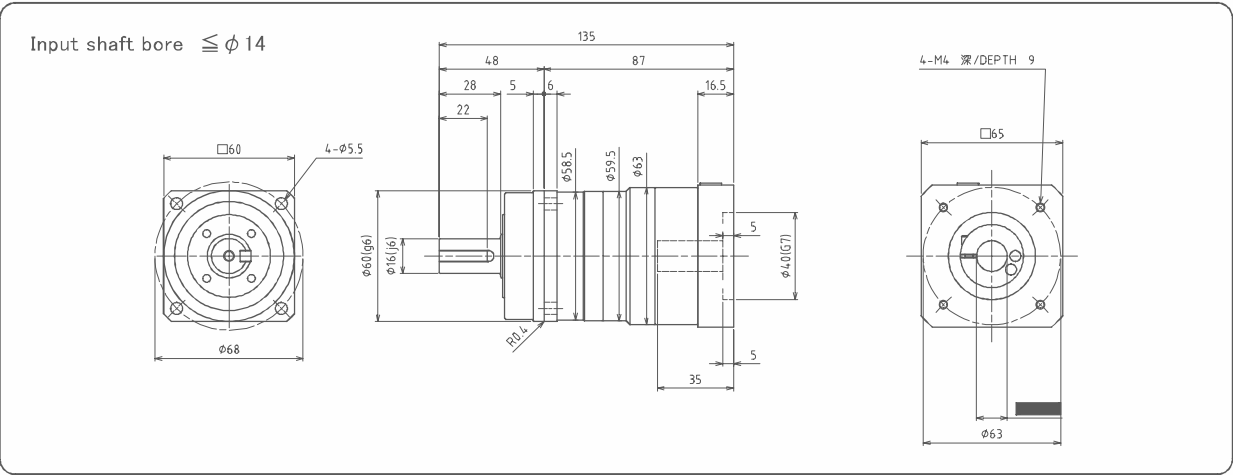
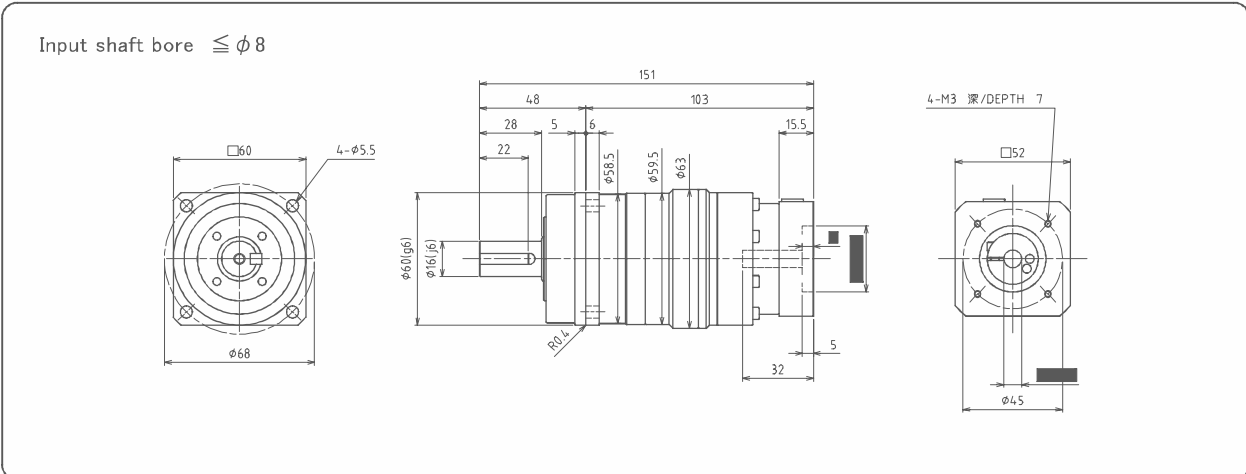
Frame size	Model	Ratio	⌀ 4		Weight	⌀ 5	
			Maximum radial load	Maximum axial load		Moment of inertia (≤ ϕ 48)	Moment of inertia (≤ ϕ 65)
			[N]	[N]		[kgcm ²]	[kgcm ²]
240	Level 1	3	30000	27000	85	—	220
		4	30000	27000		—	160
		5	30000	27000		—	130
		6	30000	27000		—	120
		7	30000	27000		—	110
		8	30000	27000		—	110
		9	30000	27000		—	110
		10	30000	27000		—	100
	Level 2	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 With this load and nominal input speed,service life will be 20,000 hours.
(Applied to the output shaft center, at axial load 0)
- ⌀ 3 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output side bearing, at radial load 0)
- ⌀ 4 The maximum radial load the reducer can accept.
- ⌀ 5 The maximum axial load the reducer can accept.
- ⌀ 6 Operating temperature is -20°C - 175°C

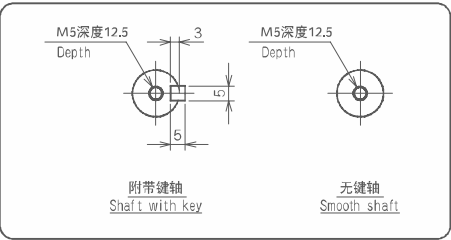
AHS-060 Level1



AHS-060 Level2



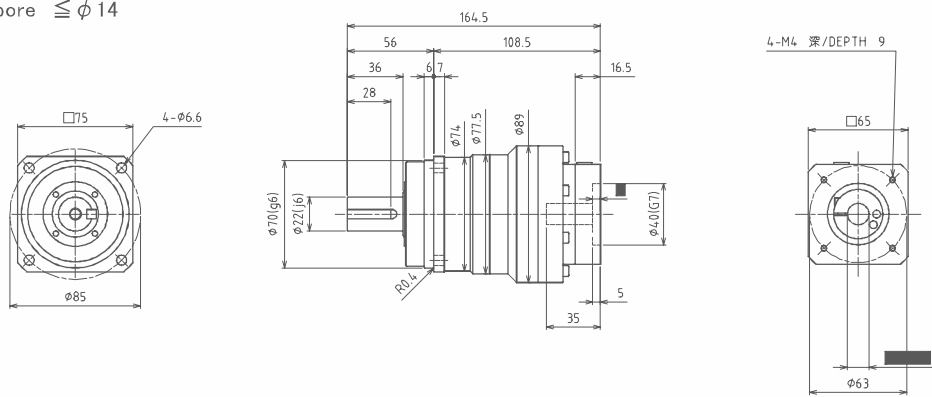
Note1: The body size varies with the installation of the motor.
Note2: When the shaft diameter of the motor is different from the input shaft diameter, the shaft sleeve can be inserted.



Note1: The body size varies with the installation of the motor.
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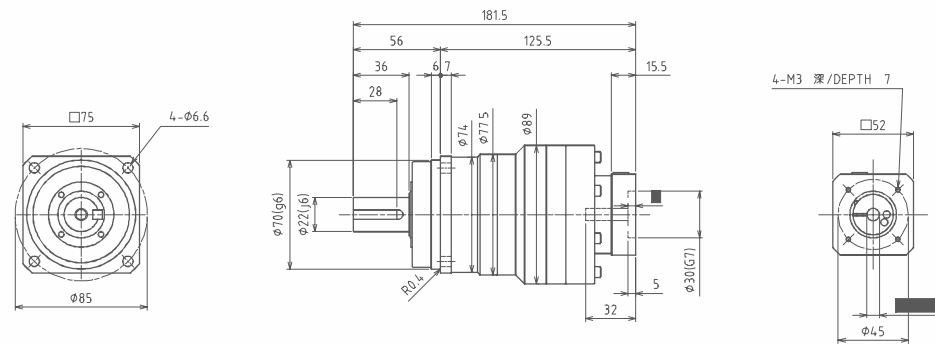
AHS-075 Level 1

Input shaft bore $\leq \phi 14$

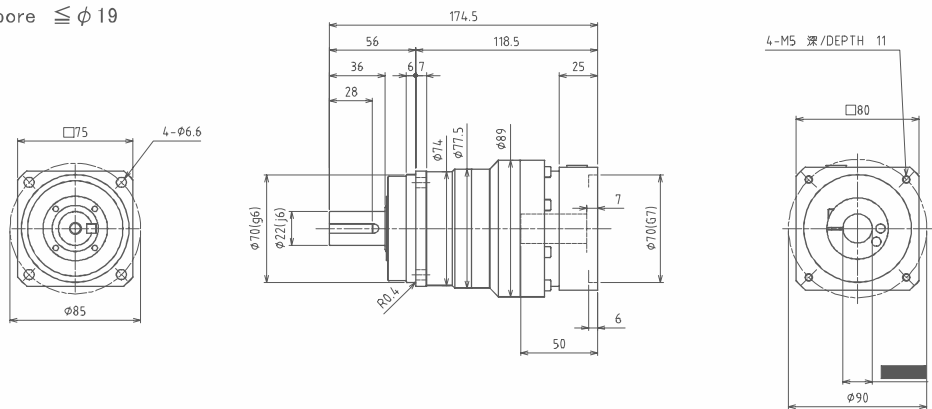


AHS-075 Level 2

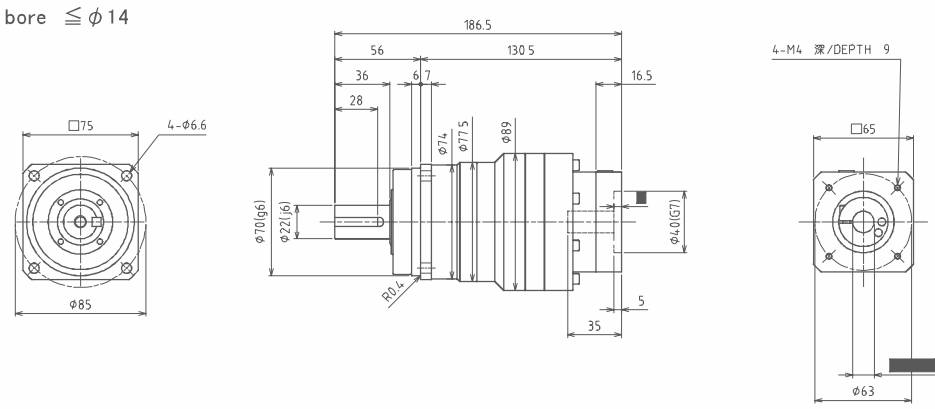
Input shaft bore $\leq \phi 8$



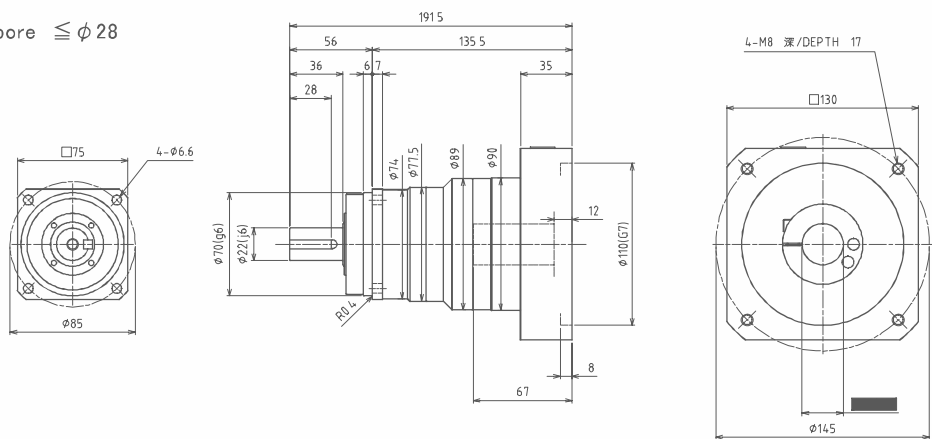
Input shaft bore $\leq \phi 19$



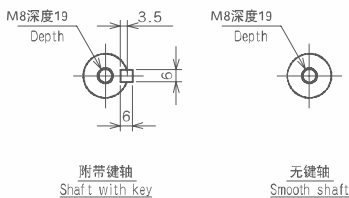
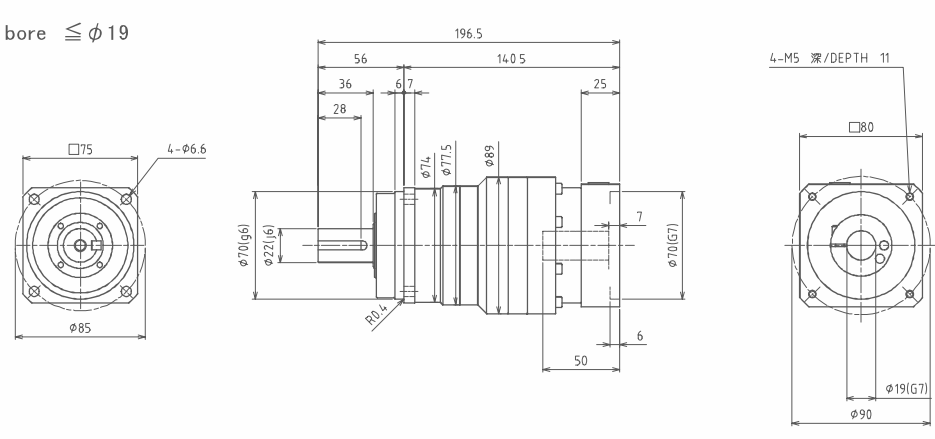
Input shaft bore $\leq \phi 14$



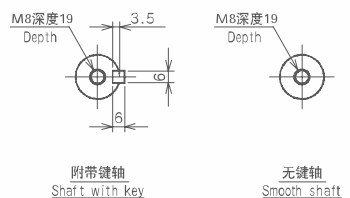
Input shaft bore $\leq \phi 28$



Input shaft bore $\leq \phi 19$

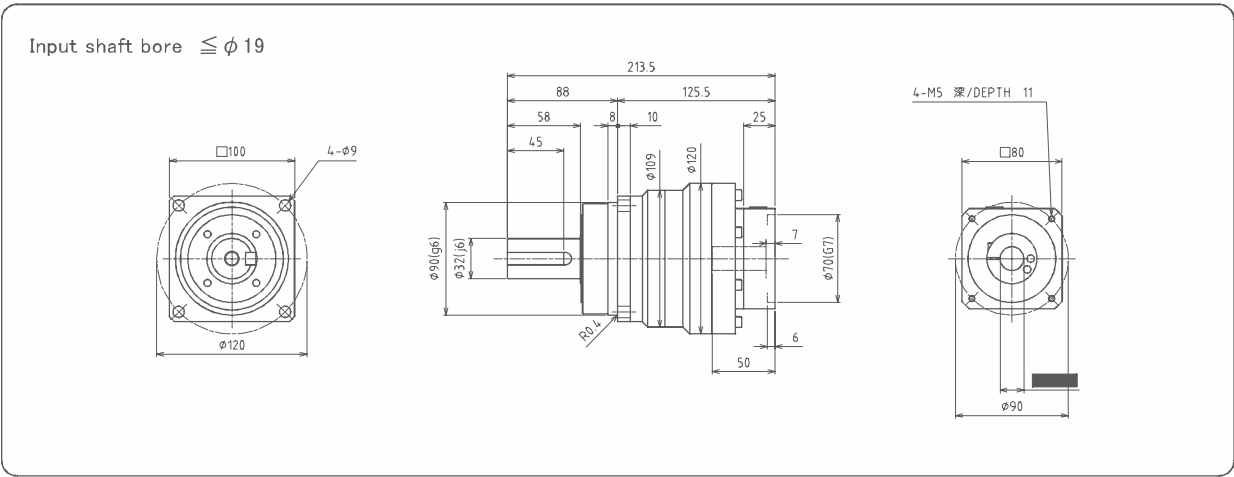


Note1: The body size varies with the installation of the motor.
Note2: When the shaft diameter of the motor is different from the input shaft diameter, the shaft sleeve can be inserted.

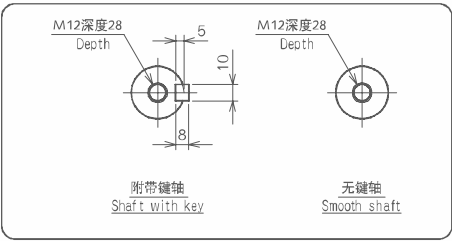
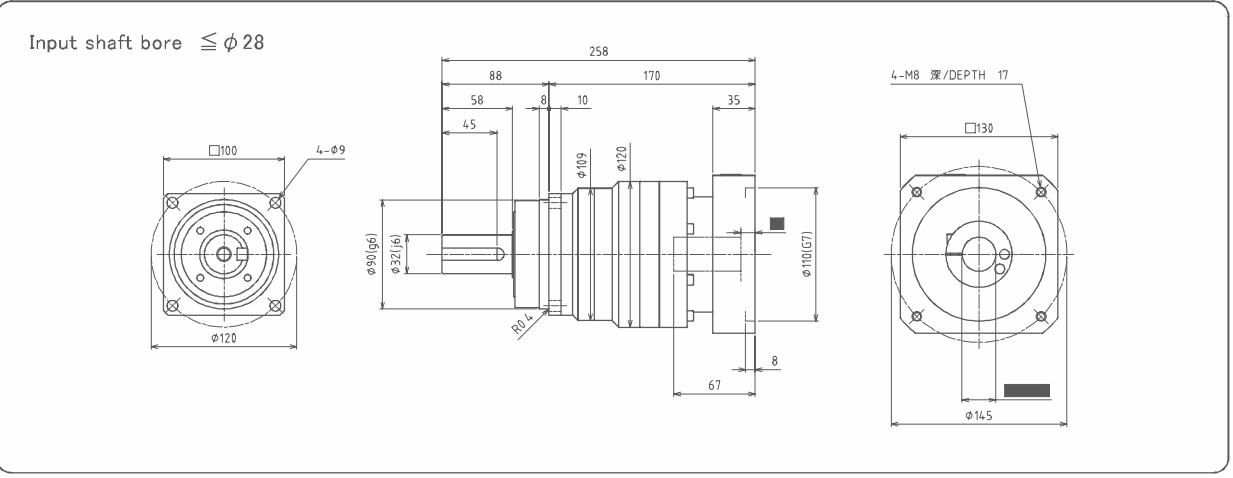
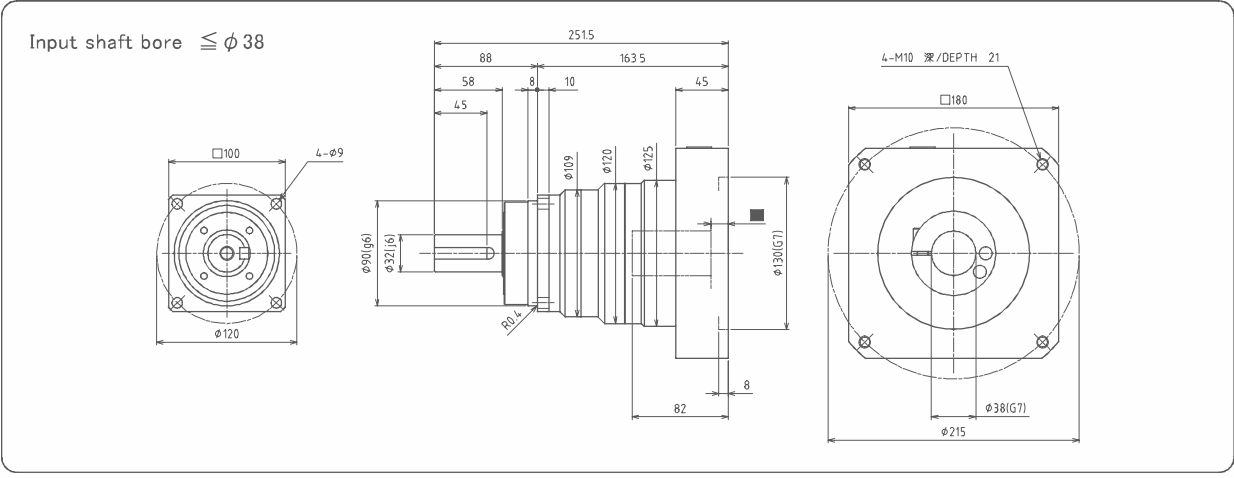
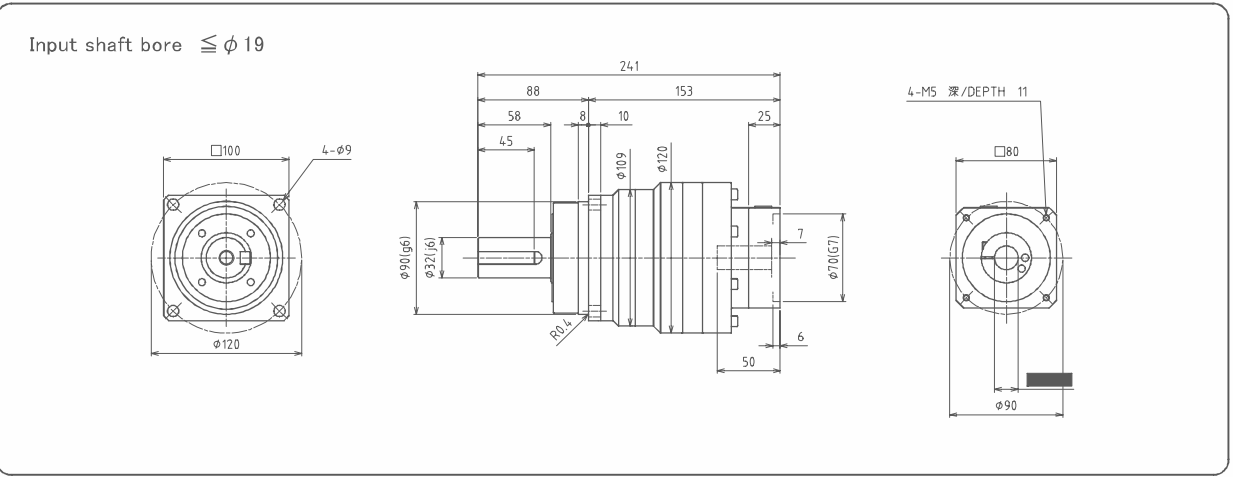
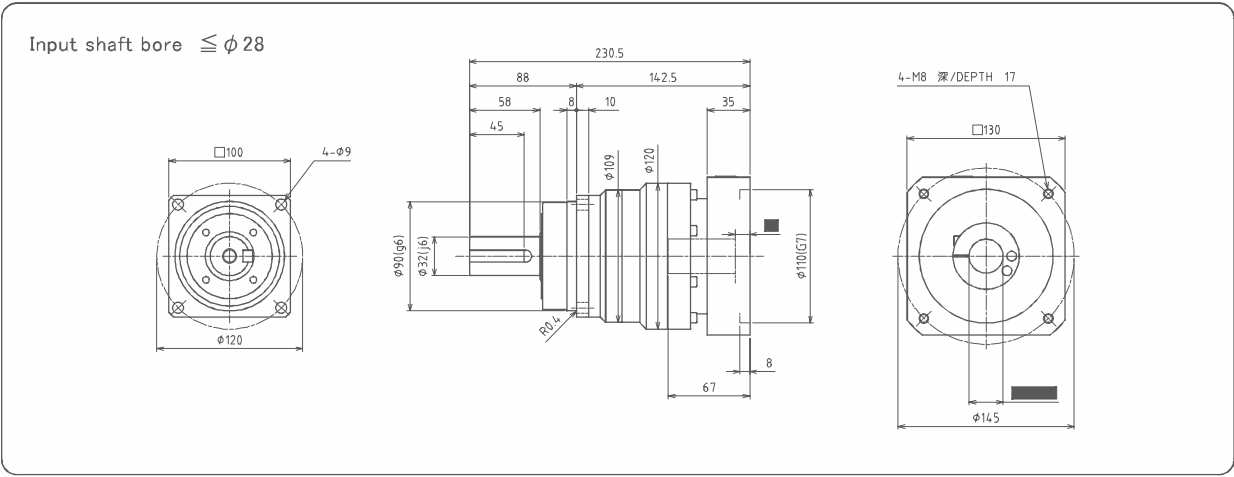
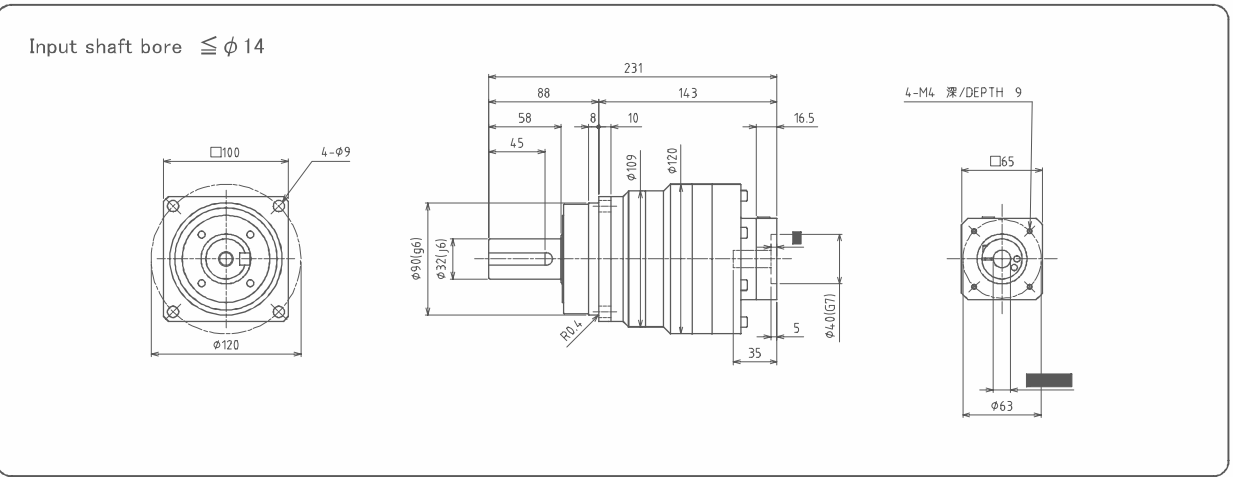


Note1: The body size varies with the installation of the motor.
Note2: When the shaft diameter of the motor is different from the input shaft diameter, the shaft sleeve can be inserted.

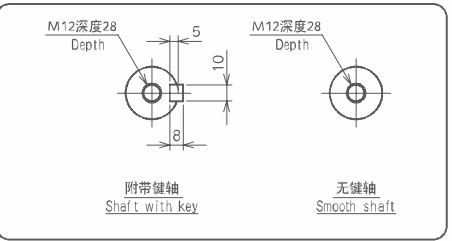
AHS-100 Level1



AHS-100 Level2

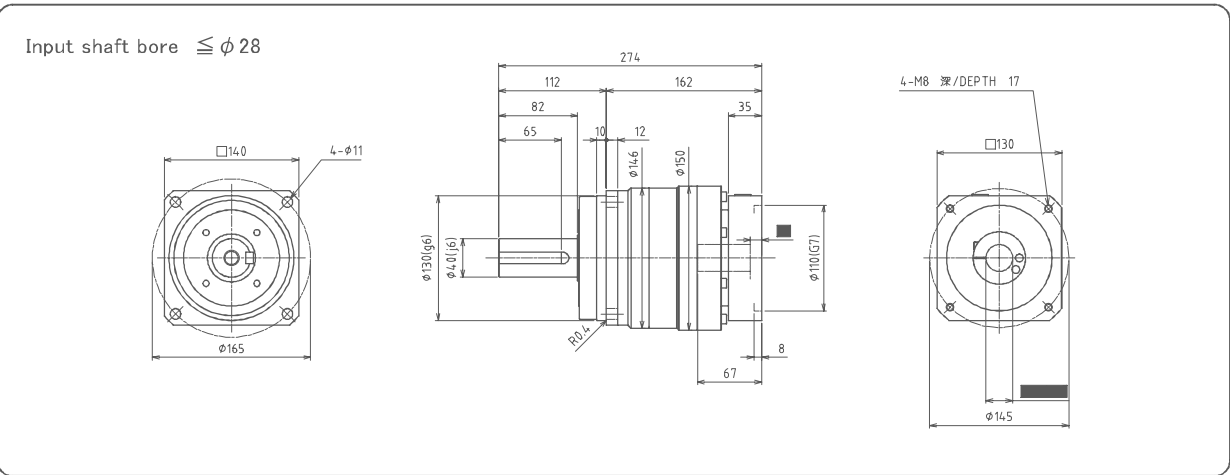


Note1: The body size varies with the installation of the motor.
Note2: When the shaft diameter of the motor is different from the input shaft diameter, the shaft sleeve can be inserted.

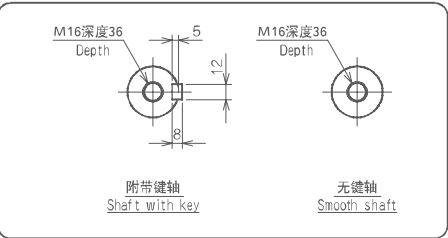
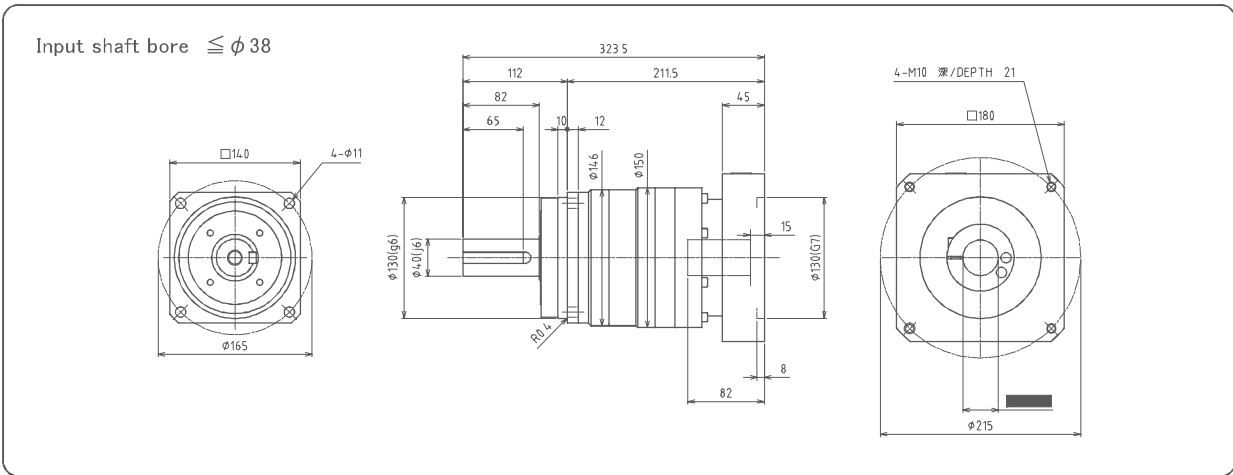
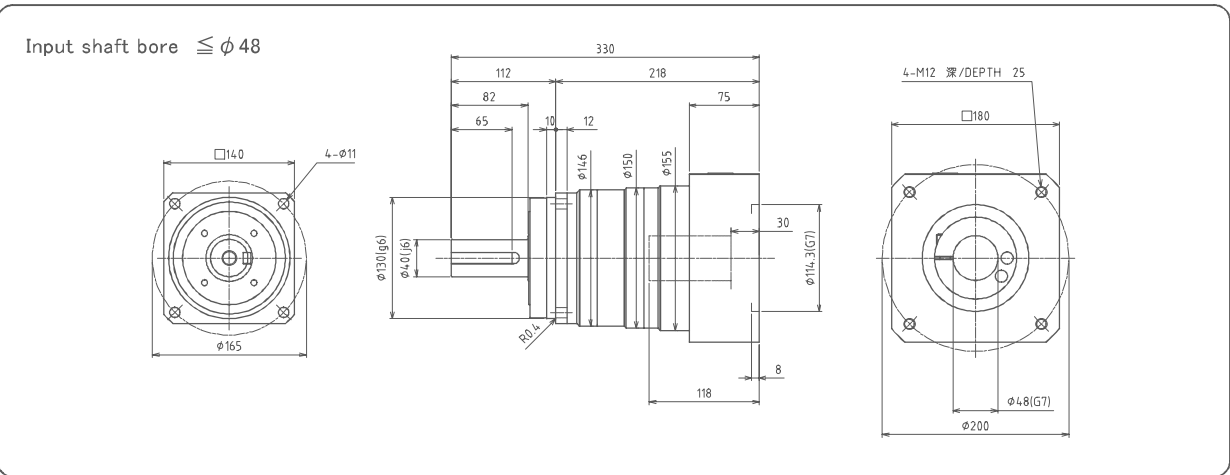
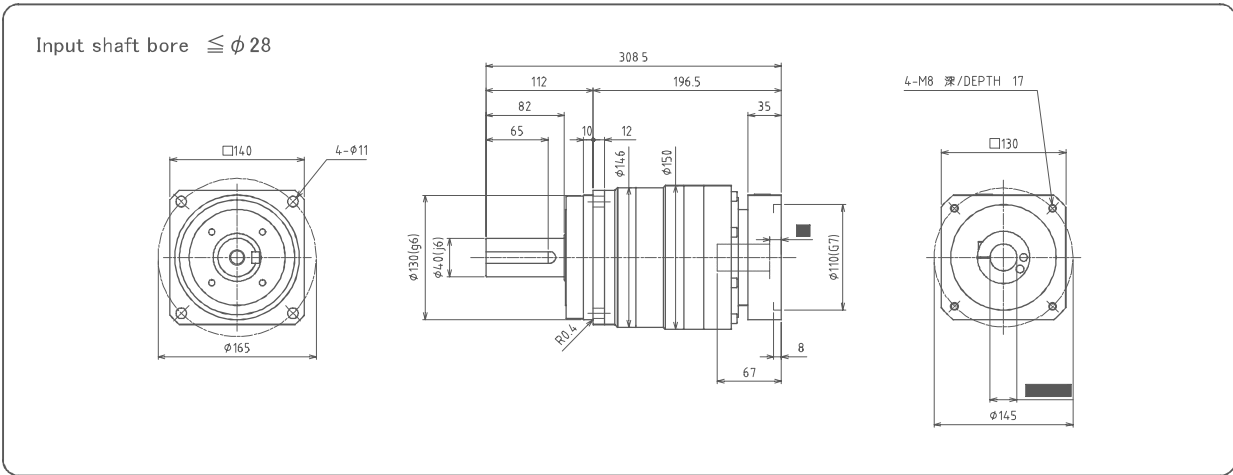
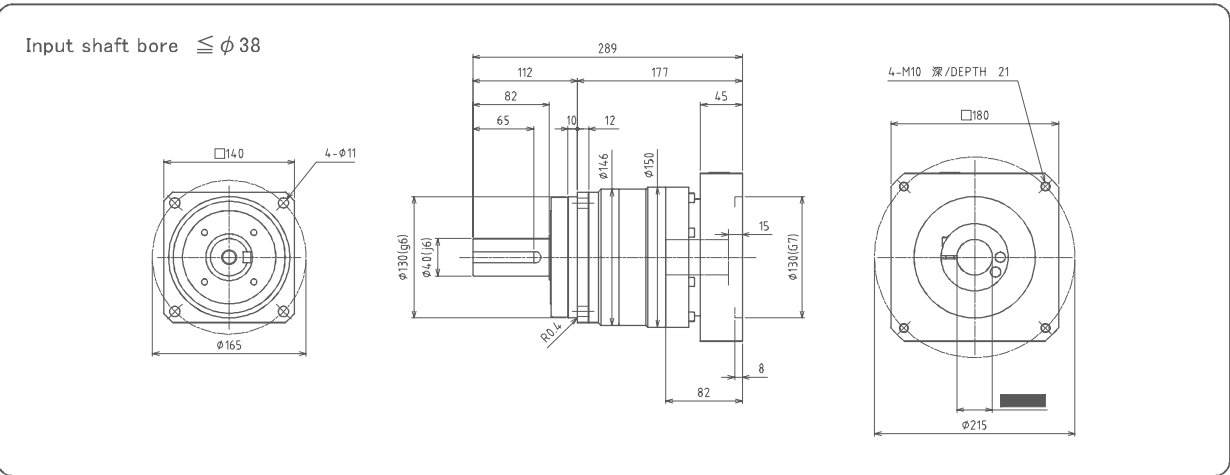
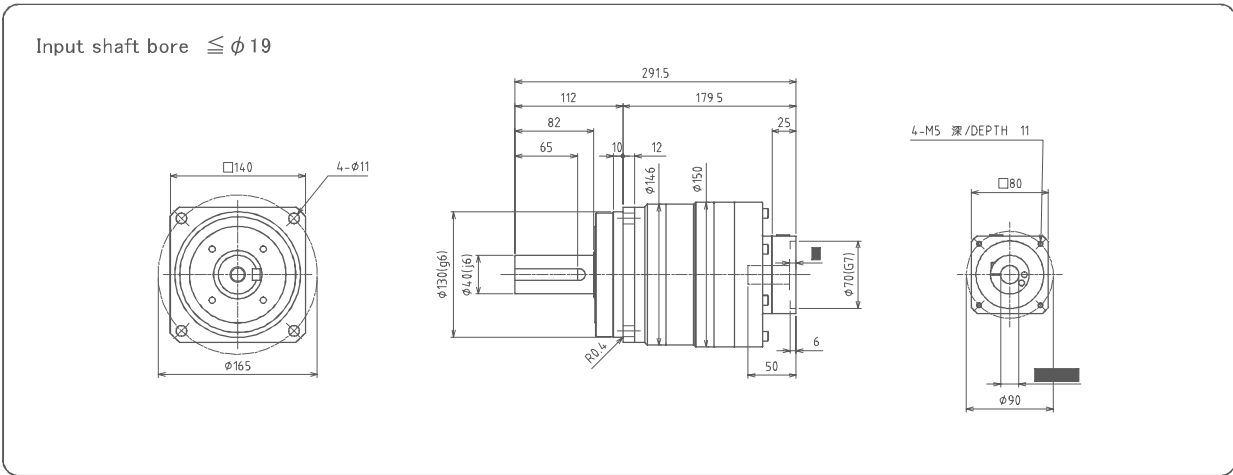


Note1: The body size varies with the installation of the motor.
Note2: When the shaft diameter of the motor is different from the input shaft diameter, the shaft sleeve can be inserted.

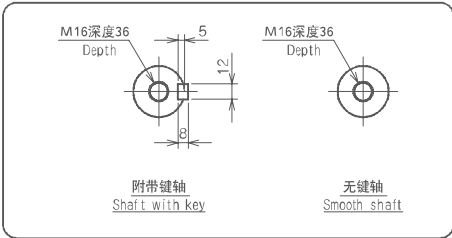
AHS-140 Level1



AHS-140 Level2



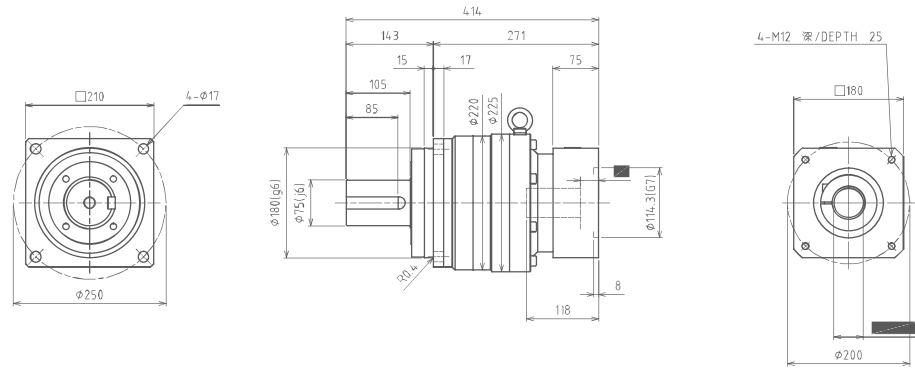
Note1: The body size varies with the installation of the motor.
Note2: When the shaft diameter of the motor is different from the input shaft diameter, the shaft sleeve can be inserted.



Note1: The body size varies with the installation of the motor.
Note2: When the shaft diameter of the motor is different from the input shaft diameter, the shaft sleeve can be inserted.

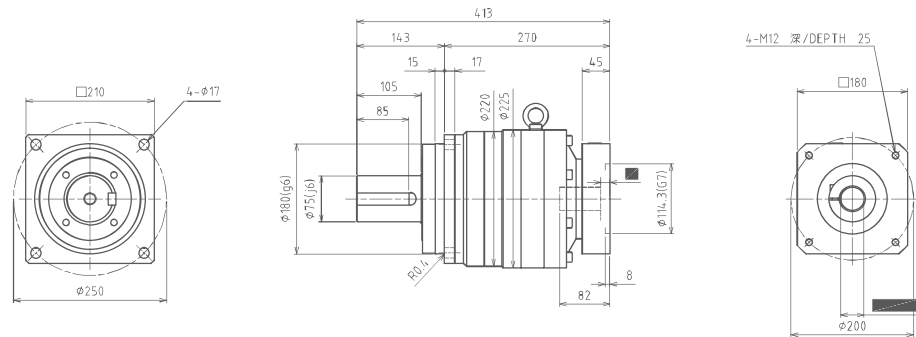
AHS-210 Level1

Input shaft bore $\leq \phi 48$

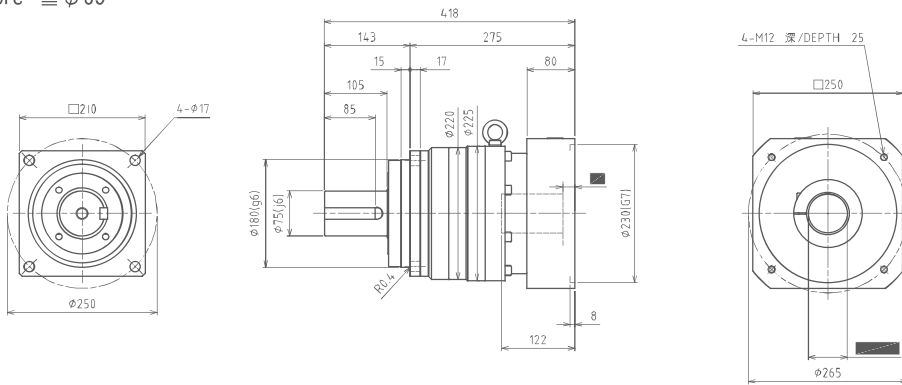


AHS-210 Level2

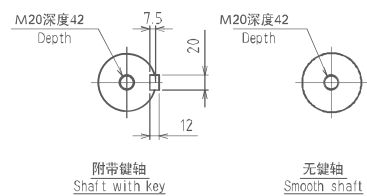
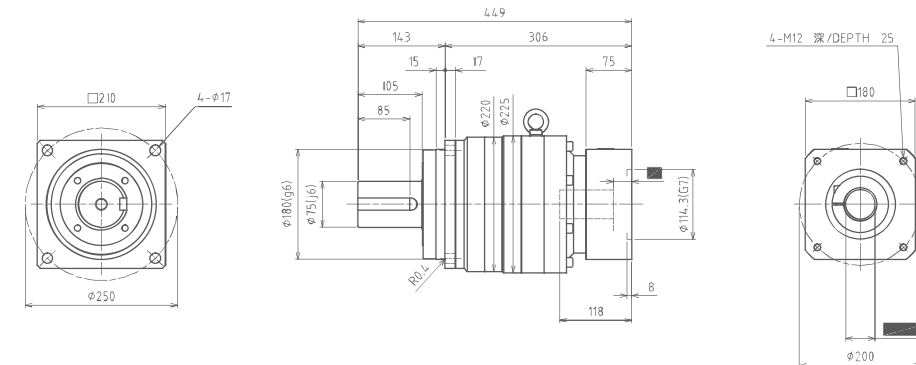
Input shaft bore $\leq \phi 38$



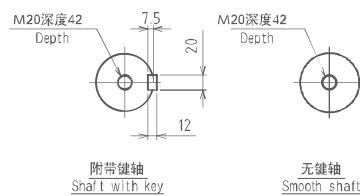
Input shaft bore $\leq \phi 65$



Input shaft bore $\leq \phi 48$

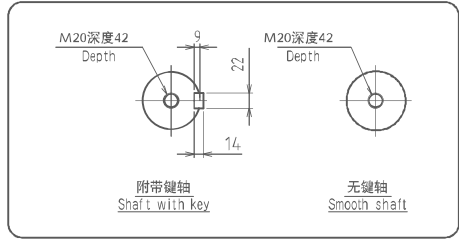
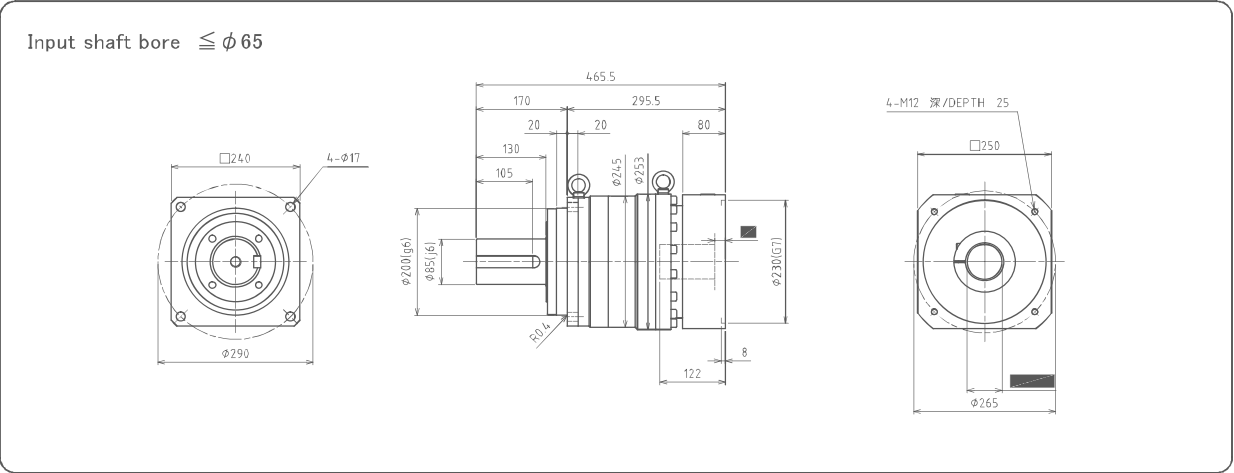


Note1: The body size varies with the installation of the motor.
Note2: When the shaft diameter of the motor is different from the input shaft diameter, the shaft sleeve can be inserted.



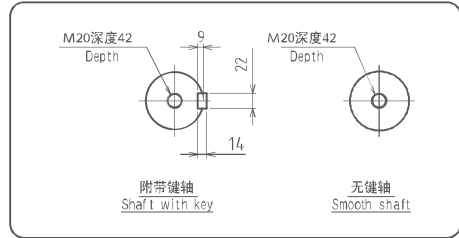
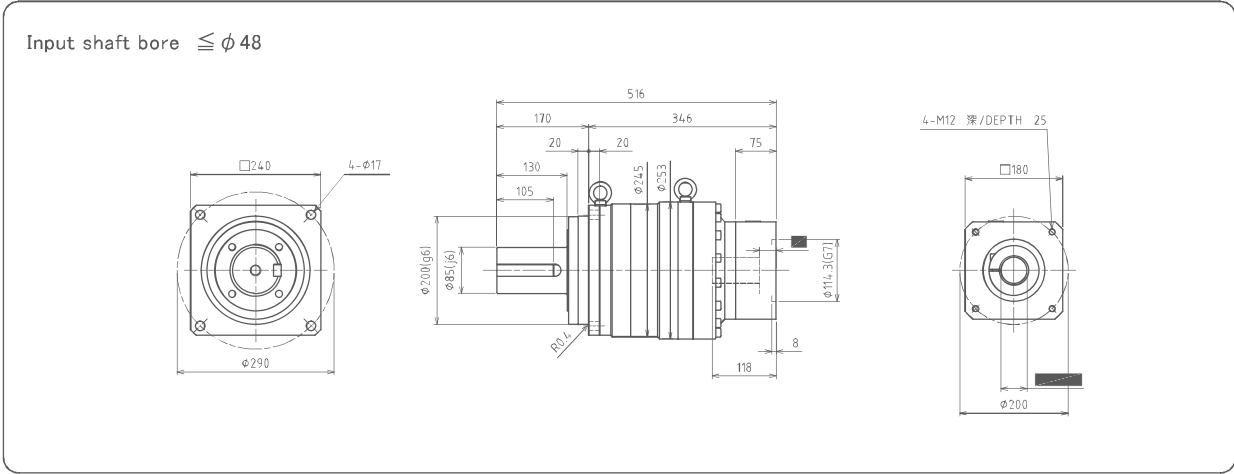
Note1: The body size varies with the installation of the motor.
Note2: When the shaft diameter of the motor is different from the input shaft diameter, the shaft sleeve can be inserted.

AHS-240 Level1



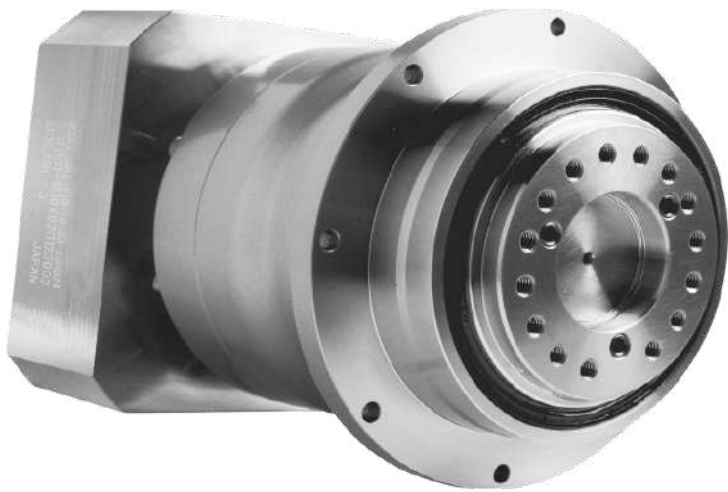
Note1: The body size varies with the installation of the motor.
Note2: When the shaft diameter of the motor is different from the input shaft diameter, the shaft sleeve can be inserted.

AHS-240 Level2 2stage



Note1: The body size varies with the installation of the motor.
Note2: When the shaft diameter of the motor is different from the input shaft diameter, the shaft sleeve can be inserted.

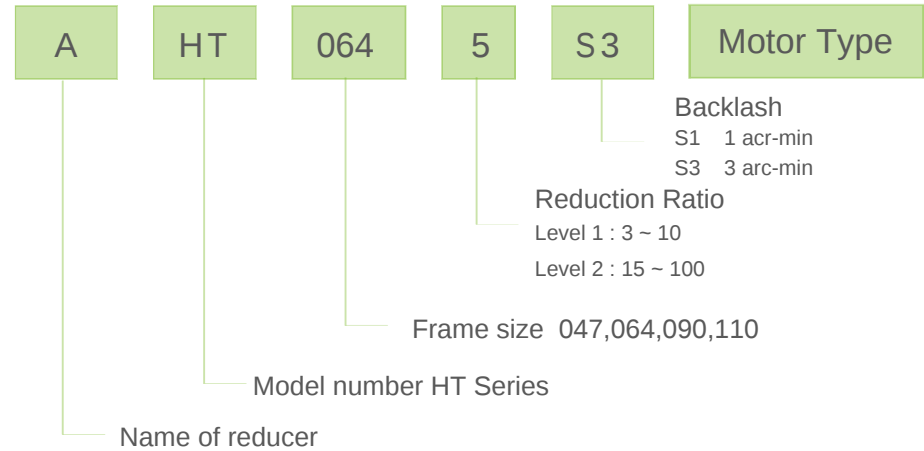
AHTSeries



Features

- 1 The main bearing uses tapered roller bearings to achieve high load capacity
- 2 The backlash is less than 3 arc-min with accurate positioning.
- 3 The use of integral ball bearings greatly improves rigidity and torque.
- 4 Applicable to all kinds of motors
- 5 Effectively prevent grease leakage by using grease with high viscosity and anti-separation.
- 6 No need to change the grease during the life of the product, making installation easier

Model number



AHT047

Frame size	Model	Ratio	⌀ 1	⌀ 2		⌀ 3		Permitted radial load	Permitted axial load
			Nominal output torque	Maximum output torque	Emergency stop torque	Nominal input speed	Maximum input speed		
			[Nm]	[Nm]	[Nm]	[rpm]	[rpm]	[N]	[N]
047	Level 1	4	10	20	40	4000	8000	280	310
		5	10	20	40	4000	8000	310	340
		6	10	20	40	4000	8000	320	370
		7	10	20	40	4000	8000	340	400
		8	10	20	40	4000	8000	360	420
		9	7	14	35	4000	8000	370	440
	Level 2	10	7	14	35	4000	8000	380	460
		16	10	20	40	4000	8000	450	560
		20	10	20	40	4000	8000	480	560
		25	10	20	40	4000	8000	520	560
		28	10	20	40	4000	8000	540	560
		35	10	20	40	4000	8000	580	560
		40	10	20	40	4000	8000	600	560
		45	7	14	35	4000	8000	630	560
		50	10	20	40	4000	8000	650	560
		60	10	20	40	4000	8000	690	560
		70	10	20	40	4000	8000	720	560
		80	10	20	40	4000	8000	760	560
		90	7	14	35	4000	8000	790	560
		100	7	14	35	4000	8000	810	560

Frame size	Model	Ratio	⌀ 4	⌀ 5	Weight	⌀ 6		Operating temperature
			Maximum radial load	Maximum axial load		Moment of inertia (≤ ϕ 8)	Moment of inertia (≤ ϕ 14)	
			[N]	[N]	[kg]	[kgcm ²]	[kgcm ²]	
047	Level 1	4	1120	570	0.7	0.052	0.090	-20℃ ~ 90℃
		5	1120	570		0.043	0.081	
		6	1120	570		0.038	0.077	
		7	1120	570		0.036	0.074	
		8	1120	570		0.034	0.072	
		9	1120	570		0.033	0.071	
	Level 2	10	1120	570	0.8	0.032	0.071	
		16	1120	570		0.039	—	
		20	1120	570		0.035	—	
		25	1120	570		0.034	—	
		28	1120	570		0.038	—	
		35	1120	570		0.034	—	
		40	1120	570		0.030	—	
		45	1120	570		0.034	—	
		50	1120	570		0.030	—	
		60	1120	570		0.030	—	
		70	1120	570		0.030	—	
		80	1120	570		0.030	—	
		90	1120	570		0.030	—	
		100	1120	570		0.030	—	

- ⌀ 1 With nominal input speed, service life is 20,000 hours.
- ⌀ 2 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output shaft center, at axial load 0)
- ⌀ 3 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output side bearing, at radial load 0)
- ⌀ 4 The maximum radial load the reducer can accept.
- ⌀ 5 The maximum axial load the reducer can accept.

AHT064

Frame size	Model	Ratio	⌀ 1	⌀ 2		⌀ 3		Permitted radial load	Permitted axial load
			Nominal output torque	Maximum output torque	Emergency stop torque	Nominal input speed	Maximum input speed		
			[Nm]	[Nm]	[Nm]	[rpm]	[rpm]	[N]	[N]
064	Level 1	4	29	55	108	3000	6000	385	375
		5	29	55	108	3000	6000	415	405
		6	29	55	108	3000	6000	435	445
		7	29	55	108	3000	6000	455	475
		8	29	55	108	3000	6000	475	495
		9	20	40	88	3000	6000	495	525
	Level 2	10	20	40	88	3000	6000	515	545
		16	29	55	108	3000	6000	595	665
		20	29	55	108	3000	6000	645	735
		25	29	55	108	3000	6000	695	765
		28	29	55	108	3000	6000	715	765
		35	29	55	108	3000	6000	775	765
		40	29	55	108	3000	6000	805	765
		45	20	40	88	3000	6000	835	765
		50	29	55	108	3000	6000	865	765
		60	29	55	108	3000	6000	925	765
		70	29	55	108	3000	6000	965	765
		80	29	55	108	3000	6000	1015	765
		90	20	40	88	3000	6000	1015	765
		100	20	40	88	3000	6000	1115	765

Frame size	Model	Ratio	⌀ 4	⌀ 5	Weight	⌀ 6			Operating temperature
			Maximum radial load	Maximum axial load		Moment of inertia (≤ ϕ 8)	Moment of inertia (≤ ϕ 14)	Moment of inertia (≤ ϕ 19)	
			[N]	[N]	[kg]	[kgcm ²]	[kgcm ²]	[kgcm ²]	
064	Level 1	4	1525	775	1.4	0.13	0.21	0.4	-20℃ ~ 90℃
		5	1525	775		0.10	0.18	0.4	
		6	1525	775		0.085	0.17	0.4	
		7	1525	775		0.075	0.15	0.4	
		8	1525	775		0.068	0.15	0.4	
		9	1525	775		0.064	0.14	0.4	
	Level 2	10	1525	775	1.6	0.062	0.14	0.4	
		16	1525	775		0.059	0.14	—	
		20	1525	775		0.055	0.14	—	
		25	1525	775		0.054	0.13	—	
		28	1525	775		0.056	0.14	—	
		35	1525	775		0.053	0.13	—	
		40	1525	775		0.049	0.13	—	
		45	1525	775		0.053	0.13	—	
		50	1525	775		0.049	0.13	—	
		60	1525	775		0.049	0.13	—	
		70	1525	775		0.049	0.13	—	
		80	1525	775		0.049	0.13	—	
		90	1525	775		0.049	0.13	—	
		100	1525	775		0.049	0.13	—	

- ⌀ 1 With nominal input speed, service life is 20,000 hours.
- ⌀ 2 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output shaft center, at axial load 0)
- ⌀ 3 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output side bearing, at radial load 0)
- ⌀ 4 The maximum radial load the reducer can accept.
- ⌀ 5 The maximum axial load the reducer can accept.

AHT090

Frame size	Model	Ratio	⌀ 1			⌀ 2		⌀ 3	
			Nominal output torque	Maximum output torque	Emergency stop torque	Nominal input speed	Maximum input speed	Permitted radial load	Permitted axial load
			[Nm]	[Nm]	[Nm]	[rpm]	[rpm]	[N]	[N]
090	Level 1	4	80	130	260	3000	6000	740	640
		5	80	130	260	3000	6000	800	700
		6	80	130	260	3000	6000	850	760
		7	80	130	260	3000	6000	890	810
		8	80	130	260	3000	6000	930	850
		9	55	85	210	3000	6000	970	900
	Level 2	10	55	85	210	3000	6000	1000	940
		16	80	130	260	3000	6000	1220	1120
		20	80	130	260	3000	6000	1220	1220
		25	80	130	260	3000	6000	1320	1420
		28	80	130	260	3000	6000	1420	1420
		35	80	130	260	3000	6000	1520	1620
		40	80	130	260	3000	6000	1620	1720
		45	55	85	210	3000	6000	1620	1720
		50	80	130	260	3000	6000	1720	1720
		60	80	130	260	3000	6000	1820	1720
		70	80	130	260	3000	6000	1920	1720
		80	80	130	260	3000	6000	2020	1720
		90	55	85	210	3000	6000	2020	1720
		100	55	85	210	3000	6000	2120	1720

Frame size	Model	Ratio	⌀ 4		⌀ 5				
			Maximum radial load	Maximum axial load	Weight	Moment of inertia (≤ ϕ 8)	Moment of inertia (≤ ϕ 14)	Moment of inertia (≤ ϕ 19)	Moment of inertia (≤ ϕ 28)
			[N]	[N]	[kg]	[kgcm ²]	[kgcm ²]	[kgcm ²]	[kgcm ²]
090	Level 1	4	3030	1730	3.6	—	0.77	1.2	2.9
		5	3030	1730		—	0.58	1.0	2.9
		6	3030	1730		—	0.48	0.94	2.8
		7	3030	1730		—	0.41	0.88	2.8
		8	3030	1730		—	0.37	0.84	2.8
		9	3030	1730		—	0.35	0.81	2.8
	Level 2	10	3030	1730	4	—	0.33	0.80	2.8
		16	3030	1730		0.16	0.31	0.75	—
		20	3030	1730		0.14	0.29	0.73	—
		25	3030	1730		0.13	0.28	0.72	—
		28	3030	1730		0.14	0.30	0.73	—
		35	3030	1730		0.13	0.28	0.72	—
		40	3030	1730		0.10	0.25	0.70	—
		45	3030	1730		0.12	0.27	0.71	—
		50	3030	1730		0.10	0.25	0.70	—
		60	3030	1730		0.099	0.25	0.70	—
		70	3030	1730		0.098	0.25	0.69	—
		80	3030	1730		0.098	0.25	0.69	—
		90	3030	1730		0.098	0.25	0.69	—
		100	3030	1730		0.098	0.25	0.69	—

- ⌀ 1 With nominal input speed, service life is 20,000 hours.
- ⌀ 2 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output shaft center, at axial load 0)
- ⌀ 3 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output side bearing, at radial load 0)
- ⌀ 4 The maximum radial load the reducer can accept.
- ⌀ 5 The maximum axial load the reducer can accept.

AHT110

Frame size	Model	Ratio	⌀ 1			⌀ 2		⌀ 3	
			Nominal output torque	Maximum output torque	Emergency stop torque	Nominal input speed	Maximum input speed	Permitted radial load	Permitted axial load
			[Nm]	[Nm]	[Nm]	[rpm]	[rpm]	[N]	[N]
110	Level 1	4	125	335	640	3000	6000	4725	3225
		5	185	335	640	3000	6000	5025	3425
		7	185	335	640	3000	6000	5625	3825
		10	125	230	515	3000	6000	6225	4225
	Level 2	16	185	335	640	3000	6000	7125	4825
		20	185	335	640	3000	6000	7625	5225
		25	185	335	640	3000	6000	8225	5525
		28	185	335	640	3000	6000	8525	5725
		35	185	335	640	3000	6000	9025	6125
		40	185	335	640	3000	6000	9425	6425
		50	185	335	640	3000	6000	10025	6825
		70	185	335	640	3000	6000	11025	7525
		100	125	230	515	3000	6000	12025	8425

Frame size	Model	Ratio	⌀ 4		⌀ 5				
			Maximum radial load	Maximum axial load	Weight	Moment of inertia (≤ ϕ 14)	Moment of inertia (≤ ϕ 19)	Moment of inertia (≤ ϕ 28)	Moment of inertia (≤ ϕ 38)
			[N]	[N]	[kg]	[kgcm ²]	[kgcm ²]	[kgcm ²]	[kgcm ²]
110	Level 1	4	12050	8850	7.8	—	3.1	5.1	13
		5	12050	8850		—	2.3	4.3	12
		7	12050	8850		—	1.5	3.5	11
		10	12050	8850		—	1.1	3.1	11
	Level 2	16	12050	8850	8.6	1.0	1.5	3.4	—
		20	12050	8850		0.8	1.2	3.1	—
		25	12050	8850		0.7	1.2	3.1	—
		28	12050	8850		0.9	1.4	3.3	—
		35	12050	8850		0.7	1.1	3.1	—
		40	12050	8850		0.4	0.8	2.8	—
		50	12050	8850		0.4	0.8	2.8	—
		70	12050	8850		0.4	0.8	2.7	—
		100	12050	8850		0.4	0.8	2.7	—

- ⌀ 1 With nominal input speed, service life is 20,000 hours.
- ⌀ 2 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output shaft center, at axial load 0)
- ⌀ 3 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output side bearing, at radial load 0)
- ⌀ 4 The maximum radial load the reducer can accept.
- ⌀ 5 The maximum axial load the reducer can accept.

AHT140

Frame size	Model	Ratio	⌀ 1		Emergency stop torque	Nominal input speed	Maximum input speed	⌀ 2		⌀ 3	
			Nominal output torque	Maximum output torque				Permitted radial load	Permitted axial load		
			[Nm]	[Nm]				[N]	[N]		
140	Level 1	4	240	700	1250	2000	4000	8000	5600		
		5	360	700	1250	2000	4000	8500	6000		
		7	360	700	1250	2000	4000	9400	6700		
		10	240	470	1000	2000	4000	10000	7400		
	Level 2	16	360	700	1250	2000	4000	12000	8500		
		20	360	700	1250	2000	4000	13000	9100		
		25	360	700	1250	2000	4000	14000	9800		
		28	360	700	1250	2000	4000	14000	10000		
		35	360	700	1250	2000	4000	15000	11000		
		40	360	700	1250	2000	4000	16000	11000		
		50	360	700	1250	2000	4000	17000	12000		
		70	360	700	1250	2000	4000	19000	13000		
		100	240	470	1000	2000	4000	19000	14000		
Frame size	Model	Ratio	⌀ 4		Weight	⌀ 5		Moment of inertia (≤ ϕ14)	Moment of inertia (≤ ϕ19)	Moment of inertia (≤ ϕ 28)	Moment of inertia (≤ ϕ 38)
			Maximum radial load	Maximum axial load							
			[N]	[N]		[kg]					
140	Level 1	4	19000	14000	15			—	11	19	41
		5	19000	14000							
		7	19000	14000							
		10	19000	14000							
	Level 2	16	19000	14000	17			3.8	5.8	13	—
		20	19000	14000							
		25	19000	14000							
		28	19000	14000							
		35	19000	14000							
		40	19000	14000							
		50	19000	14000							
		70	19000	14000							
		100	19000	14000							

- ⌀ 1 With nominal input speed, service life is 20,000 hours.
- ⌀ 2 With this load and nominal input speed,service life will be 20,000 hours. (Applied to the output shaft center, at axial load 0)
- ⌀ 3 With this load and nominal input speed, service life will be 20,000 hours. (Applied to the output side bearing, at radial load 0)
- ⌀ 4 The maximum radial load the reducer can accept.
- ⌀ 5 The maximum axial load the reducer can accept.
- ⌀ 6 Operating temperature is -20℃-175℃

AHT200

Frame size	Model	Ratio	⌀ 1		Emergency stop torque	Nominal input speed	Maximum input speed	⌀ 2		⌀ 3	
			Nominal output torque	Maximum output torque				Permitted radial load	Permitted axial load		
			[Nm]	[Nm]				[N]	[N]		
200	Level 1	4	750	1400	2750	1500	3000	18000	12000		
		5	750	1400	2750	1500	3000	19000	13000		
		7	750	1400	2750	1500	3000	21000	14000		
		10	500	970	2200	1500	3000	23000	16000		
	Level 2	16	750	1400	2750	1500	3000	27000	18000		
		20	750	1400	2750	1500	3000	28000	19000		
		25	750	1400	2750	1500	3000	30000	21000		
		28	750	1400	2750	1500	3000	31000	21000		
		35	750	1400	2750	1500	3000	34000	23000		
		40	750	1400	2750	1500	3000	35000	24000		
		50	750	1400	2750	1500	3000	37000	25000		
		70	750	1400	2750	1500	3000	40000	28000		
		100	500	970	2200	1500	3000	40000	30000		
Frame size	Model	Ratio	⌀ 4		Weight	⌀ 5		Moment of inertia (≤ ϕ 28)	Moment of inertia (≤ ϕ 38)	Moment of inertia (≤ ϕ 48)	Moment of inertia (≤ ϕ 65)
			Maximum radial load	Maximum axial load							
			[N]	[N]		[kg]					
200	Level 1	4	40000	30000	42			—	54	76	140
		5	40000	30000							
		7	40000	30000							
		10	40000	30000							
	Level 2	16	40000	30000	43			13	21	43	—
		20	40000	30000							
		25	40000	30000							
		28	40000	30000							
		35	40000	30000							
		40	40000	30000							
		50	40000	30000							
		70	40000	30000							
		100	40000	30000							

- ⌀ 1 With nominal input speed, service life is 20,000 hours.
- ⌀ 2 With this load and nominal input speed,service life will be 20,000 hours. (Applied to the output shaft center, at axial load 0)
- ⌀ 3 With this load and nominal input speed, service life will be 20,000 hours. (Applied to the output side bearing, at radial load 0)
- ⌀ 4 The maximum radial load the reducer can accept.
- ⌀ 5 The maximum axial load the reducer can accept.
- ⌀ 6 Operating temperature is -20℃-175℃

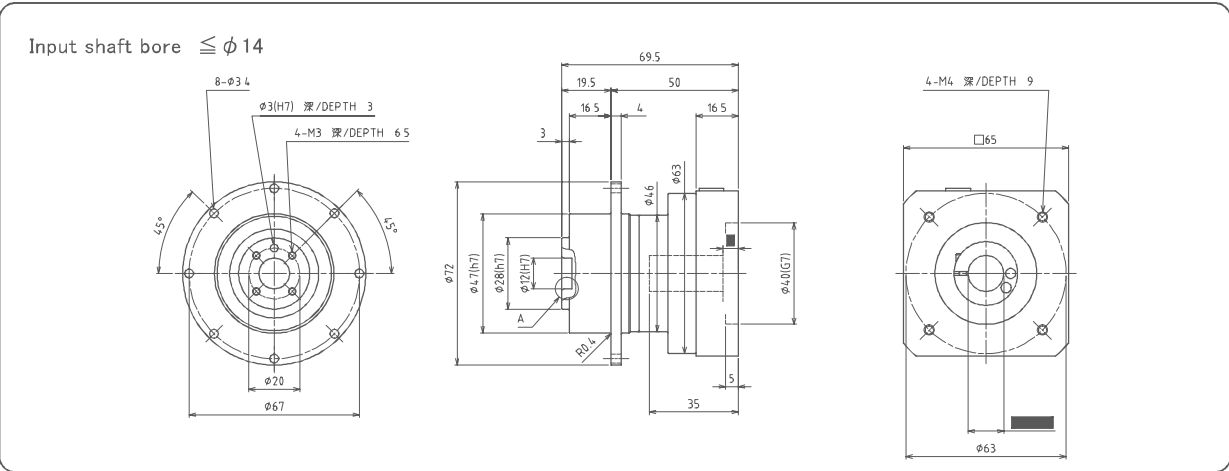
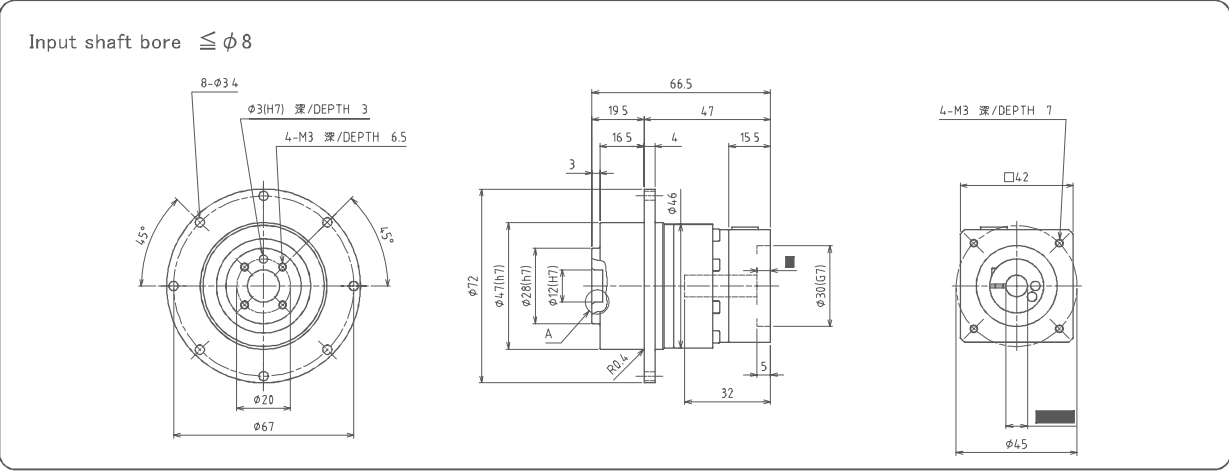
AHT255

Frame size	Model	Ratio	⌀ 1			⌀ 2		⌀ 3	
			Nominal output torque	Maximum output torque	Emergency stop torque	Nominal input speed	Maximum input speed	Permitted radial load	Permitted axial load
			[Nm]	[Nm]	[Nm]	[rpm]	[rpm]	[N]	[N]
255	Level 1	4	2400	3700	8000	1000	2000	31000	22000
		5	2400	3700	8000	1000	2000	33000	24000
		7	2400	3700	8000	1000	2000	36000	26000
		10	1600	2600	6000	1000	2000	40000	29000
	Level 2	16	2400	3700	8000	1000	2000	46000	34000
		20	2400	3700	8000	1000	2000	49000	36000
		25	2400	3700	8000	1000	2000	53000	38000
		28	2400	3700	8000	1000	2000	55000	40000
		35	2400	3700	8000	1000	2000	59000	42000
		40	2400	3700	8000	1000	2000	61000	44000
		50	2400	3700	8000	1000	2000	64000	47000
		70	2400	3700	8000	1000	2000	64000	48000
		100	1600	1800	6000	1000	2000	64000	48000

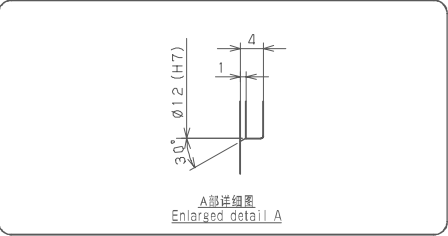
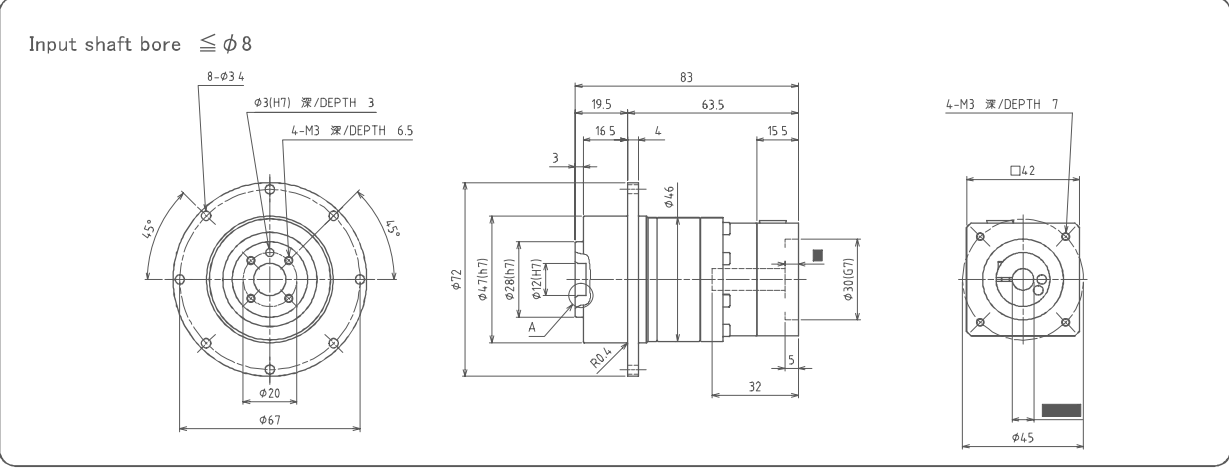
Frame size	Model	Ratio	⌀ 4		Weight	⌀ 5	
			Maximum radial load	Maximum axial load		Moment of inertia (<= ⌀48)	Moment of inertia (<= ⌀65)
			[N]	[N]	[kg]	[kgcm ²]	[kgcm ²]
255	Level 1	4	64000	48000	84	—	200
		5	64000	48000		—	170
		7	64000	48000		—	130
		10	64000	48000		—	110
	Level 2	16	64000	48000	89	64	—
		20	64000	48000		53	—
		25	64000	48000		51	—
		28	64000	48000		59	—
		35	64000	48000		50	—
		40	64000	48000		38	—
		50	64000	48000		38	—
		70	64000	48000		37	—
		100	64000	48000		37	—

- ⌀ 1 With nominal input speed, service life is 20,000 hours.
- ⌀ 2 With this load and nominal input speed, service life will be 20,000 hours. (Applied to the output shaft center, at axial load 0)
- ⌀ 3 With this load and nominal input speed, service life will be 20,000 hours. (Applied to the output side bearing, at radial load 0)
- ⌀ 4 The maximum radial load the reducer can accept.
- ⌀ 5 The maximum axial load the reducer can accept.
- ⌀ 6 Operating temperature is -20℃-175℃

AHT-047 Level1



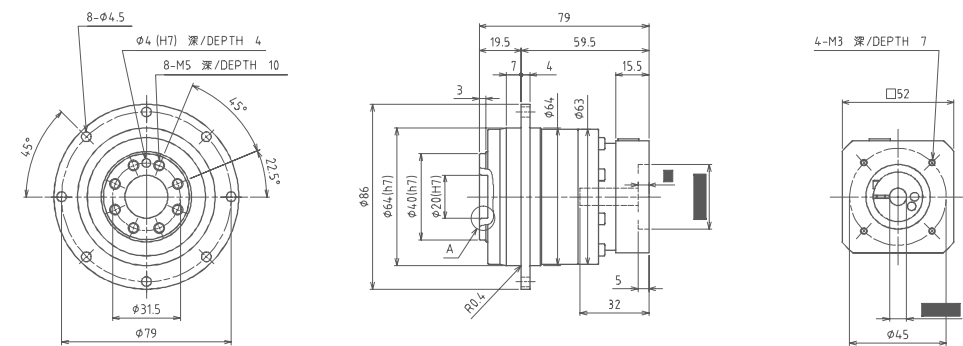
AHT-047 Level12



- Note1: The body size varies with the installation of the motor.
- Note2: When the shaft diameter of the motor is different from the input shaft diameter, the shaft sleeve can be inserted.

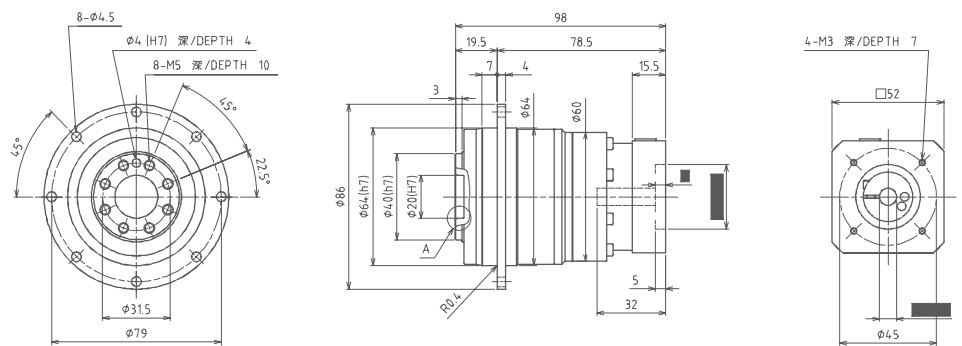
AHT-064 Level1

Input shaft bore $\leq \phi 8$

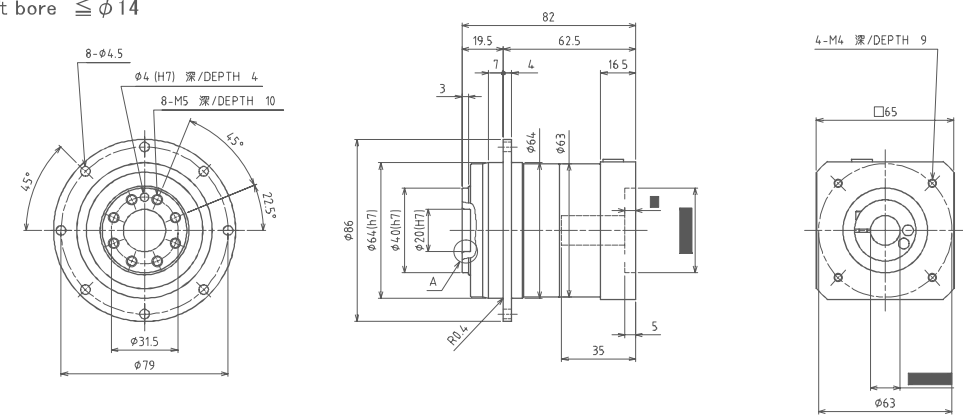


AHT-064 Level2

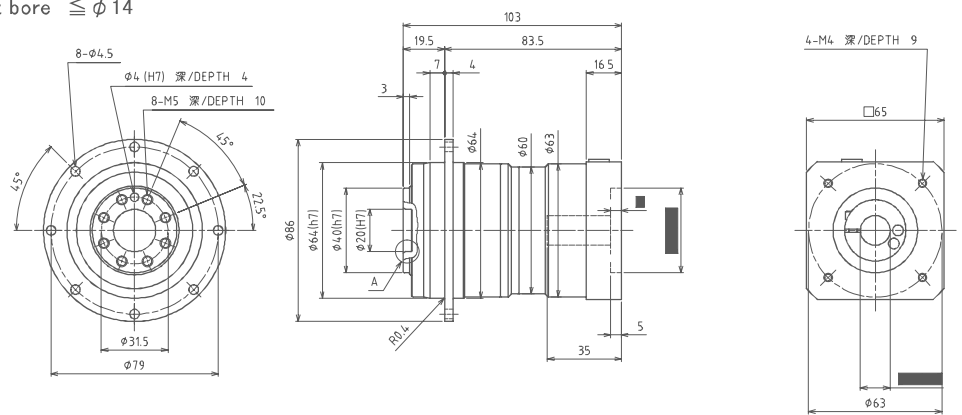
Input shaft bore $\leq \phi 8$



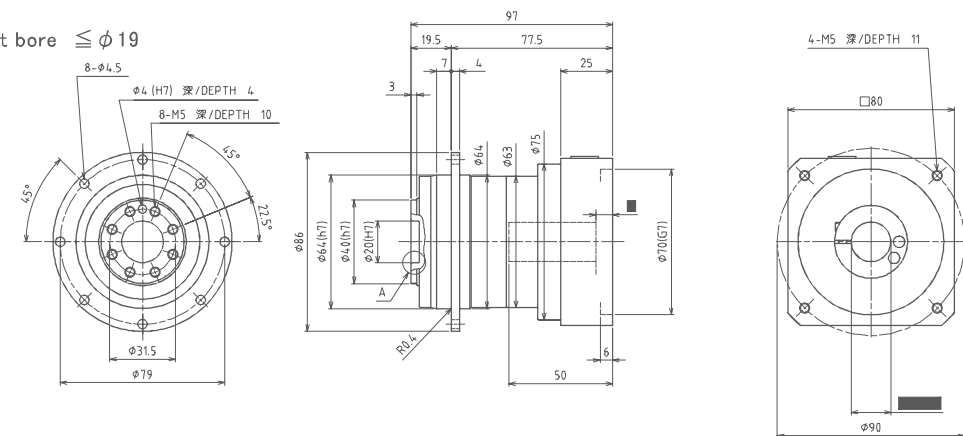
Input shaft bore $\leq \phi 14$



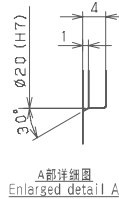
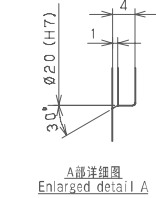
Input shaft bore $\leq \phi 14$



Input shaft bore $\leq \phi 19$

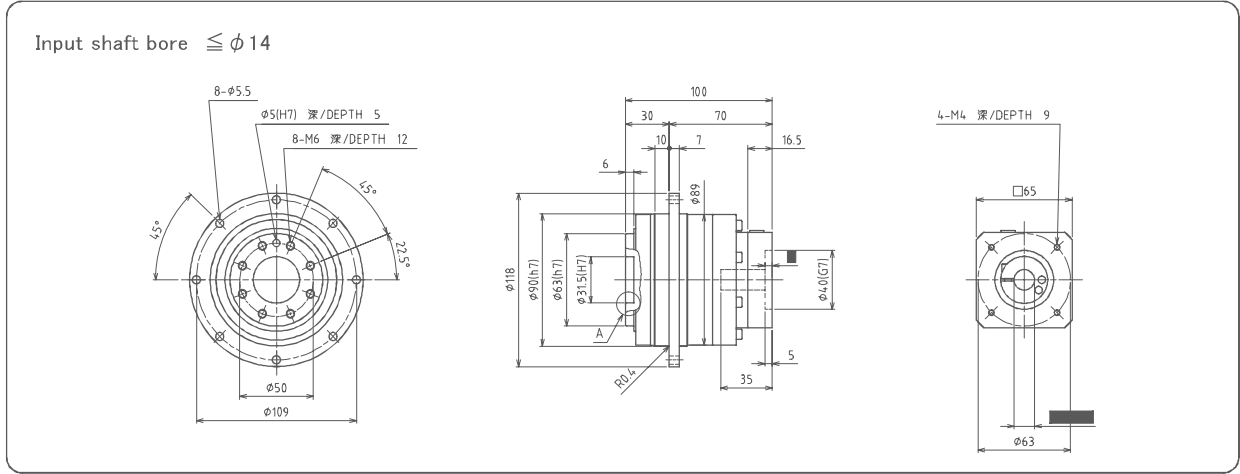


Note1: The body size varies with the installation of the motor.
Note2: When the shaft diameter of the motor is different from the input shaft diameter, the shaft sleeve can be inserted.

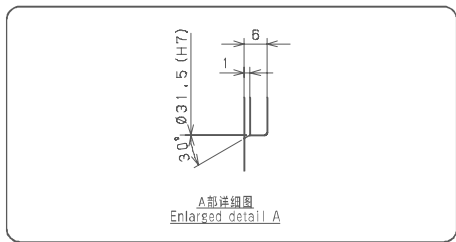
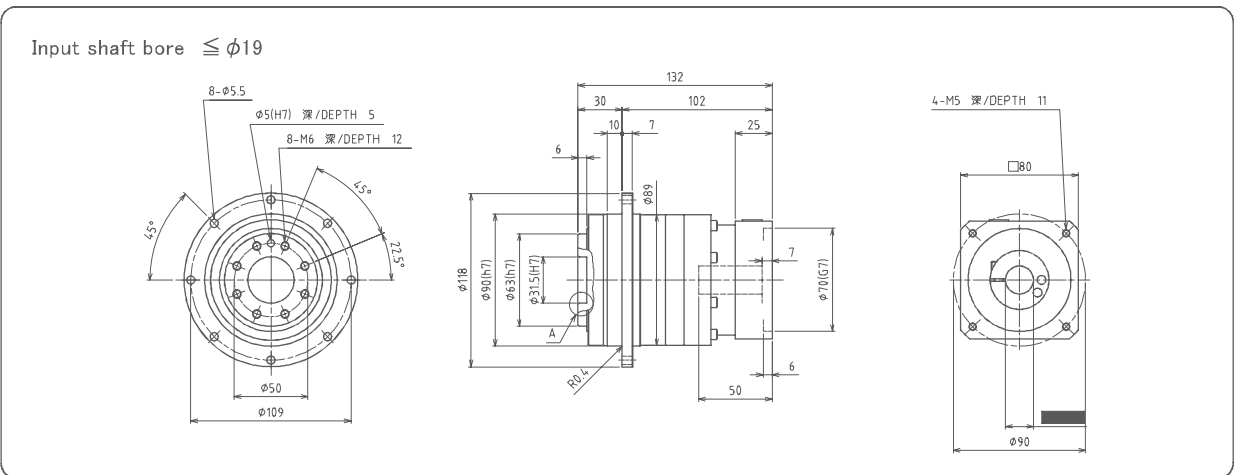
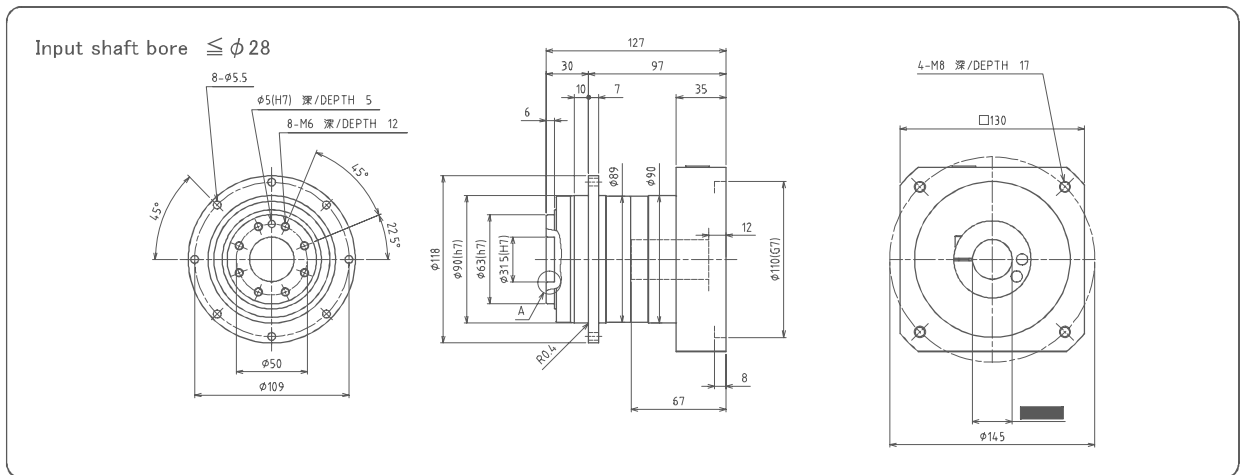
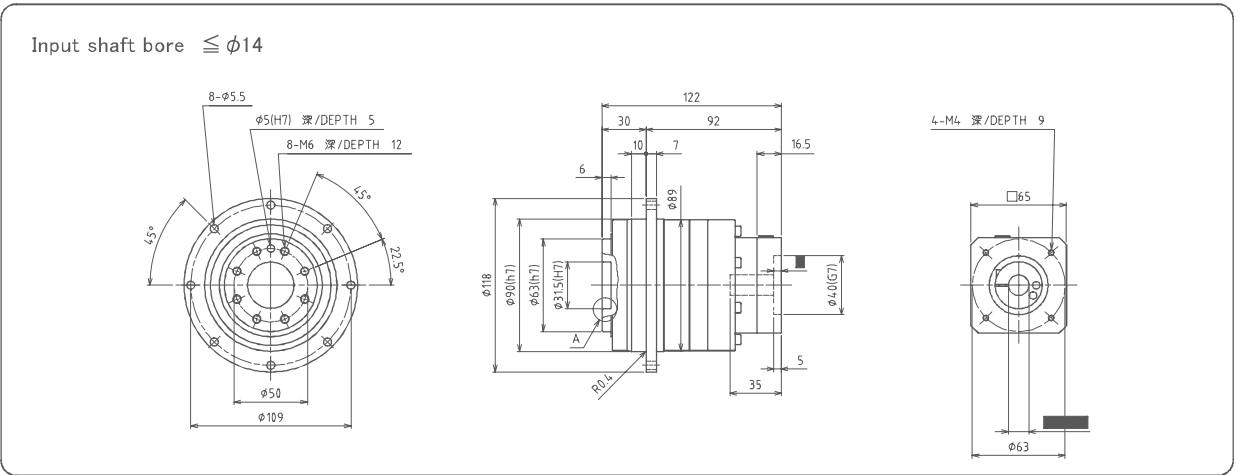
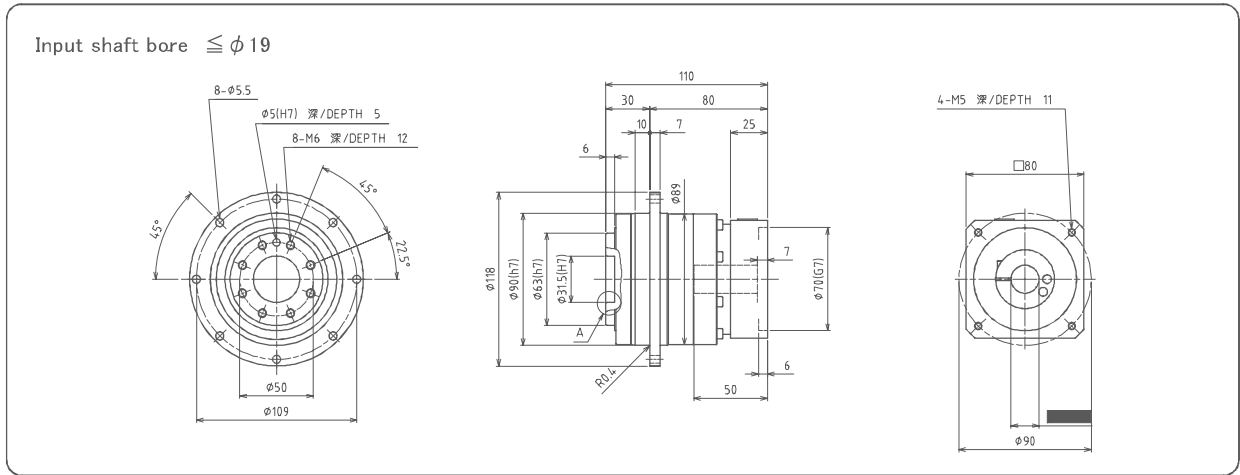
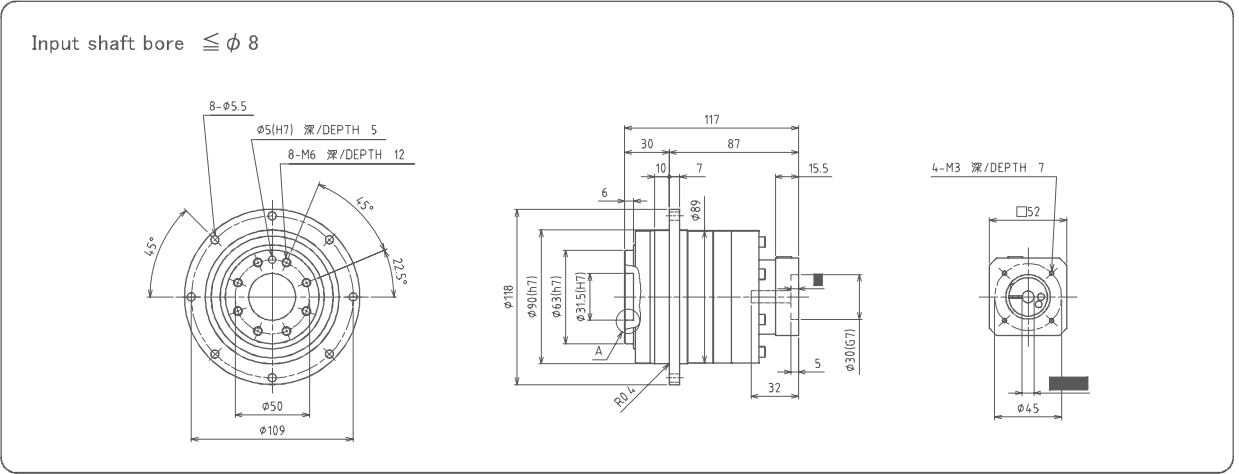


Note1: The body size varies with the installation of the motor.
Note2: When the shaft diameter of the motor is different from the input shaft diameter, the shaft sleeve can be inserted.

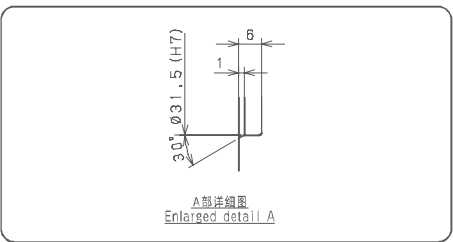
AHT-090 Level1



AHT-090 Level2



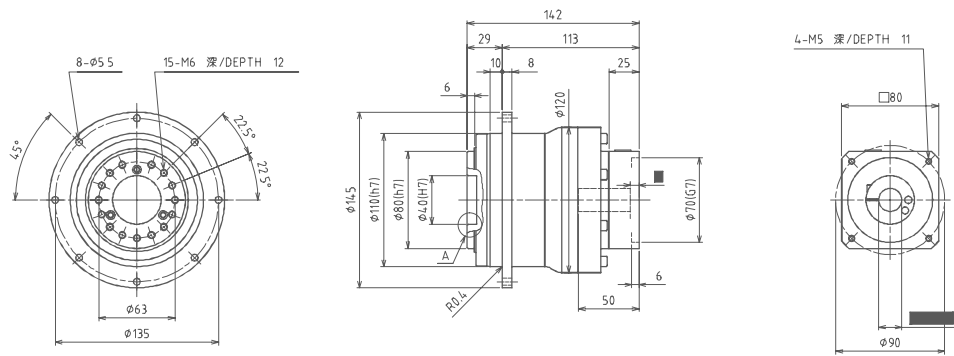
Note1: The body size varies with the installation of the motor.
Note2: When the shaft diameter of the motor is different from the input shaft diameter, the shaft sleeve can be inserted.



Note1: The body size varies with the installation of the motor.
Note2: When the shaft diameter of the motor is different from the input shaft diameter, the shaft sleeve can be inserted.

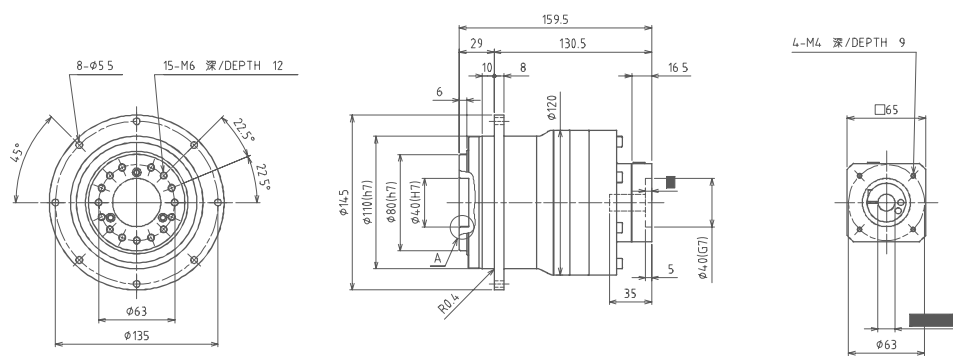
AHT-110 Level1

Input shaft bore ≤ φ19

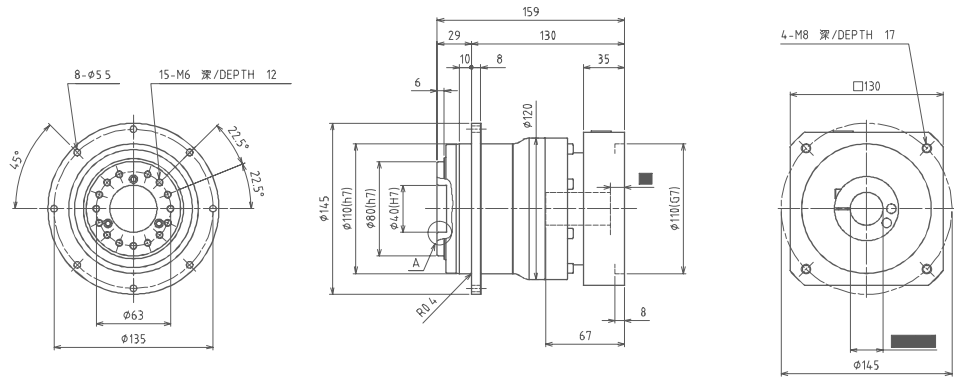


AHT-110 Level2

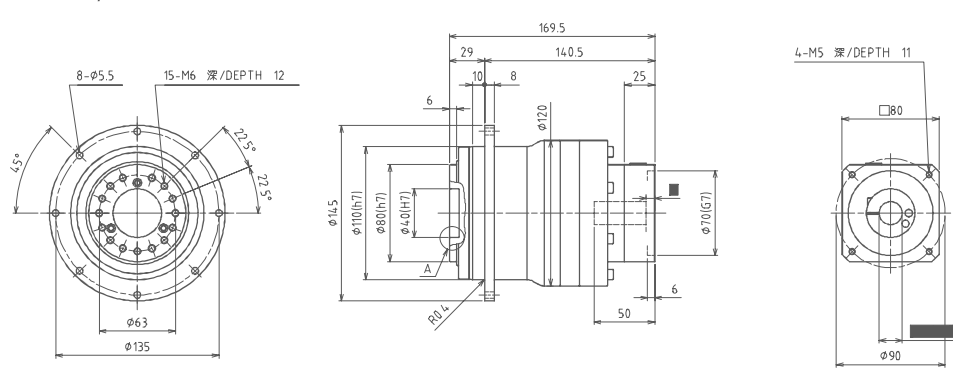
Input shaft bore ≤ φ14



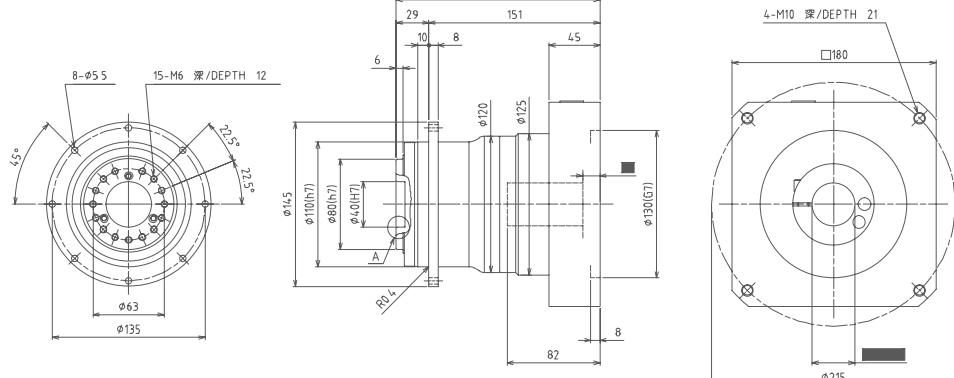
Input shaft bore ≤ φ28



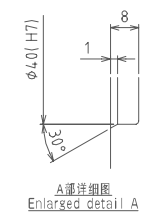
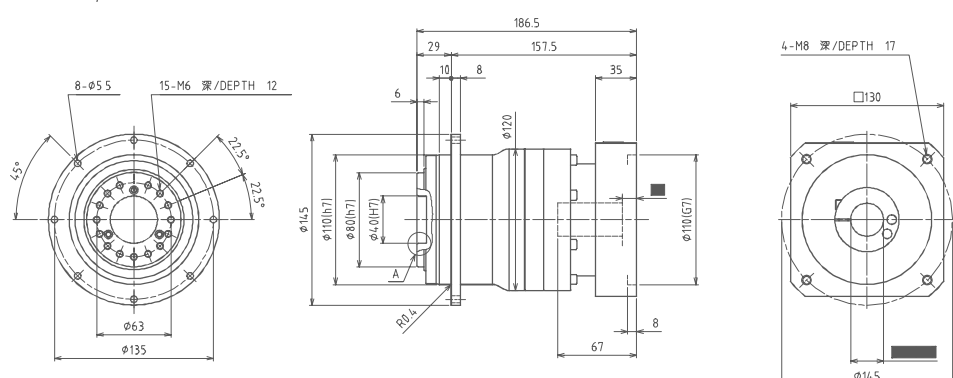
Input shaft bore ≤ φ19



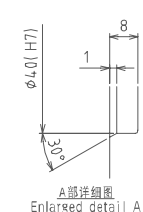
Input shaft bore ≤ φ38



Input shaft bore ≤ φ28



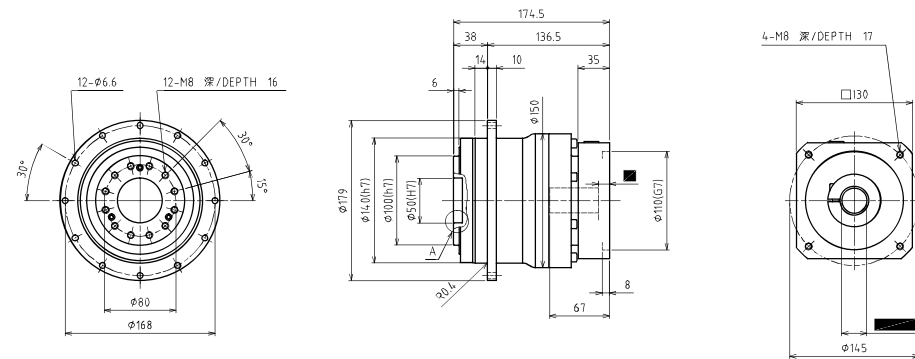
Note1: The body size varies with the installation of the motor.
Note2: When the shaft diameter of the motor is different from the input shaft diameter, the shaft sleeve can be inserted.



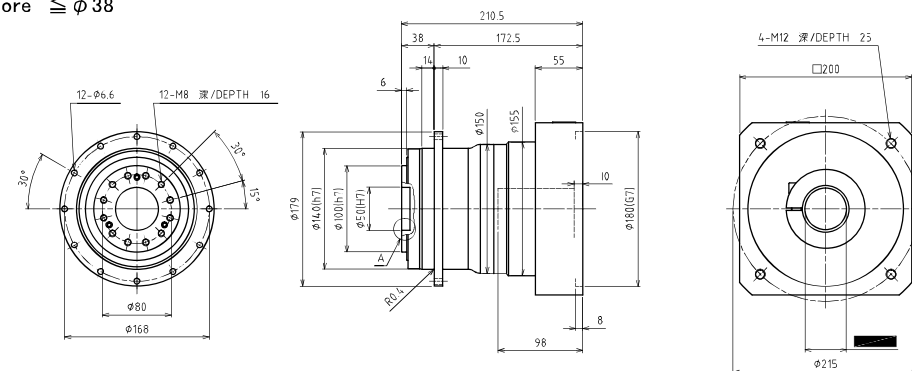
Note1: The body size varies with the installation of the motor.
Note2: When the shaft diameter of the motor is different from the input shaft diameter, the shaft sleeve can be inserted.

AHT-140 Level 1

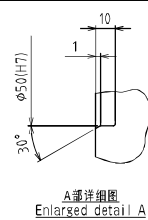
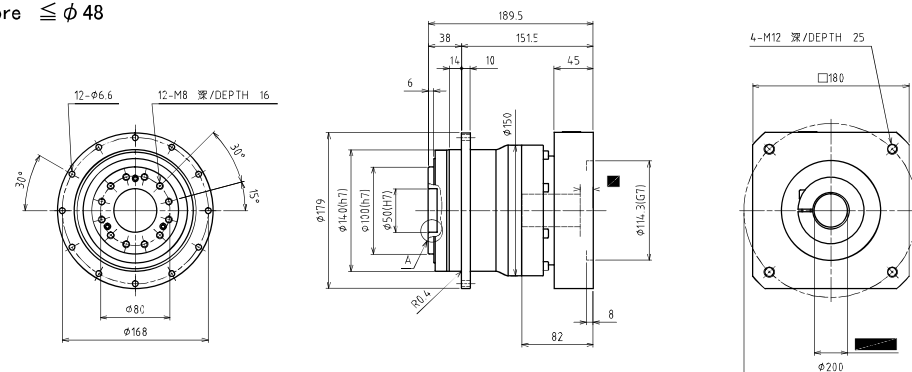
Input shaft bore $\leq \phi 28$



Input shaft bore $\leq \phi 38$



Input shaft bore $\leq \phi 48$

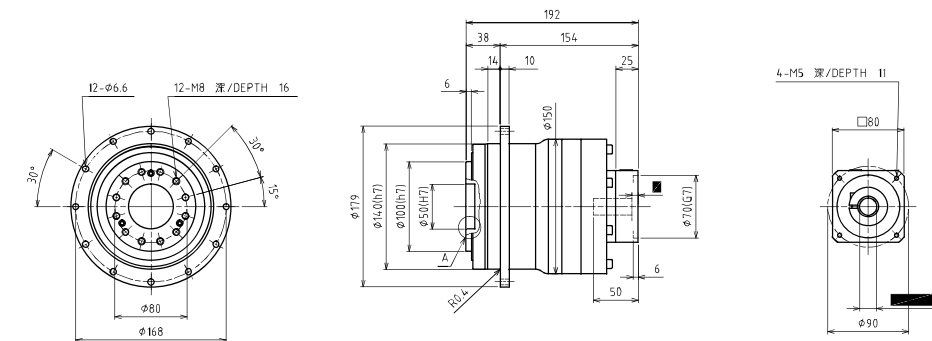


Note1: The body size varies with the installation of the motor.

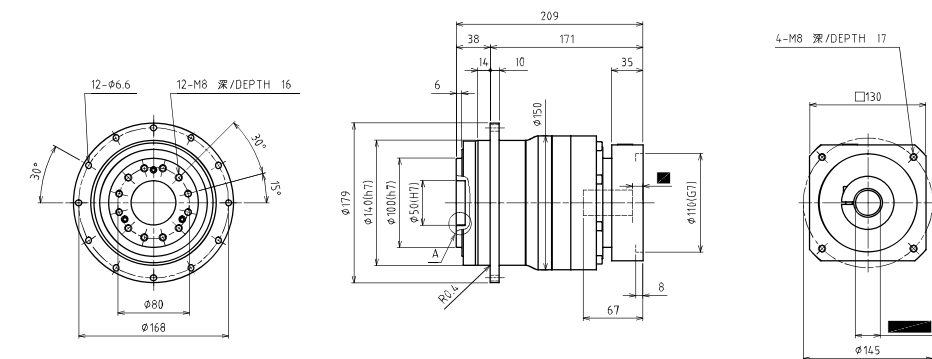
Note2: When the shaft diameter of the motor is different from the input shaft diameter, the shaft sleeve can be inserted.

AHT-140 Level2

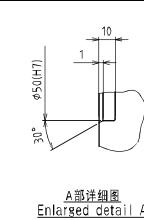
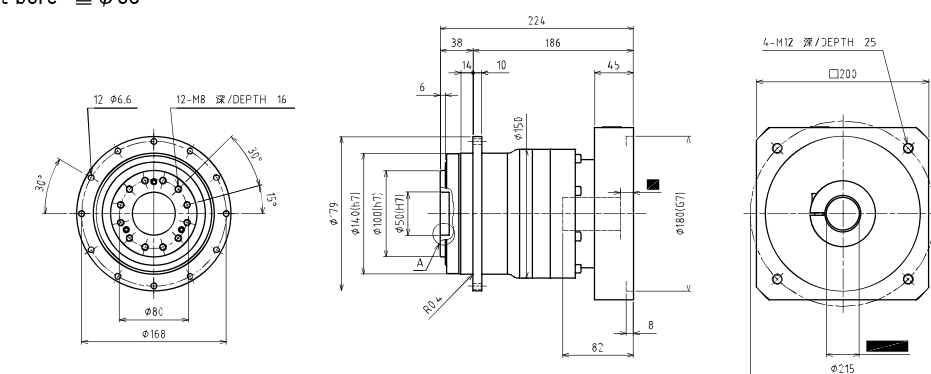
Input shaft bore $\leq \phi 19$



Input shaft bore $\leq \phi 28$



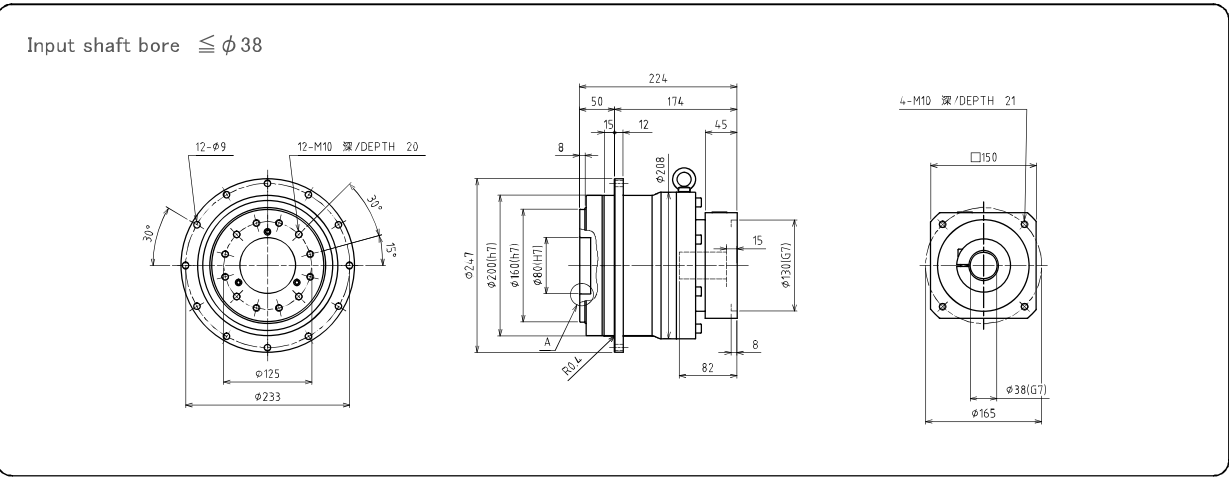
Input shaft bore $\leq \phi 38$



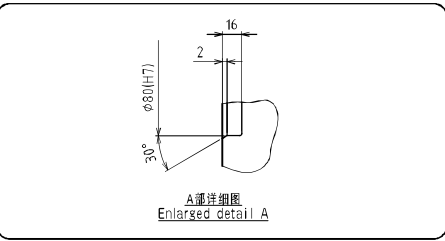
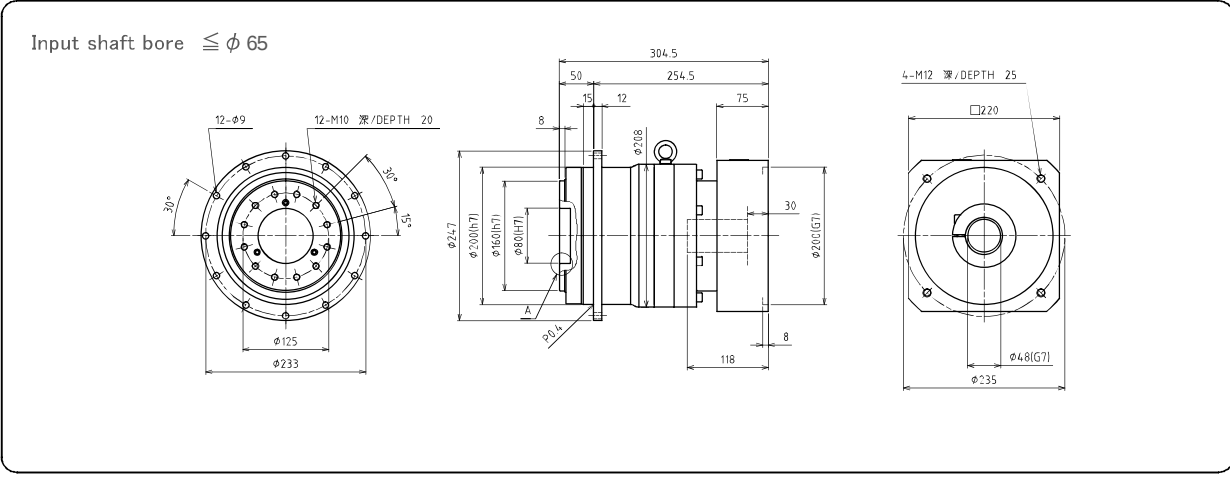
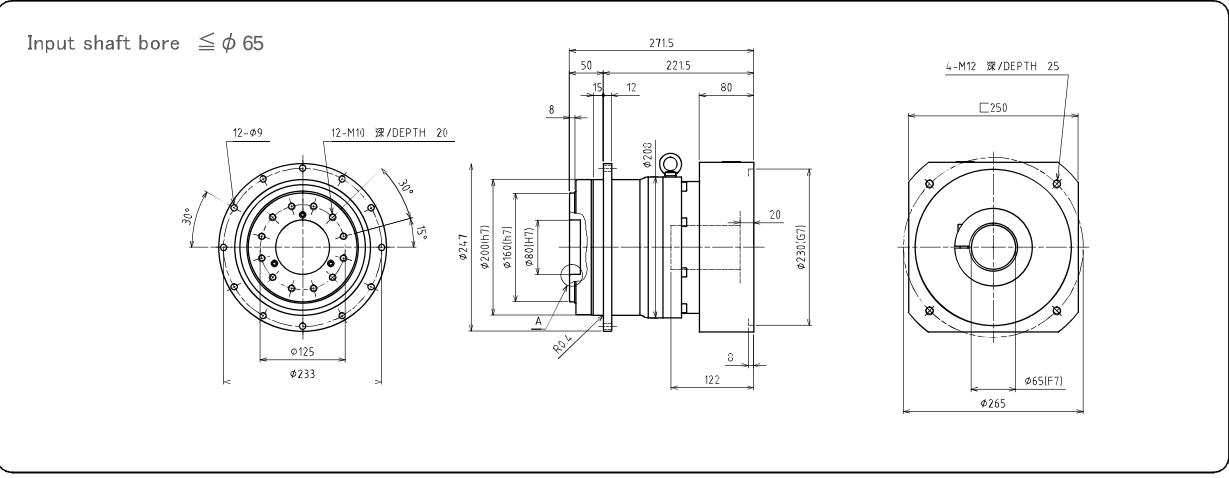
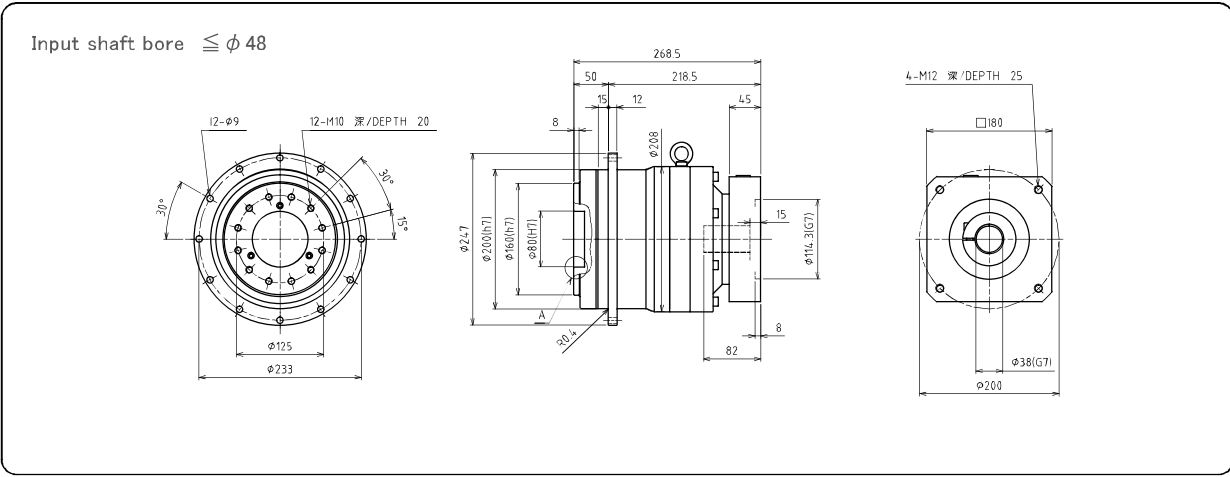
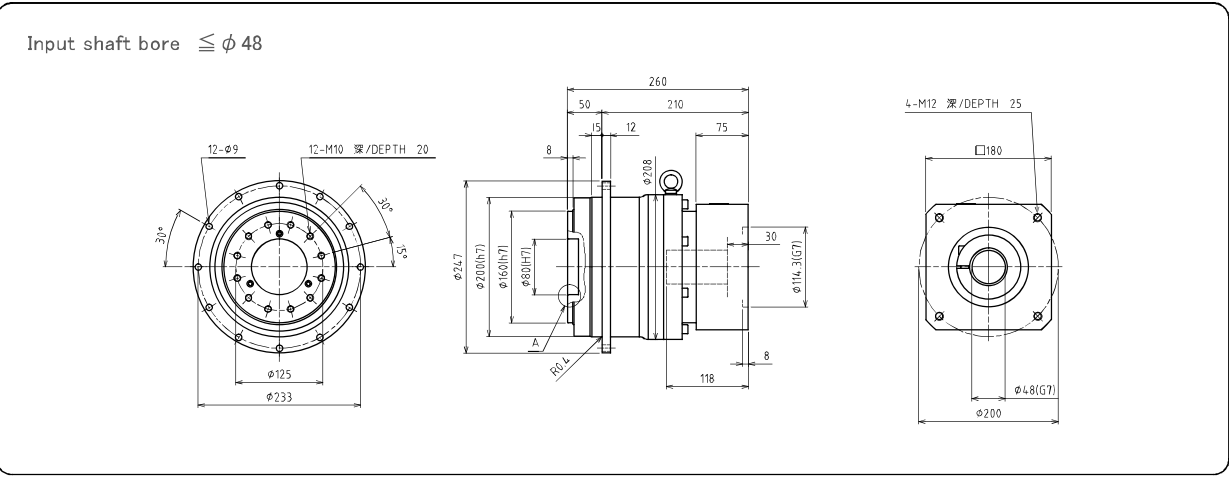
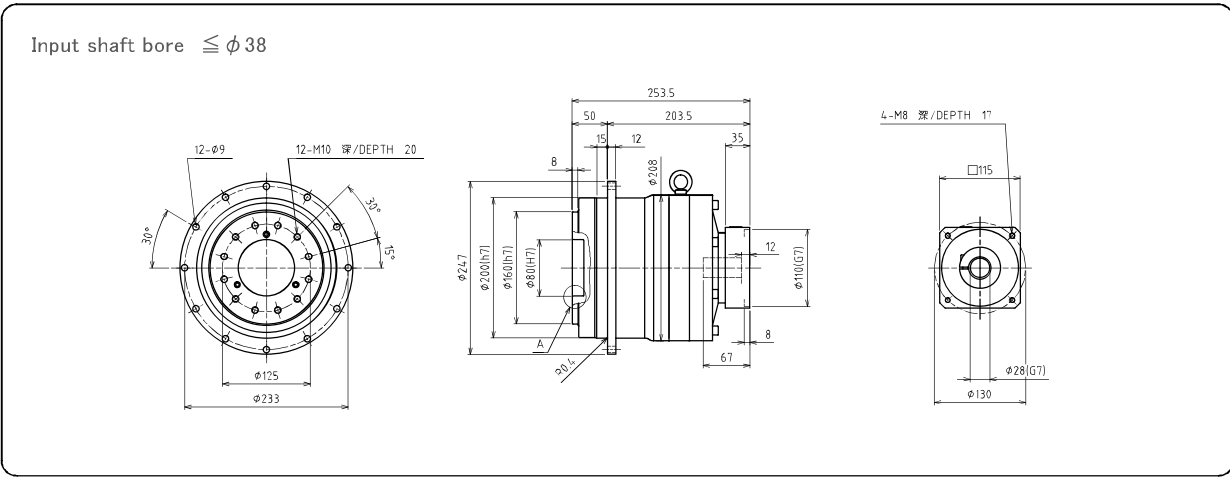
Note1: The body size varies with the installation of the motor.

Note2: When the shaft diameter of the motor is different from the input shaft diameter, the shaft sleeve can be inserted.

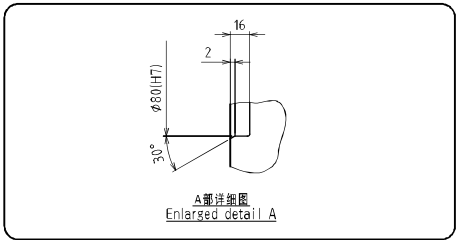
AHT-200 Level1



AHT-200 Level2

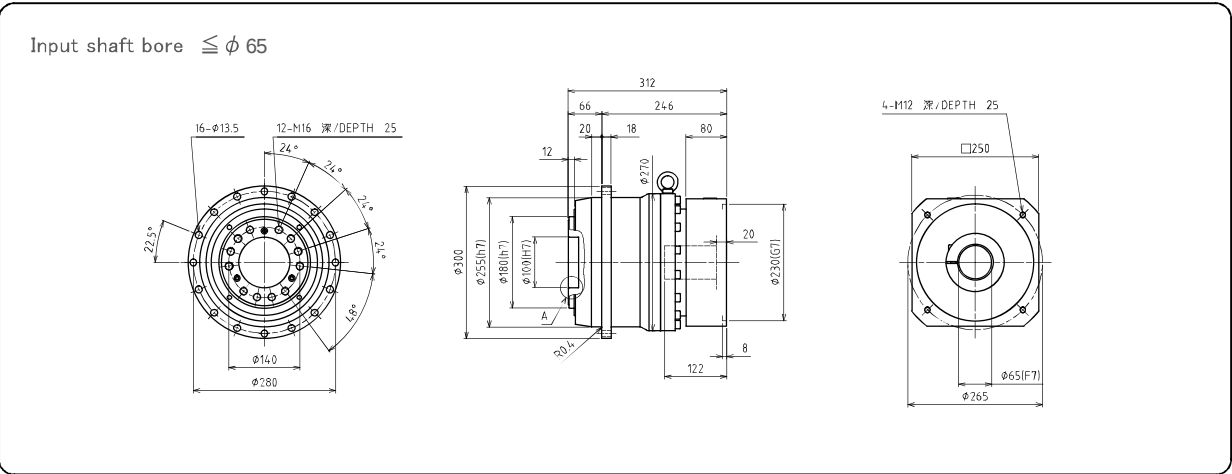


Note1: The body size varies with the installation of the motor.
Note2: When the shaft diameter of the motor is different from the input shaft diameter, the shaft sleeve can be inserted.

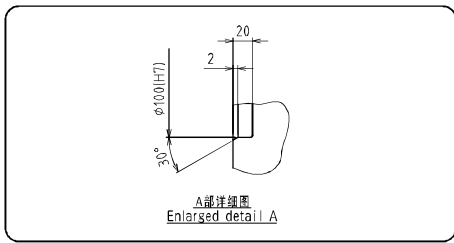
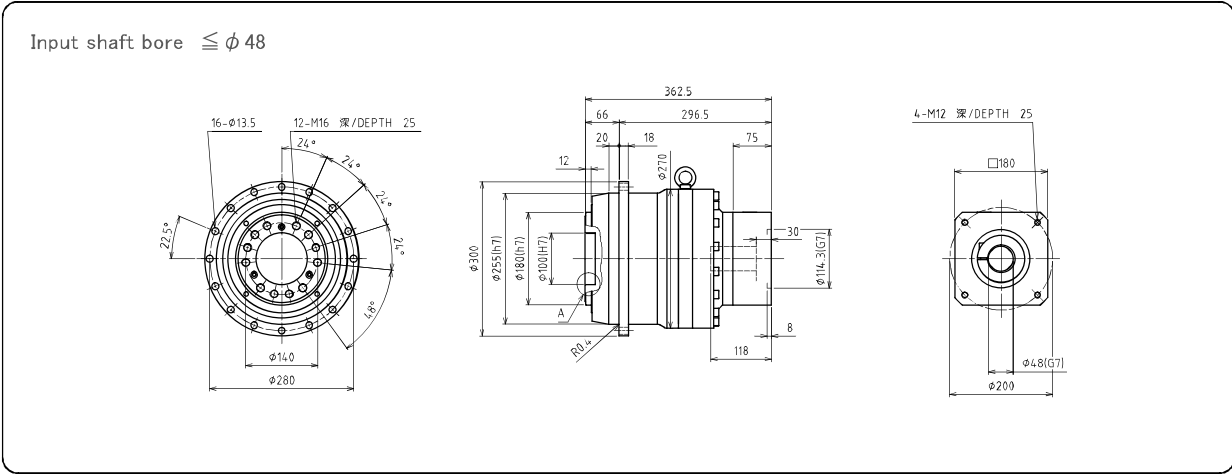


Note1: The body size varies with the installation of the motor.
Note2: When the shaft diameter of the motor is different from the input shaft diameter, the shaft sleeve can be inserted.

AHT-255 Level1



AHT-255 2级 2stage



Note1: The body size varies with the installation of the motor.
Note2: When the shaft diameter of the motor is different from the input shaft diameter, the shaft sleeve can be inserted.

1 Mounting procedure to the motor

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

2 Remove the plug.

3 Turn the input shaft to align the head of the clamping bolt with the jack hole. At this time, ensure that the clamping bolt is loose.

If there is a shaft sleeve, the installation method is shown in the figure.

4 Please place reducer vertically on the flat surface so the motor mounting part faces up. 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. (Refer to table1)

2 Installation of reducer
After confirming the installation surface is flat and clean, tighten the bolt using a torque wrench to the proper torque. (Refer to table 2)

5 Tighten the clamping bolt of the input shaft with torquewrench to the proper torque. (Refer to table 1)

6 Reinstall the plug and the installation is complete.

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	—	—

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

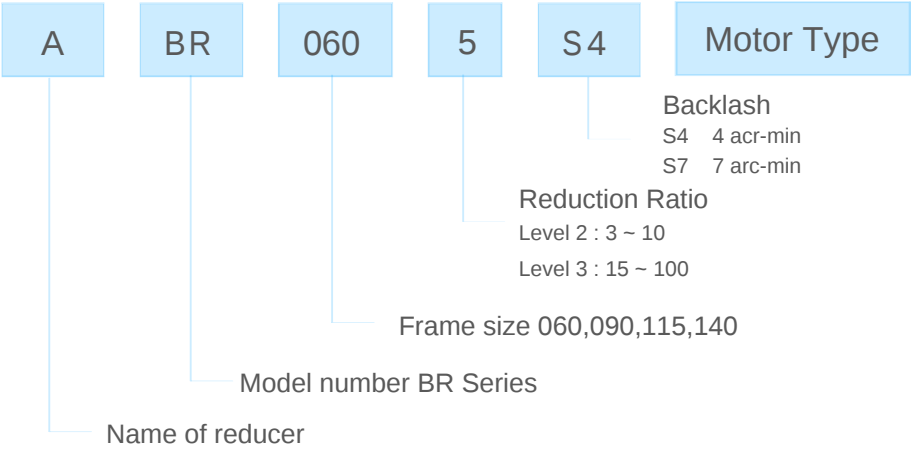
ABR Series



Features

- 1 Right angle reducer using spiralbevel gear. Customer canlocate the motor at 90 degree away from the reducer if required to save space
- 2 The use ofintegralneedle roller bearings greatly improvesrigidity and torque
- 3 Effectively prevent grease leakage by using grease with high viscosity and anti-separation
- 4 Applicable to all kinds of motors
- 5 No need to change the grease during the life of the product, making installation easier

Model number



ABR060

Frame size	Model	Ratio	⌀ 1					⌀ 2	⌀ 3
			Nominal output torque	Maximum output torque	Emergency stop torque	Nominal input speed	Maximum input speed	Permitted radial load	Permitted axial load
			[Nm]	[Nm]	[Nm]	[rpm]	[rpm]	[N]	[N]
060	2	3	13	26	55	3000	6000	440	320
		4	17	24	60	3000	6000	480	370
		5	23	42	85	3000	6000	520	400
		6	25	47	95	3000	6000	550	440
		7	25	47	95	3000	6000	580	470
		8	25	47	95	3000	6000	610	490
		9	17	34	70	3000	6000	620	520
		10	17	34	70	3000	6000	650	540
	3	15	17	34	70	3000	6000	750	640
		16	25	47	95	3000	6000	760	660
		20	25	47	95	3000	6000	820	730
		25	25	47	95	3000	6000	880	800
		28	25	47	95	3000	6000	920	840
		30	17	34	70	3000	6000	940	870
		35	25	47	95	3000	6000	990	930
		40	25	47	95	3000	6000	1010	980
		45	16	34	70	3000	6000	1110	1010
		50	25	47	95	3000	6000	1110	1110
		60	25	47	95	3000	6000	1210	1110
		70	25	47	95	3000	6000	1210	1110
		80	24	47	95	3000	6000	1210	1110
		90	17	34	70	3000	6000	1210	1110
		100	17	34	70	3000	6000	1210	1110

Frame size	Model	Ratio	⌀ 4	⌀ 5	Weight	Moment of inertia (≤ ϕ 8)	Moment of inertia (≤ ϕ 14)	Moment of inertia (≤ ϕ 19)	Operating temperature
			Maximum radial load	Maximum axial load					
			[N]	[N]	[kg]	[kg·cm ²]	[kg·cm ²]	[kg·cm ²]	
060	2	3	1220	1120	1.8	0.31	0.39	0.58	-20℃ ~ 90℃
		4	1220	1120		0.27	0.34	0.53	
		5	1220	1120		0.25	0.32	0.51	
		6	1220	1120		0.24	0.31	0.50	
		7	1220	1120		0.23	0.31	0.50	
		8	1220	1120		0.23	0.31	0.50	
		9	1220	1120		0.23	0.30	0.49	
		10	1220	1120		0.23	0.30	0.49	
	3	15	1220	1120	1.6	0.073	0.118	—	
		16	1220	1120		0.079	0.124	—	
		20	1220	1120		0.071	0.116	—	
		25	1220	1120		0.071	0.115	—	
		28	1220	1120		0.077	0.122	—	
		30	1220	1120		0.062	0.106	—	
		35	1220	1120		0.070	0.115	—	
		40	1220	1120		0.061	0.106	—	
		45	1220	1120		0.070	0.115	—	
		50	1220	1120		0.061	0.106	—	
		60	1220	1120		0.061	0.106	—	
		70	1220	1120		0.061	0.105	—	
		80	1220	1120		0.061	0.105	—	
		90	1220	1120		0.061	0.105	—	
		100	1220	1120		0.061	0.105	—	

- ⌀ 1 With nominal input speed, service life is 20,000 hours.
- ⌀ 2 With this load and nominal input speed, service life will be 20,000 hours. (Applied to the output shaft center, at axial load 0)
- ⌀ 3 With this load and nominal input speed, service life will be 20,000 hours. (Applied to the output side bearing, at radial load 0)
- ⌀ 4 The maximum radial load the reducer can accept.
- ⌀ 5 The maximum axial load the reducer can accept.

ABR090

			Ø 1			Ø 2			Ø 3	
Frame size	Model	Ratio	Nominal output torque	Maximum output torque	Emergency stop torque	Nominal input speed	Maximum input speed	Permitted radial load	Permitted axial load	
			[Nm]	[Nm]	[Nm]	[rpm]	[rpm]	[N]	[N]	
090	2	3	47	70	138	3000	6000	825	945	
		4	62	95	178	3000	6000	905	1115	
		5	67	95	228	3000	6000	975	1215	
		6	67	95	228	3000	6000	1015	1315	
		7	67	95	228	3000	6000	1115	1315	
		8	67	95	228	3000	6000	1115	1415	
		9	47	70	178	3000	6000	1215	1515	
		10	47	70	178	3000	6000	1215	1615	
	3	15	47	70	178	3000	6000	1415	1915	
		16	67	115	228	3000	6000	1415	1915	
		20	67	115	228	3000	6000	1515	2115	
		25	67	115	228	3000	6000	1615	2215	
		28	67	115	228	3000	6000	1715	2215	
		30	47	70	178	3000	6000	1715	2215	
		35	67	115	228	3000	6000	1815	2215	
		40	67	115	228	3000	6000	1915	2215	
		45	47	70	178	3000	6000	2015	2215	
		50	67	115	228	3000	6000	2115	2215	
		60	67	115	228	3000	6000	2215	2215	
		70	67	115	228	3000	6000	2315	2215	
		80	67	115	228	3000	6000	2415	2215	
		90	47	70	228	3000	6000	2415	2215	
		100	47	70	178	3000	6000	2415	2215	

Frame size	Model	Ratio	⌀ 4	⌀ 5	Weight	Moment of inertia (≤ ϕ 8)	Moment of inertia (≤ ϕ 14)	Moment of inertia (≤ ϕ 19)	Moment of inertia (≤ ϕ 28)
			Maximum radial load	Maximum axial load					
			[N]	[N]					
090	2	3	2425	2225	5.1	—	2.12	2.45	4.57
		4	2425	2225		—	1.89	2.22	4.35
		5	2425	2225		—	1.80	2.13	4.26
		6	2425	2225		—	1.76	2.09	4.21
		7	2425	2225		—	1.73	2.06	4.18
		8	2425	2225		—	1.71	2.04	4.17
		9	2425	2225		—	1.70	2.03	4.16
		10	2425	2225		—	1.69	2.02	4.15
	3	15	2425	2225	4.4	0.34	0.41	0.60	—
		16	2425	2225		0.38	0.46	0.65	—
		20	2425	2225		0.33	0.40	0.59	—
		25	2425	2225		0.32	0.40	0.59	—
		28	2425	2225		0.37	0.45	0.64	—
		30	2425	2225		0.25	0.33	0.51	—
		35	2425	2225		0.32	0.40	0.59	—
		40	2425	2225		0.25	0.32	0.51	—
		45	2425	2225		0.32	0.39	0.58	—
		50	2425	2225		0.25	0.32	0.51	—
		60	2425	2225		0.25	0.32	0.51	—
		70	2425	2225		0.25	0.32	0.51	—
		80	2425	2225		0.25	0.32	0.51	—
		90	2425	2225		0.25	0.32	0.51	—
		100	2425	2225		0.25	0.32	0.51	—

- ⌀ 1 With nominal input speed, service life is 20,000 hours.
- ⌀ 2 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output shaft center, at axial load 0)
- ⌀ 3 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output side bearing, at radial load 0)
- ⌀ 4 The maximum radial load the reducer can accept.
- ⌀ 5 The maximum axial load the reducer can accept.

ABR115

ABR115			Ø 1				Ø 2		Ø 3	
Frame size	Model	Ratio	Nominal output torque	Maximum output torque	Emergency stop torque	Nominal input speed	Maximum input speed	Permitted radial load	Permitted axial load	
			[Nm]	[Nm]	[Nm]	[rpm]	[rpm]	[N]	[N]	
115	2	3	80	155	330	3000	6000	1320	1520	
		4	105	205	440	3000	6000	1520	1720	
		5	125	245	510	3000	6000	1620	1920	
		6	155	305	560	3000	6000	1720	2020	
		7	155	305	560	3000	6000	1820	2100	
		8	155	305	560	3000	6000	1920	2320	
		9	115	205	460	3000	6000	1920	2420	
		10	115	205	460	3000	6000	2020	2520	
	3	15	115	205	460	3000	6000	2320	3020	
		16	135	265	560	3000	6000	2320	3120	
		20	155	305	560	3000	6000	2520	3420	
		25	155	305	560	3000	6000	2720	3720	
		28	155	305	560	3000	6000	2820	3920	
		30	115	205	460	3000	6000	2920	3920	
		35	155	305	560	3000	6000	3020	3920	
		40	155	305	560	3000	6000	3220	3920	
		45	115	205	460	3000	6000	3320	3920	
		50	155	305	560	3000	6000	3420	3920	
		60	155	305	560	3000	6000	3620	3920	
		70	155	305	560	3000	6000	3820	3920	
80	155	305	560	3000	6000	4020	3920			
90	115	205	460	3000	6000	4220	3920			
100	115	205	460	3000	6000	4320	3920			

Frame size	Model	Ratio	⌀ 4	⌀ 5	Weight	Moment of inertia (≤ ϕ 14)	Moment of inertia (≤ ϕ 19)	Moment of inertia (≤ ϕ 28)	Moment of inertia (≤ ϕ 38)
			Maximum radial load	Maximum axial load					
			[N]	[N]					
115	2	3	4330	3930	10.4	—	6.74	8.34	15.41
		4	4330	3930		—	5.49	7.08	14.15
		5	4330	3930		—	5.02	6.61	13.69
		6	4330	3930		—	4.77	6.36	13.43
		7	4330	3930		—	4.65	6.24	13.31
		8	4330	3930		—	4.55	6.14	13.22
		9	4330	3930		—	4.49	6.08	13.16
		10	4330	3930		—	4.46	6.05	13.12
	3	15	4330	3930	10.1	2.25	2.58	4.70	—
		16	4330	3930		2.46	2.79	4.91	—
		20	4330	3930		2.20	2.53	4.65	—
		25	4330	3930		2.18	2.51	4.64	—
		28	4330	3930		2.40	2.73	4.86	—
		30	4330	3930		1.87	2.20	4.33	—
		35	4330	3930		2.16	2.49	4.62	—
		40	4330	3930		1.86	2.19	4.32	—
		45	4330	3930		2.15	2.48	4.61	—
		50	4330	3930		1.86	2.19	4.31	—
		60	4330	3930		1.85	2.18	4.31	—
		70	4330	3930		1.85	2.18	4.31	—
		80	4330	3930		1.85	2.18	4.31	—
		90	4330	3930		1.85	2.18	4.31	—
		100	4330	3930		1.85	2.18	4.31	—

- ⌀ 1 With nominal input speed, service life is 20,000 hours.
- ⌀ 2 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output shaft center, at axial load 0)
- ⌀ 3 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output side bearing, at radial load 0)
- ⌀ 4 The maximum radial load the reducer can accept.
- ⌀ 5 The maximum axial load the reducer can accept.

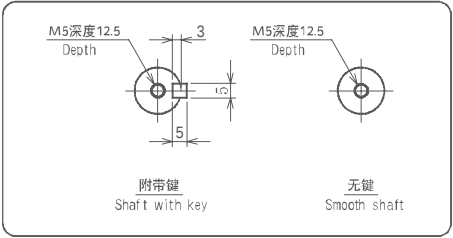
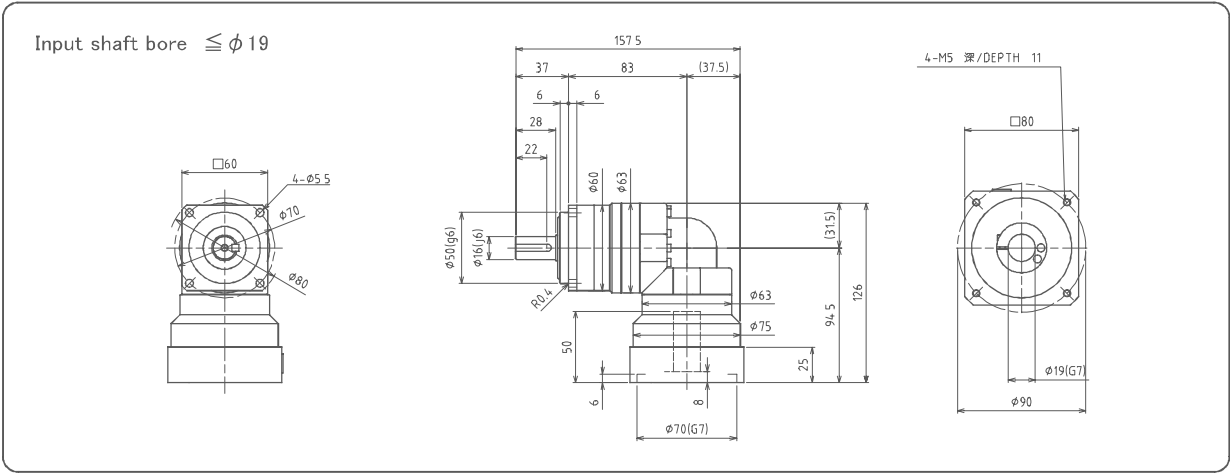
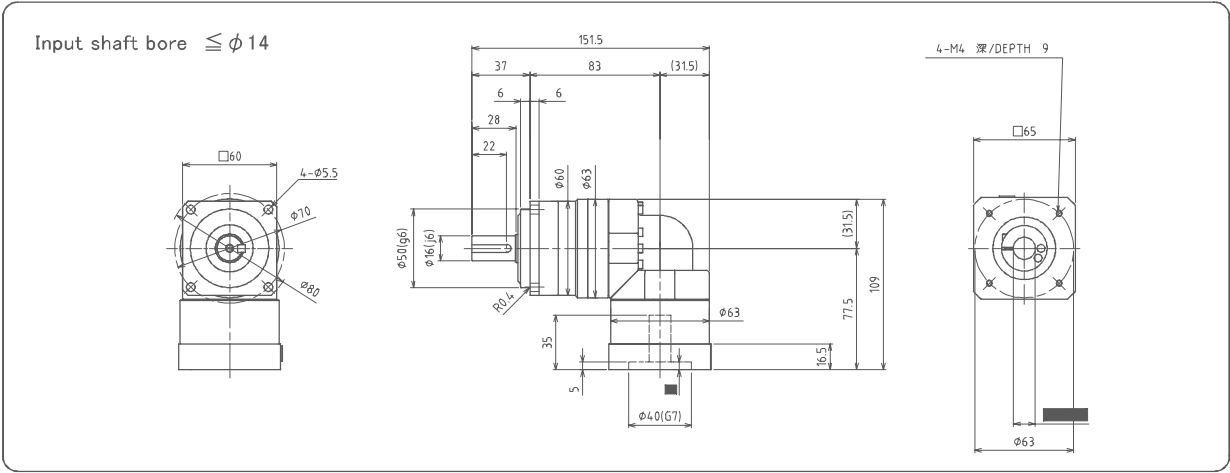
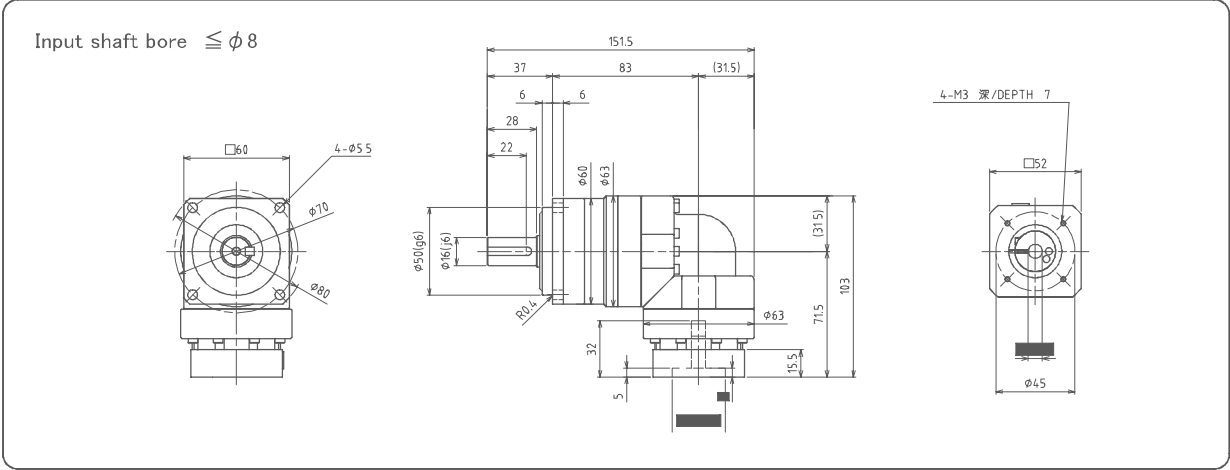
ABR090

Frame size	Model	Ratio	⌀ 1				⌀ 2		⌀ 3
			Nominal output torque	Maximum output torque	Emergency stop torque	Nominal input speed	Maximum input speed	Permitted radial load	Permitted axial load
			[Nm]	[Nm]	[Nm]	[rpm]	[rpm]	[N]	[N]
140	2	3	135	265	715	2000	4000	3225	2425
		4	175	345	965	2000	4000	3525	2725
		5	205	405	1115	2000	4000	3825	3025
		6	265	525	1115	2000	4000	4025	3325
		7	305	605	1115	2000	4000	4225	3525
		8	305	605	1115	2000	4000	4425	3725
		9	205	405	765	2000	4000	4625	3925
		10	205	405	765	2000	4000	4725	4125
	3	15	205	405	765	2000	4000	5425	4925
		16	305	605	1115	2000	4000	5525	5025
		20	305	605	1115	2000	4000	6025	5525
		25	305	605	1115	2000	4000	6425	6125
		28	305	605	1115	2000	4000	6725	6425
		30	205	405	765	2000	4000	6825	6625
		35	305	605	1115	2000	4000	7225	7025
		40	305	605	1115	2000	4000	7525	7525
		45	205	405	765	2000	4000	7825	7925
		50	305	605	1115	2000	4000	8125	8225
		60	305	605	1115	2000	4000	8625	8225
		70	305	605	1115	2000	4000	9125	8225
		80	305	605	1115	2000	4000	9125	8225
		90	205	405	765	2000	4000	9125	8225
		100	205	405	765	2000	4000	9125	8225

Frame size	Model	Ratio	⌀ 4	⌀ 5	Weight	Moment of inertia (≤ ϕ 19)	Moment of inertia (≤ ϕ 28)	Moment of inertia (≤ ϕ 38)	Moment of inertia (≤ ϕ 48)
			Maximum radial load	Maximum axial load					
			[N]	[N]	[kg]	[kg·cm ²]	[kg·cm ²]	[kg·cm ²]	[kg·cm ²]
140	2	3	9135	8235	19.1	—	23.13	27.50	40.73
		4	9135	8235		—	18.57	22.94	36.17
		5	9135	8235		—	16.91	21.28	34.51
		6	9135	8235		—	16.01	20.38	33.61
		7	9135	8235		—	15.58	19.95	33.18
		8	9135	8235		—	15.23	19.61	32.84
		9	9135	8235		—	14.77	19.41	32.37
		10	9135	8235		—	14.66	19.03	32.26
	3	15	9135	8235	19.6	6.40	8.00	15.07	—
		16	9135	8235		7.29	8.88	15.96	—
		20	9135	8235		6.22	7.81	14.89	—
		25	9135	8235		6.15	7.75	14.82	—
		28	9135	8235		7.09	8.68	15.76	—
		30	9135	8235		4.99	6.58	13.66	—
		35	9135	8235		6.09	7.69	14.76	—
		40	9135	8235		4.95	6.54	13.61	—
		45	9135	8235		6.07	7.66	14.74	—
		50	9135	8235		4.93	6.52	13.59	—
		60	9135	8235		4.92	6.51	13.59	—
		70	9135	8235		4.91	6.51	13.58	—
		80	9135	8235		4.91	6.50	13.58	—
		90	9135	8235		4.91	6.50	13.57	—
		100	9135	8235		4.91	6.50	13.57	—

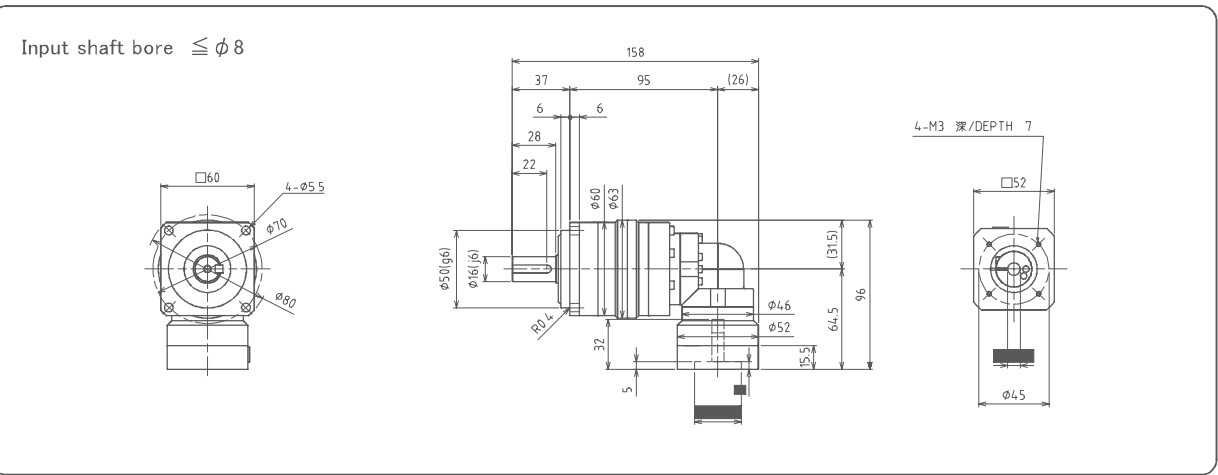
- ⌀ 1 With nominal input speed, service life is 20,000 hours.
- ⌀ 2 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output shaft center, at axial load 0)
- ⌀ 3 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output side bearing, at radial load 0)
- ⌀ 4 The maximum radial load the reducer can accept.
- ⌀ 5 The maximum axial load the reducer can accept.

ABR-060 Level2

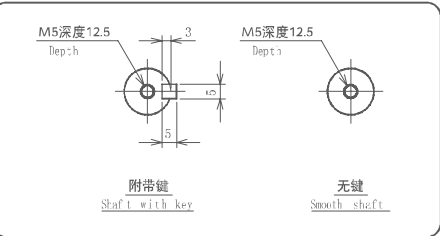
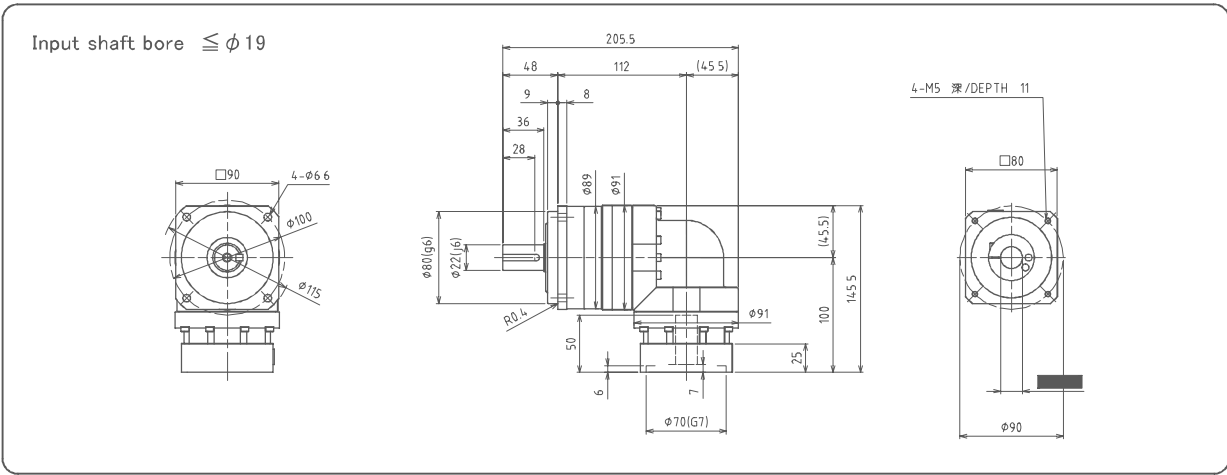
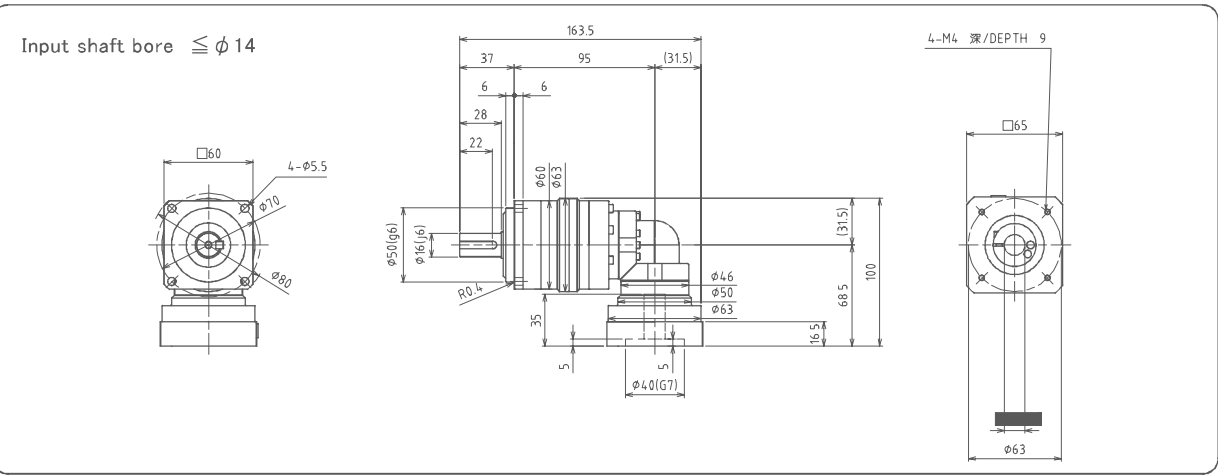
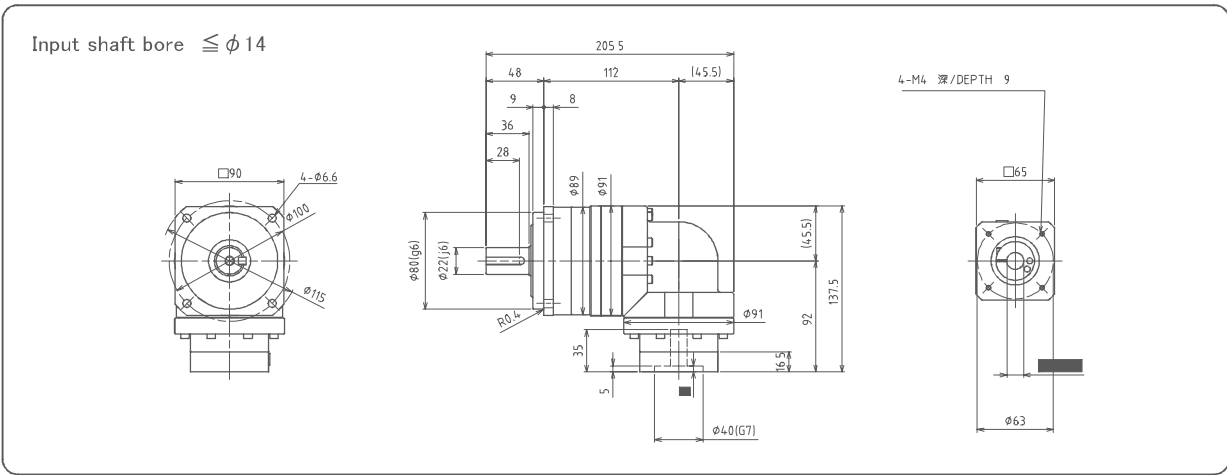


Note1: The body size varies with the installation of the motor.
Note2: When the shaft diameter of the motor is different from the input shaft diameter, the shaft sleeve can be inserted.

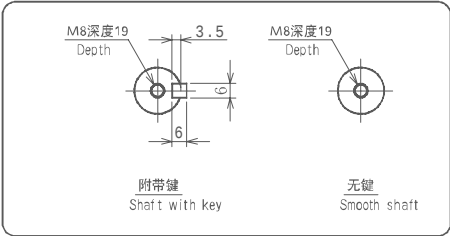
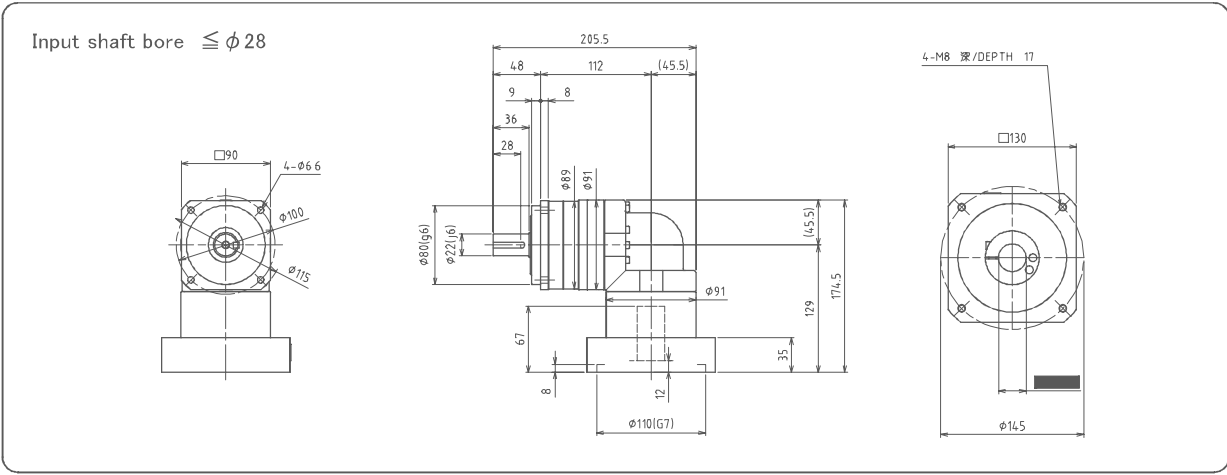
ABR-060 Level3



ABR-090 Level2

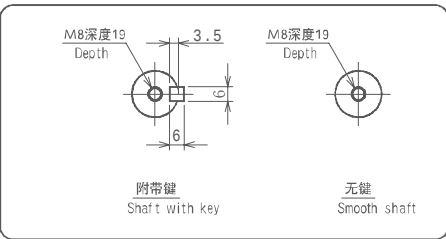
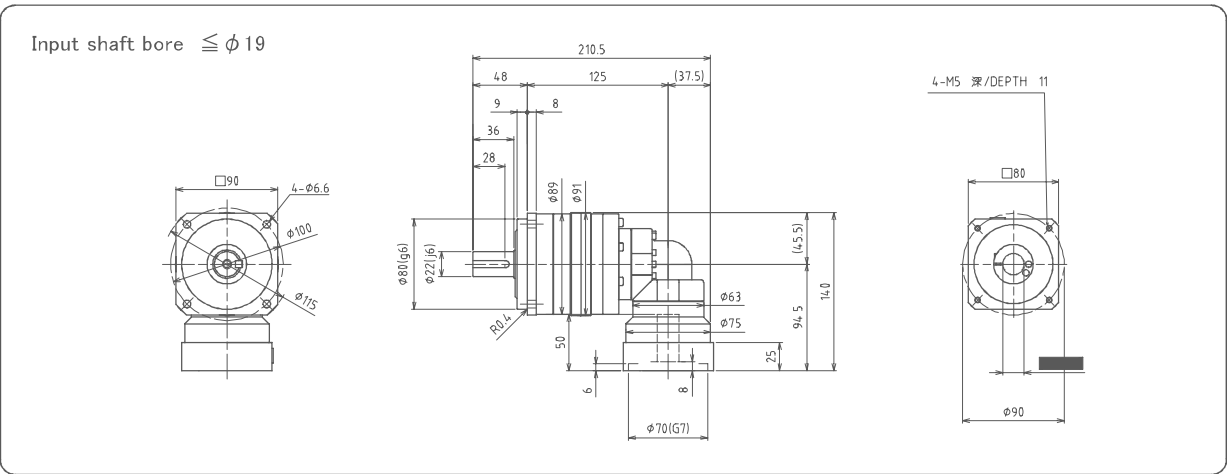
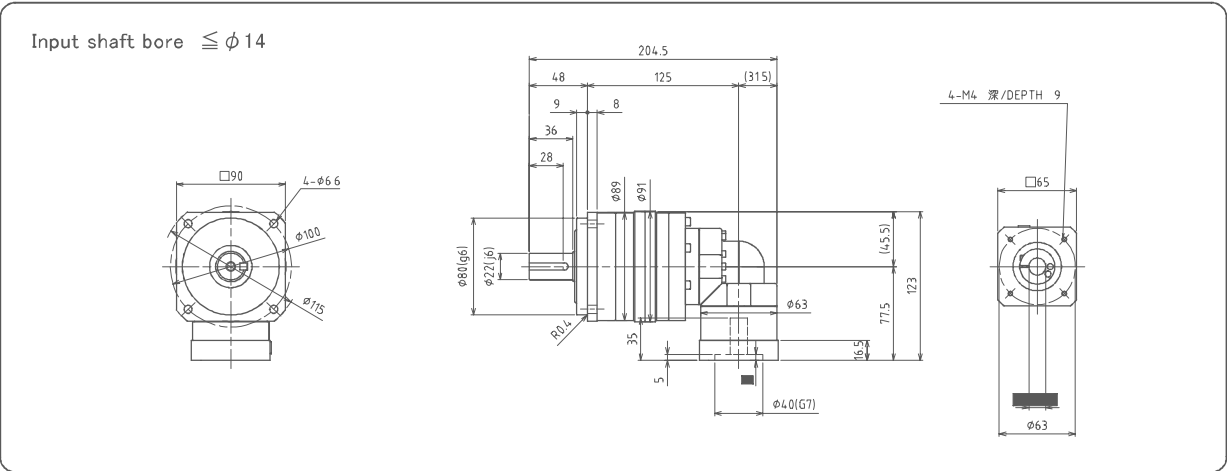
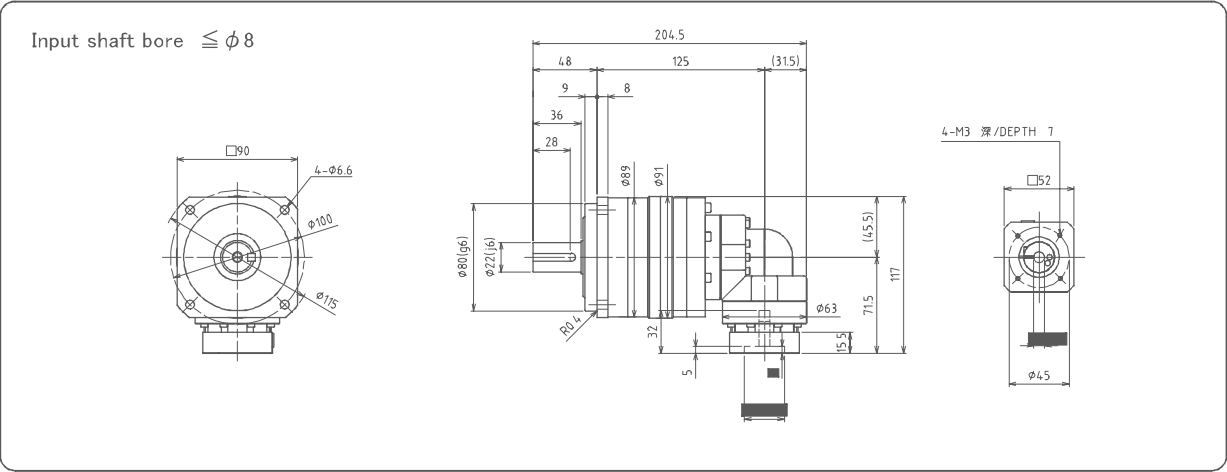


Note1: The body size varies with the installation of the motor.
Note2: When the shaft diameter of the motor is different from the input shaft diameter, the shaft sleeve can be inserted.



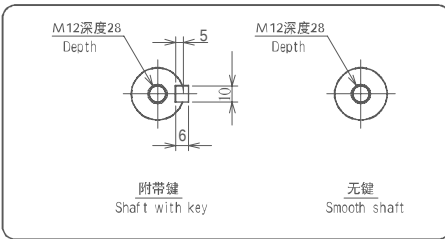
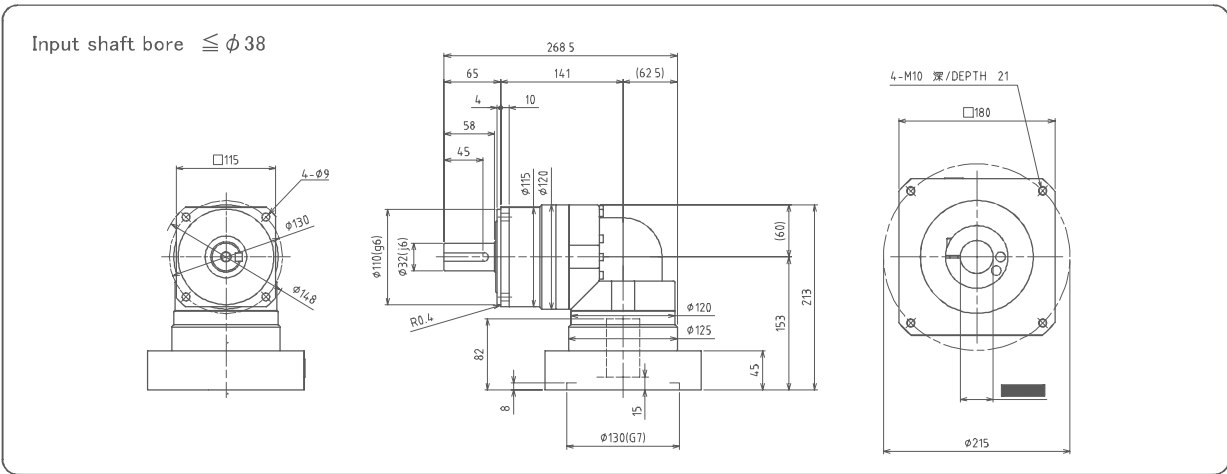
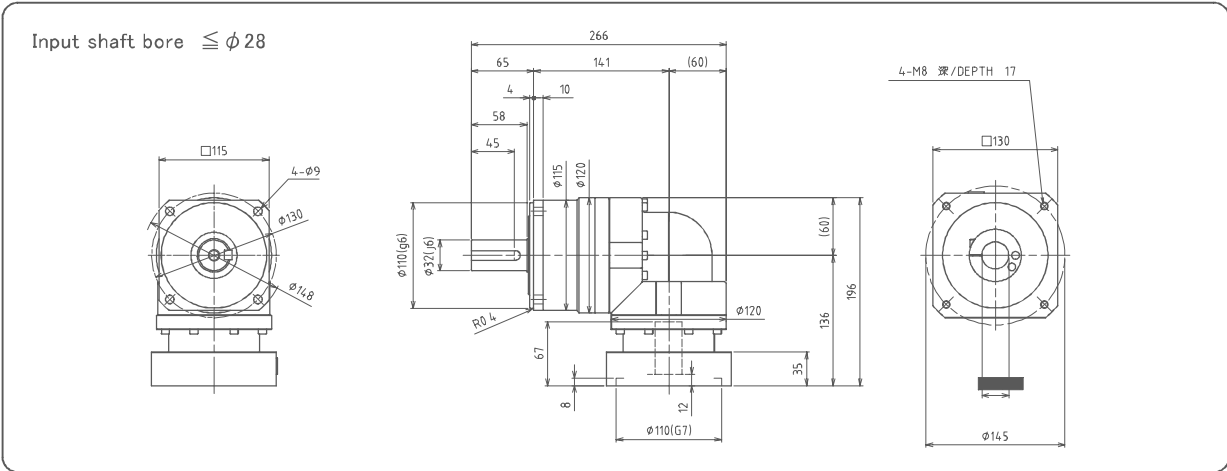
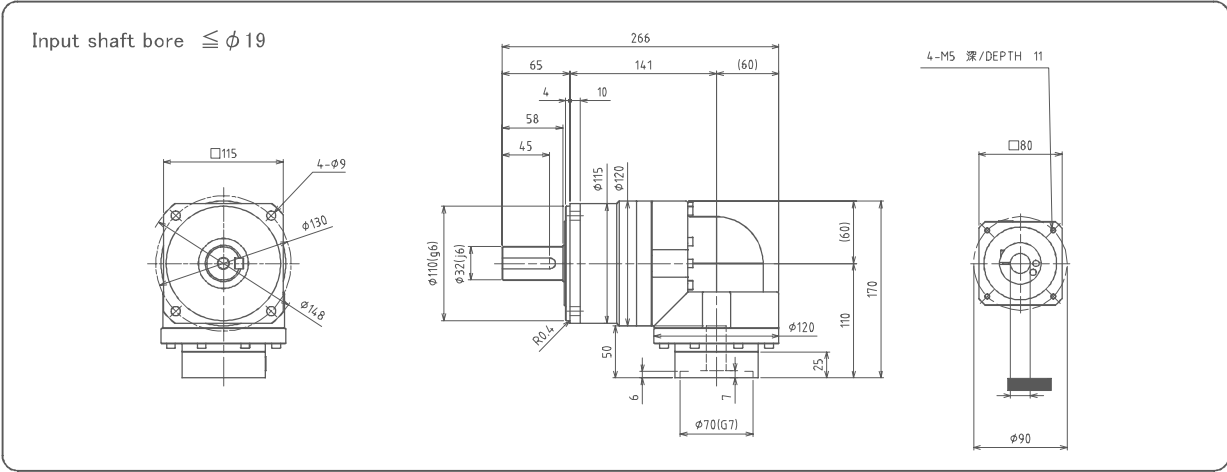
Note1: The body size varies with the installation of the motor.
Note2: When the shaft diameter of the motor is different from the input shaft diameter, the shaft sleeve can be inserted.

ABR-090 Level3



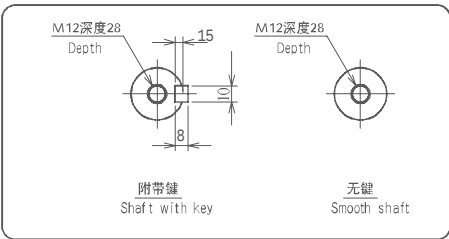
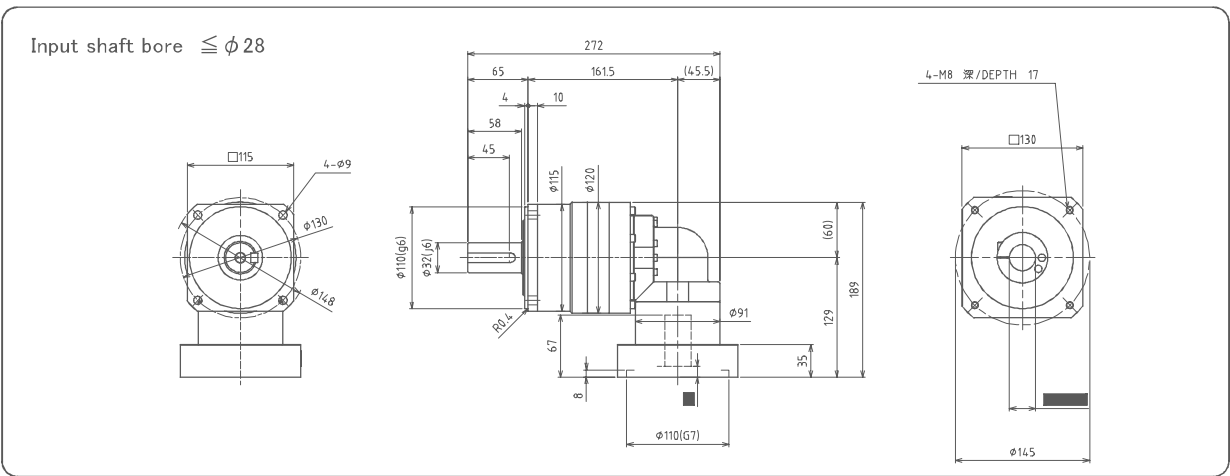
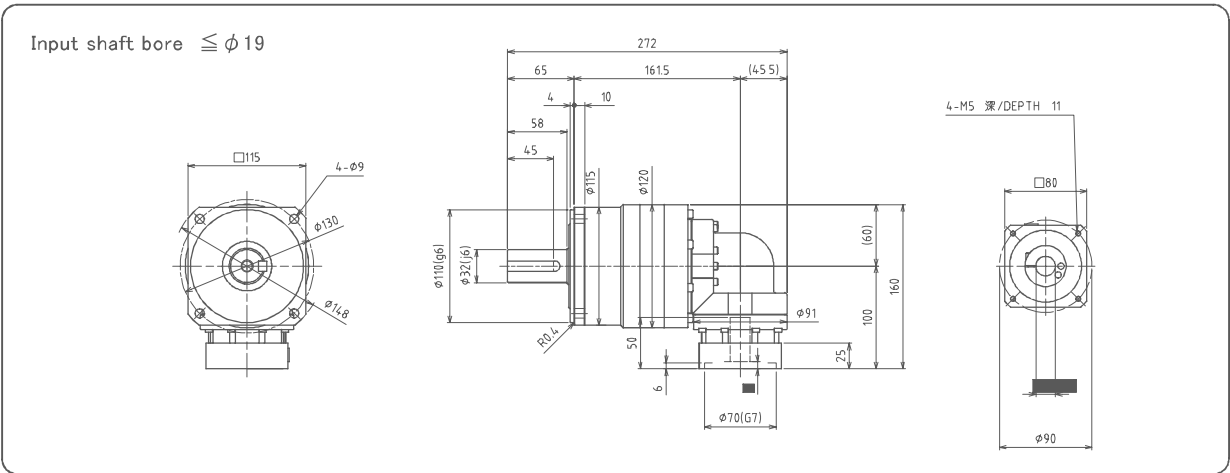
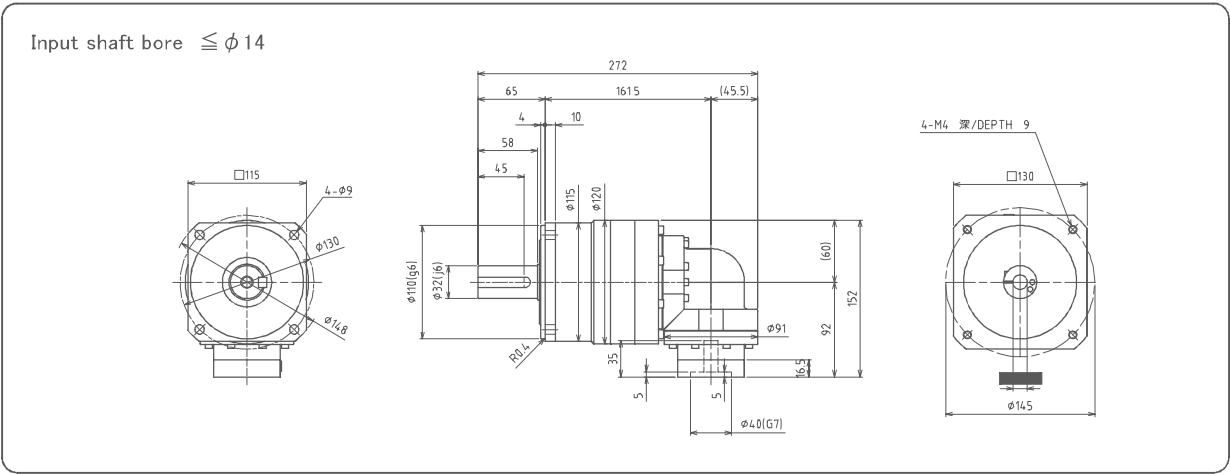
Note1: The body size varies with the installation of the motor.
Note2: When the shaft diameter of the motor is different from the input shaft diameter, the shaft sleeve can be inserted.

ABR-115 Level2



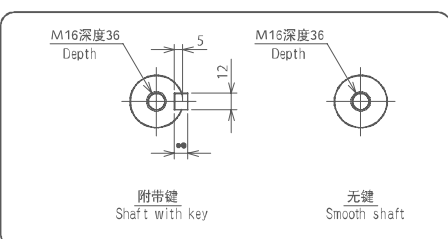
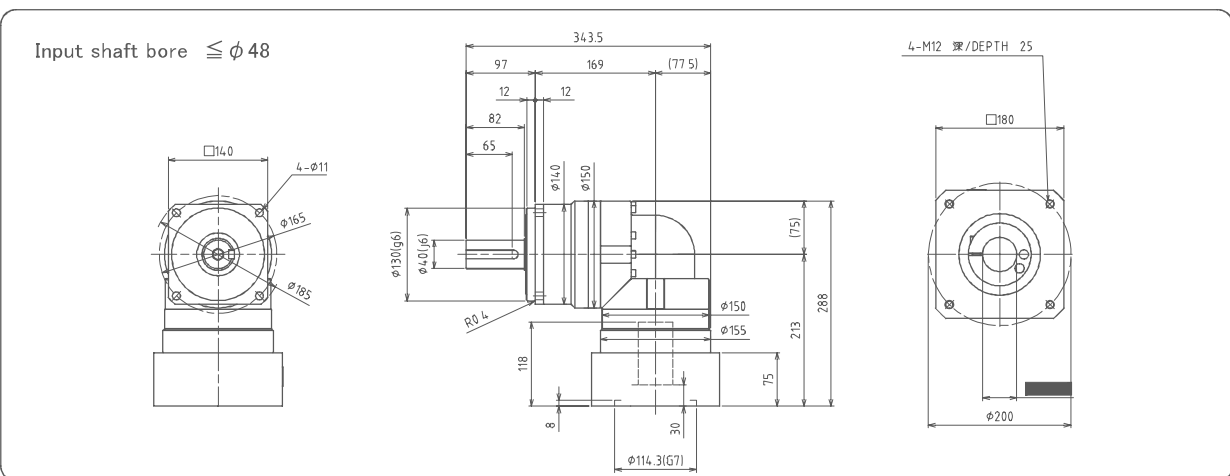
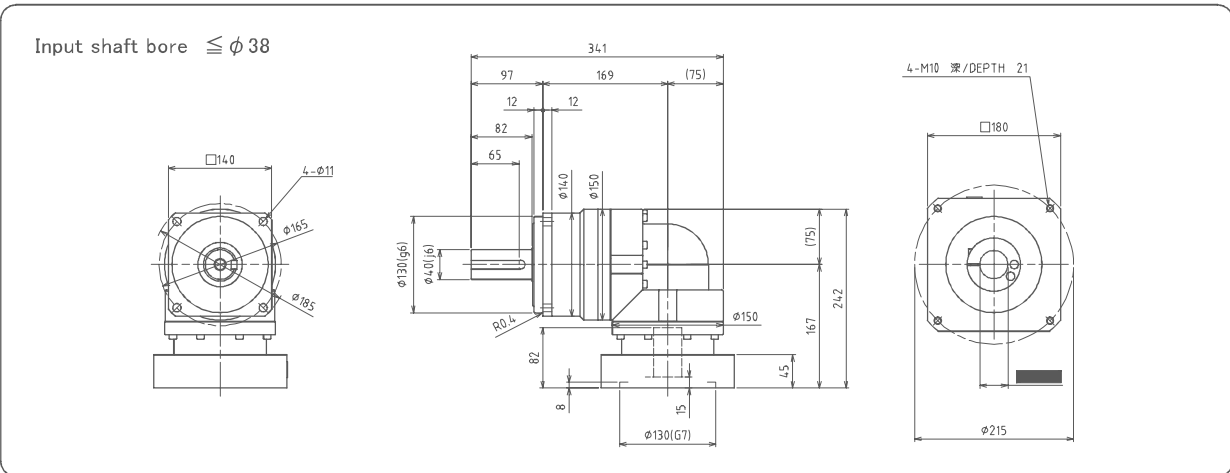
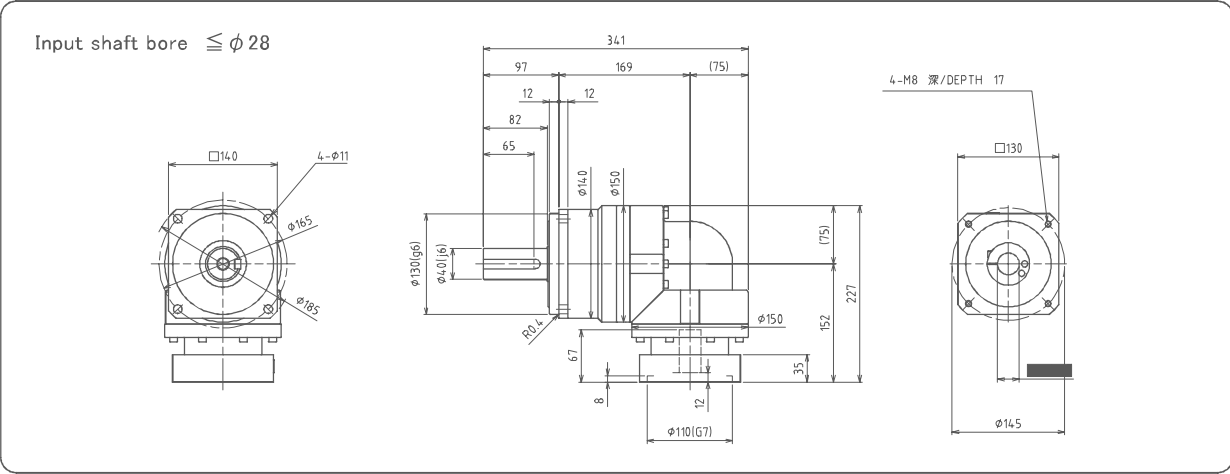
Note1: The body size varies with the installation of the motor.
Note2: When the shaft diameter of the motor is different from the input shaft diameter, the shaft sleeve can be inserted.

ABR-115 Level3



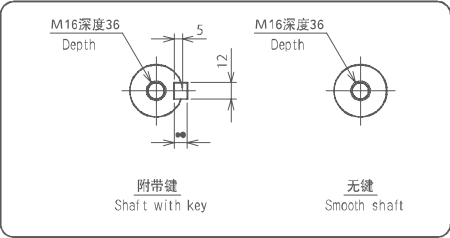
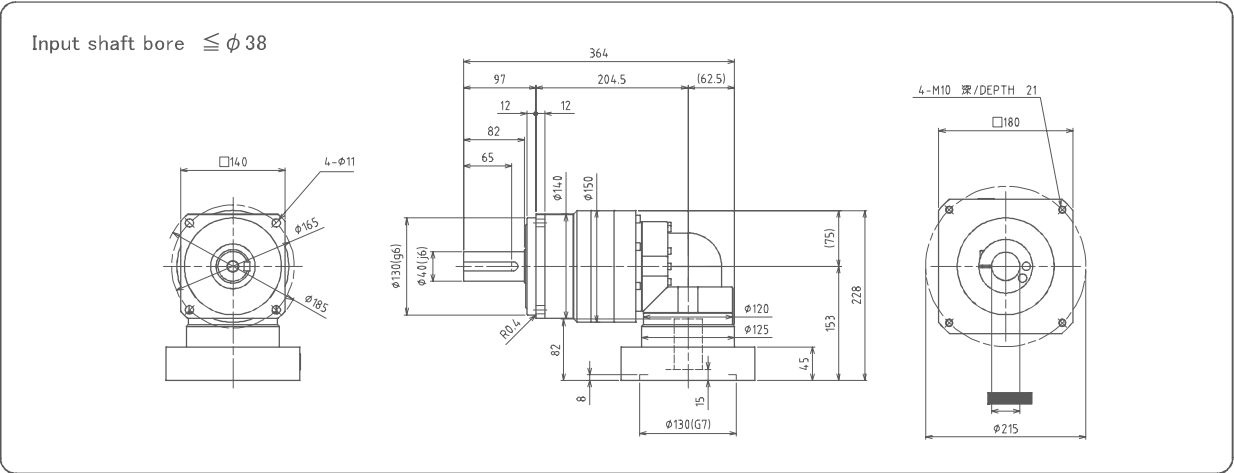
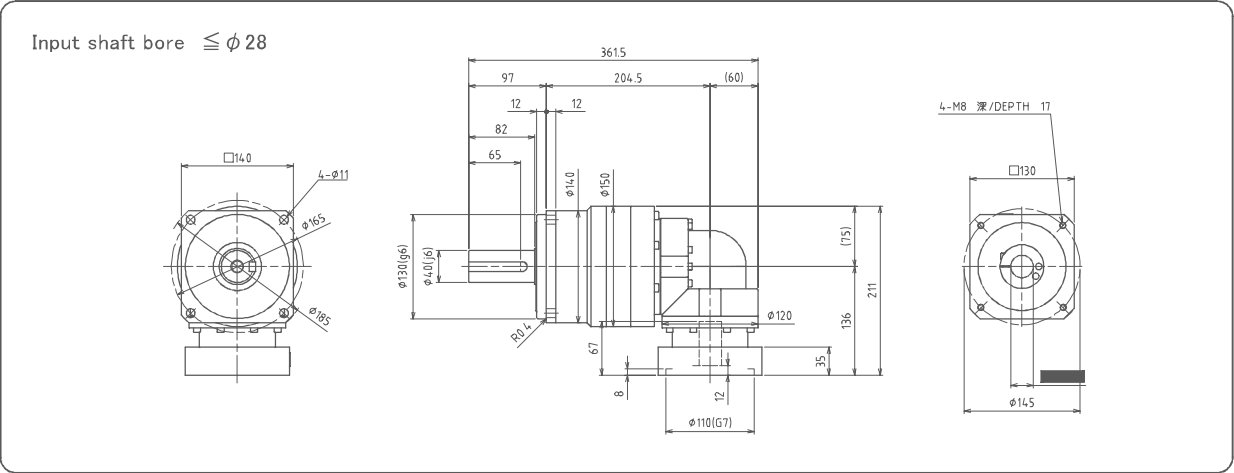
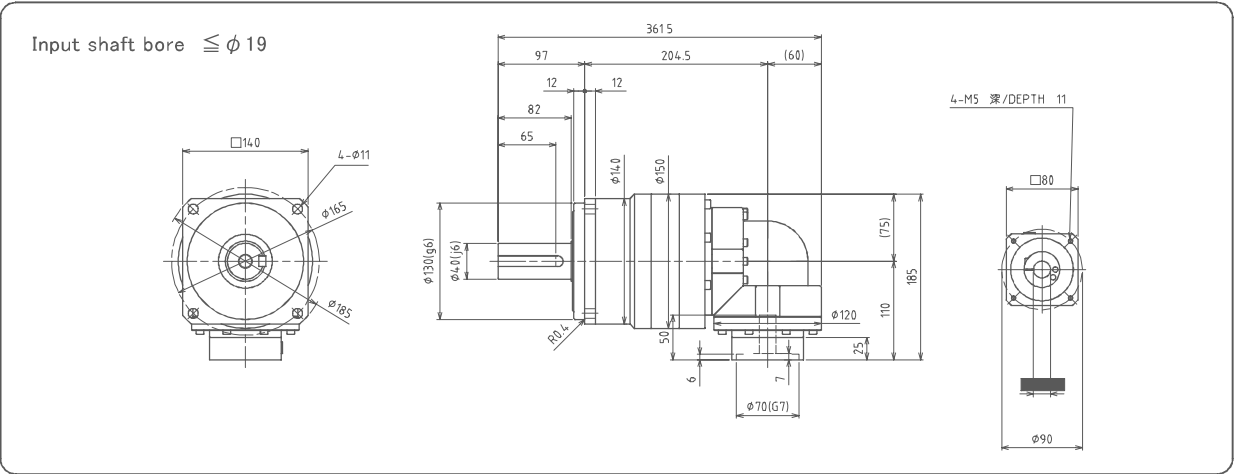
Note1: The body size varies with the installation of the motor.
Note2: When the shaft diameter of the motor is different from the input shaft diameter, the shaft sleeve can be inserted.

ABR-140 Level2



Note1: The body size varies with the installation of the motor.
Note2: When the shaft diameter of the motor is different from the input shaft diameter, the shaft sleeve can be inserted.

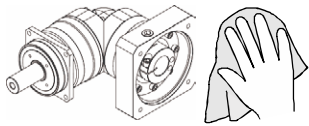
ABR-140 Level 3



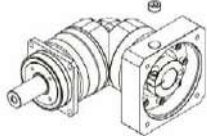
Note1: The body size varies with the installation of the motor.
Note2: When the shaft diameter of the motor is different from the input shaft diameter, the shaft sleeve can be inserted.

1 Mounting procedure to the motor

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

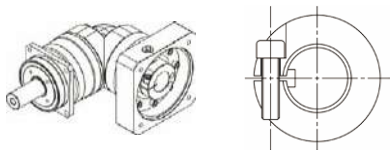


2 Remove the plug

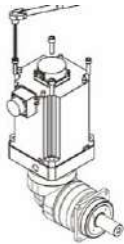


3 Turn the input shaft to align the head of the clamping bolt with the jack hole. At this time, ensure that the clamping bolt is loose.

If there is a shaft sleeve, the installation method is shown in the figure.



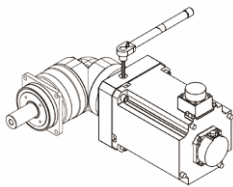
4 Please place reducer vertically on the flat surface so the motor mounting part faces up. Carefully insert the motor shaft into the input shaft. (It should be inserted smoothly) Make sure the motor flange is perfectly fit to the reducer's flange. Tighten the motor installing bolts to the proper torque. (Refer to table1)



2 Installation of reducer

Installation of reducer After confirming the installation surface is flat and clean, tighten the bolt using a torque wrench to the proper torque.(Refer to table 2)

5 Tighten the clamping bolt of the input shaft with torque wrench to the proper torque.(Refer to table 1)



6 Reinstall the plug and the installation is complete.

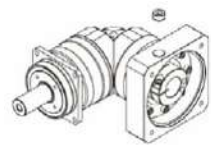


Table 1

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	—	—

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

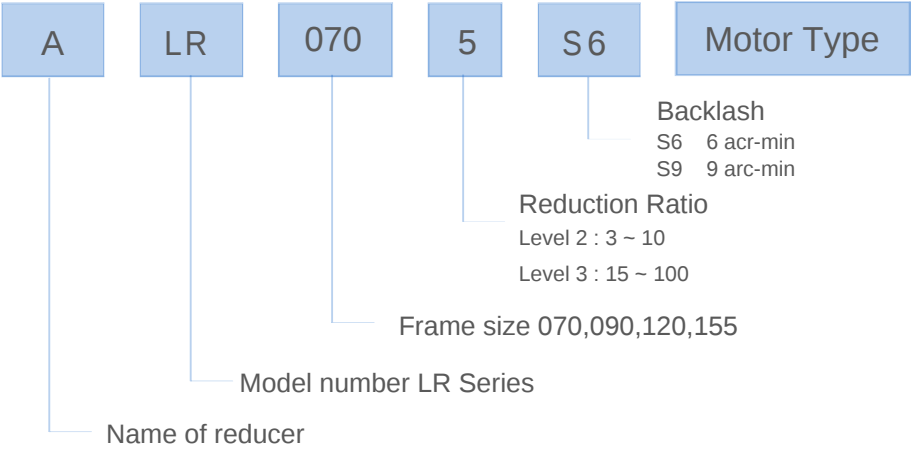
ALR Series



Features

- 1 Right angle reducer using spiralbevel gear. Customer canlocate the motor at 90 degree away from the reducer if required to save space
- 2 The use of integral needle roller bearings greatly improves rigidity and torque
- 3 Effectively prevent grease leakage by using grease with high viscosity and anti-separation
- 4 Applicable to all kinds of motors
- 5 No need to change the grease during the life of the product, making installation easier

Model number



ALR070

Frame size	Model	Ratio	φ 1			φ 2		φ 3	
			Nominal output torque [Nm]	Maximum output torque [Nm]	Emergency stop torque [Nm]	Nominal input speed [rpm]	Maximum input speed [rpm]	Permitted radial load [N]	Permitted axial load [N]
070	2	3	13	26	55	3000	6000	440	320
		4	17	34	70	3000	6000	480	370
		5	23	42	85	3000	6000	520	400
		6	25	47	95	3000	6000	550	440
		7	25	47	95	3000	6000	580	470
		8	25	47	95	3000	6000	610	490
		9	17	34	70	3000	6000	630	520
		10	17	34	70	3000	6000	650	540
	3	15	17	34	70	3000	6000	750	640
		16	25	47	95	3000	6000	760	650
		20	25	47	95	3000	6000	820	730
		25	25	47	95	3000	6000	880	800
		28	25	47	95	3000	6000	920	840
		30	17	34	65	3000	6000	940	870
		35	25	47	95	3000	6000	990	930
		40	25	47	95	3000	6000	1010	980
		45	17	33	70	3000	6000	1110	1010
		50	25	47	95	3000	6000	1110	1110
		60	25	47	95	3000	6000	1210	1100
		70	25	47	95	3000	6000	1210	1100
		80	25	47	95	3000	6000	1210	1100
		90	17	34	70	3000	6000	1210	1100
		100	17	34	70	3000	6000	1210	1100

Frame size	Model	Ratio	φ 4		φ 5		φ 6		
			Maximum radial load [N]	Maximum axial load [N]	Weight [kg]	Moment of inertia (≤ φ 8) [kg·cm ²]	Moment of inertia (≤ φ 14) [kg·cm ²]	Moment of inertia (≤ φ 19) [kg·cm ²]	Operating temperature
070	2	3	1220	1120	1.9	0.31	0.39	0.58	-20℃ ~ 90℃
		4	1220	1120		0.27	0.34	0.53	
		5	1220	1120		0.25	0.32	0.51	
		6	1220	1120		0.24	0.31	0.50	
		7	1220	1120		0.23	0.31	0.50	
		8	1220	1120		0.23	0.31	0.50	
		9	1220	1120		0.23	0.30	0.49	
		10	1220	1120		0.23	0.30	0.49	
	3	15	1220	1120	1.7	0.073	0.118	—	
		16	1220	1120		0.079	0.124	—	
		20	1220	1120		0.071	0.116	—	
		25	1220	1120		0.071	0.115	—	
		28	1220	1120		0.077	0.122	—	
		30	1220	1120		0.062	0.106	—	
		35	1220	1120		0.070	0.115	—	
		40	1220	1120		0.061	0.106	—	
		45	1220	1120		0.070	0.115	—	
		50	1220	1120		0.061	0.106	—	
		60	1220	1120		0.061	0.106	—	
		70	1220	1120		0.061	0.105	—	
		80	1220	1120		0.061	0.105	—	
		90	1220	1120		0.061	0.105	—	
		100	1220	1120		0.061	0.105	—	

- φ 1 With nominal input speed, service life is 20,000 hours.
- φ 2 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output shaft center, at axial load 0)
- φ 3 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output side bearing, at radial load 0)
- φ 4 The maximum radial load the reducer can accept.
- φ 5 The maximum axial load the reducer can accept.

ALR090

ALR090

⌀ 1						⌀ 2		⌀ 3	
Frame size	Model	Ratio	Nominal output torque	Maximum output torque	Emergency stop torque	Nominal input speed	Maximum input speed	Permitted radial load	Permitted axial load
			[Nm]	[Nm]	[Nm]	[rpm]	[rpm]	[N]	[N]
090	2	3	47	68	138	3000	6000	825	945
		4	62	93	178	3000	6000	905	1115
		5	67	93	228	3000	6000	975	1215
		6	67	93	228	3000	6000	1015	1315
		7	67	93	228	3000	6000	1115	1315
		8	67	93	228	3000	6000	1115	1415
		9	47	68	178	3000	6000	1215	1515
	3	10	47	68	178	3000	6000	1215	1615
		15	47	68	178	3000	6000	1415	1915
		16	67	113	228	3000	6000	1415	1915
		20	67	113	228	3000	6000	1515	2115
		25	67	113	228	3000	6000	1615	2215
		28	67	113	228	3000	6000	1715	2215
		30	47	68	178	3000	6000	1715	2215
		35	67	113	228	3000	6000	1815	2215
		40	67	113	228	3000	6000	1915	2215
		45	47	68	178	3000	6000	2015	2215
		50	67	113	228	3000	6000	2115	2215
		60	67	113	228	3000	6000	2215	2215
		70	67	113	228	3000	6000	2315	2215
		80	67	113	228	3000	6000	2415	2215
		90	47	68	178	3000	6000	2415	2215
		100	47	68	178	3000	6000	2415	2215

Frame size	Model	Ratio	⌀ 4	⌀ 5	Weight	Moment of inertia (≤ ϕ 8)	Moment of inertia (≤ ϕ 14)	Moment of inertia (≤ ϕ 19)	Moment of inertia (≤ ϕ 28)
			Maximum radial load	Maximum axial load					
			[N]	[N]					
090	2	3	2425	2225	4.9	—	2.12	2.45	4.57
		4	2425	2225		—	1.89	2.22	4.35
		5	2425	2225		—	1.80	2.13	4.26
		6	2425	2225		—	1.76	2.09	4.21
		7	2425	2225		—	1.73	2.06	4.18
		8	2425	2225		—	1.71	2.04	4.17
		9	2425	2225		—	1.70	2.03	4.16
		10	2425	2225		—	1.69	2.02	4.15
	3	15	2425	2225	4.3	0.34	0.41	0.60	—
		16	2425	2225		0.38	0.46	0.65	—
		20	2425	2225		0.33	0.40	0.59	—
		25	2425	2225		0.32	0.40	0.59	—
		28	2425	2225		0.37	0.45	0.64	—
		30	2425	2225		0.25	0.33	0.51	—
		35	2425	2225		0.32	0.40	0.59	—
		40	2425	2225		0.25	0.32	0.51	—
		45	2425	2225		0.32	0.39	0.58	—
		50	2425	2225		0.25	0.32	0.51	—
		60	2425	2225		0.25	0.32	0.51	—
		70	2425	2225		0.25	0.32	0.51	—
		80	2425	2225		0.25	0.32	0.51	—
		90	2425	2225		0.25	0.32	0.51	—
		100	2425	2225		0.25	0.32	0.51	—

- ⌀ 1 With nominal input speed, service life is 20,000 hours.
- ⌀ 2 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output shaft center, at axial load 0)
- ⌀ 3 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output side bearing, at radial load 0)
- ⌀ 4 The maximum radial load the reducer can accept.
- ⌀ 5 The maximum axial load the reducer can accept.

ALR120

ALR120

Ø 1						Ø 2		Ø 3	
Frame size	Model	Ratio	Nominal output torque	Maximum output torque	Emergency stop torque	Nominal input speed	Maximum input speed	Permitted radial load	Permitted axial load
			[Nm]	[Nm]	[Nm]	[rpm]	[rpm]	[N]	[N]
120	2	3	80	155	330	3000	6000	1320	1520
		4	105	205	440	3000	6000	1520	1720
		5	125	245	510	3000	6000	1620	1920
		6	155	305	560	3000	6000	1720	2020
		7	155	305	560	3000	6000	1820	2120
		8	155	305	560	3000	6000	1920	2320
		9	115	205	460	3000	6000	1920	2420
	3	10	115	205	460	3000	6000	2020	2520
		15	115	205	460	3000	6000	2320	3020
		16	135	265	560	3000	6000	2320	3120
		20	155	305	560	3000	6000	2520	3420
		25	155	305	560	3000	6000	2720	3720
		28	155	305	560	3000	6000	2820	3920
		30	115	205	460	3000	6000	2920	3920
		35	155	305	560	3000	6000	3020	3920
		40	155	305	560	3000	6000	3220	3920
		45	115	205	460	3000	6000	3320	3920
		50	155	305	560	3000	6000	3420	3920
		60	155	305	560	3000	6000	3620	3920
		70	155	305	560	3000	6000	3820	3920
		80	155	305	560	3000	6000	4020	3920
		90	115	205	460	3000	6000	4220	3920
		100	115	205	460	3000	6000	4320	3920

Frame size	Model	Ratio	⌀ 4	⌀ 5	Weight	Moment of inertia (≤ ϕ 14)	Moment of inertia (≤ ϕ 19)	Moment of inertia (≤ ϕ 28)	Moment of inertia (≤ ϕ 38)
			Maximum radial load	Maximum axial load					
			[N]	[N]					
120	2	3	4330	3930	10.2	—	6.74	8.34	15.41
		4	4330	3930		—	5.49	7.08	14.15
		5	4430	3930		—	5.02	6.61	13.69
		6	4330	3930		—	4.77	6.36	13.43
		7	4330	3930		—	4.65	6.24	13.31
		8	4330	3930		—	4.55	6.14	13.22
		9	4330	3930		—	4.49	6.08	13.16
		10	4330	3930		—	4.46	6.05	13.12
	3	15	4330	3930	10.0	2.25	2.58	4.70	—
		16	4330	3930		2.46	2.79	4.91	—
		20	4330	3930		2.20	2.53	4.65	—
		25	4330	3930		2.18	2.51	4.64	—
		28	4330	3930		2.40	2.73	4.86	—
		30	4330	3930		1.87	2.20	4.33	—
		35	4330	3930		2.16	2.49	4.62	—
		40	4330	3930		1.86	2.19	4.32	—
		45	4330	3930		2.15	2.48	4.61	—
		50	4330	3930		1.86	2.19	4.31	—
		60	4330	3930		1.85	2.18	4.31	—
		70	4330	3930		1.85	2.18	4.31	—
		80	4330	3930		1.85	2.18	4.31	—
		90	4330	3930		1.85	2.18	4.31	—
		100	4330	3930		1.85	2.18	4.31	—

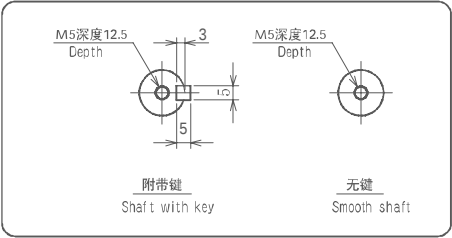
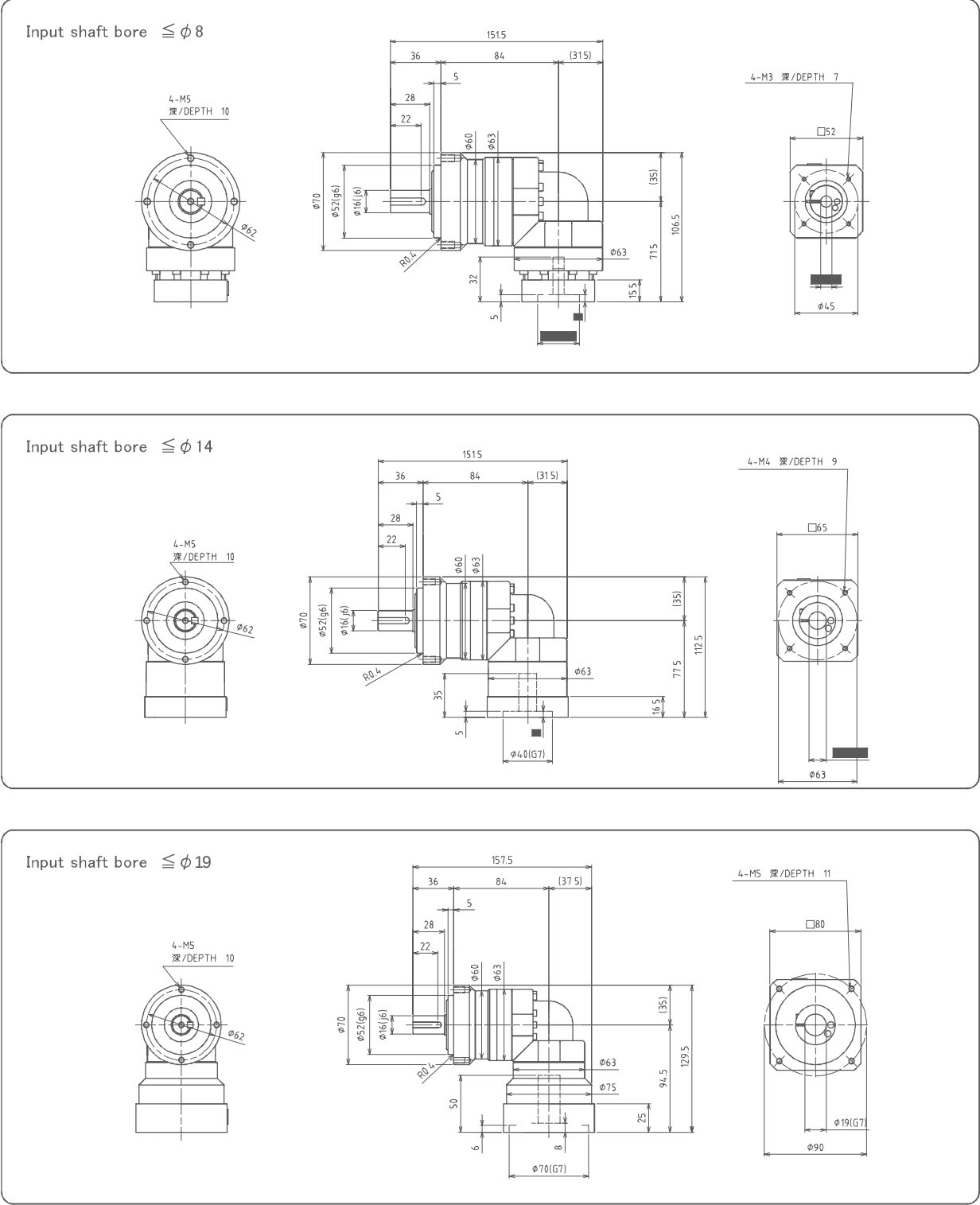
- ⌀ 1 With nominal input speed, service life is 20,000 hours.
- ⌀ 2 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output shaft center, at axial load 0)
- ⌀ 3 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output side bearing, at radial load 0)
- ⌀ 4 The maximum radial load the reducer can accept.
- ⌀ 5 The maximum axial load the reducer can accept.

ALR155

Frame size	Model	Ratio	⌀ 1			⌀ 2		⌀ 3	
			Nominal output torque	Maximum output torque	Emergency stop torque	Nominal input speed	Maximum input speed	Permitted radial load	Permitted axial load
			[Nm]	[Nm]	[Nm]	[rpm]	[rpm]	[N]	[N]
155	2	3	135	265	715	2000	4000	3225	2425
		4	175	345	965	2000	4000	3525	2725
		5	205	405	1115	2000	4000	3825	3025
		6	265	525	1115	2000	4000	4025	3325
		7	305	605	1115	2000	4000	4225	3525
		8	305	605	1115	2000	4000	4425	3725
		9	205	405	765	2000	4000	4625	3925
		10	205	405	765	2000	4000	4725	4125
	3	15	205	405	765	2000	4000	5425	4925
		16	305	605	1115	2000	4000	5525	5025
		20	305	605	1115	2000	4000	6025	5525
		25	305	605	1115	2000	4000	6425	6125
		28	305	605	1115	2000	4000	6725	6425
		30	205	405	765	2000	4000	6825	6625
		35	305	605	1115	2000	4000	7225	7025
		40	305	605	1115	2000	4000	7525	7525
		45	205	405	765	2000	4000	7825	7925
		50	305	605	1115	2000	4000	8125	8225
155	2	60	305	605	1115	2000	4000	8625	8225
		70	305	605	1115	2000	4000	9125	8225
		80	305	605	1115	2000	4000	9125	8225
		90	205	405	715	2000	4000	9125	8225
		100	205	405	715	2000	4000	9125	8225
	3	15	9140	8240	19.8	—	23.13	27.50	40.73
		4	9140	8240		—	18.57	22.94	36.17
		5	9140	8240		—	16.91	21.28	34.51
		6	9140	8240		—	16.01	20.38	33.61
		7	9140	8240		—	15.58	19.95	33.18
		8	9140	8240		—	15.23	19.61	32.84
		9	9140	8240		—	14.77	19.41	32.37
		10	9140	8240		—	14.66	19.03	32.26
		15	9140	8240		6.40	8.00	15.07	—
		16	9140	8240		7.29	8.88	15.96	—
155	3	20	9140	8240	20.4	6.22	7.81	14.89	—
		25	9140	8240		6.15	7.75	14.82	—
		28	9140	8240		7.09	8.68	15.76	—
		30	9140	8240		4.99	6.58	13.66	—
		35	9140	8240		6.09	7.69	14.76	—
		40	9140	8240		4.95	6.54	13.61	—
		45	9140	8240		6.07	7.66	14.74	—
		50	9140	8240		4.93	6.52	13.59	—
		60	9140	8240		4.92	6.51	13.59	—
		70	9140	8240		4.91	6.51	13.58	—
155	3	80	9140	8240		4.91	6.50	13.58	—
		90	9140	8240		4.91	6.50	13.57	—
		100	9140	8240		4.91	6.50	13.57	—

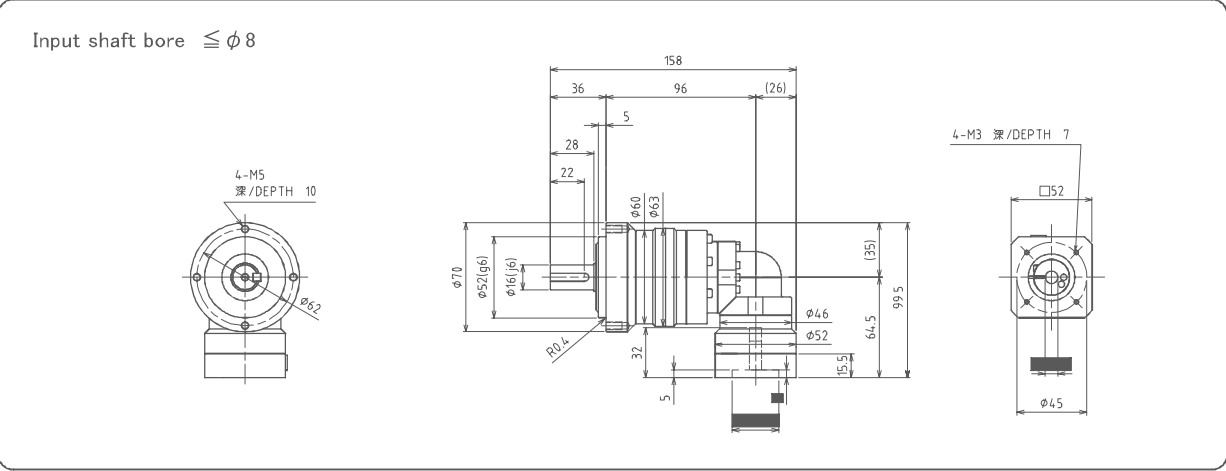
- ⌀ 1 With nominal input speed, service life is 20,000 hours.
- ⌀ 2 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output shaft center, at axial load 0)
- ⌀ 3 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output side bearing, at radial load 0)
- ⌀ 4 The maximum radial load the reducer can accept.
- ⌀ 5 The maximum axial load the reducer can accept.

ALR-070 Level2

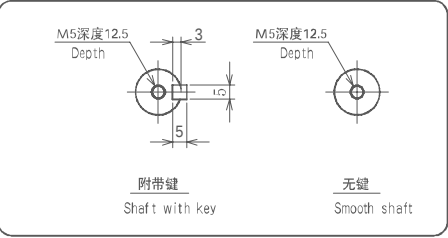
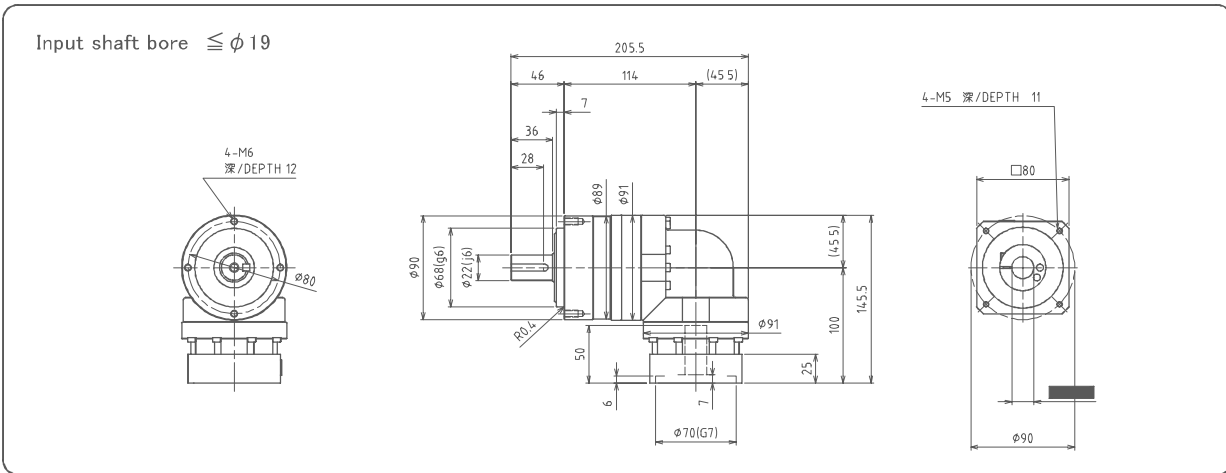
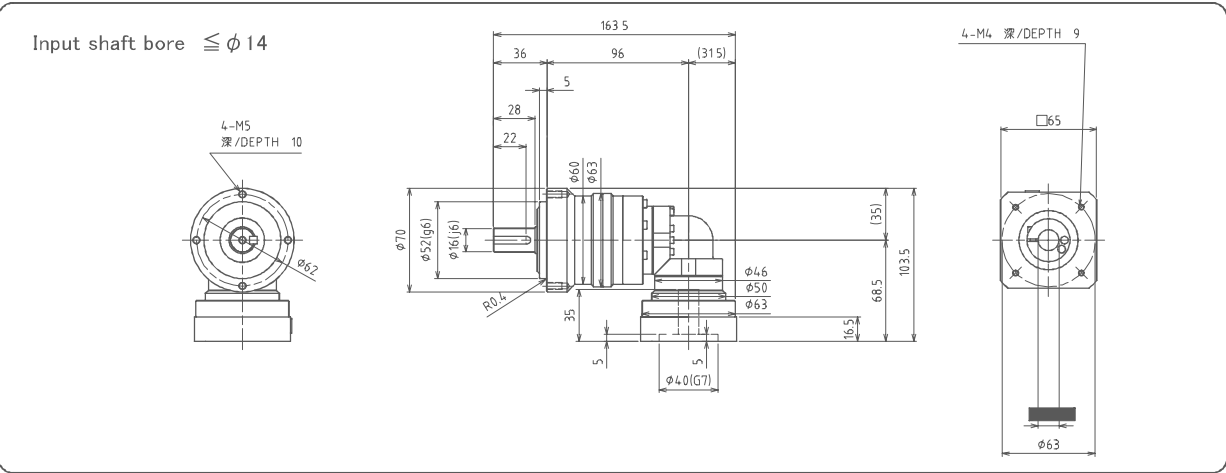
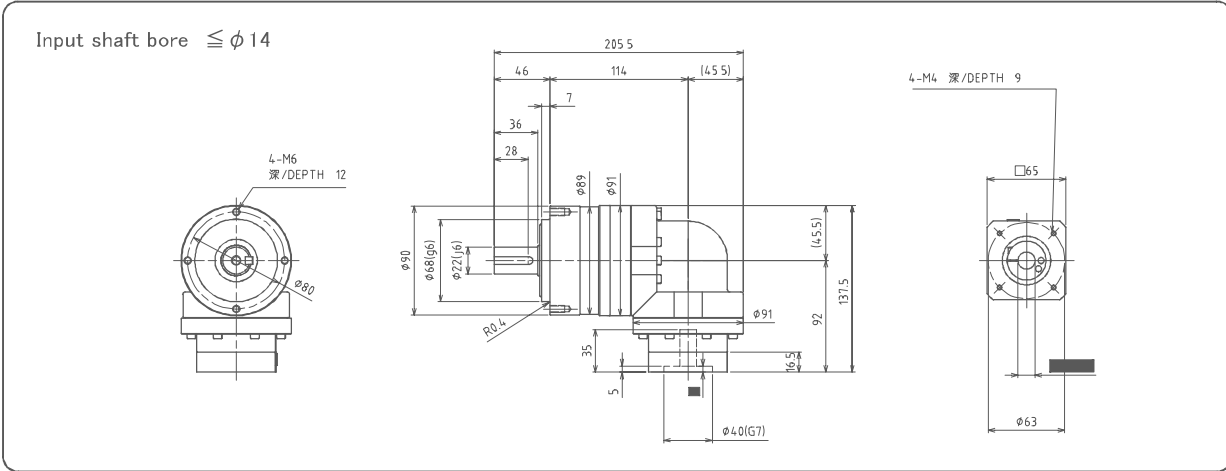


Note1: The body size varies with the installation of the motor.
Note2: When the shaft diameter of the motor is different from the input shaft diameter, the shaft sleeve can be inserted.

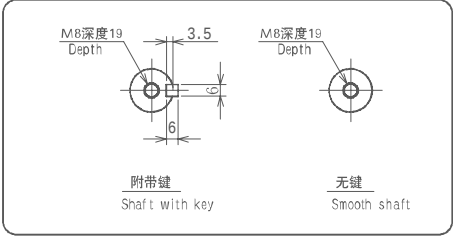
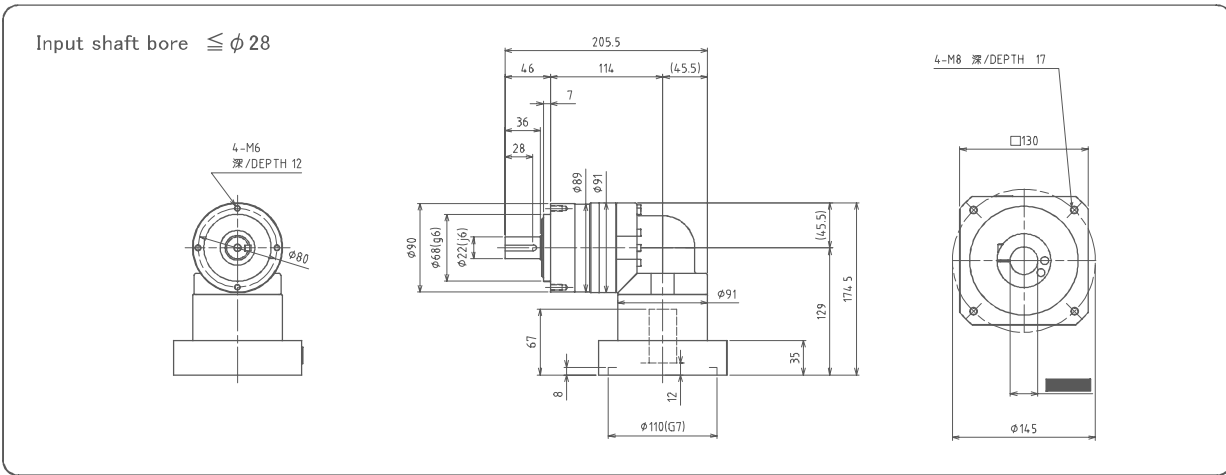
ALR-070 Level3



ALR-090 Level2

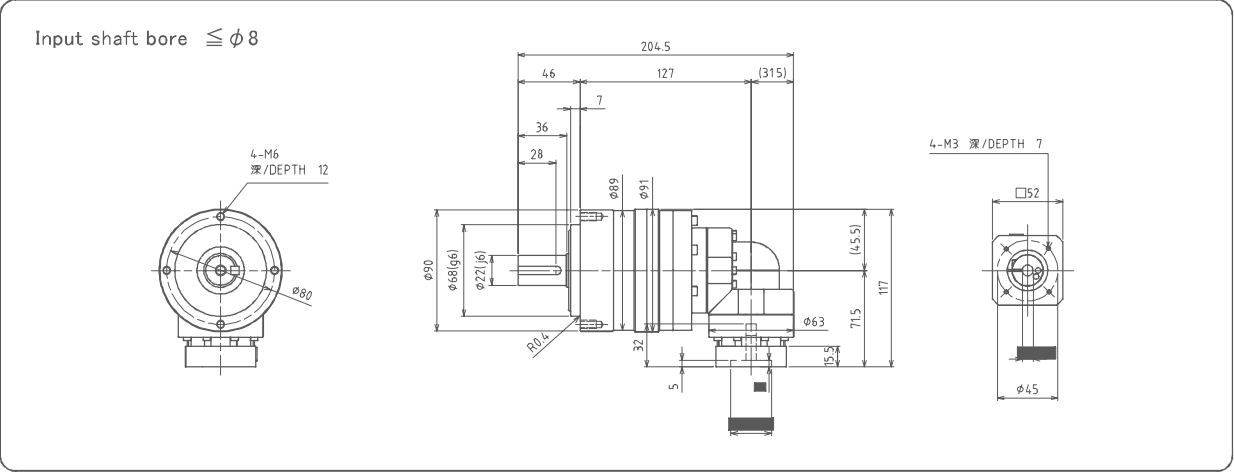


Note1: The body size varies with the installation of the motor.
Note2: When the shaft diameter of the motor is different from the input shaft diameter, the shaft sleeve can be inserted.

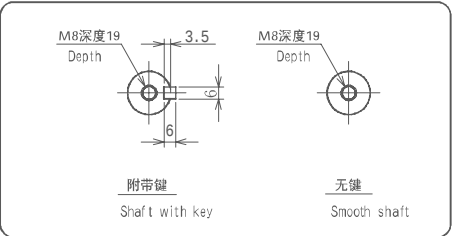
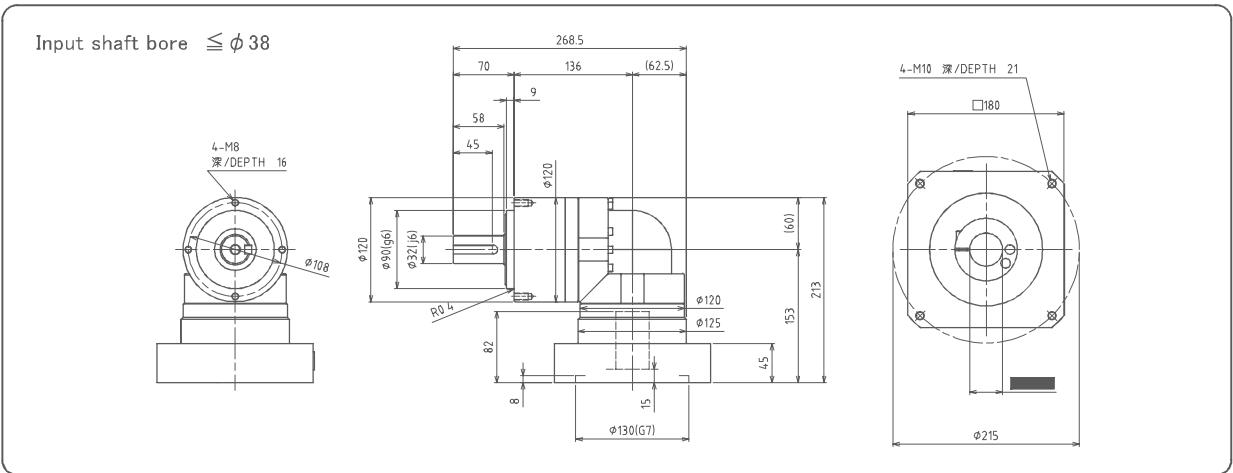
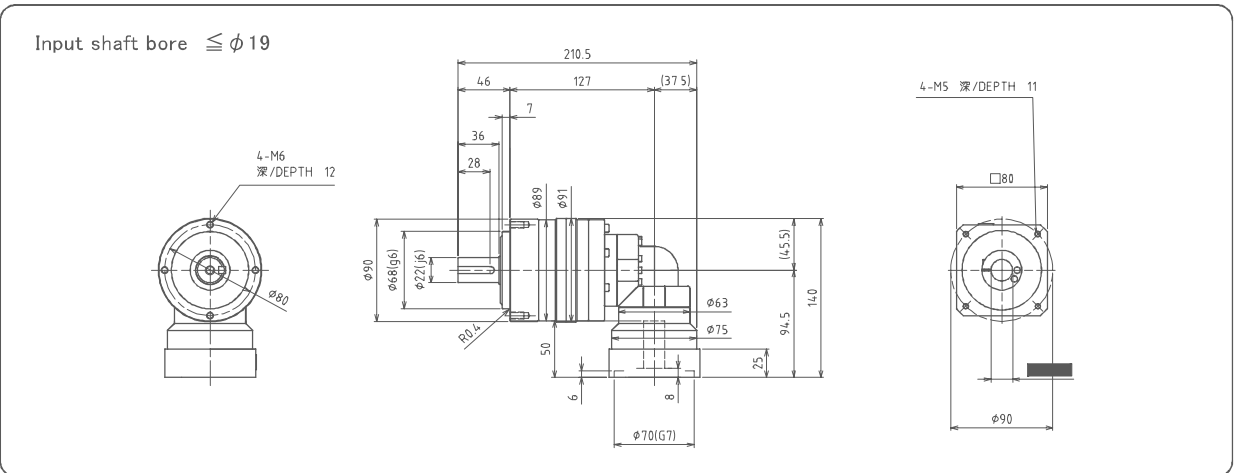
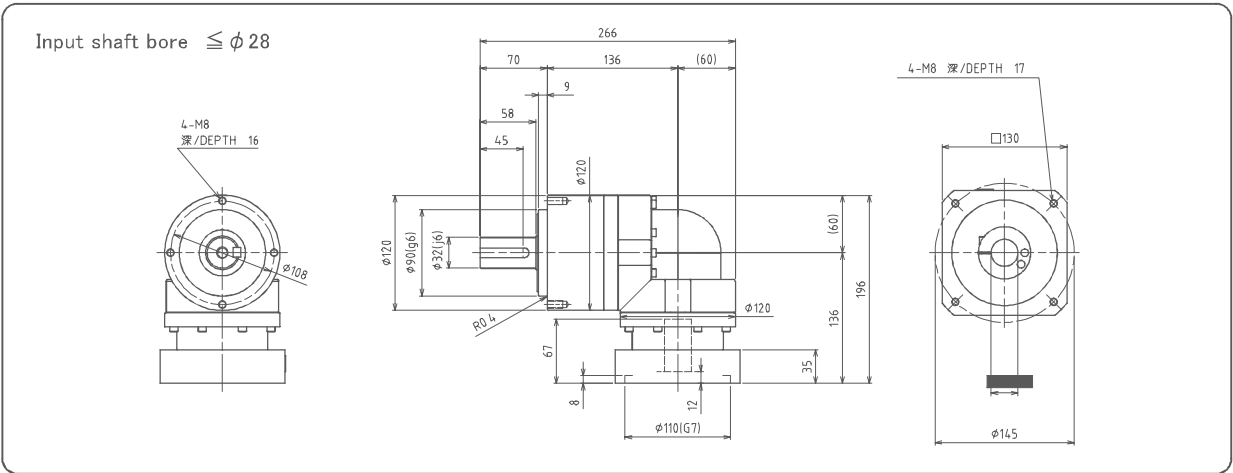
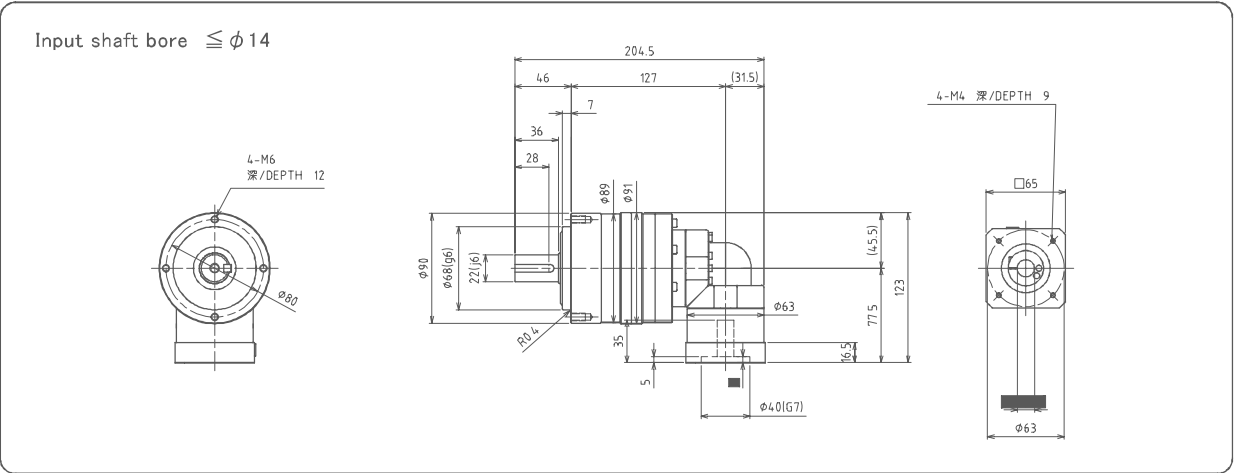
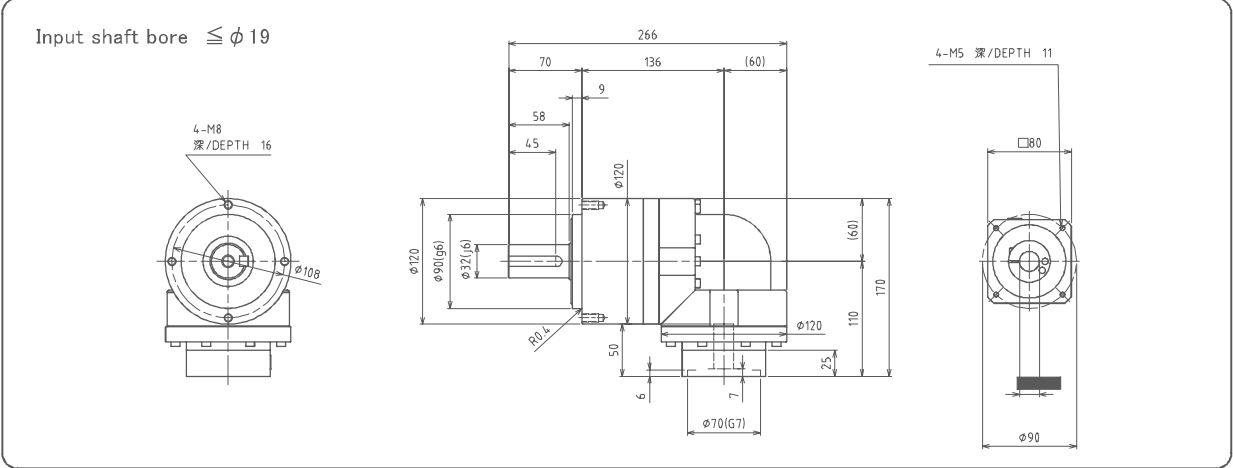


Note1: The body size varies with the installation of the motor.
Note2: When the shaft diameter of the motor is different from the input shaft diameter, the shaft sleeve can be inserted.

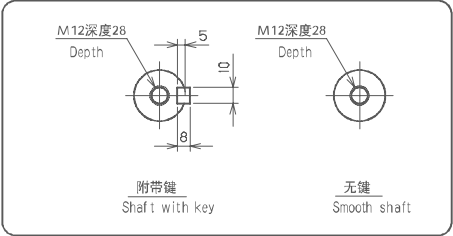
ALR-090 Level3



ALR-120 Level2

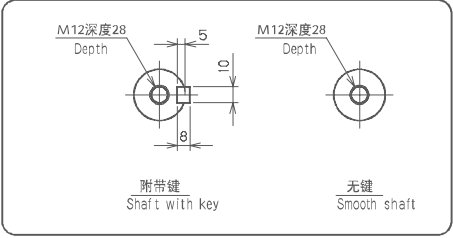
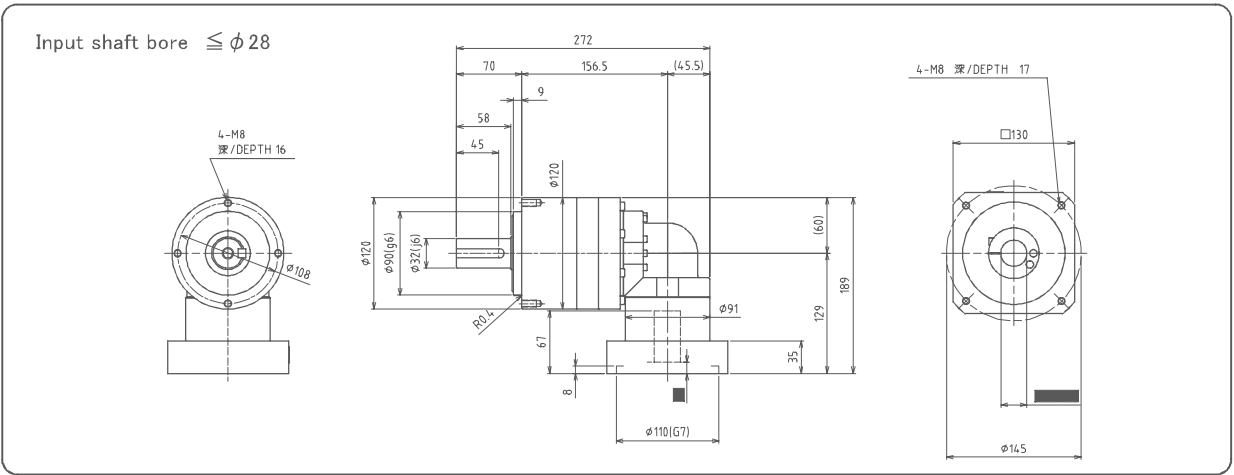
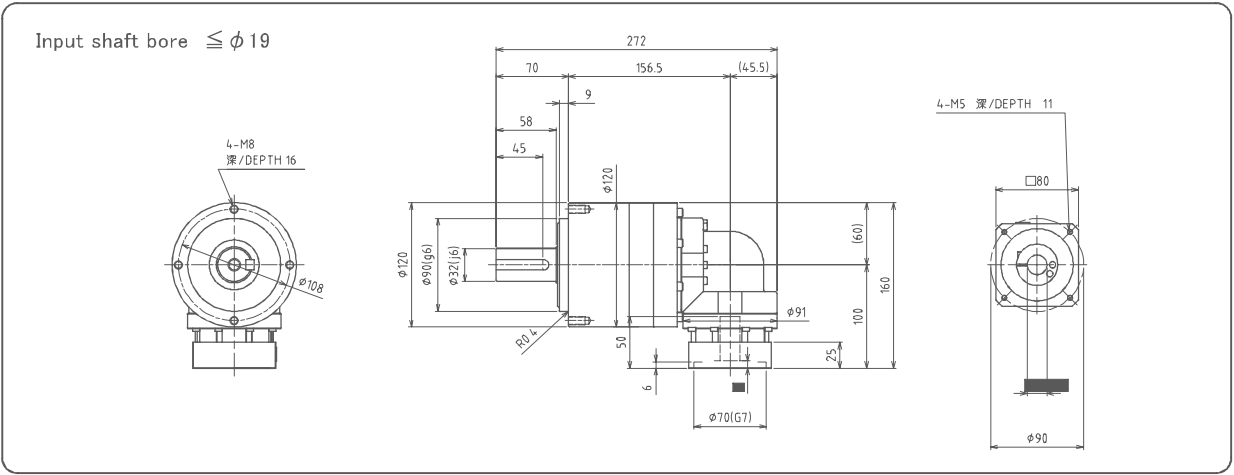
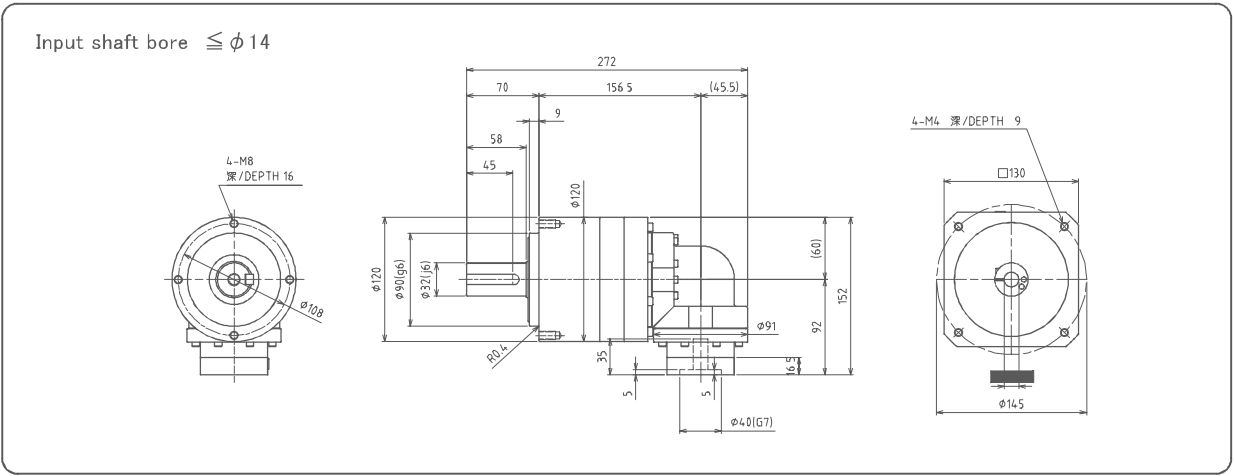


Note1: The body size varies with the installation of the motor.
Note2: When the shaft diameter of the motor is different from the input shaft diameter, the shaft sleeve can be inserted.



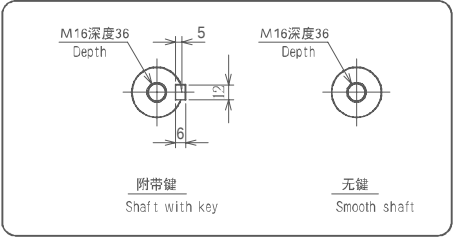
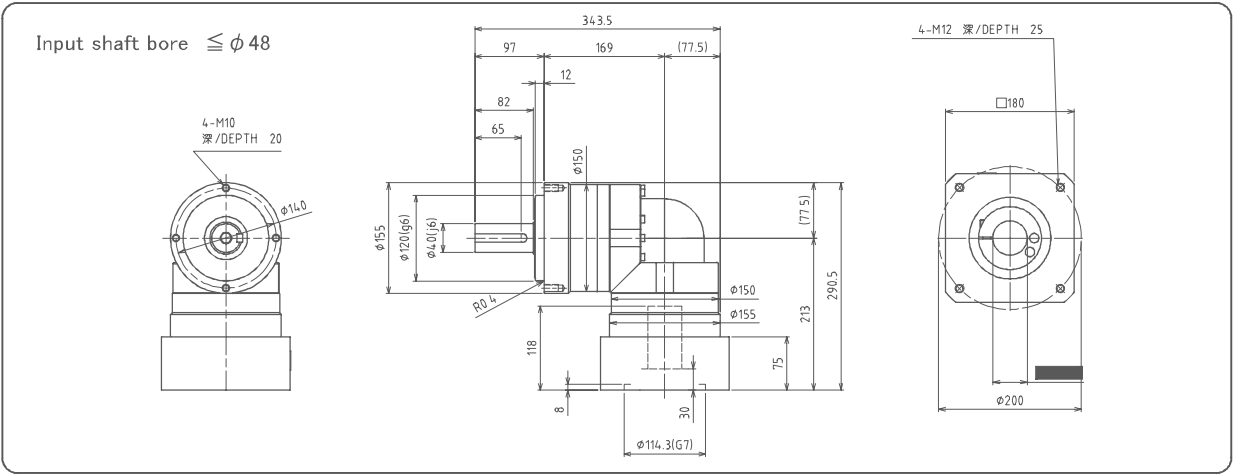
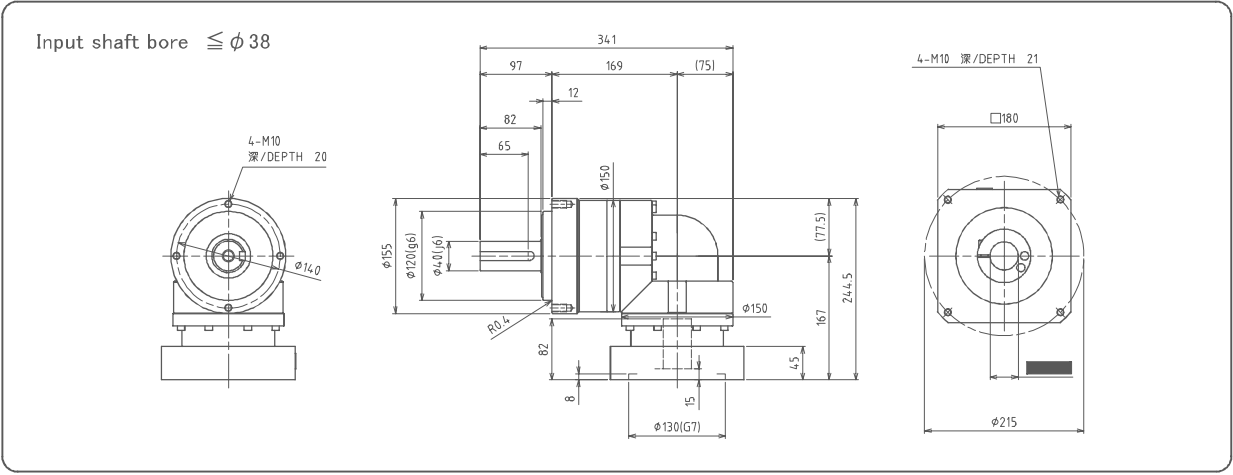
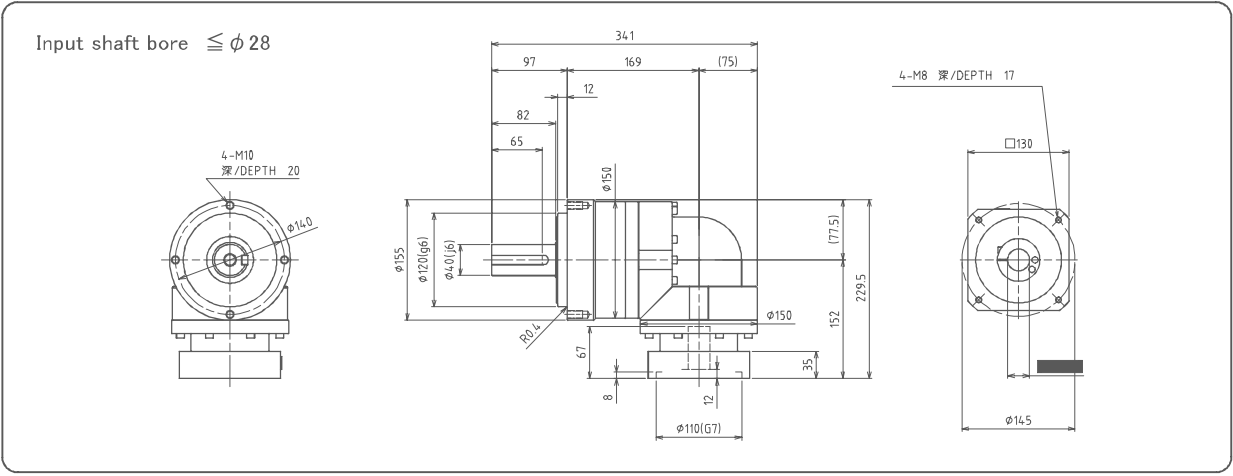
Note1: The body size varies with the installation of the motor.
Note2: When the shaft diameter of the motor is different from the input shaft diameter, the shaft sleeve can be inserted.

ALR-120 Level3



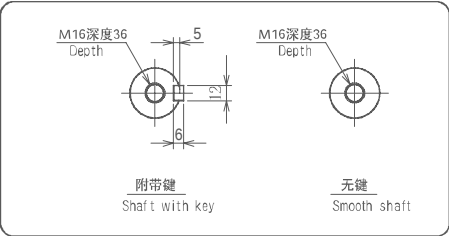
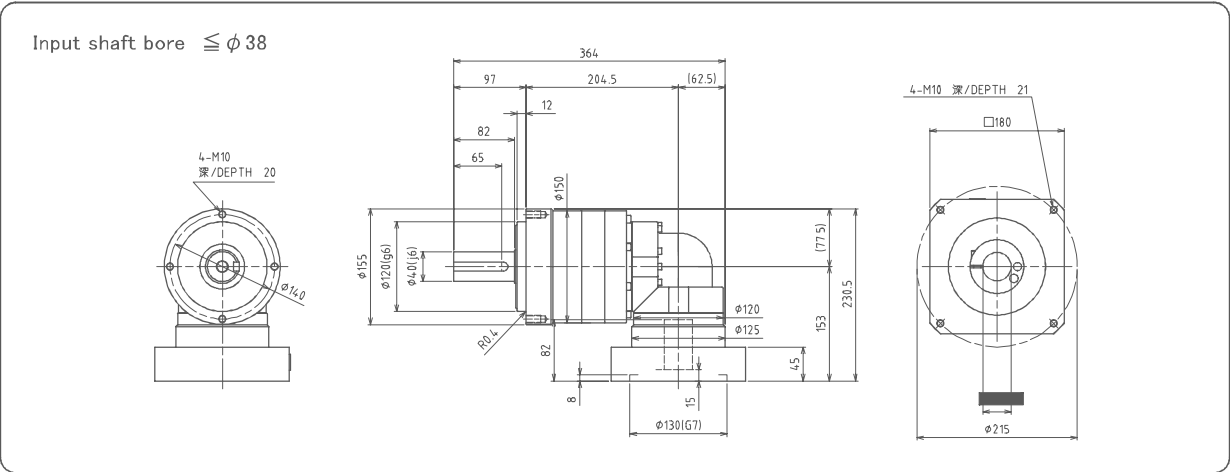
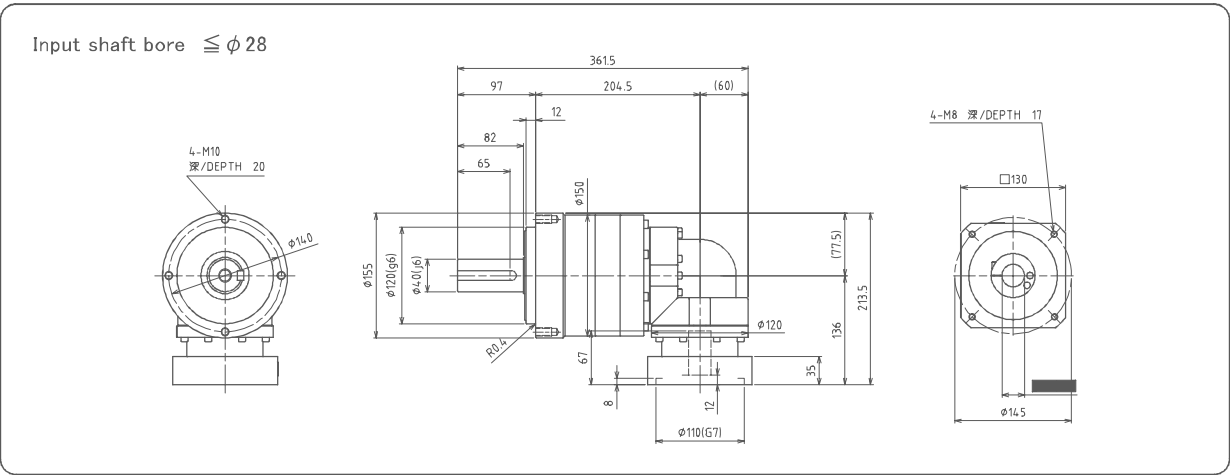
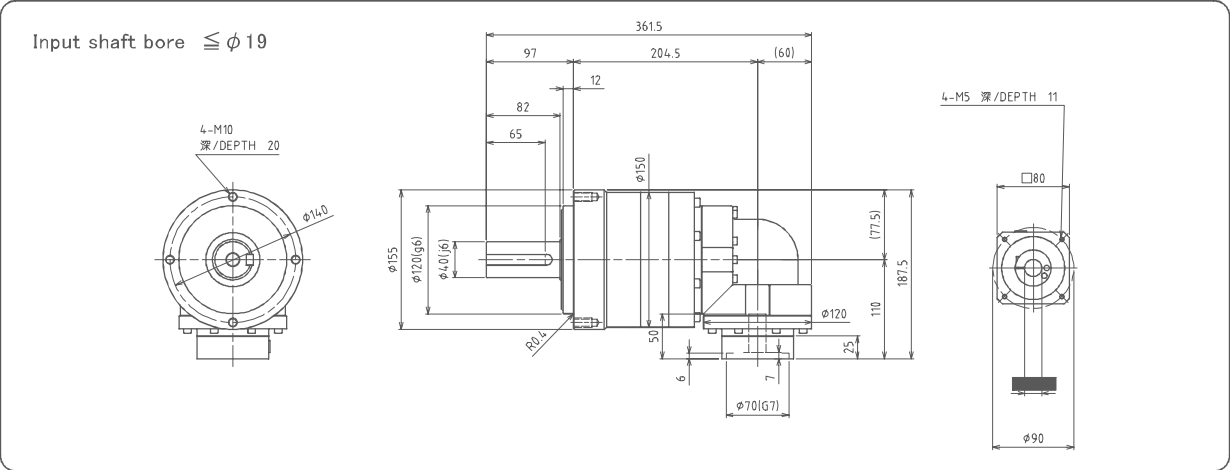
Note1: The body size varies with the installation of the motor.
Note2: When the shaft diameter of the motor is different from the input shaft diameter, the shaft sleeve can be inserted.

ALR-155 Level2



Note1: The body size varies with the installation of the motor.
Note2: When the shaft diameter of the motor is different from the input shaft diameter, the shaft sleeve can be inserted.

ALR-155 Level3



Note1: The body size varies with the installation of the motor.
Note2: When the shaft diameter of the motor is different from the input shaft diameter, the shaft sleeve can be inserted.

1 Mounting procedure to the motor

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

2 Remove the plug.

3 Turn the input shaft to align the head of the clamping bolt with the jack hole. At this time, ensure that the clamping bolt is loose.

If there is a shaft sleeve, the installation method is shown in the figure.

4 Please place reducer vertically on the flat surface so the motor mounting part faces up. 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 mounting bolts to the proper torque. (Refer to table1)

2 Installation of Reducer

After confirming the installation surface is flat and clean, tighten the bolt using a torque wrench to the proper torque. (Refer to table 2)

5 Tighten the clamping bolt of the input shaft with torque wrench to the proper torque. (Refer to table 1)

6 Reinstall the plug and the installation 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	—	—

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

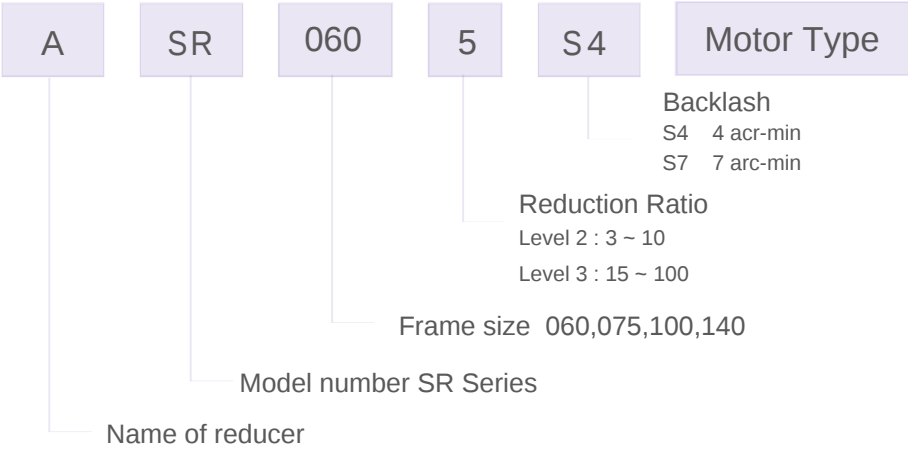
ASR Series



Features

- 1 Right angle reducer using spiral bevel gear. Costomer can locate the motor at 90 degree away from the reducer if required to save space
- 2 The use of integral needle roller bearings greatly improves rigidity and torque
- 3 The main bearing uses tapered roller bearings to achieve high load capacity
- 4 Applicable to all kinds of motors
- 5 Effectively prevent grease leakage by using grease with highviscosity and anti-separation.
- 6 No need to change the grease during the life of the product, making installation easier

Model number



ASR060

Frame size	Model	Ratio	Φ 1			Φ 2		Φ 3	
			Nominal output torque [Nm]	Maximum output torque [Nm]	Emergency stop torque [Nm]	Nominal input speed [rpm]	Maximum input speed [rpm]	Permitted radial load [N]	Permitted axial load [N]
060	2	3	13	26	55	3000	6000	1720	2320
		4	17	34	70	3000	6000	1920	2520
		5	23	44	85	3000	6000	2020	2720
		6	25	47	95	3000	6000	2120	2720
		7	25	47	95	3000	6000	2220	2720
		8	25	47	95	3000	6000	2320	2720
		9	17	34	70	3000	6000	2420	2720
		10	17	34	70	3000	6000	2420	2720
		15	17	34	70	3000	6000	2820	2720
		16	25	47	95	3000	6000	2820	2720
	3	20	25	47	95	3000	6000	3020	2720
		25	25	47	95	3000	6000	3020	2720
		28	25	47	95	3000	6000	3020	2720
		30	17	34	70	3000	6000	3020	2720
		35	25	47	95	3000	6000	3020	2720
		40	25	47	95	3000	6000	3020	2720
		45	17	34	70	3000	6000	3020	2720
		50	25	47	95	3000	6000	3020	2720
		60	25	47	95	3000	6000	3020	2720
		70	25	47	95	3000	6000	3020	2720
		80	25	47	95	3000	6000	3020	2720
		90	17	34	70	3000	6000	3020	2720
		100	17	34	70	3000	6000	3020	2720

Frame size	Model	Ratio	Φ 4		Weight [kg]	Φ 5			Φ 6	
			Maximum radial load [N]	Maximum axial load [N]		Moment of inertia (≤ φ 8) [kg·cm ²]	Moment of inertia (≤ φ 14) [kg·cm ²]	Moment of inertia (≤ φ 19) [kg·cm ²]	Operating temperature	
060	2	3	3025	2725	2.0	0.320	0.395	0.584	- 20℃ ~ 90℃	
		4	3025	2725		0.271	0.346	0.535		
		5	3025	2725		0.251	0.326	0.516		
		6	3025	2725		0.242	0.317	0.506		
		7	3025	2725		0.235	0.310	0.500		
		8	3025	2725		0.232	0.307	0.496		
		9	3025	2725		0.229	0.304	0.494		
		10	3025	2725		0.228	0.303	0.492		
	3	15	3025	2725	1.8	0.074	0.118	—		
		16	3025	2725		0.079	0.124	—		
		20	3025	2725		0.072	0.116	—		
		25	3025	2725		0.071	0.115	—		
		28	3025	2725		0.077	0.122	—		
		30	3025	2725		0.062	0.106	—		
		35	3025	2725		0.070	0.115	—		
		40	3025	2725		0.061	0.106	—		
		45	3025	2725		0.070	0.115	—		
		50	3025	2725		0.061	0.106	—		
		60	3025	2725		0.061	0.106	—		
		70	3025	2725		0.061	0.106	—		
		80	3025	2725		0.061	0.105	—		
		90	3025	2725		0.061	0.105	—		
		100	3025	2725		0.061	0.105	—		

- Φ 1 With nominal input speed, service life is 20,000 hours.
- Φ 2 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output shaft center, at axial load 0)
- Φ 3 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output side bearing, at radial load 0)
- Φ 4 The maximum radial load the reducer can accept.
- Φ 5 The maximum axial load the reducer can accept.

ASR075

ASR075

		Ø 1				Ø 2		Ø 3		
Frame size	Model	Ratio	Nominal output torque	Maximum output torque	Emergency stop torque	Nominal input speed	Maximum input speed	Permitted radial load	Permitted axial load	
			[Nm]	[Nm]	[Nm]	[rpm]	[rpm]	[N]	[N]	
075	2	3	47	68	138	3000	6000	2325	3425	
		4	62	93	178	3000	6000	2525	3725	
		5	67	93	228	3000	6000	2725	3925	
		6	67	93	228	3000	6000	2825	3925	
		7	67	93	228	3000	6000	3025	3925	
		8	67	93	228	3000	6000	3125	3925	
		9	47	68	178	3000	6000	3225	3925	
		10	47	68	178	3000	6000	3325	3925	
		3	15	47	68	178	3000	6000	3725	3925
			16	67	113	228	3000	6000	3825	3925
	20		67	113	228	3000	6000	4025	3925	
	25		67	113	228	3000	6000	4325	3925	
	28		67	113	228	3000	6000	4325	3925	
	30		47	68	178	3000	6000	4325	3925	
	35		67	113	228	3000	6000	4325	3925	
	40		67	113	228	3000	6000	4325	3925	
	45		47	68	178	3000	6000	4325	3925	
	50		67	113	228	3000	6000	4325	3925	
	60		67	113	228	3000	6000	4325	3925	
	70		67	113	228	3000	6000	4325	3925	
	80		67	113	228	3000	6000	4325	3925	
	90	47	68	178	3000	6000	4325	3925		
	100	47	68	178	3000	6000	4325	3925		

Frame size	Model	Ratio	⌀ 4	⌀ 5	Weight	Moment of inertia ($\leq \phi 8$)	Moment of inertia ($\leq \phi 14$)	Moment of inertia ($\leq \phi 19$)	Moment of inertia ($\leq \phi 28$)
			Maximum radial load	Maximum axial load					
			[N]	[N]					
075	2	3	4330	3930	4.8	—	2.07	2.40	4.53
		4	4330	3930		—	1.87	2.20	4.32
		5	4330	3930		—	1.78	2.11	4.24
		6	4330	3930		—	1.74	2.07	4.20
		7	4330	3930		—	1.72	2.05	4.17
		8	4330	3930		—	1.70	2.03	4.16
		9	4330	3930		—	1.69	2.02	4.15
		10	4330	3930		—	1.69	2.02	4.15
	3	15	4330	3930	4.1	0.33	0.41	0.60	—
		16	4330	3930		0.38	0.46	0.65	—
		20	4330	3930		0.33	0.40	0.59	—
		25	4330	3930		0.32	0.40	0.59	—
		28	4330	3930		0.37	0.45	0.64	—
		30	4330	3930		0.25	0.32	0.51	—
		35	4330	3930		0.32	0.40	0.58	—
		40	4330	3930		0.25	0.32	0.51	—
		45	4330	3930		0.32	0.39	0.58	—
		50	4330	3930		0.25	0.32	0.51	—
		60	4330	3930		0.25	0.32	0.51	—
		70	4330	3930		0.25	0.32	0.51	—
		80	4330	3930		0.25	0.32	0.51	—
		90	4330	3930		0.25	0.32	0.51	—
		100	4330	3930		0.25	0.32	0.51	—

- ⌀ 1 With nominal input speed, service life is 20,000 hours.
- ⌀ 2 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output shaft center, at axial load 0)
- ⌀ 3 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output side bearing, at radial load 0)
- ⌀ 4 The maximum radial load the reducer can accept.
- ⌀ 5 The maximum axial load the reducer can accept.

ASR100

ASR100

			Ø 1					Ø 2	Ø 3	
Frame size	Model	Ratio	Nominal output torque	Maximum output torque	Emergency stop torque	Nominal input speed	Maximum input speed	Permitted radial load	Permitted axial load	
			[Nm]	[Nm]	[Nm]	[rpm]	[rpm]	[N]	[N]	
100	2	3	78	154	330	3000	6000	3430	4830	
		4	103	204	440	3000	6000	3730	5230	
		5	123	244	510	3000	6000	4030	5630	
		6	153	304	560	3000	6000	4230	5930	
		7	153	304	560	3000	6000	4430	6130	
		8	153	304	560	3000	6000	4630	6330	
		9	113	204	460	3000	6000	4830	6330	
		10	113	204	460	3000	6000	4930	6330	
	3	15	113	204	460	3000	6000	5630	6330	
		16	133	264	560	3000	6000	5730	6330	
		20	153	304	560	3000	6000	6130	6330	
		25	153	304	560	3000	6000	6530	6330	
		28	153	304	560	3000	6000	6730	6330	
		30	113	204	460	3000	6000	6930	6330	
		35	153	304	560	3000	6000	7030	6330	
		40	153	304	560	3000	6000	7030	6330	
		45	113	204	460	3000	6000	7030	6330	
		50	153	304	560	3000	6000	7030	6330	
		60	153	304	560	3000	6000	7030	6330	
		70	153	304	560	3000	6000	7030	6330	
80	153	304	560	3000	6000	7030	6330			
90	113	204	460	3000	6000	7030	6330			
100	113	204	460	3000	6000	7030	6330			

			⌀ 4	⌀ 5					
Frame size	Model	Ratio	Maximum radial load	Maximum axial load	Weight	Moment of inertia (≤ ϕ 14)	Moment of inertia (≤ ϕ 19)	Moment of inertia (≤ ϕ 28)	Moment of inertia (≤ ϕ 38)
			[N]	[N]		[kg]	[kg·cm ²]	[kg·cm ²]	[kg·cm ²]
100	2	3	7040	6340	10.5	—	6.61	8.21	15.28
		4	7040	6340		—	5.41	7.01	14.08
		5	7040	6340		—	4.97	6.57	13.64
		6	7040	6340		—	4.73	6.33	13.40
		7	7040	6340		—	4.62	6.22	13.29
		8	7040	6340		—	4.53	6.12	13.20
		9	7040	6340		—	4.47	6.07	13.14
		10	7040	6340		—	4.45	6.04	13.11
	3	15	7040	6340	10.1	2.24	2.57	4.70	—
		16	7040	6340		2.45	2.78	4.91	—
		20	7040	6340		2.19	2.52	4.65	—
		25	7040	6340		2.18	2.51	4.63	—
		28	7040	6340		2.40	2.73	4.86	—
		30	7040	6340		1.87	2.20	4.33	—
		35	7040	6340		2.16	2.49	4.62	—
		40	7040	6340		1.86	2.19	4.32	—
		45	7040	6340		2.15	2.48	4.61	—
		50	7040	6340		1.86	2.19	4.31	—
		60	7040	6340		1.85	2.18	4.31	—
		70	7040	6340		1.85	2.18	4.31	—
		80	7040	6340		1.85	2.18	4.31	—
		90	7040	6340		1.85	2.18	4.31	—
		100	7040	6340		1.85	2.18	4.31	—

- ⌀ 1 With nominal input speed, service life is 20,000 hours.
- ⌀ 2 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output shaft center, at axial load 0)
- ⌀ 3 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output side bearing, at radial load 0)
- ⌀ 4 The maximum radial load the reducer can accept.
- ⌀ 5 The maximum axial load the reducer can accept.

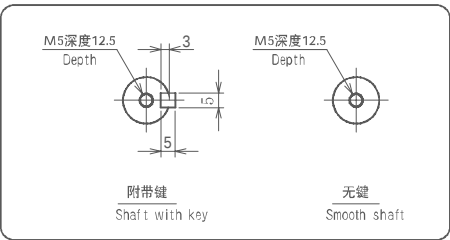
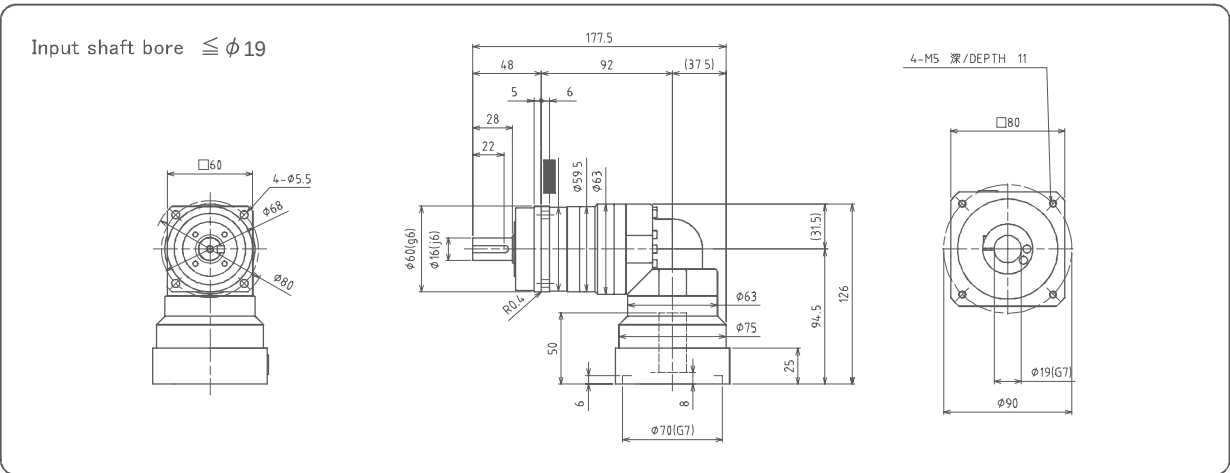
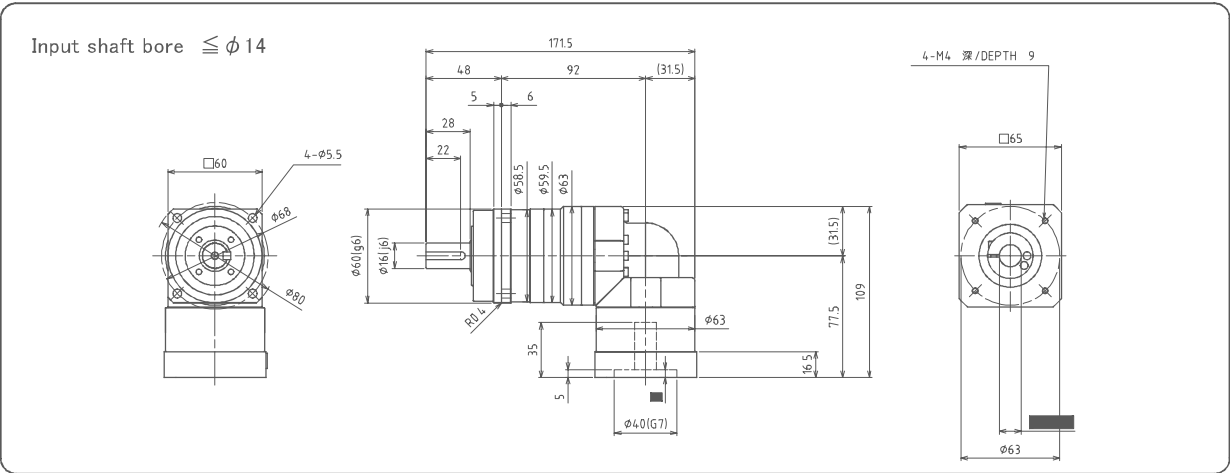
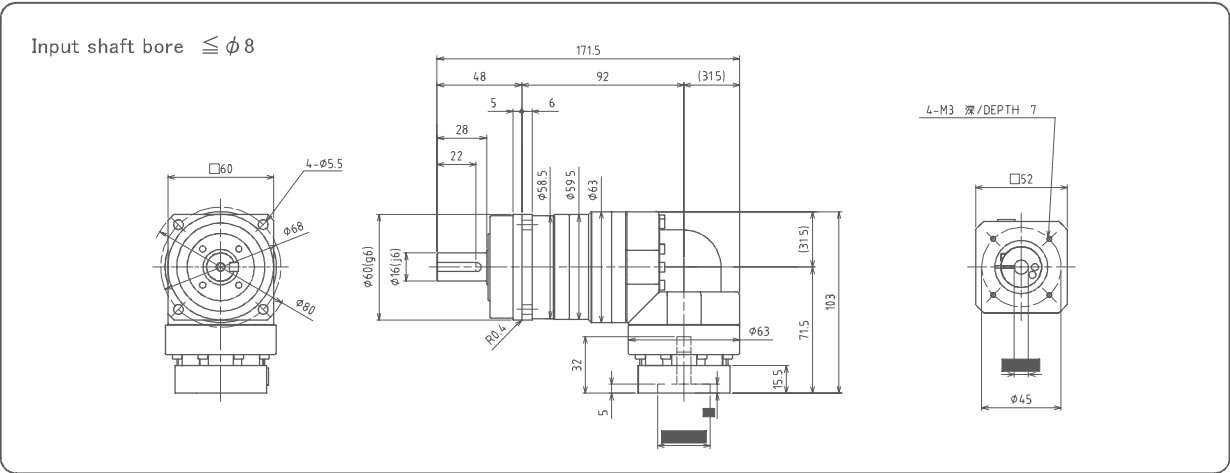
ASR140

ASR140			⊙ 1			⊙ 2		⊙ 3	
Frame size	Model	Ratio	Nominal output torque	Maximum output torque	Emergency stop torque	Nominal input speed	Maximum input speed	Permitted radial load	Permitted axial load
			[Nm]	[Nm]	[Nm]	[rpm]	[rpm]	[N]	[N]
140	2	3	134	265	715	2000	4000	6740	9040
		4	174	345	965	2000	4000	7440	9040
		5	204	405	1115	2000	4000	7940	9040
		6	264	525	1115	2000	4000	8340	9040
		7	304	605	1115	2000	4000	8740	9040
		8	304	605	1115	2000	4000	9140	9040
		9	204	405	765	2000	4000	9440	9040
	3	10	204	405	765	2000	4000	9740	9040
		15	204	405	765	2000	4000	10040	9040
		16	304	605	1115	2000	4000	10040	9040
		20	304	605	1115	2000	4000	10040	9040
		25	304	605	1115	2000	4000	10040	9040
		28	304	605	1115	2000	4000	10040	9040
		30	204	405	765	2000	4000	10040	9040
		35	304	605	1115	2000	4000	10040	9040
		40	304	605	1115	2000	4000	10040	9040
		45	204	405	765	2000	4000	10040	9040
		50	304	605	1115	2000	4000	10040	9040
		60	304	605	1115	2000	4000	10040	9040
		70	304	605	1115	2000	4000	10040	9040
80	304	605	1115	2000	4000	10040	9040		
90	204	405	765	2000	4000	10040	9040		
100	204	405	765	2000	4000	10040	9040		

Frame size	Model	Ratio	Maximum radial load	Maximum axial load	Weight	Moment of inertia ($\leq \phi 19$)	Moment of inertia ($\leq \phi 28$)	Moment of inertia ($\leq \phi 38$)	Moment of inertia ($\leq \phi 48$)
			[N]	[N]		[kg]	[kg·cm ²]	[kg·cm ²]	[kg·cm ²]
140	2	3	10050	9050	20.6	—	23.01	27.38	40.61
		4	10050	9050		—	18.49	22.86	36.09
		5	10050	9050		—	16.85	21.22	34.45
		6	10050	9050		—	15.97	20.34	33.57
		7	10050	9050		—	15.55	19.92	33.15
		8	10050	9050		—	15.21	19.58	32.81
		9	10050	9050		—	14.75	19.12	32.35
		10	10050	9050		—	14.64	19.02	32.25
	3	15	10050	9050	20.7	6.40	7.99	15.06	—
		16	10050	9050		7.29	8.88	15.95	—
		20	10050	9050		6.22	7.81	14.88	—
		25	10050	9050		6.15	7.75	14.82	—
		28	10050	9050		7.09	8.68	15.75	—
		30	10050	9050		4.99	6.58	13.66	—
		35	10050	9050		6.09	7.68	14.76	—
		40	10050	9050		4.94	6.54	13.61	—
		45	10050	9050		6.07	7.66	14.73	—
		50	10050	9050		4.93	6.52	13.59	—
		60	10050	9050		4.92	6.51	13.59	—
		70	10050	9050		4.91	6.51	13.58	—
		80	10050	9050		4.91	6.50	13.58	—
		90	10050	9050		4.91	6.50	13.57	—
		100	10050	9050		4.91	6.50	13.57	—

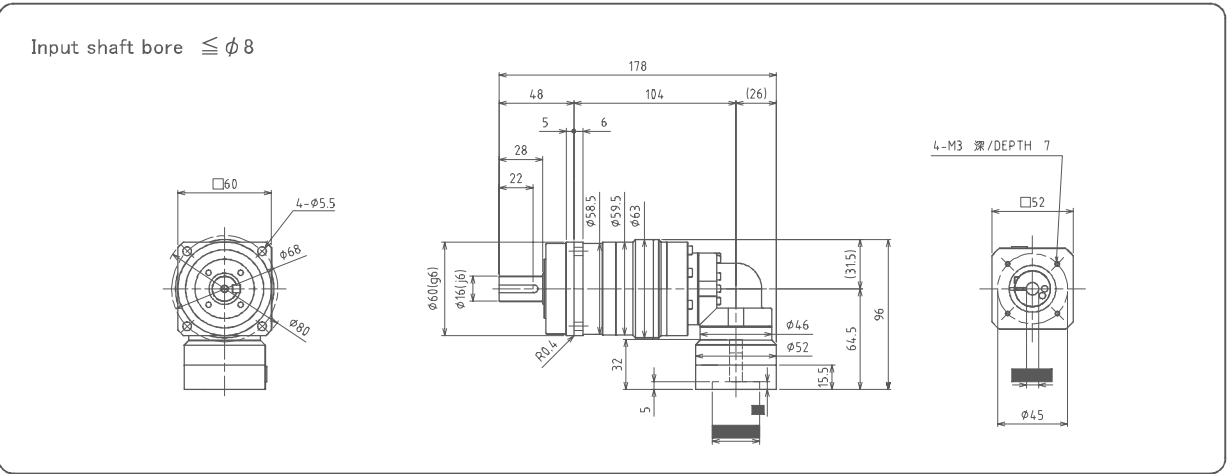
- ⊙1 With nominal input speed, service life is 20,000 hours.
- ⊙2 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output shaft center, at axial load 0)
- ⊙3 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output side bearing, at radial load 0)
- ⊙4 The maximum radial load the reducer can accept.
- ⊙5 The maximum axial load the reducer can accept.

ASR-060 Level2

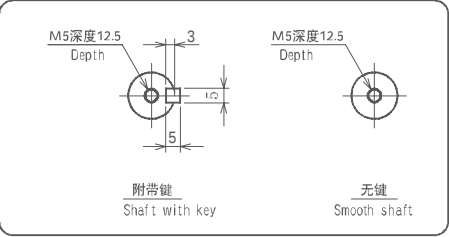
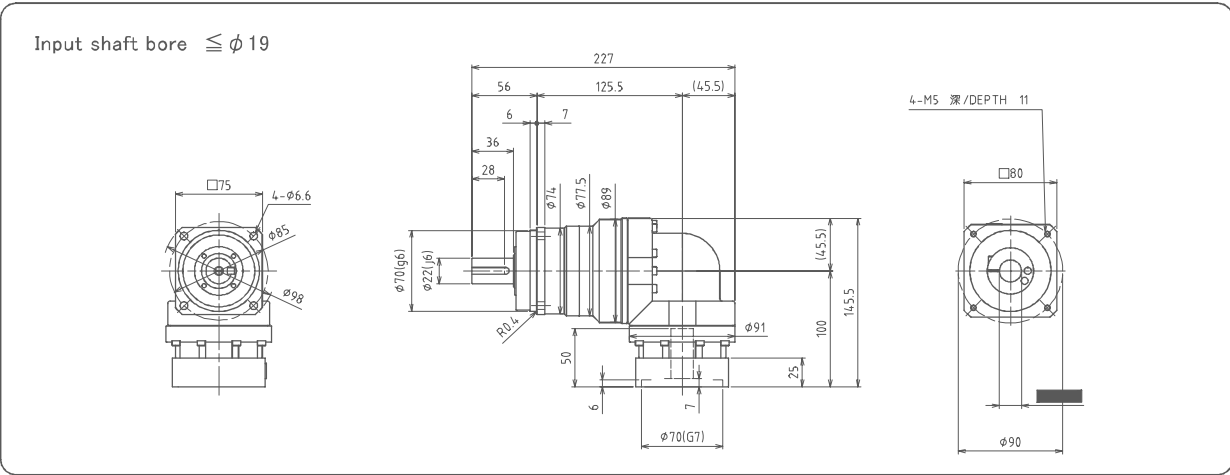
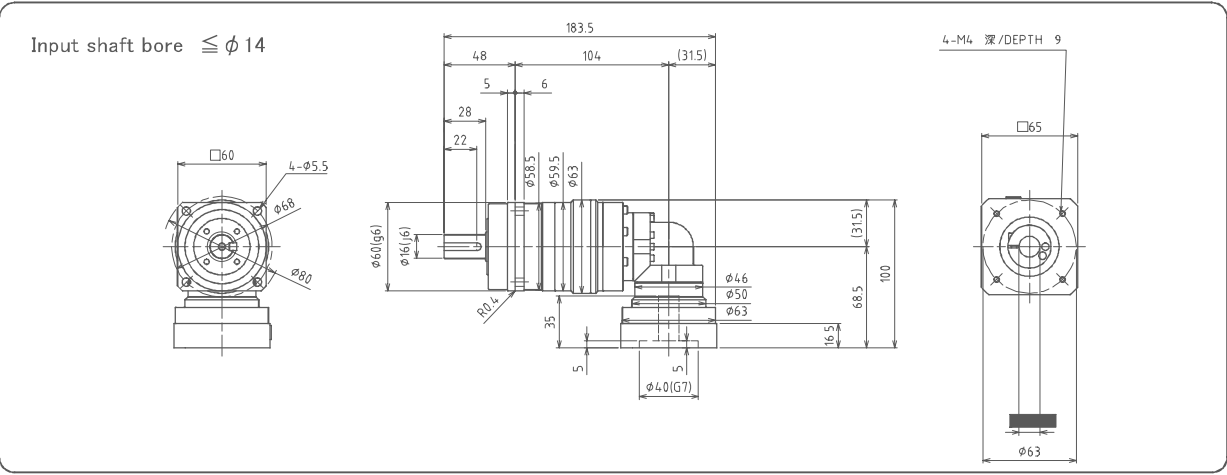
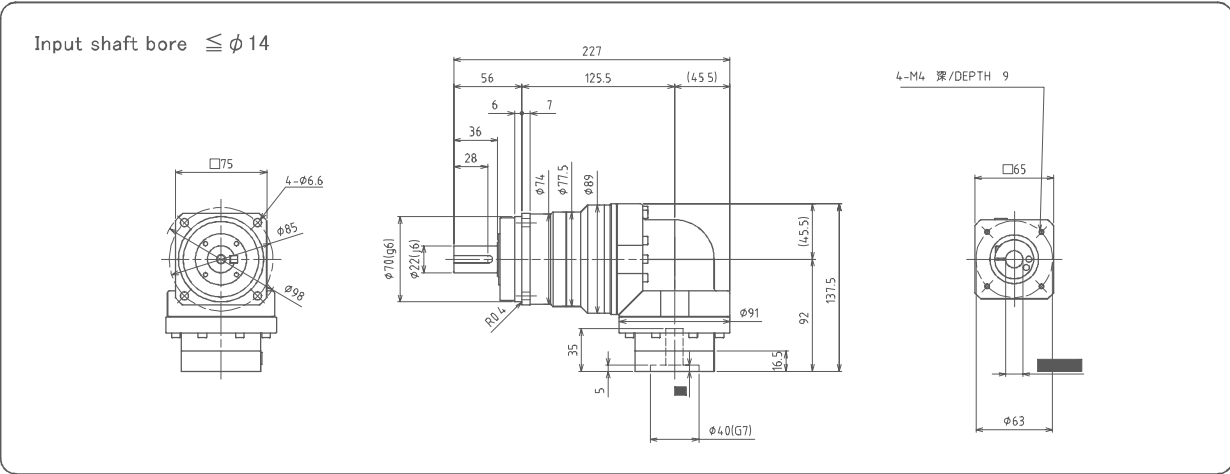


Note1: The body size varies with the installation of the motor.
Note2: When the shaft diameter of the motor is different from the input shaft diameter, the shaft sleeve can be inserted.

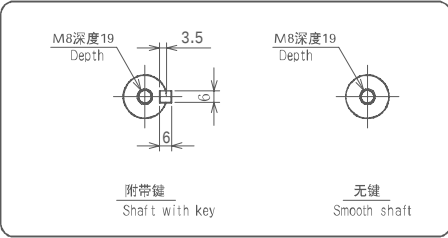
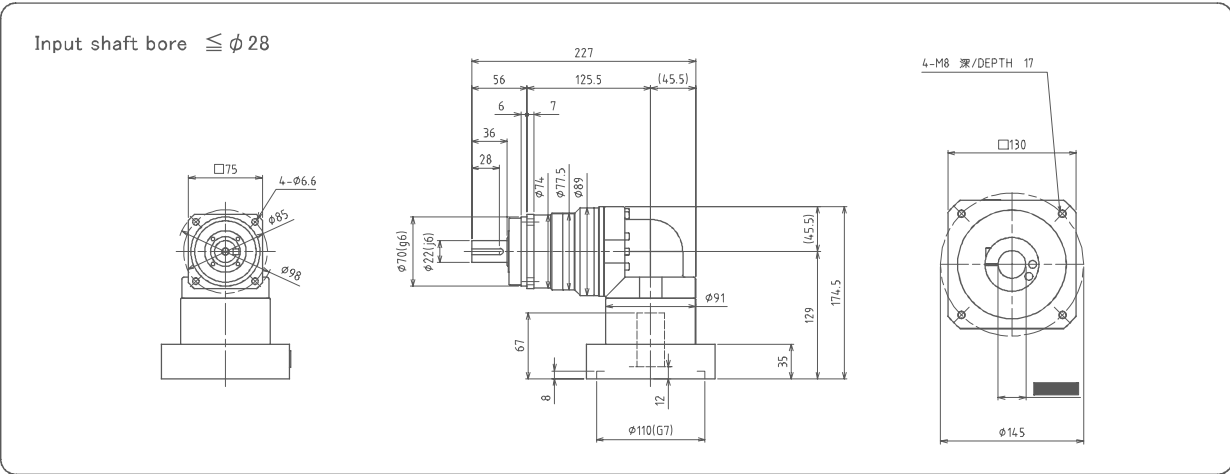
ASR-060 Level3



ASR-075 Level2

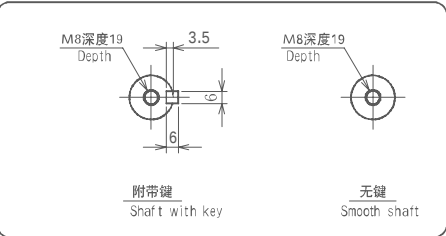
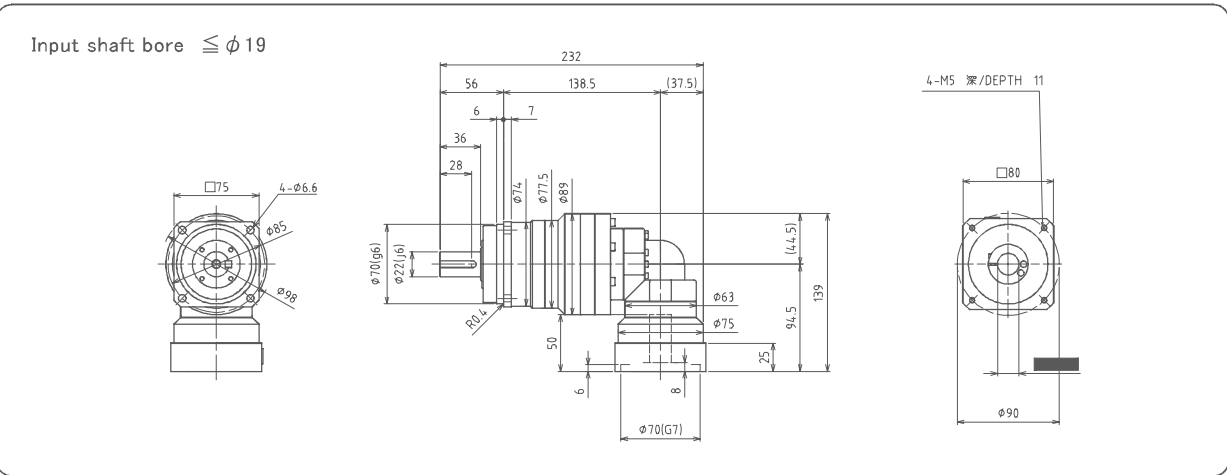
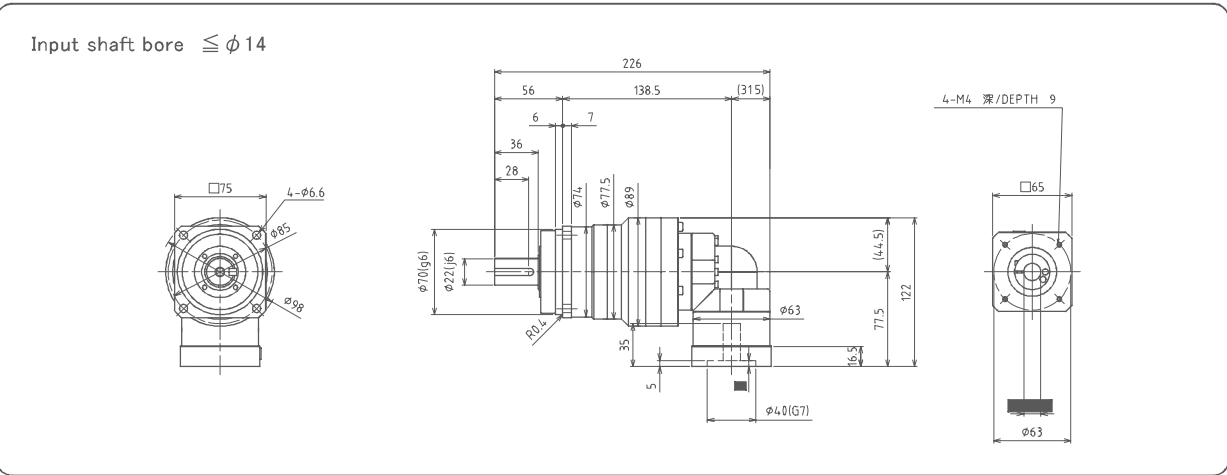
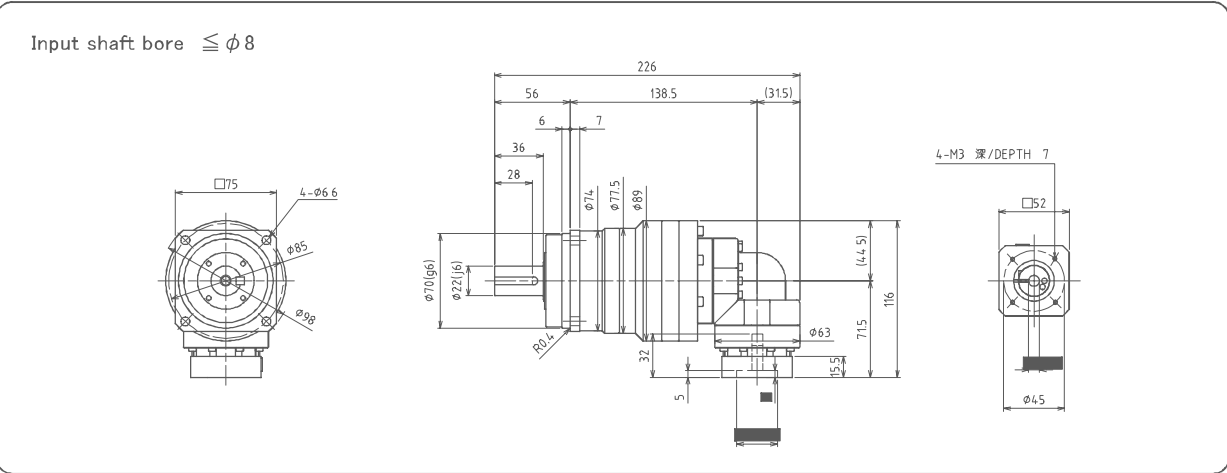


Note1: The body size varies with the installation of the motor.
Note2: When the shaft diameter of the motor is different from the input shaft diameter, the shaft sleeve can be inserted.



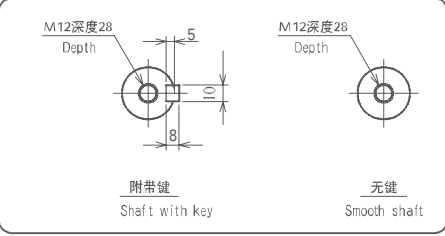
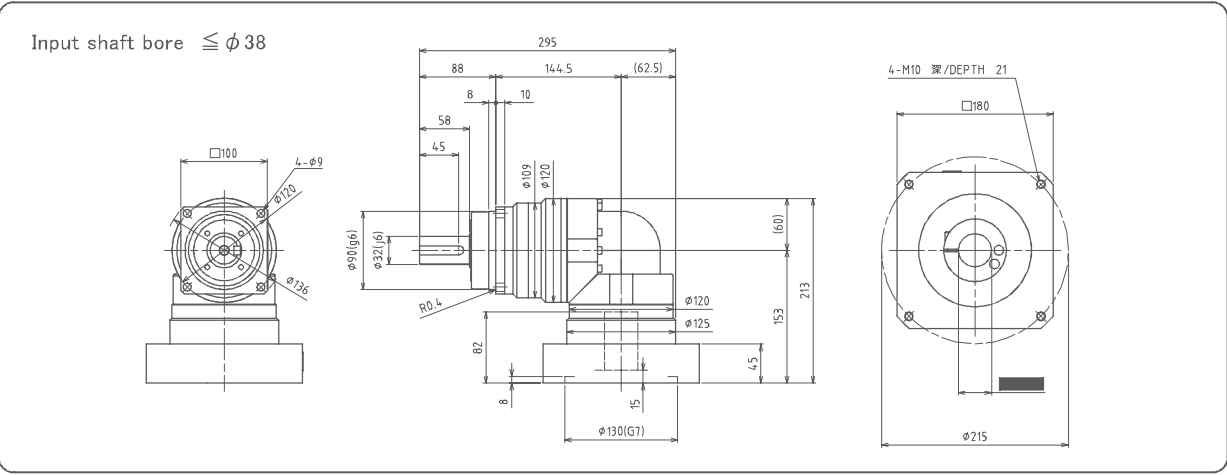
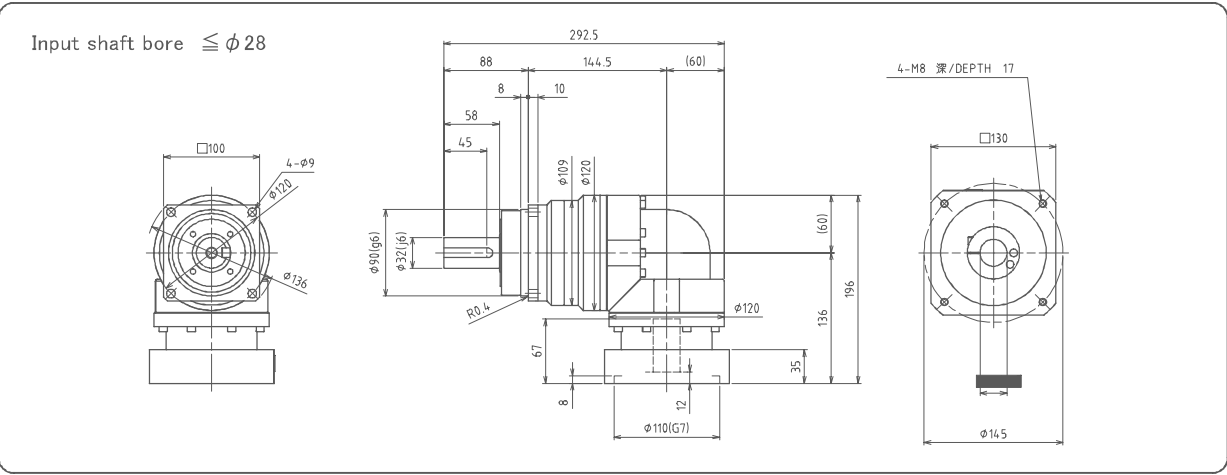
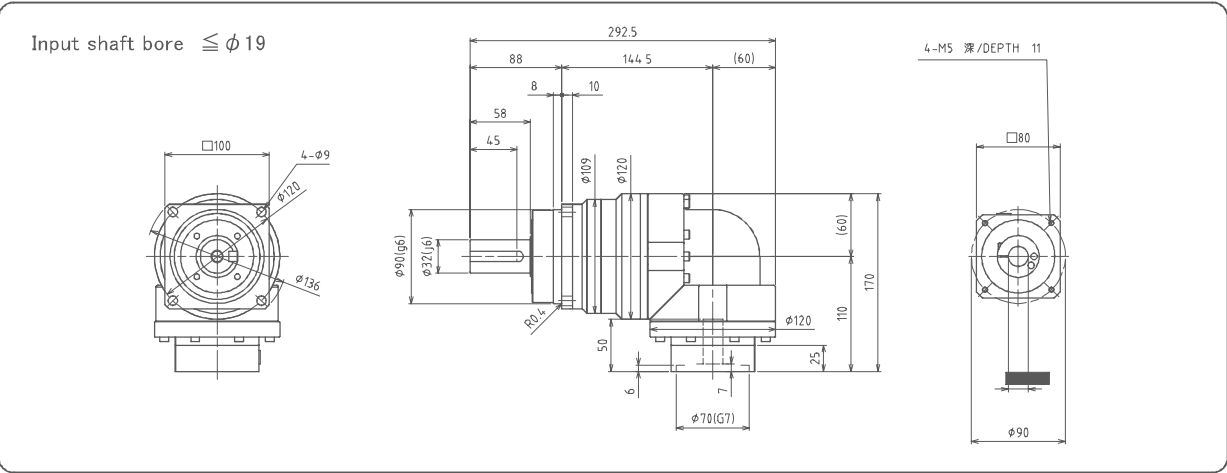
Note1: The body size varies with the installation of the motor.
Note2: When the shaft diameter of the motor is different from the input shaft diameter, the shaft sleeve can be inserted.

ASR-075 Level3



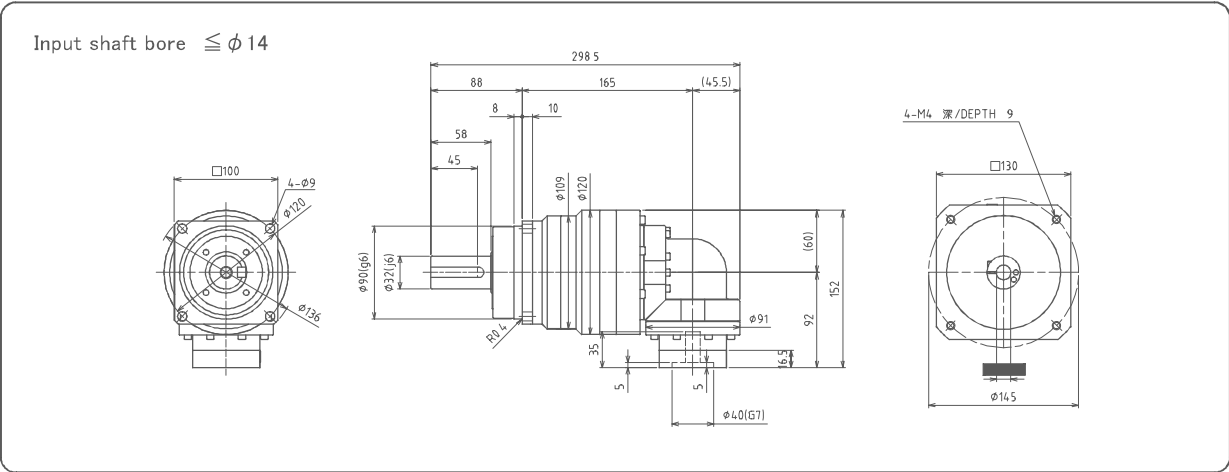
Note1: The body size varies with the installation of the motor.
Note2: When the shaft diameter of the motor is different from the input shaft diameter, the shaft sleeve can be inserted.

ASR-100 Level2

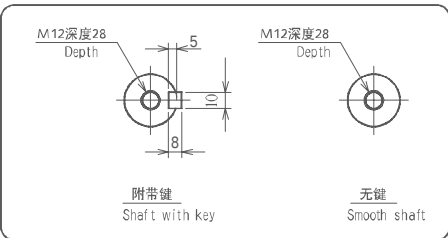
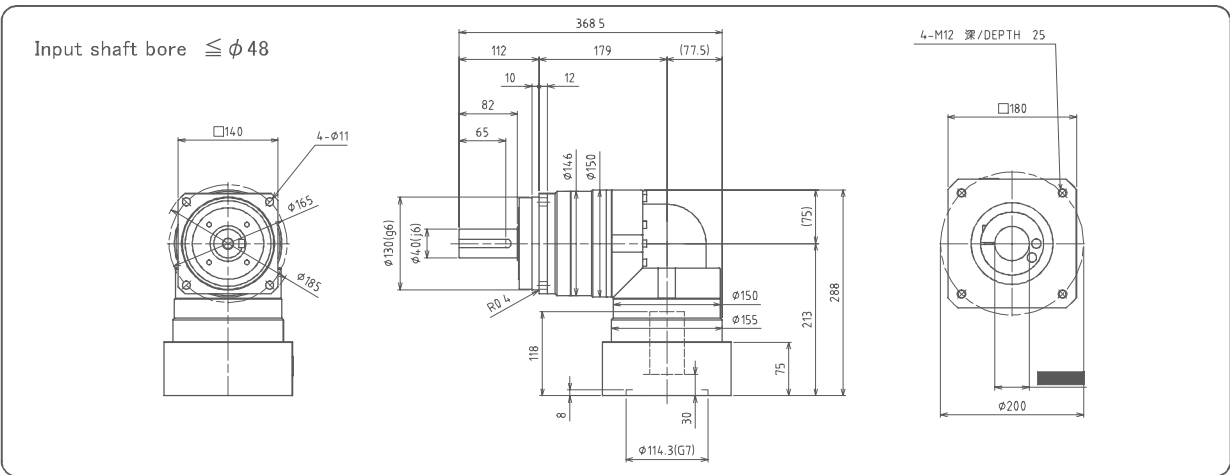
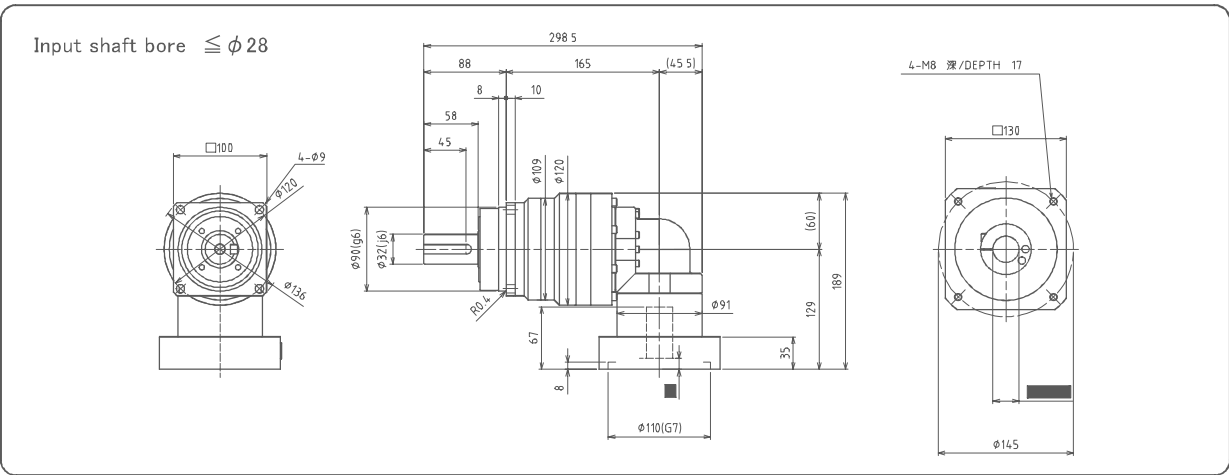
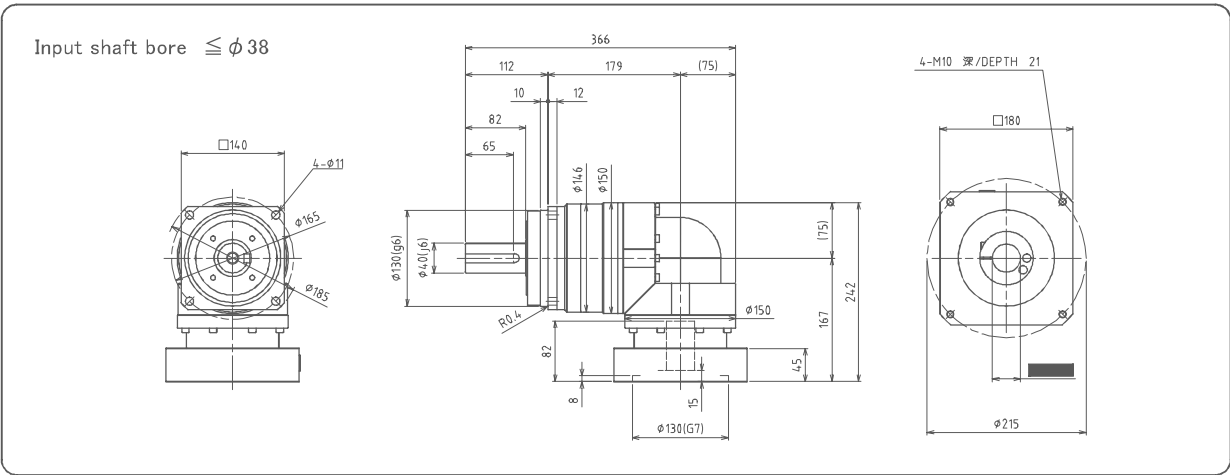
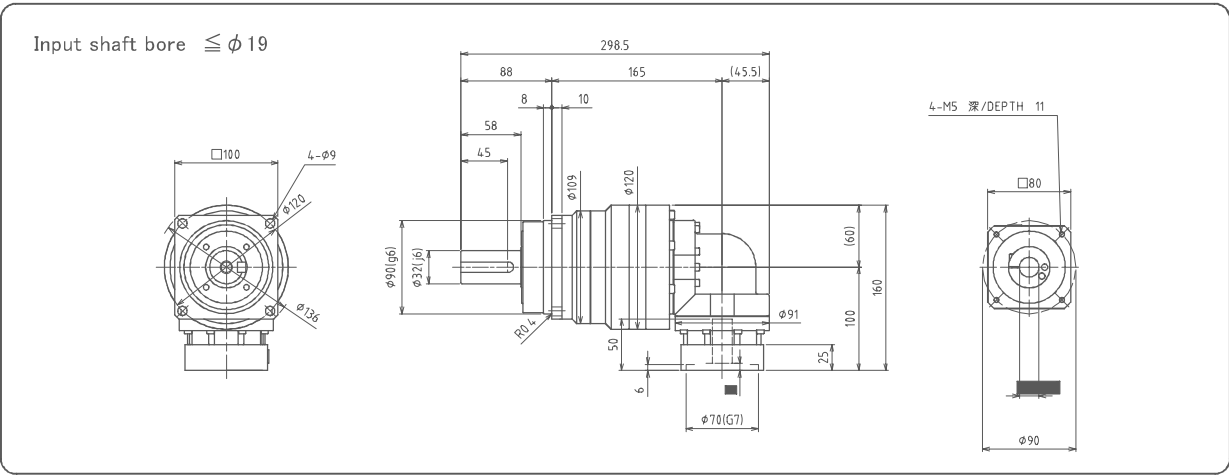
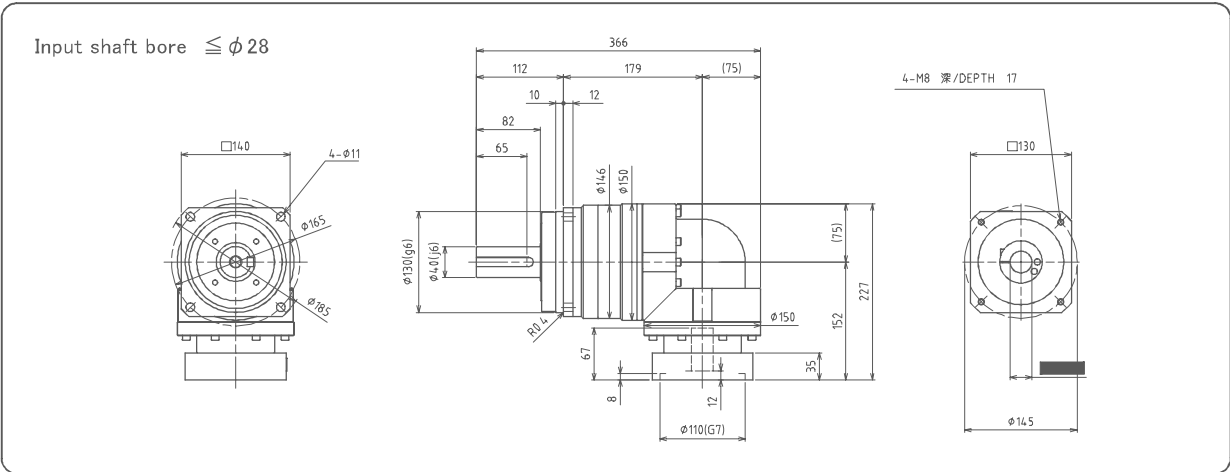


Note1: The body size varies with the installation of the motor.
Note2: When the shaft diameter of the motor is different from the input shaft diameter, the shaft sleeve can be inserted.

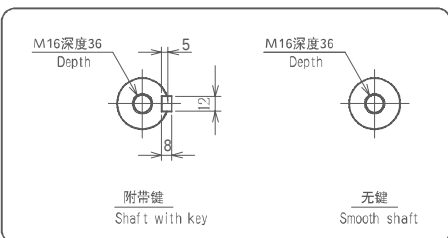
ASR-100 Level3



ASR-140 Level2

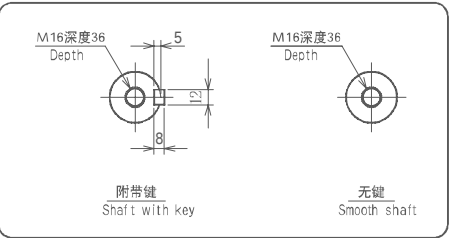
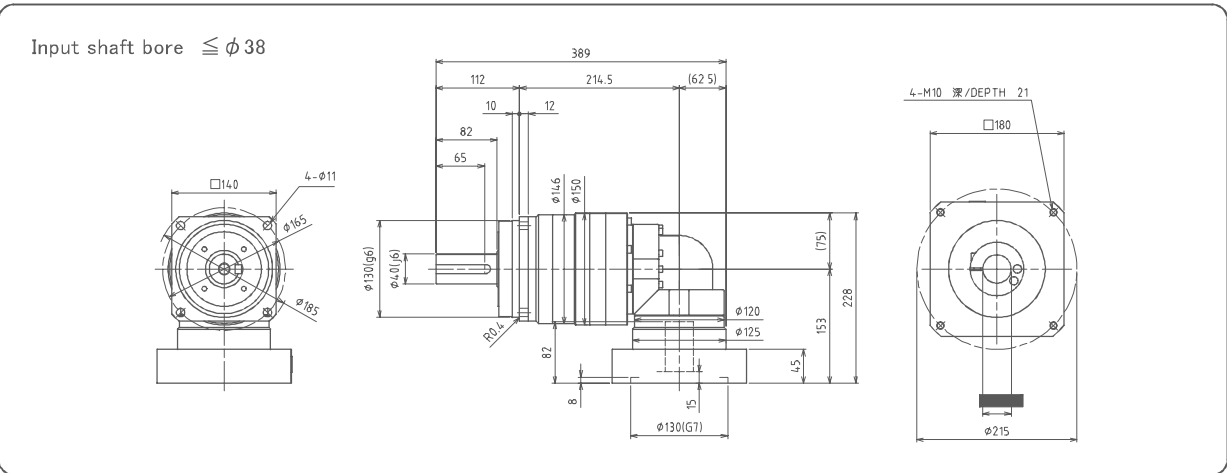
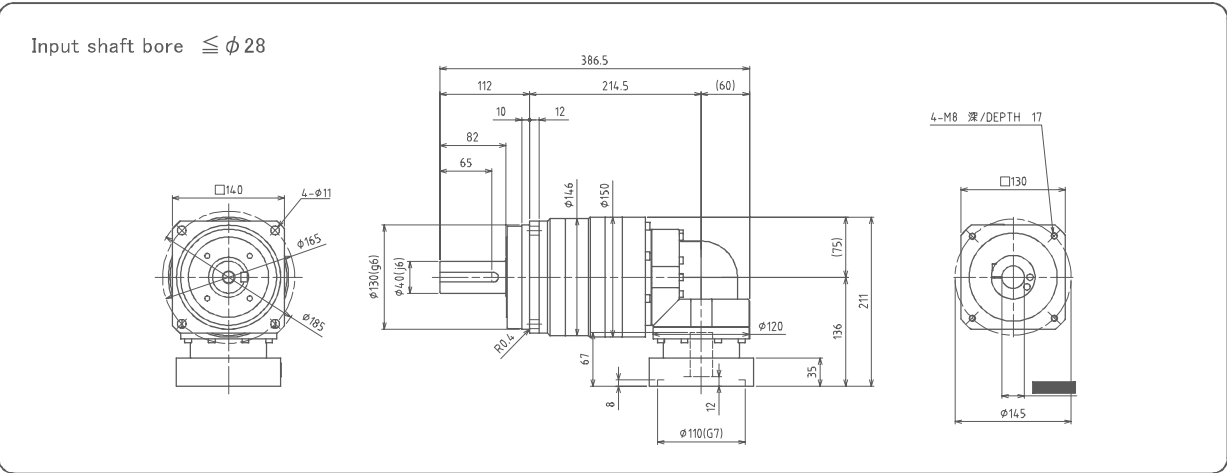
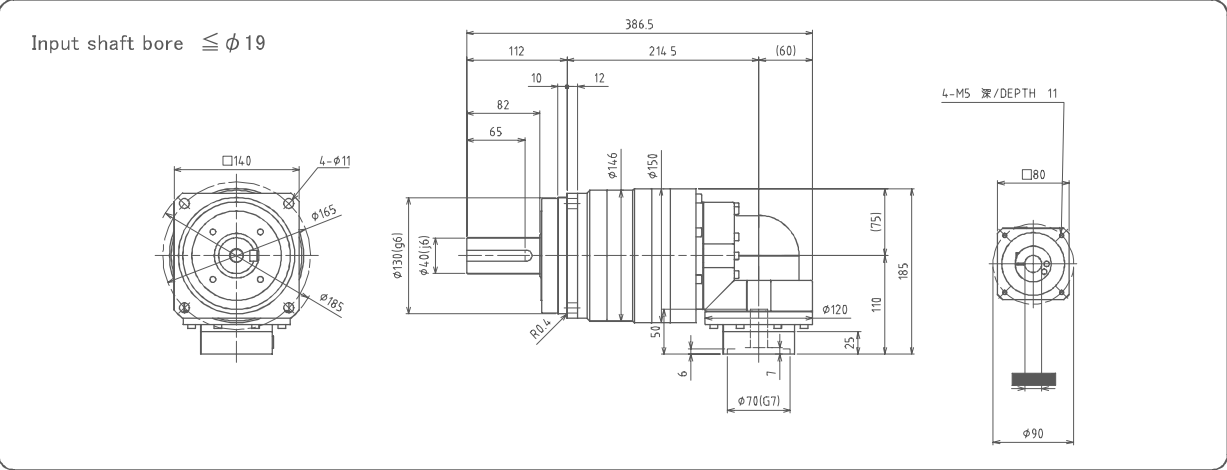


Note1: The body size varies with the installation of the motor.
Note2: When the shaft diameter of the motor is different from the input shaft diameter, the shaft sleeve can be inserted.



Note1: The body size varies with the installation of the motor.
Note2: When the shaft diameter of the motor is different from the input shaft diameter, the shaft sleeve can be inserted.

ASR-140 Level3



Note1: The body size varies with the installation of the motor.
Note2: When the shaft diameter of the motor is different from the input shaft diameter, the shaft sleeve can be inserted.

1 Mounting procedure to the motor

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

2 Remove the plug.

3 Turn the input shaft to align the head of the clamping bolt with the jack hole. At this time, ensure that the clamping bolt is loose.

If there is a shaft sleeve, the installation method is shown in the figure.

4 Please place reducer vertically on the flat surface so the motor mounting part faces up. 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 mounting bolts to the proper torque. (Refer to table1)

2 Installation of Reducer

After confirming the installation surface is flat and clean, tighten the bolt using a torque wrench to the proper torque. (Refer to table 2)

5 Tighten the clamping bolt of the input shaft with torque wrench to the proper torque. (Refer to table 1)

6 Reinstall the plug and the installation 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	—	—

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

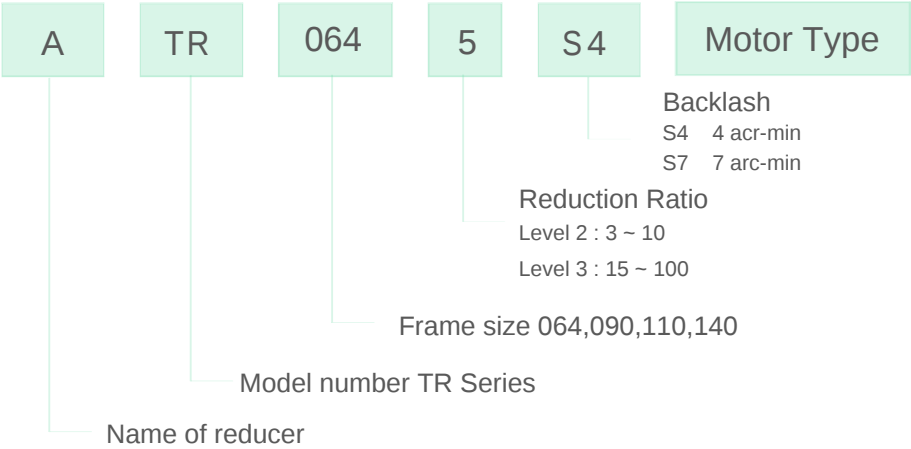
ATR Series



Features

- 1 Right angle reducer using spiralbevel gear. Customer can locate the motor at 90 degree away from the reducer if required to save space
- 2 The use of integral needle roller bearings greatly improves rigidity and torque
- 3 The main bearing uses tapered roller bearings to achieve high load capacity
- 4 Applicable to all kinds of motors
- 5 No need to change the grease during the life of the product, making installation easier

Model number



ATR064

ATR064			1					2		3	4	5				
Frame Size	Model	Ratio	Nominal Output Torque	Maximum Output Torque	Emergency Stop Torque	Nominal Input Speed	Maximum Input Speed	Permitted radial load	Permitted radial load	Permitted axial load	Backlash	Weight	Moment of inertia			
			[Nm]	[Nm]	[Nm]	[rpm]	[rpm]	[N]	[N]	[N]			[N]	[kg]	(≤ φ 8)	(≤ φ 14)
064	2	4	17	34	70	3000	6000	370	360	1515	765	1.9	0.305	0.379	0.569	
		5	23	42	85	3000	6000	400	390	1515	765		0.273	0.348	0.537	
		6	25	47	95	3000	6000	420	430	1515	765		0.256	0.331	0.521	
		7	25	47	95	3000	6000	440	460	1515	765		0.246	0.321	0.510	
		8	25	47	95	3000	6000	460	480	1515	765		0.240	0.315	0.504	
		9	17	34	70	3000	6000	480	510	1515	765		0.236	0.311	0.500	
	3	10	17	34	70	3000	6000	500	530	1515	765	0.233	0.308	0.497		
		16	25	47	95	3000	6000	580	650	1515	765	0.082	0.126	—		
		20	25	47	95	3000	6000	630	720	1515	765	0.073	0.118	—		
		25	25	47	95	3000	6000	680	750	1515	765	0.072	0.116	—		
		28	25	47	95	3000	6000	700	750	1515	765	0.078	0.123	—		
		35	25	47	95	3000	6000	760	750	1515	765	0.071	0.115	—		
		40	25	47	95	3000	6000	790	750	1515	765	0.062	0.106	—		
		45	17	34	70	3000	6000	820	750	1515	765	0.070	0.115	—		
		50	25	47	95	3000	6000	850	750	1515	765	0.061	0.106	—		
		60	25	47	95	3000	6000	910	750	1515	765	0.061	0.106	—		
		70	25	47	95	3000	6000	950	750	1515	765	0.061	0.106	—		
		80	25	47	95	3000	6000	1000	750	1515	765	0.061	0.106	—		
		90	17	34	70	3000	6000	1000	750	1515	765	0.061	0.106	—		
		100	17	34	70	3000	6000	1100	750	1515	765	0.061	0.105	—		

ATR090

ATR090			⚙ 1	⚙ 2					⚙ 3	⚙ 4	⚙ 5						
Frame Size	Model	Ratio	Output Torque	Maximum Output Torque	Emergency Stop Torque	Nominal Input Speed	Maximum Input Speed	Permitted radial load	Permitted radial load	Permitted axial load	Backlash	Weight	Moment of inertia				
														(≤ ϕ 8)	(≤ ϕ 14)	(≤ ϕ 19)	(≤ ϕ 28)
			[Nm]	[Nm]	[Nm]	[rpm]	[rpm]	[N]	[N]	[N]	[N]		[kg]	[kg·cm²]	[kg·cm²]	[kg·cm²]	[kg·cm²]
090	2	4	62	93	178	3000	6000	720	620	3325	1725	5.1	—	2.17	2.50	4.63	
		5	67	93	228	3000	6000	780	680	3325	1725		—	1.98	2.31	4.43	
		6	67	93	228	3000	6000	830	740	3325	1725		—	1.88	2.21	4.33	
		7	67	93	228	3000	6000	870	790	3325	1725		—	1.81	2.14	4.27	
		8	67	93	228	3000	6000	910	830	3325	1725		—	1.78	2.10	4.23	
		9	47	68	178	3000	6000	950	880	3325	1725		—	1.75	2.08	4.21	
	3	10	47	68	178	3000	6000	980	920	3325	1725	4.3	—	1.73	2.06	4.19	
		16	67	113	228	3000	6000	1200	1100	3325	1725		0.40	0.48	0.66	—	
		20	67	113	228	3000	6000	1200	1200	3325	1725		0.34	0.41	0.60	—	
		25	67	113	228	3000	6000	1300	1400	3325	1725		0.33	0.41	0.59	—	
		28	67	113	228	3000	6000	1400	1400	3325	1725		0.38	0.45	0.64	—	
		35	67	113	228	3000	6000	1500	1600	3325	1725		0.32	0.40	0.59	—	
		40	67	113	228	3000	6000	1600	1700	3325	1725		0.25	0.33	0.51	—	
		45	47	68	178	3000	6000	1600	1700	3325	1725		0.32	0.40	0.59	—	
		50	67	113	228	3000	6000	1700	1700	3325	1725		0.25	0.32	0.51	—	
		60	67	113	228	3000	6000	1800	1700	3325	1725		0.25	0.32	0.51	—	
		70	67	113	228	3000	6000	1900	1700	3325	1725		0.25	0.32	0.51	—	
		80	67	113	228	3000	6000	2000	1700	3325	1725		0.25	0.32	0.51	—	
		90	47	68	178	3000	6000	2000	1700	3325	1725		0.25	0.32	0.51	—	
		100	47	68	178	3000	6000	2100	1700	3325	1725		0.25	0.32	0.51	—	

- 1 With nominal input speed, service life is 20,000 hours.
- 2 With this load and nominal input speed, service life will be 20,000 hours. (Applied to the output shaft center, at axial load 0)
- 3 With this load and nominal input speed, service life will be 20,000 hours. (Applied to the output side bearing, at radial load 0)
- 4 The maximum radial load the reducer can accept.
- 5 The maximum axial load the reducer can accept.

ATR110

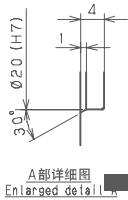
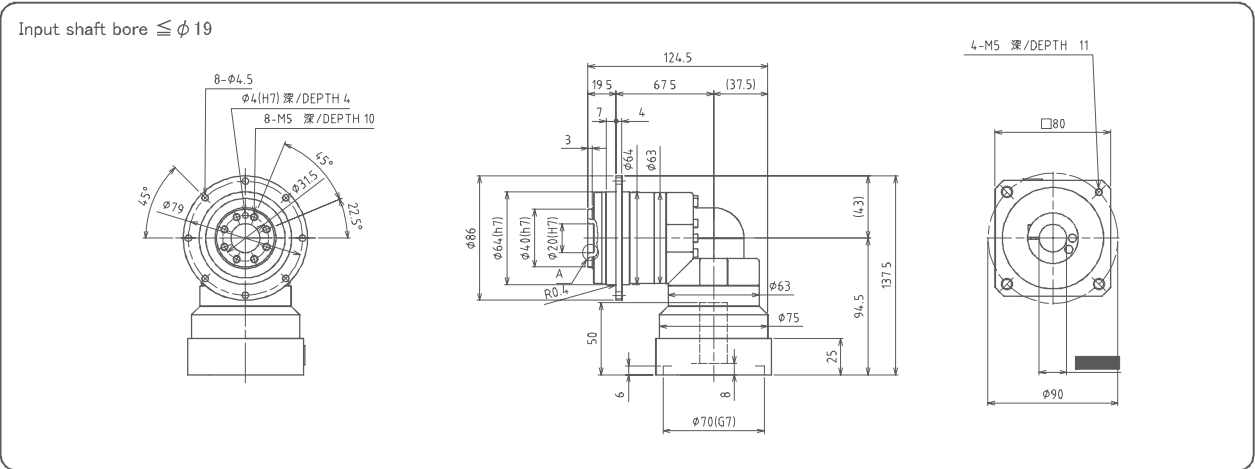
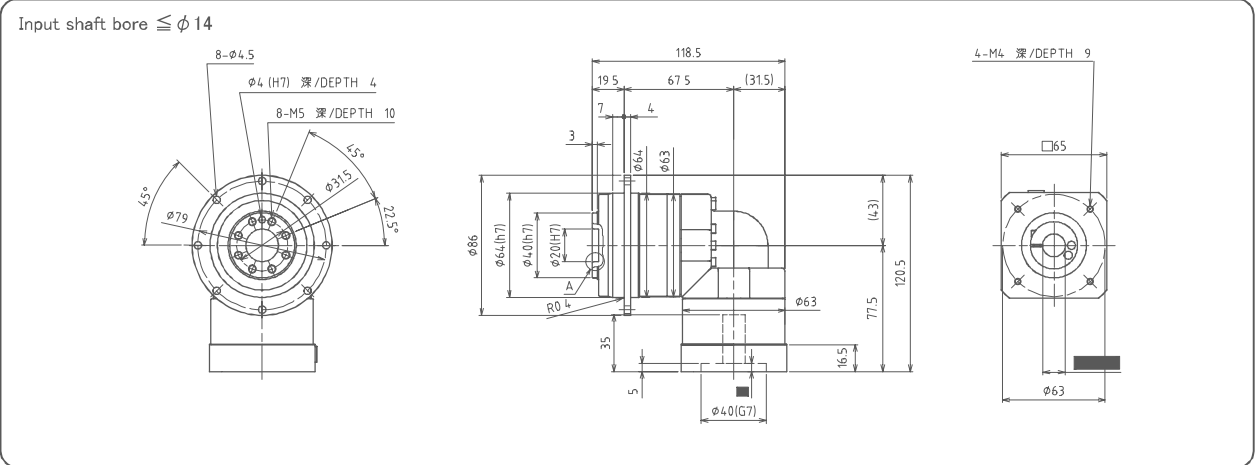
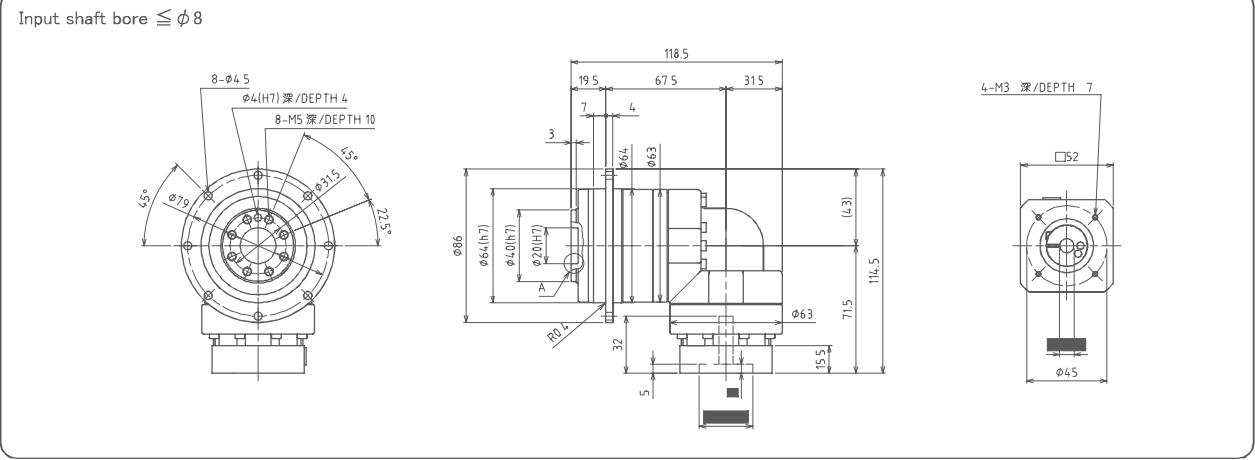
			⊙ 1				⊙ 2	⊙ 3	⊙ 4	⊙ 5							
Frame Size	Model	Ratio	Nominal Output Torque	Maximum Output Torque	Emergency Stop Torque	Nominal Input Speed	Maximum Input Speed	Permitted radial load	Permitted radial load	Permitted axial load	Backlash	Weight	Moment of inertia				
														(≤ ϕ 14)	(≤ ϕ 19)	(≤ ϕ 28)	(≤ ϕ 38)
			[Nm]	[Nm]	[Nm]	[rpm]	[rpm]	[N]	[N]	[N]	[N]		[kg]	[kg·cm ²]	[kg·cm ²]	[kg·cm ²]	[kg·cm ²]
110	2	4	105	205	440	3000	6000	4700	3200	12040	8840	9.5	—	6.46	8.06	15.13	
		5	125	245	510	3000	6000	5000	3400	12040	8840		—	5.65	7.24	14.31	
		7	155	305	560	3000	6000	5600	3800	12040	8840		—	4.97	6.56	13.63	
		10	115	204	460	3000	6000	6200	4200	12040	8840		—	4.62	6.21	13.28	
	3	16	135	265	560	3000	6000	7100	4800	12040	8840	9.0	2.52	2.85	4.98	—	
		20	155	305	560	3000	6000	7600	5200	12040	8840		2.24	2.57	4.69	—	
		25	155	305	560	3000	6000	8200	5500	12040	8840		2.20	2.53	4.66	—	
		28	155	305	560	3000	6000	8500	5700	12040	8840		2.42	2.75	4.88	—	
		35	155	305	560	3000	6000	9000	6100	12040	8840		2.17	2.50	4.63	—	
		40	155	305	560	3000	6000	9400	6400	12040	8840		1.87	2.20	4.33	—	
		50	155	305	560	3000	6000	10000	6800	12040	8840		1.86	2.19	4.32	—	
		70	155	305	560	3000	6000	11000	7500	12040	8840		1.85	2.18	4.31	—	
		100	115	205	460	3000	6000	12000	8400	12040	8840		1.85	2.18	4.31	—	

ATR140

TR140			⊙1				⊙2	⊙3	⊙4	⊙5								
Frame Size	Model	Ratio	Nominal Output Torque	Maximum Output Torque	Emergency Stop Torque	Nominal Input Speed	Maximum Input Speed	Permitted radial load	Permitted radial load	Permitted axial load	Backlash	Weight	Moment of inertia					
														(≤ ϕ 19)	(≤ ϕ 28)	(≤ ϕ 38)	(≤ ϕ 48)	
			[Nm]	[Nm]	[Nm]	[rpm]	[rpm]	[N]	[N]	[N]	[N]		[kg]	[kg·cm ²]	[kg·cm ²]	[kg·cm ²]	[kg·cm ²]	
140	2	4	175	345	965	2000	4000	8000	5600	19050	14050	17.4	—	22.58	26.96	40.19		
		5	205	405	1115	2000	4000	8500	6000	19050	14050		—	19.57	23.94	37.17		
		7	305	605	1115	2000	4000	9400	6700	19050	14050		—	17.07	21.45	34.68		
		10	205	405	765	2000	4000	10000	7400	19050	14050		—	15.36	19.73	32.96		
	3	16	305	605	1115	2000	4000	12000	8500	19050	14050	7.24	8.83	15.91	—			
		20	305	605	1115	2000	4000	13000	9100	19050	14050	6.21	7.80	14.88	—			
		25	305	605	1115	2000	4000	14000	9800	19050	14050	6.09	7.69	14.76	—			
		28	305	605	1115	2000	4000	14000	10000	19050	14050	6.89	8.48	15.55	—			
		35	305	605	1115	2000	4000	15000	11000	19050	14050	5.98	7.58	14.65	—			
		40	305	605	1115	2000	4000	16000	11000	19050	14050	4.94	6.53	13.60	—			
		50	305	605	1115	2000	4000	17000	12000	19050	14050	4.91	6.50	13.58	—			
		70	305	605	1115	2000	4000	19000	13000	19050	14050	4.88	6.48	13.55	—			
100	205	405	765	2000	4000	19000	14000	19050	14050	4.87	6.46	13.54	—					

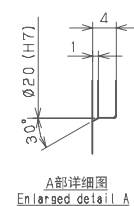
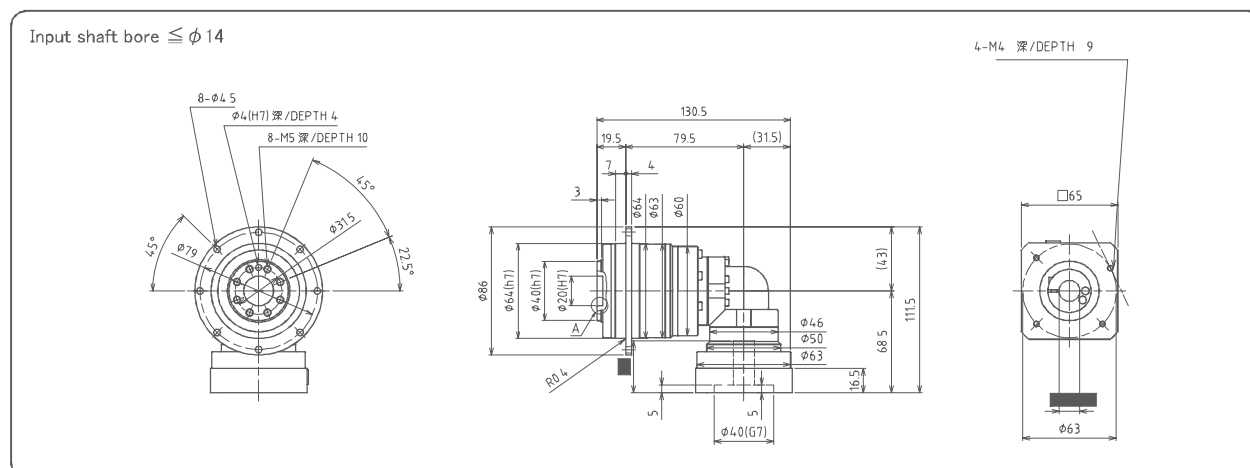
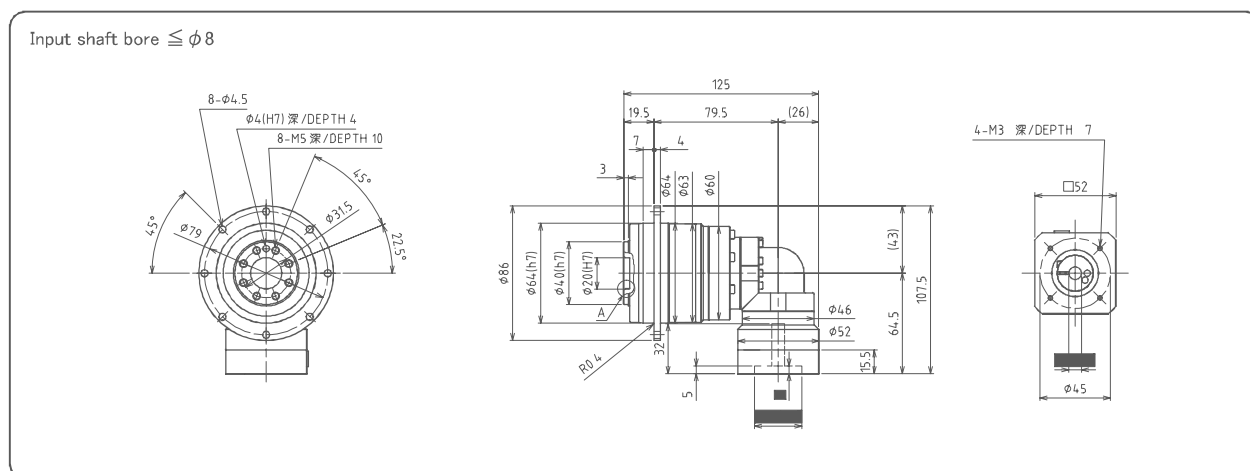
- ⊙ 1 With nominal input speed, service life is 20,000 hours.
- ⊙ 2 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output shaft center, at axial load 0)
- ⊙ 3 With this load and nominal input speed, service life will be 20,000 hours.
(Applied to the output side bearing, at radial load 0)
- ⊙ 4 The maximum radial load the reducer can accept.
- ⊙ 5 The maximum axial load the reducer can accept.

ATR-064 Level2



Note1: The body size varies with the installation of the motor.
Note2: When the shaft diameter of the motor is different from the input shaft diameter, the shaft sleeve can be inserted

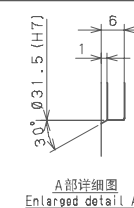
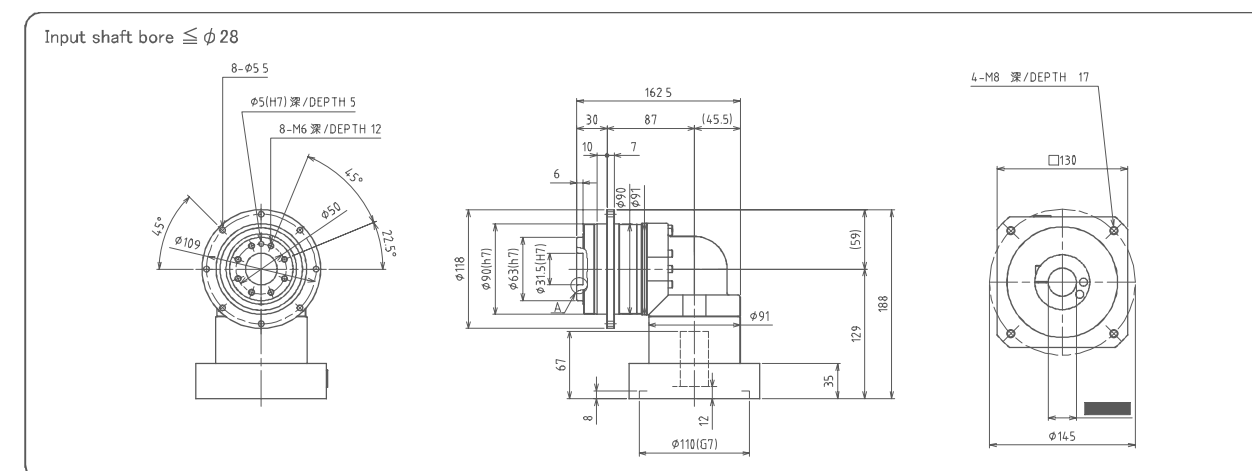
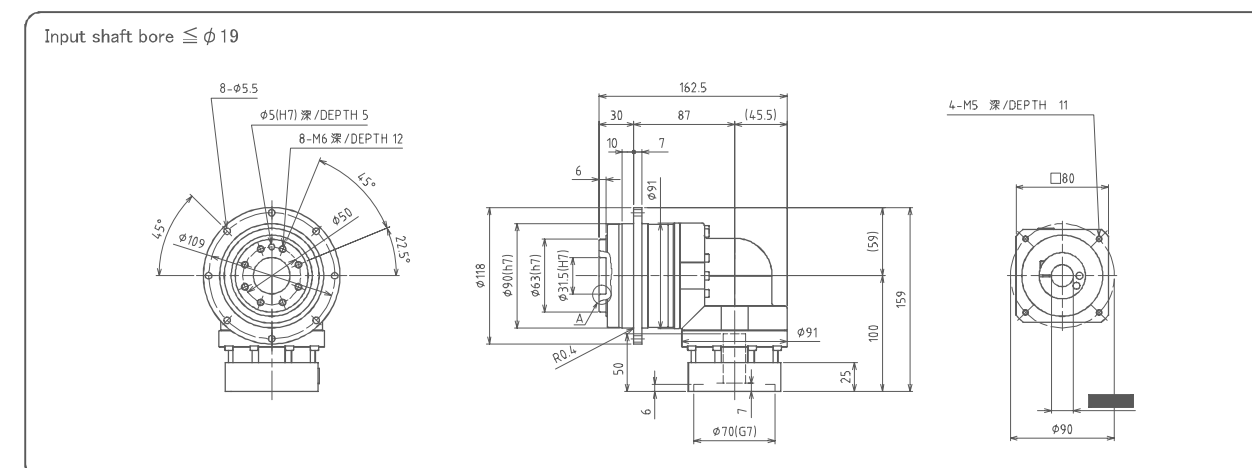
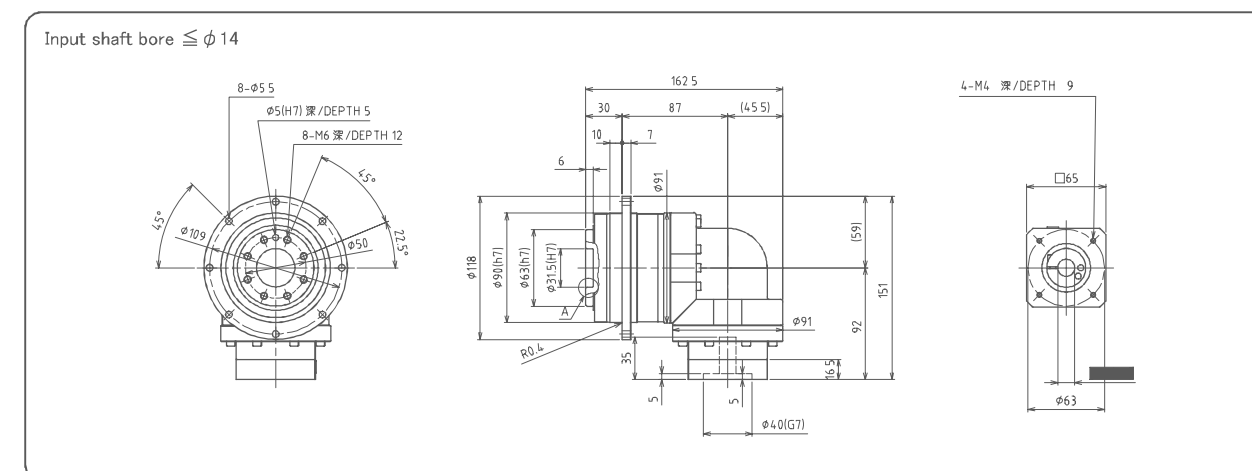
ATR-064 Level3



Note1: The body size varies with the installation of the motor.

Note2: When the shaft diameter of the motor is different from the input shaft diameter,
the shaft sleeve can be inserted

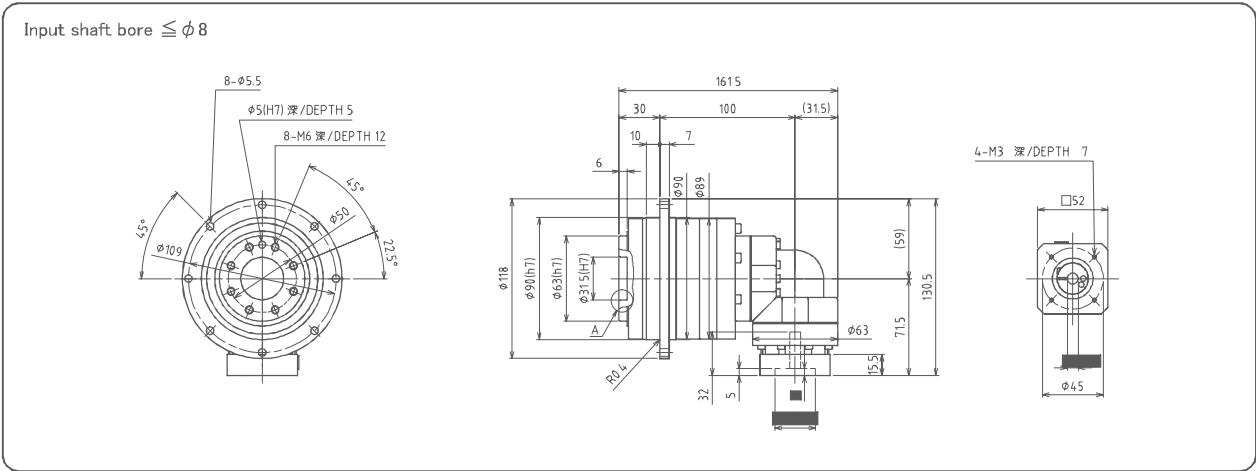
ATR-090 Level2



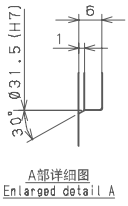
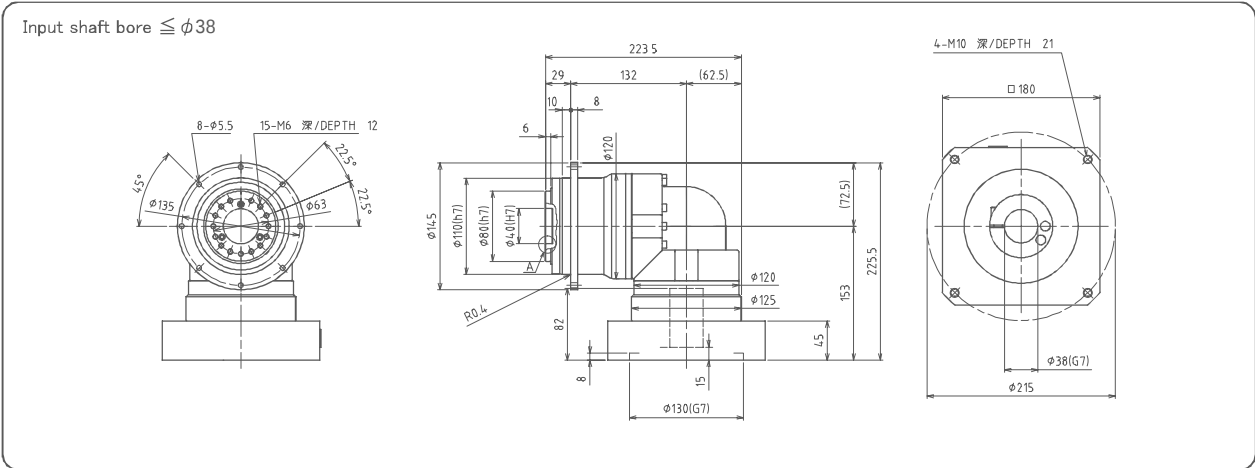
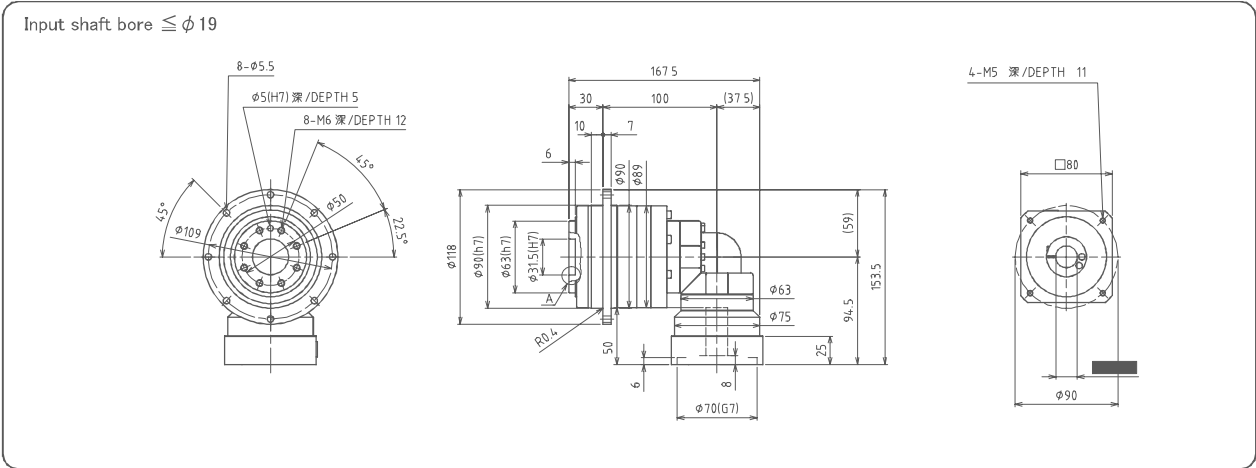
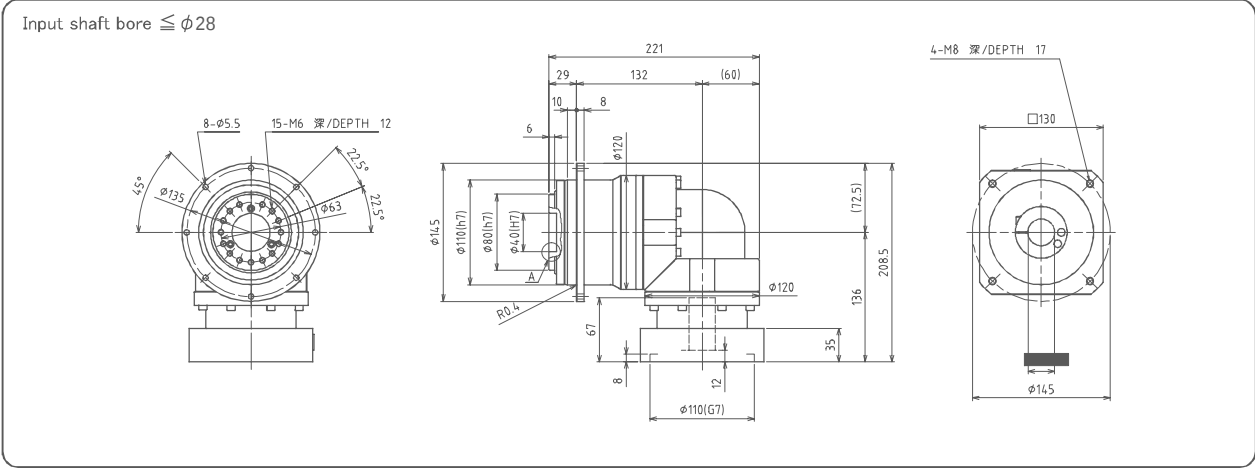
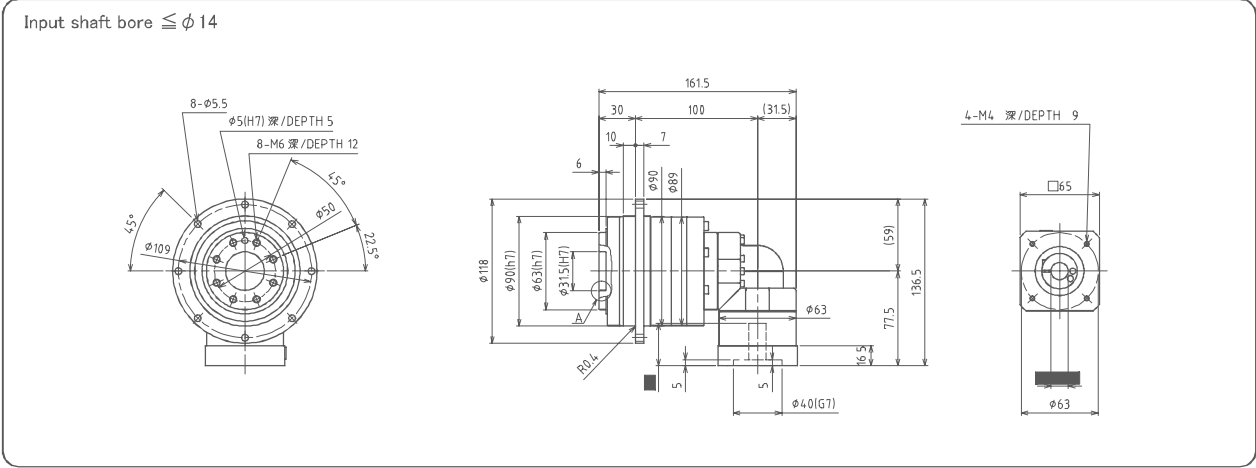
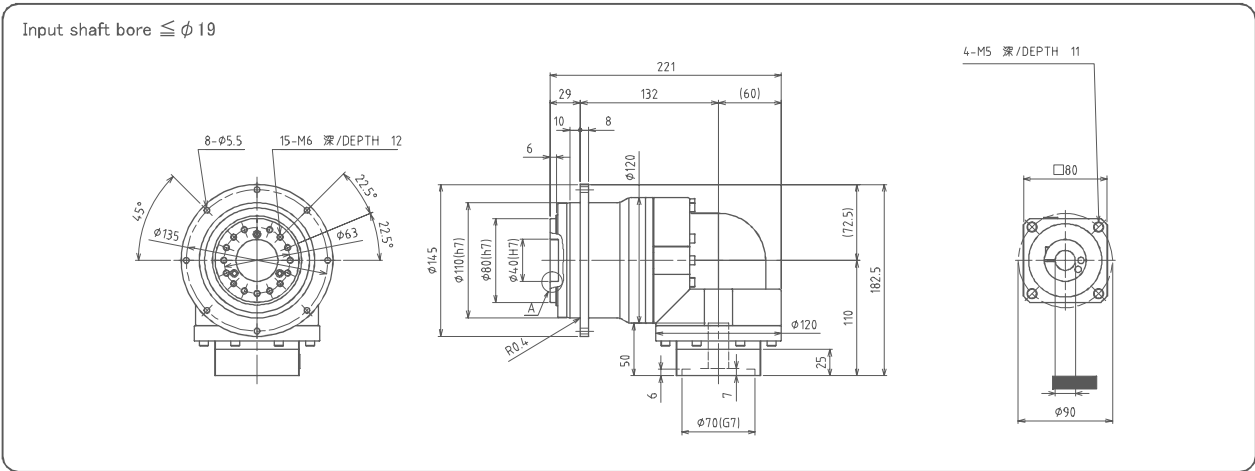
Note1: The body size varies with the installation of the motor.

Note2: When the shaft diameter of the motor is different from the input shaft diameter, the shaft sleeve can be inserted

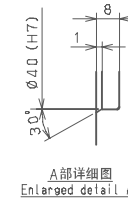
ATR-090 Level3



ATR-110 Level2

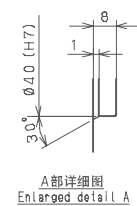
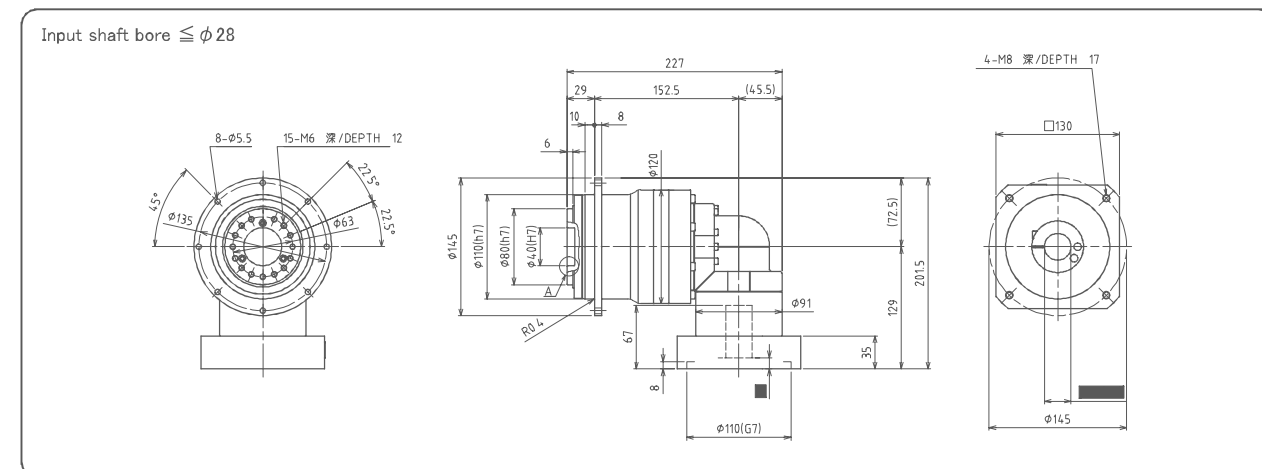
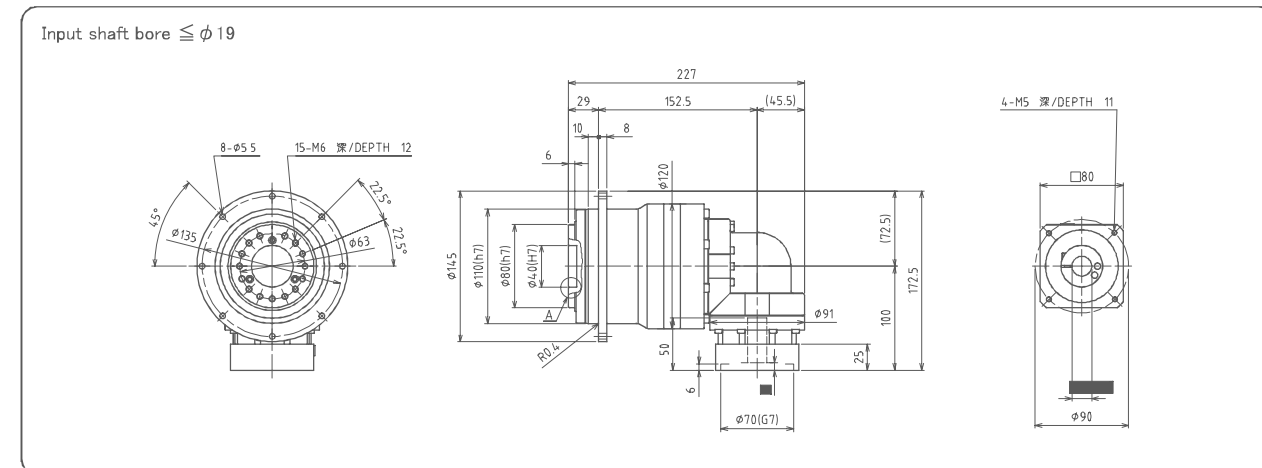
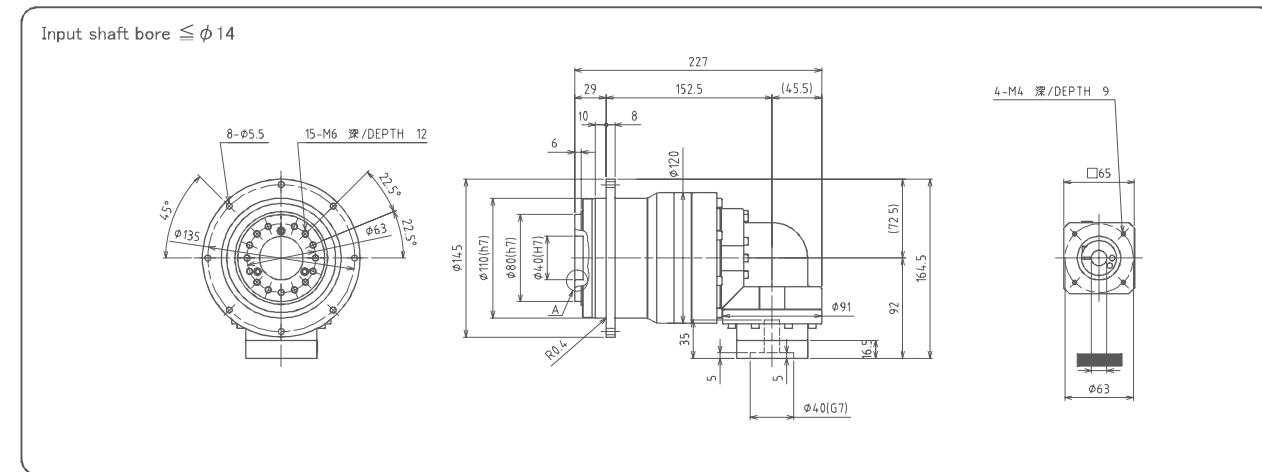


Note1: The body size varies with the installation of the motor.
Note2: When the shaft diameter of the motor is different from the input shaft diameter, the shaft sleeve can be inserted



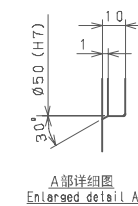
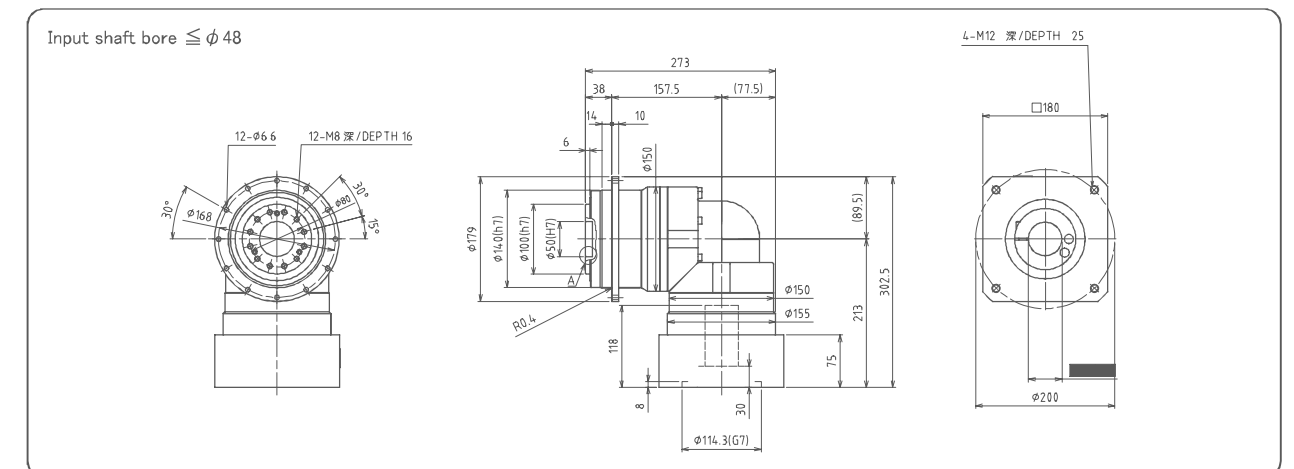
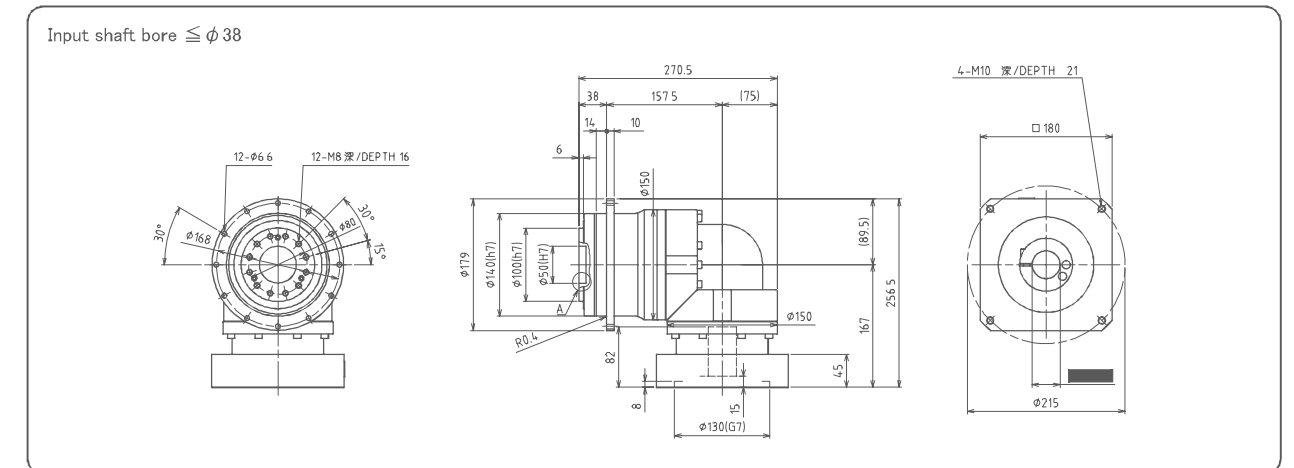
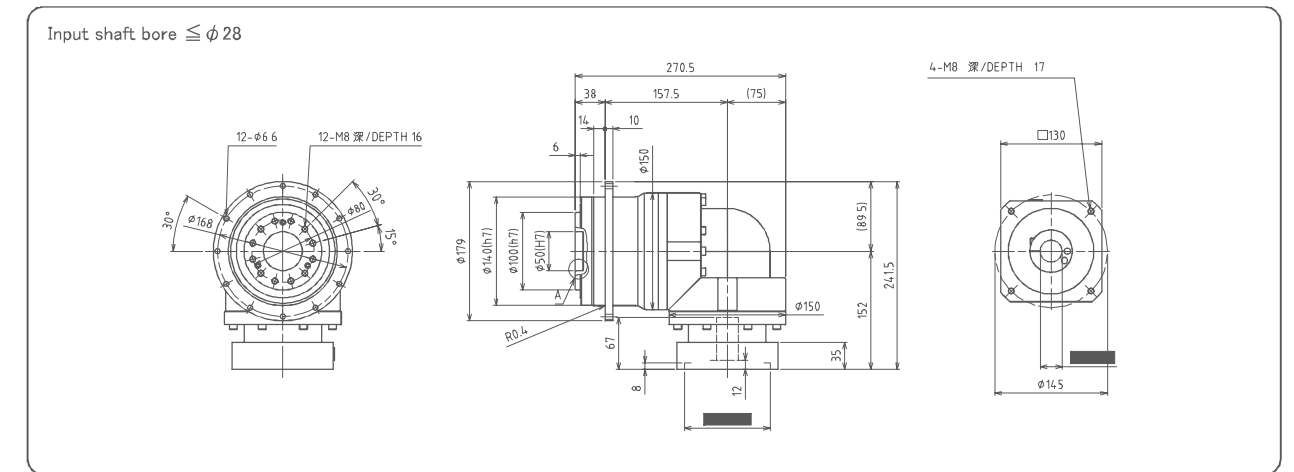
Note1: The body size varies with the installation of the motor.
Note2: When the shaft diameter of the motor is different from the input shaft diameter, the shaft sleeve can be inserted

ATR-110 Level3



Note1: The body size varies with the installation of the motor.
Note2: When the shaft diameter of the motor is different from the input shaft diameter,
the shaft sleeve can be inserted

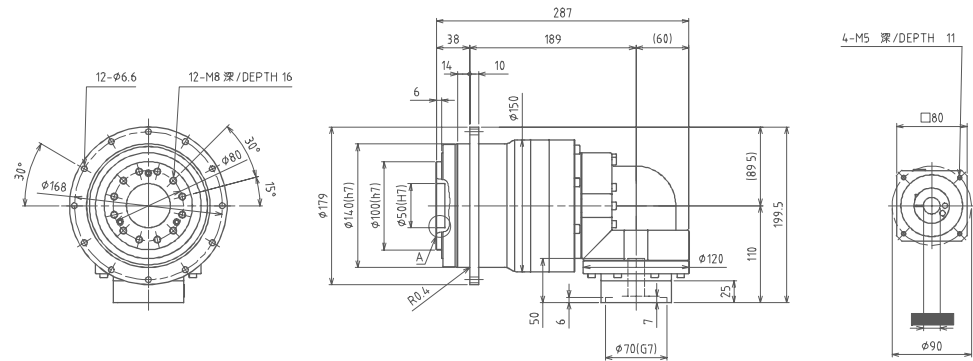
ATR-140 Level2



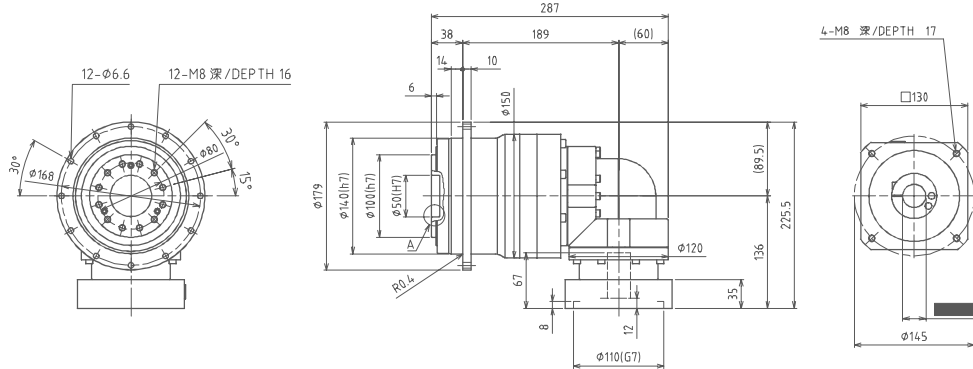
Note1: The body size varies with the installation of the motor.
Note2: When the shaft diameter of the motor is different from the input shaft diameter,
the shaft sleeve can be inserted

ATR-140 Level3

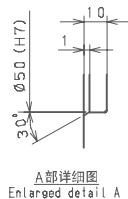
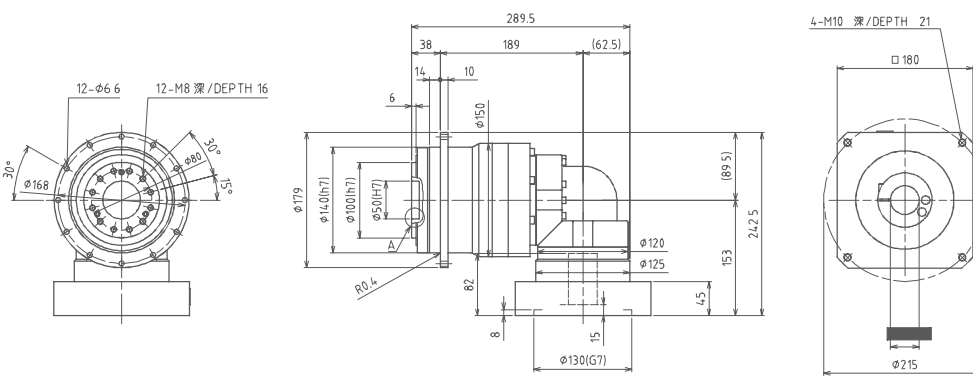
Input shaft bore ≤ φ 19



Input shaft bore ≤ φ 28



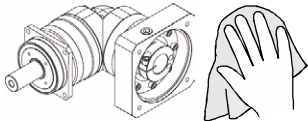
Input shaft bore ≤ φ 38



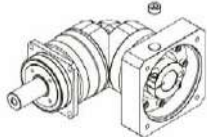
Note1: The body size varies with the installation of the motor.
Note2: When the shaft diameter of the motor is different from the input shaft diameter, the shaft sleeve can be inserted

1 Mounting procedure to the motor

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

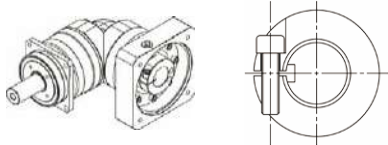


2 Remove the plug.

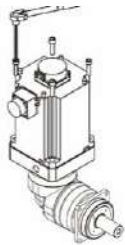


3 Turn the input shaft to align the head of the clamping bolt with the jack hole. At this time, ensure that the clamping bolt is loose.

If there is a shaft sleeve, the installation method is shown in the figure



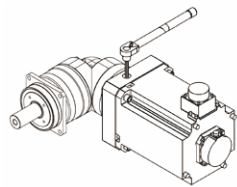
4 Please place reducer vertically on the flat surface so the motor mounting part faces up. Carefully insert the motor shaft into the input shaft. (It should be inserted smoothly) Make sure the motor flange is perfectly fit to the reducer's flange. Tighten the Motor mounting bolts to the proper torque.(Refer to table1)



2 Installation of Reducer

After confirming the installation surface is flat and clean, tighten the bolt using a torque wrench to the proper torque. (Refer to table 2)

5 Tighten the clamping bolt of the input shaft with torque wrench to the proper torque. (Refer to table 1)



6 Reinstall the plug and the installation is complete.

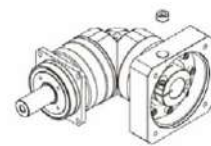


Table 1

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	—	—

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