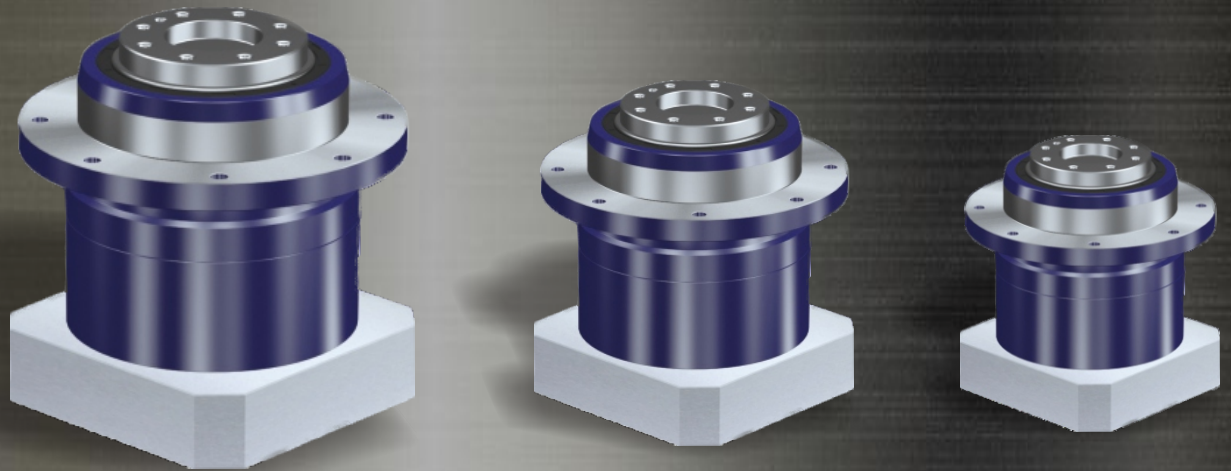


AH Series Highlights Overview



Higher Smoothness

Enhanced smoothness and lower noise due to adoption of Helical Gears.

Higher Precision

Fairly high precision enabled by backlash as 3arcmin.

Higher Rigidity and Torque

Due to adoption of uncaged needle roller bearings.

Flexible Motor Integration

Can be integrated with any motor in the world.

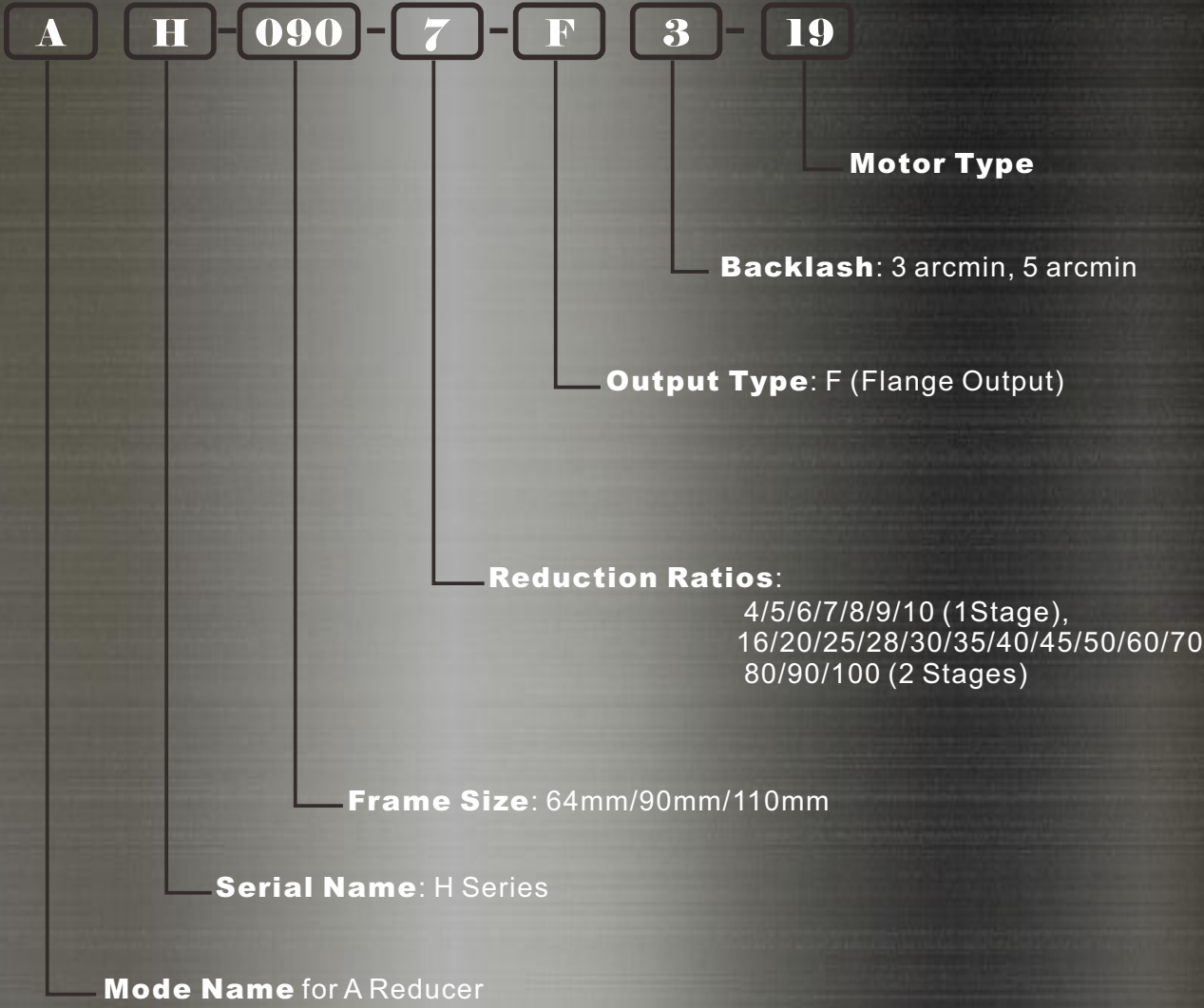
Free of Maintenance

No need to replace the grease for lifelong time and maintenance of any part.

No Grease Leakage

Usage of high viscosity and anti-separation lifetime grease.

AH Series Naming Rules



AH-064 Series Load Performance Table

Frame size	Stage	Ratio	※1	※2	※3	※4	※5	※6	※7
			Normal output torque [Nm]	Maximum output torque [Nm]	Emergency stop torque [Nm]	Normal input speed [rpm]	Maximum input speed [rpm]	Permitted radial load [N]	Permitted axial load [N]
064	1	4	27	50	100	3000	6000	370	360
		5	27	50	100	3000	6000	400	390
		6	27	50	100	3000	6000	420	430
		7	27	50	100	3000	6000	440	460
		8	27	50	100	3000	6000	460	480
		9	18	35	80	3000	6000	480	510
	2	10	18	35	80	3000	6000	500	530
		16	27	50	100	3000	6000	580	650
		20	27	50	100	3000	6000	630	720
		25	27	50	100	3000	6000	680	750
		28	27	50	100	3000	6000	700	750
		35	27	50	100	3000	6000	760	750
		40	27	50	100	3000	6000	790	750
		45	18	35	80	3000	6000	820	750
		50	27	50	100	3000	6000	850	750
		60	27	50	100	3000	6000	910	750
		70	27	50	100	3000	6000	950	750
		80	27	50	100	3000	6000	1000	750
90	18	35	80	3000	6000	1000	750		
100	18	35	80	3000	6000	1100	750		

Frame size	Stage	Ratio	※8	※9	※10	Moment of inertia ($\leq \Phi 8$) [kgcm ²]	Moment of inertia ($\leq \Phi 14$) [kgcm ²]	Moment of inertia ($\leq \Phi 19$) [kgcm ²]	
			Maximum radial load [N]	Maximum axial load [N]	Weight [kg]				
064	1	4	1500	750	1.4	0.13	0.21	0.4	
		5	1500	750		0.10	0.18	0.4	
		6	1500	750		0.085	0.17	0.4	
		7	1500	750		0.075	0.15	0.4	
		8	1500	750		0.068	0.15	0.4	
		9	1500	750		0.064	0.14	0.4	
	2	10	1500	750	0.062	0.14	0.4		
		16	1500	750	0.059	0.14	-		
		20	1500	750	0.055	0.14	-		
		25	1500	750	0.054	0.13	-		
		28	1500	750	0.056	0.14	-		
		35	1500	750	0.053	0.13	-		
		40	1500	750	0.049	0.13	-		
		45	1500	750	0.053	0.13	-		
		50	1500	750	0.049	0.13	-		
		60	1500	750	0.049	0.13	-		
		70	1500	750	0.049	0.13	-		
		80	1500	750	0.049	0.13	-		
90	1500	750	0.049	0.13	-				
100	1500	750	0.049	0.13	-				

- ※ 1 With nominal input speed, service life is 20,000 hours
- ※ 2 The maximum torque when starting and stopping
- ※ 3 The maximum torque when it receives shock (up to 1000times)
- ※ 4 The maximum average input speed.
- ※ 5 The maximum momentary input speed.
- ※ 6 With this load and nominal input speed, service life will be 20,000 hours (Applied to the output shaft center, at axial load 0)
- ※ 7 With this load and nominal input speed, service life will be 20,000 hours (Applied to the output side bearing, at radial load 0)
- ※ 8 The maximum radial load the reducer can accept
- ※ 9 The maximum axial load the reducer can accept
- ※ 10 The weight may vary slightly model to model.

AH-090 Series Load Performance Table

Frame size	Stage	Ratio	※1	※2	※3	※4	※5	※6	※7
			Normal output torque [Nm]	Maximum output torque [Nm]	Emergency stop torque [Nm]	Normal input speed [rpm]	Maximum input speed [rpm]	Permitted radial load [N]	Permitted axial load [N]
090	1	4	75	125	250	3000	6000	720	620
		5	75	125	250	3000	6000	780	680
		6	75	125	250	3000	6000	830	740
		7	75	125	250	3000	6000	870	790
		8	75	125	250	3000	6000	910	830
		9	50	80	200	3000	6000	950	880
	2	10	50	80	200	3000	6000	980	920
		16	75	125	250	3000	6000	1200	1100
		20	75	125	250	3000	6000	1200	1200
		25	75	125	250	3000	6000	1300	1400
		28	75	125	250	3000	6000	1400	1400
		35	75	125	250	3000	6000	1500	1600
		40	75	125	250	3000	6000	1600	1700
		45	50	80	200	3000	6000	1600	1700
		50	75	125	250	3000	6000	1700	1700
		60	75	125	250	3000	6000	1800	1700
		70	75	125	250	3000	6000	1900	1700
		80	75	125	250	3000	6000	2000	1700
90	50	80	200	3000	6000	2000	1700		
100	50	80	200	3000	6000	2100	1700		

Frame size	Stage	Ratio	※8	※9	※10	Moment of inertia (≤ Φ8) [kgcm ²]	Moment of inertia (≤ Φ14) [kgcm ²]	Moment of inertia (≤ Φ19) [kgcm ²]	Moment of inertia (≤ Φ28) [kgcm ²]
			Maximum radial load [N]	Maximum axial load [N]	Weight [kg]				
090	1	4	3300	1700	3.6	-	0.77	1.2	2.9
		5	3300	1700		-	0.58	1.0	2.9
		6	3300	1700		-	0.48	0.94	2.8
		7	3300	1700		-	0.41	0.88	2.8
		8	3300	1700		-	0.37	0.84	2.8
		9	3300	1700		-	0.35	0.81	2.8
	2	10	3300	1700	-	0.33	0.80	2.8	
		16	3300	1700	4.0	0.16	0.31	0.75	-
		20	3300	1700		0.14	0.29	0.73	-
		25	3300	1700		0.13	0.28	0.72	-
		28	3300	1700		0.14	0.30	0.73	-
		35	3300	1700		0.13	0.28	0.72	-
		40	3300	1700		0.10	0.25	0.70	-
		45	3300	1700		0.12	0.27	0.71	-
		50	3300	1700		0.10	0.25	0.70	-
		60	3300	1700		0.099	0.25	0.70	-
		70	3300	1700		0.098	0.25	0.69	-
		80	3300	1700		0.098	0.25	0.69	-
90	3300	1700	0.098	0.25		0.69	-		
100	3300	1700	0.098	0.25	0.69	-			

- ※ 1 With nominal input speed, service life is 20,000 hours
- ※ 2 The maximum torque when starting and stopping
- ※ 3 The maximum torque when it receives shock (up to 1000times)
- ※ 4 The maximum average input speed.
- ※ 5 The maximum momentary input speed.
- ※ 6 With this load and nominal input speed, service life will be 20,000 hours (Applied to the output shaft center, at axial load 0)
- ※ 7 With this load and nominal input speed, service life will be 20,000 hours (Applied to the output side bearing, at radial load 0)
- ※ 8 The maximum radial load the reducer can accept
- ※ 9 The maximum axial load the reducer can accept
- ※ 10 The weight may vary slightly model to model.

AH-110 Series Load Performance Table

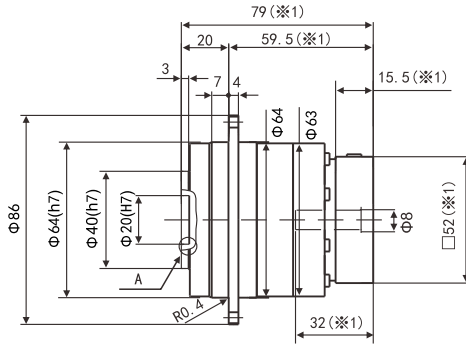
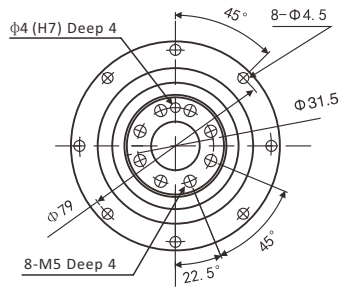
Frame size	Stage	Ratio	※1	※2	※3	※4	※5	※6	※7
			Normal output torque [Nm]	Maximum output torque [Nm]	Emergency stop torque [Nm]	Normal input speed [rpm]	Maximum input speed [rpm]	Permitted radial load [N]	Permitted axial load [N]
110	1	4	120	330	625	3000	6000	4100	3500
		5	180	330	625	3000	6000	4400	3800
		6	180	330	625	3000	6000	4600	4000
		7	180	330	625	3000	6000	4800	4200
		8	180	330	625	3000	6000	5000	4300
		9	120	225	500	3000	6000	5200	4300
	2	10	120	225	500	3000	6000	5400	4300
		16	180	330	625	3000	6000	6200	4300
		20	180	330	625	3000	6000	6600	4300
		25	180	330	625	3000	6000	7100	4300
		28	180	330	625	3000	6000	7300	4300
		35	180	330	625	3000	6000	7800	4300
		40	180	330	625	3000	6000	8200	4300
		45	120	225	500	3000	6000	8400	4300
		50	180	330	625	3000	6000	8500	4300
		60	180	330	625	3000	6000	8500	4300
		70	180	330	625	3000	6000	8500	4300
		80	180	330	625	3000	6000	8500	4300
90	120	225	500	3000	6000	8500	4300		
100	120	225	500	3000	6000	8500	4300		

Frame size	Stage	Ratio	※8	※9	※10	Moment of inertia (≤ Φ8) [kgcm ²]	Moment of inertia (≤ Φ14) [kgcm ²]	Moment of inertia (≤ Φ19) [kgcm ²]	Moment of inertia (≤ Φ28) [kgcm ²]
			Maximum radial load [N]	Maximum axial load [N]	Weight [kg]				
110	1	4	8500	4300	7.0	-	2.5	4.6	12
		5	8500	4300		-	1.9	3.9	12
		6	8500	4300		-	1.5	3.6	11
		7	8500	4300		-	1.3	3.3	11
		8	8500	4300		-	1.2	3.2	11
		9	8500	4300		-	1.1	3.1	11
	2	10	8500	4300	-	1.0	3.0	11	
		16	8500	4300	7.7	0.51	0.95	2.9	-
		20	8500	4300		0.42	0.85	2.8	-
		25	8500	4300		0.40	0.83	2.8	-
		28	8500	4300		0.45	0.89	2.8	-
		35	8500	4300		0.38	0.81	2.8	-
		40	8500	4300		0.29	0.74	2.7	-
		45	8500	4300		0.37	0.81	2.7	-
		50	8500	4300		0.28	0.73	2.7	-
		60	8500	4300		0.28	0.73	2.7	-
		70	8500	4300		0.28	0.73	2.7	-
		80	8500	4300		0.28	0.73	2.7	-
90	8500	4300	0.28	0.73		2.7	-		
100	8500	4300	0.28	0.73	2.7	-			

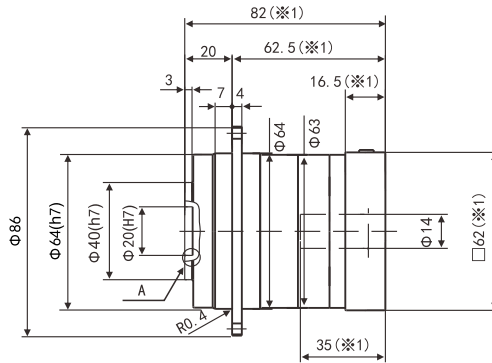
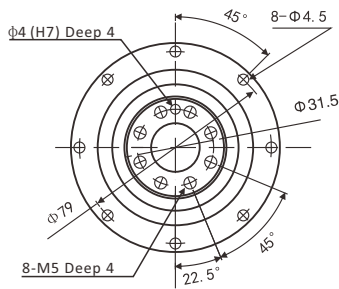
- ※ 1 With nominal input speed, service life is 20,000 hours
- ※ 2 The maximum torque when starting and stopping
- ※ 3 The maximum torque when it receives shock (up to 1000times)
- ※ 4 The maximum average input speed.
- ※ 5 The maximum momentary input speed.
- ※ 6 With this load and nominal input speed, service life will be 20,000 hours (Applied to the output shaft center, at axial load 0)
- ※ 7 With this load and nominal input speed, service life will be 20,000 hours (Applied to the output side bearing, at radial load 0)
- ※ 8 The maximum radial load the reducer can accept
- ※ 9 The maximum axial load the reducer can accept
- ※ 10 The weight may vary slightly model to model.

AH-064 1-Stage Series Mechanical Dimensions

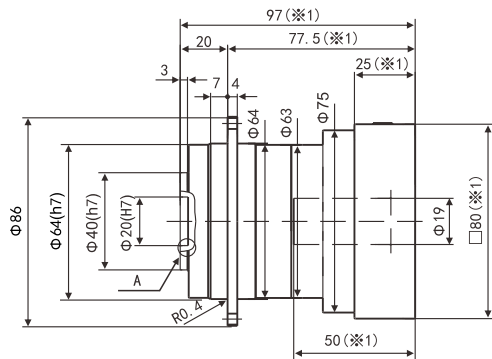
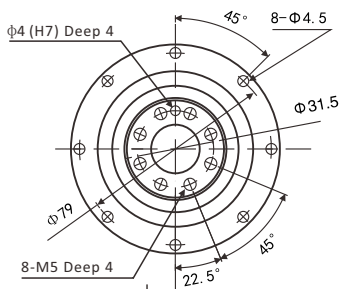
Input Shaft Diameter $\leq \phi 8$ (in mm)



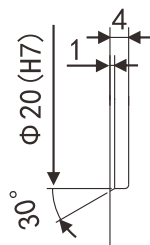
Input Shaft Diameter $\leq \phi 14$ (in mm)



Input Shaft Diameter $\leq \phi 19$ (in mm)



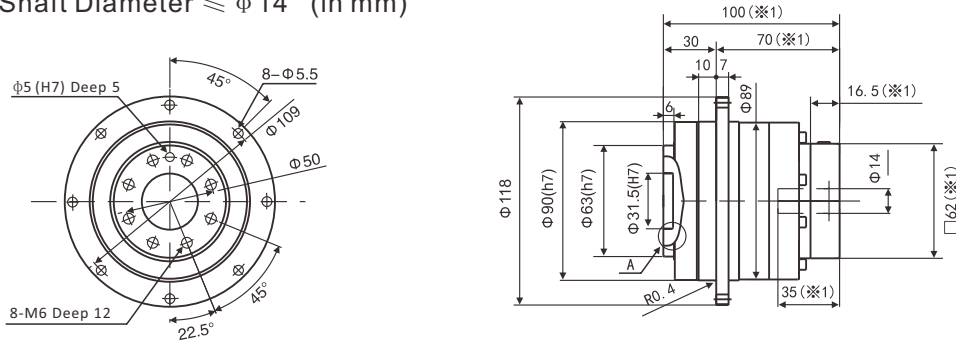
Enlarged Details A (in mm)



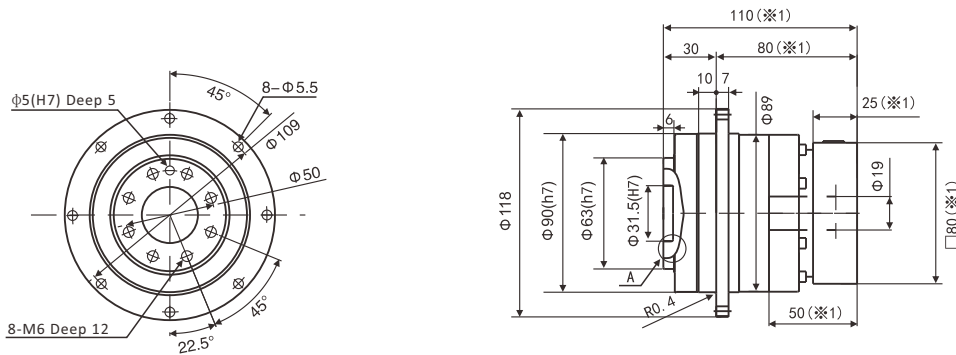
- ※1 Length may change for different motors.
- ※1 Adaptors available to match different input shaft diameters.

AH-090 1-Stage Series Mechanical Dimensions

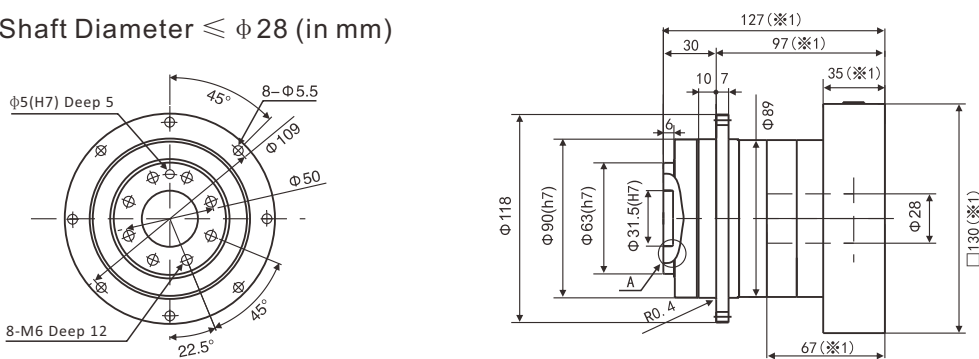
Input Shaft Diameter $\leq \phi 14$ (in mm)



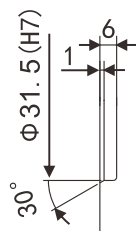
Input Shaft Diameter $\leq \phi 19$ (in mm)



Input Shaft Diameter $\leq \phi 28$ (in mm)



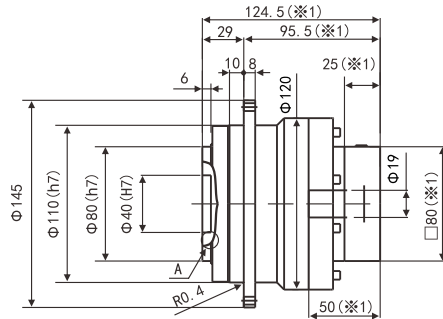
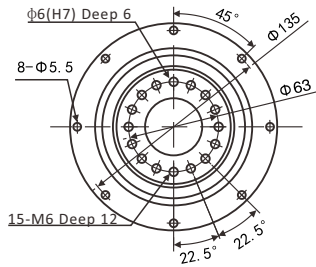
Enlarged Details A (in mm)



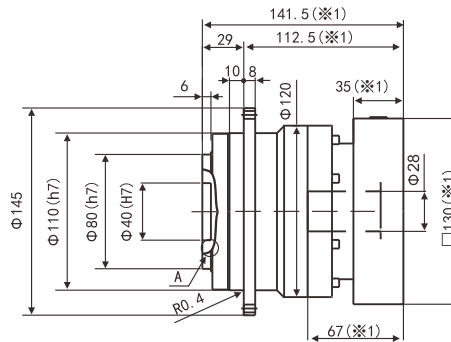
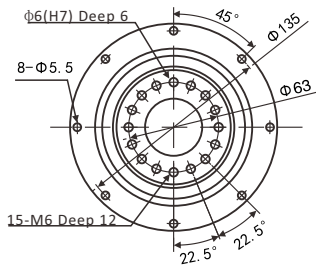
- ※1 Length may change for different motors.
- ※1 Adaptors available to match different input shaft diameters.

AH-110 1-Stage Series Mechanical Dimensions

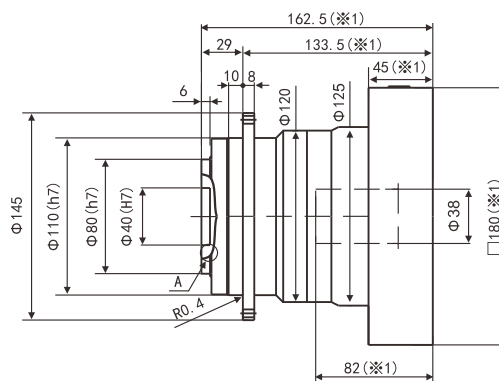
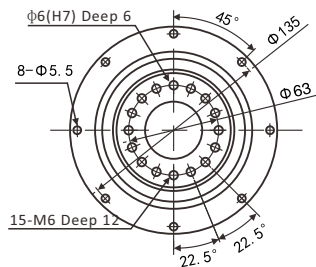
Input Shaft Diameter $\leq \phi 19$ (in mm)



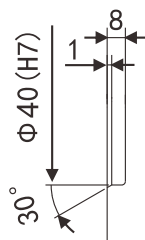
Input Shaft Diameter $\leq \phi 28$ (in mm)



Input Shaft Diameter $\leq \phi 38$ (in mm)



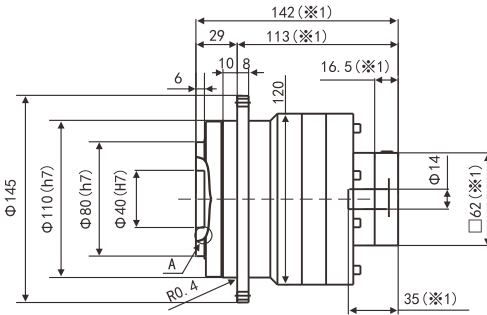
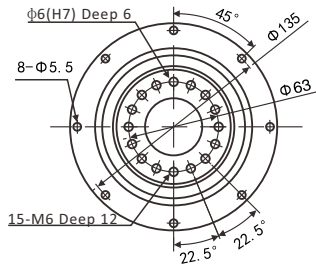
Enlarged Details A (in mm)



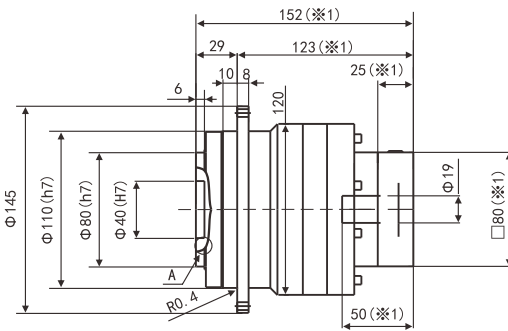
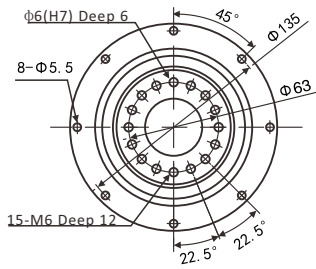
- ※1 Length may change for different motors.
- ※1 Adaptors available to match different input shaft diameters.

AH-110 2-Stage Series Mechanical Dimensions

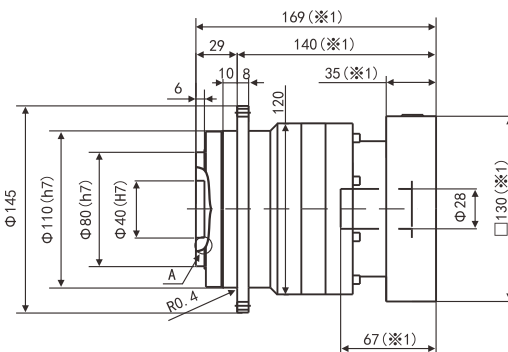
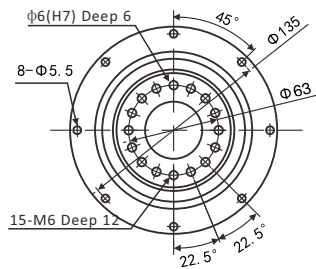
Input Shaft Diameter $\leq \phi 14$ (in mm)



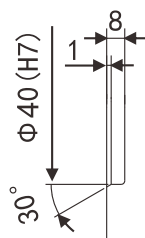
Input Shaft Diameter $\leq \phi 19$ (in mm)



Input Shaft Diameter $\leq \phi 28$ (in mm)

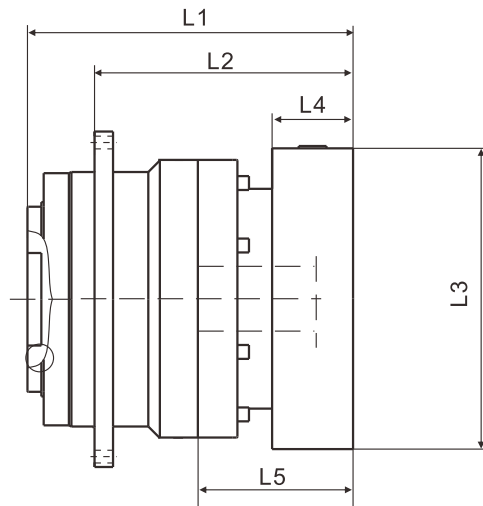


Enlarged Details A (in mm)



- ※1 Length may change for different motors.
- ※1 Adaptors available to match different input shaft diameters.

AH-064 Input Shaft Adaptors

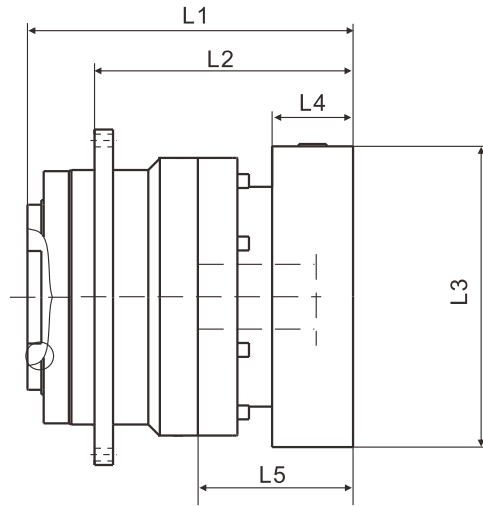


Model number	**: Adapter code	1 Stage					2 Stage				
		L1	L2	L3	L4	L5	L1	L2	L3	L4	L5
AH-064-[-]-[-]-8** Input Shaft Dia. ≤ φ8	AA · AC · AD · AF · AG	79	59.5	□52	15.5	32	98	78.5	□52	15.5	32
	AB · AE · AH · AJ · AK	84	64.5	□52	20.5	37	103	83.5	□52	20.5	37
	BA · BB · BD · BE	79	59.5	□60	15.5	32	98	78.5	□60	15.5	32
	BC · BF	84	64.5	□60	20.5	37	103	83.5	□60	20.5	37
	CA	84	64.5	□70	20.5	37	103	83.5	□70	20.5	37
AH-064-[-]-[-]-14** Input Shaft Dia. ≤ φ14	BA · BB · BD · BE · BF · BG · BJ · BK	82	62.5	□65	16.5	35	103	83.5	□65	16.5	35
	BC · BH · BM	87	67.5	□65	21.5	40	108	88.5	□65	21.5	40
	BL	92	72.5	□65	26.5	45	113	93.5	□65	26.5	45
	CA	82	62.5	□70	16.5	35	103	83.5	□70	16.5	35
	CB	87	67.5	□70	21.5	40	108	88.5	□70	21.5	40
	DA · DB · DC · DD · DF · DH	82	62.5	□80	16.5	35	103	83.5	□80	16.5	35
	DE	87	67.5	□80	21.5	40	108	88.5	□80	21.5	40
	DG	92	72.5	□80	26.5	45	113	93.5	□80	26.5	45
	EA · EB · EC	82	62.5	□90	16.5	35	103	83.5	□90	16.5	35
	ED	92	72.5	□90	26.5	45	113	93.5	□90	26.5	45
	FA	82	62.5	□100	16.5	35	103	83.5	□100	16.5	35
	GA	82	62.5	□115	16.5	35	103	83.5	□115	16.5	35
	AH-064-[-]-[-]-19** Input Shaft Dia. ≤ φ19	DA · DB · DC	97	77.5	□80	25	50	-	-	-	-
DD		107	87.5	□80	35	60	-	-	-	-	-
DE		102	82.5	□80	30	55	-	-	-	-	-
EA		102	82.5	□90	30	55	-	-	-	-	-
EB		97	77.5	□90	25	50	-	-	-	-	-
EC		107	87.5	□90	35	60	-	-	-	-	-
FA		97	77.5	□100	25	50	-	-	-	-	-
FB		107	87.5	□100	35	60	-	-	-	-	-
GA · GC		102	82.5	□115	30	55	-	-	-	-	-
GB · GD		97	77.5	□115	25	50	-	-	-	-	-
HA		97	77.5	□130	25	50	-	-	-	-	-
HB		112	92.5	□130	40	65	-	-	-	-	-
HC · HD · HE		102	82.5	□130	30	55	-	-	-	-	-

※1 1-stage reduction ratios 4 to 10, 2-stages reduction ratios 16 to 100

※2 Adaptors available to match different input shaft diameters.

AH-090 Series Input shaft Adaptors

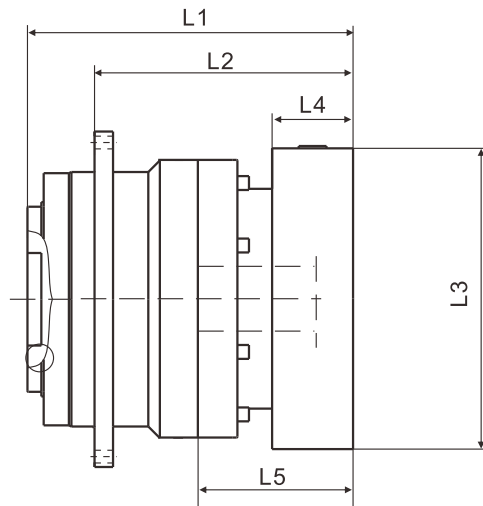


Model number	**: Adapter code	1 Stage					2 Stage				
		L1	L2	L3	L4	L5	L1	L2	L3	L4	L5
AH-090-[-][-]-8** Input Shaft Dia. ≤ φ8	AA · AC · AD · AF · AG	-	-	-	-	-	117	87	□52	15.5	32
	AB · AE · AH · AJ · AK	-	-	-	-	-	122	92	□52	20.5	37
	BA · BB · BD · BE	-	-	-	-	-	117	87	□60	15.5	32
	BC · BF	-	-	-	-	-	122	92	□60	20.5	37
	CA	-	-	-	-	-	122	92	□70	20.5	37
AH-090-[-][-]-14** Input Shaft Dia. ≤ φ14	BA · BB · BD · BE · BF · BG · BJ · BK	100	70	□65	16.5	35	122	92	□65	16.5	35
	BC · BH · BM	105	75	□65	21.5	40	127	97	□65	21.5	40
	BL	110	80	□65	26.5	45	132	102	□65	26.5	45
	CA	100	70	□70	16.5	35	122	92	□70	16.5	35
	CB	105	75	□70	21.5	40	127	97	□70	21.5	40
	DA · DB · DC · DD · DF · DH	100	70	□80	16.5	35	122	92	□80	16.5	35
	DE	105	75	□80	21.5	40	127	97	□80	21.5	40
	DG	110	80	□80	26.5	45	132	102	□80	26.5	45
	EA · EB · EC	100	70	□90	16.5	35	122	92	□90	16.5	35
	ED	110	80	□90	26.5	45	132	102	□90	26.5	45
	FA	100	70	□100	16.5	35	122	92	□100	16.5	35
	GA	100	70	□115	16.5	35	122	92	□115	16.5	35
AH-090-[-][-]-19** Input Shaft Dia. ≤ φ19	DA · DB · DC	110	80	□80	25	50	132	102	□80	25	50
	DD	120	90	□80	35	60	142	112	□80	35	60
	DE	115	85	□80	30	55	137	107	□80	30	55
	EA	115	85	□90	30	55	137	107	□90	30	55
	EB	110	80	□90	25	50	132	102	□90	25	50
	EC	120	90	□90	35	60	142	112	□90	35	60
	FA	110	80	□100	25	50	132	102	□100	25	50
	FB	120	90	□100	35	60	142	112	□100	35	60
	GA · GC	115	85	□115	30	55	137	107	□115	30	55
	GB · GD	110	80	□115	25	50	132	102	□115	25	50
	HA	110	80	□130	25	50	132	102	□130	25	50
	HB	125	95	□130	40	65	147	117	□130	40	65
	HC · HD · HE	115	85	□130	30	55	137	107	□130	30	55
	AH-090-[-][-]-28** Input Shaft Dia. ≤ φ28	FA · FB · FC	127	97	□100	35	67	-	-	-	-
GA · GB · GC · GD · GE · GF · GG		127	97	□115	35	67	-	-	-	-	-
HA · HC · HD		127	97	□130	35	67	-	-	-	-	-
HB		127	107	□130	45	77	-	-	-	-	-
JA · JB · JC		127	97	□150	35	67	-	-	-	-	-
KA · KB		127	97	□180	35	67	-	-	-	-	-
KD		137	107	□180	45	77	-	-	-	-	-
LA		127	97	□200	35	67	-	-	-	-	-
MA	127	97	□220	35	67	-	-	-	-	-	

※1 1-stage reduction ratios 4 to 10, 2-stages reduction ratios 16 to 100

※2 Adaptors available to match different input shaft diameters.

AH-110 Input Shaft Adaptors



Model number	**: Adapter code	1 Stage					2 Stage				
		L1	L2	L3	L4	L5	L1	L2	L3	L4	L5
AH-110-[-][-]-14** Input Shaft Dia. ≤ φ14	BA · BB · BD · BE · BF · BG · BJ · BK	-	-	-	-	-	142	113	□65	16.5	35
	BC · BH · BM	-	-	-	-	-	147	118	□65	21.5	40
	BL	-	-	-	-	-	152	123	□65	26.5	45
	CA	-	-	-	-	-	142	113	□70	16.5	35
	CB	-	-	-	-	-	147	118	□70	21.5	40
	DA · DB · DC · DD · DF · DH	-	-	-	-	-	142	113	□80	16.5	35
	DE	-	-	-	-	-	147	118	□80	21.5	40
	DG	-	-	-	-	-	152	123	□80	26.5	45
	EA · EB · EC	-	-	-	-	-	142	113	□90	16.5	35
	ED	-	-	-	-	-	152	123	□90	26.5	45
	FA	-	-	-	-	-	142	113	□100	16.5	35
	GA	-	-	-	-	-	142	113	□115	16.5	35
AH-110-[-][-]-19** Input Shaft Dia. ≤ φ19	DA · DB · DC	124.5	95.5	□80	25	50	152	123	□80	25	50
	DD	134.5	105.5	□80	35	60	162	133	□80	35	60
	DE	129.5	100.5	□80	30	55	157	128	□80	30	55
	EA	129.5	100.5	□90	30	55	157	128	□90	30	55
	EB	124.5	95.5	□90	25	50	152	123	□90	25	50
	EC	134.5	105.5	□90	35	60	162	133	□90	35	60
	FA	124.5	95.5	□100	25	50	152	123	□100	25	50
	FB	134.5	105.5	□100	35	60	162	133	□100	35	60
	GA · GC	129.5	100.5	□115	30	55	157	128	□115	30	55
	GB · GD	124.5	95.5	□115	25	50	152	123	□115	25	50
	HA	124.5	95.5	□130	25	50	152	123	□130	25	50
	HB	139.5	110.5	□130	40	65	167	138	□130	40	65
	HC · HD · HE	129.5	100.5	□130	30	55	157	128	□130	30	55
	FA · FB · FC	141.5	112.5	□100	35	67	169	140	□100	35	67
AH-110-[-][-]-28** Input Shaft Dia. ≤ φ28	GA · GB · GC · GD · GE · GF · GG	141.5	112.5	□115	35	67	169	140	□115	35	67
	HA · HC · HD	141.5	112.5	□130	35	67	169	140	□130	35	67
	HB	151.5	122.5	□130	45	77	179	150	□130	45	77
	JA · JB · JC	141.5	112.5	□150	35	67	169	140	□130	35	67
	KA · KB	141.5	112.5	□180	35	67	169	140	□150	35	67
	KD	151.5	122.5	□180	45	77	179	150	□180	45	77
	LA	141.5	112.5	□200	35	67	169	140	□200	35	67
	MA	141.5	112.5	□220	35	67	169	140	□220	35	67
AH-110-[-][-]-38** Input Shaft Dia. ≤ φ38	HA	162.5	133.5	□130	45	82	-	-	-	-	-
	HB	157.5	128.5	□130	40	77	-	-	-	-	-
	JA	162.5	133.5	□150	45	82	-	-	-	-	-
	KA · KB · KC	162.5	133.5	□180	45	82	-	-	-	-	-
	LA	162.5	133.5	□200	45	82	-	-	-	-	-
	LB	172.5	143.5	□200	55	92	-	-	-	-	-
	MA · MB	162.5	133.5	□220	45	82	-	-	-	-	-
	NA	162.5	133.5	□250	45	82	-	-	-	-	-

※1 1-stage reduction ratios 4 to 10, 2-stages reduction ratios 16 to 100

※2 Adaptors available to match different input shaft diameters.