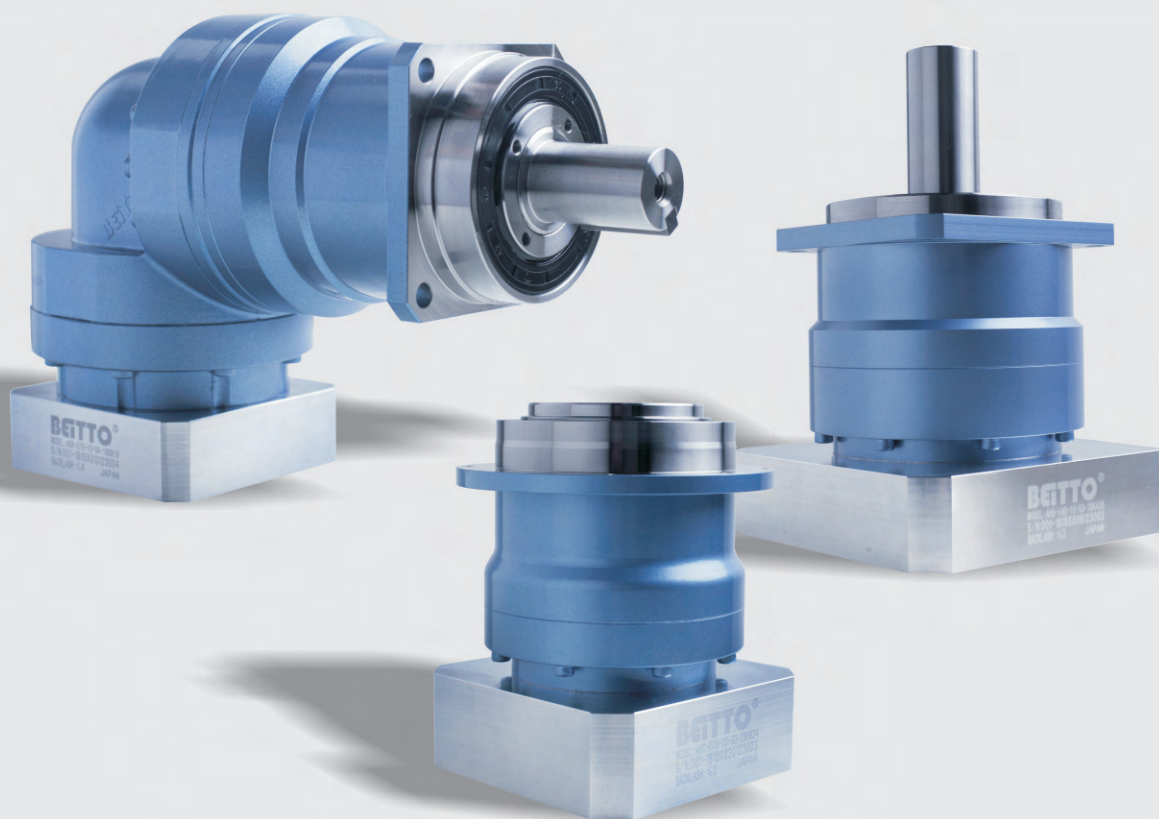


BETTO 貝託®

精密行星减速机

轻 / 松 / 传 / 动 / 每 / 一 / 秒



日本貝託精機株式会社
JAPAN BETTO PRECISION MACHINERY CO., LTD



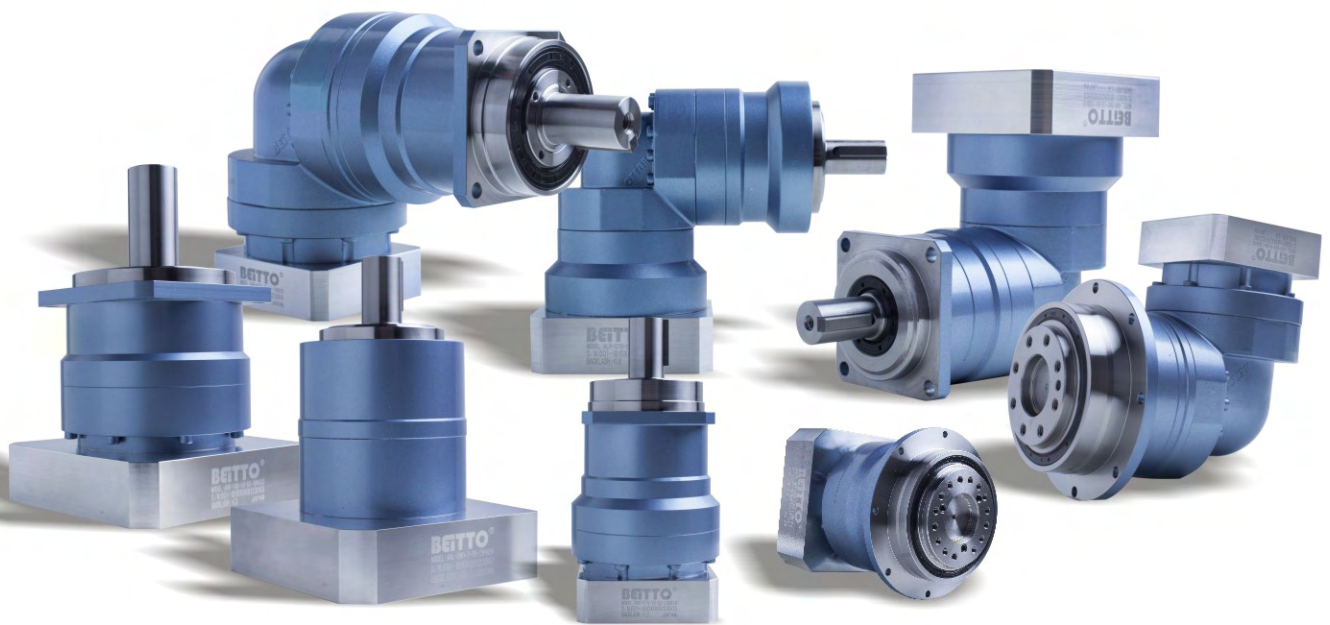
我们的使命

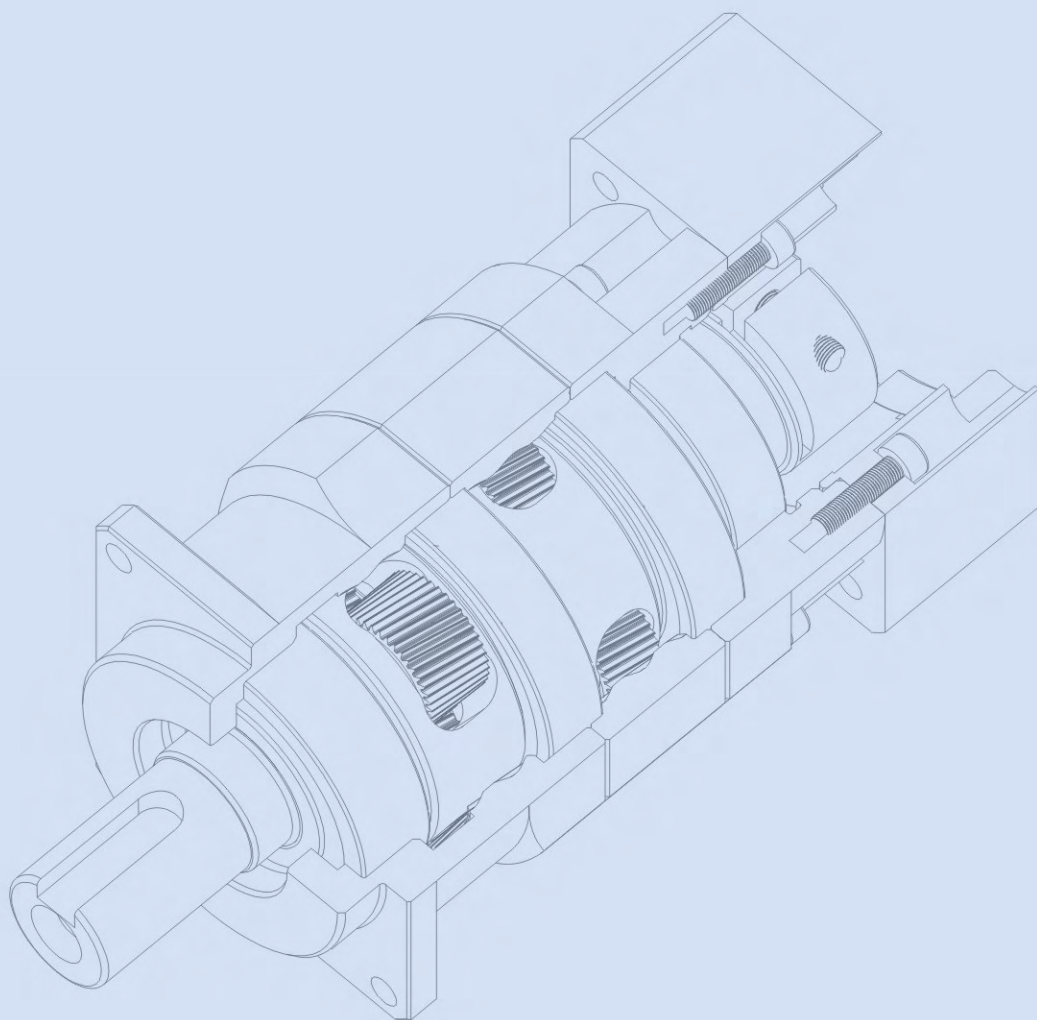
“超越客户期望，提升员工价值，承担社会责任”为核心价值观，坚持以市场为导向，以科技进步为支撑，以人才战略为根本，且一直保持着对更高品质的追求，为客户提供放心高质量的产品。

Our mission

"Exceed customer expectations, enhance employee value and take social responsibility" as the core values. Adhering to market-oriented, supported by scientific and technological progress and based on the talent strategy, And has always maintained the pursuit of higher quality, to provide customers with assured high-quality products.

「お客様の期待を超えて、従業員の価値を向上させ、社会の責任を負う」ということをコア価値観にする。市場をガイドにして、科学技術の進歩を支えとして、人材戦略を根本にすることを固める。より高い品質を追求し、お客様に安心させる高品質の製品を提供している。



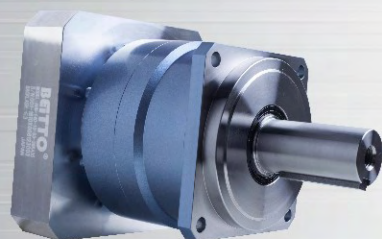


>> 产品系列目录 / 03-04

- ◆ AHB 系列 / 05-24
- ◆ AHL 系列 / 25-44
- ◆ AHS 系列 / 45-60
- ◆ AHT 系列 / 61-76
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>>产品系列目录

AHB 系列



特征

Features

AHB 06

机种、型号代码

Model number

AHB 07

性能一览表

Performance table

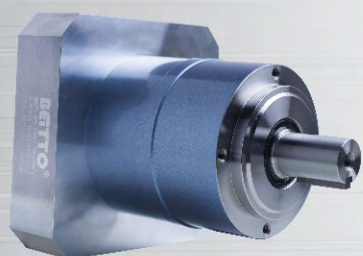
AHB 08

尺寸一览表

Dimensions

AHB 14

AHL 系列



特征

Features

AHL 26

机种、型号代码

Model number

AHL 27

性能一览表

Performance table

AHL 28

尺寸一览表

Dimensions

AHL 34

AHS 系列



特征

Features

AHS 46

机种、型号代码

Model number

AHS 47

性能一览表

Performance table

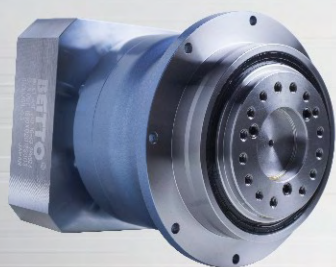
AHS 48

尺寸一览表

Dimensions

AHS 53

AHT 系列



特征

Features

AHT 62

机种、型号代码

Model number

AHT 63

性能一览表

Performance table

AHT 64

尺寸一览表

Dimensions

AHT 68

安装方法

安装方法

Installation

AH 75

ABR 系列



特征	Features
机种、型号代码	Model number
性能一览表	Performance table
尺寸一览表	Dimensions

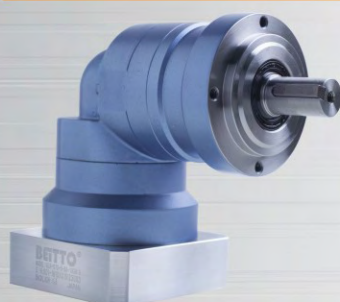
ABR 02

ABR 03

ABR 04

ABR 08

ALR 系列



特征	Features
机种、型号代码	Model number
性能一览表	Performance table
尺寸一览表	Dimensions

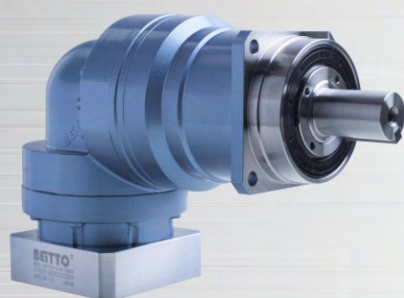
ALR 18

ALR 19

ALR 20

ALR 24

ASR 系列



特征	Features
机种、型号代码	Model number
性能一览表	Performance table
尺寸一览表	Dimensions

ASR 34

ASR 35

ASR 36

ASR 40

ATR 系列



特征	Features
机种、型号代码	Model number
性能一览表	Performance table
尺寸一览表	Dimensions

ATR 50

ATR 51

ATR 52

ATR 54

安装方法

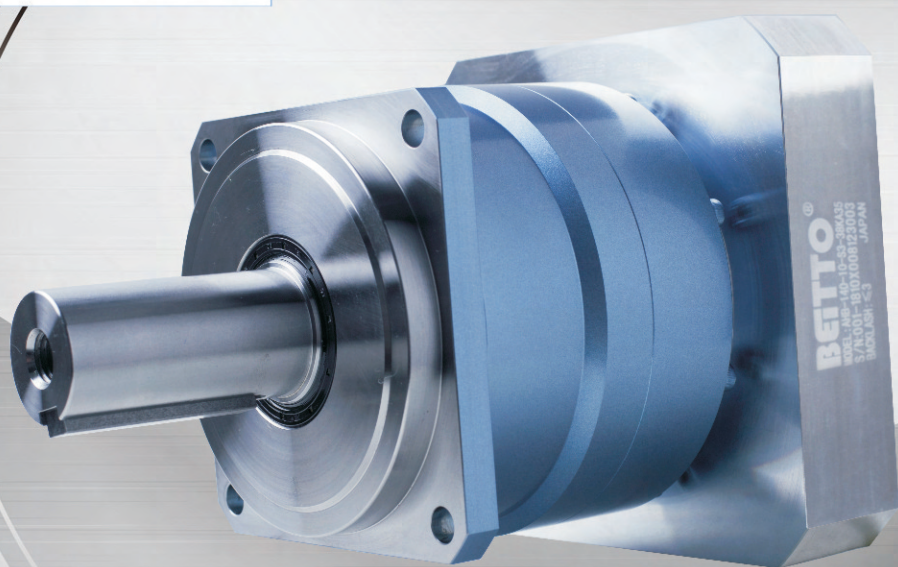
安装方法	Installation
------	--------------

AR 62

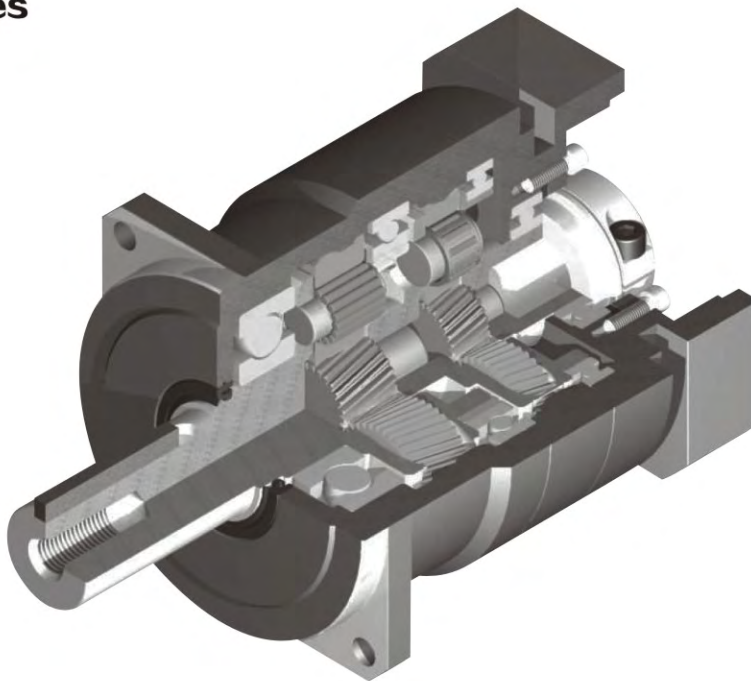
BETTO 貝託®
精密行星齿轮减速机

AHB

伺服电机专用



AHB series



静音

使用斜齿轮实现顺畅安静地运转。

Quiet operation

Helical gears contribute to reduce vibration and noise.

高精度

齿隙低于3分、定位精确。

High precision

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

高刚性、高扭矩

使用整体式滚珠轴承，大大提高了刚性和扭矩。

High rigidity & torque

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

连接法兰、轴套方式

电机通用性

Adapter-bushing connection

Motor generality

高粘度润滑脂

使用高粘度、不易分离的润滑脂，有效防止润滑脂泄漏。

High viscosity grease

Perfect solution using high viscosity anti-separation grease.

维护方便

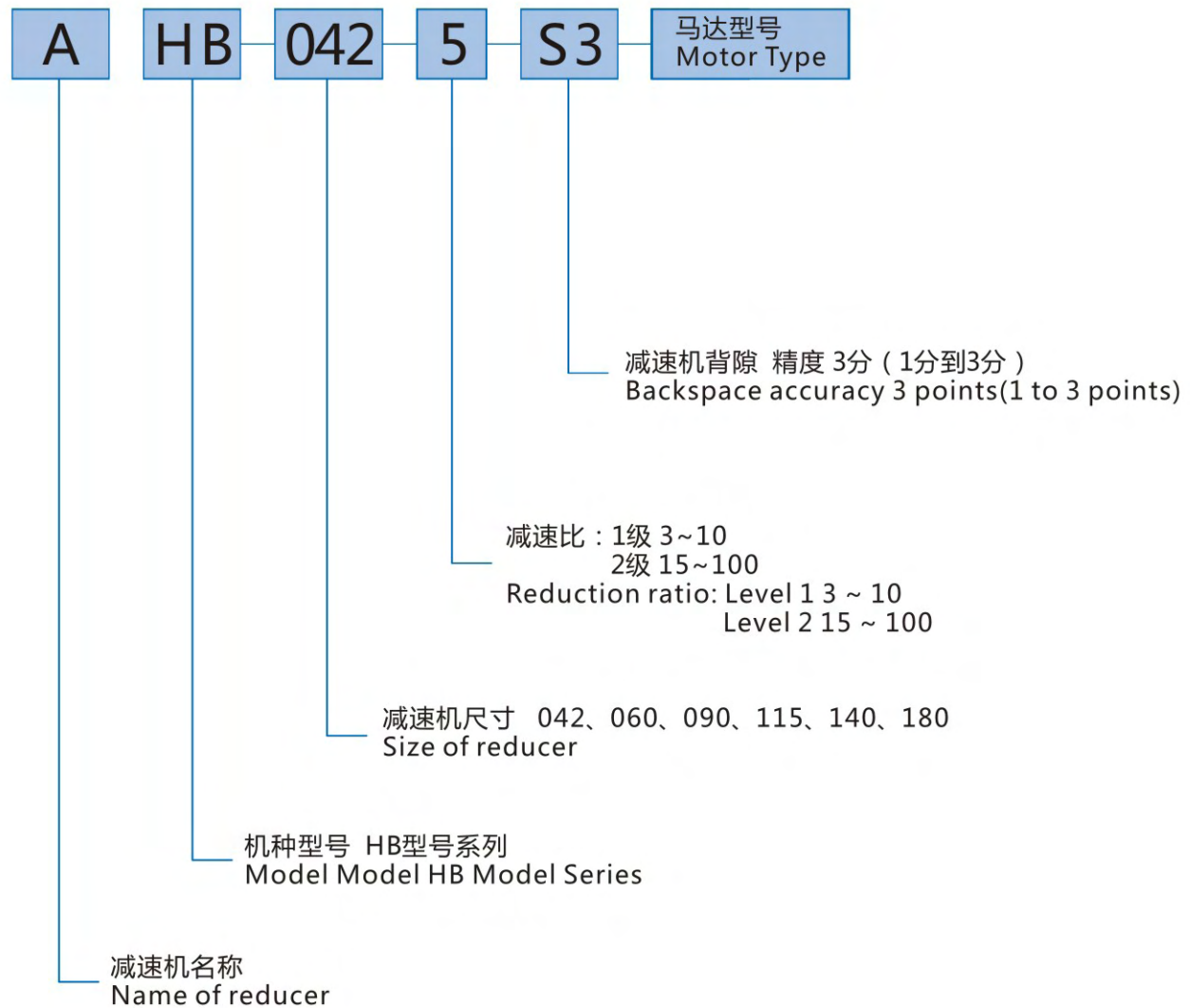
在产品寿命期内无需更换润滑脂，安装更便捷。

Maintenance-free

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

AHB series

机种、型号代码 Model number



AHB-042

尺寸 Frame size	机种 Model	减速比 Ratio	①			②		③	
			额定扭矩 Nominal output torque [Nm]	最大扭矩 Maximum output torque [Nm]	急停 最大扭矩 Emergency stop torque [Nm]	额定 输入转速 Nominal input speed [rpm]	最大 输入转速 Maximum input speed [rpm]	额定径向力 Permitted radial load [N]	额定轴向力 Permitted axial load [N]
042	1级 Single	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
		10	7	14	35	4000	8000	370	460
		15	7	14	35	4000	8000	420	550
		16	10	20	40	4000	8000	430	560
	2级 Double	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

尺寸 Frame size	机种 Model	减速比 Ratio	④		重量 Weight [kg]	⑤		使用温度 Use the temperature
			最大 径向负荷 Maximum radial load [N]	最大 轴向负荷 Maximum axial load [N]		惯性力矩 Moment of inertia ($\leq \phi 8$) [kgcm ²]	惯性力矩 Moment of inertia ($\leq \phi 14$) [kgcm ²]	
042	1级 Single	3	730	660	0.6	0.053	0.091	-20℃ ~ 175℃
		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	
		10	730	660		0.030	0.069	
	2级 Double	15	730	660	0.7	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 输入转速为额定转速时，使用寿命为 20000 小时的值

② 输入转速为额定转速时，使用寿命为 20000 小时的值
(作用于轴中央，轴向负荷为 0 时)

③ 输入转速为额定转速时，使用寿命为 20000 小时的值
(作用于轴芯，径向负荷为 0 时)

④ 径向负荷的容许最大值

⑤ 轴向负荷的容许最大值

⑥ 使用温度 -20℃ ~ 175℃

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 Use the temperature -20℃ ~ 175℃

AHB-060

尺寸 Frame size	机种 Model	减速比 Ratio	①			②		③	
			额定扭矩 Nominal output torque [Nm]	最大扭矩 Maximum output torque [Nm]	急停 最大扭矩 Emergency stop torque [Nm]	额定 输入转速 Nominal input speed [rpm]	最大 输入转速 Maximum input speed [rpm]	额定径向力 Permitted radial load [N]	额定轴向力 Permitted axial load [N]
060	1级 Single	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
	2级 Double	10	20	40	88	3000	6000	660	550
		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

尺寸 Frame size	机种 Model	减速比 Ratio	④		重量 Weight [kg]	⑤		⑥	
			最大 径向负荷 Maximum radial load [N]	最大 轴向负荷 Maximum axial load [N]		惯性力矩 Moment of inertia ($\leq \phi 8$) [kgcm ²]	惯性力矩 Moment of inertia ($\leq \phi 14$) [kgcm ²]	惯性力矩 Moment of inertia ($\leq \phi 19$) [kgcm ²]	使用温度 Use the temperature
060	1级 Single	3	1220	1120	1.4	0.14	0.22	0.43	-20℃ ~ 175℃
		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	
	2级 Double	10	1220	1120	1.6	0.056	0.14	0.34	
		15	1220	1120		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 输入转速为额定转速时，使用寿命为 20000 小时的值

② 输入转速为额定转速时，使用寿命为 20000 小时的值
(作用于轴中央，轴向负荷为 0 时)③ 输入转速为额定转速时，使用寿命为 20000 小时的值
(作用于轴芯，径向负荷为 0 时)

④ 径向负荷的容许最大值

⑤ 轴向负荷的容许最大值

⑥ 使用温度 -20℃ ~ 175℃

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 Use the temperature -20℃ ~ 175℃

AHB-090

尺寸 Frame size	机种 Model	减速比 Ratio	①			②		③	
			额定扭矩 Nominal output torque [Nm]	最大扭矩 Maximum output torque [Nm]	急停 最大扭矩 Emergency stop torque [Nm]	额定 输入转速 Nominal input speed [rpm]	最大 输入转速 Maximum input speed [rpm]	额定径向力 Permitted radial load [N]	额定轴向力 Permitted axial load [N]
090	1级 Single	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
	2级 Double	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

尺寸 Frame size	机种 Model	减速比 Ratio	④		重量 Weight [kg]	⑤			
			最大 径向负荷 Maximum radial load [N]	最大 轴向负荷 Maximum axial load [N]		惯性力矩 Moment of inertia ($\leq \phi 8$) [kgcm ²]	惯性力矩 Moment of inertia ($\leq \phi 14$) [kgcm ²]	惯性力矩 Moment of inertia ($\leq \phi 19$) [kgcm ²]	惯性力矩 Moment of inertia ($\leq \phi 28$) [kgcm ²]
090	1级 Single	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
	2级 Double	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	-

- ① 输入转速为额定转速时，使用寿命为 20000 小时
 ② 输入转速为额定转速时，使用寿命为 20000 小时的值
 (作用于轴中央，轴向负荷为 0 时)
 ③ 输入转速为额定转速时，使用寿命为 20000 小时的值
 (作用于轴芯，径向负荷为 0 时)
 ④ 径向负荷的容许最大值
 ⑤ 轴向负荷的容许最大值
 注：使用温度 -20℃ ~ 175℃

- 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.
 Note: Use the temperature -20℃ ~ 175℃

AHB-115

尺寸 Frame size	机种 Model	减速比 Ratio	①			②		③	
			额定扭矩 Nominal output torque [Nm]	最大扭矩 Maximum output torque [Nm]	急停 最大扭矩 Emergency stop torque [Nm]	额定 输入转速 Nominal input speed [rpm]	最大 输入转速 Maximum input speed [rpm]	额定径向力 Permitted radial load [N]	额定轴向力 Permitted axial load [N]
115	1级 Single	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
		15	125	230	515	3000	6000	2325	3025
		16	185	335	640	3000	6000	2325	3125
	2级 Double	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
		60	185	335	640	3000	6000	3625	3925
		70	185	335	640	3000	6000	3825	3925
		80	185	335	640	3000	6000	4025	3925
		90	125	230	515	3000	6000	4225	3925
		100	125	230	515	3000	6000	4325	3925

尺寸 Frame size	机种 Model	减速比 Ratio	④		重量 Weight [kg]	⑤		惯性力矩 Moment of inertia ($\leq \phi 14$) [kgcm ²]	惯性力矩 Moment of inertia ($\leq \phi 19$) [kgcm ²]	惯性力矩 Moment of inertia ($\leq \phi 28$) [kgcm ²]	惯性力矩 Moment of inertia ($\leq \phi 38$) [kgcm ²]
			最大 径向负荷 Maximum radial load [N]	最大 轴向负荷 Maximum axial load [N]		最大 径向负荷 Maximum radial load [N]	最大 轴向负荷 Maximum axial load [N]				
115	1级 Single	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		
	2级 Double	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 输入转速为额定转速时, 使用寿命为 20000 小时的值

② 输入转速为额定转速时, 使用寿命为 20000 小时的值
(作用于轴中央, 轴向负荷为 0 时)③ 输入转速为额定转速时, 使用寿命为 20000 小时的值
(作用于轴芯, 径向负荷为 0 时)

④ 径向负荷的容许最大值

⑤ 轴向负荷的容许最大值

注: 使用温度 -20℃ ~ 175℃

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.

Note: Use the temperature -20℃ ~ 175℃

AHB-140

尺寸 Frame size	机种 Model	减速比 Ratio	①			②		③	
			额定扭矩 Nominal output torque [Nm]	最大扭矩 Maximum output torque [Nm]	急停 最大扭矩 Emergency stop torque [Nm]	额定 输入转速 Nominal input speed [rpm]	最大 输入转速 Maximum input speed [rpm]	额定径向力 Permitted radial load [N]	额定轴向力 Permitted axial load [N]
140	1级 Single	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
		15	245	476	1016	2000	4000	5430	4935
		16	365	706	1266	2000	4000	5530	5035
	2级 Double	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
		60	365	706	1266	2000	4000	8630	8235
		70	365	706	1266	2000	4000	9130	8235
		80	365	706	1266	2000	4000	9130	8235
		90	245	476	1016	2000	4000	9130	8235
		100	245	476	1016	2000	4000	9130	8235

尺寸 Frame size	机种 Model	减速比 Ratio	④		重量 Weight [kg]	⑤			
			最大 径向负荷 Maximum radial load [N]	最大 轴向负荷 Maximum axial load [N]		惯性力矩 Moment of inertia ($\leq \phi 19$) [kgcm ²]	惯性力矩 Moment of inertia ($\leq \phi 28$) [kgcm ²]	惯性力矩 Moment of inertia ($\leq \phi 38$) [kgcm ²]	惯性力矩 Moment of inertia ($\leq \phi 48$) [kgcm ²]
140	1级 Single	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 Double	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 输入转速为额定转速时，使用寿命为 20000 小时的值

② 输入转速为额定转速时，使用寿命为 20000 小时的值
(作用于轴中央，轴向负荷为 0 时)

③ 输入转速为额定转速时，使用寿命为 20000 小时的值
(作用于轴芯，径向负荷为 0 时)

④ 径向负荷的容许最大值

⑤ 轴向负荷的容许最大值

注：使用温度 -20℃ ~ 175℃

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.

Note: Use the temperature -20℃ ~ 175℃

AHB-180

尺寸 Frame size	机种 Model	减速比 Ratio	Φ 1			Φ 2		Φ 3	
			额定扭矩 Nominal output torque [Nm]	最大扭矩 Maximum output torque [Nm]	急停 最大扭矩 Emergency stop torque [Nm]	额定 输入转速 Nominal input speed [rpm]	最大 输入转速 Maximum input speed [rpm]	额定径向力 Permitted radial load [N]	额定轴向力 Permitted axial load [N]
180	1级 Single	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
		15	506	980	2220	1500	3000	9635	8735
		16	756	1410	2770	1500	3000	9835	8935
	2级 Double	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

尺寸 Frame size	机种 Model	减速比 Ratio	Φ 4		重量 Weight [kg]	Φ 5		惯性力矩 Moment of inertia (≤ φ 28) [kgcm ²]	惯性力矩 Moment of inertia (≤ φ 38) [kgcm ²]	惯性力矩 Moment of inertia (≤ φ 48) [kgcm ²]	惯性力矩 Moment of inertia (≤ φ 65) [kgcm ²]
			最大 径向负荷 Maximum radial load [N]	最大 轴向负荷 Maximum axial load [N]		最大 径向负荷 Maximum radial load [N]	最大 轴向负荷 Maximum axial load [N]				
180	1级 Single	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		
	2级 Double	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	-		

Φ 1 输入转速为额定转速时, 使用寿命为 20000 小时的值

Φ 2 输入转速为额定转速时, 使用寿命为 20000 小时的值
(作用于轴中央, 轴向负荷为 0 时)

Φ 3 输入转速为额定转速时, 使用寿命为 20000 小时的值
(作用于轴芯, 径向负荷为 0 时)

Φ 4 径向负荷的容许最大值

Φ 5 轴向负荷的容许最大值

注: 使用温度 -20℃ ~ 175℃

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)

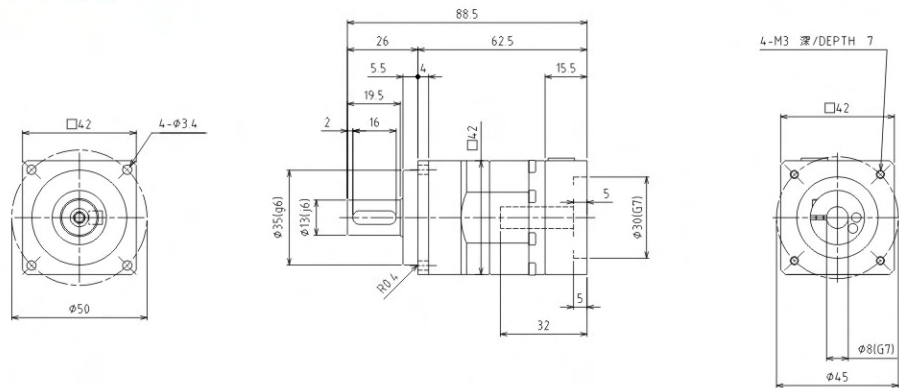
Φ 4 The maximum radial load the reducer can accept.

Φ 5 The maximum axial load the reducer can accept.

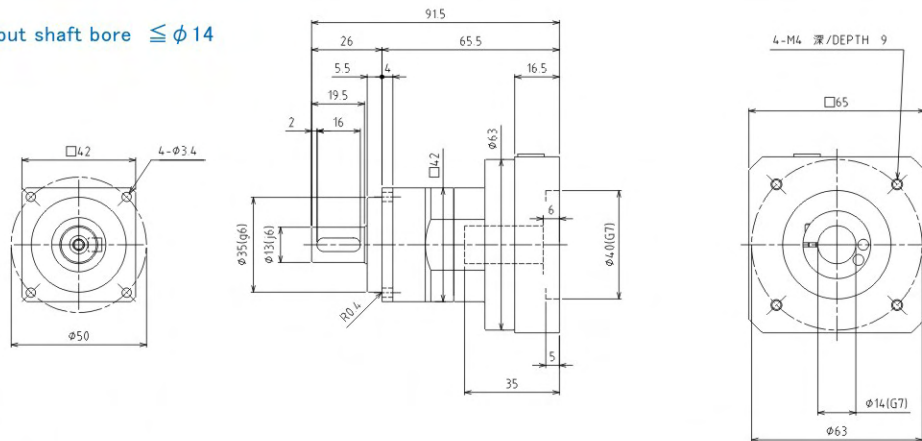
Note: Use the temperature - 20 °C ~ 175 °C

AHB-042 1级 1stage

输入轴内径 Input shaft bore $\leq \phi 8$

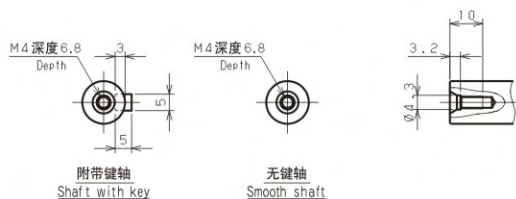
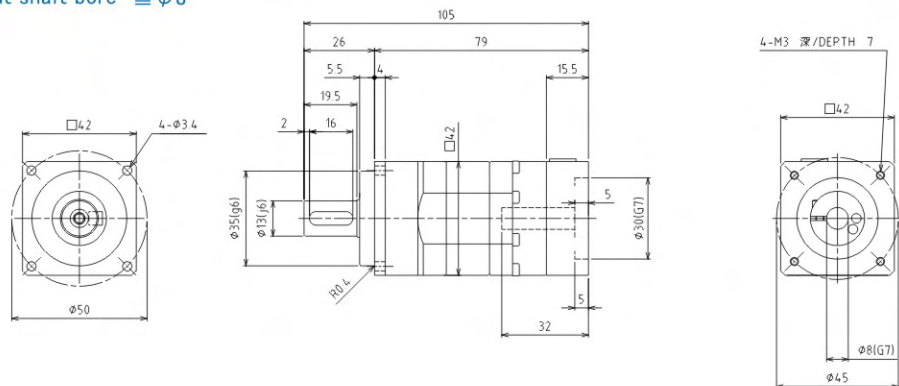


输入轴内径 Input shaft bore $\leq \phi 14$



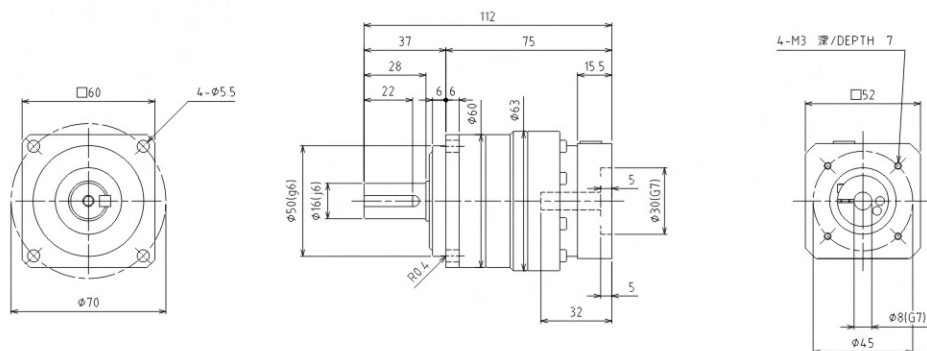
AHB-042 2级 2stage

输入轴内径 Input shaft bore $\leq \phi 8$



备注1: 机身尺寸随安装电机的不同而有所差异。
 备注2: 电机轴径与输入轴径不同时, 可插入轴套。
 Note1: Body Size Length will vary depending on motor.
 Note2: Bushing will be inserted to adapt to motor shaft.

输入轴内径 Input shaft bore $\leq \phi 8$

[illegible]

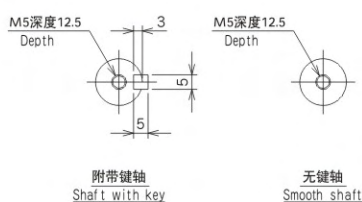
Technical drawing of the input shaft assembly, showing three views: front view (left), side view (middle), and end view (right).

Front View (Left): Shows a square flange with a width of 60 mm and an outer diameter of $\phi 70$. It features four mounting holes, each with a diameter of $\phi 5.5$.

Side View (Middle): Shows the shaft assembly with the following dimensions:

- Total length: 130 mm
- Distance from flange face to first step: 37 mm
- Distance between steps: 28 mm
- Distance from second step to third step: 22 mm
- Distance from third step to fourth step: 6 mm
- Distance from fourth step to fifth step: 6 mm
- Distance from fifth step to end face: 25 mm
- Shaft diameter at first step: $\phi 50(g6)$
- Shaft diameter between first and second steps: $\phi 16(h6)$
- Shaft diameter at second step: $\phi 60$
- Shaft diameter at third step: $\phi 63$
- Shaft diameter at fourth step: $\phi 75$
- Shaft diameter at fifth step: $\phi 70(G7)$
- End face diameter: $\phi 80$
- Distance from end face to last step: 6 mm
- Distance from last step to end face: 50 mm
- Flange thickness: 6 mm
- Flange outer diameter: $\phi 70$
- Flange inner diameter: $\phi 19(G7)$
- Flange hole diameter: $\phi 90$
- Flange hole depth: 4-M5 深/DEPTH 11

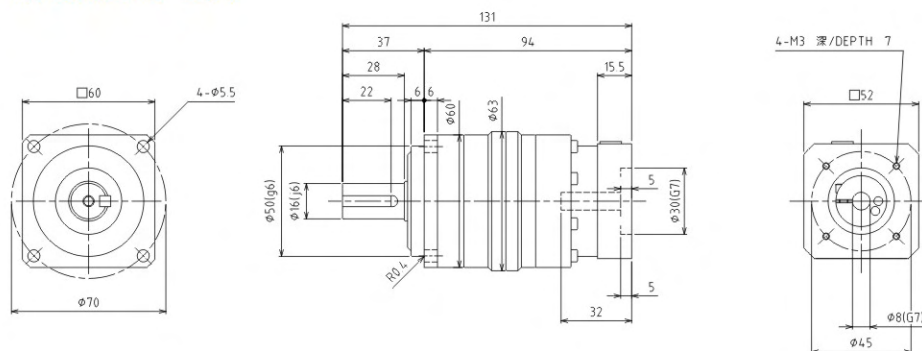
End View (Right): Shows the end of the shaft with a diameter of $\phi 80$ and a central hole with a diameter of $\phi 19(G7)$.



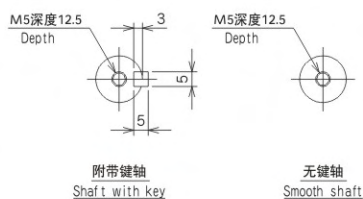
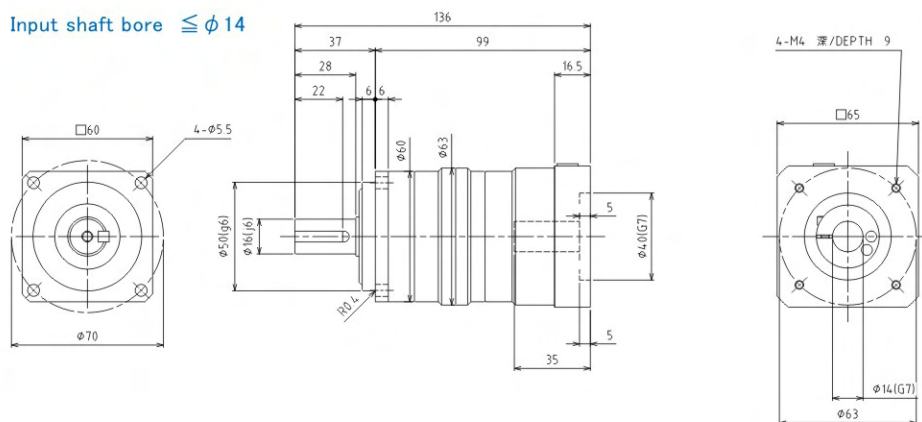
Note2: Bushing will be inserted to adapt to motor shaft.

AHB-060 2级 2stage

输入轴内径 Input shaft bore $\leq \phi 8$



输入轴内径 Input shaft bore $\leq \phi 14$



备注1: 机身尺寸随安装电机的不同而有所差异。

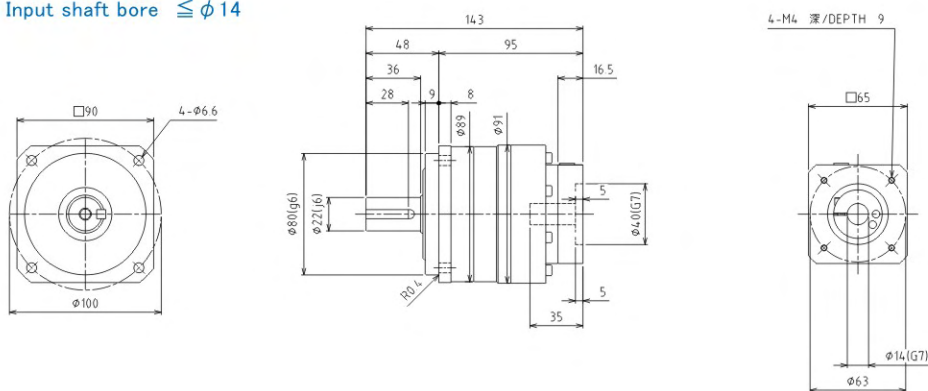
备注2: 电机轴径与输入轴径不同时, 可插入轴套。

Note1: Body Size Length will vary depending on motor.

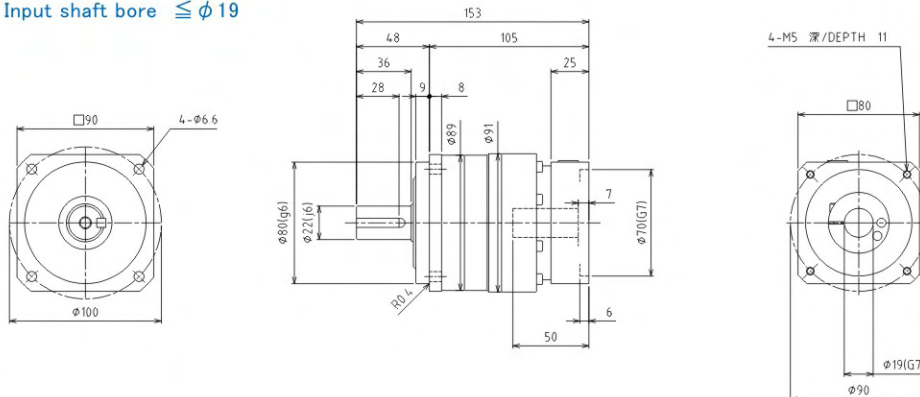
Note2: Bushing will be inserted to adapt to motor shaft.

AHB-090 1级 1stage

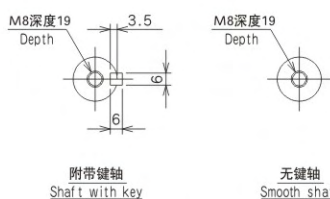
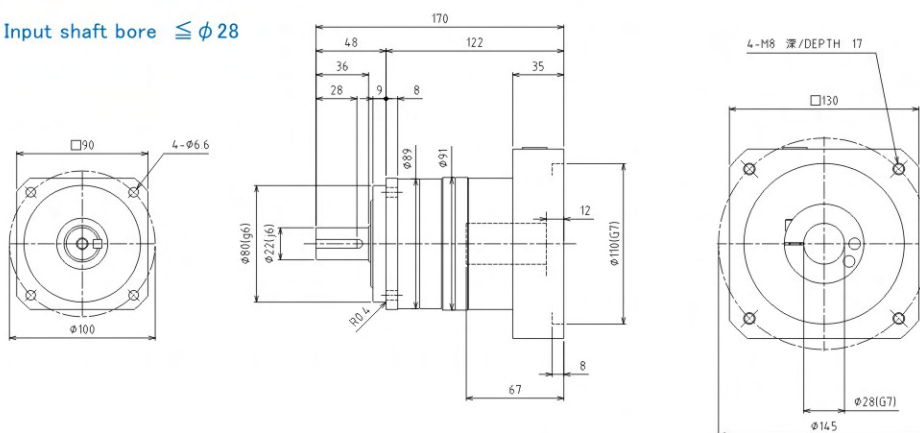
输入轴内径 Input shaft bore $\leq \phi 14$



输入轴内径 Input shaft bore $\leq \phi 19$



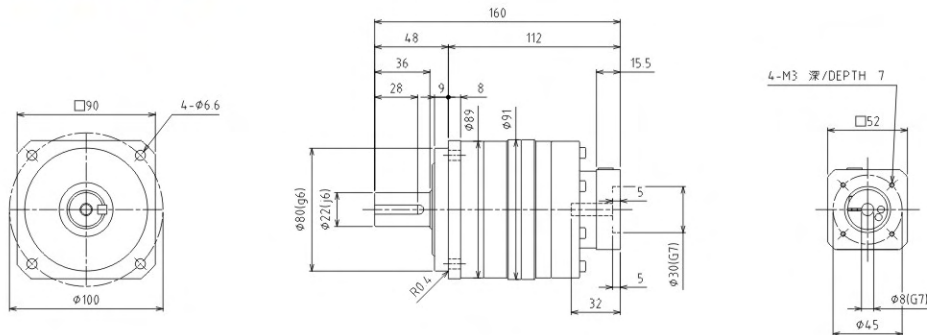
输入轴内径 Input shaft bore $\leq \phi 28$



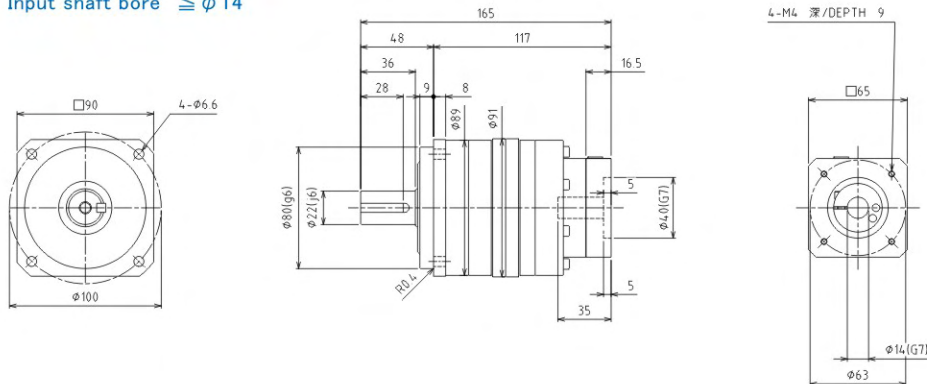
备注1: 机身尺寸随安装电机的不同而有所差异。
 备注2: 电机轴径与输入轴径不同时, 可插入轴套。
 Note1: Body Size Length will vary depending on motor.
 Note2: Bushing will be inserted to adapt to motor shaft.

AHB-090 2级 2stage

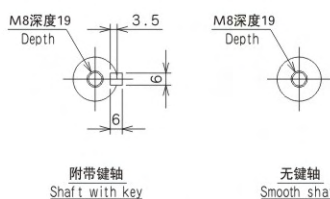
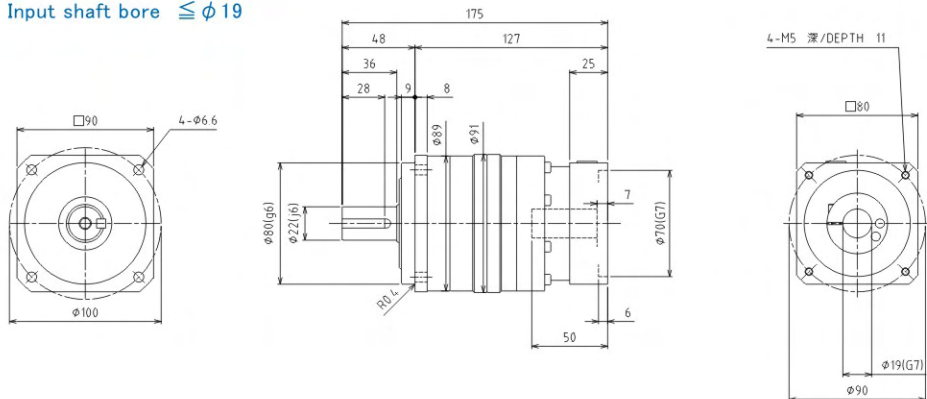
输入轴内径 Input shaft bore $\leq \phi 8$



输入轴内径 Input shaft bore $\leq \phi 14$



输入轴内径 Input shaft bore $\leq \phi 19$



备注1: 机身尺寸随安装电机的不同而有所差异。

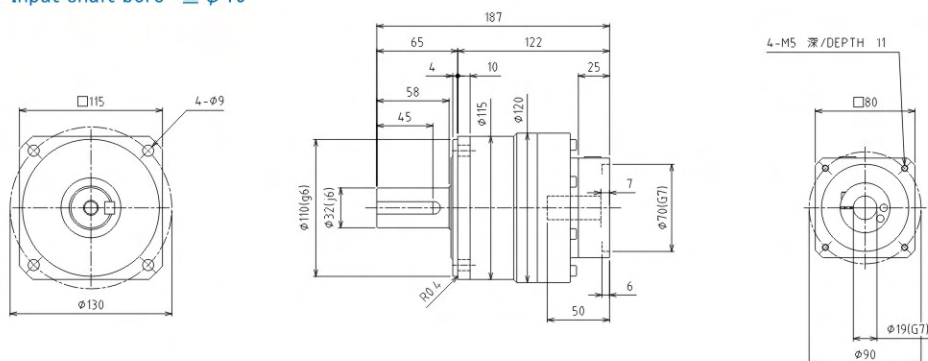
备注2: 电机轴径与输入轴径不同时, 可插入轴套。

Note1: Body Size Length will vary depending on motor.

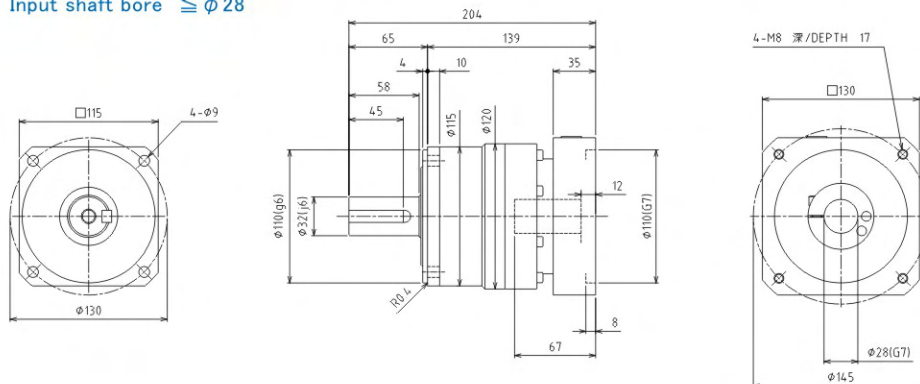
Note2: Bushing will be inserted to adapt to motor shaft.

AHB-115 1级 1stage

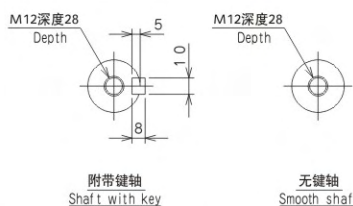
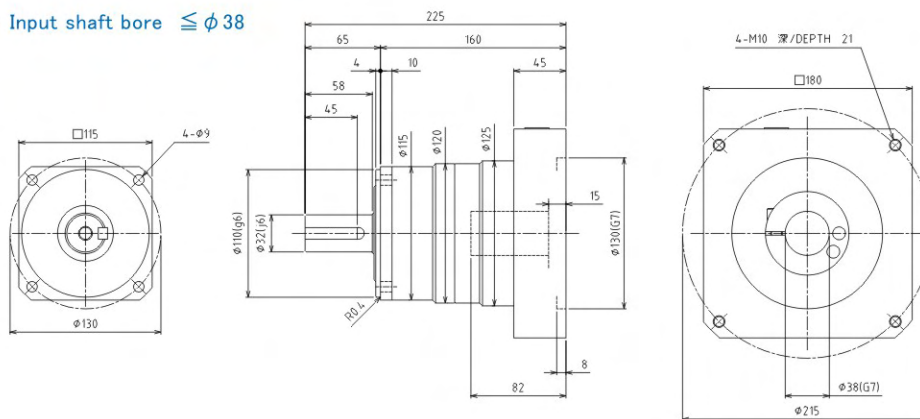
输入轴内径 Input shaft bore $\leq \phi 19$



输入轴内径 Input shaft bore $\leq \phi 28$



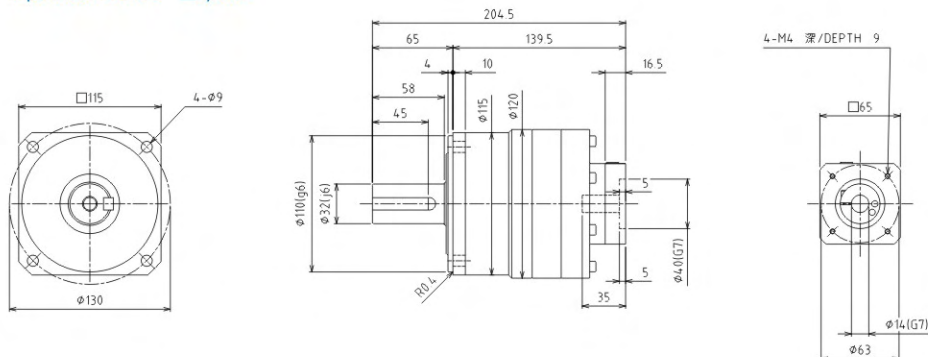
输入轴内径 Input shaft bore $\leq \phi 38$



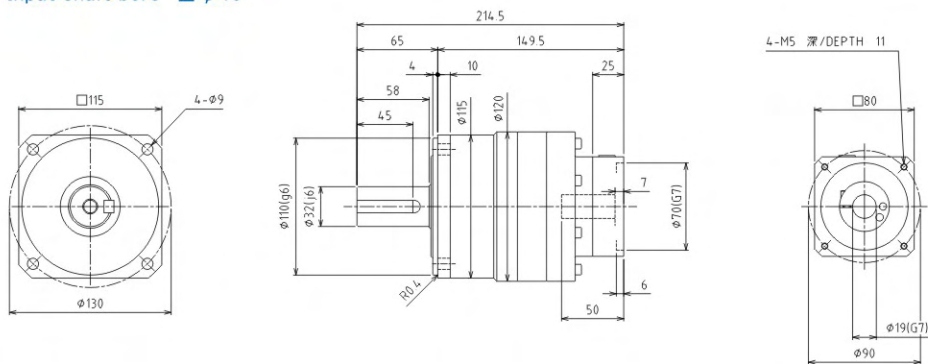
备注1: 机身尺寸随安装电机的不同而有所差异。
 备注2: 电机轴径与输入轴径不同时, 可插入轴套。
 Note1: Body Size Length will vary depending on motor.
 Note2: Bushing will be inserted to adapt to motor shaft.

AHB-115 2级 2stage

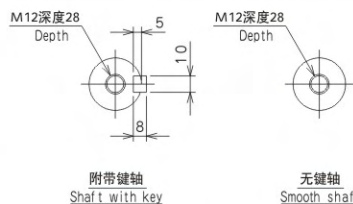
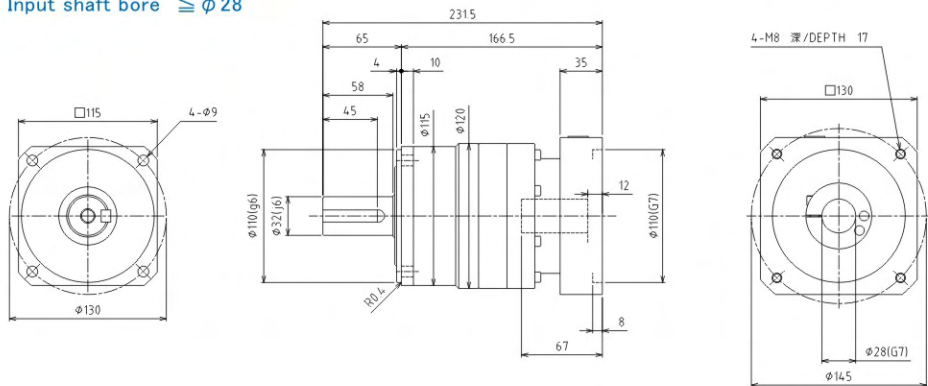
输入轴内径 Input shaft bore $\leq \phi 14$



输入轴内径 Input shaft bore $\leq \phi 19$



输入轴内径 Input shaft bore $\leq \phi 28$



备注1: 机身尺寸随安装电机的不同而有所差异。

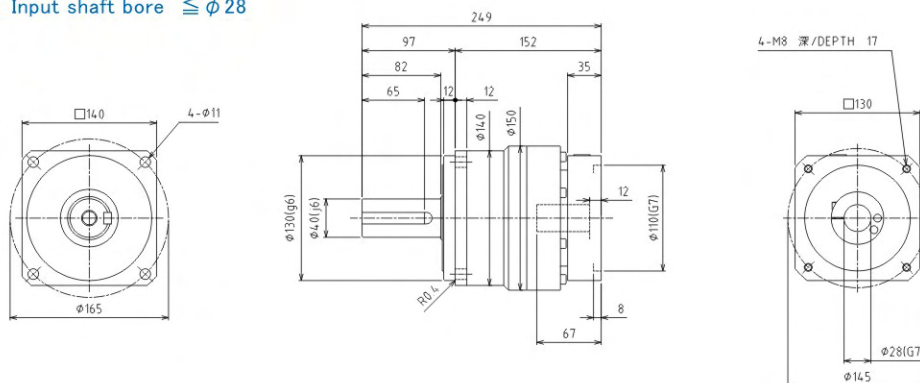
备注2: 电机轴径与输入轴径不同时, 可插入轴套。

Note1: Body Size Length will vary depending on motor.

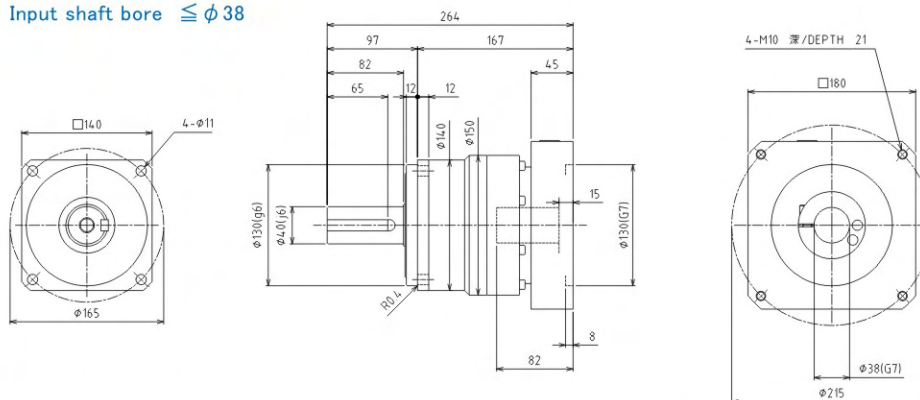
Note2: Bushing will be inserted to adapt to motor shaft.

AHB-140 1级 1stage

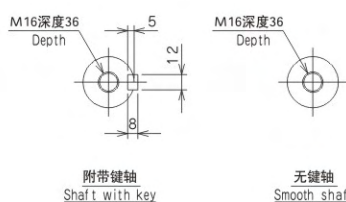
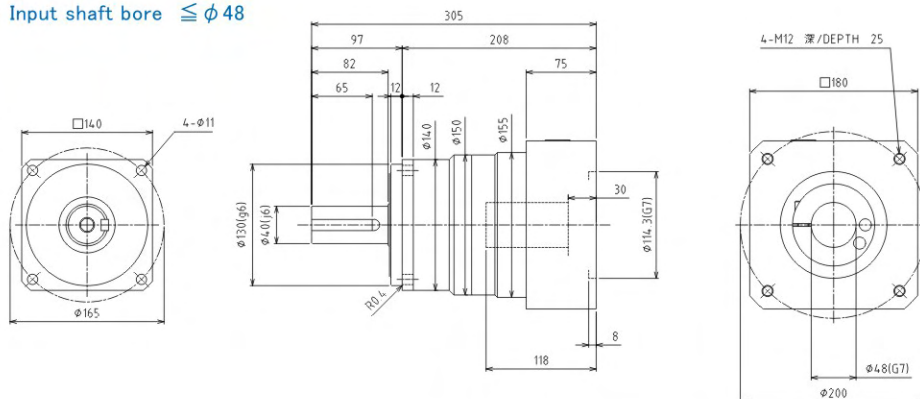
输入轴内径 Input shaft bore $\leq \phi 28$



输入轴内径 Input shaft bore $\leq \phi 38$



输入轴内径 Input shaft bore $\leq \phi 48$



备注1: 机身尺寸随安装电机的不同而有所差异。

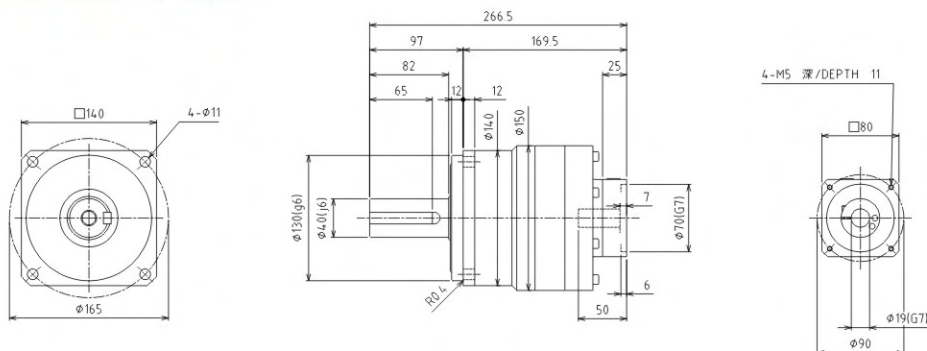
备注2: 电机轴径与输入轴径不同时, 可插入轴套。

Note1: Body Size Length will vary depending on motor.

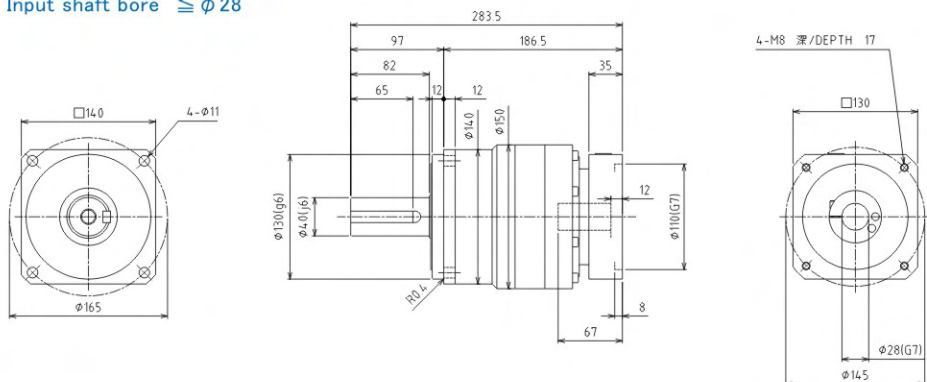
Note2: Bushing will be inserted to adapt to motor shaft.

AHB-140 2级 2stage

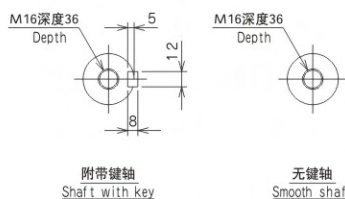
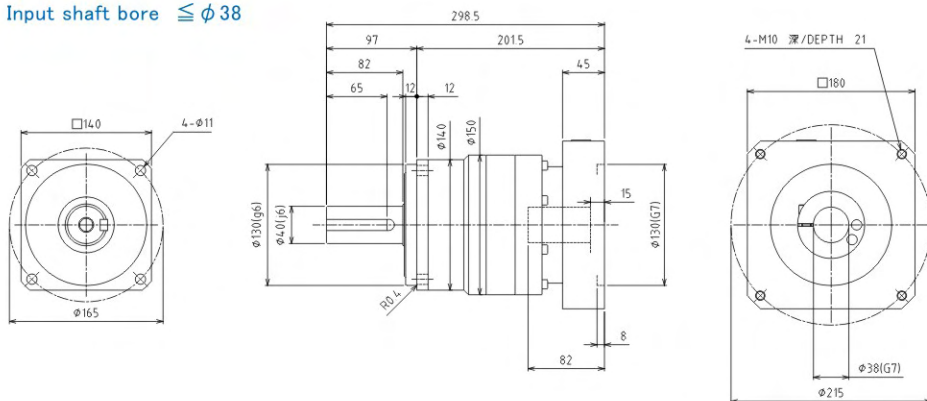
输入轴内径 Input shaft bore $\leq \phi 19$



输入轴内径 Input shaft bore $\leq \phi 28$



输入轴内径 Input shaft bore $\leq \phi 38$



备注1: 机身尺寸随安装电机的不同而有所差异。

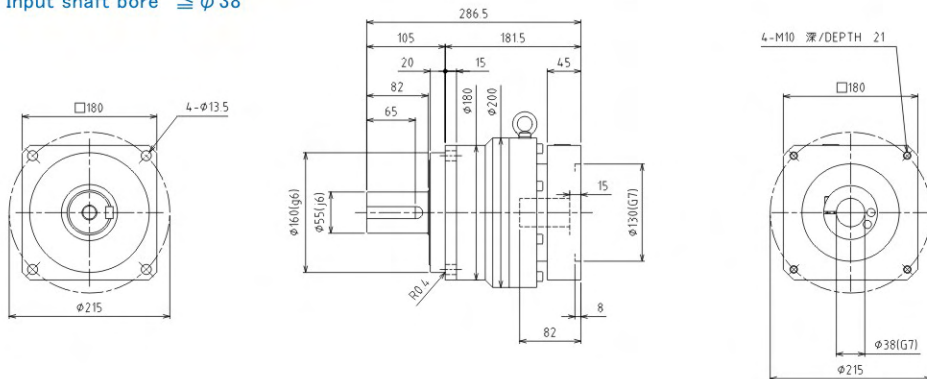
备注2: 电机轴径与输入轴径不同时, 可插入轴套。

Note1: Body Size Length will vary depending on motor.

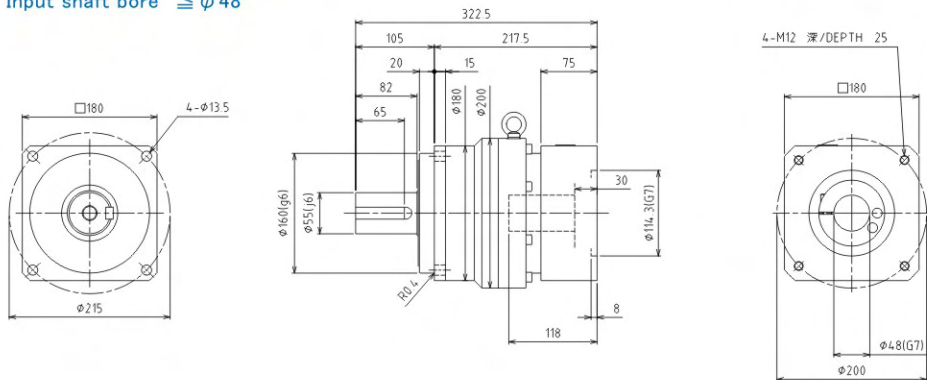
Note2: Bushing will be inserted to adapt to motor shaft.

AHB-180 1級 1stage

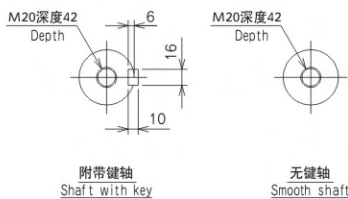
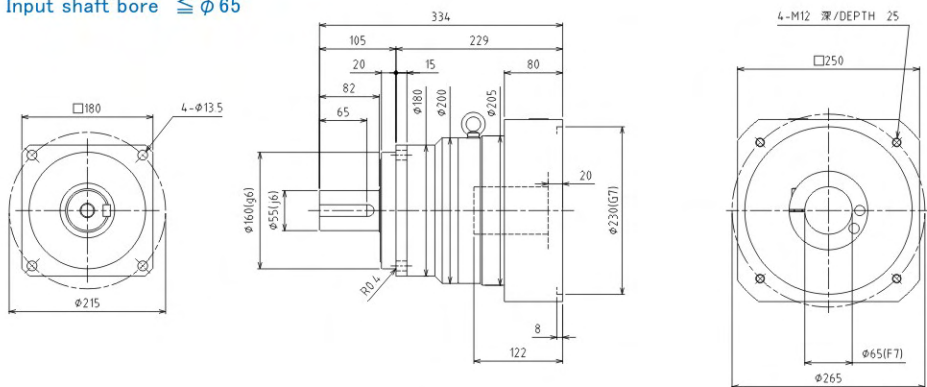
输入轴内径 Input shaft bore $\leq \phi 38$



输入轴内径 Input shaft bore $\leq \phi 48$



输入轴内径 Input shaft bore $\leq \phi 65$



备注1: 机身尺寸随安装电机的不同而有所差异。

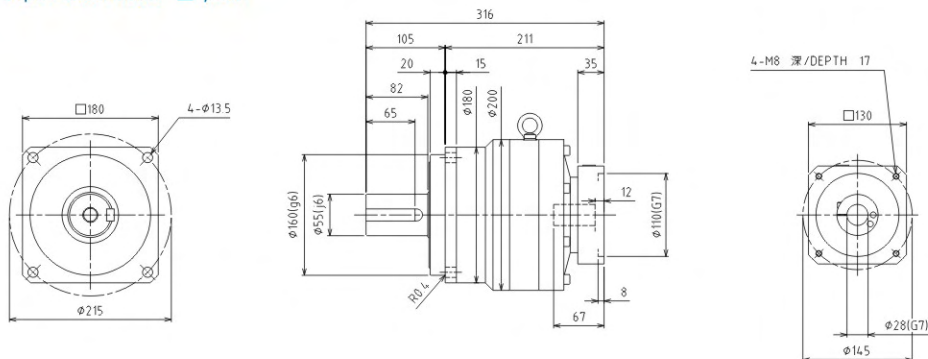
备注2: 电机轴径与输入轴径不同时, 可插入轴套。

Note1: Body Size Length will vary depending on motor.

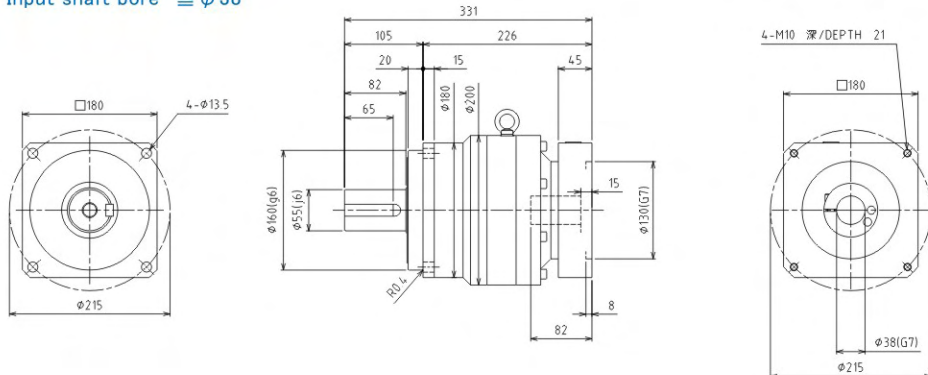
Note2: Bushing will be inserted to adapt to motor shaft.

AHB-180 2级 2stage

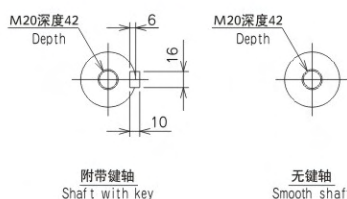
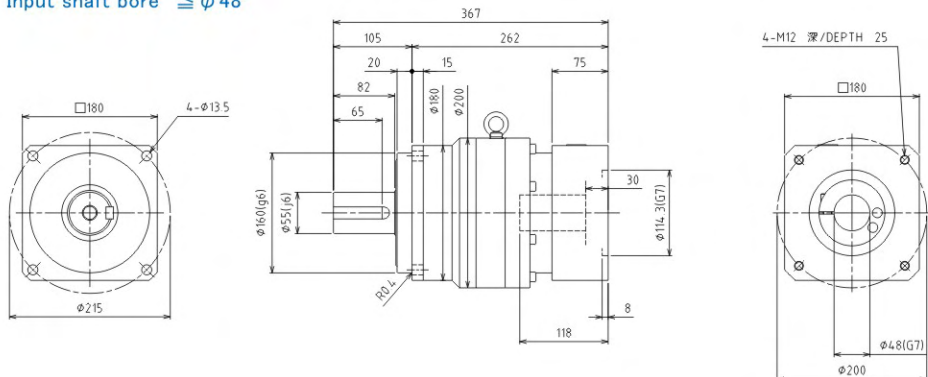
输入轴内径 Input shaft bore $\leq \phi 28$



输入轴内径 Input shaft bore $\leq \phi 38$



输入轴内径 Input shaft bore $\leq \phi 48$



备注1: 机身尺寸随安装电机的不同而有所差异。

备注2: 电机轴径与输入轴径不同时, 可插入轴套。

Note1: Body Size Length will vary depending on motor.

Note2: Bushing will be inserted to adapt to motor shaft.

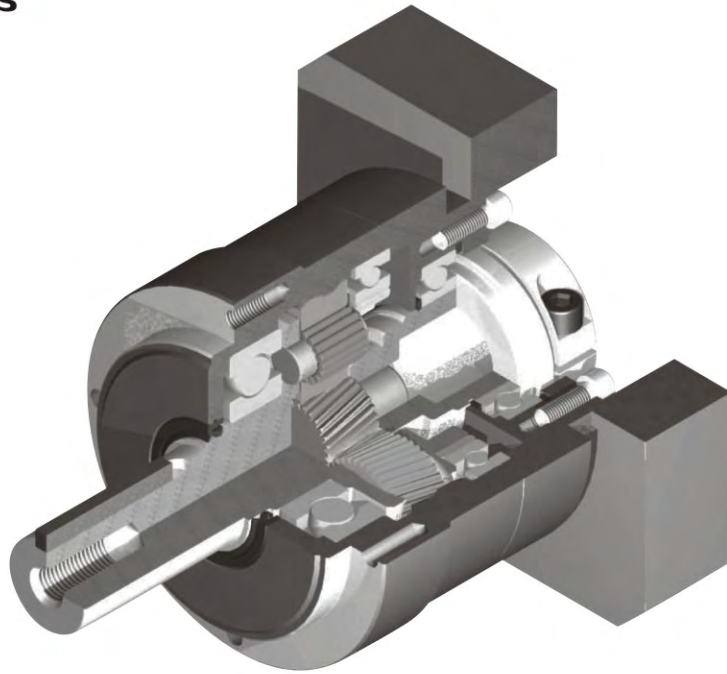
BETTO 貝託®
精密行星齿轮减速机

AHL

伺服电机专用



AHL series

**静音**

使用斜齿轮实现顺畅安静地运转。

Quiet operation

Helical gears contribute to reduce vibration and noise.

高精度

齿隙低于3分、定位精确。

High precision

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

高刚性、高扭矩

使用整体式滚珠轴承，大大提高了刚性和扭矩。

High rigidity & torque

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

连接法兰、轴套方式

电机通用性

Adapter-bushing connection

Motor generality

高粘度润滑脂

使用高粘度、不易分离的润滑脂，有效防止润滑脂泄漏。

High viscosity grease

Perfect solution using high viscosity anti-separation grease.

维护方便

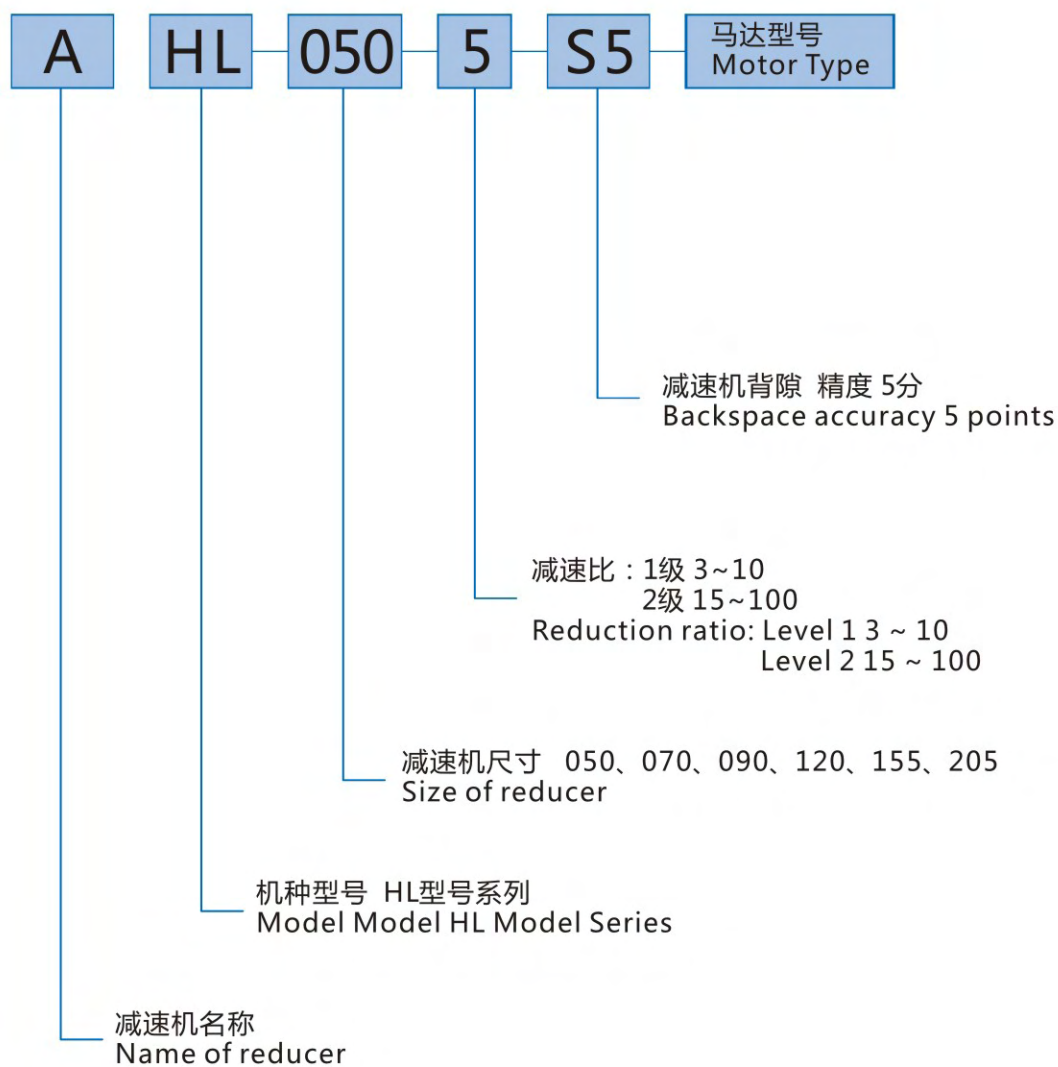
在产品寿命期内无需更换润滑脂，安装更便捷。

Maintenance-free

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

AHL series

机种、型号代码 Model number



AHL-050

尺寸 Frame size	机种 Model	减速比 Ratio	Φ 1			Φ 2		Φ 3	
			额定扭矩 Nominal output torque [Nm]	最大扭矩 Maximum output torque [Nm]	急停 最大扭矩 Emergency stop torque [Nm]	额定 输入转速 Nominal input speed [rpm]	最大 输入转速 Maximum input speed [rpm]	额定径向力 Permitted radial load [N]	额定轴向力 Permitted axial load [N]
050	1级 Single	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
		10	7	14	35	4000	8000	370	460
		15	7	14	35	4000	8000	420	550
		16	10	20	40	4000	8000	430	560
	2级 Double	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

尺寸 Frame size	机种 Model	减速比 Ratio	Φ 4		重量 Weight [kg]	Φ 5		Φ 6	
			最大 径向负荷 Maximum radial load [N]	最大 轴向负荷 Maximum axial load [N]		惯性力矩 Moment of inertia ($\leq \phi 8$) [kgcm ²]	惯性力矩 Moment of inertia ($\leq \phi 14$) [kgcm ²]	使用温度 Use the temperature	
050	1级 Single	3	730	660	0.7	0.053	0.091	-20℃ ~ 175℃	
		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		
		10	730	660		0.030	0.069		
	2级 Double	15	730	660	0.8	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 输入转速为额定转速时，使用寿命为 20000 小时的值
- Φ 2 输入转速为额定转速时，使用寿命为 20000 小时的值
(作用于轴中央，轴向负荷为 0 时)
- Φ 3 输入转速为额定转速时，使用寿命为 20000 小时的值
(作用于轴芯，径向负荷为 0 时)
- Φ 4 径向负荷的容许最大值
- Φ 5 轴向负荷的容许最大值
- Φ 6 使用温度 -20℃ ~ 175℃

- 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.
- Φ 6 Use the temperature - 20 °C ~ 175 °C

AHL-070

尺寸 Frame size	机种 Model	减速比 Ratio	①			②		③	
			额定扭矩 Nominal output torque [Nm]	最大扭矩 Maximum output torque [Nm]	急停 最大扭矩 Emergency stop torque [Nm]	额定 输入转速 Nominal input speed [rpm]	最大 输入转速 Maximum input speed [rpm]	额定径向力 Permitted radial load [N]	额定轴向力 Permitted axial load [N]
070	1级 Single	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
		10	20	40	90	3000	6000	655	545
		15	20	40	90	3000	6000	755	645
		16	29	55	110	3000	6000	765	665
	2级 Double	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

尺寸 Frame size	机种 Model	减速比 Ratio	④		重量 Weight [kg]	⑤		⑥	
			最大 径向负荷 Maximum radial load [N]	最大 轴向负荷 Maximum axial load [N]		惯性力矩 Moment of inertia ($\leq \phi 8$) [kgcm ²]	惯性力矩 Moment of inertia ($\leq \phi 14$) [kgcm ²]	惯性力矩 Moment of inertia ($\leq \phi 19$) [kgcm ²]	使用温度 Use the temperature
070	1级 Single	3	1225	1125	1.5	0.14	0.22	0.43	-20℃ ~ 175℃
		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	
		10	1225	1125		0.056	0.14	0.34	
	2级 Double	15	1225	1125	1.7	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 输入转速为额定转速时，使用寿命为 20000 小时的值

② 输入转速为额定转速时，使用寿命为 20000 小时的值
(作用于轴中央，轴向负荷为 0 时)③ 输入转速为额定转速时，使用寿命为 20000 小时的值
(作用于轴芯，径向负荷为 0 时)

④ 径向负荷的容许最大值

⑤ 轴向负荷的容许最大值

⑥ 使用温度 -20℃ ~ 175℃

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 Use the temperature -20℃ ~ 175℃

AHL-090

尺寸 Frame size	机种 Model	减速比 Ratio	①			②		③	
			额定扭矩 Nominal output torque [Nm]	最大扭矩 Maximum output torque [Nm]	急停 最大扭矩 Emergency stop torque [Nm]	额定 输入转速 Nominal input speed [rpm]	最大 输入转速 Maximum input speed [rpm]	额定径向力 Permitted radial load [N]	额定轴向力 Permitted axial load [N]
090	1级 Single	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
		15	53	85	210	3000	6000	1420	1920
		16	78	130	260	3000	6000	1420	1920
	2级 Double	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
		60	78	130	260	3000	6000	2220	2220
		70	78	130	260	3000	6000	2320	2220
		80	78	130	260	3000	6000	2420	2220
		90	53	85	210	3000	6000	2420	2220
		100	53	85	210	3000	6000	2420	2220

尺寸 Frame size	机种 Model	减速比 Ratio	④		重量 Weight [kg]	⑤			
			最大 径向负荷 Maximum radial load [N]	最大 轴向负荷 Maximum axial load [N]		惯性力矩 Moment of inertia ($\leq \phi 8$) [kgcm ²]	惯性力矩 Moment of inertia ($\leq \phi 14$) [kgcm ²]	惯性力矩 Moment of inertia ($\leq \phi 19$) [kgcm ²]	惯性力矩 Moment of inertia ($\leq \phi 28$) [kgcm ²]
090	1级 Single	3	2430	2230	3.5	-	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
	2级 Double	15	2430	2230	4	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 输入转速为额定转速时，使用寿命为 20000 小时的值

② 输入转速为额定转速时，使用寿命为 20000 小时的值
(作用于轴中央，轴向负荷为 0 时)

③ 输入转速为额定转速时，使用寿命为 20000 小时的值
(作用于轴芯，径向负荷为 0 时)

④ 径向负荷的容许最大值

⑤ 轴向负荷的容许最大值

注：使用温度 -20℃ ~ 175℃

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.

Note: Use the temperature -20℃ ~ 175℃

AHL-120

尺寸 Frame size	机种 Model	减速比 Ratio	○ 1			○ 2		○ 3	
			额定扭矩 Nominal output torque [Nm]	最大扭矩 Maximum output torque [Nm]	急停 最大扭矩 Emergency stop torque [Nm]	额定 输入转速 Nominal input speed [rpm]	最大 输入转速 Maximum input speed [rpm]	额定径向力 Permitted radial load [N]	额定轴向力 Permitted axial load [N]
120	1级 Single	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
		15	124	230	515	3000	6000	2325	3025
		16	184	335	640	3000	6000	2325	3125
	2级 Double	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
		60	184	335	640	3000	6000	3625	3925
		70	184	335	640	3000	6000	3825	3925
		80	184	335	640	3000	6000	4025	3925
		90	124	230	515	3000	6000	4225	3925
		100	124	230	515	3000	6000	4325	3925

尺寸 Frame size	机种 Model	减速比 Ratio	○ 4		重量 Weight [kg]	○ 5		惯性力矩 Moment of inertia ($\leq \phi 14$) [kgcm ²]	惯性力矩 Moment of inertia ($\leq \phi 19$) [kgcm ²]	惯性力矩 Moment of inertia ($\leq \phi 28$) [kgcm ²]	惯性力矩 Moment of inertia ($\leq \phi 38$) [kgcm ²]
			最大 径向负荷 Maximum radial load [N]	最大 轴向负荷 Maximum axial load [N]		最大 径向负荷 Maximum radial load [N]	最大 轴向负荷 Maximum axial load [N]				
120	1级 Single	3	4335	3935	7.8	-	-	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	-
	2级 Double	15	4335	3935	8.7	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 输入转速为额定转速时, 使用寿命为 20000 小时的值

○ 2 输入转速为额定转速时, 使用寿命为 20000 小时的值
(作用于轴中央, 轴向负荷为 0 时)○ 3 输入转速为额定转速时, 使用寿命为 20000 小时的值
(作用于轴芯, 径向负荷为 0 时)

○ 4 径向负荷的容许最大值

○ 5 轴向负荷的容许最大值

注: 使用温度 -20℃ ~ 175℃

○ 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.

Note: Use the temperature -20℃ ~ 175℃

AHL-155

尺寸 Frame size	机种 Model	减速比 Ratio	○ 1			○ 2		○ 3	
			额定扭矩 Nominal output torque [Nm]	最大扭矩 Maximum output torque [Nm]	急停 最大扭矩 Emergency stop torque [Nm]	额定 输入转速 Nominal input speed [rpm]	最大 输入转速 Maximum input speed [rpm]	额定径向力 Permitted radial load [N]	额定轴向力 Permitted axial load [N]
155	1级 Single	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
		15	245	476	1016	2000	4000	5430	4930
		16	365	706	1266	2000	4000	5530	5030
	2级 Double	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

尺寸 Frame size	机种 Model	减速比 Ratio	○ 4		重量 Weight [kg]	○ 5			
			最大 径向负荷 Maximum radial load [N]	最大 轴向负荷 Maximum axial load [N]		惯性力矩 Moment of inertia ($\leq \phi 19$) [kgcm ²]	惯性力矩 Moment of inertia ($\leq \phi 28$) [kgcm ²]	惯性力矩 Moment of inertia ($\leq \phi 38$) [kgcm ²]	惯性力矩 Moment of inertia ($\leq \phi 48$) [kgcm ²]
155	1级 Single	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 Double	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	—
		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 输入转速为额定转速时，使用寿命为 20000 小时的值
 ○ 2 输入转速为额定转速时，使用寿命为 20000 小时的值
 （作用于轴中央，轴向负荷为 0 时）

○ 3 输入转速为额定转速时，使用寿命为 20000 小时的值
 （作用于轴芯，径向负荷为 0 时）

○ 4 径向负荷的容许最大值

○ 5 轴向负荷的容许最大值

注：使用温度 -20℃ ~ 175℃

○ 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.

Note: Use the temperature -20℃ ~ 175℃

AHL-205

尺寸 Frame size	机种 Model	减速比 Ratio	①			②		③	
			额定扭矩	最大扭矩	急停 最大扭矩	额定 输入转速	最大 输入转速	额定径向力	额定轴向力
			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]
205	1级 Single	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
	2级 Double	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

尺寸 Frame size	机种 Model	减速比 Ratio	④		重量 Weight [kg]	⑤		惯性力矩 Moment of inertia ($\leq \phi 28$) [kgcm ²]	惯性力矩 Moment of inertia ($\leq \phi 38$) [kgcm ²]	惯性力矩 Moment of inertia ($\leq \phi 48$) [kgcm ²]	惯性力矩 Moment of inertia ($\leq \phi 65$) [kgcm ²]
			最大 径向负荷	最大 轴向负荷		最大 径向负荷	最大 轴向负荷				
			Maximum radial load [N]	Maximum axial load [N]		Maximum radial load [N]	Maximum axial load [N]				
205	1级 Single	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		
	2级 Double	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	-		
		60	15045	14045		3.1	11	33	-		
		70	15045	14045		3.1	11	33	-		
		80	15045	14045		3.1	11	33	-		
		90	15045	14045		3.1	11	33	-		
		100	15045	14045		3.1	11	33	-		

① 输入转速为额定转速时, 使用寿命为 20000 小时的值

② 输入转速为额定转速时, 使用寿命为 20000 小时的值
(作用于轴中央, 轴向负荷为 0 时)③ 输入转速为额定转速时, 使用寿命为 20000 小时的值
(作用于轴芯, 径向负荷为 0 时)

④ 径向负荷的容许最大值

⑤ 轴向负荷的容许最大值

注: 使用温度 -20℃ ~ 175℃

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)

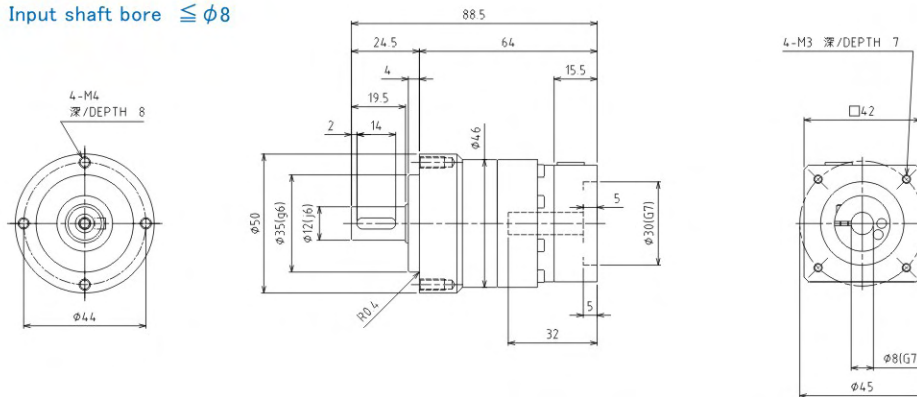
④ The maximum radial load the reducer can accept.

⑤ The maximum axial load the reducer can accept.

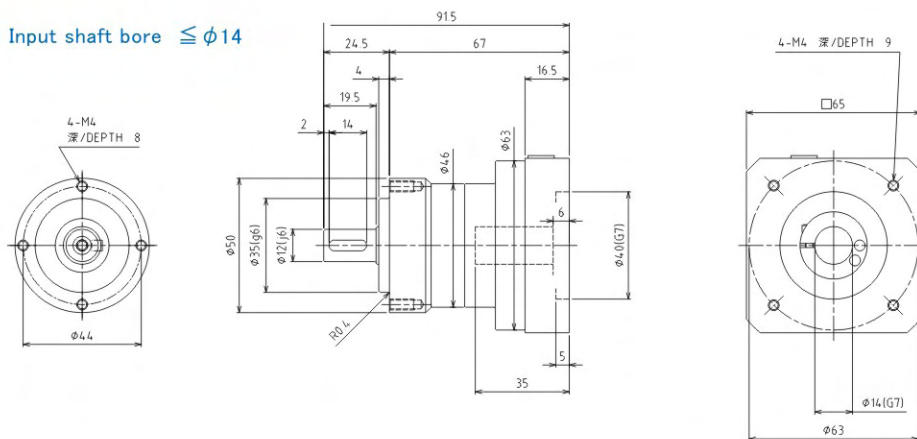
Note: Use the temperature -20℃ ~ 175℃

AHL-050 1级 1stage

输入轴内径 Input shaft bore $\leq \phi 8$

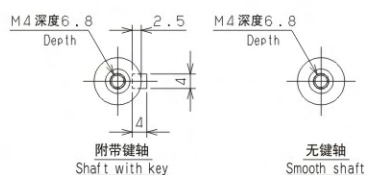
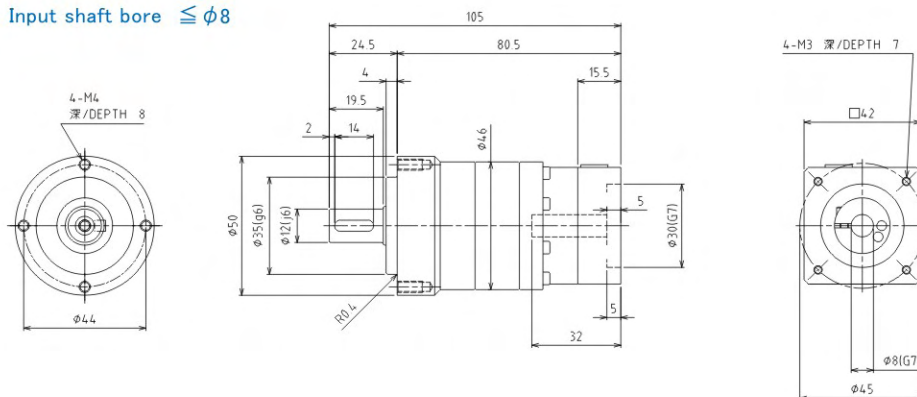


输入轴内径 Input shaft bore $\leq \phi 14$



AHL-050 2段 2stage

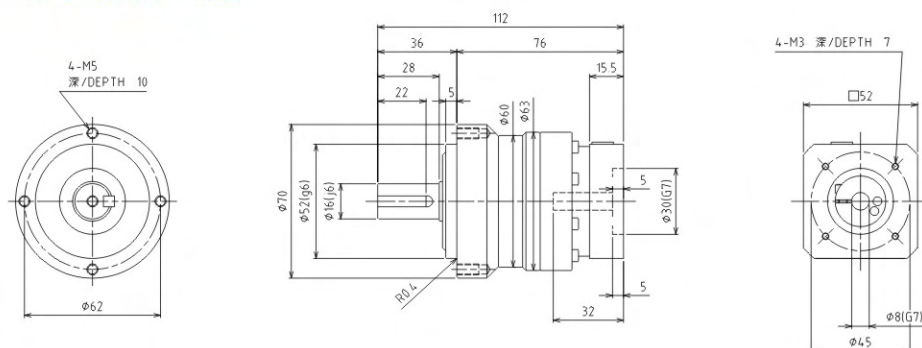
输入轴内径 Input shaft bore $\leq \phi 8$



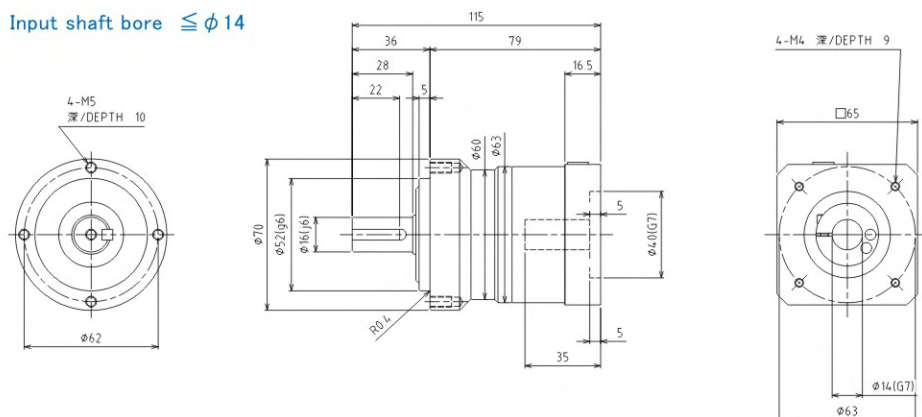
备注1: 机身尺寸随安装电机的不同而有所差异。
 备注2: 电机轴径与输入轴径不同时, 可插入轴套。
 Note1: Body Size Length will vary depending on motor.
 Note2: Bushing will be inserted to adapt to motor shaft.

AHL-070 1级 1stage

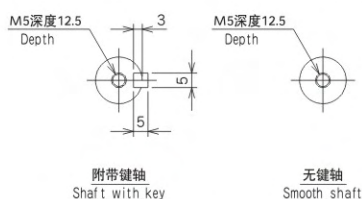
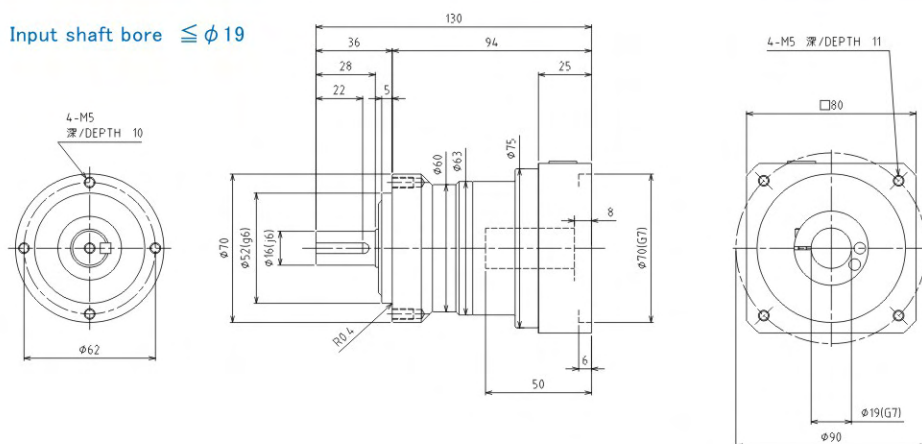
输入轴内径 Input shaft bore $\leq \phi 8$



输入轴内径 Input shaft bore $\leq \phi 14$



输入轴内径 Input shaft bore $\leq \phi 19$



备注1: 机身尺寸随安装电机的不同而有所差异。

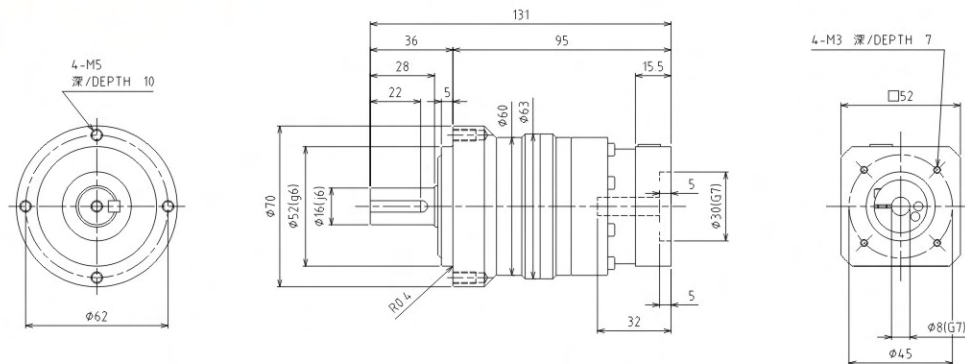
备注2: 电机轴径与输入轴径不同时, 可插入轴套。

Note1: Body Size Length will vary depending on motor.

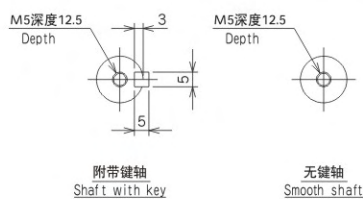
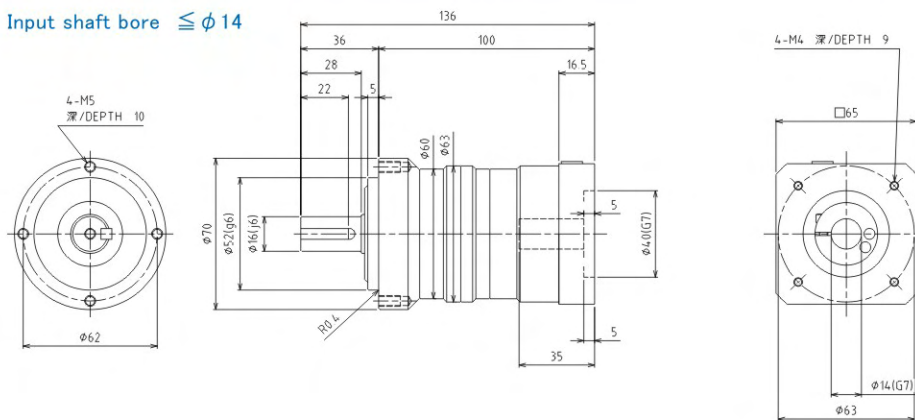
Note2: Bushing will be inserted to adapt to motor shaft.

AHL-070 2级 2stage

输入轴内径 Input shaft bore $\leq \phi 8$



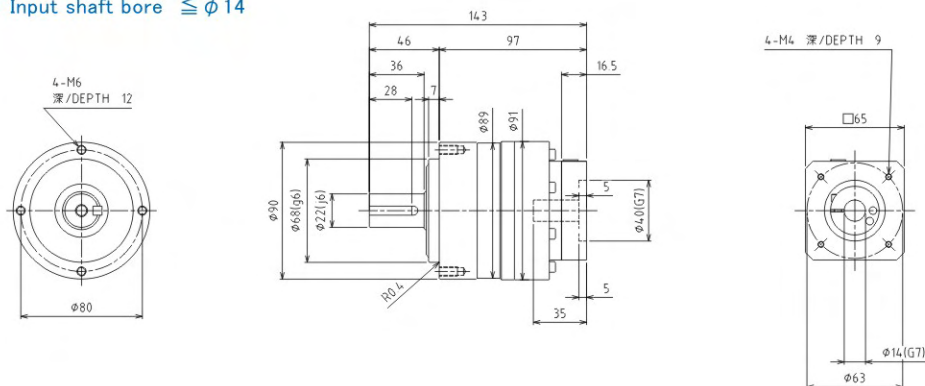
输入轴内径 Input shaft bore $\leq \phi 14$



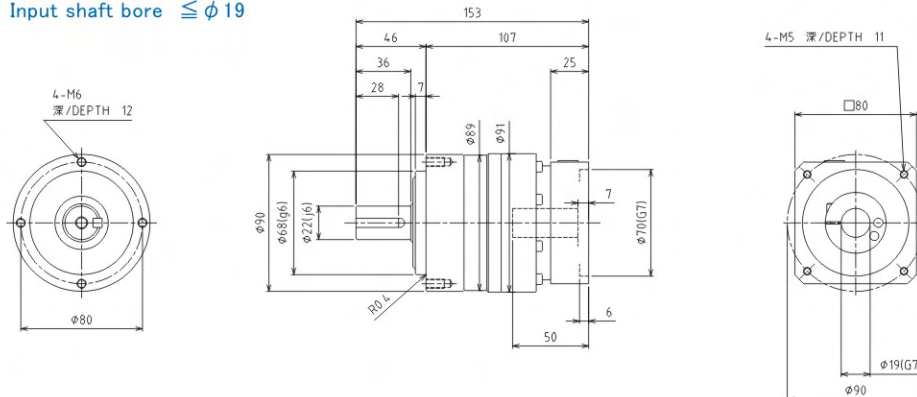
备注1: 机身尺寸随安装电机的不同而有所差异。
 备注2: 电机轴径与输入轴径不同时, 可插入轴套。
 Note1: Body Size Length will vary depending on motor.
 Note2: Bushing will be inserted to adapt to motor shaft.

AHL-090 1级 1stage

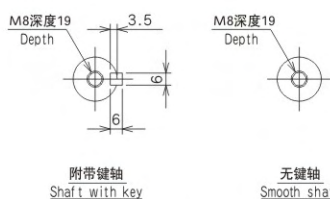
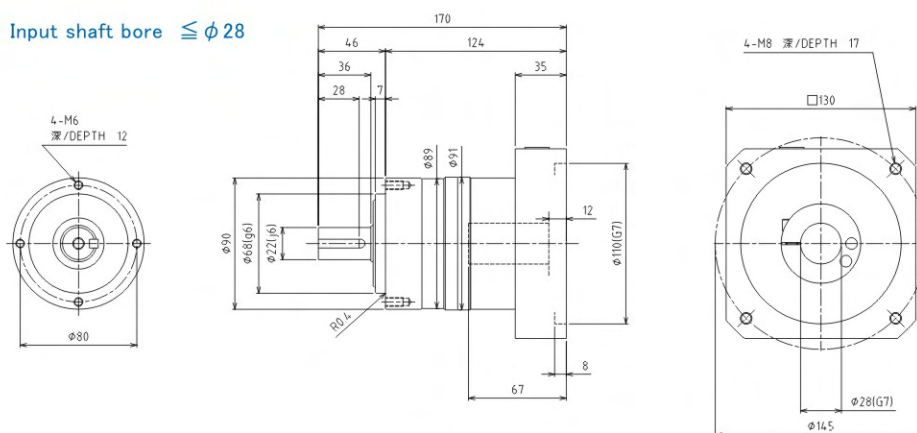
输入轴内径 Input shaft bore $\leq \phi 14$



输入轴内径 Input shaft bore $\leq \phi 19$



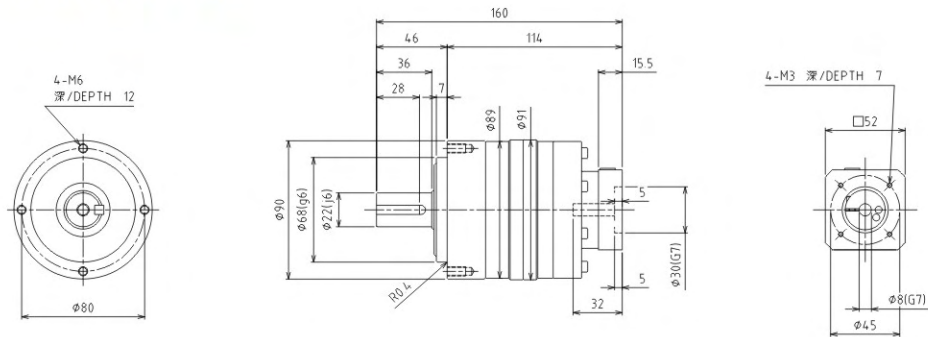
输入轴内径 Input shaft bore $\leq \phi 28$



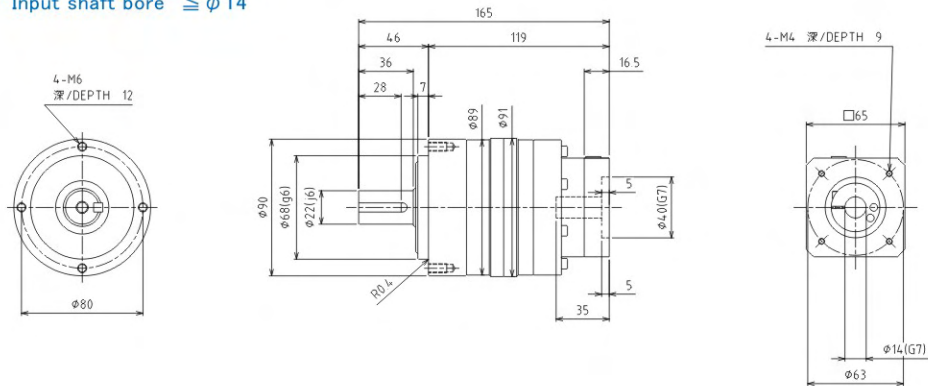
备注1: 机身尺寸随安装电机的不同而有所差异。
备注2: 电机轴径与输入轴径不同时, 可插入轴套。
Note1: Body Size Length will vary depending on motor.
Note2: Bushing will be inserted to adapt to motor shaft.

AHL-090 2级 2stage

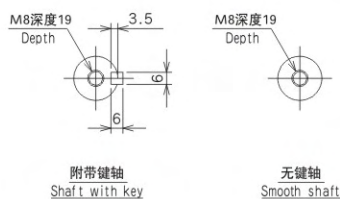
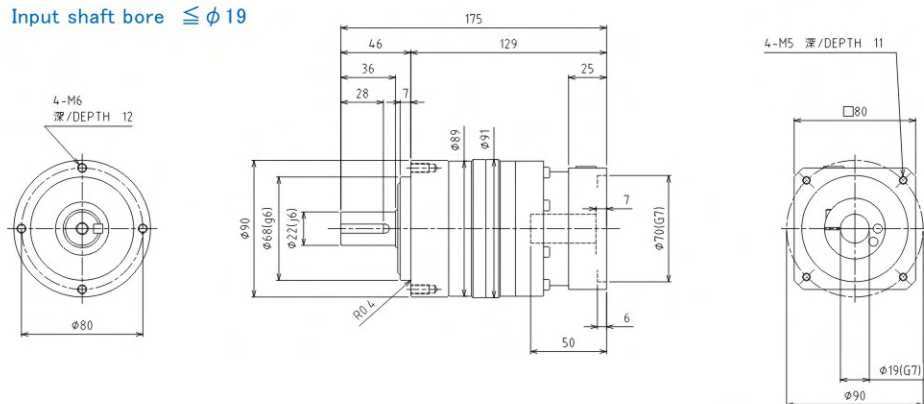
输入轴内径 Input shaft bore $\leq \phi 8$



输入轴内径 Input shaft bore $\leq \phi 14$



输入轴内径 Input shaft bore $\leq \phi 19$



备注1: 机身尺寸随安装电机的不同而有所差异。

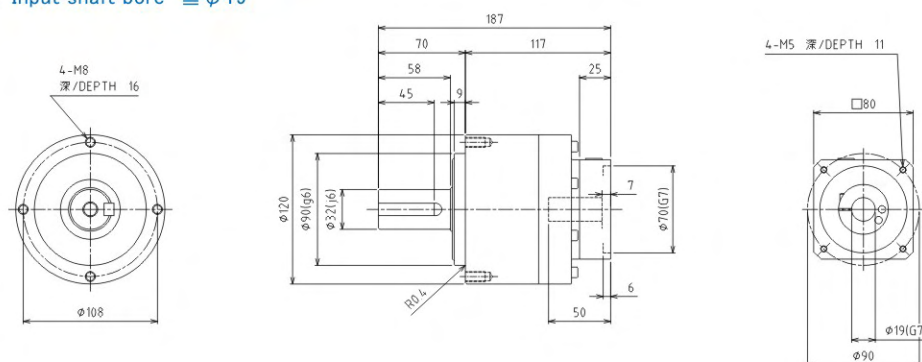
备注2: 电机轴径与输入轴径不同时, 可插入轴套。

Note1: Body Size Length will vary depending on motor.

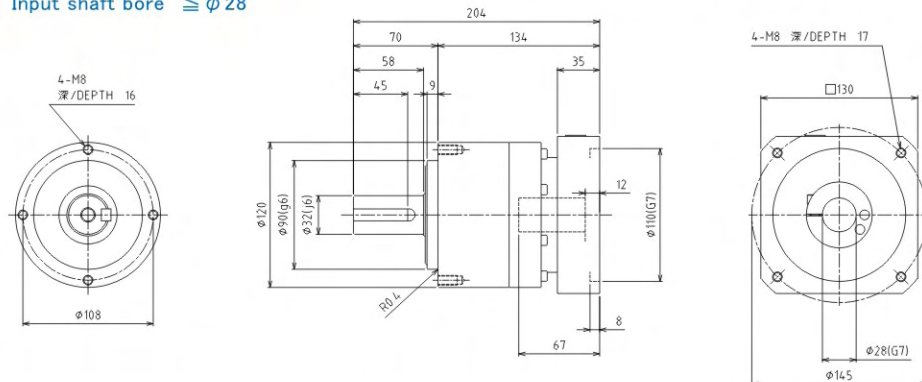
Note1: Body Size Length will vary depending on motor.
Note2: Bushing will be inserted to adapt to motor shaft.

AHL-120 1级 1stage

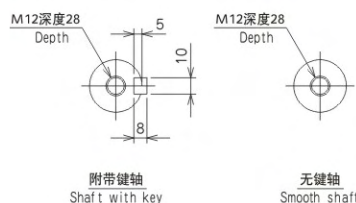
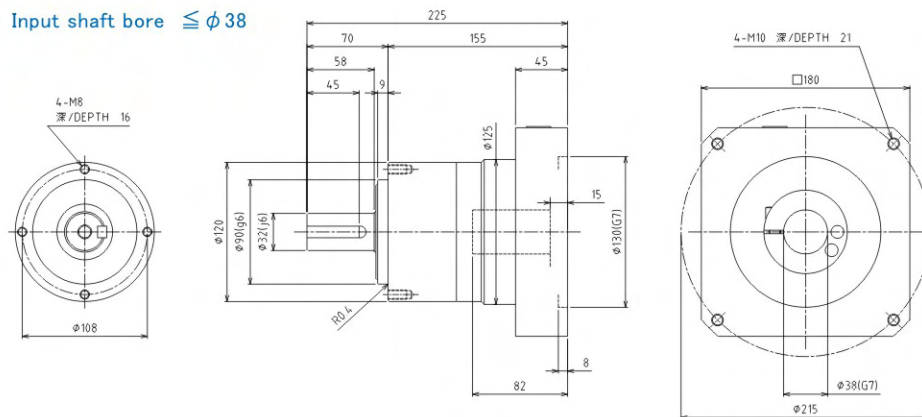
输入轴内径 Input shaft bore $\leq \phi 19$



输入轴内径 Input shaft bore $\leq \phi 28$



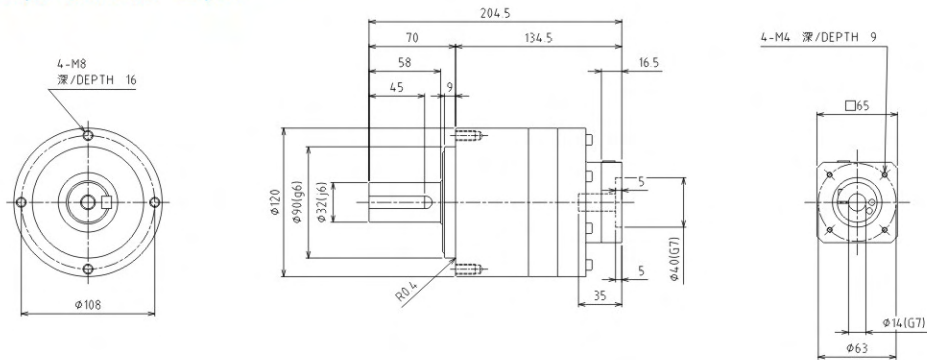
输入轴内径 Input shaft bore $\leq \phi 38$



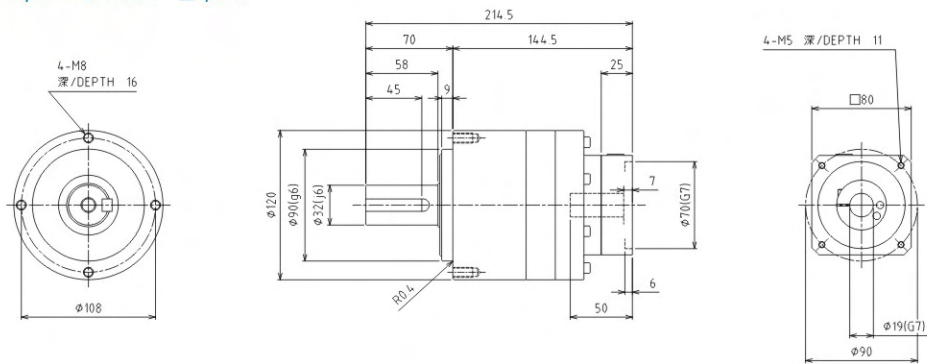
备注1: 机身尺寸随安装电机的不同而有所差异。
 备注2: 电机轴径与输入轴径不同时, 可插入轴套。
 Note1: Body Size Length will vary depending on motor.
 Note2: Bushing will be inserted to adapt to motor shaft.

AHL-120 2級 2stage

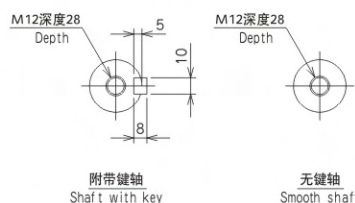
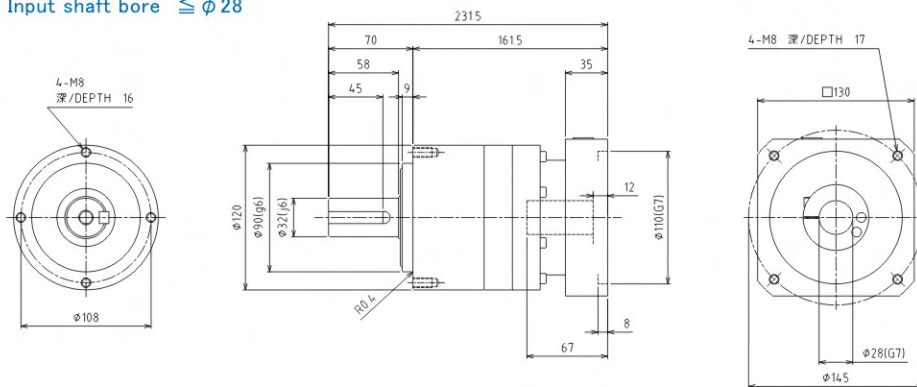
输入轴内径 Input shaft bore $\leq \phi 14$



输入轴内径 Input shaft bore $\leq \phi 19$



输入轴内径 Input shaft bore $\leq \phi 28$



备注1: 机身尺寸随安装电机的不同而有所差异。

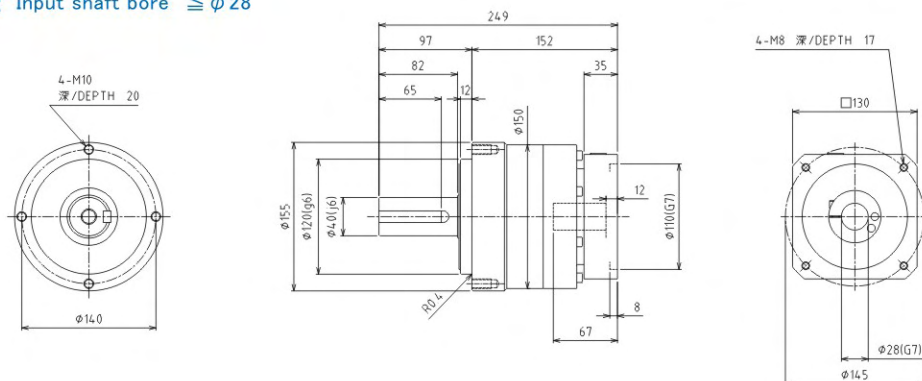
备注2: 电机轴径与输入轴径不同时, 可插入轴套。

Note1: Body Size Length will vary depending on motor.

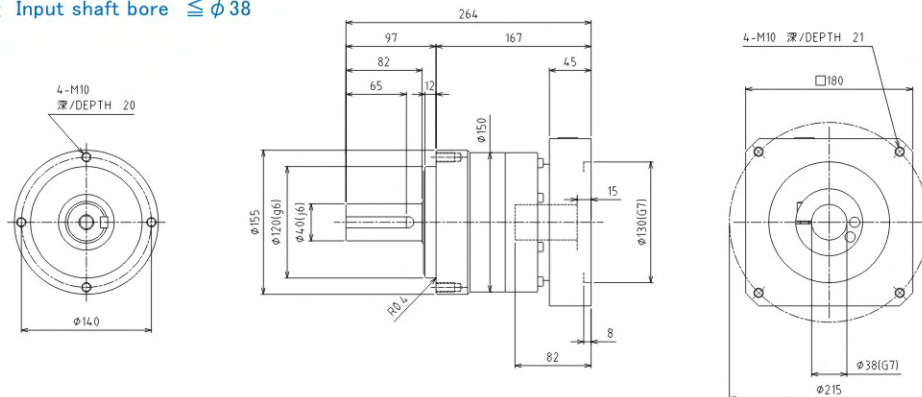
Note2: Bushing will be inserted to adapt to motor shaft.

AHL-155 1级 1stage

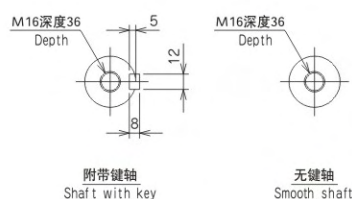
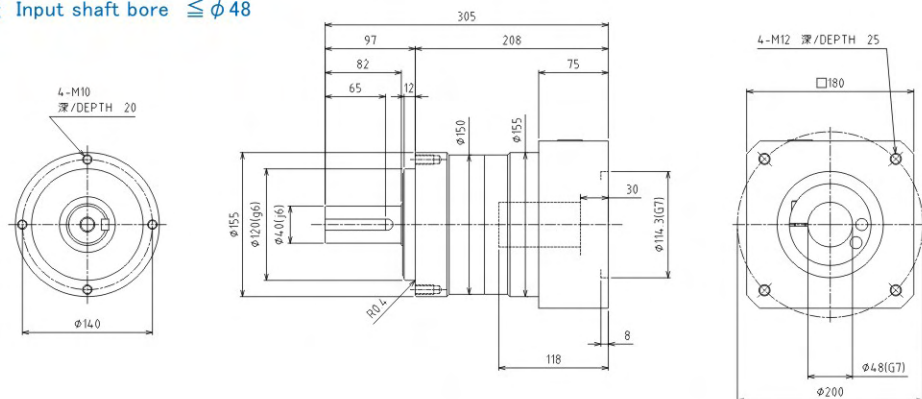
输入轴内径 Input shaft bore $\leq \phi 28$



输入轴内径 Input shaft bore $\leq \phi 38$



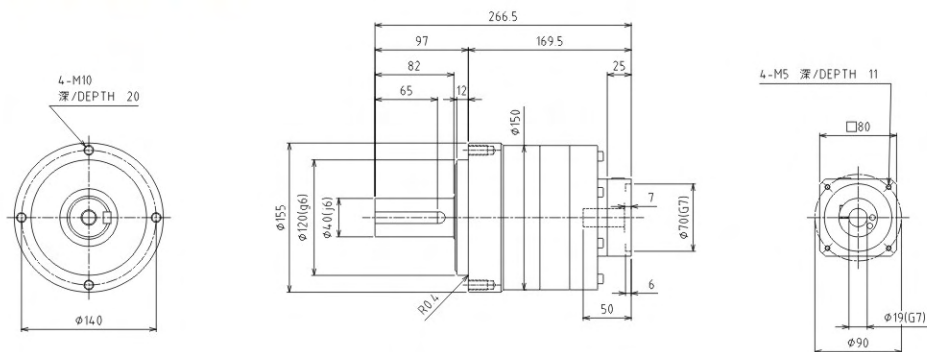
输入轴内径 Input shaft bore $\leq \phi 48$



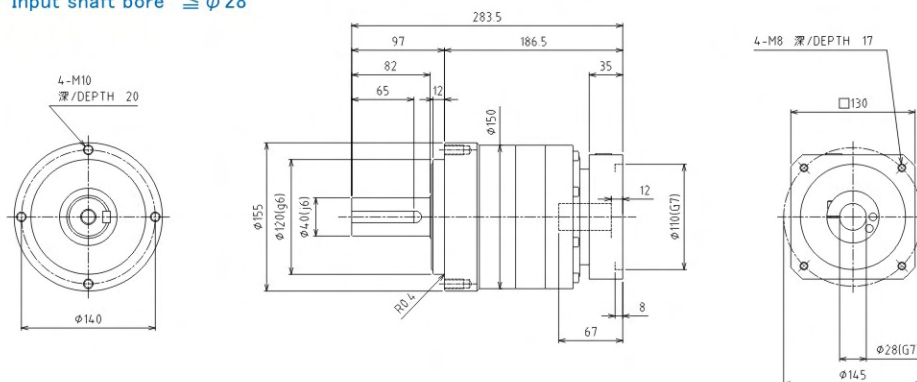
备注1: 机身尺寸随安装电机的不同而有所差异。
备注2: 电机轴径与输入轴径不同时, 可插入轴套。
Note1: Body Size Length will vary depending on motor.
Note2: Bushing will be inserted to adapt to motor shaft.

AHL-155 2级 2stage

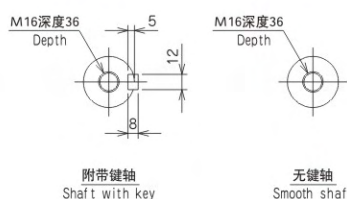
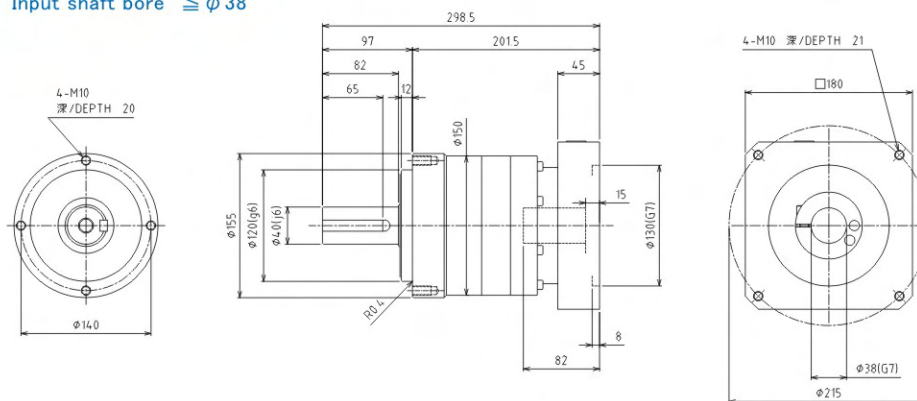
输入轴内径 Input shaft bore $\leq \phi 19$



输入轴内径 Input shaft bore $\leq \phi 28$



输入轴内径 Input shaft bore $\leq \phi 38$



备注1: 机身尺寸随安装电机的不同而有所差异。

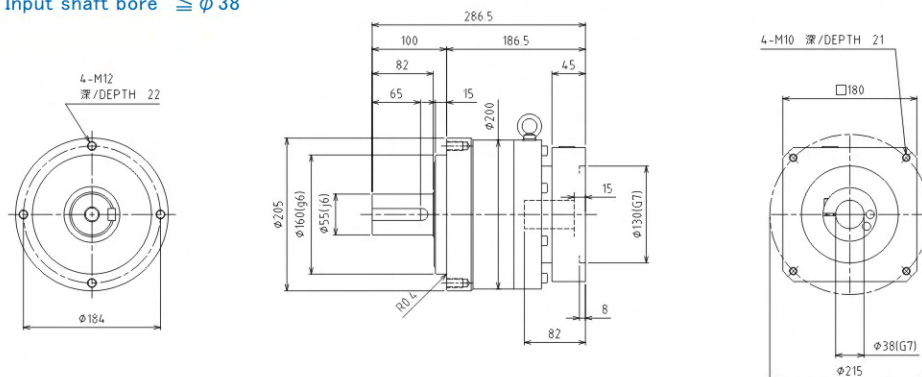
备注2: 电机轴径与输入轴径不同时, 可插入轴套。

Note1: Body Size Length will vary depending on motor.

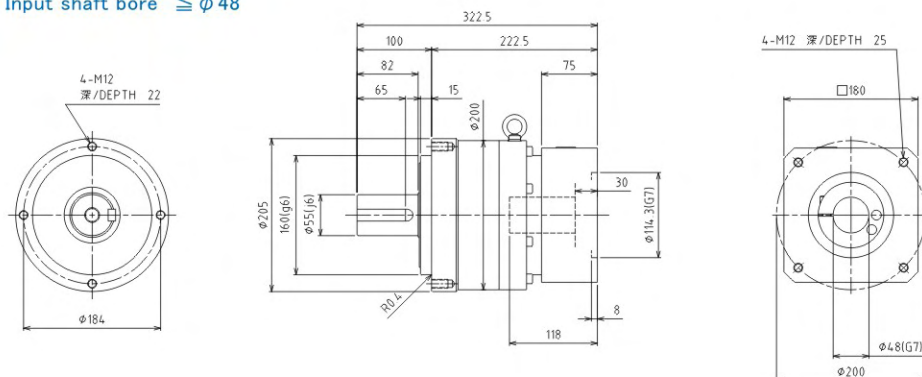
Note2: Bushing will be inserted to adapt to motor shaft.

AHL-205 1级 1stage

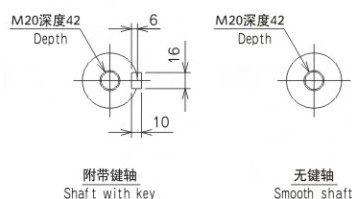
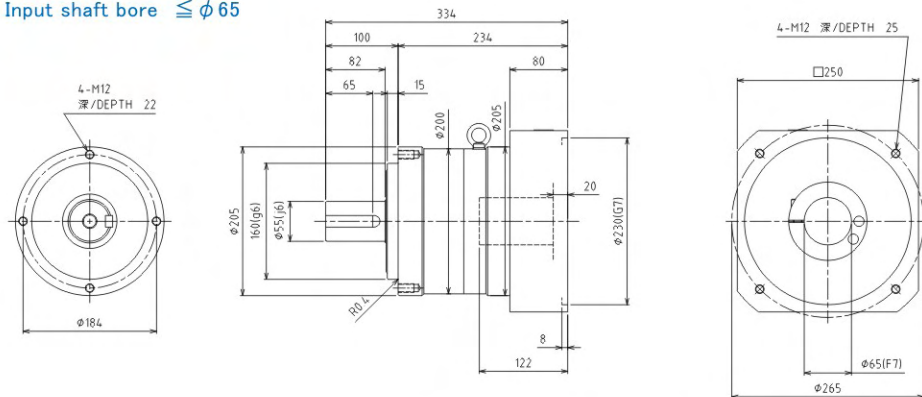
输入轴内径 Input shaft bore $\leq \phi 38$



输入轴内径 Input shaft bore $\leq \phi 48$



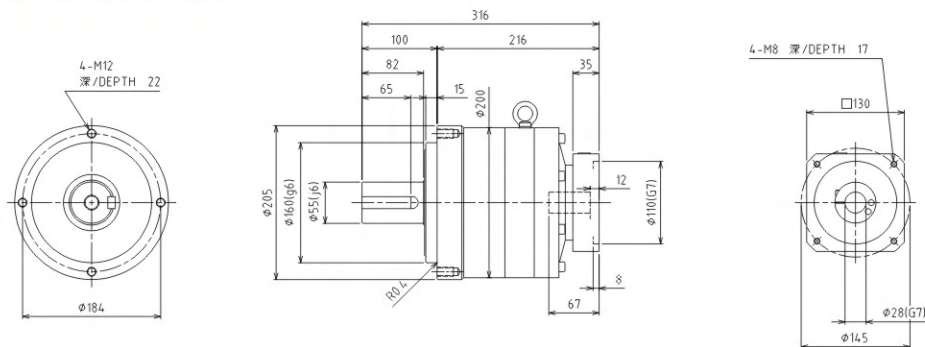
输入轴内径 Input shaft bore $\leq \phi 65$



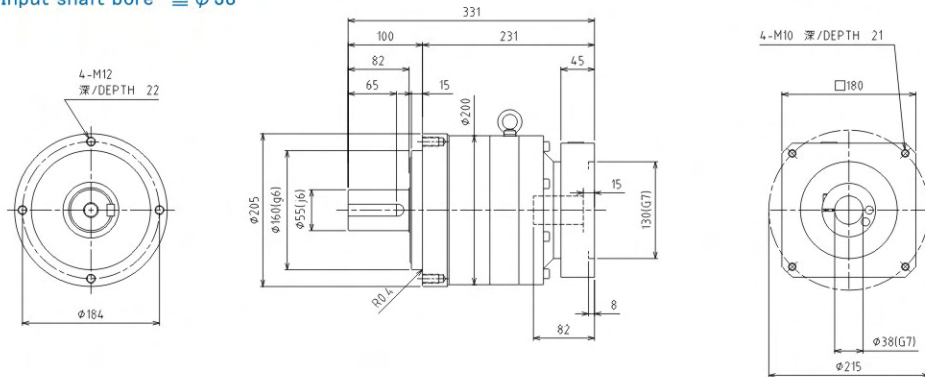
备注1: 机身尺寸随安装电机的不同而有所差异。
 备注2: 电机轴径与输入轴径不同时, 可插入轴套。
 Note1: Body Size Length will vary depending on motor.
 Note2: Bushing will be inserted to adapt to motor shaft.

AHL-205 2级 2stage

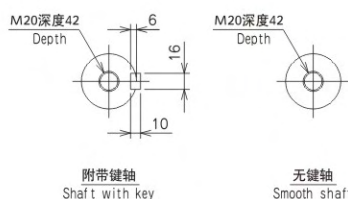
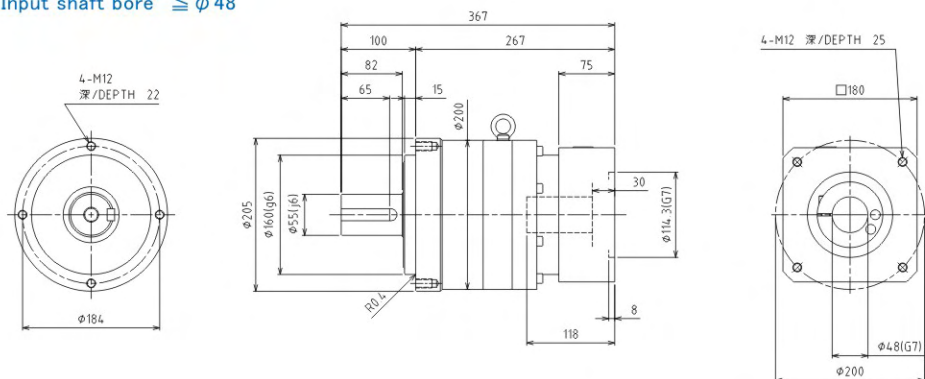
输入轴内径 Input shaft bore $\leq \phi 28$



输入轴内径 Input shaft bore $\leq \phi 38$



输入轴内径 Input shaft bore $\leq \phi 48$

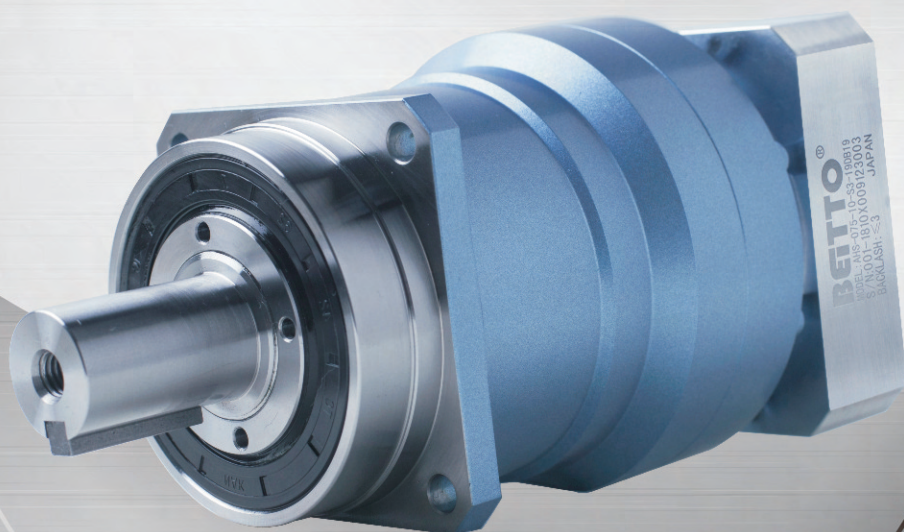


备注1: 机身尺寸随安装电机的不同而有所差异。
备注2: 电机轴径与输入轴径不同时, 可插入轴套。
Note1: Body Size Length will vary depending on motor.
Note2: Bushing will be inserted to adapt to motor shaft.

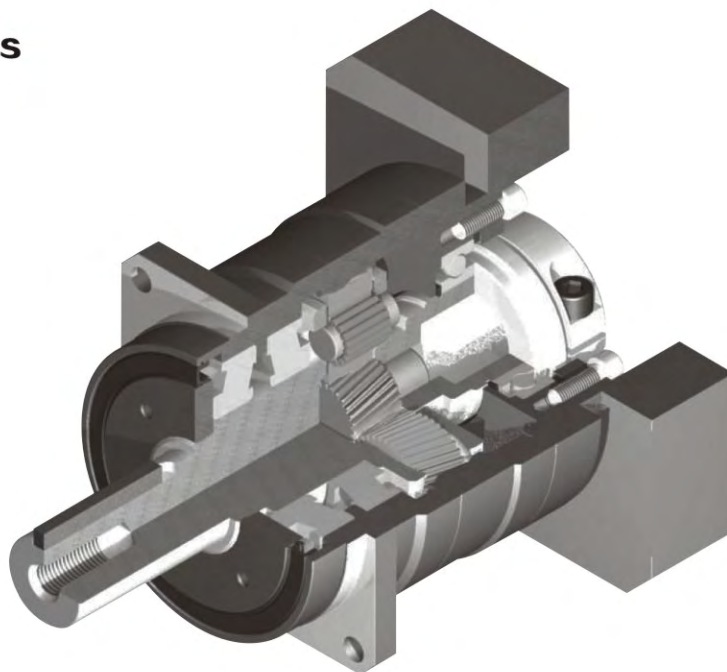
BETTO 貝託®
精密行星齿轮减速机

AHS

伺服电机专用



AHS series



高精度

齿隙低于3分、定位精确。

High precision

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

高刚性、高扭矩

使用整体式滚珠轴承, 大大提高了刚性和扭矩。

High rigidity & torque

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

高负载

主轴承采用锥形滚柱轴承, 实现高负载容量。

High load

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

连接法兰、轴套方式

电机通用性

Adapter-bushing connection

Motor generality

高粘度润滑脂

使用高粘度、不易分离的润滑脂, 有效防止润滑脂泄漏。

High viscosity grease

Perfect solution using high viscosity anti-separation grease.

维护方便

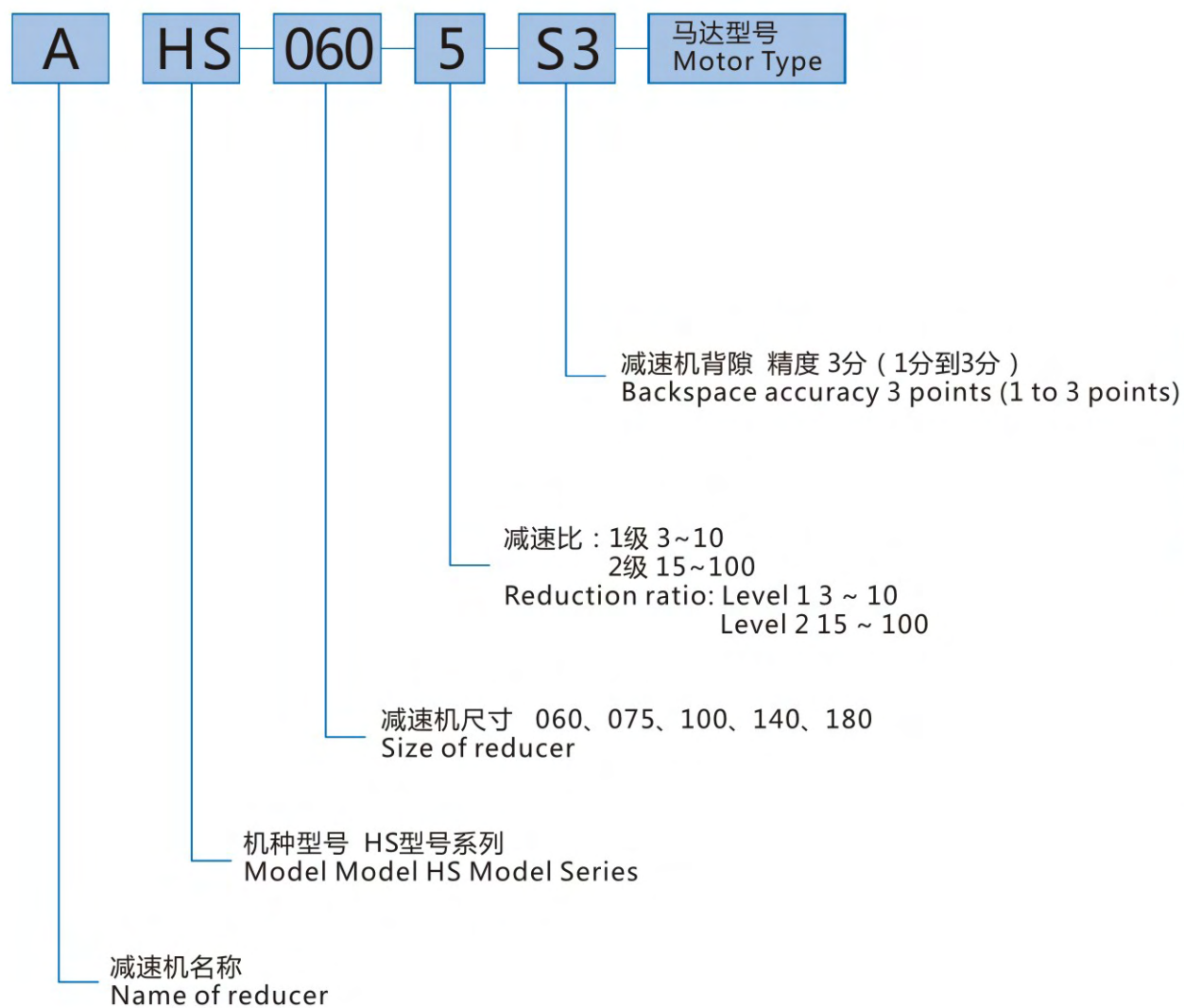
在产品寿命期内无需更换润滑脂, 安装更便捷。

Maintenance-free

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

AHS series

机种、型号代码 Model number



AHS-060

尺寸 Frame size	机种 Model	减速比 Ratio	①			②		③	
			额定扭矩 Nominal output torque [Nm]	最大扭矩 Maximum output torque [Nm]	急停 最大扭矩 Emergency stop torque [Nm]	额定 输入转速 Nominal input speed [rpm]	最大 输入转速 Maximum input speed [rpm]	额定径向力 Permitted radial load [N]	额定轴向力 Permitted axial load [N]
060	1级 Single	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
	2级 Double	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

尺寸 Frame size	机种 Model	减速比 Ratio	④		重量 Weight [kg]	⑤		⑥	
			最大 径向负荷 Maximum radial load [N]	最大 轴向负荷 Maximum axial load [N]		惯性力矩 Moment of inertia ($\leq \phi 8$) [kgcm ²]	惯性力矩 Moment of inertia ($\leq \phi 14$) [kgcm ²]	惯性力矩 Moment of inertia ($\leq \phi 19$) [kgcm ²]	使用温度 Use the temperature
060	1级 Single	3	3030	2730	1.6	0.15	0.23	0.44	-20℃ ~ 175℃
		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	
	2级 Double	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	—	

① 输入转速为额定转速时，使用寿命为 20000 小时的值

② 输入转速为额定转速时，使用寿命为 20000 小时的值
(作用于轴中央，轴向负荷为 0 时)

③ 输入转速为额定转速时，使用寿命为 20000 小时的值
(作用于轴芯，径向负荷为 0 时)

④ 径向负荷的容许最大值

⑤ 轴向负荷的容许最大值

⑥ 使用温度 -20℃ ~ 175℃

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 Use the temperature -20℃ ~ 175℃

AHS-075

AHS-075

		⊙ 1			⊙ 2		⊙ 3			
尺寸 Frame size	机种 Model	减速比 Ratio	额定扭矩 Nominal output torque [Nm]	最大扭矩 Maximum output torque [Nm]	急停 最大扭矩 Emergency stop torque [Nm]	额定 输入转速 Nominal input speed [rpm]	最大 输入转速 Maximum input speed [rpm]	额定径向力 Permitted radial load [N]	额定轴向力 Permitted axial load [N]	
075	1级 Single	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	
		2级 Double	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	
	60	80	130	260	3000	6000	4330	3930		
	70	80	130	260	3000	6000	4330	3930		
80	80	130	260	3000	6000	4330	3930			
90	55	85	210	3000	6000	4330	3930			
100	55	85	210	3000	6000	4330	3930			

		⌀ 4		⌀ 5							
尺寸 Frame size	机种 Model	减速比 Ratio	最大 径向负荷 Maximum radial load	最大 轴向负荷 Maximum axial load	重量 Weight	惯性力矩 Moment of inertia (≤ ϕ 8)	惯性力矩 Moment of inertia (≤ ϕ 14)	惯性力矩 Moment of inertia (≤ ϕ 19)	惯性力矩 Moment of inertia (≤ ϕ 28)		
			[N]	[N]	[kg]	[kgcm ²]	[kgcm ²]	[kgcm ²]	[kgcm ²]		
075	1级 Single	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		
		2级 Double	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	—		
	60	4335	3935	0.098	0.25	0.69	—				
	70	4335	3935	0.097	0.25	0.69	—				
80	4335	3935	0.097	0.25	0.69	—					
90	4335	3935	0.097	0.25	0.69	—					
100	4335	3935	0.097	0.25	0.69	—					

① 输入转速为额定转速时，使用寿命为 20000 小时的值

② 输入转速为额定转速时，使用寿命为 20000 小时的值
(作用于轴中央，轴向负荷为 0 时)

③ 输入转速为额定转速时，使用寿命为 20000 小时的值
(作用于轴芯，径向负荷为 0 时)

④ 径向负荷的容许最大值

⑤ 轴向负荷的容许最大值
注：使用温度 -20℃ ~ 175℃

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.

Note: Use the temperature - 20 °C ~ 175 °C

AHS-100

尺寸 Frame size	机种 Model	减速比 Ratio	①			②		③	
			额定扭矩 Nominal output torque [Nm]	最大扭矩 Maximum output torque [Nm]	急停 最大扭矩 Emergency stop torque [Nm]	额定 输入转速 Nominal input speed [rpm]	最大 输入转速 Maximum input speed [rpm]	额定径向力 Permitted radial load [N]	额定轴向力 Permitted axial load [N]
100	1级 Single	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
		15	124	230	505	3000	6000	5635	6335
		16	184	335	630	3000	6000	5735	6335
	2级 Double	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
		60	184	335	630	3000	6000	7035	6335
		70	184	335	630	3000	6000	7035	6335
		80	184	335	630	3000	6000	7035	6335
		90	124	230	505	3000	6000	7035	6335
		100	124	230	505	3000	6000	7035	6335

		Φ 4		Φ 5					
尺寸 Frame size	机种 Model	减速比 Ratio	最大 径向负荷 Maximum radial load	最大 轴向负荷 Maximum axial load	重量 Weight	惯性力矩 Moment of inertia (≤ φ 14)	惯性力矩 Moment of inertia (≤ φ 19)	惯性力矩 Moment of inertia (≤ φ 28)	惯性力矩 Moment of inertia (≤ φ 38)
			[N]	[N]	[kg]	[kgcm ²]	[kgcm ²]	[kgcm ²]	[kgcm ²]
100	1级 Single	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
	2级 Double	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	—
		60	7040	6340		0.28	0.73	2.7	—
		70	7040	6340		0.28	0.73	2.7	—
		80	7040	6340		0.28	0.73	2.7	—
		90	7040	6340		0.27	0.73	2.7	—
		100	7040	6340		0.27	0.73	2.7	—

① 输入转速为额定转速时，使用寿命为 20000 小时的值

② 输入转速为额定转速时，使用寿命为 20000 小时的值
(作用于轴中央，轴向负荷为 0 时)

③ 输入转速为额定转速时，使用寿命为 20000 小时的值
(作用于轴芯，径向负荷为 0 时)

④ 径向负荷的容许最大值

⑤ 轴向负荷的容许最大值

注：使用温度 -20℃ ~ 175℃

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.

Note: Use the temperature -20℃ ~ 175℃

AHS-140

尺寸 Frame size	机种 Model	减速比 Ratio	①			②		③	
			额定扭矩	最大扭矩	急停 最大扭矩	额定 输入转速	最大 输入转速	额定径向力	额定轴向力
			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]
140	1级 Single	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
	2级 Double	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

尺寸 Frame size	机种 Model	减速比 Ratio	④		重量 Weight [kg]	⑤		惯性力矩 Moment of inertia ($\leq \phi 19$) [kgcm ²]	惯性力矩 Moment of inertia ($\leq \phi 28$) [kgcm ²]	惯性力矩 Moment of inertia ($\leq \phi 38$) [kgcm ²]	惯性力矩 Moment of inertia ($\leq \phi 48$) [kgcm ²]
			最大 径向负荷	最大 轴向负荷		最大 径向负荷	最大 轴向负荷				
			Maximum radial load [N]	Maximum axial load [N]		Maximum radial load [N]	Maximum axial load [N]				
140	1级 Single	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
	2级 Double	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 输入转速为额定转速时，使用寿命为 20000 小时的值

② 输入转速为额定转速时，使用寿命为 20000 小时的值
(作用于轴中央，轴向负荷为 0 时)③ 输入转速为额定转速时，使用寿命为 20000 小时的值
(作用于轴芯，径向负荷为 0 时)

④ 径向负荷的容许最大值

⑤ 轴向负荷的容许最大值

注：使用温度 -20℃ ~ 175℃

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.

Note: Use the temperature -20℃ ~ 175℃

AHS-180

尺寸 Frame size	机种 Model	减速比 Ratio	○ 1			○ 2		○ 3	
			额定扭矩 Nominal output torque [Nm]	最大扭矩 Maximum output torque [Nm]	急停 最大扭矩 Emergency stop torque [Nm]	额定 输入转速 Nominal input speed [rpm]	最大 输入转速 Maximum input speed [rpm]	额定径向力 Permitted radial load [N]	额定轴向力 Permitted axial load [N]
180	1级 Single	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
		15	506	980	2218	1500	3000	19040	17040
		16	756	1410	2768	1500	3000	19040	17040
	2级 Double	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

尺寸 Frame size	机种 Model	减速比 Ratio	○ 4		重量 Weight [kg]	○ 5		惯性力矩 Moment of inertia ($\leq \phi 28$) [kgcm ²]	惯性力矩 Moment of inertia ($\leq \phi 38$) [kgcm ²]	惯性力矩 Moment of inertia ($\leq \phi 48$) [kgcm ²]	惯性力矩 Moment of inertia ($\leq \phi 65$) [kgcm ²]
			最大 径向负荷 Maximum radial load [N]	最大 轴向负荷 Maximum axial load [N]		最大 径向负荷 Maximum radial load [N]	最大 轴向负荷 Maximum axial load [N]				
180	1级 Single	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		
	2级 Double	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 输入转速为额定转速时，使用寿命为 20000 小时的值

○ 2 输入转速为额定转速时，使用寿命为 20000 小时的值
(作用于轴中央，轴向负荷为 0 时)

○ 3 输入转速为额定转速时，使用寿命为 20000 小时的值
(作用于轴芯，径向负荷为 0 时)

○ 4 径向负荷的容许最大值

○ 5 轴向负荷的容许最大值

注：使用温度 -20℃ ~ 175℃

○ 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)

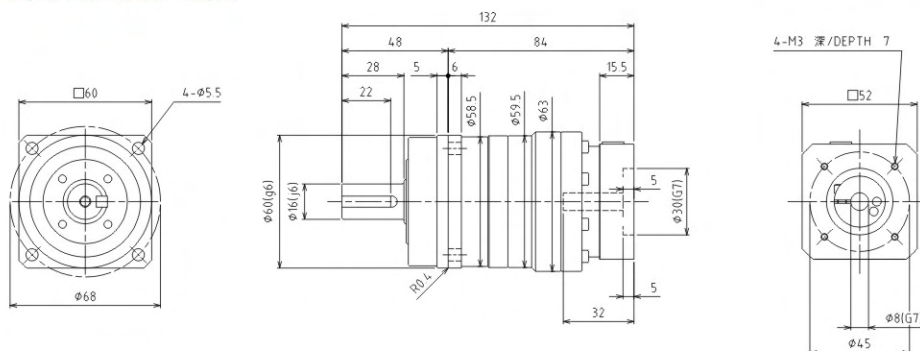
○ 4 The maximum radial load the reducer can accept.

○ 5 The maximum axial load the reducer can accept.

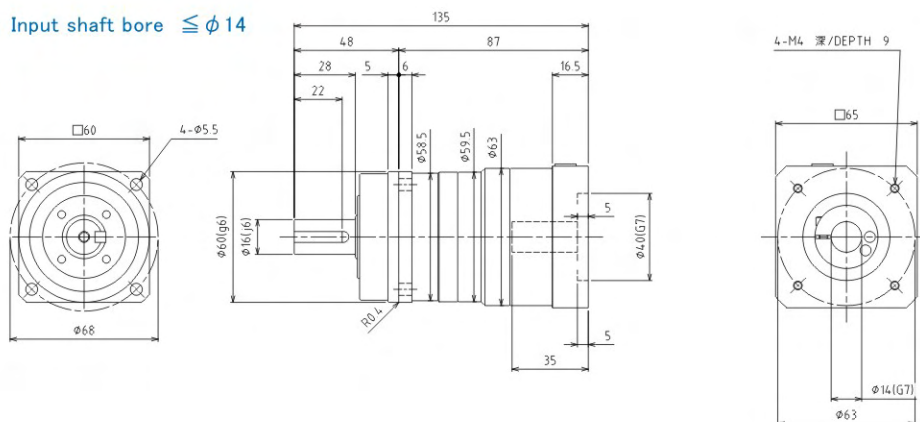
Note: Use the temperature -20℃ ~ 175℃

AHS-060 1级 1stage

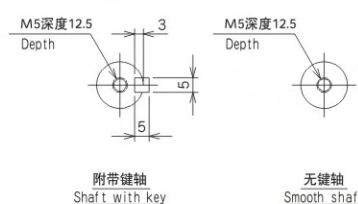
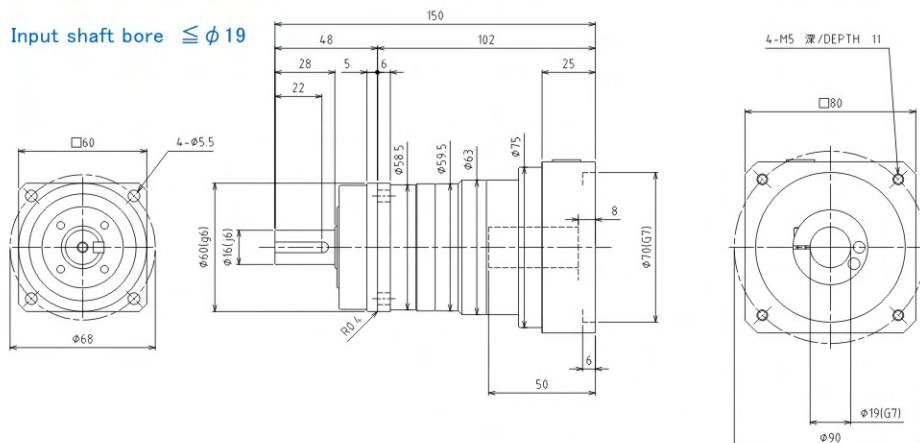
输入轴内径 Input shaft bore $\leq \phi 8$



输入轴内径 Input shaft bore $\leq \phi 14$



输入轴内径 Input shaft bore $\leq \phi 19$



备注1: 机身尺寸随安装电机的不同而有所差异。

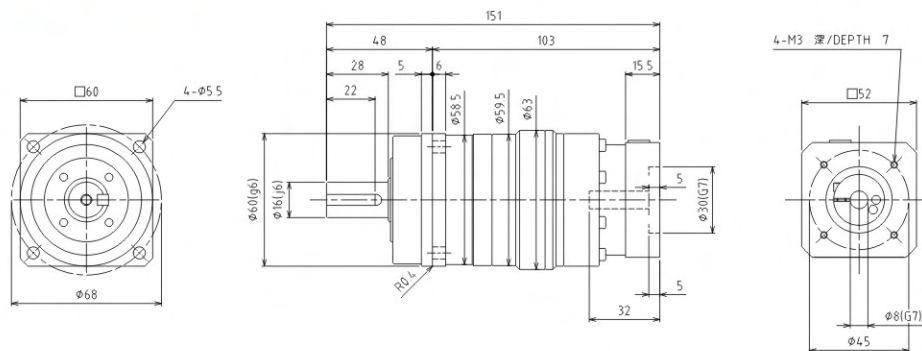
备注2: 电机轴径与输入轴径不同时, 可插入轴套。

Note1: Body Size Length will vary depending on motor.

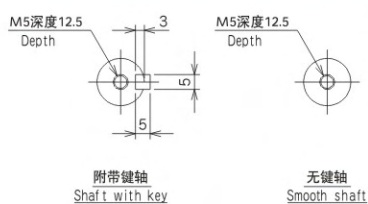
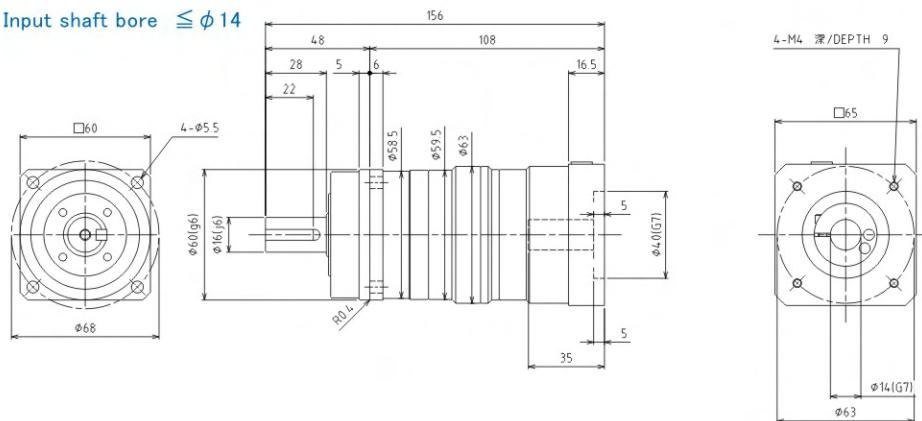
Note2: Bushing will be inserted to adapt to motor shaft.

AHS-060 2级 2stage

输入轴内径 Input shaft bore $\leq \phi 8$



输入轴内径 Input shaft bore $\leq \phi 14$



备注1: 机身尺寸随安装电机的不同而有所差异。

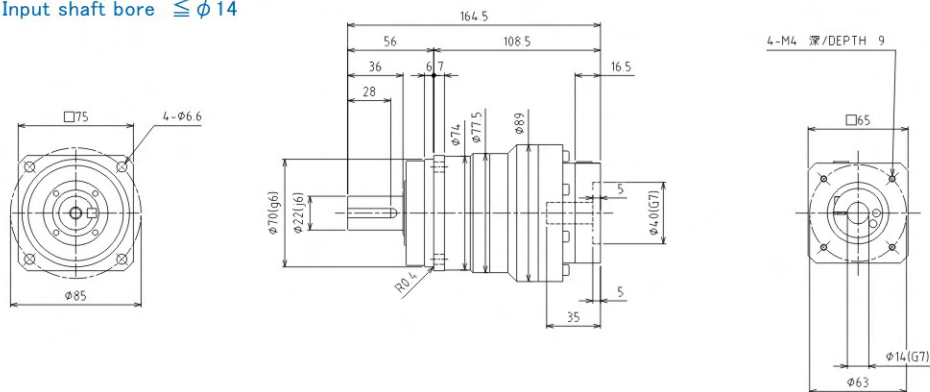
备注2: 电机轴径与输入轴径不同时, 可插入轴套。

Note1: Body Size Length will vary depending on motor.

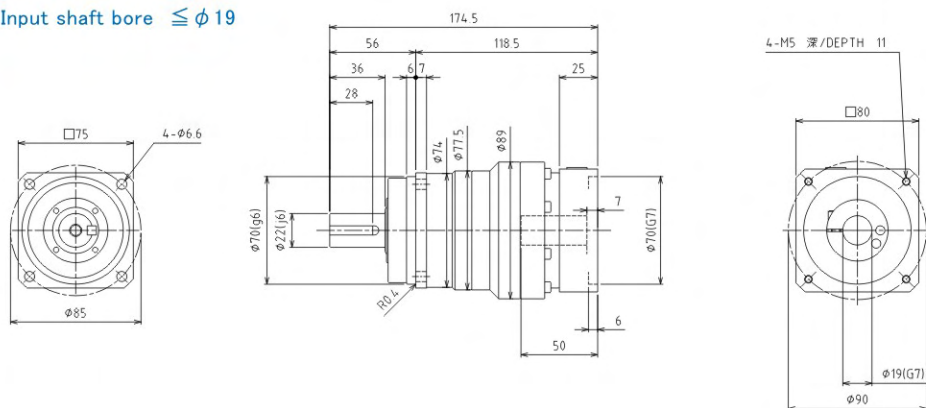
Note2: Bushing will be inserted to adapt to motor shaft.

AHS-075 1级 1stage

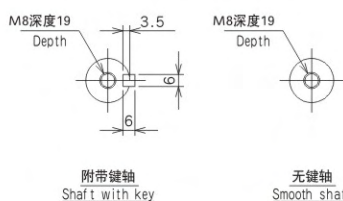
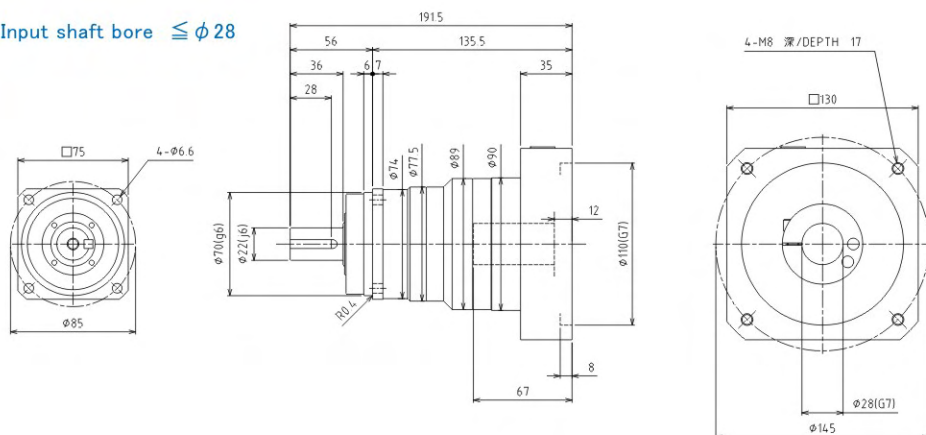
输入轴内径 Input shaft bore $\leq \phi 14$



输入轴内径 Input shaft bore $\leq \phi 19$



输入轴内径 Input shaft bore $\leq \phi 28$



备注1: 机身尺寸随安装电机的不同而有所差异。

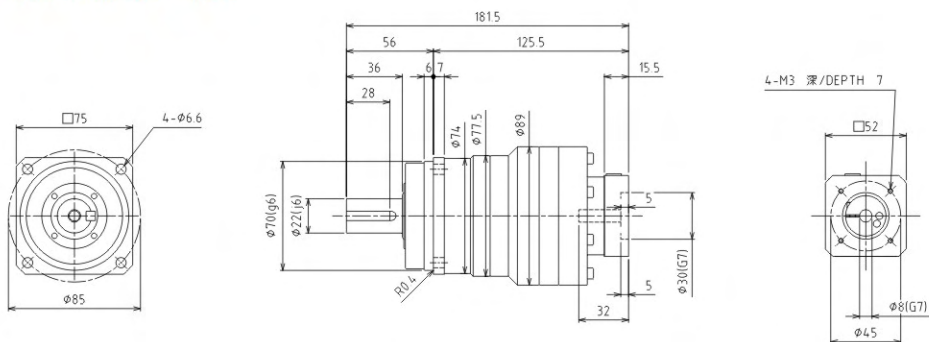
备注2: 电机轴径与输入轴径不同时, 可插入轴套。

Note1: Body Size Length will vary depending on motor.

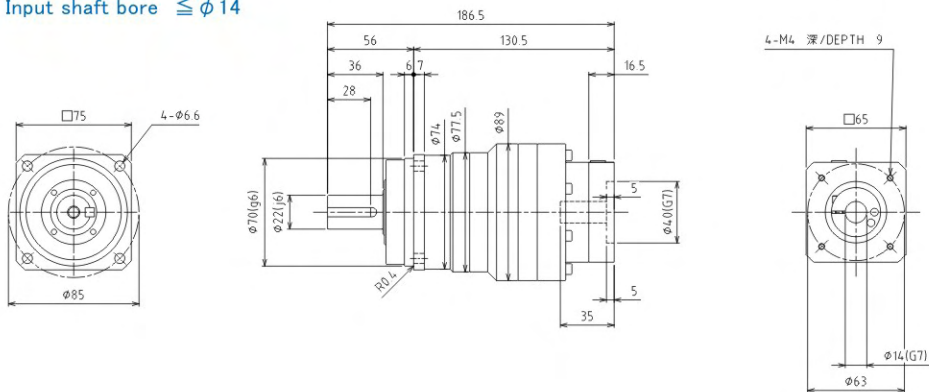
Note2: Bushing will be inserted to adapt to motor shaft.

AHS-075 2級 2stage

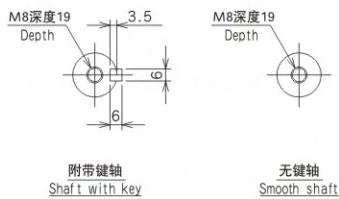
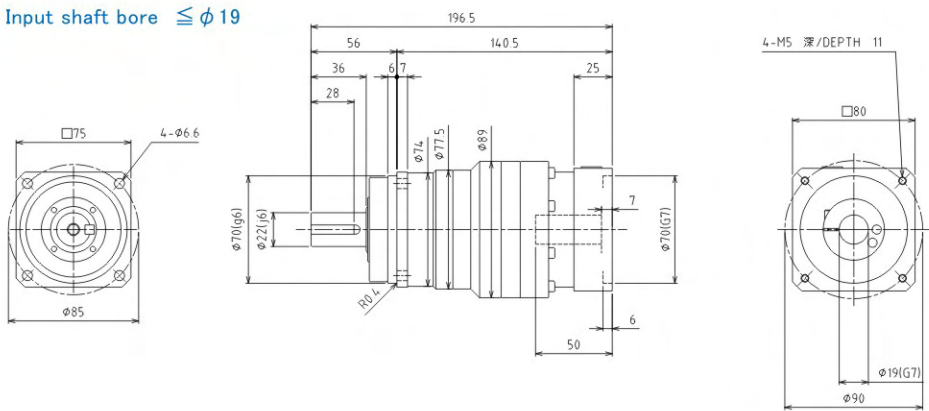
输入轴内径 Input shaft bore $\leq \phi 8$



输入轴内径 Input shaft bore $\leq \phi 14$



输入轴内径 Input shaft bore $\leq \phi 19$



备注1: 机身尺寸随安装电机的不同而有所差异。

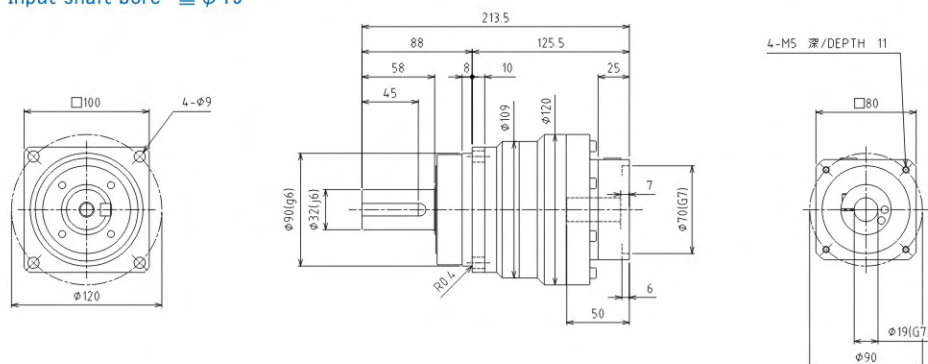
备注2: 电机轴径与输入轴径不同时, 可插入轴套。

Note1: Body Size Length will vary depending on motor.

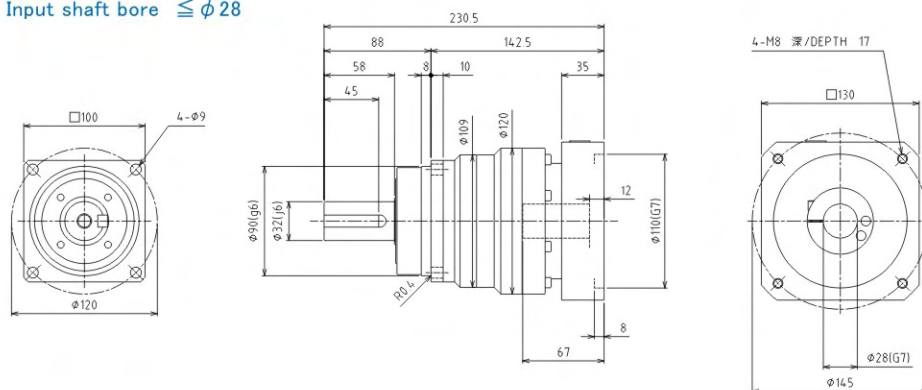
Note2: Bushing will be inserted to adapt to motor shaft.

AHS-100 1级 1stage

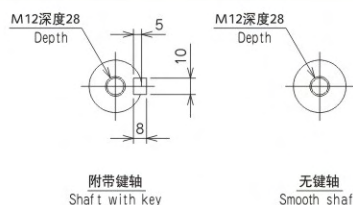
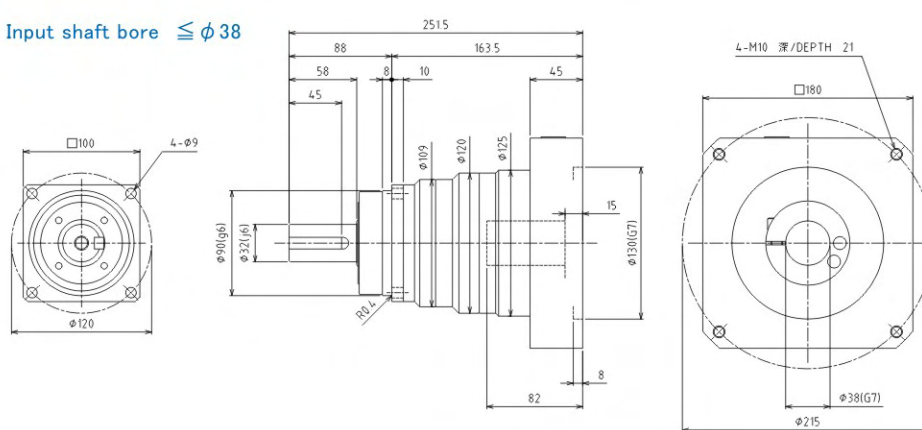
输入轴内径 Input shaft bore $\leq \phi 19$



输入轴内径 Input shaft bore $\leq \phi 28$



输入轴内径 Input shaft bore $\leq \phi 38$



备注1: 机身尺寸随安装电机的不同而有所差异。

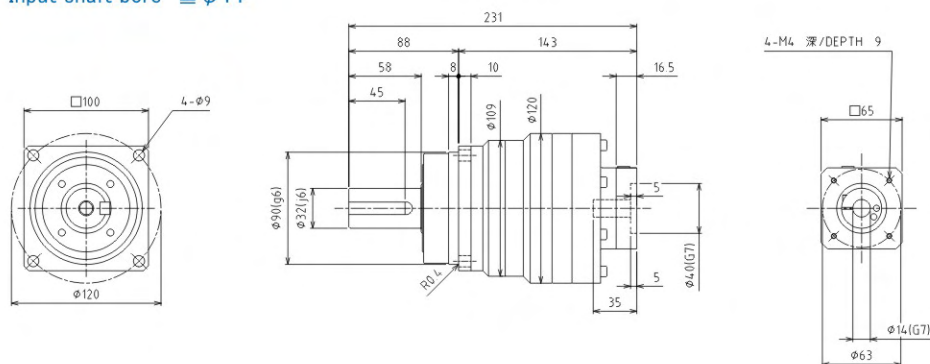
备注2: 电机轴径与输入轴径不同时, 可插入轴套。

Note1: Body Size Length will vary depending on motor.

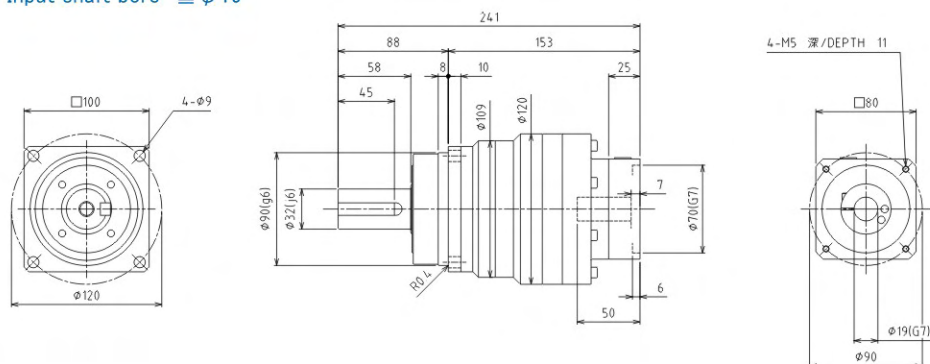
Note2: Bushing will be inserted to adapt to motor shaft.

AHS-100 2级 2stage

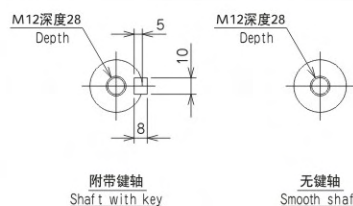
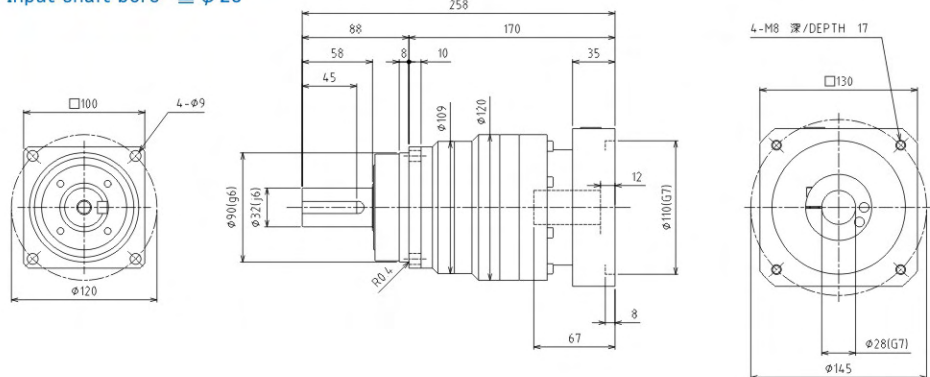
输入轴内径 Input shaft bore $\leq \phi 14$



输入轴内径 Input shaft bore $\leq \phi 19$



输入轴内径 Input shaft bore $\leq \phi 28$



备注1: 机身尺寸随安装电机的不同而有所差异。

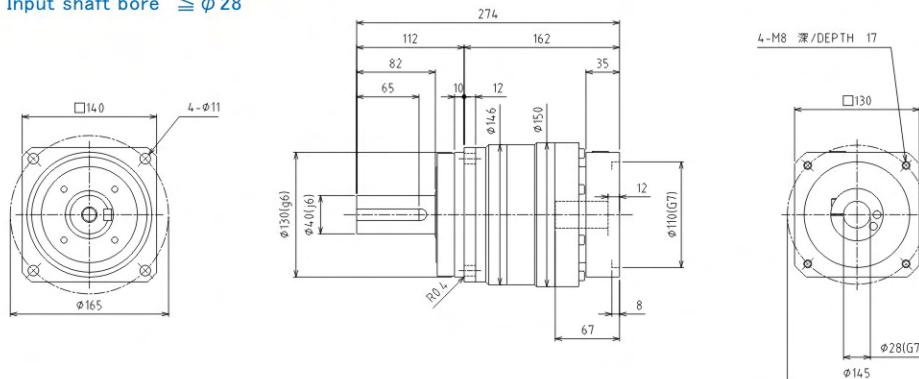
备注2: 电机轴径与输入轴径不同时, 可插入轴套。

Note1: Body Size Length will vary depending on motor.

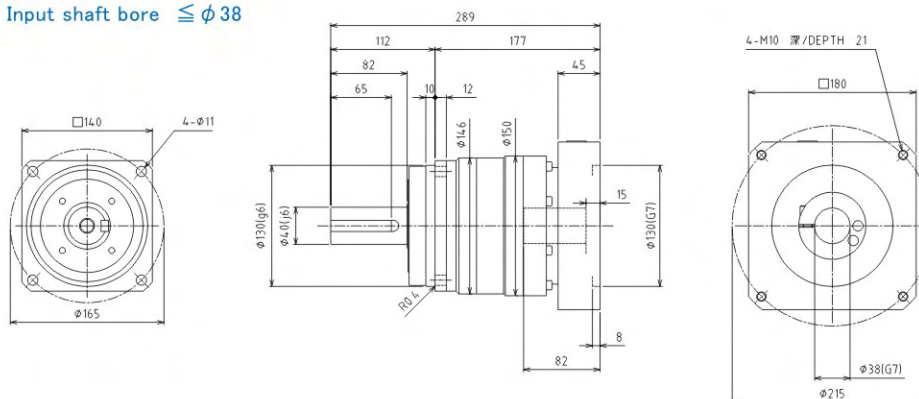
Note2: Bushing will be inserted to adapt to motor shaft.

AHS-140 1级 1stage

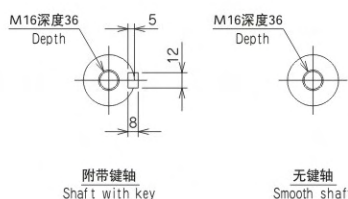
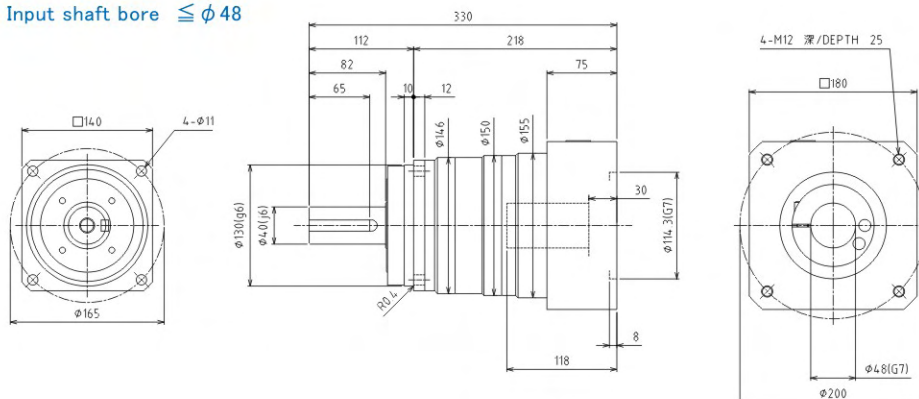
输入轴内径 Input shaft bore $\leq \phi 28$



输入轴内径 Input shaft bore $\leq \phi 38$



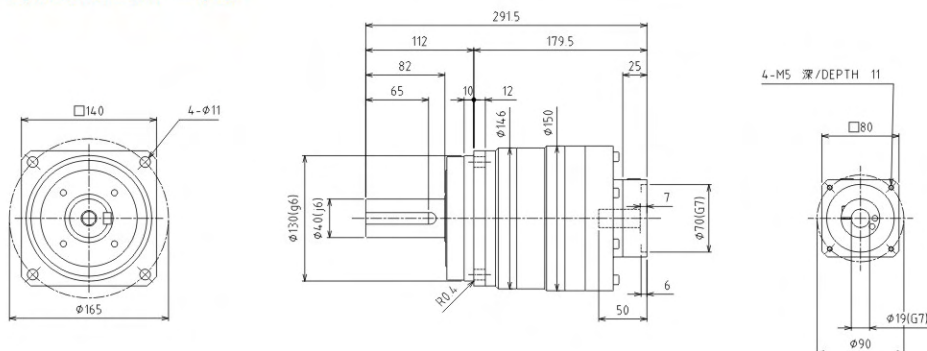
输入轴内径 Input shaft bore $\leq \phi 48$



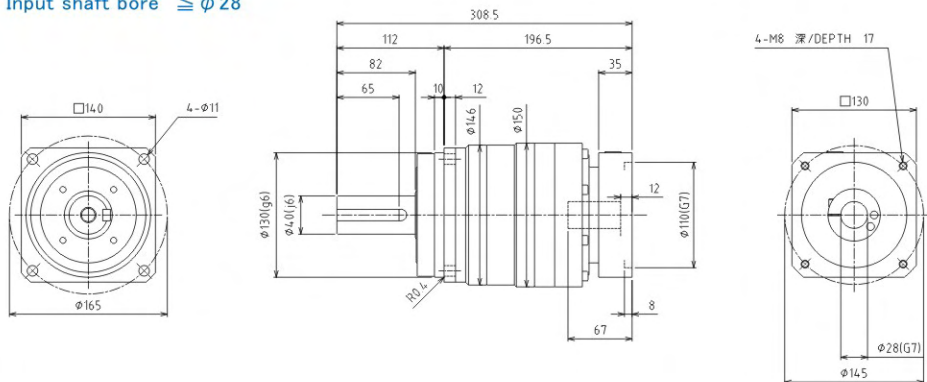
备注1: 机身尺寸随安装电机的不同而有所差异。
 备注2: 电机轴径与输入轴径不同时, 可插入轴套。
 Note1: Body Size Length will vary depending on motor.
 Note2: Bushing will be inserted to adapt to motor shaft.

AHS-140 2级 2stage

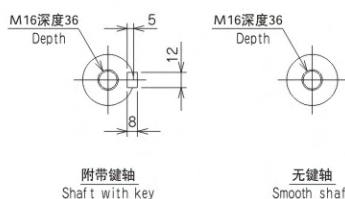
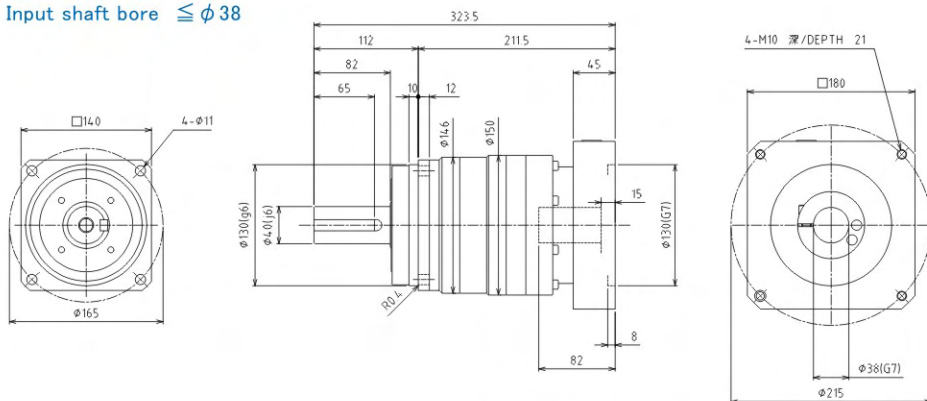
输入轴内径 Input shaft bore $\leq \phi 19$



输入轴内径 Input shaft bore $\leq \phi 28$



输入轴内径 Input shaft bore $\leq \phi 38$



备注1: 机身尺寸随安装电机的不同而有所差异。

备注2: 电机轴径与输入轴径不同时, 可插入轴套。

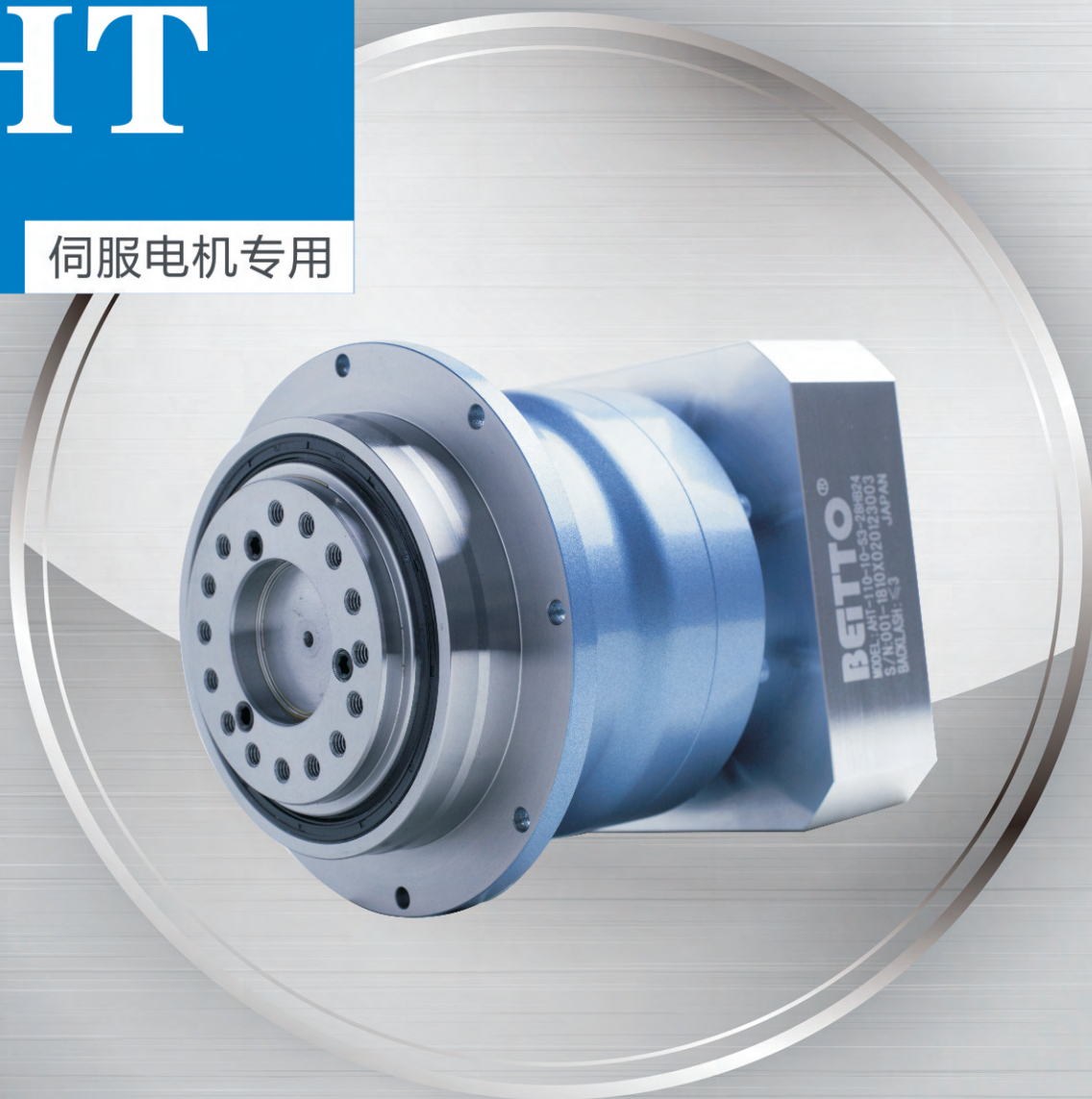
Note1: Body Size Length will vary depending on motor.

Note2: Bushing will be inserted to adapt to motor shaft.

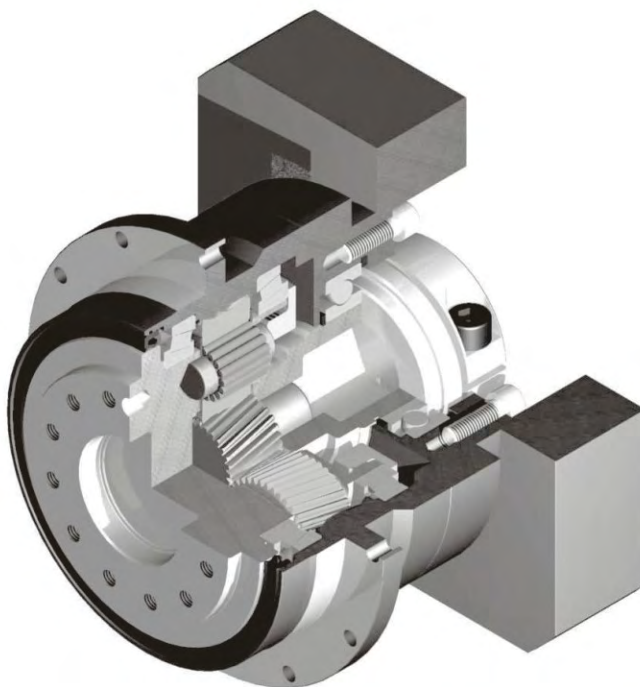
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AHT

伺服电机专用



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**高精度**

齿隙低于3分、定位精确。

High precision

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

高刚性、高扭矩

使用整体式滚珠轴承, 大大提高了刚性和扭矩。

High rigidity & torque

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

高负载

主轴承采用锥形滚柱轴承, 实现高负载容量。
✿尺寸 064 · 090 采用滚子轴承

High load

Adopting taper roller bearing for the main output shaft to increase radial and axial load.
✿Frame size 064 · 090 adopt ball bearing.

连接法兰、轴套方式

电机通用性

Adapter-bushing connection

Motor generality

高粘度润滑脂

使用高粘度、不易分离的润滑脂, 有效防止润滑脂泄漏。

High viscosity grease

Perfect solution using high viscosity anti-separation grease.

维护方便

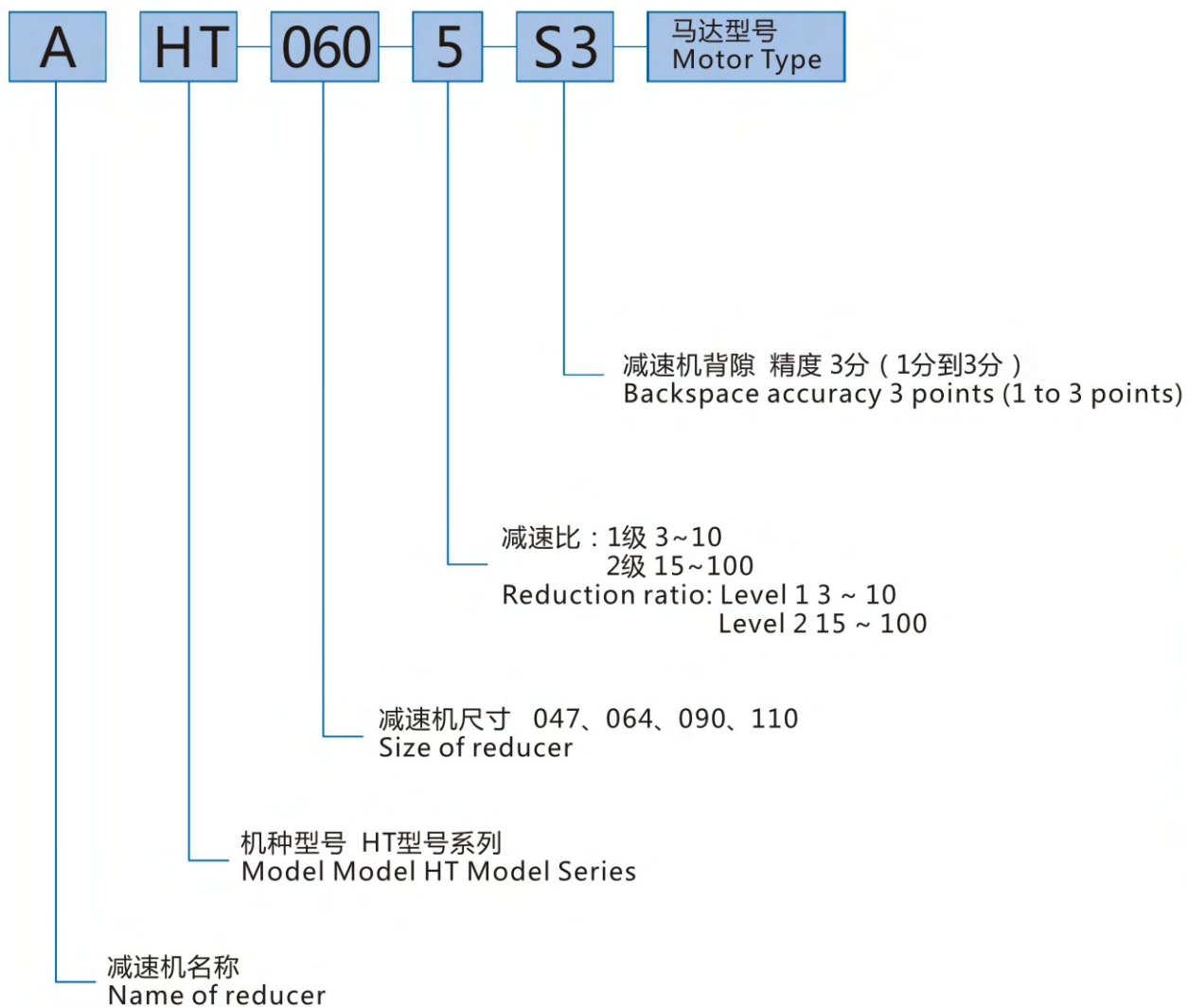
在产品寿命期内无需更换润滑脂, 安装更便捷。

Maintenance-free

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

AHT series

机种、型号代码 Model number



AHT-047

尺寸 Frame size	机种 Model	减速比 Ratio	①			②		③	
			额定扭矩 Nominal output torque	最大扭矩 Maximum output torque	急停 最大扭矩 Emergency stop torque	额定 输入转速 Nominal input speed	最大 输入转速 Maximum input speed	额定径向力 Permitted radial load	额定轴向力 Permitted axial load
047	1级 Single	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
	2级 Double	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

尺寸 Frame size	机种 Model	减速比 Ratio	④		重量 Weight	⑤		使用温度 Use the temperature
			最大 径向负荷 Maximum radial load	最大 轴向负荷 Maximum axial load		惯性力矩 Moment of inertia ($\leq \phi 8$)	惯性力矩 Moment of inertia ($\leq \phi 14$)	
047	1级 Single	4	1120	570	0.7	0.052	0.090	-20℃ ~ 175℃
		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	
	2级 Double	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 输入转速为额定转速时，使用寿命为 20000 小时的值
 ② 输入转速为额定转速时，使用寿命为 20000 小时的值
 （作用于轴中央，轴向负荷为 0 时）
 ③ 输入转速为额定转速时，使用寿命为 20000 小时的值
 （作用于轴芯，径向负荷为 0 时）
 ④ 径向负荷的容许最大值
 ⑤ 轴向负荷的容许最大值
 ⑥ 使用温度 -20℃ ~ 175℃

- 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 Use the temperature - 20 °C ~ 175 °C

AHT-064

尺寸 Frame size	机种 Model	减速比 Ratio	①			②		③	
			额定扭矩 Nominal output torque [Nm]	最大扭矩 Maximum output torque [Nm]	急停 最大扭矩 Emergency stop torque [Nm]	额定 输入转速 Nominal input speed [rpm]	最大 输入转速 Maximum input speed [rpm]	额定径向力 Permitted radial load [N]	额定轴向力 Permitted axial load [N]
064	1级 Single	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
	2级 Double	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

尺寸 Frame size	机种 Model	减速比 Ratio	④		重量 Weight [kg]	⑤		⑥	
			最大 径向负荷 Maximum radial load [N]	最大 轴向负荷 Maximum axial load [N]		惯性力矩 Moment of inertia ($\leq \phi 8$) [kgcm ²]	惯性力矩 Moment of inertia ($\leq \phi 14$) [kgcm ²]	惯性力矩 Moment of inertia ($\leq \phi 19$) [kgcm ²]	使用温度 Use the temperature
064	1级 Single	4	1525	775	1.4	0.13	0.21	0.4	-20℃ ~ 175℃
		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	
	2级 Double	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 输入转速为额定转速时，使用寿命为 20000 小时的值
 ② 输入转速为额定转速时，使用寿命为 20000 小时的值
 （作用于轴中央，轴向负荷为 0 时）
 ③ 输入转速为额定转速时，使用寿命为 20000 小时的值
 （作用于轴芯，径向负荷为 0 时）
 ④ 径向负荷的容许最大值
 ⑤ 轴向负荷的容许最大值
 ⑥ 使用温度 -20℃ ~ 175℃

- 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 Use the temperature - 20 °C ~ 175 °C

AHT-090

⊙ 1

⊙ 2

⊙ 3

尺寸 Frame size	机种 Model	减速比 Ratio	额定扭矩 Nominal output torque [Nm]	最大扭矩 Maximum output torque [Nm]	急停 最大扭矩 Emergency stop torque [Nm]	额定 输入转速 Nominal input speed [rpm]	最大 输入转速 Maximum input speed [rpm]	额定径向力 Permitted radial load [N]	额定轴向力 Permitted axial load [N]
090	1级 Single	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
	2级 Double	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

⊙ 4

⊙ 5

尺寸 Frame size	机种 Model	减速比 Ratio	最大 径向负荷 Maximum radial load [N]	最大 轴向负荷 Maximum axial load [N]	重量 Weight [kg]	惯性力矩 Moment of inertia ($\leq \phi 8$) [kgcm ²]	惯性力矩 Moment of inertia ($\leq \phi 14$) [kgcm ²]	惯性力矩 Moment of inertia ($\leq \phi 19$) [kgcm ²]	惯性力矩 Moment of inertia ($\leq \phi 28$) [kgcm ²]
090	1级 Single	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
	2级 Double	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 输入转速为额定转速时, 使用寿命为 20000 小时的值

⊙ 1 With nominal input speed, service life is 20,000 hours.

⊙ 2 输入转速为额定转速时, 使用寿命为 20000 小时的值
(作用于轴中央, 轴向负荷为 0 时)⊙ 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 输入转速为额定转速时, 使用寿命为 20000 小时的值
(作用于轴芯, 径向负荷为 0 时)⊙ 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 径向负荷的容许最大值

⊙ 4 The maximum radial load the reducer can accept.

⊙ 5 轴向负荷的容许最大值

⊙ 5 The maximum axial load the reducer can accept.

注: 使用温度 -20℃ ~ 175℃

Note: Use the temperature -20℃ ~ 175℃

AHT-110

AT7-110

①					②		③		
尺寸 Frame size	机种 Model	减速比 Ratio	额定扭矩 Nominal output torque	最大扭矩 Maximum output torque	急停 最大扭矩 Emergency stop torque	额定 输入转速 Nominal input speed	最大 输入转速 Maximum input speed	额定径向力 Permitted radial load	额定轴向力 Permitted axial load
			[Nm]	[Nm]	[Nm]	[rpm]	[rpm]	[N]	[N]
110	1级 Single	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
	2级 Double	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		

		Φ 4		Φ 5						
尺寸 Frame size	机种 Model	减速比 Ratio	最大 径向负荷 Maximum radial load	最大 轴向负荷 Maximum axial load	重量 Weight	惯性力矩 Moment of inertia (≤ Φ 14)	惯性力矩 Moment of inertia (≤ Φ 19)	惯性力矩 Moment of inertia (≤ Φ 28)	惯性力矩 Moment of inertia (≤ Φ 38)	
			[N]	[N]	[kg]	[kgcm ²]	[kgcm ²]	[kgcm ²]	[kgcm ²]	
110	1级 Single	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	
	2级 Double	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 输入转速为额定转速时，使用寿命为 20000 小时的值

② 输入转速为额定转速时，使用寿命为 20000 小时的值
(作用于轴中央，轴向负荷为 0 时)

③ 输入转速为额定转速时，使用寿命为 20000 小时的值
(作用于轴芯，径向负荷为 0 时)

④ 径向负荷的容许最大值

⑤ 轴向负荷的容许最大值

注：使用温度 -20℃ ~ 175℃

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)

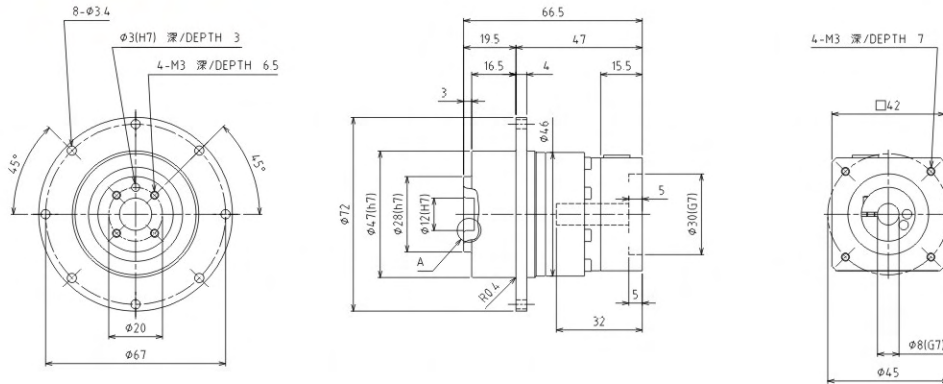
④ The maximum radial load the reducer can accept.

⑤ The maximum axial load the reducer can accept.

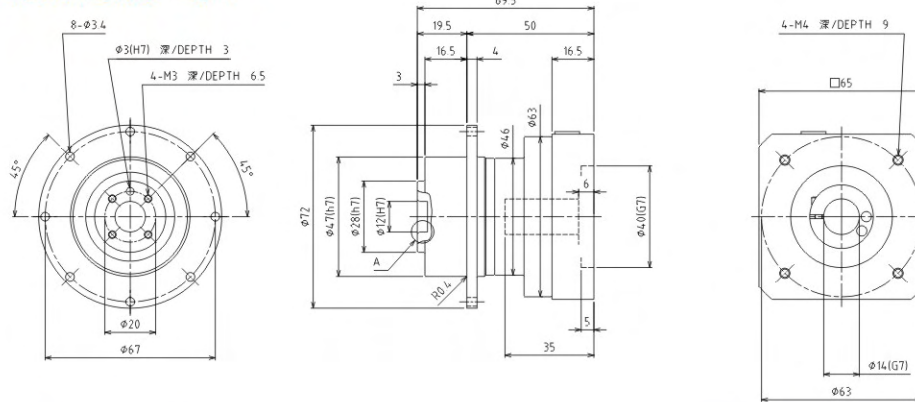
Note: Use the temperature -20℃ ~ 175℃

AHT-047 1级 1stage

输入轴内径 Input shaft bore $\leq \phi 8$

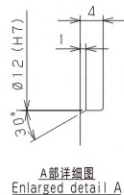
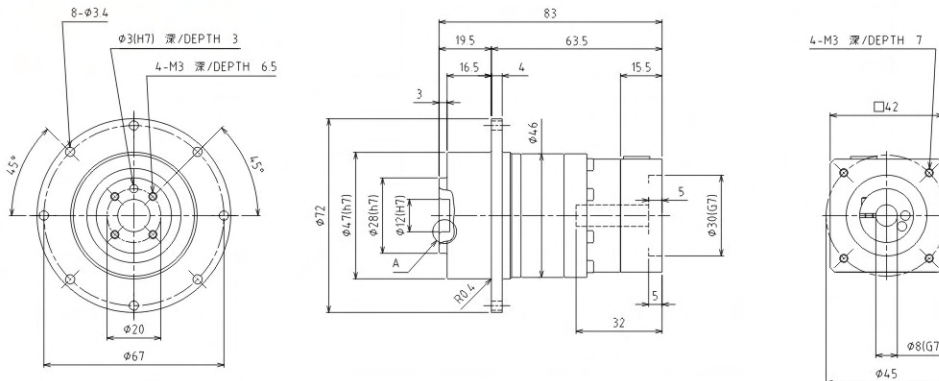


输入轴内径 Input shaft bore $\leq \phi 14$



AHT-047 2段 2stage

输入轴内径 Input shaft bore $\leq \phi 8$



A部详细图
Enlarged detail A

备注1: 机身尺寸随安装电机的不同而有所差异。

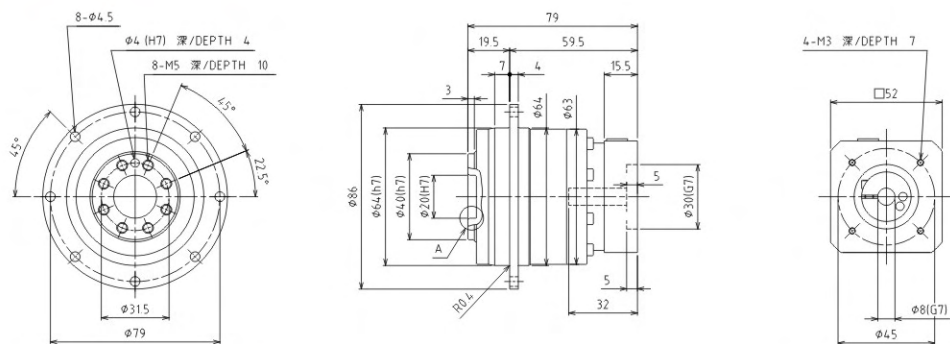
备注2: 电机轴径与输入轴径不同时, 可插入轴套。

Note1: Body Size Length will vary depending on motor.

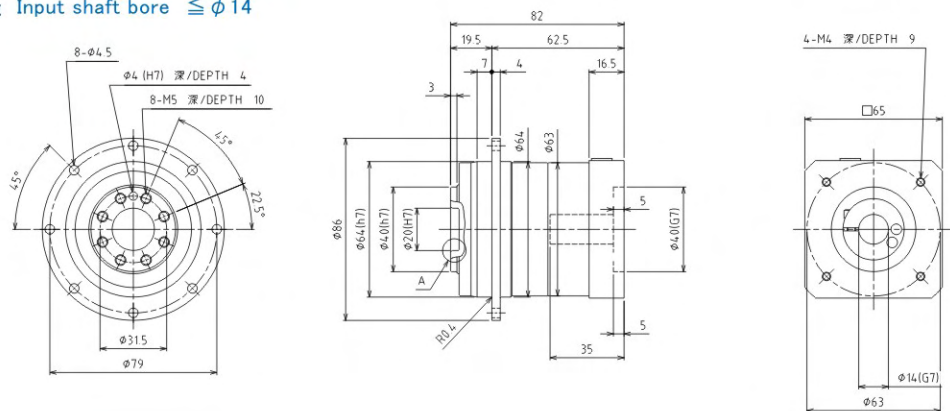
Note2: Bushing will be inserted to adapt to motor shaft.

AHT-064 1级 1stage

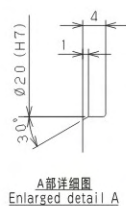
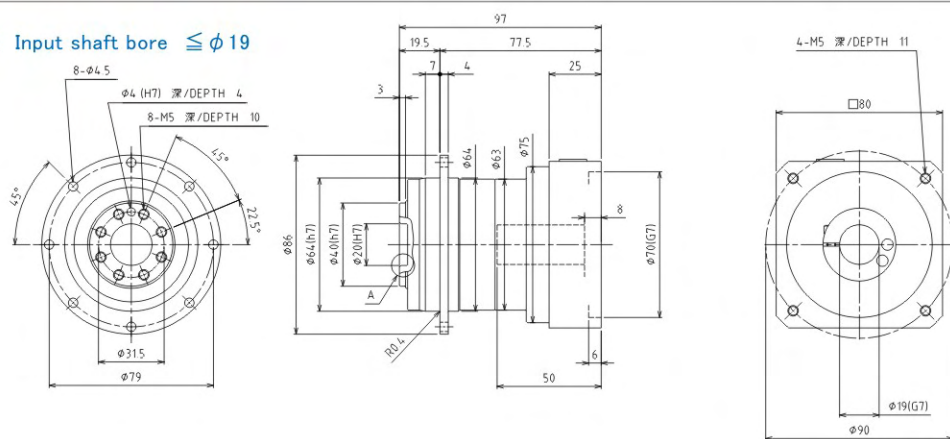
输入轴内径 Input shaft bore $\leq \phi 8$



输入轴内径 Input shaft bore $\leq \phi 14$



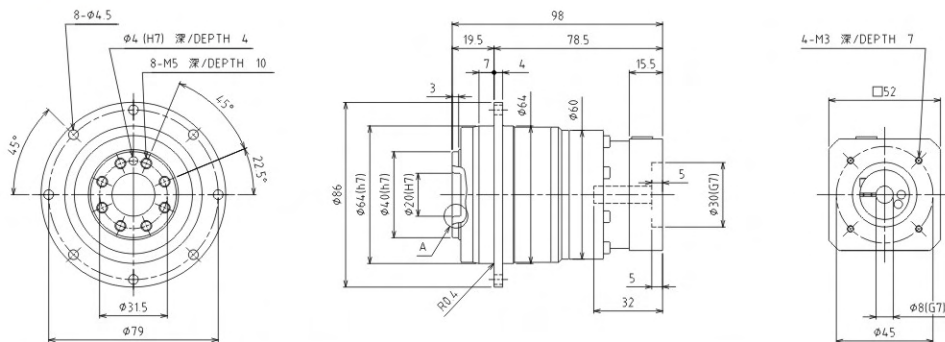
输入轴内径 Input shaft bore $\leq \phi 19$



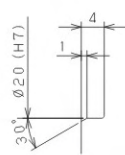
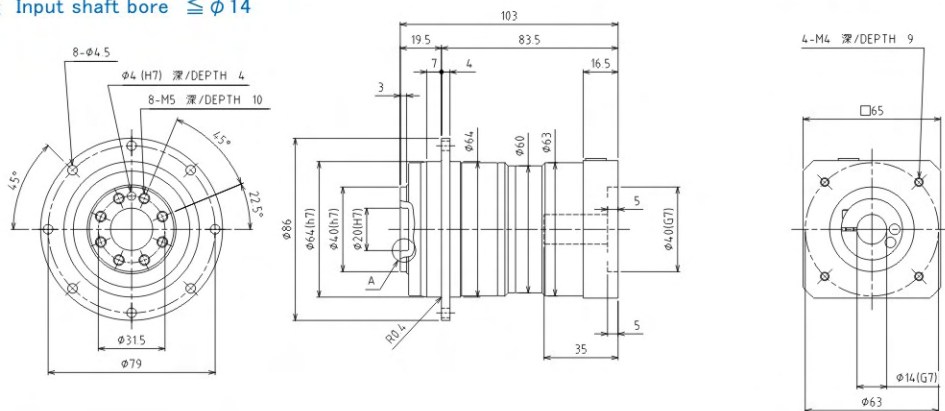
备注1: 机身尺寸随安装电机的不同而有所差异。
 备注2: 电机轴径与输入轴径不同时, 可插入轴套。
 Note1: Body Size Length will vary depending on motor.
 Note2: Bushing will be inserted to adapt to motor shaft.

AHT-064 2级 2stage

输入轴内径 Input shaft bore $\leq \phi 8$



输入轴内径 Input shaft bore $\leq \phi 14$



备注1: 机身尺寸随安装电机的不同而有所差异。

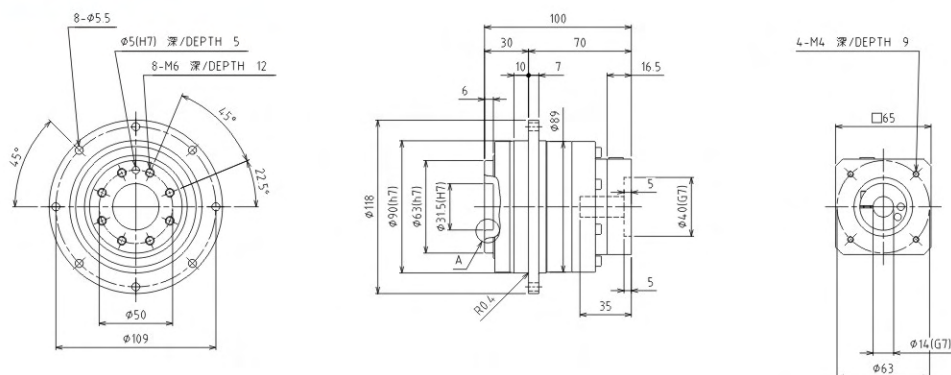
备注2: 电机轴径与输入轴径不同时, 可插入轴套。

Note1: Body Size Length will vary depending on motor.

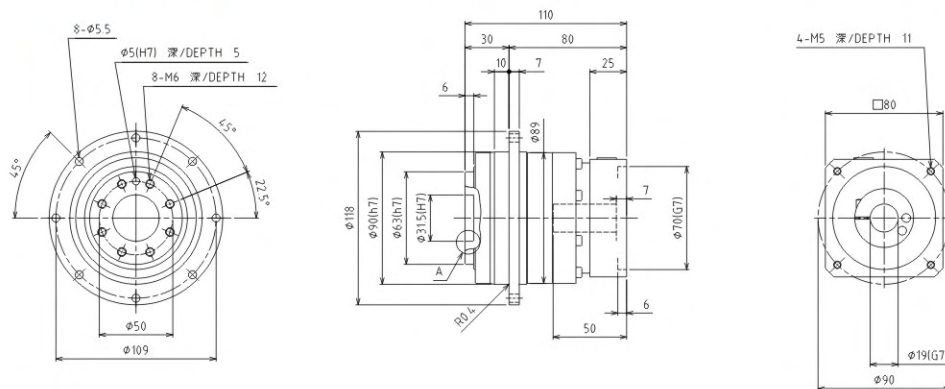
Note2: Bushing will be inserted to adapt to motor shaft.

AHT-090 1级 1stage

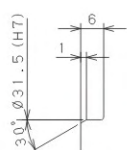
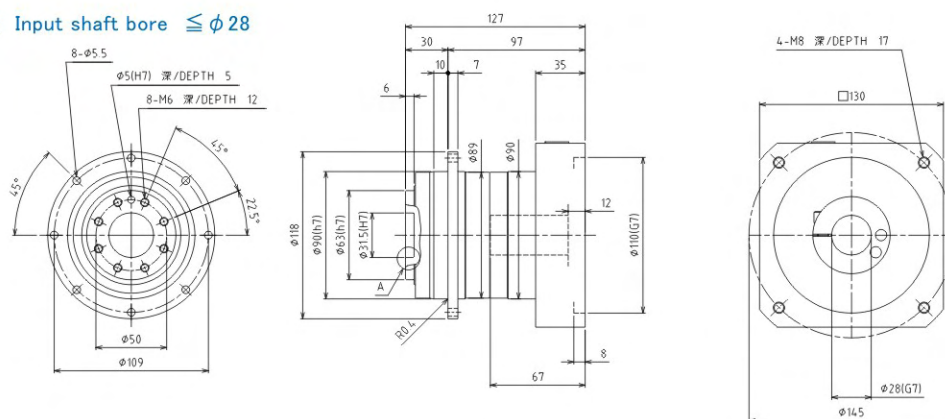
输入轴内径 Input shaft bore $\leq \phi 14$



输入轴内径 Input shaft bore $\leq \phi 19$



输入轴内径 Input shaft bore $\leq \phi 28$

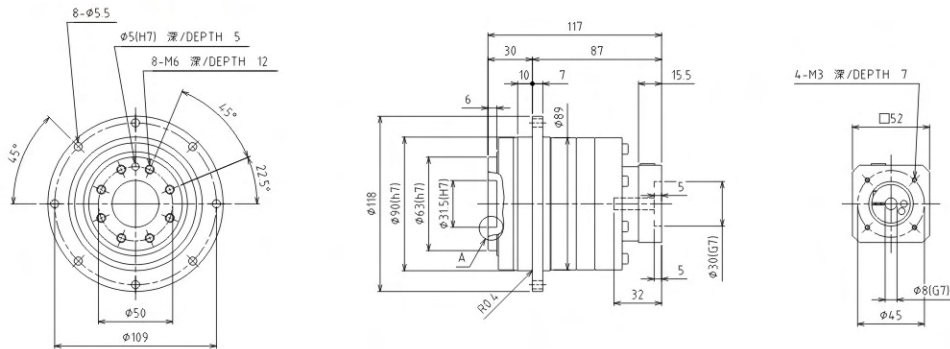


A部详细图
Enlarged detail A

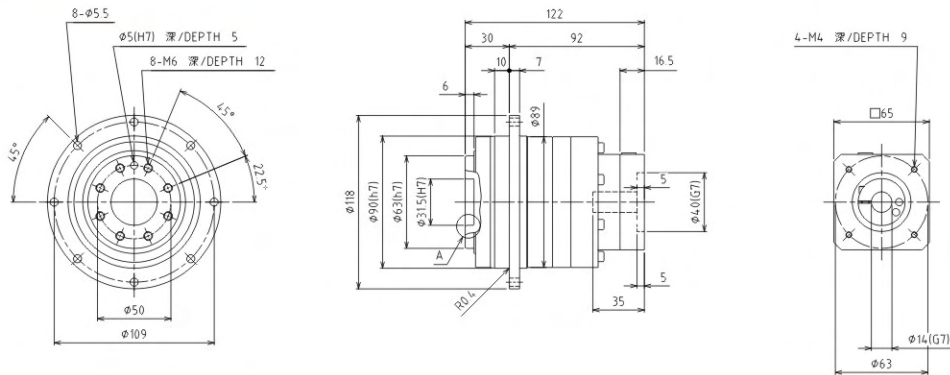
备注1: 机身尺寸随安装电机的不同而有所差异。
备注2: 电机轴径与输入轴径不同时, 可插入轴套。
Note1: Body Size Length will vary depending on motor.
Note2: Bushing will be inserted to adapt to motor shaft.

AHT-090 2级 2stage

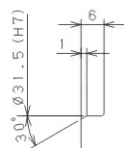
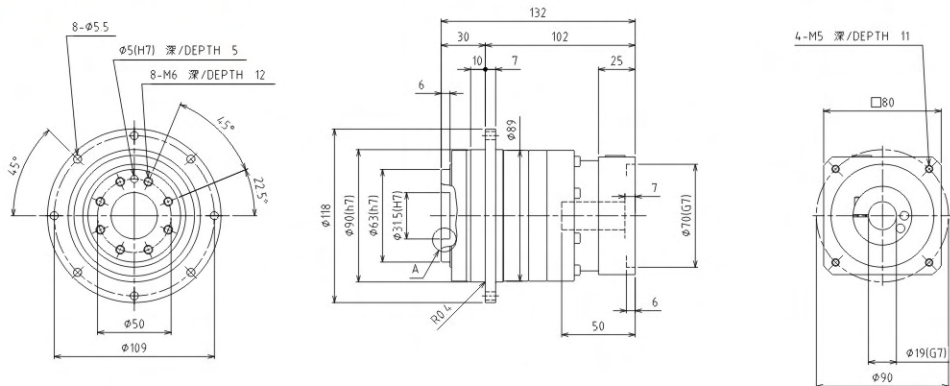
输入轴内径 Input shaft bore $\leq \phi 8$



输入轴内径 Input shaft bore $\leq \phi 14$



输入轴内径 Input shaft bore $\leq \phi 19$



A部详细图
Enlarged detail A

备注1: 机身尺寸随安装电机的不同而有所差异。

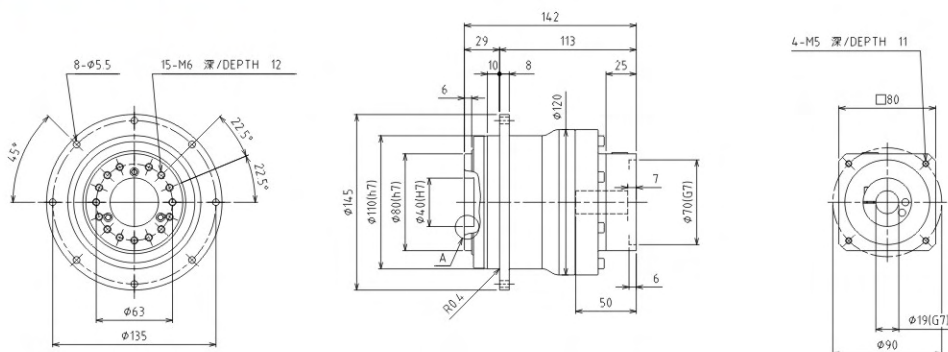
备注2: 电机轴径与输入轴径不同时, 可插入轴套。

Note1: Body Size Length will vary depending on motor.

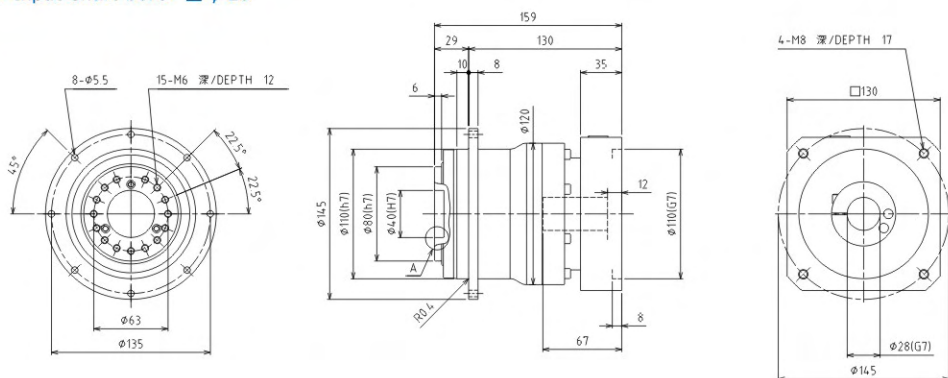
Note2: Bushing will be inserted to adapt to motor shaft.

AHT-110 1级 1stage

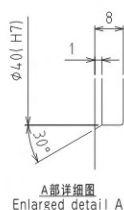
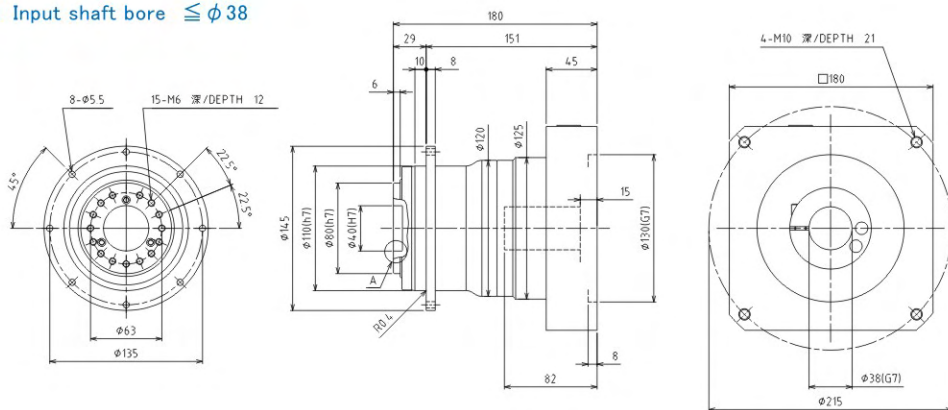
输入轴内径 Input shaft bore $\leq \phi 19$



输入轴内径 Input shaft bore $\leq \phi 28$



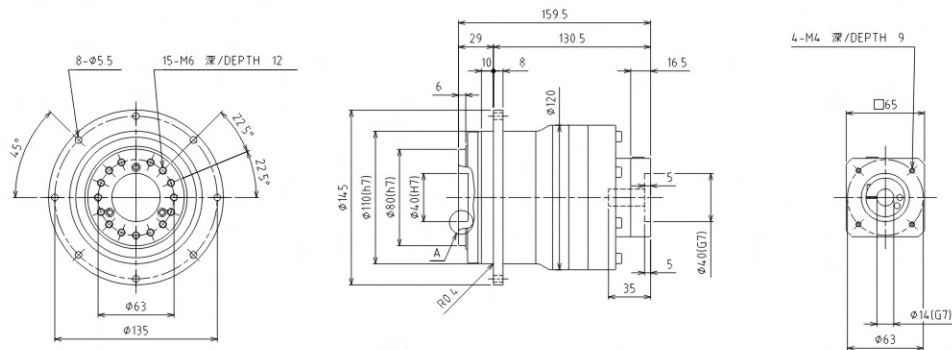
输入轴内径 Input shaft bore $\leq \phi 38$



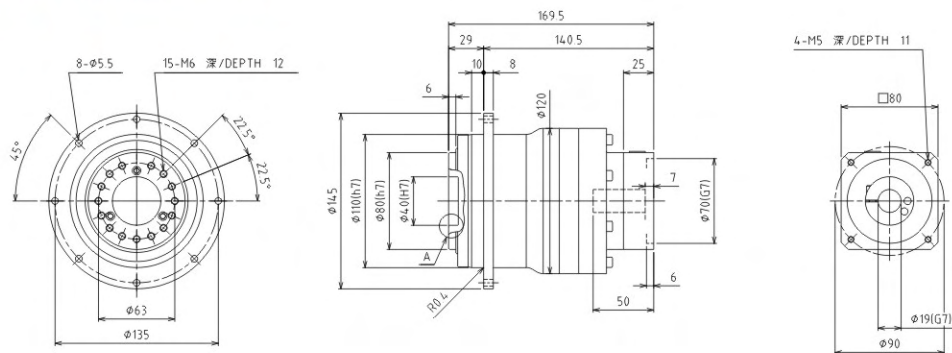
备注1: 机身尺寸随安装电机的不同而有所差异。
 备注2: 电机轴径与输入轴径不同时, 可插入轴套。
 Note1: Body Size Length will vary depending on motor.
 Note2: Bushing will be inserted to adapt to motor shaft.

AHT-110 2级 2stage

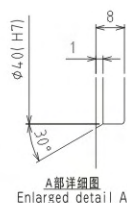
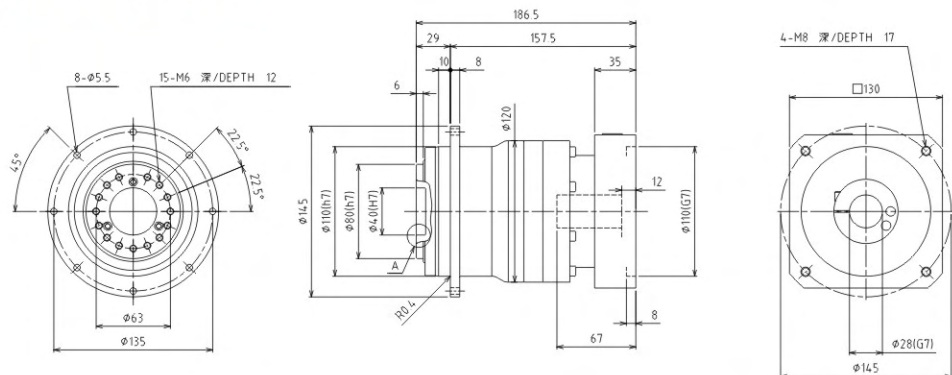
输入轴内径 Input shaft bore $\leq \phi 14$



输入轴内径 Input shaft bore $\leq \phi 19$



输入轴内径 Input shaft bore $\leq \phi 28$



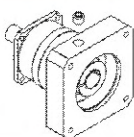
备注1: 机身尺寸随安装电机的不同而有所差异。
 备注2: 电机轴径与输入轴径不同时, 可插入轴套。
 Note1: Body Size Length will vary depending on motor.
 Note2: Bushing will be inserted to adapt to motor shaft.

1 电机安装步骤 Mounting procedure to the motor

- 1 擦拭电机轴上的防锈剂、润滑脂等。
Wipe off anti-rust agent and oil on the motor shaft.



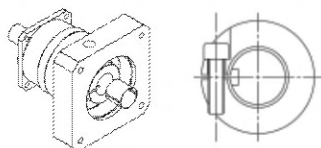
- 2 取下堵头。
Remove the plug.



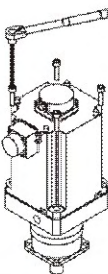
- 3 旋转输入轴使紧固螺栓的头对准塞孔。此时，请确认紧固螺栓是松动的。
Turn the input shaft until the cap screw is seen. Make sure the cap screw is loosened.

如带有轴套，安装方法如图所示。

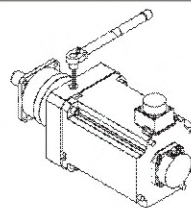
In case the bushing has been attached, Please fix it to the reducer as the drawing below.



- 4 将减速机垂直放置在平坦的地方，使减速机的电机安装面朝上侧。将电机轴慢慢地插入输入轴，注意避免撞击到输入轴，请确认电机的法兰面紧靠减速机的法兰面。按指定的紧固扭矩拧紧马达安装螺栓。（参考表1）
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.(See table1)



- 5 使用转矩扳手等按照指定的紧固扭矩拧紧紧固螺栓。（参考表1）
Tighten the clamping bolt of the input shaft with torque wrench to the proper torque.(See table1)



- 6 安装上堵头，安装完成。
Reinstall the plug. The procedure is done.

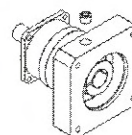


表1 Table 1

螺栓尺寸 Bolt size	电机安装螺栓 Motor installing bolts		紧固螺栓 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	-	-

表2 Table 2

螺栓尺寸 Bolt size	紧固扭矩 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

○ 推荐螺栓：强度12.9以上

○ Recommended bolt: Strength 12.9

2 减速机的安装

要将减速机安装到设备上时，请先确认安装面平坦且没有毛刺等，然后使用转矩扳手等按照指定的紧固扭矩拧紧螺栓。（参考表2）

Reducer installation

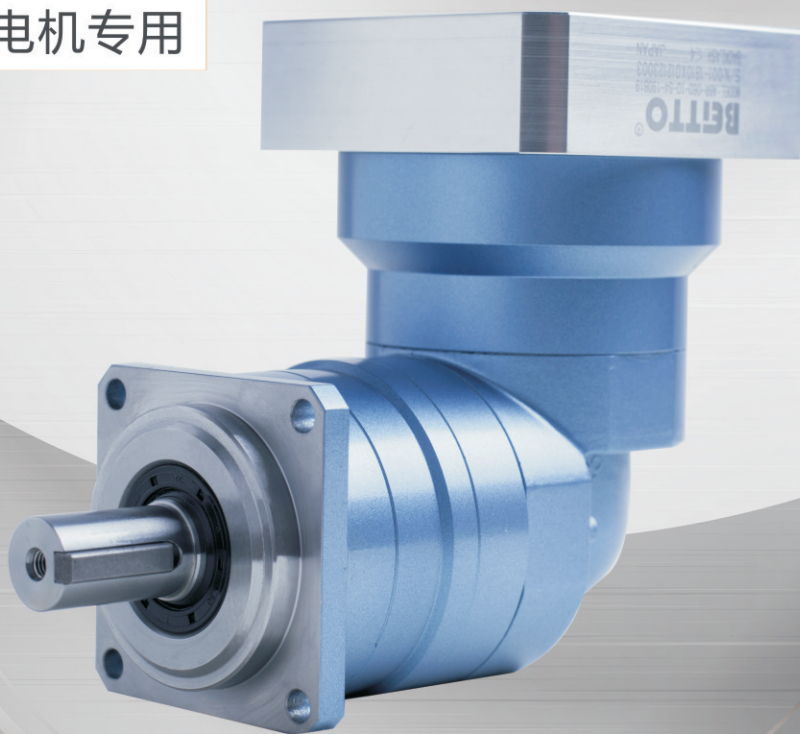
After confirming the installation surface is flat and clean, tighten the bolt using a torque wrench to the proper torque.(See table2)

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

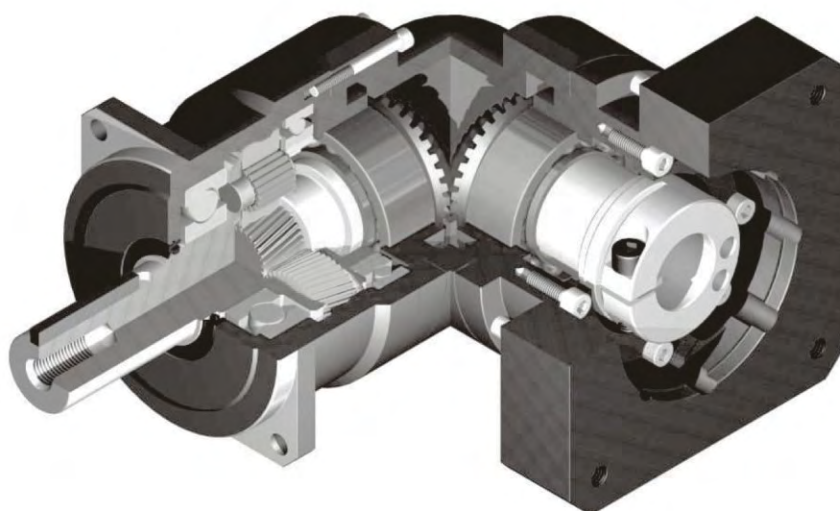
BETTO 貝託®
精密行星齿轮减速机

ABR

伺服电机专用



ABR series

**省空间**

直交型减速机使用螺旋式伞齿轮, 电机的安装可实现90度弯曲, 节省了安装空间。

Space - saving

Right angle reducer using spiral bevel gear
Customer can locate the motor at 90 degree away from the reducer if required to save space.

高刚性、高扭矩

使用整体式滚针轴承, 大大提高了刚性和扭矩。

High rigidity & torque

High rigidity & high torque was achieved by uncaged needle roller bearings.

连接法兰、轴套方式

电机通用性

Adapter-bushing connection

Motor generality

高粘度润滑脂

使用高粘度、不易分离的润滑脂, 有效防止润滑脂泄漏。

High viscosity grease

Perfect solution by high viscosity anti-separation grease.

维护方便

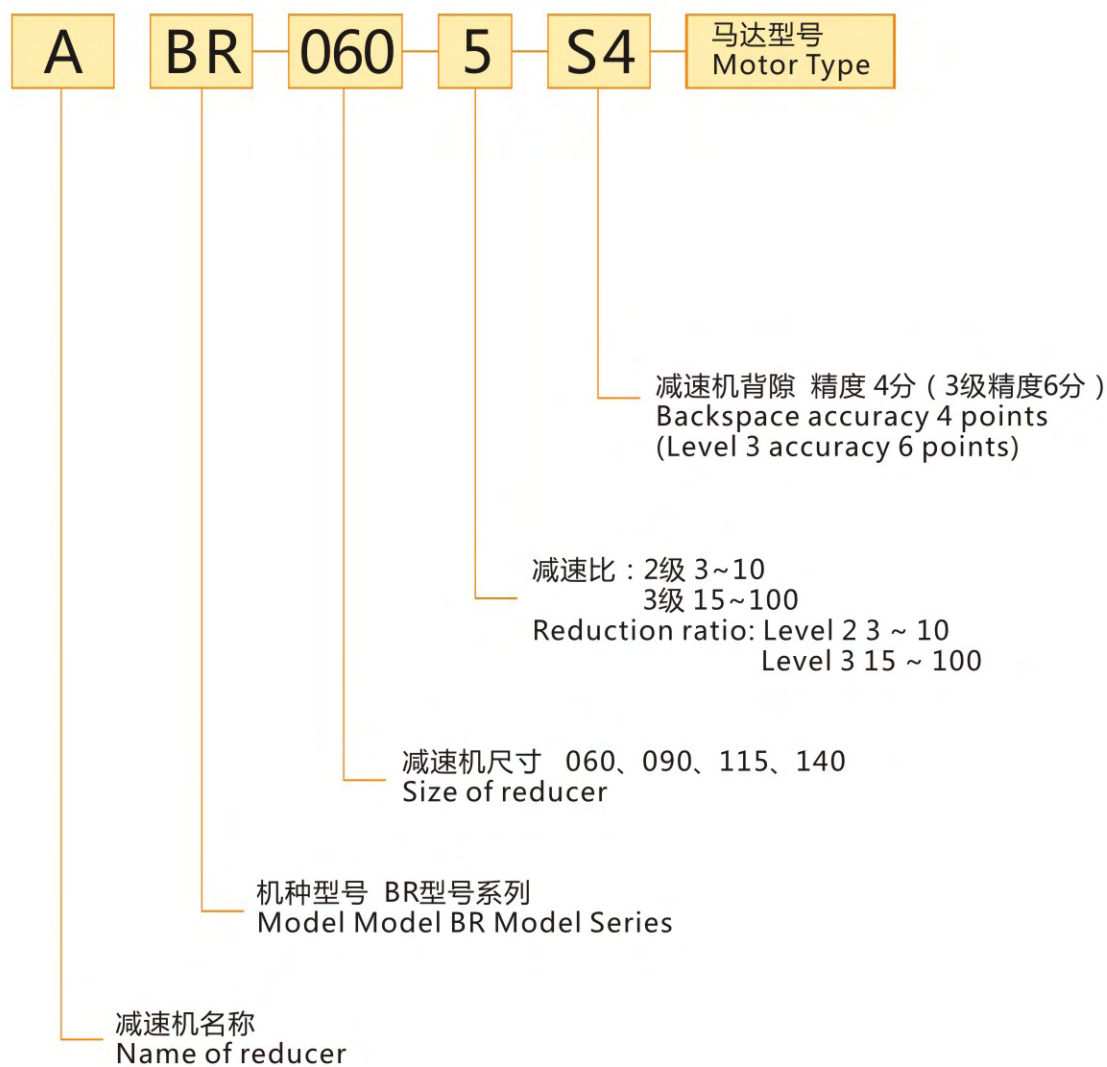
在产品寿命期内无需更换润滑脂, 安装更便捷。

Maintenance-free

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

ABR series

机种、型号代码 Model number



ABR-060

尺寸 Frame size	机种 Model	减速比 Ratio	Φ 1			Φ 2		Φ 3	
			额定扭矩 Nominal output torque [Nm]	最大扭矩 Maximum output torque [Nm]	急停 最大扭矩 Emergency stop torque [Nm]	额定 输入转速 Nominal input speed [rpm]	最大 输入转速 Maximum input speed [rpm]	额定径向力 Permitted radial load [N]	额定轴向力 Permitted axial load [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
		15	17	34	70	3000	6000	750	640
		16	25	47	95	3000	6000	760	660
	3	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

尺寸 Frame size	机种 Model	减速比 Ratio	Φ 4		重量 Weight [kg]	Φ 5			使用温度 Use the temperature
			最大 径向负荷 Maximum radial load [N]	最大 轴向负荷 Maximum axial load [N]		惯性力矩 Moment of inertia ($\leq \phi 8$) [kg·cm ²]	惯性力矩 Moment of inertia ($\leq \phi 14$) [kg·cm ²]	惯性力矩 Moment of inertia ($\leq \phi 19$) [kg·cm ²]	
060	2	3	1220	1120	1.8	0.31	0.39	0.58	-20℃ ~ 175℃
		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	—	

- Φ 1 输入转速为额定转速时，使用寿命为 20000 小时的值
- Φ 2 输入转速为额定转速时，使用寿命为 20000 小时的值
(作用于轴中央，轴向负荷为 0 时)
- Φ 3 输入转速为额定转速时，使用寿命为 20000 小时的值
(作用于轴芯，径向负荷为 0 时)
- Φ 4 径向负荷的容许最大值
- Φ 5 轴向负荷的容许最大值
- Φ 6 使用温度 -20℃ ~ 175℃

- 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.
- Φ 6 Use the temperature -20℃ ~ 175℃

ABR-090

尺寸 Frame size	机种 Model	减速比 Ratio	①			②		③	
			额定扭矩 Nominal output torque [Nm]	最大扭矩 Maximum output torque [Nm]	急停 最大扭矩 Emergency stop torque [Nm]	额定 输入转速 Nominal input speed [rpm]	最大 输入转速 Maximum input speed [rpm]	额定径向力 Permitted radial load [N]	额定轴向力 Permitted axial load [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
		15	47	70	178	3000	6000	1415	1915
		16	67	115	228	3000	6000	1415	1915
	3	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

尺寸 Frame size	机种 Model	减速比 Ratio	④		重量 Weight [kg]	⑤			
			最大 径向负荷 Maximum radial load [N]	最大 轴向负荷 Maximum axial load [N]		惯性力矩 Moment of inertia ($\leq \phi 8$) [kg·cm ²]	惯性力矩 Moment of inertia ($\leq \phi 14$) [kg·cm ²]	惯性力矩 Moment of inertia ($\leq \phi 19$) [kg·cm ²]	惯性力矩 Moment of inertia ($\leq \phi 28$) [kg·cm ²]
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 输入转速为额定转速时，使用寿命为 20000 小时的值

② 输入转速为额定转速时，使用寿命为 20000 小时的值
(作用于轴中央，轴向负荷为 0 时)

③ 输入转速为额定转速时，使用寿命为 20000 小时的值
(作用于轴芯，径向负荷为 0 时)

④ 径向负荷的容许最大值

⑤ 轴向负荷的容许最大值

注：使用温度 -20℃ ~ 175℃

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.

Note: Use the temperature -20℃ ~ 175℃

ABR-115

尺寸 Frame size	机种 Model	减速比 Ratio	○ 1			○ 2		○ 3	
			额定扭矩 Nominal output torque [Nm]	最大扭矩 Maximum output torque [Nm]	急停 最大扭矩 Emergency stop torque [Nm]	额定 输入转速 Nominal input speed [rpm]	最大 输入转速 Maximum input speed [rpm]	额定径向力 Permitted radial load [N]	额定轴向力 Permitted axial load [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

尺寸 Frame size	机种 Model	减速比 Ratio	○ 4		重量 Weight [kg]	○ 5			
			最大 径向负荷 Maximum radial load [N]	最大 轴向负荷 Maximum axial load [N]		惯性力矩 Moment of inertia ($\leq \phi 14$) [kg·cm ²]	惯性力矩 Moment of inertia ($\leq \phi 19$) [kg·cm ²]	惯性力矩 Moment of inertia ($\leq \phi 28$) [kg·cm ²]	惯性力矩 Moment of inertia ($\leq \phi 38$) [kg·cm ²]
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 输入转速为额定转速时，使用寿命为 20000 小时的值

○ 2 输入转速为额定转速时，使用寿命为 20000 小时的值
(作用于轴中央，轴向负荷为 0 时)

○ 3 输入转速为额定转速时，使用寿命为 20000 小时的值
(作用于轴芯，径向负荷为 0 时)

○ 4 径向负荷的容许最大值

○ 5 轴向负荷的容许最大值

注：使用温度 -20℃ ~ 175℃

○ 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.

Note: Use the temperature - 20 °C ~ 175 °C

ABR-140

尺寸 Frame size	机种 Model	减速比 Ratio	①			②		③	
			额定扭矩 Nominal output torque [Nm]	最大扭矩 Maximum output torque [Nm]	急停 最大扭矩 Emergency stop torque [Nm]	额定 输入转速 Nominal input speed [rpm]	最大 输入转速 Maximum input speed [rpm]	额定径向力 Permitted radial load [N]	额定轴向力 Permitted axial load [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
		15	205	405	765	2000	4000	5425	4925
		16	305	605	1115	2000	4000	5525	5025
	3	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

尺寸 Frame size	机种 Model	减速比 Ratio	④		重量 Weight [kg]	⑤			
			最大 径向负荷 Maximum radial load [N]	最大 轴向负荷 Maximum axial load [N]		惯性力矩 Moment of inertia ($\leq \phi 19$) [kg·cm ²]	惯性力矩 Moment of inertia ($\leq \phi 28$) [kg·cm ²]	惯性力矩 Moment of inertia ($\leq \phi 38$) [kg·cm ²]	惯性力矩 Moment of inertia ($\leq \phi 48$) [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 输入转速为额定转速时，使用寿命为 20000 小时的值

② 输入转速为额定转速时，使用寿命为 20000 小时的值
(作用于轴中央，轴向负荷为 0 时)

③ 输入转速为额定转速时，使用寿命为 20000 小时的值
(作用于轴芯，径向负荷为 0 时)

④ 径向负荷的容许最大值

⑤ 轴向负荷的容许最大值

注：使用温度 -20℃ ~ 175℃

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)

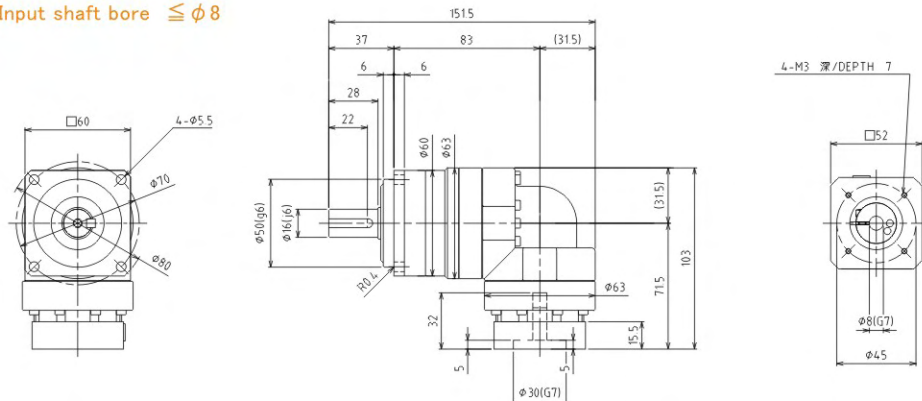
④ The maximum radial load the reducer can accept.

⑤ The maximum axial load the reducer can accept.

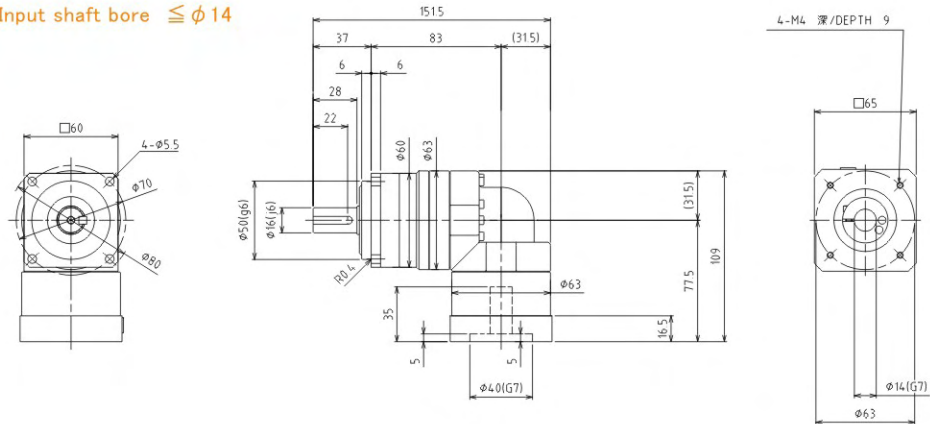
Note: Use the temperature -20℃ ~ 175℃

ABR-060 2级 2stage

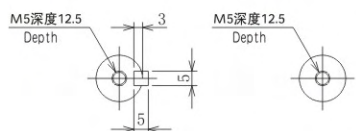
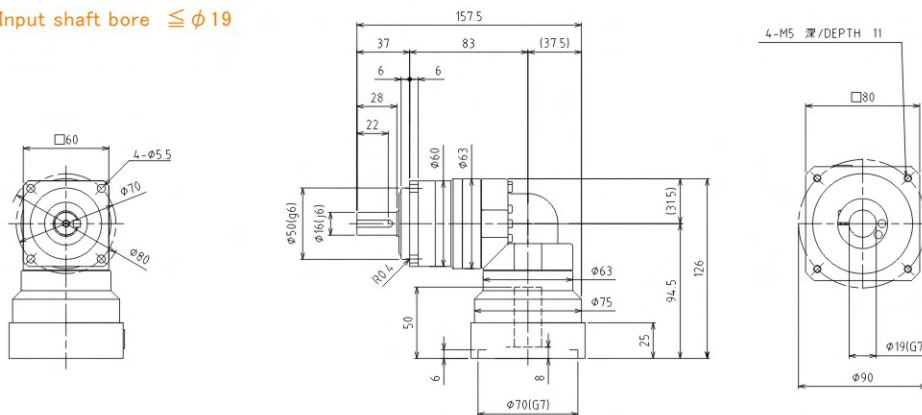
输入轴内径 Input shaft bore $\leq \phi 8$



输入轴内径 Input shaft bore $\leq \phi 14$



输入轴内径 Input shaft bore $\leq \phi 19$

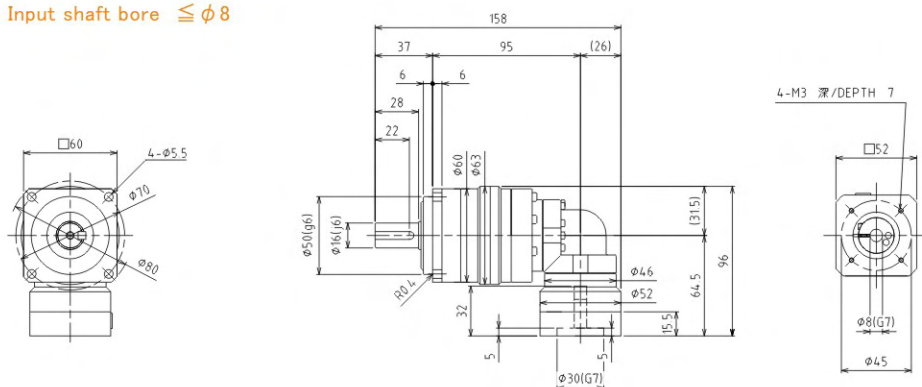


附带键 Shaft with key
无键 Smooth shaft

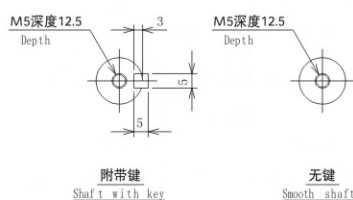
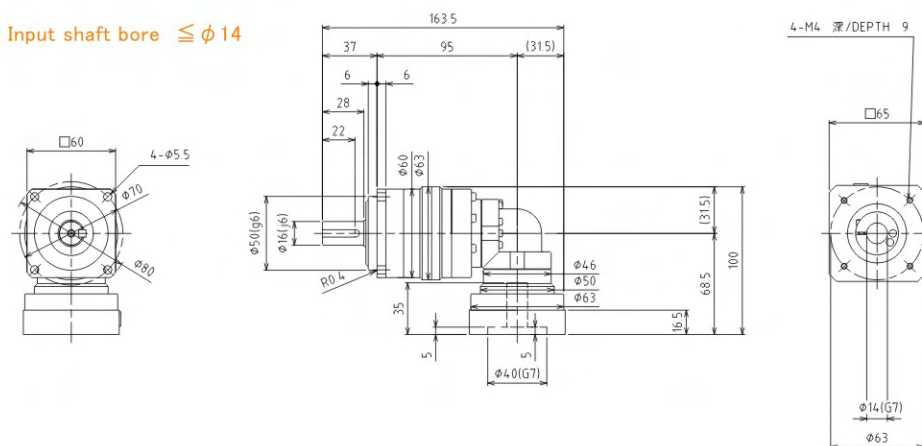
备注1: 机身尺寸随安装电机的不同而有所差异。
备注2: 电机轴径与输入轴径不同时, 可插入轴套。
Note1: Body Size Length will vary depending on motor.
Note2: Bushing will be inserted to adapt to motor shaft.

ABR-060 3级 3stage

输入轴内径 Input shaft bore $\leq \phi 8$

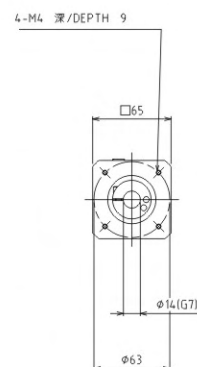
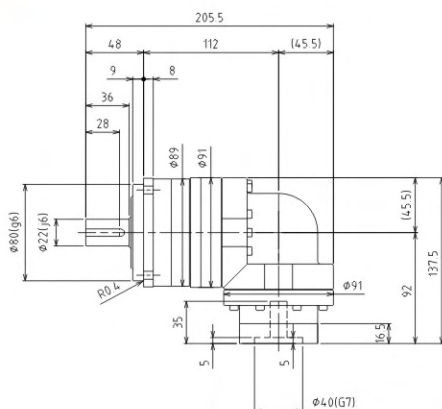
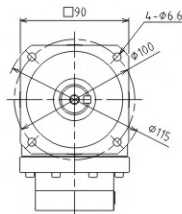


输入轴内径 Input shaft bore $\leq \phi 14$

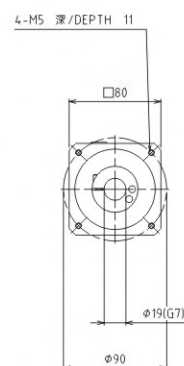
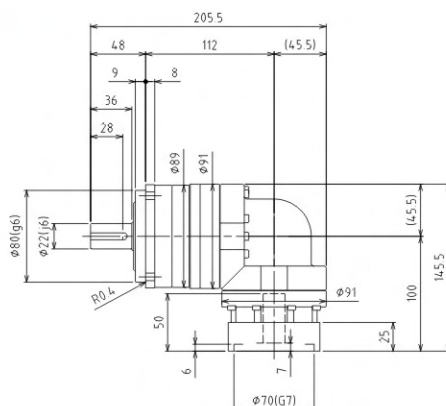
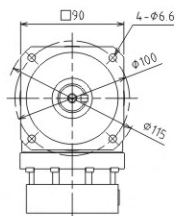


备注1: 机身尺寸随安装电机的不同而有所差异。
 备注2: 电机轴径与输入轴径不同时, 可插入轴套。
 Note1: Body Size Length will vary depending on motor.
 Note2: Bushing will be inserted to adapt to motor shaft.

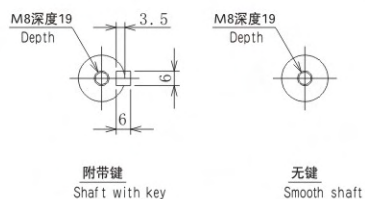
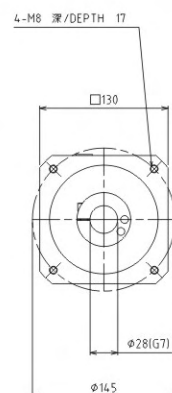
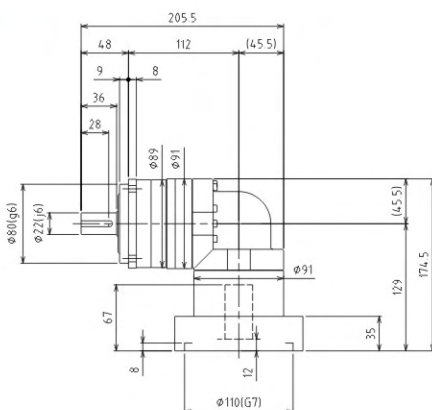
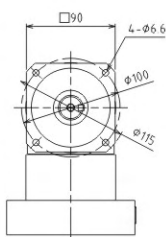
输入轴内径 Input shaft bore $\leq \phi 14$



输入轴内径 Input shaft bore $\leq \phi 19$

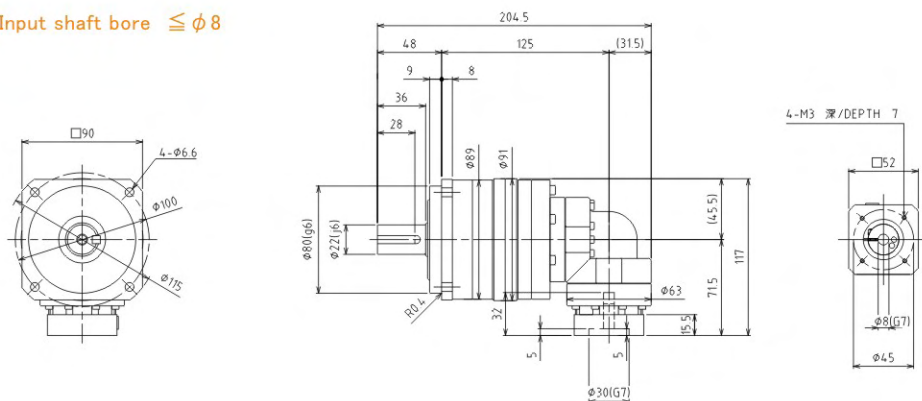


输入轴内径 Input shaft bore $\leq \phi 28$

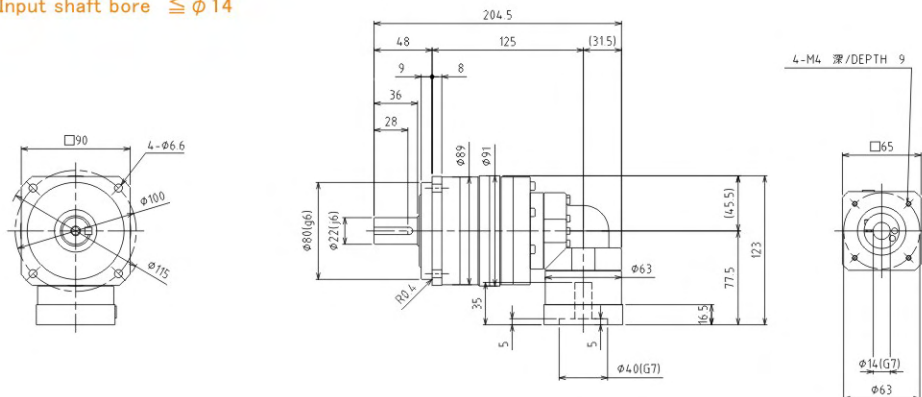


ABR-090 3级 3stage

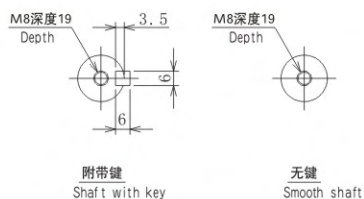
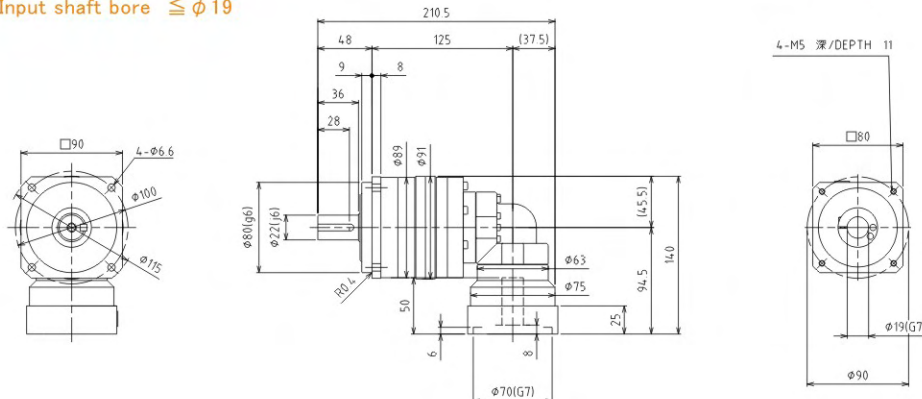
输入轴内径 Input shaft bore $\leq \phi 8$



输入轴内径 Input shaft bore $\leq \phi 14$



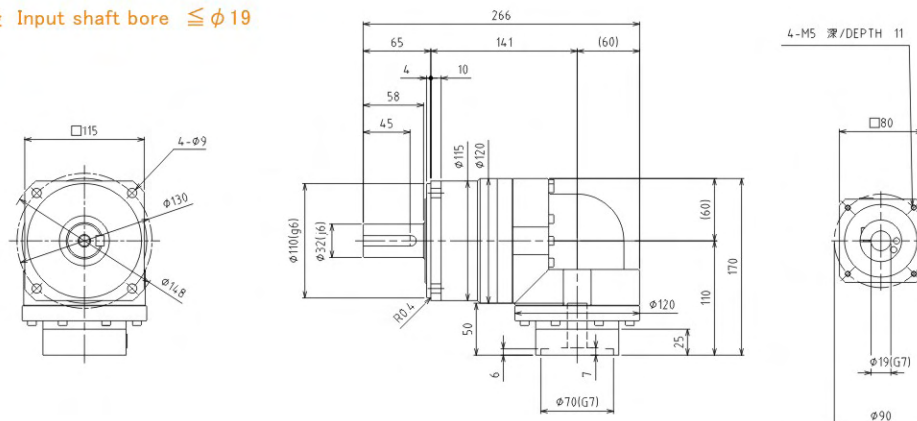
输入轴内径 Input shaft bore $\leq \phi 19$



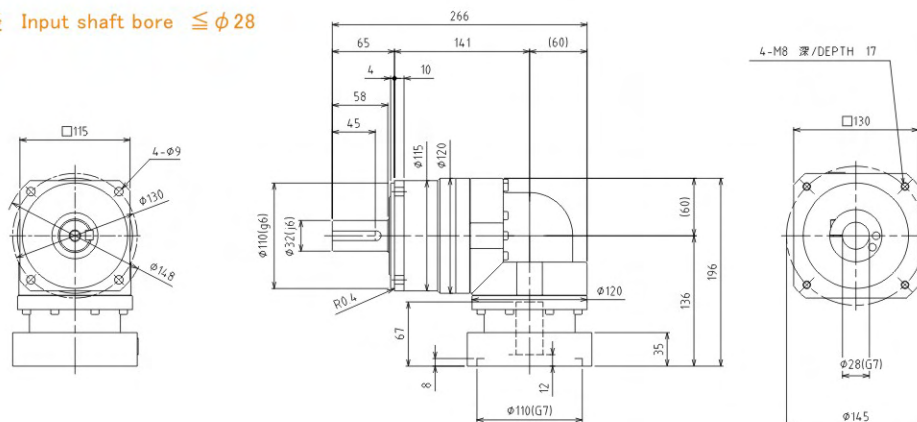
备注1: 机身尺寸随安装电机的不同而有所差异。
备注2: 电机轴径与输入轴径不同时, 可插入轴套。
Note1: Body Size Length will vary depending on motor.
Note2: Bushing will be inserted to adapt to motor shaft.

ABR-115 2级 2stage

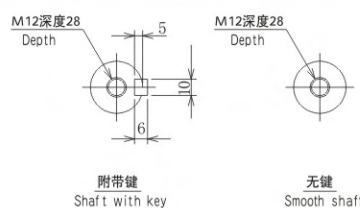
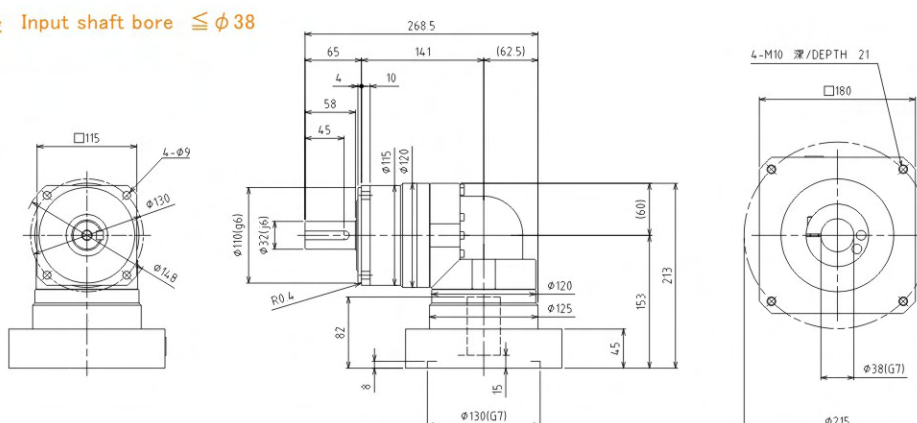
输入轴内径 Input shaft bore $\leq \phi 19$



输入轴内径 Input shaft bore $\leq \phi 28$



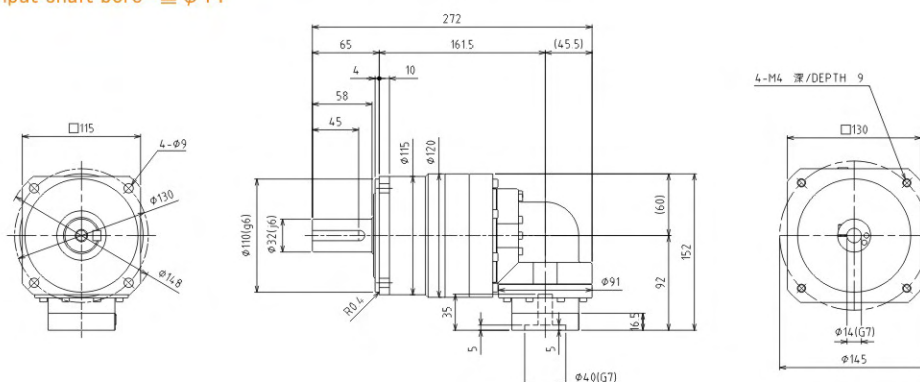
输入轴内径 Input shaft bore $\leq \phi 38$



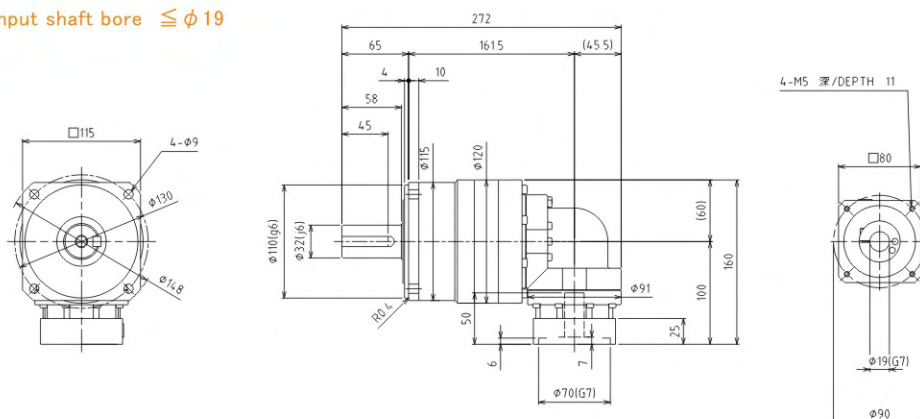
备注1: 机身尺寸随安装电机的不同而有所差异。
 备注2: 电机轴径与输入轴径不同时, 可插入轴套。
 Note1: Body Size Length will vary depending on motor.
 Note2: Bushing will be inserted to adapt to motor shaft.

ABR-115 3级 3stage

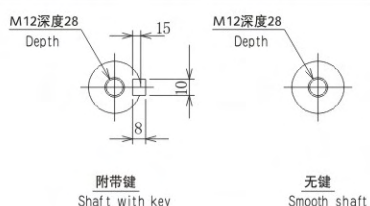
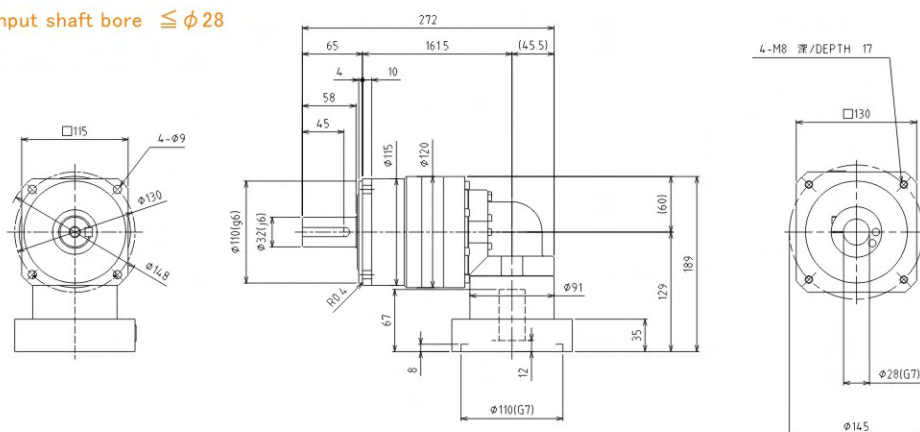
输入轴内径 Input shaft bore $\leq \phi 14$



输入轴内径 Input shaft bore $\leq \phi 19$



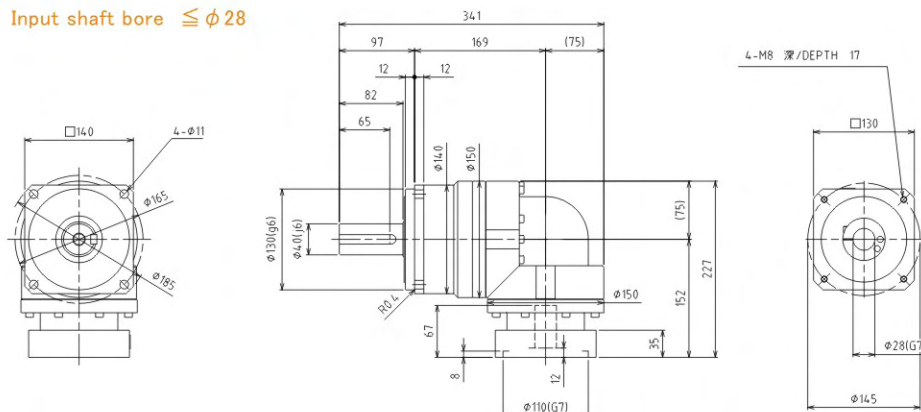
输入轴内径 Input shaft bore $\leq \phi 28$



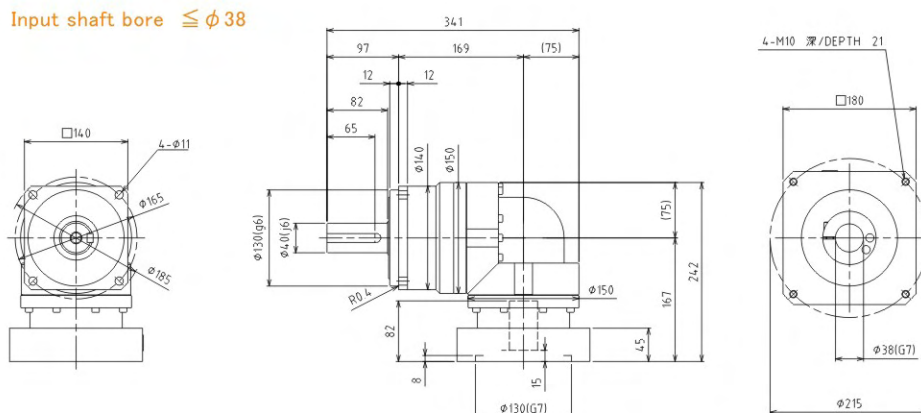
备注1: 机身尺寸随安装电机的不同而有所差异。
备注2: 电机轴径与输入轴径不同时, 可插入轴套。
Note1: Body Size Length will vary depending on motor.
Note2: Bushing will be inserted to adapt to motor shaft.

ABR-140 2级 2stage

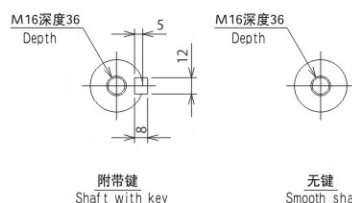
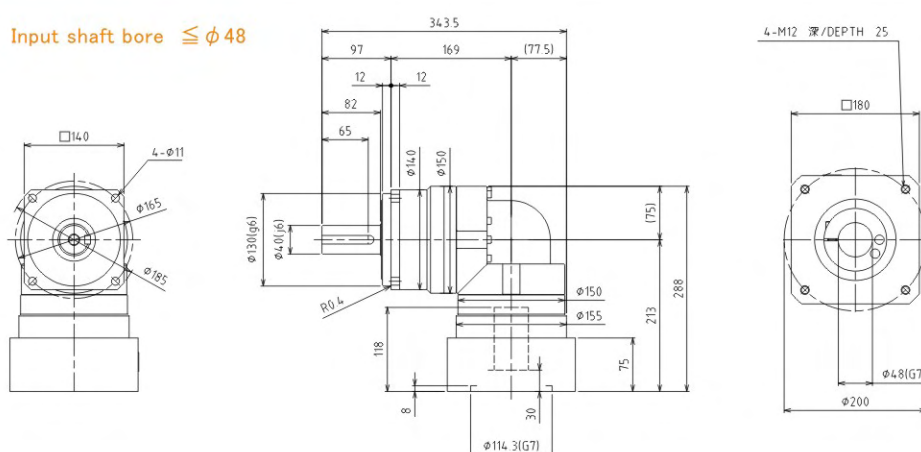
输入轴内径 Input shaft bore $\leq \phi 28$



输入轴内径 Input shaft bore $\leq \phi 38$



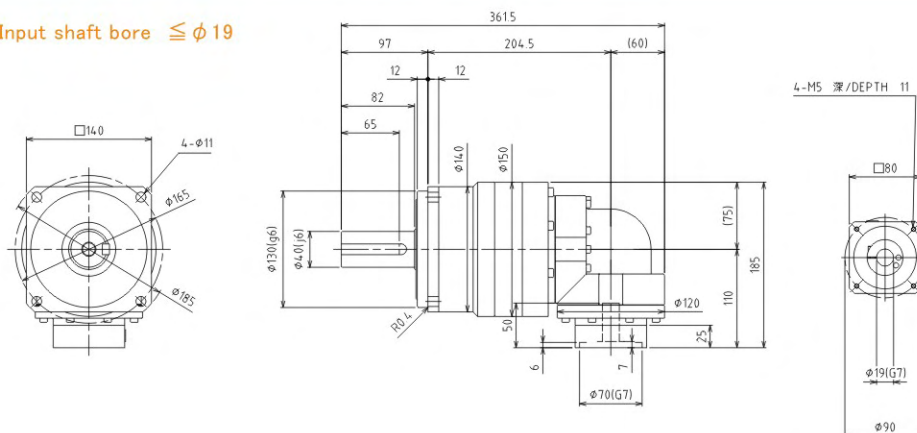
输入轴内径 Input shaft bore $\leq \phi 48$



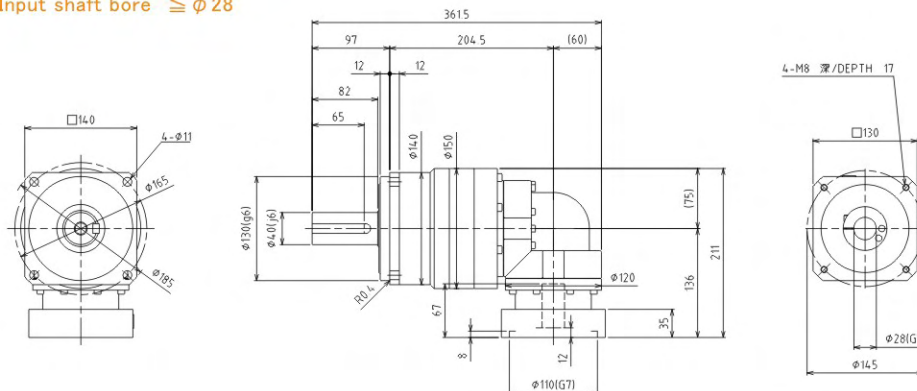
备注1: 机身尺寸随安装电机的不同而有所差异。
备注2: 电机轴径与输入轴径不同时, 可插入轴套。
Note1: Body Size Length will vary depending on motor.
Note2: Bushing will be inserted to adapt to motor shaft.

ABR-140 3级 3stage

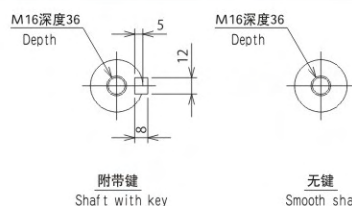
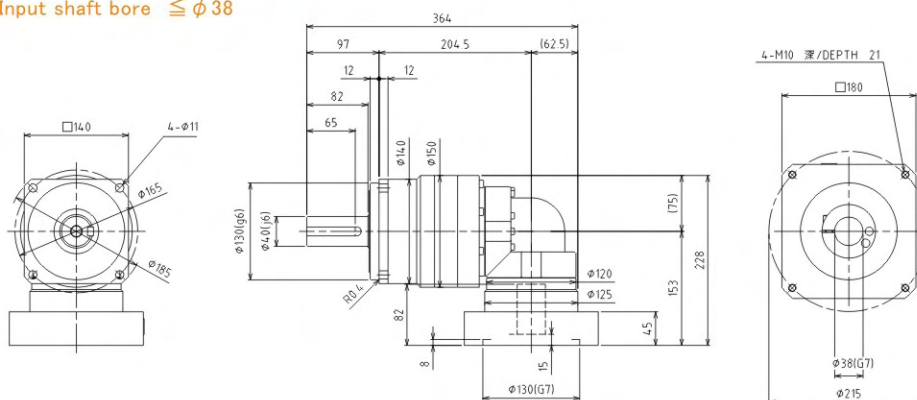
输入轴内径 Input shaft bore $\leq \phi 19$



输入轴内径 Input shaft bore $\leq \phi 28$



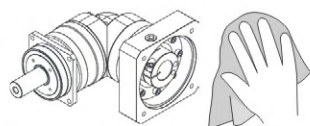
输入轴内径 Input shaft bore $\leq \phi 38$



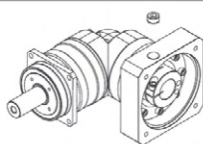
备注1: 机身尺寸随安装电机的不同而有所差异。
备注2: 电机轴径与输入轴径不同时, 可插入轴套。
Note1: Body Size Length will vary depending on motor.
Note2: Bushing will be inserted to adapt to motor shaft.

1 电机安装步骤 Mounting procedure to the motor

- 1 擦拭电机轴上的防锈剂、润滑脂等。
Wipe off anti-rust agent and oil on the motor shaft.

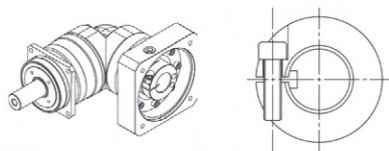


- 2 取下堵头。
Remove the plug.

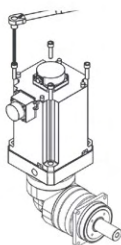


- 3 旋转输入轴使紧固螺栓的头对准塞孔。此时，请确认紧固螺栓是松动的。
Turn the input shaft until the cap screw is seen. Make sure the cap screw is loosened.

如带有轴套，安装方法如图所示。
In case the bushing has been attached, Please fix it to the reducer as the drawing below.



- 4 将减速机垂直放置在平坦的地方，使减速机的电机安装面朝上侧。将电机轴慢慢地插入输入轴，注意避免撞击到输入轴，请确认电机的法兰面紧靠减速机的法兰面。按指定的紧固扭矩拧紧电机安装螺栓。（参考表 1）
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.(See table1)



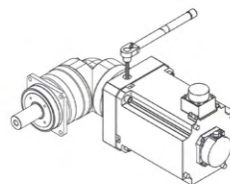
2 减速机的安装

要将减速机安装到设备上时，请先确认安装面平坦且没有毛边等，然后使用扭矩扳手等按照指定的紧固扭矩拧紧螺栓。（参考表 2）

Reducer installation

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

- 5 使用扭矩扳手等按照指定的紧固扭矩拧紧紧固螺栓。（参考表 1）
Tighten the clamping bolt of the input shaft with torque wrench to the proper torque.(See table1)



- 6 安装堵头，安装完成。
Reinstall the plug. The procedure is done.

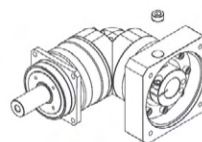


表1 Table 1

螺栓 尺寸 Bolt size	电机安装螺栓 Motor installing bolts		紧固螺栓 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	—	—

表2 Table 2

螺栓 尺寸 Bolt size	紧固扭矩 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

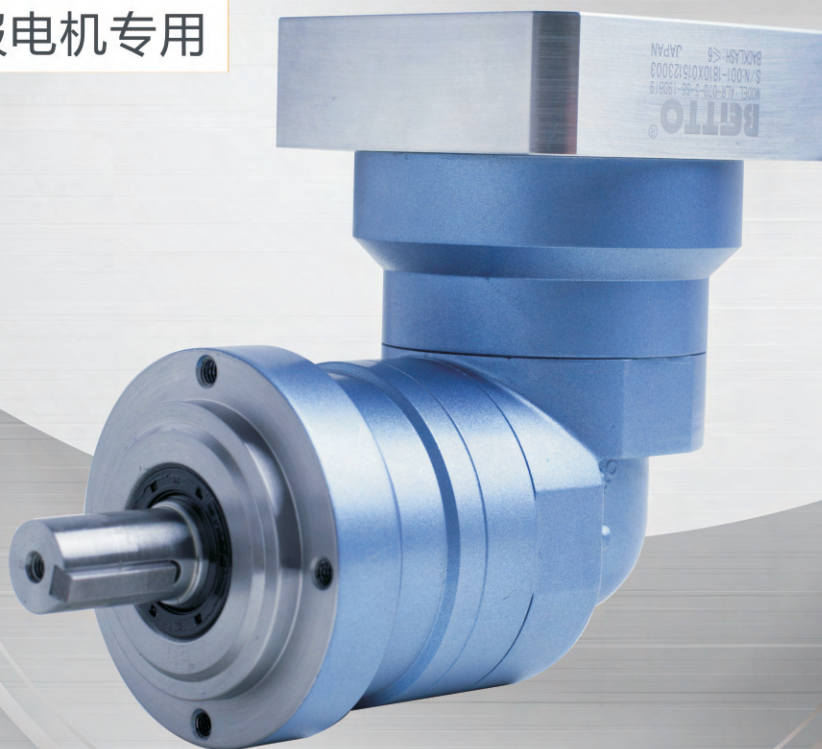
◎推荐螺栓：强度12.9以上

◎Recommended bolt: Strength 12.9

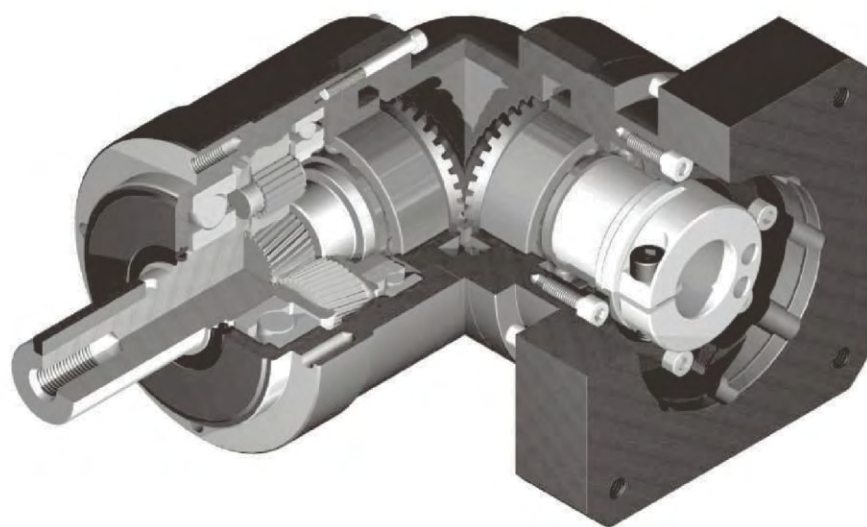
BETTO 貝託®
精密行星齿轮减速机

ALR

伺服电机专用



ALR series

**省空间**

直交型减速机使用螺旋式伞齿轮, 电机的安装可实现90度弯曲, 节省了安装空间。

Space - saving

Right angle reducer using spiral bevel gear
Customer can locate the motor at 90 degree away from the reducer if required to save space.

高刚性、高扭矩

使用整体式滚针轴承, 大大提高了刚性和扭矩。

High rigidity & torque

High rigidity & high torque was achieved by uncaged needle roller bearings.

连接法兰、轴套方式

电机通用性

Adapter-bushing connection

Motor generality

高粘度润滑脂

使用高粘度、不易分离的润滑脂, 有效防止润滑脂泄漏。

High viscosity grease

Perfect solution by high viscosity anti-separation grease.

维护方便

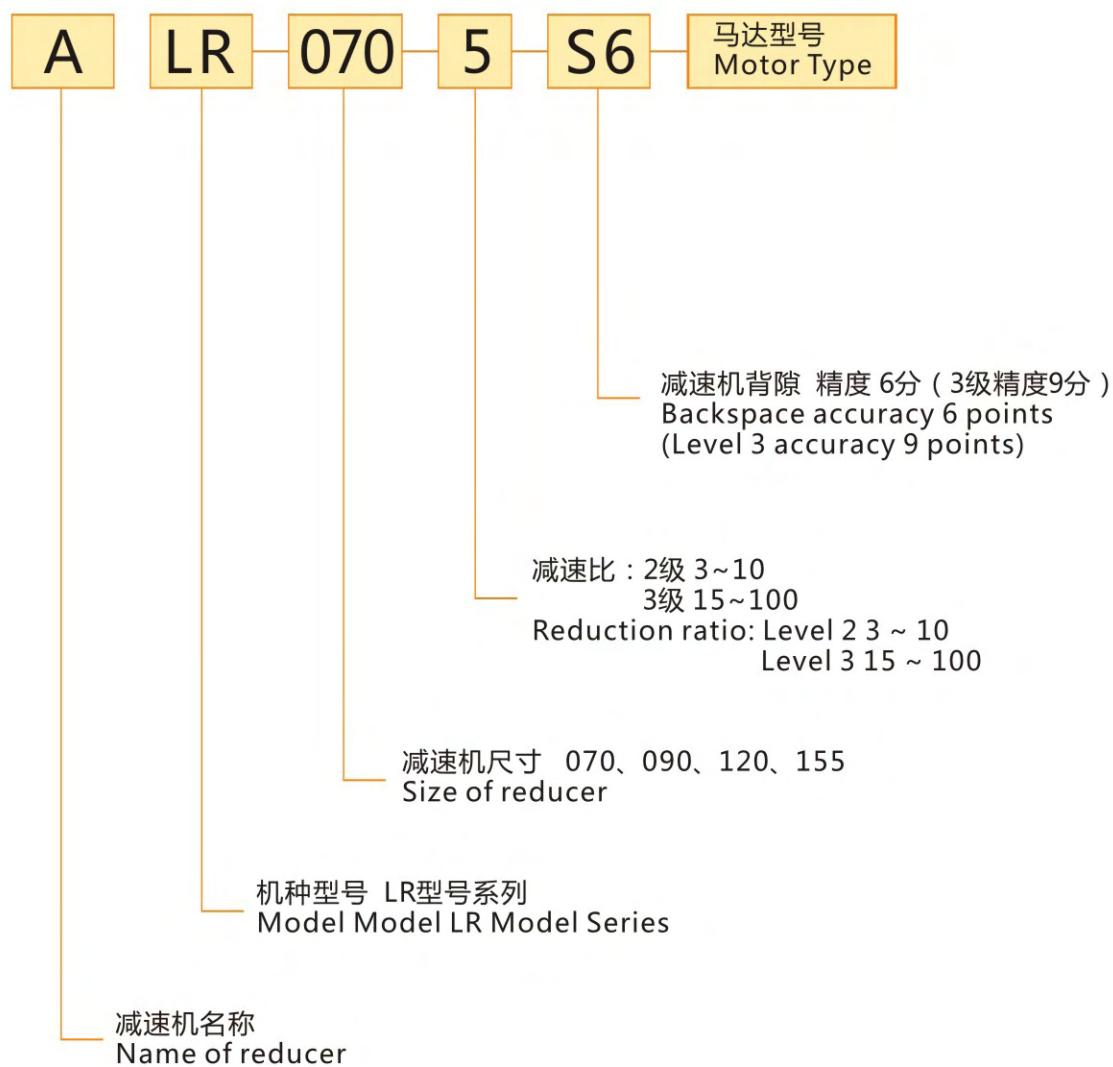
在产品寿命期内无需更换润滑脂, 安装更便捷。

Maintenance-free

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

ALR series

机种、型号代码 Model number



ALR-070

尺寸 Frame size	机种 Model	减速比 Ratio	①			②		③	
			额定扭矩 Nominal output torque [Nm]	最大扭矩 Maximum output torque [Nm]	急停 最大扭矩 Emergency stop torque [Nm]	额定 输入转速 Nominal input speed [rpm]	最大 输入转速 Maximum input speed [rpm]	额定径向力 Permitted radial load [N]	额定轴向力 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
		15	17	34	70	3000	6000	750	640
		16	25	47	95	3000	6000	760	650
	3	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

尺寸 Frame size	机种 Model	减速比 Ratio	④		重量 Weight [kg]	⑤		⑥	
			最大 径向负荷 Maximum radial load [N]	最大 轴向负荷 Maximum axial load [N]		惯性力矩 Moment of inertia ($\leq \phi 8$) [kg·cm ²]	惯性力矩 Moment of inertia ($\leq \phi 14$) [kg·cm ²]	惯性力矩 Moment of inertia ($\leq \phi 19$) [kg·cm ²]	使用温度 Use the temperature
070	2	3	1220	1120	1.9	0.31	0.39	0.58	-20℃ ~ 175℃
		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	—	

- ① 输入转速为额定转速时，使用寿命为 20000 小时的值
 ② 输入转速为额定转速时，使用寿命为 20000 小时的值
 （作用于轴中央，轴向负荷为 0 时）
 ③ 输入转速为额定转速时，使用寿命为 20000 小时的值
 （作用于轴芯，径向负荷为 0 时）
 ④ 径向负荷的容许最大值
 ⑤ 轴向负荷的容许最大值
 ⑥ 使用温度 -20℃ ~ 175℃

- 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 Use the temperature -20 °C ~ 175 °C

ALR-090

尺寸 Frame size	机种 Model	减速比 Ratio	①			②		③	
			额定扭矩 Nominal output torque [Nm]	最大扭矩 Maximum output torque [Nm]	急停 最大扭矩 Emergency stop torque [Nm]	额定 输入转速 Nominal input speed [rpm]	最大 输入转速 Maximum input speed [rpm]	额定径向力 Permitted radial load [N]	额定轴向力 Permitted axial load [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
		10	47	68	178	3000	6000	1215	1615
		15	47	68	178	3000	6000	1415	1915
		16	67	113	228	3000	6000	1415	1915
	3	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

尺寸 Frame size	机种 Model	减速比 Ratio	④		重量 Weight [kg]	⑤		惯性力矩 Moment of inertia ($\leq \phi 8$) [kg·cm ²]	惯性力矩 Moment of inertia ($\leq \phi 14$) [kg·cm ²]	惯性力矩 Moment of inertia ($\leq \phi 19$) [kg·cm ²]	惯性力矩 Moment of inertia ($\leq \phi 28$) [kg·cm ²]
			最大 径向负荷 Maximum radial load [N]	最大 轴向负荷 Maximum axial load [N]		最大 径向负荷 Maximum radial load [N]	最大 轴向负荷 Maximum axial load [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 输入转速为额定转速时，使用寿命为 20000 小时的值

② 输入转速为额定转速时，使用寿命为 20000 小时的值
(作用于轴中央，轴向负荷为 0 时)

③ 输入转速为额定转速时，使用寿命为 20000 小时的值
(作用于轴芯，径向负荷为 0 时)

④ 径向负荷的容许最大值

⑤ 轴向负荷的容许最大值

注：使用温度 -20℃ ~ 175℃

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.

Note: Use the temperature - 20 °C ~ 175 °C

ALR-120

ALR-120

			○ 1			○ 2		○ 3	
尺寸 Frame size	机种 Model	减速比 Ratio	额定扭矩 Nominal output torque	最大扭矩 Maximum output torque	急停 最大扭矩 Emergency stop torque	额定 输入转速 Nominal input speed	最大 输入转速 Maximum input speed	额定径向力 Permitted radial load	额定轴向力 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		

尺寸 Frame size	机种 Model	减速比 Ratio	○ 4		重量 Weight	○ 5			
			最大 径向负荷 Maximum radial load	最大 轴向负荷 Maximum axial load		惯性力矩 Moment of inertia ($\leq \phi 14$)	惯性力矩 Moment of inertia ($\leq \phi 19$)	惯性力矩 Moment of inertia ($\leq \phi 28$)	惯性力矩 Moment of inertia ($\leq \phi 38$)
			[N]	[N]		[kg·cm ²]	[kg·cm ²]	[kg·cm ²]	[kg·cm ²]
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 输入转速为额定转速时，使用寿命为 20000 小时的值

○ 2 输入转速为额定转速时，使用寿命为 20000 小时的值
(作用于轴中央，轴向负荷为 0 时)

○ 3 输入转速为额定转速时，使用寿命为 20000 小时的值
(作用于轴芯，径向负荷为 0 时)

○ 4 径向负荷的容许最大值

○ 5 轴向负荷的容许最大值

注：使用温度 -20℃ ~ 175℃

○ 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.

Note: Use the temperature -20℃ ~ 175℃

ALR-155

尺寸 Frame size	机种 Model	减速比 Ratio	①			②		③	
			额定扭矩 Nominal output torque [Nm]	最大扭矩 Maximum output torque [Nm]	急停 最大扭矩 Emergency stop torque [Nm]	额定 输入转速 Nominal input speed [rpm]	最大 输入转速 Maximum input speed [rpm]	额定径向力 Permitted radial load [N]	额定轴向力 Permitted axial load [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
		15	205	405	765	2000	4000	5425	4925
		16	305	605	1115	2000	4000	5525	5025
	3	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	715	2000	4000	9125	8225
		100	205	405	715	2000	4000	9125	8225

尺寸 Frame size	机种 Model	减速比 Ratio	④		重量 Weight [kg]	⑤			
			最大 径向负荷 Maximum radial load [N]	最大 轴向负荷 Maximum axial load [N]		惯性力矩 Moment of inertia ($\leq \phi 19$) [kg·cm ²]	惯性力矩 Moment of inertia ($\leq \phi 28$) [kg·cm ²]	惯性力矩 Moment of inertia ($\leq \phi 38$) [kg·cm ²]	惯性力矩 Moment of inertia ($\leq \phi 48$) [kg·cm ²]
155	2	3	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
	3	15	9140	8240	20.4	6.40	8.00	15.07	—
		16	9140	8240		7.29	8.88	15.96	—
		20	9140	8240		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	—
		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 输入转速为额定转速时，使用寿命为 20000 小时的值

② 输入转速为额定转速时，使用寿命为 20000 小时的值
(作用于轴中央，轴向负荷为 0 时)

③ 输入转速为额定转速时，使用寿命为 20000 小时的值
(作用于轴芯，径向负荷为 0 时)

④ 径向负荷的容许最大值

⑤ 轴向负荷的容许最大值

注：使用温度 -20℃ ~ 175℃

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)

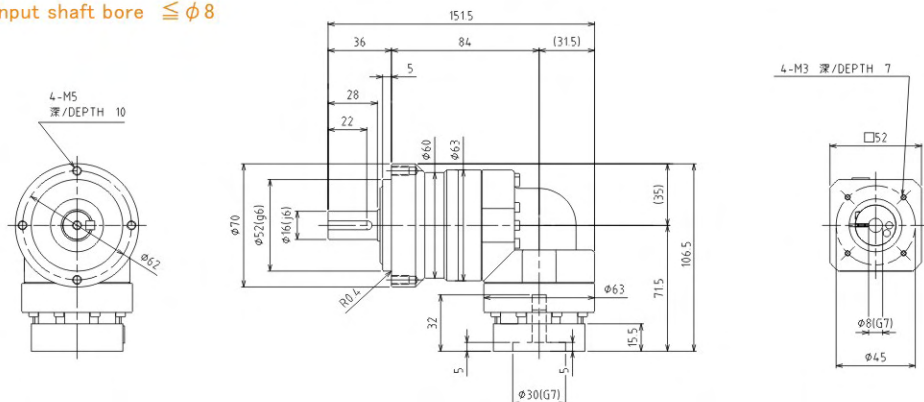
④ The maximum radial load the reducer can accept.

⑤ The maximum axial load the reducer can accept.

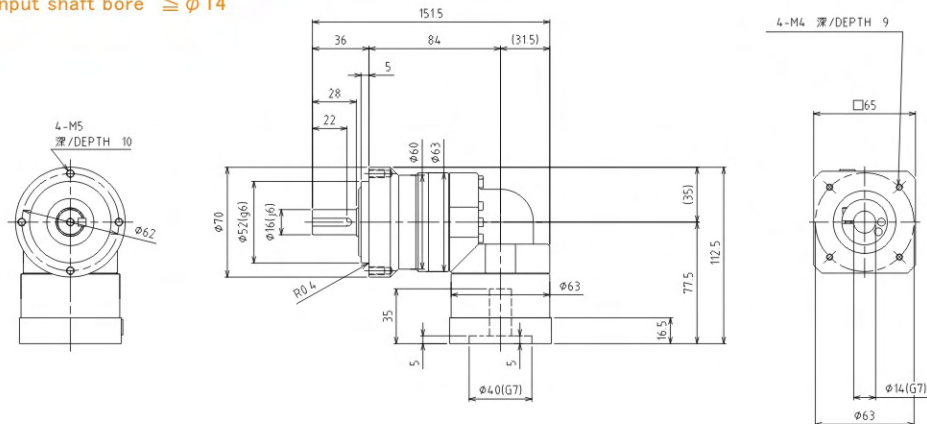
Note: Use the temperature - 20 °C ~ 175 °C

ALR-070 2级 2stage

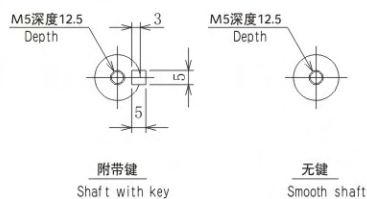
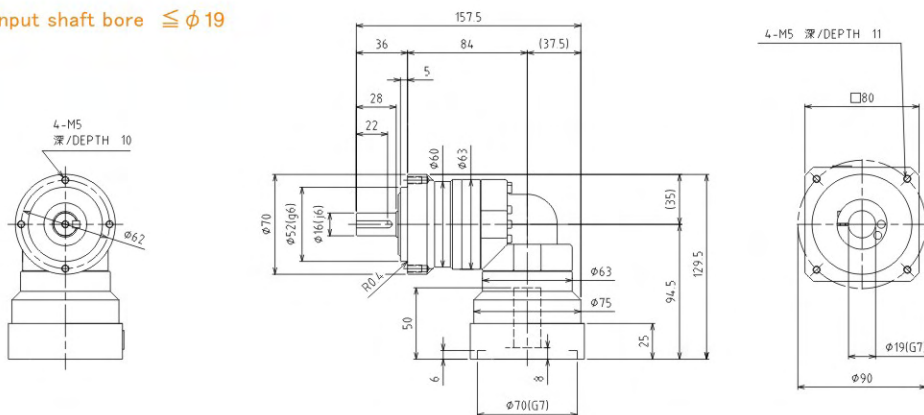
输入轴内径 Input shaft bore $\leq \phi 8$



输入轴内径 Input shaft bore $\leq \phi 14$



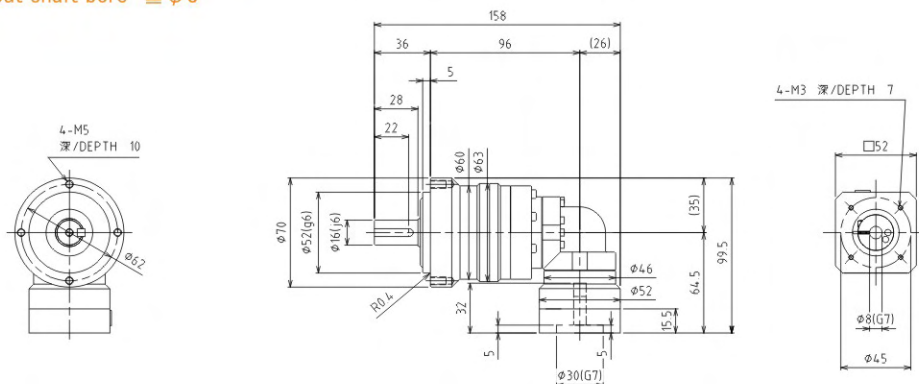
输入轴内径 Input shaft bore $\leq \phi 19$



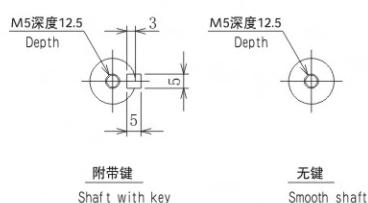
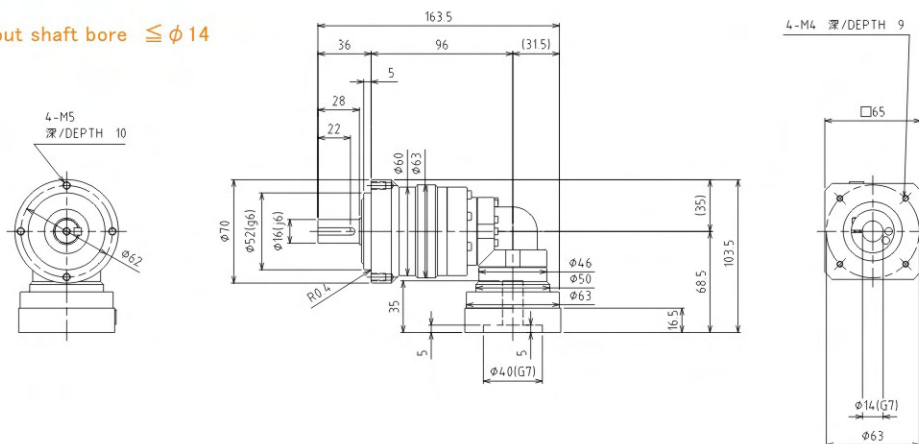
备注1: 机身尺寸随安装电机的不同而有所差异。
备注2: 电机轴径与输入轴径不同时, 可插入轴套。
Note1: Body Size Length will vary depending on motor.
Note2: Bushing will be inserted to adapt to motor shaft.

ALR-070 3级 3stage

输入轴内径 Input shaft bore $\leq \phi 8$



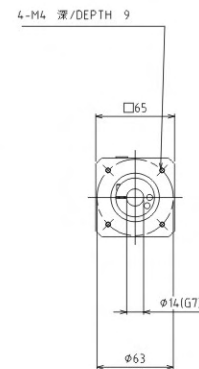
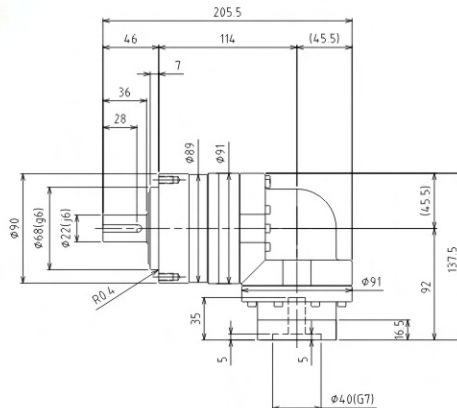
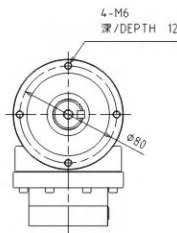
输入轴内径 Input shaft bore $\leq \phi 14$



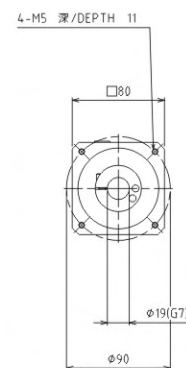
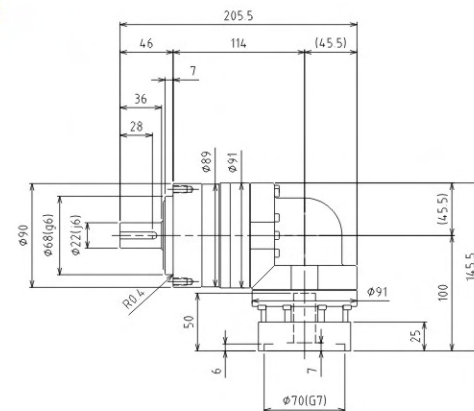
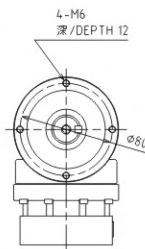
备注1: 机身尺寸随安装电机的不同而有所差异。
备注2: 电机轴径与输入轴径不同时, 可插入轴套。
Note1: Body Size Length will vary depending on motor.
Note2: Bushing will be inserted to adapt to motor shaft.

ALR-090 2级 2stage

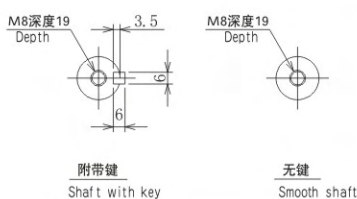
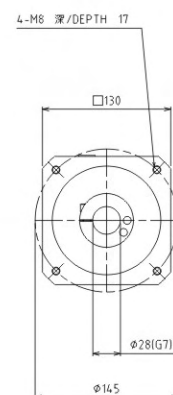
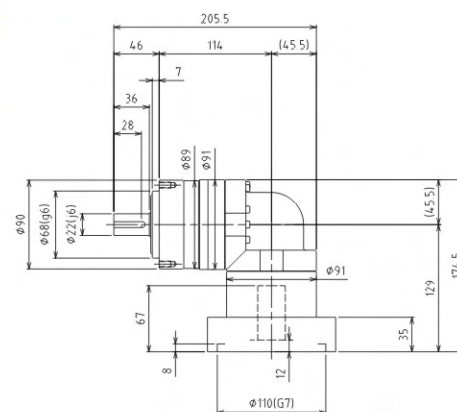
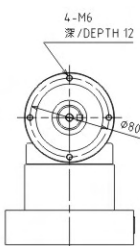
输入轴内径 Input shaft bore $\leq \phi 14$



输入轴内径 Input shaft bore $\leq \phi 19$



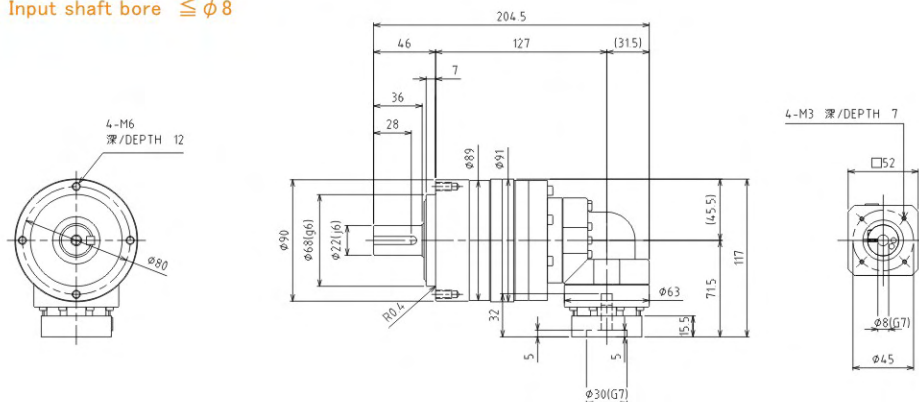
输入轴内径 Input shaft bore $\leq \phi 28$



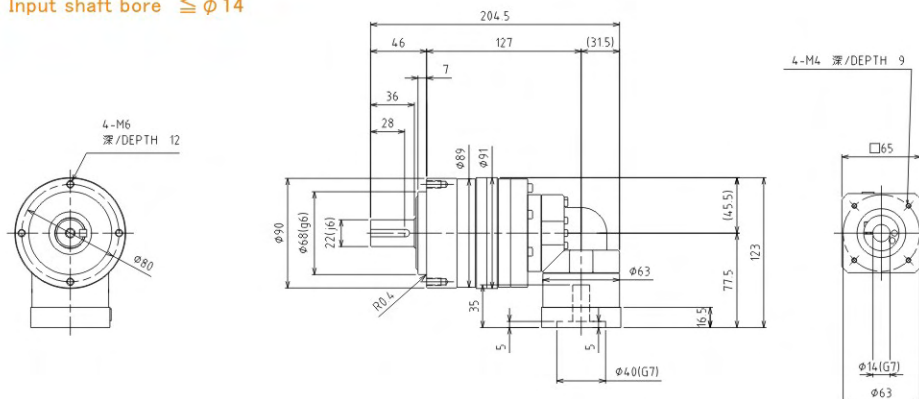
备注1: 机身尺寸随安装电机的不同而有所差异。
 备注2: 电机轴径与输入轴径不同时, 可插入轴套。
 Note1: Body Size Length will vary depending on motor.
 Note2: Bushing will be inserted to adapt to motor shaft.

ALR-090 3级 3stage

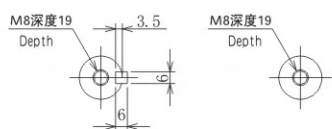
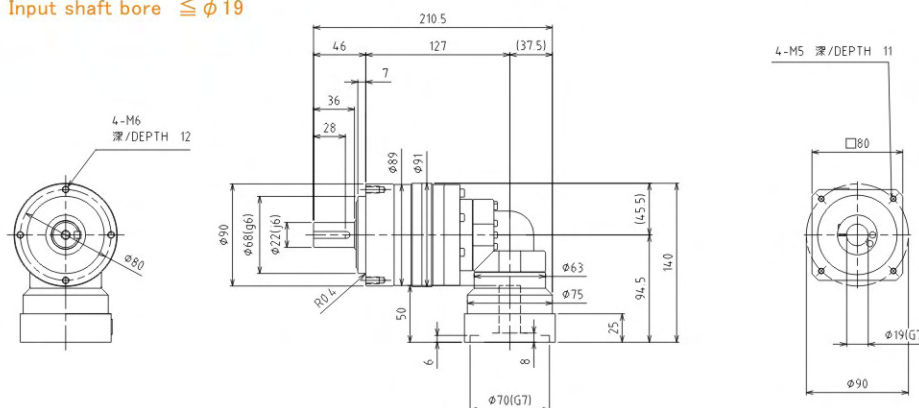
输入轴内径 Input shaft bore $\leq \phi 8$



输入轴内径 Input shaft bore $\leq \phi 14$



输入轴内径 Input shaft bore $\leq \phi 19$



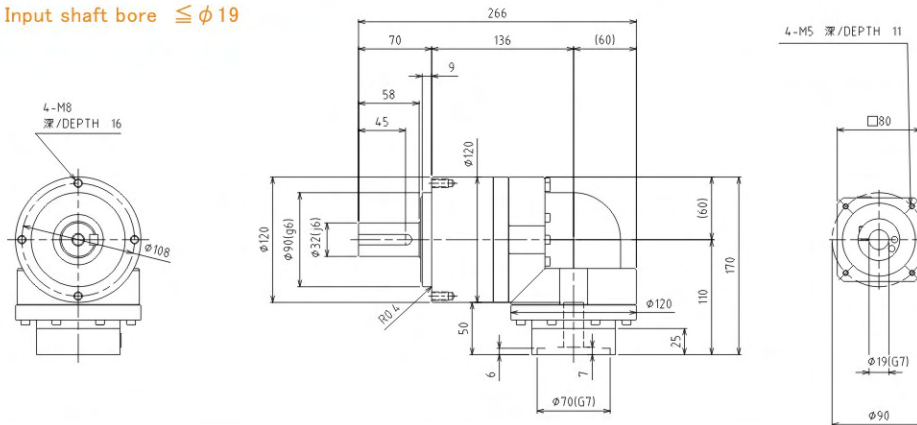
附带键
Shaft with key

无键
Smooth shaft

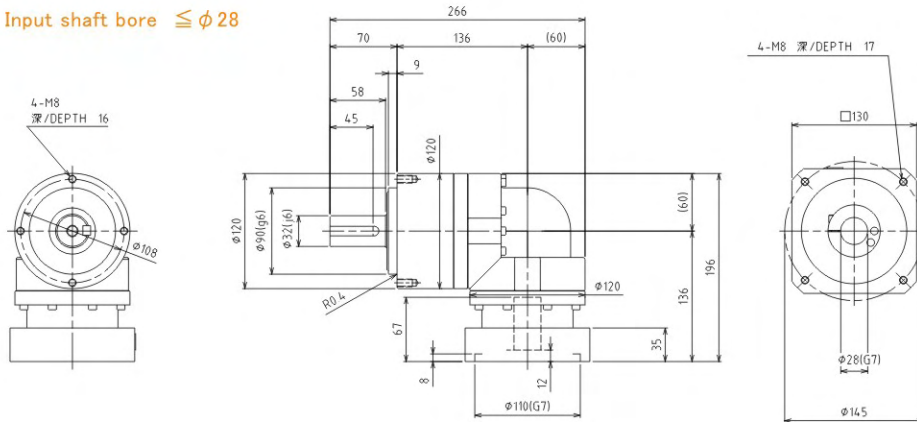
备注1: 机身尺寸随安装电机的不同而有所差异。
备注2: 电机轴径与输入轴径不同时, 可插入轴套。
Note1: Body Size Length will vary depending on motor.
Note2: Bushing will be inserted to adapt to motor shaft.

ALR-120 2级 2stage

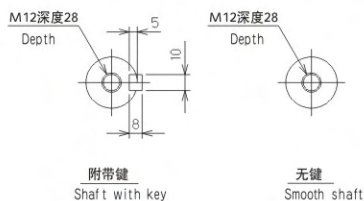
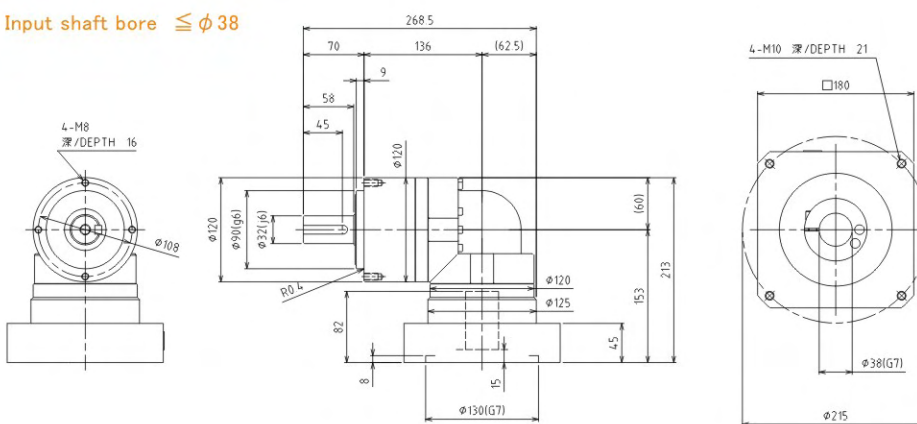
输入轴内径 Input shaft bore $\leq \phi 19$



输入轴内径 Input shaft bore $\leq \phi 28$



输入轴内径 Input shaft bore $\leq \phi 38$



备注1: 机身尺寸随安装电机的不同而有所差异。

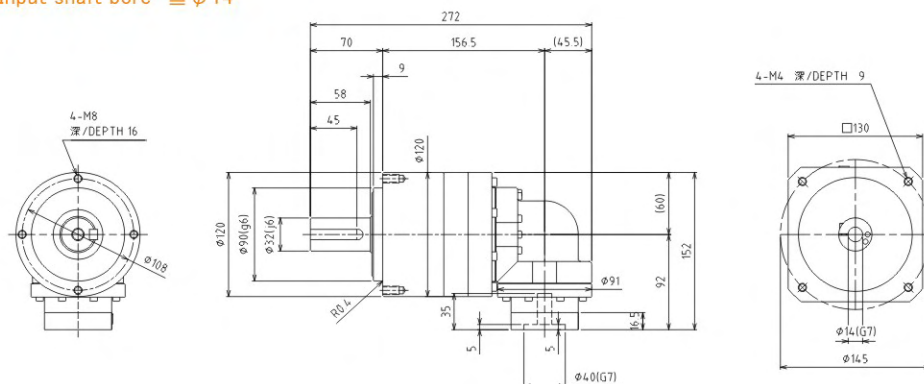
备注2: 电机轴径与输入轴径不同时, 可插入轴套。

Note1: Body Size Length will vary depending on motor.

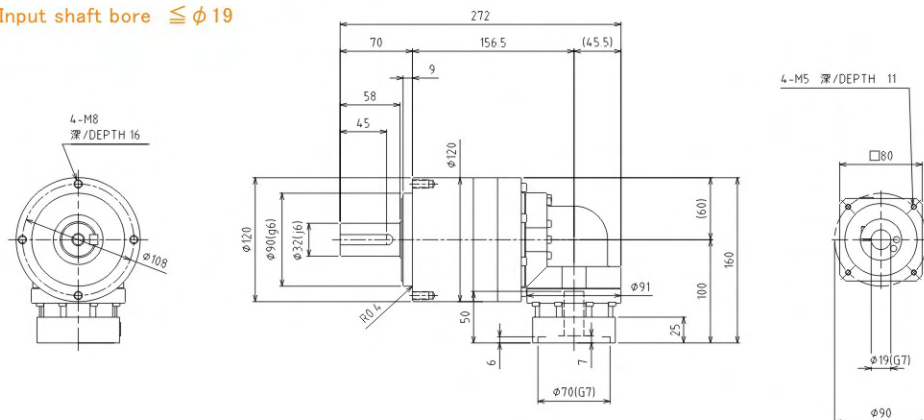
Note2: Bushing will be inserted to adapt to motor shaft.

ALR-120 3级 3stage

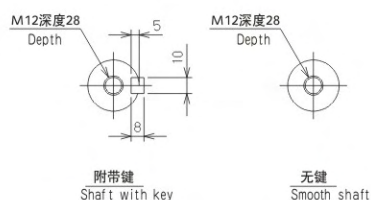
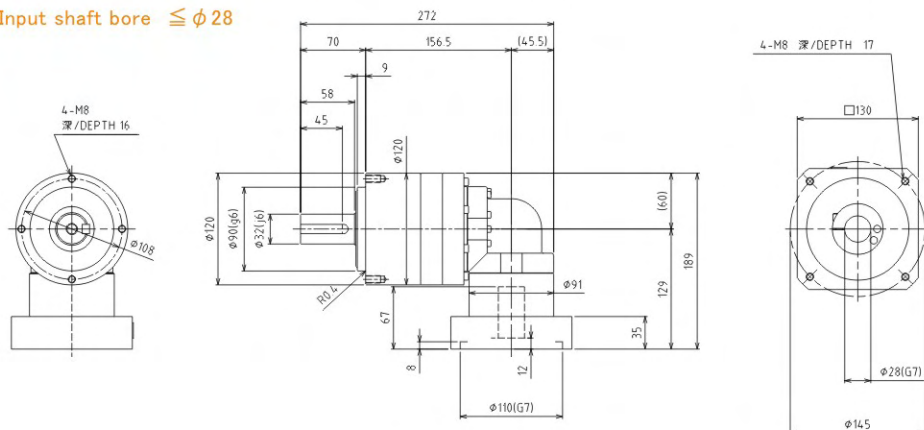
输入轴内径 Input shaft bore $\leq \phi 14$



输入轴内径 Input shaft bore $\leq \phi 19$



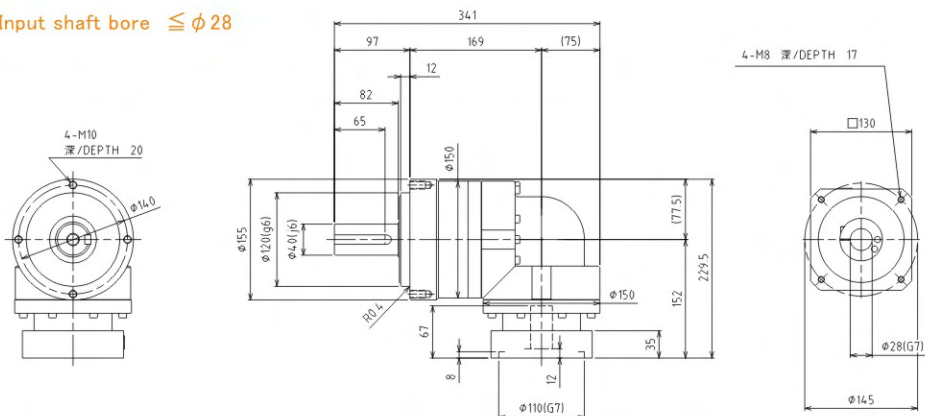
输入轴内径 Input shaft bore $\leq \phi 28$



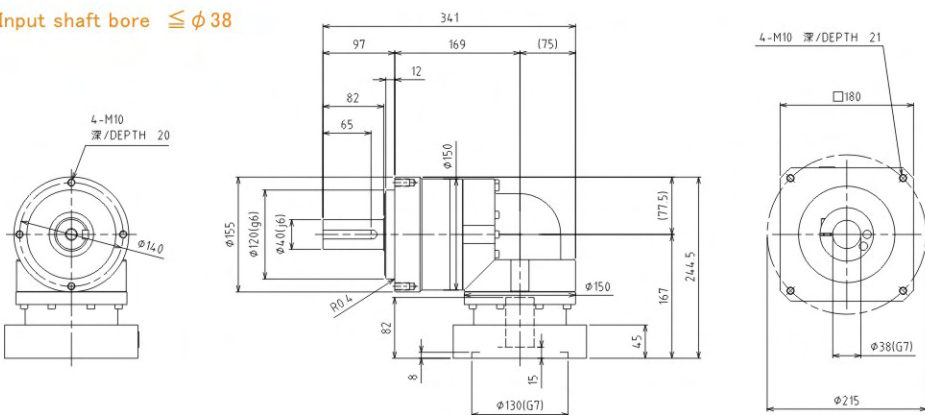
备注1: 机身尺寸随安装电机的不同而有所差异。
 备注2: 电机轴径与输入轴径不同时, 可插入轴套。
 Note1: Body Size Length will vary depending on motor.
 Note2: Bushing will be inserted to adapt to motor shaft.

ALR-155 2级 2stage

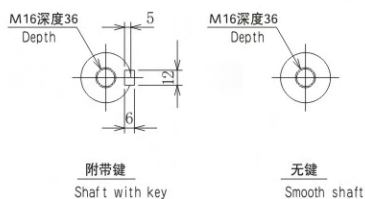
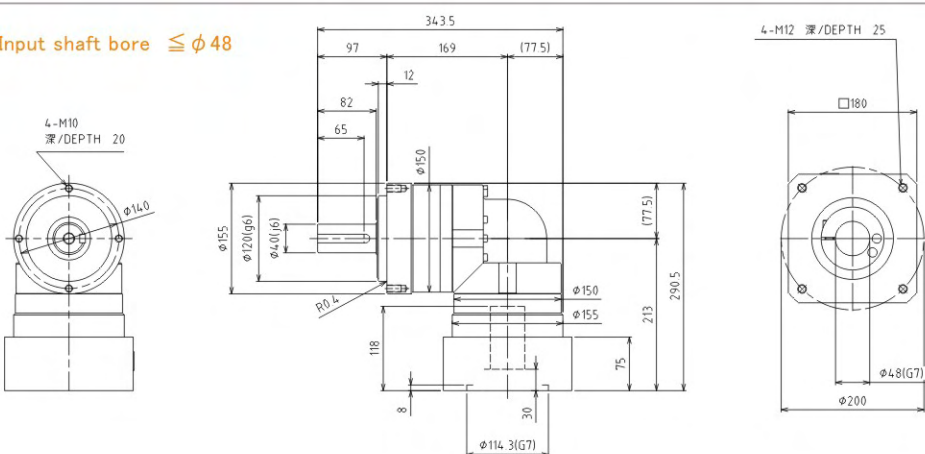
输入轴内径 Input shaft bore $\leq \phi 28$



输入轴内径 Input shaft bore $\leq \phi 38$



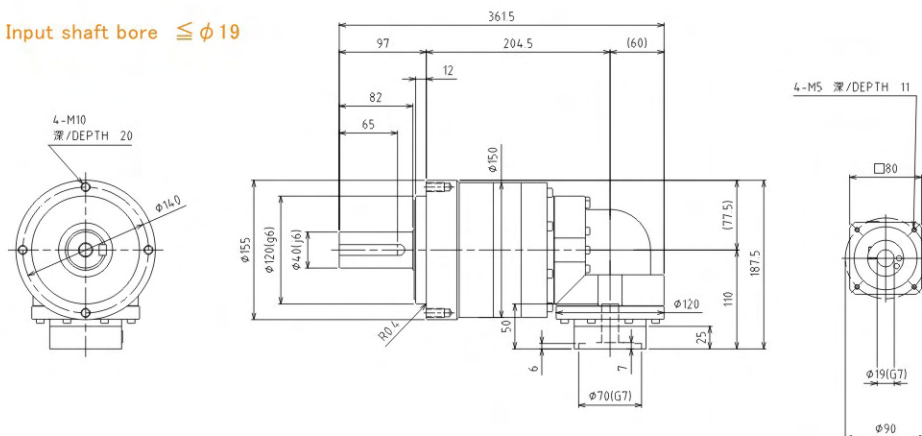
输入轴内径 Input shaft bore $\leq \phi 48$



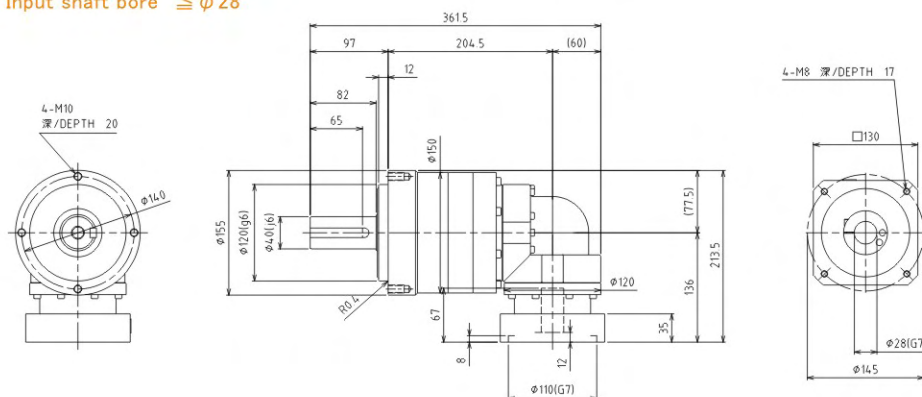
备注1: 机身尺寸随安装电机的不同而有所差异。
 备注2: 电机轴径与输入轴径不同时, 可插入轴套。
 Note1: Body Size Length will vary depending on motor.
 Note2: Bushing will be inserted to adapt to motor shaft.

ALR-155 3级 3stage

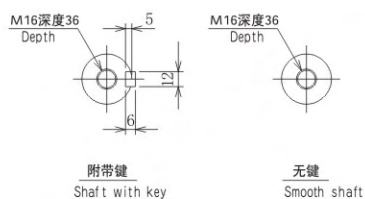
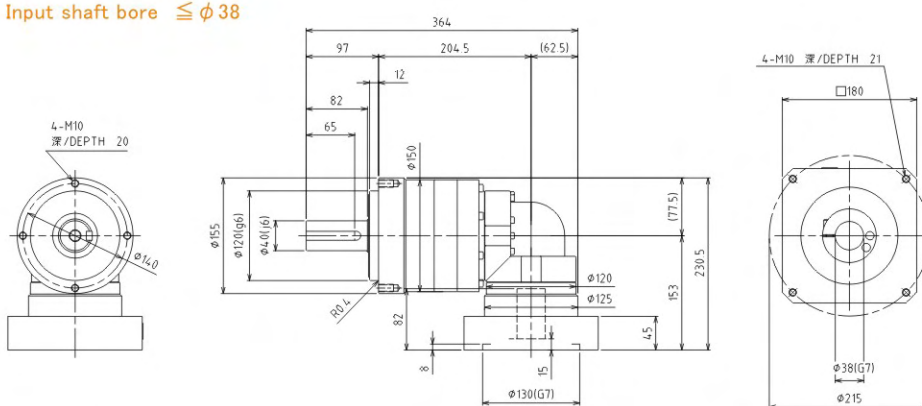
输入轴内径 Input shaft bore $\leq \phi 19$



输入轴内径 Input shaft bore $\leq \phi 28$



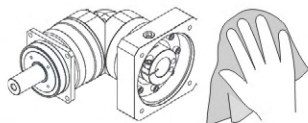
输入轴内径 Input shaft bore $\leq \phi 38$



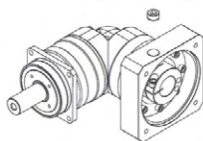
备注1: 机身尺寸随安装电机的不同而有所差异。
备注2: 电机轴径与输入轴径不同时, 可插入轴套。
Note1: Body Size Length will vary depending on motor.
Note2: Bushing will be inserted to adapt to motor shaft.

1 电机安装步骤 Mounting procedure to the motor

- 1 擦拭电机轴上的防锈剂、润滑脂等。
Wipe off anti-rust agent and oil on the motor shaft.

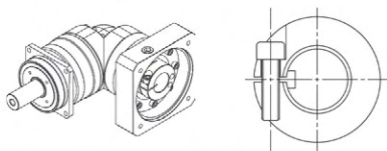


- 2 取下堵头。
Remove the plug.

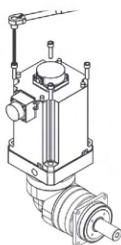


- 3 旋转输入轴使紧固螺栓的头对准塞孔。此时，请确认紧固螺栓是松动的。
Turn the input shaft until the cap screw is seen. Make sure the cap screw is loosened.

如带有轴套，安装方法如图所示。
In case the bushing has been attached, Please fix it to the reducer as the drawing below.



- 4 将减速机垂直放置在平坦的地方，使减速机的电机安装面朝上侧。将电机轴慢慢地插入输入轴，注意避免撞击到输入轴，请确认电机的法兰面紧靠减速机的法兰面。按指定的紧固扭矩拧紧电机安装螺栓。（参考表 1）
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.(See table1)



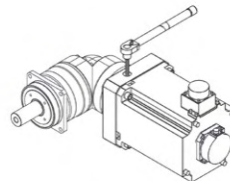
2 减速机的安装

要将减速机安装到设备上时，请先确认安装面平坦且没有毛边等，然后使用扭矩扳手等按照指定的紧固扭矩拧紧螺栓。（参考表 2）

Reducer installation

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

- 5 使用扭矩扳手等按照指定的紧固扭矩拧紧紧固螺栓。（参考表 1）
Tighten the clamping bolt of the input shaft with torque wrench to the proper torque.(See table1)



- 6 安装堵头，安装完成。
Reinstall the plug. The procedure is done.

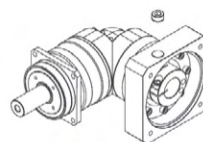


表1 Table 1

螺栓 尺寸 Bolt size	电机安装螺栓 Motor installing bolts		紧固螺栓 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	—	—

表2 Table 2

螺栓 尺寸 Bolt size	紧固扭矩 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

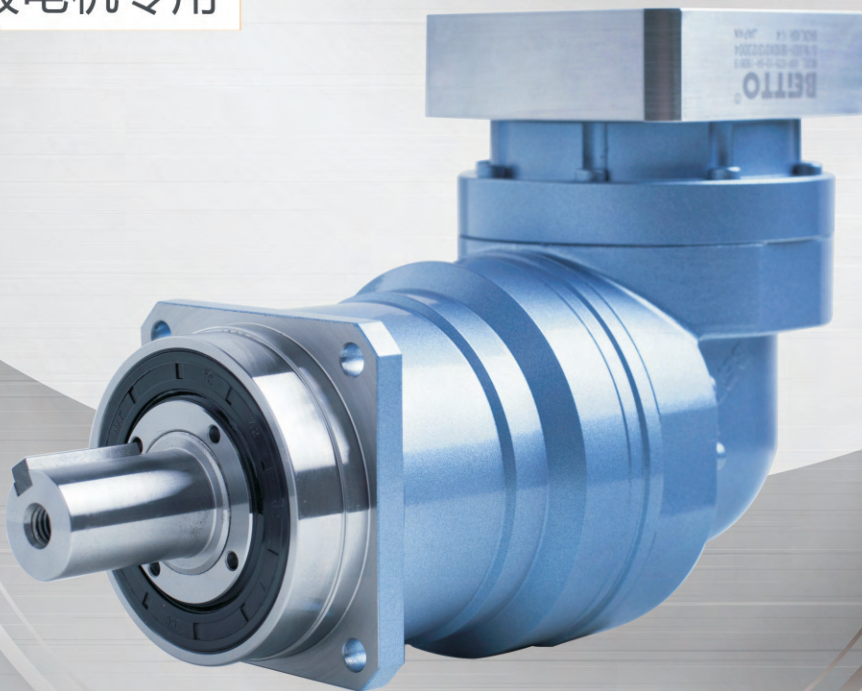
◎推荐螺栓：强度12.9以上

◎Recommended bolt: Strength 12.9

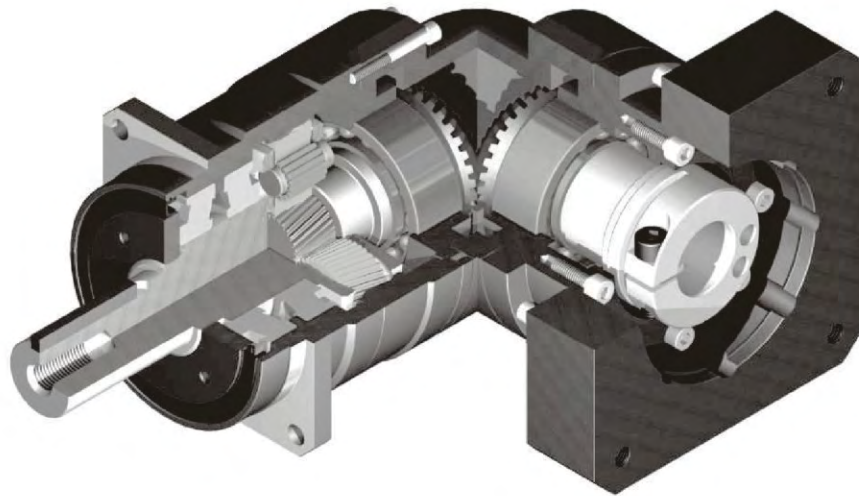
BETTO 貝託®
精密行星齿轮减速机

ASR

伺服电机专用



ASR series

**省空间**

直交型减速机使用螺旋式伞齿轮, 电机的安装可实现90度弯曲, 节省了安装空间。

Space - saving

Right angle reducer using spiral bevel gear
Customer can locate the motor at 90 degree away from the reducer if required to save space.

高刚性、高扭矩

使用整体式滚针轴承, 大大提高了刚性和扭矩。

High rigidity & torque

High rigidity & high torque was achieved by uncaged needle roller bearings.

高负载

主轴承采用锥形滚柱轴承, 实现高负载容量。

High load

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

连接法兰、轴套方式

电机通用性

Adapter-bushing connection

Motor generality

高粘度润滑脂

使用高粘度、不易分离的润滑脂, 有效防止润滑脂泄漏。

High viscosity grease

Perfect solution by high viscosity anti-separation grease.

维护方便

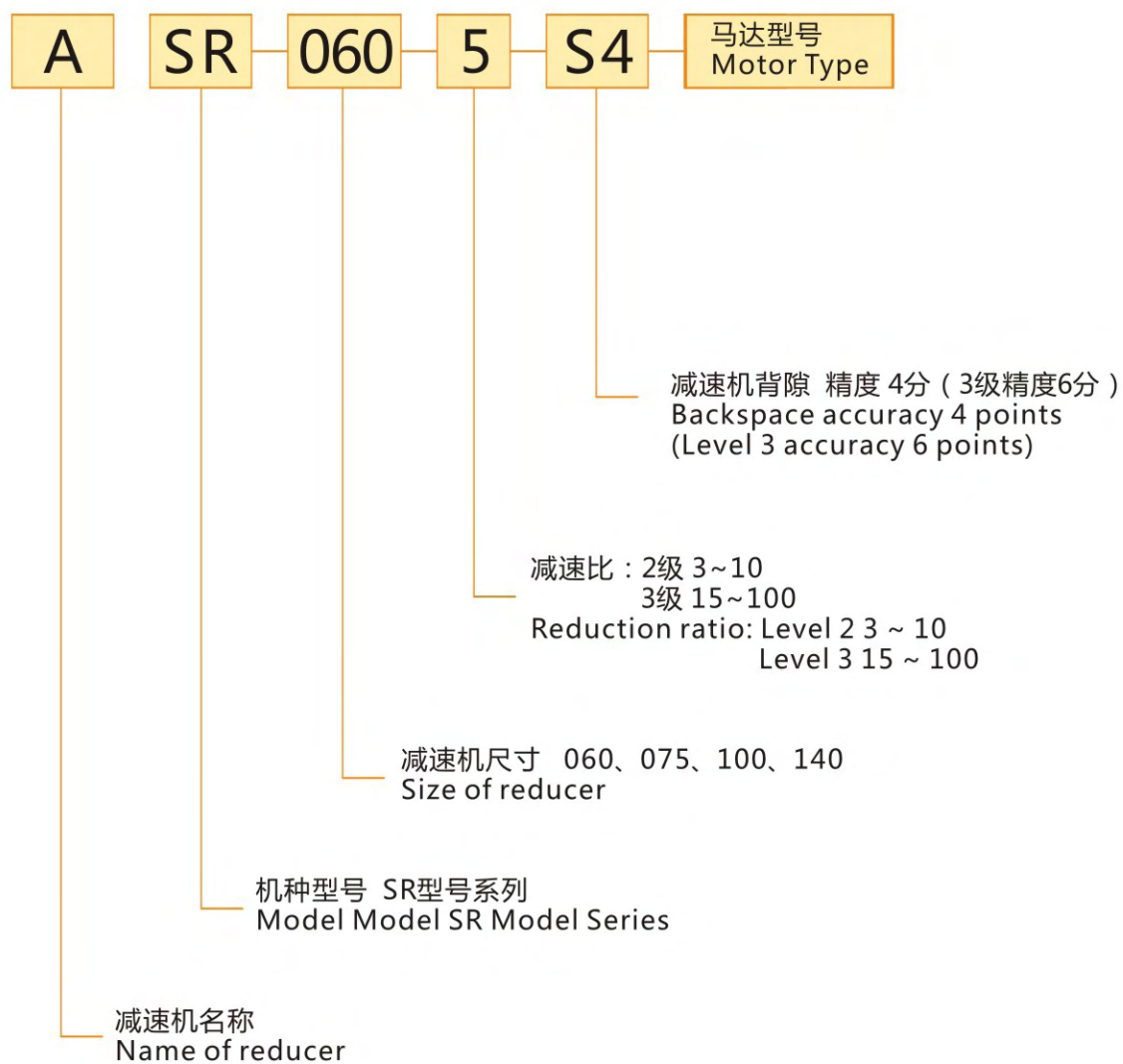
在产品寿命期内无需更换润滑脂, 安装更便捷。

Maintenance-free

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

ASR series

机种、型号代码 Model number



ASR-060

尺寸 Frame size	机种 Model	减速比 Ratio	①			②		③	
			额定扭矩 Nominal output torque [Nm]	最大扭矩 Maximum output torque [Nm]	急停 最大扭矩 Emergency stop torque [Nm]	额定 输入转速 Nominal input speed [rpm]	最大 输入转速 Maximum input speed [rpm]	额定径向力 Permitted radial load [N]	额定轴向力 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

尺寸 Frame size	机种 Model	减速比 Ratio	④		重量 Weight [kg]	⑤		⑥	
			最大 径向负荷 Maximum radial load [N]	最大 轴向负荷 Maximum axial load [N]		惯性力矩 Moment of inertia ($\leq \phi 8$) [kg·cm ²]	惯性力矩 Moment of inertia ($\leq \phi 14$) [kg·cm ²]	惯性力矩 Moment of inertia ($\leq \phi 19$) [kg·cm ²]	使用温度 Use the temperature
060	2	3	3025	2725	2.0	0.320	0.395	0.584	-20℃ ~ 175℃
		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	—	

- ① 输入转速为额定转速时，使用寿命为 20000 小时的值
- ② 输入转速为额定转速时，使用寿命为 20000 小时的值（作用于轴中央，轴向负荷为 0 时）
- ③ 输入转速为额定转速时，使用寿命为 20000 小时的值（作用于轴芯，径向负荷为 0 时）
- ④ 径向负荷的容许最大值
- ⑤ 轴向负荷的容许最大值
- ⑥ 使用温度 -20℃ ~ 175℃

- 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 Use the temperature -20 °C ~ 175 °C

ASR-075

尺寸 Frame size	机种 Model	减速比 Ratio	○ 1			○ 2		○ 3	
			额定扭矩 Nominal output torque [Nm]	最大扭矩 Maximum output torque [Nm]	急停 最大扭矩 Emergency stop torque [Nm]	额定 输入转速 Nominal input speed [rpm]	最大 输入转速 Maximum input speed [rpm]	额定径向力 Permitted radial load [N]	额定轴向力 Permitted axial load [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

尺寸 Frame size	机种 Model	减速比 Ratio	○ 4		重量 Weight [kg]	○ 5			
			最大 径向负荷 Maximum radial load [N]	最大 轴向负荷 Maximum axial load [N]		惯性力矩 Moment of inertia ($\leq \phi 8$) [kg·cm ²]	惯性力矩 Moment of inertia ($\leq \phi 14$) [kg·cm ²]	惯性力矩 Moment of inertia ($\leq \phi 19$) [kg·cm ²]	惯性力矩 Moment of inertia ($\leq \phi 28$) [kg·cm ²]
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 输入转速为额定转速时, 使用寿命为 20000 小时的值

○ 2 输入转速为额定转速时, 使用寿命为 20000 小时的值
(作用于轴中央, 轴向负荷为 0 时)○ 3 输入转速为额定转速时, 使用寿命为 20000 小时的值
(作用于轴芯, 径向负荷为 0 时)

○ 4 径向负荷的容许最大值

○ 5 轴向负荷的容许最大值

注: 使用温度 -20℃ ~ 175℃

○ 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.

Note: Use the temperature - 20 °C ~ 175 °C

ASR-100

尺寸 Frame size	机种 Model	减速比 Ratio	○ 1			○ 2		○ 3	
			额定扭矩 Nominal output torque [Nm]	最大扭矩 Maximum output torque [Nm]	急停 最大扭矩 Emergency stop torque [Nm]	额定 输入转速 Nominal input speed [rpm]	最大 输入转速 Maximum input speed [rpm]	额定径向力 Permitted radial load [N]	额定轴向力 Permitted axial load [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

尺寸 Frame size	机种 Model	减速比 Ratio	○ 4		重量 Weight [kg]	○ 5			
			最大 径向负荷 Maximum radial load [N]	最大 轴向负荷 Maximum axial load [N]		惯性力矩 Moment of inertia ($\leq \phi 14$) [kg·cm ²]	惯性力矩 Moment of inertia ($\leq \phi 19$) [kg·cm ²]	惯性力矩 Moment of inertia ($\leq \phi 28$) [kg·cm ²]	惯性力矩 Moment of inertia ($\leq \phi 38$) [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 输入转速为额定转速时，使用寿命为 20000 小时的值

○ 2 输入转速为额定转速时，使用寿命为 20000 小时的值
(作用于轴中央，轴向负荷为 0 时)

○ 3 输入转速为额定转速时，使用寿命为 20000 小时的值
(作用于轴芯，径向负荷为 0 时)

○ 4 径向负荷的容许最大值

○ 5 轴向负荷的容许最大值

注：使用温度 -20℃ ~ 175℃

○ 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.

Note: Use the temperature -20℃ ~ 175℃

ASR-140

ASR-140

①						②		③	
尺寸 Frame size	机种 Model	减速比 Ratio	额定扭矩	最大扭矩	急停 最大扭矩	额定 输入转速	最大 输入转速	额定径向力	额定轴向力
			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
		10	204	405	765	2000	4000	9740	9040
	3	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		

		◎ 4		◎ 5					
尺寸 Frame size	机种 Model	减速比 Ratio	最大 径向负荷 Maximum radial load	最大 轴向负荷 Maximum axial load	重量 Weight	惯性力矩 Moment of inertia (≤ ϕ 19)	惯性力矩 Moment of inertia (≤ ϕ 28)	惯性力矩 Moment of inertia (≤ ϕ 38)	惯性力矩 Moment of inertia (≤ ϕ 48)
			[N]	[N]	[kg]	[kg·cm ²]	[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 输入转速为额定转速时, 使用寿命为 20000 小时的值

② 输入转速为额定转速时, 使用寿命为 20000 小时的值
(作用于轴中央, 轴向负荷为 0 时)③ 输入转速为额定转速时, 使用寿命为 20000 小时的值
(作用于轴芯, 径向负荷为 0 时)

④ 径向负荷的容许最大值

⑤ 轴向负荷的容许最大值

注: 使用温度 -20℃ ~ 175℃

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)

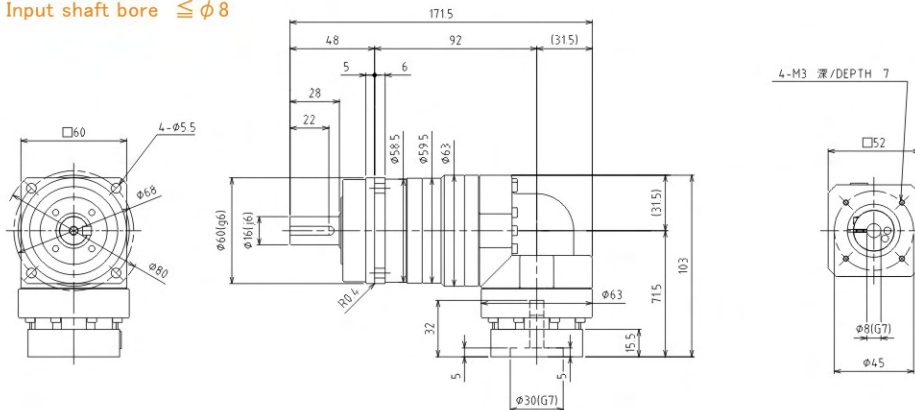
④ The maximum radial load the reducer can accept.

⑤ The maximum axial load the reducer can accept.

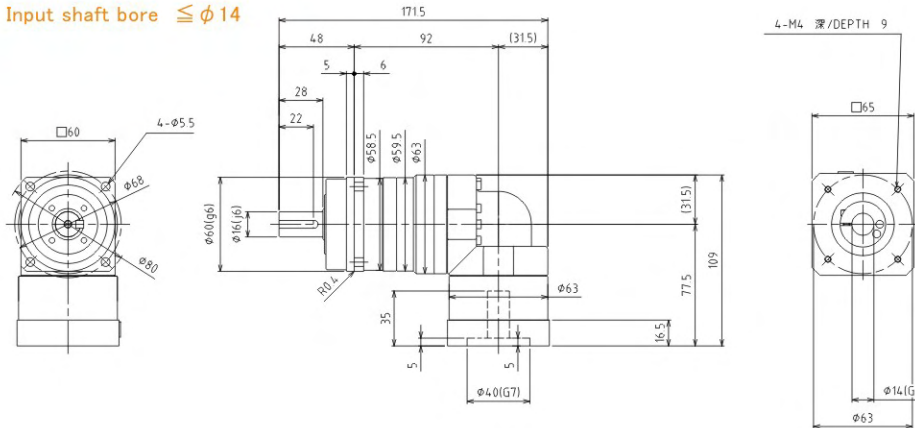
Note: Use the temperature -20℃ ~ 175℃

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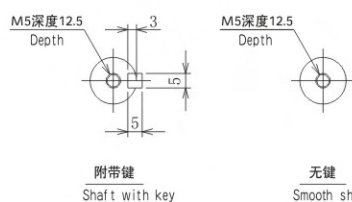
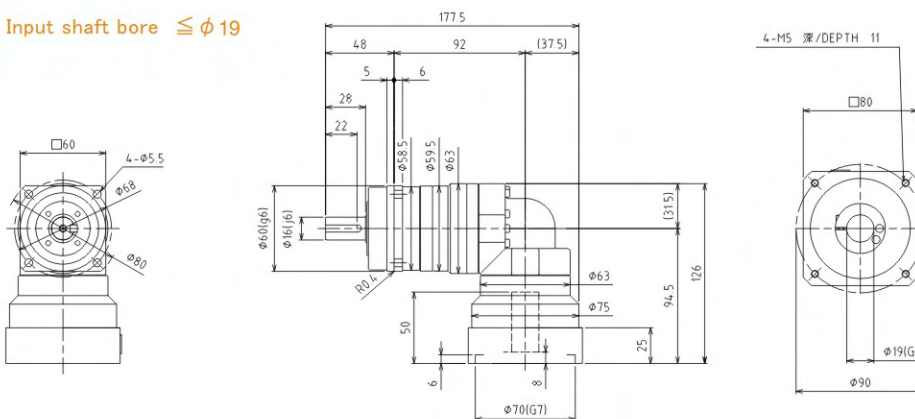
输入轴内径 Input shaft bore $\leq \phi 8$



输入轴内径 Input shaft bore $\leq \phi 14$



输入轴内径 Input shaft bore $\leq \phi 19$



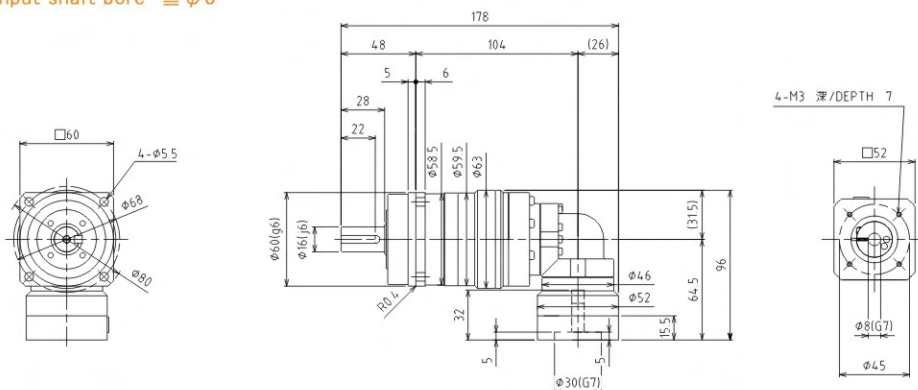
备注1: 机身尺寸随安装电机的不同而有所差异。

备注2: 电机轴径与输入轴径不同时, 可插入轴套。

Note1: Body Size Length will vary depending on motor.

Note2: Bushing will be inserted to adapt to motor shaft.

输入轴内径 Input shaft bore $\leq \phi 8$



Technical drawing of a 4-M4 deep groove ball bearing. The drawing includes a side view with dimensions and a cross-sectional view.

Dimensions:

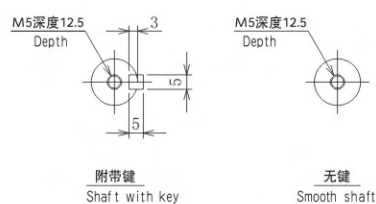
- Outer diameter: $\phi 60$ (g6)
- Inner diameter: $\phi 40$ (G7)
- Width: 100
- Outer ring diameter: $\phi 46$ (f6)
- Inner ring diameter: $\phi 50$
- Outer ring diameter: $\phi 58.5$
- Inner ring diameter: $\phi 59.5$
- Outer ring diameter: $\phi 62$
- Inner ring diameter: $\phi 63$
- Outer ring diameter: $\phi 65$

Fit Specifications:

- Outer ring: 4-M4
- Inner ring: 4-M4

Notes:

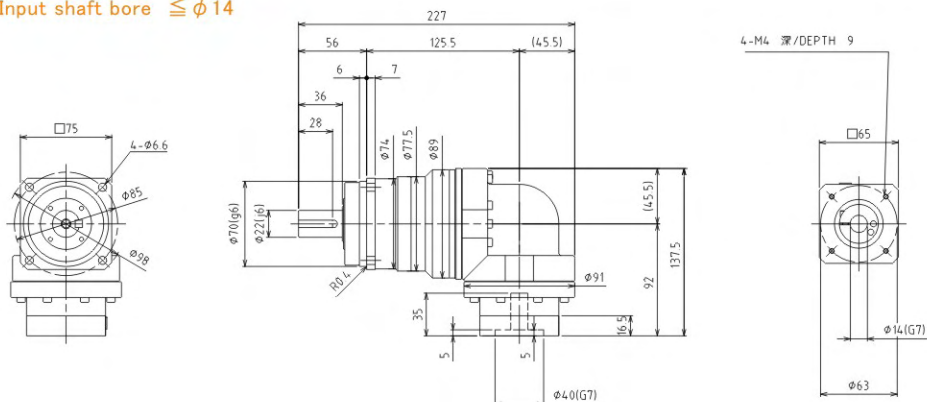
- 4-M4 深/DEPTH 9
- 14 (G7)
- $\phi 63$



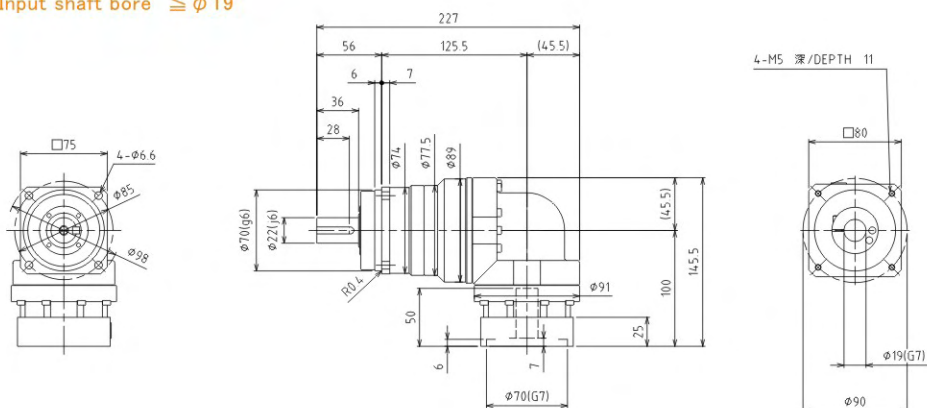
备注1: 机身尺寸随安装电机的不同而有所差异。
备注2: 电机轴径与输入轴径不同时, 可插入轴套。
Note1: Body Size Length will vary depending on motor.
Note2: Bushing will be inserted to adapt to motor shaft.

ASR-075 2级 2stage

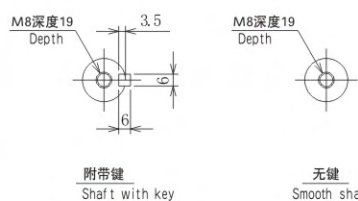
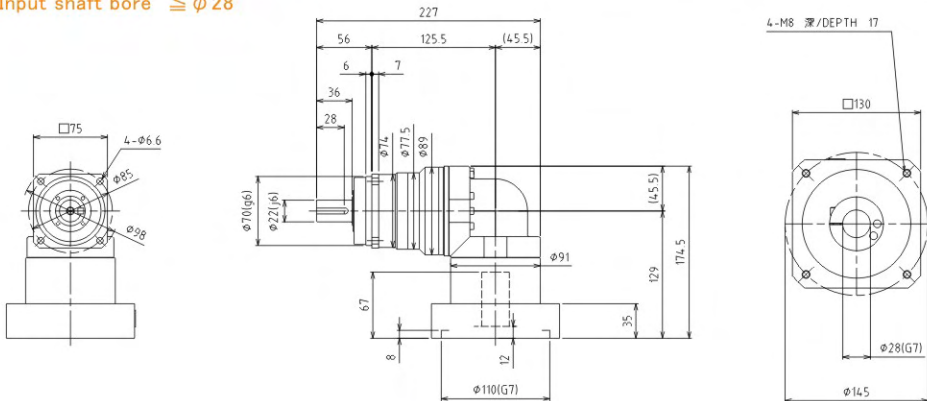
输入轴内径 Input shaft bore $\leq \phi 14$



输入轴内径 Input shaft bore $\leq \phi 19$



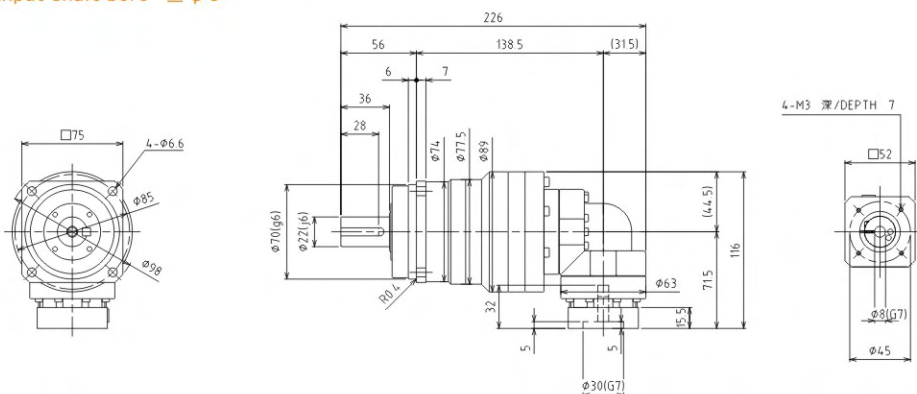
输入轴内径 Input shaft bore $\leq \phi 28$



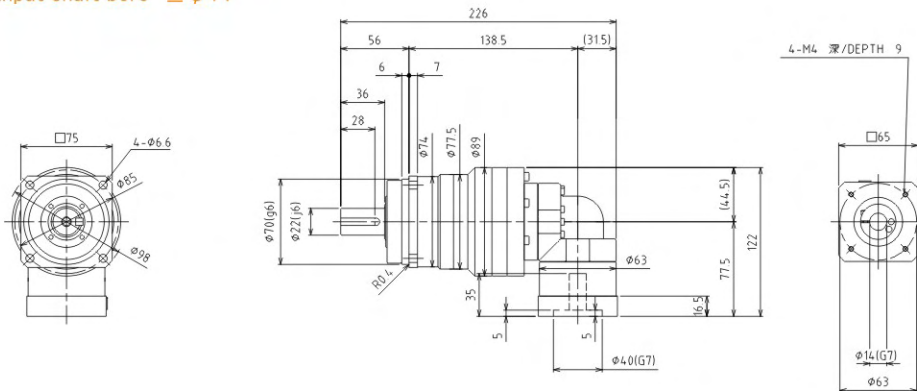
备注1: 机身尺寸随安装电机的不同而有所差异。
 备注2: 电机轴径与输入轴径不同时, 可插入轴套。
 Note1: Body Size Length will vary depending on motor.
 Note2: Bushing will be inserted to adapt to motor shaft.

ASR-075 3级 3stage

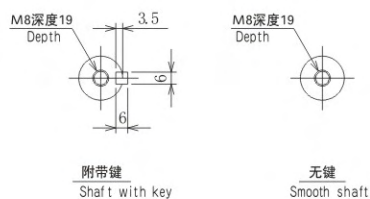
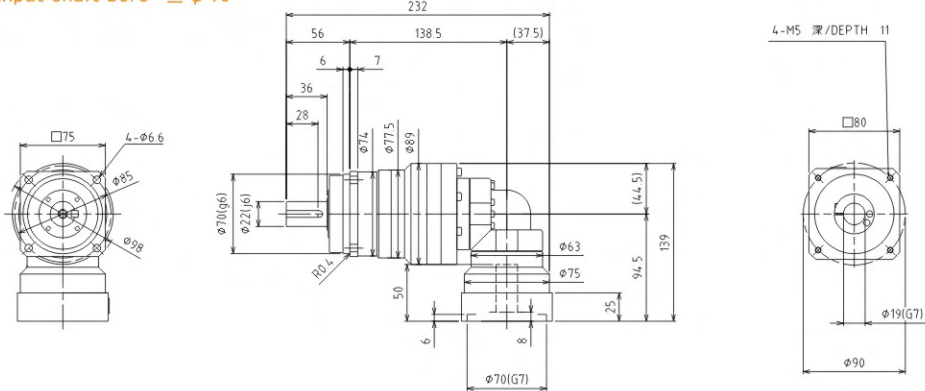
输入轴内径 Input shaft bore $\leq \phi 8$



输入轴内径 Input shaft bore $\leq \phi 14$



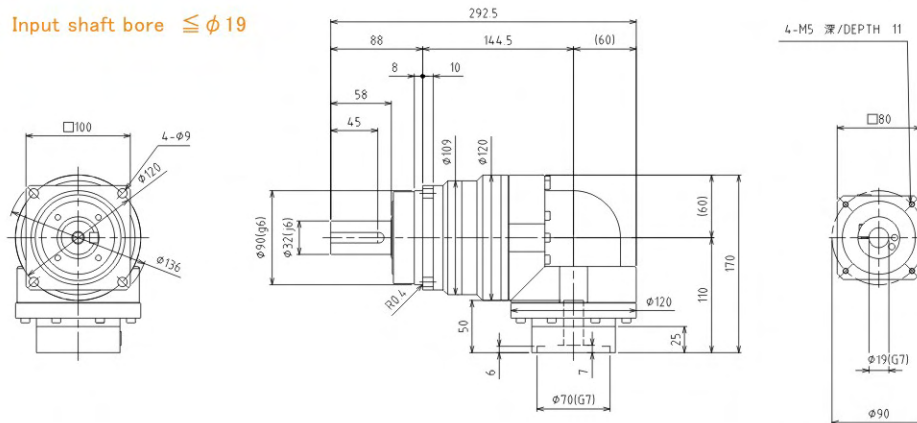
输入轴内径 Input shaft bore $\leq \phi 19$



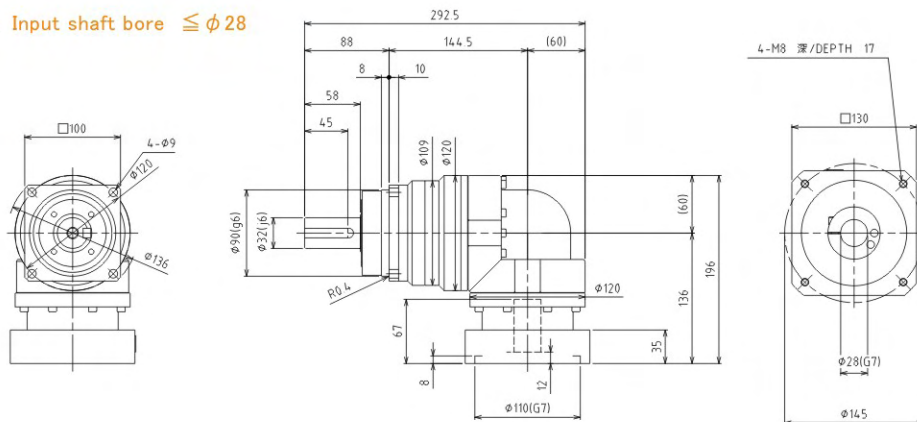
备注1: 机身尺寸随安装电机的不同而有所差异。
 备注2: 电机轴径与输入轴径不同时, 可插入轴套。
 Note1: Body Size Length will vary depending on motor.
 Note2: Bushing will be inserted to adapt to motor shaft.

ASR-100 2级 2stage

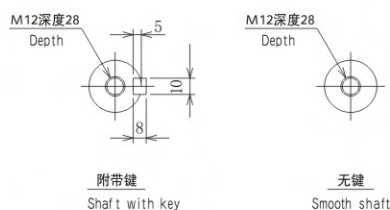
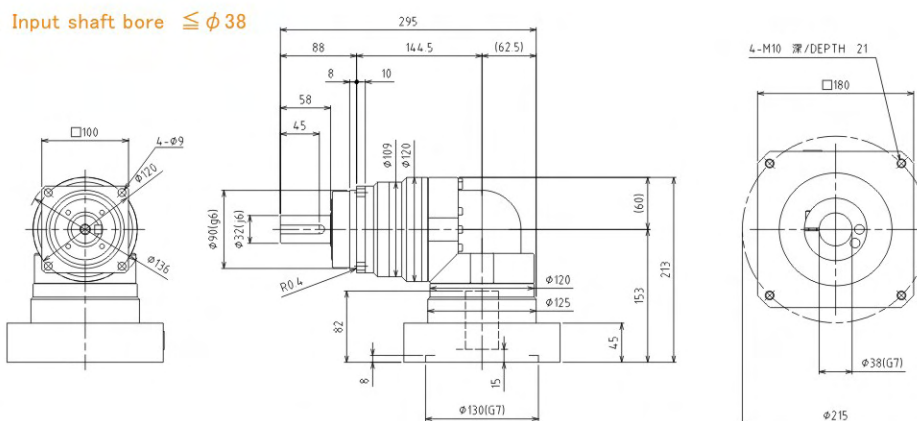
输入轴内径 Input shaft bore $\leq \phi 19$



输入轴内径 Input shaft bore $\leq \phi 28$



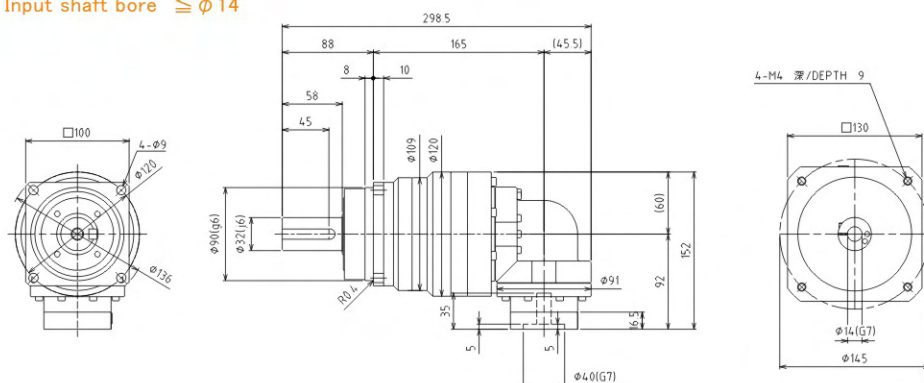
输入轴内径 Input shaft bore $\leq \phi 38$



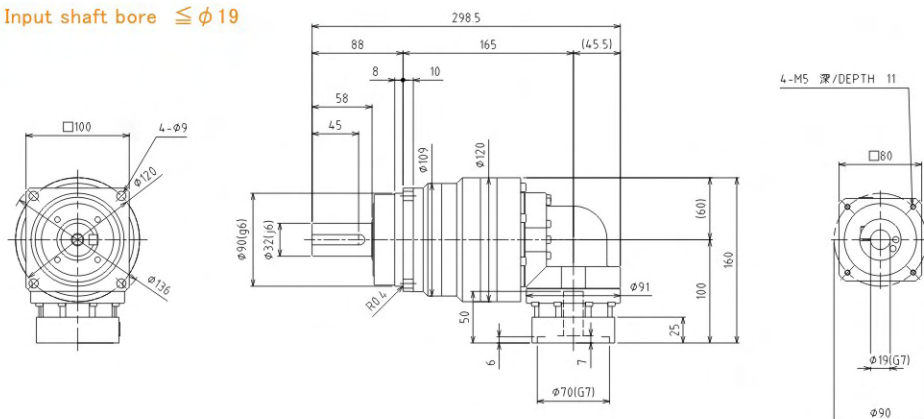
备注1: 机身尺寸随安装电机的不同而有所差异。
 备注2: 电机轴径与输入轴径不同时, 可插入轴套。
 Note1: Body Size Length will vary depending on motor.
 Note2: Bushing will be inserted to adapt to motor shaft.

ASR-100 3级 3stage

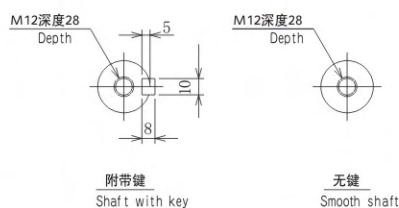
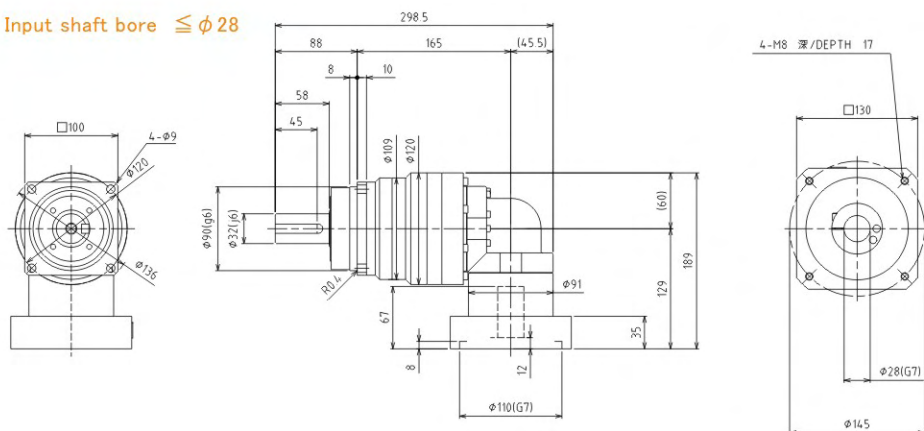
输入轴内径 Input shaft bore $\leq \phi 14$



输入轴内径 Input shaft bore $\leq \phi 19$



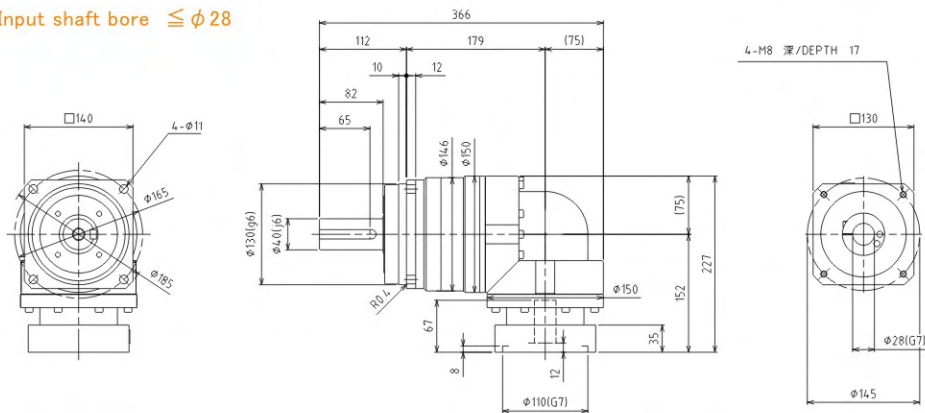
输入轴内径 Input shaft bore $\leq \phi 28$



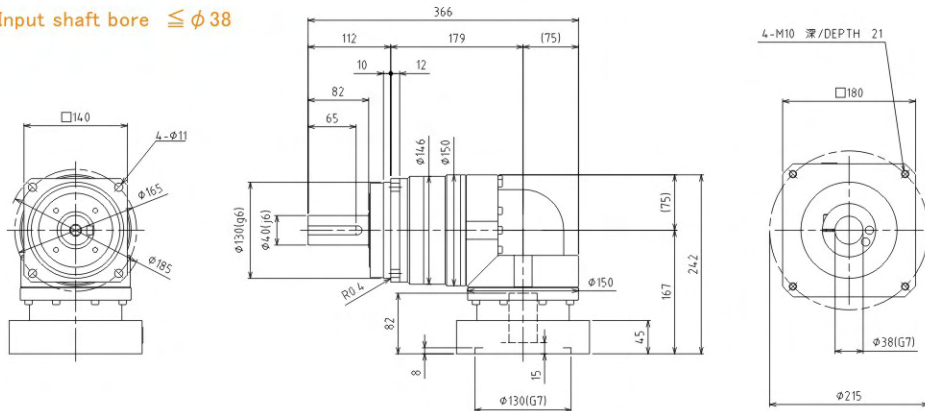
备注1: 机身尺寸随安装电机的不同而有所差异。
 备注2: 电机轴径与输入轴径不同时, 可插入轴套。
 Note1: Body Size Length will vary depending on motor.
 Note2: Bushing will be inserted to adapt to motor shaft.

ASR-140 2级 2stage

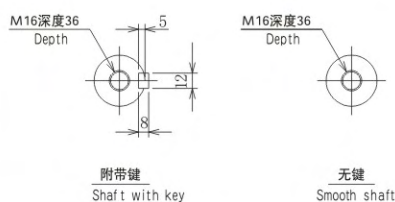
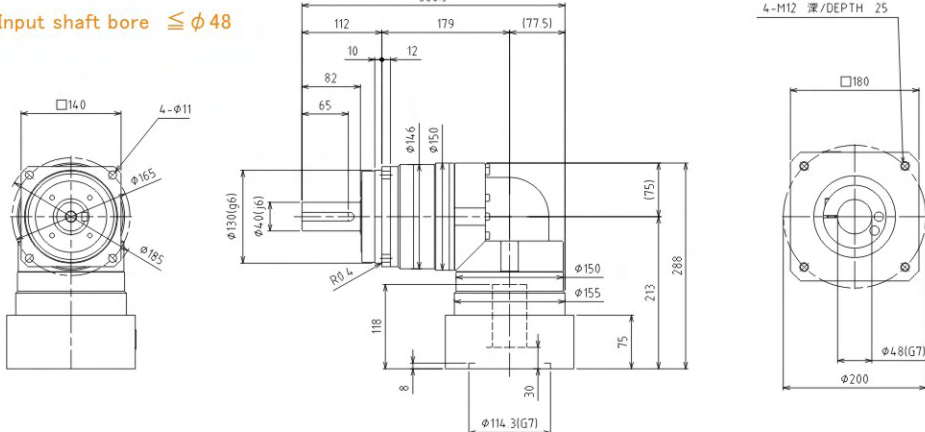
输入轴内径 Input shaft bore $\leq \phi 28$



输入轴内径 Input shaft bore $\leq \phi 38$



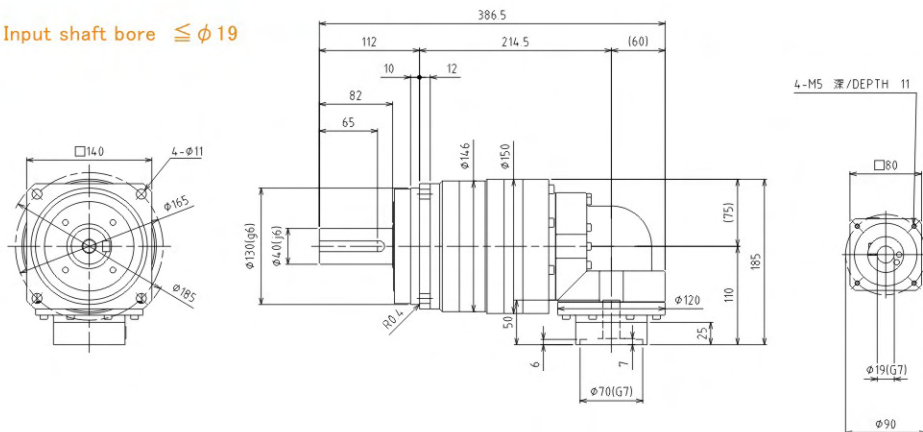
输入轴内径 Input shaft bore $\leq \phi 48$



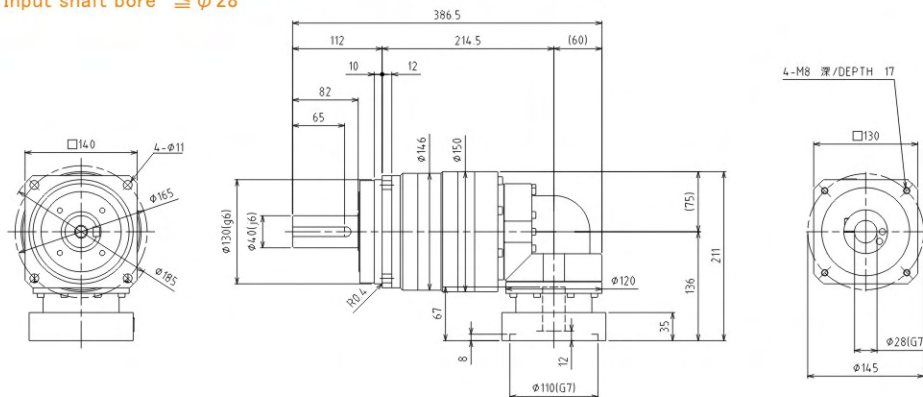
备注1: 机身尺寸随安装电机的不同而有所差异。
 备注2: 电机轴径与输入轴径不同时, 可插入轴套。
 Note1: Body Size Length will vary depending on motor.
 Note2: Bushing will be inserted to adapt to motor shaft.

ASR-140 3级 3stage

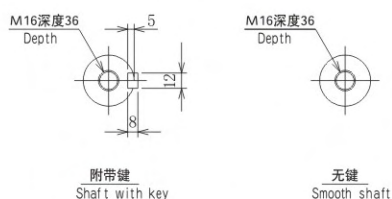
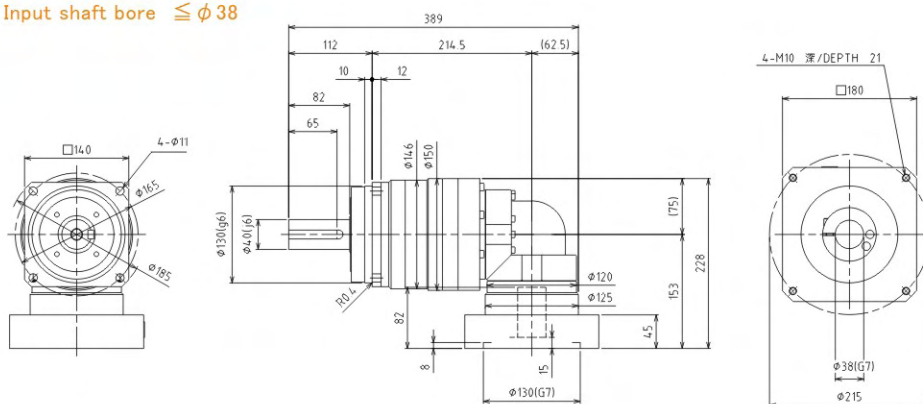
输入轴内径 Input shaft bore $\leq \phi 19$



输入轴内径 Input shaft bore $\leq \phi 28$



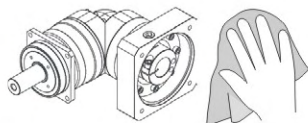
输入轴内径 Input shaft bore $\leq \phi 38$



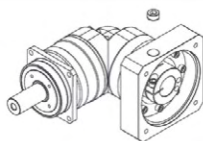
备注1: 机身尺寸随安装电机的不同而有所差异。
备注2: 电机轴径与输入轴径不同时, 可插入轴套。
Note1: Body Size Length will vary depending on motor.
Note2: Bushing will be inserted to adapt to motor shaft.

1 电机安装步骤 Mounting procedure to the motor

- 1 擦拭电机轴上的防锈剂、润滑脂等。
Wipe off anti-rust agent and oil on the motor shaft.

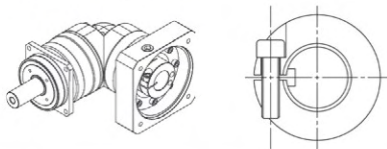


- 2 取下堵头。
Remove the plug.

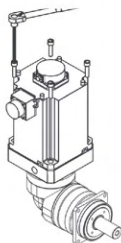


- 3 旋转输入轴使紧固螺栓的头对准塞孔。此时，请确认紧固螺栓是松动的。
Turn the input shaft until the cap screw is seen. Make sure the cap screw is loosened.

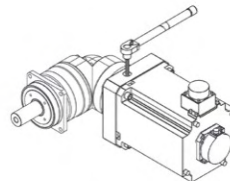
如带有轴套，安装方法如图所示。
In case the bushing has been attached, Please fix it to the reducer as the drawing below.



- 4 将减速机垂直放置在平坦的地方，使减速机的电机安装面朝上侧。将电机轴慢慢地插入输入轴，注意避免撞击到输入轴，请确认电机的法兰面紧靠减速机的法兰面。按指定的紧固扭矩拧紧电机安装螺栓。（参考表1）
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.(See table1)



- 5 使用转矩扳手等按照指定的紧固扭矩拧紧紧固螺栓。（参考表1）
Tighten the clamping bolt of the input shaft with torque wrench to the proper torque.(See table1)



- 6 安装堵头，安装完成。
Reinstall the plug. The procedure is done.

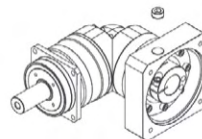


表1 Table 1

螺栓 尺寸 Bolt size	电机安装螺栓 Motor installing bolts		紧固螺栓 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	—	—

表2 Table 2

螺栓 尺寸 Bolt size	紧固扭矩 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

◎推荐螺栓：强度12.9以上

◎Recommended bolt: Strength 12.9

2 减速机的安装

要将减速机安装到设备上时，请先确认安装面平坦且没有毛边等，然后使用转矩扳手等按照指定的紧固扭矩拧紧螺栓。（参考表2）

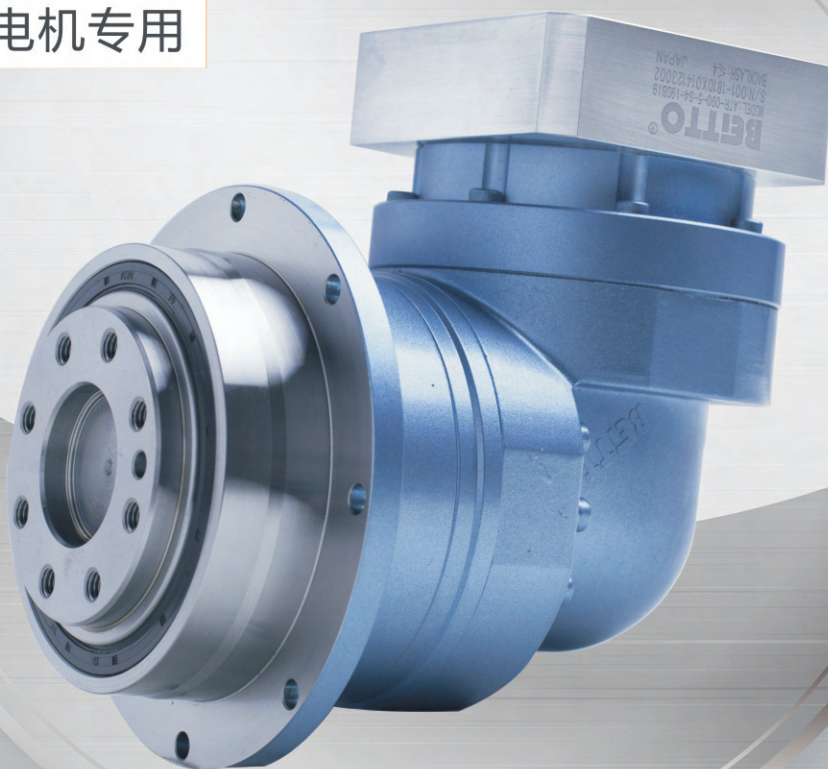
Reducer installation

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

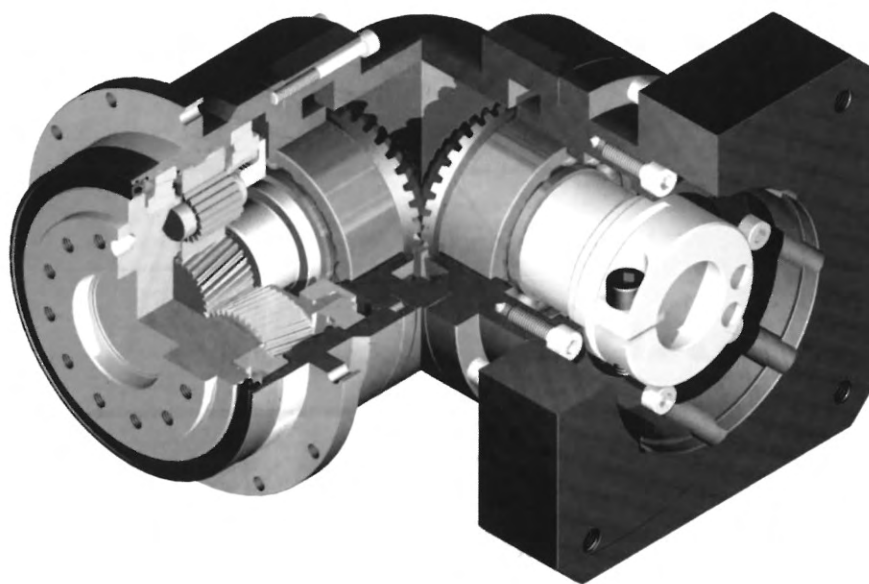
BETTO 貝託®
精密行星齿轮减速机

ATR

伺服电机专用



ATR series



省空间

直交型减速机使用螺旋式伞齿轮，电机的安装可实现90度弯曲，节省了安装空间。

Space - saving

Right angle reducer using spiral bevel gear
Customer can locate the motor at 90 degree away from the reducer if required to save space.

高刚性、高扭矩

使用整体式滚针轴承，大大提高了刚性和扭矩。

High rigidity & torque

High rigidity & high torque was achieved by uncaged needle roller bearings.

高负载

主轴承采用锥形滚子轴承，实现高负载容量。
⊙采用064•090尺寸球轴承

High load

Adopting taper roller bearing for the main output shaft to increase radial and axial load.
⊙Frame size 064•090 adopt ball bearing.

连接器、轴套方式

可以安装到世界上任何一台马达上。

Adapter-bushing connection

Can be attached to any motor all over the world.

维护方便

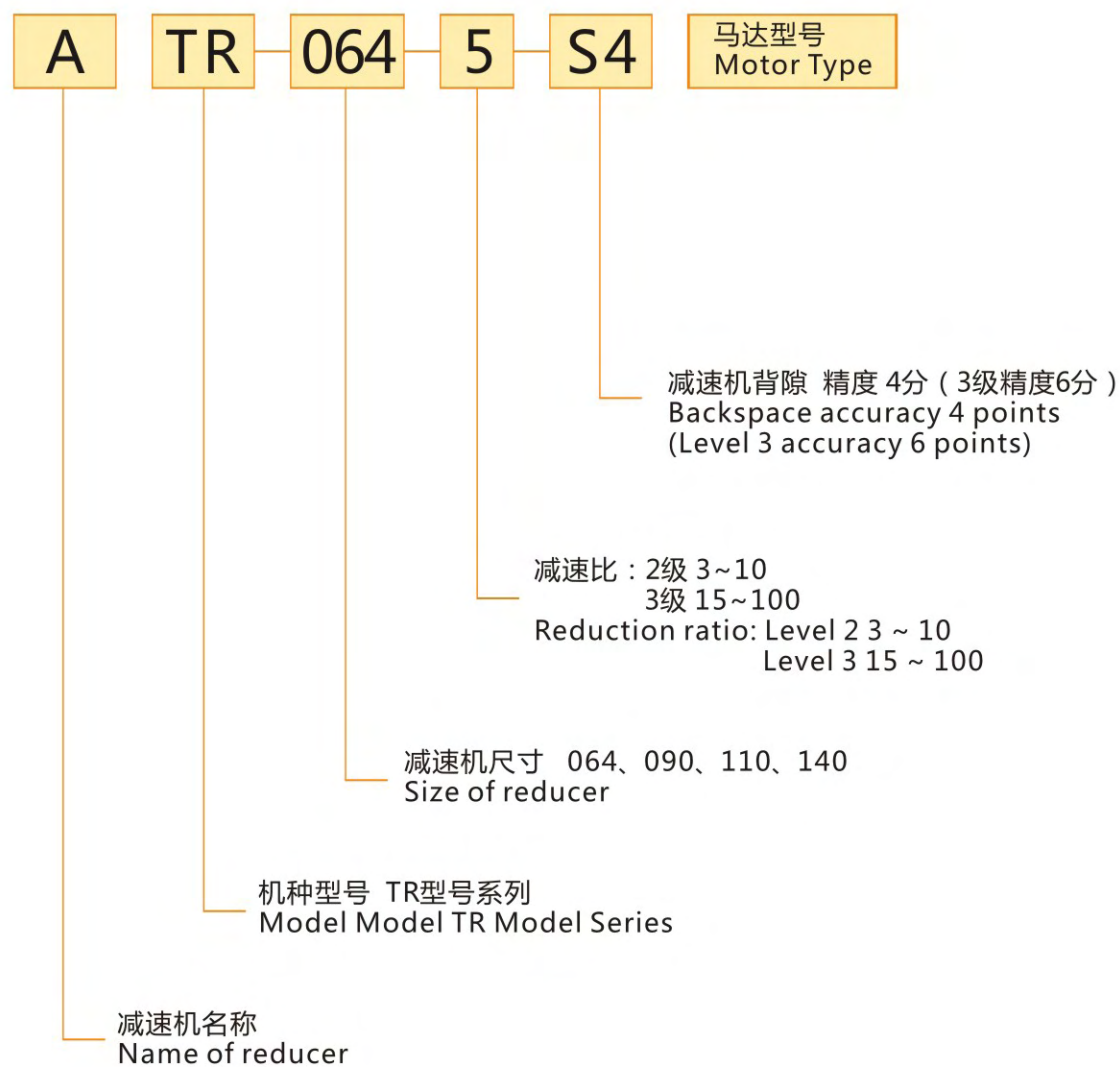
在产品寿命期内无需更换润滑脂，安装更便捷。

Maintenance-free

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

ATR series

机种、型号代码 Model number



ATR-064

尺寸 Frame Size	机种 Model	减速比 Ratio	⊙1			⊙2		⊙3	⊙4	⊙5	重量 Weight	惯性力矩 Moment of inertia			
			额定扭矩	最大扭矩	急停 最大扭矩	输入转速	输入转速	额定径向力	额定轴向力	最大 径向负荷		最大 轴向负荷			
			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 radial load [N]	Permitted axial load [N]		Backlash [N]	($\leq \phi 8$) [kg·cm ²]	($\leq \phi 14$) [kg·cm ²]	($\leq \phi 19$) [kg·cm ²]
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	1.6	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	—

ATR-090

尺寸			⊙1			⊙2		⊙3	⊙4		⊙5		惯性力矩				
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				
			[Nm]	[Nm]	[Nm]	[rpm]	[rpm]	[N]	[N]	[N]	[N]	[kg]	(≤ φ8)	(≤ φ14)	(≤ φ19)	(≤ φ28)	
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	—	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 输入转速为额定转速时，使用寿命为 20000 小时的值

⊙2 输入转速为额定转速时，使用寿命为 20000 小时的值
(作用于轴中央，轴向负荷为 0 时)

⊙3 输入转速为额定转速时，使用寿命为 20000 小时的值
(作用于轴芯，径向负荷为 0 时)

⊙4 径向负荷的容许最大值

⊙5 轴向负荷的容许最大值

注：使用温度 -20℃ ~ 175℃

⊙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.

Note: Use the temperature -20℃ ~ 175℃

ATR-110

尺寸 Frame Size	机种 Model	减速比 Ratio	⊙ 1					⊙ 2		⊙ 3	⊙ 4	⊙ 5	重量 Weight	惯性力矩 Moment of inertia			
			额定扭矩	最大扭矩	急停 最大扭矩	输入转速	输入转速	额定径向力	额定轴向力	最大 径向负荷	最大 轴向负荷	Backlash		(≤ φ 14)	(≤ φ 19)	(≤ φ 28)	(≤ φ 38)
			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 radial load [N]	Permitted axial load [N]	Permitted axial load [N]	Backlash		[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	—

ATR-140

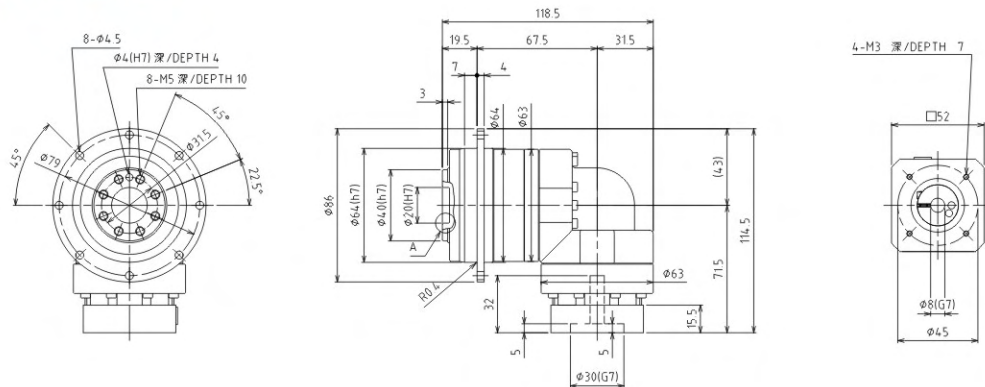
尺寸 Frame Size	机种 Model	减速比 Ratio	⊙ 1					⊙ 2		⊙ 3	⊙ 4	⊙ 5	重量 Weight	惯性力矩 Moment of inertia			
			额定扭矩	最大扭矩	急停 最大扭矩	输入转速	输入转速	额定径向力	额定轴向力	最大 径向负荷	最大 轴向负荷	Backlash		(≤ φ 19)	(≤ φ 28)	(≤ φ 38)	(≤ φ 48)
			Nominal Output Torque [Nm]	Maximum Output Torque [Nm]	Emergency Stop Torque [Nm]	Nominal Input Speed [rpm]	Maximum Input Speed [rpm]	Permitted radial load [N]	Permitted radial load [N]	Permitted axial load [N]	Permitted axial load [N]	Backlash		[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		17.6	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 输入转速为额定转速时，使用寿命为 20000 小时的值
 ⊙ 2 输入转速为额定转速时，使用寿命为 20000 小时的值
 (作用于轴中央，轴向负荷为 0 时)
 ⊙ 3 输入转速为额定转速时，使用寿命为 20000 小时的值
 (作用于轴芯，径向负荷为 0 时)
 ⊙ 4 径向负荷的容许最大值
 ⊙ 5 轴向负荷的容许最大值
 注：使用温度 -20℃ ~ 175℃

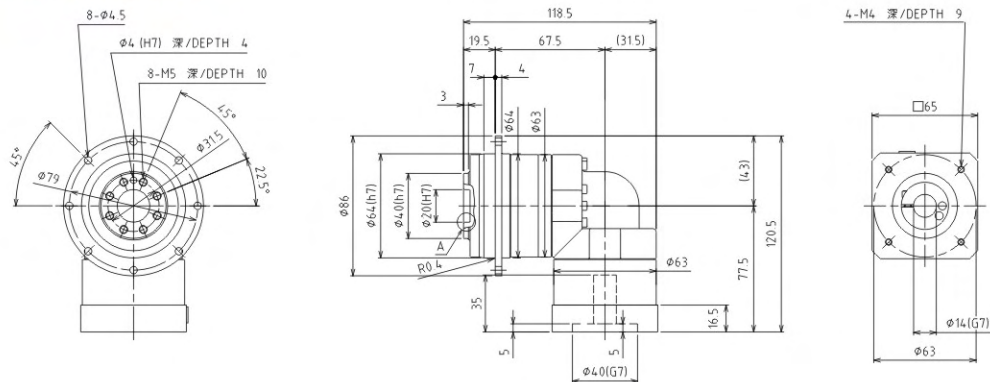
- ⊙ 1 With nominal input speed, service life is 20,000 hours.
 ⊙ 2 With this load and nominal input speed, service life will be 20,000 hours.
 (Applied to the output shaft center, at axial load 0)
 ⊙ 3 With this load and nominal input speed, service life will be 20,000 hours.
 (Applied to the output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

ATR-064 2段 2stage

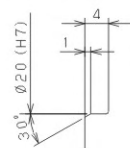
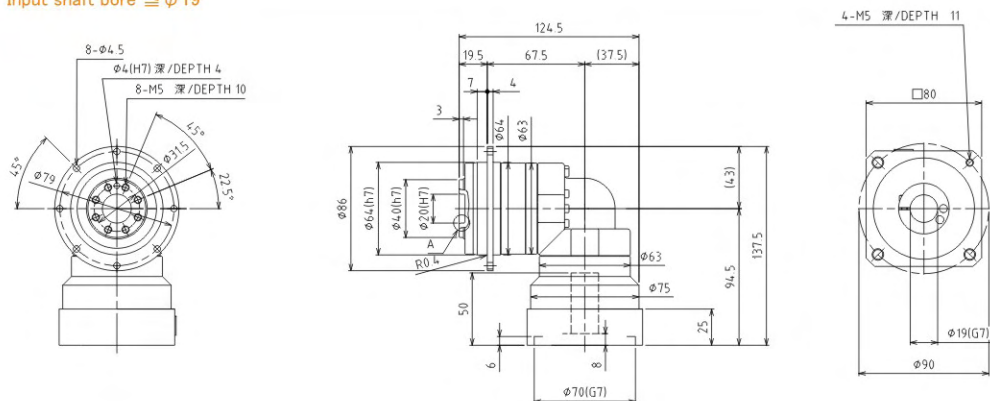
输入轴内径 Input shaft bore $\leq \phi 8$



输入轴内径 Input shaft bore $\leq \phi 14$



输入轴内径 Input shaft bore $\leq \phi 19$



A部详细图
Enlarged detail A

备注1: 机身尺寸随安装电机的不同而有所差异。

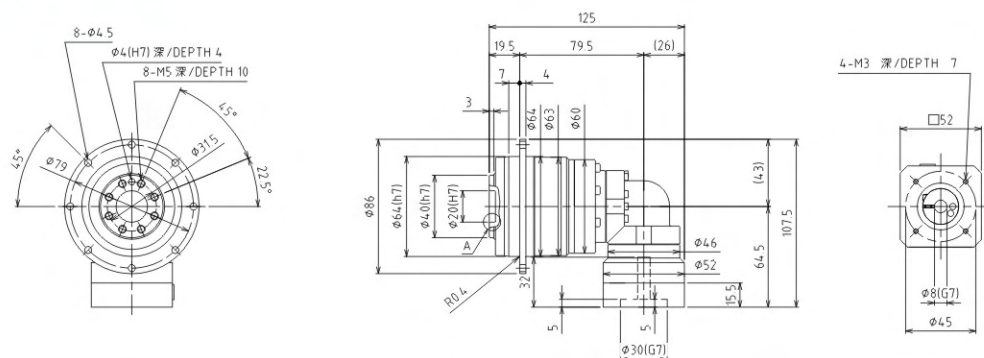
备注2: 电机轴径与输入轴径不同时, 可插入轴套。

Note1: Body Size Length will vary depending on motor.

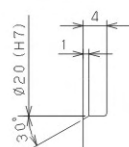
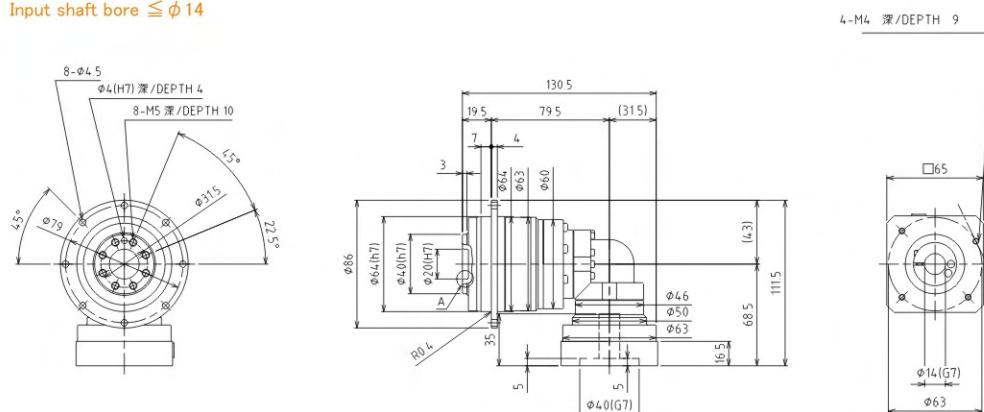
Note2: Bushing will be inserted to adapt to motor shaft.

ATR-064 3段 3stage

输入轴内径 Input shaft bore $\leq \phi 8$



输入轴内径 Input shaft bore $\leq \phi 14$

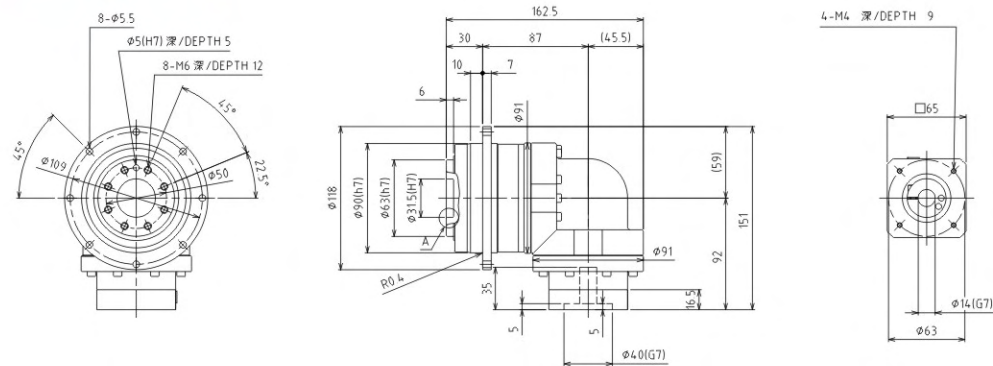


A部详细图
Enlarged detail A

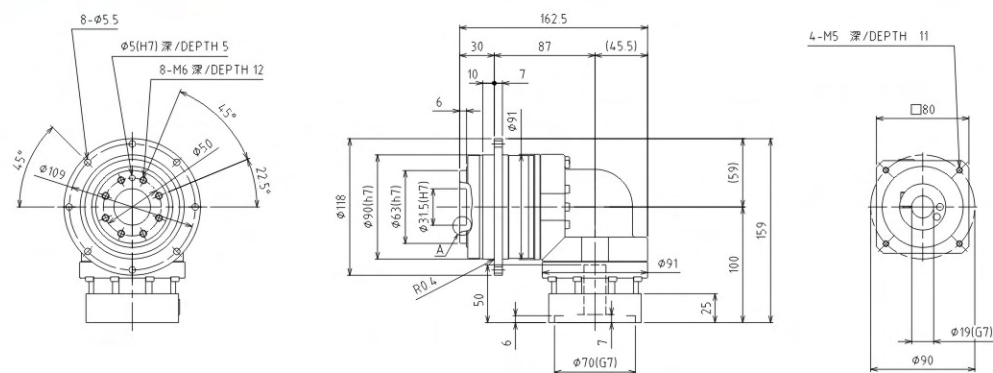
备注1: 机身尺寸随安装电机的不同而有所差异。
备注2: 电机轴径与输入轴径不同时, 可插入轴套。
Note1: Body Size Length will vary depending on motor.
Note2: Bushing will be inserted to adapt to motor shaft.

ATR-090 2段 2stage

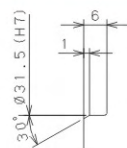
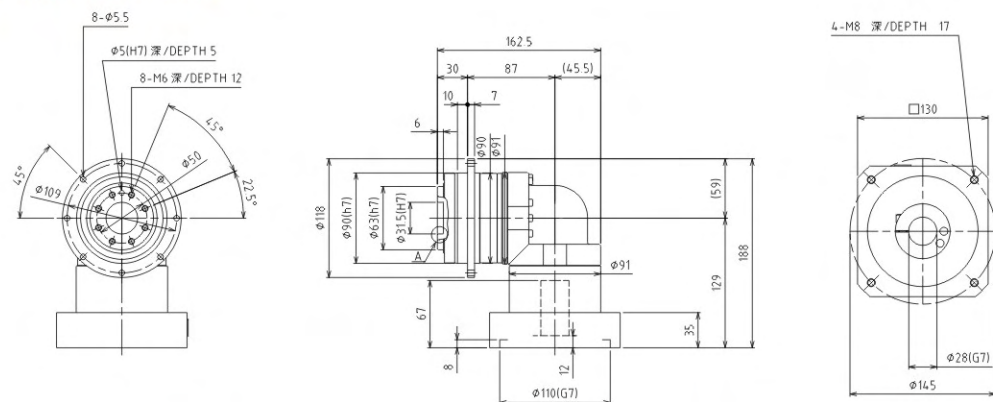
输入轴内径 Input shaft bore $\leq \phi 14$



输入轴内径 Input shaft bore $\leq \phi 19$



输入轴内径 Input shaft bore $\leq \phi 28$



A部详细图
Enlarged detail A

备注1: 机身尺寸随安装电机的不同而有所差异。

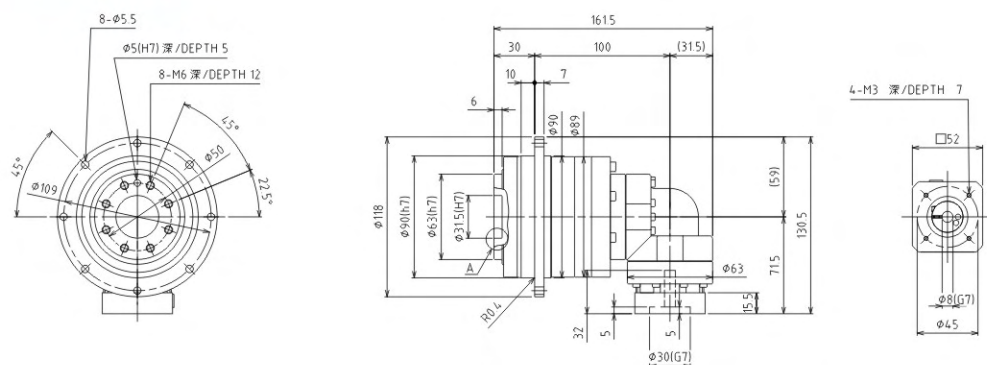
备注2: 电机轴径与输入轴径不同时, 可插入轴套。

Note1: Body Size Length will vary depending on motor.

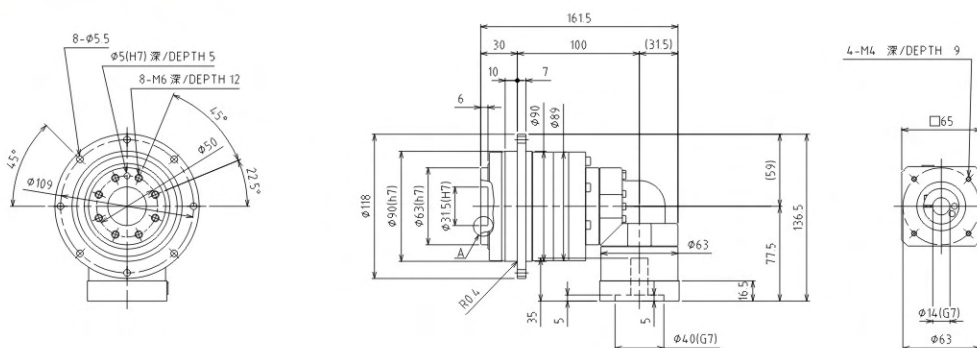
Note2: Bushing will be inserted to adapt to motor shaft.

ATR-090 3段 3stage

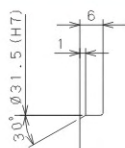
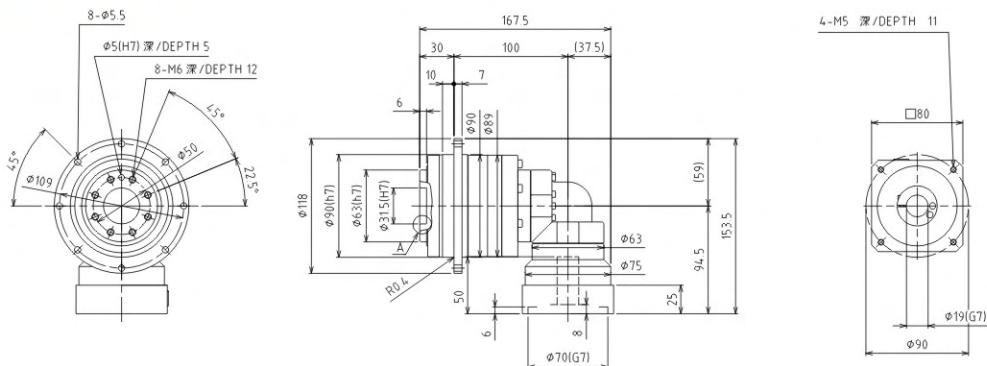
输入轴内径 Input shaft bore $\leq \phi 8$



输入轴内径 Input shaft bore $\leq \phi 14$



输入轴内径 Input shaft bore $\leq \phi 19$

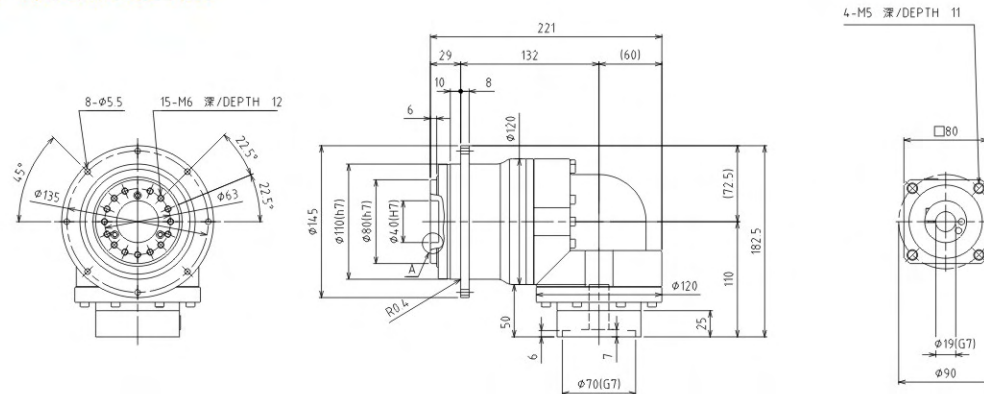


A部详细图
Enlarged detail A

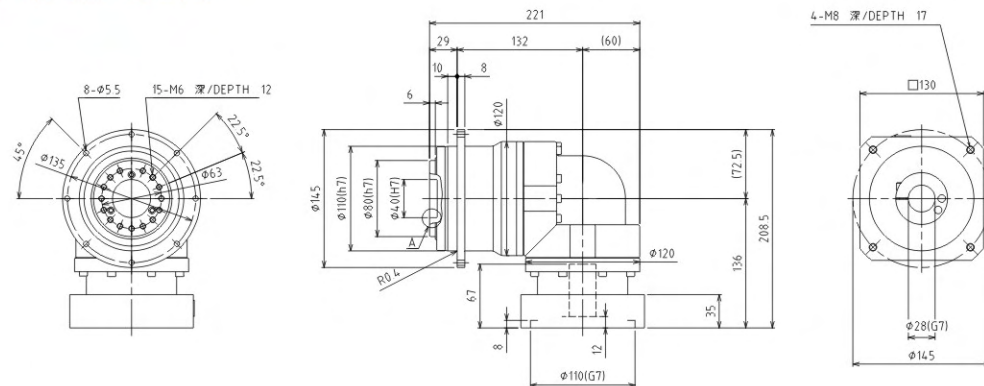
备注1: 机身尺寸随安装电机的不同而有所差异。
备注2: 电机轴径与输入轴径不同时, 可插入轴套。
Note1: Body Size Length will vary depending on motor.
Note2: Bushing will be inserted to adapt to motor shaft.

ATR-110 2段 2stage

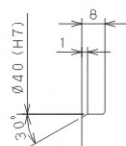
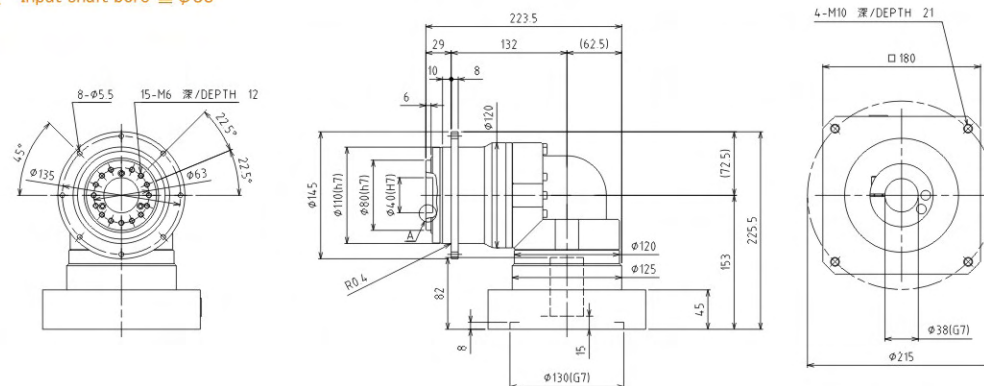
输入轴内径 Input shaft bore $\leq \phi 19$



输入轴内径 Input shaft bore $\leq \phi 28$



输入轴内径 Input shaft bore $\leq \phi 38$

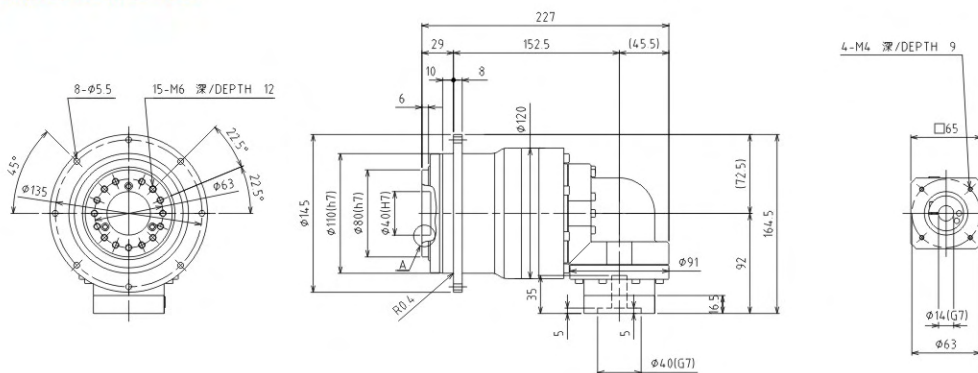


A部详细图
Enlarged detail A

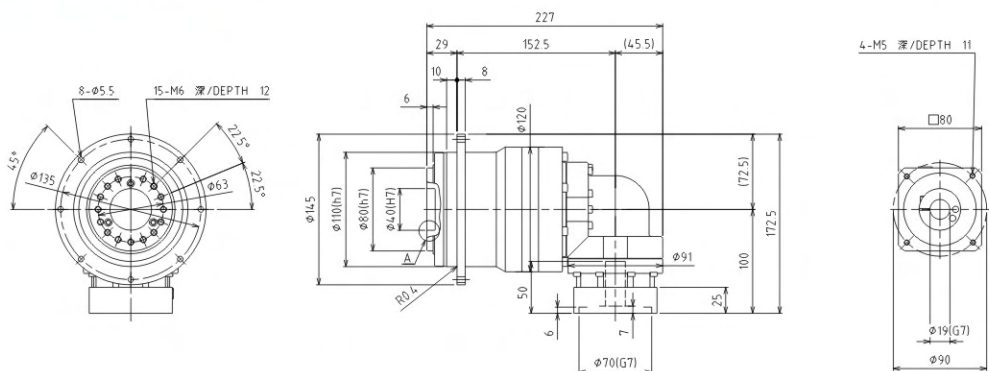
备注1: 机身尺寸随安装电机的不同而有所差异。
备注2: 电机轴径与输入轴径不同时, 可插入轴套。
Note1: Body Size Length will vary depending on motor.
Note2: Bushing will be inserted to adapt to motor shaft.

ATR-110 3段 3stage

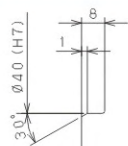
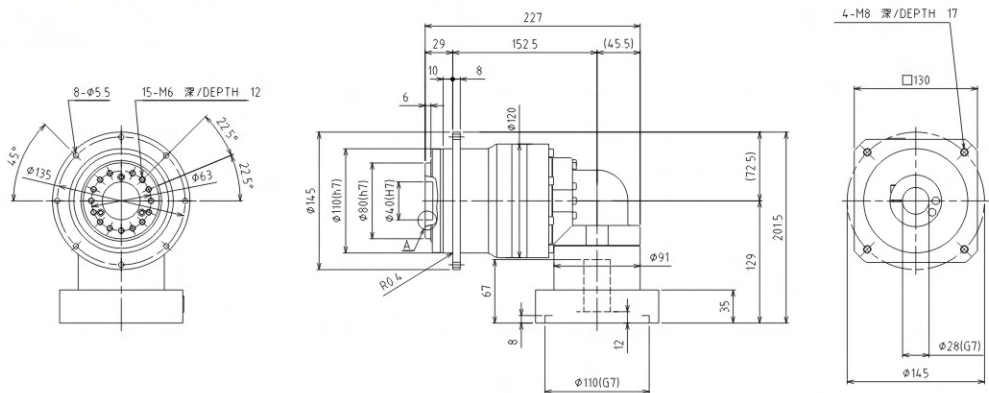
输入轴内径 Input shaft bore $\leq \phi 14$



输入轴内径 Input shaft bore $\leq \phi 19$



输入轴内径 Input shaft bore $\leq \phi 28$

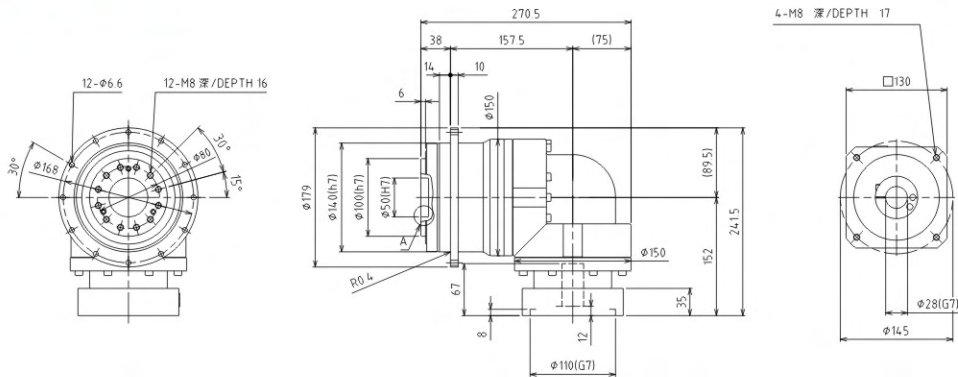


A 部详细图
Enlarged detail A

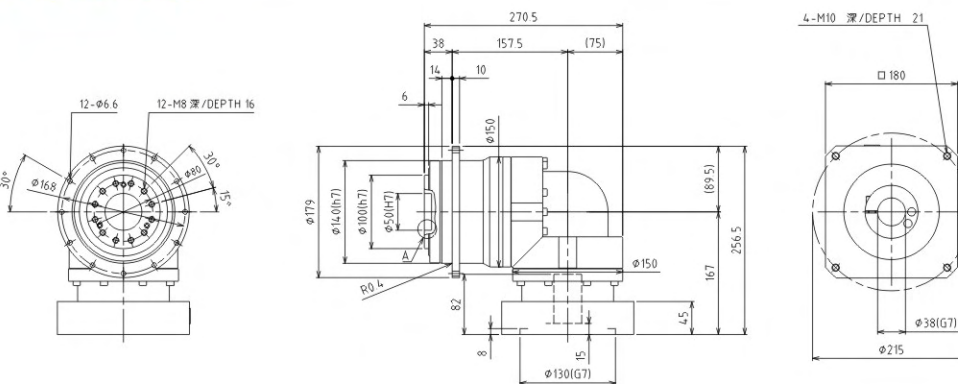
备注1: 机身尺寸随安装电机的不同而有所差异。
备注2: 电机轴径与输入轴径不同时, 可插入轴套。
Note1: Body Size Length will vary depending on motor.
Note2: Bushing will be inserted to adapt to motor shaft.

ATR-140 2段 2stage

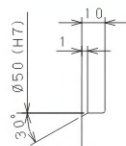
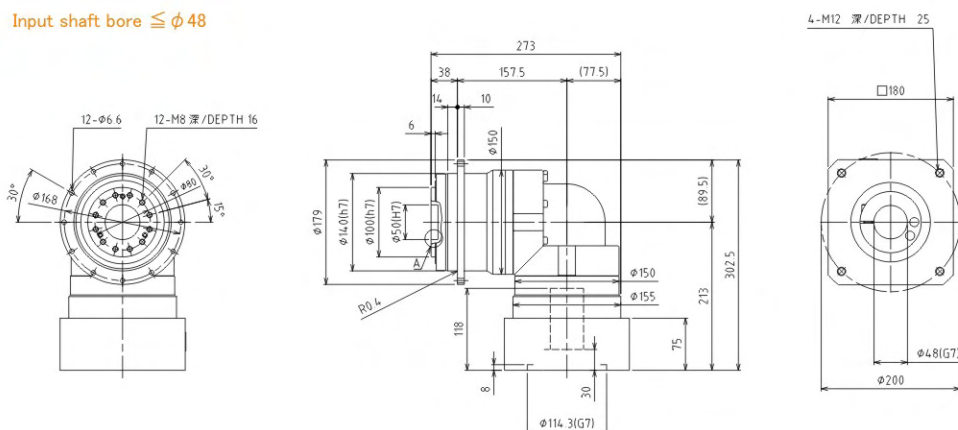
输入轴内径 Input shaft bore $\leq \phi 28$



输入轴内径 Input shaft bore $\leq \phi 38$



输入轴内径 Input shaft bore $\leq \phi 48$

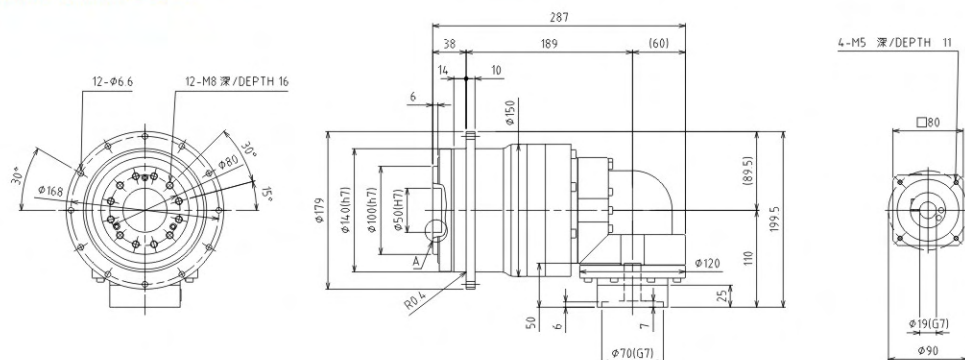


A 部详细图
Enlarged detail A

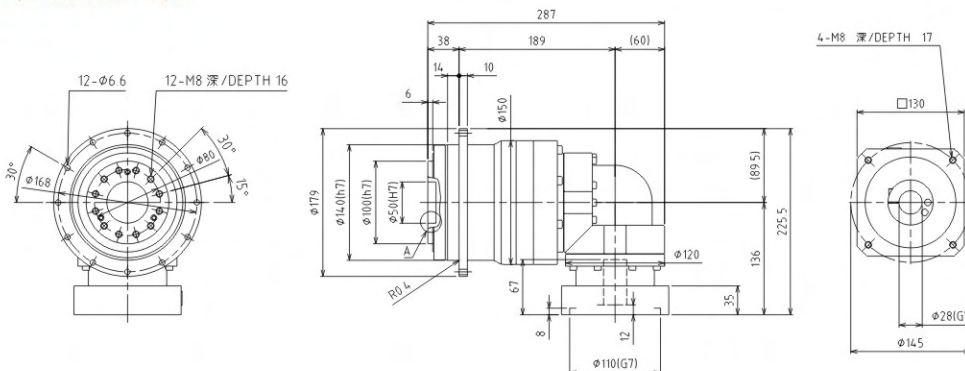
备注1: 机身尺寸随安装电机的不同而有所差异。
备注2: 电机轴径与输入轴径不同时, 可插入轴套。
Note1: Body Size Length will vary depending on motor.
Note2: Bushing will be inserted to adapt to motor shaft.

ATR-140 3段 3stage

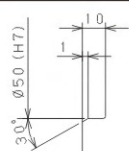
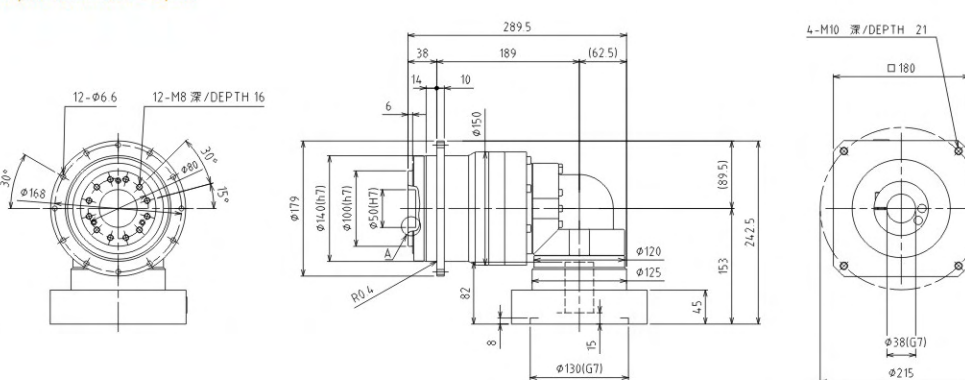
输入轴内径 Input shaft bore $\leq \phi 19$



输入轴内径 Input shaft bore $\leq \phi 28$



输入轴内径 Input shaft bore $\leq \phi 38$

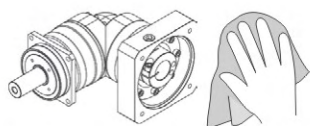


A部详细图
Enlarged detail A

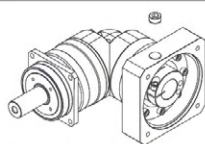
备注1: 机身尺寸随安装电机的不同而有所差异。
备注2: 电机轴径与输入轴径不同时, 可插入轴套。
Note1: Body Size Length will vary depending on motor.
Note2: Bushing will be inserted to adapt to motor shaft.

1 电机安装步骤 Mounting procedure to the motor

- 1 擦拭电机轴上的防锈剂、润滑脂等。
Wipe off anti-rust agent and oil on the motor shaft.

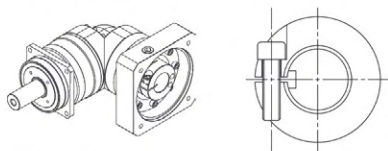


- 2 取下堵头。
Remove the plug.

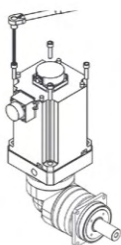


- 3 旋转输入轴使紧固螺栓的头对准塞孔。此时，请确认紧固螺栓是松动的。
Turn the input shaft until the cap screw is seen. Make sure the cap screw is loosened.

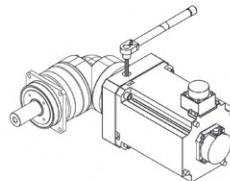
如带有轴套，安装方法如图所示。
In case the bushing has been attached, Please fix it to the reducer as the drawing below.



- 4 将减速机垂直放置在平坦的地方，使减速机的电机安装面朝上侧。将电机轴慢慢地插入输入轴，注意避免撞击到输入轴，请确认电机的法兰面紧靠减速机的法兰面。按指定的紧固扭矩拧紧电机安装螺栓。（参考表1）
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.(See table1)



- 5 使用转矩扳手等按照指定的紧固扭矩拧紧紧固螺栓。（参考表1）
Tighten the clamping bolt of the input shaft with torque wrench to the proper torque.(See table1)



- 6 安装堵头，安装完成。
Reinstall the plug. The procedure is done.

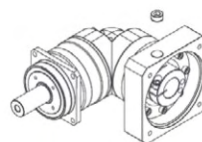


表1 Table 1

螺栓 尺寸 Bolt size	电机安装螺栓 Motor installing bolts		紧固螺栓 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	—	—

表2 Table 2

螺栓 尺寸 Bolt size	紧固扭矩 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

◎推荐螺栓：强度12.9以上

◎Recommended bolt: Strength 12.9

2 减速机的安装

要将减速机安装到设备上时，请先确认安装面平坦且没有毛边等，然后使用转矩扳手等按照指定的紧固扭矩拧紧螺栓。（参考表2）

Reducer installation

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

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.



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