

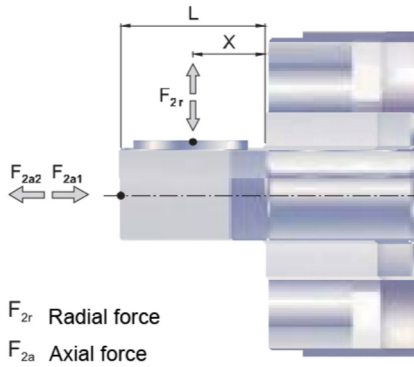


## Reducer performance data

Specification	Stage	Ratio	YABR042	YABR060	YABR090	YABR115	YABR142	YABR180	YABR220		
Rated output torque $T_{2N}$	1	3	9	36	90	195	342	588	1,140		
		4	12	48	120	260	520	1,040	1,680		
		5	15	60	150	325	650	1,200	2,000		
		6	18	55	150	310	600	1,100	1,900		
		7	19	50	140	300	550	1,100	1,800		
		8	17	45	120	260	500	1,000	1,600		
		9	14	40	100	230	450	900	1,500		
		10	14	40	100	230	450	900	1,500		
		14	-	42	140	300	550	1,100	1,800		
		20	-	40	100	230	450	900	1,500		
	Nm	2	15	14	-	-	-	-	-	-	
			20	14	-	-	-	-	-	-	
			25	15	60	150	325	650	1,200	2,000	
			30	20	55	150	310	600	1,100	1,900	
			35	19	50	140	300	550	1,100	1,800	
			40	17	45	120	260	500	1,000	1,600	
			45	14	40	100	230	450	900	1,500	
			50	14	60	100	230	650	1,200	2,000	
		60	20	55	150	310	600	1,100	1,900		
		70	19	50	140	300	550	1,100	1,800		
		80	17	45	120	260	500	1,000	1,600		
		90	14	40	100	230	450	900	1,500		
		100	14	40	100	230	450	900	1,500		
		120	-	-	150	310	600	1,100	1,900		
		140	-	-	140	300	550	1,100	1,800		
		160	-	-	120	260	550	1,000	1,600		
180	-	-	100	230	450	900	1,500				
200	-	-	100	230	450	900	1,500				
The maximum output torque $T_{2a}$	Nm	1,2	3~200 Three times than rated output torque								
Rated input speed $n_{1N}$	rpm	1,2	3~200	5,000	5,000	4,000	4,000	3,000	3,000	2,000	
Max. input speed $n_{1B}$	rpm	1,2	3~200	10,000	10,000	8,000	8,000	6,000	6,000	4,000	
Ultra-precision backlash PO	arcmin	1	3~20	-	-	≤2	≤2	≤2	≤2	≤2	
		2	25~200	-	-	≤4	≤4	≤4	≤4	≤4	
Precision Backlash P1	arcmin	1	3~20	≤4	≤4	≤4	≤4	≤4	≤4	≤4	
		2	25~200	≤7	≤7	≤7	≤7	≤7	≤7	≤7	
Standard Backlash P2	arcmin	1	3~20	≤6	≤6	≤6	≤6	≤6	≤6	≤6	
		2	25~200	≤9	≤9	≤9	≤9	≤9	≤9	≤9	
Torsional stiffness	Nm/arcmin	1,2	3~200	3	7	14	25	50	145	225	
Permissible radial force $F_{2a}^2$	N	1,2	3~200	780	1,530	3,250	6,700	9,400	14,500	50,000	
Permissible axial force $F_{2aB}^2$	N	1,2	3~200	350	630	1,300	3,000	4,000	6,200	35,000	
Permissible axial force $F_{2aB}^2$	N	1,2	3~200	390	765	1,625	3,350	4,700	7,250	25,000	
Lifetime	hr	1,2	3~200	20,000*							
Efficiency $\eta$	%	1	3~20	≥95%							
		2	25~200	≥92%							
Weight	kg	1	3~20	0.9	2.1	6.4	13	24.5	51	83	
		2	25~200	1.2	1.5	7.8	14.2	27.5	54	95	
Temperature	°C	1,2	3~200	-10°C~+90°C							
Lubricating		1,2	3~200	(NYOGEL 792D)							
Protection class		1,2	3~200	IP65							
Mounting Direction		1,2	3~200	Any direction							
Noise level ( $n_1=3,000$ rpm)	dB	1,2	3~200	≤61	≤63	≤65	≤68	≤70	≤72	≤74	

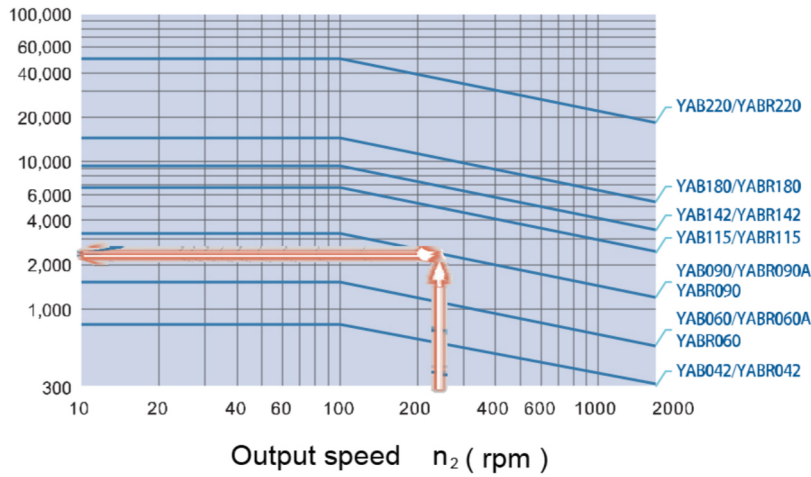
Specification	Stage	Ratio	YABR042	YABR060	YABR090	YABR115	YABR142	YABR180	YABR220
Moment of inertia $J_1$	1	3~10	0.09	0.35	2.25	6.84	23.4	68.9	135.4
		14	-	0.07	1.87	6.25	21.8	65.6	119.8
		20	-	0.07	1.87	6.25	21.8	65.6	119.8
	2	15	0.09	-	-	-	-	-	-
		20	0.09	-	-	-	-	-	-
		25~100	0.09	0.09	0.35	2.25	6.84	23.4	68.9
		120~200	-	-	0.31	1.87	6.25	21.8	65.6

Reducer output shaft of the permissible radial force and axial force

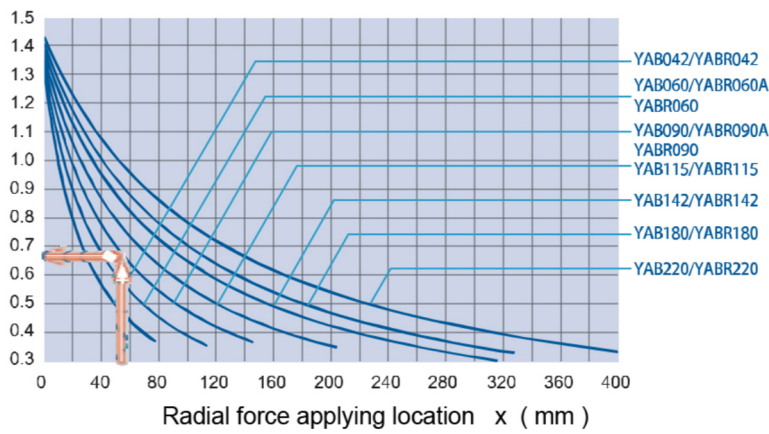


The maximum radial force of the output shaft of the speed reducer can bear and axial force, depending on the internal-branch Bearing design, design of reducer used bearing large size and large span, It can bear a greater radial and axial load.

Allowable radial force  $F_{2rB}$  ( N ) Force on the shaft center position



Position load factor  $K_b$



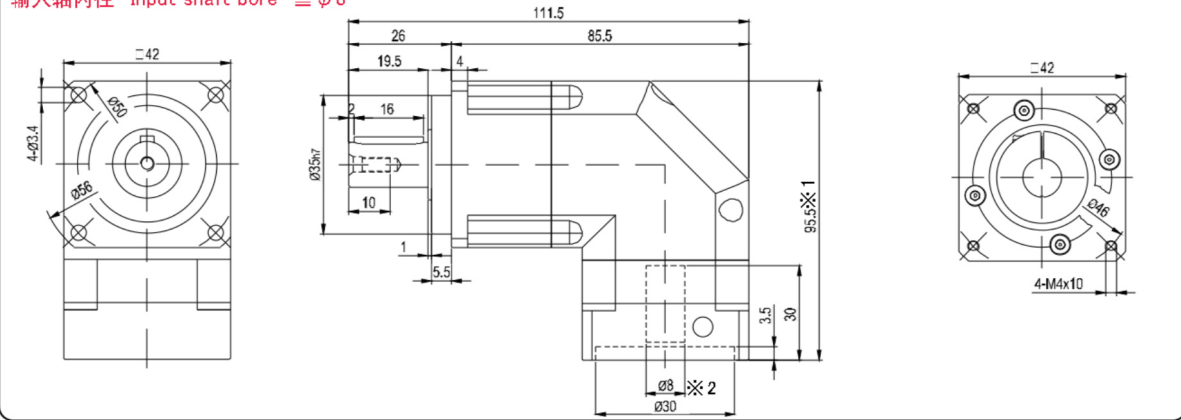
\* Lifetime will be half if continuous running



# YABR 外形尺寸图表 / OUTLINE DIMENSION SHEET

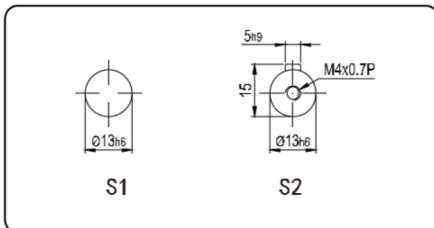
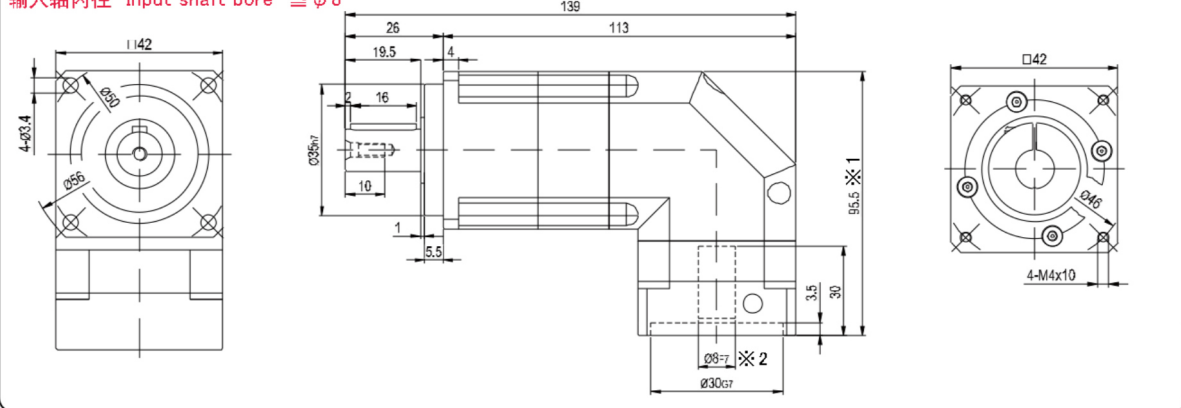
## YABR-040-L1

输入轴内径 Input shaft bore  $\leq \phi 8$



## YABR-040-L2

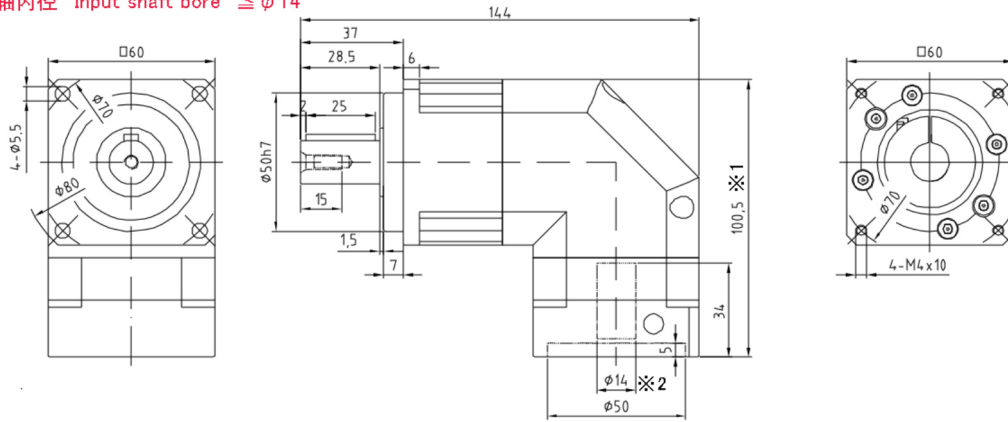
输入轴内径 Input shaft bore  $\leq \phi 8$



- ※1 视安装马达的不同而有所差异。  
※2 马达轴径与输入轴径不同时, 可插入轴套。
- ※1 Length will vary depending on motor.  
※2 Bushing will be inserted to adapt to motor shaft.

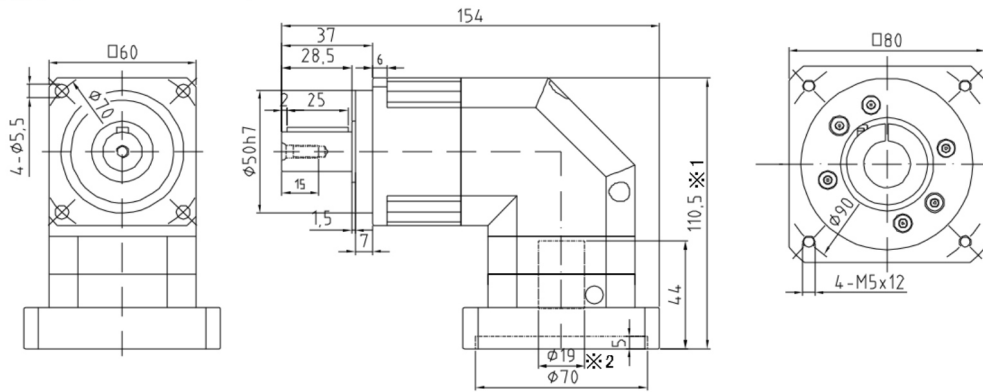
**YABR-060-L1**

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



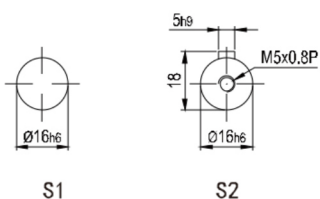
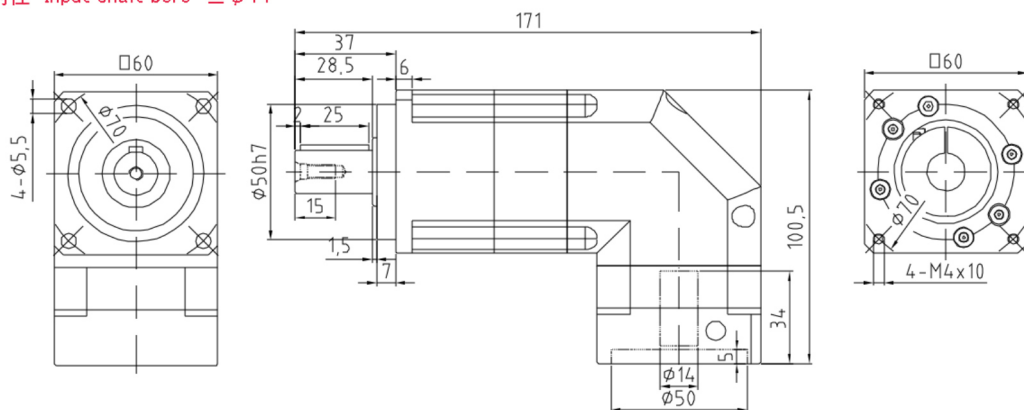
**YABR-060-L1**

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



**YABR-060-L2**

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



- ※1 视安装马达的不同而有所差异。
- ※2 马达轴径与输入轴径不同时,可插入轴套。
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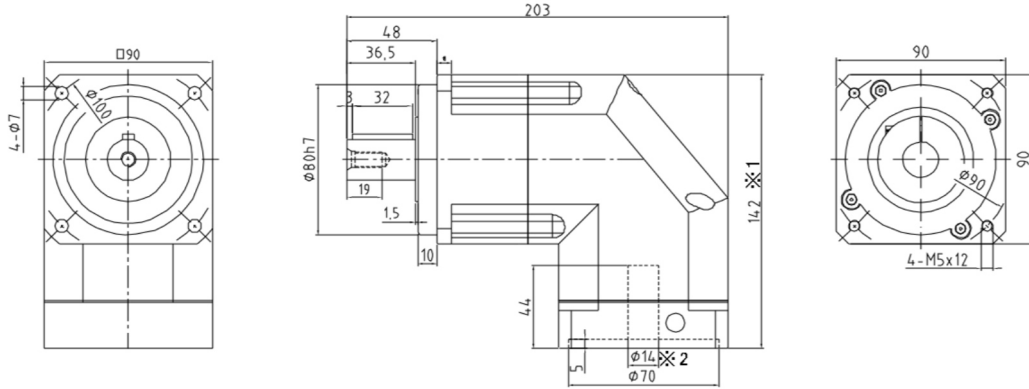




# YABR 外形尺寸图表 / OUTLINE DIMENSION SHEET

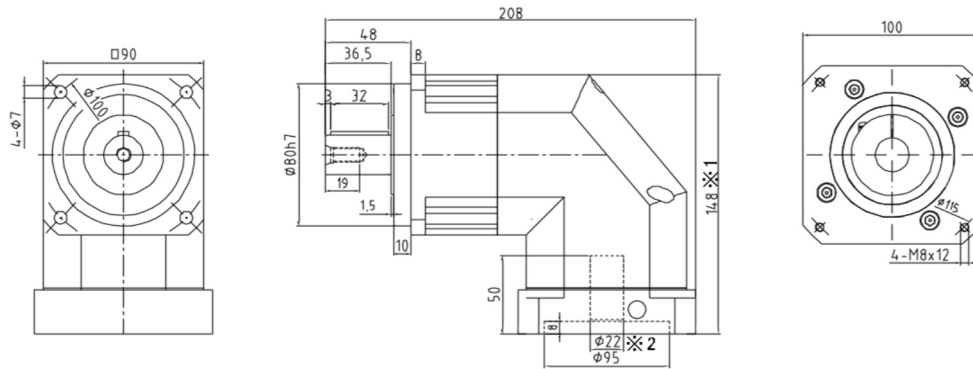
## YABR-090-L1

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



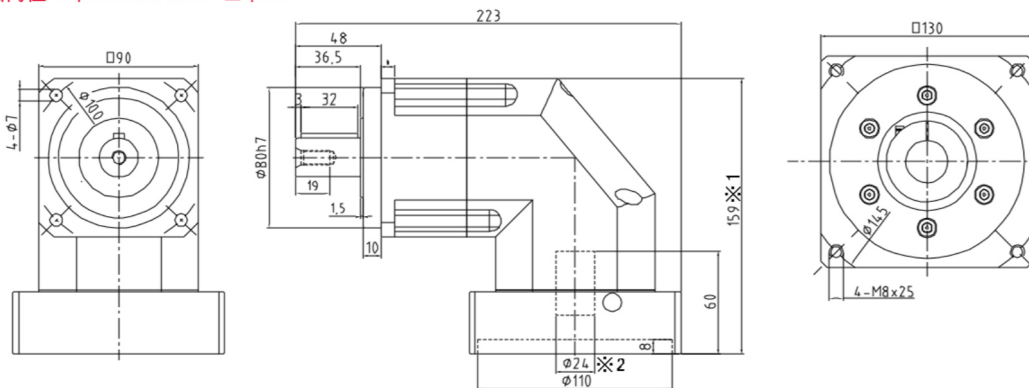
## YABR-090-L1

输入轴内径 Input shaft bore  $\leq \phi 22$

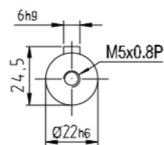


## YABR-090-L2

输入轴内径 Input shaft bore  $\leq \phi 24$



S1

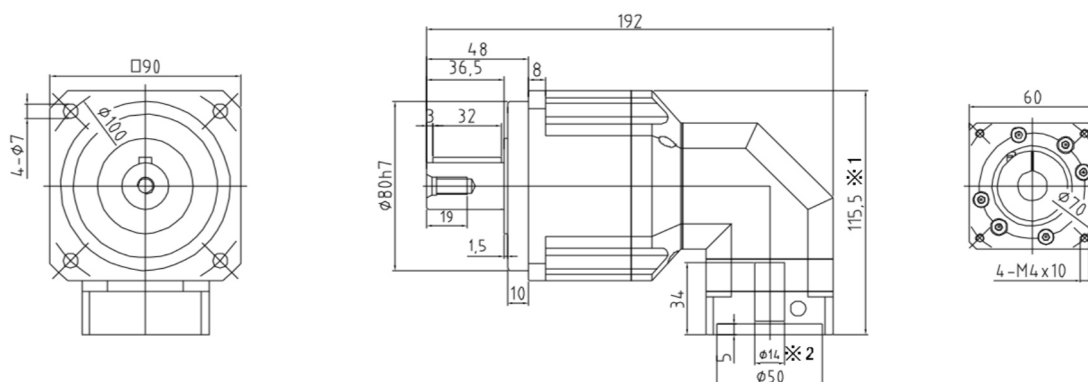


S2

- ※ 1 视安装马达的不同而有所差异。
- ※ 2 马达轴径与输入轴径不同时, 可插入轴套。
- ※ 1 Length will vary depending on motor.
- ※ 2 Bushing will be inserted to adapt to motor shaft.

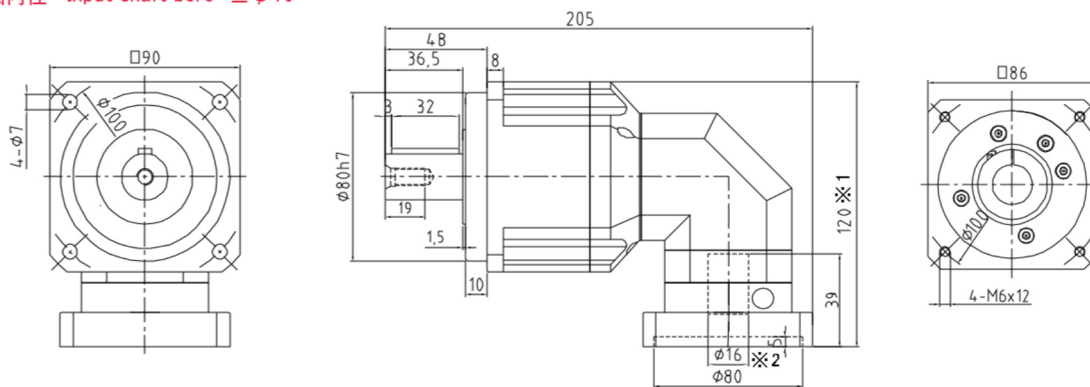
YABR-090-L2

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



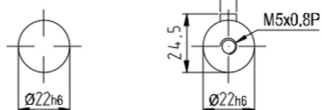
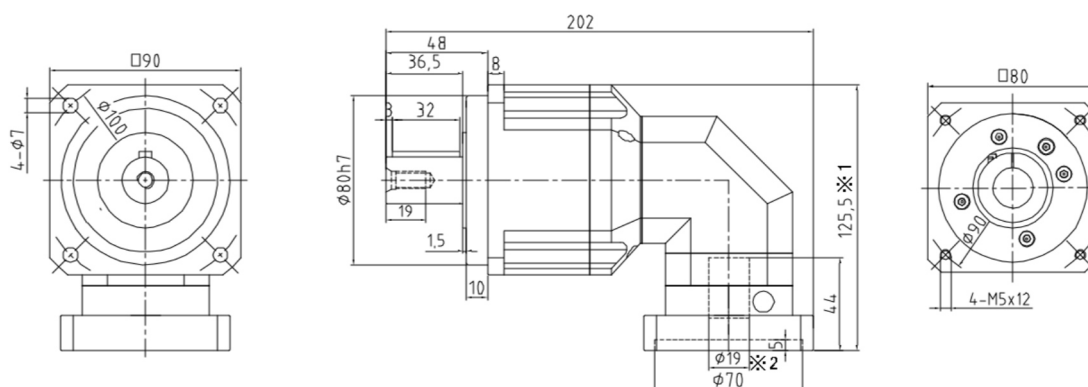
YABR-090-L2

输入轴内径 Input shaft bore  $\leq \phi 16$



YABR-090-L2

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



S1

S2

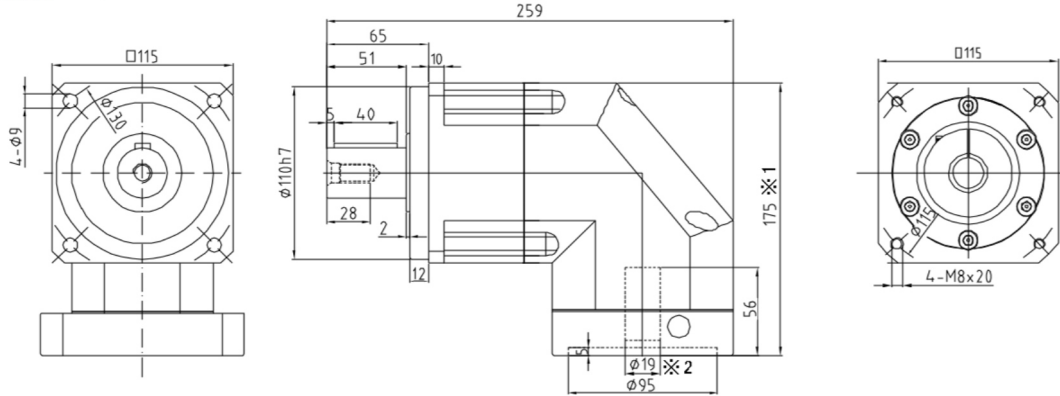
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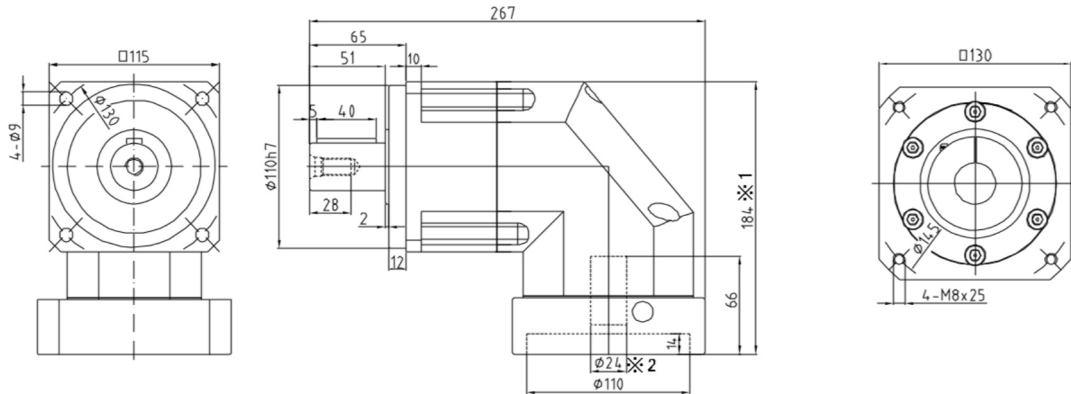
## YABR-115-L1

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



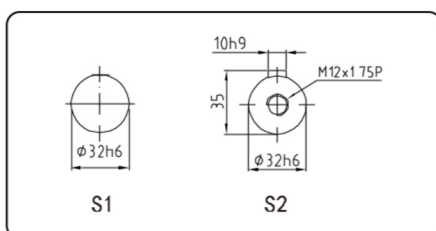
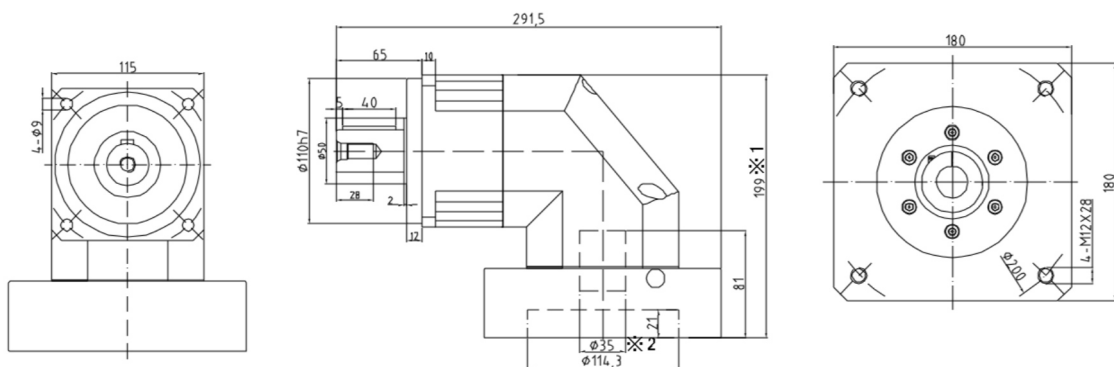
## YABR-115-L1

输入轴内径 Input shaft bore  $\leq \phi 24$



## YABR-115-L1

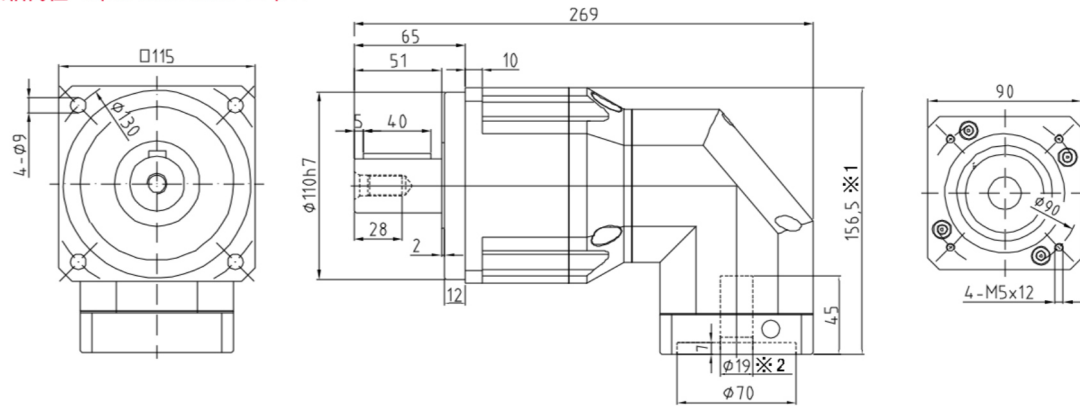
输入轴内径 Input shaft bore  $\leq \phi 35$



- ※ 1 视安装马达的不同而有所差异。
- ※ 2 马达轴径与输入轴径不同时，可插入轴套。
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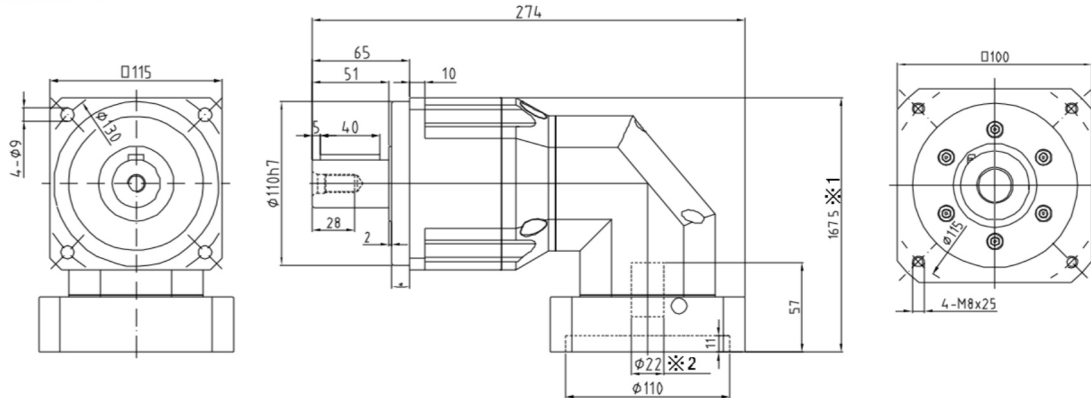
**YABR-115-L2**

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



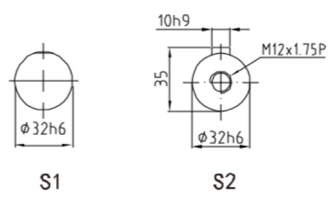
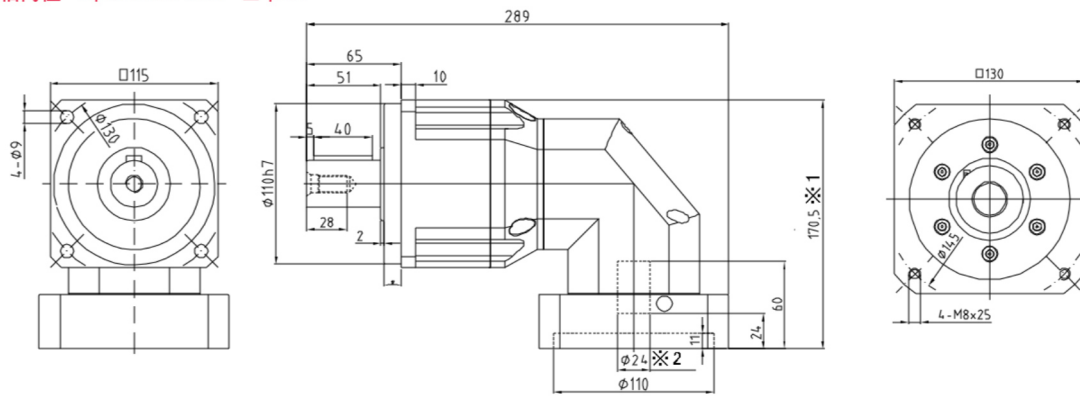
**YABR-115-L2**

输入轴内径 Input shaft bore  $\leq \phi 22$



**YABR-115-L2**

输入轴内径 Input shaft bore  $\leq \phi 24$



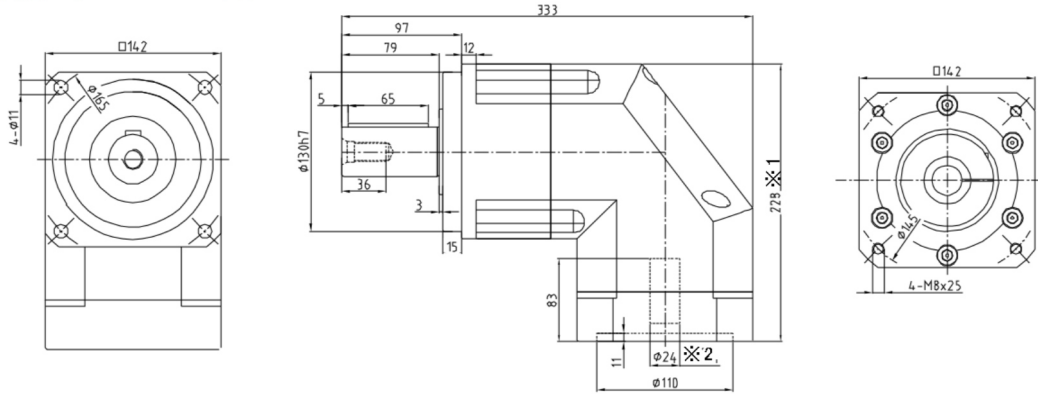
- ※1 视安装马达的不同而有所差异。
- ※2 马达轴径与输入轴径不同时，可插入轴套。
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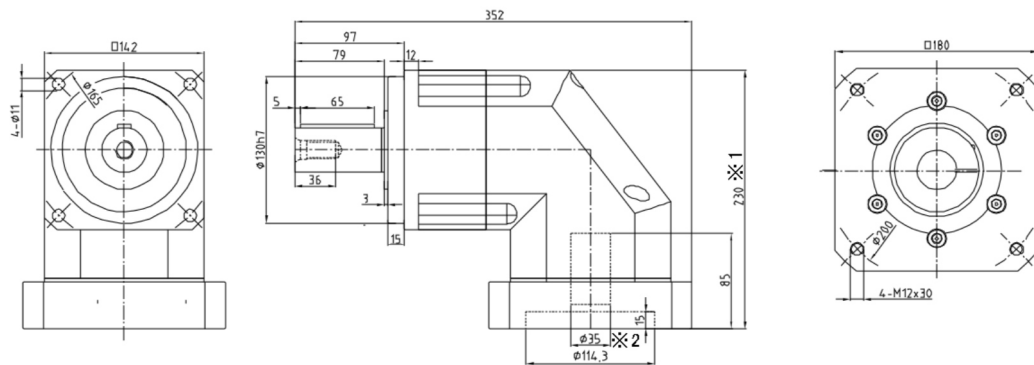
## YABR-142-L1

输入轴内径 Input shaft bore  $\leq \phi 24$

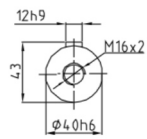


## YABR-142-L1

输入轴内径 Input shaft bore  $\leq \phi 35$



S1



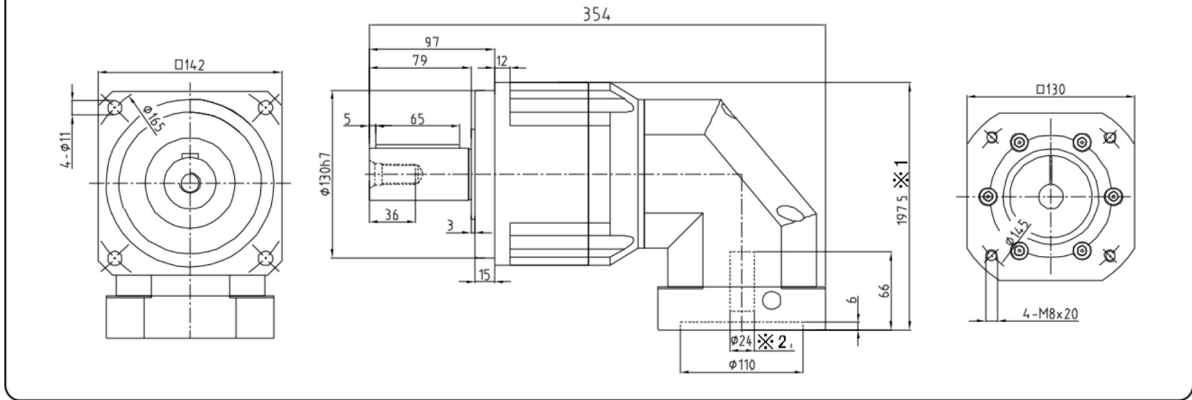
S2

- ※1 视安装马达的不同而有所差异。
- ※2 马达轴径与输入轴径不同时,可插入轴套。
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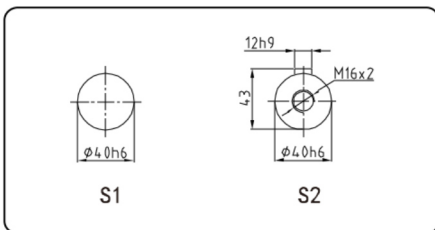
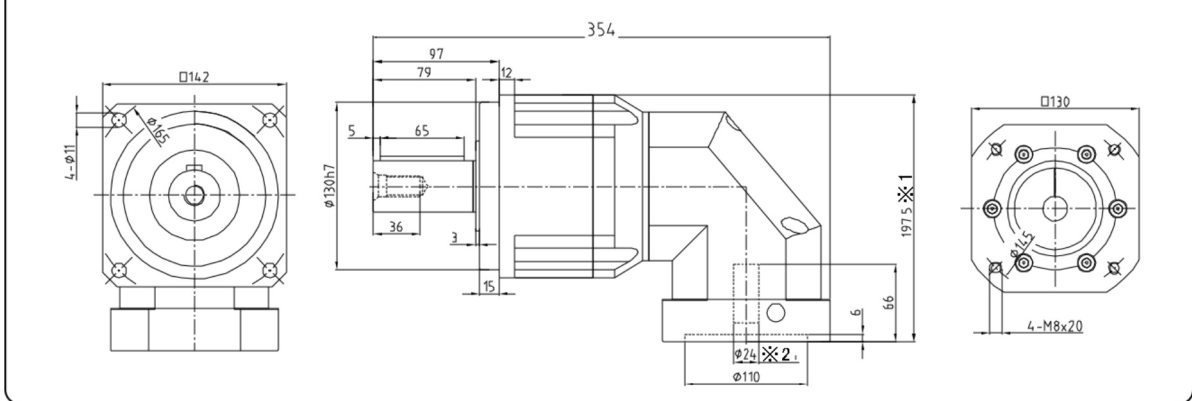
**YABR-142-L2**

输入轴内径 Input shaft bore  $\leq \phi 24$



**YABR-142-L2**

输入轴内径 Input shaft bore  $\leq \phi 35$



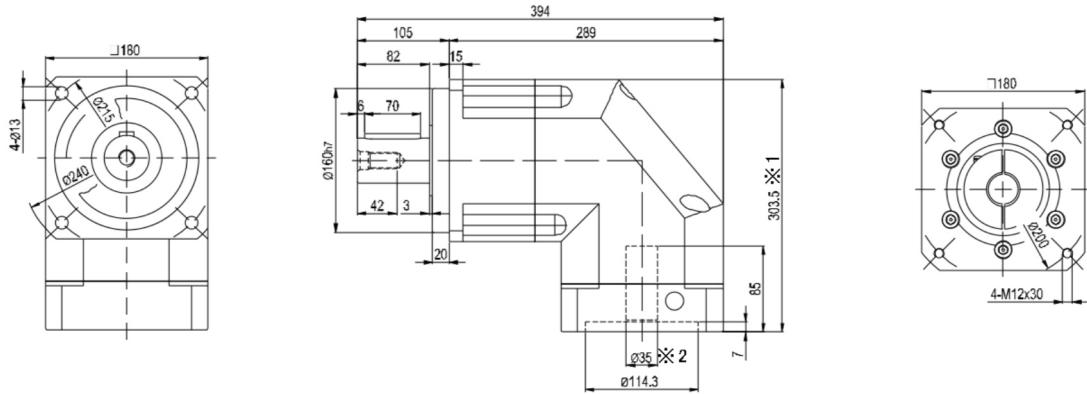
- ※1 视安装马达的不同而有所差异。
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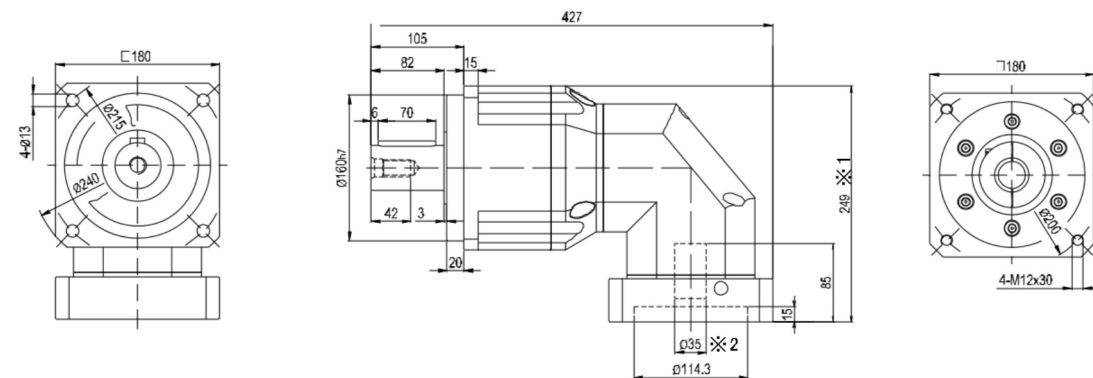
## YABR-180-L1

输入轴内径 Input shaft bore  $\leq \phi 35$

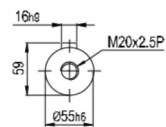


## YABR-180-L2

输入轴内径 Input shaft bore  $\leq \phi 35$



S1

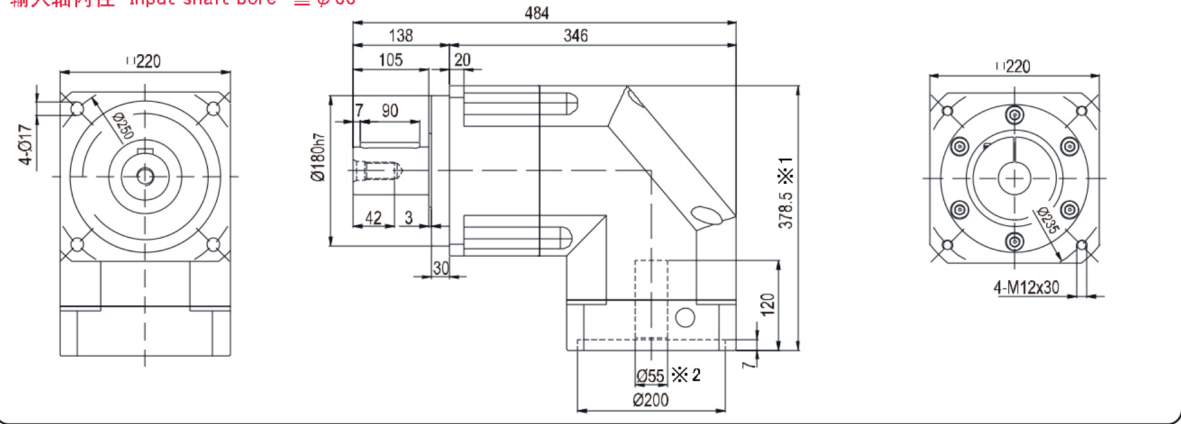


S2

- ※1 视安装马达的不同而有所差异。
- ※2 马达轴径与输入轴径不同时,可插入轴套。
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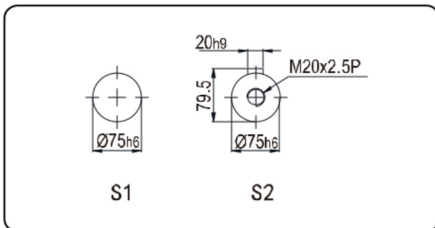
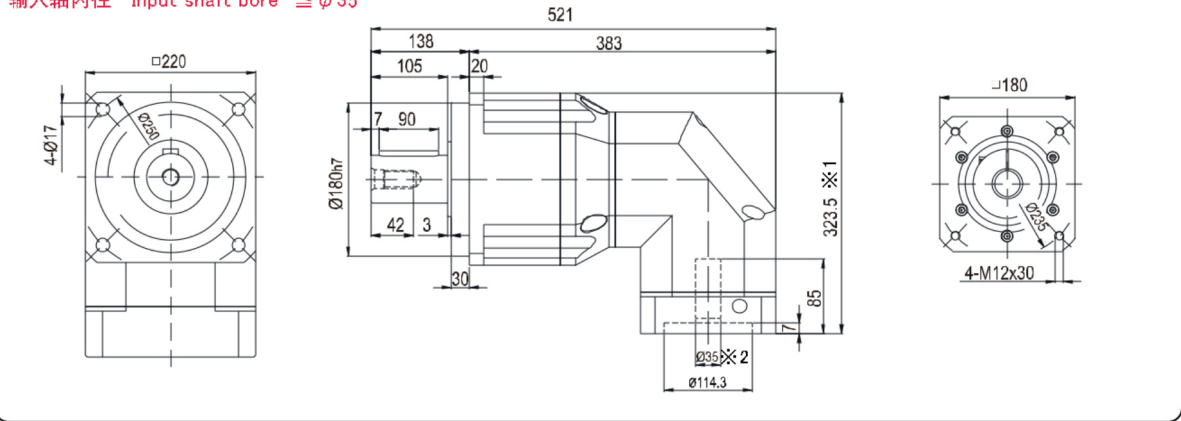
**YABR-220-L1**

输入轴内径 Input shaft bore  $\leq \phi 55$



**YABR-220-L2**

输入轴内径 Input shaft bore  $\leq \phi 35$



- ※ 1 视安装马达的不同而有所差异。
- ※ 2 马达轴径与输入轴径不同时，可插入轴套。
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