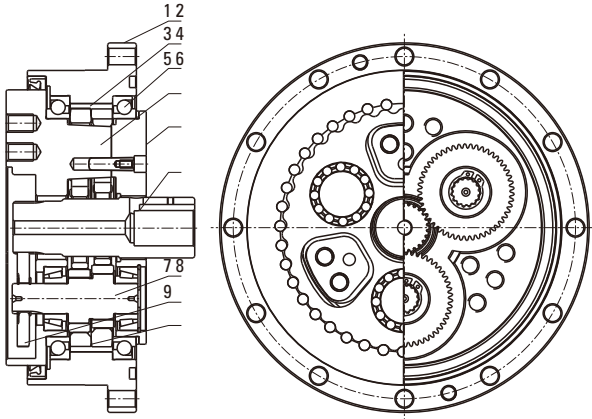


Reducer structure

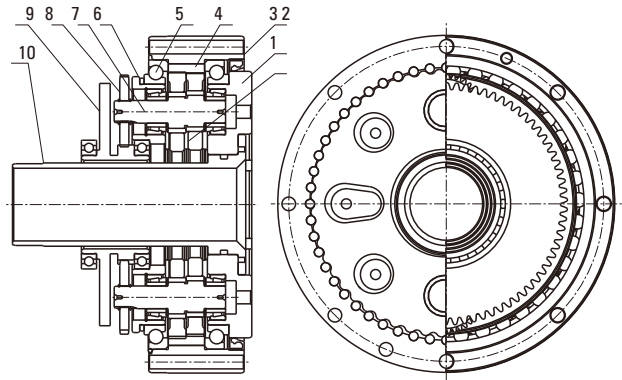
E series reducer structure

- 1- Needle tooth shell
- 3- Main bearing
- 5- Supporting flange
- 7- Crankshaft
- 9- Cycloidal gear
- 2- Pin gear
- 4- Output flange
- 6- Input shaft
- 8- Planetary gear



C series reducer structure

- 1- Cycloidal gear
- 3- Needle tooth shell
- 5- Main bearing
- 7- Crankshaft
- 9- Central gear
- 2- Output flange
- 4- Pin gear
- 6- Supporting flange
- 8- Planetary gear
- 10- Low speed tube



Code

Reducer Code

E Series			C Series		
Code	Outline dimension (mm)	General model	Code	Outline dimension (mm)	The original code
120	Φ122	6E	10C	Φ145	150
150	Φ145	20E	27C	Φ181	180
190	Φ190	40E	50C	Φ222	220
220	Φ222	80E	100C	Φ250	250
250	Φ244	110E	200C	Φ345	350
280	Φ280	160E	320C	Φ440	440
320	Φ325	320E	500C	Φ520	520
370	Φ370	450E	/	/	/

Reduction Ratio

E Series		C Series	
Code	Reduction ratio (output flange output)	Code	Monomer reduction ratio
120	31, 43, 53.5, 59, 79, 103	10CBX	27.00
150	41, 57, 81, 105, 121, 141, 161	27CBX	36.57
190	41, 57, 81, 105, 121, 153	50CBX	32.54
220	57, 81, 101, 121, 153	100CBX	36.75
250	81, 111, 161, 175.28	200CBX	34.86
280	81, 101, 129, 145, 171	320CBX	35.61
320	81, 101, 118.5, 129, 141, 171, 185	500CBX	37.34
370	81, 101, 118.5, 129, 154.8, 171, 192.4	/	/

Note 1: E series, such as by the shell (pin shell) output, the corresponding reduction ratio by 1.

Note 2: C series gear ratio refers to the motor installed in the casing of the reduction ratio, if installed on the output flange side, the corresponding reduction ratio by 1.

■ C系列输出转矩及效率 C output series torque and efficiency

输出转速项目 Output Speed Project 型号 Model	5 r/min		15 r/min			25 r/min		30 r/min		容许最高输出转速 Maximum Allowable Loss Out Speed r/min
	输出转矩 Output Torque N.m	输入功率 Input Power Kw	输出转矩 Output Torque N.m	输入功率 Input Power Kw	效率 Efficiency %	输出转矩 Output Torque N.m	输入功率 Input Power Kw	输出转矩 Output Torque N.m	输入功率 Input Power Kw	
10CBX	134	0.09	98	0.20	78	89	0.3	87	0.35	80
27CBX	372	0.25	264	0.54	78	239	0.8	223	0.90	60
50CBX	745	0.50	490	1.00	78	447	1.5	434	1.75	50
100CBX	1490	1.00	980	2.00	78	894	3.0	819	3.30	40
120CBX	1490	1.00	1176	2.36	78	941	3.16	856	3.45	40
200CBX	2235	2.00	1960	4.00	78	1788	6.0	1638	6.60	30
320CBX	4470	3.00	3136	6.30	78	2830	9.5	/	/	25
500CBX	7003	4.70	4900	10.0	78	/	/	/	/	20
注1: 额定转矩是指输出转速为15rpm时的输出转矩。输入功率考虑了减速器的效率。 Note 1: The rated torque is the output torque of the output speed of 15rpm. The input power considers the efficiency of the reducer.										
注2: 转矩计算公式 Note 2: Torque calculation formula: $T=9549XP\eta/N$ (T: 转矩Nm, P: 功率Kw, N: 转速RPM, η : 效率%)。 $T=9549XP\eta/N$ (T: Torque Nm, P: Power Kw, N: Speed RPM, η : Efficiency %).										

■ C系列技术参数 C series of technical parameters

项目 Project 型号 Model	减速器 单体减速比 Retarder Monomer Reduction Ratio	容许力矩 Allowable Moment N.m	扭转刚度 Torsional Rigidity N.m/(Arc.min)	启动停止许用 输出转矩 Stat And Stop Allowing Output Torque N.m	瞬时容许最大转矩 Instantaneous Maximum Torque N.m	传动精度 Transmission Accuracy Arc.min	齿隙回差 Backlash Of Backlash Arc.min	寿命 Life h	减速器单体 惯性力矩 Retarder Inertia Moment Kg.m ²	重量 Weight kg
10CBX	27.00	686	47	245	490	1.0	1.0	6000	1.380×10^{-5}	4.60
27CBX	36.57	980	147	662	1323	1.0	1.0	6000	0.550×10^{-4}	8.50
50CBX	32.54	1764	255	1225	2450	1.0	1.0	6000	1.820×10^{-4}	14.6
100CBX	36.75	2450	510	2450	4900	1.0	1.0	6000	0.475×10^{-3}	19.5
120CBX	36.75	2940	588	2990	5880	1.0	1.0	6000	0.475×10^{-3}	19.5
200CBX	34.86	8820	980	4900	9800	1.0	1.0	6000	1.390×10^{-3}	55.6
320CBX	35.61	20580	1960	7840	15680	1.0	1.0	6000	0.518×10^{-2}	79.5
500CBX	37.34	34300	3430	12250	24500	1.0	1.0	6000	0.996×10^{-2}	154

说明Note: 惯性力矩值是减速器单体的值，不考虑中心齿轮、输入齿轮的惯性力矩。电机轴换算的惯性力矩值请参照以下公式计算。
Inertial moment value is the value of the reducer unit, without considering the inertial moment of the central gear and the input gear. For the inertia moment value converted by the motor shaft, refer to the following formula.

惯性力矩(减速器单体) + 中心齿轮的惯性力矩
Inertia moment (Reducer Unit) + Inertia moment of the central gear

————— + 输入齿轮的惯性力矩 Inertia moment of input gear
(中心齿轮大齿轮的齿数/输入齿轮的齿数)²
(Tooth Number of Central Gear/Tooth Number of Input Gear)²

RCA系列外形尺寸图

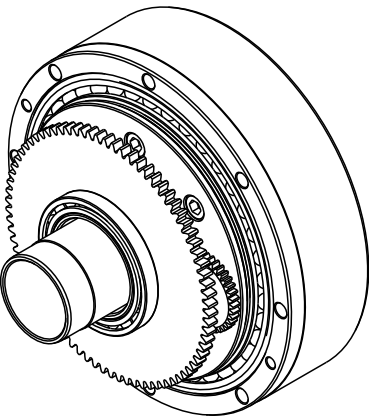
RCA SERIES OUTLINE DIMENSION DRAWING

● 说明： Table C.9: Lubricating oil injection

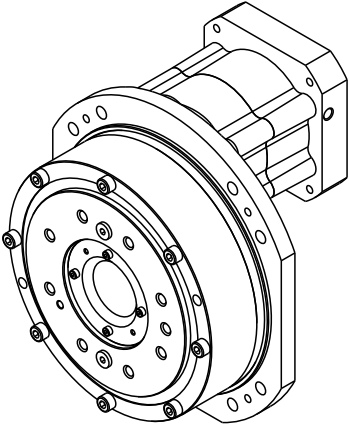
- 减速比是指裸机的减速比。可以选配中心齿轮及定制输入齿轮；
The reduction ratio refers to the reduction ratio of the bare gearbox. Sun gear and input gear are optional;
- 润滑油脂：VIGO GREASE RE0或RE-00 (MOLYWHITE)；
Lubricating grease: VIGO GREASE RE0 or RE-00 (MOLYWHITE);
- 额定输出扭矩见表4，额定输出转速：15 r/min；
See Table 4 for rated output torque, rated output speed: 15 r/min;
- 安装法兰需特别设计、制作，保证安装中心距及相关尺寸公差要求；
The mounting flange needs to be specially designed and manufactured to ensure the installation center distance and related dimensional tolerance requirements;
- 安装时须做好密封，注意保证同心度等要求；
It must be sealed when installing, pay attention to ensure the requirements such as concentricity;
- RCA机种上为带输入端法兰的机种，具体减速比见下表：
RCA models are models with input flanges. The specific reduction ratio is shown in the table below:

机型 Model	裸机减速比 Bare Gearbox Reduction Ratio	RCA机型减速比 RCA Model Reduction Ratio	适配电机轴径 Adapted Motor Shaft Diameter
10CBX	27	81, 108, 153, 189, 243	11, 14
27CBX	36.57	79, 103, 120, 157, 177, 231.5	14, 19, 22
50CBX	32.54	80, 107, 151, 177, 234	19, 22, 24
100CBX/120CBX	36.75	76.3, 100.2, 124.7, 152, 214.3, 264.6	22, 24, 35
200CBX	35.61	106, 122, 156, 206, 245, 281	22, 24, 35, 42

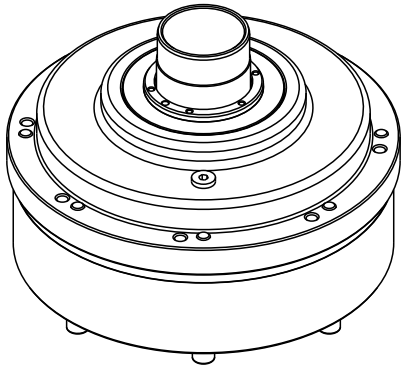
- RCA机型可以衍生多个不同机种，适用不同场所，常用的有以下几种（图示）：
RCA models can be derived from many different models, suitable for different places, the following are commonly used (as picture shows):



RVC-STD



RCA

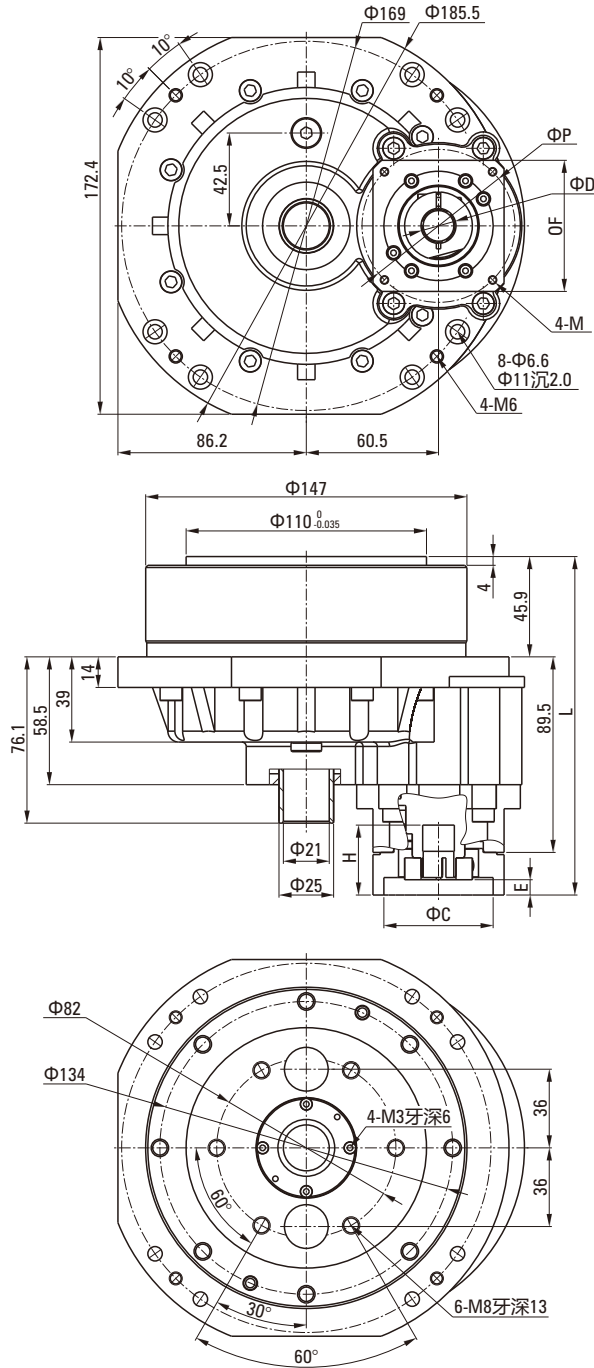


RCA-TB

RCA系列外形尺寸图

RCA SERIES OUTLINE DIMENSION DRAWING

10CBX-RCA 外形图 10CBX-RCA Outline Drawing



马达种类 Type Motor	M41	M42
C	50	50
D	14	14
E	7	7
F	60	60
H	32	32
L	154.9	154.9
M	M4	M5
P	70	70

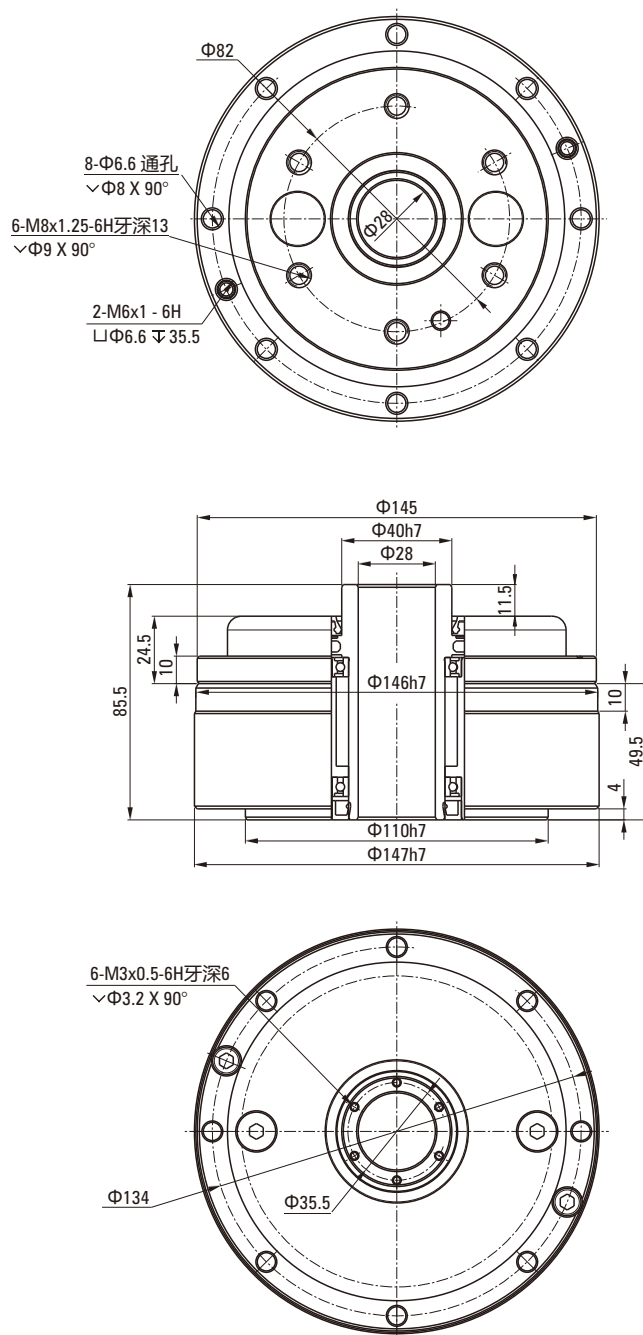
马达种类 Type Motor	M51	M52
C	70	70
D	19	19
E	7	7
F	80	80
H	42	42
L	154.9	154.9
M	M5	M6
P	90	90

说明 Note:

1. 本图为中空10CBX型减速器。This picture shows the hollow 10CBX reducer.
2. 减速机速比: (81,108,453,189,243):1。Reducer speed ratio: (81,108,453,189,243):1.
3. 润滑油脂: VIGO GREASE RE0或RE-00 (MOLYWHITE)。Grease: VIGO GREASE RE0 or RE-00 (MOLYWHITE).
4. 额定输出扭矩: 98N.m (输出转速: 15R/Min)。Rated output torque: 98N.m (output speed: 15R / Min).

RCA系列外形尺寸图

10CBX-27-RCA-TB 外形图 10CBX-27-RCA-TB Outline Drawing



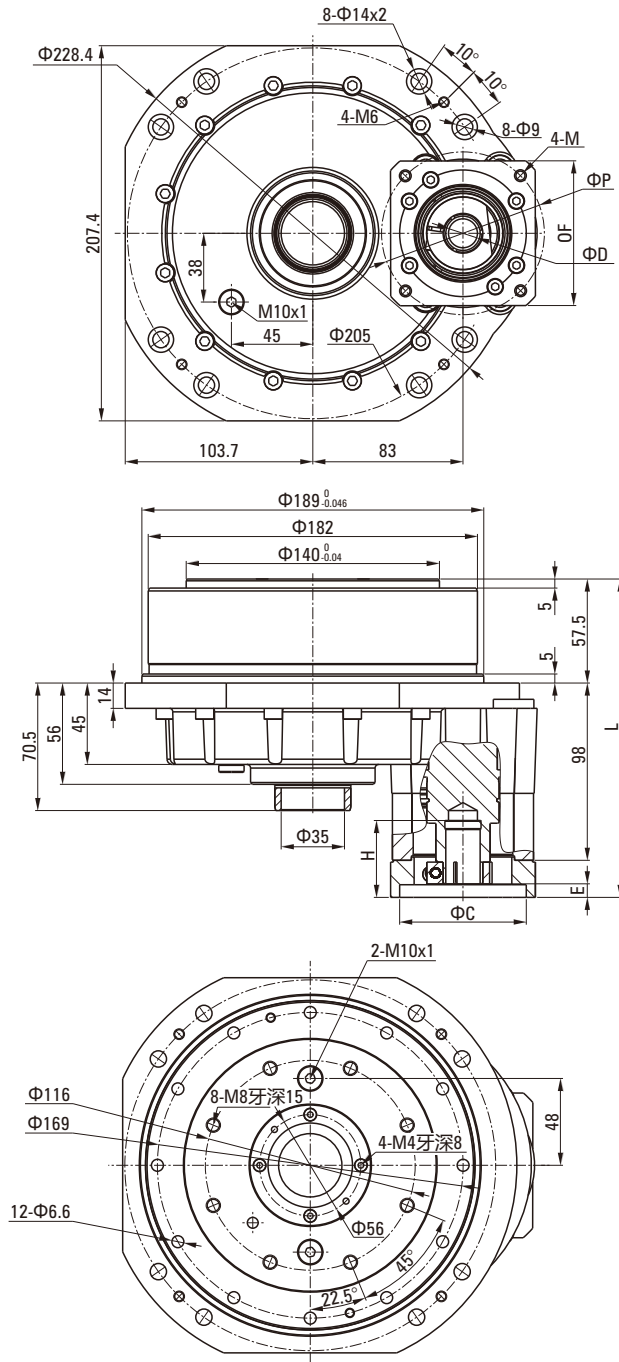
● **说明 Note:**

1. 本图为中空10CBX型减速器，输入端配同步带轮。 This picture shows the hollow 10CBX reducer, the input end with timing pulley.
2. 减速机速比: 27:1。 Reducer speed ratio: 27:1.
3. 润滑油脂: VIGO GREASE RE0或RE-00 (MOLYWHITE)。 Grease: VIGO GREASE RE0 or RE-00 (MOLYWHITE).
4. 额定输出扭矩: 98N.m (输出转速: 15R/Min)。 Rated output torque: 98N.m (output speed: 15R / Min).
5. 安装法兰需特别设计、制作，保证中心距及相关尺寸公差要求。
The installation flanges shall be specially designed and manufactured to ensure the center distance and the relevant requirements of the PRCs.

RCA系列外形尺寸图

RCA SERIES OUTLINE DIMENSION DRAWING

27CBX-RCA 外形图 27CBX-RCA Outline Drawing



● 说明 Note:

1. 本图为中空27CBX型减速器。This picture shows the hollow 27CBX reducer.
2. 减速机速比: (79,103,120,157,177,231.5):1。Reducer speed ratio: (79,103,120,157,177,231.5):1.
3. 润滑油脂: VIGO GREASE RE0或RE-00 (MOLYWHITE)。Grease: VIGO GREASE RE0 or RE-00 (MOLYWHITE).
4. 额定输出扭矩: 264N.m (输出转速: 15R/Min)。Rated output torque: 264N.m (output speed: 15R / Min).

马达种类 Type Motor	M51	M52
C	70	70
D	19	19
E	7.5	7.5
F	80	80
H	42	42
K	6	6
L	176	176
M	M5	M6
P	90	90

马达种类 Type Motor	M53	M54
C	80	110
D	19	19
E	7.5	23
F	90	130
H	42	58
K	6	6
L	176	191.5
M	M6	M8
P	100	145

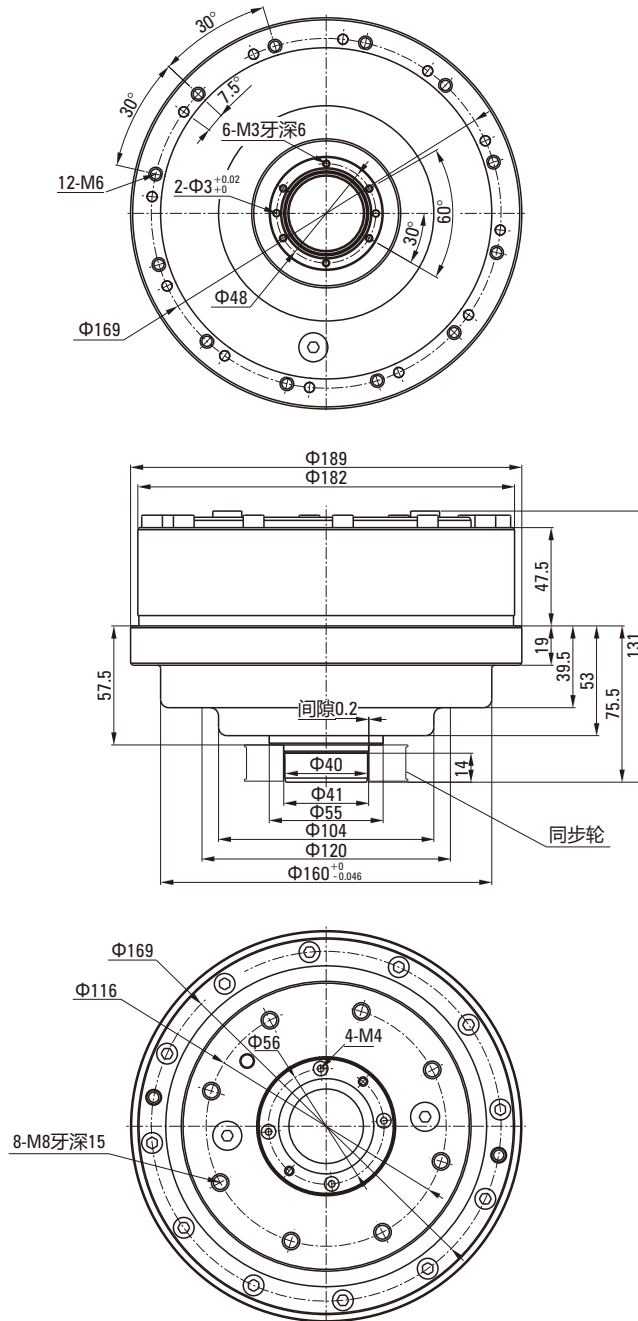
马达种类 Type Motor	M54	M56
C	110	95
D	22	19
E	23	20
F	130	100
H	58	55
K	8	6
L	191.5	188.5
M	M8	M6
P	145	115

马达种类 Type Motor	M57
C	95
D	22
E	20
F	100
H	55
K	8
L	188.5
M	M8
P	115

RCA系列外形尺寸图

RCA SERIES OUTLINE DIMENSION DRAWING

27CBX-36.57-RCA-TB 外形图 27CBX-36.57-RCA-TB Outline Drawing



● 说明 Note:

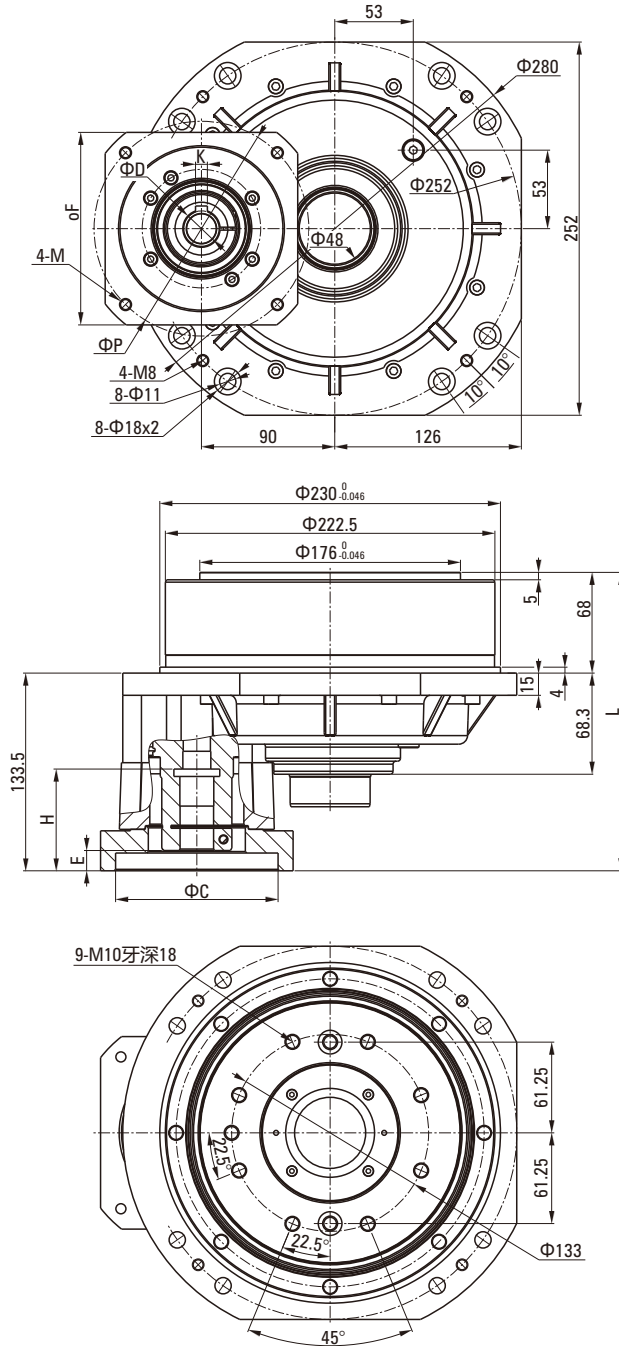
1. 本图为中空27CBX型减速器，输入端配同步带轮。This picture shows the hollow 27CBX reducer, the input end with timing pulley.
2. 减速机速比: 36.57:1。Reducer speed ratio: 36.57:1.
3. 润滑油脂: VIGO GREASE RE0或RE-00 (MOLYWHITE)。Grease: VIGO GREASE RE0 or RE-00 (MOLYWHITE).
4. 额定输出扭矩: 264N.m (输出转速: 15R/Min)。Rated output torque: 264N.m (output speed: 15R / Min).
5. 安装法兰需特别设计、制作，保证中心距及相关尺寸公差要求。

The installation flanges shall be specially designed and manufactured to ensure the center distance and the relevant requirements of the PRCs.

RCA系列外形尺寸图

RCA SERIES OUTLINE DIMENSION DRAWING

50CBX-RCA 外形图 50CBX-RCA Outline Drawing



● 说明 Note:

1. 本图为中空50CBX型减速器。This picture shows the hollow 50CBX reducer.
2. 减速机速比: (80,107,151,177,234):1。Reducer speed ratio: (80,107,151,177,234):1.
3. 润滑油脂: VIGO GREASE RE0或RE-00 (MOLYWHITE)。Grease: VIGO GREASE RE0 or RE-00 (MOLYWHITE).
4. 额定输出扭矩: 490N.m (输出转速: 15R/Min)。Rated output torque: 490N.m (output speed: 15R / Min).

马达种类 Type Motor	M51	M52
C	70	70
D	19	19
E	6	6
F	80	80
H	58	58
K	6	6
L	194	194
M	M5	M6
P	90	90

马达种类 Type Motor	M53	M71
C	80	110
D	19	19/22/24
E	6	13.5
F	90	130
H	58	65
K	6	6/8
L	194	201.5
M	M6	M8
P	100	145

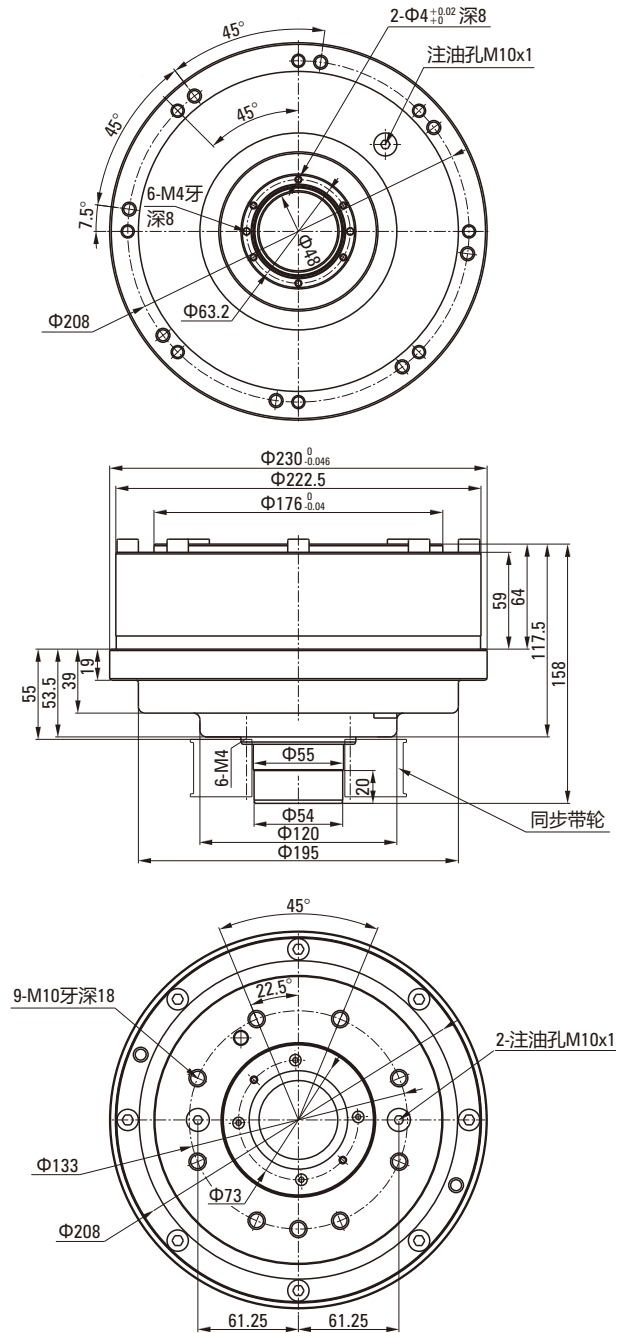
马达种类 Type Motor	M73	M74
C	95	95
D	19/22/24	19/22/24
E	10.5	10.5
F	100	100
H	62	62
K	6/8	6/8
L	198.5	198.5
M	M6	M8
P	115	115

马达种类 Type Motor	M75
C	95
D	19/22/24
E	13.5
F	110
H	65
K	6/8
L	201.5
M	M8
P	130

RCA系列外形尺寸图

RCA SERIES OUTLINE DIMENSION DRAWING

50CBX-32.54-RCA-TB 外形图 50CBX-32.54-RCA-TB Outline Drawing



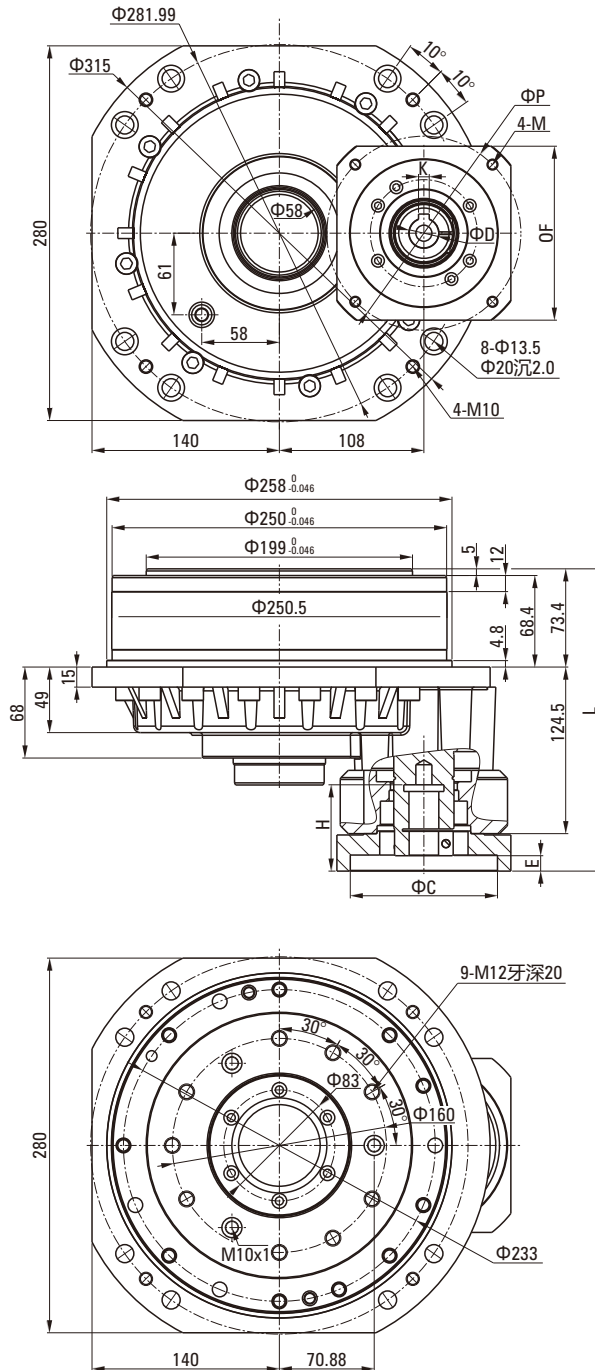
● 说明 Note:

1. 本图适用配同步带轮。The figure applies with timing pulley.
2. 减速机速比: 32.54:1。Reducer speed ratio: 32.54:1.
3. 润滑油脂: VIGO GREASE RE0或RE-00 (MOLYWHITE)。Grease: VIGO GREASE RE0 or RE-00 (MOLYWHITE).
4. 额定输出扭矩: 498N.m (输出转速: 15R/Min)。Rated output torque: 498N.m (output speed: 15R / Min).
5. 系统减速比: 32.54乘以同步带级的速比。System reduction ratio: 32.54 multiplied by the speed ratio belt.

RCA系列外形尺寸图

RCA SERIES OUTLINE DIMENSION DRAWING

100CBX-RCA 外形图 100CBX-RCA Outline Drawing



说明 Note:

1. 本图为中空100CBX型减速器。This picture shows the hollow 100CBX reducer.
2. 减速机速比: (76.3,100.2,124.7,152,214.3,264.6):1。Reducer speed ratio: (76.3,100.2,124.7,152,214.3,264.6):1.
3. 润滑油脂: VIGO GREASE RE0或RE-00 (MOLYWHITE)。Grease: VIGO GREASE RE0 or RE-00 (MOLYWHITE).
4. 额定输出扭矩: 980N.m (输出转速: 15R/Min)。Rated output torque: 980N.m (output speed: 15R / Min).

马达种类 Type Motor	M71	M73
C	110	95
D	22/24	22/24
E	11.5	8.5
F	130	100
H	62	58
K	6/8	6
L	226	223
M	M8	M6
P	145	115

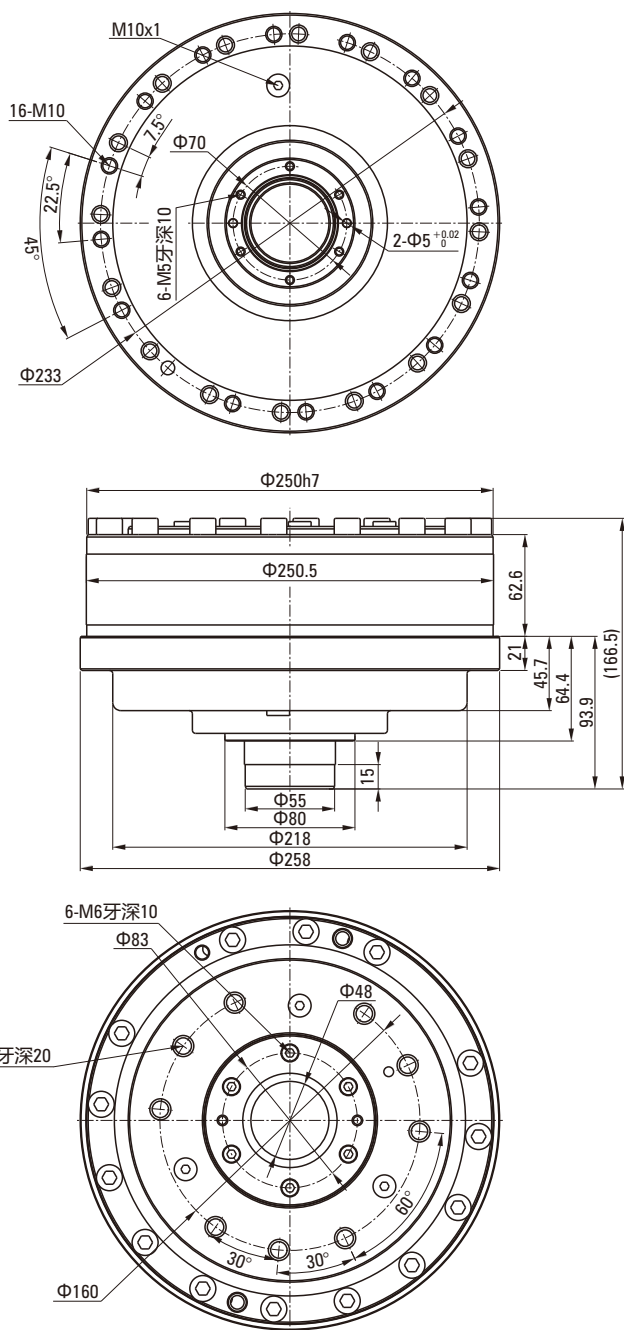
马达种类 Type Motor	M74	M75
C	95	95
D	22/24	22/24
E	8.5	11.5
F	100	110
H	58	60
K	6/8	6/8
L	223	226
M	M8	M8
P	115	130

马达种类 Type Motor	M76	M91
C	130	114.3
D	22/24	28/35
E	11.5	25.5
F	142	175
H	60	82
K	6/8	8/10
L	226	240
M	M10	M12
P	165	200

RCA系列外形尺寸图

RCA SERIES OUTLINE DIMENSION DRAWING

100CBX-36.75-RCA-TB 外形图 100CBX-36.75-RCA-TB Outline Drawing



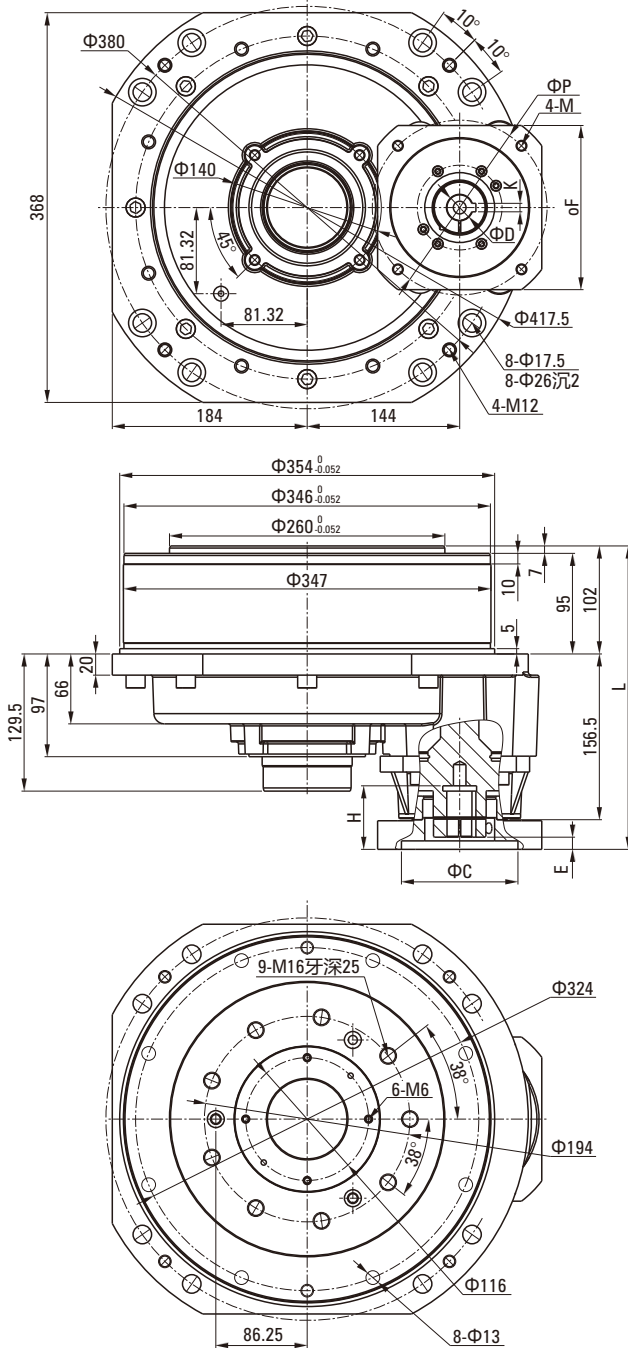
● 说明 Note:

1. 本图适用配同步带轮。The figure applies with timing pulley.
2. 减速机速比: 36.75:1。Reducer speed ratio: 36.75:1.
3. 润滑油脂: VIGO GREASE RE0或RE-00 (MOLYWHITE)。Grease: VIGO GREASE RE0 or RE-00 (MOLYWHITE).
4. 额定输出扭矩: 980N.m (输出转速: 15R/Min)。Rated output torque: 980N.m (output speed: 15R / Min).
5. 系统减速比: 36.75乘以同步带轮的速比。System reduction ratio: 36.75 multiplied by the speed ratio belt.

RCA系列外形尺寸图

RCA SERIES OUTLINE DIMENSION DRAWING

200CBX-RCA 外形图 200CBX-RCA Outline Drawing



马达种类 Type Motor	M71	M71
C	110	110
D	22/24	28
E	11.5	11.5
F	130	130
H	60	60
K	6/8	8
L	286.5	286.5
M	M8	M8
P	145	145

马达种类 Type Motor	M91	M91
C	114.3	114.3
D	28	35
E	25.5	25.5
F	175	175
H	74	84
K	8	10
L	300.5	300.5
M	M12	M12
P	200	200

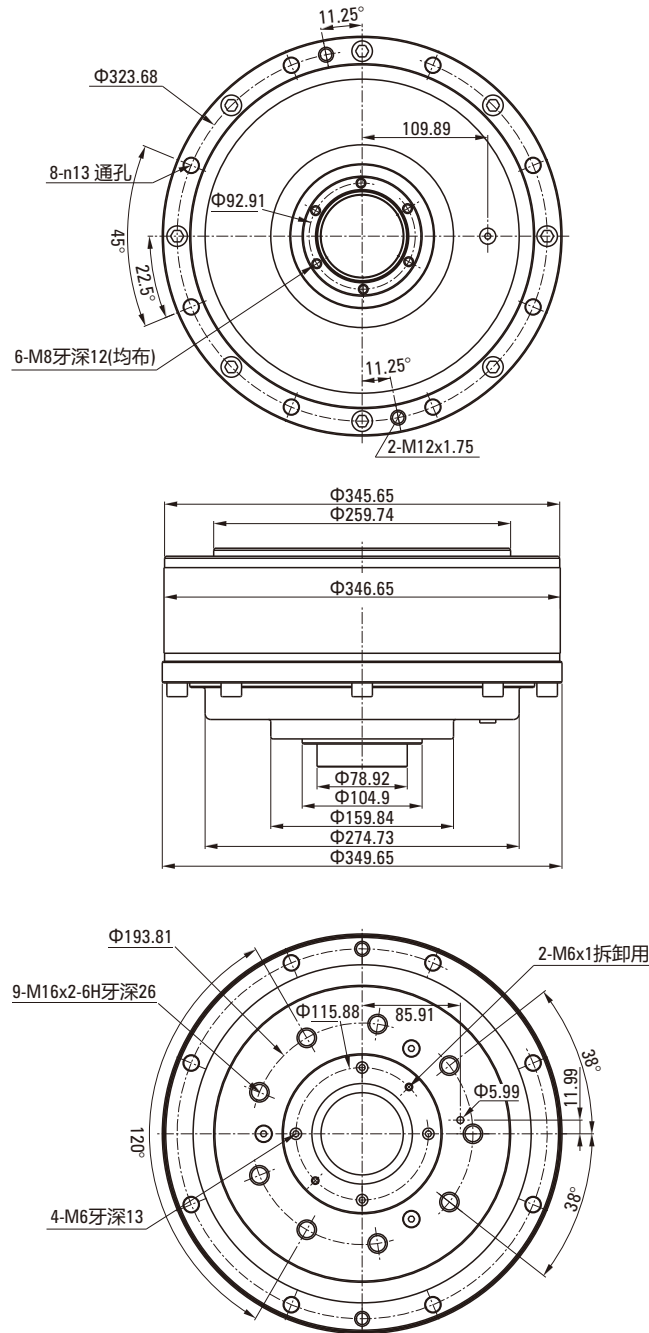
● 说明 Note:

1. 本图为中空200CBX型减速器。 This picture shows the hollow 200CBX reducer.
2. 减速机电速比: (106,122,156,206,245,281):1。 Reducer speed ratio: (106,122,156,206,245,281):1.
3. 润滑油脂: VIGO GREASE RE0或RE-00 (MOLYWHITE)。 Grease: VIGO GREASE RE0 or RE-00 (MOLYWHITE).
4. 额定输出扭矩: 1960N.m (输出转速: 15R/Min)。 Rated output torque: 1960N.m (output speed: 15R / Min).

RCA系列外形尺寸图

RCA SERIES OUTLINE DIMENSION DRAWING

200CBX-34.86-RCA-TB 外形图 200CBX-34.86-RCA-TB Outline Drawing



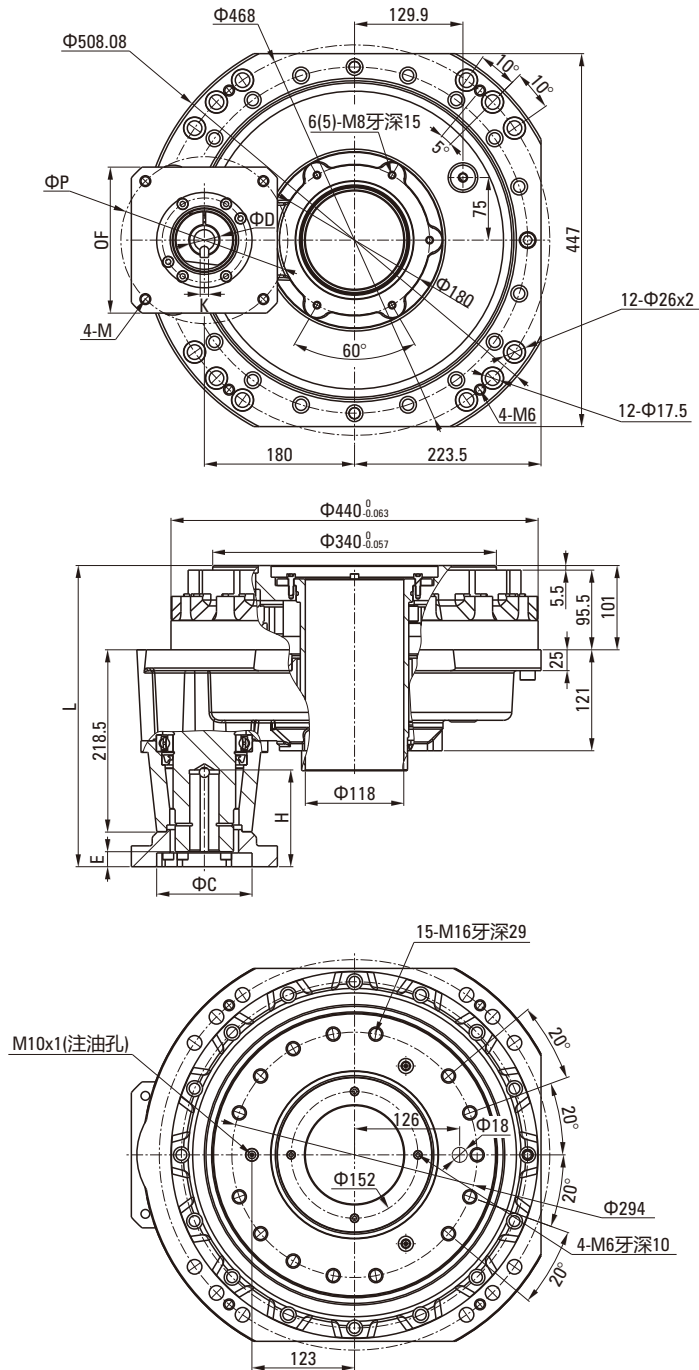
● 说明 Note:

1. 减速器单体减速比: $i=34.86$ (1499/43), 减速器单体重: 约55.6kg。Reducer single reduction ratio: $i = 34.86$ (1499/43), weight of single reducer: about 55.6kg.
2. 图示中心齿轮为标准型, 可依客户要求提供适用的中心齿轮。
The sun gear shown in the figure is a standard type, which can be provided according to customer requirements.
3. 减速器额定输出转矩为1960Nm (输出转速15RPM, 输入电机功率4KW)。Rated output torque: 1960N.m (output speed: 15RPM, input motor power 4KW)).

RCA系列外形尺寸图

RCA SERIES OUTLINE DIMENSION DRAWING

320CBX-RCA 外形图 320CBX-RCA Outline Drawing



马达种类 Type Motor	M91	M91
C	114.3	114.3
D	42	35
E	18	18
F	175	175
H	116	90
K	12	10
L	361.5	361.5
M	M12	M12
P	200	200

● 说明 Note:

1. 本图为中空320CBX型减速器。This picture shows the hollow 320CBX reducer, the input end with timing pulley.
2. 减速机速比: (253 etc...):1。Reducer speed ratio: (253 etc...):1.
3. 润滑油脂: VIGO GREASE RE0或RE-00 (MOLYWHITE)。Grease: VIGO GREASE RE0 or RE-00 (MOLYWHITE).
4. 额定输出扭矩: 3160N.m (输出转速: 15R/Min)。Rated output torque: 3160N.m (output speed: 15R / Min).