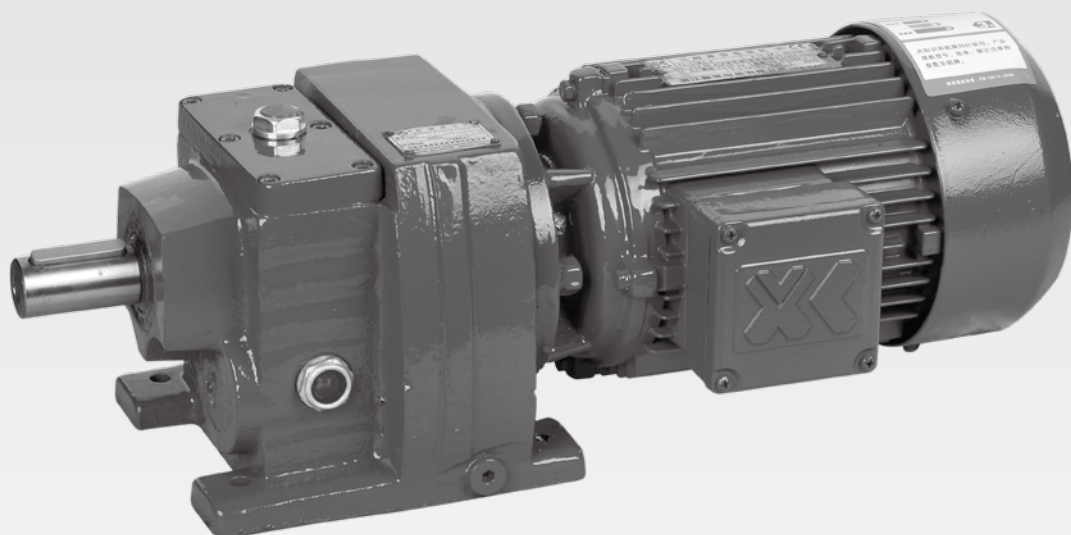


# R 系列齿轮减速机

R Series of Gear Reducer



## 概述 | Introduction

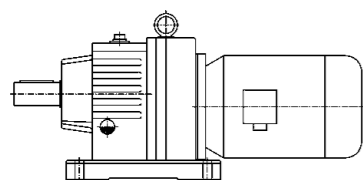
R 系列减速机系我公司新近创新开发的齿轮减速机新产品，由于传动性能可靠、结构合理、高效低噪音等特点，不仅可以作为无级变速器的模块组合件，也可以作为单独传动元件。广泛运用于化工、食品、制药、工程、塑料、印刷、电子等行业的机械传动装置上，它的主要性能特点：

- 小偏置输出，结构紧凑，最大限度利用箱体空间、二级、三级在同一箱体内；
- 采用整体式铸造箱体，箱体结构刚度好，易于提高轴的强度和轴承寿命；
- 安装方式：底座式安装，法兰有大小法兰易于选择；
- 实心轴输出，平均效率是二级 96%、三级 94%、CR/CR 平均效率 85%；
- 减速比：基本型二级 5~24.8、三级 27.2~192、组合可达 23401；
- 基本型二级输入输出旋转方向相同，三级相反，组合时另行咨询。

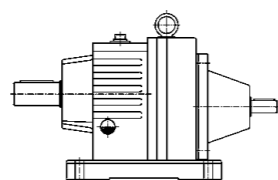
R series gear reducer is a new type gear reducer developed by our company. It is featured by reliable transmission, reasonable structure, high efficiency and low noise. It can be used either as the module unit of stepless speed variator or as an independent transmission unit. R series gear reducer is now widely used in the transmission equipments in fields of chemical engineering, foodstuff, pharmacy, engineering, plastic, printing and electron. Its main characteristics are as follows:

- Small offset output with compact structure. It has made full use of the space, the second grade reducer and third grade reducer contained in one cabinet.
- We adapt integrated casting cabinet. The cabinet is of good structure and rigidity, so it is easy to improve the strength and extend service life of the axis.
- Means of assembling: Base-mounted assembling, with flange in different size to be chosen.
- Solid axis output, the average is 96% for second grade, 94% for third grade, and 85% for CR/CR.
- Reduction ratio: basic second grade: 5~24.8, third grade: 27.2~192, combination type: 23401
- The rotate direction of the input axes and the output axes is the same in basic second grade, and are opposite in third grade. For combination types please contact us for consultation.

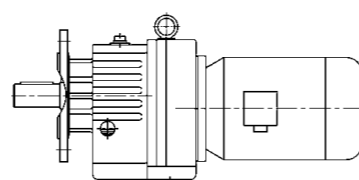
## R(RF) 系列减速机设计方案 | Design of R(RF) Series



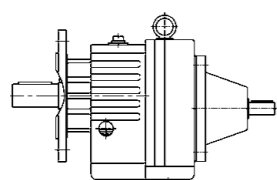
R...Y...  
轴伸式底座安装斜齿轮减速机  
Shaft extended & base-mounted assembled helical gear reducer



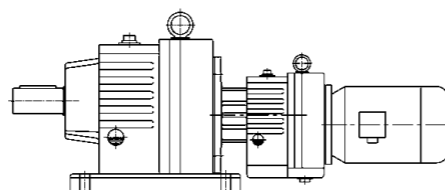
RS...  
轴伸式底座安装，轴输入斜齿轮减速机  
Shaft extended & base-mounted assembled helical gear reducer with input axis



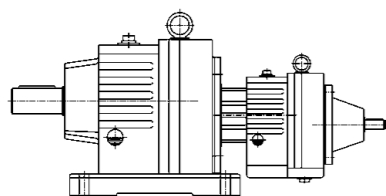
RF...Y...  
轴伸法兰式安装斜齿轮减速机  
Shaft extended & flange-mounted helical gear reducer



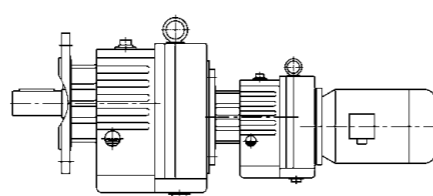
RFS...  
轴伸法兰式安装，轴输入斜齿轮减速机  
Shaft extended & flange-mounted helical gear reducer with input axis



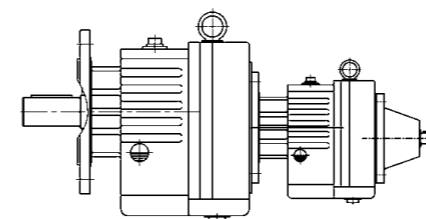
R...R...Y...  
轴伸式底座安装组合型，斜齿轮减速机  
Shaft extended & base-mounted assembled combination helical gear reducer



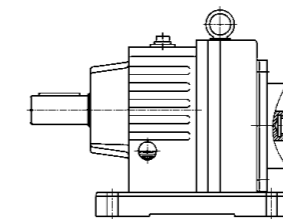
RS...R...  
轴伸式底座安装组合型，轴输入斜齿轮减速机  
Shaft extended & base-mounted assembled helical gear reducer with combination input axis



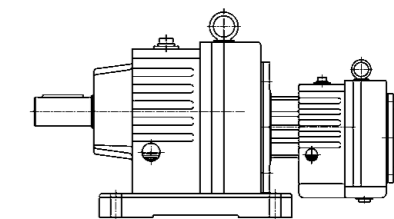
RF...R...Y...  
轴伸法兰式安装组合型，斜齿轮减速机  
Shaft extended & flange-mounted combination helical gear reducer



RFS...R...  
轴伸法兰式安装组合型  
输入轴斜齿轮减速机  
Shaft extended & flange-mounted helical gear reducer with combination input axis



R(RF)...  
电机用户自配、配特殊电机或  
大减速比时需加联接法兰  
Connecting flanges shall be equipped when special electromotor or high reduction ratio is applied



R...R(RF)...  
电机用户自配、配特殊电机或大减速比  
时需加联接法兰  
Connecting flanges shall be equipped when special electromotor or high reduction ratio is applied

## R(RF) 系列选型 | Options of R(RF) Series

使用条件及选型结果	使用条件○	选型结果●	Conditions and results	Condition ○	Result ●
○ 负荷容量 (被驱动设备输入功率或输入转矩) Load capacity (Input power or input torque of the driven equipment)			P=1.1KW		
○ 电源电压 / Voltage			380V		
○ 电源频率 / Frequency			50Hz		
○ 要求转速 / Speed required			30r/min		
○ 负荷性质及运转时间 / Load pattern and operation time ● 确认使用系数 / Confirmation of usage coefficient ○ 启动次数 / Number of startups ● 确认启动系数 / Confirmation of startup coefficient ○ 可靠度 / Reliability ● 确认可靠度系数 / Confirmation of reliability coefficient ● 确认运行系数 / Confirmation of performance coefficient			均匀负荷, 14 小时 / 天 K <sub>A</sub> =1.25 查表 P2 启动次数: 5 次 / 小时 K <sub>S</sub> =1 查表 P4 可靠度: 一般 K <sub>R</sub> =1 查表 P4 K=K <sub>A</sub> * K <sub>S</sub> * K <sub>R</sub> =1.25		Uniform load, 14 hours/day K <sub>A</sub> =1.25 check the table P2 Number of startups: 5 times/hour K <sub>S</sub> =1 check the table P4 Reliability: normal K <sub>R</sub> =1 check the table P4
○ 安装形式 / Type of installation ● 确认安装形式 / Confirmation of installation type			轴伸式底座安装 B3 查表 P140		Shaft extended & base-mounted B3 check the table P140
○ 承载能力计算 / Calculation of bearing capacity ● 确认机型 / Confirmation of machine			M <sub>S2</sub> =9550*P/ N <sub>2</sub> =350N.m M <sub>2</sub> ≥ M <sub>S2</sub> * K=438N.m 根据 N <sub>2</sub> 及 M <sub>2</sub> 查表 P132 得: R67/46-Y1.5-4 Based on N <sub>2</sub> and M <sub>2</sub> & table P132: R67/46-Y1.5-4		
○ 环境条件 / Environmental condition ● 确认环境条件 / Confirmation of environmental condition			室内、环境温度 28℃ OK		Inside, ambient temperature 28℃
○ 电机规格 / Electromotor specification ● 确认电机规格 / Confirmation of electromotor specification			1.5-4、380V、50Hz 无制动器、室内型 / Without brake, for inside OK		
● 结束选型 / End of selection			R67/46-Y1.5-4-B3、380V、50Hz 无制动器、室内型 / Without brake, for inside		





■ R(RF)-R 系列选型参数表 | Parameter List Selections of R(RF)-R Series

机座号 Housing No.	输入功率 (KW) Input power	减速比 Reduction ratio						机座号 Housing No.	输入功率 (KW) Input power	减速比 Reduction ratio					
		428	372	340	300	252	224			836	730	630	500	380	240
		许用输出转矩 N.m Permissible output torque								许用输出转矩 N.m Permissible output torque					
R47-R37	0.12		266	247	215	181	160	R67-R37	0.18					410	257
	0.18					271	241		0.25					565	357
	0.25								0.37						528
输出转速 r/min Output speed		3.3	3.8	4.1	4.7	5.6	6.3	输出转速 r/min Output speed		1.7	1.9	2.2	2.8	3.7	5.9

机座号 Housing No.	输入功率 (KW) Input power	减速比 Reduction ratio														
		1124	1040	916	856	764	676	571	547	512	465	426	368	312	296	248
		许用输出转矩 N.m Permissible output torque														
R77-R37	0.18					811	718	607	584	562	506	460				
	0.25									769	698	640	555	468		
	0.37											817	693	664	557	
	0.55															
输出转速 r/min Output speed		1.25	1.35	1.53	1.64	1.83	2.1	2.5	2.6	2.7	3	3.3	3.8	4.5	4.7	5.6

机座号 Housing No.	输入功率 (KW) Input power	减速比 Reduction ratio														
		2129	1955	1842	1733	1524	1489	1306	1232	1145	1037	883	683	472	351	256
		许用输出转矩 N.m Permissible output torque														
R87-R47	0.18							1420	1340	1245	1125	955	740			
	0.25											1330	1029	703		
	0.37												1040	780	567	
	0.55													1160	844	
	0.75														1150	
输出转速 r/min Output speed		0.66	0.72	0.76	0.81	0.92	0.94	1.07	1.14	1.22	1.35	1.59	2.05	3	4	5.5

机座号 Housing No.	输入功率 (KW) Input power	减速比 Reduction ratio														
		4304	3702	3016	2604	2245	2016	1828	1623	1434	1242	937	755	484	336	227
		许用输出转矩 N.m Permissible output torque														
R97-R67	0.18				2802	2416	2170	1972	1766	1550	1344	1012				
	0.25							2743	2435	2152	1866	1406	1140			
	0.37										2758	2081	1687	1076		
	0.55												2495	1600	1105	
	0.75													2182	1506	1020
	1.1														2210	1497
输出转速 r/min Output speed		0.33	0.38	0.46	0.54	0.62	0.7	0.77	0.86	0.98	1.13	1.5	1.85	2.9	4.2	6.2

机座号 Housing No.	输入功率 (KW) Input power	减速比 Reduction ratio														
		7583	5914	4435	3918	2280	2067	1827	1599	1209	939	815	614	492	253	172
		许用输出转矩 N.m Permissible output torque														
R107-R77	0.18			4400	4126	2401	2176	1833	1568							
	0.25						3563	2734	2362	2170	1411					
	0.37						4567	3949	3420	2617	2029					
	0.55									4067	3156	2773				
	0.75										4312	4213	3114	2558		
	1.1											4067	3244	1666		
	1.5												5116	2604		
	2.2													2401		
	3														4694	
输出转速 r/min Output speed		0.18	0.23	0.31	0.35	0.61	0.67	0.72	0.83	1.1	1.5	1.7	2.3	2.8	5.5	8.2

机座号 Housing No.	输入功率 (KW) Input power	减速比 Reduction ratio														
		12921	10573	8784	6559	5116	3928	2658	2073	1383	1226	1079	730	428	323	223
		许用输出转矩 N.m Permissible output torque														
R137-R77	0.18			8722	6811	5312	3900									
	0.25					7811	5811	4106	3205	2115	1852					
	0.37						8399	5880	4586	3037	2666	2367				
	0.55							9065	7076	4696	4136	3667				
	0.75								9614	6393	5635	4986	3293			
	1.1									9343	8252	7286	4851			
	1.5										9895	6635	3871	2960		
	2.2											9800	5743	4371	3009	
	3												7938	6037	4155	
输出转速 r/min Output speed		0.11	0.13	0.15	0.20	0.25	0.35	0.52	0.67	1.0	1.1	1.3	1.9	3.3	4.4	6.4

机座号 Housing No.	输入功率 (KW) Input power	减速比 Reduction ratio									
		533	462	426	368	326	280	247	214	189	159
		许用输出转矩 N.m Permissible output torque									
R147-R87	1.5	7899	6262	4929	3979	3107					
	2.2			8722	6811	5312	3900				
	3					7811	5811	4106	3205	2115	1852
	4						8399	5880	4586	3037	2666
	5.5							9065	7076	4696	4136
	7.5								9614	6393	5635
输出转速 r/min Output speed		0.11	0.13	0.15	0.20	0.25	0.35	0.52	0.67	1.0	1.1

机座号 Housing No.	输入功率 (KW) Input power	减速比 Reduction ratio															
		6077	4650	4129	2657	2085	1438	1123	999	861	760	656	503	376	335	279	
		许用输出转矩 N.m Permissible output torque															
R167-R97	0.55	19404	14700	12838													
	0.75		20286	17836	11858	9114	6419										
	1.1				17542	13524	9486	7360									
	1.5					18620	13034	10094	8996								
	2.2						19306	14994	13328	11564	10192	8555					
	3								20776	18522	15974	14112	11956	9143			
	4										21070	18620	15778	12152	9075	8075	
	5.5												21756	16660	12446	11074	9173
	7.5													22932	17150	15288	12642
输出转速 r/min Output speed		0.22	0.29	0.33	0.52	0.67	0.97	1.2	1.4	1.6	1.9	2.1	2.8	3.8	4.2	5.2	

R 系列外形及安装尺寸 | Overall & Installation Dimension of R Series

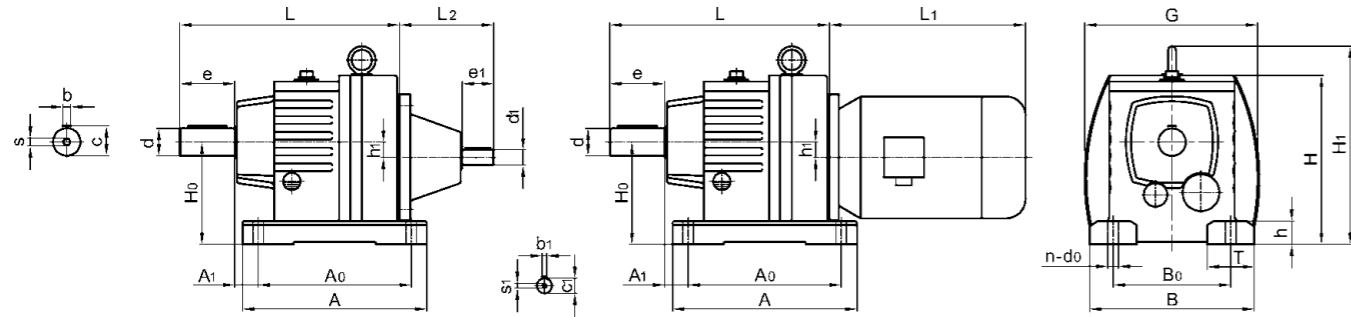


Table with 21 columns: Housing No., Installation dimension (W), Output shaft dimension, Input shaft dimension, Overall dimension. Rows include models 37, 47, 67, 77, 87, 97, 107, 137, 147, 167.

R-R 系列外形及安装尺寸 | Overall & Installation Dimension of R-R Series

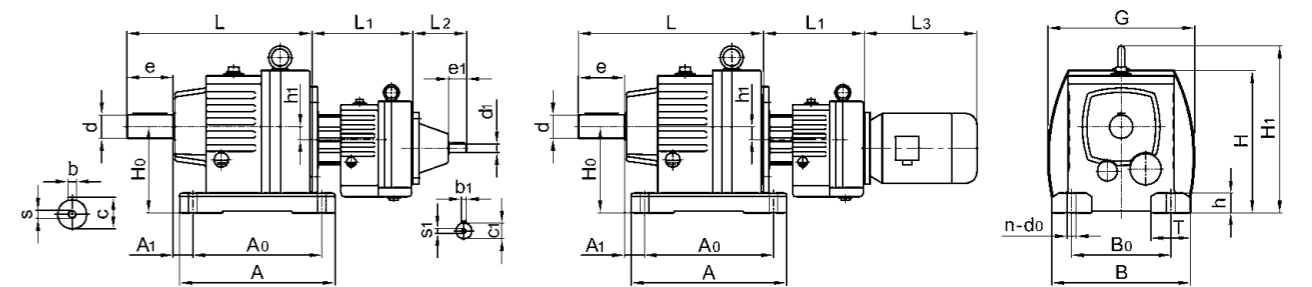


Table with 22 columns: Housing No., Installation dimension (W), Output shaft dimension, Input shaft dimension, Overall dimension. Rows include models R47-R37, R67-R37, R77-R37, R87-R47, R97-R67, R107-R77, R137-R77, R147-R87, R167-R97.

RF 系列外形及安装尺寸 | Overall & Installation Dimension of RF Series

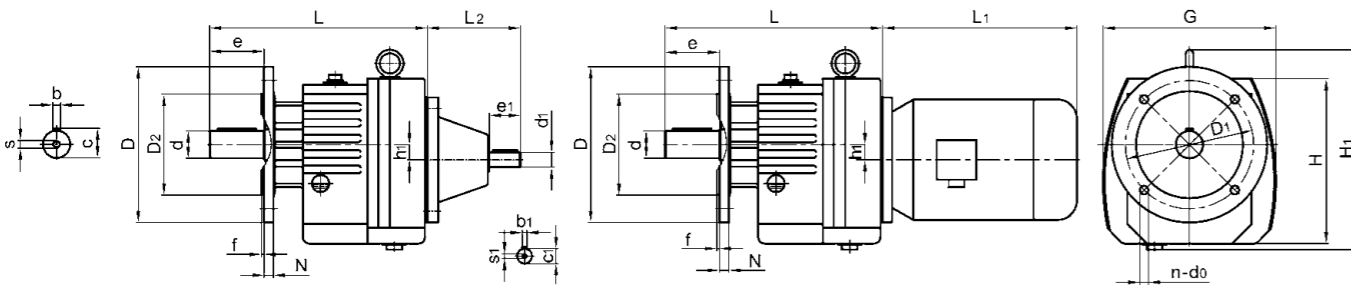


Table with 21 columns: Housing No., Installation dimension (W), Output shaft dimension, Input shaft dimension, Overall dimension. Rows include models 37, 47, 67, 77, 87, 97, 107, 137, 147, 167.

RF-R 系列外形及安装尺寸 | Overall & Installation Dimension of RF-R Series

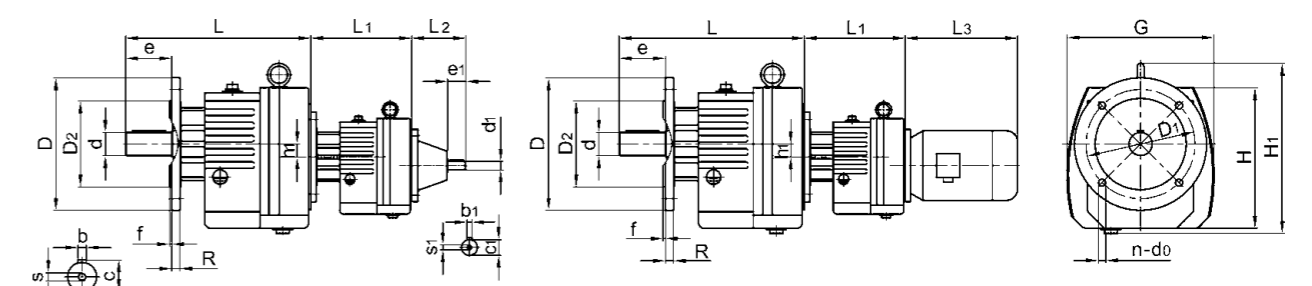
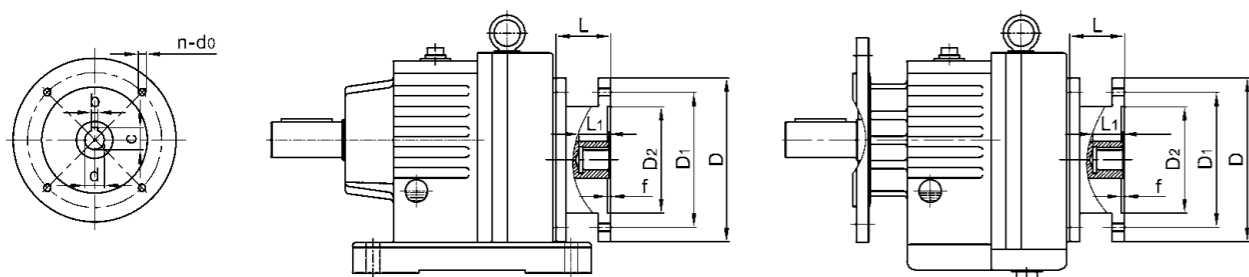


Table with 22 columns: Housing No., Installation dimension (W), Output shaft dimension, Input shaft dimension, Overall dimension. Rows include models RF47-R37, RF67-R37, RF77-R37, RF87-R47, RF97-R67, R107-R77, R137-R77, R147-R87, R167-R97.

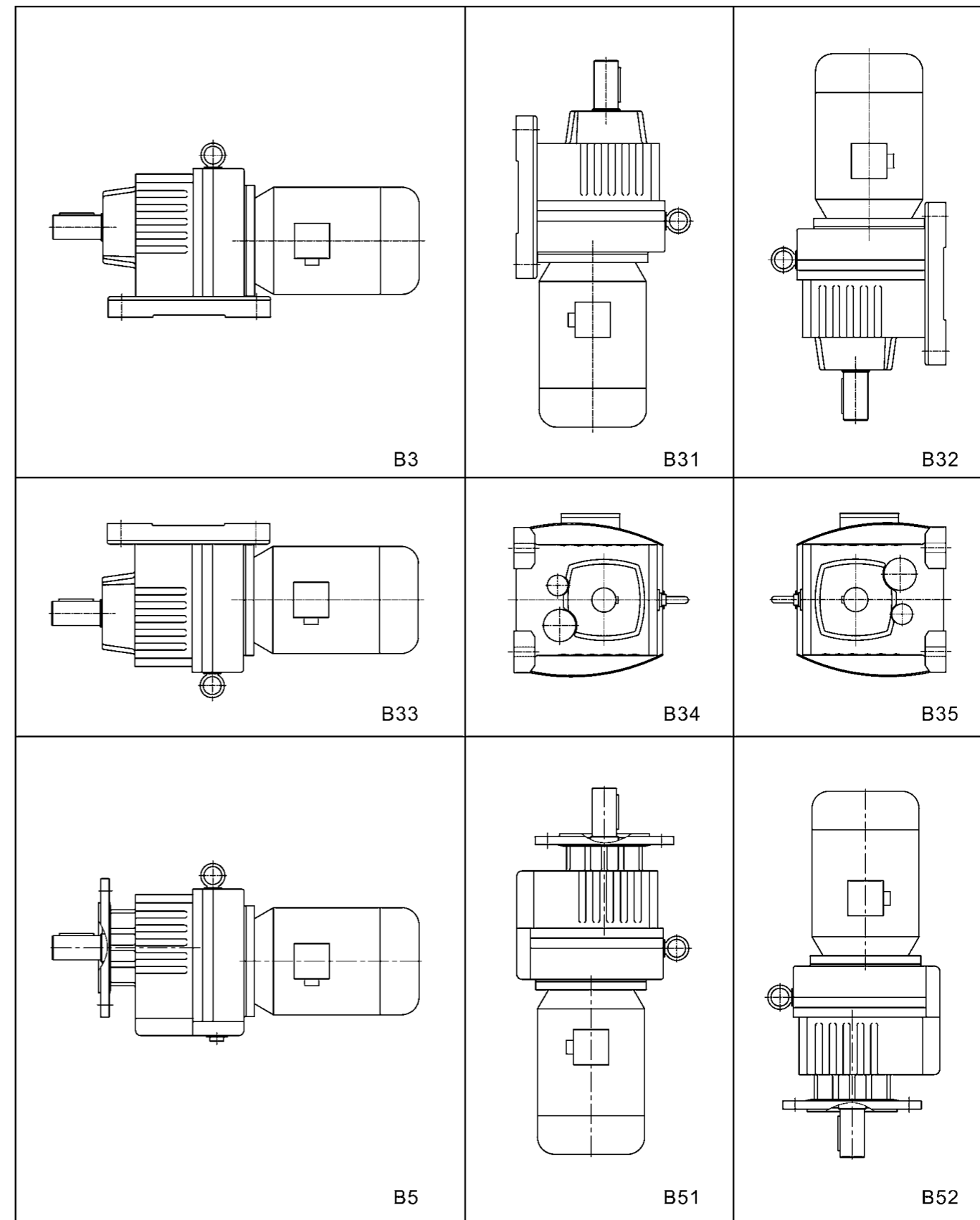
■ R(RF) 系列输入联接法兰尺寸

Input Dimension of Flange Connected with R(RF) Series



机座号 Housing No.	D	D <sub>1</sub>	D <sub>2</sub>	f	L	d	b	c	n	d <sub>0</sub>	L <sub>1</sub>
37	140	115	95H7	4	55	11F8	4	12.8	4	M8	26
	160	130	110H7	4	55	14F8	5	16.3	4	M8	33
	200	165	130H7	4	55	19F8	6	21.8	4	M10	43
47	140	115	95H7	4	57	11F8	4	12.8	4	M8	26
	160	130	110H7	4	57	14F8	5	16.3	4	M8	33
67	200	165	130H7	4	57	19F8	6	21.8	4	M10	43
					67	24F8	8	27.3			53
	250	215	180H7	5	70	28F8	8	31.3	4	M12	63
77	200	165	130H7	4	67	19F8	6	21.8	4	M10	43
						24F8	8	27.3			53
87	250	215	180H7	5	70	28F8	8	31.3	4	M12	63
	300	265	230H7	5	100	38F8	10	41.3	4	M12	83
97	200	165	130H7	4	67	24F8	8	27.3	4	M10	53
	250	215	180H7	5	70	28F8	8	31.3	4	M12	63
	300	265	230H7	5	100	38F8	10	41.3	4	M12	83
	350	300	250H7	6	140	42F8	12	45.3	4	M16	115
						48F8	14	51.8			115
107	250	215	180H7	5	55	28F8	8	31.3	4	M12	63
	300	265	230H7	5	76	38F8	10	41.3	4	M12	83
	350	300	250H7	6	112	42F8	12	45.3	4	M16	115
						48F8	14	51.8			115
	400	350	300H7	6	130	55F8	16	59.3	4	M16	115
450	400	350H7	6	151	60F8	18	64.4	8	M16	145	
137	300	265	230H7	5	74	38F8	10	41.3	4	M12	83
	350	300	250H7	6	112	42F8	12	45.3	4	M16	115
						48F8	14	51.8			115
	400	350	300H7	6	130	55F8	16	59.3	4	M16	115
	450	400	350H7	6	151	60F8	18	64.4	8	M16	145
147	300	265	230H7	5	78	38F8	10	41.3	4	M12	83
	350	300	250H7	6	112	42F8	12	45.3	4	M16	115
						48F8	14	51.8			115
	400	350	300H7	6	130	55F8	16	59.3	4	M16	115
	450	400	350H7	6	151	60F8	18	64.4	8	M16	145
550	500	450H7	6	159	65F8	18	69.4	8	M16	150	
167	350	300	250H7	6	101	42F8	12	45.3	4	M16	115
						48F8	14	51.8			115
	400	350	300H7	6	111	55F8	16	59.3	4	M16	115
	450	400	350H7	6	116	60F8	18	64.4	8	M16	145
	550	500	450H7	6	120	65F8	18	69.4	8	M16	150
						75F8	20	79.9			150

■ R(RF) 系列安装形式 | Installation Type of R(RF) Series



**C 系列润滑油量表 | Lubricating Oil Capacity Sheet of C Series**

安装形式 Installation form	B3	B31	B32	B33	B34	B35	B5	B51	B52
机座号 Housing No.	润滑油量 (升) Lubricating Oil Capacity (L)								
C61/CF61	0.5	0.8	1.6	1.6	1.0	1.0	0.5	0.8	1.6
C71/CF71	0.7	0.9	2.5	2.5	1.5	1.5	0.7	0.9	2.5
C81/CF81	1.0	1.5	4.3	4.3	2.7	2.7	1.0	1.5	4.3
C91/CF91	2.1	3.2	6.8	6.8	4.2	4.2	2.1	3.2	6.8
C101/CF101	3.1	5.0	9	9	6.5	6.5	3.1	5.0	9

**CJ 系列润滑油量表 | Lubricating Oil Capacity Sheet of CJ Series**

安装形式 Installation form	B3	B31	B32	B33	B34	B35	B5	B51	B52
机座号 Housing No.	润滑油量 (升) Lubricating Oil Capacity (L)								
CJ04	0.8	1.8	2.2	2.2	1.4	1.4	0.8	1.8	2.2
CJ07	1.2	2.5	3.2	3.2	2.2	2.2	1.2	2.5	3.2
CJ15	2.3	4	6	6	4	4	2.3	4	6
CJ40	4.2	7	11	11	7.8	7.8	4.2	7	11

**R 系列润滑油量表 | Lubricating Oil Capacity Sheet of R Series**

安装形式 Installation form	B3	B31	B32	B33	B34	B35	B5	B51	B52
机座号 Housing No.	润滑油量 (升) Lubricating Oil Capacity (L)								
R37	0.3 / 1	0.9	1.1	1.0	0.8	1.0	0.4 / 1	0.9	1.1
R47	0.7 / 1.5	1.6	1.7	1.5	1.5	1.5	0.75 / 1.5	1.6	1.7
R67	1.1 / 2.3	2.6 / 3.5	3.2	2.8	1.8	2.0	1.2 / 2.5	2.7 / 3.6	3.1
R77	1.2 / 3	3.8 / 4.3	4.3	3.6	2.5	3.4	1.2 / 2.6	3.8 / 4.1	4.1
R87	2.3 / 6	6.7 / 8.4	7.7	7.2	6.3	6.5	2.4 / 6	6.8 / 7.9	7.7
R97	4.6 / 9.8	11.7 / 14	13.4	11.7	11.3	11.7	5.1 / 10.2	11.9 / 14	14
R107	6 / 13.7	16.3	19.2	16.9	13.2	15.9	6.3 / 14.9	15.9	19.2
R137	10 / 25	28	31.5	29.5	25	25	9.5 / 25	27	32.5
R147	15.4 / 40	46.5	52	48	39.5	41	16.4 / 42	47	52
R167	27 / 70	82	88	78	66	69	26 / 70	82	88

**C 系列重量表 (不含电机)**  
 Weight Table of C Series (Without Motor)

机座号 Housing No.	C61	C71	C81	C91	C101
重量 Weight (kg)	10/16	24/32	32/44	62/77	90/110
机座号 Housing No.	CF61	CF71	CF81	CF91	CF101
重量 Weight (kg)	12/18	30/38	40/52	70/85	100/120

**CJ 系列重量表 (不含电机)**  
 Weight Table of CJ Series (Without Motor)

机座号 Housing No.	CJ04	CJ07	CJ15	CJ40
重量 Weight (kg)	14/20	21/29	36/46	70/80
机座号 Housing No.	CJF04	CJF07	CJF15	CJF40
重量 Weight (kg)	15/21	23/31	39/49	75/85

**R 系列重量表 (不含电机) | Weight Table of R Series (Without Motor)**

机座号 Housing No.	R37	R47	R67	R77	R87	R97	R107	R137	R147	R167
重量 Weight (kg)	15	18	29	35	65	102	162	248	420	762
机座号 Housing No.	RF37	RF47	RF67	RF77	RF87	RF97	RF107	RF137	RF147	RF167
重量 Weight (kg)	16	18	32	41	72	118	168	272	430	770