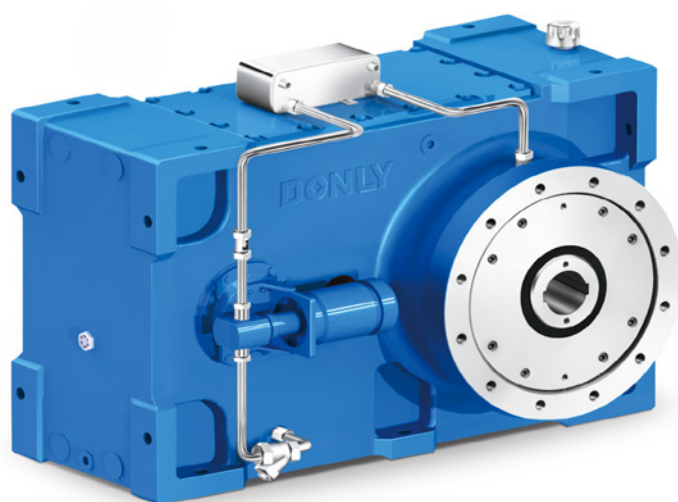


DONLY TRANSMISSION



东力齿轮箱

单螺杆挤出机齿轮箱

GEAR UNITS FOR SINGLE SCREW EXTRUDER

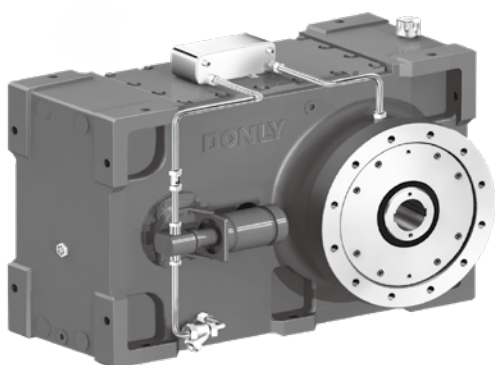
型号 Type ZLYJ

版本 Edition 2021

DONLY

驱 动 无 限 可 能

DLZLYJ 单螺杆挤出机齿轮箱 Gear Units For Single Screw Extruder



产品说明 Product Description

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DONLY

产品说明

1.1 概述

DLZLYJ 系列齿轮箱是为塑料、橡胶螺杆挤出机配套设计的高精度硬齿面带推力包的齿轮传动装置。产品设计参照 JB/T8853《圆柱齿轮齿轮箱》规定的各项技术规范。其特性是齿轮和轴类零件采用了高强度合金钢材质。齿轮经渗碳、淬火、喷丸磨齿工艺加工。齿轮的精度等级为 GB/T10095 6 级。齿面硬度 HRC57~62。在空心输出轴前端配置有大规格推力轴承，承受螺杆工作时的轴向推力。整机具有体积小、承载能力高、传动平稳、噪声低、效率高等特点。

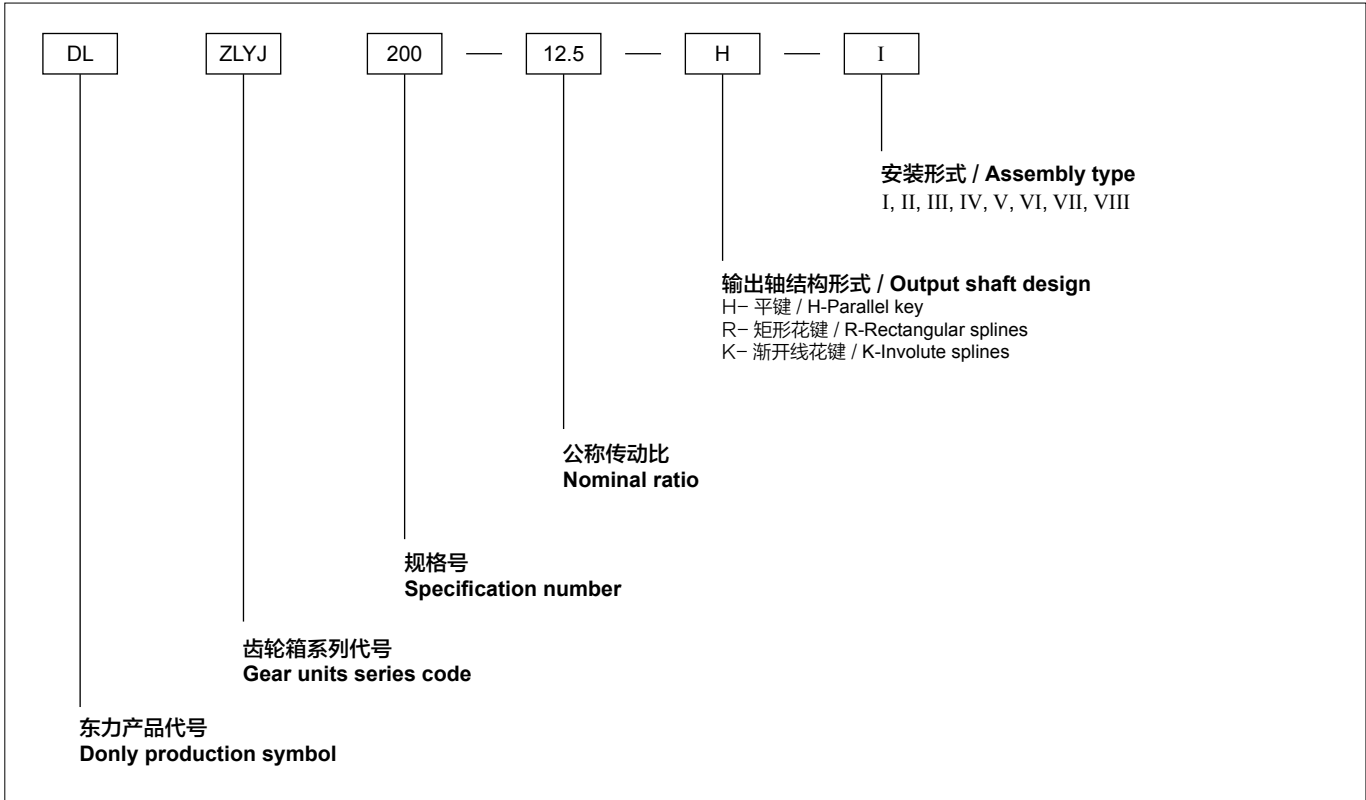
1.2 适用范围

- 1. 高速轴转速不大于 1500 转 / 分。
- 2. 齿轮传动圆周速度不大于 20 米 / 秒。
- 3. 工作环境温度为 -40~50℃，如果低于 0℃，启动前润滑油应预热至 0℃以上，本齿轮箱可用于正反两个方向运转，但部分机型高速轴带单向油泵，默认方向为：面对输出轴，输出轴为顺时针旋转。如方向改变，请在订货时说明。

1.3 齿轮箱型号

在齿轮箱型号中，含产品代号、系列代号、规格号、公称传动比、输出轴结构形式、安装形式。

标记示例



Product Description

1.1 General notes

DLZLYJ series gear units are specially designed for plastic and rubber screw extruder with high accuracy and thrust package. The product design is with reference to the technical specification of “JB/T8853”provisions of the cylindrical gear units . Its characteristic is the gear and shaft parts with high strength alloy steel. After carburizing, quenching, shot peening grinding process, the gear precision is GB/T10095, class 6. Tooth surface hardness is HRC57-62. In the hollow output shaft there is a large thrust bearing, which bears the axial force at work. The machine has the advantages of small volume, high load capacity, stable transmission, low noise, high efficiency.

1.2 Application scope

- 1. The speed of high speed shaft should be not more than 1500 rpm.
- 2. With gear circumferential speed of not more than 20m/s.
- 3. With working environment temperature -40~50 ℃ , if the working environment temperature is less than 0℃ , before the start of the lubricating oil should be above preheat to 0℃ , the speed gear units can be used for the operation of two opposite direction, but the partial type high speed shaft with single pump, the default direction is: in the face of the output shaft to rotate clockwise. Such as the direction of change, please specify when ordering.

1.3 Gear units type

There are production symbol, series of codes, specifications, nominal ratio, Output shaft design and assembly type in the gear units type.

Sample of the code

产品说明

Product Description

1.4 齿轮箱的选用

DLZLYJ 齿轮箱选型必须校核机械功率、轴向推力和热功率，详细步骤见下：

第一步 选速比（表 1）

输入转速 $n_1=1000\text{rpm}$ ，输出转速 $n_2=80\text{rpm}$
 $i=n_1/n_2=1000/80=12.5$ 选速比 12.5

第二步 选齿轮箱的规格（表 1）

根据用户提供的输入功率以及输出转速选择机型。
 输入功率 $P=25\text{kW}$
 查表， $33\text{kW}>25\text{kW}$ ，且最经济，选 DLZLYJ200

第三步 选齿轮箱的装配形式（图 1）

根据用户的安装方式选择齿轮箱的装配形式。

第四步 计算轴向推力

$F_a=\pi \times d_s^2 \times P_s/(4 \times 1000)$
 螺杆直径： $d_s=75\text{mm}$ 螺杆压强： $P_s=26\text{MPa}$
 推力 $F_a=\pi \times 75^2 \times 26/(4 \times 1000)=114.8\text{kN}$
 $196\text{kN}>114.8\text{kN}$ ，DLZLYJ200 能承受此轴向推力。

第五步 确定联接尺寸（图 1，表 3）

1. 核对空心输出轴的孔径、键宽或花键参数、轴孔深度。
2. 核对地脚安装孔尺寸以及推力包螺纹孔的大小。

第六步 确定冷却方式（表 2）

小规格齿轮箱一般采用飞溅润滑，自然冷却。大规格齿轮箱采用强制润滑和冷却器冷却，如用户要求超出附表配置，订货时必须声明。

1.4 Gear units selection

DLZLYJ gear units selection must check the mechanical power, axial thrust and thermal power, the detailed steps:

The first step To choose the ratio (Table 1)

Speed input $n_1=1000\text{rpm}$, output speed $n_2=80\text{rpm}$
 $i=n_1/n_2=1000/80=12.5$ ratio of 12.5

The second step To choose the gear units 's specifications (Table 1)

To choose the gear units' s type according to the input power users and output speed

The input power $P=25\text{kW}$

The look-up table, $33\text{kW}>25\text{kW}$, and the most economic, choose DLZLYJ200

The third step To choose the assembling form of gear units (Figure 1)

To choose the gear units's assembling form according to the user's installation

The fourth step To calculate the axial thrust

$F_a=\pi \times d_s^2 \times P_s/(4 \times 1000)$

Screw diameter: $d_s=75\text{mm}$ screw pressure: $P_s=26\text{MPa}$

The thrust of $F_a=\pi \times 75^2 \times 26/(4 \times 1000)=114.8\text{kN}$

$196\text{kN}>114.8\text{kN}$, DLZLYJ200 can withstand the axial thrust.

The fifth step To determine the connection size(Fig1,table3)

1. Check the aperture, bond width or spline parameters, the shaft hole depth of hollow output shaft.
2. Check the anchor hole size and the size of the thrust pack thread hole.

The sixth step To determine the cooling method(Table2)

The small size gear units generally adopts splash lubrication, cooling. Large size gear units used forced lubrication and cooling, such as user requirements beyond the schedule arrangement, when order statement.

推荐配置

The recommended configuration

齿轮箱 Gear units	112	133	146	173	180	200	225	250	280	315	330	375	395	420	450
传动比 Nominal ratio	8	8	10	10	10	12.5	12.5	16	16	16	16	16	16	16	16
电机功率 (kW) Motor power(kW)	5.5-4P	7.5-4P	11-4P	18.5-4P	22-4P	25-4P	45-4P	45-4P	55-6P	75-6P	110-6P	132-6P	132-6P	160-6P	200-6P
输入转速 (rpm) Input speed(rpm)	800	800	900	900	900	1000	1000	1120	960	960	960	960	960	960	960
输出转速 (rpm) Output speed(rpm)	100	100	90	90	90	80	80	70	60	60	60	60	60	60	60
螺杆直径 (mm) Screw diameter(mm)	35	45、50	55	65	65	75	90	100	105,110	120	130,150	150,160	160	165	165
螺杆推力 (kN) Thrust(kN)	43	56	63	160	160	196	262	281	373	423	468	519	525	545	619
备注 Note	电机与齿轮箱通过皮带轮连接 Motor and gear units through belt wheel transmission								电机与齿轮箱通过联轴器连接 Motor and gear units with coupling						

产品说明

Product Description

表1 DLZLYJ 齿轮箱功率、扭矩

Table1 DLZLYJ gear units power, torque

公称 传动 比	转速 rpm		齿轮箱规格 / Gear unit specifications																													
	输入 n ₁	输出 n ₂	112	133	146	173	180	200	225	250	280	315	330	375	395	420	450															
			额定输入功率 P ₁ (kW)、输出扭矩 T ₂ (Nm) / Nominal power ratings P ₁ (kW), Nominal output torques T ₂ (Nm)																													
			P ₁	T ₂	P ₁	T ₂	P ₁	T ₂	P ₁	T ₂	P ₁	T ₂	P ₁	T ₂	P ₁	T ₂	P ₁	T ₂	P ₁	T ₂	P ₁	T ₂	P ₁	T ₂	P ₁	T ₂	P ₁	T ₂	P ₁	T ₂	P ₁	T ₂
8	1500	188	13.4	683	21.8	1109	29.6	1504	49.4	2507	52	2650	77	3911	105	5334	146	7416	197	10007	285	14477	357	18135	457	23215	524	26700	636	32307	785	39876
	1200	150	10.9	694	17.6	1121	23.9	1522	39.9	2540	41.6	2649	62	3947	85	5412	118	7513	159	10123	230	14643	288	18336	369	23493	424	26963	514	32725	634	40365
	1000	125	9	688	14.7	1123	19.9	1520	33.2	2536	37.2	2840	52	3973	71	5424	98	7487	133	10161	192	14669	240	18336	308	23531	363	27700	428	32699	529	40416
	750	94	7.2	731	11.7	1189	15.8	1605	26.4	2682	27.6	2810	41	4165	56	5689	78	7924	105	10668	152	15443	191	19405	244	24789	280	28500	340	34543	420	42670
	600	75	5.8	739	9.3	1184	12.7	1617	21.1	2687	22.1	2812	33	4202	45	5730	62	7895	84	10696	122	15535	153	19482	196	24957	223	28340	272	34635	336	42784
10	1500	150	10.9	695	17.9	1136	23.5	1497	39.7	2527	43.6	2780	63	4011	86	5475	120	7640	161	10250	233	14834	292	18591	374	23811	429	27300	520	33107	643	40938
	1200	120	8.8	700	14.4	1146	19	1512	32.1	2555	34.9	2776	51	4059	69	5491	97	7720	130	10346	188	14986	236	18774	302	24050	347	27598	420	33441	520	41344
	1000	100	7.4	707	12	1146	15.8	1509	26.7	2550	30	2870	42	4011	58	5539	81	7736	108	10314	157	14984	197	18775	252	24047	297	28400	350	33435	433	41352
	750	75	5.8	739	9.5	1210	12.6	1604	21.2	2699	23.2	2950	34	4329	46	5857	64	8149	86	10951	125	15878	156	19889	200	25479	228	29100	278	35424	344	43803
	600	60	4.7	748	7.6	1210	10.1	1608	17	2706	18.6	2954	27	4298	37	5889	51	8118	69	10983	99.7	15869	125	19896	160	25483	182	28919	223	35431	275	43803
12.5	1500	120	8.82	702	14.3	1136	18.9	1504	31.2	2482	33.2	2640	49	3900	69	5491	97	7720	130	10346	189	15041	236	18782	303	24114	348	27700	422	33584	522	41543
	1200	96	7.1	706	11.5	1144	15.3	1522	25.2	2507	26.6	2642	40	3979	56	5571	78	7759	105	10445	153	15220	191	19001	245	24372	280	27838	341	33922	422	41980
	1000	80	5.9	704	9.6	1146	12.7	1516	21	2507	22.8	2720	33	3939	46	5491	65	7759	88	10505	127	15161	159	18981	204	24353	240	28700	284	33903	351	41901
	750	60	4.7	748	7.6	1210	10.1	1608	16.7	2658	17.6	2800	26	4138	37	5889	52	8277	70	11142	101	16076	126	20055	162	25785	185	29500	226	35972	279	44408
	600	48	3.8	756	6.1	1214	8.1	1612	13.3	2646	14.1	2801	21	4178	30	5969	42	8356	56	11142	81	16116	101	20095	130	25865	149	29729	181	36011	223	44368
14	1500	107			12.8	1143	16.9	1509	27.7	2474	29.6	2640	44	3927	62	5534	86	7676	118	10532	170	15173	212	18921	272	24277	312	27800	379	33827	468	41770
	1200	86			10.4	1155	13.7	1521	22.4	2487	23.7	2638	36	3998	50	5552	69	7662	95	10549	137	15213	171	18989	220	24430	250	27890	306	33980	378	41976
	1000	71			8.6	1157	11.4	1533	18.7	2515	20.4	2730	30	4035	42	5649	58	7801	79	10626	114	15334	143	19235	183	24615	216	28900	255	34299	315	42370
	750	54			6.9	1220	9	1592	14.8	2617	15.6	2780	24	4244	33	5836	46	8135	63	11142	91	16094	113	19984	146	25820	166	29700	203	35901	250	44213
	600	43			5.5	1222	7.2	1599	11.9	2643	12.5	2781	19	4220	27	5997	37	8217	51	11327	73	16213	91	20210	116	25763	134	29753	162	35979	200	44419
16	1500	94			11.1	1131	14.9	1515	25.7	2614	28.2	2870	41	4165	56	5689	78	7924	105	10668	152	15443	190	19303	245	24891	280	28500	340	34543	420	42670
	1200	75			9	1146	12	1528	20.8	2649	22.6	2873	33	4202	45	5730	63	8022	85	10823	123	15662	154	19609	198	25212	226	28797	275	35017	339	43166
	1000	63			7.5	1137	10	1516	17.3	2622	19.6	2990	28	4244	38	5760	53	8034	71	10763	102	15462	128	19403	165	25012	194	29600	229	34713	283	42899
	750	47			6	1219	8	1626	13.8	2804	15.2	3100	22	4470	30	6096	42	8534	56	11379	81	16459	102	20726	131	26618	149	30400	182	36981	225	45718
	600	38			4.8	1206	6.4	1608	11	2764	12.2	3097	18	4524	24	6032	33	8293	45	11309	65	16336	81	20357	105	26388	117	29814	146	36692	180	45237
18	1500	83			9.98	1148	13.4	1546	22.6	2597	24.2	2770	36	4142	48	5523	67	7709	95	10931	137	15763	171	19675	219	25198	252	28800	306	35208	378	43493
	1200	67			8.1	1155	10.9	1554	18.2	2594	19.4	2773	29	4134	39	5559	54	7697	77	10975	111	15822	138	19670	177	25229	203	29095	247	35207	305	43474
	1000	56			6.7	1143	9	1535	15.2	2592	16.8	2890	24	4093	32	5457	45	7674	64	10914	92	15689	115	19612	147	25069	174	29900	206	35130	255	43487
	750	42			5.3	1205	7.2	1637	12.1	2751	12.8	2930	19	4320	26	5912	36	8186	51	11596	73	16599	91	20692	117	26604	131	30250	164	37290	202	45931
	600	33			4.3	1244	5.8	1678	9.7	2807	10.2	2934	15	4341	21	6077	29	8392	41	11865	59	17074	73	21126	94	27203	108	30926	131	37911	162	46882
20	1500	75			9.14	1163	12.2	1551	21.1	2687	23.6	3010	33	4202	43	5475	60	7640	86	10951	124	15789	158	20119	205	26103	235	29900	286	36417	353	44949
	1200	60			7.4	1178	9.8	1560	17.1	2722	18.9	3005	27	4298	35	5571	48	7640	69	10983	100	15917	128	20373	166	26422	188	29923	231	36768	285	45363
	1000	50			6.2	1184	8.2	1566	14.2	2712	16.4	3130	22	4202	29	5539	40	7640	58	11078	83	15853	106	20246	138	26358	157	29900	193	36863	238	45458
	750	38			4.9	1231	6.5	1634	11.3	2840	12.8	3260	18	4524	23	5780	32	8042	46	11561	66	16587	85	21362	110	27645	118	30025	153	38451	189	47499
	600	30			3.9	1242	5.2	1655	9	2865	10.2	3265	14	4457	18	5730	26	8277	37	11778	53	16872	68	21647	88	28013	94	29923	122	38837	151	48068

备注:

1. 上表功率和扭矩已考虑工况系数和安全系数, 可直接选用。
2. 上表功率和扭矩主要针对塑料挤出机用齿轮箱, 当用于橡胶机械时上表功率和扭矩乘以系数 0.9。
3. 输入转速或输出转速与上表误差大于 4% 时, 应参照最近一档转速, 进行功率折算。
4. DLZLYJ630、DLZSYJ450、DLZSYJ560、DLZSYJ630 这几个型号订货时其功率、扭矩请咨询厂家。

Note:

1. The power and torque have considered the condition coefficient and safety coefficient can be directly selected.
2. The power and torque of gear units for plastic extruders, when used in rubber machine table power and torque multiplied by the coefficient 0.9.
3. The input speed or output speed and form error is greater than 4%, reference shall be made to the recent a speed, power conversion.
4. DLZLYJ630, DLZSYJ450, DLZSYJ560 and DLZSYJ630 these model when ordering the power and torque, please consult factory.

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表 2 DLZLYJ 齿轮箱热功率

Table2 DLZLYJ gear units thermal power

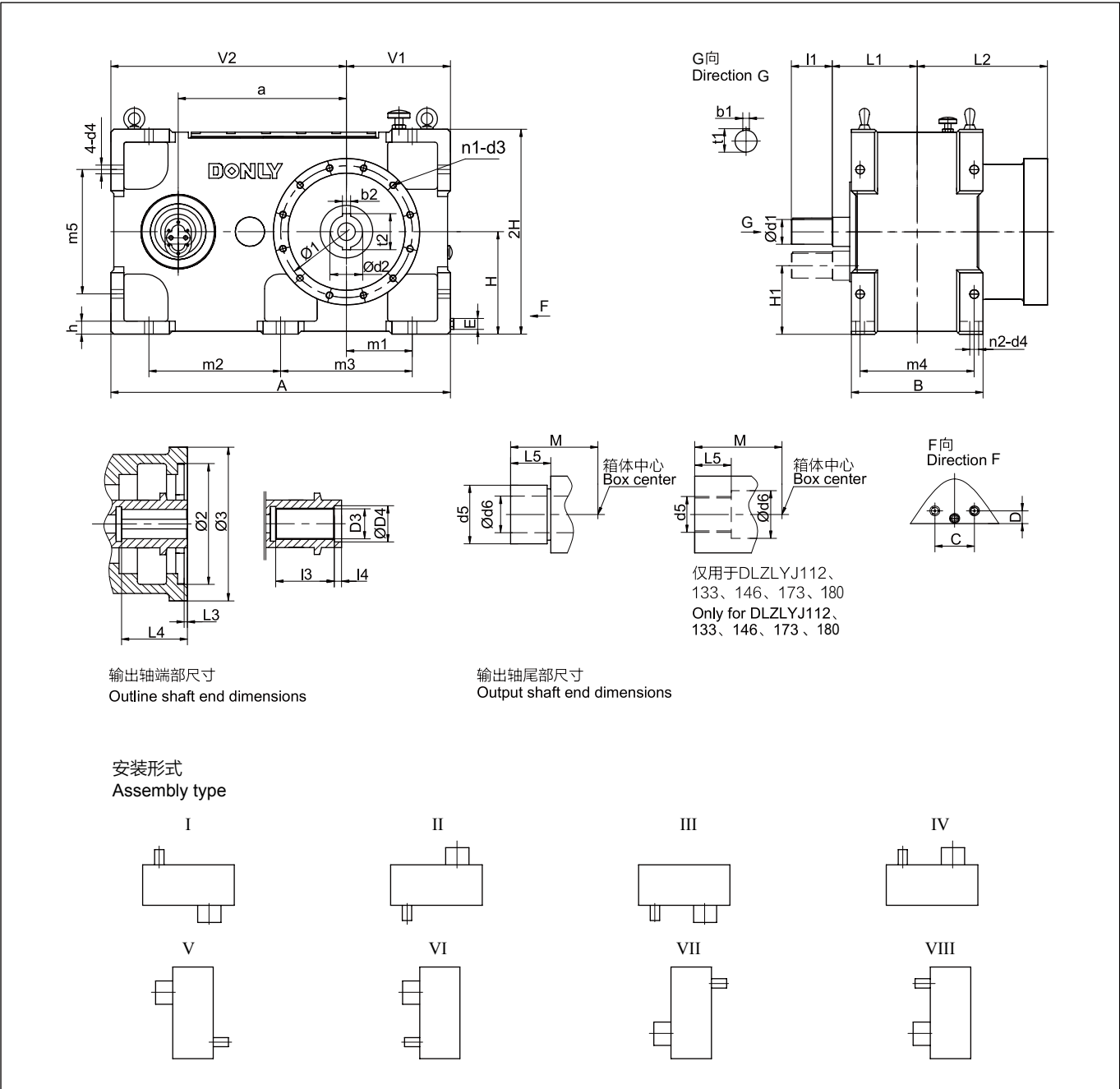
齿轮箱热功率 (kW) / Gear units thermal power(kW)															
规格 Size	112	133	146	173	180	200	225	250	280	315	330	375	395	420	450
热功率 P_{G1} Thermal power P_{G1}	13.4	17.4	23.4	25.3	33.8	45.9	51.1	64.1	72.3	97.5	100.9	118.4	130.9	154.0	182.8
热功率 P_{G2} Thermal power P_{G2}	-	-	-	52.6	64.6	81.5	89.1	108.2	118.3	-	-	-	-	-	-
热功率 P_{G3} Thermal power P_{G3}	-	-	-	-	-	110.6	115.8	128.9	184.5	209.7	230.4	277.4	289.9	387.7	416.6

备注:
1. P_{G1} 齿轮箱无辅助冷却措施时的热功率。
2. P_{G2} 齿轮箱内置冷却盘管时的热功率。
3. P_{G3} 齿轮箱配置强制循环与冷却器时的热功率。
4. 带 ■ 阴影部分为齿轮箱标准配置。

Note:
1. Thermal power of P_{G1} gear units without auxiliary cooling measures.
2. Thermal power of P_{G2} gear units with built-in cooling coil.
3. Thermal power when P_{G3} gear units is equipped with forced circulation and cooler.
4. The shaded part is the standard configuration of the gear units .

图 1 外形尺寸及安装形式

Figure1 dimension and assembly type



产品说明

Product Description

表 3 外形尺寸

Table3 dimensions

规格 Size	外形安装 Size and shape															输入轴 The input shaft size					输出轴 The output shaft size			
	a	A	B	H ₁	H1 ₁	V1 ₁	V2 ₁	h	n2	d4	m1	m2	m3	m4	m5	L1	l1	d1 (m6)	t1	b1	d2 (H8)	t2	b2 (F9)	L4
DLZLYJ112	184	426	170	130	~	146	280	18	4	Φ14	96	~	326	136	170	106	60	28	31	8	35	38.3	10	52
DLZLYJ133	218	478	215	140	~	165	313	20	4	Φ16	104	~	370	180	184	125	60	28	31	8	38	41.3	10	80
DLZLYJ146	256	560	250	160	~	190	370	22	4	Φ16	118	~	425	210	210	148	70	32	35	10	45	48.8	14	120
DLZLYJ173	285	576	256	170	~	181.5	394.5	22	4	Φ18	113.5	~	440	225	214	148	80	38	41	10	50	57.6	14×2	140
DLZLYJ180	320	650	300	200	~	200	450	26	4	Φ18	130	~	510	260	240	176	80	42	45	12	55	63.6	16×2	155
DLZLYJ200	340	750	340	240	~	250	500	28	4	Φ18	150	~	550	290	310	200	80	45	48.5	14	60	68.8	18×2	170
DLZLYJ225	385	800	360	250	~	255	545	30	4	Φ26	165	~	620	315	330	205	110	55	59	16	70	78.8	18×2	170
DLZLYJ250	430	930	380	280	~	310	620	36	6	Φ26	205	360	360	330	340	220	110	60	64	18	80	90.8	22×2	180
DLZLYJ280	480	970	410	300	~	300	670	40	6	Φ30	200	385	385	355	380	240	125	65	69	18	90	100.8	25×2	180
DLZLYJ315	539	1160	450	350	~	390	770	42	6	Φ30	260	450	450	390	460	250	140	75	79.5	20	100	112.8	28×2	200
DLZLYJ330	575	1160	450	350	~	355	805	44	6	Φ30	225	450	450	390	425	260	170	85	90	22	110	122.8	28×2	220
DLZLYJ375	625	1280	466	400	~	415	865	52	6	Φ32	250	475	500	400	500	265	170	85	90	22	110	122.8	28×2	255
DLZLYJ395	680	1310	505	425	~	415	895	54	6	Φ32	300	530	550	447	520	295.5	170	85	90	22	110	122.8	28×2	255
DLZLYJ420	695	1420	550	460	~	455	965	56	6	Φ32	305	580	540	480	580	310	130	95	100	25	120	134.8	32×2	270
DLZLYJ450	765	1550	600	500	~	490	1060	60	6	Φ32	300	600	600	520	550	350	130	100	106	28	170	188.8	40×2	250
DLZLYJ630	1070	2000	770	630	~	600	1400	80	6	Φ48	400	850	800	670	~	430	165	120	127	32	180	200.8	45×2	340
DLZSYJ450	765	1550	600	500	276	490	1060	60	6	Φ32	300	600	600	520	~	350	105	75	79.5	20	170	188.8	40×2	250
DLZSYJ560	960	1850	610	580	324	560	1290	80	6	Φ48	390	730	780	510	~	355	130	95	100	25	160	178.8	40×2	300
DLZSYJ630	1070	2000	770	630	350	600	1400	80	6	Φ48	400	850	800	670	~	430	165	110	116	28	180	200.8	45×2	340

规格 size	输出轴 / The output shaft size								推力包 Thrust packet connection size								推力轴承与螺杆 (参考) Thrust bearing model		冷却管接头 Cooling pipe joint			重量 Weight	加油量			
	矩形花键 R Rectangular splines (GB/T 1144)				渐开线花键 K Involute splines (GB/T 3478.1)																			d5	d6	L5
	D3	I3	D4 (H8)	I4	D3	I3	D4 (H8)	I4	L2	Φ1	Φ2 (H7)	L3	Φ3	n1	d3	型号	最大 螺杆直径 (mm)	C	D	E	(kg)	(L)				
DLZLYJ112	8×32×38×6	30	40	10	INT22z×1.5m×30P×7H	28	40	15	内螺纹 M20	22	30	125	203	185	160	8	210	6	M10	29412E	45	~	~	~	95	4
DLZLYJ133	8×36×42×7	45	45	10	INT24z×1.5m×30P×7H	35	45	15				137	205	205	180	8	230	8	M12	29415E	55	~	~	~	144	7
DLZLYJ146	8×42×48×8	55	50	15	INT28z×1.5m×30P×7H	35	50	20				167	245	230	200	8	260	8	M12	29417E	65	~	~	~	205	10
DLZLYJ173	8×46×54×9	65	60	15	INT23z×2m×30P×7H	55	55	20				167	250	260	230	8	300	8	M16	29420E	75	85	45	ZG 1/2"	256	12
DLZLYJ180	8×52×60×10	70	65	15	INT28z×2m×30P×7H	50	65	20				180	300	260	230	8	300	8	M16	29420E	75	100	50		400	22
DLZLYJ200	8×52×60×10	80	65	15	INT28z×2m×30P×7H	55	65	20	M85×4	50	50	250	330	300	270	8	350	12	M16	29422E	90	120	50	ZG 3/4"	500	28
DLZLYJ225	8×62×72×12	90	75	15	INT33z×2m×30P×7H	60	75	20				265	355	370	330	8	420	12	M20	29426E	105	140	60		650	33
DLZLYJ250	10×72×82×12	80	85	20	INT24z×3m×30P×7H	65	85	25				285	380	370	330	8	420	12	M20	29428E	110	140	60		815	46
DLZLYJ280	10×82×92×12	100	95	20	INT28z×3m×30P×7H	70	95	25				300	405	400	360	8	450	12	M24	29432E	120	160	65	1020	55	
DLZLYJ315	10×82×92×12	130	95	20	INT31z×3m×30P×7H	70	105	25				M90×4	335	440	405	365	8	450	12	M24	59434E	130	160	65	1410	84
DLZLYJ330	10×92×102×14	150	105	20	INT34z×3m×30P×7H	75	115	25	M85×4	350	445	450	400	10	500	12	M24	29436E	130	160	65	1520	87			
DLZLYJ375	10×92×102×14	180	105	20	INT34z×3m×30P×7H	90	115	25	M90×4	55	60	345	445	450	400	10	500	12	M24	29438E	150	160	70	ZG 3/4"	1800	110
DLZLYJ395	10×92×102×14	180	105	20	INT34z×3m×30P×7H	90	115	25				383.5	493.5	500	450	10	570	12	M24	29440E	150	160	70		2150	140
DLZLYJ420	10×112×125×18	160	130	25	INT28z×4m×30P×7H	110	125	30				370	535	580	500	10	660	12	M30	29448E	165	200	70		2750	166
DLZLYJ450	10×112×125×18	200	130	25	INT30z×5m×30P×7H	80	170	30				425	600	610	500	15	700	12	M30	29448E	165	200	70		3560	215
DLZLYJ630	~	~	~	~	~	~	~	~				520	760	720	650	25	805	12	M36	~	~	300	80	8200	~	
DLZSYJ450	~	~	~	~	~	~	~	~				425	600	610	520	10	700	12	M36	~	~	200	60	3800	210	
DLZSYJ560	~	~	~	~	~	~	~	~				435	670	720	620	25	805	12	M36	~	~	270	80	5350	~	
DLZSYJ630	~	~	~	~	~	~	~	~				520	760	720	650	25	805	12	M36	~	~	300	80	8500	~	

备注：
b2 中带有 × 2 的表示对称双键，450、560、630 三种规格，输出联接方式及尺寸仅供参考，具体方式可以在订货时确定。

Note:
b2 with 2 indicates symmetrical double keys.450, 560, 630 these three kinds of specifications, the coupling mode and dimensions are reference only, the specific ways can be determined at the time of order.

产品说明

Product Description

1.5 安装使用和维护

1. 齿轮箱在运输和存放过程中应注意防潮，半年内未安装应对外露的加工面重涂防锈油。
2. 齿轮箱应安装在平整的基础上，在地脚螺栓均匀紧固的情况下，应保证插入输出轴中的螺杆能无卡滞地均匀回转，以免给输出轴轴承增加附加力而影响轴承寿命。不得采用强力拆装螺杆。
3. 在齿轮箱安装完毕后，注润滑油至油标中心线。该油位应在润滑油在箱内分布均匀后确定，油位应经常检查，任何情况下，油位不应低于油标位置。请使用中负荷工业齿轮油 L-CKC220 或 L-CKC320。首次使用 300-600 小时后，应换油一次。以后每 3000 小时换油一次。更换应在齿轮箱停车，润滑油尚未冷却时排放。箱体应用同品质的油冲洗干净。若因粘度高而不宜冲洗可先加热或低粘度油。
4. 装有油泵强制润滑的齿轮箱，在开车初始阶段，可能会因油粘度过高，油泵吸油阻力大而造成进油不足，发出过高的噪声。该现象一般在润滑油温度升高后，自行消失。带电机油泵的齿轮箱，在加载前应先开启电机油泵，空车运转一段时间以利于各润滑点的充分润滑。
5. 在正常运转中，如出现油泵噪声增高，一般情况可能是油路阻力过大。此时情况请清洗滤清器及其他相关部件。无论哪种规格齿轮箱，在长期不用或气温过低时启动使用，都应空车运转一段时间，待各轴承处充分润滑后方可加载运转。
6. 在工作中当发现油温显著升高，温升超过 70℃或油温超过 100℃时，油的质量下降，以及产生不正常的噪声等现象，应停止使用，检查原因，如因齿面胶合等原因所致，必须修复排除故障，更换润滑油后再使用。

1.5 Installation and maintenance

1. The gear units should pay attention to moisture during the transportation and storage, processing surface is not installed with exposed within six months of heavy coated anti rust oil.
2. The gear units should be installed on flat base, on the anchor bolts tighten evenly circumstances, should ensure that the screw rod is inserted into the output shaft can have no card uniformly rotating, so as to avoid the output shaft bearing additional force and bearing life. The powerful assembly and disassembly screw shall not.
3. After gear units 's installation, put note lubricating oil to the oil standard center line. The oil level should be determined in the lubricating oil in the uniform distribution, the oil level should be checked regularly, in any case, the oil level should not be lower than the oil gauge position. Please use the medium duty industrial gear oil L-CKC220 or L-CKC320. After the first use of 300-600 hours, oil should be changed. The oil should be changed every 3000 hours. Replacement should be gear units in parking, emissions of lubricating oil is not cooling. The application of oil of the same quality. If the viscosity is high but not flushing can be heated or low viscosity oil.
4. Oil pump lubrication of the gear units drive, in the initial stage, may be due to too high oil viscosity, oil pump suction resistance caused by the oil shortage, make excessive noise. This phenomenon generally in the lubricating oil temperature, disappear. Speed gear units with motor oil pump, before loading should first open the motor oil pump, empty car running for a period of time in order to fully lubricate each lubricating point.
5. During the normal operation, such as the emergence of the pump noise increased, the general is likely to be oil resistance is too large. Now please filter cleaning and other related components. No matter what kind of specifications Gear Units , in the long term without starting temperature is too low or, should run empty for a period of time, to be all bearings sufficient lubrication before loading operation.
6. When the temperature increased, the temperature over 70℃ or oil temperature exceeds 100℃ , decline of oil quality, and the noise is not normal phenomenon, should stop using, check reason, such as tooth bonding due to other reasons, must repair, troubleshooting, replacement of lubricating oil after use.

1.6 故障、原因及排除方法

1.6 Faults, causes and solutions

可能会发生的故障：

Possible faults:

故障 Fault	原因 Reason	排除方法 Elimination method
齿轮箱噪声变化 Noise gear units changes	齿轮啮合部位有损伤 Gear parts damage 齿轮间隙增大 Gear clearance 轴承损坏 Bearing damage	检查啮合部件，可能需要更换损伤部件。 Check the engagement member, may need to replace the damage component. 调整轴承间隙。 Adjust bearing clearance. 更换损伤的轴承。 Replace the damage of bearing.
齿轮箱固定部位中有强烈噪声 There is a strong noise gear units fixed position	齿轮箱固定件有松动 Gear units fasteners loose	使用规定的扭矩拧紧螺栓 / 螺母。 Torque tightening bolts/nuts with specified. 更换损坏的螺栓 / 螺母。 Replace bolts/nuts damage.
轴承部位温度升高 Bearing parts of temperature	齿轮箱油位太低 The oil level is too low 机油已老化 Oil ageing 油泵损坏 Damage of oil pump 轴承损坏 Bearing damage	在室温下检查油位，可能需要补充机油。 Check the oil level in the room temperature, may need to add oil. 检查上次换油日期，可能需要更换机油。 Check the last change date, may need to change the oil. 检查油泵，可能需要更换。 Check the pump, may need to replace. 检查轴承，可能需要更换。 Check the bearing, may need to be replaced.
齿轮箱有油污、机油从外壳中漏出 The gear oil leaked from the shell	箱体分界面密封不好 The interface between the seal is not good	将密封面密封好 The sealing surface of the seal.
机油中有水分 There is water in oil	机油产生泡沫 The oil bubble	通过试剂玻璃杯取试样来检查机油的含水状态。 To check the condition of water oil through the glass sample reagent. 通过化学实验室检查机油，冲洗与更换。 Through chemical laboratory check oil, washing and replacement.
工作温度升高 Working temperature	齿轮箱中的油位太高 The oil level is too high in the gear units 机油已老化 Oil ageing 机油严重污染 Oil pollution 油泵损坏 Damage of oil pump	检查油位，可能需要纠正油位。 Check the oil level, may need to correct oil level. 检查上次换油日期，可能需要更换机油。 Check the last change date, may need to change the oil. 检查油泵的功能，可能需要检修或者更换油泵。 Check the pump function, may need to repair or replace oil pump.

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