



中华人民共和国国家标准

GB/T 3478.2—2008
代替 GB/T 3478.2—1995

圆柱直齿渐开线花键 (米制模数 齿侧配合) 第 2 部分: 30° 压力角尺寸表

Straight cylindrical involute splines—Metric module, side fit—
Part 2: 30° pressure angle dimensions tables

(ISO 4156-2:2005, Straight cylindrical involute splines—
Metric module, side fit—Part 2: Dimensions, MOD)

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前 言

GB/T 3478《圆柱直齿渐开线花键(米制模数 齿侧配合)》分为九个部分:

- 第1部分:总论;
- 第2部分:30°压力角尺寸表;
- 第3部分:37.5°压力角尺寸表;
- 第4部分:45°压力角尺寸表;
- 第5部分:检验;
- 第6部分:30°压力角 M 值和 W 值;
- 第7部分:37.5°压力角 M 值和 W 值;
- 第8部分:45°压力角 M 值和 W 值;
- 第9部分:量棒。

本部分为 GB/T 3478 的第2部分。

本部分修改采用 ISO 4156-2:2005《圆柱直齿渐开线花键(米制模数 齿侧配合) 第2部分:尺寸》,主要差异如下:

- 只采用 5.1~5.14 的内容作为本部分的主要内容。

本部分是对 GB/T 3478.2—1995《圆柱直齿渐开线花键 30°压力角 尺寸表》的修订,主要差异如下:

- 标准名称由《圆柱直齿渐开线花键 30°压力角 尺寸表》改为《圆柱直齿渐开线花键(米制模数 齿侧配合) 第2部分:30°压力角尺寸表》;
- 修改了原标准中的错误,并按 GB/T 1.1 做了编辑性的修改。

本部分由全国机器轴与附件标准化技术委员会提出并归口。

本部分起草单位:中机生产力促进中心、哈尔滨东安发动机制造公司、石家庄链轮总厂、中国第二重型机械集团公司、太原重工股份有限公司。

本部分主要起草人:明翠新、常宝印、许文江、谭仁万、王晓凌、邓高见。

本部分所代替标准的历次版本发布情况为:

- GB 3478.2—1983、GB/T 3478.2—1995。

圆柱直齿渐开线花键

(米制模数 齿侧配合)

第 2 部分:30°压力角尺寸表

1 范围

GB/T 3478 的本部分规定了 30°标准压力角平齿根和圆齿根(以下简称 30°平齿根和 30°圆齿根)的圆柱直齿渐开线花键所需的全部花键尺寸。

本部分适用于 GB/T 3478.1—2008 标准中规定的压力角为 30°、模数为 0.5 mm~10 mm、齿侧配合的渐开线花键。

本部分的尺寸表是按 GB/T 3478.1—2008 表 3 计算公式和齿侧配合为 H/h、并采用基本检验方法编制的。

2 规范性引用文件

下列文件中的条款通过 GB/T 3478 的本部分的引用而成为本部分的条款。凡是注日期的引用文件,其随后所有的修改单(不包括勘误的内容)或修订版均不适用于本部分,然而,鼓励根据本部分达成协议的各方研究是否可使用这些文件的最新版本。凡是不注日期的引用文件,其最新版本适用于本部分。

GB/T 1800.1 产品几何技术规范(GPS)极限与配合 第 1 部分:公差、偏差和配合的基础

GB/T 3478.1—2008 圆柱直齿渐开线花键(米制模数 齿侧配合) 第 1 部分:总论(ISO 4156-1:2005,MOD)

3 尺寸表

3.1 30°平齿根和 30°圆齿根,模数为 0.5 mm~10 mm,公差等级为 4、5、6 和 7 级的花键尺寸表,见表 1~表 28。

3.2 内花键小径 D_{ii} 的极限偏差和外花键大径 D_{ee} 的公差见 GB/T 3478.1—2008 表 25。

3.3 内花键大径 D_{ei} 和外花键小径 D_{ie} 的公差,从 GB/T 1800.1 的标准公差 IT12、IT13 或 IT14 中选取。

3.4 用展成法加工内、外花键时,齿根圆弧半径是变化的,本部分给出的是齿根圆弧最小曲率半径,见 GB/T 3478.1—2008 表 26。

3.5 当选择的检验方法不为基本方法时,其作用齿槽宽最大值、实际齿槽宽最小值、作用齿厚最小值和实际齿厚最大值按下式计算:

$$\text{作用齿槽宽最大值 } E_{v \max} = E_{\max} - \lambda;$$

$$\text{实际齿槽宽最小值 } E_{\min} = E_{v \min} + \lambda;$$

$$\text{作用齿厚最小值 } S_{v \min} = S_{\min} + \lambda;$$

$$\text{实际齿厚最大值 } S_{\max} = S_{v \max} - \lambda。$$

3.6 当花键齿侧配合类别不为 H/h 时,尺寸表中外花键的尺寸应按下式计算:

$$\text{作用齿厚最大值 } S_{v \max} = S + es_v;$$

$$\text{实际齿厚最小值 } S_{\min} = S_{v \max} - (T + \lambda)。$$

式中:

es_v ——作用齿厚的上偏差,见 GB/T 3478.1—2008 表 23;

$(T+\lambda)$ ——总公差,见 GB/T 3478.1—2008 表 8~表 21。

外花键大径和小径的上偏差见 GB/T 3478.1—2008 表 24。

3.7 尺寸表中外花键渐开线起始圆直径最大值 $D_{Fe\ max}$ 的数值是按齿条形刀具加工原理推导的公式计算的。

当花键齿侧配合类别不为 H/h 时, $D_{Fe\ max}$ 可根据 GB/T 3478.1—2008 表 3 中的公式计算。

表 1 30°内花键

模数 $m=0.5\text{ mm}$ 作用齿槽宽最小值 $E_{v, \min}=0.785\text{ mm}$

单位为毫米

齿数 z	分度圆 直径 D	基圆 直径 D_b	大径 D_a		渐开线终 止圆直径 $D_{F, \min}$	小径 D_i	实际齿槽宽最大值 $E_{\max}=E_{v, \min}+(T+\lambda)$				齿数 z
			平齿根	圆齿根			4H	5H	6H	7H	
10	5.00	4.330 1	5.75	5.90	5.60	4.62	0.810	0.824	0.846	0.883	10
11	5.50	4.763 1	6.25	6.40	6.10	5.11	0.810	0.825	0.847	0.884	11
12	6.00	5.196 2	6.75	6.90	6.60	5.60	0.810	0.825	0.848	0.885	12
13	6.50	5.629 2	7.25	7.40	7.10	6.09	0.810	0.826	0.848	0.886	13
14	7.00	6.062 2	7.75	7.90	7.60	6.58	0.811	0.826	0.849	0.887	14
15	7.50	6.495 2	8.25	8.40	8.10	7.08	0.811	0.826	0.849	0.887	15
16	8.00	6.928 2	8.75	8.90	8.60	7.57	0.811	0.827	0.850	0.888	16
17	8.50	7.361 2	9.25	9.40	9.10	8.07	0.811	0.827	0.850	0.889	17
18	9.00	7.794 2	9.75	9.90	9.60	8.56	0.811	0.827	0.851	0.890	18
19	9.50	8.227 2	10.25	10.40	10.10	9.06	0.812	0.827	0.851	0.890	19
20	10.00	8.660 3	10.75	10.90	10.60	9.56	0.812	0.828	0.851	0.891	20
21	10.50	9.093 3	11.25	11.40	11.10	10.05	0.812	0.828	0.852	0.892	21
22	11.00	9.526 3	11.75	11.90	11.60	10.55	0.812	0.828	0.852	0.892	22
23	11.50	9.959 3	12.25	12.40	12.10	11.05	0.812	0.828	0.853	0.893	23
24	12.00	10.392 3	12.75	12.90	12.60	11.55	0.812	0.829	0.853	0.894	24
25	12.50	10.825 3	13.25	13.40	13.10	12.05	0.813	0.829	0.853	0.894	25
26	13.00	11.258 3	13.75	13.90	13.60	12.54	0.813	0.829	0.854	0.895	26
27	13.50	11.691 3	14.25	14.40	14.10	13.04	0.813	0.829	0.854	0.895	27
28	14.00	12.124 4	14.75	14.90	14.60	13.54	0.813	0.830	0.854	0.896	28
29	14.50	12.557 4	15.25	15.40	15.10	14.04	0.813	0.830	0.855	0.896	29
30	15.00	12.990 4	15.75	15.90	15.60	14.54	0.813	0.830	0.855	0.897	30
31	15.50	13.423 4	16.25	16.40	16.10	15.04	0.813	0.830	0.855	0.897	31
32	16.00	13.856 4	16.75	16.90	16.60	15.54	0.814	0.830	0.856	0.898	32
33	16.50	14.289 4	17.25	17.40	17.10	16.03	0.814	0.831	0.856	0.898	33
34	17.00	14.722 4	17.75	17.90	17.60	16.53	0.814	0.831	0.856	0.899	34
35	17.50	15.155 4	18.25	18.40	18.10	17.03	0.814	0.831	0.857	0.899	35
36	18.00	15.588 5	18.75	18.90	18.60	17.53	0.814	0.831	0.857	0.900	36
37	18.50	16.021 5	19.25	19.40	19.10	18.03	0.814	0.831	0.857	0.900	37
38	19.00	16.454 5	19.75	19.90	19.60	18.53	0.814	0.832	0.857	0.901	38
39	19.50	16.887 5	20.25	20.40	20.10	19.03	0.814	0.832	0.858	0.901	39
40	20.00	17.320 5	20.75	20.90	20.60	19.53	0.814	0.832	0.858	0.902	40
41	20.50	17.753 5	21.25	21.40	21.10	20.03	0.815	0.832	0.858	0.902	41
42	21.00	18.186 5	21.75	21.90	21.60	20.53	0.815	0.832	0.859	0.902	42
43	21.50	18.619 5	22.25	22.40	22.10	21.03	0.815	0.832	0.859	0.903	43
44	22.00	19.052 6	22.75	22.90	22.60	21.53	0.815	0.833	0.859	0.903	44
45	22.50	19.485 6	23.25	23.40	23.10	22.02	0.815	0.833	0.859	0.904	45
46	23.00	19.918 6	23.75	23.90	23.60	22.52	0.815	0.833	0.860	0.904	46
47	23.50	20.351 6	24.25	24.40	24.10	23.02	0.815	0.833	0.860	0.904	47
48	24.00	20.784 6	24.75	24.90	24.60	23.52	0.815	0.833	0.860	0.905	48
49	24.50	21.217 6	25.25	25.40	25.10	24.02	0.815	0.833	0.860	0.905	49
50	25.00	21.650 6	25.75	25.90	25.60	24.52	0.815	0.833	0.860	0.906	50
51	25.50	22.083 6	26.25	26.40	26.10	25.02	0.816	0.834	0.861	0.906	51
52	26.00	22.516 7	26.75	26.90	26.60	25.52	0.816	0.834	0.861	0.906	52
53	26.50	22.949 7	27.25	27.40	27.10	26.02	0.816	0.834	0.861	0.907	53
54	27.00	23.382 7	27.75	27.90	27.60	26.52	0.816	0.834	0.861	0.907	54
55	27.50	23.815 7	28.25	28.40	28.10	27.02	0.816	0.834	0.862	0.907	55

表 1 (续)

单位为毫米

齿数 z	分度圆 直径 D	基圆 直径 D_b	大径 D_e		渐开线终 止圆直径 $D_{F, min}$	小径 D_i	实际齿槽宽最大值 $E_{max} = E_{v, min} + (T + \lambda)$				齿数 z
			平齿根	圆齿根			4H	5H	6H	7H	
56	28.00	24.248 7	28.75	28.90	28.60	27.52	0.816	0.834	0.862	0.908	56
57	28.50	24.681 7	29.25	29.40	29.10	28.02	0.816	0.834	0.862	0.908	57
58	29.00	25.114 7	29.75	29.90	29.60	28.52	0.816	0.835	0.862	0.908	58
59	29.50	25.547 7	30.25	30.40	30.10	29.02	0.816	0.835	0.862	0.909	59
60	30.00	25.980 8	30.75	30.90	30.60	29.52	0.816	0.835	0.863	0.909	60
61	30.50	26.413 8	31.25	31.40	31.10	30.02	0.816	0.835	0.863	0.909	61
62	31.00	26.846 8	31.75	31.90	31.60	30.52	0.816	0.835	0.863	0.910	62
63	31.50	27.279 8	32.25	32.40	32.10	31.02	0.817	0.835	0.863	0.910	63
64	32.00	27.712 8	32.75	32.90	32.60	31.52	0.817	0.835	0.863	0.910	64
65	32.50	28.145 8	33.25	33.40	33.10	32.02	0.817	0.835	0.864	0.911	65
66	33.00	28.578 8	33.75	33.90	33.60	32.52	0.817	0.836	0.864	0.911	66
67	33.50	29.011 9	34.25	34.40	34.10	33.02	0.817	0.836	0.864	0.911	67
68	34.00	29.444 9	34.75	34.90	34.60	33.52	0.817	0.836	0.864	0.912	68
69	34.50	29.877 9	35.25	35.40	35.10	34.02	0.817	0.836	0.864	0.912	69
70	35.00	30.310 9	35.75	35.90	35.60	34.52	0.817	0.836	0.865	0.912	70
71	35.50	30.743 9	36.25	36.40	36.10	35.02	0.817	0.836	0.865	0.912	71
72	36.00	31.176 9	36.75	36.90	36.60	35.52	0.817	0.836	0.865	0.913	72
73	36.50	31.609 9	37.25	37.40	37.10	36.02	0.817	0.836	0.865	0.913	73
74	37.00	32.042 9	37.75	37.90	37.60	36.51	0.817	0.837	0.865	0.913	74
75	37.50	32.476 0	38.25	38.40	38.10	37.01	0.817	0.837	0.866	0.914	75
76	38.00	32.909 0	38.75	38.90	38.60	37.51	0.818	0.837	0.866	0.914	76
77	38.50	33.342 0	39.25	39.40	39.10	38.01	0.818	0.837	0.866	0.914	77
78	39.00	33.775 0	39.75	39.90	39.60	38.51	0.818	0.837	0.866	0.914	78
79	39.50	34.208 0	40.25	40.40	40.10	39.01	0.818	0.837	0.866	0.915	79
80	40.00	34.641 0	40.75	40.90	40.60	39.51	0.818	0.837	0.866	0.915	80
81	40.50	35.074 0	41.25	41.40	41.10	40.01	0.818	0.837	0.867	0.915	81
82	41.00	35.507 0	41.75	41.90	41.60	40.51	0.818	0.837	0.867	0.916	82
83	41.50	35.940 1	42.25	42.40	42.10	41.01	0.818	0.838	0.867	0.916	83
84	42.00	36.373 1	42.75	42.90	42.60	41.51	0.818	0.838	0.867	0.916	84
85	42.50	36.806 1	43.25	43.40	43.10	42.01	0.818	0.838	0.867	0.916	85
86	43.00	37.239 1	43.75	43.90	43.60	42.51	0.818	0.838	0.867	0.917	86
87	43.50	37.672 1	44.25	44.40	44.10	43.01	0.818	0.838	0.868	0.917	87
88	44.00	38.105 1	44.75	44.90	44.60	43.51	0.818	0.838	0.868	0.917	88
89	44.50	38.538 1	45.25	45.40	45.10	44.01	0.818	0.838	0.868	0.917	89
90	45.00	38.971 1	45.75	45.90	45.60	44.51	0.818	0.838	0.868	0.918	90
91	45.50	39.404 2	46.25	46.40	46.10	45.01	0.819	0.838	0.868	0.918	91
92	46.00	39.837 2	46.75	46.90	46.60	45.51	0.819	0.839	0.868	0.918	92
93	46.50	40.270 2	47.25	47.40	47.10	46.01	0.819	0.839	0.869	0.918	93
94	47.00	40.703 2	47.75	47.90	47.60	46.51	0.819	0.839	0.869	0.919	94
95	47.50	41.136 2	48.25	48.40	48.10	47.01	0.819	0.839	0.869	0.919	95
96	48.00	41.569 2	48.75	48.90	48.60	47.51	0.819	0.839	0.869	0.919	96
97	48.50	42.002 2	49.25	49.40	49.10	48.01	0.819	0.839	0.869	0.919	97
98	49.00	42.435 2	49.75	49.90	49.60	48.51	0.819	0.839	0.869	0.920	98
99	49.50	42.868 3	50.25	50.40	50.10	49.01	0.819	0.839	0.869	0.920	99
100	50.00	43.301 3	50.75	50.90	50.60	49.51	0.819	0.839	0.870	0.920	100

表 2 30°内花键

模数 $m=0.75\text{ mm}$ 作用齿槽宽最小值 $E_{v,\min}=1.178\text{ mm}$

单位为毫米

齿数 z	分度圆 直径 D	基圆 直径 D_b	大径 D_{ei}		渐开线终 止圆直径 $D_{Fi,\min}$	小径 D_{ii}	实际齿槽宽最大值 $E_{\max}=E_{v,\min}+(T+\lambda)$				齿数 z
			平齿根	圆齿根			4H	5H	6H	7H	
10	7.50	6.495 2	8.63	8.85	8.40	6.93	1.206	1.223	1.248	1.290	10
11	8.25	7.144 7	9.38	9.60	9.15	7.66	1.206	1.223	1.249	1.291	11
12	9.00	7.794 2	10.13	10.35	9.90	8.40	1.207	1.224	1.249	1.292	12
13	9.75	8.443 7	10.88	11.10	10.65	9.14	1.207	1.224	1.250	1.293	13
14	10.50	9.093 3	11.63	11.85	11.40	9.88	1.207	1.225	1.251	1.294	14
15	11.25	9.742 8	12.38	12.60	12.15	10.62	1.207	1.225	1.251	1.295	15
16	12.00	10.392 3	13.13	13.35	12.90	11.36	1.208	1.225	1.252	1.296	16
17	12.75	11.041 8	13.88	14.10	13.65	12.10	1.208	1.226	1.252	1.297	17
18	13.50	11.691 3	14.63	14.85	14.40	12.85	1.208	1.226	1.253	1.298	18
19	14.25	12.340 9	15.38	15.60	15.15	13.59	1.208	1.226	1.253	1.298	19
20	15.00	12.990 4	16.13	16.35	15.90	14.34	1.208	1.227	1.254	1.299	20
21	15.75	13.639 9	16.88	17.10	16.65	15.08	1.209	1.227	1.254	1.300	21
22	16.50	14.289 4	17.63	17.85	17.40	15.83	1.209	1.227	1.255	1.301	22
23	17.25	14.938 9	18.38	18.60	18.15	16.57	1.209	1.227	1.255	1.301	23
24	18.00	15.588 5	19.13	19.35	18.90	17.32	1.209	1.228	1.256	1.302	24
25	18.75	16.238 0	19.88	20.10	19.65	18.07	1.209	1.228	1.256	1.303	25
26	19.50	16.887 5	20.63	20.85	20.40	18.82	1.209	1.228	1.256	1.304	26
27	20.25	17.537 0	21.38	21.60	21.15	19.56	1.210	1.229	1.257	1.304	27
28	21.00	18.186 5	22.13	22.35	21.90	20.31	1.210	1.229	1.257	1.305	28
29	21.75	18.836 1	22.88	23.10	22.65	21.06	1.210	1.229	1.258	1.305	29
30	22.50	19.485 6	23.63	23.85	23.40	21.81	1.210	1.229	1.258	1.306	30
31	23.25	20.135 1	24.38	24.60	24.15	22.55	1.210	1.229	1.258	1.307	31
32	24.00	20.784 6	25.13	25.35	24.90	23.30	1.210	1.230	1.259	1.307	32
33	24.75	21.434 1	25.88	26.10	25.65	24.05	1.211	1.230	1.259	1.308	33
34	25.50	22.083 6	26.63	26.85	26.40	24.80	1.211	1.230	1.259	1.308	34
35	26.25	22.733 2	27.38	27.60	27.15	25.55	1.211	1.230	1.260	1.309	35
36	27.00	23.382 7	28.13	28.35	27.90	26.30	1.211	1.231	1.260	1.309	36
37	27.75	24.032 2	28.88	29.10	28.65	27.05	1.211	1.231	1.260	1.310	37
38	28.50	24.681 7	29.63	29.85	29.40	27.79	1.211	1.231	1.261	1.310	38
39	29.25	25.331 2	30.38	30.60	30.15	28.54	1.211	1.231	1.261	1.311	39
40	30.00	25.980 8	31.13	31.35	30.90	29.29	1.211	1.231	1.261	1.311	40
41	30.75	26.630 3	31.88	32.10	31.65	30.04	1.212	1.232	1.262	1.312	41
42	31.50	27.279 8	32.63	32.85	32.40	30.79	1.212	1.232	1.262	1.312	42
43	32.25	27.929 3	33.38	33.60	33.15	31.54	1.212	1.232	1.262	1.313	43
44	33.00	28.578 8	34.13	34.35	33.90	32.29	1.212	1.232	1.263	1.313	44
45	33.75	29.228 4	34.88	35.10	34.65	33.04	1.212	1.232	1.263	1.314	45
46	34.50	29.877 9	35.63	35.85	35.40	33.79	1.212	1.233	1.263	1.314	46
47	35.25	30.527 4	36.38	36.60	36.15	34.54	1.212	1.233	1.263	1.315	47
48	36.00	31.176 9	37.13	37.35	36.90	35.28	1.212	1.233	1.264	1.315	48
49	36.75	31.826 4	37.88	38.10	37.65	36.03	1.212	1.233	1.264	1.316	49
50	37.50	32.476 0	38.63	38.85	38.40	36.78	1.213	1.233	1.264	1.316	50
51	38.25	33.125 5	39.38	39.60	39.15	37.53	1.213	1.233	1.265	1.316	51
52	39.00	33.775 0	40.13	40.35	39.90	38.28	1.213	1.234	1.265	1.317	52
53	39.75	34.424 5	40.88	41.10	40.65	39.03	1.213	1.234	1.265	1.317	53
54	40.50	35.074 0	41.63	41.85	41.40	39.78	1.213	1.234	1.265	1.318	54
55	41.25	35.723 5	42.38	42.60	42.15	40.53	1.213	1.234	1.266	1.318	55

表 2 (续)

单位为毫米

齿数 <i>z</i>	分度圆 直径 <i>D</i>	基圆 直径 <i>D_b</i>	大径 <i>D_e</i>		渐开线终 止圆直径 <i>D_{F_i min}</i>	小径 <i>D_i</i>	实际齿槽宽最大值 <i>E_{max} = E_{v min} + (T + λ)</i>				齿数 <i>z</i>
			平齿根	圆齿根			4H	5H	6H	7H	
56	42.00	36.373 1	43.13	43.35	42.90	41.28	1.213	1.234	1.266	1.318	56
57	42.75	37.022 6	43.88	44.10	43.65	42.03	1.213	1.234	1.266	1.319	57
58	43.50	37.672 1	44.63	44.85	44.40	42.78	1.213	1.235	1.266	1.319	58
59	44.25	38.321 6	45.38	45.60	45.15	43.53	1.213	1.235	1.267	1.320	59
60	45.00	38.971 1	46.13	46.35	45.90	44.28	1.214	1.235	1.267	1.320	60
61	45.75	39.620 7	46.88	47.10	46.65	45.03	1.214	1.235	1.267	1.320	61
62	46.50	40.270 2	47.63	47.85	47.40	45.78	1.214	1.235	1.267	1.321	62
63	47.25	40.919 7	48.38	48.60	48.15	46.53	1.214	1.235	1.268	1.321	63
64	48.00	41.569 2	49.13	49.35	48.90	47.28	1.214	1.235	1.268	1.322	64
65	48.75	42.218 7	49.88	50.10	49.65	48.03	1.214	1.236	1.268	1.322	65
66	49.50	42.868 3	50.63	50.85	50.40	48.77	1.214	1.236	1.268	1.322	66
67	50.25	43.517 8	51.38	51.60	51.15	49.52	1.214	1.236	1.268	1.323	67
68	51.00	44.167 3	52.13	52.35	51.90	50.27	1.214	1.236	1.269	1.323	68
69	51.75	44.816 8	52.88	53.10	52.65	51.02	1.214	1.236	1.269	1.323	69
70	52.50	45.466 3	53.63	53.85	53.40	51.77	1.215	1.236	1.269	1.324	70
71	53.25	46.115 9	54.38	54.60	54.15	52.52	1.215	1.236	1.269	1.324	71
72	54.00	46.765 4	55.13	55.35	54.90	53.27	1.215	1.237	1.270	1.324	72
73	54.75	47.414 9	55.88	56.10	55.65	54.02	1.215	1.237	1.270	1.325	73
74	55.50	48.064 4	56.63	56.85	56.40	54.77	1.215	1.237	1.270	1.325	74
75	56.25	48.713 9	57.38	57.60	57.15	55.52	1.215	1.237	1.270	1.325	75
76	57.00	49.363 4	58.13	58.35	57.90	56.27	1.215	1.237	1.270	1.326	76
77	57.75	50.013 0	58.88	59.10	58.65	57.02	1.215	1.237	1.271	1.326	77
78	58.50	50.662 5	59.63	59.85	59.40	57.77	1.215	1.237	1.271	1.326	78
79	59.25	51.312 0	60.38	60.60	60.15	58.52	1.215	1.238	1.271	1.327	79
80	60.00	51.961 5	61.13	61.35	60.90	59.27	1.215	1.238	1.271	1.327	80
81	60.75	52.611 0	61.88	62.10	61.65	60.02	1.215	1.238	1.271	1.327	81
82	61.50	53.260 5	62.63	62.85	62.40	60.77	1.216	1.238	1.272	1.328	82
83	62.25	53.910 1	63.38	63.60	63.15	61.52	1.216	1.238	1.272	1.328	83
84	63.00	54.559 6	64.13	64.35	63.90	62.27	1.216	1.238	1.272	1.328	84
85	63.75	55.209 1	64.88	65.10	64.65	63.02	1.216	1.238	1.272	1.329	85
86	64.50	55.858 6	65.63	65.85	65.40	63.77	1.216	1.238	1.272	1.329	86
87	65.25	56.508 2	66.38	66.60	66.15	64.52	1.216	1.239	1.273	1.329	87
88	66.00	57.157 7	67.13	67.35	66.90	65.27	1.216	1.239	1.273	1.330	88
89	66.75	57.807 2	67.88	68.10	67.65	66.02	1.216	1.239	1.273	1.330	89
90	67.50	58.456 7	68.63	68.85	68.40	66.77	1.216	1.239	1.273	1.330	90
91	68.25	59.106 2	69.38	69.60	69.15	67.52	1.216	1.239	1.273	1.331	91
92	69.00	59.755 8	70.13	70.35	69.90	68.27	1.216	1.239	1.274	1.331	92
93	69.75	60.405 3	70.88	71.10	70.65	69.02	1.216	1.239	1.274	1.331	93
94	70.50	61.054 8	71.63	71.85	71.40	69.77	1.216	1.239	1.274	1.331	94
95	71.25	61.704 3	72.38	72.60	72.15	70.52	1.216	1.240	1.274	1.332	95
96	72.00	62.353 8	73.13	73.35	72.90	71.27	1.217	1.240	1.274	1.332	96
97	72.75	63.003 3	73.88	74.10	73.65	72.02	1.217	1.240	1.274	1.332	97
98	73.50	63.652 9	74.63	74.85	74.40	72.77	1.217	1.240	1.275	1.333	98
99	74.25	64.302 4	75.38	75.60	75.15	73.52	1.217	1.240	1.275	1.333	99
100	75.00	64.951 9	76.13	76.35	75.90	74.27	1.217	1.240	1.275	1.333	100

表 3 30° 内花键
模数 $m = 1 \text{ mm}$ 作用齿槽宽最小值 $E_{v \min} = 1.571 \text{ mm}$ 单位为毫米

齿数 z	分度圆 直径 D	基圆 直径 D_b	大径 D_e		渐开线终 止圆直径 $D_{Fi \min}$	小径 D_i	实际齿槽宽最大值 $E_{\max} = E_{v \min} + (T + \lambda)$				齿数 z
			平齿根	圆齿根			4H	5H	6H	7H	
10	10.00	8.660 3	11.50	11.80	11.20	9.24	1.602	1.620	1.648	1.694	10
11	11.00	9.526 3	12.50	12.80	12.20	10.22	1.602	1.621	1.649	1.695	11
12	12.00	10.392 3	13.50	13.80	13.20	11.20	1.602	1.621	1.649	1.696	12
13	13.00	11.258 3	14.50	14.80	14.20	12.18	1.602	1.621	1.650	1.698	13
14	14.00	12.124 4	15.50	15.80	15.20	13.17	1.603	1.622	1.651	1.699	14
15	15.00	12.990 4	16.50	16.80	16.20	14.16	1.603	1.622	1.651	1.700	15
16	16.00	13.856 4	17.50	17.80	17.20	15.15	1.603	1.623	1.652	1.701	16
17	17.00	14.722 4	18.50	18.80	18.20	16.14	1.604	1.623	1.653	1.702	17
18	18.00	15.588 5	19.50	19.80	19.20	17.13	1.604	1.624	1.653	1.703	18
19	19.00	16.454 5	20.50	20.80	20.20	18.12	1.604	1.624	1.654	1.703	19
20	20.00	17.320 5	21.50	21.80	21.20	19.11	1.604	1.624	1.654	1.704	20
21	21.00	18.186 5	22.50	22.80	22.20	20.11	1.604	1.625	1.655	1.705	21
22	22.00	19.052 6	23.50	23.80	23.20	21.10	1.605	1.625	1.655	1.706	22
23	23.00	19.918 6	24.50	24.80	24.20	22.10	1.605	1.625	1.656	1.707	23
24	24.00	20.784 6	25.50	25.80	25.20	23.09	1.605	1.626	1.656	1.708	24
25	25.00	21.650 6	26.50	26.80	26.20	24.09	1.605	1.626	1.657	1.708	25
26	26.00	22.516 7	27.50	27.80	27.20	25.09	1.605	1.626	1.657	1.709	26
27	27.00	23.382 7	28.50	28.80	28.20	26.08	1.606	1.626	1.658	1.710	27
28	28.00	24.248 7	29.50	29.80	29.20	27.08	1.606	1.627	1.658	1.710	28
29	29.00	25.114 7	30.50	30.80	30.20	28.08	1.606	1.627	1.659	1.711	29
30	30.00	25.980 8	31.50	31.80	31.20	29.07	1.606	1.627	1.659	1.712	30
31	31.00	26.846 8	32.50	32.80	32.20	30.07	1.606	1.627	1.659	1.712	31
32	32.00	27.712 8	33.50	33.80	33.20	31.07	1.606	1.628	1.660	1.713	32
33	33.00	28.578 8	34.50	34.80	34.20	32.07	1.607	1.628	1.660	1.714	33
34	34.00	29.444 9	35.50	35.80	35.20	33.07	1.607	1.628	1.661	1.714	34
35	35.00	30.310 9	36.50	36.80	36.20	34.06	1.607	1.628	1.661	1.715	35
36	36.00	31.176 9	37.50	37.80	37.20	35.06	1.607	1.629	1.661	1.716	36
37	37.00	32.042 9	38.50	38.80	38.20	36.06	1.607	1.629	1.662	1.716	37
38	38.00	32.909 0	39.50	39.80	39.20	37.06	1.607	1.629	1.662	1.717	38
39	39.00	33.775 0	40.50	40.80	40.20	38.06	1.607	1.629	1.662	1.717	39
40	40.00	34.641 0	41.50	41.80	41.20	39.06	1.608	1.630	1.663	1.718	40
41	41.00	35.507 0	42.50	42.80	42.20	40.05	1.608	1.630	1.663	1.718	41
42	42.00	36.373 1	43.50	43.80	43.20	41.05	1.608	1.630	1.663	1.719	42
43	43.00	37.239 1	44.50	44.80	44.20	42.05	1.608	1.630	1.664	1.719	43
44	44.00	38.105 1	45.50	45.80	45.20	43.05	1.608	1.630	1.664	1.720	44
45	45.00	38.971 1	46.50	46.80	46.20	44.05	1.608	1.631	1.664	1.720	45
46	46.00	39.837 2	47.50	47.80	47.20	45.05	1.608	1.631	1.665	1.721	46
47	47.00	40.703 2	48.50	48.80	48.20	46.05	1.608	1.631	1.665	1.721	47
48	48.00	41.569 2	49.50	49.80	49.20	47.05	1.609	1.631	1.665	1.722	48
49	49.00	42.435 2	50.50	50.80	50.20	48.05	1.609	1.631	1.666	1.722	49
50	50.00	43.301 3	51.50	51.80	51.20	49.04	1.609	1.632	1.666	1.723	50
51	51.00	44.167 3	52.50	52.80	52.20	50.04	1.609	1.632	1.666	1.723	51
52	52.00	45.033 3	53.50	53.80	53.20	51.04	1.609	1.632	1.666	1.724	52
53	53.00	45.899 3	54.50	54.80	54.20	52.04	1.609	1.632	1.667	1.724	53
54	54.00	46.765 4	55.50	55.80	55.20	53.04	1.609	1.632	1.667	1.725	54
55	55.00	47.631 4	56.50	56.80	56.20	54.04	1.609	1.633	1.667	1.725	55

表 3 (续)

单位为毫米

齿数 z	分度圆 直径 D	基圆 直径 D_b	大径 D_e		渐开线终 止圆直径 $D_{F_{min}}$	小径 D_i	实际齿槽宽最大值 $E_{max} = E_{v_{min}} + (T + \lambda)$				齿数 z
			平齿根	圆齿根			4H	5H	6H	7H	
56	56.00	48.497 4	57.50	57.80	57.20	55.04	1.610	1.633	1.668	1.726	56
57	57.00	49.363 4	58.50	58.80	58.20	56.04	1.610	1.633	1.668	1.726	57
58	58.00	50.229 5	59.50	59.80	59.20	57.04	1.610	1.633	1.668	1.727	58
59	59.00	51.095 5	60.50	60.80	60.20	58.04	1.610	1.633	1.668	1.727	59
60	60.00	51.961 5	61.50	61.80	61.20	59.04	1.610	1.633	1.669	1.728	60
61	61.00	52.827 5	62.50	62.80	62.20	60.04	1.610	1.634	1.669	1.728	61
62	62.00	53.693 6	63.50	63.80	63.20	61.04	1.610	1.634	1.669	1.728	62
63	63.00	54.559 6	64.50	64.80	64.20	62.03	1.610	1.634	1.670	1.729	63
64	64.00	55.425 6	65.50	65.80	65.20	63.03	1.610	1.634	1.670	1.729	64
65	65.00	56.291 7	66.50	66.80	66.20	64.03	1.610	1.634	1.670	1.730	65
66	66.00	57.157 7	67.50	67.80	67.20	65.03	1.611	1.634	1.670	1.730	66
67	67.00	58.023 7	68.50	68.80	68.20	66.03	1.611	1.635	1.671	1.730	67
68	68.00	58.889 7	69.50	69.80	69.20	67.03	1.611	1.635	1.671	1.731	68
69	69.00	59.755 8	70.50	70.80	70.20	68.03	1.611	1.635	1.671	1.731	69
70	70.00	60.621 8	71.50	71.80	71.20	69.03	1.611	1.635	1.671	1.732	70
71	71.00	61.487 8	72.50	72.80	72.20	70.03	1.611	1.635	1.672	1.732	71
72	72.00	62.353 8	73.50	73.80	73.20	71.03	1.611	1.635	1.672	1.732	72
73	73.00	63.219 9	74.50	74.80	74.20	72.03	1.611	1.636	1.672	1.733	73
74	74.00	64.085 9	75.50	75.80	75.20	73.03	1.611	1.636	1.672	1.733	74
75	75.00	64.951 9	76.50	76.80	76.20	74.03	1.611	1.636	1.673	1.734	75
76	76.00	65.817 9	77.50	77.80	77.20	75.03	1.612	1.636	1.673	1.734	76
77	77.00	66.684 0	78.50	78.80	78.20	76.03	1.612	1.636	1.673	1.734	77
78	78.00	67.550 0	79.50	79.80	79.20	77.03	1.612	1.636	1.673	1.735	78
79	79.00	68.416 0	80.50	80.80	80.20	78.03	1.612	1.636	1.673	1.735	79
80	80.00	69.282 0	81.50	81.80	81.20	79.03	1.612	1.637	1.674	1.735	80
81	81.00	70.148 1	82.50	82.80	82.20	80.03	1.612	1.637	1.674	1.736	81
82	82.00	71.014 1	83.50	83.80	83.20	81.03	1.612	1.637	1.674	1.736	82
83	83.00	71.880 1	84.50	84.80	84.20	82.03	1.612	1.637	1.674	1.736	83
84	84.00	72.746 1	85.50	85.80	85.20	83.03	1.612	1.637	1.675	1.737	84
85	85.00	73.612 2	86.50	86.80	86.20	84.03	1.612	1.637	1.675	1.737	85
86	86.00	74.478 2	87.50	87.80	87.20	85.03	1.612	1.637	1.675	1.738	86
87	87.00	75.344 2	88.50	88.80	88.20	86.03	1.613	1.638	1.675	1.738	87
88	88.00	76.210 2	89.50	89.80	89.20	87.02	1.613	1.638	1.675	1.738	88
89	89.00	77.076 3	90.50	90.80	90.20	88.02	1.613	1.638	1.676	1.739	89
90	90.00	77.942 3	91.50	91.80	91.20	89.02	1.613	1.638	1.676	1.739	90
91	91.00	78.808 3	92.50	92.80	92.20	90.02	1.613	1.638	1.676	1.739	91
92	92.00	79.674 3	93.50	93.80	93.20	91.02	1.613	1.638	1.676	1.740	92
93	93.00	80.540 4	94.50	94.80	94.20	92.02	1.613	1.638	1.676	1.740	93
94	94.00	81.406 4	95.50	95.80	95.20	93.02	1.613	1.639	1.677	1.740	94
95	95.00	82.272 4	96.50	96.80	96.20	94.02	1.613	1.639	1.677	1.741	95
96	96.00	83.138 4	97.50	97.80	97.20	95.02	1.613	1.639	1.677	1.741	96
97	97.00	84.004 5	98.50	98.80	98.20	96.02	1.613	1.639	1.677	1.741	97
98	98.00	84.870 5	99.50	99.80	99.20	97.02	1.613	1.639	1.677	1.742	98
99	99.00	85.736 5	100.50	100.80	100.20	98.02	1.614	1.639	1.678	1.742	99
100	100.00	86.602 5	101.50	101.80	101.20	99.02	1.614	1.639	1.678	1.742	100

表 4 30°内花键

模数 $m = 1.25 \text{ mm}$ 作用齿槽宽最小值 $E_{v \min} = 1.963 \text{ mm}$

单位为毫米

齿数 z	分度圆 直径 D	基圆 直径 D_b	大径 D_e		渐开线终 止圆直径 $D_{Fi \min}$	小径 D_i	实际齿槽宽最大值 $E_{\max} = E_{v \min} + (T + \lambda)$				齿数 z
			平齿根	圆齿根			4H	5H	6H	7H	
10	12.50	10.825 3	14.38	14.75	14.00	11.55	1.997	2.017	2.046	2.096	10
11	13.75	11.907 8	15.63	16.00	15.25	12.77	1.997	2.017	2.047	2.098	11
12	15.00	12.990 4	16.88	17.25	16.50	14.00	1.997	2.018	2.048	2.099	12
13	16.25	14.072 9	18.13	18.50	17.75	15.23	1.998	2.018	2.049	2.100	13
14	17.50	15.155 4	19.38	19.75	19.00	16.46	1.998	2.019	2.050	2.101	14
15	18.75	16.238 0	20.63	21.00	20.25	17.69	1.998	2.019	2.050	2.102	15
16	20.00	17.320 5	21.88	22.25	21.50	18.93	1.999	2.020	2.051	2.104	16
17	21.25	18.403 0	23.13	23.50	22.75	20.17	1.999	2.020	2.052	2.105	17
18	22.50	19.485 6	24.38	24.75	24.00	21.41	1.999	2.020	2.052	2.106	18
19	23.75	20.568 1	25.63	26.00	25.25	22.65	1.999	2.021	2.053	2.107	19
20	25.00	21.650 6	26.88	27.25	26.50	23.89	2.000	2.021	2.054	2.108	20
21	26.25	22.733 2	28.13	28.50	27.75	25.14	2.000	2.021	2.054	2.108	21
22	27.50	23.815 7	29.38	29.75	29.00	26.38	2.000	2.022	2.055	2.109	22
23	28.75	24.898 2	30.63	31.00	30.25	27.62	2.000	2.022	2.055	2.110	23
24	30.00	25.980 8	31.88	32.25	31.50	28.87	2.000	2.023	2.056	2.111	24
25	31.25	27.063 3	33.13	33.50	32.75	30.11	2.001	2.023	2.056	2.112	25
26	32.50	28.145 8	34.38	34.75	34.00	31.36	2.001	2.023	2.057	2.113	26
27	33.75	29.228 4	35.63	36.00	35.25	32.60	2.001	2.023	2.057	2.113	27
28	35.00	30.310 9	36.88	37.25	36.50	33.85	2.001	2.024	2.058	2.114	28
29	36.25	31.393 4	38.13	38.50	37.75	35.10	2.001	2.024	2.058	2.115	29
30	37.50	32.476 0	39.38	39.75	39.00	36.34	2.002	2.024	2.059	2.116	30
31	38.75	33.558 5	40.63	41.00	40.25	37.59	2.002	2.025	2.059	2.116	31
32	40.00	34.641 0	41.88	42.25	41.50	38.84	2.002	2.025	2.059	2.117	32
33	41.25	35.723 5	43.13	43.50	42.75	40.08	2.002	2.025	2.060	2.118	33
34	42.50	36.806 1	44.38	44.75	44.00	41.33	2.002	2.025	2.060	2.118	34
35	43.75	37.888 6	45.63	46.00	45.25	42.58	2.002	2.026	2.061	2.119	35
36	45.00	38.971 1	46.88	47.25	46.50	43.83	2.003	2.026	2.061	2.120	36
37	46.25	40.053 7	48.13	48.50	47.75	45.08	2.003	2.026	2.062	2.120	37
38	47.50	41.136 2	49.38	49.75	49.00	46.32	2.003	2.026	2.062	2.121	38
39	48.75	42.218 7	50.63	51.00	50.25	47.57	2.003	2.027	2.062	2.122	39
40	50.00	43.301 3	51.88	52.25	51.50	48.82	2.003	2.027	2.063	2.122	40
41	51.25	44.383 8	53.13	53.50	52.75	50.07	2.003	2.027	2.063	2.123	41
42	52.50	45.466 3	54.38	54.75	54.00	51.32	2.003	2.027	2.063	2.123	42
43	53.75	46.548 9	55.63	56.00	55.25	52.56	2.004	2.028	2.064	2.124	43
44	55.00	47.631 4	56.88	57.25	56.50	53.81	2.004	2.028	2.064	2.125	44
45	56.25	48.713 9	58.13	58.50	57.75	55.06	2.004	2.028	2.064	2.125	45
46	57.50	49.796 5	59.38	59.75	59.00	56.31	2.004	2.028	2.065	2.126	46
47	58.75	50.879 0	60.63	61.00	60.25	57.56	2.004	2.029	2.065	2.126	47
48	60.00	51.961 5	61.88	62.25	61.50	58.81	2.004	2.029	2.066	2.127	48
49	61.25	53.044 1	63.13	63.50	62.75	60.06	2.004	2.029	2.066	2.127	49
50	62.50	54.126 6	64.38	64.75	64.00	61.31	2.005	2.029	2.066	2.128	50
51	63.75	55.209 1	65.63	66.00	65.25	62.55	2.005	2.029	2.067	2.128	51
52	65.00	56.291 7	66.88	67.25	66.50	63.80	2.005	2.030	2.067	2.129	52
53	66.25	57.374 2	68.13	68.50	67.75	65.05	2.005	2.030	2.067	2.129	53
54	67.50	58.456 7	69.38	69.75	69.00	66.30	2.005	2.030	2.067	2.130	54
55	68.75	59.539 2	70.63	71.00	70.25	67.55	2.005	2.030	2.068	2.130	55

表 4 (续)

单位为毫米

齿数 <i>z</i>	分度圆 直径 <i>D</i>	基圆 直径 <i>D_b</i>	大径 <i>D_a</i>		渐开线终 止圆直径 <i>D_{Fmin}</i>	小径 <i>D_i</i>	实际齿槽宽最大值 <i>E_{max} = E_{vmin} + (T + λ)</i>				齿数 <i>z</i>
			平齿根	圆齿根			4H	5H	6H	7H	
56	70.00	60.621 8	71.88	72.25	71.50	68.80	2.005	2.030	2.068	2.131	56
57	71.25	61.704 3	73.13	73.50	72.75	70.05	2.005	2.031	2.068	2.131	57
58	72.50	62.786 8	74.38	74.75	74.00	71.30	2.006	2.031	2.069	2.132	58
59	73.75	63.869 4	75.63	76.00	75.25	72.55	2.006	2.031	2.069	2.132	59
60	75.00	64.951 9	76.88	77.25	76.50	73.80	2.006	2.031	2.069	2.133	60
61	76.25	66.034 4	78.13	78.50	77.75	75.05	2.006	2.031	2.070	2.133	61
62	77.50	67.117 0	79.38	79.75	79.00	76.29	2.006	2.032	2.070	2.134	62
63	78.75	68.199 5	80.63	81.00	80.25	77.54	2.006	2.032	2.070	2.134	63
64	80.00	69.282 0	81.88	82.25	81.50	78.79	2.006	2.032	2.070	2.135	64
65	81.25	70.364 6	83.13	83.50	82.75	80.04	2.006	2.032	2.071	2.135	65
66	82.50	71.447 1	84.38	84.75	84.00	81.29	2.006	2.032	2.071	2.135	66
67	83.75	72.529 6	85.63	86.00	85.25	82.54	2.007	2.032	2.071	2.136	67
68	85.00	73.612 2	86.88	87.25	86.50	83.79	2.007	2.033	2.072	2.136	68
69	86.25	74.694 7	88.13	88.50	87.75	85.04	2.007	2.033	2.072	2.137	69
70	87.50	75.777 2	89.38	89.75	89.00	86.29	2.007	2.033	2.072	2.137	70
71	88.75	76.859 8	90.63	91.00	90.25	87.54	2.007	2.033	2.072	2.138	71
72	90.00	77.942 3	91.88	92.25	91.50	88.79	2.007	2.033	2.073	2.138	72
73	91.25	79.024 8	93.13	93.50	92.75	90.04	2.007	2.034	2.073	2.139	73
74	92.50	80.107 3	94.38	94.75	94.00	91.29	2.007	2.034	2.073	2.139	74
75	93.75	81.189 9	95.63	96.00	95.25	92.54	2.007	2.034	2.073	2.139	75
76	95.00	82.272 4	96.88	97.25	96.50	93.79	2.008	2.034	2.074	2.140	76
77	96.25	83.354 9	98.13	98.50	97.75	95.04	2.008	2.034	2.074	2.140	77
78	97.50	84.437 5	99.38	99.75	99.00	96.29	2.008	2.034	2.074	2.141	78
79	98.75	85.520 0	100.63	101.00	100.25	97.53	2.008	2.034	2.074	2.141	79
80	100.00	86.602 5	101.88	102.25	101.50	98.78	2.008	2.035	2.075	2.141	80
81	101.25	87.685 1	103.13	103.50	102.75	100.03	2.008	2.035	2.075	2.142	81
82	102.50	88.767 6	104.38	104.75	104.00	101.28	2.008	2.035	2.075	2.142	82
83	103.75	89.850 1	105.63	106.00	105.25	102.53	2.008	2.035	2.075	2.143	83
84	105.00	90.932 7	106.88	107.25	106.50	103.78	2.008	2.035	2.076	2.143	84
85	106.25	92.015 2	108.13	108.50	107.75	105.03	2.008	2.035	2.076	2.143	85
86	107.50	93.097 7	109.38	109.75	109.00	106.28	2.009	2.036	2.076	2.144	86
87	108.75	94.180 3	110.63	111.00	110.25	107.53	2.009	2.036	2.076	2.144	87
88	110.00	95.262 8	111.88	112.25	111.50	108.78	2.009	2.036	2.077	2.144	88
89	111.25	96.345 3	113.13	113.50	112.75	110.03	2.009	2.036	2.077	2.145	89
90	112.50	97.427 9	114.38	114.75	114.00	111.28	2.009	2.036	2.077	2.145	90
91	113.75	98.510 4	115.63	116.00	115.25	112.53	2.009	2.036	2.077	2.146	91
92	115.00	99.592 9	116.88	117.25	116.50	113.78	2.009	2.036	2.078	2.146	92
93	116.25	100.675 5	118.13	118.50	117.75	115.03	2.009	2.037	2.078	2.146	93
94	117.50	101.758 0	119.38	119.75	119.00	116.28	2.009	2.037	2.078	2.147	94
95	118.75	102.840 5	120.63	121.00	120.25	117.53	2.009	2.037	2.078	2.147	95
96	120.00	103.923 0	121.88	122.25	121.50	118.78	2.009	2.037	2.078	2.147	96
97	121.25	105.005 6	123.13	123.50	122.75	120.03	2.010	2.037	2.079	2.148	97
98	122.50	106.088 1	124.38	124.75	124.00	121.28	2.010	2.037	2.079	2.148	98
99	123.75	107.170 6	125.63	126.00	125.25	122.53	2.010	2.037	2.079	2.148	99
100	125.00	108.253 2	126.88	127.25	126.50	123.78	2.010	2.038	2.079	2.149	100

表 5 30°内花键

模数 $m = 1.5 \text{ mm}$ 作用齿槽宽最小值 $E_{v \min} = 2.356 \text{ mm}$

单位为毫米

齿数 z	分度圆 直径 D	基圆 直径 D_b	大径 D_{ei}		渐开线终 止圆直径 $D_{Fi \min}$	小径 D_{ii}	实际齿槽宽最大值 $E_{\max} = E_{v \min} + (T + \lambda)$				齿数 z
			平齿根	圆齿根			4H	5H	6H	7H	
10	15.00	12.990 4	17.25	17.70	16.80	13.86	2.391	2.413	2.444	2.497	10
11	16.50	14.289 4	18.75	19.20	18.30	15.33	2.392	2.413	2.445	2.499	11
12	18.00	15.588 5	20.25	20.70	19.80	16.80	2.392	2.414	2.446	2.500	12
13	19.50	16.887 5	21.75	22.20	21.30	18.27	2.393	2.414	2.447	2.502	13
14	21.00	18.186 5	23.25	23.70	22.80	19.75	2.393	2.415	2.448	2.503	14
15	22.50	19.485 6	24.75	25.20	24.30	21.23	2.393	2.415	2.449	2.504	15
16	24.00	20.784 6	26.25	26.70	25.80	22.72	2.393	2.416	2.449	2.505	16
17	25.50	22.083 6	27.75	28.20	27.30	24.20	2.394	2.416	2.450	2.506	17
18	27.00	23.382 7	29.25	29.70	28.80	25.69	2.394	2.417	2.451	2.507	18
19	28.50	24.681 7	30.75	31.20	30.30	27.18	2.394	2.417	2.451	2.508	19
20	30.00	25.980 8	32.25	32.70	31.80	28.67	2.395	2.417	2.452	2.509	20
21	31.50	27.279 8	33.75	34.20	33.30	30.16	2.395	2.418	2.453	2.510	21
22	33.00	28.578 8	35.25	35.70	34.80	31.66	2.395	2.418	2.453	2.511	22
23	34.50	29.877 9	36.75	37.20	36.30	33.15	2.395	2.419	2.454	2.512	23
24	36.00	31.176 9	38.25	38.70	37.80	34.64	2.395	2.419	2.454	2.513	24
25	37.50	32.476 0	39.75	40.20	39.30	36.14	2.396	2.419	2.455	2.514	25
26	39.00	33.775 0	41.25	41.70	40.80	37.63	2.396	2.420	2.455	2.515	26
27	40.50	35.074 0	42.75	43.20	42.30	39.13	2.396	2.420	2.456	2.516	27
28	42.00	36.373 1	44.25	44.70	43.80	40.62	2.396	2.420	2.456	2.517	28
29	43.50	37.672 1	45.75	46.20	45.30	42.12	2.396	2.421	2.457	2.517	29
30	45.00	38.971 1	47.25	47.70	46.80	43.61	2.397	2.421	2.457	2.518	30
31	46.50	40.270 2	48.75	49.20	48.30	45.11	2.397	2.421	2.458	2.519	31
32	48.00	41.569 2	50.25	50.70	49.80	46.61	2.397	2.422	2.458	2.520	32
33	49.50	42.868 3	51.75	52.20	51.30	48.10	2.397	2.422	2.458	2.520	33
34	51.00	44.167 3	53.25	53.70	52.80	49.60	2.397	2.422	2.459	2.521	34
35	52.50	45.466 3	54.75	55.20	54.30	51.10	2.398	2.422	2.460	2.522	35
36	54.00	46.765 4	56.25	56.70	55.80	52.59	2.398	2.423	2.460	2.522	36
37	55.50	48.064 4	57.75	58.20	57.30	54.09	2.398	2.423	2.461	2.523	37
38	57.00	49.363 4	59.25	59.70	58.80	55.59	2.398	2.423	2.461	2.524	38
39	58.50	50.662 5	60.75	61.20	60.30	57.09	2.398	2.424	2.461	2.524	39
40	60.00	51.961 5	62.25	62.70	61.80	58.58	2.398	2.424	2.462	2.525	40
41	61.50	53.260 6	63.75	64.20	63.30	60.08	2.399	2.424	2.462	2.526	41
42	63.00	54.559 6	65.25	65.70	64.80	61.58	2.399	2.424	2.463	2.526	42
43	64.50	55.858 6	66.75	67.20	66.30	63.08	2.399	2.425	2.463	2.527	43
44	66.00	57.157 7	68.25	68.70	67.80	64.58	2.399	2.425	2.463	2.528	44
45	67.50	58.456 7	69.75	70.20	69.30	66.07	2.399	2.425	2.464	2.528	45
46	69.00	59.755 8	71.25	71.70	70.80	67.57	2.399	2.425	2.464	2.529	46
47	70.50	61.054 8	72.75	73.20	72.30	69.07	2.400	2.425	2.464	2.529	47
48	72.00	62.353 8	74.25	74.70	73.80	70.57	2.400	2.426	2.465	2.530	48
49	73.50	63.652 9	75.75	76.20	75.30	72.07	2.400	2.426	2.465	2.531	49
50	75.00	64.951 9	77.25	77.70	76.80	73.57	2.400	2.426	2.466	2.531	50
51	76.50	66.250 9	78.75	79.20	78.30	75.07	2.400	2.426	2.466	2.532	51
52	78.00	67.550 0	80.25	80.70	79.80	76.56	2.400	2.427	2.466	2.532	52
53	79.50	68.849 0	81.75	82.20	81.30	78.06	2.400	2.427	2.467	2.533	53
54	81.00	70.148 1	83.25	83.70	82.80	79.56	2.400	2.427	2.467	2.533	54
55	82.50	71.447 1	84.75	85.20	84.30	81.06	2.401	2.427	2.467	2.534	55

表 5 (续)

单位为毫米

齿数 <i>z</i>	分度圆 直径 <i>D</i>	基圆 直径 <i>D_b</i>	大径 <i>D_e</i>		渐开线终 止圆直径 <i>D_{F1, min}</i>	小径 <i>D_i</i>	实际齿槽宽最大值 <i>E_{max} = E_{v, min} + (T + λ)</i>				齿数 <i>z</i>
			平齿根	圆齿根			4H	5H	6H	7H	
56	84.00	72.746 1	86.25	86.70	85.80	82.56	2.401	2.427	2.468	2.534	56
57	85.50	74.045 2	87.75	88.20	87.30	84.06	2.401	2.428	2.468	2.535	57
58	87.00	75.344 2	89.25	89.70	88.80	85.56	2.401	2.428	2.468	2.535	58
59	88.50	76.643 2	90.75	91.20	90.30	87.06	2.401	2.428	2.469	2.536	59
60	90.00	77.942 3	92.25	92.70	91.80	88.56	2.401	2.428	2.469	2.536	60
61	91.50	79.241 3	93.75	94.20	93.30	90.05	2.401	2.429	2.469	2.537	61
62	93.00	80.540 4	95.25	95.70	94.80	91.55	2.402	2.429	2.470	2.538	62
63	94.50	81.839 4	96.75	97.20	96.30	93.05	2.402	2.429	2.470	2.538	63
64	96.00	83.138 4	98.25	98.70	97.80	94.55	2.402	2.429	2.470	2.538	64
65	97.50	84.437 5	99.75	100.20	99.30	96.05	2.402	2.429	2.470	2.539	65
66	99.00	85.736 5	101.25	101.70	100.80	97.55	2.402	2.429	2.471	2.539	66
67	100.50	87.035 6	102.75	103.20	102.30	99.05	2.402	2.430	2.471	2.540	67
68	102.00	88.334 6	104.25	104.70	103.80	100.55	2.402	2.430	2.471	2.540	68
69	103.50	89.633 6	105.75	106.20	105.30	102.05	2.402	2.430	2.472	2.541	69
70	105.00	90.932 7	107.25	107.70	106.80	103.55	2.402	2.430	2.472	2.541	70
71	106.50	92.231 7	108.75	109.20	108.30	105.05	2.403	2.430	2.472	2.542	71
72	108.00	93.530 7	110.25	110.70	109.80	106.55	2.403	2.431	2.472	2.542	72
73	109.50	94.829 8	111.75	112.20	111.30	108.05	2.403	2.431	2.473	2.543	73
74	111.00	96.128 8	113.25	113.70	112.80	109.54	2.403	2.431	2.473	2.543	74
75	112.50	97.427 9	114.75	115.20	114.30	111.04	2.403	2.431	2.473	2.544	75
76	114.00	98.726 9	116.25	116.70	115.80	112.54	2.403	2.431	2.474	2.544	76
77	115.50	100.025 9	117.75	118.20	117.30	114.04	2.403	2.432	2.474	2.544	77
78	117.00	101.325 0	119.25	119.70	118.80	115.54	2.403	2.432	2.474	2.545	78
79	118.50	102.624 0	120.75	121.20	120.30	117.04	2.403	2.432	2.474	2.545	79
80	120.00	103.923 0	122.25	122.70	121.80	118.54	2.404	2.432	2.475	2.546	80
81	121.50	105.222 1	123.75	124.20	123.30	120.04	2.404	2.432	2.475	2.546	81
82	123.00	106.521 1	125.25	125.70	124.80	121.54	2.404	2.432	2.475	2.547	82
83	124.50	107.820 2	126.75	127.20	126.30	123.04	2.404	2.433	2.475	2.547	83
84	126.00	109.119 2	128.25	128.70	127.80	124.54	2.404	2.433	2.476	2.547	84
85	127.50	110.418 2	129.75	130.20	129.30	126.04	2.404	2.433	2.476	2.548	85
86	129.00	111.717 3	131.25	131.70	130.80	127.54	2.404	2.433	2.476	2.548	86
87	130.50	113.016 3	132.75	133.20	132.30	129.04	2.404	2.433	2.477	2.549	87
88	132.00	114.315 4	134.25	134.70	133.80	130.54	2.404	2.433	2.477	2.549	88
89	133.50	115.614 4	135.75	136.20	135.30	132.04	2.405	2.434	2.477	2.550	89
90	135.00	116.913 4	137.25	137.70	136.80	133.54	2.405	2.434	2.477	2.550	90
91	136.50	118.212 5	138.75	139.20	138.30	135.04	2.405	2.434	2.478	2.550	91
92	138.00	119.511 5	140.25	140.70	139.80	136.54	2.405	2.434	2.478	2.551	92
93	139.50	120.810 5	141.75	142.20	141.30	138.04	2.405	2.434	2.478	2.551	93
94	141.00	122.109 6	143.25	143.70	142.80	139.53	2.405	2.434	2.478	2.552	94
95	142.50	123.408 6	144.75	145.20	144.30	141.03	2.405	2.434	2.479	2.552	95
96	144.00	124.707 7	146.25	146.70	145.80	142.53	2.405	2.435	2.479	2.552	96
97	145.50	126.006 7	147.75	148.20	147.30	144.03	2.405	2.435	2.479	2.553	97
98	147.00	127.305 7	149.25	149.70	148.80	145.53	2.405	2.435	2.479	2.553	98
99	148.50	128.604 8	150.75	151.20	150.30	147.03	2.406	2.435	2.479	2.553	99
100	150.00	129.903 8	152.25	152.70	151.80	148.53	2.406	2.435	2.480	2.554	100

表 6 30°内花键

模数 $m = 1.75 \text{ mm}$ 作用齿槽宽最小值 $E_{v \min} = 2.749 \text{ mm}$

单位为毫米

齿数 z	分度圆 直径 D	基圆 直径 D_b	大径 D_a		渐开线终 止圆直径 $D_{Fi \min}$	小径 D_i	实际齿槽宽最大值 $E_{\max} = E_{v \min} + (T + \lambda)$				齿数 z
			平齿根	圆齿根			4H	5H	6H	7H	
10	17.50	15.155 4	20.13	20.65	19.60	16.17	2.786	2.808	2.842	2.898	10
11	19.25	16.671 0	21.88	22.40	21.35	17.88	2.786	2.809	2.843	2.899	11
12	21.00	18.186 5	23.63	24.15	23.10	19.60	2.787	2.810	2.844	2.901	12
13	22.75	19.702 1	25.38	25.90	24.85	21.32	2.787	2.810	2.845	2.902	13
14	24.50	21.217 6	27.13	27.65	26.60	23.04	2.788	2.811	2.845	2.903	14
15	26.25	22.733 2	28.88	29.40	28.35	24.77	2.788	2.811	2.846	2.905	15
16	28.00	24.248 7	30.63	31.15	30.10	26.50	2.788	2.812	2.847	2.906	16
17	29.75	25.764 3	32.38	32.90	31.85	28.24	2.788	2.812	2.848	2.907	17
18	31.50	27.279 8	34.13	34.65	33.60	29.97	2.789	2.813	2.848	2.908	18
19	33.25	28.795 3	35.88	36.40	35.35	31.71	2.789	2.813	2.849	2.909	19
20	35.00	30.310 9	37.63	38.15	37.10	33.45	2.789	2.813	2.850	2.910	20
21	36.75	31.826 4	39.38	39.90	38.85	35.19	2.790	2.814	2.850	2.911	21
22	38.50	33.342 0	41.13	41.65	40.60	36.93	2.790	2.814	2.851	2.912	22
23	40.25	34.857 5	42.88	43.40	42.35	38.67	2.790	2.815	2.852	2.913	23
24	42.00	36.373 1	44.63	45.15	44.10	40.42	2.790	2.815	2.852	2.914	24
25	43.75	37.888 6	46.38	46.90	45.85	42.16	2.790	2.815	2.853	2.915	25
26	45.50	39.404 2	48.13	48.65	47.60	43.90	2.791	2.816	2.853	2.916	26
27	47.25	40.919 7	49.88	50.40	49.35	45.65	2.791	2.816	2.854	2.917	27
28	49.00	42.435 2	51.63	52.15	51.10	47.39	2.791	2.816	2.855	2.918	28
29	50.75	43.950 8	53.38	53.90	52.85	49.14	2.791	2.817	2.855	2.919	29
30	52.50	45.466 3	55.13	55.65	54.60	50.88	2.792	2.817	2.856	2.920	30
31	54.25	46.981 9	56.88	57.40	56.35	52.63	2.792	2.817	2.856	2.920	31
32	56.00	48.497 4	58.63	59.15	58.10	54.37	2.792	2.818	2.857	2.921	32
33	57.75	50.013 0	60.38	60.90	59.85	56.12	2.792	2.818	2.857	2.922	33
34	59.50	51.528 5	62.13	62.65	61.60	57.87	2.792	2.818	2.858	2.923	34
35	61.25	53.044 1	63.88	64.40	63.35	59.61	2.793	2.819	2.858	2.923	35
36	63.00	54.559 6	65.63	66.15	65.10	61.36	2.793	2.819	2.858	2.924	36
37	64.75	56.075 1	67.38	67.90	66.85	63.11	2.793	2.819	2.859	2.925	37
38	66.50	57.590 7	69.13	69.65	68.60	64.85	2.793	2.820	2.859	2.926	38
39	68.25	59.106 2	70.88	71.40	70.35	66.60	2.793	2.820	2.860	2.926	39
40	70.00	60.621 8	72.63	73.15	72.10	68.35	2.793	2.820	2.860	2.927	40
41	71.75	62.137 3	74.38	74.90	73.85	70.09	2.794	2.820	2.861	2.928	41
42	73.50	63.652 9	76.13	76.65	75.60	71.84	2.794	2.821	2.861	2.928	42
43	75.25	65.168 4	77.88	78.40	77.35	73.59	2.794	2.821	2.861	2.929	43
44	77.00	66.684 0	79.63	80.15	79.10	75.34	2.794	2.821	2.862	2.930	44
45	78.75	68.199 5	81.38	81.90	80.85	77.09	2.794	2.821	2.862	2.930	45
46	80.50	69.715 0	83.13	83.65	82.60	78.83	2.794	2.822	2.863	2.931	46
47	82.25	71.230 6	84.88	85.40	84.35	80.58	2.795	2.822	2.863	2.932	47
48	84.00	72.746 1	86.63	87.15	86.10	82.33	2.795	2.822	2.863	2.932	48
49	85.75	74.261 7	88.38	88.90	87.85	84.08	2.795	2.822	2.864	2.933	49
50	87.50	75.777 2	90.13	90.65	89.60	85.83	2.795	2.823	2.864	2.933	50
51	89.25	77.292 8	91.88	92.40	91.35	87.58	2.795	2.823	2.865	2.934	51
52	91.00	78.808 3	93.63	94.15	93.10	89.32	2.795	2.823	2.865	2.935	52
53	92.75	80.323 9	95.38	95.90	94.85	91.07	2.795	2.823	2.865	2.935	53
54	94.50	81.839 4	97.13	97.65	96.60	92.82	2.796	2.824	2.866	2.936	54
55	96.25	83.354 9	98.88	99.40	98.35	94.57	2.796	2.824	2.866	2.936	55

表 6 (续)

单位为毫米

齿数 z	分度圆 直径 D	基圆 直径 D_b	大径 D_e		渐开线终 止圆直径 $D_{F, \min}$	小径 D_i	实际齿槽宽最大值 $E_{\max} = E_{v, \min} + (T + \lambda)$				齿数 z
			平齿根	圆齿根			4H	5H	6H	7H	
56	98.00	84.870 5	100.63	101.15	100.10	96.32	2.796	2.824	2.866	2.937	56
57	99.75	86.386 0	102.38	102.90	101.85	98.07	2.796	2.824	2.867	2.938	57
58	101.50	87.901 6	104.13	104.65	103.60	99.82	2.796	2.825	2.867	2.938	58
59	103.25	89.417 1	105.88	106.40	105.35	101.57	2.796	2.825	2.867	2.939	59
60	105.00	90.932 7	107.63	108.15	107.10	103.31	2.796	2.825	2.868	2.939	60
61	106.75	92.448 2	109.38	109.90	108.85	105.06	2.797	2.825	2.868	2.940	61
62	108.50	93.963 8	111.13	111.65	110.60	106.81	2.797	2.825	2.868	2.940	62
63	110.25	95.479 3	112.88	113.40	112.35	108.56	2.797	2.826	2.869	2.941	63
64	112.00	96.994 8	114.63	115.15	114.10	110.31	2.797	2.826	2.869	2.941	64
65	113.75	98.510 4	116.38	116.90	115.85	112.06	2.797	2.826	2.869	2.942	65
66	115.50	100.025 9	118.13	118.65	117.60	113.81	2.797	2.826	2.870	2.942	66
67	117.25	101.541 5	119.88	120.40	119.35	115.56	2.797	2.826	2.870	2.943	67
68	119.00	103.057 0	121.63	122.15	121.10	117.31	2.797	2.827	2.870	2.943	68
69	120.75	104.572 6	123.38	123.90	122.85	119.06	2.798	2.827	2.871	2.944	69
70	122.50	106.088 1	125.13	125.65	124.60	120.80	2.798	2.827	2.871	2.944	70
71	124.25	107.603 7	126.88	127.40	126.35	122.55	2.798	2.827	2.871	2.945	71
72	126.00	109.119 2	128.63	129.15	128.10	124.30	2.798	2.827	2.872	2.945	72
73	127.75	110.634 7	130.38	130.90	129.85	126.05	2.798	2.828	2.872	2.946	73
74	129.50	112.150 3	132.13	132.65	131.60	127.80	2.798	2.828	2.872	2.946	74
75	131.25	113.665 8	133.88	134.40	133.35	129.55	2.798	2.828	2.873	2.947	75
76	133.00	115.181 4	135.63	136.15	135.10	131.30	2.798	2.828	2.873	2.947	76
77	134.75	116.696 9	137.38	137.90	136.85	133.05	2.799	2.828	2.873	2.948	77
78	136.50	118.212 5	139.13	139.65	138.60	134.80	2.799	2.829	2.873	2.948	78
79	138.25	119.728 0	140.88	141.40	140.35	136.55	2.799	2.829	2.874	2.949	79
80	140.00	121.243 6	142.63	143.15	142.10	138.30	2.799	2.829	2.874	2.949	80
81	141.75	122.759 1	144.38	144.90	143.85	140.05	2.799	2.829	2.874	2.950	81
82	143.50	124.274 6	146.13	146.65	145.60	141.80	2.799	2.829	2.875	2.950	82
83	145.25	125.790 2	147.88	148.40	147.35	143.55	2.799	2.830	2.875	2.950	83
84	147.00	127.305 7	149.63	150.15	149.10	145.30	2.799	2.830	2.875	2.951	84
85	148.75	128.821 3	151.38	151.90	150.85	147.05	2.800	2.830	2.875	2.951	85
86	150.50	130.336 8	153.13	153.65	152.60	148.79	2.800	2.830	2.876	2.952	86
87	152.25	131.852 4	154.88	155.40	154.35	150.54	2.800	2.830	2.876	2.952	87
88	154.00	133.367 9	156.63	157.15	156.10	152.29	2.800	2.830	2.876	2.953	88
89	155.75	134.883 5	158.38	158.90	157.85	154.04	2.800	2.831	2.877	2.953	89
90	157.50	136.399 0	160.13	160.65	159.60	155.79	2.800	2.831	2.877	2.954	90
91	159.25	137.914 5	161.88	162.40	161.35	157.54	2.800	2.831	2.877	2.954	91
92	161.00	139.430 1	163.63	164.15	163.10	159.29	2.800	2.831	2.877	2.954	92
93	162.75	140.945 6	165.38	165.90	164.85	161.04	2.800	2.831	2.878	2.955	93
94	164.50	142.461 2	167.13	167.65	166.60	162.79	2.800	2.831	2.878	2.955	94
95	166.25	143.976 7	168.88	169.40	168.35	164.54	2.801	2.832	2.878	2.956	95
96	168.00	145.492 3	170.63	171.15	170.10	166.29	2.801	2.832	2.878	2.956	96
97	169.75	147.007 8	172.38	172.90	171.85	168.04	2.801	2.832	2.879	2.956	97
98	171.50	148.523 4	174.13	174.65	173.60	169.79	2.801	2.832	2.879	2.957	98
99	173.25	150.038 9	175.88	176.40	175.35	171.54	2.801	2.832	2.879	2.957	99
100	175.00	151.554 4	177.63	178.15	177.10	173.29	2.801	2.832	2.879	2.958	100

表 7 30°内花键

模数 $m=2\text{ mm}$ 作用齿槽宽最小值 $E_{v, \min}=3.142\text{ mm}$

单位为毫米

齿数 z	分度圆 直径 D	基圆 直径 D_b	大径 D_e		渐开线终 止圆直径 $D_{Fi, \min}$	小径 D_i	实际齿槽宽最大值 $E_{\max}=E_{v, \min}+(T+\lambda)$				齿数 z
			平齿根	圆齿根			4H	5H	6H	7H	
10	20.00	17.320 5	23.00	23.60	22.40	18.48	3.180	3.204	3.239	3.297	10
11	22.00	19.052 6	25.00	25.60	24.40	20.44	3.181	3.204	3.240	3.299	11
12	24.00	20.784 6	27.00	27.60	26.40	22.40	3.181	3.205	3.241	3.300	12
13	26.00	22.516 7	29.00	29.60	28.40	24.36	3.182	3.206	3.242	3.302	13
14	28.00	24.248 7	31.00	31.60	30.40	26.34	3.182	3.206	3.243	3.303	14
15	30.00	25.980 8	33.00	33.60	32.40	28.31	3.182	3.207	3.243	3.305	15
16	32.00	27.712 8	35.00	35.60	34.40	30.29	3.183	3.207	3.244	3.306	16
17	34.00	29.444 9	37.00	37.60	36.40	32.27	3.183	3.208	3.245	3.307	17
18	36.00	31.176 9	39.00	39.60	38.40	34.26	3.183	3.208	3.246	3.308	18
19	38.00	32.909 0	41.00	41.60	40.40	36.24	3.184	3.209	3.247	3.309	19
20	40.00	34.641 0	43.00	43.60	42.40	38.23	3.184	3.209	3.247	3.311	20
21	42.00	36.373 1	45.00	45.60	44.40	40.22	3.184	3.210	3.248	3.312	21
22	44.00	38.105 1	47.00	47.60	46.40	42.21	3.184	3.210	3.249	3.313	22
23	46.00	39.837 2	49.00	49.60	48.40	44.20	3.185	3.210	3.249	3.314	23
24	48.00	41.569 2	51.00	51.60	50.40	46.19	3.185	3.211	3.250	3.315	24
25	50.00	43.301 3	53.00	53.60	52.40	48.18	3.185	3.211	3.250	3.316	25
26	52.00	45.033 3	55.00	55.60	54.40	50.17	3.185	3.212	3.251	3.317	26
27	54.00	46.765 4	57.00	57.60	56.40	52.17	3.186	3.212	3.252	3.318	27
28	56.00	48.497 4	59.00	59.60	58.40	54.16	3.186	3.212	3.252	3.319	28
29	58.00	50.229 5	61.00	61.60	60.40	56.16	3.186	3.213	3.253	3.319	29
30	60.00	51.961 5	63.00	63.60	62.40	58.15	3.186	3.213	3.253	3.320	30
31	62.00	53.693 6	65.00	65.60	64.40	60.14	3.186	3.213	3.254	3.321	31
32	64.00	55.425 6	67.00	67.60	66.40	62.14	3.187	3.214	3.254	3.322	32
33	66.00	57.157 7	69.00	69.60	68.40	64.14	3.187	3.214	3.255	3.323	33
34	68.00	58.889 7	71.00	71.60	70.40	66.13	3.187	3.214	3.255	3.324	34
35	70.00	60.621 8	73.00	73.60	72.40	68.13	3.187	3.215	3.256	3.324	35
36	72.00	62.353 8	75.00	75.60	74.40	70.12	3.187	3.215	3.256	3.325	36
37	74.00	64.085 9	77.00	77.60	76.40	72.12	3.188	3.215	3.257	3.326	37
38	76.00	65.817 9	79.00	79.60	78.40	74.12	3.188	3.216	3.257	3.327	38
39	78.00	67.550 0	81.00	81.60	80.40	76.11	3.188	3.216	3.258	3.327	39
40	80.00	69.282 0	83.00	83.60	82.40	78.11	3.188	3.216	3.258	3.328	40
41	82.00	71.014 1	85.00	85.60	84.40	80.11	3.188	3.217	3.259	3.329	41
42	84.00	72.746 1	87.00	87.60	86.40	82.11	3.189	3.217	3.259	3.330	42
43	86.00	74.478 2	89.00	89.60	88.40	84.10	3.189	3.217	3.260	3.330	43
44	88.00	76.210 2	91.00	91.60	90.40	86.10	3.189	3.217	3.260	3.331	44
45	90.00	77.942 3	93.00	93.60	92.40	88.10	3.189	3.218	3.260	3.332	45
46	92.00	79.674 3	95.00	95.60	94.40	90.10	3.189	3.218	3.261	3.332	46
47	94.00	81.406 4	97.00	97.60	96.40	92.09	3.189	3.218	3.261	3.333	47
48	96.00	83.138 4	99.00	99.60	98.40	94.09	3.190	3.218	3.262	3.334	48
49	98.00	84.870 5	101.00	101.60	100.40	96.09	3.190	3.219	3.262	3.334	49
50	100.00	86.602 5	103.00	103.60	102.40	98.09	3.190	3.219	3.262	3.335	50
51	102.00	88.334 6	105.00	105.60	104.40	100.09	3.190	3.219	3.263	3.336	51
52	104.00	90.066 6	107.00	107.60	106.40	102.09	3.190	3.219	3.263	3.336	52
53	106.00	91.798 7	109.00	109.60	108.40	104.08	3.190	3.220	3.264	3.337	53
54	108.00	93.530 7	111.00	111.60	110.40	106.08	3.191	3.220	3.264	3.337	54
55	110.00	95.262 8	113.00	113.60	112.40	108.08	3.191	3.220	3.264	3.338	55

表 7 (续)

单位为毫米

齿数 <i>z</i>	分度圆 直径 <i>D</i>	基圆 直径 <i>D_b</i>	大径 <i>D_e</i>		渐开线终 止圆直径 <i>D_{F, min}</i>	小径 <i>D_i</i>	实际齿槽宽最大值 <i>E_{max} = E_{v, min} + (T + λ)</i>				齿数 <i>z</i>
			平齿根	圆齿根			4H	5H	6H	7H	
56	112.00	96.994 8	115.00	115.60	114.40	110.08	3.191	3.220	3.265	3.339	56
57	114.00	98.726 9	117.00	117.60	116.40	112.08	3.191	3.221	3.265	3.339	57
58	116.00	100.458 9	119.00	119.60	118.40	114.08	3.191	3.221	3.265	3.340	58
59	118.00	102.191 0	121.00	121.60	120.40	116.07	3.191	3.221	3.266	3.340	59
60	120.00	103.923 0	123.00	123.60	122.40	118.07	3.191	3.221	3.266	3.341	60
61	122.00	105.655 1	125.00	125.60	124.40	120.07	3.192	3.222	3.267	3.342	61
62	124.00	107.387 1	127.00	127.60	126.40	122.07	3.192	3.222	3.267	3.342	62
63	126.00	109.119 2	129.00	129.60	128.40	124.07	3.192	3.222	3.267	3.343	63
64	128.00	110.851 3	131.00	131.60	130.40	126.07	3.192	3.222	3.268	3.343	64
65	130.00	112.583 3	133.00	133.60	132.40	128.07	3.192	3.222	3.268	3.344	65
66	132.00	114.315 4	135.00	135.60	134.40	130.07	3.192	3.223	3.268	3.344	66
67	134.00	116.047 4	137.00	137.60	136.40	132.07	3.192	3.223	3.269	3.345	67
68	136.00	117.779 5	139.00	139.60	138.40	134.06	3.193	3.223	3.269	3.345	68
69	138.00	119.511 5	141.00	141.60	140.40	136.06	3.193	3.223	3.269	3.346	69
70	140.00	121.243 6	143.00	143.60	142.40	138.06	3.193	3.224	3.270	3.346	70
71	142.00	122.975 6	145.00	145.60	144.40	140.06	3.193	3.224	3.270	3.347	71
72	144.00	124.707 7	147.00	147.60	146.40	142.06	3.193	3.224	3.270	3.347	72
73	146.00	126.439 7	149.00	149.60	148.40	144.06	3.193	3.224	3.271	3.348	73
74	148.00	128.171 8	151.00	151.60	150.40	146.06	3.193	3.224	3.271	3.348	74
75	150.00	129.903 8	153.00	153.60	152.40	148.06	3.193	3.225	3.271	3.349	75
76	152.00	131.635 9	155.00	155.60	154.40	150.06	3.194	3.225	3.272	3.349	76
77	154.00	133.367 9	157.00	157.60	156.40	152.06	3.194	3.225	3.272	3.350	77
78	156.00	135.100 0	159.00	159.60	158.40	154.06	3.194	3.225	3.272	3.350	78
79	158.00	136.832 0	161.00	161.60	160.40	156.06	3.194	3.225	3.272	3.351	79
80	160.00	138.564 1	163.00	163.60	162.40	158.05	3.194	3.226	3.273	3.351	80
81	162.00	140.296 1	165.00	165.60	164.40	160.05	3.194	3.226	3.273	3.352	81
82	164.00	142.028 2	167.00	167.60	166.40	162.05	3.194	3.226	3.273	3.352	82
83	166.00	143.760 2	169.00	169.60	168.40	164.05	3.194	3.226	3.274	3.353	83
84	168.00	145.492 3	171.00	171.60	170.40	166.05	3.195	3.226	3.274	3.353	84
85	170.00	147.224 3	173.00	173.60	172.40	168.05	3.195	3.226	3.274	3.354	85
86	172.00	148.956 4	175.00	175.60	174.40	170.05	3.195	3.227	3.275	3.354	86
87	174.00	150.688 4	177.00	177.60	176.40	172.05	3.195	3.227	3.275	3.355	87
88	176.00	152.420 5	179.00	179.60	178.40	174.05	3.195	3.227	3.275	3.355	88
89	178.00	154.152 5	181.00	181.60	180.40	176.05	3.195	3.227	3.275	3.356	89
90	180.00	155.884 6	183.00	183.60	182.40	178.05	3.195	3.227	3.276	3.356	90
91	182.00	157.616 6	185.00	185.60	184.40	180.05	3.195	3.228	3.276	3.357	91
92	184.00	159.348 7	187.00	187.60	186.40	182.05	3.195	3.228	3.276	3.357	92
93	186.00	161.080 7	189.00	189.60	188.40	184.05	3.196	3.228	3.277	3.358	93
94	188.00	162.812 8	191.00	191.60	190.40	186.05	3.196	3.228	3.277	3.358	94
95	190.00	164.544 8	193.00	193.60	192.40	188.05	3.196	3.228	3.277	3.358	95
96	192.00	166.276 9	195.00	195.60	194.40	190.05	3.196	3.228	3.277	3.359	96
97	194.00	168.008 9	197.00	197.60	196.40	192.05	3.196	3.229	3.278	3.359	97
98	196.00	169.741 0	199.00	199.60	198.40	194.04	3.196	3.229	3.278	3.360	98
99	198.00	171.473 0	201.00	201.60	200.40	196.04	3.196	3.229	3.278	3.360	99
100	200.00	173.205 1	203.00	203.60	202.40	198.04	3.196	3.229	3.278	3.361	100

表 8 30°内花键
模数 $m=2.5\text{ mm}$ 作用齿槽宽最小值 $E_{v\min}=3.927\text{ mm}$ 单位为毫米

齿数 z	分度圆 直径 D	基圆 直径 D_b	大径 D_a		渐开线终 止圆直径 $D_{Fi\min}$	小径 D_i	实际齿槽宽最大值 $E_{\max}=E_{v\min}+(T+\lambda)$				齿数 z
			平齿根	圆齿根			4H	5H	6H	7H	
10	25.00	21.650 6	28.75	29.50	28.00	23.11	3.969	3.994	4.032	4.095	10
11	27.50	23.815 7	31.25	32.00	30.50	25.54	3.969	3.995	4.033	4.097	11
12	30.00	25.980 8	33.75	34.50	33.00	28.00	3.970	3.995	4.034	4.098	12
13	32.50	28.145 8	36.25	37.00	35.50	30.45	3.970	3.996	4.035	4.100	13
14	35.00	30.310 9	38.75	39.50	38.00	32.92	3.971	3.997	4.036	4.101	14
15	37.50	32.476 0	41.25	42.00	40.50	35.39	3.971	3.997	4.037	4.103	15
16	40.00	34.641 0	43.75	44.50	43.00	37.86	3.971	3.998	4.038	4.104	16
17	42.50	36.806 1	46.25	47.00	45.50	40.34	3.972	3.998	4.039	4.106	17
18	45.00	38.971 1	48.75	49.50	48.00	42.82	3.972	3.999	4.039	4.107	18
19	47.50	41.136 2	51.25	52.00	50.50	45.30	3.972	3.999	4.040	4.108	19
20	50.00	43.301 3	53.75	54.50	53.00	47.79	3.973	4.000	4.041	4.109	20
21	52.50	45.466 3	56.25	57.00	55.50	50.27	3.973	4.000	4.042	4.111	21
22	55.00	47.631 4	58.75	59.50	58.00	52.76	3.973	4.001	4.042	4.112	22
23	57.50	49.796 5	61.25	62.00	60.50	55.25	3.973	4.001	4.043	4.113	23
24	60.00	51.961 5	63.75	64.50	63.00	57.74	3.974	4.002	4.044	4.114	24
25	62.50	54.126 6	66.25	67.00	65.50	60.23	3.974	4.002	4.044	4.115	25
26	65.00	56.291 7	68.75	69.50	68.00	62.72	3.974	4.003	4.045	4.116	26
27	67.50	58.456 7	71.25	72.00	70.50	65.21	3.975	4.003	4.046	4.117	27
28	70.00	60.621 8	73.75	74.50	73.00	67.70	3.975	4.003	4.046	4.118	28
29	72.50	62.786 8	76.25	77.00	75.50	70.19	3.975	4.004	4.047	4.119	29
30	75.00	64.951 9	78.75	79.50	78.00	72.69	3.975	4.004	4.048	4.120	30
31	77.50	67.117 0	81.25	82.00	80.50	75.18	3.975	4.005	4.048	4.121	31
32	80.00	69.282 0	83.75	84.50	83.00	77.68	3.976	4.005	4.049	4.122	32
33	82.50	71.447 1	86.25	87.00	85.50	80.17	3.976	4.005	4.049	4.123	33
34	85.00	73.612 2	88.75	89.50	88.00	82.66	3.976	4.006	4.050	4.124	34
35	87.50	75.777 2	91.25	92.00	90.50	85.16	3.976	4.006	4.050	4.124	35
36	90.00	77.942 3	93.75	94.50	93.00	87.66	3.977	4.006	4.051	4.125	36
37	92.50	80.107 3	96.25	97.00	95.50	90.15	3.977	4.007	4.051	4.126	37
38	95.00	82.272 4	98.75	99.50	98.00	92.65	3.977	4.007	4.052	4.127	38
39	97.50	84.437 5	101.25	102.00	100.50	95.14	3.977	4.007	4.052	4.128	39
40	100.00	86.602 5	103.75	104.50	103.00	97.64	3.977	4.008	4.053	4.129	40
41	102.50	88.767 6	106.25	107.00	105.50	100.14	3.978	4.008	4.053	4.129	41
42	105.00	90.932 7	108.75	109.50	108.00	102.63	3.978	4.008	4.054	4.130	42
43	107.50	93.097 7	111.25	112.00	110.50	105.13	3.978	4.009	4.054	4.131	43
44	110.00	95.262 8	113.75	114.50	113.00	107.63	3.978	4.009	4.055	4.132	44
45	112.50	97.427 9	116.25	117.00	115.50	110.12	3.978	4.009	4.055	4.132	45
46	115.00	99.592 9	118.75	119.50	118.00	112.62	3.979	4.009	4.056	4.133	46
47	117.50	101.758 0	121.25	122.00	120.50	115.12	3.979	4.010	4.056	4.134	47
48	120.00	103.923 0	123.75	124.50	123.00	117.62	3.979	4.010	4.057	4.135	48
49	122.50	106.088 1	126.25	127.00	125.50	120.11	3.979	4.010	4.057	4.135	49
50	125.00	108.253 2	128.75	129.50	128.00	122.61	3.979	4.011	4.058	4.136	50
51	127.50	110.418 2	131.25	132.00	130.50	125.11	3.979	4.011	4.058	4.137	51
52	130.00	112.583 3	133.75	134.50	133.00	127.61	3.980	4.011	4.058	4.137	52
53	132.50	114.748 4	136.25	137.00	135.50	130.10	3.980	4.011	4.059	4.138	53
54	135.00	116.913 4	138.75	139.50	138.00	132.60	3.980	4.012	4.059	4.139	54
55	137.50	119.078 5	141.25	142.00	140.50	135.10	3.980	4.012	4.060	4.139	55

表 8 (续)

单位为毫米

齿数 <i>z</i>	分度圆 直径 <i>D</i>	基圆 直径 <i>D_b</i>	大径 <i>D_e</i>		渐开线终 止圆直径 <i>D_{F, min}</i>	小径 <i>D_i</i>	实际齿槽宽最大值 $E_{max} = E_{v, min} + (T + \lambda)$				齿数 <i>z</i>
			平齿根	圆齿根			4H	5H	6H	7H	
56	140.00	121.243 6	143.75	144.50	143.00	137.60	3.980	4.012	4.060	4.140	56
57	142.50	123.408 6	146.25	147.00	145.50	140.10	3.980	4.012	4.061	4.141	57
58	145.00	125.573 7	148.75	149.50	148.00	142.60	3.981	4.013	4.061	4.141	58
59	147.50	127.738 7	151.25	152.00	150.50	145.09	3.981	4.013	4.061	4.142	59
60	150.00	129.903 8	153.75	154.50	153.00	147.59	3.981	4.013	4.062	4.143	60
61	152.50	132.068 9	156.25	157.00	155.50	150.09	3.981	4.014	4.062	4.143	61
62	155.00	134.233 9	158.75	159.50	158.00	152.59	3.981	4.014	4.063	4.144	62
63	157.50	136.399 0	161.25	162.00	160.50	155.09	3.981	4.014	4.063	4.145	63
64	160.00	138.564 1	163.75	164.50	163.00	157.59	3.982	4.014	4.063	4.145	64
65	162.50	140.729 1	166.25	167.00	165.50	160.08	3.982	4.014	4.064	4.146	65
66	165.00	142.894 2	168.75	169.50	168.00	162.58	3.982	4.015	4.064	4.146	66
67	167.50	145.059 3	171.25	172.00	170.50	165.08	3.982	4.015	4.064	4.147	67
68	170.00	147.224 3	173.75	174.50	173.00	167.58	3.982	4.015	4.065	4.148	68
69	172.50	149.389 4	176.25	177.00	175.50	170.08	3.982	4.015	4.065	4.148	69
70	175.00	151.554 4	178.75	179.50	178.00	172.58	3.982	4.016	4.066	4.149	70
71	177.50	153.719 5	181.25	182.00	180.50	175.08	3.983	4.016	4.066	4.149	71
72	180.00	155.884 6	183.75	184.50	183.00	177.58	3.983	4.016	4.066	4.150	72
73	182.50	158.049 6	186.25	187.00	185.50	180.08	3.983	4.016	4.067	4.150	73
74	185.00	160.214 7	188.75	189.50	188.00	182.57	3.983	4.017	4.067	4.151	74
75	187.50	162.379 7	191.25	192.00	190.50	185.07	3.983	4.017	4.067	4.152	75
76	190.00	164.544 8	193.75	194.50	193.00	187.57	3.983	4.017	4.068	4.152	76
77	192.50	166.709 9	196.25	197.00	195.50	190.07	3.983	4.017	4.068	4.153	77
78	195.00	168.875 0	198.75	199.50	198.00	192.57	3.984	4.017	4.068	4.153	78
79	197.50	171.040 0	201.25	202.00	200.50	195.07	3.984	4.018	4.069	4.154	79
80	200.00	173.205 1	203.75	204.50	203.00	197.57	3.984	4.018	4.069	4.154	80
81	202.50	175.370 1	206.25	207.00	205.50	200.07	3.984	4.018	4.069	4.155	81
82	205.00	177.535 2	208.75	209.50	208.00	202.57	3.984	4.018	4.070	4.155	82
83	207.50	179.700 3	211.25	212.00	210.50	205.07	3.984	4.019	4.070	4.156	83
84	210.00	181.865 3	213.75	214.50	213.00	207.57	3.984	4.019	4.070	4.156	84
85	212.50	184.030 4	216.25	217.00	215.50	210.06	3.984	4.019	4.071	4.157	85
86	215.00	186.195 5	218.75	219.50	218.00	212.56	3.985	4.019	4.071	4.157	86
87	217.50	188.360 5	221.25	222.00	220.50	215.06	3.985	4.019	4.071	4.158	87
88	220.00	190.525 6	223.75	224.50	223.00	217.56	3.985	4.020	4.072	4.158	88
89	222.50	192.690 6	226.25	227.00	225.50	220.06	3.985	4.020	4.072	4.159	89
90	225.00	194.855 7	228.75	229.50	228.00	222.56	3.985	4.020	4.072	4.159	90
91	227.50	197.020 8	231.25	232.00	230.50	225.06	3.985	4.020	4.073	4.160	91
92	230.00	199.185 8	233.75	234.50	233.00	227.56	3.985	4.020	4.073	4.160	92
93	232.50	201.350 9	236.25	237.00	235.50	230.06	3.985	4.021	4.073	4.161	93
94	235.00	203.516 0	238.75	239.50	238.00	232.56	3.986	4.021	4.074	4.161	94
95	237.50	205.681 0	241.25	242.00	240.50	235.06	3.986	4.021	4.074	4.162	95
96	240.00	207.846 1	243.75	244.50	243.00	237.56	3.986	4.021	4.074	4.162	96
97	242.50	210.011 2	246.25	247.00	245.50	240.06	3.986	4.021	4.074	4.163	97
98	245.00	212.176 2	248.75	249.50	248.00	242.56	3.986	4.022	4.075	4.163	98
99	247.50	214.341 3	251.25	252.00	250.50	245.06	3.986	4.022	4.075	4.164	99
100	250.00	216.506 3	253.75	254.50	253.00	247.55	3.986	4.022	4.075	4.164	100

表 9 30°内花键
模数 $m=3\text{ mm}$ 作用齿槽宽最小值 $E_{v\text{ min}}=4.712\text{ mm}$ 单位为毫米

齿数 z	分度圆 直径 D	基圆 直径 D_b	大径 D_e		渐开线终 止圆直径 $D_{F\text{ min}}$	小径 D_i	实际齿槽宽最大值 $E_{\text{max}} = E_{v\text{ min}} + (T + \lambda)$				齿数 z
			平齿根	圆齿根			4H	5H	6H	7H	
10	30.00	25.980 8	34.50	35.40	33.60	27.73	4.757	4.784	4.824	4.891	10
11	33.00	28.578 8	37.50	38.40	36.60	30.65	4.757	4.785	4.825	4.893	11
12	36.00	31.176 9	40.50	41.40	39.60	33.59	4.758	4.785	4.826	4.895	12
13	39.00	33.775 0	43.50	44.40	42.60	36.54	4.758	4.786	4.827	4.896	13
14	42.00	36.373 1	46.50	47.40	45.60	39.50	4.759	4.787	4.828	4.898	14
15	45.00	38.971 1	49.50	50.40	48.60	42.47	4.759	4.787	4.829	4.900	15
16	48.00	41.569 2	52.50	53.40	51.60	45.44	4.760	4.788	4.830	4.901	16
17	51.00	44.167 3	55.50	56.40	54.60	48.41	4.760	4.788	4.831	4.902	17
18	54.00	46.765 4	58.50	59.40	57.60	51.38	4.760	4.789	4.832	4.904	18
19	57.00	49.363 4	61.50	62.40	60.60	54.36	4.761	4.790	4.833	4.905	19
20	60.00	51.961 5	64.50	65.40	63.60	57.34	4.761	4.790	4.834	4.907	20
21	63.00	54.559 6	67.50	68.40	66.60	60.33	4.761	4.791	4.835	4.908	21
22	66.00	57.157 7	70.50	71.40	69.60	63.31	4.762	4.791	4.835	4.909	22
23	69.00	59.755 8	73.50	74.40	72.60	66.30	4.762	4.792	4.836	4.910	23
24	72.00	62.353 8	76.50	77.40	75.60	69.28	4.762	4.792	4.837	4.911	24
25	75.00	64.951 9	79.50	80.40	78.60	72.27	4.762	4.792	4.838	4.913	25
26	78.00	67.550 0	82.50	83.40	81.60	75.26	4.763	4.793	4.838	4.914	26
27	81.00	70.148 1	85.50	86.40	84.60	78.25	4.763	4.793	4.839	4.915	27
28	84.00	72.746 1	88.50	89.40	87.60	81.24	4.763	4.794	4.840	4.916	28
29	87.00	75.344 2	91.50	92.40	90.60	84.23	4.764	4.794	4.840	4.917	29
30	90.00	77.942 3	94.50	95.40	93.60	87.22	4.764	4.795	4.841	4.918	30
31	93.00	80.540 4	97.50	98.40	96.60	90.22	4.764	4.795	4.841	4.919	31
32	96.00	83.138 4	100.50	101.40	99.60	93.21	4.764	4.795	4.842	4.920	32
33	99.00	85.736 5	103.50	104.40	102.60	96.20	4.765	4.796	4.843	4.921	33
34	102.00	88.334 6	106.50	107.40	105.60	99.20	4.765	4.796	4.843	4.922	34
35	105.00	90.932 7	109.50	110.40	108.60	102.19	4.765	4.797	4.844	4.923	35
36	108.00	93.530 7	112.50	113.40	111.60	105.19	4.765	4.797	4.844	4.924	36
37	111.00	96.128 8	115.50	116.40	114.60	108.18	4.765	4.797	4.845	4.925	37
38	114.00	98.726 9	118.50	119.40	117.60	111.18	4.766	4.798	4.846	4.925	38
39	117.00	101.325 0	121.50	122.40	120.60	114.17	4.766	4.798	4.846	4.926	39
40	120.00	103.923 0	124.50	125.40	123.60	117.17	4.766	4.798	4.847	4.927	40
41	123.00	106.521 1	127.50	128.40	126.60	120.16	4.766	4.799	4.847	4.928	41
42	126.00	109.119 2	130.50	131.40	129.60	123.16	4.767	4.799	4.848	4.929	42
43	129.00	111.717 3	133.50	134.40	132.60	126.15	4.767	4.799	4.848	4.930	43
44	132.00	114.315 4	136.50	137.40	135.60	129.15	4.767	4.800	4.849	4.931	44
45	135.00	116.913 4	139.50	140.40	138.60	132.15	4.767	4.800	4.849	4.931	45
46	138.00	119.511 5	142.50	143.40	141.60	135.14	4.767	4.800	4.850	4.932	46
47	141.00	122.109 6	145.50	146.40	144.60	138.14	4.768	4.801	4.850	4.933	47
48	144.00	124.707 7	148.50	149.40	147.60	141.14	4.768	4.801	4.851	4.934	48
49	147.00	127.305 7	151.50	152.40	150.60	144.14	4.768	4.801	4.851	4.935	49
50	150.00	129.903 8	154.50	155.40	153.60	147.13	4.768	4.802	4.852	4.935	50
51	153.00	132.501 9	157.50	158.40	156.60	150.13	4.768	4.802	4.852	4.936	51
52	156.00	135.100 0	160.50	161.40	159.60	153.13	4.768	4.802	4.853	4.937	52
53	159.00	137.698 0	163.50	164.40	162.60	156.13	4.769	4.802	4.853	4.938	53
54	162.00	140.296 1	166.50	167.40	165.60	159.12	4.769	4.803	4.854	4.938	54
55	165.00	142.894 2	169.50	170.40	168.60	162.12	4.769	4.803	4.854	4.939	55

表 9 (续)

单位为毫米

齿数 z	分度圆 直径 D	基圆 直径 D_b	大径 D_a		渐开线终 止圆直径 $D_{F1.min}$	小径 D_n	实际齿槽宽最大值 $E_{max} = E_{.min} + (T + \lambda)$				齿数 z
			平齿根	圆齿根			4H	5H	6H	7H	
56	168.00	145.492 3	172.50	173.40	171.60	165.12	4.769	4.803	4.854	4.940	56
57	171.00	148.090 3	175.50	176.40	174.60	168.12	4.769	4.804	4.855	4.940	57
58	174.00	150.688 4	178.50	179.40	177.60	171.11	4.770	4.804	4.855	4.941	58
59	177.00	153.286 5	181.50	182.40	180.60	174.11	4.770	4.804	4.856	4.942	59
60	180.00	155.884 6	184.50	185.40	183.60	177.11	4.770	4.804	4.856	4.942	60
61	183.00	158.482 6	187.50	188.40	186.60	180.11	4.770	4.805	4.857	4.943	61
62	186.00	161.080 7	190.50	191.40	189.60	183.11	4.770	4.805	4.857	4.944	62
63	189.00	163.678 8	193.50	194.40	192.60	186.10	4.770	4.805	4.857	4.944	63
64	192.00	166.276 9	196.50	197.40	195.60	189.10	4.771	4.805	4.858	4.945	64
65	195.00	168.875 0	199.50	200.40	198.60	192.10	4.771	4.806	4.858	4.946	65
66	198.00	171.473 0	202.50	203.40	201.60	195.10	4.771	4.806	4.859	4.946	66
67	201.00	174.071 1	205.50	206.40	204.60	198.10	4.771	4.806	4.859	4.947	67
68	204.00	176.669 2	208.50	209.40	207.60	201.10	4.771	4.807	4.859	4.948	68
69	207.00	179.267 3	211.50	212.40	210.60	204.10	4.771	4.807	4.860	4.948	69
70	210.00	181.865 3	214.50	215.40	213.60	207.09	4.772	4.807	4.860	4.949	70
71	213.00	184.463 4	217.50	218.40	216.60	210.09	4.772	4.807	4.861	4.950	71
72	216.00	187.061 5	220.50	221.40	219.60	213.09	4.772	4.808	4.861	4.950	72
73	219.00	189.659 6	223.50	224.40	222.60	216.09	4.772	4.808	4.861	4.951	73
74	222.00	192.257 6	226.50	227.40	225.60	219.09	4.772	4.808	4.862	4.951	74
75	225.00	194.855 7	229.50	230.40	228.60	222.09	4.772	4.808	4.862	4.952	75
76	228.00	197.453 8	232.50	233.40	231.60	225.09	4.772	4.809	4.863	4.953	76
77	231.00	200.051 9	235.50	236.40	234.60	228.09	4.773	4.809	4.863	4.953	77
78	234.00	202.649 9	238.50	239.40	237.60	231.08	4.773	4.809	4.863	4.954	78
79	237.00	205.248 0	241.50	242.40	240.60	234.08	4.773	4.809	4.864	4.954	79
80	240.00	207.846 1	244.50	245.40	243.60	237.08	4.773	4.809	4.864	4.955	80
81	243.00	210.444 2	247.50	248.40	246.60	240.08	4.773	4.810	4.864	4.956	81
82	246.00	213.042 2	250.50	251.40	249.60	243.08	4.773	4.810	4.865	4.956	82
83	249.00	215.640 3	253.50	254.40	252.60	246.08	4.773	4.810	4.865	4.957	83
84	252.00	218.238 4	256.50	257.40	255.60	249.08	4.774	4.810	4.865	4.957	84
85	255.00	220.836 5	259.50	260.40	258.60	252.08	4.774	4.811	4.866	4.958	85
86	258.00	223.434 6	262.50	263.40	261.60	255.08	4.774	4.811	4.866	4.958	86
87	261.00	226.032 6	265.50	266.40	264.60	258.08	4.774	4.811	4.867	4.959	87
88	264.00	228.630 7	268.50	269.40	267.60	261.07	4.774	4.811	4.867	4.960	88
89	267.00	231.228 8	271.50	272.40	270.60	264.07	4.774	4.811	4.867	4.960	89
90	270.00	233.826 9	274.50	275.40	273.60	267.07	4.774	4.812	4.868	4.961	90
91	273.00	236.424 9	277.50	278.40	276.60	270.07	4.775	4.812	4.868	4.961	91
92	276.00	239.023 0	280.50	281.40	279.60	273.07	4.775	4.812	4.868	4.962	92
93	279.00	241.621 1	283.50	284.40	282.60	276.07	4.775	4.812	4.869	4.962	93
94	282.00	244.219 2	286.50	287.40	285.60	279.07	4.775	4.813	4.869	4.963	94
95	285.00	246.817 2	289.50	290.40	288.60	282.07	4.775	4.813	4.869	4.963	95
96	288.00	249.415 3	292.50	293.40	291.60	285.07	4.775	4.813	4.870	4.964	96
97	291.00	252.013 4	295.50	296.40	294.60	288.07	4.775	4.813	4.870	4.964	97
98	294.00	254.611 5	298.50	299.40	297.60	291.07	4.776	4.813	4.870	4.965	98
99	297.00	257.209 5	301.50	302.40	300.60	294.07	4.776	4.814	4.871	4.966	99
100	300.00	259.807 6	304.50	305.40	303.60	297.07	4.776	4.814	4.871	4.966	100

表 10 30°内花键
模数 $m=4$ mm 作用齿槽宽最小值 $E_{v, \min}=6.283$ mm

单位为毫米

齿数 z	分度圆 直径 D	基圆 直径 D_b	大径 D_e		渐开线终 止圆直径 $D_{F1, \text{mm}}$	小径 D_i	实际齿槽宽最大值 $E_{\max}=E_{v, \min}+(T+\lambda)$				齿数 z
			平齿根	圆齿根			4H	5H	6H	7H	
10	40.00	34.641 0	46.00	47.20	44.80	36.97	6.332	6.362	6.406	6.480	10
11	44.00	38.105 1	50.00	51.20	48.80	40.87	6.333	6.363	6.408	6.482	11
12	48.00	41.569 2	54.00	55.20	52.80	44.79	6.333	6.364	6.409	6.484	12
13	52.00	45.033 3	58.00	59.20	56.80	48.73	6.334	6.364	6.410	6.486	13
14	56.00	48.497 4	62.00	63.20	60.80	52.67	6.334	6.365	6.411	6.488	14
15	60.00	51.961 5	66.00	67.20	64.80	56.62	6.335	6.366	6.412	6.490	15
16	64.00	55.425 6	70.00	71.20	68.80	60.58	6.335	6.366	6.413	6.491	16
17	68.00	58.889 7	74.00	75.20	72.80	64.54	6.336	6.367	6.414	6.493	17
18	72.00	62.353 8	78.00	79.20	76.80	68.51	6.336	6.368	6.415	6.495	18
19	76.00	65.817 9	82.00	83.20	80.80	72.48	6.336	6.368	6.416	6.496	19
20	80.00	69.282 0	86.00	87.20	84.80	76.46	6.337	6.369	6.417	6.498	20
21	84.00	72.746 1	90.00	91.20	88.80	80.44	6.337	6.370	6.418	6.499	21
22	88.00	76.210 2	94.00	95.20	92.80	84.41	6.337	6.370	6.419	6.500	22
23	92.00	79.674 3	98.00	99.20	96.80	88.40	6.338	6.371	6.420	6.502	23
24	96.00	83.138 4	102.00	103.20	100.80	92.38	6.338	6.371	6.421	6.503	24
25	100.00	86.602 5	106.00	107.20	104.80	96.36	6.338	6.372	6.421	6.504	25
26	104.00	90.066 6	110.00	111.20	108.80	100.35	6.339	6.372	6.422	6.506	26
27	108.00	93.530 7	114.00	115.20	112.80	104.33	6.339	6.373	6.423	6.507	27
28	112.00	96.994 8	118.00	119.20	116.80	108.32	6.339	6.373	6.424	6.508	28
29	116.00	100.458 9	122.00	123.20	120.80	112.31	6.340	6.374	6.424	6.509	29
30	120.00	103.923 0	126.00	127.20	124.80	116.30	6.340	6.374	6.425	6.510	30
31	124.00	107.387 1	130.00	131.20	128.80	120.29	6.340	6.375	6.426	6.512	31
32	128.00	110.851 3	134.00	135.20	132.80	124.28	6.341	6.375	6.427	6.513	32
33	132.00	114.315 4	138.00	139.20	136.80	128.27	6.341	6.375	6.427	6.514	33
34	136.00	117.779 5	142.00	143.20	140.80	132.26	6.341	6.376	6.428	6.515	34
35	140.00	121.243 6	146.00	147.20	144.80	136.26	6.341	6.376	6.429	6.516	35
36	144.00	124.707 7	150.00	151.20	148.80	140.25	6.342	6.377	6.429	6.517	36
37	148.00	128.171 8	154.00	155.20	152.80	144.24	6.342	6.377	6.430	6.518	37
38	152.00	131.635 9	158.00	159.20	156.80	148.23	6.342	6.377	6.431	6.519	38
39	156.00	135.100 0	162.00	163.20	160.80	152.23	6.342	6.378	6.431	6.520	39
40	160.00	138.564 1	166.00	167.20	164.80	156.22	6.343	6.378	6.432	6.521	40
41	164.00	142.028 2	170.00	171.20	168.80	160.22	6.343	6.379	6.432	6.522	41
42	168.00	145.492 3	174.00	175.20	172.80	164.21	6.343	6.379	6.433	6.523	42
43	172.00	148.956 4	178.00	179.20	176.80	168.21	6.343	6.379	6.434	6.524	43
44	176.00	152.420 5	182.00	183.20	180.80	172.20	6.344	6.380	6.434	6.525	44
45	180.00	155.884 6	186.00	187.20	184.80	176.20	6.344	6.380	6.435	6.526	45
46	184.00	159.348 7	190.00	191.20	188.80	180.19	6.344	6.381	6.435	6.527	46
47	188.00	162.812 8	194.00	195.20	192.80	184.19	6.344	6.381	6.436	6.527	47
48	192.00	166.276 9	198.00	199.20	196.80	188.18	6.344	6.381	6.436	6.528	48
49	196.00	169.741 0	202.00	203.20	200.80	192.18	6.345	6.382	6.437	6.529	49
50	200.00	173.205 1	206.00	207.20	204.80	196.18	6.345	6.382	6.437	6.530	50
51	204.00	176.669 2	210.00	211.20	208.80	200.17	6.345	6.382	6.438	6.531	51
52	208.00	180.133 3	214.00	215.20	212.80	204.17	6.345	6.383	6.439	6.532	52
53	212.00	183.597 4	218.00	219.20	216.80	208.17	6.346	6.383	6.439	6.533	53
54	216.00	187.061 5	222.00	223.20	220.80	212.16	6.346	6.383	6.440	6.533	54
55	220.00	190.525 6	226.00	227.20	224.80	216.16	6.346	6.384	6.440	6.534	55

表 10 (续)

单位为毫米

齿数 z	分度圆 直径 D	基圆 直径 D_b	大径 D_{e1}		渐开线终 止圆直径 $D_{Fi\ min}$	小径 D_{i1}	实际齿槽宽最大值 $E_{\max} = E_{v\ min} + (T + \lambda)$				齿数 z
			平齿根	圆齿根			4H	5H	6H	7H	
56	224.00	193.989 7	230.00	231.20	228.80	220.16	6.346	6.384	6.441	6.535	56
57	228.00	197.453 8	234.00	235.20	232.80	224.15	6.346	6.384	6.441	6.536	57
58	232.00	200.917 9	238.00	239.20	236.80	228.15	6.347	6.385	6.442	6.537	58
59	236.00	204.382 0	242.00	243.20	240.80	232.15	6.347	6.385	6.442	6.537	59
60	240.00	207.846 1	246.00	247.20	244.80	236.15	6.347	6.385	6.443	6.538	60
61	244.00	211.310 2	250.00	251.20	248.80	240.14	6.347	6.386	6.443	6.539	61
62	248.00	214.774 3	254.00	255.20	252.80	244.14	6.347	6.386	6.444	6.540	62
63	252.00	218.238 4	258.00	259.20	256.80	248.14	6.348	6.386	6.444	6.541	63
64	256.00	221.702 5	262.00	263.20	260.80	252.14	6.348	6.386	6.445	6.541	64
65	260.00	225.166 6	266.00	267.20	264.80	256.14	6.348	6.387	6.445	6.542	65
66	264.00	228.630 7	270.00	271.20	268.80	260.13	6.348	6.387	6.445	6.543	66
67	268.00	232.094 8	274.00	275.20	272.80	264.13	6.348	6.387	6.446	6.544	67
68	272.00	235.558 9	278.00	279.20	276.80	268.13	6.348	6.388	6.446	6.544	68
69	276.00	239.023 0	282.00	283.20	280.80	272.13	6.349	6.388	6.447	6.545	69
70	280.00	242.487 1	286.00	287.20	284.80	276.13	6.349	6.388	6.447	6.546	70
71	284.00	245.951 2	290.00	291.20	288.80	280.12	6.349	6.388	6.448	6.546	71
72	288.00	249.415 3	294.00	295.20	292.80	284.12	6.349	6.389	6.448	6.547	72
73	292.00	252.879 4	298.00	299.20	296.80	288.12	6.349	6.389	6.449	6.548	73
74	296.00	256.343 5	302.00	303.20	300.80	292.12	6.350	6.389	6.449	6.549	74
75	300.00	259.807 6	306.00	307.20	304.80	296.12	6.350	6.390	6.449	6.549	75
76	304.00	263.271 7	310.00	311.20	308.80	300.12	6.350	6.390	6.450	6.550	76
77	308.00	266.735 8	314.00	315.20	312.80	304.11	6.350	6.390	6.450	6.551	77
78	312.00	270.199 9	318.00	319.20	316.80	308.11	6.350	6.390	6.451	6.551	78
79	316.00	273.664 0	322.00	323.20	320.80	312.11	6.350	6.391	6.451	6.552	79
80	320.00	277.128 1	326.00	327.20	324.80	316.11	6.351	6.391	6.452	6.553	80
81	324.00	280.592 2	330.00	331.20	328.80	320.11	6.351	6.391	6.452	6.553	81
82	328.00	284.056 3	334.00	335.20	332.80	324.11	6.351	6.392	6.452	6.554	82
83	332.00	287.520 4	338.00	339.20	336.80	328.11	6.351	6.392	6.453	6.555	83
84	336.00	290.984 5	342.00	343.20	340.80	332.10	6.351	6.392	6.453	6.555	84
85	340.00	294.448 6	346.00	347.20	344.80	336.10	6.351	6.392	6.454	6.556	85
86	344.00	297.912 7	350.00	351.20	348.80	340.10	6.352	6.393	6.454	6.557	86
87	348.00	301.376 8	354.00	355.20	352.80	344.10	6.352	6.393	6.454	6.557	87
88	352.00	304.840 9	358.00	359.20	356.80	348.10	6.352	6.393	6.455	6.558	88
89	356.00	308.305 0	362.00	363.20	360.80	352.10	6.352	6.393	6.455	6.559	89
90	360.00	311.769 1	366.00	367.20	364.80	356.10	6.352	6.394	6.456	6.559	90
91	364.00	315.233 2	370.00	371.20	368.80	360.10	6.352	6.394	6.456	6.560	91
92	368.00	318.697 3	374.00	375.20	372.80	364.10	6.352	6.394	6.456	6.560	92
93	372.00	322.161 4	378.00	379.20	376.80	368.09	6.353	6.394	6.457	6.561	93
94	376.00	325.625 5	382.00	383.20	380.80	372.09	6.353	6.395	6.457	6.562	94
95	380.00	329.089 6	386.00	387.20	384.80	376.09	6.353	6.395	6.458	6.562	95
96	384.00	332.553 8	390.00	391.20	388.80	380.09	6.353	6.395	6.458	6.563	96
97	388.00	336.017 9	394.00	395.20	392.80	384.09	6.353	6.395	6.458	6.564	97
98	392.00	339.482 0	398.00	399.20	396.80	388.09	6.353	6.396	6.459	6.564	98
99	396.00	342.946 1	402.00	403.20	400.80	392.09	6.354	6.396	6.459	6.565	99
100	400.00	346.410 2	406.00	407.20	404.80	396.09	6.354	6.396	6.460	6.565	100

表 11 30°内花键
模数 $m=5\text{ mm}$ 作用齿槽宽最小值 $E_{v, \min}=7.854\text{ mm}$ 单位为毫米

齿数 z	分度圆 直径 D	基圆 直径 D_b	大径 D_a		渐开线终 止圆直径 $D_{Fi, \min}$	小径 D_i	实际齿槽宽最大值 $E_{\max}=E_{v, \min}+(T+\lambda)$				齿数 z
			平齿根	圆齿根			4H	5H	6H	7H	
10	50.00	43.301 3	57.50	59.00	56.00	46.21	7.907	7.939	7.987	8.066	10
11	55.00	47.631 4	62.50	64.00	61.00	51.09	7.908	7.940	7.988	8.069	11
12	60.00	51.961 5	67.50	69.00	66.00	55.99	7.908	7.941	7.990	8.071	12
13	65.00	56.291 7	72.50	74.00	71.00	60.91	7.909	7.942	7.991	8.073	13
14	70.00	60.621 8	77.50	79.00	76.00	65.84	7.909	7.942	7.992	8.075	14
15	75.00	64.951 9	82.50	84.00	81.00	70.78	7.910	7.943	7.993	8.077	15
16	80.00	69.282 0	87.50	89.00	86.00	75.73	7.910	7.944	7.995	8.079	16
17	85.00	73.612 2	92.50	94.00	91.00	80.68	7.911	7.945	7.996	8.081	17
18	90.00	77.942 3	97.50	99.00	96.00	85.64	7.911	7.945	7.997	8.082	18
19	95.00	82.272 4	102.50	104.00	101.00	90.60	7.912	7.946	7.998	8.084	19
20	100.00	86.602 5	107.50	109.00	106.00	95.57	7.912	7.947	7.999	8.086	20
21	105.00	90.932 7	112.50	114.00	111.00	100.54	7.912	7.947	8.000	8.087	21
22	110.00	95.262 8	117.50	119.00	116.00	105.52	7.913	7.948	8.001	8.089	22
23	115.00	99.592 9	122.50	124.00	121.00	110.49	7.913	7.948	8.002	8.090	23
24	120.00	103.923 0	127.50	129.00	126.00	115.47	7.913	7.949	8.003	8.092	24
25	125.00	108.253 2	132.50	134.00	131.00	120.45	7.914	7.950	8.003	8.093	25
26	130.00	112.583 3	137.50	139.00	136.00	125.43	7.914	7.950	8.004	8.094	26
27	135.00	116.913 4	142.50	144.00	141.00	130.42	7.914	7.951	8.005	8.096	27
28	140.00	121.243 6	147.50	149.00	146.00	135.40	7.915	7.951	8.006	8.097	28
29	145.00	125.573 7	152.50	154.00	151.00	140.39	7.915	7.952	8.007	8.098	29
30	150.00	129.903 8	157.50	159.00	156.00	145.37	7.915	7.952	8.008	8.100	30
31	155.00	134.233 9	162.50	164.00	161.00	150.36	7.916	7.953	8.008	8.101	31
32	160.00	138.564 1	167.50	169.00	166.00	155.35	7.916	7.953	8.009	8.102	32
33	165.00	142.894 2	172.50	174.00	171.00	160.34	7.916	7.954	8.010	8.103	33
34	170.00	147.224 3	177.50	179.00	176.00	165.33	7.917	7.954	8.011	8.105	34
35	175.00	151.554 4	182.50	184.00	181.00	170.32	7.917	7.955	8.011	8.106	35
36	180.00	155.884 5	187.50	189.00	186.00	175.31	7.917	7.955	8.012	8.107	36
37	185.00	160.214 7	192.50	194.00	191.00	180.30	7.917	7.956	8.013	8.108	37
38	190.00	164.544 8	197.50	199.00	196.00	185.29	7.918	7.956	8.013	8.109	38
39	195.00	168.875 0	202.50	204.00	201.00	190.29	7.918	7.956	8.014	8.110	39
40	200.00	173.205 1	207.50	209.00	206.00	195.28	7.918	7.957	8.015	8.111	40
41	205.00	177.535 2	212.50	214.00	211.00	200.27	7.919	7.957	8.015	8.112	41
42	210.00	181.865 3	217.50	219.00	216.00	205.26	7.919	7.958	8.016	8.113	42
43	215.00	186.195 5	222.50	224.00	221.00	210.26	7.919	7.958	8.017	8.114	43
44	220.00	190.525 6	227.50	229.00	226.00	215.25	7.919	7.959	8.017	8.116	44
45	225.00	194.855 7	232.50	234.00	231.00	220.25	7.920	7.959	8.018	8.117	45
46	230.00	199.185 8	237.50	239.00	236.00	225.24	7.920	7.959	8.019	8.118	46
47	235.00	203.516 0	242.50	244.00	241.00	230.24	7.920	7.960	8.019	8.119	47
48	240.00	207.846 1	247.50	249.00	246.00	235.23	7.920	7.960	8.020	8.120	48
49	245.00	212.176 2	252.50	254.00	251.00	240.23	7.921	7.961	8.021	8.120	49
50	250.00	216.506 3	257.50	259.00	256.00	245.22	7.921	7.961	8.021	8.121	50
51	255.00	220.836 5	262.50	264.00	261.00	250.22	7.921	7.961	8.022	8.122	51
52	260.00	225.166 6	267.50	269.00	266.00	255.21	7.921	7.962	8.022	8.123	52
53	265.00	229.496 7	272.50	274.00	271.00	260.21	7.922	7.962	8.023	8.124	53
54	270.00	233.826 9	277.50	279.00	276.00	265.20	7.922	7.962	8.023	8.125	54
55	275.00	238.157 0	282.50	284.00	281.00	270.20	7.922	7.963	8.024	8.126	55

表 11 (续)

单位为毫米

齿数 z	分度圆 直径 D	基圆 直径 D_b	大径 D_e		渐开线终 止圆直径 $D_{F, \min}$	小径 D_i	实际齿槽宽最大值 $E_{\max} = E_{v, \min} + (T + \lambda)$				齿数 z
			平齿根	圆齿根			4H	5H	6H	7H	
56	280.00	242.487 1	287.50	289.00	286.00	275.20	7.922	7.963	8.025	8.127	56
57	285.00	246.817 2	292.50	294.00	291.00	280.19	7.922	7.964	8.025	8.128	57
58	290.00	251.147 4	297.50	299.00	296.00	285.19	7.923	7.964	8.026	8.129	58
59	295.00	255.477 5	302.50	304.00	301.00	290.19	7.923	7.964	8.026	8.130	59
60	300.00	259.807 6	307.50	309.00	306.00	295.18	7.923	7.965	8.027	8.131	60
61	305.00	264.137 7	312.50	314.00	311.00	300.18	7.923	7.965	8.027	8.131	61
62	310.00	268.467 9	317.50	319.00	316.00	305.18	7.924	7.965	8.028	8.132	62
63	315.00	272.798 0	322.50	324.00	321.00	310.17	7.924	7.966	8.028	8.133	63
64	320.00	277.128 1	327.50	329.00	326.00	315.17	7.924	7.966	8.029	8.134	64
65	325.00	281.458 3	332.50	334.00	331.00	320.17	7.924	7.966	8.029	8.135	65
66	330.00	285.788 4	337.50	339.00	336.00	325.17	7.924	7.967	8.030	8.136	66
67	335.00	290.118 5	342.50	344.00	341.00	330.16	7.925	7.967	8.031	8.136	67
68	340.00	294.448 6	347.50	349.00	346.00	335.16	7.925	7.967	8.031	8.137	68
69	345.00	298.778 8	352.50	354.00	351.00	340.16	7.925	7.968	8.032	8.138	69
70	350.00	303.108 9	357.50	359.00	356.00	345.16	7.925	7.968	8.032	8.139	70
71	355.00	307.439 0	362.50	364.00	361.00	350.15	7.925	7.968	8.033	8.140	71
72	360.00	311.769 1	367.50	369.00	366.00	355.15	7.926	7.969	8.033	8.140	72
73	365.00	316.099 3	372.50	374.00	371.00	360.15	7.926	7.969	8.034	8.141	73
74	370.00	320.429 4	377.50	379.00	376.00	365.15	7.926	7.969	8.034	8.142	74
75	375.00	324.759 5	382.50	384.00	381.00	370.15	7.926	7.970	8.034	8.143	75
76	380.00	329.089 6	387.50	389.00	386.00	375.14	7.926	7.970	8.035	8.144	76
77	385.00	333.419 8	392.50	394.00	391.00	380.14	7.927	7.970	8.035	8.144	77
78	390.00	337.749 9	397.50	399.00	396.00	385.14	7.927	7.970	8.036	8.145	78
79	395.00	342.080 0	402.50	404.00	401.00	390.14	7.927	7.971	8.036	8.146	79
80	400.00	346.410 2	407.50	409.00	406.00	395.14	7.927	7.971	8.037	8.147	80
81	405.00	350.740 3	412.50	414.00	411.00	400.14	7.927	7.971	8.037	8.147	81
82	410.00	355.070 4	417.50	419.00	416.00	405.13	7.928	7.972	8.038	8.148	82
83	415.00	359.400 5	422.50	424.00	421.00	410.13	7.928	7.972	8.038	8.149	83
84	420.00	363.730 7	427.50	429.00	426.00	415.13	7.928	7.972	8.039	8.150	84
85	425.00	368.060 8	432.50	434.00	431.00	420.13	7.928	7.973	8.039	8.150	85
86	430.00	372.390 9	437.50	439.00	436.00	425.13	7.928	7.973	8.040	8.151	86
87	435.00	376.721 0	442.50	444.00	441.00	430.13	7.928	7.973	8.040	8.152	87
88	440.00	381.051 2	447.50	449.00	446.00	435.12	7.929	7.973	8.041	8.152	88
89	445.00	385.381 3	452.50	454.00	451.00	440.12	7.929	7.974	8.041	8.153	89
90	450.00	389.711 4	457.50	459.00	456.00	445.12	7.929	7.974	8.041	8.154	90
91	455.00	394.041 6	462.50	464.00	461.00	450.12	7.929	7.974	8.042	8.155	91
92	460.00	398.371 7	467.50	469.00	466.00	455.12	7.929	7.975	8.042	8.155	92
93	465.00	402.701 8	472.50	474.00	471.00	460.12	7.929	7.975	8.043	8.156	93
94	470.00	407.031 9	477.50	479.00	476.00	465.12	7.930	7.975	8.043	8.157	94
95	475.00	411.362 1	482.50	484.00	481.00	470.12	7.930	7.975	8.044	8.157	95
96	480.00	415.692 2	487.50	489.00	486.00	475.11	7.930	7.976	8.044	8.158	96
97	485.00	420.022 3	492.50	494.00	491.00	480.11	7.930	7.976	8.044	8.159	97
98	490.00	424.352 4	497.50	499.00	496.00	485.11	7.930	7.976	8.045	8.159	98
99	495.00	428.682 6	502.50	504.00	501.00	490.11	7.931	7.976	8.045	8.160	99
100	500.00	433.012 7	507.50	509.00	506.00	495.11	7.931	7.977	8.046	8.161	100

表 12 30°内花键
模数 $m=6\text{ mm}$ 作用齿槽宽最小值 $E_{v,\min}=9.425\text{ mm}$ 单位为毫米

齿数 z	分度圆 直径 D	基圆 直径 D_b	大径 D_e		渐开线终 止圆直径 $D_{Fi,\min}$	小径 D_i	实际齿槽宽最大值 $E_{\max}=E_{v,\min}+(T+\lambda)$				齿数 z
			平齿根	圆齿根			4H	5H	6H	7H	
10	60.00	51.961 5	69.00	70.80	67.20	55.45	9.481	9.515	9.566	9.566	10
11	66.00	57.157 7	75.00	76.80	73.20	61.31	9.482	9.516	9.568	9.568	11
12	72.00	62.353 8	81.00	82.80	79.20	67.19	9.483	9.517	9.569	9.569	12
13	78.00	67.550 0	87.00	88.80	85.20	73.09	9.483	9.518	9.571	9.571	13
14	84.00	72.746 1	93.00	94.80	91.20	79.01	9.484	9.519	9.572	9.572	14
15	90.00	77.942 3	99.00	100.80	97.20	84.93	9.484	9.520	9.573	9.573	15
16	96.00	83.138 4	105.00	106.80	103.20	90.87	9.485	9.521	9.575	9.575	16
17	102.00	88.334 6	111.00	112.80	109.20	96.82	9.485	9.521	9.576	9.576	17
18	108.00	93.530 7	117.00	118.80	115.20	102.77	9.486	9.522	9.577	9.577	18
19	114.00	98.726 9	123.00	124.80	121.20	108.73	9.486	9.523	9.578	9.578	19
20	120.00	103.923 0	129.00	130.80	127.20	114.69	9.487	9.524	9.579	9.579	20
21	126.00	109.119 2	135.00	136.80	133.20	120.65	9.487	9.524	9.580	9.580	21
22	132.00	114.315 4	141.00	142.80	139.20	126.62	9.487	9.525	9.581	9.581	22
23	138.00	119.511 5	147.00	148.80	145.20	132.59	9.488	9.526	9.582	9.582	23
24	144.00	124.707 7	153.00	154.80	151.20	138.57	9.488	9.526	9.583	9.583	24
25	150.00	129.903 8	159.00	160.80	157.20	144.54	9.489	9.527	9.584	9.584	25
26	156.00	135.100 0	165.00	166.80	163.20	150.52	9.489	9.527	9.585	9.585	26
27	162.00	140.296 1	171.00	172.80	169.20	156.50	9.489	9.528	9.586	9.586	27
28	168.00	145.492 3	177.00	178.80	175.20	162.48	9.490	9.529	9.587	9.587	28
29	174.00	150.688 4	183.00	184.80	181.20	168.47	9.490	9.529	9.588	9.588	29
30	180.00	155.884 6	189.00	190.80	187.20	174.45	9.490	9.530	9.589	9.589	30
31	186.00	161.080 7	195.00	196.80	193.20	180.43	9.491	9.530	9.589	9.589	31
32	192.00	166.276 9	201.00	202.80	199.20	186.42	9.491	9.531	9.590	9.590	32
33	198.00	171.473 0	207.00	208.80	205.20	192.41	9.491	9.531	9.591	9.591	33
34	204.00	176.669 2	213.00	214.80	211.20	198.39	9.492	9.532	9.592	9.592	34
35	210.00	181.865 3	219.00	220.80	217.20	204.38	9.492	9.532	9.593	9.593	35
36	216.00	187.061 5	225.00	226.80	223.20	210.37	9.492	9.533	9.593	9.593	36
37	222.00	192.257 6	231.00	232.80	229.20	216.36	9.493	9.533	9.594	9.594	37
38	228.00	197.453 8	237.00	238.80	235.20	222.35	9.493	9.534	9.595	9.595	38
39	234.00	202.649 9	243.00	244.80	241.20	228.34	9.493	9.534	9.596	9.596	39
40	240.00	207.846 1	249.00	250.80	247.20	234.33	9.493	9.535	9.596	9.596	40
41	246.00	213.042 2	255.00	256.80	253.20	240.33	9.494	9.535	9.597	9.597	41
42	252.00	218.238 4	261.00	262.80	259.20	246.32	9.494	9.536	9.598	9.598	42
43	258.00	223.434 6	267.00	268.80	265.20	252.31	9.494	9.536	9.599	9.599	43
44	264.00	228.630 7	273.00	274.80	271.20	258.30	9.495	9.536	9.599	9.599	44
45	270.00	233.826 9	279.00	280.80	277.20	264.30	9.495	9.537	9.600	9.600	45
46	276.00	239.023 0	285.00	286.80	283.20	270.29	9.495	9.537	9.601	9.601	46
47	282.00	244.219 2	291.00	292.80	289.20	276.28	9.495	9.538	9.601	9.601	47
48	288.00	249.415 3	297.00	298.80	295.20	282.28	9.496	9.538	9.602	9.602	48
49	294.00	254.611 5	303.00	304.80	301.20	288.27	9.496	9.539	9.603	9.603	49
50	300.00	259.807 6	309.00	310.80	307.20	294.27	9.496	9.539	9.603	9.603	50
51	306.00	265.003 8	315.00	316.80	313.20	300.26	9.496	9.539	9.604	9.604	51
52	312.00	270.199 9	321.00	322.80	319.20	306.26	9.497	9.540	9.605	9.605	52
53	318.00	275.396 1	327.00	328.80	325.20	312.25	9.497	9.540	9.605	9.605	53
54	324.00	280.592 2	333.00	334.80	331.20	318.25	9.497	9.541	9.606	9.606	54
55	330.00	285.788 4	339.00	340.80	337.20	324.24	9.497	9.541	9.607	9.607	55

表 12 (续)

单位为毫米

齿数 <i>z</i>	分度圆 直径 <i>D</i>	基圆 直径 <i>D_b</i>	大径 <i>D_a</i>		渐开线终 止圆直径 <i>D_{F1 min}</i>	小径 <i>D_i</i>	实际齿槽宽最大值 <i>E_{max} = E_{v min} + (T + λ)</i>				齿数 <i>z</i>
			平齿根	圆齿根			4H	5H	6H	7H	
56	336.00	290.984 5	345.00	346.80	343.20	330.24	9.498	9.542	9.607	9.717	56
57	342.00	296.180 7	351.00	352.80	349.20	336.23	9.498	9.542	9.608	9.718	57
58	348.00	301.376 8	357.00	358.80	355.20	342.23	9.498	9.542	9.608	9.719	58
59	354.00	306.573 0	363.00	364.80	361.20	348.22	9.498	9.543	9.609	9.720	59
60	360.00	311.769 1	369.00	370.80	367.20	354.22	9.499	9.543	9.610	9.720	60
61	366.00	316.965 3	375.00	376.80	373.20	360.22	9.499	9.543	9.610	9.721	61
62	372.00	322.161 4	381.00	382.80	379.20	366.21	9.499	9.544	9.611	9.722	62
63	378.00	327.357 6	387.00	388.80	385.20	372.21	9.499	9.544	9.611	9.723	63
64	384.00	332.553 8	393.00	394.80	391.20	378.21	9.500	9.545	9.612	9.724	64
65	390.00	337.749 9	399.00	400.80	397.20	384.20	9.500	9.545	9.612	9.725	65
66	396.00	342.946 1	405.00	406.80	403.20	390.20	9.500	9.545	9.613	9.726	66
67	402.00	348.142 2	411.00	412.80	409.20	396.20	9.500	9.546	9.614	9.727	67
68	408.00	353.338 4	417.00	418.80	415.20	402.19	9.501	9.546	9.614	9.728	68
69	414.00	358.534 6	423.00	424.80	421.20	408.19	9.501	9.546	9.615	9.729	69
70	420.00	363.730 7	429.00	430.80	427.20	414.19	9.501	9.547	9.615	9.730	70
71	426.00	368.926 8	435.00	436.80	433.20	420.19	9.501	9.547	9.616	9.730	71
72	432.00	374.123 0	441.00	442.80	439.20	426.18	9.501	9.547	9.616	9.731	72
73	438.00	379.319 1	447.00	448.80	445.20	432.18	9.502	9.548	9.617	9.732	73
74	444.00	384.515 3	453.00	454.80	451.20	438.18	9.502	9.548	9.617	9.733	74
75	450.00	389.711 4	459.00	460.80	457.20	444.18	9.502	9.548	9.618	9.734	75
76	456.00	394.907 6	465.00	466.80	463.20	450.17	9.502	9.549	9.619	9.735	76
77	462.00	400.103 7	471.00	472.80	469.20	456.17	9.502	9.549	9.619	9.736	77
78	468.00	405.299 9	477.00	478.80	475.20	462.17	9.503	9.549	9.620	9.736	78
79	474.00	410.496 0	483.00	484.80	481.20	468.17	9.503	9.550	9.620	9.737	79
80	480.00	415.692 2	489.00	490.80	487.20	474.16	9.503	9.550	9.621	9.738	80
81	486.00	420.888 3	495.00	496.80	493.20	480.16	9.503	9.550	9.621	9.739	81
82	492.00	426.084 5	501.00	502.80	499.20	486.16	9.504	9.551	9.622	9.740	82
83	498.00	431.280 6	507.00	508.80	505.20	492.16	9.504	9.551	9.622	9.741	83
84	504.00	436.476 8	513.00	514.80	511.20	498.16	9.504	9.552	9.624	9.743	84
85	510.00	441.672 9	519.00	520.80	517.20	504.15	9.505	9.552	9.624	9.744	85
86	516.00	446.869 1	525.00	526.80	523.20	510.15	9.505	9.553	9.625	9.745	86
87	522.00	452.065 3	531.00	532.80	529.20	516.15	9.505	9.553	9.625	9.746	87
88	528.00	457.261 4	537.00	538.80	535.20	522.15	9.505	9.554	9.626	9.747	88
89	534.00	462.457 6	543.00	544.80	541.20	528.15	9.506	9.554	9.627	9.748	89
90	540.00	467.653 7	549.00	550.80	547.20	534.15	9.506	9.554	9.627	9.749	90
91	546.00	472.849 9	555.00	556.80	553.20	540.14	9.506	9.555	9.628	9.750	91
92	552.00	478.046 0	561.00	562.80	559.20	546.14	9.506	9.555	9.628	9.751	92
93	558.00	483.242 2	567.00	568.80	565.20	552.14	9.506	9.555	9.629	9.752	93
94	564.00	488.438 3	573.00	574.80	571.20	558.14	9.507	9.556	9.630	9.752	94
95	570.00	493.634 5	579.00	580.80	577.20	564.14	9.507	9.556	9.630	9.753	95
96	576.00	498.830 6	585.00	586.80	583.20	570.14	9.507	9.557	9.631	9.754	96
97	582.00	504.026 8	591.00	592.80	589.20	576.14	9.507	9.557	9.631	9.755	97
98	588.00	509.222 9	597.00	598.80	595.20	582.13	9.508	9.557	9.632	9.756	98
99	594.00	514.419 1	603.00	604.80	601.20	588.13	9.508	9.558	9.633	9.757	99
100	600.00	519.615 2	609.00	610.80	607.20	594.13	9.508	9.558	9.633	9.758	100

表 13 30°内花键

模数 $m=8\text{ mm}$ 作用齿槽宽最小值 $E_{v\min}=12.566\text{ mm}$

单位为毫米

齿数 z	分度圆 直径 D	基圆 直径 D_b	大径 D_{ei}		渐开线终 止圆直径 $D_{Fi\min}$	小径 D_{ii}	实际齿槽宽最大值 $E_{\max}=E_{v\min}+(T+\lambda)$				齿数 z
			平齿根	圆齿根			4H	5H	6H	7H	
10	80.00	69.282 0	92.00	94.40	89.60	73.94	12.629	12.666	12.723	12.816	10
11	88.00	76.210 2	100.00	102.40	97.60	81.74	12.630	12.667	12.724	12.819	11
12	96.00	83.138 4	108.00	110.40	105.60	89.59	12.630	12.669	12.726	12.822	12
13	104.00	90.066 6	116.00	118.40	113.60	97.45	12.631	12.670	12.728	12.824	13
14	112.00	96.994 8	124.00	126.40	121.60	105.34	12.631	12.671	12.729	12.827	14
15	120.00	103.923 0	132.00	134.40	129.60	113.25	12.632	12.671	12.731	12.829	15
16	128.00	110.851 3	140.00	142.40	137.60	121.16	12.633	12.672	12.732	12.831	16
17	136.00	117.779 5	148.00	150.40	145.60	129.09	12.633	12.673	12.733	12.833	17
18	144.00	124.707 7	156.00	158.40	153.60	137.02	12.634	12.674	12.735	12.836	18
19	152.00	131.635 9	164.00	166.40	161.60	144.97	12.634	12.675	12.736	12.838	19
20	160.00	138.564 1	172.00	174.40	169.60	152.92	12.635	12.676	12.737	12.840	20
21	168.00	145.492 3	180.00	182.40	177.60	160.87	12.635	12.676	12.738	12.842	21
22	176.00	152.420 5	188.00	190.40	185.60	168.83	12.636	12.677	12.739	12.843	22
23	184.00	159.348 7	196.00	198.40	193.60	176.79	12.636	12.678	12.741	12.845	23
24	192.00	166.276 9	204.00	206.40	201.60	184.76	12.637	12.679	12.742	12.847	24
25	200.00	173.205 1	212.00	214.40	209.60	192.72	12.637	12.679	12.743	12.849	25
26	208.00	180.133 3	220.00	222.40	217.60	200.70	12.637	12.680	12.744	12.850	26
27	216.00	187.061 5	228.00	230.40	225.60	208.67	12.638	12.681	12.745	12.852	27
28	224.00	193.989 7	236.00	238.40	233.60	216.64	12.638	12.681	12.746	12.854	28
29	232.00	200.917 9	244.00	246.40	241.60	224.62	12.639	12.682	12.747	12.855	29
30	240.00	207.846 1	252.00	254.40	249.60	232.60	12.639	12.683	12.748	12.857	30
31	248.00	214.774 3	260.00	262.40	257.60	240.58	12.639	12.683	12.749	12.858	31
32	256.00	221.702 5	268.00	270.40	265.60	248.56	12.640	12.684	12.750	12.860	32
33	264.00	228.630 7	276.00	278.40	273.60	256.54	12.640	12.684	12.751	12.861	33
34	272.00	235.558 9	284.00	286.40	281.60	264.53	12.641	12.685	12.752	12.863	34
35	280.00	242.487 1	292.00	294.40	289.60	272.51	12.641	12.686	12.753	12.864	35
36	288.00	249.415 3	300.00	302.40	297.60	280.50	12.641	12.686	12.754	12.866	36
37	296.00	256.343 5	308.00	310.40	305.60	288.48	12.642	12.687	12.754	12.867	37
38	304.00	263.271 7	316.00	318.40	313.60	296.47	12.642	12.687	12.755	12.869	38
39	312.00	270.199 9	324.00	326.40	321.60	304.46	12.642	12.688	12.756	12.870	39
40	320.00	277.128 1	332.00	334.40	329.60	312.45	12.643	12.688	12.757	12.871	40
41	328.00	284.056 3	340.00	342.40	337.60	320.43	12.643	12.689	12.758	12.873	41
42	336.00	290.984 5	348.00	350.40	345.60	328.42	12.643	12.689	12.759	12.874	42
43	344.00	297.912 7	356.00	358.40	353.60	336.41	12.644	12.690	12.759	12.875	43
44	352.00	304.840 9	364.00	366.40	361.60	344.40	12.644	12.690	12.760	12.877	44
45	360.00	311.769 1	372.00	374.40	369.60	352.39	12.644	12.691	12.761	12.878	45
46	368.00	318.697 3	380.00	382.40	377.60	360.39	12.645	12.691	12.762	12.879	46
47	376.00	325.625 5	388.00	390.40	385.60	368.38	12.645	12.692	12.763	12.880	47
48	384.00	332.553 8	396.00	398.40	393.60	376.37	12.645	12.692	12.763	12.882	48
49	392.00	339.482 0	404.00	406.40	401.60	384.36	12.645	12.693	12.764	12.883	49
50	400.00	346.410 2	412.00	414.40	409.60	392.35	12.646	12.693	12.765	12.884	50
51	408.00	353.338 4	420.00	422.40	417.60	400.35	12.646	12.694	12.766	12.885	51
52	416.00	360.266 6	428.00	430.40	425.60	408.34	12.646	12.694	12.766	12.886	52
53	424.00	367.194 8	436.00	438.40	433.60	416.33	12.647	12.695	12.767	12.888	53
54	432.00	374.123 0	444.00	446.40	441.60	424.33	12.647	12.695	12.768	12.889	54
55	440.00	381.051 2	452.00	454.40	449.60	432.32	12.647	12.696	12.769	12.890	55

表 13 (续)

单位为毫米

齿数 z	分度圆 直径 D	基圆 直径 D_b	大径 D_e		渐开线终 止圆直径 $D_{F_{min}}$	小径 D_i	实际齿槽宽最大值 $E_{max} = E_{v_{min}} + (T + \lambda)$				齿数 z
			平齿根	圆齿根			4H	5H	6H	7H	
56	448.00	387.979 4	460.00	462.40	457.60	440.32	12.648	12.696	12.769	12.891	56
57	456.00	394.907 6	468.00	470.40	465.60	448.31	12.648	12.697	12.770	12.892	57
58	464.00	401.835 8	476.00	478.40	473.60	456.30	12.648	12.697	12.771	12.893	58
59	472.00	408.764 0	484.00	486.40	481.60	464.30	12.648	12.698	12.771	12.894	59
60	480.00	415.692 2	492.00	494.40	489.60	472.29	12.649	12.698	12.772	12.895	60
61	488.00	422.620 4	500.00	502.40	497.60	480.29	12.649	12.698	12.773	12.897	61
62	496.00	429.548 6	508.00	510.40	505.60	488.28	12.649	12.699	12.773	12.898	62
63	504.00	436.476 8	516.00	518.40	513.60	496.28	12.650	12.700	12.775	12.900	63
64	512.00	443.405 0	524.00	526.40	521.60	504.28	12.650	12.700	12.776	12.902	64
65	520.00	450.333 2	532.00	534.40	529.60	512.27	12.650	12.701	12.777	12.903	65
66	528.00	457.261 4	540.00	542.40	537.60	520.27	12.651	12.701	12.777	12.904	66
67	536.00	464.189 6	548.00	550.40	545.60	528.26	12.651	12.702	12.778	12.905	67
68	544.00	471.117 8	556.00	558.40	553.60	536.26	12.651	12.702	12.779	12.907	68
69	552.00	478.046 0	564.00	566.40	561.60	544.25	12.652	12.703	12.780	12.908	69
70	560.00	484.974 2	572.00	574.40	569.60	552.25	12.652	12.704	12.781	12.909	70
71	568.00	491.902 4	580.00	582.40	577.60	560.25	12.652	12.704	12.781	12.911	71
72	576.00	498.830 6	588.00	590.40	585.60	568.24	12.653	12.705	12.782	12.912	72
73	584.00	505.758 8	596.00	598.40	593.60	576.24	12.653	12.705	12.783	12.913	73
74	592.00	512.687 0	604.00	606.40	601.60	584.24	12.653	12.706	12.784	12.914	74
75	600.00	519.615 2	612.00	614.40	609.60	592.23	12.654	12.706	12.785	12.916	75
76	608.00	526.543 4	620.00	622.40	617.60	600.23	12.654	12.707	12.785	12.917	76
77	616.00	533.471 6	628.00	630.40	625.60	608.23	12.654	12.707	12.786	12.918	77
78	624.00	540.399 8	636.00	638.40	633.60	616.22	12.655	12.708	12.787	12.919	78
79	632.00	547.328 0	644.00	646.40	641.60	624.22	12.655	12.708	12.788	12.921	79
80	640.00	554.256 3	652.00	654.40	649.60	632.22	12.655	12.709	12.789	12.922	80
81	648.00	561.184 5	660.00	662.40	657.60	640.22	12.656	12.709	12.789	12.923	81
82	656.00	568.112 7	668.00	670.40	665.60	648.21	12.656	12.710	12.790	12.925	82
83	664.00	575.040 9	676.00	678.40	673.60	656.21	12.656	12.710	12.791	12.926	83
84	672.00	581.969 1	684.00	686.40	681.60	664.21	12.657	12.711	12.792	12.927	84
85	680.00	588.897 3	692.00	694.40	689.60	672.21	12.657	12.711	12.793	12.928	85
86	688.00	595.825 5	700.00	702.40	697.60	680.20	12.657	12.712	12.793	12.930	86
87	696.00	602.753 7	708.00	710.40	705.60	688.20	12.658	12.712	12.794	12.931	87
88	704.00	609.681 9	716.00	718.40	713.60	696.20	12.658	12.713	12.795	12.932	88
89	712.00	616.610 1	724.00	726.40	721.60	704.20	12.658	12.713	12.796	12.934	89
90	720.00	623.538 3	732.00	734.40	729.60	712.19	12.658	12.714	12.797	12.935	90
91	728.00	630.466 5	740.00	742.40	737.60	720.19	12.659	12.714	12.797	12.936	91
92	736.00	637.394 7	748.00	750.40	745.60	728.19	12.659	12.715	12.798	12.937	92
93	744.00	644.322 9	756.00	758.40	753.60	736.19	12.659	12.715	12.799	12.939	93
94	752.00	651.251 1	764.00	766.40	761.60	744.19	12.660	12.716	12.800	12.940	94
95	760.00	658.179 3	772.00	774.40	769.60	752.18	12.660	12.716	12.801	12.941	95
96	768.00	665.107 5	780.00	782.40	777.60	760.18	12.660	12.717	12.801	12.943	96
97	776.00	672.035 7	788.00	790.40	785.60	768.18	12.661	12.717	12.802	12.944	97
98	784.00	678.963 9	796.00	798.40	793.60	776.18	12.661	12.718	12.803	12.945	98
99	792.00	685.892 1	804.00	806.40	801.60	784.18	12.661	12.718	12.804	12.946	99
100	800.00	692.820 3	812.00	814.40	809.60	792.17	12.662	12.719	12.805	12.948	100

表 14 30°内花键
模数 $m = 10 \text{ mm}$ 作用齿槽宽最小值 $E_{v \min} = 15.708 \text{ mm}$ 单位为毫米

齿数 z	分度圆 直径 D	基圆 直径 D_b	大径 D_e		渐开线终 止圆直径 $D_{Fi \min}$	小径 D_i	实际齿槽宽最大值 $E_{\max} = E_{v \min} + (T + \lambda)$				齿数 z
			平齿根	圆齿根			4H	5H	6H	7H	
10	100.00	86.602 5	115.00	118.00	112.00	92.42	15.775	15.816	15.877	15.978	10
11	110.00	95.262 8	125.00	128.00	122.00	102.18	15.776	15.817	15.879	15.981	11
12	120.00	103.923 0	135.00	138.00	132.00	111.98	15.777	15.818	15.881	15.984	12
13	130.00	112.583 3	145.00	148.00	142.00	121.82	15.778	15.820	15.882	15.987	13
14	140.00	121.243 6	155.00	158.00	152.00	131.68	15.778	15.821	15.884	15.990	14
15	150.00	129.903 8	165.00	168.00	162.00	141.56	15.779	15.822	15.886	15.992	15
16	160.00	138.564 1	175.00	178.00	172.00	151.45	15.780	15.823	15.887	15.995	16
17	170.00	147.224 3	185.00	188.00	182.00	161.36	15.780	15.824	15.889	15.997	17
18	180.00	155.884 6	195.00	198.00	192.00	171.28	15.781	15.824	15.890	15.999	18
19	190.00	164.544 8	205.00	208.00	202.00	181.21	15.781	15.825	15.891	16.002	19
20	200.00	173.205 1	215.00	218.00	212.00	191.15	15.782	15.826	15.893	16.004	20
21	210.00	181.865 3	225.00	228.00	222.00	201.09	15.782	15.827	15.894	16.006	21
22	220.00	190.525 6	235.00	238.00	232.00	211.04	15.783	15.828	15.895	16.008	22
23	230.00	199.185 8	245.00	248.00	242.00	220.99	15.783	15.829	15.897	16.010	23
24	240.00	207.846 1	255.00	258.00	252.00	230.95	15.784	15.830	15.898	16.012	24
25	250.00	216.506 3	265.00	268.00	262.00	240.91	15.784	15.830	15.899	16.014	25
26	260.00	225.166 6	275.00	278.00	272.00	250.87	15.785	15.831	15.900	16.016	26
27	270.00	233.826 9	285.00	288.00	282.00	260.84	15.785	15.832	15.901	16.018	27
28	280.00	242.487 1	295.00	298.00	292.00	270.80	15.786	15.833	15.903	16.019	28
29	290.00	251.147 4	305.00	308.00	302.00	280.78	15.786	15.833	15.904	16.021	29
30	300.00	259.807 6	315.00	318.00	312.00	290.75	15.787	15.834	15.905	16.023	30
31	310.00	268.467 9	325.00	328.00	322.00	300.72	15.787	15.835	15.906	16.025	31
32	320.00	277.128 1	335.00	338.00	332.00	310.70	15.788	15.835	15.907	16.026	32
33	330.00	285.788 4	345.00	348.00	342.00	320.68	15.788	15.836	15.908	16.028	33
34	340.00	294.448 6	355.00	358.00	352.00	330.66	15.788	15.837	15.909	16.030	34
35	350.00	303.108 9	365.00	368.00	362.00	340.64	15.789	15.837	15.910	16.031	35
36	360.00	311.769 1	375.00	378.00	372.00	350.62	15.789	15.838	15.911	16.033	36
37	370.00	320.429 4	385.00	388.00	382.00	360.60	15.790	15.839	15.912	16.034	37
38	380.00	329.089 6	395.00	398.00	392.00	370.59	15.790	15.839	15.913	16.036	38
39	390.00	337.749 9	405.00	408.00	402.00	380.57	15.790	15.840	15.914	16.037	39
40	400.00	346.410 2	415.00	418.00	412.00	390.56	15.791	15.840	15.915	16.039	40
41	410.00	355.070 4	425.00	428.00	422.00	400.54	15.791	15.841	15.916	16.040	41
42	420.00	363.730 7	435.00	438.00	432.00	410.53	15.791	15.842	15.917	16.042	42
43	430.00	372.390 9	445.00	448.00	442.00	420.52	15.792	15.842	15.918	16.043	43
44	440.00	381.051 2	455.00	458.00	452.00	430.50	15.792	15.843	15.919	16.045	44
45	450.00	389.711 4	465.00	468.00	462.00	440.49	15.793	15.843	15.919	16.046	45
46	460.00	398.371 7	475.00	478.00	472.00	450.48	15.793	15.844	15.920	16.048	46
47	470.00	407.031 9	485.00	488.00	482.00	460.47	15.793	15.844	15.921	16.049	47
48	480.00	415.692 2	495.00	498.00	492.00	470.46	15.794	15.845	15.922	16.050	48
49	490.00	424.352 4	505.00	508.00	502.00	480.45	15.794	15.846	15.923	16.052	49
50	500.00	433.012 7	515.00	518.00	512.00	490.44	15.794	15.846	15.924	16.053	50
51	510.00	441.672 9	525.00	528.00	522.00	500.43	15.795	15.847	15.926	16.056	51
52	520.00	450.333 2	535.00	538.00	532.00	510.43	15.795	15.848	15.927	16.058	52
53	530.00	458.993 5	545.00	548.00	542.00	520.42	15.796	15.849	15.928	16.059	53
54	540.00	467.653 7	555.00	558.00	552.00	530.41	15.796	15.849	15.929	16.061	54
55	550.00	476.314 0	565.00	568.00	562.00	540.40	15.797	15.850	15.930	16.063	55

表 14 (续)

单位为毫米

齿数 <i>z</i>	分度圆 直径 <i>D</i>	基圆 直径 <i>D_b</i>	大径 <i>D_a</i>		渐开线终 止圆直径 <i>D_{Fi min}</i>	小径 <i>D_i</i>	实际齿槽宽最大值 $E_{max} = E_{v min} + (T + \lambda)$				齿数 <i>z</i>
			平齿根	圆齿根			4H	5H	6H	7H	
56	560.00	484.974 2	575.00	578.00	572.00	550.39	15.797	15.850	15.931	16.064	56
57	570.00	493.634 5	585.00	588.00	582.00	560.39	15.797	15.851	15.932	16.066	57
58	580.00	502.294 7	595.00	598.00	592.00	570.38	15.798	15.852	15.933	16.067	58
59	590.00	510.955 0	605.00	608.00	602.00	580.37	15.798	15.852	15.934	16.069	59
60	600.00	519.615 2	615.00	618.00	612.00	590.37	15.799	15.853	15.935	16.071	60
61	610.00	528.275 5	625.00	628.00	622.00	600.36	15.799	15.854	15.936	16.072	61
62	620.00	536.935 7	635.00	638.00	632.00	610.36	15.799	15.854	15.937	16.074	62
63	630.00	545.596 0	645.00	648.00	642.00	620.35	15.800	15.855	15.938	16.075	63
64	640.00	554.256 3	655.00	658.00	652.00	630.34	15.800	15.856	15.939	16.077	64
65	650.00	562.916 5	665.00	668.00	662.00	640.34	15.801	15.856	15.940	16.079	65
66	660.00	571.576 8	675.00	678.00	672.00	650.33	15.801	15.857	15.941	16.080	66
67	670.00	580.237 0	685.00	688.00	682.00	660.33	15.801	15.858	15.942	16.082	67
68	680.00	588.897 3	695.00	698.00	692.00	670.32	15.802	15.858	15.943	16.083	68
69	690.00	597.557 5	705.00	708.00	702.00	680.32	15.802	15.859	15.944	16.085	69
70	700.00	606.217 8	715.00	718.00	712.00	690.31	15.803	15.859	15.945	16.087	70
71	710.00	614.878 0	725.00	728.00	722.00	700.31	15.803	15.860	15.946	16.088	71
72	720.00	623.538 3	735.00	738.00	732.00	710.31	15.803	15.861	15.947	16.090	72
73	730.00	632.198 5	745.00	748.00	742.00	720.30	15.804	15.861	15.948	16.091	73
74	740.00	640.858 8	755.00	758.00	752.00	730.30	15.804	15.862	15.949	16.093	74
75	750.00	649.519 0	765.00	768.00	762.00	740.29	15.805	15.863	15.950	16.095	75
76	760.00	658.179 3	775.00	778.00	772.00	750.29	15.805	15.863	15.951	16.096	76
77	770.00	666.839 5	785.00	788.00	782.00	760.28	15.805	15.864	15.952	16.098	77
78	780.00	675.499 8	795.00	798.00	792.00	770.28	15.806	15.865	15.953	16.099	78
79	790.00	684.160 1	805.00	808.00	802.00	780.28	15.806	15.865	15.954	16.101	79
80	800.00	692.820 3	815.00	818.00	812.00	790.27	15.807	15.866	15.955	16.103	80
81	810.00	701.480 6	825.00	828.00	822.00	800.27	15.807	15.866	15.956	16.104	81
82	820.00	710.140 8	835.00	838.00	832.00	810.27	15.807	15.867	15.957	16.106	82
83	830.00	718.801 1	845.00	848.00	842.00	820.26	15.808	15.868	15.958	16.107	83
84	840.00	727.461 3	855.00	858.00	852.00	830.26	15.808	15.868	15.959	16.109	84
85	850.00	736.121 6	865.00	868.00	862.00	840.26	15.809	15.869	15.960	16.111	85
86	860.00	744.781 8	875.00	878.00	872.00	850.25	15.809	15.870	15.961	16.112	86
87	870.00	753.442 1	885.00	888.00	882.00	860.25	15.809	15.870	15.962	16.114	87
88	880.00	762.102 3	895.00	898.00	892.00	870.25	15.810	15.871	15.963	16.115	88
89	890.00	770.762 6	905.00	908.00	902.00	880.25	15.810	15.872	15.964	16.117	89
90	900.00	779.422 9	915.00	918.00	912.00	890.24	15.811	15.872	15.965	16.119	90
91	910.00	788.083 1	925.00	928.00	922.00	900.24	15.811	15.873	15.966	16.120	91
92	920.00	796.743 4	935.00	938.00	932.00	910.24	15.811	15.874	15.967	16.122	92
93	930.00	805.403 6	945.00	948.00	942.00	920.24	15.812	15.874	15.968	16.123	93
94	940.00	814.063 9	955.00	958.00	952.00	930.23	15.812	15.875	15.969	16.125	94
95	950.00	822.724 1	965.00	968.00	962.00	940.23	15.813	15.875	15.970	16.127	95
96	960.00	831.384 4	975.00	978.00	972.00	950.23	15.813	15.876	15.971	16.128	96
97	970.00	840.044 6	985.00	988.00	982.00	960.23	15.813	15.877	15.972	16.130	97
98	980.00	848.704 9	995.00	998.00	992.00	970.22	15.814	15.877	15.973	16.131	98
99	990.00	857.365 1	1 005.00	1 008.00	1 002.00	980.22	15.814	15.878	15.974	16.133	99
100	1 000.00	866.025 4	1 015.00	1 018.00	1 012.00	990.22	15.815	15.879	15.975	16.135	100

表 15 30°外花键

模数 $m=0.5\text{ mm}$ 作用齿厚最大值 $S_{v\text{ max}}=0.785\text{ mm}$

单位为毫米

齿数 z	分度圆 直径 D	基圆 直径 D_b	大径 D_{ce}	渐开线起 始圆直径 $D_{Fe\text{ max}}$	小径 D_{fe}		实际齿厚最小值 $S_{\text{min}}=S_{v\text{ max}}-(T+\lambda)$				齿数 z
					平齿根	圆齿根	4h	5h	6h	7h	
10	5.00	4.330 1	5.50	4.52	4.25	4.10	0.761	0.746	0.724	0.688	10
11	5.50	4.763 1	6.00	5.01	4.75	4.60	0.761	0.746	0.724	0.687	11
12	6.00	5.196 2	6.50	5.50	5.25	5.10	0.761	0.746	0.723	0.686	12
13	6.50	5.629 2	7.00	5.99	5.75	5.60	0.760	0.745	0.723	0.685	13
14	7.00	6.062 2	7.50	6.48	6.25	6.10	0.760	0.745	0.722	0.684	14
15	7.50	6.495 2	8.00	6.98	6.75	6.60	0.760	0.745	0.722	0.683	15
16	8.00	6.928 2	8.50	7.47	7.25	7.10	0.760	0.744	0.721	0.683	16
17	8.50	7.361 2	9.00	7.97	7.75	7.60	0.759	0.744	0.721	0.682	17
18	9.00	7.794 2	9.50	8.46	8.25	8.10	0.759	0.744	0.720	0.681	18
19	9.50	8.227 2	10.00	8.96	8.75	8.60	0.759	0.743	0.720	0.680	19
20	10.00	8.660 3	10.50	9.46	9.25	9.10	0.759	0.743	0.719	0.680	20
21	10.50	9.093 3	11.00	9.95	9.75	9.60	0.759	0.743	0.719	0.679	21
22	11.00	9.526 3	11.50	10.45	10.25	10.10	0.759	0.743	0.719	0.678	22
23	11.50	9.959 3	12.00	10.95	10.75	10.60	0.758	0.742	0.718	0.678	23
24	12.00	10.392 3	12.50	11.45	11.25	11.10	0.758	0.742	0.718	0.677	24
25	12.50	10.825 3	13.00	11.95	11.75	11.60	0.758	0.742	0.717	0.677	25
26	13.00	11.258 3	13.50	12.44	12.25	12.10	0.758	0.742	0.717	0.676	26
27	13.50	11.691 3	14.00	12.94	12.75	12.60	0.758	0.741	0.717	0.675	27
28	14.00	12.124 4	14.50	13.44	13.25	13.10	0.758	0.741	0.716	0.675	28
29	14.50	12.557 4	15.00	13.94	13.75	13.60	0.758	0.741	0.716	0.674	29
30	15.00	12.990 4	15.50	14.44	14.25	14.10	0.758	0.741	0.716	0.674	30
31	15.50	13.423 4	16.00	14.94	14.75	14.60	0.757	0.741	0.715	0.673	31
32	16.00	13.856 4	16.50	15.44	15.25	15.10	0.757	0.740	0.715	0.673	32
33	16.50	14.289 4	17.00	15.93	15.75	15.60	0.757	0.740	0.715	0.672	33
34	17.00	14.722 4	17.50	16.43	16.25	16.10	0.757	0.740	0.714	0.672	34
35	17.50	15.155 4	18.00	16.93	16.75	16.60	0.757	0.740	0.714	0.671	35
36	18.00	15.588 5	18.50	17.43	17.25	17.10	0.757	0.740	0.714	0.671	36
37	18.50	16.021 5	19.00	17.93	17.75	17.60	0.757	0.739	0.714	0.671	37
38	19.00	16.454 5	19.50	18.43	18.25	18.10	0.757	0.739	0.713	0.670	38
39	19.50	16.887 5	20.00	18.93	18.75	18.60	0.756	0.739	0.713	0.670	39
40	20.00	17.320 5	20.50	19.43	19.25	19.10	0.756	0.739	0.713	0.669	40
41	20.50	17.753 5	21.00	19.93	19.75	19.60	0.756	0.739	0.713	0.669	41
42	21.00	18.186 5	21.50	20.43	20.25	20.10	0.756	0.739	0.712	0.668	42
43	21.50	18.619 5	22.00	20.93	20.75	20.60	0.756	0.738	0.712	0.668	43
44	22.00	19.052 6	22.50	21.43	21.25	21.10	0.756	0.738	0.712	0.668	44
45	22.50	19.485 6	23.00	21.92	21.75	21.60	0.756	0.738	0.712	0.667	45
46	23.00	19.918 6	23.50	22.42	22.25	22.10	0.756	0.738	0.711	0.667	46
47	23.50	20.351 6	24.00	22.92	22.75	22.60	0.756	0.738	0.711	0.666	47
48	24.00	20.784 6	24.50	23.42	23.25	23.10	0.756	0.738	0.711	0.666	48
49	24.50	21.217 6	25.00	23.92	23.75	23.60	0.755	0.737	0.711	0.666	49
50	25.00	21.650 6	25.50	24.42	24.25	24.10	0.755	0.737	0.710	0.665	50
51	25.50	22.083 6	26.00	24.92	24.75	24.60	0.755	0.737	0.710	0.665	51
52	26.00	22.516 7	26.50	25.42	25.25	25.10	0.755	0.737	0.710	0.665	52
53	26.50	22.949 7	27.00	25.92	25.75	25.60	0.755	0.737	0.710	0.664	53
54	27.00	23.382 7	27.50	26.42	26.25	26.10	0.755	0.737	0.709	0.664	54
55	27.50	23.815 7	28.00	26.92	26.75	26.60	0.755	0.737	0.709	0.663	55

表 15 (续)

单位为毫米

齿数 z	分度圆 直径 D	基圆 直径 D_b	大径 D_{ee}	渐开线起 始圆直径 $D_{F_{cmax}}$	小径 D_{ic}		实际齿厚最小值 $S_{min} = S_{v_{max}} - (T + \lambda)$				齿数 z
					平齿根	圆齿根	4h	5h	6h	7h	
56	28.00	24.248 7	28.50	27.42	27.25	27.10	0.755	0.736	0.709	0.663	56
57	28.50	24.681 7	29.00	27.92	27.75	27.60	0.755	0.736	0.709	0.663	57
58	29.00	25.114 7	29.50	28.42	28.25	28.10	0.755	0.736	0.709	0.662	58
59	29.50	25.547 7	30.00	28.92	28.75	28.60	0.755	0.736	0.708	0.662	59
60	30.00	25.980 8	30.50	29.42	29.25	29.10	0.754	0.736	0.708	0.662	60
61	30.50	26.413 8	31.00	29.92	29.75	29.60	0.754	0.736	0.708	0.661	61
62	31.00	26.846 8	31.50	30.42	30.25	30.10	0.754	0.736	0.708	0.661	62
63	31.50	27.279 8	32.00	30.92	30.75	30.60	0.754	0.736	0.708	0.661	63
64	32.00	27.712 8	32.50	31.42	31.25	31.10	0.754	0.735	0.707	0.660	64
65	32.50	28.145 8	33.00	31.92	31.75	31.60	0.754	0.735	0.707	0.660	65
66	33.00	28.578 8	33.50	32.42	32.25	32.10	0.754	0.735	0.707	0.660	66
67	33.50	29.011 9	34.00	32.92	32.75	32.60	0.754	0.735	0.707	0.660	67
68	34.00	29.444 9	34.50	33.42	33.25	33.10	0.754	0.735	0.707	0.659	68
69	34.50	29.877 9	35.00	33.92	33.75	33.60	0.754	0.735	0.706	0.659	69
70	35.00	30.310 9	35.50	34.42	34.25	34.10	0.754	0.735	0.706	0.659	70
71	35.50	30.743 9	36.00	34.92	34.75	34.60	0.754	0.735	0.706	0.658	71
72	36.00	31.176 9	36.50	35.42	35.25	35.10	0.754	0.734	0.706	0.658	72
73	36.50	31.609 9	37.00	35.92	35.75	35.60	0.753	0.734	0.706	0.658	73
74	37.00	32.042 9	37.50	36.41	36.25	36.10	0.753	0.734	0.705	0.657	74
75	37.50	32.476 0	38.00	36.91	36.75	36.60	0.753	0.734	0.705	0.657	75
76	38.00	32.909 0	38.50	37.41	37.25	37.10	0.753	0.734	0.705	0.657	76
77	38.50	33.342 0	39.00	37.91	37.75	37.60	0.753	0.734	0.705	0.657	77
78	39.00	33.775 0	39.50	38.41	38.25	38.10	0.753	0.734	0.705	0.656	78
79	39.50	34.208 0	40.00	38.91	38.75	38.60	0.753	0.734	0.705	0.656	79
80	40.00	34.641 0	40.50	39.41	39.25	39.10	0.753	0.734	0.704	0.656	80
81	40.50	35.074 0	41.00	39.91	39.75	39.60	0.753	0.733	0.704	0.655	81
82	41.00	35.507 0	41.50	40.41	40.25	40.10	0.753	0.733	0.704	0.655	82
83	41.50	35.940 1	42.00	40.91	40.75	40.60	0.753	0.733	0.704	0.655	83
84	42.00	36.373 1	42.50	41.41	41.25	41.10	0.753	0.733	0.704	0.655	84
85	42.50	36.806 1	43.00	41.91	41.75	41.60	0.753	0.733	0.704	0.654	85
86	43.00	37.239 1	43.50	42.41	42.25	42.10	0.753	0.733	0.703	0.654	86
87	43.50	37.672 1	44.00	42.91	42.75	42.60	0.753	0.733	0.703	0.654	87
88	44.00	38.105 1	44.50	43.41	43.25	43.10	0.752	0.733	0.703	0.654	88
89	44.50	38.538 1	45.00	43.91	43.75	43.60	0.752	0.733	0.703	0.653	89
90	45.00	38.971 1	45.50	44.41	44.25	44.10	0.752	0.732	0.703	0.653	90
91	45.50	39.404 2	46.00	44.91	44.75	44.60	0.752	0.732	0.703	0.653	91
92	46.00	39.837 2	46.50	45.41	45.25	45.10	0.752	0.732	0.702	0.653	92
93	46.50	40.270 2	47.00	45.91	45.75	45.60	0.752	0.732	0.702	0.652	93
94	47.00	40.703 2	47.50	46.41	46.25	46.10	0.752	0.732	0.702	0.652	94
95	47.50	41.136 2	48.00	46.91	46.75	46.60	0.752	0.732	0.702	0.652	95
96	48.00	41.569 2	48.50	47.41	47.25	47.10	0.752	0.732	0.702	0.652	96
97	48.50	42.002 2	49.00	47.91	47.75	47.60	0.752	0.732	0.702	0.651	97
98	49.00	42.435 2	49.50	48.41	48.25	48.10	0.752	0.732	0.701	0.651	98
99	49.50	42.868 3	50.00	48.91	48.75	48.60	0.752	0.732	0.701	0.651	99
100	50.00	43.301 3	50.50	49.41	49.25	49.10	0.752	0.731	0.701	0.651	100

表 16 30°外花键

模数 $m=0.75\text{ mm}$ 作用齿厚最大值 $S_{v\max}=1.178\text{ mm}$

单位为毫米

齿数 z	分度圆 直径 D	基圆 直径 D_b	大径 D_e	渐开线起 始圆直径 $D_{Fe\max}$	小径 D_{fe}		实际齿厚最小值 $S_{\min}=S_{v\max}-(T+\lambda)$				齿数 z
					平齿根	圆齿根	4h	5h	6h	7h	
10	7.50	6.495 2	8.25	6.78	6.38	6.15	1.150	1.133	1.108	1.066	10
11	8.25	7.144 7	9.00	7.51	7.13	6.90	1.150	1.133	1.108	1.065	11
12	9.00	7.794 2	9.75	8.25	7.88	7.65	1.150	1.132	1.107	1.064	12
13	9.75	8.443 7	10.50	8.99	8.63	8.40	1.149	1.132	1.106	1.063	13
14	10.50	9.093 3	11.25	9.73	9.38	9.15	1.149	1.132	1.106	1.062	14
15	11.25	9.742 8	12.00	10.47	10.13	9.90	1.149	1.131	1.105	1.061	15
16	12.00	10.392 3	12.75	11.21	10.88	10.65	1.149	1.131	1.104	1.060	16
17	12.75	11.041 8	13.50	11.95	11.63	11.40	1.148	1.131	1.104	1.059	17
18	13.50	11.691 3	14.25	12.70	12.38	12.15	1.148	1.130	1.103	1.059	18
19	14.25	12.340 9	15.00	13.44	13.13	12.90	1.148	1.130	1.103	1.058	19
20	15.00	12.990 4	15.75	14.19	13.88	13.65	1.148	1.130	1.102	1.057	20
21	15.75	13.639 9	16.50	14.93	14.63	14.40	1.148	1.129	1.102	1.056	21
22	16.50	14.289 4	17.25	15.68	15.38	15.15	1.147	1.129	1.101	1.055	22
23	17.25	14.938 9	18.00	16.42	16.13	15.90	1.147	1.129	1.101	1.055	23
24	18.00	15.588 5	18.75	17.17	16.88	16.65	1.147	1.128	1.101	1.054	24
25	18.75	16.238 0	19.50	17.92	17.63	17.40	1.147	1.128	1.100	1.053	25
26	19.50	16.887 5	20.25	18.67	18.38	18.15	1.147	1.128	1.100	1.053	26
27	20.25	17.537 0	21.00	19.41	19.13	18.90	1.147	1.128	1.099	1.052	27
28	21.00	18.186 5	21.75	20.16	19.88	19.65	1.146	1.127	1.099	1.051	28
29	21.75	18.836 1	22.50	20.91	20.63	20.40	1.146	1.127	1.099	1.051	29
30	22.50	19.485 6	23.25	21.66	21.38	21.15	1.146	1.127	1.098	1.050	30
31	23.25	20.135 1	24.00	22.40	22.13	21.90	1.146	1.127	1.098	1.050	31
32	24.00	20.784 6	24.75	23.15	22.88	22.65	1.146	1.126	1.097	1.049	32
33	24.75	21.434 1	25.50	23.90	23.63	23.40	1.146	1.126	1.097	1.048	33
34	25.50	22.083 6	26.25	24.65	24.38	24.15	1.146	1.126	1.097	1.048	34
35	26.25	22.733 2	27.00	25.40	25.13	24.90	1.145	1.126	1.096	1.047	35
36	27.00	23.382 7	27.75	26.15	25.88	25.65	1.145	1.126	1.096	1.047	36
37	27.75	24.032 2	28.50	26.90	26.63	26.40	1.145	1.125	1.096	1.046	37
38	28.50	24.681 7	29.25	27.64	27.38	27.15	1.145	1.125	1.095	1.046	38
39	29.25	25.331 2	30.00	28.39	28.13	27.90	1.145	1.125	1.095	1.045	39
40	30.00	25.980 8	30.75	29.14	28.88	28.65	1.145	1.125	1.095	1.045	40
41	30.75	26.630 3	31.50	29.89	29.63	29.40	1.145	1.125	1.094	1.044	41
42	31.50	27.279 8	32.25	30.64	30.38	30.15	1.145	1.124	1.094	1.044	42
43	32.25	27.929 3	33.00	31.39	31.13	30.90	1.144	1.124	1.094	1.043	43
44	33.00	28.578 8	33.75	32.14	31.88	31.65	1.144	1.124	1.094	1.043	44
45	33.75	29.228 4	34.50	32.89	32.63	32.40	1.144	1.124	1.093	1.042	45
46	34.50	29.877 9	35.25	33.64	33.38	33.15	1.144	1.124	1.093	1.042	46
47	35.25	30.527 4	36.00	34.39	34.13	33.90	1.144	1.123	1.093	1.042	47
48	36.00	31.176 9	36.75	35.13	34.88	34.65	1.144	1.123	1.092	1.041	48
49	36.75	31.826 4	37.50	35.88	35.63	35.40	1.144	1.123	1.092	1.041	49
50	37.50	32.476 0	38.25	36.63	36.38	36.15	1.144	1.123	1.092	1.040	50
51	38.25	33.125 5	39.00	37.38	37.13	36.90	1.144	1.123	1.092	1.040	51
52	39.00	33.775 0	39.75	38.13	37.88	37.65	1.143	1.123	1.091	1.039	52
53	39.75	34.424 5	40.50	38.88	38.63	38.40	1.143	1.122	1.091	1.039	53
54	40.50	35.074 0	41.25	39.63	39.38	39.15	1.143	1.122	1.091	1.039	54
55	41.25	35.723 5	42.00	40.38	40.13	39.90	1.143	1.122	1.091	1.038	55

表 16 (续)

单位为毫米

齿数 <i>z</i>	分度圆 直径 <i>D</i>	基圆 直径 <i>D_b</i>	大径 <i>D_{ee}</i>	渐开线起 始圆直径 <i>D_{Fe max}</i>	小径 <i>D_{ic}</i>		实际齿厚最小值 <i>S_{min} = S_{v max} - (T + λ)</i>				齿数 <i>z</i>
					平齿根	圆齿根	4h	5h	6h	7h	
56	42.00	36.373 1	42.75	41.13	40.88	40.65	1.143	1.122	1.090	1.038	56
57	42.75	37.022 6	43.50	41.88	41.63	41.40	1.143	1.122	1.090	1.037	57
58	43.50	37.672 1	44.25	42.63	42.38	42.15	1.143	1.122	1.090	1.037	58
59	44.25	38.321 6	45.00	43.38	43.13	42.90	1.143	1.121	1.090	1.037	59
60	45.00	38.971 1	45.75	44.13	43.88	43.65	1.143	1.121	1.089	1.036	60
61	45.75	39.620 7	46.50	44.88	44.63	44.40	1.143	1.121	1.089	1.036	61
62	46.50	40.270 2	47.25	45.63	45.38	45.15	1.142	1.121	1.089	1.035	62
63	47.25	40.919 7	48.00	46.38	46.13	45.90	1.142	1.121	1.089	1.035	63
64	48.00	41.569 2	48.75	47.13	46.88	46.65	1.142	1.121	1.088	1.035	64
65	48.75	42.218 7	49.50	47.88	47.63	47.40	1.142	1.121	1.088	1.034	65
66	49.50	42.868 3	50.25	48.62	48.38	48.15	1.142	1.120	1.088	1.034	66
67	50.25	43.517 8	51.00	49.37	49.13	48.90	1.142	1.120	1.088	1.034	67
68	51.00	44.167 3	51.75	50.12	49.88	49.65	1.142	1.120	1.088	1.033	68
69	51.75	44.816 8	52.50	50.87	50.63	50.40	1.142	1.120	1.087	1.033	69
70	52.50	45.466 3	53.25	51.62	51.38	51.15	1.142	1.120	1.087	1.032	70
71	53.25	46.115 9	54.00	52.37	52.13	51.90	1.142	1.120	1.087	1.032	71
72	54.00	46.765 4	54.75	53.12	52.88	52.65	1.142	1.120	1.087	1.032	72
73	54.75	47.414 9	55.50	53.87	53.63	53.40	1.141	1.119	1.086	1.031	73
74	55.50	48.064 4	56.25	54.62	54.38	54.15	1.141	1.119	1.086	1.031	74
75	56.25	48.713 9	57.00	55.37	55.13	54.90	1.141	1.119	1.086	1.031	75
76	57.00	49.363 4	57.75	56.12	55.88	55.65	1.141	1.119	1.086	1.030	76
77	57.75	50.013 0	58.50	56.87	56.63	56.40	1.141	1.119	1.086	1.030	77
78	58.50	50.662 5	59.25	57.62	57.38	57.15	1.141	1.119	1.085	1.030	78
79	59.25	51.312 0	60.00	58.37	58.13	57.90	1.141	1.119	1.085	1.029	79
80	60.00	51.961 5	60.75	59.12	58.88	58.65	1.141	1.118	1.085	1.029	80
81	60.75	52.611 0	61.50	59.87	59.63	59.40	1.141	1.118	1.085	1.029	81
82	61.50	53.260 6	62.25	60.62	60.38	60.15	1.141	1.118	1.085	1.028	82
83	62.25	53.910 1	63.00	61.37	61.13	60.90	1.141	1.118	1.084	1.028	83
84	63.00	54.559 6	63.75	62.12	61.88	61.65	1.141	1.118	1.084	1.028	84
85	63.75	55.209 1	64.50	62.87	62.63	62.40	1.140	1.118	1.084	1.028	85
86	64.50	55.858 6	65.25	63.62	63.38	63.15	1.140	1.118	1.084	1.027	86
87	65.25	56.508 2	66.00	64.37	64.13	63.90	1.140	1.118	1.084	1.027	87
88	66.00	57.157 7	66.75	65.12	64.88	64.65	1.140	1.117	1.083	1.027	88
89	66.75	57.807 2	67.50	65.87	65.63	65.40	1.140	1.117	1.083	1.026	89
90	67.50	58.456 7	68.25	66.62	66.38	66.15	1.140	1.117	1.083	1.026	90
91	68.25	59.106 2	69.00	67.37	67.13	66.90	1.140	1.117	1.083	1.026	91
92	69.00	59.755 8	69.75	68.12	67.88	67.65	1.140	1.117	1.083	1.025	92
93	69.75	60.405 3	70.50	68.87	68.63	68.40	1.140	1.117	1.082	1.025	93
94	70.50	61.054 8	71.25	69.62	69.38	69.15	1.140	1.117	1.082	1.025	94
95	71.25	61.704 3	72.00	70.37	70.13	69.90	1.140	1.117	1.082	1.025	95
96	72.00	62.353 8	72.75	71.12	70.88	70.65	1.140	1.117	1.082	1.024	96
97	72.75	63.003 3	73.50	71.87	71.63	71.40	1.140	1.116	1.082	1.024	97
98	73.50	63.652 9	74.25	72.62	72.38	72.15	1.139	1.116	1.082	1.024	98
99	74.25	64.302 4	75.00	73.37	73.13	72.90	1.139	1.116	1.081	1.023	99
100	75.00	64.951 9	75.75	74.12	73.88	73.65	1.139	1.116	1.081	1.023	100

表 17 30°外花键

模数 $m = 1 \text{ mm}$ 作用齿厚最大值 $S_{v, \max} = 1.571 \text{ mm}$

单位为毫米

齿数 z	分度圆 直径 D	基圆 直径 D_b	大径 D_{ee}	渐开线起 始圆直径 $D_{Fe, \max}$	小径 D_{ci}		实际齿厚最小值 $S_{\min} = S_{v, \max} - (T + \lambda)$				齿数 z
					平齿根	圆齿根	4h	5h	6h	7h	
10	10.00	8.660 3	11.00	9.04	8.50	8.20	1.540	1.522	1.494	1.448	10
11	11.00	9.526 3	12.00	10.02	9.50	9.20	1.540	1.521	1.493	1.446	11
12	12.00	10.392 3	13.00	11.00	10.50	10.20	1.539	1.521	1.492	1.445	12
13	13.00	11.258 3	14.00	11.98	11.50	11.20	1.539	1.520	1.492	1.444	13
14	14.00	12.124 4	15.00	12.97	12.50	12.20	1.539	1.520	1.491	1.443	14
15	15.00	12.990 4	16.00	13.96	13.50	13.20	1.539	1.519	1.490	1.442	15
16	16.00	13.856 4	17.00	14.95	14.50	14.20	1.538	1.519	1.490	1.441	16
17	17.00	14.722 4	18.00	15.94	15.50	15.20	1.538	1.518	1.489	1.440	17
18	18.00	15.588 5	19.00	16.93	16.50	16.20	1.538	1.518	1.488	1.439	18
19	19.00	16.454 5	20.00	17.92	17.50	17.20	1.538	1.518	1.488	1.438	19
20	20.00	17.320 5	21.00	18.91	18.50	18.20	1.537	1.517	1.487	1.437	20
21	21.00	18.186 5	22.00	19.91	19.50	19.20	1.537	1.517	1.487	1.436	21
22	22.00	19.052 6	23.00	20.90	20.50	20.20	1.537	1.517	1.486	1.436	22
23	23.00	19.918 6	24.00	21.90	21.50	21.20	1.537	1.516	1.486	1.435	23
24	24.00	20.784 6	25.00	22.89	22.50	22.20	1.537	1.516	1.485	1.434	24
25	25.00	21.650 6	26.00	23.89	23.50	23.20	1.536	1.516	1.485	1.433	25
26	26.00	22.516 7	27.00	24.89	24.50	24.20	1.536	1.516	1.484	1.433	26
27	27.00	23.382 7	28.00	25.88	25.50	25.20	1.536	1.515	1.484	1.432	27
28	28.00	24.248 7	29.00	26.88	26.50	26.20	1.536	1.515	1.484	1.431	28
29	29.00	25.114 7	30.00	27.88	27.50	27.20	1.536	1.515	1.483	1.430	29
30	30.00	25.980 8	31.00	28.87	28.50	28.20	1.536	1.514	1.483	1.430	30
31	31.00	26.846 8	32.00	29.87	29.50	29.20	1.535	1.514	1.482	1.429	31
32	32.00	27.712 8	33.00	30.87	30.50	30.20	1.535	1.514	1.482	1.429	32
33	33.00	28.578 8	34.00	31.87	31.50	31.20	1.535	1.514	1.481	1.428	33
34	34.00	29.444 9	35.00	32.87	32.50	32.20	1.535	1.513	1.481	1.427	34
35	35.00	30.310 9	36.00	33.86	33.50	33.20	1.535	1.513	1.481	1.427	35
36	36.00	31.176 9	37.00	34.86	34.50	34.20	1.535	1.513	1.480	1.426	36
37	37.00	32.042 9	38.00	35.86	35.50	35.20	1.534	1.513	1.480	1.425	37
38	38.00	32.909 0	39.00	36.86	36.50	36.20	1.534	1.512	1.480	1.425	38
39	39.00	33.775 0	40.00	37.86	37.50	37.20	1.534	1.512	1.479	1.424	39
40	40.00	34.641 0	41.00	38.86	38.50	38.20	1.534	1.512	1.479	1.424	40
41	41.00	35.507 0	42.00	39.85	39.50	39.20	1.534	1.512	1.479	1.423	41
42	42.00	36.373 1	43.00	40.85	40.50	40.20	1.534	1.512	1.478	1.423	42
43	43.00	37.239 1	44.00	41.85	41.50	41.20	1.534	1.511	1.478	1.422	43
44	44.00	38.105 1	45.00	42.85	42.50	42.20	1.534	1.511	1.478	1.422	44
45	45.00	38.971 1	46.00	43.85	43.50	43.20	1.533	1.511	1.477	1.421	45
46	46.00	39.837 2	47.00	44.85	44.50	44.20	1.533	1.511	1.477	1.421	46
47	47.00	40.703 2	48.00	45.85	45.50	45.20	1.533	1.511	1.477	1.420	47
48	48.00	41.569 2	49.00	46.85	46.50	46.20	1.533	1.510	1.476	1.420	48
49	49.00	42.435 2	50.00	47.85	47.50	47.20	1.533	1.510	1.476	1.419	49
50	50.00	43.301 3	51.00	48.84	48.50	48.20	1.533	1.510	1.476	1.419	50
51	51.00	44.167 3	52.00	49.84	49.50	49.20	1.533	1.510	1.475	1.418	51
52	52.00	45.033 3	53.00	50.84	50.50	50.20	1.533	1.510	1.475	1.418	52
53	53.00	45.899 3	54.00	51.84	51.50	51.20	1.532	1.509	1.475	1.417	53
54	54.00	46.765 4	55.00	52.84	52.50	52.20	1.532	1.509	1.475	1.417	54
55	55.00	47.631 4	56.00	53.84	53.50	53.20	1.532	1.509	1.474	1.416	55

表 17 (续)

单位为毫米

齿数 <i>z</i>	分度圆 直径 <i>D</i>	基圆 直径 <i>D_b</i>	大径 <i>D_{ee}</i>	渐开线起 始圆直径 <i>D_{Fe max}</i>	小径 <i>D_e</i>		实际齿厚最小值 $S_{min} = S_{v max} - (T + \lambda)$				齿数 <i>z</i>
					平齿根	圆齿根	4h	5h	6h	7h	
56	56.00	48.497 4	57.00	54.84	54.50	54.20	1.532	1.509	1.474	1.416	56
57	57.00	49.363 4	58.00	55.84	55.50	55.20	1.532	1.509	1.474	1.415	57
58	58.00	50.229 5	59.00	56.84	56.50	56.20	1.532	1.508	1.473	1.415	58
59	59.00	51.095 5	60.00	57.84	57.50	57.20	1.532	1.508	1.473	1.415	59
60	60.00	51.961 5	61.00	58.84	58.50	58.20	1.532	1.508	1.473	1.414	60
61	61.00	52.827 5	62.00	59.84	59.50	59.20	1.532	1.508	1.473	1.414	61
62	62.00	53.693 6	63.00	60.84	60.50	60.20	1.531	1.508	1.472	1.413	62
63	63.00	54.559 6	64.00	61.83	61.50	61.20	1.531	1.508	1.472	1.413	63
64	64.00	55.425 6	65.00	62.83	62.50	62.20	1.531	1.507	1.472	1.412	64
65	65.00	56.291 7	66.00	63.83	63.50	63.20	1.531	1.507	1.472	1.412	65
66	66.00	57.157 7	67.00	64.83	64.50	64.20	1.531	1.507	1.471	1.412	66
67	67.00	58.023 7	68.00	65.83	65.50	65.20	1.531	1.507	1.471	1.411	67
68	68.00	58.889 7	69.00	66.83	66.50	66.20	1.531	1.507	1.471	1.411	68
69	69.00	59.755 8	70.00	67.83	67.50	67.20	1.531	1.507	1.471	1.410	69
70	70.00	60.621 8	71.00	68.83	68.50	68.20	1.531	1.506	1.470	1.410	70
71	71.00	61.487 8	72.00	69.83	69.50	69.20	1.530	1.506	1.470	1.410	71
72	72.00	62.353 8	73.00	70.83	70.50	70.20	1.530	1.506	1.470	1.409	72
73	73.00	63.219 9	74.00	71.83	71.50	71.20	1.530	1.506	1.470	1.409	73
74	74.00	64.085 9	75.00	72.83	72.50	72.20	1.530	1.506	1.469	1.408	74
75	75.00	64.951 9	76.00	73.83	73.50	73.20	1.530	1.506	1.469	1.408	75
76	76.00	65.817 9	77.00	74.83	74.50	74.20	1.530	1.506	1.469	1.408	76
77	77.00	66.684 0	78.00	75.83	75.50	75.20	1.530	1.505	1.469	1.407	77
78	78.00	67.550 0	79.00	76.83	76.50	76.20	1.530	1.505	1.468	1.407	78
79	79.00	68.416 0	80.00	77.83	77.50	77.20	1.530	1.505	1.468	1.407	79
80	80.00	69.282 0	81.00	78.83	78.50	78.20	1.530	1.505	1.468	1.406	80
81	81.00	70.148 1	82.00	79.83	79.50	79.20	1.530	1.505	1.468	1.406	81
82	82.00	71.014 1	83.00	80.83	80.50	80.20	1.529	1.505	1.467	1.405	82
83	83.00	71.880 1	84.00	81.83	81.50	81.20	1.529	1.505	1.467	1.405	83
84	84.00	72.746 1	85.00	82.83	82.50	82.20	1.529	1.504	1.467	1.405	84
85	85.00	73.612 2	86.00	83.83	83.50	83.20	1.529	1.504	1.467	1.404	85
86	86.00	74.478 2	87.00	84.83	84.50	84.20	1.529	1.504	1.467	1.404	86
87	87.00	75.344 2	88.00	85.83	85.50	85.20	1.529	1.504	1.466	1.404	87
88	88.00	76.210 2	89.00	86.82	86.50	86.20	1.529	1.504	1.466	1.403	88
89	89.00	77.076 3	90.00	87.82	87.50	87.20	1.529	1.504	1.466	1.403	89
90	90.00	77.942 3	91.00	88.82	88.50	88.20	1.529	1.504	1.466	1.403	90
91	91.00	78.808 3	92.00	89.82	89.50	89.20	1.529	1.503	1.466	1.402	91
92	92.00	79.674 3	93.00	90.82	90.50	90.20	1.529	1.503	1.465	1.402	92
93	93.00	80.540 4	94.00	91.82	91.50	91.20	1.529	1.503	1.465	1.402	93
94	94.00	81.406 4	95.00	92.82	92.50	92.20	1.528	1.503	1.465	1.401	94
95	95.00	82.272 4	96.00	93.82	93.50	93.20	1.528	1.503	1.465	1.401	95
96	96.00	83.138 4	97.00	94.82	94.50	94.20	1.528	1.503	1.465	1.401	96
97	97.00	84.004 5	98.00	95.82	95.50	95.20	1.528	1.503	1.464	1.400	97
98	98.00	84.870 5	99.00	96.82	96.50	96.20	1.528	1.503	1.464	1.400	98
99	99.00	85.736 5	100.00	97.82	97.50	97.20	1.528	1.502	1.464	1.400	99
100	100.00	86.602 5	101.00	98.82	98.50	98.20	1.528	1.502	1.464	1.399	100

表 18 30°外花键

模数 $m = 1.25 \text{ mm}$ 作用齿厚最大值 $S_{v \max} = 1.963 \text{ mm}$

单位为毫米

齿数 z	分度圆 直径 D	基圆 直径 D_b	大径 D_e	渐开线起 始圆直径 $D_{F_c \max}$	小径 D_i		实际齿厚最小值 $S_{\min} = S_{v \max} - (T + \lambda)$				齿数 z
					平齿根	圆齿根	4h	5h	6h	7h	
10	12.50	10.825 3	13.75	11.30	10.63	10.25	1.930	1.910	1.881	1.831	10
11	13.75	11.907 8	15.00	12.52	11.88	11.50	1.930	1.910	1.880	1.829	11
12	15.00	12.990 4	16.25	13.75	13.13	12.75	1.930	1.909	1.879	1.828	12
13	16.25	14.072 9	17.50	14.98	14.38	14.00	1.929	1.909	1.878	1.827	13
14	17.50	15.155 4	18.75	16.21	15.63	15.25	1.929	1.908	1.877	1.826	14
15	18.75	16.238 0	20.00	17.44	16.88	16.50	1.929	1.908	1.877	1.825	15
16	20.00	17.320 5	21.25	18.68	18.13	17.75	1.928	1.907	1.876	1.823	16
17	21.25	18.403 0	22.50	19.92	19.38	19.00	1.928	1.907	1.875	1.822	17
18	22.50	19.485 6	23.75	21.16	20.63	20.25	1.928	1.907	1.875	1.821	18
19	23.75	20.568 1	25.00	22.40	21.88	21.50	1.928	1.906	1.874	1.820	19
20	25.00	21.650 6	26.25	23.64	23.13	22.75	1.927	1.906	1.873	1.819	20
21	26.25	22.733 2	27.50	24.89	24.38	24.00	1.927	1.906	1.873	1.819	21
22	27.50	23.815 7	28.75	26.13	25.63	25.25	1.927	1.905	1.872	1.818	22
23	28.75	24.898 2	30.00	27.37	26.88	26.50	1.927	1.905	1.872	1.817	23
24	30.00	25.980 8	31.25	28.62	28.13	27.75	1.927	1.904	1.871	1.816	24
25	31.25	27.063 3	32.50	29.86	29.38	29.00	1.926	1.904	1.871	1.815	25
26	32.50	28.145 8	33.75	31.11	30.63	30.25	1.926	1.904	1.870	1.814	26
27	33.75	29.228 4	35.00	32.35	31.88	31.50	1.926	1.904	1.870	1.814	27
28	35.00	30.310 9	36.25	33.60	33.13	32.75	1.926	1.903	1.869	1.813	28
29	36.25	31.393 4	37.50	34.85	34.38	34.00	1.926	1.903	1.869	1.812	29
30	37.50	32.476 0	38.75	36.09	35.63	35.25	1.925	1.903	1.868	1.811	30
31	38.75	33.558 5	40.00	37.34	36.88	36.50	1.925	1.902	1.868	1.811	31
32	40.00	34.641 0	41.25	38.59	38.13	37.75	1.925	1.902	1.868	1.810	32
33	41.25	35.723 5	42.50	39.83	39.38	39.00	1.925	1.902	1.867	1.809	33
34	42.50	36.806 1	43.75	41.08	40.63	40.25	1.925	1.902	1.867	1.809	34
35	43.75	37.888 6	45.00	42.33	41.88	41.50	1.925	1.901	1.866	1.808	35
36	45.00	38.971 1	46.25	43.58	43.13	42.75	1.924	1.901	1.866	1.807	36
37	46.25	40.053 7	47.50	44.83	44.38	44.00	1.924	1.901	1.865	1.807	37
38	47.50	41.136 2	48.75	46.07	45.63	45.25	1.924	1.901	1.865	1.806	38
39	48.75	42.218 7	50.00	47.32	46.88	46.50	1.924	1.900	1.865	1.805	39
40	50.00	43.301 3	51.25	48.57	48.13	47.75	1.924	1.900	1.864	1.805	40
41	51.25	44.383 8	52.50	49.82	49.38	49.00	1.924	1.900	1.864	1.804	41
42	52.50	45.466 3	53.75	51.07	50.63	50.25	1.924	1.900	1.864	1.804	42
43	53.75	46.548 9	55.00	52.31	51.88	51.50	1.923	1.899	1.863	1.803	43
44	55.00	47.631 4	56.25	53.56	53.13	52.75	1.923	1.899	1.863	1.802	44
45	56.25	48.713 9	57.50	54.81	54.38	54.00	1.923	1.899	1.863	1.802	45
46	57.50	49.796 5	58.75	56.06	55.63	55.25	1.923	1.899	1.862	1.801	46
47	58.75	50.879 0	60.00	57.31	56.88	56.50	1.923	1.898	1.862	1.801	47
48	60.00	51.961 5	61.25	58.56	58.13	57.75	1.923	1.898	1.861	1.800	48
49	61.25	53.044 1	62.50	59.81	59.38	59.00	1.923	1.898	1.861	1.800	49
50	62.50	54.126 6	63.75	61.06	60.63	60.25	1.922	1.898	1.861	1.799	50
51	63.75	55.209 1	65.00	62.30	61.88	61.50	1.922	1.898	1.860	1.799	51
52	65.00	56.291 7	66.25	63.55	63.13	62.75	1.922	1.897	1.860	1.798	52
53	66.25	57.374 2	67.50	64.80	64.38	64.00	1.922	1.897	1.860	1.798	53
54	67.50	58.456 7	68.75	66.05	65.63	65.25	1.922	1.897	1.860	1.797	54
55	68.75	59.539 2	70.00	67.30	66.88	66.50	1.922	1.897	1.859	1.797	55

表 18 (续)

单位为毫米

齿数 <i>z</i>	分度圆 直径 <i>D</i>	基圆 直径 <i>D_b</i>	大径 <i>D_{ee}</i>	渐开线起 始圆直径 <i>D_{Fe max}</i>	小径 <i>D_{ic}</i>		实际齿厚最小值 $S_{min} = S_{v max} - (T + \lambda)$				齿数 <i>z</i>
					平齿根	圆齿根	4h	5h	6h	7h	
56	70.00	60.621 8	71.25	68.55	68.13	67.75	1.922	1.897	1.859	1.796	56
57	71.25	61.704 3	72.50	69.80	69.38	69.00	1.922	1.896	1.859	1.796	57
58	72.50	62.786 8	73.75	71.05	70.63	70.25	1.921	1.896	1.858	1.795	58
59	73.75	63.869 4	75.00	72.30	71.88	71.50	1.921	1.896	1.858	1.795	59
60	75.00	64.951 9	76.25	73.55	73.13	72.75	1.921	1.896	1.858	1.794	60
61	76.25	66.034 4	77.50	74.80	74.38	74.00	1.921	1.896	1.857	1.794	61
62	77.50	67.117 0	78.75	76.04	75.63	75.25	1.921	1.895	1.857	1.793	62
63	78.75	68.199 5	80.00	77.29	76.88	76.50	1.921	1.895	1.857	1.793	63
64	80.00	69.282 0	81.25	78.54	78.13	77.75	1.921	1.895	1.857	1.792	64
65	81.25	70.364 6	82.50	79.79	79.38	79.00	1.921	1.895	1.856	1.792	65
66	82.50	71.447 1	83.75	81.04	80.63	80.25	1.920	1.895	1.856	1.791	66
67	83.75	72.529 6	85.00	82.29	81.88	81.50	1.920	1.895	1.856	1.791	67
68	85.00	73.612 2	86.25	83.54	83.13	82.75	1.920	1.894	1.855	1.791	68
69	86.25	74.694 7	87.50	84.79	84.38	84.00	1.920	1.894	1.855	1.790	69
70	87.50	75.777 2	88.75	86.04	85.63	85.25	1.920	1.894	1.855	1.790	70
71	88.75	76.859 8	90.00	87.29	86.88	86.50	1.920	1.894	1.855	1.789	71
72	90.00	77.942 3	91.25	88.54	88.13	87.75	1.920	1.894	1.854	1.789	72
73	91.25	79.024 8	92.50	89.79	89.38	89.00	1.920	1.893	1.854	1.788	73
74	92.50	80.107 3	93.75	91.04	90.63	90.25	1.920	1.893	1.854	1.788	74
75	93.75	81.189 9	95.00	92.29	91.88	91.50	1.920	1.893	1.854	1.788	75
76	95.00	82.272 4	96.25	93.54	93.13	92.75	1.919	1.893	1.853	1.787	76
77	96.25	83.354 9	97.50	94.79	94.38	94.00	1.919	1.893	1.853	1.787	77
78	97.50	84.437 5	98.75	96.04	95.63	95.25	1.919	1.893	1.853	1.786	78
79	98.75	85.520 0	100.00	97.28	96.88	96.50	1.919	1.893	1.853	1.786	79
80	100.00	86.602 5	101.25	98.53	98.13	97.75	1.919	1.892	1.852	1.786	80
81	101.25	87.685 1	102.50	99.78	99.38	99.00	1.919	1.892	1.852	1.785	81
82	102.50	88.767 6	103.75	101.03	100.63	100.25	1.919	1.892	1.852	1.785	82
83	103.75	89.850 1	105.00	102.28	101.88	101.50	1.919	1.892	1.852	1.784	83
84	105.00	90.932 7	106.25	103.53	103.13	102.75	1.919	1.892	1.851	1.784	84
85	106.25	92.015 2	107.50	104.78	104.38	104.00	1.919	1.892	1.851	1.784	85
86	107.50	93.097 7	108.75	106.03	105.63	105.25	1.918	1.891	1.851	1.783	86
87	108.75	94.180 3	110.00	107.28	106.88	106.50	1.918	1.891	1.851	1.783	87
88	110.00	95.262 8	111.25	108.53	108.13	107.75	1.918	1.891	1.850	1.783	88
89	111.25	96.345 3	112.50	109.78	109.38	109.00	1.918	1.891	1.850	1.782	89
90	112.50	97.427 9	113.75	111.03	110.63	110.25	1.918	1.891	1.850	1.782	90
91	113.75	98.510 4	115.00	112.28	111.88	111.50	1.918	1.891	1.850	1.781	91
92	115.00	99.592 9	116.25	113.53	113.13	112.75	1.918	1.891	1.849	1.781	92
93	116.25	100.675 5	117.50	114.78	114.38	114.00	1.918	1.890	1.849	1.781	93
94	117.50	101.758 0	118.75	116.03	115.63	115.25	1.918	1.890	1.849	1.780	94
95	118.75	102.840 5	120.00	117.28	116.88	116.50	1.918	1.890	1.849	1.780	95
96	120.00	103.923 0	121.25	118.53	118.13	117.75	1.918	1.890	1.849	1.780	96
97	121.25	105.005 6	122.50	119.78	119.38	119.00	1.917	1.890	1.848	1.779	97
98	122.50	106.088 1	123.75	121.03	120.63	120.25	1.917	1.890	1.848	1.779	98
99	123.75	107.170 6	125.00	122.28	121.88	121.50	1.917	1.890	1.848	1.779	99
100	125.00	108.253 2	126.25	123.53	123.13	122.75	1.917	1.889	1.848	1.778	100

表 19 30°外花键

模数 $m = 1.5 \text{ mm}$ 作用齿厚最大值 $S_{v \max} = 2.356 \text{ mm}$

单位为毫米

齿数 z	分度圆 直径 D	基圆 直径 D_b	大径 D_{e2}	渐开线起 始圆直径 $D_{Fe \max}$	小径 D_{i2}		实际齿厚最小值 $S_{\min} = S_{v \max} - (T + \lambda)$				齿数 z
					平齿根	圆齿根	4h	5h	6h	7h	
10	15.00	12.990 4	16.50	13.56	12.75	12.30	2.321	2.300	2.268	2.215	10
11	16.50	14.289 4	18.00	15.03	14.25	13.80	2.321	2.299	2.267	2.214	11
12	18.00	15.588 5	19.50	16.50	15.75	15.30	2.320	2.299	2.266	2.212	12
13	19.50	16.887 5	21.00	17.97	17.25	16.80	2.320	2.298	2.265	2.211	13
14	21.00	18.186 5	22.50	19.45	18.75	18.30	2.320	2.298	2.265	2.210	14
15	22.50	19.485 6	24.00	20.93	20.25	19.80	2.319	2.297	2.264	2.208	15
16	24.00	20.784 6	25.50	22.42	21.75	21.30	2.319	2.297	2.263	2.207	16
17	25.50	22.083 6	27.00	23.90	23.25	22.80	2.319	2.296	2.262	2.206	17
18	27.00	23.382 7	28.50	25.39	24.75	24.30	2.318	2.296	2.262	2.205	18
19	28.50	24.681 7	30.00	26.88	26.25	25.80	2.318	2.295	2.261	2.204	19
20	30.00	25.980 8	31.50	28.37	27.75	27.30	2.318	2.295	2.260	2.203	20
21	31.50	27.279 8	33.00	29.86	29.25	28.80	2.318	2.295	2.260	2.202	21
22	33.00	28.578 8	34.50	31.36	30.75	30.30	2.317	2.294	2.259	2.201	22
23	34.50	29.877 9	36.00	32.85	32.25	31.80	2.317	2.294	2.259	2.200	23
24	36.00	31.176 9	37.50	34.34	33.75	33.30	2.317	2.293	2.258	2.199	24
25	37.50	32.476 0	39.00	35.84	35.25	34.80	2.317	2.293	2.258	2.198	25
26	39.00	33.775 0	40.50	37.33	36.75	36.30	2.317	2.293	2.257	2.198	26
27	40.50	35.074 0	42.00	38.83	38.25	37.80	2.316	2.292	2.256	2.197	27
28	42.00	36.373 1	43.50	40.32	39.75	39.30	2.316	2.292	2.256	2.196	28
29	43.50	37.672 1	45.00	41.82	41.25	40.80	2.316	2.292	2.255	2.195	29
30	45.00	38.971 1	46.50	43.31	42.75	42.30	2.316	2.291	2.255	2.194	30
31	46.50	40.270 2	48.00	44.81	44.25	43.80	2.316	2.291	2.255	2.194	31
32	48.00	41.569 2	49.50	46.31	45.75	45.30	2.315	2.291	2.254	2.193	32
33	49.50	42.868 3	51.00	47.80	47.25	46.80	2.315	2.291	2.254	2.192	33
34	51.00	44.167 3	52.50	49.30	48.75	48.30	2.315	2.290	2.253	2.191	34
35	52.50	45.466 3	54.00	50.80	50.25	49.80	2.315	2.290	2.253	2.191	35
36	54.00	46.765 4	55.50	52.29	51.75	51.30	2.315	2.290	2.252	2.190	36
37	55.50	48.064 4	57.00	53.79	53.25	52.80	2.314	2.289	2.252	2.189	37
38	57.00	49.363 4	58.50	55.29	54.75	54.30	2.314	2.289	2.251	2.189	38
39	58.50	50.662 5	60.00	56.79	56.25	55.80	2.314	2.289	2.251	2.188	39
40	60.00	51.961 5	61.50	58.28	57.75	57.30	2.314	2.289	2.251	2.187	40
41	61.50	53.260 6	63.00	59.78	59.25	58.80	2.314	2.288	2.250	2.187	41
42	63.00	54.559 6	64.50	61.28	60.75	60.30	2.314	2.288	2.250	2.186	42
43	64.50	55.858 6	66.00	62.78	62.25	61.80	2.313	2.288	2.249	2.185	43
44	66.00	57.157 7	67.50	64.28	63.75	63.30	2.313	2.288	2.249	2.185	44
45	67.50	58.456 7	69.00	65.77	65.25	64.80	2.313	2.287	2.249	2.184	45
46	69.00	59.755 8	70.50	67.27	66.75	66.30	2.313	2.287	2.248	2.184	46
47	70.50	61.054 8	72.00	68.77	68.25	67.80	2.313	2.287	2.248	2.183	47
48	72.00	62.353 8	73.50	70.27	69.75	69.30	2.313	2.287	2.248	2.182	48
49	73.50	63.652 9	75.00	71.77	71.25	70.80	2.313	2.286	2.247	2.182	49
50	75.00	64.951 9	76.50	73.27	72.75	72.30	2.312	2.286	2.247	2.181	50
51	76.50	66.250 9	78.00	74.77	74.25	73.80	2.312	2.286	2.246	2.181	51
52	78.00	67.550 0	79.50	76.26	75.75	75.30	2.312	2.286	2.246	2.180	52
53	79.50	68.849 0	81.00	77.76	77.25	76.80	2.312	2.286	2.246	2.180	53
54	81.00	70.148 1	82.50	79.26	78.75	78.30	2.312	2.285	2.245	2.179	54
55	82.50	71.447 1	84.00	80.76	80.25	79.80	2.312	2.285	2.245	2.178	55

表 19 (续)

单位为毫米

齿数 z	分度圆 直径 D	基圆 直径 D_b	大径 D_e	渐开线起 始圆直径 $D_{F_{c\max}}$	小径 D_{F_c}		实际齿厚最小值 $S_{\min} = S_{v\max} - (T + \lambda)$				齿数 z
					平齿根	圆齿根	4h	5h	6h	7h	
56	84.00	72.746 1	85.50	82.26	81.75	81.30	2.312	2.285	2.245	2.178	56
57	85.50	74.045 2	87.00	83.76	83.25	82.80	2.312	2.285	2.244	2.177	57
58	87.00	75.344 2	88.50	85.26	84.75	84.30	2.311	2.284	2.244	2.177	58
59	88.50	76.643 2	90.00	86.76	86.25	85.80	2.311	2.284	2.244	2.176	59
60	90.00	77.942 3	91.50	88.26	87.75	87.30	2.311	2.284	2.244	2.176	60
61	91.50	79.241 3	93.00	89.75	89.25	88.80	2.311	2.284	2.243	2.175	61
62	93.00	80.540 4	94.50	91.25	90.75	90.30	2.311	2.284	2.243	2.175	62
63	94.50	81.839 4	96.00	92.75	92.25	91.80	2.311	2.283	2.243	2.174	63
64	96.00	83.138 4	97.50	94.25	93.75	93.30	2.311	2.283	2.242	2.174	64
65	97.50	84.437 5	99.00	95.75	95.25	94.80	2.311	2.283	2.242	2.173	65
66	99.00	85.736 5	100.50	97.25	96.75	96.30	2.310	2.283	2.242	2.173	66
67	100.50	87.035 6	102.00	98.75	98.25	97.80	2.310	2.283	2.241	2.172	67
68	102.00	88.334 6	103.50	100.25	99.75	99.30	2.310	2.283	2.241	2.172	68
69	103.50	89.633 6	105.00	101.75	101.25	100.80	2.310	2.282	2.241	2.172	69
70	105.00	90.932 7	106.50	103.25	102.75	102.30	2.310	2.282	2.240	2.171	70
71	106.50	92.231 7	108.00	104.75	104.25	103.80	2.310	2.282	2.240	2.171	71
72	108.00	93.530 7	109.50	106.25	105.75	105.30	2.310	2.282	2.240	2.170	72
73	109.50	94.829 8	111.00	107.75	107.25	106.80	2.310	2.282	2.240	2.170	73
74	111.00	96.128 8	112.50	109.24	108.75	108.30	2.309	2.281	2.239	2.169	74
75	112.50	97.427 9	114.00	110.74	110.25	109.80	2.309	2.281	2.239	2.169	75
76	114.00	98.726 9	115.50	112.24	111.75	111.30	2.309	2.281	2.239	2.168	76
77	115.50	100.025 9	117.00	113.74	113.25	112.80	2.309	2.281	2.239	2.168	77
78	117.00	101.325 0	118.50	115.24	114.75	114.30	2.309	2.281	2.238	2.167	78
79	118.50	102.624 0	120.00	116.74	116.25	115.80	2.309	2.281	2.238	2.167	79
80	120.00	103.923 0	121.50	118.24	117.75	117.30	2.309	2.280	2.238	2.167	80
81	121.50	105.222 1	123.00	119.74	119.25	118.80	2.309	2.280	2.237	2.166	81
82	123.00	106.521 1	124.50	121.24	120.75	120.30	2.309	2.280	2.237	2.166	82
83	124.50	107.820 2	126.00	122.74	122.25	121.80	2.308	2.280	2.237	2.165	83
84	126.00	109.119 2	127.50	124.24	123.75	123.30	2.308	2.280	2.237	2.165	84
85	127.50	110.418 2	129.00	125.74	125.25	124.80	2.308	2.280	2.236	2.164	85
86	129.00	111.717 3	130.50	127.24	126.75	126.30	2.308	2.279	2.236	2.164	86
87	130.50	113.016 3	132.00	128.74	128.25	127.80	2.308	2.279	2.236	2.164	87
88	132.00	114.315 4	133.50	130.24	129.75	129.30	2.308	2.279	2.236	2.163	88
89	133.50	115.614 4	135.00	131.74	131.25	130.80	2.308	2.279	2.235	2.163	89
90	135.00	116.913 4	136.50	133.24	132.75	132.30	2.308	2.279	2.235	2.162	90
91	136.50	118.212 5	138.00	134.74	134.25	133.80	2.308	2.279	2.235	2.162	91
92	138.00	119.511 5	139.50	136.24	135.75	135.30	2.308	2.278	2.235	2.162	92
93	139.50	120.810 5	141.00	137.74	137.25	136.80	2.307	2.278	2.234	2.161	93
94	141.00	122.109 6	142.50	139.23	138.75	138.30	2.307	2.278	2.234	2.161	94
95	142.50	123.408 6	144.00	140.73	140.25	139.80	2.307	2.278	2.234	2.160	95
96	144.00	124.707 7	145.50	142.23	141.75	141.30	2.307	2.278	2.234	2.160	96
97	145.50	126.006 7	147.00	143.73	143.25	142.80	2.307	2.278	2.233	2.160	97
98	147.00	127.305 7	148.50	145.23	144.75	144.30	2.307	2.277	2.233	2.159	98
99	148.50	128.604 8	150.00	146.73	146.25	145.80	2.307	2.277	2.233	2.159	99
100	150.00	129.903 8	151.50	148.23	147.75	147.30	2.307	2.277	2.233	2.159	100

表 20 30°外花键
模数 $m = 1.75 \text{ mm}$ 作用齿厚最大值 $S_{v \max} = 2.749 \text{ mm}$ 单位为毫米

齿数 z	分度圆 直径 D	基圆 直径 D_b	大径 D_{ee}	渐开线起 始圆直径 $D_{Fe \max}$	小径 D_{ie}		实际齿厚最小值 $S_{\min} = S_{v \max} - (T + \lambda)$				齿数 z
					平齿根	圆齿根	4h	5h	6h	7h	
10	17.50	15.155 4	19.25	15.82	14.88	14.35	2.712	2.689	2.656	2.600	10
11	19.25	16.671 0	21.00	17.53	16.63	16.10	2.711	2.689	2.655	2.599	11
12	21.00	18.186 5	22.75	19.25	18.38	17.85	2.711	2.688	2.654	2.597	12
13	22.75	19.702 1	24.50	20.97	20.13	19.60	2.711	2.688	2.653	2.596	13
14	24.50	21.217 6	26.25	22.69	21.88	21.35	2.710	2.687	2.652	2.594	14
15	26.25	22.733 2	28.00	24.42	23.63	23.10	2.710	2.687	2.652	2.593	15
16	28.00	24.248 7	29.75	26.15	25.38	24.85	2.710	2.686	2.651	2.592	16
17	29.75	25.764 3	31.50	27.89	27.13	26.60	2.709	2.686	2.650	2.591	17
18	31.50	27.279 8	33.25	29.62	28.88	28.35	2.709	2.685	2.649	2.590	18
19	33.25	28.795 3	35.00	31.36	30.63	30.10	2.709	2.685	2.649	2.588	19
20	35.00	30.310 9	36.75	33.10	32.38	31.85	2.709	2.684	2.648	2.587	20
21	36.75	31.826 4	38.50	34.84	34.13	33.60	2.708	2.684	2.647	2.586	21
22	38.50	33.342 0	40.25	36.58	35.88	35.35	2.708	2.683	2.647	2.585	22
23	40.25	34.857 5	42.00	38.32	37.63	37.10	2.708	2.683	2.646	2.584	23
24	42.00	36.373 1	43.75	40.07	39.38	38.85	2.708	2.683	2.645	2.583	24
25	43.75	37.888 6	45.50	41.81	41.13	40.60	2.707	2.682	2.645	2.583	25
26	45.50	39.404 2	47.25	43.55	42.88	42.35	2.707	2.682	2.644	2.582	26
27	47.25	40.919 7	49.00	45.30	44.63	44.10	2.707	2.682	2.644	2.581	27
28	49.00	42.435 2	50.75	47.04	46.38	45.85	2.707	2.681	2.643	2.580	28
29	50.75	43.950 8	52.50	48.79	48.13	47.60	2.706	2.681	2.643	2.579	29
30	52.50	45.466 3	54.25	50.53	49.88	49.35	2.706	2.681	2.642	2.578	30
31	54.25	46.981 9	56.00	52.28	51.63	51.10	2.706	2.680	2.642	2.577	31
32	56.00	48.497 4	57.75	54.02	53.38	52.85	2.706	2.680	2.641	2.577	32
33	57.75	50.013 0	59.50	55.77	55.13	54.60	2.706	2.680	2.641	2.576	33
34	59.50	51.528 5	61.25	57.52	56.88	56.35	2.705	2.679	2.640	2.575	34
35	61.25	53.044 1	63.00	59.26	58.63	58.10	2.705	2.679	2.640	2.574	35
36	63.00	54.559 6	64.75	61.01	60.38	59.85	2.705	2.679	2.639	2.574	36
37	64.75	56.075 1	66.50	62.76	62.13	61.60	2.705	2.678	2.639	2.573	37
38	66.50	57.590 7	68.25	64.50	63.88	63.35	2.705	2.678	2.638	2.572	38
39	68.25	59.106 2	70.00	66.25	65.63	65.10	2.705	2.678	2.638	2.571	39
40	70.00	60.621 8	71.75	68.00	67.38	66.85	2.704	2.678	2.638	2.571	40
41	71.75	62.137 3	73.50	69.74	69.13	68.60	2.704	2.677	2.637	2.570	41
42	73.50	63.652 9	75.25	71.49	70.88	70.35	2.704	2.677	2.637	2.569	42
43	75.25	65.168 4	77.00	73.24	72.63	72.10	2.704	2.677	2.636	2.569	43
44	77.00	66.684 0	78.75	74.99	74.38	73.85	2.704	2.677	2.636	2.568	44
45	78.75	68.199 5	80.50	76.74	76.13	75.60	2.704	2.676	2.635	2.567	45
46	80.50	69.715 0	82.25	78.48	77.88	77.35	2.703	2.676	2.635	2.567	46
47	82.25	71.230 6	84.00	80.23	79.63	79.10	2.703	2.676	2.635	2.566	47
48	84.00	72.746 1	85.75	81.98	81.38	80.85	2.703	2.676	2.634	2.566	48
49	85.75	74.261 7	87.50	83.73	83.13	82.60	2.703	2.675	2.634	2.565	49
50	87.50	75.777 2	89.25	85.48	84.88	84.35	2.703	2.675	2.634	2.564	50
51	89.25	77.292 8	91.00	87.23	86.63	86.10	2.703	2.675	2.633	2.564	51
52	91.00	78.808 3	92.75	88.97	88.38	87.85	2.702	2.675	2.633	2.563	52
53	92.75	80.323 9	94.50	90.72	90.13	89.60	2.702	2.674	2.632	2.563	53
54	94.50	81.839 4	96.25	92.47	91.88	91.35	2.702	2.674	2.632	2.562	54
55	96.25	83.354 9	98.00	94.22	93.63	93.10	2.702	2.674	2.632	2.561	55

表 20 (续)

单位为毫米

齿数 z	分度圆 直径 D	基圆 直径 D_b	大径 D_{ce}	渐开线起 始圆直径 $D_{Fe\ max}$	小径 D_{fe}		实际齿厚最小值 $S_{\min} = S_{v\ max} - (T + \lambda)$				齿数 z
					平齿根	圆齿根	4h	5h	6h	7h	
56	98.00	84.870 5	99.75	95.97	95.38	94.85	2.702	2.674	2.631	2.561	56
57	99.75	86.386 0	101.50	97.72	97.13	96.60	2.702	2.673	2.631	2.560	57
58	101.50	87.901 6	103.25	99.47	98.88	98.35	2.702	2.673	2.631	2.560	58
59	103.25	89.417 1	105.00	101.22	100.63	100.10	2.701	2.673	2.630	2.559	59
60	105.00	90.932 7	106.75	102.96	102.38	101.85	2.701	2.673	2.630	2.559	60
61	106.75	92.448 2	108.50	104.71	104.13	103.60	2.701	2.673	2.630	2.558	61
62	108.50	93.963 8	110.25	106.46	105.88	105.35	2.701	2.672	2.629	2.558	62
63	110.25	95.479 3	112.00	108.21	107.63	107.10	2.701	2.672	2.629	2.557	63
64	112.00	96.994 8	113.75	109.96	109.38	108.85	2.701	2.672	2.629	2.557	64
65	113.75	98.510 4	115.50	111.71	111.13	110.60	2.701	2.672	2.628	2.556	65
66	115.50	100.025 9	117.25	113.46	112.88	112.35	2.701	2.672	2.628	2.555	66
67	117.25	101.541 5	119.00	115.21	114.63	114.10	2.700	2.671	2.628	2.555	67
68	119.00	103.057 0	120.75	116.96	116.38	115.85	2.700	2.671	2.627	2.554	68
69	120.75	104.572 5	122.50	118.71	118.13	117.60	2.700	2.671	2.627	2.554	69
70	122.50	106.088 1	124.25	120.45	119.88	119.35	2.700	2.671	2.627	2.553	70
71	124.25	107.603 7	126.00	122.20	121.63	121.10	2.700	2.671	2.626	2.553	71
72	126.00	109.119 2	127.75	123.95	123.38	122.85	2.700	2.670	2.626	2.552	72
73	127.75	110.634 7	129.50	125.70	125.13	124.60	2.700	2.670	2.626	2.552	73
74	129.50	112.150 3	131.25	127.45	126.88	126.35	2.700	2.670	2.626	2.552	74
75	131.25	113.665 8	133.00	129.20	128.63	128.10	2.699	2.670	2.625	2.551	75
76	133.00	115.181 4	134.75	130.95	130.38	129.85	2.699	2.670	2.625	2.551	76
77	134.75	116.696 9	136.50	132.70	132.13	131.60	2.699	2.669	2.625	2.550	77
78	136.50	118.212 5	138.25	134.45	133.88	133.35	2.699	2.669	2.624	2.550	78
79	138.25	119.728 0	140.00	136.20	135.63	135.10	2.699	2.669	2.624	2.549	79
80	140.00	121.243 6	141.75	137.95	137.38	136.85	2.699	2.669	2.624	2.549	80
81	141.75	122.759 1	143.50	139.70	139.13	138.60	2.699	2.669	2.623	2.548	81
82	143.50	124.274 6	145.25	141.45	140.88	140.35	2.699	2.668	2.623	2.548	82
83	145.25	125.790 2	147.00	143.20	142.63	142.10	2.699	2.668	2.623	2.547	83
84	147.00	127.305 7	148.75	144.95	144.38	143.85	2.698	2.668	2.623	2.547	84
85	148.75	128.821 3	150.50	146.70	146.13	145.60	2.698	2.668	2.622	2.546	85
86	150.50	130.336 8	152.25	148.44	147.88	147.35	2.698	2.668	2.622	2.546	86
87	152.25	131.852 4	154.00	150.19	149.63	149.10	2.698	2.668	2.622	2.546	87
88	154.00	133.367 9	155.75	151.94	151.38	150.85	2.698	2.667	2.622	2.545	88
89	155.75	134.883 5	157.50	153.69	153.13	152.60	2.698	2.667	2.621	2.545	89
90	157.50	136.399 0	159.25	155.44	154.88	154.35	2.698	2.667	2.621	2.544	90
91	159.25	137.914 5	161.00	157.19	156.63	156.10	2.698	2.667	2.621	2.544	91
92	161.00	139.430 1	162.75	158.94	158.38	157.85	2.698	2.667	2.620	2.543	92
93	162.75	140.945 6	164.50	160.69	160.13	159.60	2.697	2.667	2.620	2.543	93
94	164.50	142.461 2	166.25	162.44	161.88	161.35	2.697	2.666	2.620	2.543	94
95	166.25	143.976 7	168.00	164.19	163.63	163.10	2.697	2.666	2.620	2.542	95
96	168.00	145.492 3	169.75	165.94	165.38	164.85	2.697	2.666	2.619	2.542	96
97	169.75	147.007 8	171.50	167.69	167.13	166.60	2.697	2.666	2.619	2.541	97
98	171.50	148.523 4	173.25	169.44	168.88	168.35	2.697	2.666	2.619	2.541	98
99	173.25	150.038 9	175.00	171.19	170.63	170.10	2.697	2.666	2.619	2.541	99
100	175.00	151.554 4	176.75	172.94	172.38	171.85	2.697	2.665	2.618	2.540	100

表 21 30°外花键
模数 $m = 2 \text{ mm}$ 作用齿厚最大值 $S_{v \max} = 3.142 \text{ mm}$

单位为毫米

齿数 z	分度圆 直径 D	基圆 直径 D_b	大径 D_{ee}	渐开线起 始圆直径 $D_{Fe \max}$	小径 D_{ie}		实际齿厚最小值 $S_{\min} = S_{v \max} - (T + \lambda)$				齿数 z
					平齿根	圆齿根	4h	5h	6h	7h	
10	20.00	17.320 5	22.00	18.08	17.00	16.40	3.103	3.079	3.044	2.986	10
11	22.00	19.052 6	24.00	20.04	19.00	18.40	3.102	3.079	3.043	2.984	11
12	24.00	20.784 6	26.00	22.00	21.00	20.40	3.102	3.078	3.042	2.983	12
13	26.00	22.516 7	28.00	23.96	23.00	22.40	3.102	3.078	3.041	2.981	13
14	28.00	24.248 7	30.00	25.94	25.00	24.40	3.101	3.077	3.041	2.980	14
15	30.00	25.980 8	32.00	27.91	27.00	26.40	3.101	3.076	3.040	2.979	15
16	32.00	27.712 8	34.00	29.89	29.00	28.40	3.101	3.076	3.039	2.977	16
17	34.00	29.444 9	36.00	31.87	31.00	30.40	3.100	3.075	3.038	2.976	17
18	36.00	31.176 9	38.00	33.86	33.00	32.40	3.100	3.075	3.037	2.975	18
19	38.00	32.909 0	40.00	35.84	35.00	34.40	3.100	3.074	3.037	2.974	19
20	40.00	34.641 0	42.00	37.83	37.00	36.40	3.099	3.074	3.036	2.973	20
21	42.00	36.373 1	44.00	39.82	39.00	38.40	3.099	3.074	3.035	2.972	21
22	44.00	38.105 1	46.00	41.81	41.00	40.40	3.099	3.073	3.035	2.970	22
23	46.00	39.837 2	48.00	43.80	43.00	42.40	3.099	3.073	3.034	2.969	23
24	48.00	41.569 2	50.00	45.79	45.00	44.40	3.098	3.072	3.033	2.968	24
25	50.00	43.301 3	52.00	47.78	47.00	46.40	3.098	3.072	3.033	2.967	25
26	52.00	45.033 3	54.00	49.77	49.00	48.40	3.098	3.072	3.032	2.967	26
27	54.00	46.765 4	56.00	51.77	51.00	50.40	3.098	3.071	3.032	2.966	27
28	56.00	48.497 4	58.00	53.76	53.00	52.40	3.097	3.071	3.031	2.965	28
29	58.00	50.229 5	60.00	55.76	55.00	54.40	3.097	3.070	3.030	2.964	29
30	60.00	51.961 5	62.00	57.75	57.00	56.40	3.097	3.070	3.030	2.963	30
31	62.00	53.693 6	64.00	59.74	59.00	58.40	3.097	3.070	3.029	2.962	31
32	64.00	55.425 6	66.00	61.74	61.00	60.40	3.096	3.069	3.029	2.961	32
33	66.00	57.157 7	68.00	63.74	63.00	62.40	3.096	3.069	3.028	2.960	33
34	68.00	58.889 7	70.00	65.73	65.00	64.40	3.096	3.069	3.028	2.960	34
35	70.00	60.621 8	72.00	67.73	67.00	66.40	3.096	3.068	3.027	2.959	35
36	72.00	62.353 8	74.00	69.72	69.00	68.40	3.096	3.068	3.027	2.958	36
37	74.00	64.085 9	76.00	71.72	71.00	70.40	3.096	3.068	3.026	2.957	37
38	76.00	65.817 9	78.00	73.72	73.00	72.40	3.095	3.068	3.026	2.957	38
39	78.00	67.550 0	80.00	75.71	75.00	74.40	3.095	3.067	3.025	2.956	39
40	80.00	69.282 0	82.00	77.71	77.00	76.40	3.095	3.067	3.025	2.955	40
41	82.00	71.014 1	84.00	79.71	79.00	78.40	3.095	3.067	3.025	2.954	41
42	84.00	72.746 1	86.00	81.71	81.00	80.40	3.095	3.066	3.024	2.954	42
43	86.00	74.478 2	88.00	83.70	83.00	82.40	3.094	3.066	3.024	2.953	43
44	88.00	76.210 2	90.00	85.70	85.00	84.40	3.094	3.066	3.023	2.952	44
45	90.00	77.942 3	92.00	87.70	87.00	86.40	3.094	3.066	3.023	2.952	45
46	92.00	79.674 3	94.00	89.70	89.00	88.40	3.094	3.065	3.022	2.951	46
47	94.00	81.406 4	96.00	91.69	91.00	90.40	3.094	3.065	3.022	2.950	47
48	96.00	83.138 4	98.00	93.69	93.00	92.40	3.094	3.065	3.022	2.950	48
49	98.00	84.870 5	100.00	95.69	95.00	94.40	3.093	3.065	3.021	2.949	49
50	100.00	86.602 5	102.00	97.69	97.00	96.40	3.093	3.064	3.021	2.948	50
51	102.00	88.334 6	104.00	99.69	99.00	98.40	3.093	3.064	3.020	2.948	51
52	104.00	90.066 6	106.00	101.69	101.00	100.40	3.093	3.064	3.020	2.947	52
53	106.00	91.798 7	108.00	103.68	103.00	102.40	3.093	3.064	3.020	2.946	53
54	108.00	93.530 7	110.00	105.68	105.00	104.40	3.093	3.063	3.019	2.946	54
55	110.00	95.262 8	112.00	107.68	107.00	106.40	3.092	3.063	3.019	2.945	55

表 21 (续)

单位为毫米

齿数 z	分度圆 直径 D	基圆 直径 D_b	大径 D_{cc}	渐开线起 始圆直径 $D_{Fc\max}$	小径 D_{fc}		实际齿厚最小值 $S_{\min} = S_{v\max} - (T + \lambda)$				齿数 z
					平齿根	圆齿根	4h	5h	6h	7h	
56	112.00	96.994 8	114.00	109.68	109.00	108.40	3.092	3.063	3.018	2.945	56
57	114.00	98.726 9	116.00	111.68	111.00	110.40	3.092	3.063	3.018	2.944	57
58	116.00	100.458 9	118.00	113.68	113.00	112.40	3.092	3.062	3.018	2.943	58
59	118.00	102.191 0	120.00	115.67	115.00	114.40	3.092	3.062	3.017	2.943	59
60	120.00	103.923 0	122.00	117.67	117.00	116.40	3.092	3.062	3.017	2.942	60
61	122.00	105.655 1	124.00	119.67	119.00	118.40	3.092	3.062	3.017	2.942	61
62	124.00	107.387 1	126.00	121.67	121.00	120.40	3.091	3.061	3.016	2.941	62
63	126.00	109.119 2	128.00	123.67	123.00	122.40	3.091	3.061	3.016	2.941	63
64	128.00	110.851 3	130.00	125.67	125.00	124.40	3.091	3.061	3.016	2.940	64
65	130.00	112.583 3	132.00	127.67	127.00	126.40	3.091	3.061	3.015	2.939	65
66	132.00	114.315 4	134.00	129.67	129.00	128.40	3.091	3.061	3.015	2.939	66
67	134.00	116.047 4	136.00	131.67	131.00	130.40	3.091	3.060	3.015	2.938	67
68	136.00	117.779 5	138.00	133.66	133.00	132.40	3.091	3.060	3.014	2.938	68
69	138.00	119.511 5	140.00	135.66	135.00	134.40	3.091	3.060	3.014	2.937	69
70	140.00	121.243 6	142.00	137.66	137.00	136.40	3.090	3.060	3.014	2.937	70
71	142.00	122.975 6	144.00	139.66	139.00	138.40	3.090	3.059	3.013	2.936	71
72	144.00	124.707 7	146.00	141.66	141.00	140.40	3.090	3.059	3.013	2.936	72
73	146.00	126.439 7	148.00	143.66	143.00	142.40	3.090	3.059	3.013	2.935	73
74	148.00	128.171 8	150.00	145.66	145.00	144.40	3.090	3.059	3.012	2.935	74
75	150.00	129.903 8	152.00	147.66	147.00	146.40	3.090	3.059	3.012	2.934	75
76	152.00	131.635 9	154.00	149.66	149.00	148.40	3.090	3.058	3.012	2.934	76
77	154.00	133.367 9	156.00	151.66	151.00	150.40	3.089	3.058	3.011	2.933	77
78	156.00	135.100 0	158.00	153.66	153.00	152.40	3.089	3.058	3.011	2.933	78
79	158.00	136.832 0	160.00	155.66	155.00	154.40	3.089	3.058	3.011	2.932	79
80	160.00	138.564 1	162.00	157.65	157.00	156.40	3.089	3.058	3.010	2.932	80
81	162.00	140.296 1	164.00	159.65	159.00	158.40	3.089	3.057	3.010	2.931	81
82	164.00	142.028 2	166.00	161.65	161.00	160.40	3.089	3.057	3.010	2.931	82
83	166.00	143.760 2	168.00	163.65	163.00	162.40	3.089	3.057	3.010	2.930	83
84	168.00	145.492 3	170.00	165.65	165.00	164.40	3.089	3.057	3.009	2.930	84
85	170.00	147.224 3	172.00	167.65	167.00	166.40	3.089	3.057	3.009	2.929	85
86	172.00	148.956 4	174.00	169.65	169.00	168.40	3.088	3.057	3.009	2.929	86
87	174.00	150.688 4	176.00	171.65	171.00	170.40	3.088	3.056	3.008	2.928	87
88	176.00	152.420 5	178.00	173.65	173.00	172.40	3.088	3.056	3.008	2.928	88
89	178.00	154.152 5	180.00	175.65	175.00	174.40	3.088	3.056	3.008	2.927	89
90	180.00	155.884 6	182.00	177.65	177.00	176.40	3.088	3.056	3.007	2.927	90
91	182.00	157.616 6	184.00	179.65	179.00	178.40	3.088	3.056	3.007	2.927	91
92	184.00	159.348 7	186.00	181.65	181.00	180.40	3.088	3.055	3.007	2.926	92
93	186.00	161.080 7	188.00	183.65	183.00	182.40	3.088	3.055	3.007	2.926	93
94	188.00	162.812 8	190.00	185.65	185.00	184.40	3.088	3.055	3.006	2.925	94
95	190.00	164.544 8	192.00	187.65	187.00	186.40	3.087	3.055	3.006	2.925	95
96	192.00	166.276 9	194.00	189.65	189.00	188.40	3.087	3.055	3.006	2.924	96
97	194.00	168.008 9	196.00	191.65	191.00	190.40	3.087	3.055	3.006	2.924	97
98	196.00	169.741 0	198.00	193.64	193.00	192.40	3.087	3.054	3.005	2.923	98
99	198.00	171.473 0	200.00	195.64	195.00	194.40	3.087	3.054	3.005	2.923	99
100	200.00	173.205 1	202.00	197.64	197.00	196.40	3.087	3.054	3.005	2.923	100

表 22 30°外花键

模数 $m = 2.5 \text{ mm}$ 作用齿厚最大值 $S_{v \max} = 3.927 \text{ mm}$

单位为毫米

齿数 z	分度圆 直径 D	基圆 直径 D_b	大径 D_{e2}	渐开线起 始圆直径 $D_{Fe \max}$	小径 D_{fe}		实际齿厚最小值 $S_{\min} = S_{v \max} - (T + \lambda)$				齿数 z
					平齿根	圆齿根	4h	5h	6h	7h	
10	25.00	21.650 6	27.50	22.61	21.25	20.50	3.885	3.860	3.822	3.759	10
11	27.50	23.815 7	30.00	25.04	23.75	23.00	3.885	3.859	3.821	3.757	11
12	30.00	25.980 8	32.50	27.50	26.25	25.50	3.884	3.858	3.820	3.756	12
13	32.50	28.145 8	35.00	29.95	28.75	28.00	3.884	3.858	3.819	3.754	13
14	35.00	30.310 9	37.50	32.42	31.25	30.50	3.883	3.857	3.818	3.753	14
15	37.50	32.476 0	40.00	34.89	33.75	33.00	3.883	3.857	3.817	3.751	15
16	40.00	34.641 0	42.50	37.36	36.25	35.50	3.883	3.856	3.816	3.750	16
17	42.50	36.806 1	45.00	39.84	38.75	38.00	3.882	3.856	3.815	3.748	17
18	45.00	38.971 1	47.50	42.32	41.25	40.50	3.882	3.855	3.815	3.747	18
19	47.50	41.136 2	50.00	44.80	43.75	43.00	3.882	3.855	3.814	3.746	19
20	50.00	43.301 3	52.50	47.29	46.25	45.50	3.881	3.854	3.813	3.745	20
21	52.50	45.466 3	55.00	49.77	48.75	48.00	3.881	3.854	3.812	3.743	21
22	55.00	47.631 4	57.50	52.26	51.25	50.50	3.881	3.853	3.812	3.742	22
23	57.50	49.796 5	60.00	54.75	53.75	53.00	3.881	3.853	3.811	3.741	23
24	60.00	51.961 5	62.50	57.24	56.25	55.50	3.880	3.852	3.810	3.740	24
25	62.50	54.126 6	65.00	59.73	58.75	58.00	3.880	3.852	3.809	3.739	25
26	65.00	56.291 7	67.50	62.22	61.25	60.50	3.880	3.851	3.809	3.738	26
27	67.50	58.456 7	70.00	64.71	63.75	63.00	3.879	3.851	3.808	3.737	27
28	70.00	60.621 8	72.50	67.20	66.25	65.50	3.879	3.851	3.808	3.736	28
29	72.50	62.786 8	75.00	69.69	68.75	68.00	3.879	3.850	3.807	3.735	29
30	75.00	64.951 9	77.50	72.19	71.25	70.50	3.879	3.850	3.806	3.734	30
31	77.50	67.117 0	80.00	74.68	73.75	73.00	3.879	3.849	3.806	3.733	31
32	80.00	69.282 0	82.50	77.18	76.25	75.50	3.878	3.849	3.805	3.732	32
33	82.50	71.447 1	85.00	79.67	78.75	78.00	3.878	3.849	3.805	3.731	33
34	85.00	73.612 2	87.50	82.16	81.25	80.50	3.878	3.848	3.804	3.730	34
35	87.50	75.777 2	90.00	84.66	83.75	83.00	3.878	3.848	3.804	3.730	35
36	90.00	77.942 3	92.50	87.16	86.25	85.50	3.877	3.848	3.803	3.729	36
37	92.50	80.107 3	95.00	89.65	88.75	88.00	3.877	3.847	3.803	3.728	37
38	95.00	82.272 4	97.50	92.15	91.25	90.50	3.877	3.847	3.802	3.727	38
39	97.50	84.437 5	100.00	94.64	93.75	93.00	3.877	3.847	3.801	3.726	39
40	100.00	86.602 5	102.50	97.14	96.25	95.50	3.877	3.846	3.801	3.725	40
41	102.50	88.767 6	105.00	99.64	98.75	98.00	3.876	3.846	3.801	3.725	41
42	105.00	90.932 7	107.50	102.13	101.25	100.50	3.876	3.846	3.800	3.724	42
43	107.50	93.097 7	110.00	104.63	103.75	103.00	3.876	3.845	3.800	3.723	43
44	110.00	95.262 8	112.50	107.13	106.25	105.50	3.876	3.845	3.799	3.722	44
45	112.50	97.427 9	115.00	109.62	108.75	108.00	3.876	3.845	3.799	3.722	45
46	115.00	99.592 9	117.50	112.12	111.25	110.50	3.875	3.845	3.798	3.721	46
47	117.50	101.758 0	120.00	114.62	113.75	113.00	3.875	3.844	3.798	3.720	47
48	120.00	103.923 0	122.50	117.12	116.25	115.50	3.875	3.844	3.797	3.719	48
49	122.50	106.088 1	125.00	119.61	118.75	118.00	3.875	3.844	3.797	3.719	49
50	125.00	108.253 2	127.50	122.11	121.25	120.50	3.875	3.843	3.796	3.718	50
51	127.50	110.418 2	130.00	124.61	123.75	123.00	3.875	3.843	3.796	3.717	51
52	130.00	112.583 3	132.50	127.11	126.25	125.50	3.874	3.843	3.795	3.717	52
53	132.50	114.748 4	135.00	129.60	128.75	128.00	3.874	3.843	3.795	3.716	53
54	135.00	116.913 4	137.50	132.10	131.25	130.50	3.874	3.842	3.795	3.715	54
55	137.50	119.078 5	140.00	134.60	133.75	133.00	3.874	3.842	3.794	3.715	55

表 22 (续)

单位为毫米

齿数 z	分度圆 直径 D	基圆 直径 D_b	大径 D_{ee}	渐开线起 始圆直径 $D_{Fe\max}$	小径 D_{ic}		实际齿厚最小值 $S_{\min} = S_{v\max} - (T + \lambda)$				齿数 z
					平齿根	圆齿根	4h	5h	6h	7h	
56	140.00	121.243 6	142.50	137.10	136.25	135.50	3.874	3.842	3.794	3.714	56
57	142.50	123.408 6	145.00	139.60	138.75	138.00	3.874	3.841	3.793	3.713	57
58	145.00	125.573 7	147.50	142.10	141.25	140.50	3.873	3.841	3.793	3.713	58
59	147.50	127.738 7	150.00	144.59	143.75	143.00	3.873	3.841	3.793	3.712	59
60	150.00	129.903 8	152.50	147.09	146.25	145.50	3.873	3.841	3.792	3.711	60
61	152.50	132.068 9	155.00	149.59	148.75	148.00	3.873	3.840	3.792	3.711	61
62	155.00	134.233 9	157.50	152.09	151.25	150.50	3.873	3.840	3.791	3.710	62
63	157.50	136.399 0	160.00	154.59	153.75	153.00	3.873	3.840	3.791	3.709	63
64	160.00	138.564 1	162.50	157.09	156.25	155.50	3.872	3.840	3.791	3.709	64
65	162.50	140.729 1	165.00	159.58	158.75	158.00	3.872	3.839	3.790	3.708	65
66	165.00	142.894 2	167.50	162.08	161.25	160.50	3.872	3.839	3.790	3.708	66
67	167.50	145.059 3	170.00	164.58	163.75	163.00	3.872	3.839	3.790	3.707	67
68	170.00	147.224 3	172.50	167.08	166.25	165.50	3.872	3.839	3.789	3.706	68
69	172.50	149.389 4	175.00	169.58	168.75	168.00	3.872	3.839	3.789	3.706	69
70	175.00	151.554 4	177.50	172.08	171.25	170.50	3.872	3.838	3.788	3.705	70
71	177.50	153.719 5	180.00	174.58	173.75	173.00	3.871	3.838	3.788	3.705	71
72	180.00	155.884 6	182.50	177.08	176.25	175.50	3.871	3.838	3.788	3.704	72
73	182.50	158.049 6	185.00	179.58	178.75	178.00	3.871	3.838	3.787	3.704	73
74	185.00	160.214 7	187.50	182.07	181.25	180.50	3.871	3.837	3.787	3.703	74
75	187.50	162.379 8	190.00	184.57	183.75	183.00	3.871	3.837	3.787	3.702	75
76	190.00	164.544 8	192.50	187.07	186.25	185.50	3.871	3.837	3.786	3.702	76
77	192.50	166.709 9	195.00	189.57	188.75	188.00	3.871	3.837	3.786	3.701	77
78	195.00	168.875 0	197.50	192.07	191.25	190.50	3.870	3.837	3.786	3.701	78
79	197.50	171.040 0	200.00	194.57	193.75	193.00	3.870	3.836	3.785	3.700	79
80	200.00	173.205 1	202.50	197.07	196.25	195.50	3.870	3.836	3.785	3.700	80
81	202.50	175.370 1	205.00	199.57	198.75	198.00	3.870	3.836	3.785	3.699	81
82	205.00	177.535 2	207.50	202.07	201.25	200.50	3.870	3.836	3.784	3.699	82
83	207.50	179.700 3	210.00	204.57	203.75	203.00	3.870	3.835	3.784	3.698	83
84	210.00	181.865 3	212.50	207.07	206.25	205.50	3.870	3.835	3.784	3.698	84
85	212.50	184.030 4	215.00	209.56	208.75	208.00	3.870	3.835	3.783	3.697	85
86	215.00	186.195 5	217.50	212.06	211.25	210.50	3.869	3.835	3.783	3.697	86
87	217.50	188.360 5	220.00	214.56	213.75	213.00	3.869	3.835	3.783	3.696	87
88	220.00	190.525 6	222.50	217.06	216.25	215.50	3.869	3.834	3.782	3.696	88
89	222.50	192.690 6	225.00	219.56	218.75	218.00	3.869	3.834	3.782	3.695	89
90	225.00	194.855 7	227.50	222.06	221.25	220.50	3.869	3.834	3.782	3.695	90
91	227.50	197.020 8	230.00	224.56	223.75	223.00	3.869	3.834	3.781	3.694	91
92	230.00	199.185 8	232.50	227.06	226.25	225.50	3.869	3.834	3.781	3.694	92
93	232.50	201.350 9	235.00	229.56	228.75	228.00	3.869	3.833	3.781	3.693	93
94	235.00	203.516 0	237.50	232.06	231.25	230.50	3.868	3.833	3.780	3.693	94
95	237.50	205.681 0	240.00	234.56	233.75	233.00	3.868	3.833	3.780	3.692	95
96	240.00	207.846 1	242.50	237.06	236.25	235.50	3.868	3.833	3.780	3.692	96
97	242.50	210.011 2	245.00	239.56	238.75	238.00	3.868	3.833	3.780	3.691	97
98	245.00	212.176 2	247.50	242.06	241.25	240.50	3.868	3.832	3.779	3.691	98
99	247.50	214.341 3	250.00	244.56	243.75	243.00	3.868	3.832	3.779	3.690	99
100	250.00	216.506 3	252.50	247.05	246.25	245.50	3.868	3.832	3.779	3.690	100

表 23 30°外花键
模数 $m=3\text{ mm}$ 作用齿厚最大值 $S_{v\text{max}}=4.712\text{ mm}$

单位为毫米

齿数 z	分度圆 直径 D	基圆 直径 D_b	大径 D_{ee}	渐开线起 始圆直径 $D_{Fe\text{max}}$	小径 D_{ic}		实际齿厚最小值 $S_{\text{min}}=S_{v\text{max}}-(T+\lambda)$				齿数 z
					平齿根	圆齿根	4h	5h	6h	7h	
10	30.00	25.980 8	33.00	27.13	25.50	24.60	4.668	4.641	4.601	4.534	10
11	33.00	28.578 8	36.00	30.05	28.50	27.60	4.667	4.640	4.600	4.532	11
12	36.00	31.176 9	39.00	32.99	31.50	30.60	4.667	4.640	4.599	4.530	12
13	39.00	33.775 0	42.00	35.94	34.50	33.60	4.666	4.639	4.597	4.528	13
14	42.00	36.373 1	45.00	38.90	37.50	36.60	4.666	4.638	4.596	4.527	14
15	45.00	38.971 1	48.00	41.87	40.50	39.60	4.666	4.638	4.595	4.525	15
16	48.00	41.569 2	51.00	44.84	43.50	42.60	4.665	4.637	4.594	4.524	16
17	51.00	44.167 3	54.00	47.81	46.50	45.60	4.665	4.636	4.594	4.522	17
18	54.00	46.765 4	57.00	50.78	49.50	48.60	4.665	4.636	4.593	4.521	18
19	57.00	49.363 4	60.00	53.76	52.50	51.60	4.664	4.635	4.592	4.520	19
20	60.00	51.961 5	63.00	56.74	55.50	54.60	4.664	4.635	4.591	4.518	20
21	63.00	54.559 6	66.00	59.73	58.50	57.60	4.664	4.634	4.590	4.517	21
22	66.00	57.157 7	69.00	62.71	61.50	60.60	4.663	4.634	4.589	4.516	22
23	69.00	59.755 8	72.00	65.70	64.50	63.60	4.663	4.633	4.589	4.515	23
24	72.00	62.353 9	75.00	68.68	67.50	66.60	4.663	4.633	4.588	4.513	24
25	75.00	64.951 9	78.00	71.67	70.50	69.60	4.662	4.632	4.587	4.512	25
26	78.00	67.550 0	81.00	74.66	73.50	72.60	4.662	4.632	4.587	4.511	26
27	81.00	70.148 1	84.00	77.65	76.50	75.60	4.662	4.631	4.586	4.510	27
28	84.00	72.746 1	87.00	80.64	79.50	78.60	4.662	4.631	4.585	4.509	28
29	87.00	75.344 2	90.00	83.63	82.50	81.60	4.661	4.631	4.585	4.508	29
30	90.00	77.942 3	93.00	86.62	85.50	84.60	4.661	4.630	4.584	4.507	30
31	93.00	80.540 4	96.00	89.62	88.50	87.60	4.661	4.630	4.583	4.506	31
32	96.00	83.138 4	99.00	92.61	91.50	90.60	4.661	4.629	4.583	4.505	32
33	99.00	85.736 5	102.00	95.60	94.50	93.60	4.660	4.629	4.582	4.504	33
34	102.00	88.334 6	105.00	98.60	97.50	96.60	4.660	4.629	4.581	4.503	34
35	105.00	90.932 7	108.00	101.59	100.50	99.60	4.660	4.628	4.581	4.502	35
36	108.00	93.530 7	111.00	104.59	103.50	102.60	4.660	4.628	4.580	4.501	36
37	111.00	96.128 8	114.00	107.58	106.50	105.60	4.659	4.628	4.580	4.500	37
38	114.00	98.726 9	117.00	110.58	109.50	108.60	4.659	4.627	4.579	4.499	38
39	117.00	101.325 0	120.00	113.57	112.50	111.60	4.659	4.627	4.579	4.498	39
40	120.00	103.923 0	123.00	116.57	115.50	114.60	4.659	4.626	4.578	4.498	40
41	123.00	106.521 1	126.00	119.56	118.50	117.60	4.658	4.626	4.578	4.497	41
42	126.00	109.119 2	129.00	122.56	121.50	120.60	4.658	4.626	4.577	4.496	42
43	129.00	111.717 3	132.00	125.55	124.50	123.60	4.658	4.625	4.577	4.495	43
44	132.00	114.315 4	135.00	128.55	127.50	126.60	4.658	4.625	4.576	4.494	44
45	135.00	116.913 4	138.00	131.55	130.50	129.60	4.658	4.625	4.576	4.493	45
46	138.00	119.511 5	141.00	134.54	133.50	132.60	4.657	4.624	4.575	4.493	46
47	141.00	122.109 6	144.00	137.54	136.50	135.60	4.657	4.624	4.575	4.492	47
48	144.00	124.707 7	147.00	140.54	139.50	138.60	4.657	4.624	4.574	4.491	48
49	147.00	127.305 7	150.00	143.54	142.50	141.60	4.657	4.624	4.574	4.490	49
50	150.00	129.903 8	153.00	146.53	145.50	144.60	4.657	4.623	4.573	4.490	50
51	153.00	132.501 9	156.00	149.53	148.50	147.60	4.656	4.623	4.573	4.489	51
52	156.00	135.100 0	159.00	152.53	151.50	150.60	4.656	4.623	4.572	4.488	52
53	159.00	137.698 0	162.00	155.53	154.50	153.60	4.656	4.622	4.572	4.487	53
54	162.00	140.296 1	165.00	158.52	157.50	156.60	4.656	4.622	4.571	4.487	54
55	165.00	142.894 2	168.00	161.52	160.50	159.60	4.656	4.622	4.571	4.486	55

表 23 (续)

单位为毫米

齿数 z	分度圆 直径 D	基圆 直径 D_b	大径 D_{cc}	渐开线起 始圆直径 $D_{Fr\ max}$	小径 D_{ic}		实际齿厚最小值 $S_{\min} = S_{v\ max} - (T + \lambda)$				齿数 z
					平齿根	圆齿根	4h	5h	6h	7h	
56	168.00	145.492 3	171.00	164.52	163.50	162.60	4.656	4.621	4.570	4.485	56
57	171.00	148.090 3	174.00	167.52	166.50	165.60	4.655	4.621	4.570	4.484	57
58	174.00	150.688 4	177.00	170.51	169.50	168.60	4.655	4.621	4.569	4.484	58
59	177.00	153.286 5	180.00	173.51	172.50	171.60	4.655	4.621	4.569	4.483	59
60	180.00	155.884 6	183.00	176.51	175.50	174.60	4.655	4.620	4.569	4.482	60
61	183.00	158.482 6	186.00	179.51	178.50	177.60	4.655	4.620	4.568	4.482	61
62	186.00	161.080 7	189.00	182.51	181.50	180.60	4.655	4.620	4.568	4.481	62
63	189.00	163.678 8	192.00	185.50	184.50	183.60	4.654	4.620	4.567	4.480	63
64	192.00	166.276 9	195.00	188.50	187.50	186.60	4.654	4.619	4.567	4.480	64
65	195.00	168.875 0	198.00	191.50	190.50	189.60	4.654	4.619	4.567	4.479	65
66	198.00	171.473 0	201.00	194.50	193.50	192.60	4.654	4.619	4.566	4.478	66
67	201.00	174.071 1	204.00	197.50	196.50	195.60	4.654	4.619	4.566	4.478	67
68	204.00	176.669 2	207.00	200.50	199.50	198.60	4.654	4.618	4.565	4.477	68
69	207.00	179.267 3	210.00	203.50	202.50	201.60	4.653	4.618	4.565	4.476	69
70	210.00	181.865 3	213.00	206.49	205.50	204.60	4.653	4.618	4.565	4.476	70
71	213.00	184.463 4	216.00	209.49	208.50	207.60	4.653	4.617	4.564	4.475	71
72	216.00	187.061 5	219.00	212.49	211.50	210.60	4.653	4.617	4.564	4.475	72
73	219.00	189.659 6	222.00	215.49	214.50	213.60	4.653	4.617	4.563	4.474	73
74	222.00	192.257 6	225.00	218.49	217.50	216.60	4.653	4.617	4.563	4.473	74
75	225.00	194.855 7	228.00	221.49	220.50	219.60	4.652	4.617	4.563	4.473	75
76	228.00	197.453 8	231.00	224.49	223.50	222.60	4.652	4.616	4.562	4.472	76
77	231.00	200.051 9	234.00	227.49	226.50	225.60	4.652	4.616	4.562	4.472	77
78	234.00	202.649 9	237.00	230.48	229.50	228.60	4.652	4.616	4.561	4.471	78
79	237.00	205.248 0	240.00	233.48	232.50	231.60	4.652	4.616	4.561	4.470	79
80	240.00	207.846 1	243.00	236.48	235.50	234.60	4.652	4.615	4.561	4.470	80
81	243.00	210.444 2	246.00	239.48	238.50	237.60	4.652	4.615	4.560	4.469	81
82	246.00	213.042 2	249.00	242.48	241.50	240.60	4.651	4.615	4.560	4.469	82
83	249.00	215.640 3	252.00	245.48	244.50	243.60	4.651	4.615	4.560	4.468	83
84	252.00	218.238 4	255.00	248.48	247.50	246.60	4.651	4.614	4.559	4.467	84
85	255.00	220.836 5	258.00	251.48	250.50	249.60	4.651	4.614	4.559	4.467	85
86	258.00	223.434 6	261.00	254.48	253.50	252.60	4.651	4.614	4.559	4.466	86
87	261.00	226.032 6	264.00	257.48	256.50	255.60	4.651	4.614	4.558	4.466	87
88	264.00	228.630 7	267.00	260.47	259.50	258.60	4.651	4.614	4.558	4.465	88
89	267.00	231.228 8	270.00	263.47	262.50	261.60	4.650	4.613	4.558	4.465	89
90	270.00	233.826 9	273.00	266.47	265.50	264.60	4.650	4.613	4.557	4.464	90
91	273.00	236.424 9	276.00	269.47	268.50	267.60	4.650	4.613	4.557	4.464	91
92	276.00	239.023 0	279.00	272.47	271.50	270.60	4.650	4.613	4.557	4.463	92
93	279.00	241.621 1	282.00	275.47	274.50	273.60	4.650	4.612	4.556	4.462	93
94	282.00	244.219 2	285.00	278.47	277.50	276.60	4.650	4.612	4.556	4.462	94
95	285.00	246.817 2	288.00	281.47	280.50	279.60	4.650	4.612	4.555	4.461	95
96	288.00	249.415 3	291.00	284.47	283.50	282.60	4.649	4.612	4.555	4.461	96
97	291.00	252.013 4	294.00	287.47	286.50	285.60	4.649	4.612	4.555	4.460	97
98	294.00	254.611 5	297.00	290.47	289.50	288.60	4.649	4.611	4.554	4.460	98
99	297.00	257.209 5	300.00	293.47	292.50	291.60	4.649	4.611	4.554	4.459	99
100	300.00	259.807 6	303.00	296.47	295.50	294.60	4.649	4.611	4.554	4.459	100

表 24 30°外花键
模数 $m=4$ mm 作用齿厚最大值 $S_{v\max}=6.283$ mm

单位为毫米

齿数 z	分度圆 直径 D	基圆 直径 D_b	大径 D_{ee}	渐开线起 始圆直径 $D_{Fe\max}$	小径 D_{ie}		实际齿厚最小值 $S_{\min}=S_{v\max}-(T+\lambda)$				齿数 z
					平齿根	圆齿根	4h	5h	6h	7h	
10	40.00	34.641 0	44.00	36.17	34.00	32.80	6.234	6.204	6.160	6.086	10
11	44.00	38.105 1	48.00	40.07	38.00	36.80	6.233	6.204	6.159	6.084	11
12	48.00	41.569 2	52.00	43.99	42.00	40.80	6.233	6.203	6.158	6.082	12
13	52.00	45.033 3	56.00	47.93	46.00	44.80	6.232	6.202	6.156	6.080	13
14	56.00	48.497 4	60.00	51.87	50.00	48.80	6.232	6.201	6.155	6.078	14
15	60.00	51.961 5	64.00	55.82	54.00	52.80	6.232	6.201	6.154	6.077	15
16	64.00	55.425 6	68.00	59.78	58.00	56.80	6.231	6.200	6.153	6.075	16
17	68.00	58.889 7	72.00	63.74	62.00	60.80	6.231	6.199	6.152	6.073	17
18	72.00	62.353 8	76.00	67.71	66.00	64.80	6.230	6.199	6.151	6.072	18
19	76.00	65.817 9	80.00	71.68	70.00	68.80	6.230	6.198	6.150	6.070	19
20	80.00	69.282 0	84.00	75.66	74.00	72.80	6.230	6.197	6.149	6.069	20
21	84.00	72.746 1	88.00	79.64	78.00	76.80	6.229	6.197	6.148	6.067	21
22	88.00	76.210 2	92.00	83.61	82.00	80.80	6.229	6.196	6.147	6.066	22
23	92.00	79.674 3	96.00	87.60	86.00	84.80	6.229	6.196	6.147	6.065	23
24	96.00	83.138 4	100.00	91.58	90.00	88.80	6.228	6.195	6.146	6.063	24
25	100.00	86.602 5	104.00	95.56	94.00	92.80	6.228	6.195	6.145	6.062	25
26	104.00	90.066 6	108.00	99.55	98.00	96.80	6.228	6.194	6.144	6.061	26
27	108.00	93.530 7	112.00	103.53	102.00	100.80	6.227	6.194	6.143	6.059	27
28	112.00	96.994 8	116.00	107.52	106.00	104.80	6.227	6.193	6.143	6.058	28
29	116.00	100.458 9	120.00	111.51	110.00	108.80	6.227	6.193	6.142	6.057	29
30	120.00	103.923 0	124.00	115.50	114.00	112.80	6.226	6.192	6.141	6.056	30
31	124.00	107.387 1	128.00	119.49	118.00	116.80	6.226	6.192	6.140	6.055	31
32	128.00	110.851 3	132.00	123.48	122.00	120.80	6.226	6.191	6.140	6.054	32
33	132.00	114.315 4	136.00	127.47	126.00	124.80	6.226	6.191	6.139	6.053	33
34	136.00	117.779 5	140.00	131.46	130.00	128.80	6.225	6.191	6.138	6.052	34
35	140.00	121.243 6	144.00	135.46	134.00	132.80	6.225	6.190	6.138	6.050	35
36	144.00	124.707 7	148.00	139.45	138.00	136.80	6.225	6.190	6.137	6.049	36
37	148.00	128.171 8	152.00	143.44	142.00	140.80	6.224	6.189	6.136	6.048	37
38	152.00	131.635 9	156.00	147.43	146.00	144.80	6.224	6.189	6.136	6.047	38
39	156.00	135.100 0	160.00	151.43	150.00	148.80	6.224	6.188	6.135	6.046	39
40	160.00	138.564 1	164.00	155.42	154.00	152.80	6.224	6.188	6.135	6.045	40
41	164.00	142.028 2	168.00	159.42	158.00	156.80	6.224	6.188	6.134	6.044	41
42	168.00	145.492 3	172.00	163.41	162.00	160.80	6.223	6.187	6.133	6.044	42
43	172.00	148.956 4	176.00	167.41	166.00	164.80	6.223	6.187	6.133	6.043	43
44	176.00	152.420 5	180.00	171.40	170.00	168.80	6.223	6.187	6.132	6.042	44
45	180.00	155.884 6	184.00	175.40	174.00	172.80	6.223	6.186	6.132	6.041	45
46	184.00	159.348 7	188.00	179.39	178.00	176.80	6.222	6.186	6.131	6.040	46
47	188.00	162.812 8	192.00	183.39	182.00	180.80	6.222	6.185	6.131	6.039	47
48	192.00	166.276 9	196.00	187.38	186.00	184.80	6.222	6.185	6.130	6.038	48
49	196.00	169.741 0	200.00	191.38	190.00	188.80	6.222	6.185	6.129	6.037	49
50	200.00	173.205 1	204.00	195.38	194.00	192.80	6.221	6.184	6.129	6.036	50
51	204.00	176.669 2	208.00	199.37	198.00	196.80	6.221	6.184	6.128	6.035	51
52	208.00	180.133 3	212.00	203.37	202.00	200.80	6.221	6.184	6.128	6.035	52
53	212.00	183.597 4	216.00	207.37	206.00	204.80	6.221	6.183	6.127	6.034	53
54	216.00	187.061 5	220.00	211.36	210.00	208.80	6.221	6.183	6.127	6.033	54
55	220.00	190.525 6	224.00	215.36	214.00	212.80	6.220	6.183	6.126	6.032	55

表 24 (续)

单位为毫米

齿数 z	分度圆 直径 D	基圆 直径 D_b	大径 D_{re}	渐开线起 始圆直径 $D_{Fe\ max}$	小径 D_{re}		实际齿厚最小值 $S_{min} = S_{v\ max} - (T + \lambda)$				齿数 z
					平齿根	圆齿根	4h	5h	6h	7h	
56	224.00	193.989 7	228.00	219.36	218.00	216.80	6.220	6.182	6.126	6.031	56
57	228.00	197.453 8	232.00	223.35	222.00	220.80	6.220	6.182	6.125	6.031	57
58	232.00	200.917 9	236.00	227.35	226.00	224.80	6.220	6.182	6.125	6.030	58
59	236.00	204.382 0	240.00	231.35	230.00	228.80	6.220	6.181	6.124	6.029	59
60	240.00	207.846 1	244.00	235.35	234.00	232.80	6.219	6.181	6.124	6.028	60
61	244.00	211.310 2	248.00	239.34	238.00	236.80	6.219	6.181	6.123	6.027	61
62	248.00	214.774 3	252.00	243.34	242.00	240.80	6.219	6.181	6.123	6.027	62
63	252.00	218.238 4	256.00	247.34	246.00	244.80	6.219	6.180	6.122	6.026	63
64	256.00	221.702 5	260.00	251.34	250.00	248.80	6.219	6.180	6.122	6.025	64
65	260.00	225.166 6	264.00	255.34	254.00	252.80	6.218	6.180	6.121	6.024	65
66	264.00	228.630 7	268.00	259.33	258.00	256.80	6.218	6.179	6.121	6.024	66
67	268.00	232.094 8	272.00	263.33	262.00	260.80	6.218	6.179	6.120	6.023	67
68	272.00	235.558 9	276.00	267.33	266.00	264.80	6.218	6.179	6.120	6.022	68
69	276.00	239.023 0	280.00	271.33	270.00	268.80	6.218	6.178	6.120	6.021	69
70	280.00	242.487 1	284.00	275.33	274.00	272.80	6.218	6.178	6.119	6.021	70
71	284.00	245.951 2	288.00	279.32	278.00	276.80	6.217	6.178	6.119	6.020	71
72	288.00	249.415 3	292.00	283.32	282.00	280.80	6.217	6.178	6.118	6.019	72
73	292.00	252.879 4	296.00	287.32	286.00	284.80	6.217	6.177	6.118	6.019	73
74	296.00	256.343 5	300.00	291.32	290.00	288.80	6.217	6.177	6.117	6.018	74
75	300.00	259.807 6	304.00	295.32	294.00	292.80	6.217	6.177	6.117	6.017	75
76	304.00	263.271 7	308.00	299.32	298.00	296.80	6.216	6.176	6.116	6.016	76
77	308.00	266.735 8	312.00	303.31	302.00	300.80	6.216	6.176	6.116	6.016	77
78	312.00	270.199 9	316.00	307.31	306.00	304.80	6.216	6.176	6.116	6.015	78
79	316.00	273.664 0	320.00	311.31	310.00	308.80	6.216	6.176	6.115	6.014	79
80	320.00	277.128 1	324.00	315.31	314.00	312.80	6.216	6.175	6.115	6.014	80
81	324.00	280.592 2	328.00	319.31	318.00	316.80	6.216	6.175	6.114	6.013	81
82	328.00	284.056 3	332.00	323.31	322.00	320.80	6.215	6.175	6.114	6.012	82
83	332.00	287.520 4	336.00	327.31	326.00	324.80	6.215	6.175	6.114	6.012	83
84	336.00	290.984 5	340.00	331.30	330.00	328.80	6.215	6.174	6.113	6.011	84
85	340.00	294.448 6	344.00	335.30	334.00	332.80	6.215	6.174	6.113	6.010	85
86	344.00	297.912 7	348.00	339.30	338.00	336.80	6.215	6.174	6.112	6.010	86
87	348.00	301.376 8	352.00	343.30	342.00	340.80	6.215	6.174	6.112	6.009	87
88	352.00	304.840 9	356.00	347.30	346.00	344.80	6.215	6.173	6.111	6.008	88
89	356.00	308.305 0	360.00	351.30	350.00	348.80	6.214	6.173	6.111	6.008	89
90	360.00	311.769 1	364.00	355.30	354.00	352.80	6.214	6.173	6.111	6.007	90
91	364.00	315.233 2	368.00	359.30	358.00	356.80	6.214	6.173	6.110	6.007	91
92	368.00	318.697 3	372.00	363.30	362.00	360.80	6.214	6.172	6.110	6.006	92
93	372.00	322.161 4	376.00	367.29	366.00	364.80	6.214	6.172	6.110	6.005	93
94	376.00	325.625 5	380.00	371.29	370.00	368.80	6.214	6.172	6.109	6.005	94
95	380.00	329.089 6	384.00	375.29	374.00	372.80	6.213	6.172	6.109	6.004	95
96	384.00	332.553 8	388.00	379.29	378.00	376.80	6.213	6.171	6.108	6.003	96
97	388.00	336.017 9	392.00	383.29	382.00	380.80	6.213	6.171	6.108	6.003	97
98	392.00	339.482 0	396.00	387.29	386.00	384.80	6.213	6.171	6.108	6.002	98
99	396.00	342.946 1	400.00	391.29	390.00	388.80	6.213	6.171	6.107	6.002	99
100	400.00	346.410 2	404.00	395.29	394.00	392.80	6.213	6.170	6.107	6.001	100

表 25 30°外花键
模数 $m=5\text{ mm}$ 作用齿厚最大值 $S_{v\text{max}}=7.854\text{ mm}$

单位为毫米

齿数 z	分度圆 直径 D	基圆 直径 D_b	大径 D_e	渐开线起 始圆直径 $D_{Fe\text{max}}$	小径 D_i		实际齿厚最小值 $S_{\text{min}} = S_{v\text{max}} - (T + \lambda)$				齿数 z
					平齿根	圆齿根	4h	5h	6h	7h	
10	50.00	43.301 3	55.00	45.21	42.50	41.00	7.801	7.769	7.721	7.641	10
11	55.00	47.631 4	60.00	50.09	47.50	46.00	7.800	7.768	7.720	7.639	11
12	60.00	51.961 5	65.00	54.99	52.50	51.00	7.800	7.767	7.718	7.637	12
13	65.00	56.291 7	70.00	59.91	57.50	56.00	7.799	7.766	7.717	7.635	13
14	70.00	60.621 8	75.00	64.84	62.50	61.00	7.799	7.766	7.716	7.633	14
15	75.00	64.951 9	80.00	69.78	67.50	66.00	7.798	7.765	7.715	7.631	15
16	80.00	69.282 0	85.00	74.73	72.50	71.00	7.798	7.764	7.713	7.629	16
17	85.00	73.612 2	90.00	79.68	77.50	76.00	7.797	7.763	7.712	7.627	17
18	90.00	77.942 3	95.00	84.64	82.50	81.00	7.797	7.763	7.711	7.626	18
19	95.00	82.272 4	100.00	89.60	87.50	86.00	7.796	7.762	7.710	7.624	19
20	100.00	86.602 5	105.00	94.57	92.50	91.00	7.796	7.761	7.709	7.622	20
21	105.00	90.932 7	110.00	99.54	97.50	96.00	7.796	7.761	7.708	7.621	21
22	110.00	95.262 8	115.00	104.52	102.50	101.00	7.795	7.760	7.707	7.619	22
23	115.00	99.592 9	120.00	109.49	107.50	106.00	7.795	7.759	7.706	7.618	23
24	120.00	103.923 0	125.00	114.47	112.50	111.00	7.795	7.759	7.705	7.616	24
25	125.00	108.253 2	130.00	119.45	117.50	116.00	7.794	7.758	7.705	7.615	25
26	130.00	112.583 3	135.00	124.43	122.50	121.00	7.794	7.758	7.704	7.613	26
27	135.00	116.913 4	140.00	129.42	127.50	126.00	7.794	7.757	7.703	7.612	27
28	140.00	121.243 6	145.00	134.40	132.50	131.00	7.793	7.757	7.702	7.611	28
29	145.00	125.573 7	150.00	139.39	137.50	136.00	7.793	7.756	7.701	7.609	29
30	150.00	129.903 8	155.00	144.37	142.50	141.00	7.793	7.756	7.700	7.608	30
31	155.00	134.233 9	160.00	149.36	147.50	146.00	7.792	7.755	7.700	7.607	31
32	160.00	138.564 1	165.00	154.35	152.50	151.00	7.792	7.755	7.699	7.606	32
33	165.00	142.894 2	170.00	159.34	157.50	156.00	7.792	7.754	7.698	7.605	33
34	170.00	147.224 3	175.00	164.33	162.50	161.00	7.791	7.754	7.697	7.603	34
35	175.00	151.554 4	180.00	169.32	167.50	166.00	7.791	7.753	7.697	7.602	35
36	180.00	155.884 6	185.00	174.31	172.50	171.00	7.791	7.753	7.696	7.601	36
37	185.00	160.214 7	190.00	179.30	177.50	176.00	7.790	7.752	7.695	7.600	37
38	190.00	164.544 8	195.00	184.29	182.50	181.00	7.790	7.752	7.694	7.599	38
39	195.00	168.875 0	200.00	189.29	187.50	186.00	7.790	7.751	7.694	7.598	39
40	200.00	173.205 1	205.00	194.28	192.50	191.00	7.790	7.751	7.693	7.597	40
41	205.00	177.535 2	210.00	199.27	197.50	196.00	7.789	7.751	7.692	7.596	41
42	210.00	181.865 3	215.00	204.26	202.50	201.00	7.789	7.750	7.692	7.595	42
43	215.00	186.195 5	220.00	209.26	207.50	206.00	7.789	7.750	7.691	7.593	43
44	220.00	190.525 6	225.00	214.25	212.50	211.00	7.789	7.749	7.691	7.592	44
45	225.00	194.855 7	230.00	219.25	217.50	216.00	7.788	7.749	7.690	7.591	45
46	230.00	199.185 8	235.00	224.24	222.50	221.00	7.788	7.749	7.689	7.590	46
47	235.00	203.516 0	240.00	229.24	227.50	226.00	7.788	7.748	7.689	7.589	47
48	240.00	207.846 1	245.00	234.23	232.50	231.00	7.788	7.748	7.688	7.588	48
49	245.00	212.176 2	250.00	239.23	237.50	236.00	7.787	7.747	7.687	7.587	49
50	250.00	216.506 3	255.00	244.22	242.50	241.00	7.787	7.747	7.687	7.587	50
51	255.00	220.836 5	260.00	249.22	247.50	246.00	7.787	7.747	7.686	7.586	51
52	260.00	225.166 6	265.00	254.21	252.50	251.00	7.787	7.746	7.686	7.585	52
53	265.00	229.496 7	270.00	259.21	257.50	256.00	7.786	7.746	7.685	7.584	53
54	270.00	233.826 9	275.00	264.20	262.50	261.00	7.786	7.746	7.684	7.583	54
55	275.00	238.157 0	280.00	269.20	267.50	266.00	7.786	7.745	7.684	7.582	55

表 25 (续)

单位为毫米

齿数 <i>z</i>	分度圆 直径 <i>D</i>	基圆 直径 <i>D_b</i>	大径 <i>D_{ee}</i>	渐开线起 始圆直径 <i>D_{Fe max}</i>	小径 <i>D_e</i>		实际齿厚最小值 $S_{min} = S_{v max} - (T + \lambda)$				齿数 <i>z</i>
					平齿根	圆齿根	4h	5h	6h	7h	
56	280.00	242.487 1	285.00	274.20	272.50	271.00	7.786	7.745	7.683	7.581	56
57	285.00	246.817 2	290.00	279.19	277.50	276.00	7.786	7.744	7.683	7.580	57
58	290.00	251.147 4	295.00	284.19	282.50	281.00	7.785	7.744	7.682	7.579	58
59	295.00	255.477 5	300.00	289.19	287.50	286.00	7.785	7.744	7.682	7.578	59
60	300.00	259.807 6	305.00	294.18	292.50	291.00	7.785	7.743	7.681	7.577	60
61	305.00	264.137 7	310.00	299.18	297.50	296.00	7.785	7.743	7.681	7.577	61
62	310.00	268.467 9	315.00	304.18	302.50	301.00	7.784	7.743	7.680	7.576	62
63	315.00	272.798 0	320.00	309.17	307.50	306.00	7.784	7.742	7.680	7.575	63
64	320.00	277.128 1	325.00	314.17	312.50	311.00	7.784	7.742	7.679	7.574	64
65	325.00	281.458 3	330.00	319.17	317.50	316.00	7.784	7.742	7.678	7.573	65
66	330.00	285.788 4	335.00	324.17	322.50	321.00	7.784	7.741	7.678	7.572	66
67	335.00	290.118 5	340.00	329.16	327.50	326.00	7.783	7.741	7.677	7.572	67
68	340.00	294.448 6	345.00	334.16	332.50	331.00	7.783	7.741	7.677	7.571	68
69	345.00	298.778 8	350.00	339.16	337.50	336.00	7.783	7.740	7.676	7.570	69
70	350.00	303.108 9	355.00	344.16	342.50	341.00	7.783	7.740	7.676	7.569	70
71	355.00	307.439 0	360.00	349.15	347.50	346.00	7.783	7.740	7.675	7.568	71
72	360.00	311.769 1	365.00	354.15	352.50	351.00	7.782	7.739	7.675	7.568	72
73	365.00	316.099 3	370.00	359.15	357.50	356.00	7.782	7.739	7.674	7.567	73
74	370.00	320.429 4	375.00	364.15	362.50	361.00	7.782	7.739	7.674	7.566	74
75	375.00	324.759 5	380.00	369.15	367.50	366.00	7.782	7.738	7.673	7.565	75
76	380.00	329.089 6	385.00	374.14	372.50	371.00	7.782	7.738	7.673	7.564	76
77	385.00	333.419 8	390.00	379.14	377.50	376.00	7.781	7.738	7.673	7.564	77
78	390.00	337.749 9	395.00	384.14	382.50	381.00	7.781	7.738	7.672	7.563	78
79	395.00	342.080 0	400.00	389.14	387.50	386.00	7.781	7.737	7.672	7.562	79
80	400.00	346.410 2	405.00	394.14	392.50	391.00	7.781	7.737	7.671	7.561	80
81	405.00	350.740 3	410.00	399.14	397.50	396.00	7.781	7.737	7.671	7.561	81
82	410.00	355.070 4	415.00	404.13	402.50	401.00	7.780	7.736	7.670	7.560	82
83	415.00	359.400 5	420.00	409.13	407.50	406.00	7.780	7.736	7.670	7.559	83
84	420.00	363.730 7	425.00	414.13	412.50	411.00	7.780	7.736	7.669	7.558	84
85	425.00	368.060 8	430.00	419.13	417.50	416.00	7.780	7.735	7.669	7.558	85
86	430.00	372.390 9	435.00	424.13	422.50	421.00	7.780	7.735	7.668	7.557	86
87	435.00	376.721 0	440.00	429.13	427.50	426.00	7.780	7.735	7.668	7.556	87
88	440.00	381.051 2	445.00	434.12	432.50	431.00	7.779	7.735	7.667	7.555	88
89	445.00	385.381 3	450.00	439.12	437.50	436.00	7.779	7.734	7.667	7.555	89
90	450.00	389.711 4	455.00	444.12	442.50	441.00	7.779	7.734	7.667	7.554	90
91	455.00	394.041 6	460.00	449.12	447.50	446.00	7.779	7.734	7.666	7.553	91
92	460.00	398.371 7	465.00	454.12	452.50	451.00	7.779	7.733	7.666	7.553	92
93	465.00	402.701 8	470.00	459.12	457.50	456.00	7.778	7.733	7.665	7.552	93
94	470.00	407.031 9	475.00	464.12	462.50	461.00	7.778	7.733	7.665	7.551	94
95	475.00	411.362 1	480.00	469.12	467.50	466.00	7.778	7.733	7.664	7.551	95
96	480.00	415.692 2	485.00	474.11	472.50	471.00	7.778	7.732	7.664	7.550	96
97	485.00	420.022 3	490.00	479.11	477.50	476.00	7.778	7.732	7.663	7.549	97
98	490.00	424.352 4	495.00	484.11	482.50	481.00	7.778	7.732	7.663	7.548	98
99	495.00	428.682 6	500.00	489.11	487.50	486.00	7.777	7.732	7.663	7.548	99
100	500.00	433.012 7	505.00	494.11	492.50	491.00	7.777	7.731	7.662	7.547	100

表 26 30°外花键

模数 $m=6\text{ mm}$ 作用齿厚最大值 $S_{v\max}=9.425\text{ mm}$

单位为毫米

齿数 z	分度圆 直径 D	基圆 直径 D_b	大径 D_{ee}	渐开线起 始圆直径 $D_{Fe\max}$	小径 D_{ie}		实际齿厚最小值 $S_{\min}=S_{v\max}-(T+\lambda)$				齿数 z
					平齿根	圆齿根	4h	5h	6h	7h	
10	60.00	51.961 5	66.00	54.25	51.00	49.20	9.368	9.334	9.283	9.199	10
11	66.00	57.157 7	72.00	60.11	57.00	55.20	9.368	9.333	9.282	9.196	11
12	72.00	62.353 8	78.00	65.99	63.00	61.20	9.367	9.332	9.280	9.194	12
13	78.00	67.550 0	84.00	71.89	69.00	67.20	9.366	9.331	9.279	9.191	13
14	84.00	72.746 1	90.00	77.81	75.00	73.20	9.366	9.331	9.278	9.189	14
15	90.00	77.942 3	96.00	83.73	81.00	79.20	9.365	9.330	9.276	9.187	15
16	96.00	83.138 4	102.00	89.67	87.00	85.20	9.365	9.329	9.275	9.185	16
17	102.00	88.334 6	108.00	95.62	93.00	91.20	9.364	9.328	9.274	9.183	17
18	108.00	93.530 7	114.00	101.57	99.00	97.20	9.364	9.327	9.273	9.181	18
19	114.00	98.726 9	120.00	107.53	105.00	103.20	9.363	9.327	9.272	9.180	19
20	120.00	103.923 0	126.00	113.49	111.00	109.20	9.363	9.326	9.270	9.178	20
21	126.00	109.119 2	132.00	119.45	117.00	115.20	9.363	9.325	9.269	9.176	21
22	132.00	114.315 4	138.00	125.42	123.00	121.20	9.362	9.325	9.268	9.175	22
23	138.00	119.511 5	144.00	131.39	129.00	127.20	9.362	9.324	9.267	9.173	23
24	144.00	124.707 7	150.00	137.37	135.00	133.20	9.361	9.323	9.266	9.171	24
25	150.00	129.903 8	156.00	143.34	141.00	139.20	9.361	9.323	9.265	9.170	25
26	156.00	135.100 0	162.00	149.32	147.00	145.20	9.361	9.322	9.264	9.168	26
27	162.00	140.296 1	168.00	155.30	153.00	151.20	9.360	9.322	9.264	9.167	27
28	168.00	145.492 3	174.00	161.28	159.00	157.20	9.360	9.321	9.263	9.165	28
29	174.00	150.688 4	180.00	167.27	165.00	163.20	9.360	9.320	9.262	9.164	29
30	180.00	155.884 6	186.00	173.25	171.00	169.20	9.359	9.320	9.261	9.163	30
31	186.00	161.080 7	192.00	179.23	177.00	175.20	9.359	9.319	9.260	9.161	31
32	192.00	166.276 9	198.00	185.22	183.00	181.20	9.359	9.319	9.259	9.160	32
33	198.00	171.473 0	204.00	191.21	189.00	187.20	9.358	9.318	9.258	9.159	33
34	204.00	176.669 2	210.00	197.19	195.00	193.20	9.358	9.318	9.258	9.157	34
35	210.00	181.865 3	216.00	203.18	201.00	199.20	9.358	9.317	9.257	9.156	35
36	216.00	187.061 5	222.00	209.17	207.00	205.20	9.357	9.317	9.256	9.155	36
37	222.00	192.257 6	228.00	215.16	213.00	211.20	9.357	9.316	9.255	9.154	37
38	228.00	197.453 8	234.00	221.15	219.00	217.20	9.357	9.316	9.255	9.152	38
39	234.00	202.649 9	240.00	227.14	225.00	223.20	9.356	9.315	9.254	9.151	39
40	240.00	207.846 1	246.00	233.13	231.00	229.20	9.356	9.315	9.253	9.150	40
41	246.00	213.042 2	252.00	239.13	237.00	235.20	9.356	9.314	9.252	9.149	41
42	252.00	218.238 4	258.00	245.12	243.00	241.20	9.356	9.314	9.252	9.148	42
43	258.00	223.434 6	264.00	251.11	249.00	247.20	9.355	9.314	9.251	9.147	43
44	264.00	228.630 7	270.00	257.10	255.00	253.20	9.355	9.313	9.250	9.145	44
45	270.00	233.826 9	276.00	263.10	261.00	259.20	9.355	9.313	9.250	9.144	45
46	276.00	239.023 0	282.00	269.09	267.00	265.20	9.354	9.312	9.249	9.143	46
47	282.00	244.219 2	288.00	275.08	273.00	271.20	9.354	9.312	9.248	9.142	47
48	288.00	249.415 3	294.00	281.08	279.00	277.20	9.354	9.311	9.247	9.141	48
49	294.00	254.611 5	300.00	287.07	285.00	283.20	9.354	9.311	9.247	9.140	49
50	300.00	259.807 6	306.00	293.07	291.00	289.20	9.353	9.310	9.246	9.139	50
51	306.00	265.003 8	312.00	299.06	297.00	295.20	9.353	9.310	9.246	9.138	51
52	312.00	270.199 9	318.00	305.06	303.00	301.20	9.353	9.310	9.245	9.137	52
53	318.00	275.396 1	324.00	311.05	309.00	307.20	9.353	9.309	9.244	9.136	53
54	324.00	280.592 2	330.00	317.05	315.00	313.20	9.352	9.309	9.244	9.135	54
55	330.00	285.788 4	336.00	323.04	321.00	319.20	9.352	9.308	9.243	9.134	55

表 26 (续)

单位为毫米

齿数 <i>z</i>	分度圆 直径 <i>D</i>	基圆 直径 <i>D_b</i>	大径 <i>D_e</i>	渐开线起 始圆直径 <i>D_{Fe max}</i>	小径 <i>D_i</i>		实际齿厚最小值 $S_{min} = S_{e max} - (T + \lambda)$				齿数 <i>z</i>
					平齿根	圆齿根	4h	5h	6h	7h	
56	336.00	290.984 5	342.00	329.04	327.00	325.20	9.352	9.308	9.242	9.133	56
57	342.00	296.180 7	348.00	335.03	333.00	331.20	9.352	9.308	9.242	9.132	57
58	348.00	301.376 8	354.00	341.03	339.00	337.20	9.351	9.307	9.241	9.131	58
59	354.00	306.573 0	360.00	347.02	345.00	343.20	9.351	9.307	9.241	9.130	59
60	360.00	311.769 1	366.00	353.02	351.00	349.20	9.351	9.307	9.240	9.129	60
61	366.00	316.965 3	372.00	359.02	357.00	355.20	9.351	9.306	9.239	9.128	61
62	372.00	322.161 4	378.00	365.01	363.00	361.20	9.350	9.306	9.239	9.127	62
63	378.00	327.357 6	384.00	371.01	369.00	367.20	9.350	9.305	9.238	9.126	63
64	384.00	332.553 8	390.00	377.01	375.00	373.20	9.350	9.305	9.238	9.125	64
65	390.00	337.749 9	396.00	383.00	381.00	379.20	9.350	9.305	9.237	9.124	65
66	396.00	342.946 1	402.00	389.00	387.00	385.20	9.349	9.304	9.237	9.124	66
67	402.00	348.142 2	408.00	395.00	393.00	391.20	9.349	9.304	9.236	9.123	67
68	408.00	353.338 4	414.00	400.99	399.00	397.20	9.349	9.304	9.235	9.122	68
69	414.00	358.534 5	420.00	406.99	405.00	403.20	9.349	9.303	9.235	9.121	69
70	420.00	363.730 7	426.00	412.99	411.00	409.20	9.349	9.303	9.234	9.120	70
71	426.00	368.926 8	432.00	418.99	417.00	415.20	9.348	9.303	9.234	9.119	71
72	432.00	374.123 0	438.00	424.98	423.00	421.20	9.348	9.302	9.233	9.118	72
73	438.00	379.319 1	444.00	430.98	429.00	427.20	9.348	9.302	9.233	9.117	73
74	444.00	384.515 3	450.00	436.98	435.00	433.20	9.348	9.301	9.232	9.116	74
75	450.00	389.711 4	456.00	442.98	441.00	439.20	9.347	9.301	9.232	9.116	75
76	456.00	394.907 6	462.00	448.97	447.00	445.20	9.347	9.301	9.231	9.115	76
77	462.00	400.103 7	468.00	454.97	453.00	451.20	9.347	9.300	9.231	9.114	77
78	468.00	405.299 9	474.00	460.97	459.00	457.20	9.347	9.300	9.230	9.113	78
79	474.00	410.496 0	480.00	466.97	465.00	463.20	9.347	9.300	9.229	9.112	79
80	480.00	415.692 2	486.00	472.96	471.00	469.20	9.346	9.299	9.228	9.111	80
81	486.00	420.888 3	492.00	478.96	477.00	475.20	9.346	9.299	9.228	9.111	81
82	492.00	426.084 5	498.00	484.96	483.00	481.20	9.346	9.299	9.228	9.110	82
83	498.00	431.280 6	504.00	490.96	489.00	487.20	9.346	9.298	9.227	9.109	83
84	504.00	436.476 8	510.00	496.96	495.00	493.20	9.345	9.298	9.226	9.107	84
85	510.00	441.672 9	516.00	502.95	501.00	499.20	9.345	9.297	9.225	9.106	85
86	516.00	446.869 1	522.00	508.95	507.00	505.20	9.345	9.297	9.225	9.105	86
87	522.00	452.065 3	528.00	514.95	513.00	511.20	9.345	9.296	9.224	9.104	87
88	528.00	457.261 4	534.00	520.95	519.00	517.20	9.344	9.296	9.224	9.103	88
89	534.00	462.457 6	540.00	526.95	525.00	523.20	9.344	9.296	9.223	9.102	89
90	540.00	467.653 7	546.00	532.95	531.00	529.20	9.344	9.295	9.222	9.101	90
91	546.00	472.849 9	552.00	538.94	537.00	535.20	9.344	9.295	9.222	9.100	91
92	552.00	478.046 0	558.00	544.94	543.00	541.20	9.343	9.294	9.221	9.099	92
93	558.00	483.242 2	564.00	550.94	549.00	547.20	9.343	9.294	9.221	9.098	93
94	564.00	488.438 3	570.00	556.94	555.00	553.20	9.343	9.294	9.220	9.097	94
95	570.00	493.634 5	576.00	562.94	561.00	559.20	9.343	9.293	9.219	9.096	95
96	576.00	498.830 6	582.00	568.94	567.00	565.20	9.342	9.293	9.219	9.095	96
97	582.00	504.026 8	588.00	574.94	573.00	571.20	9.342	9.293	9.218	9.094	97
98	588.00	509.222 9	594.00	580.93	579.00	577.20	9.342	9.292	9.218	9.093	98
99	594.00	514.419 1	600.00	586.93	585.00	583.20	9.342	9.292	9.217	9.092	99
100	600.00	519.615 2	606.00	592.93	591.00	589.20	9.341	9.291	9.216	9.091	100

表 27 30°外花键

模数 $m = 8 \text{ mm}$ 作用齿厚最大值 $S_{v \max} = 12.566 \text{ mm}$

单位为毫米

齿数 z	分度圆 直径 D	基圆 直径 D_b	大径 D_{cc}	渐开线起 始圆直径 $D_{Fc \max}$	小径 D_i		实际齿厚最小值 $S_{\min} = S_{v \max} - (T + \lambda)$				齿数 z
					平齿根	圆齿根	4h	5h	6h	7h	
10	80.00	69.282 0	88.00	72.34	68.00	65.60	12.504	12.466	12.410	12.316	10
11	88.00	76.210 2	96.00	80.14	76.00	73.60	12.503	12.465	12.408	12.314	11
12	96.00	83.138 4	104.00	87.99	84.00	81.60	12.503	12.464	12.407	12.311	12
13	104.00	90.066 6	112.00	95.85	92.00	89.60	12.502	12.463	12.405	12.308	13
14	112.00	96.994 8	120.00	103.74	100.00	97.60	12.501	12.462	12.404	12.306	14
15	120.00	103.923 0	128.00	111.65	108.00	105.60	12.501	12.461	12.402	12.304	15
16	128.00	110.851 3	136.00	119.56	116.00	113.60	12.500	12.460	12.401	12.301	16
17	136.00	117.779 5	144.00	127.49	124.00	121.60	12.500	12.460	12.399	12.299	17
18	144.00	124.707 7	152.00	135.42	132.00	129.60	12.499	12.459	12.398	12.297	18
19	152.00	131.635 9	160.00	143.37	140.00	137.60	12.499	12.458	12.397	12.295	19
20	160.00	138.564 1	168.00	151.32	148.00	145.60	12.498	12.457	12.396	12.293	20
21	168.00	145.492 3	176.00	159.27	156.00	153.60	12.498	12.456	12.394	12.291	21
22	176.00	152.420 5	184.00	167.23	164.00	161.60	12.497	12.456	12.393	12.289	22
23	184.00	159.348 7	192.00	175.19	172.00	169.60	12.497	12.455	12.392	12.288	23
24	192.00	166.276 9	200.00	183.16	180.00	177.60	12.496	12.454	12.391	12.286	24
25	200.00	173.205 1	208.00	191.12	188.00	185.60	12.496	12.453	12.390	12.284	25
26	208.00	180.133 3	216.00	199.10	196.00	193.60	12.495	12.453	12.389	12.282	26
27	216.00	187.061 5	224.00	207.07	204.00	201.60	12.495	12.452	12.388	12.281	27
28	224.00	193.989 7	232.00	215.04	212.00	209.60	12.495	12.451	12.387	12.279	28
29	232.00	200.917 9	240.00	223.02	220.00	217.60	12.494	12.451	12.386	12.277	29
30	240.00	207.846 1	248.00	231.00	228.00	225.60	12.494	12.450	12.385	12.276	30
31	248.00	214.774 3	256.00	238.98	236.00	233.60	12.493	12.450	12.384	12.274	31
32	256.00	221.702 5	264.00	246.96	244.00	241.60	12.493	12.449	12.383	12.273	32
33	264.00	228.630 7	272.00	254.94	252.00	249.60	12.493	12.448	12.382	12.271	33
34	272.00	235.558 9	280.00	262.93	260.00	257.60	12.492	12.448	12.381	12.270	34
35	280.00	242.487 1	288.00	270.91	268.00	265.60	12.492	12.447	12.380	12.268	35
36	288.00	249.415 3	296.00	278.90	276.00	273.60	12.492	12.447	12.379	12.267	36
37	296.00	256.343 5	304.00	286.88	284.00	281.60	12.491	12.446	12.378	12.266	37
38	304.00	263.271 7	312.00	294.87	292.00	289.60	12.491	12.445	12.377	12.264	38
39	312.00	270.199 9	320.00	302.86	300.00	297.60	12.490	12.445	12.377	12.263	39
40	320.00	277.128 1	328.00	310.85	308.00	305.60	12.490	12.444	12.376	12.261	40
41	328.00	284.056 3	336.00	318.83	316.00	313.60	12.490	12.444	12.375	12.260	41
42	336.00	290.984 5	344.00	326.82	324.00	321.60	12.489	12.443	12.374	12.259	42
43	344.00	297.912 7	352.00	334.81	332.00	329.60	12.489	12.443	12.373	12.257	43
44	352.00	304.840 9	360.00	342.80	340.00	337.60	12.489	12.442	12.373	12.256	44
45	360.00	311.769 1	368.00	350.79	348.00	345.60	12.489	12.442	12.372	12.255	45
46	368.00	318.697 3	376.00	358.79	356.00	353.60	12.488	12.441	12.371	12.254	46
47	376.00	325.625 5	384.00	366.78	364.00	361.60	12.488	12.441	12.370	12.252	47
48	384.00	332.553 8	392.00	374.77	372.00	369.60	12.488	12.440	12.369	12.251	48
49	392.00	339.482 0	400.00	382.76	380.00	377.60	12.487	12.440	12.369	12.250	49
50	400.00	346.410 2	408.00	390.75	388.00	385.60	12.487	12.439	12.368	12.249	50
51	408.00	353.338 4	416.00	398.75	396.00	393.60	12.487	12.439	12.367	12.248	51
52	416.00	360.266 6	424.00	406.74	404.00	401.60	12.486	12.438	12.366	12.246	52
53	424.00	367.194 8	432.00	414.73	412.00	409.60	12.486	12.438	12.366	12.245	53
54	432.00	374.123 0	440.00	422.73	420.00	417.60	12.486	12.437	12.365	12.244	54
55	440.00	381.051 2	448.00	430.72	428.00	425.60	12.485	12.437	12.364	12.243	55

表 27(续)

单位为毫米

齿数 z	分度圆 直径 D	基圆 直径 D_b	大径 D_{ee}	渐开线起 始圆直径 $D_{Fe\max}$	小径 D_{fe}		实际齿厚最小值 $S_{\min} = S_{v\max} - (T + \lambda)$				齿数 z
					平齿根	圆齿根	4h	5h	6h	7h	
56	448.00	387.979 4	456.00	438.72	436.00	433.60	12.485	12.437	12.363	12.242	56
57	456.00	394.907 6	464.00	446.71	444.00	441.60	12.485	12.436	12.363	12.241	57
58	464.00	401.835 8	472.00	454.70	452.00	449.60	12.485	12.436	12.362	12.239	58
59	472.00	408.764 0	480.00	462.70	460.00	457.60	12.484	12.435	12.361	12.238	59
60	480.00	415.692 2	488.00	470.69	468.00	465.60	12.484	12.435	12.361	12.237	60
61	488.00	422.620 4	496.00	478.69	476.00	473.60	12.484	12.434	12.360	12.236	61
62	496.00	429.548 6	504.00	486.68	484.00	481.60	12.484	12.434	12.359	12.235	62
63	504.00	436.476 8	512.00	494.68	492.00	489.60	12.483	12.433	12.358	12.232	63
64	512.00	443.405 0	520.00	502.68	500.00	497.60	12.483	12.432	12.357	12.231	64
65	520.00	450.333 2	528.00	510.67	508.00	505.60	12.482	12.432	12.356	12.230	65
66	528.00	457.261 4	536.00	518.67	516.00	513.60	12.482	12.431	12.355	12.229	66
67	536.00	464.189 6	544.00	526.66	524.00	521.60	12.482	12.431	12.354	12.227	67
68	544.00	471.117 8	552.00	534.66	532.00	529.60	12.481	12.430	12.354	12.226	68
69	552.00	478.046 0	560.00	542.65	540.00	537.60	12.481	12.430	12.353	12.225	69
70	560.00	484.974 2	568.00	550.65	548.00	545.60	12.481	12.429	12.352	12.224	70
71	568.00	491.902 4	576.00	558.65	556.00	553.60	12.480	12.429	12.351	12.222	71
72	576.00	498.830 6	584.00	566.64	564.00	561.60	12.480	12.428	12.350	12.221	72
73	584.00	505.758 8	592.00	574.64	572.00	569.60	12.480	12.428	12.350	12.220	73
74	592.00	512.687 0	600.00	582.64	580.00	577.60	12.479	12.427	12.349	12.218	74
75	600.00	519.615 2	608.00	590.63	588.00	585.60	12.479	12.427	12.348	12.217	75
76	608.00	526.543 4	616.00	598.63	596.00	593.60	12.479	12.426	12.347	12.216	76
77	616.00	533.471 6	624.00	606.63	604.00	601.60	12.478	12.426	12.346	12.215	77
78	624.00	540.399 8	632.00	614.62	612.00	609.60	12.478	12.425	12.346	12.213	78
79	632.00	547.328 0	640.00	622.62	620.00	617.60	12.478	12.425	12.345	12.212	79
80	640.00	554.256 3	648.00	630.62	628.00	625.60	12.477	12.424	12.344	12.211	80
81	648.00	561.184 5	656.00	638.62	636.00	633.60	12.477	12.424	12.343	12.209	81
82	656.00	568.112 7	664.00	646.61	644.00	641.60	12.477	12.423	12.342	12.208	82
83	664.00	575.040 9	672.00	654.61	652.00	649.60	12.476	12.423	12.342	12.207	83
84	672.00	581.969 1	680.00	662.61	660.00	657.60	12.476	12.422	12.341	12.206	84
85	680.00	588.897 3	688.00	670.61	668.00	665.60	12.476	12.422	12.340	12.204	85
86	688.00	595.825 5	696.00	678.60	676.00	673.60	12.476	12.421	12.339	12.203	86
87	696.00	602.753 7	704.00	686.60	684.00	681.60	12.475	12.421	12.338	12.202	87
88	704.00	609.681 9	712.00	694.60	692.00	689.60	12.475	12.420	12.338	12.200	88
89	712.00	616.610 1	720.00	702.60	700.00	697.60	12.475	12.419	12.337	12.199	89
90	720.00	623.538 3	728.00	710.59	708.00	705.60	12.474	12.419	12.336	12.198	90
91	728.00	630.466 5	736.00	718.59	716.00	713.60	12.474	12.418	12.335	12.197	91
92	736.00	637.394 7	744.00	726.59	724.00	721.60	12.474	12.418	12.334	12.195	92
93	744.00	644.322 9	752.00	734.59	732.00	729.60	12.473	12.417	12.334	12.194	93
94	752.00	651.251 1	760.00	742.59	740.00	737.60	12.473	12.417	12.333	12.193	94
95	760.00	658.179 3	768.00	750.58	748.00	745.60	12.473	12.416	12.332	12.192	95
96	768.00	665.107 5	776.00	758.58	756.00	753.60	12.472	12.416	12.331	12.190	96
97	776.00	672.035 7	784.00	766.58	764.00	761.60	12.472	12.415	12.330	12.189	97
98	784.00	678.963 9	792.00	774.58	772.00	769.60	12.472	12.415	12.330	12.188	98
99	792.00	685.892 1	800.00	782.58	780.00	777.60	12.471	12.414	12.329	12.186	99
100	800.00	692.820 3	808.00	790.57	788.00	785.60	12.471	12.414	12.328	12.185	100

表 28 30°外花键

模数 $m = 10 \text{ mm}$ 作用齿厚最大值 $S_{v \max} = 15.708 \text{ mm}$

单位为毫米

齿数 z	分度圆 直径 D	基圆 直径 D_b	大径 D_{fe}	渐开线起 始圆直径 $D_{Fe \max}$	小径 D_{fe}		实际齿厚最小值 $S_{\min} = S_{v \max} - (T + \lambda)$				齿数 z
					平齿根	圆齿根	4h	5h	6h	7h	
10	100.00	86.602 5	110.00	90.42	85.00	82.00	15.640	15.600	15.539	15.438	10
11	110.00	95.262 8	120.00	100.18	95.00	92.00	15.640	15.599	15.537	15.435	11
12	120.00	103.923 0	130.00	109.98	105.00	102.00	15.639	15.598	15.535	15.432	12
13	130.00	112.583 3	140.00	119.82	115.00	112.00	15.638	15.596	15.534	15.429	13
14	140.00	121.243 6	150.00	129.68	125.00	122.00	15.638	15.595	15.532	15.426	14
15	150.00	129.903 8	160.00	139.56	135.00	132.00	15.637	15.594	15.530	15.424	15
16	160.00	138.564 1	170.00	149.45	145.00	142.00	15.636	15.593	15.529	15.421	16
17	170.00	147.224 3	180.00	159.36	155.00	152.00	15.636	15.592	15.527	15.419	17
18	180.00	155.884 6	190.00	169.28	165.00	162.00	15.635	15.591	15.526	15.417	18
19	190.00	164.544 8	200.00	179.21	175.00	172.00	15.635	15.591	15.524	15.414	19
20	200.00	173.205 1	210.00	189.15	185.00	182.00	15.634	15.590	15.523	15.412	20
21	210.00	181.865 3	220.00	199.09	195.00	192.00	15.633	15.589	15.522	15.410	21
22	220.00	190.525 6	230.00	209.04	205.00	202.00	15.633	15.588	15.521	15.408	22
23	230.00	199.185 8	240.00	218.99	215.00	212.00	15.632	15.587	15.519	15.406	23
24	240.00	207.846 1	250.00	228.95	225.00	222.00	15.632	15.586	15.518	15.404	24
25	250.00	216.506 3	260.00	238.91	235.00	232.00	15.632	15.586	15.517	15.402	25
26	260.00	225.166 6	270.00	248.87	245.00	242.00	15.631	15.585	15.516	15.400	26
27	270.00	233.826 9	280.00	258.84	255.00	252.00	15.631	15.584	15.514	15.398	27
28	280.00	242.487 1	290.00	268.80	265.00	262.00	15.630	15.583	15.513	15.397	28
29	290.00	251.147 4	300.00	278.78	275.00	272.00	15.630	15.583	15.512	15.395	29
30	300.00	259.807 6	310.00	288.75	285.00	282.00	15.629	15.582	15.511	15.393	30
31	310.00	268.467 9	320.00	298.72	295.00	292.00	15.629	15.581	15.510	15.391	31
32	320.00	277.128 1	330.00	308.70	305.00	302.00	15.628	15.581	15.509	15.390	32
33	330.00	285.788 4	340.00	318.68	315.00	312.00	15.628	15.580	15.508	15.388	33
34	340.00	294.448 6	350.00	328.66	325.00	322.00	15.628	15.579	15.507	15.386	34
35	350.00	303.108 9	360.00	338.64	335.00	332.00	15.627	15.579	15.506	15.385	35
36	360.00	311.769 1	370.00	348.62	345.00	342.00	15.627	15.578	15.505	15.383	36
37	370.00	320.429 4	380.00	358.60	355.00	352.00	15.626	15.577	15.504	15.382	37
38	380.00	329.089 6	390.00	368.59	365.00	362.00	15.626	15.577	15.503	15.380	38
39	390.00	337.749 9	400.00	378.57	375.00	372.00	15.626	15.576	15.502	15.378	39
40	400.00	346.410 2	410.00	388.56	385.00	382.00	15.625	15.576	15.501	15.377	40
41	410.00	355.070 4	420.00	398.54	395.00	392.00	15.625	15.575	15.500	15.375	41
42	420.00	363.730 7	430.00	408.53	405.00	402.00	15.624	15.574	15.499	15.374	42
43	430.00	372.390 9	440.00	418.52	415.00	412.00	15.624	15.574	15.498	15.373	43
44	440.00	381.051 2	450.00	428.50	425.00	422.00	15.624	15.573	15.497	15.371	44
45	450.00	389.711 4	460.00	438.49	435.00	432.00	15.623	15.573	15.497	15.370	45
46	460.00	398.371 7	470.00	448.48	445.00	442.00	15.623	15.572	15.496	15.368	46
47	470.00	407.031 9	480.00	458.47	455.00	452.00	15.623	15.572	15.495	15.367	47
48	480.00	415.692 2	490.00	468.46	465.00	462.00	15.622	15.571	15.494	15.365	48
49	490.00	424.352 4	500.00	478.45	475.00	472.00	15.622	15.570	15.493	15.364	49
50	500.00	433.012 7	510.00	488.44	485.00	482.00	15.622	15.570	15.492	15.363	50
51	510.00	441.672 9	520.00	498.43	495.00	492.00	15.621	15.569	15.490	15.360	51
52	520.00	450.333 2	530.00	508.43	505.00	502.00	15.620	15.568	15.489	15.358	52
53	530.00	458.993 5	540.00	518.42	515.00	512.00	15.620	15.567	15.488	15.356	53
54	540.00	467.653 7	550.00	528.41	525.00	522.00	15.620	15.567	15.487	15.355	54
55	550.00	476.314 0	560.00	538.40	535.00	532.00	15.619	15.566	15.486	15.353	55

表 28 (续)

单位为毫米

齿数 <i>z</i>	分度圆 直径 <i>D</i>	基圆 直径 <i>D_b</i>	大径 <i>D_{ee}</i>	渐开线起 始圆直径 <i>D_{Fe max}</i>	小径 <i>D_{ic}</i>		实际齿厚最小值 $S_{min} = S_{v,max} - (T + \lambda)$				齿数 <i>z</i>
					平齿根	圆齿根	4h	5h	6h	7h	
56	560.00	484.974 2	570.00	548.39	545.00	542.00	15.619	15.565	15.485	15.352	56
57	570.00	493.634 5	580.00	558.39	555.00	552.00	15.618	15.565	15.484	15.350	57
58	580.00	502.294 7	590.00	568.38	565.00	562.00	15.618	15.564	15.483	15.348	58
59	590.00	510.955 0	600.00	578.37	575.00	572.00	15.618	15.564	15.482	15.347	59
60	600.00	519.615 2	610.00	588.37	585.00	582.00	15.617	15.563	15.481	15.345	60
61	610.00	528.275 5	620.00	598.36	595.00	592.00	15.617	15.562	15.480	15.344	61
62	620.00	536.935 7	630.00	608.36	605.00	602.00	15.616	15.562	15.479	15.342	62
63	630.00	545.596 0	640.00	618.35	615.00	612.00	15.616	15.561	15.478	15.340	63
64	640.00	554.256 3	650.00	628.34	625.00	622.00	15.616	15.560	15.477	15.339	64
65	650.00	562.916 5	660.00	638.34	635.00	632.00	15.615	15.560	15.476	15.337	65
66	660.00	571.576 8	670.00	648.33	645.00	642.00	15.615	15.559	15.475	15.336	66
67	670.00	580.237 0	680.00	658.33	655.00	652.00	15.614	15.558	15.474	15.334	67
68	680.00	588.897 3	690.00	668.32	665.00	662.00	15.614	15.558	15.473	15.332	68
69	690.00	597.557 5	700.00	678.32	675.00	672.00	15.614	15.557	15.472	15.331	69
70	700.00	606.217 8	710.00	688.31	685.00	682.00	15.613	15.556	15.471	15.329	70
71	710.00	614.878 0	720.00	698.31	695.00	692.00	15.613	15.556	15.470	15.328	71
72	720.00	623.538 3	730.00	708.31	705.00	702.00	15.612	15.555	15.469	15.326	72
73	730.00	632.198 5	740.00	718.30	715.00	712.00	15.612	15.555	15.468	15.324	73
74	740.00	640.858 8	750.00	728.30	725.00	722.00	15.612	15.554	15.467	15.323	74
75	750.00	649.519 0	760.00	738.29	735.00	732.00	15.611	15.553	15.466	15.321	75
76	760.00	658.179 3	770.00	748.29	745.00	742.00	15.611	15.553	15.465	15.320	76
77	770.00	666.839 5	780.00	758.28	755.00	752.00	15.610	15.552	15.464	15.318	77
78	780.00	675.499 8	790.00	768.28	765.00	762.00	15.610	15.551	15.463	15.316	78
79	790.00	684.160 1	800.00	778.28	775.00	772.00	15.610	15.551	15.462	15.315	79
80	800.00	692.820 3	810.00	788.27	785.00	782.00	15.609	15.550	15.461	15.313	80
81	810.00	701.480 6	820.00	798.27	795.00	792.00	15.609	15.549	15.460	15.312	81
82	820.00	710.140 8	830.00	808.27	805.00	802.00	15.608	15.549	15.459	15.310	82
83	830.00	718.801 1	840.00	818.26	815.00	812.00	15.608	15.548	15.458	15.308	83
84	840.00	727.461 3	850.00	828.26	825.00	822.00	15.608	15.548	15.457	15.307	84
85	850.00	736.121 6	860.00	838.26	835.00	832.00	15.607	15.547	15.456	15.305	85
86	860.00	744.781 8	870.00	848.25	845.00	842.00	15.607	15.546	15.455	15.304	86
87	870.00	753.442 1	880.00	858.25	855.00	852.00	15.606	15.546	15.454	15.302	87
88	880.00	762.102 3	890.00	868.25	865.00	862.00	15.606	15.545	15.453	15.300	88
89	890.00	770.762 6	900.00	878.25	875.00	872.00	15.606	15.544	15.452	15.299	89
90	900.00	779.422 9	910.00	888.24	885.00	882.00	15.605	15.544	15.451	15.297	90
91	910.00	788.083 1	920.00	898.24	895.00	892.00	15.605	15.543	15.450	15.296	91
92	920.00	796.743 4	930.00	908.24	905.00	902.00	15.604	15.542	15.449	15.294	92
93	930.00	805.403 6	940.00	918.24	915.00	912.00	15.604	15.542	15.448	15.292	93
94	940.00	814.063 9	950.00	928.23	925.00	922.00	15.604	15.541	15.447	15.291	94
95	950.00	822.724 1	960.00	938.23	935.00	932.00	15.603	15.540	15.446	15.289	95
96	960.00	831.384 4	970.00	948.23	945.00	942.00	15.603	15.540	15.445	15.288	96
97	970.00	840.044 6	980.00	958.23	955.00	952.00	15.602	15.539	15.444	15.286	97
98	980.00	848.704 9	990.00	968.22	965.00	962.00	15.602	15.539	15.443	15.284	98
99	990.00	857.365 1	1 000.00	978.22	975.00	972.00	15.602	15.538	15.442	15.283	99
100	1 000.00	866.025 4	1 010.00	988.22	985.00	982.00	15.601	15.537	15.441	15.281	100

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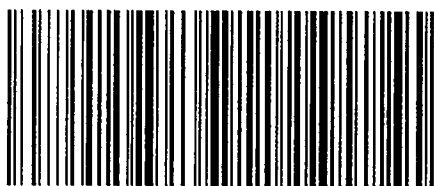
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