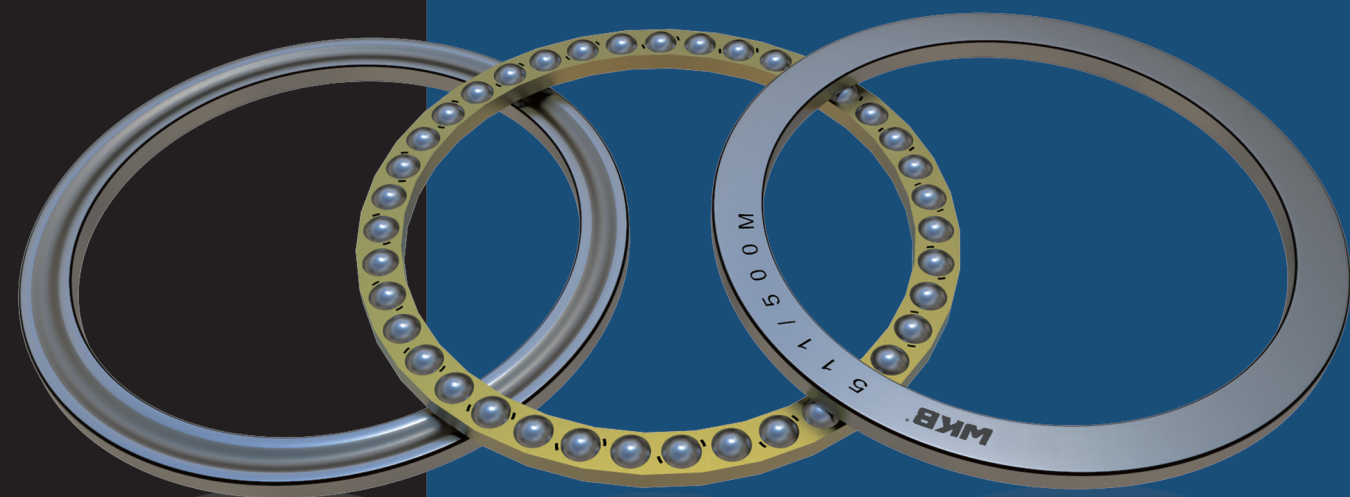




推力球轴承

Thrust Ball Bearing



基本类型 Basic type

推力球轴承有单向推力球轴承和双向推力球轴承两种。这两种结构都可以传递大的轴向载荷，而不能传递径向载荷。除了带平座圈的结构形式外，推力球轴承还有带球面座圈和座垫的结构形式。

The thrust ball bearing consists of such two types as single-direction thrust ball bearing and dual-direction thrust ball bearing. Both structures can transmit a high axial load and no radial load. In addition to the type of structure with a flat outer race, the thrust ball bearing is also in such structure types as with a spherical outer race and a washer.

WKB 提供的带平座圈的推力球轴承系列号为511、512、513和514。

座垫U2和U3用于532系列和533系列带球面座圈的轴承上。

带平座圈的WKB双向推力球轴承系列号为522和523。

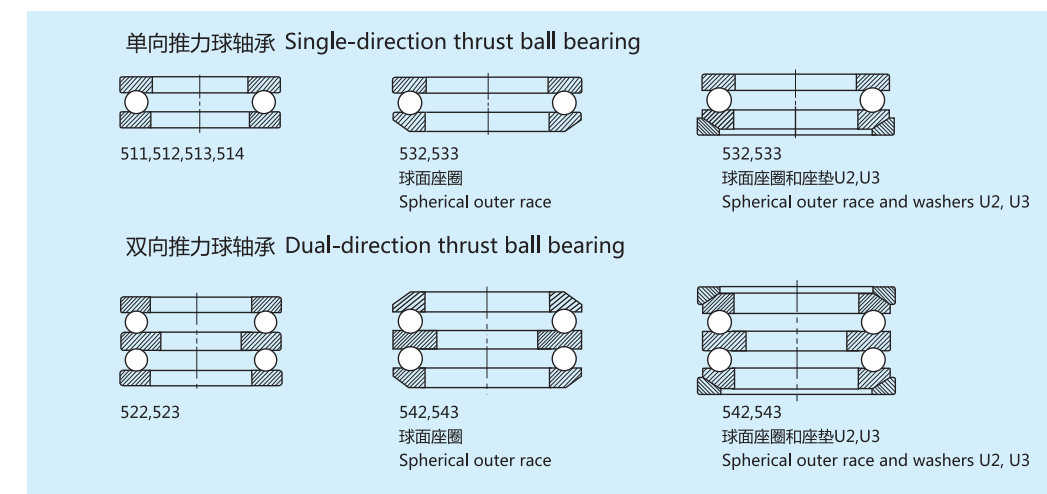
座垫U2和U3也可用于542系列和543系列带球面座圈的轴承上。

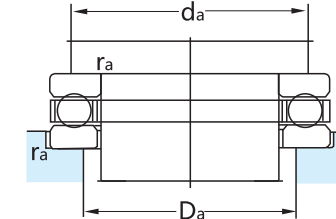
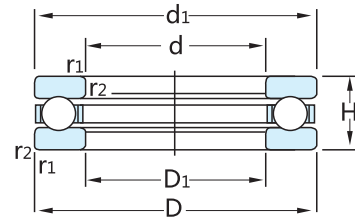
The series numbers for the thrust ball bearings of WKB with a flat outer race are 511, 512, 513 and 514.

The bearing washers U2 and U3 are used in the bearings of series 532 and 533 with a spherical outer race.

The series numbers for the dual-direction thrust ball bearings of WKB with a flat outer race are 522 and 523.

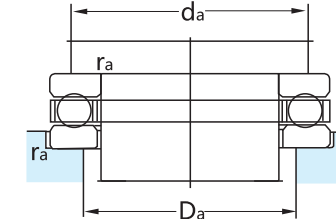
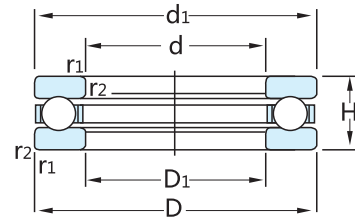
The bearing washers U2 and U3 can also be used in the bearings of series 542 and 543 with a spherical outer race.





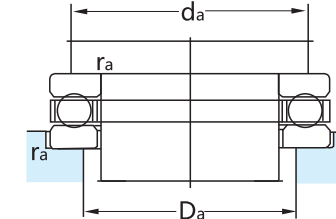
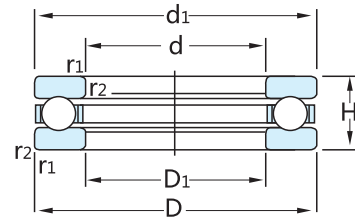
基本尺寸 Basic Size			基本额定负荷 Basic load rating 动态dynamic 静态static		代号 Code	额定转速 Speed Ratings 参考转速 极限转速 Reference Limiting Speed Speed r/min	
d	D	H	C	C ₀	-	参考转速 Reference Speed	极限转速 Limiting Speed
mm			kN			r/min	r/min
70	125	40	135	320	51314M	1900	3000
	125	40	135	320	51314	1900	2600
	150	60	234	550	51414M	1400	2000
75	135	44	163	390	51315	1700	2400
	160	65	251	610	51415M	1300	1800
80	140	44	159	390	51316	1700	2400
	170	68	302	750	51416M	1200	1700
85	110	19	44.9	146	51117	3000	4300
	150	49	174	405	51317	1600	2200
	180	72	286	750	51417M	1200	1600
90	135	35	112	290	51218	2000	2800
	155	50	182	440	51318	1500	2200
	190	77	307	815	51418M	1100	1500
100	135	25	80.6	265	51120	2400	3200
	135	25	80.6	265	51120M	2400	3500
	150	38	119	325	51220	1800	2400
	170	55	225	570	51320	1400	1900
	170	55	225	570	51320M	1400	2300
	210	85	371	1060	51420M	950	1400

尺寸 Dimensions				挡肩及倒角尺寸 Abutment and chamfer dimensions			质量 Mass
d	d ₁	D ₁	r _{1,2} min	d _a min	D _a max	r _a max	kg
mm				mm			
70	125	72	1.1	103	92	1	2.5
	125	72	1.1	103	92	1	2
	150	73	2	118	102	2	5
75	135	77	1.5	111	99	1.5	2.6
	160	78	2	126	109	2	6.75
80	140	82	1.5	116	104	1.5	2.7
	170	83	2.1	133	117	2	7.95
85	110	87	1	100	95	1	0.44
	150	88	1.5	124	111	1.5	3.55
	177	88	2.1	141	124	2	9.45
90	135	93	1.1	117	108	1	1.7
	155	93	1.5	129	116	1.5	3.8
	187	93	2.1	149	131	2	11
100	135	102	1	121	114	1	0.97
	135	102	1	121	114	1	1.05
	150	103	1.1	130	120	1	2.2
	170	103	1.5	142	128	1.5	4.95
	170	103	1.5	142	128	1.5	5.4
	205	103	3	165	145	2.5	15



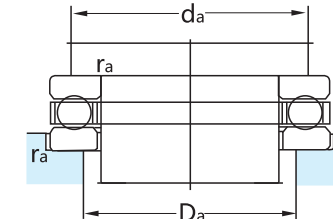
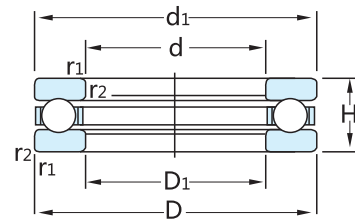
基本尺寸 Basic Size			基本额定负荷 Basic load rating		代号 Code	额定转速 Speed Ratings	
d	D	H	C	C ₀		参考转速 Reference Speed	极限转速 Limiting Speed
mm			kN		-	r/min	
110	145	25	83.2	285	51122	2200	3200
	145	25	83.2	285	51122M	2200	3400
	160	38	125	365	51222	1700	2400
	190	63	281	815	51322M	1200	1700
	230	95	410	1220	51422M	900	1300
120	155	25	85.2	305	51124	2200	3000
	155	25	85.2	305	51124M	2200	3500
	170	39	127	390	51224	1600	2200
	210	70	325	980	51324M	1100	1500
	250	102	432	1320	51424M	800	1100
130	170	30	119	440	51126	1900	2600
	190	45	186	585	51226	1400	2000
	225	75	358	1140	51326M	1000	1400
	270	110	520	1730	51426M	750	1000
140	180	31	111	440	51128	1800	2600
	180	31	106	405	51128M	1800	2800
	200	46	190	620	51228	1400	1900
	240	80	377	1220	51328M	950	1300
	280	112	520	1730	51428M	700	1000
150	190	31	111	440	51130M	1700	2400
	215	50	238	800	51230M	1300	1800
	250	80	390	1290	51330M	900	1300
	300	120	559	1960	51430M	670	950
160	200	31	112	465	51132M	1700	2400
	225	51	238	830	51232M	1200	1700
	270	87	449	1660	51332M	850	1200
170	215	34	133	540	51134M	1600	2200
	240	55	270	930	51234M	1200	1700
	280	87	468	1760	51334M	800	1100

尺寸 Dimensions				挡肩及倒角尺寸 Abutment and chamfer dimensions			质量 Mass
d	d ₁	D ₁	r _{1,2} min	d _a min	D _a max	r _a max	
mm				mm			kg
110	145	112	1	131	124	1	1.05
	145	112	1	131	124	1	1.15
	160	113	1.1	140	130	1	2.4
	187	113	2	158	142	2	7.85
	225	113	3	181	159	2.5	20
120	155	122	1	141	134	1	1.15
	155	122	1	141	134	1	1.25
	170	123	1.1	150	140	1	2.65
	205	123	2.1	173	157	2	11
	245	123	4	197	173	3	25.5
130	170	132	1	154	146	1	1.85
	187	133	1.5	166	154	1.5	4
	220	134	2.1	186	169	2	13
	265	134	4	213	187	3	32
140	178	142	1	164	156	1	2.05
	178	142	1	164	156	1	2.1
	197	143	1.5	176	164	1.5	4.35
	235	144	2.1	199	181	2	15.5
	275	144	4	223	197	3	34.5
	275	144	4	223	197	3	34.5
150	188	152	1	174	166	1	2.2
	212	153	1.5	189	176	1.5	6.1
	245	154	2.1	209	191	2	16.5
	295	154	4	239	211	3	42.5
160	198	162	1	184	176	1	2.35
	222	163	1.5	199	186	1.5	6.55
	265	164	3	225	205	2.5	21
170	213	172	1.1	197	188	1	3.3
	237	173	1.5	212	198	1.5	8.15
	275	174	3	235	215	2.5	22



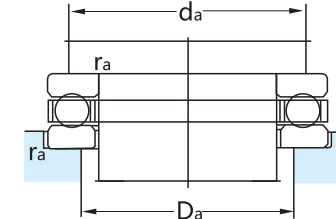
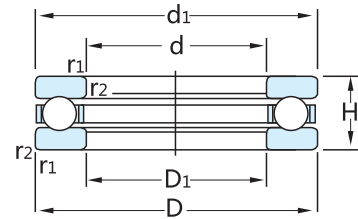
基本尺寸 Basic Size			基本额定负荷 Basic load rating 动态dynamic 静态static		代号 Code	额定转速 Speed Ratings 参考转速 极限转速 Reference Speed Limiting Speed r/min	
d	D	H	C	C ₀	-		
mm			kN				
180	225	34	135	570	51136M	1500	2200
	250	56	302	1120	51236M	1200	1600
	300	95	520	2000	51336M	750	1100
190	240	37	172	710	51138M	1400	2000
	270	62	332	1270	51238M	1100	1600
	320	105	559	2200	51338M	700	950
200	250	37	168	710	51140M	1400	1900
	280	62	338	1320	51240M	1100	1500
	340	110	624	2600	51340M	630	900
220	270	37	178	800	51144M	1300	1900
	300	63	358	1460	51244M	950	1300
240	300	45	234	1040	51148M	1100	1600
	340	78	449	1960	51248M	800	1100
260	320	45	238	1100	51152M	1100	1500
	360	79	488	2240	51252M	750	1100
	480	175	1110	5500	51452F	300	400
280	350	53	319	1460	51156M	950	1300
	380	80	488	2320	51256M	750	1000
300	380	62	364	1760	51160M	850	1200
	420	95	585	3000	51260M	630	850
320	380	30	114	735	51064F	900	1300
	400	48	242	1320	59164F	700	950
	400	63	371	1860	51164M	800	1100
	440	95	572	3000	51264F	600	800
340	420	64	377	1960	51168M	800	1100
	460	96	605	3200	51268F	600	800
	540	160	1040	5850	51368F	400	560

尺寸 Dimensions				挡肩及倒角尺寸 Abutment and chamfer dimensions			质量 Mass
d	d ₁	D ₁	r _{1,2} min	d _a min	D _a max	r _a max	kg
mm				mm			
180	222	183	1.1	207	198	1	3.5
	245	183	1.5	222	208	1.5	8.6
	295	184	3	251	229	2.5	28.5
190	237	193	1.1	220	210	1	4.05
	265	194	2	238	222	2	12
	315	195	4	267	243	3	36.5
200	247	203	1.1	230	220	1	4.25
	275	204	2	248	232	2	12
	335	205	4	283	257	3	44.5
220	267	223	1.1	250	240	1	4.6
	295	224	2	268	252	2	13
240	297	243	1.5	276	264	1.5	7.55
	335	244	2.1	299	281	2	23
260	317	263	1.5	296	284	1.5	8.1
	355	264	2.1	319	301	2	25
	472	288	6	390	350	5	135
280	347	283	1.5	322	308	1.5	12
	375	284	2.1	339	321	2	26.5
300	376	304	2	348	332	2	17.5
	415	304	3	371	349	2.5	42
320	358.5	321.5	1	344	336	1	4.3
	397	323	2	366	354	2	13.5
	396	324	2	368	352	2	19
	435	325	3	391	369	2.5	45.5
340	416	344	2	388	372	2	20.5
	455	345	3	411	389	2.5	48.5
	534	346	5	458	422	4	135



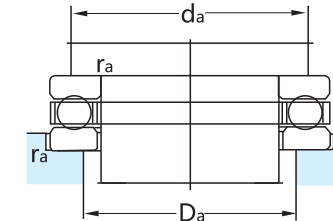
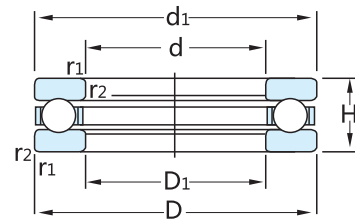
基本尺寸 Basic Size			基本额定负荷 Basic load rating		代号 Code	额定转速 Speed Ratings	
d	D	H	C	C ₀		参考转速 Reference Speed	极限转速 Limiting Speed
mm			kN		-	r/min	
360	400	30	119	815	51072F	850	1200
	440	48	255	1500	59172F	900	1200
	440	65	390	2080	51172F	750	1100
	500	110	741	4150	51272F	500	700
380	460	48	255	1530	59176F	850	1200
	460	65	397	2200	51176F	750	1000
	520	112	728	4150	51276F	500	700
	670	224	1650	10400	51476F	190	280
385	510	110	618	3450	350550	380	500
400	480	48	260	1630	59180F	850	1200
	480	65	403	2280	51180F	700	1000
	540	112	761	4500	51280F	500	700
420	500	48	265	1700	59184F	850	1200
	500	65	410	2400	51184F	700	1000
	580	130	884	5500	51284F	430	600
440	520	65	302	1630	BD1B634131	500	670
	540	60	238	1500	59188F	700	1000
	540	80	527	3250	51188F	600	850
	600	130	904	5700	51288F	430	600
460	560	80	527	3250	51192F	600	800
	620	130	923	5850	51292F	430	600
480	580	80	540	3550	51196F	560	800
	650	135	995	6550	51296F	400	560
500	540	30	133	1120	510/500F	1000	1400
	600	60	449	2900	591/500F	670	950
	600	80	553	3600	511/500F	560	800
	670	135	1010	6800	512/500F	380	530

尺寸 Dimensions				挡肩及倒角尺寸 Abutment and chamfer dimensions			质量 Mass
d	d ₁	D ₁	r _{1,2} min	d _a min	D _a max	r _a max	
mm				mm			kg
360	398.5	361.5	1	384	376	1	4.85
	437	363	2	406	394	2	15
	436	364	2	408	392	2	22
	495	365	4	443	417	3	70
380	457	383	2	426	414	2	15
	456	384	2	428	412	2	23
	515	385	4	463	437	3	73
	630	370	7.5	526	474	6	330
385	510	855	4.3	459	436	3	66
400	477	403	2	446	434	2	16.5
	476	404	2	448	432	2	24
	534	405	4	483	457	3	78.5
420	496	423	2	466	454	2	17
	496	424	2	468	452	2	25.5
	574	426	5	515	485	4	110
440	520	445	1.1	486	473	1	24
	536	444	2.1	497	483	2	28
	536	444	2.1	499	481	2	42
	594	446	5	535	505	4	115
460	556	464	2.1	519	501	2	43.5
	614	466	5	555	525	4	120
480	576	484	2.1	539	521	2	45.5
	644	486	5	581	549	4	130
500	538.5	501.5	1	524	516	1	6.55
	596	504	2.1	557	543	2	32
	596	504	2.1	559	541	2	47
	664	506	5	601	569	4	135



基本尺寸 Basic Size			基本额定负荷 Basic load rating		代号 Code	额定转速 Speed Ratings	
d	D	H	C	C ₀		参考转速 Reference Speed	极限转速 Limiting Speed
mm			kN		-	r/min	
530	580	38	203	1600	510/530F 351/794 591/530F 511/530F	850	1200
	590	36	178	1370		670	900
	640	67	468	3150		600	850
	640	85	650	4400		530	750
560	610	38	203	1660	510/560F 591/560F 511/560F	850	1200
	670	67	475	3250		600	800
	670	85	650	4650		500	700
600	650	38	212	1800	510/600F 591/600F 511/600F 350769 BD1-8000	800	1100
	710	67	475	3400		600	850
	710	85	663	4800		500	700
	800	90	676	5000		450	630
	870	118	1120	8000		220	300
630	680	38	221	1930	510/630F 591/630F 511/630F	800	1100
	750	73	540	4000		530	750
	750	95	728	5400		450	630
670	730	45	286	2400	510/670F 591/670F 511/670F 511/670M	530	700
	800	78	540	4150		480	670
	800	105	852	6700		400	560
	800	105	852	6700		400	560
710	850	85	676	5400	591/710JR 511/710F	450	630
	850	112	936	7650		380	530
730	850	85	663	5400	350627A	450	630
750	820	53	364	3050	510/750F 591/750F 511/750M	600	850
	900	90	741	6200		400	600
	900	120	1010	8650		340	480
800	870	53	371	3200	510/800F 591/800M 511/800F	560	800
	950	90	761	6550		400	560
	950	120	1010	900		340	480

尺寸 Dimensions				挡肩及倒角尺寸 Abutment and chamfer dimensions			质量 Mass
d	d ₁	D ₁	r _{1,2} min	d _a min	D _a max	r _a max	
mm				mm			kg
530	578	532	1.1	560	550	1	11
	585	535	1	564	556	1	12.5
	636	534	1.5	593	577	2.5	43.5
	636	534	3	595	575	2.5	58.5
560	608	562	1.1	590	580	1	11.5
	666	564	3	623	607	2.5	45.5
	666	564	3	625	606	2.5	61
600	648	602	1.1	630	620	1	12
	706	604	3	663	847	2.5	48
	706	604	3	665	645	2.5	65
	790	610	5	711	689	4	117
	862	608	5	750	720	4	220
630	678	632	1.1	660	650	1	12.5
	746	634	3	699	681	2.5	62.5
	746	634	3	701	679	2.5	84
670	727.5	672.5	1.5	705	695	1.5	21
	795	675	4	744	726	3	74
	795	675	4	747	723	3	105
	795	675	4	747	723	3	105
710	845	715	4	790	770	3	88.5
	845	715	4	793	767	3	130
730	850	730	3	800	780	2.5	88
750	817.5	752.5	1.5	791	779	1.5	30
	895	755	4	836	814	3	105
	895	755	4	839	811	3	155
800	867.5	802.5	1.5	841	829	1.5	32.5
	945	805	4	886	864	3	110
	945	805	4	889	861	3	155



基本尺寸 Basic Size			基本额定负荷 Basic load rating 动态dynamic 静态static		代号 Code	额定转速 Speed Ratings 参考转速 极限转速 Reference Speed Limiting Speed	
d	D	H	C	C ₀	-	Speed	Speed
mm			kN			r/min	
850	920	53	377	3450	510/850M	560	800
	1000	90	761	6800	591/850M		
	1000	120	1060	9500	511/850F	320	450
900	980	63	527	4900	510/900M	480	670
	1060	95	630	7650	591/900M	360	500
	1060	130	1120	10400	511/900F	300	430
950	1080	63	540	5100	510/950M	480	670
	1120	103	852	8150	591/950M	340	480
	1120	135	1330	12000	511/950F	280	400
980	1120	120	1010	10000	BD1B351883A		
1000	1090	70	572	5500	510/1000M	430	600
	1180	109	923	9150	591/1000M	320	430
	1180	140	1330	13200	511/1000F	260	380
1060	1150	70	752	5850	510/1060M	430	600
	1250	115	1010	10400	591/1060F	300	400
	1250	150	1430	15000	511/1060M	240	340
1120	1320	160	1530	16300	511/1120F	220	320
1180	1400	175	1780	20000	511/1180F	200	280
1250	1500	150	1430	16000	351006A		
1380	1535	130	1330	16300	BD1B351890A	240	340
1400	1630	180	1820	22000	511/1400F	180	260

尺寸 Dimensions				挡肩及倒角尺寸 Abutment and chamfer dimensions			质量 Mass
d	d ₁	D ₁	r _{1,2} min	d _a min	D _a max	r _a max	kg
mm				mm			
850	917.5	852.5	1.5	891	879	1.5	34.5
	995	855	4	936	914	3	115
	995	855	4	939	911	3	165
900	977	903	2	948	932	2	49
	1054	906	5	991	969	4	140
	1054	906	5	995	965	4	205
950	1027	953	2	998	982	2	52
	1114	956	5	1047	1023	4	170
	1114	956	5	1051	1019	4	235
980	1115	985	5	1063	1037	4	185
1000	1086.5	1003.5	2.1	1053	1037	2	68.5
	1174	1006	5	1102	1078	4	210
	1174	1006	5	1106	1074	4	275
1060	1146.5	1063.5	2.1	1113	1097	2	72.5
	1244	1066	5	1172	1138	4	240
	1244	1066	5	1172	1138	4	330
1120	1314	1126	5	1238	1202	4	395
1180	1392	1188	6	1310	1270	5	495
1250	1492	1258	6	1392	1358	5	515
1380	1535	1385	5	1475	1445	4	310
1400	1622	1408	8	1535	1495	6	665