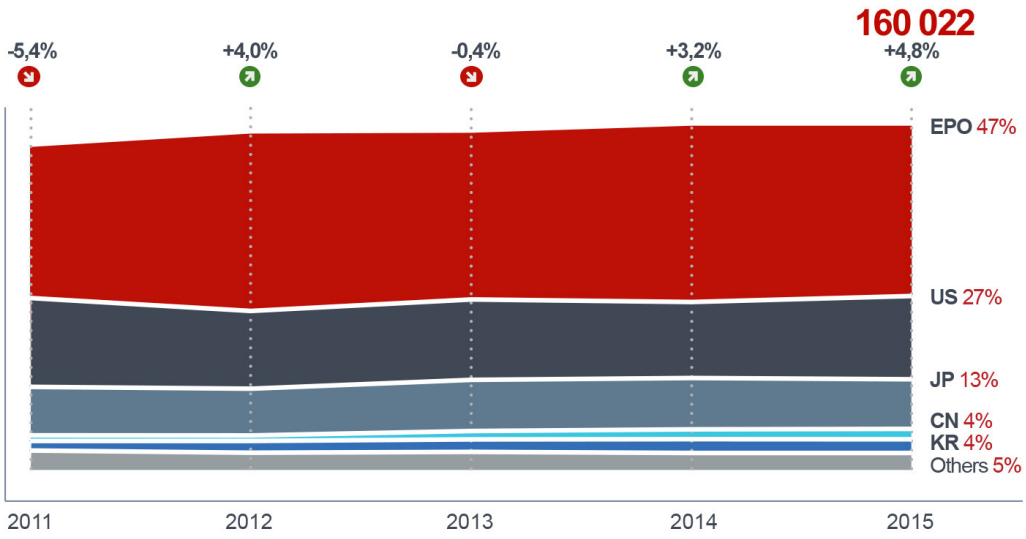
European patent applications

Total applications

Patent applications at the EPO also grew in 2015, to reach 160 000. This was an increase of 4,8% over 2014, and the highest ever number. The total applications included close to 98 300 international Patent Cooperation Treaty (PCT) filings which entered the European regional phase (becoming European applications) in 2015, and some 61 700 European patent applications filed directly at the EPO under the European Patent Convention (EPC).

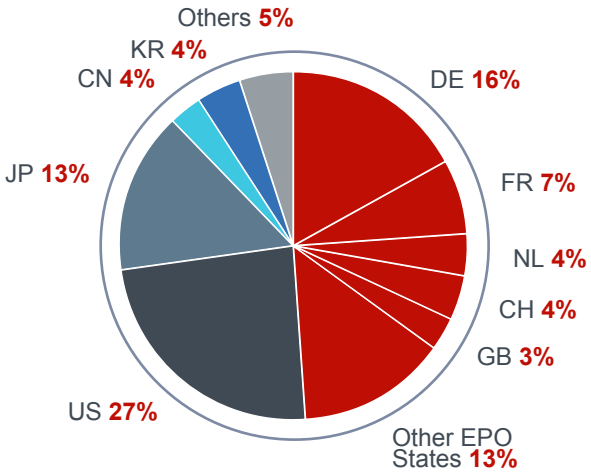


Analysis based on European patent applications filed with the EPO (Direct European applications and International (PCT) applications entering the European phase). Statistics are based on the first-named applicant.
EPO: the 38 member states of the European Patent Organisation, including EU28

More information on 2015 statistics at www.epo.org/statistics-indicators2015

European patent applications per country of origin

Almost half of all European patent applications came from the EPO member states, followed by the US, Japan, South Korea and China. Applications from Europe grew modestly overall, with marked differences among the larger economies.,The most significant growth came from Italy, the UK, Spain, the Netherlands and Switzerland. France grew moderately, while Germany and some of the Nordic countries filed fewer applications. The US and China were the main drivers ,of growth for applications. Growth from South Korea was moderate and Japanese companies filed fewer applications.



Country	2015	2014	Change
US	42 692	36 668	16,4%
DE	24 820	25 633	-3,2%
JP	21 426	22 118	-3,1%
Other EPO states	21 271	20 790	2,3%
FR	10 781	10 614	1,6%
Others	7 675	7 486	2,5%
NL	7 100	6 874	3,3%
CH	7 088	6 910	2,6%
KR	6 411	6 166	4,0%
CN	5 721	4 680	22,2%
GB	5 037	4 764	5,7%

Analysis based on European patent applications filed with the EPO (Direct European applications and International (PCT) applications entering the European phase). Statistics are based on the first-named applicant.
EPO: the 38 member states of the European Patent Organisation, including EU28

More information on 2015 statistics at www.epo.org/statistics-indicators2015

Top technical fields

Medical technology was still the field where the most applications were filed and was also one of the fastest growing areas. Other fields with strong growth were Engines, pumps and turbines, Pharmaceuticals, Measurement and Computer technology. Only Transport and Electrical machinery and energy showed a slowdown in the number of applications.

Analysis based on European patent applications filed with the EPO (Direct European applications and International (PCT) applications entering the European phase). Statistics are based on the first-named applicant.
Based on the WIPO IPC-Technology concordance. Methodology available at: http://www.wipo.int/ipstats/en/statistics/patents/pdf/wipo_ipc_technology.pdf

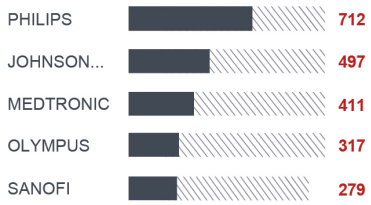
More information on 2015 statistics at www.epo.org/statistics-indicators2015

Medical technology

The field of Medical technology covers medical instruments for diagnosis, treatment of diseases and surgery. Technologies included in this field are, for example, vaccination instruments, prostheses, surgical robots, computed tomography and pacemakers.

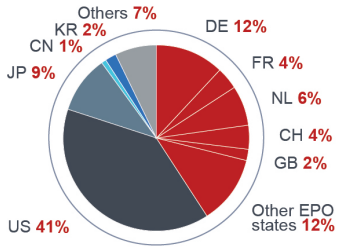
Total applications

Top applicants in 2015



	2015
1. PHILIPS	712
2. JOHNSON & JOHNSON	497
3. MEDTRONIC	411
4. OLYMPUS	317
5. SANOFI	279
6. BOSTON SCIENTIFIC	260
7. PROCTER & GAMBLE	121
8. ABBOTT	118
9. SAMSUNG	116
10. FRESENIUS	112
Others	9 531
Total applications in this field	12 474

Leading countries in 2015



	2015	vs. 2014
Germany	1 456	+7,8%
France	493	+5,3%
Switzerland	539	+22,2%
Netherlands	792	+8,9%
United Kingdom	278	0,0%
other EPO member states	1 419	+9,8%
United States	5 158	+17,1%
Japan	1 152	-2,5%
China, People's Republic of	133	+17,7%
Korea, Republic of	215	-3,6%
Others	839	+11,7%
Total applications in this field:	12 474	

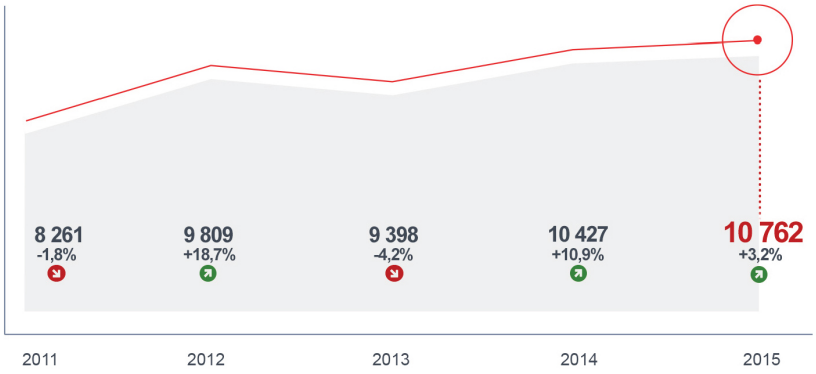
Analysis based on European patent applications filed with the EPO (Direct European applications and International (PCT) applications entering the European phase). Statistics are based on the first-named applicant.

More information on 2015 statistics at www.epo.org/statistics-indicators2015

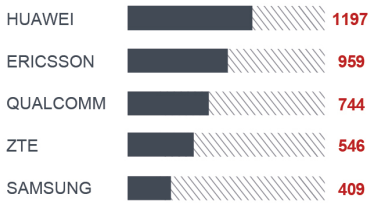
Digital Communication

This field encompasses basic electronic circuitry and electronic communication.
The field includes, for example, amplifiers, decoders and telegraphic communication.

Total applications

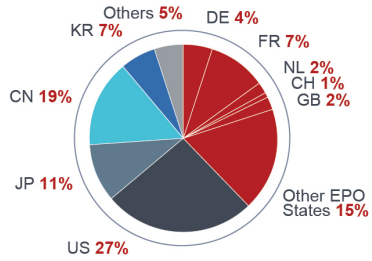


Top applicants in 2015



	2015
1. HUAWEI	1 197
2. ERICSSON	959
3. QUALCOMM	744
4. ZTE	546
5. SAMSUNG	409
6. NOKIA	362
7. INTEL	329
8. LG	294
9. SONY	292
10. ALCATEL LUCENT	283
Others	5 347
Total applications in this field	10 762

Leading countries in 2015



	2015	vs. 2014
Germany	468	+0,2%
France	732	-27,6%
Switzerland	91	+2,2%
Netherlands	208	-8,4%
United Kingdom	246	+1,7%
other EPO member states	1 640	-8,5%
United States	2 837	+3,3%
Japan	1 152	+5,8%
China, People's Republic of	2 069	+42,8%
Korea, Republic of	790	-2,3%
Others	529	+5,8%
Total applications in this field:		10 762

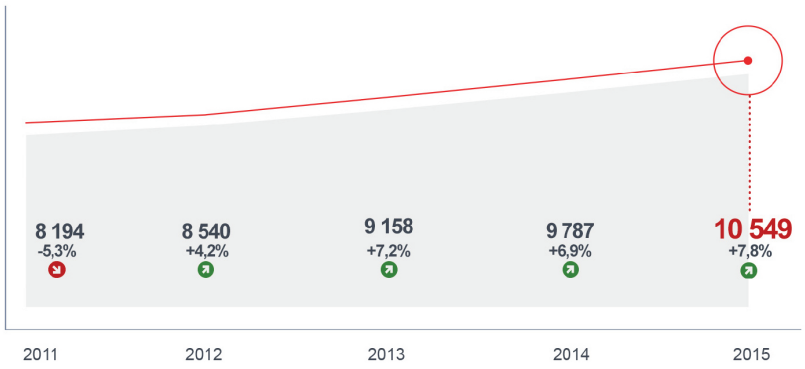
Analysis based on European patent applications filed with the EPO (Direct European applications and International (PCT) applications entering the European phase). Statistics are based on the first-named applicant.

More information on 2015 statistics at www.epo.org/statistics-indicators2015

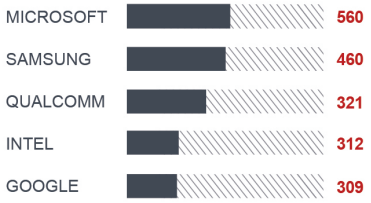
Computer technology

This field encompasses computing, calculating and counting devices. It includes, for example, digital computers and data processing systems.

Total applications

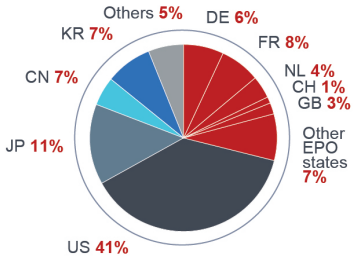


Top applicants in 2015



	2015
1. MICROSOFT	560
2. SAMSUNG	460
3. QUALCOMM	321
4. INTEL	312
5. GOOGLE	309
6. TECHNICOLOR	270
7. HUAWEI	263
8. HEWLETT- PACKARD	262
9. PHILIPS	233
10. NOKIA	176
Others	7 383
Total applications in this field	10 549

Leading countries in 2015



	2015	vs. 2014
Germany	680	-1,6%
France	828	+6,4%
Switzerland	144	+23,1%
Netherlands	392	+4,5%
United Kingdom	272	+37,4%
other EPO member states	756	-3,9%
United States	4 372	+22,5%
Japan	1 152	-17,9%
China, People's Republic of	705	+37,7%
Korea, Republic of	722	-10,1%
Others	526	-4,9%
Total applications in this field:		10 549

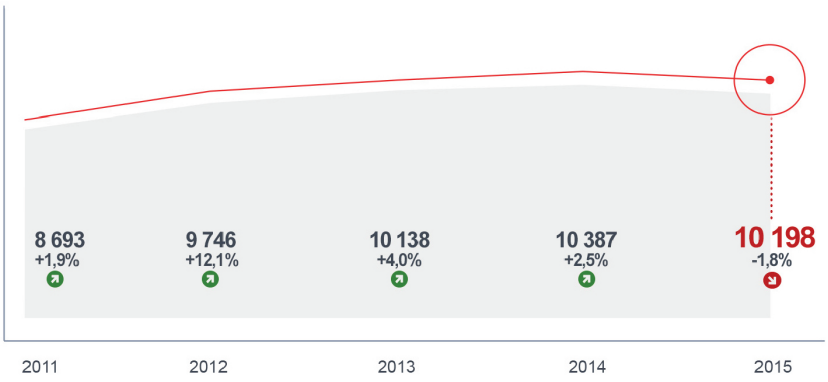
Analysis based on European patent applications filed with the EPO (Direct European applications and International (PCT) applications entering the European phase). Statistics are based on the first-named applicant.

More information on 2015 statistics at www.epo.org/statistics-indicators2015

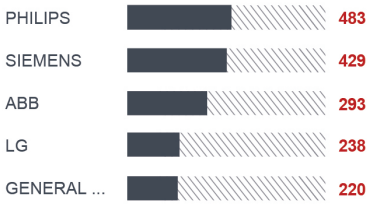
Electrical machinery, apparatus, energy

This field encompasses lighting devices, power and electric energy supply systems, basic electric elements and techniques. Some specific examples of technologies in this field are power cables, magnets, relays and x-rays techniques.

Total applications

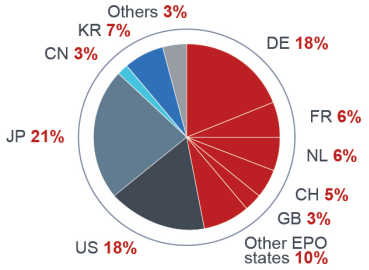


Top applicants in 2015



	2015
1. PHILIPS	483
2. SIEMENS	429
3. ABB	293
4. LG	238
5. GENERAL ELECTRIC	220
6. SAMSUNG	196
7. ROBERT BOSCH	188
8. PANASONIC	171
9. TE CONNECTIVITY	150
10. VALEO	123
Others	7 707
Total applications in this field	10 198

Leading countries in 2015



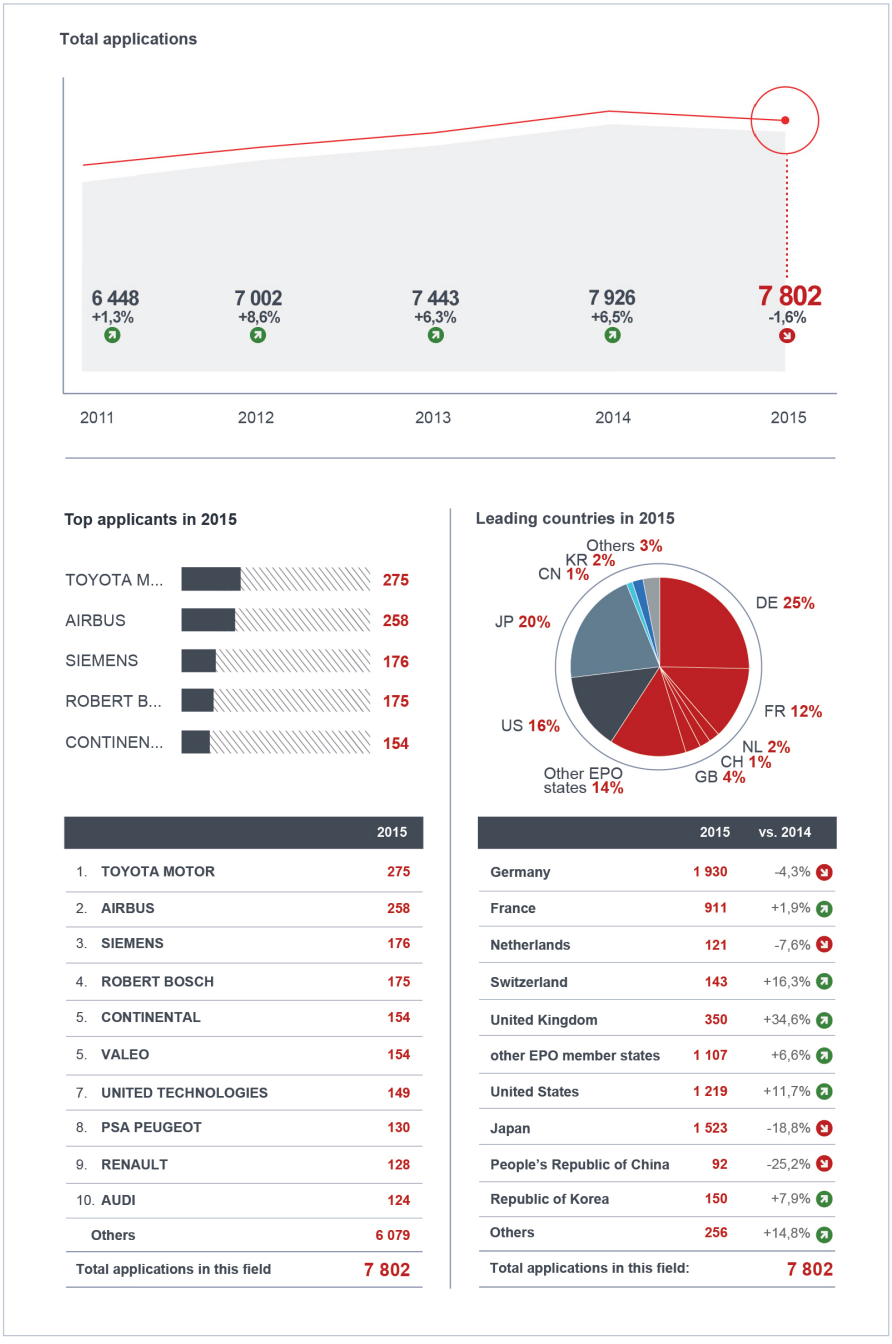
	2015	vs. 2014
Germany	1838	-11,4%
France	627	-3,8%
Switzerland	533	+3,3%
Netherlands	627	+0,2%
United Kingdom	271	-19,6%
other EPO member states	1 008	+6,7%
United States	1 791	+9,3%
Japan	2 180	-0,8%
China, People's Republic of	290	+16,0%
Korea, Republic of	670	-15,5%
Others	363	0,0%
Total applications in this field:		10 198

Analysis based on European patent applications filed with the EPO (Direct European applications and International (PCT) applications entering the European phase). Statistics are based on the first-named applicant.

More information on 2015 statistics at www.epo.org/statistics-indicators2015

Transport

This field encompasses vehicles, and more specifically vehicle tyres, wheels, windows and roofs, railway systems.



	2015
1. TOYOTA MOTOR	275
2. AIRBUS	258
3. SIEMENS	176
4. ROBERT BOSCH	175
5. CONTINENTAL	154
5. VALEO	154
7. UNITED TECHNOLOGIES	149
8. PSA PEUGEOT	130
9. RENAULT	128
10. AUDI	124
Others	6 079
Total applications in this field	7 802

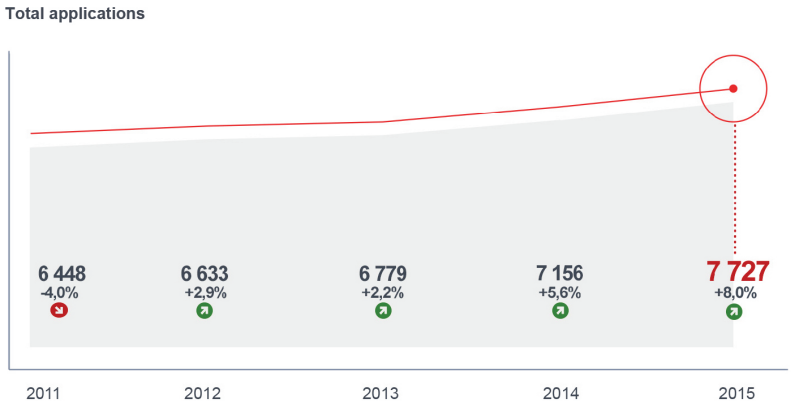
	2015	vs. 2014
Germany	1 930	-4,3%
France	911	+1,9%
Netherlands	121	-7,6%
Switzerland	143	+16,3%
United Kingdom	350	+34,6%
other EPO member states	1 107	+6,6%
United States	1 219	+11,7%
Japan	1 523	-18,8%
People's Republic of China	92	-25,2%
Republic of Korea	150	+7,9%
Others	256	+14,8%
Total applications in this field:	7 802	

Analysis based on European patent applications filed with the EPO (Direct European applications and International (PCT) applications entering the European phase). Statistics are based on the first-named applicant.

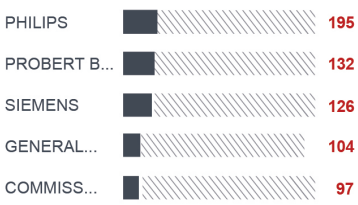
More information on 2015 statistics at www.epo.org/statistics-indicators2015

Measurement

This field encompasses horology, devices for measuring position and displacement, more specifically clocks and watches, navigation systems, volume, liquid and sound measuring devices.

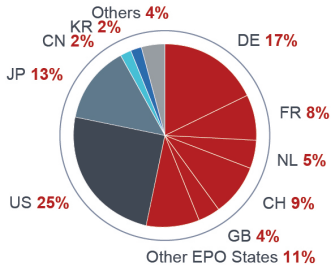


Top applicants in 2015



	2015
1. PHILIPS	195
2. ROBERT BOSCH	132
3. SIEMENS	126
4. GENERAL ELECTRIC	104
5. CEA [1]	97
6. HALLIBURTON	94
6. HITACHI	94
8. HONEYWELL	81
9. HOFFMANN-LA ROCHE	77
9. QUALCOMM	77
Others	6 650
Total applications in this field	7 727

Leading countries in 2015



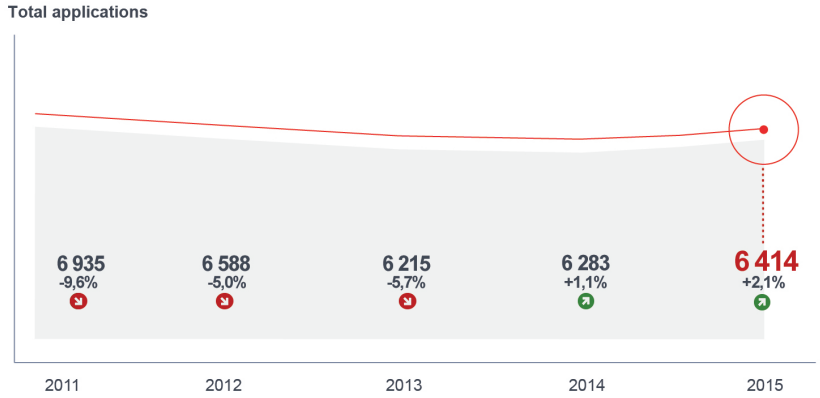
	2015	vs. 2015
Germany	1 342	+1,2%
France	590	+4,4%
Switzerland	677	+0,1%
Netherlands	383	+12,3%
United Kingdom	289	-5,6%
other EPO member states	851	+13,2%
United States	1 933	+21,0%
Japan	1 046	+0,6%
China, People's Republic of	160	+19,4%
Korea, Republic of	138	+3,0%
Others	322	+12,6%
Total applications in this field:		7 727

1) Commissariat à l'énergie atomique et aux énergies alternatives
Analysis based on European patent applications filed with the EPO (Direct European applications and International (PCT) applications entering the European phase). Statistics are based on the first-named applicant.

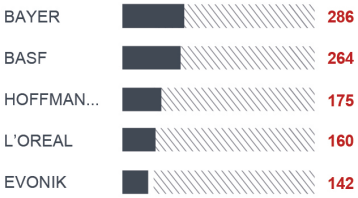
More information on 2015 statistics at www.epo.org/statistics-indicators2015

Organic fine chemistry

This field encompasses organic pure substances, combinatorial chemistry, and preparations for medical, dental and hygiene uses. It includes, for example, steroids, sugars, cosmetics, pharmaceuticals and food ingredients.

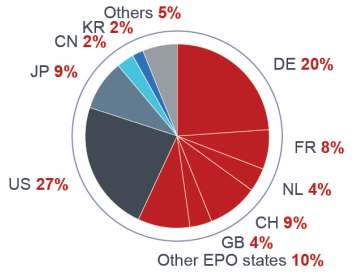


Top applicants in 2015



	2015
1. BAYER	286
2. BASF	264
3. HOFFMAN-LA ROCHE	175
4. L´OREAL	160
5. EVONIK	142
6. UNILEVER	137
7. JOHNSON & JOHNSON	124
8. PROCTER & GAMBLE	118
9. NOVARTIS	109
10. BRISTOL-MYERS SQUIBB	103
Others	4 796
Total applications in this field	6 414

Leading countries in 2015



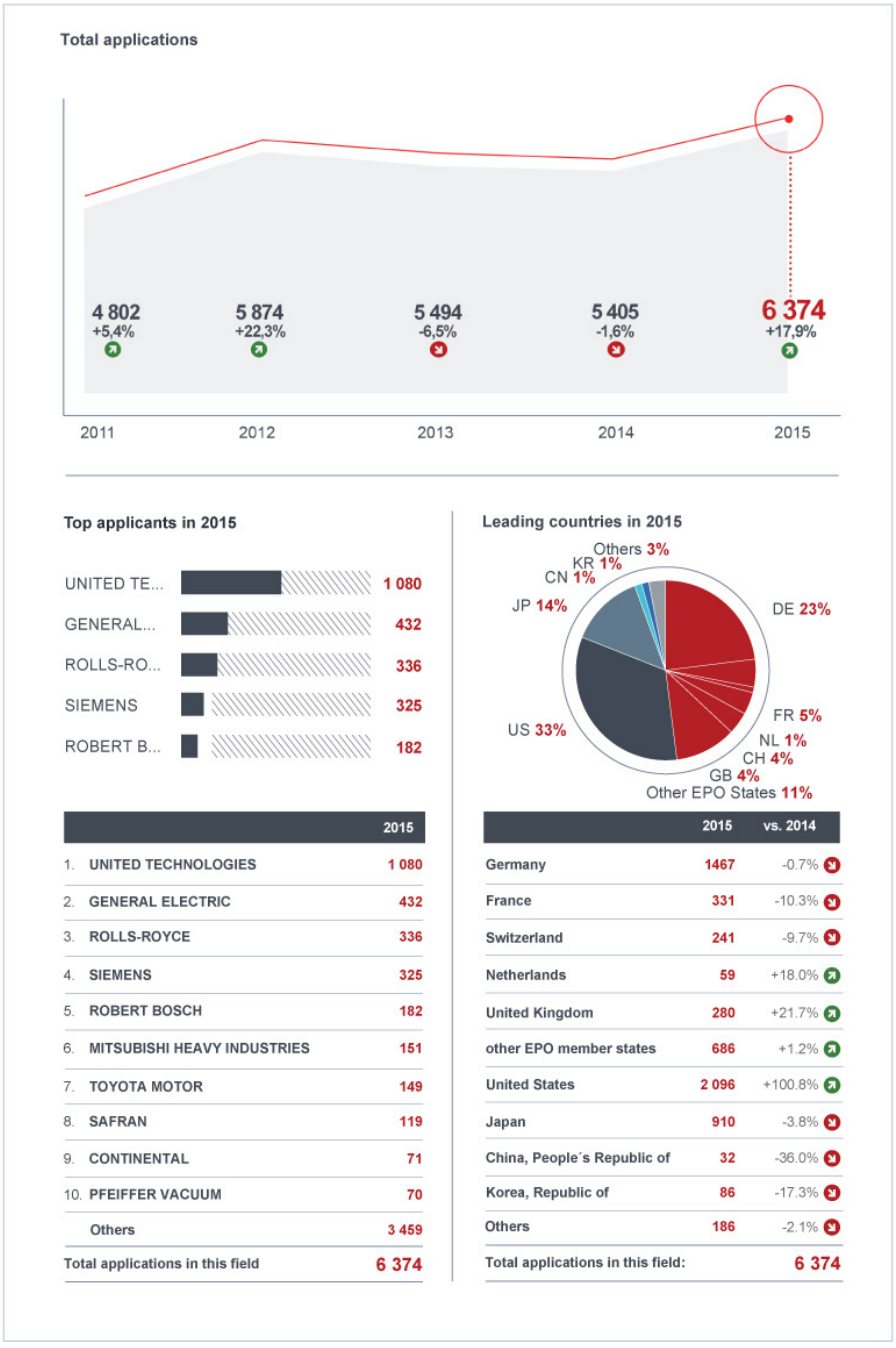
	2015	vs. 2014
Germany	1283	-12,1%
France	489	+12,9%
Switzerland	568	+2,3%
Netherlands	291	+21,8%
United Kingdom	270	+0,7%
other EPO member states	630	+7,7%
United States	1 746	+12,5%
Japan	540	-6,9%
China, People's Republic of	149	-13,9%
Korea, Republic of	122	+24,5%
Others	326	-3,6%
Total applications in this field:		6 414

Analysis based on European patent applications filed with the EPO (Direct European applications and International (PCT) applications entering the European phase). Statistics are based on the first-named applicant.

More information on 2015 statistics at www.epo.org/statistics-indicators2015

Engines, pumps, turbines

This field encompasses combustion engines, engines and pumps for liquids, eolic energy, nuclear physics and engineering. It covers, for example, gas-turbine plants, pumps and pistons, fusion and nuclear reactors, x-ray microscopes and wind motors.



		2015
1.	UNITED TECHNOLOGIES	1 080
2.	GENERAL ELECTRIC	432
3.	ROLLS-ROYCE	336
4.	SIEMENS	325
5.	ROBERT BOSCH	182
6.	MITSUBISHI HEAVY INDUSTRIES	151
7.	TOYOTA MOTOR	149
8.	SAFRAN	119
9.	CONTINENTAL	71
10.	PFEIFFER VACUUM	70
	Others	3 459
	Total applications in this field	6 374

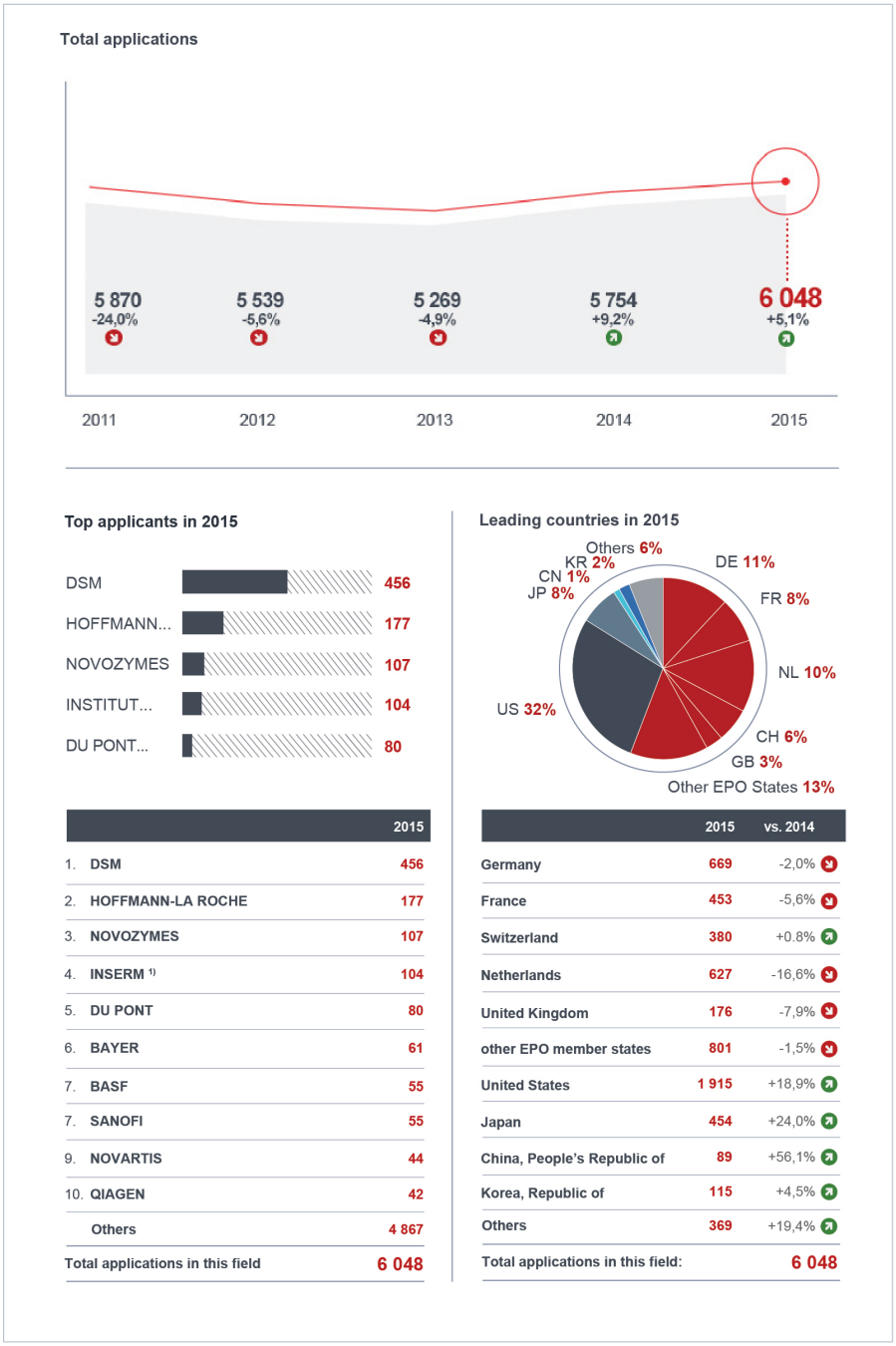
	2015	vs. 2014
Germany	1467	-0.7%
France	331	-10.3%
Switzerland	241	-9.7%
Netherlands	59	+18.0%
United Kingdom	280	+21.7%
other EPO member states	686	+1.2%
United States	2 096	+100.8%
Japan	910	-3.8%
China, People´s Republic of	32	-36.0%
Korea, Republic of	86	-17.3%
Others	186	-2.1%
Total applications in this field:		6 374

Analysis based on European patent applications filed with the EPO (Direct European applications and International (PCT) applications entering the European phase). Statistics are based on the first-named applicant.

More information on 2015 statistics at www.epo.org/statistics-indicators2015

Biotechnology

This field encompasses peptides, microbiology and genetic engineering. Included in the field are, for example, genetically modified organisms, brewing of beers, preparation of wine and vinegar.



	2015
1. DSM	456
2. HOFFMANN-LA ROCHE	177
3. NOVOZYMES	107
4. INSERM [1]	104
5. DU PONT	80
6. BAYER	61
7. BASF	55
7. SANOFI	55
9. NOVARTIS	44
10. QIAGEN	42
Others	4 867
Total applications in this field	6 048

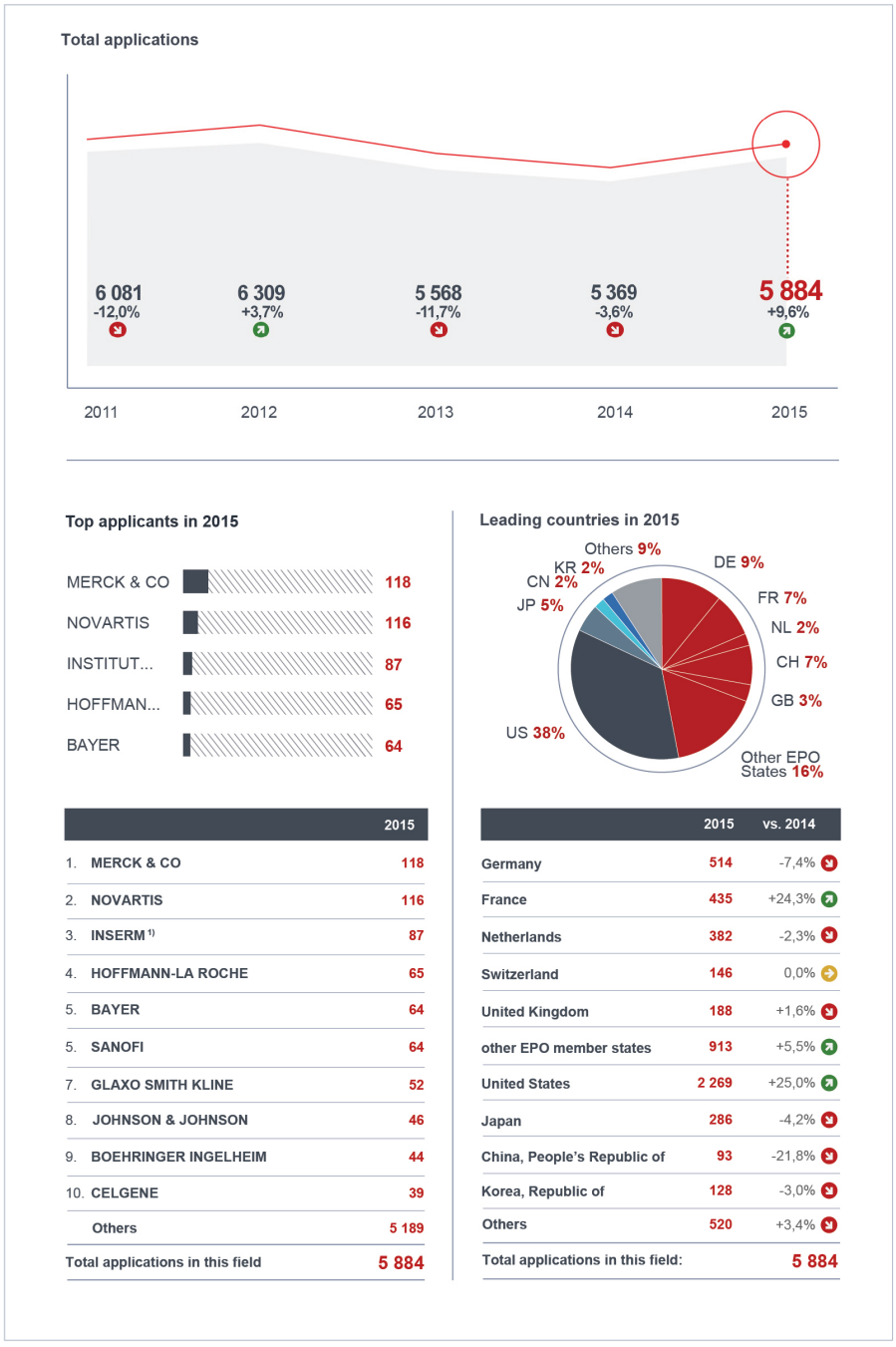
	2015	vs. 2014
Germany	669	-2,0%
France	453	-5,6%
Switzerland	380	+0.8%
Netherlands	627	-16,6%
United Kingdom	176	-7,9%
other EPO member states	801	-1,5%
United States	1 915	+18,9%
Japan	454	+24,0%
China, People's Republic of	89	+56,1%
Korea, Republic of	115	+4,5%
Others	369	+19,4%
Total applications in this field:		6 048

1) Institut national de la santé et de la recherche médicale
Analysis based on European patent applications filed with the EPO (Direct European applications and International (PCT) applications entering the European phase). Statistics are based on the first-named applicant.

More information on 2015 statistics at www.epo.org/statistics-indicators2015

Pharmaceuticals

This field encompasses preparations for medical, dental or hygiene purposes, for example emulsions, dragees and amalgams.



	2015
1. MERCK & CO	118
2. NOVARTIS	116
3. INSERM [1)]	87
4. HOFFMANN-LA ROCHE	65
5. BAYER	64
5. SANOFI	64
7. GLAXO SMITH KLINE	52
8. JOHNSON & JOHNSON	46
9. BOEHRINGER INGELHEIM	44
10. CELGENE	39
Others	5 189
Total applications in this field	5 884

	2015	vs. 2014
Germany	514	-7,4%
France	435	+24,3%
Netherlands	382	-2,3%
Switzerland	146	0,0%
United Kingdom	188	+1,6%
other EPO member states	913	+5,5%
United States	2 269	+25,0%
Japan	286	-4,2%
China, People's Republic of	93	-21,8%
Korea, Republic of	128	-3,0%
Others	520	+3,4%
Total applications in this field:	5 884	

1) Institut national de la santé et de la recherche médicale
Analysis based on European patent applications filed with the EPO (Direct European applications and International (PCT) applications entering the European phase). Statistics are based on the first-named applicant.

All technical fields

Technical Field		2015	2014	Change
Electrical engineering	Electrical machinery, apparatus, energy	10 198	10 387	-1,8%
	Audio-visual technology	4 250	3 876	9.6%
	Telecommunications	3 892	3 528	10.3%
	Digital communication	10 762	10 427	3.2%
	Basic communication processes	983	980	0.3%
	Computer technology	10 549	9 787	7.8%
	IT methods for management	1 922	2 059	-6.7%
	Semiconductors	2 878	2 996	-3.9%
Instruments	Optics	3 469	3 513	-1.3%
	Measurement	7 727	7 156	8%
	Analysis of biological materials	1 339	1 235	8.4%
	Control	2 455	2 267	8.3%
	Medical technology	12 474	11 234	11%
Chemistry	Organic fine chemistry	6 414	6 283	2.1%
	Biotechnology	6 048	5 754	5.1%
	Pharmaceuticals	5 884	5 369	9.6%
	Macromolecular chemistry, polymers	3 553	3 672	-3.2%
	Food chemistry	1 661	1 644	1%
	Basic materials chemistry	4 885	4 347	12.4%
	Materials, metallurgy	3 149	3 112	1.2%
	Surface technology, coating	2 334	2 322	0.5%
	Micro-structural and nanotechnology	145	267	-45.7%
	Chemical engineering	3 545	3 670	-3.4%
	Environmental technology	1 954	2 014	-3%

Analysis based on European patent applications filed with the EPO (Direct European applications and International (PCT) applications entering the European phase)
Based on the WIPO IPC-Technology concordance . Methodology available at: http://www.wipo.int/ipstats/en/statistics/technology_concordance.html

More information on 2015 statistics at www.epo.org/statistics-indicators2015

All technical fields

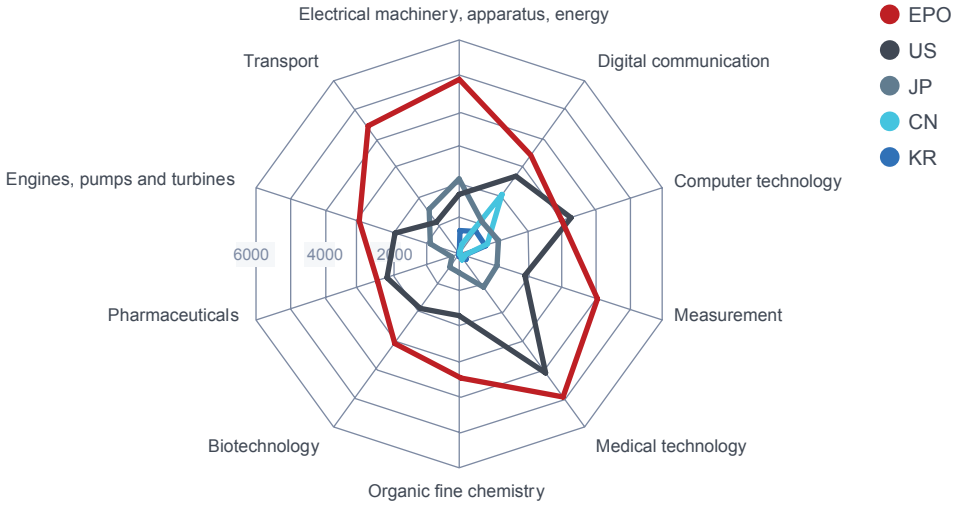
Technical Field		2015	2014	Change
Mechanical engineering	Handling	4 143	3 782	9.5%
	Machine tools	3 478	3 356	3.6%
	Engines, pumps, turbines	6 374	5 405	17.9%
	Textile and paper machines	2 304	2 252	2.3%
	Other special machines	5 033	4 732	6.4%
	Thermal processes and apparatus	2 581	2 499	3.3%
	Mechanical elements	4 301	3 878	10.9%
	Transport	7 802	7 926	-1.6%
Other fields	Furniture, games	2 951	2 748	7.4%
	Other consumer goods	3 347	3 220	3.9%
	Civil engineering	4 886	4 667	4.7%
Not classified		352	339	3.8%
Total		160 022	152 703	

Analysis based on European patent applications filed with the EPO (Direct European applications and International (PCT) applications entering the European phase)
Based on the WIPO IPC-Technology concordance . Methodology available at: http://www.wipo.int/ipstats/en/statistics/technology_concordance.html

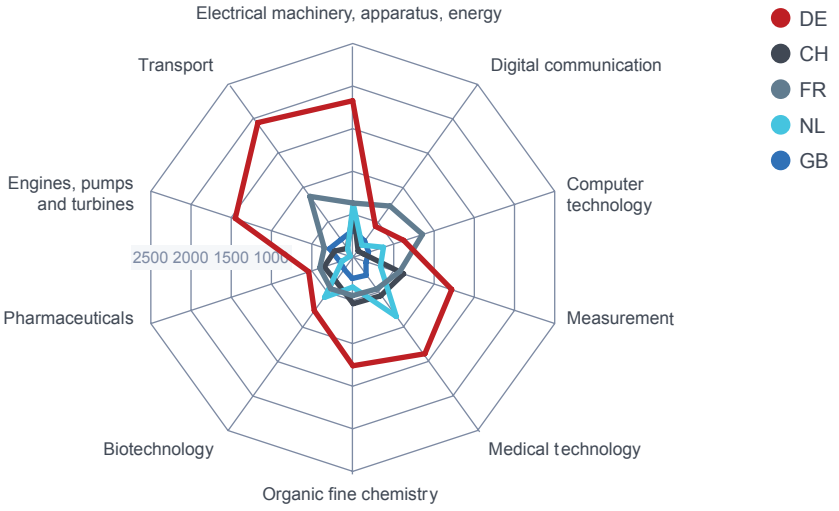
More information on 2015 statistics at www.epo.org/statistics-indicators2015

Country profile - EPO in a worldwide context

European companies filed the most applications in eight of the ten most active fields of technology, with US companies leading in the remaining two, Medical technology and Computers.



Country profile - EPO member states – top 5



Analysis based on European patent applications filed with the EPO (Direct European applications and International (PCT) applications entering the European phase)
Based on the WIPO IPC-Technology concordance. Methodology available at: http://www.wipo.int/ipstats/en/statistics/patents/pdf/wipo_ipc_technology.pdf
EPO: the 38 member states of the European Patent Organisation, including EU28.
Statistics are based on the first-named applicant.

More information on 2015 statistics at www.epo.org/statistics-indicators2015

Ratio per million of inhabitants

The inventiveness of Europe's leading economies is also reflected in the ratio of European patent applications to population. Switzerland (with 873 applications per million inhabitants), the Netherlands (419) and some of the Nordic countries topped the list again in 2015. Japan (169) was the first non-European country in the ranking with a ratio higher than the EU average (132), and also ahead of the US (133), South Korea (130) and China (4).

Rank	Country	Applications per mio inhabitants	Population	Applications
1.	Switzerland	872.7	8 121 830	7 088
2.	Netherlands	418.9	16 947 904	7 100
3.	Sweden	391.7	9 801 616	3 839
4.	Finland	365.2	5 476 922	2 000
5.	Denmark	354.8	5 581 503	1 930
6.	Germany	307.0	80 854 408	24 820
7.	Austria	229.9	8 665 550	1 992
8.	Belgium	180.2	11 323 973	2 041
9.	Japan	168.8	126 919 659	21 426
10.	France	162.0	66 553 776	10 781
11.	Israel	136.7	8 049 314	1 100
12.	United States	132.8	321 368 864	42 692
13.	Korea, Republic of	130.5	49 115 196	6 411
14.	Ireland	119.0	4 892 305	582
15.	Norway	98.3	5 207 680	512
16.	United Kingdom	78.6	64 088 222	5 037
17.	Singapore	68.9	5 674 472	391
18.	Italy	64.3	61 855 120	3 979
19.	Slovenia	59.5	1 983 412	118
20.	Chinese Taipei	53.8	23 415 126	1 260
21.	Canada	46.9	35 099 836	1 645
22.	New Zealand	42.4	4 438 393	188

Analysis based on European patent applications filed with the EPO (Direct European applications and International (PCT) applications entering the European phase)
Source of population figures: U.S. Census Bureau, International Data Base.
Statistics are based on the first-named applicant.

More information on 2015 statistics at www.epo.org/statistics-indicators2015

Ratio per million of inhabitants

Rank	Country	Applications per mio inhabitants	Population	Applications
23.	Australia	36.0	22 751 014	819
24.	Spain	31.7	48 146 134	1 527
25.	Cyprus	31.1	1 189 197	37
26.	Estonia	25.3	1 265 420	32
27.	Czech Republic	20.0	10 644 842	213
28.	Poland	14.7	38 562 189	568
29.	Latvia	14.6	1 986 705	29
30.	Lithuania	13.5	2 884 433	39
31.	Portugal	12.7	10 825 309	137
32.	Qatar	10.9	2 194 817	24
33.	Hong Kong	10.4	7 141 106	74
34.	Hungary	10.0	9 897 541	99
35.	Slovakia	8.8	5 445 027	48
36.	Greece	8.0	10 775 643	86
37.	Mauritius	6.7	1 339 827	9
37.	Puerto Rico	6.7	3 598 357	24
39.	Saudi Arabia	6.6	27 752 316	182
40.	Turkey	5.6	79 414 269	447
41.	United Arab Emirates	4.7	2 165 165	8
42.	Bulgaria	4.6	7 186 893	33
43.	China	4.2	1 367 485 388	5 721
44.	Uruguay	2.7	3 341 893	9
45.	Croatia	2.0	4 464 844	9
46.	Malaysia	1.8	30 513 848	56
46.	South Africa	1.8	53 675 563	98
48.	Chile	1.7	17 508 260	29
49.	Russian Federation	1.6	142 423 773	230
50.	Romania	1.5	21 666 350	33

Analysis based on European patent applications filed with the EPO (Direct European applications and International (PCT) applications entering the European phase)
Source of population figures: U.S. Census Bureau, International Data Base.
Statistics are based on the first-named applicant.

More information on 2015 statistics at www.epo.org/statistics-indicators2015