

Table SINV-71

USPTO utility patents granted in engines, pumps, turbines, by region, country, or economy: 1998–2020

(Number)

Region, country, or economy	Economy by income status	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
World	na	3,495	3,423	4,148	4,850	4,895	4,918	4,651	4,207	4,610	3,949	3,737	3,644	4,524	4,806	6,082	6,242	6,757	6,688	6,666	7,636	7,903	8,774	8,601
North America	na	1,552	1,480	1,865	2,189	2,334	2,172	1,994	1,860	2,031	1,715	1,590	1,707	2,047	2,296	2,835	2,922	3,059	3,090	3,151	3,480	3,642	4,175	3,935
Canada	High	57	67	91	109	95	103	89	107	119	108	79	110	122	105	138	133	128	139	131	177	162	213	239
Mexico	Upper middle	3	2	1	0	1	2	2	0	0	1	0	0	3	2	4	3	3	3	8	8	8	9	17
United States	High	1,492	1,411	1,773	2,080	2,237	2,067	1,904	1,753	1,912	1,606	1,511	1,597	1,922	2,190	2,693	2,786	2,927	2,947	3,012	3,296	3,472	3,953	3,679
Central America and Caribbean	na	0	2	1	1	0	1	2	2	2	0	3	2	0	3	6	4	5	2	1	0	3	2	3
Puerto Rico	High	0	0	1	0	0	0	2	2	0	0	1	0	0	1	4	2	3	1	1	0	2	1	3
South America	na	6	9	7	12	9	16	7	3	17	9	8	4	7	16	15	15	20	28	18	19	18	28	22
Argentina	Upper middle	0	1	1	3	4	4	1	0	2	2	1	0	3	3	1	0	1	1	2	0	2	1	1
Brazil	Upper middle	4	6	5	7	2	8	5	2	14	7	6	2	4	13	12	10	15	19	11	17	14	22	17
Europe	na	827	822	1,016	1,206	1,147	1,202	1,186	1,036	1,079	963	942	886	1,170	1,223	1,603	1,635	1,858	1,766	1,752	2,051	2,108	2,182	2,233
EU-27 + UK ^a	na	773	777	965	1,118	1,080	1,146	1,133	1,001	1,013	916	887	830	1,106	1,155	1,529	1,534	1,767	1,672	1,650	1,942	1,992	2,082	2,105
United Kingdom	High	100	99	102	151	116	105	101	108	128	107	102	103	168	162	229	225	276	239	224	291	271	322	282
EU-27 ^b	na	673	679	863	967	964	1,041	1,032	893	885	809	785	727	938	993	1,300	1,308	1,492	1,433	1,426	1,651	1,721	1,760	1,823
Austria	High	11	13	31	41	28	36	38	30	29	19	21	12	23	14	28	33	41	28	32	37	38	36	52
Belgium	High	7	7	12	6	10	12	11	7	9	14	11	10	5	7	17	14	24	22	16	26	40	44	37
Denmark	High	20	9	8	11	10	17	16	14	7	16	14	8	28	59	88	78	101	94	89	110	100	109	107
Finland	High	8	4	7	10	10	8	2	12	10	10	5	4	8	8	16	4	13	12	15	19	15	16	10
France	High	126	100	112	102	92	97	106	85	129	126	116	140	179	201	248	222	312	297	289	336	349	362	397
Germany	High	404	441	568	645	662	715	704	626	580	509	493	442	535	545	697	732	772	758	765	862	844	873	857
Hungary	High	1	0	3	0	0	1	0	0	1	0	0	1	2	2	0	4	2	0	4	2	2	1	2
Ireland	High	2	1	2	3	2	1	1	1	1	0	2	1	2	3	1	3	5	3	3	3	4	6	6
Italy	High	33	39	43	44	51	65	72	56	59	52	56	48	69	71	87	81	93	89	85	110	146	142	160
Netherlands	High	9	10	11	23	22	13	11	12	6	11	13	7	17	16	33	24	28	32	26	26	27	28	35
Spain	High	4	1	8	7	5	9	10	7	2	4	4	5	11	18	18	23	30	30	31	43	46	33	27
Sweden	High	42	48	53	69	69	61	53	39	46	41	37	43	43	40	45	68	57	48	50	57	78	71	88
Other Europe	na	54	44	50	88	66	56	53	36	66	46	54	56	64	68	74	102	91	94	102	108	116	99	128
Other Europe-2020 ^b	na	154	143	152	239	183	161	154	143	194	153	157	159	232	230	303	327	367	333	326	399	387	422	410
Belarus	Upper middle	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	1
Moldova	Lower middle	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Norway	High	1	3	3	7	2	3	3	3	6	2	7	6	10	6	8	21	14	9	13	12	15	6	16
Russia	Upper middle	10	7	11	22	21	11	5	6	6	8	6	6	13	13	18	14	10	15	15	15	14	15	22
Switzerland	High	43	31	36	55	40	38	39	23	47	33	35	40	39	45	46	63	61	63	69	79	80	68	79

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Ukraine	Lower middle	0	1	0	0	0	2	3	2	7	2	2	3	2	0	1	2	1	1	1	0	2	1	1
Asia	na	1,059	1,077	1,218	1,398	1,362	1,477	1,425	1,259	1,448	1,225	1,164	1,018	1,257	1,237	1,563	1,598	1,738	1,740	1,668	2,008	2,071	2,318	2,321
China	Upper middle	1	1	4	8	10	8	13	5	7	13	21	21	33	41	65	63	69	82	74	119	120	179	188
India	Lower middle	0	1	1	3	0	3	2	3	4	7	4	8	13	30	42	54	68	68	58	63	75	83	112
Japan	High	968	975	1,099	1,226	1,190	1,278	1,201	1,081	1,237	1,047	971	832	1,038	954	1,183	1,218	1,289	1,253	1,212	1,434	1,433	1,573	1,460
Malaysia	Upper middle	1	0	0	0	0	0	2	0	1	2	0	1	1	1	0	1	2	2	2	2	1	4	2
Singapore	High	2	2	1	0	1	2	1	1	2	1	1	1	3	5	11	10	12	14	11	7	7	8	6
South Korea	High	55	47	36	64	72	80	114	97	102	79	97	78	86	108	135	150	197	194	218	268	331	354	425
Taiwan	High	32	49	77	97	86	102	89	68	91	76	69	78	81	99	127	100	100	123	91	111	99	113	123
Middle East	na	14	12	12	18	10	20	8	10	6	9	16	11	19	13	26	28	33	27	36	40	35	41	50
Israel	High	13	11	9	17	9	14	6	9	5	9	13	8	17	9	19	19	21	13	21	17	17	14	15
Africa	na	4	1	2	2	1	3	3	3	2	3	1	3	3	3	2	5	7	3	3	5	4	3	5
South Africa	Upper middle	4	1	1	1	1	3	3	2	2	3	0	2	3	3	2	5	5	3	3	4	2	3	3
Australia and Oceania	na	30	22	27	22	33	27	26	34	26	23	14	14	21	14	32	34	36	33	35	31	20	23	33
Australia	High	27	21	26	19	30	21	22	30	21	15	13	10	16	13	28	28	29	29	31	27	18	21	32
New Zealand	High	3	1	1	3	3	5	2	4	4	8	1	4	5	1	3	5	7	3	4	5	1	3	1
Unclassified	na	3	0	1	1	0	0	0	0	0	2	0	0	0	0	0	1	0	0	1	1	3	2	1

na = not applicable, metric not calculated at this level.

EU = European Union; UK = United Kingdom; USPTO = U.S. Patent and Trademark Office.

^a The United Kingdom was a part of the EU for data purposes from 1973 to 2019.^b Beginning in 2020, the United Kingdom was no longer a member of the EU.**Note(s):**

USPTO patents are allocated according to patent inventorship information. USPTO patents are fractionally allocated among regions, countries, or economies based on the proportion of residences of all named inventors. Patents are classified under the World Intellectual Property Organization (WIPO) classification of patents, which classifies International Patent Classification (IPC) codes under 35 technical fields. IPC reformed codes take into account changes that were made to the WIPO classification in 2006 under the eighth version of the classification and were used to prepare these data. However, because PatentsView only provides the original IPC codes as they appeared on patents and not the IPC reformed codes, current Cooperative Patent Classification codes on patents were converted back to the most recent IPC classification to prepare these statistics. Fractional counts of patents were assigned to each technological field on patents to assign the proper weight of a patent to the corresponding technological fields under the classification. China includes Hong Kong.

Source(s):

National Center for Science and Engineering Statistics; Science-Metrix; PatentsView, USPTO, accessed June 2021.

Science and Engineering Indicators