

For Your Information (*JRAIA Statistics)

*The Japan Refrigeration and Air Conditioning Industry Association

Re: Estimation on RAC/PAC World Demand in 2011

1. Outline

Shown below are translation of the summary on estimated world demand for *air-conditioners (RAC/PAC) released by JRAIA in April 2012. The estimation of the demand during the period from 2006 to 2011 was conducted by global committee members of the association. In 2011 breakdown of RAC (Window/Mini-Split) is also shown.

2. Estimation of the demand

(1) Total(RAC+PAC) (2) RAC (3) PAC

3. Categories and classification

Objected air-conditioners herein are designed mainly for the use in residence and buildings forming a unit, which include *heat pump (cooling & heating) units. However, portable (movable) air conditioners and fan-coil units for water chillers and water heater are not included.

*Note: Cooling and heating type air conditioners are those capable of heating by heat-pump method. (Cooling only and cooling and heating are collectively called air conditioners in Japan.

(1)RAC: Residential air conditioners, so-called room air conditioners, are designed mainly for residential use, and include window type and split type. Multi-split systems are also included.

(2) PAC: Packaged air conditioners, so called (light commercial or) commercial air conditioners, are designed mainly for building use, such as offices and shops, and include medium- and large-sized split type, single packaged type and remote condenser type. Multi-split systems for building use (VRF/VRV) are also included. What they call unitary air conditioners and unitary heat pumps in USA are included here in this statistical estimation. Those of engine-driven type are excluded. Remark: The definition, categorization and description of PAC, light commercial and commercial air conditioners may differ in each country and region.

4. Method of Estimation (Countries/Region)

Estimation of demand was conducted by compiling the figures extracted from questionnaires sent to the global committee members of JRAIA. EOE

(1) RAC+PAC Total (Unit: Thousand set)						
World	2006	2007	2008	2009	2010	2011
	71,793	74,806	76,994	72,229	85,002	91,593
Japan	8,317	8,143	8,493	7,384	8,931	9,057
Outside of Japan	63,476	66,663	68,501	64,845	76,071	82,536
China	23,025	24,449	26,733	26,804	32,719	37,352
Asia	8,330	9,333	9,414	10,297	12,005	12,126
India	1,401	1,852	2,065	2,800	3,506	3,705
Korea	1,603	1,603	1,409	1,155	1,177	1,157
Indonesia	707	927	1,024	1,257	1,532	1,612
Taiwan	1,014	1,014	913	829	878	912
Malaysia	734	769	767	775	829	805
Thailand	692	723	756	760	1,034	890
Pakistan	509	615	610	708	677	702
Hong Kong	582	590	565	540	575	562
Philippines	505	505	459	503	502	507
Vietnam	209	312	414	512	702	667
Singapore	159	164	168	159	158	157
Bangladesh	43	74	83	121	131	139
Sri Lanka	49	52	52	52	55	55
Others	124	133	129	126	249	256
Middle East	3,640	3,974	4,520	3,996	4,054	4,222
Saudi Arabia	1,324	1,418	1,540	1,462	1,417	1,519
U A E	770	828	930	687	577	543
Iran	480	533	590	470	497	482
Israel	250	258	320	304	317	378
Oman	150	191	272	261	246	257
Qatar	137	177	187	199	177	192
Kuwait	172	193	163	125	125	122
Iraq	159	164	164	136	276	286
Bahrain	60	65	75	77	77	73
Lebanon	48	53	57	62	76	77
Others	90	94	222	213	269	293
Europe	6,651	8,137	6,119	4,994	6,400	6,752
Russia	759	1,221	1,083	918	1,442	1,935
Italy	1,163	1,583	1,069	953	1,037	947
Turkey	973	1,150	907	572	717	831
Spain	1,271	1,229	422	541	731	623
Greece	372	528	477	376	279	230
France	460	505	409	344	419	391
Ukraine	198	247	177	119	380	415
England	213	222	160	130	150	154
Bulgaria	102	134	139	68	86	80
Portugal	149	166	119	96	132	104
Rumania	103	128	171	89	81	82
Germany	116	136	131	110	113	116
Sweden	74	84	75	69	65	62
Croatia	63	74	59	38	38	38
Hungary	68	75	65	33	33	33
Poland	46	57	68	55	74	73
Others	521	598	588	483	623	637
North America	16,516	14,979	14,984	11,543	11,989	12,446
USA	16,136	14,604	14,604	11,220	11,608	12,028
Canada	380	375	380	323	381	418
Latin America	3,166	3,496	4,180	4,642	6,203	6,726
Brazil	1,210	1,265	1,648	2,296	3,448	3,749
Argentina	931	997	1,068	850	1,092	1,228
Mexico	443	635	687	709	662	703
Puerto Rico	143	148	159	154	177	178
Venezuela	132	136	136	137	163	188
Others	307	315	482	496	661	680
Africa	1,248	1,401	1,638	1,654	1,757	1,939
Egypt	334	367	468	472	541	650
Nigeria	221	270	303	330	349	405
S.Africa	161	159	199	200	220	219
Algeria	112	125	128	131	144	154
Libya	75	102	164	165	149	153
Kenya	19	52	50	51	51	51
Others	326	326	326	305	303	307
Oceania	900	894	913	915	944	973
Australia	808	799	812	813	835	863
New Zealand	86	89	95	95	102	103
Others	6	6	6	7	7	7

Remarks: * Asia - Japan and China are excluded * Period - Calendar Year (Jan-Dec)

(2) RAC (Unit: Thousand set)						Window	Mini-Split
World	2006	2007	2008	2009	2010	2011	2011
	58,048	61,786	64,189	61,336	73,420	79,248	13,060 66,188
Japan	7,520	7,390	7,749	6,775	8,242	8,279	8,279
Outside of Japan	50,528	54,396	56,440	54,561	65,178	70,969	13,060 57,909
China	21,105	22,349	24,472	24,787	30,424	34,852	352 34,500
Asia	7,131	8,033	8,182	9,216	10,856	10,932	2,420 8,512
India	1,301	1,732	1,953	2,676	3,363	3,541	1,132 2,409
Korea	801	762	645	552	566	540	24 516
Indonesia	690	900	996	1,224	1,493	1,570	28 1,542
Taiwan	985	985	884	807	856	890	226 664
Malaysia	658	690	674	669	751	725	6 719
Thailand	630	660	685	698	957	811	9 802
Pakistan	500	605	600	690	654	677	144 533
Hong Kong	557	557	535	509	541	528	348 180
Philippines	460	460	419	467	467	470	348 122
Vietnam	203	288	389	477	670	631	7 624
Singapore	139	144	148	140	137	138	7 131
Bangladesh	42	73	82	115	116	119	53 66
Sri Lanka	45	48	48	48	50	50	25 25
Others	120	129	124	144	235	242	63 179
Middle East	2,898	3,101	3,695	3,297	3,474	3,614	1,647 1,967
Saudi Arabia	1,074	1,160	1,320	1,273	1,287	1,377	906 471
U A E	600	648	745	519	428	394	139 255
Iran	450	419	470	415	449	433	242 191
Israel	100	103	210	215	235	285	10 275
Oman	140	180	246	215	209	218	91 127
Qatar	120	144	160	165	147	159	76 83
Kuwait	89	108	86	87	90	90	28 62
Iraq	155	160	160	113	258	267	69 198
Bahrain	43	46	55	57	64	60	27 33
Lebanon	45	47	52	56	69	69	1 68
Others	82	86	191	182	238	262	58 204
Europe	5,907	7,278	5,438	4,411	5,741	6,088	189 5,899
Russia	704	1,140	1,004	860	1,381	1,848	71 1,777
Italy	1,107	1,503	1,013	906	983	896	7 889
Turkey	944	1,115	864	545	679	785	1 784
Spain	1,039	986	331	443	609	517	12 505
Greece	345	500	447	353	260	215	0 215
France	380	414	319	268	316	293	5 288
Ukraine	187	232	164	113	365	400	19 381
England	115	120	85	61	70	72	2 70
Bulgaria	99	131	135	64	83	77	1 76
Portugal	133	148	103	83	118	93	1 92
Rumania	99	124	166	107	76	77	2 75
Germany	86	100	89	74	75	77	8 69
Sweden	70	80	71	64	61	58	0 58
Croatia	60	71	56	36	36	36	1 35
Hungary	53	58	54	26	26	26	1 25
Poland	36	45	52	43	57	56	1 55
Others	450	511	485	365	546	562	57 505
North America	8,660	8,348	8,525	6,270	6,550	6,663	6,223 440
USA	8,550	8,238	8,412	6,176	6,419	6,518	6,150 368
Canada	110	110	113	94	131	145	73 72
Latin America	2,914	3,235	3,875	4,298	5,750	6,231	1,770 4,461
Brazil	1,125	1,177	1,525	2,127	3,195	3,465	981 2,484
Argentina	920	984	1,053	838	1,073	1,205	98 1,107
Mexico	390	580	635	657	597	633	267 366
Puerto Rico	108	112	117	117	136	139	97 42
Venezuela	120	124	124	125	151	176	90 86
Others	251	258	421	434	598	613	237 376
Africa	1,164	1,312	1,483	1,501	1,585	1,764	374 1,390
Egypt	314	346	430	428	489	600	77 523
Nigeria	210	259	286	310	324	375	55 320
S.Africa	140	135	134	140	153	153	27 126
Algeria	110	122	125	128	141	150	53 97
Libya	71	98	162	163	147	152	12 140
Kenya	15	48	42	43	43	43	20 23
Others	304	304	304	289	288	291	130 161
Oceania	749	740	770	781	798	825	85 740
Australia	668	656	685	695	708	734	81 653
New Zealand	76	79	80	80	84	85	3 82
Others	5	5	5	6	6	6	1 5

Remarks: * Asia - Japan and China are excluded * Period - Calendar Year (Jan-Dec)

(3) PAC Total (Unit: Thousand set)					
World					