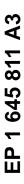
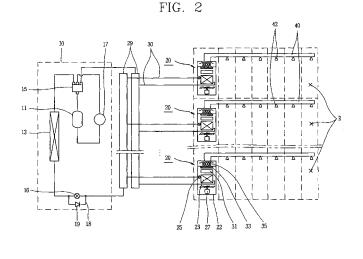
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	Office européen des brevets	(11) <b>EP 1 645 811 A3</b>
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## (54) Air conditioner

(57) An air conditioner comprises: at least one outdoor unit (10) having a compressor (11) and an outdoor heat exchanger (13); an air process unit (20) including a heat exchanger (23) connected to the outdoor unit (10) by a refrigerant pipe, in which the air is heat exchanged, and a blower fan (27) blowing the heat exchanged air; and a duct (40) having one side connected to the air process unit and another side connected to a plurality of rooms, and introducing to the room, the air blown after heat exchange. Accordingly, the refrigerant pipe is shortened, which reduces pressure loss and a head loss. Also, oil discharged outside of the compressor together with the compressor refrigerant is easily recovered, and the amount of accumulated refrigerant is reduced, thereby reducing the risk of suffocation due to leakage of a refrigerant.





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## EUROPEAN SEARCH REPORT

Application Number EP 05 25 6194

Category	Citation of document with inc of relevant passa			elevant claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	PATENT ABSTRACTS OF vol. 017, no. 395 (N 23 July 1993 (1993-0 -& JP 05 071820 A (N 23 March 1993 (1993- * paragraph [0016] - figures 1-3,6 *	I-1451), 07-23) IIPPONDENSO CO LTD), 03-23)		10	INV. F24F3/06 F25B13/00
Х	EP 1 113 233 A (CARF 4 July 2001 (2001-07 * the whole document	/-04)	11	-16	
Х	US 5 317 907 A (SHIN 7 June 1994 (1994-06 * the whole document	5-07)	1		
A	US 2004/045699 A1 (N 11 March 2004 (2004- * paragraph [0035];	03-11)	)  1-	3,5	
A	US 4 507 938 A (HAMA 2 April 1985 (1985-6 * the whole document	04-02)	11	-16	TECHNICAL FIELDS SEARCHED (IPC) F24F F25B
	The present search report has be	•			
Place of search The Hague		Date of completion of the sea 13 September			Examiner IZALEZ-GRANDA, C
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		L : document	ent documen ling date t cited in the a cited for othe	nvention	

## EP 1 645 811 A3

## ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO.

EP 05 25 6194

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

13-09-2006

DE         60019246 T2         16-02-200           US         6298677 B1         09-10-200           US 5317907         A         07-06-1994         GB         2255171 A         28-10-199           JP         4327751 A         17-11-199         KR         9512153 B1         14-10-199           US 2004045699         A1         11-03-2004         US         6533026 B1         18-03-200           US 4507938         A         02-04-1985         DE         332611 A1         10-05-198           DK         410583 A         11-03-198         JP         59046465 A         15-03-198		Publication date		Patent family member(s)		Publication date
DE         60019246         T2         16-02-200           US         6298677         B1         09-10-200           US         5317907         A         07-06-1994         GB         2255171         A         28-10-199           JP         4327751         A         17-11-199         KR         9512153         B1         14-10-199           US         2004045699         A1         11-03-2004         US         6533026         B1         18-03-200           US         4507938         A         02-04-1985         DE         3332611         A1         10-05-198           DK         410583         A         11-03-198         JP         59046465         A         15-03-198	Α	23-03-1993	NONE			
JP 4327751 A 17-11-199 KR 9512153 B1 14-10-199 US 2004045699 A1 11-03-2004 US 6533026 B1 18-03-200 US 4507938 A 02-04-1985 DE 3332611 A1 10-05-198 DK 410583 A 11-03-198 JP 59046465 A 15-03-198	A	04-07-2001	DE	60019246	Т2	12-05-2005 16-02-2006 09-10-2001
US 4507938 A 02-04-1985 DE 3332611 A1 10-05-198 DK 410583 A 11-03-198 JP 59046465 A 15-03-198	A	07-06-1994	JP	4327751	A	28-10-1992 17-11-1992 14-10-1995
DK 410583 A 11-03-198 JP 59046465 A 15-03-198	A1	11-03-2004	US	6533026	B1	18-03-2003
SE 460307 B 25-09-198	Α	02-04-1985	DK JP KR SE	410583 59046465 8801148 460307	A A B1 B	10-05-1984 11-03-1984 15-03-1984 01-07-1988 25-09-1989 04-05-1984
		A A A A1	date           A         23-03-1993           A         04-07-2001           A         07-06-1994           A1         11-03-2004	date           A         23-03-1993         NONE           A         04-07-2001         DE DE US           A         07-06-1994         GB JP KR           A1         11-03-2004         US           A         02-04-1985         DE DK JP KR SE	date         member(s)           A         23-03-1993         NONE           A         04-07-2001         DE         60019246           DE         60019246         0298677           A         07-06-1994         GB         2255171           JP         4327751         KR         9512153           A1         11-03-2004         US         6533026           A         02-04-1985         DE         3332611           DK         410583         JP         59046465           KR         8801148         SE         460307	date         member(s)           A         23-03-1993         NONE           A         04-07-2001         DE         60019246         D1           DE         60019246         T2         US         6298677         B1           A         07-06-1994         GB         2255171         A           JP         4327751         A           KR         9512153         B1           A1         11-03-2004         US         6533026         B1           A         02-04-1985         DE         3332611         A1           DK         410583         A         JP         59046465         A           KR         8801148         B1         SE         460307         B

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