



**TOGETHER**  
*for a sustainable future*

## OCCASION

This publication has been made available to the public on the occasion of the 50<sup>th</sup> anniversary of the United Nations Industrial Development Organisation.



**TOGETHER**  
*for a sustainable future*

## DISCLAIMER

This document has been produced without formal United Nations editing. The designations employed and the presentation of the material in this document do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations Industrial Development Organization (UNIDO) concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries, or its economic system or degree of development. Designations such as “developed”, “industrialized” and “developing” are intended for statistical convenience and do not necessarily express a judgment about the stage reached by a particular country or area in the development process. Mention of firm names or commercial products does not constitute an endorsement by UNIDO.

## FAIR USE POLICY

Any part of this publication may be quoted and referenced for educational and research purposes without additional permission from UNIDO. However, those who make use of quoting and referencing this publication are requested to follow the Fair Use Policy of giving due credit to UNIDO.

## CONTACT

Please contact [publications@unido.org](mailto:publications@unido.org) for further information concerning UNIDO publications.

For more information about UNIDO, please visit us at [www.unido.org](http://www.unido.org)

21452

September 1995

**CONVERSION OF DOMESTIC REFRIGERATOR PRODUCTION  
FACILITIES TO PHASE OUT CFC-11 AND CFC-12  
IRAN**

**PARS APPLIANCE MANUFACTURING COMPANY**  
Project No. MP/IRA/94/403  
UNIDO Contract 94/096

**FINAL REPORT**

Prepared by Mohammad Hajifaraji

Backstopping Officer:  
A. Malayeri  
Engineering and Metallurgical Industries Branch

UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION  
VIENNA, AUSTRIA



## *Contents*

- 1) *Introduction*
- 2) *Project Background in the Company*
- 3) *Synopsis*
- 4) *Activities*
- 5) *Tasks*
- 6) *Prototypes evaluation and analysis*
- 7) *Conclusion*
- 8) *Attachments*



## *Introduction*

According to contract drawn up between PAMCO and UNIDO the R134a replaced in four models of PAMCO production and hence the reports prepared after a trial production.

Preparation are made in order to replace R134a in both three new models of refrigerutor and freezer and also in a 16 cf nofrost refrigerator-freezer in near future, new models are so - design that to reach an optimizing refrigeration system und to reduce energy consumption comparing with the current productions, especially freezers will gain a very high quality in respect.



## *Project background in the company*

Following the contract which was drawn up between UNIDO and PAMCO to phase out the CFC12, a report prepared under topic of calculation and redesign of different models of PAMCO productions covering the following subjects:

1- Plan of treatment :

performance standards and test conditions and design criteria on using HFC134a

2- Describing different models of PAMCO productions from dimensions ,refrigeration components, working performance,energy consumption and performance characteristics point of view.

3- Evaluation of cabinet constant both in theoretical and experimental method and calculation of cooling capacity and selection of suitable compressor and refrigeration system components such as evaporator, condensor and capillary tube.

At the second stage a report prepared under topic of "evaluation and testing of prototypes for R134a" covering following subjects:

1- The method of selecting compatible components with respect



to the test results and optimization plan

2- Optimization plan and evaluation of prototypes with respect to minor modification or changes

3- Temperature and energy consumption test according to ISO and compared the results with those for R12

4- Efforts that have been made to modify the refrigeration system and to reduce energy consumption.



## *Synopsis*

In this report we have been at first revised the steps in order to replace R134a in the current production, and then the -- specification of new models and activities of optimizing the refrigeration system and reducing of energy consumption have been discussed.

The new productions are compared with the currents from refrigeration system point of view, and finally the PAMCO planning about the new models which are going to be replaced with the current models in near future and optimization plan and reduction of energy consumption have been explained.

## *Activities*

To produce appliance with R134a following activities are done in PAMCO.

- 1- Calculation and redesign of all models of PAMCO productions such as 8 , 10 and 12 cubic feet refrigerator and 12 cubic feet freezer and hence preparing the first report .
- 2- Making and testing of the prototypes according to ISO. and hence preparing the second report.
- 3- Evaluation , redesign and fabrication of prototypes for all new models of production.( 8, 10 and 12 cubic feet refrigerator and 8,10 and 12 cubic feet freezer with plastic inner body ,new design chassis and 16 cubic feet no frost refrigerator-freezer ) and testing of prototypes according to ISO and comparing the results with current productions ( metal inner body ) .
- 4- Activities are done to reduce energy consumption of freezer such as increasing of the foam thickness, modification of door gasket and improving the cooling performance.



## *Tasks*

Our plan to replace R134a in the current and the future production and steps taken in order to overcome the problem related to mass production are explained bellow:

1- replacing R134a in different models of current production :

Following the test of approved prototypes, it is requested to purchase 1000 sets of R134a compressor for a trial production .

2- Mass production with R134a :

Following problems are predicted to be occurred with the mass production.

a) Respecting of problems such as system inside cleaning, permissible humidity and vacuum limit.

b) Testing of the system components and the assembled refrigeration system respecting of humidity and leakage.

c) Training of the operators and the the labours and the customer service department

d) Installation and start up the equipments related to charging , testing and vacuum.

3- Replacing of R134a in the new models of PAMCO productions:

There are seven new different models as follow:



Refrigerator of 8,10 and 12 cubic feet with plastic inner body and new design of chassi, Freezer of 8,10, 12 cf with plastic inner body, new design of chassi and foam thickness equal to 7 cm and nofost 16 cf refrigerator-freezer, prototypes have been made for all above mentioned models and tested according to ISO standard.

4- Producing of ST climate freezer:

Three new design freezer of 8,10 and 12 cf are to be produced according to ISO for ST class in the beggining of 1996.

5- Reducing of energy consumption:

Energy consumption will be reduced due to redesign of chassi and foam thickness of new design freezers.

6- There is a new project in order to improve the current refrigerators to achive the following specifications :

- a) Insulated (\*\*\*) freezer compartment.
- b) T-class
- c) having a unique evaporator in the refrigerator compartment.

7- Project to built two new hot-room and provide and instaling of related test equipments.



## *Prototype evaluation and analysis*

Abbreviations :

C : Cabinet constant

U : overall heat transfer coefficient

Q1 : Rate of heat flow in to the cabinet

Q2 : Heat transferd in to the cabinet by compressor

Q3 : Product load

Q4 : Oppening door

Q : Cooling capacity

MODEL :

R: Refrigerator

F: Freezer

T: Refrigerator-Freezer

R 08 A

A: metallic inner body

B: Plastic inner body

Gross volume



## CALCULATION AND COMPONENT SELECTION

MODEL		R08A	R08B	R10A	R10B	R12A	R12B	F08A	F08B	F10A	F10B	F12A	F12B
C	(W/°C)	1.51	1.35	1.78	1.66	2.0	1.88	1.43	1.0	1.7	1.2	1.97	1.4
U	(W/°CM2)	0.53	0.46	0.54	0.48	0.54	0.49	0.50	0.38	0.51	0.39	0.51	0.41
Q1	W	63	56	83	77	95	89	71	67	85	80	94	89
Q2	W	6.3	3	8.3	4.	9.5	5	7.1	4	8.5	4	9.4	5
Q3	W	28	28	35	35	42	42	43	48	57	64	71	81
Q4	W	9.7	9	12.6	12	14.6	14	12.1	12	15	15	17.5	17
Q	W	108	96	139	128	161	150	133	131	166	163	192	192
EVAP. AREA	m2	1.06	1.03	1.36	1.3	1.58	1.51	2.1	2.05	2.8	2.8	3.2	3.2
COND. AREA	m2	1.1	1.0	1.4	1.35	1.6	1.5	1.37	1.35	1.58	1.51	2.1	2.0
CLASS		T(43°)	T(43°)	T(43°)	T(43°)	T(43°)	T(43°)	N(32°)	T(43°)	N(32°)	T(43°)	N(32°)	T(43°)



## SPECIFICATION OF THE REFRIGERATION SYSTEM

MODEL		R08A	R08B	R10A	R10B	R12A	R12B	F08A	F08B	F10A	F10B	F12A	F12B
GROSS VOLUME	lit.	262	264	321	322	364	361	262	226	319	275	362	324
NET VOLUME	lit.	251	250	304	305	346	343	125	129	140	155	195	182
EVAPORATOR AREA	m <sup>2</sup>	1	1	1.06	1.06	1.23	1.23	1.1	1.1	1.35	1.35	1.4	1.4
CONDENSOR AREA	m <sup>2</sup>	0.6	0.65	0.6	0.65	0.74	.08	0.6	0.65	0.6	0.65	0.74	0.8
CONDENSOR VOLUME	cc	96	105	96	105	116	128	96	105	96	105	116	128
OIL COOLER		-	-	-	-	-	-	YES	YES	YES	YES	YES	YES
CAPILLARY TUBE	ø mm	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.79	0.79	0.79	0.79
	L m	2.5	2.5	2.4	2.4	2.3	2.3	2.3	2.3	3.5	3.5	3	3
CHARGING AMOUNT	gr.	90	90	100	100	170	170	125	125	150	150	180	180

( 6-3 )



ISO 7371 (T CLASS)

PAMCO R08 A

PROTOTYPE NO.		1			2			3			4		
COMPRESSOR		ZANUSSI GL60AB			DANFOSS TLS5F			ZANUSSI GL70AA			DANFOSS FR6G		
CAPACITY (ASHREA)	W	125			128			150			119		
Ta (ambient)	°C	18	32	43	18	32	43	18	32	43	18	32	43
Tm (mean)	°C	-	+5	+5	-	+5	+5	-	+4.8	+4.9	+2.1	+5.1	+5.2
Tc (cellar)	°C	-	+8.1	+8.8	-	+8	+8.5	-	+7.3	+8.1	+5.3	+8.0	+9.1
Tw (warmest test package)	°C	-	-18.2	-16.9	-	-18.3	-17.1	-	-19	-17.6	-19.3	-17.7	-16.2
ENERGY CONSUMPTION	Kwh/day	-	1.25	1.79	-	1.28	1.83	-	1.31	1.88	0.68	1.11	1.6

ISO 7371 (T CLASS)

PAMCO R08 B

PROTOTYPE NO.		17			18		
COMPRESSOR		DANFOSS FR6G			DANFOSS FR6G		
CAPACITY (ASHREA)	W	119			119		
Ta (ambient)	°C	18	32	43	18	32	43
Tm (mean)	°C	-	+5	+5.2	+1.8	+4.9	+5
Tc (cellar)	°C	-	+8.1	+8.8	+5.1	+8	+8.8
Tw (warmest test package)	°C	-	-18.0	-17.9	-19.5	-18.1	-17.7
ENERGY CONSUMPTION	Kwh/day	-	1.10	1.58	0.63	1.08	1.55

(NEW MODEL)



ISO 7371 (T CLASS)

PAMCO R10 A

PROTOTYPE NO.		5			6			7			8		
COMPRESSOR		DANFOSS FR6G			ZANUSSI GL60AA			ZANUSSI GL60AA			DANFOSS FR7.5G		
CAPACITY (ASHREA)	W	119			138			138			145		
Ta (ambient)	°C	18	32	43	18	32	43	18	32	43	18	32	43
Tm (mean)	°C	-	+5.1	+5.2	-	+4.7	+5.2	-	+4.9	+5	+1.9	+4.6	+4.8
Tc (cellar)	°C	-	+8.0	+9.1	-	+7.5	+9.3	-	+8.4	+9.0	+5.2	+7.3	+8.5
Tw (warmest test package)	°C	-	-17.7	-16.2	-	-17.7	-16.0	-	-17.3	-16.2	-19.2	-17.8	-16.9
ENERGY CONSUMPTION	Kwh/day	-	1.11	1.6	-	1.49	1.88	-	1.39	1.94	1.01	1.57	2.27

ISO 7371 (T CLASS)

PAMCO R10 B

PROTOTYPE NO.		19			20		
COMPRESSOR		DANFOSS FR7.5G			DANFOSS FR7.5G		
CAPACITY (ASHREA)	W	145			145		
Ta (ambient)	°C	18	32	43	18	32	43
Tm (mean)	°C	-	+4.8	+5.1	+1.8	+4.5	+4.6
Tc (cellar)	°C	-	+7.3	+8.2	+5.1	+7.1	+8.0
Tw (warmest test package)	°C	-	-18.0	-17.0	-19.9	-18.2	-17.3
ENERGY CONSUMPTION	Kwh/day	-	1.45	2.10	0.92	1.49	2.11

(NEW MODEL)



ISO 7371 (T CLASS)

PAMCO R12 A

PROTOTYPE NO.		9			10			11			12		
COMPRESSOR		DANFOSS TLS5F			DANFOSS TL5F			MATSUSHITA D51C10RAX5			DANFOSS FR10G		
CAPACITY (ASHREA)	W	139			121			121			191		
Ta (ambient)	°C	18	32	43	18	32	43	18	32	43	18	32	43
Tm (mean)	°C	-	+5	+5	+3.2	+5	+5.2	-	+5	+5.3	-	4.5	+4.7
Tc (cellar)	°C	-	+8.5	+10	+5.3	+9.5	+10.5	-	+9.0	+10.5	-	+7.5	+8.5
Tw (warmest test package)	°C	-	-15.5	-14.2	-18.2	-15.2	-14.0	-	-15.2	-13.9	-	-17.4	-16.0
ENERGY CONSUMPTION	Kwh/day	-	1.59	2.1	1.12	1.51	2.0	-	1.49	2.0	-	1.68	2.5

ISO 7371 (T CLASS)

PAMCO R12 B

PROTOTYPE NO.		21			22		
COMPRESSOR		DANFOSS FR7.5G			DANFOSS FR7.5G		
CAPACITY (ASHREA)	W	145			145		
Ta (ambient)	°C	18	32	43	18	32	43
Tm (mean)	°C	-	+5	+5.1	+1.8	+5	+5
Tc (cellar)	°C	-	+8.0	+9.2	+4.2	+7.1	+9
Tw (warmest test package)	°C	-	-17.0	-15.8	-19.0	-18.2	+16.1
ENERGY CONSUMPTION	Kwh/day	-	1.55	2.11	1.09	1.58	2.13

(NEW MODEL)





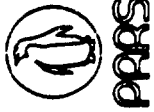
(NEW MODEL)

ISO 8561 (N CLASS)

PAMCO T16

PROTOTYPE NO.	COMPRESSOR	23			24		
		DANFOSS SC12G			DANFOSS SC12G		
CAPACITY (ASHREA)	W	235			235		
Ta (ambient)	°C	18	25	32	18	25	32
Tm (mean)	°C	-	+2.6	+4.5	+1.1	+2.7	+4.4
Tc (cellar)	°C	-	+4.1	+6.2	+2.6	+7.1	+6.0
Tw (warmest test package)	°C	-	-18.3	-17.4	-19.3	-18.5	-17.7
ENERGY CONSUMPTION	Kwh/day	-	2.52	3.1	1.94	2.48	3.12

( 6-7 )



ISO 5155 (N CLASS)

PAMCO F12 A

PROTOTYPE NO.	13			14			15			16		
COMPRESSOR	MATSUSHITA D91C21RAX5			MATSUSHITA D91C21RAX5			MATSUSHITA QA91C20RAX5			DANFOSS FR11G		
CAPACITY (ASHREA) W	227			227			200			235		
Ta (ambient) °C	18	25	32	18	25	32	18	25	32	18	25	32
Tw (warmest test package) °C	-	-18.1	-16.6	-	-18.5	-18.2	-	-18.4	-18.4	-	-18.6	-18.4
ENERGY CONSUMPTION Kwh/day	-	2.6	2.75	-	2.1	2.54	-	2.2	2.55	-	2.3	2.7

ISO 5155 (T CLASS)

PAMCO F12 B

PROTOTYPE NO.	29			30		
COMPRESSOR	MATSUSHITA QA91C20RAX5			MATSUSHITA QA91C20RAX5		
CAPACITY (ASHREA) W	200			200		
Ta (ambient) °C	18	32	43	18	32	43
Tw (warmest test package) °C	-	-18.6	-18.5	-	-18.7	-18.8
ENERGY CONSUMPTION Kwh/day	-	2.15	2.52	-	2.16	2.59

( NEW MODEL )



ISO 5155 (T CLASS)

PAMCO F08 B

PROTOTYPE NO.		25			26		
COMPRESSOR		DANFOSS FR7.5G			MATSUSHITA QA77C18RAX5		
CAPACITY (ASHREA)	W	145			160		
Ta (ambient)	°C	18	32	43	18	32	43
Tw (warmest test package)	°C	-	-18.3	-18.7	-	-18.7	-18.8
ENERGY CONSUMPTION	Kwh/day	-	1.63	2.01	-	1.77	2.08

( NEW MODEL )

ISO 5155 (T CLASS)

PAMCO F10 B

PROTOTYPE NO.		27			28		
COMPRESSOR		MATSUSHITA QA77C18RAX5			MATSUSHITA QA91C20RAX5		
CAPACITY (ASHREA)	W	160			200		
Ta (ambient)	°C	18	32	43	18	32	43
Tw (warmest test package)	°C	-	-18.2	-18.3	-	-18.6	-18.5
ENERGY CONSUMPTION	Kwh/day	-	1.84	2.18	-	2.02	2.36

( NEW MODEL )



## *Conclusion*

- 1- According to ISO the results of temperature and energy consumption test of the prototypes with R134a are the same as those with R12.
- 2- The performance of prototypes of new models is much better and their energy consumption more less than those with current models considering the results of no-load cycling and pulldown test.
- 3- According to ISO new models of freezers stand in T class whereas the current models stand in N class.

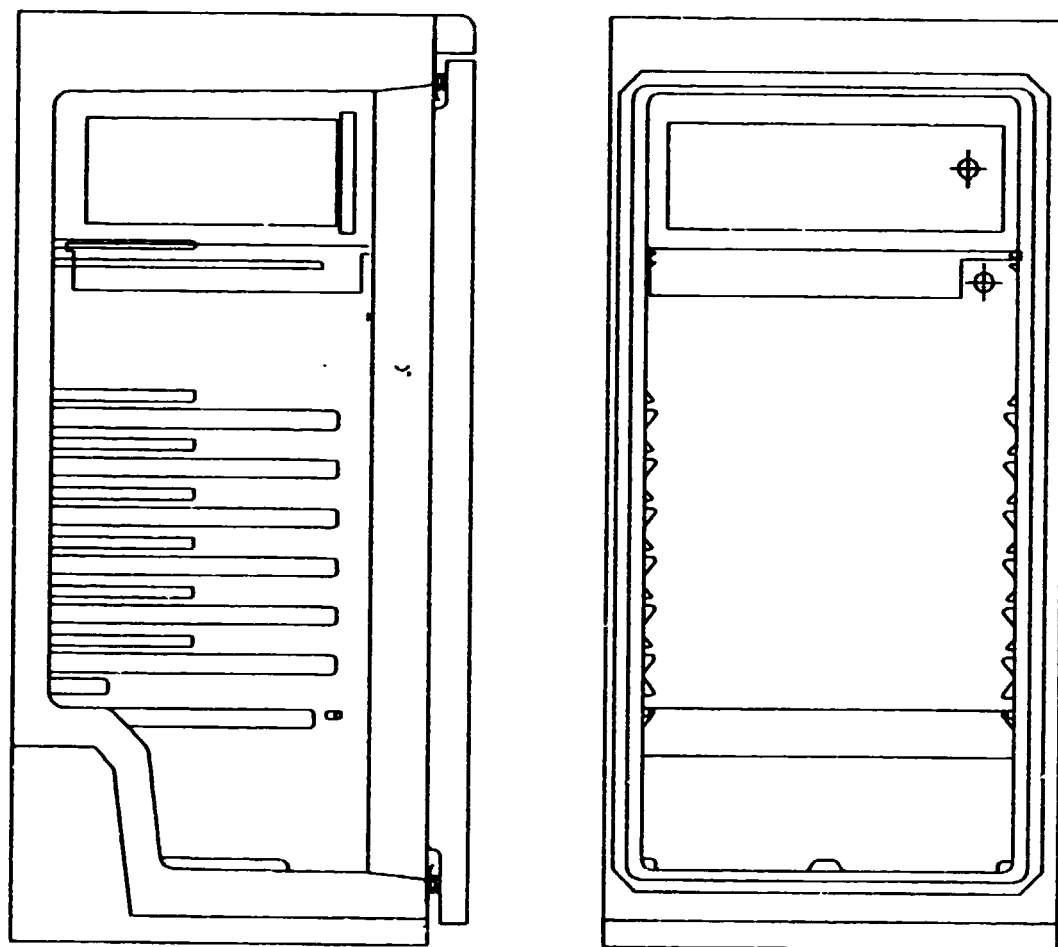
Model : PAMCOR08B (NEW)



Type : Refrigerator with semi automatic defrost PARS

Dimensions : 630 x 1240 x 640

Gross volume : 264 lit



Model : PAMCOR10B (NEW)

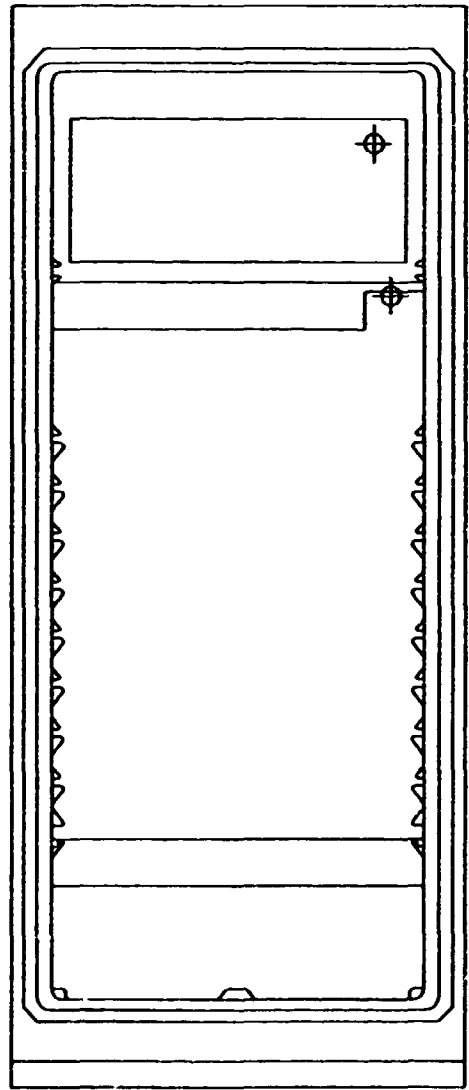
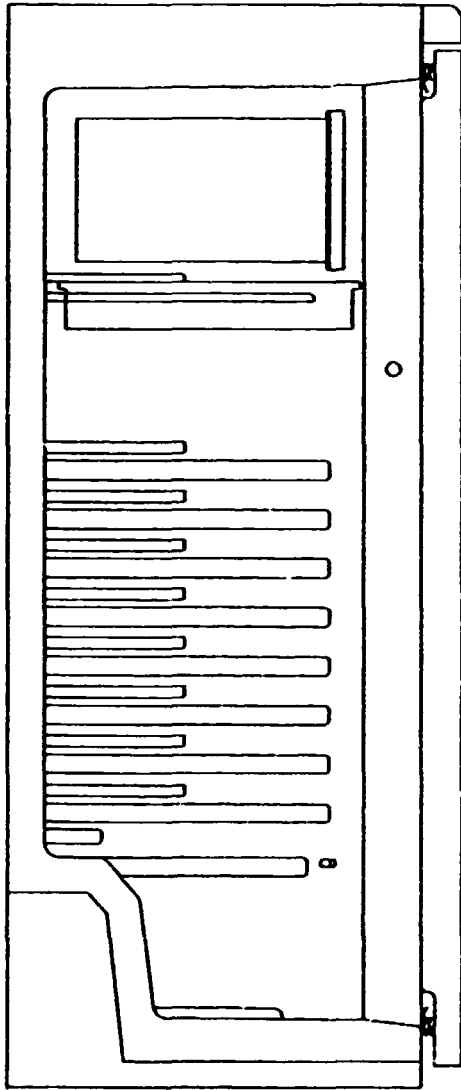


Type : Refrigerator with semi automatic defrost

PPRS

Dimensions : 630 x 1390 x 640

Gross volume : 322 lit



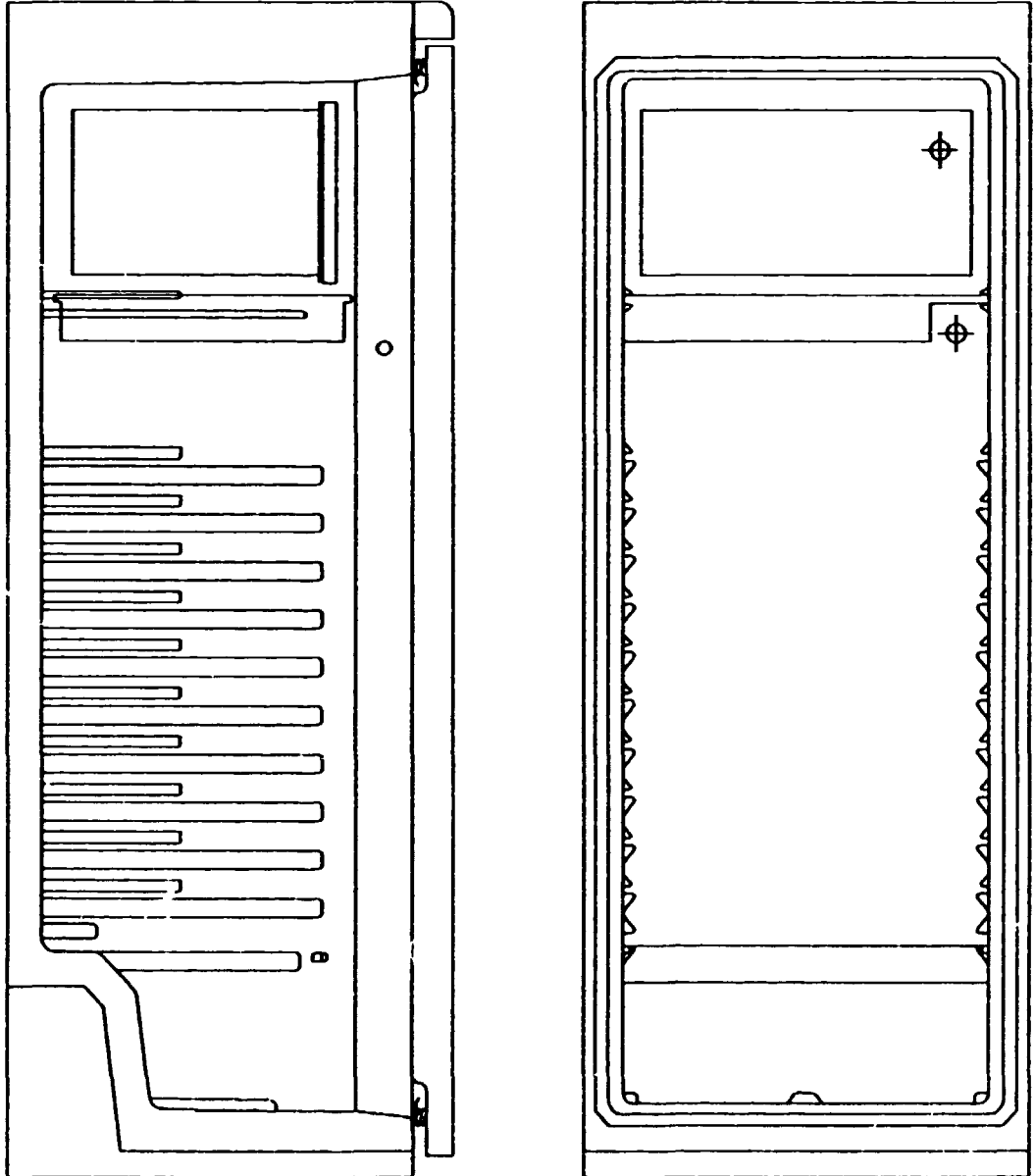
Model : PAMCOR12B (NEW)



Type : Refrigerator with semi automatic defrost PQR

Dimensions : 630 W x 1590 H x 640 D

Gross volume : 361 lit



Model : PAMCOF08B (NEW)

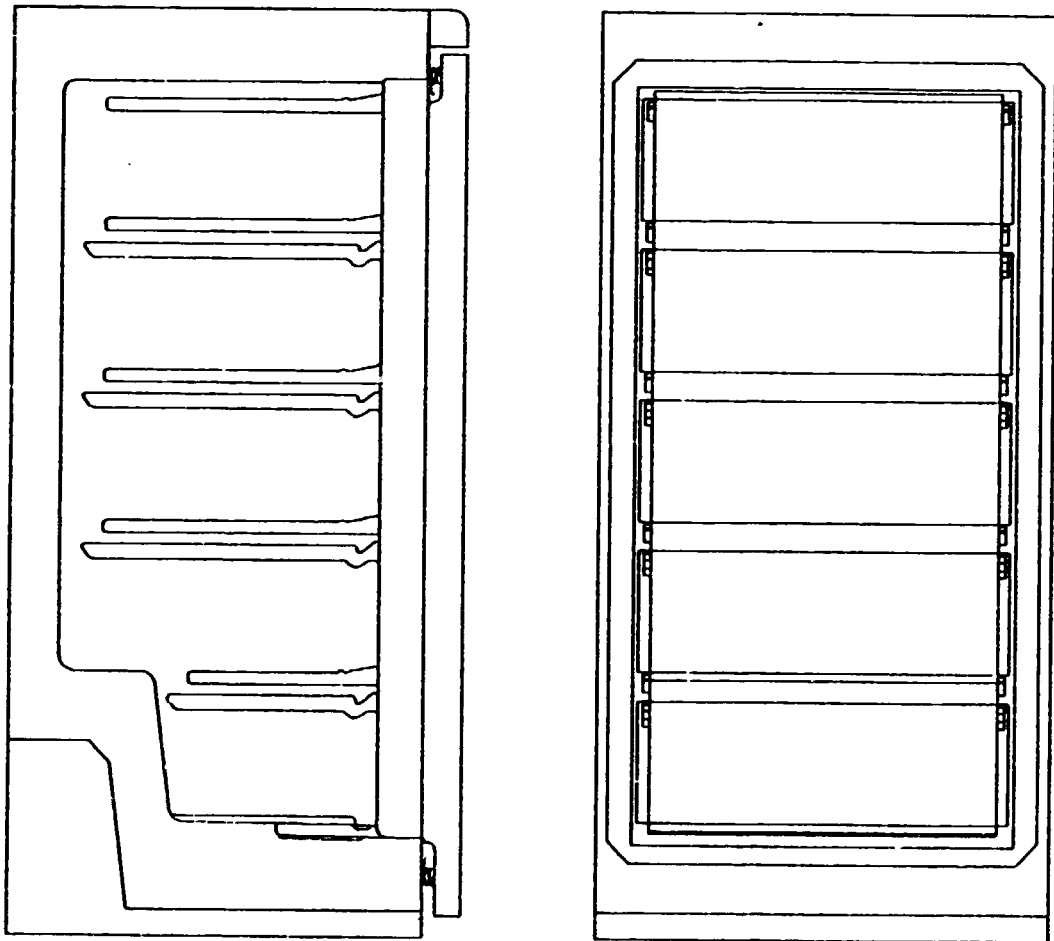


PARS

Type : Upright freezer

Dimensions : 630 x 1240 x 640

Gross volume : 226 lit





Model : PAMCOF10B (NEW)

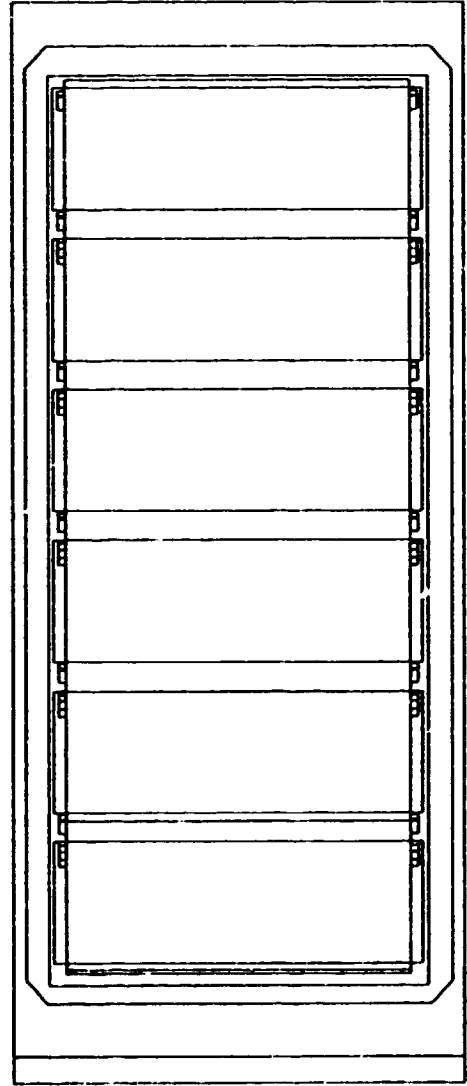
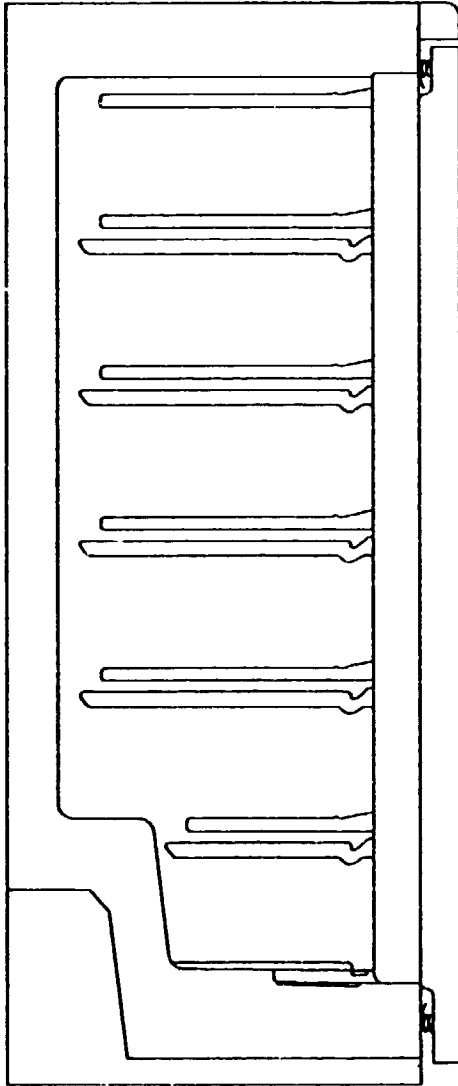


PARS

Type : Upright freezer

Dimensions : 630 x 1390 x 640

Gross volume : 275 lit



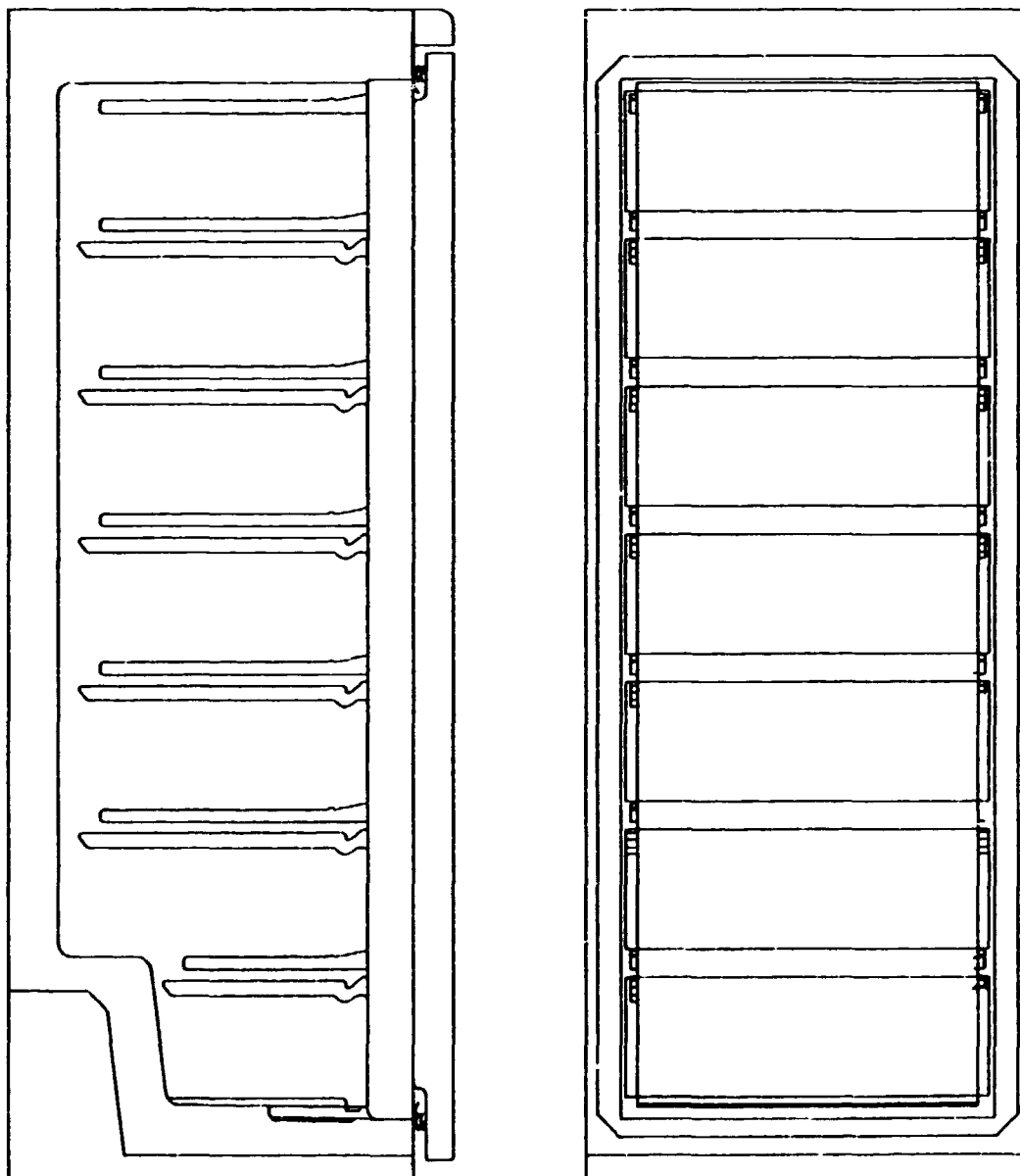
Model : PAMCOF12B (NEW)



Type : Upright freezer

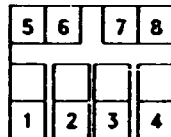
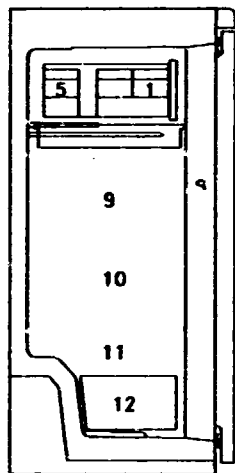
Dimensions : 630 W x 1590 H x 640 D

Gross volume : 324 lit



ISO 7371

TEST SHEET



TYPE	PAMCOR08B
GROSS VOLUME	262
REFRIGERANT	R134a
CHARGE	90 gm.
COMPRESSOR	DANFOSS
	FR6G
CAPACITY	119 W
CAPILLARY TUBE	∅0.71mm x L2.5m
PROTOTYPE NO.	17

TEMPERATURE TEST

CLASSIFICATION	: T
AMBIENT TEMPERATURE	: 43 °c
RELATIVE HUMIDITY	: 58 %
THERMOSTAT SETTING	: 4.5
STAND STILL TIME (Ts)	: - min
RUNNING TIME (Tr)	: - min
RELATIVE SWITCH TIME	: - % = (Trx100)/(Ts+Tr)
RUNNING PERIOD	: - Per day = 24x60/(Ts+Tr)
POWER	: - watt
CURRENT	: - A
VOLTAGE	: 220 V 50 HZ
ENERGY CONSUMPTION	: 1.58 Kwh/day

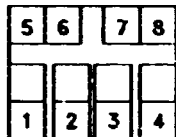
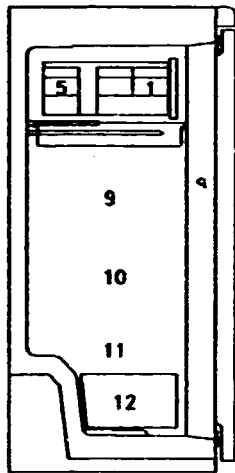
TEMPERATURE	t <sub>1</sub>	t <sub>2</sub>	t <sub>3</sub>	t <sub>4</sub>	t <sub>5</sub>	t <sub>6</sub>	t <sub>7</sub>	t <sub>8</sub>	t <sub>9</sub>	t <sub>10</sub>	t <sub>11</sub>	t <sub>12</sub>	t <sub>13</sub>
	-18.3	-17.9	-18.2	-18.4	-17.3	-17.1	-17.1	-17.4	+4.9	+5.2	+5.5	+8.8	

T <sub>m</sub> = ( T <sub>1</sub> + T <sub>2</sub> + T <sub>3</sub> )/3	: +5.2	fresh food storage compartment
T <sub>c</sub>	: +8.8	celler compartment
T <sub>w</sub>	: -17.9	warmest test package

TESTED BY :

ISO 7371

TEST SHEET



TYPE	PAMCOR08B
GROSS VOLUME	262
REFRIGERANT	R134a
CHARGE	90 grm.
COMPRESSOR	DANFOSS FR6G
CAPACITY	119 W
CAPILLARY TUBE	∅0.71mm x L2.5m
PROTOTYPE NO.	17

ENERGY CONSUMPTION TEST

CLASSIFICATION	: T
AMBIENT TEMPERATURE	: 32 °c
RELATIVE HUMIDITY	: 61 %
THERMOSTAT SETTING	: 4,5
STAND STILL TIME (Ts)	: - min
RUNNING TIME (Tr)	: - min
RELATIVE SWITCH TIME	: - % = (Trx100)/(Ts+Tr)
RUNNING PERIOD	: - Per day = 24x60/(Ts+Tr)
POWER	: - watt
CURRENT	: - A
VOLTAGE	: 220 V 50 HZ
ENERGY CONSUMPTION	: 1.10 Kwh/day

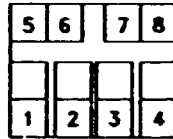
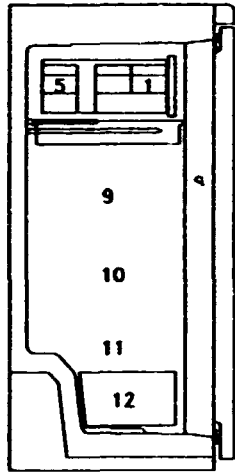
TEMPERATURE	t <sub>1</sub>	t <sub>2</sub>	t <sub>3</sub>	t <sub>4</sub>	t <sub>5</sub>	t <sub>6</sub>	t <sub>7</sub>	t <sub>8</sub>	t <sub>9</sub>	t <sub>10</sub>	t <sub>11</sub>	t <sub>12</sub>	t <sub>13</sub>
	-19.1	-18.3	-18.0	-18.3	-19.0	-18.3	-18.3	-18.8	+4.7	+5.0	+5.2	+8.1	

T <sub>m</sub> = ( T <sub>1</sub> + T <sub>2</sub> + T <sub>3</sub> )/3	: +5	fresh food storage compartment
T <sub>c</sub>	: +8.1	celler compartment
T <sub>w</sub>	: -18.0	warmest test package

TESTED BY :

ISO 7371

TEST SHEET



TYPE	PAMCDR08B
GROSS VOLUME	262
REFRIGERANT	R134a
CHARGE	90 grm.
COMPRESSOR	DANFOSS
	FR6G
CAPACITY	119 W
CAPILLARY TUBE	∅0.71mm x L2.5m
PROTOTYPE NO.	18

TEMPERATURE TEST

CLASSIFICATION	: T
AMBIENT TEMPERATURE	: 18 °c
RELATIVE HUMIDITY	: 57 %
THERMOSTAT SETTING	: 3.8
STAND STILL TIME (Ts)	: - min
RUNNING TIME (Tr)	: - min
RELATIVE SWITCH TIME	: - % = (Trx100)/(Ts+Tr)
RUNNING PERIOD	: - Per day = 24x60/(Ts+Tr)
POWER	: - watt
CURRENT	: - A
VOLTAGE	: 220 V 50 HZ
ENERGY CONSUMPTION	: 0.63 Kwh/day

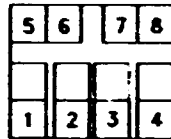
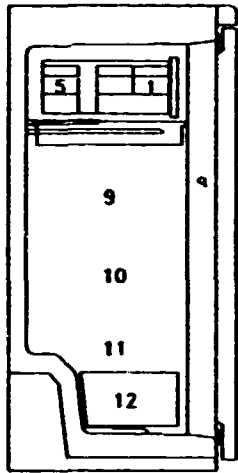
TEMPERATURE	t <sub>1</sub>	t <sub>2</sub>	t <sub>3</sub>	t <sub>4</sub>	t <sub>5</sub>	t <sub>6</sub>	t <sub>7</sub>	t <sub>8</sub>	t <sub>9</sub>	t <sub>10</sub>	t <sub>11</sub>	t <sub>12</sub>	t <sub>13</sub>
	-20.1	-19.7	-19.5	-19.6	-20	-19.7	-19.8	-19.7	+1.7	+1.9	+2.1	+5.1	

T <sub>m</sub> = ( T <sub>1</sub> +T <sub>2</sub> + T <sub>3</sub> )/3	: +1.8	fresh food storage compartment
T <sub>c</sub>	: +5.1	celler compartment
T <sub>w</sub>	: -19.5	warmest test package

TESTED BY :

ISO 7371

TEST SHEET



TYPE	PAMCOR08B
GROSS VOLUME	262
REFRIGERANT	R134a
CHARGE	90 gm.
COMPRESSOR	DANFOSS FR6G
CAPACITY	119 W
CAPILLARY TUBE	∅0.71mm x L2.5m
PROTOTYPE NO.	18

TEMPERATURE TEST

CLASSIFICATION	: T
AMBIENT TEMPERATURE	: 43 °c
RELATIVE HUMIDITY	: 61 %
THERMOSTAT SETTING	: 4.5
STAND STILL TIME (Ts)	: - min
RUNNING TIME (Tr)	: - min
RELATIVE SWITCH TIME	: - % = (Trx100)/(Ts+Tr)
RUNNING PERIOD	: - Per day = 24x60/(Ts+Tr)
POWER	: - watt
CURRENT	: - A
VOLTAGE	: 220 V 50 HZ
ENERGY CONSUMPTION	: 1.55 Kwh/day

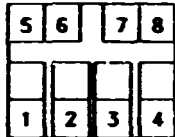
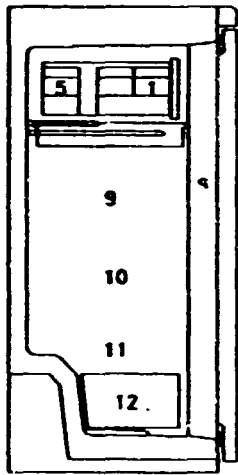
TEMPERATURE	t <sub>1</sub>	t <sub>2</sub>	t <sub>3</sub>	t <sub>4</sub>	t <sub>5</sub>	t <sub>6</sub>	t <sub>7</sub>	t <sub>8</sub>	t <sub>9</sub>	t <sub>10</sub>	t <sub>11</sub>	t <sub>12</sub>	t <sub>13</sub>
	-18.6	-17.7	-18.6	-18.5	-17.3	-17.3	-17.2	-17.3	+4.9	+5	+5.3	+8.8	

T <sub>m</sub> = ( T <sub>1</sub> +T <sub>2</sub> + T <sub>3</sub> )/3	: +5	fresh food storage compartment
T <sub>c</sub>	: +8.8	celler compartment
T <sub>w</sub>	: -17.7	warmest test package

TESTED BY :

ISO 7371

TEST SHEET



TYPE	PAMCOR08B
GROSS VOLUME	262
REFRIGERANT	R134a
CHARGE	90 gm.
COMPRESSOR	DANFOSS FR6G
CAPACITY	119 W
CAPILLARY TUBE	∅0.71mm x L2.5m
PROTOTYPE NO.	18

ENERGY CONSUMPTION TEST

CLASSIFICATION	: T
AMBIENT TEMPERATURE	: 32 °c
RELATIVE HUMIDITY	: 55 %
THERMOSTAT SETTING	: 4,5
STAND STILL TIME (Ts)	: - min
RUNNING TIME (Tr)	: - min
RELATIVE SWITCH TIME	: - % = (Trx100)/(Ts+Tr)
RUNNING PERIOD	: - Per day = 24x60/(Ts+Tr)
POWER	: - watt
CURRENT	: - A
VOLTAGE	: 220 V 50 HZ
ENERGY CONSUMPTION	: 1.08 Kwh/day

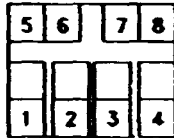
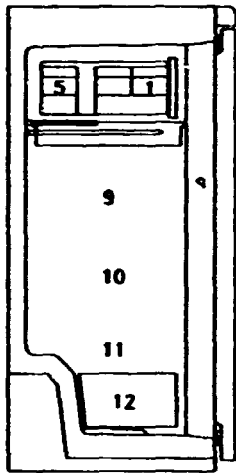
TEMPERATURE	t <sub>1</sub>	t <sub>2</sub>	t <sub>3</sub>	t <sub>4</sub>	t <sub>5</sub>	t <sub>6</sub>	t <sub>7</sub>	t <sub>8</sub>	t <sub>9</sub>	t <sub>10</sub>	t <sub>11</sub>	t <sub>12</sub>	t <sub>13</sub>
	-19.1	-18.3	-18.0	-18.3	-19.0	-18.3	-18.3	-18.8	+4.7	+4.9	+5	+8	

T <sub>m</sub> = ( T <sub>1</sub> +T <sub>2</sub> + T <sub>3</sub> )/3	: +4.9	fresh food storage compartment
T <sub>c</sub>	: +8	celler compartment
T <sub>w</sub>	: -18.1	warmest test package

TESTED BY :

ISO 7371

TEST SHEET



TYPE	PAMCOR10B
GROSS VOLUME	322
REFRIGERANT	R134a
CHARGE	90
COMPRESSOR	DANFOSS FR7.5G
CAPACITY	145
CAPILLARY TUBE	∅0.71mm x L2.4m
PROTOTYPE NO.	19

TEMPERATURE TEST

CLASSIFICATION	: T
AMBIENT TEMPERATURE	: 43 °c
RELATIVE HUMIDITY	: 53 %
THERMOSTAT SETTING	: 4.2
STAND STILL TIME (Ts)	: - min
RUNNING TIME (Tr)	: - min
RELATIVE SWITCH TIME	: - % = (Trx100)/(Ts+Tr)
RUNNING PERIOD	: - Per day = 24x60/(Ts+Tr)
POWER	: - watt
CURRENT	: - A
VOLTAGE	: 220 V 50 HZ
ENERGY CONSUMPTION	: 1.91 Kwh/day

TEMPERATURE	t <sub>1</sub>	t <sub>2</sub>	t <sub>3</sub>	t <sub>4</sub>	t <sub>5</sub>	t <sub>6</sub>	t <sub>7</sub>	t <sub>8</sub>	t <sub>9</sub>	t <sub>10</sub>	t <sub>11</sub>	t <sub>12</sub>	t <sub>13</sub>
	-17.5	-17.0	-17.3	-17.9	-17.8	-17.3	-17.5	-17.7	+4.8	+5.0	+5.4	+8.2	

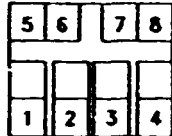
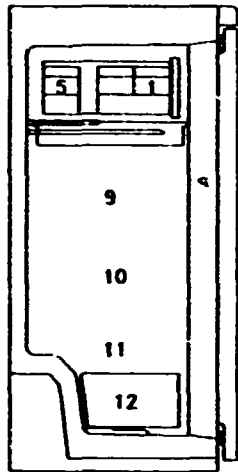
T <sub>m</sub> = ( T <sub>1</sub> + T <sub>2</sub> + T <sub>3</sub> )/3	: +5.1	fresh food storage compartment
T <sub>c</sub>	: +8.2	celler compartment
T <sub>w</sub>	: -17.0	warmest test package

TESTED BY :



ISO 7371

TEST SHEET



TYPE	PAMCOR10B
GROSS VOLUME	322
REFRIGERANT	R134a
CHARGE	90
COMPRESSOR	DANFOSS FR7.5G
CAPACITY	145
CAPILLARY TUBE	∅0.71mm x L2.4m
PROTOTYPE NO.	19

ENERGY CONSUMPTION TEST

CLASSIFICATION	: T
AMBIENT TEMPERATURE	: 32 °c
RELATIVE HUMIDITY	: 60 %
THERMOSTAT SETTING	: 4,1
STAND STILL TIME (Ts)	: - min
RUNNING TIME (Tr)	: - min
RELATIVE SWITCH TIME	: - % = (Trx100)/(Ts+Tr)
RUNNING PERIOD	: - Per day = 24x60/(Ts+Tr)
POWER	: - watt
CURRENT	: - A
VOLTAGE	: 220 V 50 HZ
ENERGY CONSUMPTION	: 1.41 Kwh/day

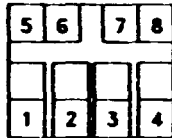
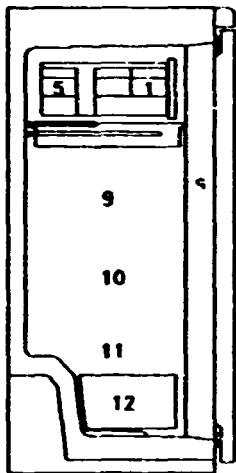
TEMPERATURE	t <sub>1</sub>	t <sub>2</sub>	t <sub>3</sub>	t <sub>4</sub>	t <sub>5</sub>	t <sub>6</sub>	t <sub>7</sub>	t <sub>8</sub>	t <sub>9</sub>	t <sub>10</sub>	t <sub>11</sub>	t <sub>12</sub>	t <sub>13</sub>
	-18.6	-18.2	-18.0	-18.9	-18.8	-18.7	-18.9	-18.9	+4.3	+4.7	+5.1	+7.3	

T <sub>m</sub> = ( T <sub>1</sub> + T <sub>2</sub> + T <sub>3</sub> )/3	: +4.8	fresh food storage compartment
T <sub>c</sub>	: +7.3	celler compartment
T <sub>w</sub>	: -18.0	warmest test package

TESTED BY :

ISO 7371

TEST SHEET



TYPE	PAMCOR10B
GROSS VOLUME	322
REFRIGERANT	R134a
CHARGE	90
COMPRESSOR	DANFOSS
	FR7.5G
CAPACITY	145
CAPILLARY TUBE	∅0.71mm x L2.4m
PROTOTYPE NO.	19

ENERGY CONSUMPTION TEST

CLASSIFICATION	: T
AMBIENT TEMPERATURE	: 32 °c
RELATIVE HUMIDITY	: 60 %
THERMOSTAT SETTING	: 4,1
STAND STILL TIME (Ts)	: - min
RUNNING TIME (Tr)	: - min
RELATIVE SWITCH TIME	: - % = (Trx100)/(Ts+Tr)
RUNNING PERIOD	: - Per day = 24x60/(Ts+Tr)
POWER	: - watt
CURRENT	: - A
VOLTAGE	: 220 V 50 HZ
ENERGY CONSUMPTION	: 1.41 Kwh/day

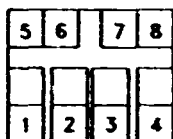
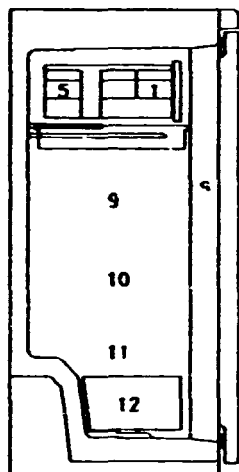
TEMPERATURE	t <sub>1</sub>	t <sub>2</sub>	t <sub>3</sub>	t <sub>4</sub>	t <sub>5</sub>	t <sub>6</sub>	t <sub>7</sub>	t <sub>8</sub>	t <sub>9</sub>	t <sub>10</sub>	t <sub>11</sub>	t <sub>12</sub>	t <sub>13</sub>
	-18.6	-18.2	-18.0	-18.9	-18.8	-18.7	-18.9	-18.9	+4.3	+4.7	+5.1	+7.3	

T <sub>m</sub> = ( T <sub>1</sub> + T <sub>2</sub> + T <sub>3</sub> )/3	: +4.8	fresh food storage compartment
T <sub>c</sub>	: +7.3	celler compartment
T <sub>w</sub>	: -18.0	warmest test package

TESTED BY :

ISO 7371

TEST SHEET



TYPE	PAMCOR10B
GROSS VOLUME	322
REFRIGERANT	R134a
CHARGE	90
COMPRESSOR	DANFOSS FR7.5G
CAPACITY	145
CAPILLARY TUBE	∅0.71mm x L2.4m
PROTOTYPE NO.	20

TEMPERATURE TEST

CLASSIFICATION	: T
AMBIENT TEMPERATURE	: 18 °c
RELATIVE HUMIDITY	: 57 %
THERMOSTAT SETTING	: 3.7
STAND STILL TIME (Ts)	: - min
RUNNING TIME (Tr)	: - min
RELATIVE SWITCH TIME	: - % = (Trx100)/(Ts+Tr)
RUNNING PERIOD	: - Per day = 24x60/(Ts+Tr)
POWER	: - watt
CURRENT	: - A
VOLTAGE	: 220 V 50 HZ
ENERGY CONSUMPTION	: 0.92 Kwh/day

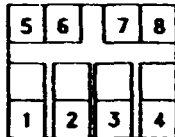
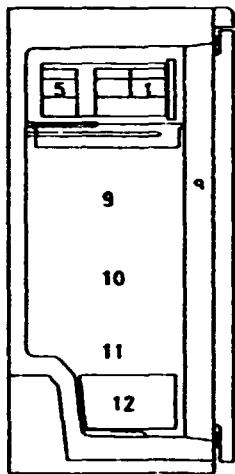
TEMPERATURE	t <sub>1</sub>	t <sub>2</sub>	t <sub>3</sub>	t <sub>4</sub>	t <sub>5</sub>	t <sub>6</sub>	t <sub>7</sub>	t <sub>8</sub>	t <sub>9</sub>	t <sub>10</sub>	t <sub>11</sub>	t <sub>12</sub>	t <sub>13</sub>
	-20.8	-19.9	-20.6	-20.4	-20	-20.1	-20.1	-20	+1.2	+1.9	+2.5	+5.1	

T <sub>m</sub> = ( T <sub>1</sub> + T <sub>2</sub> + T <sub>3</sub> )/3	: +1.8	fresh food storage compartment
T <sub>c</sub>	: +5.1	celler compartment
T <sub>w</sub>	: -19.9	warmest test package

TESTED BY :

ISO 7371

TEST SHEET



TYPE	PAMCOR10B
GROSS VOLUME	322
REFRIGERANT	R134a
CHARGE	90
COMPRESSOR	DANFOSS FR7.5G
CAPACITY	145
CAPILLARY TUBE	∅0.71mm x L2.4m
PROTOTYPE NO.	20

TEMPERATURE TEST

CLASSIFICATION	: T
AMBIENT TEMPERATURE	: 43 °c
RELATIVE HUMIDITY	: 53 %
THERMOSTAT SETTING	: 4.2
STAND STILL TIME (Ts)	: - min
RUNNING TIME (Tr)	: - min
RELATIVE SWITCH TIME	: - % = (Trx100)/(Ts+Tr)
RUNNING PERIOD	: - Per day = 24x60/(Ts+Tr)
POWER	: - watt
CURRENT	: - A
VOLTAGE	: 220 V 50 HZ
ENERGY CONSUMPTION	: 2.11 Kwh/day

TEMPERATURE	t <sub>1</sub>	t <sub>2</sub>	t <sub>3</sub>	t <sub>4</sub>	t <sub>5</sub>	t <sub>6</sub>	t <sub>7</sub>	t <sub>8</sub>	t <sub>9</sub>	t <sub>10</sub>	t <sub>11</sub>	t <sub>12</sub>	t <sub>13</sub>
	-17.7	-17.5	-17.3	-18	-17.8	-17.5	-17.8	-17.8	+4.5	+4.8	+5	+8	

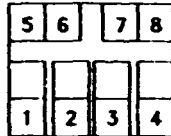
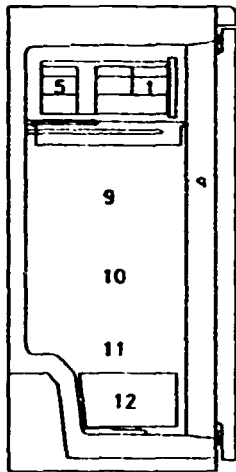
T <sub>m</sub> = ( T <sub>1</sub> +T <sub>2</sub> + T <sub>3</sub> )/3	: +4.6	fresh food storage compartment
T <sub>c</sub>	: +8	celler compartment
T <sub>w</sub>	: -17.3	warmest test package

TESTED BY :



ISO 7371

TEST SHEET



TYPE	PAMCOR12B
GROSS VOLUME	361 Lit.
REFRIGERANT	R134a
CHARGE	170 grm.
COMPRESSOR	DANFOSS FR7.5G
CAPACITY	145 W
CAPILLARY TUBE	∅0.71mm x L2.3m
PROTOTYPE NO.	21

TEMPERATURE TEST

CLASSIFICATION	: T
AMBIENT TEMPERATURE	: 43 °c
RELATIVE HUMIDITY	: 50 %
THERMOSTAT SETTING	: 4,4
STAND STILL TIME (Ts)	: - min
RUNNING TIME (Tr)	: - min
RELATIVE SWITCH TIME	: - % = (Trx100)/(Ts+Tr)
RUNNING PERIOD	: - Per day = 24x60/(Ts+Tr)
POWER	: - watt
CURRENT	: - A
VOLTAGE	: 220 V 50 HZ
ENERGY CONSUMPTION	: 2.1 Kwh/day

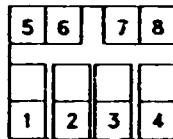
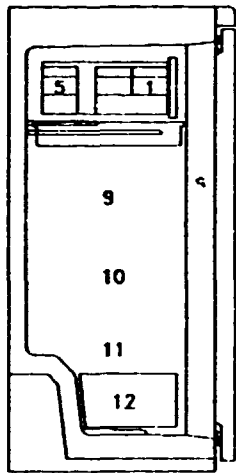
TEMPERATURE	t <sub>1</sub>	t <sub>2</sub>	t <sub>3</sub>	t <sub>4</sub>	t <sub>5</sub>	t <sub>6</sub>	t <sub>7</sub>	t <sub>8</sub>	t <sub>9</sub>	t <sub>10</sub>	t <sub>11</sub>	t <sub>12</sub>	t <sub>13</sub>
	-16.5	-15.9	-15.8	-16.3	-16.4	-16.4	-16.0	-16.0	+4.6	+5.2	+5.4	+9.2	

T <sub>m</sub> = ( T <sub>1</sub> + T <sub>2</sub> + T <sub>3</sub> )/3	: +5.1	fresh food storage compartment
T <sub>c</sub>	: +9.2	celler compartment
T <sub>w</sub>	: -15.8	warmest test package

TESTED BY :

ISO 7371

TEST SHEET



TYPE	PAMCOR12B
GROSS VOLUME	361 Lit.
REFRIGERANT	R134a
CHARGE	170 gm.
COMPRESSOR	DANFOSS FR7.5G
CAPACITY	145 W
CAPILLARY TUBE	∅0.71mm x L2.3m
PROTOTYPE NO.	21

ENERGY CONSUMPTION TEST

CLASSIFICATION	: T
AMBIENT TEMPERATURE	: 32 °c
RELATIVE HUMIDITY	: 61 %
THERMOSTAT SETTING	: 4,5
STAND STILL TIME (Ts)	: - min
RUNNING TIME (Tr)	: - min
RELATIVE SWITCH TIME	: - % = (Trx100)/(Ts+Tr)
RUNNING PERIOD	: - Per day = 24x60/(Ts+Tr)
POWER	: - watt
CURRENT	: - A
VOLTAGE	: 220 V 50 HZ
ENERGY CONSUMPTION	: 1.59 Kwh/day

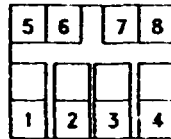
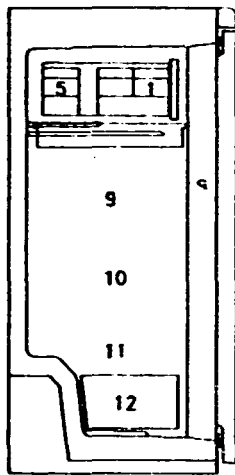
TEMPERATURE	t <sub>1</sub>	t <sub>2</sub>	t <sub>3</sub>	t <sub>4</sub>	t <sub>5</sub>	t <sub>6</sub>	t <sub>7</sub>	t <sub>8</sub>	t <sub>9</sub>	t <sub>10</sub>	t <sub>11</sub>	t <sub>12</sub>	t <sub>13</sub>
	17.7	-17.1	-17.0	-17.6	-17.6	-17.8	-17.3	-17.2	+4.5	+4.9	+5.2	+8.5	

T <sub>m</sub> = ( T <sub>1</sub> +T <sub>2</sub> + T <sub>3</sub> )/3	: +5	fresh food storage compartment
T <sub>c</sub>	: +8.0	celler compartment
T <sub>w</sub>	: -17.0	warmest test package

TESTED BY :

ISO 7371

TEST SHEET



TYPE	PAMCUR12B
GROSS VOLUME	361 Lit.
REFRIGERANT	R134a
CHARGE	170 grm.
COMPRESSOR	DANFOSS
	FR7.5G
CAPACITY	145 W
CAPILLARY TUBE	∅0.71mm x L2.3m
PROTOTYPE NO.	22

TEMPERATURE TEST

CLASSIFICATION	: T
AMBIENT TEMPERATURE	: 18 °c
RELATIVE HUMIDITY	: 60 %
THERMOSTAT SETTING	: 3.8
STAND STILL TIME (Ts)	: - min
RUNNING TIME (Tr)	: - min
RELATIVE SWITCH TIME	: - % = (Trx100)/(Ts+Tr)
RUNNING PERIOD	: - Per day = 24x60/(Ts+Tr)
POWER	: - watt
CURRENT	: - A
VOLTAGE	: 220 V 50 HZ
ENERGY CONSUMPTION	: 1.09 Kwh/dry

TEMPERATURE	t <sub>1</sub>	t <sub>2</sub>	t <sub>3</sub>	t <sub>4</sub>	t <sub>5</sub>	t <sub>6</sub>	t <sub>7</sub>	t <sub>8</sub>	t <sub>9</sub>	t <sub>10</sub>	t <sub>11</sub>	t <sub>12</sub>	t <sub>13</sub>
	-19.5	-19	-19	-19.6	-19.3	-19.4	-19.6	-19.2	+1.2	+1.7	+2.3	+4.2	

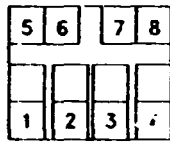
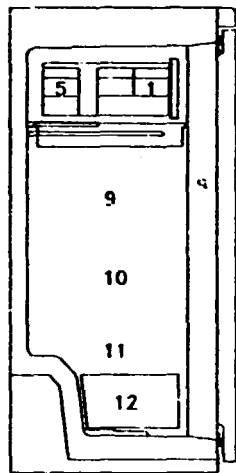
T <sub>m</sub> = ( T <sub>1</sub> +T <sub>2</sub> + T <sub>3</sub> )/3	: +1.8	fresh food storage compartment
T <sub>c</sub>	: +4.2	celler compartment
T <sub>w</sub>	: -19	warmest test package

TESTED BY :



ISO 7371

TEST SHEET



TYPE	PAMCOR12B
GROSS VOLUME	361 Lit.
REFRIGERANT	R134a
CHARGE	170 grm.
COMPRESSOR	DANFOSS
	FR7.5G
CAPACITY	145 W
CAPILLARY TUBE	ø0.71mm x L2.3m
PROTOTYPE NO.	22

TEMPERATURE TEST

CLASSIFICATION	: T
AMBIENT TEMPERATURE	: 43 °c
RELATIVE HUMIDITY	: 48 %
THERMOSTAT SETTING	: 4,4
STAND STILL TIME (Ts)	: - min
RUNNING TIME (Tr)	: - min
RELATIVE SWITCH TIME	: - % = (Trx100)/(Ts+Tr)
RUNNING PERIOD	: - Per day = 24x60/(Ts+Tr)
POWER	: - watt
CURRENT	: - A
VOLTAGE	: 220 V 50 HZ
ENERGY CONSUMPTION	: 2.13 Kwh/day

TEMPERATURE	t <sub>1</sub>	t <sub>2</sub>	t <sub>3</sub>	t <sub>4</sub>	t <sub>5</sub>	t <sub>6</sub>	t <sub>7</sub>	t <sub>8</sub>	t <sub>9</sub>	t <sub>10</sub>	t <sub>11</sub>	t <sub>12</sub>	t <sub>13</sub>
	-16	-16.1	-16.2	-16.3	-16.4	-16.7	-16.5	-16.7	+4.6	+5.2	+5.4	+9	

T <sub>m</sub> = ( T <sub>1</sub> +T <sub>2</sub> + T <sub>3</sub> )/3	: +5	fresh food storage compartment
T <sub>c</sub>	: +9	celler compartment
T <sub>w</sub>	: -16.1	warmest test package

TESTED BY :

ISO 7371

TEST SHEET



	<table border="1"> <tr> <td>5</td><td>6</td><td>7</td><td>8</td> </tr> <tr> <td> </td><td> </td><td> </td><td> </td> </tr> <tr> <td>1</td><td>2</td><td>3</td><td>4</td> </tr> </table>	5	6	7	8					1	2	3	4	TYPE	PAMCOR12B
	5	6	7	8											
	1	2	3	4											
	GROSS VOLUME	361 Lit.													
	REFRIGERANT	R134a													
	CHARGE	170 gm.													
	COMPRESSOR	DANFOSS FR7.5G													
	CAPACITY	145 W													
	CAPILLARY TUBE	ø0.71mm x L2.3m													
PROTOTYPE NO.	22														

ENERGY CONSUMPTION TEST

CLASSIFICATION	: T
AMBIENT TEMPERATURE	: 32 °c
RELATIVE HUMIDITY	: 50 %
THERMOSTAT SETTING	: 4,5
STAND STILL TIME (Ts)	: - min
RUNNING TIME (Tr)	: - min
RELATIVE SWITCH TIME	: - % = (Trx100)/(Ts+Tr)
RUNNING PERIOD	: - Per day = 24x60/(Ts+Tr)
POWER	: - watt
CURRENT	: - A
VOLTAGE	: 220 V 50 HZ
ENERGY CONSUMPTION	: 1.58 Kwh/day

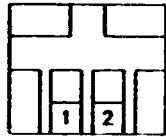
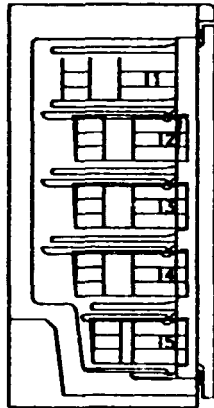
TEMPERATURE	t <sub>1</sub>	t <sub>2</sub>	t <sub>3</sub>	t <sub>4</sub>	t <sub>5</sub>	t <sub>6</sub>	t <sub>7</sub>	t <sub>8</sub>	t <sub>9</sub>	t <sub>10</sub>	t <sub>11</sub>	t <sub>12</sub>	t <sub>13</sub>
	-18.5	-18.2	-18.6	-18.3	-18.8	-18.9	-19	-18.6	+4.5	+4.9	+5.2	+7.1	

T <sub>m</sub> = ( T <sub>1</sub> +T <sub>2</sub> + T <sub>3</sub> )/3	: +5	fresh food storage compartment
T <sub>c</sub>	: +7.1	celler compartment
T <sub>w</sub>	: -18.2	warmest test package

TESTED BY :

ISO 5155

TEST SHEET



TYPE	PAMCOF08B
GROSS VOLUME	226
REFRIGERANT	R134a
CHARGE	125 GR.
COMPRESSOR	DANFOSS
	FR7.5G
CAPACITY	145 W
CAPILLARY TUBE	∅0.71mm x L2.3m
PROTOTYPE NO.	25

TEMPERATURE TEST

CLASSIFICATION	: T
AMBIENT TEMPERATURE	: 43 °c
RELATIVE HUMIDITY	: 50 %
THERMOSTAT SETTING	: 3
STAND STILL TIME (Ts)	: - min
RUNNING TIME (Tr)	: - min
RELATIVE SWITCH TIME	: - % = (Trx100)/(Ts+Tr)
RUNNING PERIOD	: - Per day = 24x60/(Ts+Tr)
POWER	: - watt
CURRENT	: - A
VOLTAGE	: 220 V 50 HZ
ENERGY CONSUMPTION	: 2.01 Kwh/day

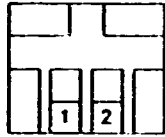
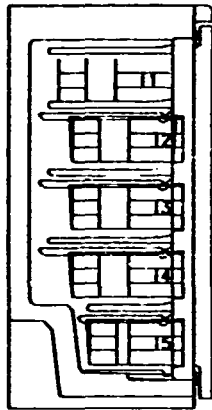
TEMPERATURE	t <sub>1</sub>	t <sub>2</sub>	t <sub>3</sub>	t <sub>4</sub>	t <sub>5</sub>	t <sub>6</sub>	t <sub>7</sub>	t <sub>8</sub>	t <sub>9</sub>	t <sub>10</sub>	t <sub>11</sub>	t <sub>12</sub>	t <sub>13</sub>
	-18.3	-19.4	-19.2	-19.3	-19.0	-18.7							

Tw : -18.7 warmest test package

TESTED BY :

ISO 5155

TEST SHEET



TYPE	PAMCOF08B
GROSS VOLUME	226
REFRIGERANT	R134a
CHARGE	125 GR.
COMPRESSOR	DANFOSS FR7.5G
CAPACITY	145 W
CAPILLARY TUBE	Ø0.71mm x L2.3m
PROTOTYPE NO.	25

ENERGY CONSUMPTION TEST

CLASSIFICATION	: T
AMBIENT TEMPERATURE	: 32 °c
RELATIVE HUMIDITY	: 56 %
THERMOSTAT SETTING	: 2.8
STAND STILL TIME (Ts)	: - min
RUNNING TIME (Tr)	: - min
RELATIVE SWITCH TIME	: - % = (Trx100)/(Ts+Tr)
RUNNING PERIOD	: - Per day = 24x60/(Ts+Tr)
POWER	: - watt
CURRENT	: - A
VOLTAGE	: 220 V 50 HZ
ENERGY CONSUMPTION	: 1.63 Kwh/day

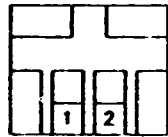
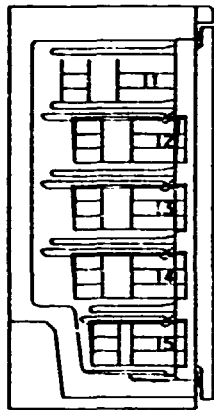
TEMPERATURE	t <sub>1</sub>	t <sub>2</sub>	t <sub>3</sub>	t <sub>4</sub>	t <sub>5</sub>	t <sub>6</sub>	t <sub>7</sub>	t <sub>8</sub>	t <sub>9</sub>	t <sub>10</sub>	t <sub>11</sub>	t <sub>12</sub>	t <sub>13</sub>
	-19.0	-18.7	18.6	18.8	-18.5	-18.3							

T<sub>w</sub> : -18.3 warmest test package

TESTED BY :

ISO 5155

TEST SHEET



TYPE	PAMCOF 08B
GROSS VOLUME	226
REFRIGERANT	R134a
CHARGE	125 GR.
COMPRESSOR	DANFOSS FR7.5G
CAPACITY	145 W
CAPILLARY TUBE	∅0.71mm x L2.3m
PROTOTYPE NO.	26

TEMPERATURE TEST

CLASSIFICATION	: T
AMBIENT TEMPERATURE	: 43 °c
RELATIVE HUMIDITY	: 50 %
THERMOSTAT SETTING	: 3
STAND STILL TIME (Ts)	: - min
RUNNING TIME (Tr)	: - min
RELATIVE SWITCH TIME	: - % = (Trx100)/(Ts+Tr)
RUNNING PERIOD	: - Per day = 24x60/(Ts+Tr)
POWER	: - watt
CURRENT	: - A
VOLTAGE	: 220 V 50 HZ
ENERGY CONSUMPTION	: 2.01 Kwh/day

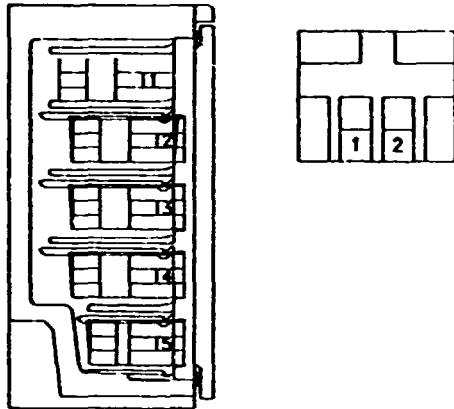
TEMPERATURE	t <sub>1</sub>	t <sub>2</sub>	t <sub>3</sub>	t <sub>4</sub>	t <sub>5</sub>	t <sub>6</sub>	t <sub>7</sub>	t <sub>8</sub>	t <sub>9</sub>	t <sub>10</sub>	t <sub>11</sub>	t <sub>12</sub>	t <sub>13</sub>
	-19.6	-19.5	-19.2	-19.2	-18.8	-18.7							

Tw : -18.7 warmest test package

TESTED BY :

ISO 5155

TEST SHEET



TYPE	PAMCOF 08B
GROSS VOLUME	226
REFRIGERANT	R134a
CHARGE	125 GR.
COMPRESSOR	DANFOSS FR7.5G
CAPACITY	145 W
CAPILLARY TUBE	∅0.71mm x L2.3m
PROTOTYPE NO.	26

ENERGY CONSUMPTION TEST

CLASSIFICATION	: T
AMBIENT TEMPERATURE	: 32 °c
RELATIVE HUMIDITY	: 57 %
THERMOSTAT SETTING	: 2.8
STAND STILL TIME (Ts)	: - min
RUNNING TIME (Tr)	: - min
RELATIVE SWITCH TIME	: - % = (Trx100)/(Ts+Tr)
RUNNING PERIOD	: - Per day = 24x60/(Ts+Tr)
POWER	: - watt
CURRENT	: - A
VOLTAGE	: 220 V 50 HZ
ENERGY CONSUMPTION	: 1.63 Kwh/day

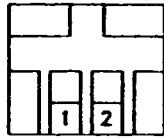
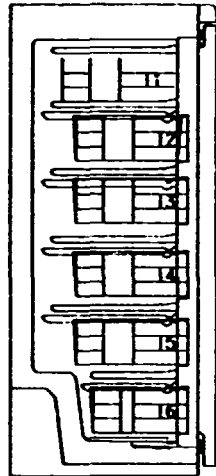
TEMPERATURE	t <sub>1</sub>	t <sub>2</sub>	t <sub>3</sub>	t <sub>4</sub>	t <sub>5</sub>	t <sub>6</sub>	t <sub>7</sub>	t <sub>8</sub>	t <sub>9</sub>	t <sub>10</sub>	t <sub>11</sub>	t <sub>12</sub>	t <sub>13</sub>
	-19.1	-18.7	-18.7	18.8	-18.6	-18.3							

Tw : -18.3 warmest test package

TESTED BY :

ISO 5155

TEST SHEET



TYPE	PAMCOF10B
GROSS VOLUME	275 Lit.
REFRIGERANT	R134a
CHARGE	150 gm.
COMPRESSOR	MATSUSHITA
	QA77C18RAX5
CAPACITY	160 W
CAPILLARY TUBE	∅0.78mm x L3.0m
PROTOTYPE NO.	27

TEMPERATURE TEST

CLASSIFICATION	: T
AMBIENT TEMPERATURE	: 43 °c
RELATIVE HUMIDITY	: 61 %
THERMOSTAT SETTING	: 3
STAND STILL TIME (Ts)	: - min
RUNNING TIME (Tr)	: - min
RELATIVE SWITCH TIME	: - % = (Trx100)/(Ts+Tr)
RUNNING PERIOD	: - Per day = 24x60/(Ts+Tr)
POWER	: - watt
CURRENT	: - A
VOLTAGE	: 220 V 50 HZ
ENERGY CONSUMPTION	: 2.18 Kwh/day

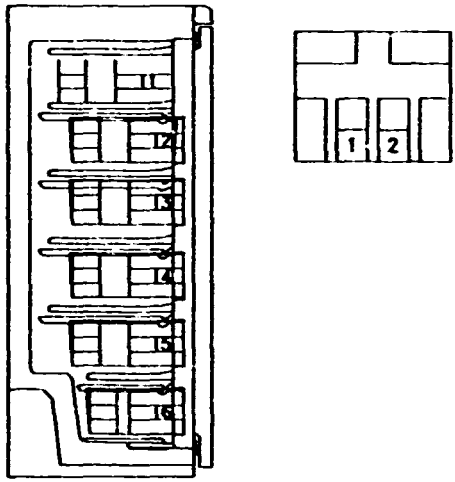
TEMPERATURE	t <sub>1</sub>	t <sub>2</sub>	t <sub>3</sub>	t <sub>4</sub>	t <sub>5</sub>	t <sub>6</sub>	t <sub>7</sub>	t <sub>8</sub>	t <sub>9</sub>	t <sub>10</sub>	t <sub>11</sub>	t <sub>12</sub>	t <sub>13</sub>
	-20	-20	-19.3	-19.1	-18.7	-18.5	-18.3						

Tw : -18.3 warmest test package

TESTED BY :

ISO 5155

TEST SHEET



TYPE	PAMCOF10B
GROSS VOLUME	275 Lit.
REFRIGERANT	R134a
CHARGE	150 grm.
COMPRESSOR	MATSUSHITA
	QA77C18RAX5
CAPACITY	160 W
CAPILLARY TUBE	ø0.78mm x L3.0m
PROTOTYPE NO.	27

ENERGY CONSUMPTION TEST

CLASSIFICATION	: T
AMBIENT TEMPERATURE	: 32 °c
RELATIVE HUMIDITY	: 55 %
THERMOSTAT SETTING	: 2.8
STAND STILL TIME (Ts)	: - min
RUNNING TIME (Tr)	: - min
RELATIVE SWITCH TIME	: - % = (Trx100)/(Ts+Tr)
RUNNING PERIOD	: - Per day = 24x60/(Ts+Tr)
POWER	: - watt
CURRENT	: - A
VOLTAGE	: 220 V 50 HZ
ENERGY CONSUMPTION	: 1.84 Kwh/day

TEMPERATURE	t <sub>1</sub>	t <sub>2</sub>	t <sub>3</sub>	t <sub>4</sub>	t <sub>5</sub>	t <sub>6</sub>	t <sub>7</sub>	t <sub>8</sub>	t <sub>9</sub>	t <sub>10</sub>	t <sub>11</sub>	t <sub>12</sub>	t <sub>13</sub>
	-19.8	-19.0	-19.0	-19.1	-18.5	-18.5	-18.2						

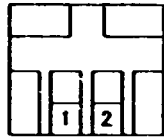
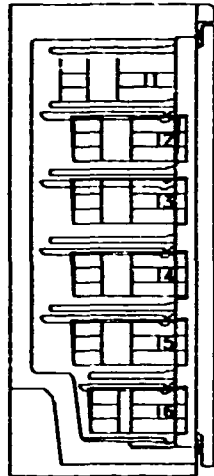
T<sub>w</sub> : -18.2 warmest test package

TESTED BY :



ISO 5155

TEST SHEET



TYPE	PAMCOF10B
GROSS VOLUME	275 Lit.
REFRIGERANT	R134a
CHARGE	150 grm.
COMPRESSOR	MATSUSHITA QA77C18RAX5
CAPACITY	160 W
CAPILLARY TUBE	∅0.78mm x L3.0m
PROTOTYPE NO.	28

TEMPERATURE TEST

CLASSIFICATION	: T
AMBIENT TEMPERATURE	: 43 °c
RELATIVE HUMIDITY	: 61 %
THERMOSTAT SETTING	: 3
STAND STILL TIME (Ts)	: - min
RUNNING TIME (Tr)	: - min
RELATIVE SWITCH TIME	: - % = (Trx100)/(Ts+Tr)
RUNNING PERIOD	: - Per day = 24x60/(Ts+Tr)
POWER	: - watt
CURRENT	: - A
VOLTAGE	: 220 V 50 HZ
ENERGY CONSUMPTION	: 2.36 Kwh/day

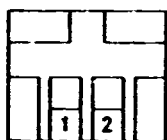
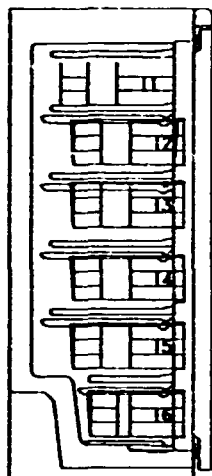
TEMPERATURE	t <sub>1</sub>	t <sub>2</sub>	t <sub>3</sub>	t <sub>4</sub>	t <sub>5</sub>	t <sub>6</sub>	t <sub>7</sub>	t <sub>8</sub>	t <sub>9</sub>	t <sub>10</sub>	t <sub>11</sub>	t <sub>12</sub>	t <sub>13</sub>
	-20	-19.7	-19.6	-19.6	-18.8	-18.7	-18.5						

T<sub>w</sub> : -18.5 warmest test package

TESTED BY :

ISO 5155

TEST SHEET



TYPE	PAMCOF10B
GROSS VOLUME	275 Lit.
REFRIGERANT	R134a
CHARGE	150 gm.
COMPRESSOR	MATSUSHITA QA77C18RAX5
CAPACITY	160 W
CAPILLARY TUBE	Ø0.78mm x L3.0m
PROTOTYPE NO.	28

ENERGY CONSUMPTION TEST

CLASSIFICATION	: f
AMBIENT TEMPERATURE	: 32 °c
RELATIVE HUMIDITY	: 55 %
THERMOSTAT SETTING	: 2.8
STAND STILL TIME (Ts)	: - min
RUNNING TIME (Tr)	: - min
RELATIVE SWITCH TIME	: - % = (Trx100)/(Ts+Tr)
RUNNING PERIOD	: - Per day = 24x60/(Ts+Tr)
POWER	: - watt
CURRENT	: - A
VOLTAGE	: 220 V 50 HZ
ENERGY CONSUMPTION	: 2.02 Kwh/day

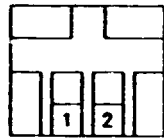
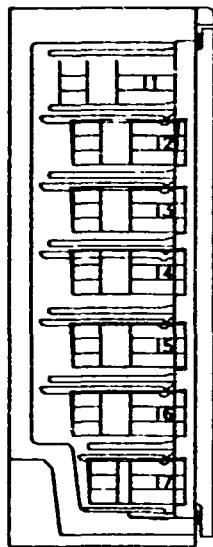
TEMPERATURE	t <sub>1</sub>	t <sub>2</sub>	t <sub>3</sub>	t <sub>4</sub>	t <sub>5</sub>	t <sub>6</sub>	t <sub>7</sub>	t <sub>8</sub>	t <sub>9</sub>	t <sub>10</sub>	t <sub>11</sub>	t <sub>12</sub>	t <sub>13</sub>
	-20	-20	-19.5	-19.5	-19	-18.9	-18.8						

T<sub>w</sub> : -18.8 warmest test package

TESTED BY :

ISO 5155

TEST SHEET



TYPE	PAMCOF12B
GROSS VOLUME	324 Lit.
REFRIGERANT	R134a
CHARGE	170 gm.
COMPRESSOR	MATSUSHITA QA91C20RAX5
CAPACITY	200 W
CAPILLARY TUBE	∅0.78mm x L3.0m
PROTOTYPE NO.	29

TEMPERATURE TEST

CLASSIFICATION	: T
AMBIENT TEMPERATURE	: 43 °c
RELATIVE HUMIDITY	: 52 %
THERMOSTAT SETTING	: 3
STAND STILL TIME (Ts)	: - min
RUNNING TIME (Tr)	: - min
RELATIVE SWITCH TIME	: - % = $(Tr \times 100) / (Ts + Tr)$
RUNNING PERIOD	: - Per day = $24 \times 60 / (Ts + Tr)$
POWER	: - watt
CURRENT	: - A
VOLTAGE	: 220 V 50 HZ
ENERGY CONSUMPTION	: 2.52 Kwh/day

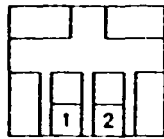
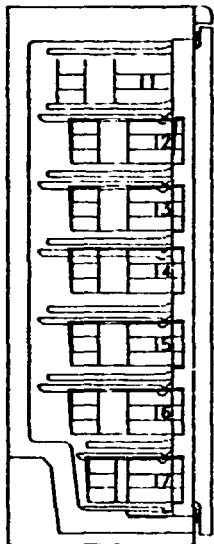
TEMPERATURE	t <sub>1</sub>	t <sub>2</sub>	t <sub>3</sub>	t <sub>4</sub>	t <sub>5</sub>	t <sub>6</sub>	t <sub>7</sub>	t <sub>8</sub>	t <sub>9</sub>	t <sub>10</sub>	t <sub>11</sub>	t <sub>12</sub>	t <sub>13</sub>
	-20.1	-20.0	-19.7	-19.6	-19.0	-18.8	-18.6	-18.5					

T <sub>w</sub>	: -18.5	warmest test package:
----------------	---------	-----------------------

TESTED BY :

ISO 5155

TEST SHEET



TYPE	PAMCDF12B
GROSS VOLUME	324 Lit.
REFRIGERANT	R134a
CHARGE	170 grm.
COMPRESSOR	MATSUSHITA
	QA9IC20RAX5
CAPACITY	200 W
CAPILLARY TUBE	∅0.78mm x L3.0m
PROTOTYPE NO.	29

ENERGY CONSUMPTION TEST

CLASSIFICATION	: T
AMBIENT TEMPERATURE	: 32 °c
RELATIVE HUMIDITY	: 59 %
THERMOSTAT SETTING	: 2.8
STAND STILL TIME (Ts)	: - min
RUNNING TIME (Tr)	: - min
RELATIVE SWITCH TIME	: - % = (Trx100)/(Ts+Tr)
RUNNING PERIOD	: - Per day = 24x60/(Ts+Tr)
POWER	: - watt
CURRENT	: - A
VOLTAGE	: 220 V 50 HZ
ENERGY CONSUMPTION	: 2.15 Kwh/day

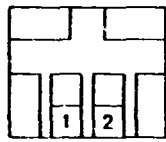
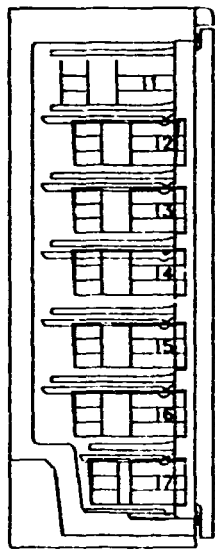
TEMPERATURE	t <sub>1</sub>	t <sub>2</sub>	t <sub>3</sub>	t <sub>4</sub>	t <sub>5</sub>	t <sub>6</sub>	t <sub>7</sub>	t <sub>8</sub>	t <sub>9</sub>	t <sub>10</sub>	t <sub>11</sub>	t <sub>12</sub>	t <sub>13</sub>
	-20.5	-20.4	-19.7	-19.8	-19.5	-19.0	-18.7	-18.6					

Tw : -18.6 warmest test package

TESTED BY :

ISO 5155

TEST SHEET



TYPE	PAMCOF12B
GROSS VOLUME	324 Lit.
REFRIGERANT	R134a
CHARGE	170 gm.
COMPRESSOR	MATSUSHITA
	QA91C20RAX5
CAPACITY	200 W
CAPILLARY TUBE	∅0.78mm x L3.0m
PROTOTYPE NO.	30

TEMPERATURE TEST

CLASSIFICATION	: T
AMBIENT TEMPERATURE	: 43 °c
RELATIVE HUMIDITY	: 55 %
THERMOSTAT SETTING	: 3
STAND STILL TIME (Ts)	: - min
RUNNING TIME (Tr)	: - min
RELATIVE SWITCH TIME	: - % = (Trx100)/(Ts+Tr)
RUNNING PERIOD	: - Per day = 24x60/(Ts+Tr)
POWER	: - watt
CURRENT	: - A
VOLTAGE	: 220 V 50 HZ
ENERGY CONSUMPTION	: 2.59 Kwh/day

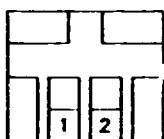
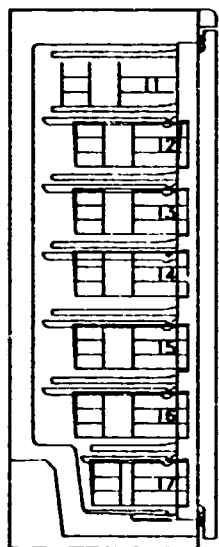
TEMPERATURE	t <sub>1</sub>	t <sub>2</sub>	t <sub>3</sub>	t <sub>4</sub>	t <sub>5</sub>	t <sub>6</sub>	t <sub>7</sub>	t <sub>8</sub>	t <sub>9</sub>	t <sub>10</sub>	t <sub>11</sub>	t <sub>12</sub>	t <sub>13</sub>
	-20.6	-20.4	-19.7	-19.6	-19.2	-19.2	-19	-18.8					

T<sub>w</sub> : -18.8 warmest test package

TESTED BY :

ISO 5155

TEST SHEET



TYPE	PAMCOF12B
GROSS VOLUME	324 Lit.
REFRIGERANT	R134a
CHARGE	170 grm.
COMPRESSOR	MATSUSHITA QA91C20RAX5
CAPACITY	200 W
CAPILLARY TUBE	ø0.78mm x L3.0m
PROTOTYPE NO.	30

ENERGY CONSUMPTION TEST

CLASSIFICATION	: T
AMBIENT TEMPERATURE	: 32 °c
RELATIVE HUMIDITY	: 52 %
THERMOSTAT SETTING	: 2.8
STAND STILL TIME (Ts)	: - min
RUNNING TIME (Tr)	: - min
RELATIVE SWITCH TIME	: - % = (Trx100)/(Ts+Tr)
RUNNING PERIOD	: - Per day = 24x60/(Ts+Tr)
POWER	: - watt
CURRENT	: - A
VOLTAGE	: 220 V 50 HZ
ENERGY CONSUMPTION	: 2.16 Kwh/day

TEMPERATURE	t <sub>1</sub>	t <sub>2</sub>	t <sub>3</sub>	t <sub>4</sub>	t <sub>5</sub>	t <sub>6</sub>	t <sub>7</sub>	t <sub>8</sub>	t <sub>9</sub>	t <sub>10</sub>	t <sub>11</sub>	t <sub>12</sub>	t <sub>13</sub>
	-20.6	-20.5	-20	-20	-19.5	-19.0	-18.9	-18.7					

T<sub>w</sub> : -18.7 warmest test package

TESTED BY :