



**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)

## Final Report for Contract No 02/059 (02/060)

**Subject:** MP/BRA/01/169 and MP/BRA/01/077 – Execution of Several Projects and the Identification of New Enterprises in the Commercial Refrigeration Sector – Contract No. 02/059 (02/060)

### Status of UNIDO projects, December 2002

Company name	Activity, Production of...	Project No MP/BRA/...	Comments
<b>Projects to be concluded</b>			
Sector	Flex+skin PU	00/106	Visit on 06/11/02 with Mr Demko. All data/signatures for PCR were obtained.
Domnick	Com. Refrig	00/127	All companies except Klima were visited by Mr Rocha, who testified destruction of base line equipment Klima visited by Mr Almén and base line equip. scrapped on 11-12/09/02. Kalten: see comments below table. Data for PCR for all companies is being transferred to Vienna.
Ingecold	Com. Refrig	00/128	
Kalten	Com. Refrig	00/123	
Klima	Com. Refrig	00/126	
Metalplan	Com. Refrig	00/124	
Tecnigel	Domest. Refrig	00/130	
<b>Projects approved at 34<sup>th</sup> ExCom, now in execution</b>			
Danica	Rigid PU foam	01/162	Krauss-Maffei equipment arrived on 22/11/02. Visit to Danica on 16/12, see report in e-mail of 16/12 to Mr Demko.
Croydon	Domest. refrig	01/168	Tel. contact 13/12: equipment functioning well, everybody happy. Letter of thanks and report on scrapping will be made.
EZ Industria	Domest. refrig	same	Quotation of 04/11 US\$ 15 868 received. Equipment ordered and will be installed end of December, with PU dispenser etc
Menoncin	Com. refrig	same	All equipment delivered and functioning, but PU dispenser not yet commissioned. US\$11 890, received 16/12. Corresp equipment will be ordered in Jan/03
Unifrio	Com. refrig	same	All equipment delivered, but installation and commissioning only in new plant in Jan/03. US\$ 13 600 received on 28/11. Equip is being ordered for the new plant.
<b>Projects approved at 35<sup>th</sup> ExCom, now in execution</b>			
Argi	Refr road vehic	01/217	All equipment delivered and functioning, but PU dispenser not yet commissioned. There is 3 700 left on budget. Invited suggestions for application on 16/12.
Hornburg	Refr road vehic	same	All equipment delivered and functioning, but PU dispenser not yet commissioned. They have US\$ 15 000 for extra installations as they were informed on 15/10. No suggestions so far. Reminder

**Kalten** paid their debt (about US\$ 10 000) to Gramkow around 1/12/02. Work on new plant is still slow, no prevision for conclusion. I broached the subject on 7/11 with Milan and Fernando in Brasilia and anew on 12/12 on the phone with Fernando. Told him I shall suggest UNIDO to close the project. He would talk with Kalten and give me a position by e-mail (not yet received).

### Missions during 2002

Data	With	To	Remarks
June 2- 7	Mr Grof	Argi, Hornburg, Danica in Joinville	
	Mr Grof	Domnick, EZ, Ingecold, Kalten, Metalplan, Tecnigel in São Paulo	With Mr Pedro Rocha
	Mr Grof	PROZON and UNDP in Brasilia	With Mrs Chaves
Sept 10-11		Klima, Venancio Aires	
Sept 18-19		Sector, Belo Horizonte	
Oct 29		EZ, São Carlos	With Mr Rocha
Oct 30		Kalten, Boituva	With Mr Rocha
Nov 4-7	Mr Demko	Danica, Joinville	
	Mr Demko	Sector, Belo horizonte	
	Mr Demko	PROZON, Brasilia	With Mrs Chaves

### Attachments

Memo: Visit to Klima on 11-12 Sept 2002. (two pages)

Memo: Visit to Kalten on 30 Oct 2002 (two pages)

Joinville, 17.12.2002  
for CGA Consulting Ltda



Carl G Almén

## Visit to Klima Refrigeracao Ltda on 11-12 Sept 2002

Project No MP/BRA/00/126

Objective of the visit was to collect data for the project conclusion report. I met with Erni Kunkel, CEO and proprietor and Mr Clerio Arlindo da Costa new share holder since February 2002.

Up to January 2002 the company had operated in a rented building, with approx. 1200 sqm area. Now they are in a building of their own with 2700 sqm, newly renovated and with a good lay out, in Venancio Aires. Address: Rua Julio de Castilho 1681, ZIP: 95 800-000 Venancio Aires – RS, Brazil

They also have a new bigger show room, well situated at the centre of the town.

The equipment, we had supplied, was in place and operating: The Cannon 60 kg/min PU dispenser, the Edwards vacuum pump, the Milanotechnica charging board and leak detector. The vacuum pump had had a problem with the electric motor, but this had been fixed.

### Scrapping of base line equipment

The following base line equipment according to the PD is to be scrapped

Description	Quantity	Type, design, capacity	Year of commissioning
L.P Dispenser	1	Transtecnica T-15/2P	1995
Charging board	1	Stag (Spain) STC-2-C	1995

**The CFC-12 charging board** was transferred to the service department.

**The PU dispenser** was scrapped as follows:

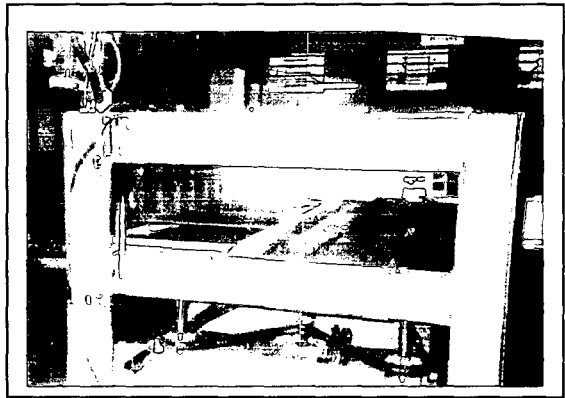
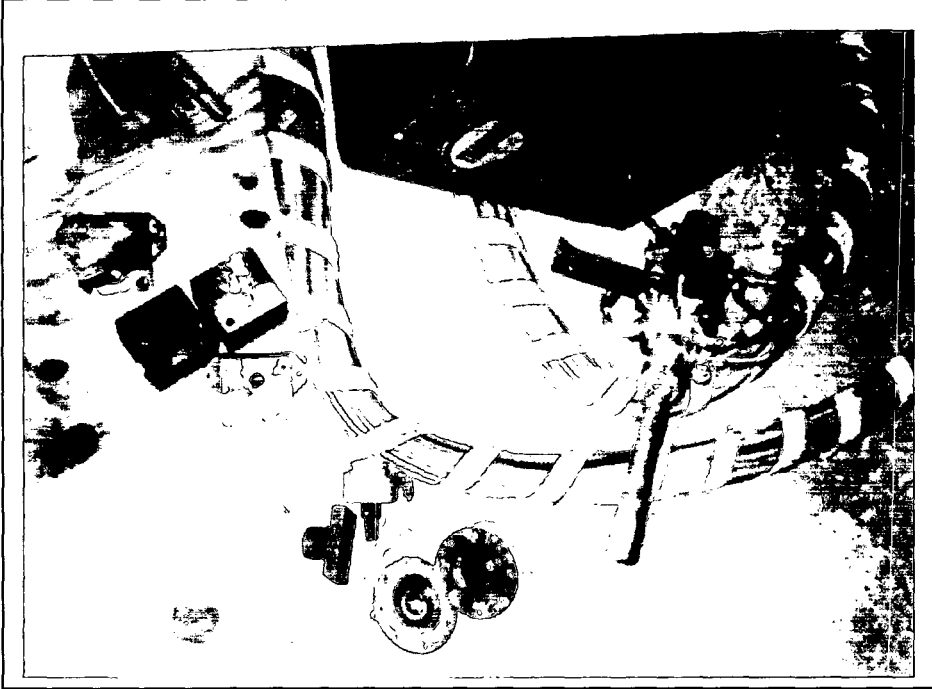
Two metering pumps: disassemble and cut through with a cutting disc

Mixing head: hoses cut and head scrapped.

On the next page are shown:

- Photo 1. Rear part of dispenser after disassembly of the feed pumps.
- Photo 2. Center: mixing head cut off from hoses, Upp left corner: cut hoses, Centerleft: the two feed pumps cut through
- Photo 3. Mr Kunkel (owner) with HFC 134a bottles.
- Photo 4. Locally manufactured press 2 x 3 m with heated surfaces (hot water coils) for the foaming moulds

This report was sent by e-mail to Mr Grof on 25/09/02



## Visit to Kalten on 30/10 2002

Project MP/BRA/01/168

I visited Kalten with Pedro Rocha. We met with Paulo Carvalho (owner) and Gustavo Carvalho (junior partner).

### Old (present) plant

The present plant is about 800 m<sup>2</sup>. Present production is 120 units per month. In the plant we noted about 12 units being assembled. They do not use CFC any more. The PU slabs between the hot and cold side of the units are foamed with HCFC-141b by an outside company. The cooling units for low evaporator temperature are with R-404a and the units for medium temp with R-22. Compressors are chiefly Copeland hermetics or Bitzer semihermetics.

Paulo complained about the lack of space in the plant. They had not put the Cannon 60 kg/min machine in operation or the Saratronic or the hydrogen leak tester, due to space problems. Also he showed, that the metalworking shop was so crammed that one man had to work in the back yard (whether permitting!). But in the new plant all would be well, and so we went there to have a look (about 500 m away).

### The new plant

The new plant is impressive from an architectural point of view. You see it from afar, fairly low and wide and with a facade of trapezoidally corrugated steel in the horizontal, which optically stretches the building still more. The area is 2600 m<sup>2</sup> (three times the old plant) arranged in the form of an "L". In the elbow of the "L" is the office complex, two storied and with an area of 2 x 150 m<sup>2</sup>. The office complex is high standard, noble woods, suspended ceilings with recessed light fixtures etc. The facade is being covered with polished black granite set in holders of stainless steel.

The building is not finished, and first priority is a concrete floor in the production area, then sanitary installations, electric installations, water well and water tower etc. About 6 men were working on the plant. "Are they from a construction company?" – "No it is our own people, cheaper that way." – "When will the construction work be finished" – "In about two months time".

Pedro had visited them in January and now, 9 months later the construction was very much as he remembered, i.e. nothing much had happened in the meantime. This is principally due to lack of investment in the enterprise, they keep ½ dozen men working there to be able to say that work is in progress. We asked for numbers:

How much was invested up to now? – About 1,5 millions R\$ or 400 000 US\$

How much is still needed? – About 400 000 or 100 000 US\$

Have you bank financing? – No, to depend on the banks breaks any company

How did you finance the building initially? – Selling assets (apartments).

You cannot well finance the building from the cash flow, have you other asset? – Well, buildings in Manaus (Amazonas, the company was founded there), we are trying to sell them but it takes time to find a buyer who pays what they are worth.

## **Gramkow**

How about the pressurising unit of the hydrogen leak testing from Gramkow? We paid you US\$ 14 500 in August, the idea was that you use that money to pay Gramkow. "Well the money entered on our account, but the unit was only delivered a few weeks later and it also took a few weeks for Fernando (sales manager, Gramkow) to bill us. And you know how it is, every day there are bills to be paid, so when the invoice came, there was no money left ..." – "When will you pay then?" – "There is a big project in Itajai, Santa Catarina for Becker Acatadista Ltda which will be financed by BADESC (development bank of the state) When the financing is paid out we are in for R\$ 100 000 and then we shall pay Fernando".

"And in the last case, we could send the unit back to Fernando!" [This is a clear break of contract and Fernando could sue them, but with Justice inoperating as it is in Brazil, they could get away with it, at least for a couple of years]

On 01.11, I talked with Fabiano of Becker, tel 344 2182 in Itajaí. He assured me that the financing had been conceded and would be paid out in a couple of days.

## **The project**

"This project is one of six, approved in the year of 2000", I said, "all the others are finished, the finishing reports are ready, only you hold us up, have you any prevision for when you will enter the new plant? – "Well we think in March next year we shall be working in the new plant" – "You said so a year ago, nothing much happened in the meantime" – "Well..."

"Another question, is there any risk that you might go broke in the meantime?" First Paulo Carvalho made as "how can you have such a preposterous idea" but we explained that this was not so farfetched, Pedro mentioned two companies that had broke recently. Then "I can assure you that this will not happen with Kalten, we have no debts with the banks and the business runs well."

## **The PU dispenser(s)**

You have two uses for PU: (1) the slabs between hot and cold in the cooling units and (2) the semi-rigid cushioning of the boxes. Do you intend to use the Cannon machine for both? – No, for the latter we shall use an Olin type unit from Arch. – Is it not rather much, the Cannon just for 120 slabs a month? – No we have plans to make also a freezing unit for foodstuffs that will need thermal insulation. – I imagined you were planning to make also PU panels, to be able to offer complete cold stores. – No there we have various big companies, like Danica. It is difficult for us to compete with those.