

PAGE 1 OF 2
DATE: 12-04-1997
REVISION:A
W.O. NO: 64745
CUSTOMER: IRCON GMBH
LOCATION: GERMANY

INFRARAIL SPECIAL NUMBER R716

PURPOSE AND DESCRIPTION:

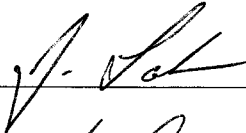
CUSTOMER REQUIRES A INFRARAIL TEMPERATURE SYSTEM WITH A STANDARD TEMPERATURE RANGE AND SPECIAL OPTICAL RESOLUTION TO BE INSTALLED AS PART OF A CONTINUOUS CASTER PYROMETER AS FOLLOWS :

MODEL: DNE99-16C
RANGE: 900 - 1600 DEG. C (STANDARD RANGE)
OPTICAL RESOLUTION: D/100
SPECIAL FIXED FOCUS AT 50" (STANDARD FOCUS 30")
WAVELENGTH: 0.7 - 1.0 um

GENERALITY OF APPLICATION AND RESTRICTIONS:

UNRESTRICTED: SUITABLE FOR USE WITH ALL STANDARD OPTIONS.

WRITTEN BY: _____



APPROVED BY: _____



DATE: _____

12-04-97

INFRARAIL SPECIAL NUMBER R716

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PRODUCTION INSTRUCTIONS:

BUILD A STANDARD MODEL DNE31-16C ELECTRONICS MODULE.
SECURE THE SPECIAL STAINLESS STEEL SENSING HEAD FROM ENGINEERING.
INSTALL SPECIAL LENS EX-4006 INPLACE OF STANDARD LENS. SECURE THIS LENS FROM
THE ENGINEERING DEPARTMENT.
DELIVER THE HIGH TEMP CABLE TO ENGINEERING FOR INSTALLATION OF THE WATERPROOF
LEMO CONNECTOR TO THE CABLE.

CALIBRATION INSTRUCTIONS:

CALIBRATE AS PER STANDARD BUT NOTE THE CHANGE IN FOCAL DISTANCE OF 50 INCHES. WHEN
FINISHED, CALL ENGINEERING TO ASSIST IN ASSEMBLING THE SENSOR INTO THE CC1000 SIGHT TUBE.

MANUAL INSTRUCTIONS:

GENERIC INFRARAIL SERIES MANUAL.

Introducing

CC1000

Continuous Caster Pyrometer

DESCRIPTION

The CC1000 is designed to measure steel temperature inside the spray chamber of a continuous caster. The instrument consists of an adjustable mounting bracket, stainless steel housing, sensing head, and indicator.

The housing is a rugged stainless steel housing complete with integral quick disconnects for the signal cable and the air purge. The front of the housing is designed so that different length tubes can be easily interchanged.

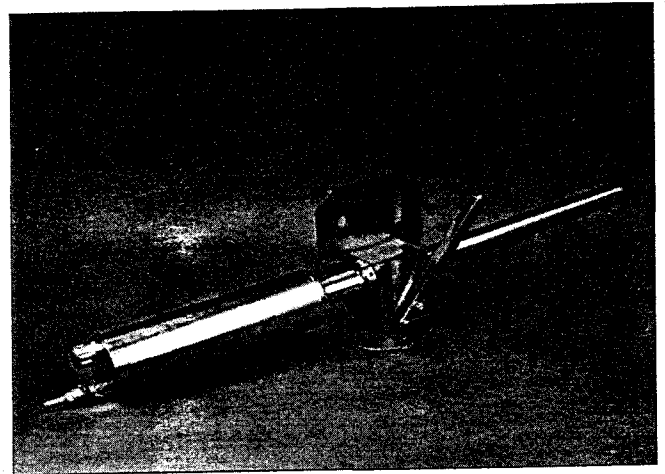
The mounting bracket is stainless steel. It has a cam actuated feature which allows quick installation and removal of the housing without tools. The bracket allows ± 10 degrees angular movement for easy alignment of the optical system between the rolls.

The sensing head uses a silicon detector which can operate in ambients up to 100°C (200°F) without cooling. The sensor is housed within a stainless steel housing and is completely watertight. Because of the presence of water in the spray chamber, no cooling water is necessary.

From the sensing head to the indicator/processor a 25 ft. (7.6 M) waterproof interconnecting cable is provided. This cable is complete with quick disconnects which allow for easy installation and removal.

The indicator/processor can be selected from a number of Ircon models. The indicator/processor provides a digital temperature indication, including peak picker function to avoid scale on the steel and a linear isolated 4-20 mA output. Accuracy starting at 0.75% of full scale reading, depending on the indicator/processor chosen.

The CC1000 can be installed anywhere in the spray chamber. It is installed so that the sensor can sight between the caster rolls. The end of the instrument housing can be 3-4 inches (75-100 mm) away from the slab or billet. Typical installations include locating the sensors near the exit of the mold, close to the beginning of the bend and close to the exit of the spray chamber. Thereafter, they are installed on both sides of the slab and are placed to measure the center as well as the edges of the slab.

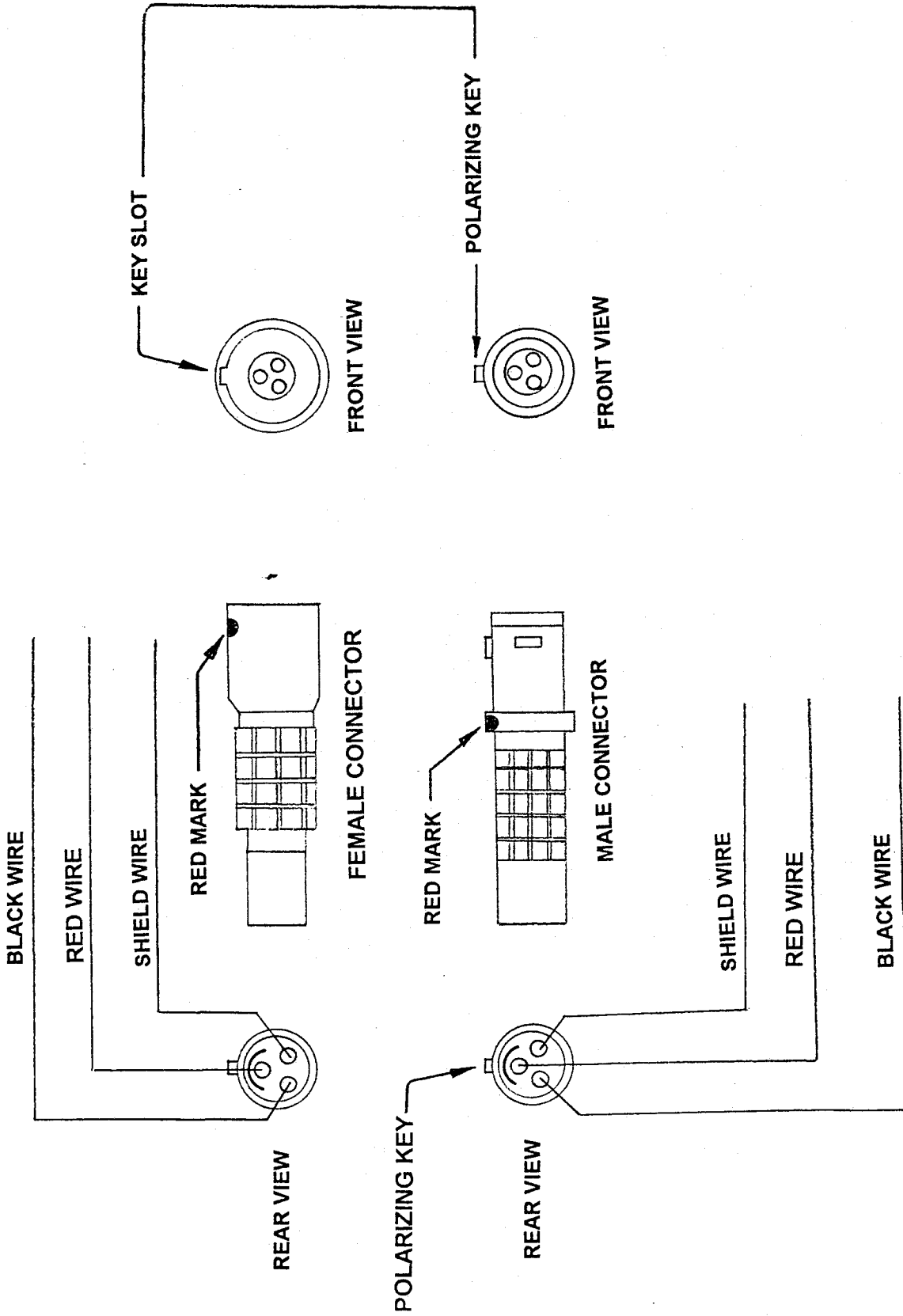


Continuous Caster Pyrometer

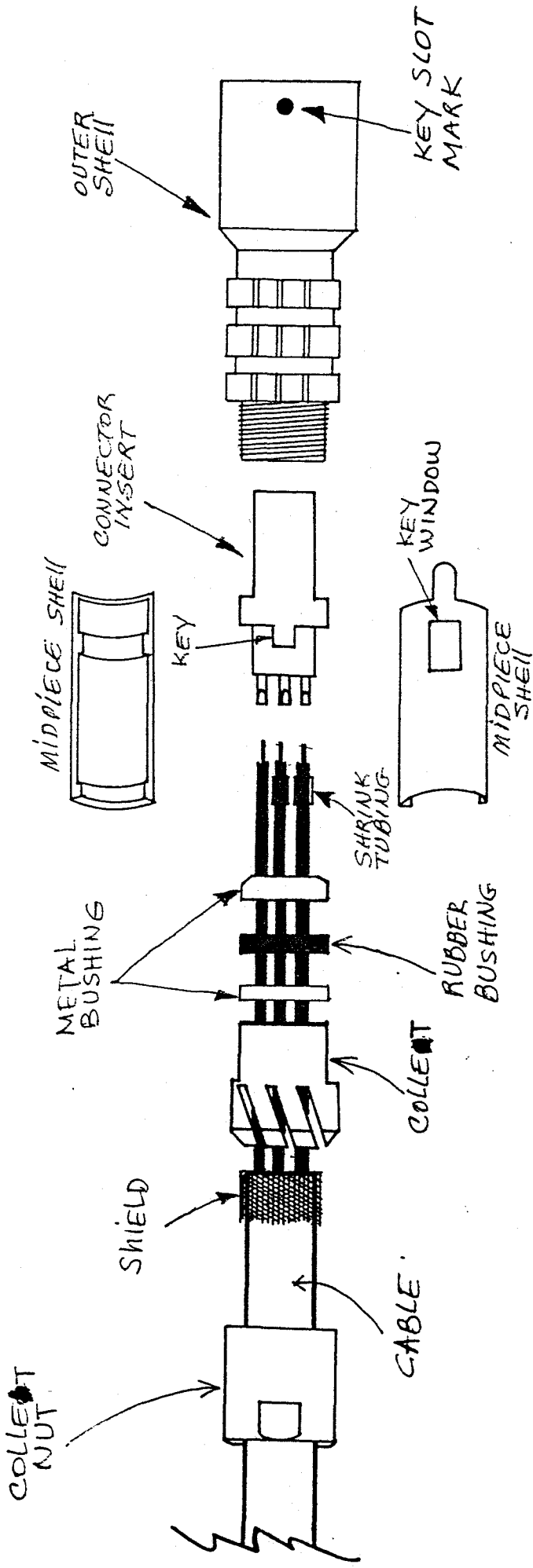
The CC1000 was specifically designed to operate in the hostile environment of the spray chamber. All parts are interchangeable and easy to replace, calibrate, and service.

FEATURES

- Stainless steel housing features quick-connect coupler for air purge connection designed for quick removal in extremely hostile environments.
- Cam actuated mounting feature allows easy alignment of optical system and angular movement to simplify installation and removal of housing.
- Indicator/processor chosen provides digital temperature indication. Peak picker function and 4-20 mA output or other selected outputs are available.
- Accuracy is dependent on indicator/processor chosen.
- Operates in high ambient temperatures without cooling.



SPECIAL F121



FOR RING

WIRING INSTRUCTIONS

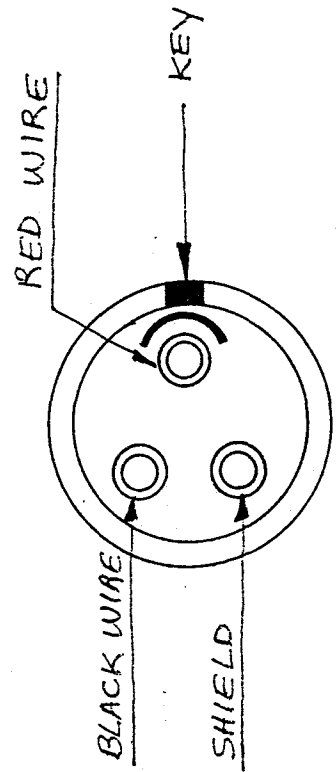
1.00"

STRIP CABLE JACKET ~~0.542~~ INCHES AND TRIM END OF WIRES 0.118 INCHES

TRIM BRAIDED SHIELD TO A LENGTH OF 0.276 INCHES AND FOLD BACK ONTO CABLE JACKET MAKING SURE THAT THE SHIELD CONDUCTOR IS NOT CUT.

SLIDE "COLLECT NUT" AND "COLLECT" ONTO CABLE.

CONNECTOR INSERT (RECEPTACLE)
REAR VIEW





PURCHASE REQUISITION

Supplier

FOX TOOL

Date

1-28-97

P.O. #

081980

Requisitioner

V. LAKNER

Purpose/Reason

CC1000 SPL

Attn

Phone

Date needed

2-21-97

Route to

V. LAKNER

Material Safety Data Information:

New chemical MSDS received on _____

for sample only

routine use

Previously purchased chemical: Active Index No. _____

Qty	U/M	Part No.	Rev. Level	Description	Price Ea	Total	Acct or W/O No.
1				SENSING HEAD PER AMENDED DRAWING # 44735-2 REV D ATTACHED	300		
				NOTE: MATERIAL CHANGE FROM ALUMINIUM TO STAINLESS STEEL - 304			

Confirming to _____

Approval (under \$100 - Authorized Requisitioner) _____

(\$100 - \$5000 - Department Manager) _____

(over \$5000 - General Manager) _____

Total \$ _____



PURCHASE REQUISITION

Supplier

FOX TOOL

Date 12-9-97

P.O. # _____

Requisitioner J. LARKNER

Purpose/Reason SPL R709

CC 1000

Attn _____

Date needed 1-23-97

Phone _____

Route to J. LARKNER

Material Safety Data Information:

New chemical MSDS received on _____

for sample only

routine use

Previously purchased chemical: Active Index No. _____

Qty	U/M	Part No.	Rev. Level	Description	Price Ea	Total	Acct or W/O No.
1		EL4001	A	PURGED SIGHT TUBE & GLAMP ASSY. Vendor has support DWGS. Ircon will supply parts Items # 9-21 of DWG 453852(A) * Price per QUOTE OF 4-10-97 attached	3100*		431-109 64745

Confirming to _____

Approval (under \$100 - Authorized Requisitioner) _____

(\$100 - \$5000 - Department Manager) _____

(over \$5000 - General Manager) _____

Total \$ 3100



12-5-97

PURCHASE REQUISITION

Supplier DAMAR ELEC.
RAINES & ASSOC

Date 12-4-97

P.O. # _____

Requisitioner J. LARKNER

Purpose/Reason SPL R709

Attn _____

Phone ~~700~~ 498-0890

Date needed 12-31-97

Route to J. LARKNER

Material Safety Data Information:
 New chemical MSDS received on _____ for sample only routine use
 Previously purchased chemical: Active Index No. _____

Qty	U/M	Part No.	Rev. Level	Description	Price Ea	Total	Acct or W/O No.
3				LEMO CONNECTOR PLUG TYPE FGG2K303CLAC50	46.20		431-109- 64745
3				LEMO CONNECTOR RECEPTACLE TYPE PHG2K303CLLC50	46.20		11

Confirming to _____

Approval (under \$100 - Authorized Requisitioner) J. Larkner

(\$100 - \$5000 - Department Manager) _____

(over \$5000 - General Manager) _____

Total \$ 277.20



PURCHASE REQUISITION

Supplier

Mc Master Carr

Date

12-4-97

P.O. #

Requisitioner

J. LARNER

Purpose/Reason

SPL R709

Attn

Phone

Date needed

12-10-97

Route to

J. LARNER

Material Safety Data Information:

New chemical MSDS received on _____

for sample only

routine use

Previously purchased chemical: Active Index No. _____

Qty	U/M	Part No.	Rev. Level	Description	Price Ea	Total	Acct or W/O No.
2				T-HANDLE #90293A312 QUICK RELEASE T-HANDLE	14.23	28.46	431-109- 64745
2				LANYARD #90312A11 TYPE A 3/64" x 6" LANYARD	1.17	2.34	"
12				DISK SPRING #9713K63 BELLVILLE DISK SPRING	.51	6.12	"
8				COMPRESSION SPRING #9435K34	1.81	14.48	"
2				COLLAR #6436K43 2 piece stainless steel 1-1/2" BORE DIA.	18.03	36.06	"

Confirming to _____

Approval (under \$100 - Authorized Requisitioner)

J. Lark

Total \$

37.96

(\$100 - \$5000 - Department Manager) _____

(over \$5000 - General Manager) _____

Acknowledgment



IRCON, INC.
7300 N. Natchez Ave.
Niles, IL 60714 USA

Phone 847-967-5151
Toll Free 800-323-7660
Fax 847-647-0948

2/7/98

SCHEDULED SHIPPING WEEK MONTH/DAY/YEAR
ENDING *01/17/98*

OUR ORDER NO. ORDER DATE MONTH/DAY/YEAR
SA 064745/00 11/26/97

YOUR ORDER NO. *D-6095*

TERMS NET 30
 OTHER NET 60

F.O.B. NILES, ILLINOIS

CODE 726 .00

VIA MSAS PPD. COLL.

SPECIAL SHIPPING INSTRUCTIONS

SOLD TO CUSTOMER NO. *008241*

IRCON GMBH
POSTFACH 1361, D-65221
TAUNUSSTEIN, GRILLPARZERSTR 40
GERMANY

SHIPPING ADDRESS TAX CODE
NO TAX

INTROPA
SPEDITIONSGESELLSCHAFT GMBH
FRANKFURT AIRPORT
ZUR VERFUEGUNG IRCONGMBH

11/26/97 PAGE 1

LINE NO.	PART NO.	QTY.	DESCRIPTION	UNIT MEAS	DISCOUNT %	PRICE EACH U.S. DOLLAR XXXXXXXXXX	AMOUNT U.S. DOLLAR XXXXXXXXXX
01		1	INFRARAIL TEMP SYSTEM W/O CBL MODEL DNE99-16C SERIAL NBR 002091 ***** * SPECIAL Z999 ***** !!!!!!!!!!WARNING!!!!!!!!!! ** SPL # TO BE DETERMINED ** ** SEE ENGINEERING DEPT. **	EA		7285.29	7285.29
02	551212	1	POWER SUPPLY 230AC/24DC 100MA	EA		156.37	156.37
			SUB TOTALS				7441.66
			GRAND TOTAL				7441.66

*Reds Special No R 709 Special
DNE99 with CC1000
Eight tube with
extension tube.
Also requires 25 ft
H temp cable.
This is rush Delivery
Fry for 2/7/98 RHB 12/3*

THIS ORDER IS ACCEPTED SUBJECT TO TERMS AND CONDITIONS SHOWN ON THIS AND THE REVERSE SIDE

IF TAX EXEMPT, PLEASE PROVIDE COPY OF EXEMPTION OR DIRECT PAYMENT CERTIFICATE.

Ship To: IRCON, INC.
7300 N. NATCHEZ AVE.
NILES, IL 60714 USA

ORIGINAL

Part No. 020172 Rev C 12/95

**DRAWING (S) TOO LARGE
TO SCAN.**

**TO VIEW THE ORIGINAL
DESIGN,
A REQUEST TO VIEW
PHYSICAL FILE
IS YOUR NEXT OPTION.**

Acknowledgment



IRCON, INC.
7300 N. Natchez Ave.
Niles, IL 60714 USA

Phone 847-967-5151
Toll Free 800-323-7660
Fax 847-647-0948

2/7/98

SCHEDULED SHIPPING WEEK MONTH/DAY/YEAR
ENDING *01/17/98*

OUR ORDER NO. ORDER DATE MONTH/DAY/YEAR
SA 064745/00 11/26/97

YOUR ORDER NO. *D-6095*

TERMS NET 30
 OTHER NET 60

F.O.B. NILES, ILLINOIS

CODE *726 .00*

VIA *MSAS* PPD. COLL.

SPECIAL SHIPPING INSTRUCTIONS

SOLD TO CUSTOMER NO. *008241*

IRCON GMBH
POSTFACH 1361, D-65221
TAUNUSSTEIN, GRILLPARZERSTR 40
GERMANY

SHIPPING ADDRESS TAX CODE
ND TAX

INTROPA
SPEDITIONSGESELLSCHAFT GMBH
FRANKFURT AIRPORT
ZUR VERFUEGUNG IRCONGMBH

LINE NO.	PART NO.	QTY.	DESCRIPTION	UNIT MEAS	DISCOUNT %	PRICE EACH U.S. DOLLAR XXXXXXXX	AMOUNT U.S. DOLLAR XXXXXXXX
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02	551212	1	POWER SUPPLY 230AC/24DC 100MA	EA		<i>156.37</i>	<i>156.37</i>
			SUB TOTALS				<i>7441.66</i>
			GRAND TOTAL				<i>7441.66</i>

Reds Special No. R 709 Special
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Eight Tube with
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7300 N. NATCHEZ AVE.
NILES, IL 60714 USA

ORIGINAL