# MULTI-PLACE COLD FINGER SERIES MCF 6

# TECHNICAL AND COMMERCIAL PROPOSAL

OF 27728 rev 0

# QUINPE SRL

# **ARGENTINA**



# 1. COMMERCIAL PROPOSAL

# 1.1. MULTI-PLACE COLD FINGER - MODEL MCF 6

Description	Unit price USD	Qty	Total price USD
MULTI-PLACE COLD FINGER - Model MCF 6	38,000	1 set	38,000
The cold finger apparatus provides a fast and reliable method of quantifying the efficiency of wax deposition inhibitors. A hydrocarbon sample is stored in multiple cells; each having a different inhibitor. The cells are placed in an isothermal bath at a production-representative temperature. Hollow cylindrical rods, referred to as "fingers", submerged in the samples are cooled by an internally circulating refrigerant and the finger temperature is monitored by an internal temperature probe. Wax progressively deposits itself on the fingers and the latter are removed and weighed at the end of the experiment. The relative performances of the different inhibitors can then be deduced from the deposition amounts. Furthermore, the wax can be collected and its composition analyzed.			
The system includes:			
<ul> <li>6 sample deposition cells</li> <li>1 chiller bath for the cold fingers</li> <li>1 controlled temperature bath for heating the oil samples</li> <li>1 electrical cabinet</li> <li>1 data acquisition and control system with reporting facilities Specifications:</li> <li>N° of sample bottles: 6</li> <li>Pressure: atmospheric</li> <li>Temperature of oil: ambient to +100 °C</li> <li>Temperature of cold finger: -10°C to +80 °C</li> <li>Temperature difference between cold finger and oil: up to 20°C</li> <li>Temperature difference between two cold fingers: up to 20°C</li> <li>Stirring speed: 100 to 2000 rpm</li> <li>Sample volume: 100 ml</li> <li>Temperature control: 1 temperature sensor on each cold finger</li> <li>Power supply: 220 VAC,50 Hz</li> </ul>			
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#### **Principle:**

The MCF 6 apparatus is utilized with black oil samples contained in up to six glass bottles, which are maintained in an isothermal, temperature adjustable bath. The fingers immersed in the oil samples are then cooled to a predefined minimum temperature via coolant supplied by an external chiller bath to initiate deposition. The experiment is conducted for 24 hours with periodic finger weight measurements to evaluate the deposition amount. After the experiment, deposited wax can be collected to precisely analyze is composition. The wax is easily removed with heat and solvent cleaning.

#### Sample deposition cell x 6:

The deposition cells consist of six 100 ml glass bottles. The samples are heated by a temperature controlled bath while a magnetically driven stirrer ensures adequate homogeneity. The bottle cap accommodates a stainless steel finger which is immersed in the oil. The finger is cooled via an internally circulating refrigerant supplied by an external chiller and its temperature is continuously monitored by a temperature probe.

#### Chiller bath x1:

The chiller bath is used to cool the finger so as to generate the temperature gradient required for wax deposition to take place.

Working temperature -10°C to 60°C

Maximum fluid pressure 700 mbar

Maximum flow rate 251/min

Size of bath 285x430x688mm

Fluid capacity 81

Flexible length 2 m

#### Thermostatic bath for heating oil x1:

This bath heats oil samples at a production-representative temperature.

Working temperature\_\_\_\_\_ambient to 100°C
Size of bath\_\_\_\_\_300x490x160mm
Capacity\_\_\_\_\_10 litres

#### **Electrical cabinet x1:**

The control panel consists of:

- Power supply, fuses, protections and connection board.
- ➤ ON/OFF switch and ON/OFF light are installed on front side
- > Digital output to control solenoid valves
- Analog output to control stirrer speed
- ➤ Temperature controller for oil sample

# Data acquisition and control system x1:

The computer workstation uses the latest state of the art personal computer operating with the latest Microsoft windows version and a specific supervision package. The system is provided with a user-friendly Vinci software for data acquisition and system control by means of intuitive icons.

#### Features:

- > Laptop computer
- Color inkjet printer
- ➤ Microsoft windows package
- > Data acquisition, supervision and reporting software

# Software for data acquisition, supervision and reporting facilities:

- ➤ Acquisition of raw data measurements such as temperature, pressure, differential pressure, volume and flow rate.
- Continuous display of measurements vs. time in the form of trends and value grids.
- Measurement logging in the computer for further compilations.
- Printout facilities.
- > Supervision facilities displaying the general synoptic of the system and indicating the status of each main component, the values of the measurement and set points.
- Computer-controlled fault diagnoses.
- Monitoring facilities. The states of the components can be selected thanks to these.

MCF series

SPARE PARTS AND CONSUMABLE ITEMS for two years operation including:	included	1 set	included
4 liters of oil for heating bath 5 liters of silicon oil for chiller bath 10 meters Polyurethane tube diam. 6 mm 10 meters Polyurethane tube diam. 10 mm 6 ea glass sample cells 1 ea Set of tools (keys, screwdriver, allen key,)			
REMOTE INSTALLATION AND START UP AND TRAINING	3,600	1 set	3,600
It comprises start-up operations and ensuring that the end-user becomes aware of the necessary adjustments for reliable measurements. During installation, the equipment is tested and commissioned according to the Manufacturer's testing methods and the measurements are checked according to the Manufacturer's recommendations. It includes 1 day of remote training.			
CIP TO DESTINATION CHARGES	2,400	1 set	2,400
<b>HIGH PRECISION ELECTRONIC BALANCE,</b> used to weigh the cold finger; mounted on a stand to facilitate the procedure.	3,840	1 set	3,840
Features  Weighing range 0-600 g  Accuracy 0.001 g  110-220 VAC, 50/ 60 Hz			
	operation including:  4 liters of oil for heating bath 5 liters of silicon oil for chiller bath 10 meters Polyurethane tube diam. 6 mm 10 meters Polyurethane tube diam. 10 mm 6 ea glass sample cells 1 ea Set of tools (keys, screwdriver, allen key,)  REMOTE INSTALLATION AND START UP AND TRAINING It comprises start-up operations and ensuring that the end-user becomes aware of the necessary adjustments for reliable measurements. During installation, the equipment is tested and commissioned according to the Manufacturer's testing methods and the measurements are checked according to the Manufacturer's recommendations. It includes 1 day of remote training.  CIP TO DESTINATION CHARGES  HIGH PRECISION ELECTRONIC BALANCE, used to weigh the cold finger; mounted on a stand to facilitate the procedure.  Features  Weighing range 0-600 g  Accuracy 0.001 g	operation including:  4 liters of oil for heating bath 5 liters of silicon oil for chiller bath 10 meters Polyurethane tube diam. 6 mm 10 meters Polyurethane tube diam. 10 mm 6 ea glass sample cells 1 ea Set of tools (keys, screwdriver, allen key,)  REMOTE INSTALLATION AND START UP AND TRAINING It comprises start-up operations and ensuring that the end-user becomes aware of the necessary adjustments for reliable measurements. During installation, the equipment is tested and commissioned according to the Manufacturer's testing methods and the measurements are checked according to the Manufacturer's recommendations. It includes 1 day of remote training.  CIP TO DESTINATION CHARGES  2,400  HIGH PRECISION ELECTRONIC BALANCE, used to weigh the cold finger; mounted on a stand to facilitate the procedure.  Features  Weighing range 0-600 g  Accuracy 0.001 g	operation including:  4 liters of oil for heating bath 5 liters of silicon oil for chiller bath 10 meters Polyurethane tube diam. 6 mm 10 meters Polyurethane tube diam. 10 mm 6 ea glass sample cells 1 ea Set of tools (keys, screwdriver, allen key,)  REMOTE INSTALLATION AND START UP AND TRAINING It comprises start-up operations and ensuring that the end-user becomes aware of the necessary adjustments for reliable measurements. During installation, the equipment is tested and commissioned according to the Manufacturer's testing methods and the measurements are checked according to the Manufacturer's recommendations. It includes 1 day of remote training.  CIP TO DESTINATION CHARGES  2,400 1 set  HIGH PRECISION ELECTRONIC BALANCE, used to weigh the cold finger; mounted on a stand to facilitate the procedure.  Features  Weighing range 0-600 g  Accuracy 0.001 g

#### 1.2. **VALIDITY OF THE OFFER**

The present conditions are valid for 3 months after receipt of the proposal.

#### 1.3. **PAYMENT CONDITIONS**

- 50% as down payment with the order, by swift transfer on our account
- 50% by irrevocable documentary credit confirmed by a first class French bank, opened in favor of **VINCI Technologies**. Each party will bear the bank expenses in its own country.

#### 1.4. **DELIVERY TIME**

The proposed equipment can be delivered within 5 months from the date of coming into force.

#### 1.5. **COMING INTO FORCE**

The date of coming into force of the contract will be the date of receipt by VINCI Technologies of

- the contract or purchase order duly signed;
  - down payment;
  - irrevocable and confirmed documentary credit.

whichever comes last.

#### 1.6. TAXES AND DUTIES

The prices given in the present bid are exclusive of any tax, duty and/or levy which may be imposed on VINCI Technologies, the goods supplied, or VINCI Technologies personnel by the local authorities.

Any such tax, duty, and/or levy, as well as personal taxes and corporate taxes, which can be imposed on VINCI Technologies, the goods supplied, VINCI Technologies personnel, by the local authorities, shall be borne by the client, and paid directly by him to the relevant authority.

All terms of our General Terms of Sale are applicable.

In case of discrepancies between Specific terms of sales as per chapter 1. and General Terms of sales as per next chapter., Specific terms of sales shall apply.

#### **GENERAL TERMS OF SALE** 2.

#### **GENERAL POINTS**

Any order is agreed upon and effective only upon notice to the Customer of our « order recording » in a reasonable time. The Customer acknowledges that the present terms contains the entire agreement entered into by the parties and that it voids and replaces any prior proposal or agreement whether verbal or written, as well as any other communication between them regarding the contract subject matter, except otherwise agreed in writing and signed by the parties' authorized agents.

Any contract by the Customer that does not comply with our conditions shall be effective only upon written approval by a person entitled to represent our corporation.

Vinci Technologies shall retain the right to reject any amendment or cancellation regarding the order after the launching of the deal. In the event of acceptance and provided that the cancellation concerned materials already availed to the Customer, this

cancellation shall become effective only upon return of the materials in its original state, without having been unpacked, installed, set up or used. The **Customer** shall be liable for the shipment and availability costs as well as for the restocking costs equal to 20 % of the billed amount.

#### 2 PRICE AND PAYMENT TERMS

Our prices are quoted net of VAT and firm for fulfillment according to tender confirmed by acknowledgment of receipt of order. Packing and delivery terms are set forth in the special stipulations. Failing this, prices are quoted for unpacked equipment exworks, excluding any taxes or duties.

The Customer undertakes to comply with the following terms of payment: cash on delivery.

Failing payment of invoice at maturity, the amount due becomes immediately payable whatever the previously agreed terms, even if payment by draft has taken place. Moreover, the buyer shall be liable ipso jure for late payment penalties, VAT not included, calculated at **1.5 times** the legal interest rate on the total amount outstanding.

We reserve the right to demand at will and according to the terms above :

- cash or down payment with order
- in case of arrears, immediate payment of invoices failing due and prepayment of all orders in course of fulfillment or cancellation thereof by **Vinci Technologies** on mere mailing of registered letter and without compensation chargeable under the terms above.

#### 3 DEADLINES

Delivery periods start running when all the particulars of the order are clarified in writing.

Deadlines are given only for information when making the tender and shall be confirmed by **Vinci Technologies** on the acknowledgment or receipt of order. Possible delays give the buyer no right to cancel sale, reject goods or services, or claim damages, penalties or deductions.

#### 4 DELIVERY AND CARRIAGE

Expenses and contingencies for insurance, packing, carriage, customs, unloading and unpacking are the responsibility of the **Customer**, unless otherwise specified with order. Upon delivery but before taking delivery, it is for the **Customer** to enter the usual reserves on the acknowledgment of receipt of delivery slip and make all necessary claims against the carrier solely liable.

#### 5 RESERVATION OF OWNERSHIP

Vinci Technologies retains ownership of goods sold until effective payment of the whole principal amount and additional expenses. This provision does not prevent assignment to the Customer as from delivery, of loss or damage risk for goods sold as well as any resulting consequences. The Customer must take out insurance covering risks arising from delivery and shall notify the insurer of our ownership rights so that we may obtain consequential indemnities for loss or damage to goods sold.

The Customer may not resell the goods before the price is settled in full, unless agreed in writing by an authorized officer.

#### 6 LIMITATION OF LIABILITY

**Vinci Technologies** liability is strictly limited to repairing or replacing parts or components recognized by us as faulty, excluding compensation for any reason whatsoever. The repair will be made at **Vinci Technologies** workshop. Transportation cost, taxes and duties are at the **Customer's** expense. Working time will be free of charge.

Whatever the type of warranty, be it legal or contractual, **Vinci Technologies** liability is strictly limited to the above obligations and **Vinci Technologies** shall not be bound to compensate the **Customer** or any third party whosoever (employees, customers, etc.) for any direct or indirect damage such as production loss, expenses or other injury resulting from misuse or malfunction of equipment.

#### 7 WARRANTY

Apart from glass items, consumable and spare parts, and subject to use according to standard operating conditions, our equipment is guaranteed free of any defects due to error in manufacturing or design as acknowledged by us, for a period of **12 months** as from delivery ex-shop. Parts substituted or remade under this warranty shall be guaranteed only for the remaining initial warranty period.

Warranty is under exclusion:

- if faulty material or design comes from the buyer or third party imposed by the Customer
- if malfunction results from servicing or changes performed by the Customer without our prior written permission
- if malfunction arises from fair wear and tear, carelessness or defective maintenance by the **Customer**, unusual applications or non-observance of our instructions for use and servicing
- if malfunction is the result of absolute necessity; import or export bans or embargo and exchange control measures shall be regarded as absolute necessity for the performance of the contract

- if the **Customer** does not follow the instructions that **Vinci Technologies** may have notified for installation and starting of equipment.

Liability of Vinci Technologies is specifically limited to the terms above, any claims including warranty claims imposing penalties for further liability being excluded.

#### 8 CONFIDENTIALITY

Estimates, reports, drawings, calculations and documents handed over or sent to the **Customer** remain the property of **Vinci Technologies** and may therefore not be used or communicated to third parties without our permission for any reason whatsoever.

# 9 GOVERNING LAW - POWER OF JURISDICTION

All sales are governed by the law of France.

Any dispute concerning sales or services, even in the event of several defendants, and failing settlement out of court, would fall within the exclusive jurisdiction of the **Commercial Court of Nanterre** (92). Special bank domiciliation terms or other conditions may not give rise to any exception or substitution.

Any possible dispute in connection with contracts of international scope shall be settled in accordance with the conciliation and arbitration rules of the International Chamber of Commerce, by one or more arbitrators designated by the parties and the place of arbitration shall be **Paris** (**France**).

#### 10 SOFTWARE LICENSING

#### 10.1 GENERAL POINTS

The **Licensee** acknowledges having read the terms of this contract and agrees to abide thereby. Moreover, the **Licensee** acknowledges that this contract contains the entire agreement between the parties and that it replaces any prior proposal or agreement, whether verbal or written, and any other communication between them for the purposes of this contract, except as agreed and executed in writing by the authorized representatives of both parties.

Where the **Licensee(s)** and/or operating systems take part in operations or are delivered with the product, the Licensee commits himself to agree to all stipulations of licenses transferred by **Vinci Technologies**.

#### 10.2 USER-LICENSEE RIGHTS

The **Licensee** may take a backup copy when necessary to ensure use of program on the site(s) specified in the contract. As the software is an integral part of a single and sole application, it may not be used for purposes other than those specifically provided for in the contract.

# 10.3 SOFTWARE SUPPLY

Any software supply usually includes:

- an input medium on which the program is recorded
- the appropriate user manual
- the warranty for licensed programs as described below
- a safety device to prevent use of software on computers not specifically mentioned in the contracts.

#### 10.4 INTELLECTUAL PROPERTY

Ownership of software belonging to **Vinci Technologies** or their suppliers is protected by French Copyright, International Treaties as well as any other domestic law which may apply. The software thus enjoys the protection granted to all intellectual design.

### 10.5 LICENSING TERM

Individual licensing is in principle granted to the **Licensee** for an unlimited period of time. The Licensee may terminate this period at any time by destroying the programs and any copies thereof in any format whatsoever.

Licensing may also be terminated in such cases as provided for by the contract and in particular through non-observance thereof by the **Licensee**.

#### 10.6 WARRANTY AND LIABILITY

Vinci Technologies guarantees that the software complies with contractual specifications.

Vinci Technologies liability is limited to delivery of licensed programs on an input medium without material or manufacturing flaws and to debugging of proven programming errors, free of charge for a period of three months following delivery. Beyond the warranty period, the Licensee may take out a specific maintenance contract (of available). This service provides the Licensee with

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technical support and user assistance especially on the telephone. User assistance is restricted to practical help with software functions and by no means covers the related operating system or any mass-marketed input-output software (word processor, spreadsheet, etc.).

It is expressly agreed that **Vinci Technologies** shall not be liable for any **Licensee** compensation for any direct or indirect injury: whatever the damage; in particular to information, data, files, programs or other property set apart from the software, or any loss of profit. Excluded from the warranty are floppy disks damaged by accident, misuse, improper use, servicing or alterations provided by a third party other than **Vinci Technologies**.

The liability of Vinci Technologies may not be presumed for any reason whatsoever outside the scope of the aforementioned warranty provisions.

Vinci Technologies is bound by mere obligation to provide means. In particular, liability cannot be incurred if direct Vinci Technologies advice or software messages are not implemented.

#### 10.7 COMPLIANCE AND EXPENSES

All current and future taxes and levies likely to apply to the services described in the contract are chargeable to the **Licensee**, whatever his country of residence. If need be, the **Licensee** must obtain the relevant exchange control authorizations enabling him to pay any amount due for licensing and technical support.

#### 10.8 LICENSING AND COPYRIGHT

Software licensing permission is granted to the **Licensee**, excluding any other party. The software may not be disclosed, assigned or leased to third parties.

The **Licensee** acknowledges that the software is intended for this exclusive use on the site(s) specified in the contract and agrees not to sub-license the said software. The **Licensee** must secure the confidentiality of information connected with the software from his employees.

#### 10.9 WORKING LANGUAGE

The language for the user interface, manuals and hot line shall be only French and/or English.