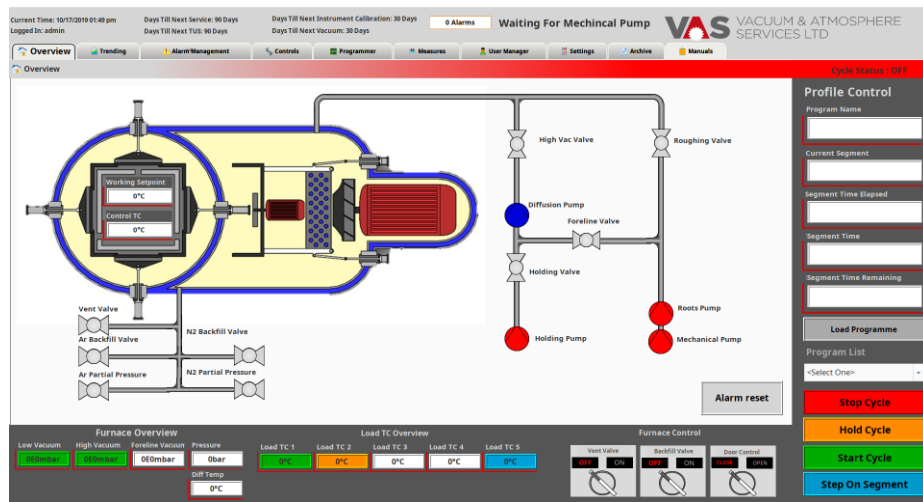


REFURBISHED HORIZONTAL LOADING VACUUM FURNACE

MODEL No. IPSEN VTTC324



Agents for:



Unit 30 Park Rose Ind Est, Middlemore Road, West Bromwich, B66 2DZ
 Tel: 0121 544 4385 Fax: 0121 544 3874
 www.vacat.co.uk

VAS Group of companies:



TECHNICAL DATA

DIMENSIONS

Floor space required

Width 4 m
Height 3.5 m
Depth 5.0 m

Plant gross weight 7,500 kgs

Work zone

Width 600 mm
Height 350 mm
Depth 900 mm

Max gross charge 300 kg

TEMPERATURE

Max. Temperature 1270 °C

Vacuum 600°C to 1200°C ±5 °C

ENERGY

Rating of heating 150Kw

Connected load 130Kva

Rated voltage (3 phase – 50Hz) 400 V

VACUUM

Ultimate vacuum (conditioned furnace) 1.0×10^{-3} mbar

Operating vacuum 5.0×10^{-2} mbar

Partial Pressure Nitrogen/Argon 0.1 to 10 mbar

Leak rate mbar/sec 5×10^{-2} mbar l / sec

PUMPING GROUP

MECHANICAL PUMP –

Model No. – Leybold SV200

Capacity 560m³/h-1

BOOSTER PUMP –

Model No. – Edwards EH1200

Capacity 1200 m³/h-1

COOLING FAN

Rated power 120Kw

INERT GAS

Nitrogen quenching gas max pressure 5 bar

Gas consumption at max pressure 3m³ approx

Quenching gas purity 99,999 %

CYCLE FEATURES – CONDITIONED, EMPTY FURNACE

Pumping time to 10⁻² mbar range < 30 min

Cooling time of furnace
from 1250°C to 150°C < 20 min

Heating time of the hot zone
from 150°C. to 1250°C. < 40 min

CONTROL SYSTEM

| | |
|------------------------------------|-----------|
| Controller | VCS+ |
| PLC | Siemens |
| Temperature/Vacuum Recorder | VCS+ |
| Over temperature safety controller | Eurotherm |
| Pirani Vacuum Gauge | Edwards |
| Penning Vacuum Gauge | Edwards |
| Thermocouples (Control O/Temp) | Type 'S' |
| Load thermocouples (12 off) | Type 'N' |

WATER (To be confirmed)

| | |
|-----------------------------------|---------|
| Min/Max pressure cooling water | 3.5 bar |
| Water consumption during cooling | 20 m3/h |
| Average consumption cooling water | 10 m3/h |
| Water inlet max. Temp. | 25 °C |

GRAPHITE HOT ZONE

| | |
|------------------|----------|
| Insulation | Graphite |
| Heating Elements | Graphite |

The work cycle of the Model No. Ipsen VTTC324 is completely automatic.

Gas fan cooling is included upto 5 bar

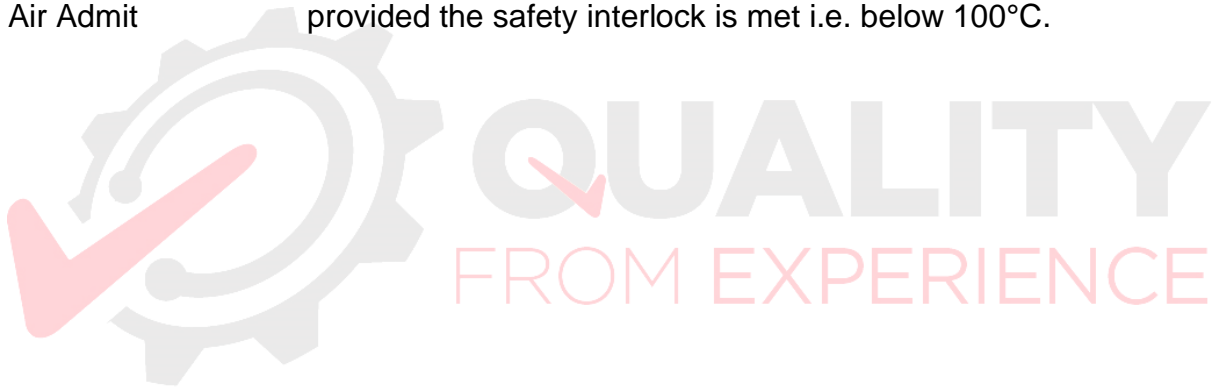
Gas Quenching is included:-

- Cooling from top to bottom and bottom to top alternatively on time

The gas pressure flowing through the gas quench system is operated at up to 5 bar

The following items are switched from the control panel.

| | |
|-----------|--|
| Pumping | booster pump introduced at pre-set vacuum levels. |
| Heating | can be activated automatically provided the pre-set vacuum levels are achieved and water is available. |
| Cooling | under vacuum, static or gas fan quench. |
| Air Admit | provided the safety interlock is met i.e. below 100°C. |



Agents for:



Unit 30 Park Rose Ind Est, Middlemore Road, West Bromwich, B66 2DZ
Tel: 0121 544 4385 Fax: 0121 544 3874
www.vacat.co.uk

VAS Group of companies:



PROPOSAL

PRICE SCHEDULE

Item 1

One (1) Vacuum Heat Treatment & Brazing Furnace Model No. Ipsen VTTC324 as generally as described within the attached technical summary.

The following upgrade works are included

- Vessel, ultrasonically tested
- New control panel and VCS+ system
- New hot zone
- Vacuum pump overhaul
- Heat exchanger removed and pressure tested
- All new water and air hoses
- All new butterfly valves
- AMS2750 compliant
- Manual loader

Price: POA

(This offer is made Subject to Prior Sale)

Delivery – to be quoted upon advising final of the destination

Installation / commissioning / training – to be quoted upon advising of the final destination

DELIVERY:

12-16 weeks

TERMS OF CONTRACT:

12 month warranty will apply to all new components.

All other items offered with 6 month warranty

TERMS OF PAYMENT:

To be discussed

TAXES:

The aforementioned quotation is exclusive of VAT or any other taxes / import duties that may apply.

Agents for:



Unit 30 Park Rose Ind Est, Middlemore Road, West Bromwich, B66 2DZ
Tel: 0121 544 4385 Fax: 0121 544 3874
www.vacat.co.uk

VAS Group of companies:



TRAINING

On site training at Customer site will include 3 man days where both practical and theoretical aspects of vacuum engineering will be discussed and include a seminar covering:-

1. Vacuum Terminology. Detailing a basic understanding of the terms and units used in day-to-day use of vacuum furnaces.
2. Vacuum Pumping. Detailing the basic operation of the individual vacuum pumps.
3. Furnace control and sequencing.
4. Furnace Control System
5. Vacuum furnace maintenance.
6. "Hands on" Maintenance training.

As well as the Operation and Maintenance manuals supplied with the plant, within the training programme, an additional manual will be supplied to each attendee of the seminar.

It is useful if a 'classroom' could be made available during this period.

EXCLUSIONS

VAS's installation proposal offer is based upon purchaser's acceptance of the following responsibilities, unless otherwise agreed in price summary.

1. Pits, foundations, packers and associated foundation bolts, unless previously specified and quoted.
2. Steelwork covering pits.
3. Any additional supporting steelwork and stairs which might be requested.
4. Cranes and handling devices.
5. Sump pumps for pit where applicable.
6. Any water treatment equipment, unless previously specified and quoted.
7. Any auxiliary emergency pumps.
8. Provide adequate 3 Phase, 50 Hz, power supply and in accordance with furnace requirements.
9. Provide adequate water system including pipework
10. Provide inert gas to furnace termination point
11. Provide and install all inlet exhaust ducting from the furnace termination point i.e.. mechanical pump exhaust.
12. Provide security for all of the furnace and erection equipment against theft and malicious damage.