



Scope of Supply
QUINTUS® Hot Isostatic Press

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Scope of Supply

QUINTUS® Hot Isostatic Press

QIH 32 – 2070 – 1400 MURC

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For further information on the items in this scope of supply, please refer to the Product Data Sheet.

Pressure vessel:

- One top-loaded QUINTUS wire wound pressure vessel with wire-wound frame
- Actuators for opening and closing of press
- One Telfer for handling workload and furnace mantle
- Parking space for one furnace mantle and one loading tool
- Platform and staircase for access of loading/unloading of pressure vessel
- Oxygen sensors for monitoring and alarm

Molybdenum furnace:

- One Molybdenum furnace mantle with Molybdenum side heater elements and URC capability
- One Molybdenum furnace base with forced convection device for URC
- One loading tool for loading/unloading the workload in the pressure vessel
- One Load basket (2 levels), in Molybdenum

Electrical system consisting of:

- Switchgear for distribution of electrical power to furnace
- Switchgear for distribution of electrical power to motor(s) and controls of the Equipment in Scope of Supply
- Power transformers for furnace power
- Control system

Control panel:

- One industrial computer with two SSD hard drives connected in RAID 1 for data safety and HMI system for human-machine communication
- One screen for operator

Gas handling system consisting of:

- One gas handling system, complete with compressor and necessary electrical motor, hydraulic pump, valves, sensors and safety devices

Vacuum system consisting of:

- Vacuum pump, valves and sensors

Cooling water system consisting of:

- One closed loop cooling system, complete with pumps, water tank, valves, necessary flow, pressure sensors and temperature sensors

External cooler:

- External adiabatic fan cooler, located outside the building (max 25 m piping distance from the press).

Workload preparation station:

- Two workload preparation stations for workload build-up

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Documentation

Instruction Manuals covering operation and maintenance. The manuals are supplied as one hard copy and on one USB memory stick in the English language (except standard component catalogues, which may be supplied in the language of the component sub-supplier).

Tests & Certificates

Hydro test of the pressure vessel in accordance with the European Pressure Equipment Directive (PED)

Inspection and selected testing of the Equipment before shipment

CE certificates for the Equipment included in the Scope of Supply

Final acceptance at installation site

Installation and Commissioning

The supplier will provide one Service Engineer for supervision of the installation and commissioning

Around four weeks is the time normally required for the installation and commissioning of the Equipment. The duration is based upon a 6 day working week (10 hrs. working per day), excluding public holidays and night shift

If the installation or the commissioning requires more than the time specified and the delays are caused by the Supplier, the extra time is included at no charge. Costs for delays due to circumstances beyond the Supplier's control will be charged at the Supplier's prevailing rate for service personnel at the time the work is carried out. Expenses are charged in addition to the above mentioned rates

All correspondence, advice and training will be in the English language

Training

Training of press operators and maintenance personnel will be carried out at the Purchaser's site during the final stages of the commissioning. The training incorporates studies of the documentation delivered with the press, as well as practical sessions involving press operation, preventive maintenance and fault finding. Parts of the mechanical training will be carried out in conjunction with the installation of the press.

The Purchaser's Scope and Responsibility

The prices do not include the following:

- Transportation, rigging, or lifting into place of the Equipment
- Tests or approvals which may be required by local authorities
- Foundation design drawings for press and periphery equipment
- Civil works, buildings, foundations, ventilation, lighting devices and floor painting. Sufficient bearing capacity on installation site for entrance and heavy lifting of the Equipment
- Modification to existing buildings and surrounding equipment
- Workload thermocouple(s)
- Payload or dummy payload for testing and commissioning (no capsuled products)
- Storage of equipment delivered to the site during installation and commissioning
- Tools for installation
- Skilled personnel during Installation and commissioning work other than technical advice of the same.
- All expenses for Purchaser's personnel in connection with the installation, the commissioning and the training, including interpreter when communication is in a language other than English
- Overhead crane for installation and commissioning
- Switchgear and distribution including cables to take over point on the Equipment in the Scope of Supply
- Argon cryogenic tank with pump and vaporiser and connection to argon gas storage
- Argon gas storage, and connection to take over point on the Equipment.
- Cooling water piping between Purchaser's cooling system and the Equipment
- Gas exhaust piping including silencer
- Spray water supply and drain for the external cooling system
- Fluids for installation and operation of the HIP such as cooling water including additives, hydraulic oil, deionised water and lubricants
- Pressurized air supply
- Personal safety equipment etc. oxygen sensors for Purchasers personnel
- The removal / disposal of crating and waste material
- Process know-how for producing Purchaser's products