

Precious Metal Recovery & Refining Equipment | 99.9% Ti

## Gold Melting Reactor

A sealed 99.9 percent titanium reactor for aqua regia gold dissolution, 10 to 20 kg a charge.



Commercial pure titanium plate at 99.9 percent purity, formed into a sealed reactor with water inlet, air inlet, exhaust vent and electric heating with automatic temperature control, for dissolving 10 to 20 kg of gold per charge in aqua regia.

### The problem it is built for

Aqua regia gold dissolution done in open vessels puts concentrated acid mist into the workshop and loses heat control at the moment it matters. A sealed titanium reactor with a dedicated suction opening keeps the fume in the duct and the temperature on a setpoint.

### Published specification

| Parameter                       | Value                                                                                               |
|---------------------------------|-----------------------------------------------------------------------------------------------------|
| Product name                    | Gold refining machine                                                                               |
| Brand                           | XHF                                                                                                 |
| Raw material                    | Pure titanium, 99.9% titanium purity                                                                |
| Specification                   | 10 to 20 kg gold per charge                                                                         |
| Function                        | Aqua regia added for gold melting, then cooled to obtain a gold-bearing solution                    |
| Structure                       | Reactor housing + water inlet + air inlet + exhaust vent + electric heating and temperature control |
| Operating temperature range     | -25 to 600 C                                                                                        |
| Exhaust purification efficiency | Up to 99% with the matching purifier                                                                |
| Warranty                        | 1 year                                                                                              |
| Place of origin                 | Guangdong, China                                                                                    |
| After-sales                     | Engineers available to service machinery overseas                                                   |
| Supply ability                  | 300 sets per month                                                                                  |

# Gold Melting Reactor - features and applications

## What is built into it

| Feature                          | What it does                                                                                                                                                                          |
|----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Titanium because of the chloride | Acid resistance, alkali resistance, high temperature resistance and chloride ion resistance together are why titanium is used here. Aqua regia would destroy most alternatives.       |
| Fast heating and fast cooling    | Electric heating with automatic temperature control to the process requirement, so material temperature follows the recipe rather than the room.                                      |
| Sealed against acid mist         | Advanced structure with good sealing, specifically to stop corrosive acid gases reaching the operator and the workshop during melting.                                                |
| Dedicated suction opening        | A unique suction opening design draws off the concentrated acid mist generated during melting. Paired with the matching purifier, exhaust purification efficiency reaches 99 percent. |
| Polished reactor wall            | The wall can be polished to stop material hanging and to make cleaning between charges practical.                                                                                     |

## Where it is used

- Gold purification and gold stripping in refining operations
- Purification of gold scrap and silver scrap of varying composition
- Chemical processes involving strong acids at elevated temperature
- Complete gold refining systems, which the company designs and manufactures

## Questions buyers ask

### How much gold per charge?

10 to 20 kg per charge is the published specification.

### What temperature range does it work over?

-25 to 600 C. The heat resistance of titanium is what gives it that span.

### What happens to the acid fume?

It is drawn off at the suction opening and treated in the matching purifier, where the stated exhaust purification efficiency reaches 99 percent.

### Can the reactor shape be changed?

Yes. Titanium's workability means reactors can be made in different shapes and configurations to the process requirement, and it can take high working pressures.

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