INSERTING DEVICE
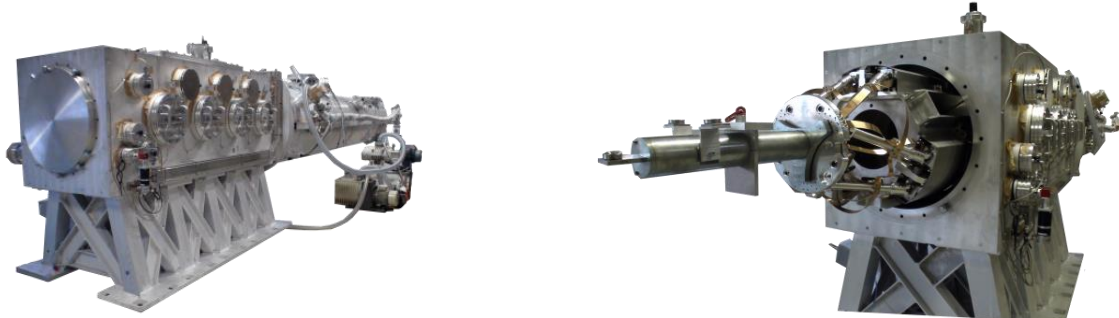# Special machine & Robotics

DATASHEET ISP

Update : 14/01/2013

Non-contractual photos

This equipment makes it possible to insert, position and orient an object in a vacuum enclosure at a distance of 6 m.

1 - Description

This equipment has a vacuum-tight casing and an insertion pole, at the end of which is fixed a positioner at 6 accurate freedom degree. The casing has two sections easily separable for an easy access to the positioner.

The aluminum-vaccum-tight casing has several connection plugs on which are fixed tight connection base allowing to drive the object to insert and/or to record data from sensors located on the concerned object.

The setting up of the object at the end of the positioner is automatic. All interventions in the casing can ve done under static or dynamic containment.

- Motion of the pole by motorization,
- Position sensors,
- Piping for installation of a ventilation device for dynamic containment
- Piping for installation of a turbo molecular pump,
- Viewing windows,
- Replaceable stopping tap by glove port for intervention under containment on the end of pole
- Compensation bellows for installation on a piping
- An installation of the object on automatic way
- A Control rack

2 - Technical Data

- Weight: 6 750 kg,
- Insertion repeatability :< 0, 5 mm 3D max and<75 µrad 3D max (without handoverto atmospheric pressure)
- Installation on piping DN 630,
- Maximal weight of object to insert: 2, 5 kg

Positioner performances:

- **Translation accuracy**
  - For a displacement< 100µm : 5µm 3D RMS
  - For a displacement between 0,1 and 5 mm : 12 µm 3D RMS
  - For a displacement beyond 5 mm : 100 µm 3D RMS

- **Rotation accuracy**
  - For a displacement< 3 µrad : 0,1 mrad 3D RMS
  - For a displacement between 3 and 50 mrad : 0,3 mrad 3D RMS
  - For a displacement beyond 50 mrad : 1 mrad 3D RMS

- **Operation under high-vacuum environment,**
- **Ergonomic (motor and sensor easily replaceable) and easy maintenance**
- **Hardening to electromagnetic fields and nuclear compatible.**