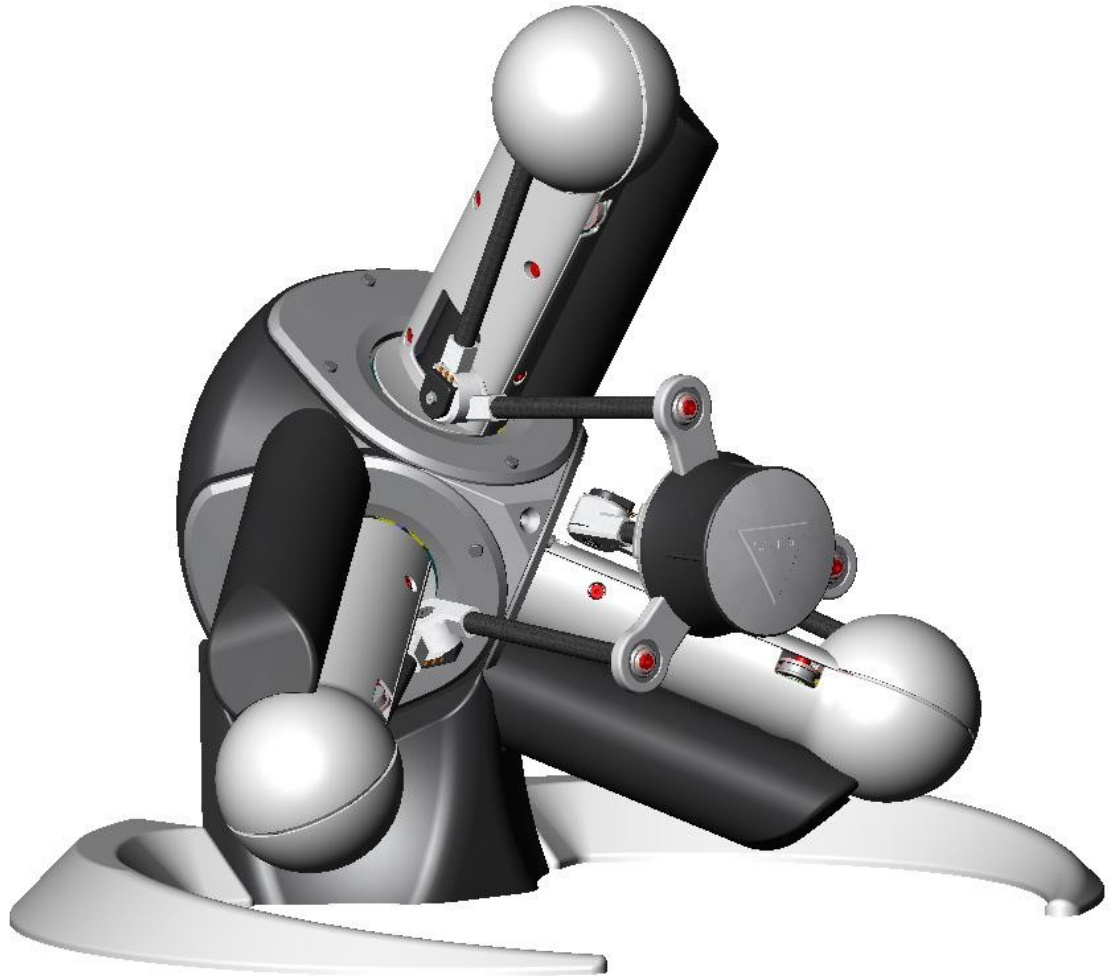




# HAPTION → Virtuose 6D Desktop

The Virtuose 6D Desktop is a 6 degrees-of-freedom haptic device, specifically designed for bidirectional interactivity with desktop software applications (e.g. Computer Aided Design).

Its workspace and its small overall dimensions intend it for a use on individual workstations, equipped with a standard monitor.



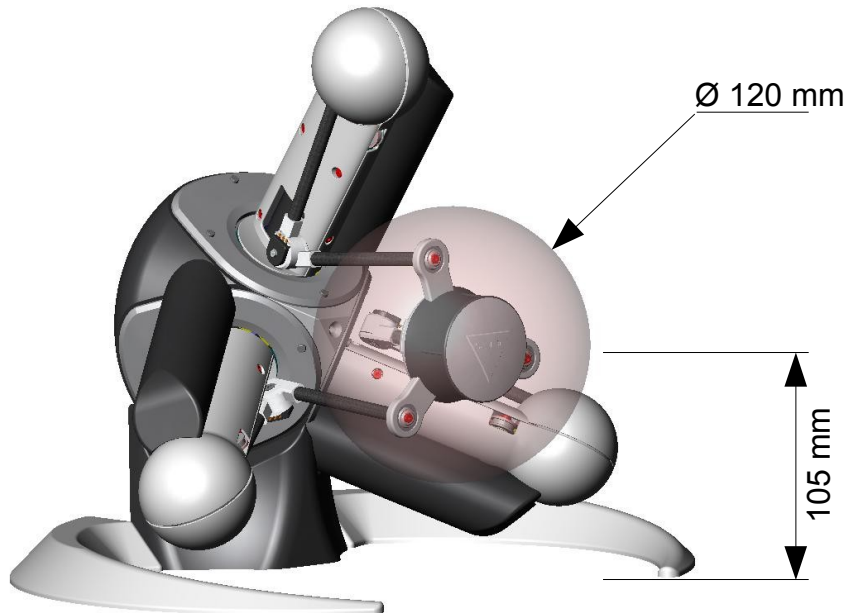
## Technicals Characteristics

The Main characteristics of the Virtuose 6D Desktop are :

- ✓ 6 degrees of freedom position feedback
- ✓ 6 degrees of freedom active force-feedback
- ✓ Operational workspace corresponding to the movements of the human hand and wrist (elbow resting on the table)
- ✓ Maximum force of 15 N in translation and 0.5 N.m in rotation
- ✓ Active weight balancing by the motors
- ✓ Ergonomic grasping tool equipped with three buttons (one for clutch or offset, two other buttons free for use by the software application)
- ✓ Lightweight, no specific equipment needed for transport
- ✓ Support of both impedance (force) and admittance (position) control
- ✓ Development kit (API) available for Microsoft Windows 2K/XP and Linux

# Virtuose 6D Desktop

## workspace



The Virtuose 6D Desktop is composed of three articulated branches, attached in parallel to the grasping tool, which give a 6 degrees-of-freedom kinematics, with force-feedback available on all degrees-of-freedom. The structure of the Virtuose 6D Desktop makes it possible to work in a volume encompassing a sphere 12 cm in diameter. The resolution in position is of  $1.5 \cdot 10^{-2}$  mm.

## Characteristics

Maximum volume	Ø 300 x 260 mm
Workspace in translation	Sphere 120 mm in diameter
Workspace in rotation	35° in the 3 directions at the centre
Maximum force in translation (*)	5 to 15 N
Continuous force in translation (*)	1.4 to 3 N
Maximum torque in rotation (*)	0.2 to 0.5 N.m
Continuous force in rotation (*)	0.06 to 0.14 N.m
Maximum stiffness in translation	2500 N/m
Maximum stiffness in rotation	2 N.m/rad
Minimum resolution in translation	0.015 mm
Minimum resolution in rotation	0.004 °

(\*) this number is valid for the global workspace

### HAPTION S.A.

Atelier relais ZA Route de Laval – 53210 SOULGE SUR OUETTE – France  
tel. +33(0)2 43 64 51 20  
fax. +33(0)2 43 64 51 21  
e-mail. [contact@haption.com](mailto:contact@haption.com)  
<http://www.haption.com>