

Saturn

The ringed giant

Saturn's rings contain countless pieces of ice and rock. Around it, Titan has a dense atmosphere and Enceladus ejects water from its subsurface ocean into space.

Type	Gas giant
Diameter	116,460 km
Mass (Earth = 1)	95.2 Earth masses
Average distance	9.54 AU · 1.43 billion km
Orbital period	29.45 years
Rotation	10 h 42 min
Temperature	≈ −140 °C at cloud level
Main orbiting bodies	Titan, Enceladus, Rhea and Iapetus

Compare with Earth

Its diameter is a little over 9 times Earth's.

Understanding Saturn

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Composition and interior

Saturn consists mainly of hydrogen and helium. Its interior is thought to contain layers of liquid and metallic hydrogen around a core rich in heavier materials.

Atmosphere and environment

Its rings contain billions of pieces of ice and rock, ranging from tiny grains to blocks several metres across. A hexagonal atmospheric jet stream surrounds its north pole.

Exploration

Cassini-Huygens studied Saturn, its rings and its moons from 2004 to 2017. The Huygens probe landed on Titan, revealing a world shaped by hydrocarbon rivers and lakes.

A remarkable fact

Titan has a dense atmosphere. Enceladus ejects plumes of water vapour and ice from a subsurface ocean, making it a major target in the search for habitable environments.

Sources and limitations

NASA Science: <https://science.nasa.gov/saturn/facts/>

Online fact sheet: <https://systeme-solaire-3d.fr/en/saturne>

Values are rounded. The artistic view changes sizes and distances for readability. Check dated information before reusing it.