

! For an efficient use of these tables, first read [HowTo.pdf](#).

T2.22A. Integrands of the form $\frac{1}{\sqrt{x^4+1}}$, $\frac{1}{x^2\sqrt{x^4+1}}$, $\frac{x^2}{(x^4+1)\sqrt{x^4+1}}$, $\frac{\sqrt{x^4+1}}{(x^2\pm 1)^2}$, and $\frac{(x^2\pm 1)^2}{(x^2+2ax+a^2)\sqrt{x^4+1}}$ on the interval $(0, y)$.

Notation used: $\varepsilon = \arccos \frac{1-y^2}{1+y^2}$, $r = \frac{\sqrt{2}}{2}$.

$$1. \int_0^y \frac{dx}{\sqrt{x^4+1}} = \frac{1}{2} F(\varepsilon, r).$$

$$2. \int_0^y \frac{dx}{\sqrt{x(1+x^3)}} = \frac{1}{3^{1/4}} F\left(\arccos \frac{1+(1-\sqrt{3})y}{1+(1+\sqrt{3})y}, \frac{\sqrt{2+\sqrt{3}}}{2}\right), \quad y > 0.$$

$$3. \int_0^y \frac{dx}{\sqrt{x(1-x^3)}} = \frac{1}{3^{1/4}} F\left(\arccos \frac{1-(1+\sqrt{3})y}{1+(\sqrt{3}-1)y}, \frac{\sqrt{2-\sqrt{3}}}{2}\right), \quad 0 < y \leq 1.$$
