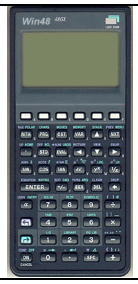
Program Version	Creation Date	State & City	Region & Country	Calculator	ROM Version
1.00	06/19/2002	NEUQUEN	Patagonia ARGENTINA		HPHP48-R (HP-48G+)

Program Author : *Miguel Angel CAPORALINI HERK*
Contribute : *Luis MILIAN (Spain)*
Program Title
Chen's Equation for Friction Factor Calculus

Library Number	Checksum (CRC)	Bytes
L995	# 3F45h	1,691.00

I'm writing this program in UsrRPL Language and after create a Library (L995), wich perform calculations as follow :

Head of Program

0.Solve EQ.
1.Exit to Home

Data Entry

Rr — Relative Rugosity (ε/D)
Re — Reynolds Number (N_{Re})

Result :

F — Factor Friction (¦)

The equation is :

$$\frac{1}{\sqrt{f}} = -4\log\left(\frac{\frac{\varepsilon}{D}}{3.7065} - \frac{5.0452}{N_{Re}}\log\left[\frac{1}{2.8257}\left(\frac{\varepsilon}{D}\right)^{1.1098} + \frac{5.8506}{N_{Re}0.8981}\right]\right)$$

Example 1

Rr : 0.00111
Re: 8627
f : 8.42829956362E-3 (0.008428)

Example 2

Rr : 0.024
Re: 61234
f : 0.013192141589 (0.013192)

*****

For any questions, please contact me to :
E-mail : m_caporalini_herk@hotmail.com