

FLIP ROSE® 2D (ver.7.2 Series, ver.7.4 Series and ver.8 Series) Program Function Comparison Chart (English version)

(As of July 2023)

Program		FLIP ROSE ver.7.2 Series (Latest version) FLIP ROSE ver.7.2.3_7	FLIP ROSE ver.7.4 Series (Latest version) FLIP ROSE ver.7.4.6	FLIP ROSE ver.8 Series (Latest version) FLIP ROSE ver.8.1.0
Features		(1) 2D dynamic effective stress analysis program (2) Undrained and partially drainage analyses (settlement due to dissipation of pore water pressure) (3) Incorporated "Asymmetric Modified Takeda Model" to nonlinear beam element (4) Incorporated forced displacement analysis function on steel members consideration of cross section force in the steel members induced by long term deformation of ground before earthquakes) (5) Incorporated Steady State of undrained shear of sand (consideration of flow failure phenomenon induced by liquefaction) (6) Incorporated Eigen value analysis function (allowed eigen frequency and eigen mode analysis of soil-structure systems) * FLIP ROSE Ver.7 series Support Service Members can download FLIP ROSE Ver.7.2 Series from Support Member website. * FLIP ROSE Ver.7 Series Academic Discount Version can run on one computer (Stand-alone license). * FLIP programs for User Members and Overseas Members can run on a maximum of ten computers connected through LAN.	In addition to FLIP ROSE ver. 7.2 Series (1)~(6), (7) Added the function of simulating pile skin friction to pile-soil interaction spring element (8) Added the function of simulating behavior of pile tip end bearing capacity by nonlinear spring element (9) Modified specification of $M\sim\phi$ relation for axial force dependency of trilinear model of nonlinear beam element (10) Added components of output elements and modified format of output data (11) Added the output function of flow velocity vector (Added in ver.7.3.1) (12) Added plane stress element to linear plane element (Added in ver.7.4.0) (13) Introduced bilinear model corresponding to Revised Technical Standards and Commentaries for Port and Harbour Facilities (2018) (IHT=2,IAX=5) (Added in ver.7.4.0) (14) Modified to output correspondence table of pore water element - soil element to file (#07) (Added in ver.7.4.0) (15) Bug-fix is applied on the fact that flow velocity vector file (#40) erroneously includes response data of elements other than pore water element (drained) (16) Fixed the bug in FLOW command from STAT command (17) Fixed the bug in INIT command in partially drained analysis (18) Updated the error treatment when the rounding error occurs in the routine for cocktail glass model element (19) Modified the file open function as measures for Intel compiler update * FLIP ROSE Ver.7 Series Academic Discount Version and Subscription Version can run on one computer. (Stand-alone license) * FLIP programs for User Members and Overseas Members can run on a maximum of ten computers connected through LAN.	In addition to FLIP ROSE ver.7.2 Series (1)~(6) and FLIP ROSE ver.7.4 Series (7)~(19), (20) Implemented cookie model for idealizing behavior of cohesive soil (21) Changed DBSW command related to the update method of stiffness matrix K used for computation of Rayleigh damping and element which considers Isotach damping in cookie model element (22) Allowed to consider void ratio dependency of coefficient of permeability in pore water element (drained) in conjunction with cookie model element (23) Modified the specification in FLIP ROSE ver.8.0.0 that cohesion c was proportional to p_n0 (initial value on normal consolidation curve) in cookie model element in consolidation settlement analysis under the conditions of simultaneous specification of overconsolidation and cohesion $C_a > 0$. (24) Allowed pile-soil interaction spring element applicable to cookie model element (25) Updated the error treatment when the rounding error occurs in the routine for cookie model element (26) Debugging output setting of linear plane element (27) Changed the name "qus" in cocktail glass model element and "qusa" in cookie model element to "Sus" and "Susa", respectively (28) Fixed a bug in cookie model element and introduced new input parameter $rpn0c$ so that the quasi-overconsolidation condition due to secondary consolidation (i.e. creep) can be specified * FLIP ROSE ver.8.0 Series are not available in Academic Discount Version and Subscription Version. * FLIP programs for User Members and Overseas Members can run on a maximum of ten computers connected through LAN.
		Element		Fluid element ○ Linear beam element ○ Linear plane element ○ Pore water element (undrained) ○ Joint element ○ Lateral ground element (Lateral viscous boundary) ○ Bottom ground element (Bottom viscous) ○ Fluid-structure interface element ○ Multi-spring model element ○ Linear spring element ○ Lumped mass element ○ Dashpot element ○ Nonlinear beam element Δ (※except for the function added in FLIP ROSE ver.7.3) ○ Nonlinear spring element Δ (※except for the function added in FLIP ROSE ver.7.3) ○ Pile-soil interaction spring element Δ (※except for the function added in FLIP ROSE ver.7.3) ○ Cocktail glass model element ○ Pore water element (drained) ○ Cookie model element ○ Nonlinear beam element (Asymmetric modified Takeda model) ○ User-defined nonlinear beam element ○ Plane stress element (Added to linear plane element) ○