

Program Function Comparison Chart of FLIP ROSE® 2D ver.7.2 Series and ver.7.4 Series

(As of August 2019)

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.7.4.3
Features		<p>(1) 2D dynamic effective stress analysis program</p> <p>(2) Undrained and partially drainage analyses (settlement due to dissipation of pore water pressure)</p> <p>(3) Incorporated "Asymmetric Modified Takeda Model" to nonlinear beam element</p> <p>(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)</p> <p>(5) Incorporated Steady State of undrained shear of sand (consideration of flow failure phenomenon induced by liquefaction)</p> <p>(6) Incorporated Eigen value analysis function (allowed eigen frequency and eigen mode analysis of soil-structure systems)</p> <p>* Overseas Members can download FLIP ROSE Ver.7.2 series from FLIP Consortium Overseas Member Site.</p> <p>* FLIP ROSE Ver.7 series Support Service Members can download FLIP ROSE Ver.7.2 Series from Support Service Site.</p> <p>* FLIP ROSE Ver.7 Series Academic Version can run on one computer (Stand-alone).</p> <p>* FLIP Consortium Overseas Members can choose the language for FLIP programs from either English or Japanese. The FLIP programs for Overseas Members can run on a maximum of ten computers connected through LAN.</p>	<p>In addition to FLIP ROSE ver. 7.2 Series (1)~(6),</p> <p>(7) Added the function of simulating pile skin friction to pile-soil interaction spring element</p> <p>(8) Added the function of simulating behavior of pile tip end bearing capacity by nonlinear spring element</p> <p>(9) Modified specification of $M\sim\phi$ relation for axial force dependency of trilinear model of nonlinear beam element</p> <p>(10) Added components of output elements and modified format of output data</p> <p>(11) Added the output function of flow velocity vector (Added in ver.7.3.1)</p> <p>(12) Added plane stress element to linear plane element (Added in ver.7.4.0)</p> <p>(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)</p> <p>(14) Modified to output correspondence table of pore water element - soil element to file (#07) (Added in ver.7.4.0)</p> <p>(15) Bugfix is applied on the fact that FLOW command introduced in FLIP ROSE (Ver.7.3.1) for output flow velocity vector erroneously include response data of other elements in flow velocity vector file (#40). (Added in ver.7.4.2)</p> <p>(16) FLIP ROSE ver.7.4.3 was made from FLIP ROSE ver.7.4.2 with bugfix in FLOW command.</p> <p>* FLIP ROSE Ver.7 Series Academic Version can run on one computer (Stand-alone).</p> <p>* FLIP Consortium Overseas Members can choose the language for FLIP programs from either English or Japanese. The programs for Overseas Members can run on a maximum of ten computers connected through LAN.</p>
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 boundary)	○	○
	Fluid-structure interface element	○	○
	Multi-spring model element	○	○
	Linear spring element	○	○
	Lumped mass element	○	○
	Dashpot element	○	○
	Nonlinear beam element	△(*except for the function added in FLIP ROSE ver.7.3)	○
	Nonlinear spring element	△(*except for the function added in FLIP ROSE ver.7.3)	○
	Pile-soil interaction spring element	△(*except for the function added in FLIP ROSE ver.7.3)	○
	Cocktail glass model element	○	○
	Pore water element (drained)	○	○
	Nonlinear beam element (Asymmetric modified Takeda model)	○	○
User-defined nonlinear beam element	×	×	
Plane stress element (Added to linear plane element)	×	○	