



SACS™ Comparison Chart

	SACS Offshore Structure	SACS Offshore Structure Advanced	SACS Offshore Structure Ultimate
SACS EXECUTIVE			
Launch interactive programs, manage general settings, and perform analyses.	◆	◆	◆
Manage project files and directories with ProjectWise.®	◆	◆	◆
PRECEDE			
Use structural wizard for automated generation of jacket and topside structures.	◆	◆	◆
Model structural elements, loads, and analysis options with automated capabilities.	◆	◆	◆
Visualize design code check, fatigue, and nonlinear analysis results.	◆	◆	◆
Generate meshes of non-tubular connections for SCF extraction.	◆	◆	◆
DATA GENERATOR			
Use smart text editor for SACS input files with syntax highlighting and line assistant.	◆	◆	◆
SEASTATE			
Perform automatic dead load generation of structural elements.		◆	◆
Automatically generate wind loads from design code profiles on modeled structural elements.		◆	◆
Perform automatic wave and current load generation on modeled elements from linear and nonlinear wave kinematic theories.			◆

SACS Comparison Chart

	SACS Offshore Structure	SACS Offshore Structure Advanced	SACS Offshore Structure Ultimate
SACS IV SOLVER			
Perform linear static elastic and P-delta analyses with geometric stiffness.	◆	◆	◆
Analyze beam, plate, shell, and solid finite elements.	◆	◆	◆
Include linear superelements for additional unmodeled stiffness elements and forces.	◆	◆	◆
Perform rigid body removal for statically indeterminate structures.	◆	◆	◆
POST			
Generate member design code checks per API RP 2A, AISC 360, ISO 19902, Eurocode 3, and more.	◆	◆	◆
Perform automatic hydrostatic collapse analysis of tubular elements.	◆	◆	◆
Generate plate panel buckling checks per DNV RP C201/C202 and ABS Buckling Guide.	◆	◆	◆
JOINT CAN			
Perform joint can design code checks per API RP 2A, ISO 19902, and more.			◆
Generate joint can strength checks based on brace capacity.			◆
Perform ultimate earthquake joint analysis per API RP 2A.			◆
DYNPAC			
Calculate dynamic mode shapes and natural frequencies from linear stiffness and mass models.		◆	◆
Reduce constrained degrees of freedom to user-defined retained degrees of freedom.		◆	◆
Perform automatic consistent mass generation of modeled structural elements, fluid added mass, and unmodeled items from user-defined forces.		◆	◆

SACS Comparison Chart

	SACS Offshore Structure	SACS Offshore Structure Advanced	SACS Offshore Structure Ultimate
TOW			
Calculate inertia forces on structure due to rigid body motion for linear static analysis.	◆	◆	◆
Define motion through accelerations, ship motion, or response amplitude operators.	◆	◆	◆
Perform automatic consistent mass generation of modeled structural elements and unmodeled items from user-defined forces.	◆	◆	◆
COMBINE			
Combine linear static and dynamic solutions with linear, SRSS, or CQC methods.	◆	◆	◆
SUPERELEMENT			
Generate linear superelements from modeled structures and forces or user-defined input.	◆	◆	◆
DYNAMIC SUPERELEMENT			
Generate dynamic superelements from modeled structures and forces.	◆	◆	◆