

COMPARISON

PRESSURE VESSELS MECHANICAL DESIGN - FEATURES COMPARISON				
The following table compares the features available in the following software programs for the mechanical design of Pressure Vessels:				
- MT-VESS/COMP by	Micro Techno			
- PVElite/Codecalc by	COADE Inc			
- COMPRESS by	Codeware			
Micro Techno always supplies to the MT-VESS purchasers also the MT-COMP program, allowing for:				
- Checking the performance of existing components under different design conditions (P, T, etc.)				
- Performing the Local Loads Analysis				
Producer:	COADE	CODEWARE	MICRO TECHNO	
Program:	PVElite	COMPRESS	MT-VESS/COMP	
PV Design Codes				
ASME VIII Div. 1 (USA)	YES(1)	YES(1)	YES(1)	
ASME VIII Div. 2 (USA)	YES(1)	YES(8)	NO	
ISPESL/VSR (ITALY)	NO	NO	YES(1)	
AD-MERKBLATT (GERMANY)	NO	NO	YES(1)	
PD5500 (U.K.)	YES(1)	NO	YES(4)	
EN13445 (European)	YES(1)	NO	NO(2)	
PED (European)	YES(1)	NO	YES(9)	
Stability Check - Wind Codes				
ANSI	NO	NO	YES	
ASCE 7-95	YES	YES	YES	
BSI CP3	NO	NO	YES	
CNR 1996	NO	NO	YES	
NEIGE ET VENT	NO	NO	YES	
UBC 1997	YES	YES	YES	
IS 875	YES	NO	NO	
NBC	YES	YES	NO	
USER	YES	YES	YES	
Stability Check - Seismic Codes				
ANSI 1982	NO	NO	YES	
ASCE 7-95	YES	YES	YES	
CNR 1986	NO	NO	YES	
PARASISMIQUE PS92	NO	NO	YES	
UBC 1997	YES	YES	YES	
NBC	YES	YES	NO	
IBC 2000	YES	YES	NO	
USER	YES	YES	YES	
Local Loads Analysis Codes				
WRC 107	YES	YES	YES	
WRC 297	YES	NO	YES	
BS5500	YES	NO	YES	
HEI	NO	NO	YES	
Other Codes				
Fitness-for-Service	API RP 579	YES	NO	

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Materials				
ASTM (USA)		YES	YES	YES
VACUUM CHARTS		YES	YES	YES
DIN (GERMANY)		NO	NO	NO(6)
UNI (ITALY)		NO	NO	YES
EURO		YES	NO	YES
Material Classes		NO	NO	YES
Internal Corrosion		YES	YES	YES
External Corrosion		NO	NO	YES
Internal lining		NO	NO	YES
External lining		YES	YES	YES
International Standards				
ANSI/ASA		YES	YES	YES
ISO		NO	NO	YES
DIN		NO	NO	YES
UNI		NO	NO	YES
Components Calculations & Heat Exchangers				
Bundled with the PV software		Codecalc	Internal	MT-COMP
Codes Allowed for Components Analysis		ASME VIII.1	ASME VIII.1	As in MT-VESS
Heat Exchanger Calculations		YES	NO(8)	YES(12)(13)
Components allowed (Internal Pressure)				
Element Types				
- Dished heads		YES	YES	YES
- Cylindrical shells		YES	YES	YES
- Conical sections		YES	YES	YES
- Flat heads (welded)		YES	YES	YES
- Flanged flat heads		NO	YES	YES
Nozzles				
. Radial		YES	YES	YES
. Offset, Inclined		YES	YES	YES
. Welding Check		YES	YES	YES
. Analysis for non isolated Nozzles		YES	YES	YES
Girth Flanges				
. Rigidity Check		YES	YES	YES
. Gasket minimum width		YES	YES	YES
. Corrosion gasket face		NO	NO	YES
Additional Components				
. Stiffening rings		YES	YES	YES
. Platforms, Ladders, etc.		YES	YES	YES
. Internals (Trays, packing, grids, etc)		YES	YES	YES
Supports				
- Saddles		YES	YES	YES
- Brackets		YES	YES	YES
- Lugs		YES	YES	YES
- Skirt		YES	YES	YES
External Pressure				
		YES	YES	YES
Calculation Mode				
Design		NO(10)	NO(10)	YES
Check		YES	YES	NO(3)

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Support's Stability Check		YES	YES	YES
	Combined Load by:			
	weight	YES	YES	YES
	wind (several codes)	YES	YES	YES
	hearquake (several codes)	YES	YES	YES
	user defined	YES	YES	YES
Other Calculations				
	Volume, weight	YES	YES	YES
	Costing	NO	NO(8)	NO(7)
	Centre of gravity	YES	YES	YES
	Lifting lugs	YES	?	NO
	Max Allowed Working Pressure (MAWP)	YES	YES	YES(12)
Units of measure				
	Brithish	YES	YES	YES
	S.I.	YES	YES	YES
	User defined	YES	?	YES
Output Language				
	English	YES	YES	YES
	Italian	NO	NO	YES
	French	NO	NO	NO(5)
	German	NO	NO	NO(5)
	Spanish	NO	NO	NO(5)
Output				
	ASCII report	YES	YES(11)	YES
	Audit Reports	YES	YES(11)	YES
	Bill of material	Limited	NO(8)	YES(7)
Graphics & 2D Drawings				
	3D Graphics on screen	YES	YES	NO
	2D Drawings			
	- General data	NO	NO	YES
	- Scaled Setting Plan	YES	NO(8)	YES
	- Vessel Assembly & Details	NO	NO(8)	YES
	- Fabrication drawings	NO	NO(8)	NO
	- Graphic Format	DXF	DXF(8)	DXF
	- Graphic Quality	Poor	Good(8)	Good

