

Rapid Design and Detailing

AMPreVA feature based environment enables the rapid configuration and detailing of pressure vessels automating the generation of:

- 3D detailed geometry models
- · Elevation, fabrication, and assembly drawings
- Production component lists, and purchased bill of material
- Layout patterns for shell and head openings
- End cuts for nozzles and legs
- Production and assembly operation sequences
- Detailed production cost estimation
- Finite Element Analysis (FEA) model and results

Export of drawings to AutoCAD® and other CAD systems, bill of material to business applications, and import of design calculations from COMPRESS® and PVElite® are supported.

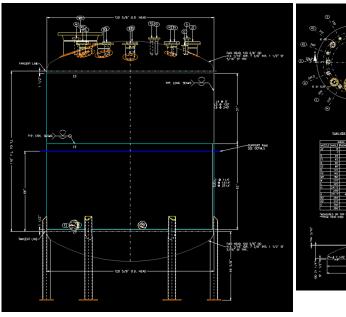
Easy to use Graphical User Interface

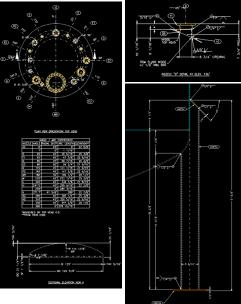
AMPreVA supports a fully interactive, easy to use Graphical User Interface customized for rapid modeling of pressure vessel components and features.

The configuration and layout of the shell, heads, support structure, nozzles, manways, and other internal as well as external features and appurtenances is facilitated through intuitive menus.

Fabrication details for shell courses, plate sizes, edge preparations, weld types, and other production details are quickly and easily specified.

A complete vessel design can be configured and detailed in less than two hours including the automatic generation of drawings, bill of material, cost estimation, and all other reports.





Vessel Designs and Configurations

AMPreVA supports a wide range of vessel designs and configurations

- Horizontal vessels with multi sectional shells with different diameters and concentric or eccentric transitional sections. Various supports including saddles and legs are provided.
- Vertical vessels with legs, skirts, or support rings.
- Columns with multi sectional shells with different diameters and transitional sections.
- Vessels with half pipe jackets on heads and shells.

Ladders and Platforms

attachments

AMPreVA supports configuration and detailing of multi sectional circular as well as square platforms. Integrated ladders with cages, climbing devices, safety cables, gates, and removable start ladder can be created and developed from the custom interface and can be configured with bolted as well as welded clip

Elevation, assembly, and manufacturing component detailed drawings for the platforms and ladders are fully automated and created to-scale.

The generation of the production components list and material purchase list for manufacturing is also supported.

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G ASSY	Y M	ARK ASSY DESCRIPTION	LENGTH	SPEC REMARKS	WEIGHT	NO.
		TOP HEAD				
01		F&D HEAD 120" ID 7 3/8" IKR 1 1/2" SF 5/16" SF THK.		SA-240 304	[1184]	8
		BOTTOM HEAD				
02		F&D HEAD 120" ID 73/8" IKR 11/2" SF 5/16" SF THK.		SA-240 304	[1252.6]	8
		NAMEPLATE				
		STANDARD ASME NAMEPLATE		SA-204-304L	[0]	8
		CHANNEL 1/8" x 2" x 6 3/8"	4"	SA-204-304L	[1.21]	8
		NOZZLE F2			[26.43]	12A
	1	1 3" SCH STD PIPE	65/16"	SA-312 TP304 WLD 8	2.23	
	1	2 3" 150# R.F. W.N. FLANGE, 3 1/16" I.D.		SA-182 F304 <= 5	11.43	
	1	3 3" 150# R.F. BLIND FLANGE		SA-182 F304 <= 5	11.43	
	4	4 5/8" UNC HEX. HD. BOLTS	3"	SA-193 B7 BOLT <= 2		
		WITH 5/8" UNC HVY. HEX. NUTS				
		NOZZLET			[14.13]	12A
	1	5 2" SCH STD PIPE	6.5/16"	SA-312 TP304 WLD 8		
	1	6 2" 150# R.F. W.N. FLANGE, 2 1/16" I.D.		SA-182 F304 <= 5	6.05	
	1	7 2" 150# R.F. BLIND FLANGE		SA-182 F304 <= 5	5.67	
	4	8 5/8" UNC HEX. HD. BOLTS	2.3/4"	SA-193 B7 BOLT <= 2		
		WITH 5/8" UNC HVY, HEX, NUTS			2.40	
		NOZZLE D			[55.1]	12A
	- 1	9 8" SCH STD PIPE	10.1/16	SA-312 TP304 WLD 8		
	1	10 1/4" PL, x 12 3/4" x 13 1/2"		SA-240 304	4.97	
	1	11 8" 150# R.F. W.N. FLANGE, 8" I.D.		SA-182 F304 <= 5	40.41	
		NOZZIE C		34-2021304 (-3	[3.04]	12A
	- 1	12 1" SCH STD PIPE	6.7/9*	SA-312 TP304 WLD 8		140
	1	13 1" 150# R.F. W.N. FLANGE, 1 1/16" I.D.	01/0	SA-182 F304 <= 5	2.42	
		NOZZLE E2		34-2021304 (= 3	[39.37]	128
	1	14 6" SCH STD PIPE	121/16	SA-312 TP304 WLD 8		120
	1	15 1/4" PL × 10 3/4" × 11 1/2"	12 1/10	SA-240 304	4.09	
	- 1	16 6" 150# R.F. W.N. FLANGE, 6 1/16" I.D.		SA-182 F304 <= 5	24.44	
		NOZZLE F1		3A-102 F304 C# 3	[27.55]	128
		17 3" SCH STD PIPE	0.00/00	SA-312 TP304 WLD 8		128
			0 // 0			
	1					
	1					
	4		3.	SA-193 B7 BOLT <= 2	1.34	
					for each	
						128
	1		91/16"			
	1					
	1					
	1					
	8	25 5/8" UNC HEX. HD. BOLTS	3"	SA-193 B7 BOLT <= 2	2.67	
		1 1 4 1 1 1 1 1 1 8	1 18 "Y SOME A. WA. FAMOR, 1 2/16" LD. 1 19 "Y SOME F. RUID PARKE 4 20 5/6" UNC HOX. HO. BOLTS WITH 5/6" UNC HOX. HO. BOLTS NOTICE 12 1 21 4" SONISTIPME 1 22 14" PL. H. S 5/6" S** 1 23 14" UNC HOX. HO. BOLTS 1 24 5 SONISTIPME 1 25 14" UNC H. S WA. FAMOR, 4" LD. 1 24 5 SONISTIPME 1 24 15 SONISTIPME 1 25 14" UNC H. S WA. FAMOR, 4" LD. 1 24 5 SONISTIPME A. BUILD FAMOR	1 19 "150F R.F. W.N. FLANGE, 3 / 1/6" I.O. 1 19 "3" 150F R.F. RIMOF LOR. 100 BOXTS 4 20 5/6" UNIV. RIV. RIV. BOXTS WITH 5/6" UNIV. RIV. RIV. ST. S NOZZEL RIV. 1 21 4" 5/6 STST PIPE 1 22 1/4" P.L. R.S. 5/6" 1" 2 12 4" 150F R.F. W.N. FLANGE, 6" 1.O. 1 24 4" 150F R.F. R.M. FLANGE 8 25 5/6" (WIN. RE.R. M.B. BOXTS) 3" 3"	1 18 1° 1598 F.R. WAN FLANDE, 3 1/18° LD. 58-182 F.500 € 55 18 18 1° 1598 F.R. BUND FLAND F. S.	1 18 17 100 REF, NV, RANKOL, 13/10° LD. 58-129 704 0-5 14.40 11 19 17 100 REF, RAND PAUL PAUL PAUL PAUL PAUL PAUL PAUL PAUL

Internal and External Appurtenances

AMPreVA supports a wide range of appurtenance features and configurations

- Internal components including tray rings, baffles, vortex breakers, and other features
- External components including lugs, clips, and vacuum rings
- Manways attached to shells and heads with optional davit arms, hinges, and handles
- Couplings, nozzles with flanges, elbows, reinforcement pads, and other attachments and configurations

Layout Fabrication Drawings and Reports

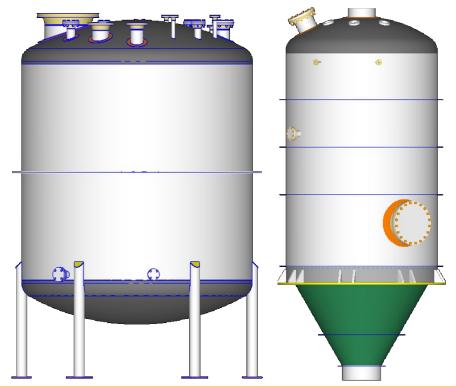
The flat roll out of shell cylinders and transitions with opening cutouts, weld seams, plate dimensions, and other fabrication details are provided.

The templates for manual cutouts of shells and heads opening, nozzle end cuts, and reinforcement pad flat patterns are supported. Output for NC machines is also supported.

The generation of shell weld map details and quality control tracking tables are supported.

Detailed assembly and fabrication drawings for shell components, appurtenances, ladders, platforms, and any other attachments are supported.

3D geometry, drawings, bill of material, weights, and cost data can be edited within **AMPreVA** or exported.



Pressure Vessel Rapid Configuration and Detailing

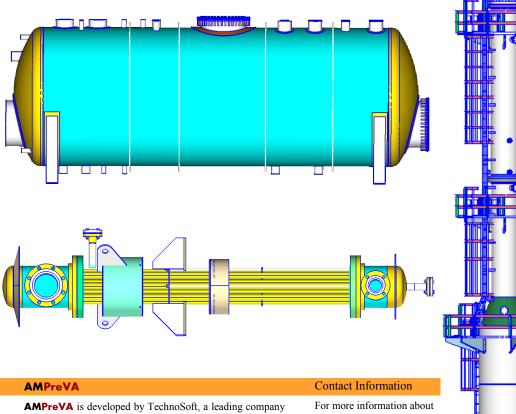
From configuration and design to 3D geometry, detailed bill of material, purchase list, cost calculation, and to-scale fabrication and layout drawings, in two hours.

Within minutes design changes can be made to modify, add, or delete features. The 3D geometry, drawings, bill of materials, shell roll out plate cut data, and cost reports are automatically updated.

Custom and easy to use graphical interface. **AMPreVA** can be mastered in two days of training.







AMPreVA is developed by TechnoSoft, a leading company in Knowledge Based Engineering. For the past 20 years TechnoSoft has successfully deployed engineering software applications in various industries ranging from aerospace to automotive and capital equipment.

For field erected and shop built tank design and detailing to API 650, API 620, AWWA, and UL142 standards refer to **AMETank**, a TechnoSoft product.

For more information about **AMPreVA** contact: **TECHNOSOFT** 11180 Reed Hartman Hwy. Cincinnati, OH 45242

Phone: 1-513-985-9877 AMPreVA@technosoft.com www.technosoft.com

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