

WAGNER

ENTERPRISE, INC.

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www.wagnerenterprise.com 

WE'VE GOT THE TANKS

Wagner Enterprises makes shopping for tank supplies and custom manufacturing easy, fast, and comprehensive. Our team of experts will help you get the right tank, mixer, or liner for your application, saving you time and guaranteeing quality and material compatibility.



WAGNER AT A GLANCE

Find all your industrial tanks, mixers, and corrosion resistance products in one place.

With Wagner Enterprise, choose the materials, structural setup, and project specifications, and our team of experts will provide you with a customized configuration for your system's needs.

When you're ready to order an industrial storage tank, simply send your application details and we'll provide you with a quote that matches your needs and ensures the right tank design, safety measures, and security of your liquids.

- Liquid storage tanks for fiberglass, plastics, metals, and alloys
- Tank lining and coating options for every project
- Industrial mixer supplies for liquid blending, suspension and homogeneous dispersion of solids, or keeping the solids suspended in a consistent particle size
- Fiberglass fabrication and installation
- Custom configurations and quotes to determine suitable solutions for your project



OUR TEAM

Wagner Enterprise has years of experience in the corrosion industry and an invaluable team. When contacting Wagner Enterprise, you will always be welcomed with personal care as we match you to the tank, mixer, or lining that you need.

PRODUCT LINES

- .01 Industrial Tanks**
- .02 Industrial Mixers**
- .03 Tank Lining and Coating**
- .04 Custom Fabrication, On-site Repair, Tank Modification**



.01 INDUSTRIAL TANKS

Fiberglass Tanks

We represent one of the few remaining manufacturers in the United States who produce 65-degree helical wound fiberglass tanks. This type of tank allows for higher axial stress in comparison to normal practices. Chop hoop design can be offered upon request.

Our fiberglass tanks have a long lifespan, offer a safe working environment and reduce unnecessary expenses over time. These tanks are available with storage capacity ranging from five to 250,000 gallons. Our FRP tanks can be designed for both atmospheric and pressure/vacuum applications. All tanks are built to all ASTM standards and can be built in accordance with RTP-1 design.

Dual Laminate, Brine Tanks, Double Walled, and Heat Traced and Insulated

- Complete brine systems can be fabricated utilizing granulated, rock, or solar salt. Production volumes up to 66 GPM.
- Double walled tanks can be provided with interstitial space up to 150% of the inner tank capacity if required.
- All Wagner Enterprise tanks can be heat traced and insulated for maintaining the internal temperature that is desired in both indoor and outdoor applications. Using the temperature differential of product to ambient, our systems can be fully automated and delivered integral to the tank.

Metal Tanks

Wagner Enterprise can provide carbon steel, stainless steel, or alloy tanks of any configuration and pressure/vacuum rating. We can define and install any type of lining or coating on the interior & exterior of our vessels. These tanks can be built in accordance with UL, API, or ASME standards. All tanks can be shipped complete with any form of heat trace, jacketing, and insulation.

Plastic Tanks

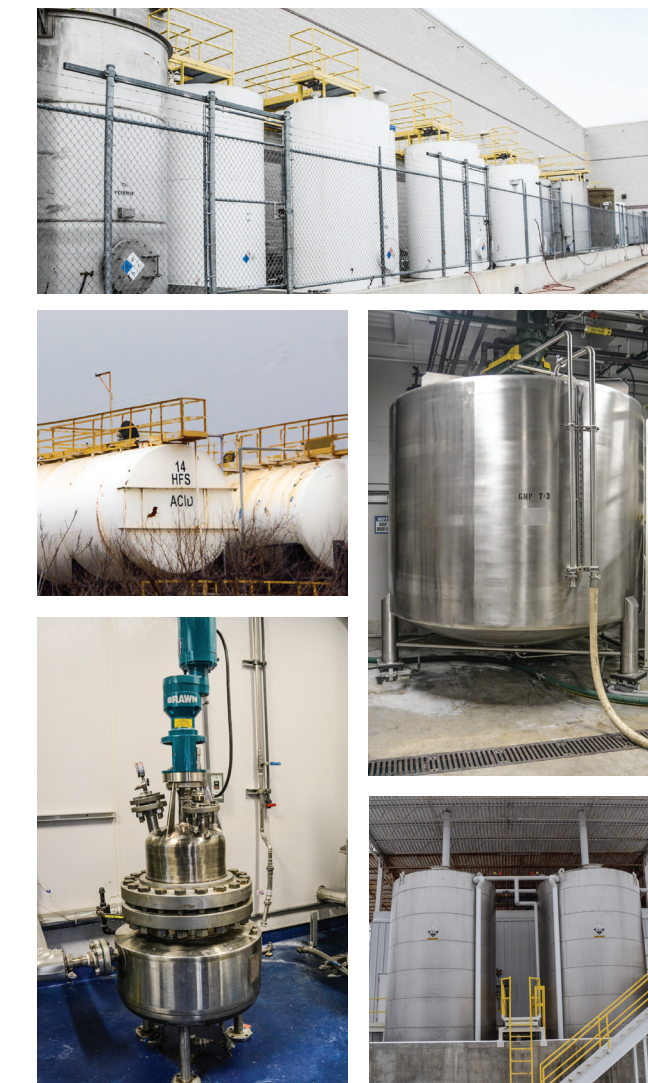
We can supply rotationally molded polyethylene tanks of any configuration and sizes that are available. Our polyethylene tanks are designed to ASTM standards with 600 PSI hoop stress at 100°F. We also supply welded polypropylene tanks of all configurations and can build these custom to your specifications.

Plastic tanks can be made to fit all configurations (round, rectangular, etc.)

Fiberglass Tanks



Metal Tanks



Plastic Tanks



.02 INDUSTRIAL MIXERS

For the last 25 years, Wagner Enterprise has been a mixer representative for Brawn Mixer out of Holland, Michigan.

We have become a leading industrial mixer supplier and manufacturer partner in chemical, automotive paint, food and pharmaceutical applications. Our knowledge of liquid storage tanks allows us to design the very best product for the mixer application and allows us to coordinate the design of both the tank and the mixer for ease of installation and proper mixing of your product.

Selecting the appropriate mixer for a specific application is a science. For five- to 100,000-gallon liquid storage tanks, the configuration and items required on the storage tank—such as baffles and mounting apparatuses—are critical for the performance of the mixer to obtain the desired results. Whether your application requires liquid to liquid blending, suspension and homogeneous dispersion of solids, or keeping the solids suspended in a consistent particle size, Wagner has the right mixer for you.

Materials Available	
For Mixer Shafts and Impellers	
Carbon Steel	Titanium
Stainless Steel	Alloy 20
Hastelloy	

Prop Styles	
Prop Styles include, but are not limited to:	
Turbine	
Marine	
Gate	
High Sheer	

Lined Wetted Parts	
Rubber	
Fiberglass Reinforced Epoxy and Vinyl Ester Lined	
Teflon	

Configurations	
Mounting Configurations include:	
Flange Mounted (Center flange with baffles, Off-center flange)	
Plate Mounted (Angled risers available when required)	
Clamp Mounted	
Cup-Plate Mounted	

Brawn mixers are fabricated to stand the test of time.

If your application requires, we can design your mixer to comply with FDA requirements. We also have the ability to coat our mixer housings with epoxies and vinyl esters for more corrosive environments. Please see more specific data for this on the next page. Our mixers incorporate a more durable design based on bearing size, shaft diameter, and rigidity in our mounting apparatuses at a competitive price.



.03 TANK LINING & COATING

Tank lining and coating options for every project.

Immersion and secondary containment linings and coatings for corrosion resistance.

Selecting the appropriate lining or coating for the given application is crucial to enhance its life expectancy. Using our 30+ years of experience in the corrosion resistance industry, Wagner Enterprise will specify the correct tank lining system to be used for your project. We'll also provide you with options for good, better and best alternative products in regards to cost saving.

The installation of these materials is equally as important. We provide three competitive installers with at least five years of proven experience in any location throughout the world.

Ceilcote is a worldwide producer of lining and coating materials. Wagner Enterprise has been a Ceilcote representative and distributor since the company was first established in 1982.

COMPONENTS WE PROVIDE

Vinyl Ester	This material is available in thin-mil and high-build spray-applied options. Single coats are offered in a range of six to 40 mils. Vinyl ester is excellent for high-corrosion service, including acid resistance and high-temperature applications. Options for abrasion resistant and Low Surface Energy (LSE) coatings are also available.
Epoxy	This material is available in thin-mil and high-build spray-applied options. Single coats are offered in a rage of six to 40 mils. Epoxy's excellent bond strength allows for application on unprepared surfaces and those that are more difficult to prepare. It is resistant to most basic solutions, such as sodium hydroxide and extremely diluted acids. Novalac epoxy is predominately used for sulfuric acid storage and secondary containment of sulfuric acid (0%-98% concentration). Low Surface Energy (LSE) coatings are also available.
Rubber	Many types of rubber linings can be selected based off of abrasion, temperature, and chemical resistance. Rubber is both flexible and durable when applied correctly. These linings can be applied to metal tanks as well as mixer shafts and impellers when deemed necessary.
Glass Mat Reinforced Lining	Excellent for secondary containment and immersion service tank lining. Glass mat reinforcement allows for higher structural integrity, increased temperature limitations, longer service life, and provides an extra layer(s) of corrosion resistance between the substrate and top coat. Glass mat reinforced linings also have crack bridging capabilities on concrete. All of Ceilcote's glass mat reinforced linings have a trowel-applied base coat for increased permeation resistance, in comparison to thin-mil coatings. They also absorb deviations in the coefficients of expansion and contraction between the substrate and the mat reinforcement.
Dual Laminate Plastics	Dual-laminate linings are used when plastic materials, such as resinous fiberglass, polyethylene, and rubber cannot be utilized due to temperature, chemical resistance, or abrasion. These applications involve a fiberglass exterior for structural integrity with a heavy duty plastic interior lining to withstand extreme services. They can be utilized in both atmospheric and pressurized applications, and can be laminated with PTFE (Teflon), ETFE (Tefzel), ECTFE (Halar), PVDF (Kynar), PFA, FEP, PolyPro, HDPE, CPVC, and PVC.

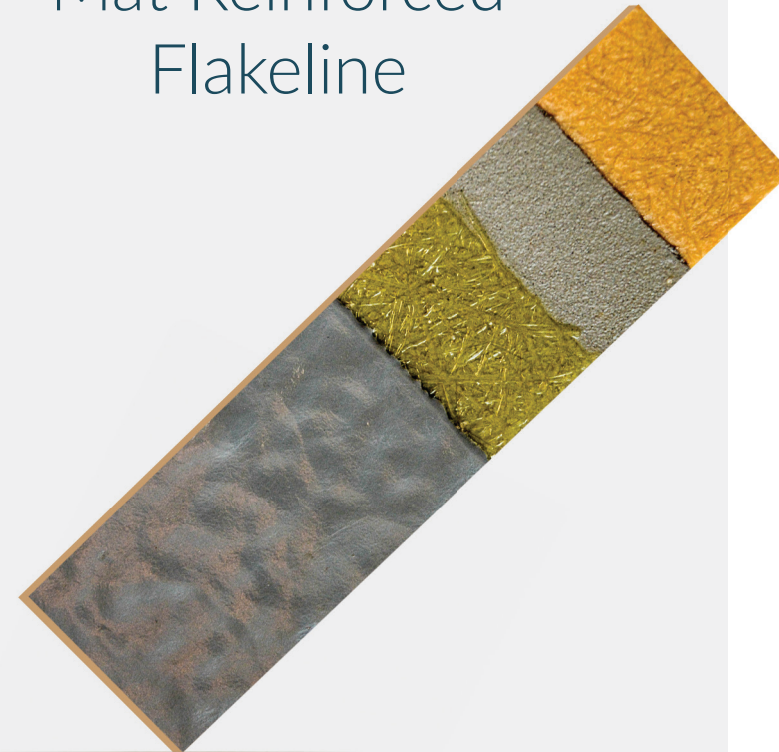
.03 TANK LINING & COATING

Flakeline



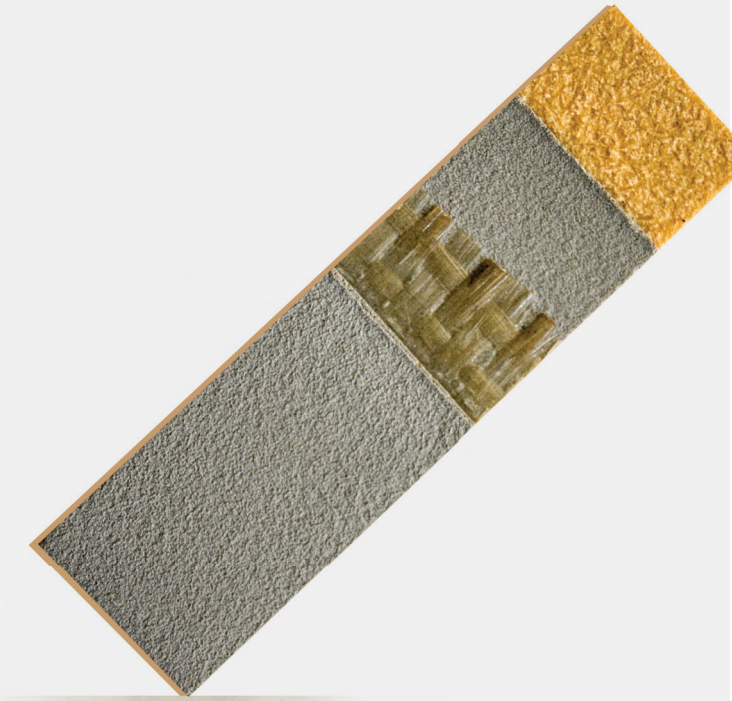
Series of linings and coatings which are reinforced with laminar, micron-thick inert flakes that overlap in multiple layers forming a barrier to permeation and extending the service life of the protective system.

Mat Reinforced
Flakeline



Series of lining and flooring products capable of handling a wide range of chemical resistance requirements while bridging cracks up to 25 mils. The trowel-applied base coat reduces permeation while the mat reinforcement reduces the coefficient of expansion and provides structural support for the entire system. Flake reinforced topcoat provides broad chemical resistance with extremely low permeation.

Coroline, Ceilcrete



These products consist of a trowel-applied base coat, a layer of glass or synthetic woven cloth and a trowelled topcoat. The filled topcoat and base coat reduce permeation and the coefficient of expansion. The layer of woven cloth improves overall physical properties. In addition to excellent chemical resistance to a wide variety of chemicals, the entire system provides abrasion and impact resistance.

Lining 74, Lining 652



Lining 74/652 is the most advanced glass mat reinforced lining system produced today. This system incorporates a trowel-applied base coat followed by multiple layers of numerous types of glass reinforcement with a resin rich top coat for superior chemical and temperature resistance.

.04 CUSTOM FABRICATION

ON-SITE REPAIR, TANK MODIFICATION



Custom fiberglass fabrication, modification, and installation to accommodate your facility needs.

Our experienced fabricators have the industry know how to produce & maintain all things fiberglass.

All custom fabrication, installations, and modifications are conducted following ASTM standards for fiberglass and all on-site work is performed by confined space certified personnel. Custom fiberglass components & modifications include but are not limited to:

- Pipe & duct
- Tank relining
- Stair, ladder, & rail assemblies
- All fitting and flanged components
- All internal and external components such as manways, brackets, internal baffles, and downtubes

TANK SERVICES

Tank repairs and inspections to assure that your tanks are certified for use.

From design to installation and repairs, Wagner Enterprise has become a reliable source for tank services and inspection over the last 30 years. We provide a full range of services for all fiberglass, steel and lined tanks.

Repairs

- Removal & installation of flanges for all mentioned tank types.
- Removal & installation of manways for all mentioned tank types.
- Repair, strip & reline of damaged lining section.
- Repair damaged interior and exterior of fiberglass tanks.
- Reline existing fiberglass tank if inspected and structurally sound.



Inspections

- Visual inspection of the exterior and interior of fiberglass tank.
- Tank wall cutout (if required) on fiberglass tank to inspect entire laminate of the vessel.
- Ultrasonic thickness testing of carbon and stainless steel tanks, which allow you to compare the actual thickness versus the thickness as originally built.
- Spark or sponge testing of existing lining.
- Visual inspection of welds on all polypropylene, PE and steel tanks.
- On-site professional engineer who will certify your tank installation as required.
- After inspection of your tank, you will receive a letter stating the results and our recommendation on any repairs or future inspections that may be required.

PE Stamping & Certifications

- Profession Engineer (PE) available for approval upon request
- A PE stamp can be provided on all fiberglass and metal tanks to meet specified requirements
- ASME, UL, ASTM certifications can be provided and labeled on your storage tank as required
- RTP-1 design by rule

Variables Needed to Quote

Tanks

Configuration	Heat exchanger (Y/N)
Product or mixture	Mixer (Y/N)
Concentration(s)	Mixer mounting method
Specific gravity	Outdoor/Indoor
Temperature	Fittings/Accessories (flanges, manways, level sensors, ladder/railing)
Pressure/Vacuum	Freight to location (city/state or zip code)

Mixers

Tank dimensions	Solid content
Tank configuration	Particle size or settling rate
Mounting method	Viscosity
Tank Baffles (Y/N)	Specific gravity
Baffle quantity, width, length	Temperature
Product or mixture	Pressure/Vacuum
Concentration(s)	Freight to location (city/state or zip code)

Linings

Substrate (i.e. steel, concrete)	Concentration(s)
Expected traffic or abrasion	Temperature
Product or mixture	Pressure/Vacuum

Heat Exchangers

Medium used to heat/cool (i.e. liquid, steam, electric)	Entering product temperature
Pressure	Expected final product temperature
Ambient temperature	Time available to meet final product temperature
	Btu/hr generated if exotherming

CONFIGURATIONS & VARIABLES FOR DESIGN

Configurations by Product Line

Tanks

Rectangular or Cylindrical
Vertical or Horizontal
Tops: (Open, Flat, Dome, Slight Cone)
Bottoms (Flat, Slight/Steep Cone, Dome, Internal/External Slope)
Double Walled
Heat traced & Insulated
Top handrail or OSHA compliant skirt

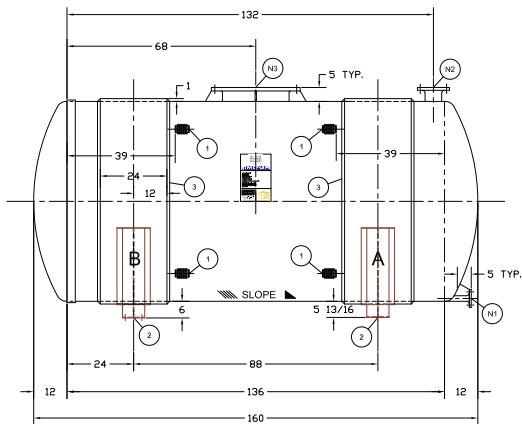
Mixers

Top or side entering
Mount styles (Plate mount, Flange mount, Clamp mount, Cup plate mount, Plate mounted angle risers)
Custom impellers upon request

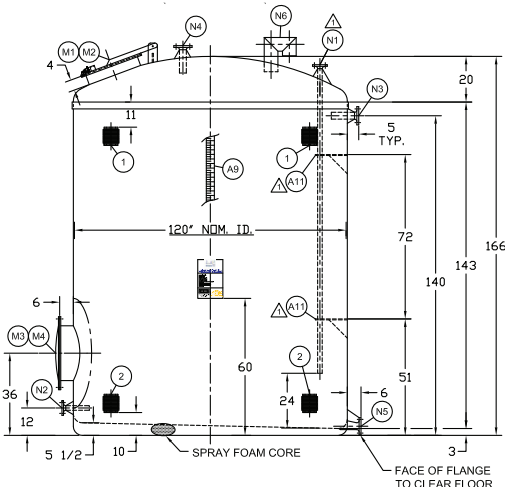
Heat Exchangers for Storage Vessel

Electric heat panel
Half round pipe
Dimpled jacket
Internal metal coil or panel

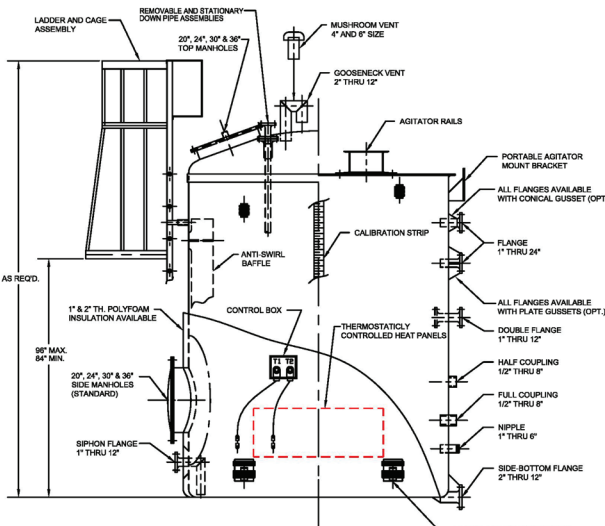
CONFIGURATION DRAWINGS



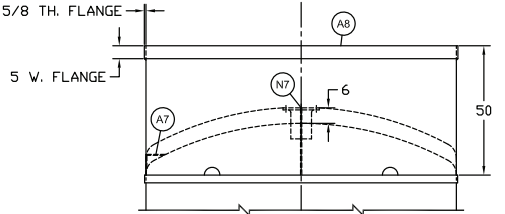
Horizontal Design



Internally Sloped Bottom with Internal Down Tube

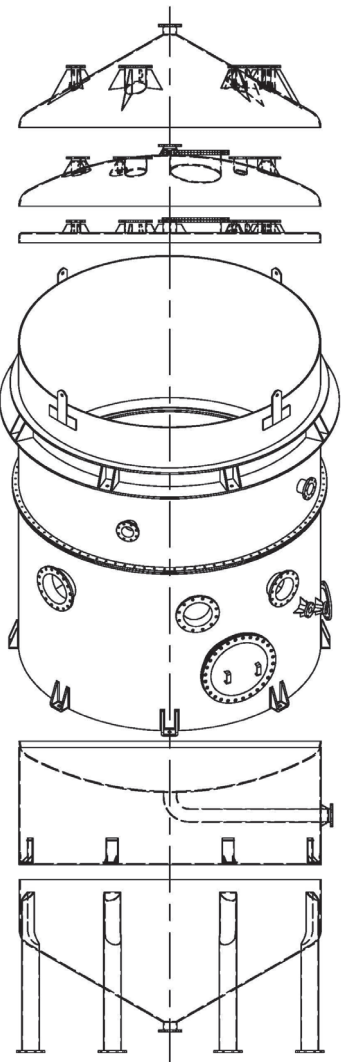


Fitting/Accessory Options Design



OSHA Compliant Fiberglass Skirt Handrail

Note: Structural handrails can be provided upon request.



All in one Design

DIMENSIONS AND CAPACITIES

WAGNER
ENTERPRISE, INC.

Diameter		Area square feet	Gallons per in. of depth	Gallons per foot of depth	Diameter		Area square feet	Gallons per in. of depth	Gallons per foot of depth	Diameter		Area square feet	Gallons per in. of depth	Gallons per foot of depth
ft.	in.				ft.	in.				ft.	in.			
1	0	.785	.490	5.87	4	4	14.748	9.194	110.32	11	0	95.03	59.242	710.90
1	1	.922	.575	6.89	4	5	15.321	9.551	114.61	11	3	99.40	61.965	743.58
1	2	1.069	.666	8.00	4	6	15.90	9.914	118.87	11	6	103.87	64.750	776.99
1	3	1.227	.765	9.18	4	7	16.50	10.285	123.42	11	9	108.43	67.595	811.14
1	4	1.396	.870	10.44	4	8	17.10	10.662	127.95	12	0	113.10	70.502	846.03
1	5	1.576	.983	11.79	4	9	17.72	11.047	132.56	12	3	117.86	73.461	881.65
1	6	1.767	1.102	13.22	4	10	18.35	11.438	137.25	12	6	122.72	76.500	918.00
1	7	1.969	1.227	14.73	4	11	18.99	11.835	142.02	12	9	127.68	79.591	955.09
1	8	2.182	1.360	16.32	5	0	19.63	12.240	146.88	13	0	132.73	82.742	992.91
1	9	2.405	1.499	17.99	5	1	20.29	12.651	151.82	13	3	137.89	85.955	1031.5
1	10	2.640	1.646	19.75	5	2	20.97	13.070	156.83	13	6	143.14	89.230	1070.8
1	11	2.885	1.799	21.58	5	3	21.65	13.495	161.93	13	9	148.49	92.565	1110.8
2	0	3.142	1.958	23.50	5	4	22.34	13.926	167.12	14	0	153.94	95.961	1151.5
2	1	3.409	2.125	25.50	5	5	23.04	14.365	172.38	14	3	159.48	99.419	1193.0
2	2	3.687	2.298	27.58	5	6	23.76	14.810	177.72	14	6	165.13	102.938	1235.3
2	3	3.976	2.479	29.74	5	7	24.48	15.263	183.15	14	9	170.87	106.519	1278.2
2	4	4.276	2.666	31.99	5	8	25.22	15.722	188.66	15	0	176.71	110.160	1321.9
2	5	4.587	2.859	34.31	5	9	25.97	16.187	194.25	15	3	182.65	113.863	1366.4
2	6	4.909	3.060	36.72	5	10	26.73	16.660	199.92	15	6	188.69	117.626	1411.5
2	7	5.241	3.267	39.21	5	11	27.49	17.139	205.67	15	9	194.83	121.451	1457.4
2	8	5.585	3.482	41.78	6	0	28.27	17.626	211.51	16	0	201.06	125.338	1504.1
2	9	5.940	3.703	44.43	6	3	30.68	19.125	229.50	16	3	207.39	129.285	1551.4
2	10	6.305	3.930	47.16	6	6	33.18	20.851	248.23	16	6	213.82	133.294	1599.5
2	11	6.681	4.165	49.98	6	9	35.78	22.307	267.69	16	9	220.35	137.363	1648.4
3	0	7.069	4.406	52.88	7	0	38.48	23.990	287.88	17	0	226.98	141.494	1697.9
3	1	7.467	4.655	55.86	7	3	41.28	25.735	308.81	17	3	233.71	145.687	1748.2
3	2	7.876	4.910	58.92	7	6	44.18	27.540	330.48	17	6	240.53	149.940	1799.3
3	3	8.296	5.171	62.06	7	9	47.17	29.407	352.88	17	9	247.45	154.255	1851.1
3	4	8.727	5.440	65.28	8	0	50.27	31.334	376.01	18	0	254.47	158.630	1903.6
3	5	9.168	5.715	68.58	8	3	53.46	33.323	399.88	18	3	261.59	163.067	1956.8
3	6	9.621	5.998	71.97	8	6	56.75	35.374	424.48	18	6	268.80	167.566	2010.8
3	7	10.085	6.287	75.44	8	9	60.13	37.485	449.82	18	9	276.12	172.125	2065.5
3	8	10.559	6.582	78.99	9	0	63.62	39.658	475.89	19	0	283.53	176.746	2120.9
3	9	11.045	6.885	82.62	9	3	67.20	41.891	502.70	19	3	291.04	181.427	2177.1
3	10	11.541	7.194	86.33	9	6	70.88	44.186	530.24	19	6	298.65	186.170	2234.0
3	11	12.048	7.511	90.13	9	9	74.66	46.543	558.51	19	9	306.35	190.975	2291.7
4	0	12.566	7.833	94.00	10	0	78.54	48.960	587.52	20	0	314.16	195.840	2350.1
4	1	13.095	8.163	97.96	10	3	82.52	51.439	617.26	20	3	322.06	200.76	2409.2
4	2	13.635	8.500	102.00	10	6	86.59	53.978	647.74	20	6	330.06	205.76	2469.1
4	3	14.186	8.843	106.12	10	9	90.76	56.597	678.95	20	9	338.16	210.80	2529.6

EXAMPLE

20,000 Gallons required – 12' Diameter – 70.502 Gallons/Inch
 $20,000 \div 70.502 = 283.7$ inches of straight side

7.48 GAL./1 CU. FT. 1 GAL H₂O = 8.3453 #
 .0034 x D² x H (All in inches) = GAL. in a Cylinder
Areas: Circle = $3.14 \times R^2$ Cylinder = $3.14 \times D \times H$

R = ½ of Diameter **D** = Diameter **H** = Height



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