

Rotationally-molded tanks
for the semiconductor industry

PRODUCT CATALOG PFA TANKS

OPTIMIZE PROCESSES | MAXIMIZE YIELDS

Flanged Tanks

Non-Flanged Tanks

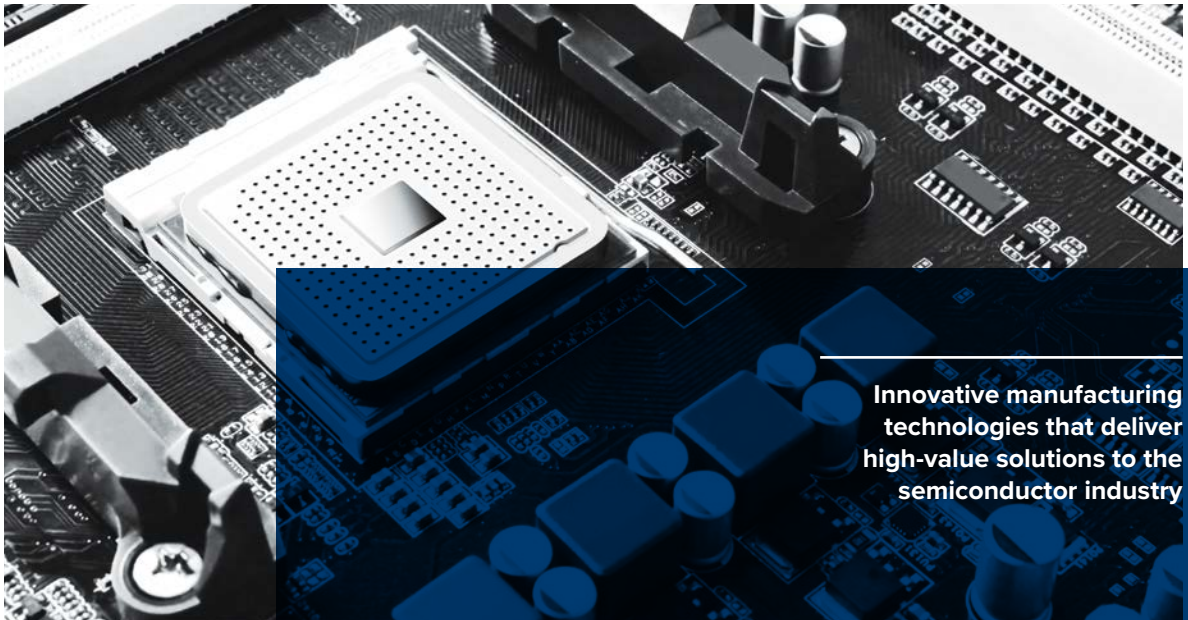
Cylindrical Tanks

Debubblers

Bottles

rmbproducts.com





Innovative manufacturing
technologies that deliver
high-value solutions to the
semiconductor industry

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ABOUT US

RMB Products is a leading supplier of engineered polymer products for critical applications in the semiconductor, bio-pharmaceutical, chemical processing and aerospace industries.

RMB Products was founded in 1963. Since 1978, we have specialized in helping customers lower capital cost and operating expenses through innovative manufacturing processes utilizing high-performance polymer materials. We have built a solid reputation on solving complex challenges requiring exacting standards.

Our rotational molding equipment allows us to manufacture tanks up to seven feet in diameter and twenty feet in length.

In addition to our standard molded tank line, we offer a line of fluoropolymer-lined pressure vessels and filter housings. These hybrid designs combine the benefits of plastic lining and metal construction to comply with ASME specifications. All wetted surfaces are plastic lined to prevent chemical-to-metal contact and are ideal for handling corrosive and ultra high-purity chemicals.

We offer a full range of vertically-integrated manufacturing services:

- Design and engineering
- Material compounding
- Fabrication of metal substrates
- High-tolerance machining
- Welding and assembly
- Custom finishing

WHAT IS PFA?

PFA is a copolymer having a tetrafluoroethylene backbone with a fully fluorinated alkoxy side chain. The familiar PTFE molecular structure accounts for its excellent mechanical, thermal, chemical and electrical properties. PFA is inert to virtually all chemicals except molten alkali metals, fluorine at elevated temperatures and certain complex halogenated compounds at elevated temperature and pressures. PFA is chemically resistant to strong minerals and oxidizing acids, bases, halogens, metal salt solutions, organic acids and anhydrides. Aromatic and aliphatic hydrocarbons, alcohols aldehydes, ketones, ethers, amines, esters, chlorinated compounds and common cleaning solvents have little affect on PFA. Tanks are available in 0.250" wall thickness but can be customized per end-user requirements.

ROTATIONAL MOLDING

Rotational molding, also known as roto-molding, uses a granular polymer resin that is placed inside the mold and all openings are covered. The mold is heated while simultaneously being rotated about two axes. The resin melts and flows evenly over the entire internal surface of the structure, bonding to the metal substrate. Once cooled, the result is a monolithic, corrosion and chemical-resistant tank that conforms to complex shapes and is virtually free of stresses.

MOLDING MATERIALS

Polymer selection and liner thickness are based on the chemical resistance properties and temperature requirements that the process requires. We work with technically-engineered fluoropolymers (PFA, ETFE, PVDF, and ECTFE), polypropylene and olefin (HDPE) to meet the specific requirements of each application.

PFA TANKS



SQUARE TANKS



PART # 3008835

L x W x H

in: 6.32 x 6.20 x 14.05

mm: 160.5 x 157.5 x 356.9

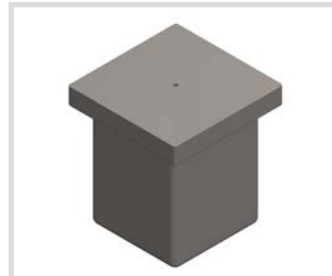


PART # 3008836

L x W x H

in: 7.14 x 7.14 x 6.96

mm: 181.4 x 181.4 x 176.8



PART # 3008837

L x W x H

in: 10.18 x 10.07 x 11.94

mm: 258.6 x 255.8 x 303.3



PART # 3008838

L x W x H

in: 11.88 x 11.82 x 11.70

mm: 301.8 x 300.2 x 297.2



PART # 3008839

L x W x H

in: 13.34 x 13.23 x 9.36

mm: 338.8 x 336.0 x 237.7

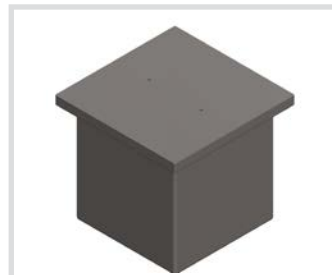


PART # 3008840

L x W x H

in: 17.97 x 17.97 x 11.82

mm: 202.7 x 202.7 x 335.5

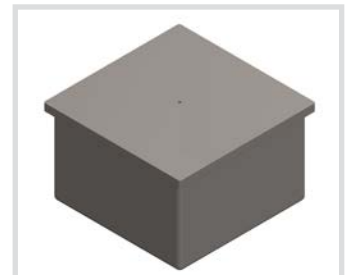


PART # 3008841

L x W x H

in: 18.02 x 17.97 x 17.79

mm: 457.7 x 456.4 x 451.9



PART # 3008842

L x W x H

in: 22.65 x 22.59 x 13.58

mm: 575.3 x 573.8 x 344.9

RECTANGULAR TANKS

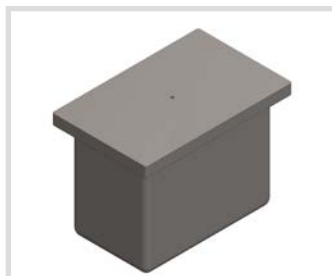


PART # 3008843

L x W x H

in: 9.31 x 7.26 x 9.07

mm: 236.5 x 184.4 x 230.4

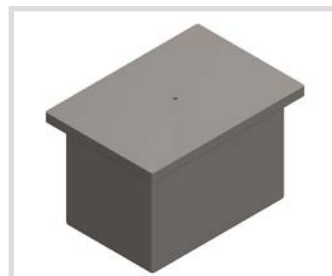


PART # 3008844

L x W x H

in: 17.09 x 10.12 x 12.88

mm: 434.1 x 257.1 x 327.2



PART # 3008845

L x W x H

in: 17.79 x 11.76 x 11.82

mm: 451.9 x 298.7 x 300.2



PART # 3008846

L x W x H

in: 20.01 x 13.97 x 16.15

mm: 508.3 x 354.8 x 410.2

NOTE: All dimensions are external and do not include flange features

RECTANGULAR TANKS



PART # 3008847

L x W x H

in: 23.64 x 11.94 x 17.73

mm: 600.5 x 303.3 x 450.3

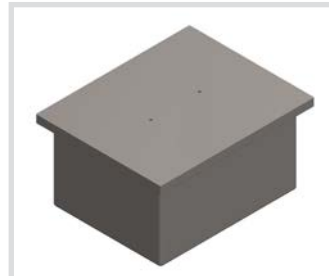


PART # 3008848

L x W x H

in: 24.05 x 10.30 x 25.46

mm: 610.9 x 261.6 x 646.7

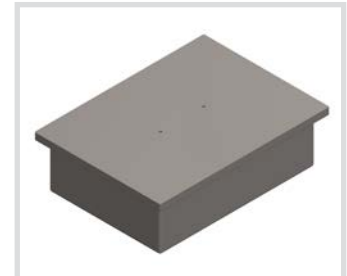


PART # 3008849

L x W x H

in: 24.46 x 19.31 x 12.70

mm: 621.3 x 490.5 x 322.6

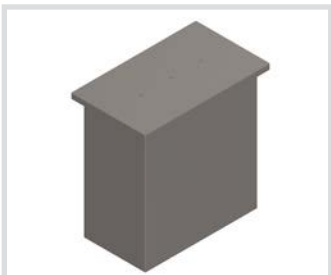


PART # 3008850

L x W x H

in: 27.68 x 19.84 x 7.90

mm: 703.1 x 503.9 x 200.7

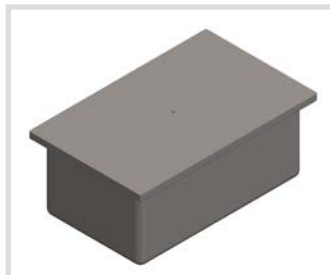


PART # 3008851

L x W x H

in: 27.97 x 15.39 x 29.96

mm: 710.4 x 390.9 x 761.0

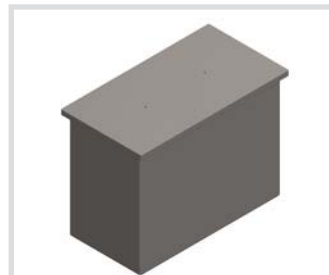


PART # 3008852

L x W x H

in: 28.91 x 17.21 x 11.60

mm: 734.3 x 437.1 x 294.6



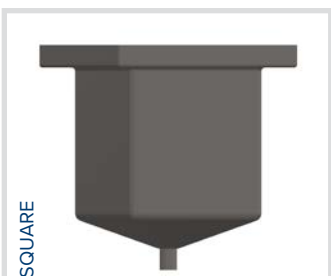
PART # 3008853

L x W x H

in: 35.70 x 18.14 x 26.33

mm: 906.8 x 460.8 x 668.8

FLANGED TANKS - SLOPED TO DRAIN



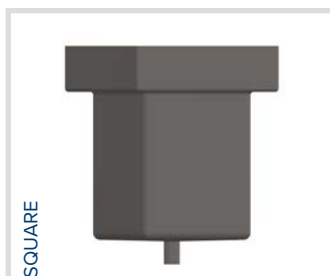
SQUARE

PART # 3008854

L x W x H

in: 7.90 x 7.90 x 9.83

mm: 200.7 x 200.7 x 249.7



SQUARE

PART # 3008855

L x W x H

in: 8.02 x 7.96 x 9.95

mm: 203.7 x 202.2 x 252.7



SQUARE

PART # 3008856

L x W x H

in: 11.70 x 11.65 x 15.68

mm: 297.2 x 295.9 x 398.3



RECTANGULAR

PART # 3008857

L x W x H

in: 8.90 x 8.37 x 11.46

mm: 226.1 x 212.6 x 291.1

NOTE: All dimensions are external and do not include flange features

PFA TANKS



NO FLANGE TANKS

FLAT BOTTOM

PART # 3008858

L x W x H

in: 9.01 x 8.90 x 12.31

mm: 228.9 x 226.1 x 312.7

SLOPED BOTTOM

PART # 3008859

L x W x H

in: 14.22 x 14.10 x 15.22

mm: 361.2 x 358.1 x 386.6

FLAT BOTTOM

PART # 3008860

L x W x H

in: 14.63 x 10.07 x 11.12

mm: 371.6 x 255.8 x 282.5

TAPERED

PART # 3008861

L x W x H

in: 11.18 x 7.20 x 5.38

mm: 284.0 x 182.9 x 136.7

SLOPED BOTTOM

PART # 3008862

L x W x H

in: 21.54 x 12.35 x 12.17

mm: 547.1 x 313.7 x 310.1



TESTING, INSPECTION AND QUALITY CONTROL

RMB Products adheres to a rigorous quality assurance program for our rotationally-molded solutions. We carry the following certifications:

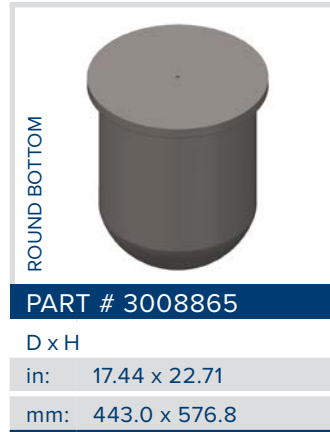
- AS9100 Revision C
- ASME U stamp
- ISO 9001:2008
- NBBI R stamp

Our testing capabilities include ultrasonic- and magnetic-thickness gauges to confirm wall thickness at point of manufacture. We perform mechanical, thermal, chemical, rheological, morphological and flammability testing as needed to ensure products meet dimensional and performance specifications.

Typical packaging per ISTA 3A; certification is available for an additional charge.

NOTE: All dimensions are external and do not include flange features

FLANGED CYLINDRICAL TANKS



ROTATIONAL MOLDING IS THE FAVORED PROCESS FOR MANUFACTURING TANKS, BOTTLES, VESSELS, CONTAINERS AND OTHER SEAMLESS HOLLOW PARTS™

DEBUBBLERS



NOTE: All dimensions are external and do not include flange features

QUALITY ASSURANCE

INSPECTION AND HANDLING

Prior to shipment, all tanks are cleaned and double bagged in our Class 10,000 clean room.

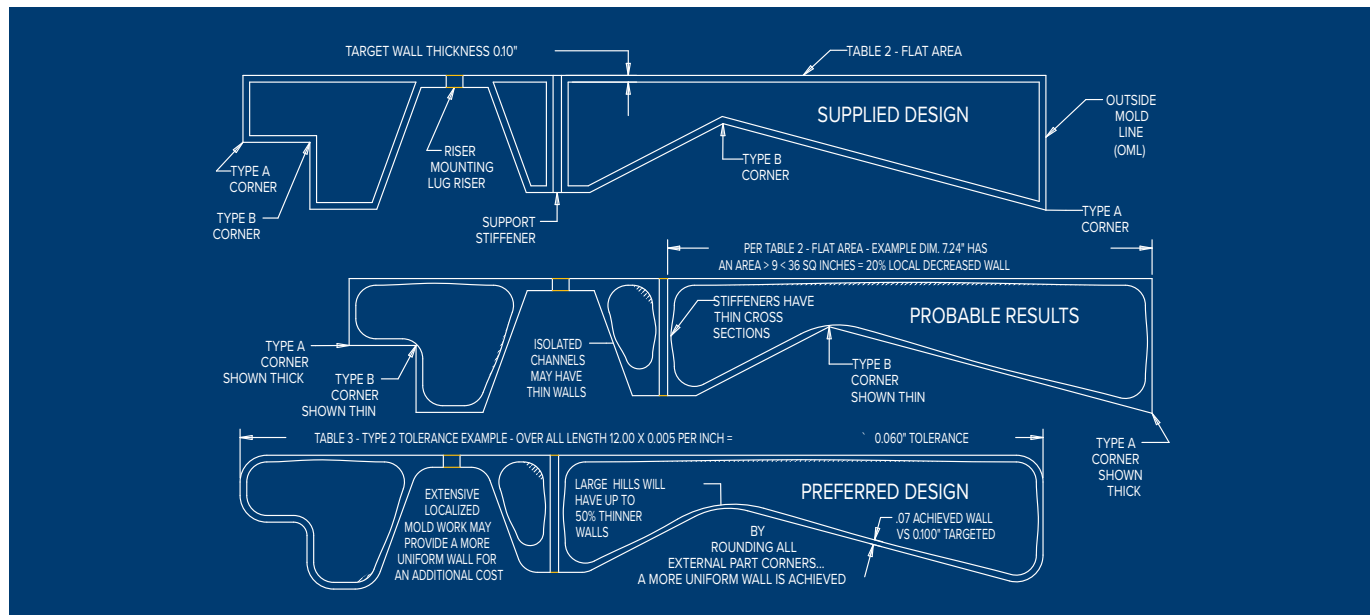
Slings, chains or lifting equipment should not be placed inside molded products or otherwise come in contact with the plastic. Extreme care must be taken at all times when loading, transporting and unloading products to and from a truck or trailer. Avoid storage in direct sunlight or other severe conditions. Storage under cover is recommended.

Contact RMB Products when handling and installing components in extreme temperatures. Do not handle tanks from any welded connection, fitting or feature. Failure to follow shipping, handling and storage instructions will void the product warranty.

RADII DEVIATION CHART (SEE DIAGRAM 1)				
MODELED RADII	TYPE A CORNER		TYPE B CORNER	
Outside Mold Line (OML) Corner "R" (radii) size	INSIDE mold corners may have an INCREASE of wall thickness at it cross section	EXAMPLE: Value of 0.100" wall thickness INCREASE defined on an inside corner	OUTSIDE mold corners may have a REDUCTION of wall thickness at its cross section	EXAMPLE: Value of 0.100" wall thickness REDUCTION defined on an outside corner
R < 1x Target Wall	+ 5x	0.50" probable wall	- 80%	0.02" probable wall
R < 1x Target Wall	+ 4x	0.40" probable wall	- 60%	0.04" probable wall
R < 2x Target Wall	+ 3x	0.30" probable wall	- 40%	0.06" probable wall
R < 3x Target Wall	+ 2x	0.20" probable wall	- 20%	0.08" probable wall

RadII that are modeled 3x or less than the target wall may have a cross-section variance as listed above

DIAGRAM 1 - THINNING EXAMPLE





Delivering innovative manufacturing technologies
and deep-rooted technical expertise to address your
most demanding requirements

VISIT US ONLINE

TO LEARN MORE ABOUT RMB PRODUCTS' INNOVATIVE MANUFACTURING CAPABILITIES AND THE ROTATIONAL MOLDING PROCESS, PLEASE VISIT US ONLINE.

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