

t-ceramics

Advanced Technical Ceramics

HIGH PURITY CRYSTALIZED ALUMINA CRUCIBLES

99.7% Alumina - Max. Usable Temperature 1750 °C

Description.

Alumina (Al₂O₃) is one of the most important ceramic oxides which is widely used for structural, electronics, medical and electrical fields. Alumina has wide application as engineering technical ceramic due to its high hardness value, high abrasion (wear) resistance and low cost. It has high melting point (2054 °C), and boiling point (2977 °C) low thermal expansion and high compressive strength which provides good thermal shock resistance. Alumina is one the best electrical insulations at high temperatures making it excellent choice as a thermodielectric refractory and is transparent to microwave radio frequencies. It's fairly high chemical stability, make Alumina a good material to withstand chemical corrosion.

Thermansys is producing a broad range of analytical grade, recrystallized, dense Alumina crucibles in various sizes and forms. Custom solutions available upon request.

Applications.

Analytical applications, metals melting, ceramic powders heat treatment, material acid treatment even at elevated temperature, crucibles for annealing, crucibles for fusion processes, crucibles for crystal growing, crucibles for extremely corrosive environments, like plasma etching



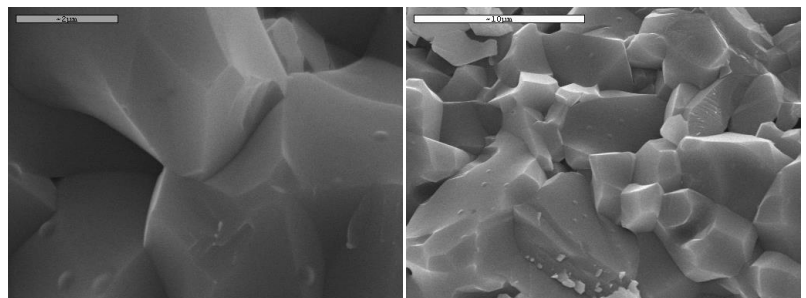
Available shapes:

- Boats
- Dishes (Round Shallow)
- Conical (Tapered Wall)
 - Classic Form
 - Cylindrical
 - Rectangular
 - Special Shapes

Contact us to discuss your application and find the best solution meeting your requirements.

Chemical Composition.

| | |
|---------------------------------------|------|
| • Al ₂ O ₃ % wt | 99.7 |
| • Fe ₂ O ₃ % wt | 0.03 |
| • SiO ₂ % wt | 0.05 |
| • MgO % wt | - |
| • Na ₂ O % wt | 0.10 |
| • Other % wt | 0.12 |



Contact details:

Ath. Stagiriti 7- Pilea, Thessaloniki Greece, 54352
 tel. 0030 2310 942346, fax. 0030 2310 942336
 e-mail: info@thermansys.com
www.thermansys.com

Information and data contained in this document was considered correct at the time of publication. Thermansys® is reserving the right to make modifications as a result of design improvements.

Properties.

| | | | |
|--|-------|--------------------------------------|------|
| • Max. Operating Temperature, °C..... | 1750 | • Dielectric Strength, AC-KV/mm..... | 16.9 |
| • Porosity, % vol. | <0.5 | • Dielectric Constant, 1 MHz..... | 9.8 |
| • Density, gr/cm ³ | 3.8 | • Compressive Strength, MPa..... | 2600 |
| • Color..... | Ivory | • Flexural Strength, MPa..... | 380 |
| • Thermal Conductivity at 20°C, W/mK.... | 30 | • Elastic Modulus, GPa..... | 375 |
| • Thermal Conductivity at 800°C, W/mK... | 8 | • Shear Modulus, GPa..... | 152 |
| • Coefficient of Thermal Expansion, 10 ⁻⁶ /°C | 8.4 | • Hardness, kg/mm ² | 1440 |

NOTE: The values listed on properties table above are intended to illustrate typical material properties. Property values vary with size, and shape of part. The material properties values contained herein should not construed as absolute or engineering data and does not constitute a representation or warranty for which Thermansys assumes legal responsibility.

Heating and Cooling Suggestions.

Recrystallized Alumina crucibles are sensitive to thermal shock.

Heat up: Warm up the furnace chamber gradually. Heating rate of 3-4 °C per minute is recommended for the first 1-2 hours to reduce the impact of thermal shock. Maximum recommended heating rate 6 °C per minute.

Cool down: Lower the temperature as gradually as possible. Recommended cooling down rate is more severe than corresponding heating rate and should be retained below 5 °C per minute. It is better to remove the crucibles from the hot zone only if the temperature drops below 100 °C. When taking the crucibles out of furnace and bring them into room temperature to pour the melted material try to make the process as gradual as possible. A better practice is after pouring the melted metal to restore the crucible back into the furnace and leave it cool down inside the furnace.

Atmosphere - Chemical Compatibility - Corrosion.

Alumina crucibles can be used at high temperature under oxidizing (air), reduced, or inert (Nitrogen, Argon) conditions with no restriction. It resists attack by all gases except wet Fluorine. Can also be used under vacuum conditions, although exhibit a rate 10⁻⁷ to 10⁻⁶ g/cm².sec of weight loss.

Alumina crucibles have very good chemical resistance against diluted or concentrated Acids (with the exception of hydrofluoric acid and phosphoric acid), Alkalis, Melted Metals and Halogens. Alumina is insoluble in water and has negligible solubility in strong acid and alkaline solutions. The low chemical solubility of alumina ceramics components makes them highly resistant to chemical corrosion. The ultra-high final firing temperature that Alumina crucibles are exposed during manufacturing process improves even further this behavior. The almost zero porosity and excellent smoothness of Thermansys crucibles surface prevents chemical attack. Generally, Alumina crucibles are the material of choice for a wide range of general purpose laboratory and industrial applications.

Chemical erosion of ceramic materials is not easy to be measured and determined in a way that will lead to accurate and represented scientific data for all shapes and sizes.

Health and Safety.

Our ceramic materials, as it is delivered, do not contain substances dangerous to health, or create them during use. They are produced using natural inert raw materials. Any organic binder or other substances used during manufacturing are burned through production firing. Thermansys however cannot guarantee that ceramic crucibles exposed to conditions that could produce residual material or create material transformations retain its health and safety properties upon reuse.

The product at its final delivery form is fully dense and do not produce dust during normal handling and operation. However, if the customer desire to proceed with further product processes like cutting or drilling inert dust might be created. Workers therefor should be provided with suitable dust protection equipment.

Contact details:

Ath. Stagiriti 7- Pilea, Thessaloniki Greece, 54352
tel. 0030 2310 942346, fax. 0030 2310 942336
e-mail: info@thermansys.com
www.thermansys.com

Information and data contained in this document was considered correct at the time of publication. Thermansys® is reserving the right to make modifications as a result of design improvements.

Standard Crucible Delivery Forms and Dimensions Tables.

Tables below are listing dimensions and capacity data for all standard shapes and sizes that are available from Thermansys. All data quoted are nominal values. Dimensional tolerances in the order of $\pm 3\%$ are apply to all our products.

Special shape or size Alumina engineering ceramics are available upon request. Thermansys can provide a detailed quote even for low volume order. Please send as a detailed drawing of the desired product and we will provide you with a quote.

Conical Form

t-ceramics High Alumina Conical Form crucibles are available in three forms:

- Tall Form with *Top I.D.* $\cong 0.6 \times$ Internal Height
- Balanced Form with *Top I.D.* \cong Internal Height
- Short Form with *Top I.D.* $\cong 2 \times$ Internal Height

Custom sizes available upon request



Conical Tall Form

| Capacity (ml) | Top O.D. (mm) | Top I.D. (mm) | Wall Th. (mm) | Height Int. (mm) | Part No. | Price (Euro) |
|---------------|---------------|---------------|---------------|------------------|--------------|--------------|
| 0.4 | 10 | 8 | 1 | 13 | CA-CO-T 0.4 | 3.3 |
| 1.0 | 12 | 10 | 1 | 16 | CA-CO-T 1.0 | 4.4 |
| 1.8 | 14 | 12 | 1 | 20 | CA-CO-T 1.8 | 5.5 |
| 4.2 | 19 | 16 | 1.5 | 26 | CA-CO-T 4.2 | 7.7 |
| 8.2 | 23 | 20 | 1.5 | 33 | CA-CO-T 8.2 | 10.4 |
| 16 | 28 | 25 | 1.5 | 42 | CA-CO-T 16 | 14.1 |
| 28 | 33 | 30 | 1.5 | 50 | CA-CO-T 28 | 18.4 |
| 48 | 40 | 36 | 2 | 60 | CA-CO-T 48 | 23.9 |
| 76 | 48 | 42 | 3 | 70 | CA-CO-T 76 | 29.9 |
| 130 | 56 | 50 | 3 | 84 | CA-CO-T 130 | 39.1 |
| 196 | 64 | 58 | 3 | 94 | CA-CO-T 196 | 48.1 |
| 268 | 70 | 64 | 3 | 106 | CA-CO-T 268 | 56.3 |
| 350 | 76 | 70 | 3 | 116 | CA-CO-T 350 | 64.5 |
| 488 | 84 | 78 | 3 | 130 | CA-CO-T 488 | 76.4 |
| 564 | 89 | 82 | 3.5 | 136 | CA-CO-T 564 | 82.3 |
| 750 | 98 | 90 | 4 | 150 | CA-CO-T 750 | 95.2 |
| 1024 | 110 | 100 | 5 | 166 | CA-CO-T 1024 | 111.7 |

Contact details:

Ath. Stagiriti 7- Pilea, Thessaloniki Greece, 54352
 tel. 0030 2310 942346, fax. 0030 2310 942336
 e-mail: info@thermansys.com
www.thermansys.com

Information and data contained in this document was considered correct at the time of publication. Thermansys® is reserving the right to make modifications as a result of design improvements.

Conical Balanced Form

| Capacity (ml) | Top O.D. (mm) | Top I.D. (mm) | Wall Th. (mm) | Height Int. (mm) | Part No. | Price (Euro) |
|------------------|------------------|------------------|------------------|---------------------|-------------|-----------------|
| 0.3 | 10 | 8 | 1 | 8 | CA-CO-B 0.3 | 3.0 |
| 0.7 | 12 | 10 | 1 | 10 | CA-CO-B 0.7 | 3.9 |
| 1.2 | 14 | 12 | 1 | 12 | CA-CO-B 1.2 | 4.7 |
| 2.8 | 19 | 16 | 1.5 | 16 | CA-CO-B 2.8 | 6.5 |
| 5.5 | 23 | 20 | 1.5 | 20 | CA-CO-B 5.5 | 8.7 |
| 11 | 28 | 25 | 1.5 | 25 | CA-CO-B 11 | 11.6 |
| 18 | 33 | 30 | 1.5 | 30 | CA-CO-B 18 | 15.0 |
| 32 | 40 | 36 | 2 | 36 | CA-CO-B 32 | 19.5 |
| 50 | 48 | 42 | 3 | 42 | CA-CO-B 50 | 24.3 |
| 85 | 56 | 50 | 3 | 50 | CA-CO-B 85 | 31.6 |
| 133 | 64 | 58 | 3 | 58 | CA-CO-B 133 | 39.6 |
| 178 | 70 | 64 | 3 | 64 | CA-CO-B 178 | 45.8 |
| 234 | 76 | 70 | 3 | 70 | CA-CO-B 234 | 52.6 |
| 299 | 84 | 78 | 3 | 78 | CA-CO-B 299 | 59.5 |
| 375 | 89 | 82 | 3.5 | 82 | CA-CO-B 375 | 66.8 |
| 496 | 97 | 90 | 3.5 | 90 | CA-CO-B 496 | 77.0 |
| 680 | 108 | 100 | 4 | 100 | CA-CO-B 680 | 90.5 |
| 906 | 120 | 110 | 5 | 110 | CA-CO-B 906 | 104.9 |

Conical Short Form

| Capacity (ml) | Top O.D. (mm) | Top I.D. (mm) | Wall Th. (mm) | Height Int. (mm) | Part No. | Price (Euro) |
|------------------|------------------|------------------|------------------|---------------------|--------------|-----------------|
| 0.8 | 19 | 16 | 1.5 | 8 | CA-CO-S 0.8 | 4.1 |
| 3.0 | 23 | 20 | 1.5 | 10 | CA-CO-S 3.0 | 6.7 |
| 5.0 | 27 | 24 | 1.5 | 12 | CA-CO-S 5.0 | 8.3 |
| 12 | 36 | 32 | 2 | 16 | CA-CO-S 12 | 12.3 |
| 24 | 46 | 40 | 3 | 20 | CA-CO-S 24 | 17.1 |
| 46 | 56 | 50 | 3 | 25 | CA-CO-S 46 | 23.4 |
| 79 | 66 | 60 | 3 | 30 | CA-CO-S 79 | 30.5 |
| 136 | 78 | 72 | 3 | 36 | CA-CO-S 136 | 40.0 |
| 216 | 90 | 84 | 3 | 42 | CA-CO-S 216 | 50.5 |
| 366 | 107 | 100 | 3.5 | 50 | CA-CO-S 366 | 66.0 |
| 571 | 124 | 116 | 4 | 58 | CA-CO-S 571 | 82.8 |
| 767 | 138 | 128 | 5 | 64 | CA-CO-S 767 | 96.3 |
| 1004 | 150 | 140 | 5 | 70 | CA-CO-S 1004 | 110.5 |

Contact details:

Ath. Stagiriti 7- Pilea, Thessaloniki Greece, 54352
tel. 0030 2310 942346, fax. 0030 2310 942336
e-mail: info@thermansys.com
www.thermansys.com

Information and data contained in this document was considered correct at the time of publication.
Thermansys® is reserving the right to make modifications as a result of design improvements.

Cylindrical Form

t-ceramics High Alumina Cylindrical crucibles are available in three forms:

- Tall Form with $I.D. \cong 0.6 \times \text{Internal Height}$
- Balanced Form with $I.D. \cong \text{Internal Height}$
- Short Form with $I.D. \cong 2 \times \text{Internal Height}$

Custom sizes available upon request



Cylindrical Tall Form

| Capacity (ml) | O.D. (mm) | I.D. (mm) | Wall Th. (mm) | Height Int. (mm) | Part No. | Price (Euro) |
|---------------|-----------|-----------|---------------|------------------|--------------|--------------|
| 0.7 | 10 | 8 | 1 | 13 | CA-CY-T 0.7 | 3.8 |
| 1.3 | 12 | 10 | 1 | 17 | CA-CY-T 1.3 | 4.9 |
| 2.3 | 14 | 12 | 1 | 20 | CA-CY-T 2.3 | 6.1 |
| 5.4 | 19 | 16 | 1.5 | 27 | CA-CY-T 5.4 | 9.0 |
| 10.5 | 23 | 20 | 1.5 | 33 | CA-CY-T 10.5 | 12.3 |
| 20 | 28 | 25 | 1.5 | 42 | CA-CY-T 20 | 17.2 |
| 35 | 33 | 30 | 1.5 | 50 | CA-CY-T 35 | 22.7 |
| 61 | 40 | 36 | 2 | 60 | CA-CY-T 61 | 30.2 |
| 97 | 48 | 42 | 3 | 70 | CA-CY-T 97 | 38.5 |
| 164 | 56 | 50 | 3 | 83 | CA-CY-T 164 | 50.9 |
| 255 | 64 | 58 | 3 | 97 | CA-CY-T 255 | 64.6 |
| 343 | 70 | 64 | 3 | 107 | CA-CY-T 343 | 75.8 |
| 449 | 76 | 70 | 3 | 117 | CA-CY-T 449 | 87.6 |
| 621 | 84 | 78 | 3 | 130 | CA-CY-T 621 | 104.5 |
| 721 | 89 | 82 | 3.5 | 137 | CA-CY-T 721 | 113.4 |
| 954 | 98 | 90 | 4 | 150 | CA-CY-T 954 | 132.0 |
| 1308 | 110 | 100 | 5 | 167 | CA-CY-T 1308 | 156.8 |

Contact details:

Ath. Stagiriti 7- Pilea, Thessaloniki Greece, 54352
 tel. 0030 2310 942346, fax. 0030 2310 942336
 e-mail: info@thermansys.com
www.thermansys.com

Information and data contained in this document was considered correct at the time of publication.
 Thermansys® is reserving the right to make modifications as a result of design improvements.

Cylindrical Balanced Form

| Capacity (ml) | O.D. (mm) | I.D. (mm) | Wall Th. (mm) | Height Int. (mm) | Part No. | Price (Euro) |
|---------------|-----------|-----------|---------------|------------------|--------------|--------------|
| 0.4 | 10 | 8 | 1 | 8 | CA-CY-B 0.4 | 3.2 |
| 0.8 | 12 | 10 | 1 | 10 | CA-CY-B 0.8 | 4.0 |
| 1.4 | 14 | 12 | 1 | 12 | CA-CY-B 1.4 | 4.9 |
| 3.2 | 19 | 16 | 1.5 | 16 | CA-CY-B 3.2 | 7.1 |
| 6.3 | 23 | 20 | 1.5 | 20 | CA-CY-B 6.3 | 9.6 |
| 12 | 28 | 25 | 1.5 | 25 | CA-CY-B 12 | 13.3 |
| 21 | 33 | 30 | 1.5 | 30 | CA-CY-B 21 | 17.5 |
| 37 | 40 | 36 | 2 | 36 | CA-CY-B 37 | 23.1 |
| 58 | 48 | 42 | 3 | 42 | CA-CY-B 58 | 29.4 |
| 98 | 56 | 50 | 3 | 50 | CA-CY-B 98 | 38.8 |
| 153 | 64 | 58 | 3 | 58 | CA-CY-B 153 | 49.1 |
| 206 | 70 | 64 | 3 | 64 | CA-CY-B 206 | 57.6 |
| 269 | 76 | 70 | 3 | 70 | CA-CY-B 269 | 66.5 |
| 373 | 84 | 78 | 3 | 78 | CA-CY-B 373 | 79.2 |
| 433 | 89 | 82 | 3.5 | 82 | CA-CY-B 433 | 85.9 |
| 572 | 97 | 90 | 3.5 | 90 | CA-CY-B 572 | 100.0 |
| 785 | 108 | 100 | 4 | 100 | CA-CY-B 785 | 118.7 |
| 1045 | 120 | 110 | 5 | 110 | CA-CY-B 1045 | 138.7 |

Cylindrical Short Form

| Capacity (ml) | O.D. (mm) | I.D. (mm) | Wall Th. (mm) | Height Int. (mm) | Part No. | Price (Euro) |
|---------------|-----------|-----------|---------------|------------------|--------------|--------------|
| 1.6 | 19 | 16 | 1.5 | 8 | CA-CY-S 1.6 | 5.3 |
| 3.1 | 23 | 20 | 1.5 | 10 | CA-CY-S 3.1 | 7.0 |
| 5.4 | 27 | 24 | 1.5 | 12 | CA-CY-S 5.4 | 9.0 |
| 13 | 36 | 32 | 2 | 16 | CA-CY-S 13 | 13.6 |
| 25 | 46 | 40 | 3 | 20 | CA-CY-S 25 | 19.1 |
| 49 | 56 | 50 | 3 | 25 | CA-CY-S 49 | 26.9 |
| 85 | 66 | 60 | 3 | 30 | CA-CY-S 85 | 35.9 |
| 146 | 78 | 72 | 3 | 36 | CA-CY-S 146 | 48.0 |
| 233 | 90 | 84 | 3 | 42 | CA-CY-S 233 | 61.5 |
| 393 | 107 | 100 | 3.5 | 50 | CA-CY-S 393 | 81.5 |
| 613 | 124 | 116 | 4 | 58 | CA-CY-S 613 | 103.8 |
| 823 | 138 | 128 | 5 | 64 | CA-CY-S 823 | 121.8 |
| 1077 | 150 | 140 | 5 | 70 | CA-CY-S 1077 | 141.0 |

Contact details:

Ath. Stagiriti 7- Pilea, Thessaloniki Greece, 54352
tel. 0030 2310 942346, fax. 0030 2310 942336
e-mail: info@thermansys.com
www.thermansys.com

Information and data contained in this document was considered correct at the time of publication.
Thermansys® is reserving the right to make modifications as a result of design improvements.

Classic Form

t-ceramics High Alumina Classic Form crucibles are available in two forms:

- Balanced Form with $I.D. \cong 1.04 \times \text{Internal Height}$
- Short Form with $I.D. \cong 0.55 \times \text{Internal Height}$

Custom sizes available upon request



Classic Balanced Form

| Capacity (ml) | Top O.D. (mm) | Top I.D. (mm) | Wall Th. (mm) | Height Int. (mm) | Part No. | Price (Euro) |
|---------------|---------------|---------------|---------------|------------------|--------------|--------------|
| 5.5 | 23 | 20 | 1.5 | 21 | CA-HF-B 5.5 | 8.9 |
| 12 | 29 | 25 | 2 | 26 | CA-HF-B 12 | 12.9 |
| 17 | 34 | 30 | 2 | 31 | CA-HF-B 17 | 15.3 |
| 27 | 40 | 35 | 2.5 | 36 | CA-HF-B 27 | 19.2 |
| 45 | 45 | 40 | 2.5 | 42 | CA-HF-B 45 | 24.8 |
| 80 | 56 | 50 | 3 | 52 | CA-HF-B 80 | 33.4 |
| 132 | 66 | 60 | 3 | 63 | CA-HF-B 132 | 43.3 |
| 210 | 76 | 70 | 3 | 73 | CA-HF-B 210 | 55.2 |
| 310 | 86 | 80 | 3 | 83 | CA-HF-B 310 | 67.8 |
| 440 | 97 | 90 | 3.5 | 94 | CA-HF-B 440 | 81.7 |
| 600 | 107 | 100 | 3.5 | 104 | CA-HF-B 600 | 96.3 |
| 700 | 112 | 105 | 3.5 | 109 | CA-HF-B 700 | 104.6 |
| 815 | 118 | 110 | 4 | 115 | CA-HF-B 815 | 113.4 |
| 1000 | 128 | 118 | 5 | 123 | CA-HF-B 1000 | 126.5 |

Classic Short Form

| Capacity (ml) | Top O.D. (mm) | Top I.D. (mm) | Wall Th. (mm) | Height Int. (mm) | Part No. | Price (Euro) |
|---------------|---------------|---------------|---------------|------------------|--------------|--------------|
| 22 | 45 | 40 | 2.5 | 22 | CA-HF-S 22 | 17.3 |
| 46 | 56 | 50 | 3 | 28 | CA-HF-S 46 | 25.1 |
| 78 | 66 | 60 | 3 | 33 | CA-HF-S 78 | 32.9 |
| 125 | 76 | 70 | 3 | 39 | CA-HF-S 125 | 42.1 |
| 184 | 86 | 80 | 3 | 44 | CA-HF-S 184 | 51.5 |
| 262 | 97 | 90 | 3.5 | 50 | CA-HF-S 262 | 62.1 |
| 356 | 107 | 100 | 3.5 | 55 | CA-HF-S 356 | 73.0 |
| 476 | 118 | 110 | 4 | 61 | CA-HF-S 476 | 85.2 |
| 625 | 128 | 120 | 4 | 66 | CA-HF-S 625 | 98.4 |
| 800 | 138 | 130 | 4 | 72 | CA-HF-S 800 | 112.3 |
| 1000 | 150 | 140 | 5 | 77 | CA-HF-S 1000 | 126.5 |

Contact details:

Ath. Stagiriti 7- Pilea, Thessaloniki Greece, 54352
 tel. 0030 2310 942346, fax. 0030 2310 942336
 e-mail: info@thermansys.com
www.thermansys.com

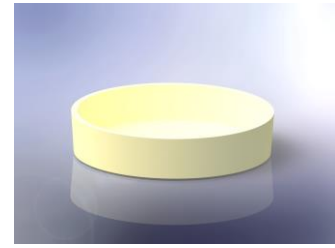
Information and data contained in this document was considered correct at the time of publication.
 Thermansys® is reserving the right to make modifications as a result of design improvements.

Dishes (Round Shallow Form)

t-ceramics High Alumina Dishes are available in one form:

- Round shallow crucibles with $I.D. \cong (3 \text{ to } 5) \times \text{Internal Height}$

Custom sizes available upon request



Dishes

| Capacity (ml) | O.D. (mm) | I.D. (mm) | Wall Th. (mm) | Height Int. (mm) | Part No. | Price (Euro) |
|---------------|-----------|-----------|---------------|------------------|------------|--------------|
| 1.9 | 23 | 20 | 1.5 | 6 | CA-DH- 1.9 | 5.7 |
| 5.7 | 33 | 30 | 1.5 | 8 | CA-DH- 5.7 | 9.3 |
| 13 | 44 | 40 | 2 | 10 | CA-DH- 13 | 13.8 |
| 24 | 56 | 50 | 3 | 12 | CA-DH- 24 | 19.0 |
| 40 | 66 | 60 | 3 | 14 | CA-DH- 40 | 24.9 |
| 62 | 76 | 70 | 3 | 16 | CA-DH- 62 | 31.5 |
| 90 | 86 | 80 | 3 | 18 | CA-DH- 90 | 38.8 |
| 127 | 96 | 90 | 3 | 20 | CA-DH- 127 | 46.6 |
| 173 | 107 | 100 | 3.5 | 22 | CA-DH- 173 | 55.1 |
| 228 | 117 | 110 | 3.5 | 24 | CA-DH- 228 | 64.1 |
| 294 | 128 | 120 | 4 | 26 | CA-DH- 294 | 73.7 |
| 371 | 138 | 130 | 4 | 28 | CA-DH- 371 | 83.9 |
| 462 | 148 | 140 | 4 | 30 | CA-DH- 462 | 94.5 |
| 565 | 160 | 150 | 5 | 32 | CA-DH- 565 | 105.7 |
| 683 | 170 | 160 | 5 | 34 | CA-DH- 683 | 117.4 |
| 817 | 182 | 170 | 6 | 36 | CA-DH- 817 | 129.6 |
| 966 | 192 | 180 | 6 | 38 | CA-DH- 966 | 142.3 |

Contact details:

Ath. Stagiriti 7- Pilea, Thessaloniki Greece, 54352
 tel. 0030 2310 942346, fax. 0030 2310 942336
 e-mail: info@thermansys.com
www.thermansys.com

Information and data contained in this document was considered correct at the time of publication.
 Thermansys® is reserving the right to make modifications as a result of design improvements.

Rectangular Form

t-ceramics High Alumina rectangular crucibles are available in two forms:

- Square Form with *Length. \cong Width*
- Oblong Form with *Length. \cong 1.5 x Width*

Custom sizes available upon request



| Rectangular Square Form | | | | | | | |
|--------------------------------|------------------|-----------------|---------------|------------------|----------|------|--------------|
| Capacity (ml) | Length Int. (mm) | Width Int. (mm) | Wall Th. (mm) | Height Int. (mm) | Part No. | | Price (Euro) |
| 4.0 | 20 | 20 | 2 | 10 | CA-RC-S | 4.0 | 8.1 |
| 22 | 40 | 40 | 2 | 14 | CA-RC-S | 22 | 20.6 |
| 65 | 60 | 60 | 2 | 18 | CA-RC-S | 65 | 37.8 |
| 141 | 80 | 80 | 3 | 22 | CA-RC-S | 141 | 59.6 |
| 260 | 100 | 100 | 3 | 26 | CA-RC-S | 260 | 85.6 |
| 432 | 120 | 120 | 3 | 30 | CA-RC-S | 432 | 115.6 |
| 666 | 140 | 140 | 4 | 34 | CA-RC-S | 666 | 149.6 |
| 973 | 160 | 160 | 4 | 38 | CA-RC-S | 973 | 187.4 |
| 1361 | 180 | 180 | 4 | 42 | CA-RC-S | 1361 | 228.9 |

Rectangular Oblong Form

| Capacity (ml) | Length Int. (mm) | Width Int. (mm) | Wall Th. (mm) | Height Int. (mm) | Part No. | | Price (Euro) |
|---------------|------------------|-----------------|---------------|------------------|----------|------|--------------|
| 2.7 | 20 | 13 | 1.5 | 10 | CA-RC-O | 2.7 | 6.6 |
| 13 | 40 | 24 | 1.5 | 14 | CA-RC-O | 13.4 | 15.5 |
| 39 | 60 | 36 | 2 | 18 | CA-RC-O | 39 | 28.2 |
| 84 | 80 | 48 | 3 | 22 | CA-RC-O | 84 | 44.2 |
| 156 | 100 | 60 | 3 | 26 | CA-RC-O | 156 | 63.3 |
| 259 | 120 | 72 | 3 | 30 | CA-RC-O | 259 | 85.4 |
| 400 | 140 | 84 | 3 | 34 | CA-RC-O | 400 | 110.4 |
| 584 | 160 | 96 | 3 | 38 | CA-RC-O | 584 | 138.2 |
| 816 | 180 | 108 | 4 | 42 | CA-RC-O | 816 | 168.8 |
| 1104 | 200 | 120 | 4 | 46 | CA-RC-O | 1104 | 202.1 |

Contact details:

Ath. Stagiriti 7- Pilea, Thessaloniki Greece, 54352
 tel. 0030 2310 942346, fax. 0030 2310 942336
 e-mail: info@thermansys.com
www.thermansys.com

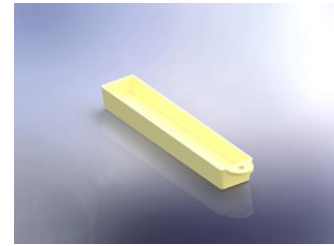
Information and data contained in this document was considered correct at the time of publication.
 Thermansys® is reserving the right to make modifications as a result of design improvements.

Boats

t-ceramics High Alumina boats are available in two forms:

- With tail and hole (*Length. \cong Width*)
- Without tail and hole (*Length. \cong Width*)

Custom sizes available upon request



Boats with Tail and Hole

| Capacity (ml) | Length Int. (mm) | Width Int. (mm) | Height Int. (mm) | Wall Th. (mm) | Part No. | Price (Euro) |
|---------------|------------------|-----------------|------------------|---------------|-------------|--------------|
| 4.5 | 40 | 14 | 8 | 2 | CA-BT-T 4.5 | 12.3 |
| 6.7 | 60 | 14 | 8 | 2 | CA-BT-T 6.7 | 15.0 |
| 9.0 | 80 | 14 | 8 | 2 | CA-BT-T 9 | 17.3 |
| 11 | 100 | 14 | 8 | 2 | CA-BT-T 11 | 19.5 |
| 12 | 110 | 14 | 8 | 2 | CA-BT-T 12 | 20.5 |
| 10 | 60 | 14 | 12 | 2 | CA-BT-T 10 | 18.4 |
| 13 | 80 | 14 | 12 | 2 | CA-BT-T 13 | 21.6 |
| 17 | 100 | 14 | 12 | 2 | CA-BT-T 17 | 24.4 |
| 18 | 110 | 14 | 12 | 2 | CA-BT-T 18 | 25.8 |
| 20 | 120 | 14 | 12 | 2 | CA-BT-T 20 | 27.1 |
| 32 | 100 | 20 | 16 | 2 | CA-BT-T 32 | 35.7 |
| 38 | 120 | 20 | 16 | 2 | CA-BT-T 38 | 39.8 |
| 45 | 140 | 20 | 16 | 2 | CA-BT-T 45 | 43.8 |
| 62 | 120 | 26 | 20 | 3 | CA-BT-T 62 | 53.9 |
| 73 | 140 | 26 | 20 | 3 | CA-BT-T 73 | 59.4 |

Boats without Tail and Hole

| Capacity (ml) | Length Int. (mm) | Width Int. (mm) | Height Int. (mm) | Wall Th. (mm) | Part No. | Price (Euro) |
|---------------|------------------|-----------------|------------------|---------------|-----------|--------------|
| 4.5 | 40 | 14 | 8 | 2 | CA-BT 4.5 | 11.4 |
| 6.7 | 60 | 14 | 8 | 2 | CA-BT 6.7 | 13.4 |
| 9.0 | 80 | 14 | 8 | 2 | CA-BT 9 | 15.2 |
| 11 | 100 | 14 | 8 | 2 | CA-BT 11 | 16.8 |
| 12 | 110 | 14 | 8 | 2 | CA-BT 12 | 17.5 |
| 10 | 60 | 14 | 12 | 2 | CA-BT 10 | 16.0 |
| 13 | 80 | 14 | 12 | 2 | CA-BT 13 | 18.3 |
| 17 | 100 | 14 | 12 | 2 | CA-BT 17 | 20.3 |
| 18 | 110 | 14 | 12 | 2 | CA-BT 18 | 21.3 |
| 20 | 120 | 14 | 12 | 2 | CA-BT 20 | 22.2 |
| 32 | 100 | 20 | 16 | 2 | CA-BT 32 | 28.0 |
| 38 | 120 | 20 | 16 | 2 | CA-BT 38 | 30.8 |
| 45 | 140 | 20 | 16 | 2 | CA-BT 45 | 33.4 |
| 62 | 120 | 26 | 20 | 3 | CA-BT 62 | 39.8 |
| 73 | 140 | 26 | 20 | 3 | CA-BT 73 | 43.3 |

Contact details:

Ath. Stagiriti 7- Pilea, Thessaloniki Greece, 54352
 tel. 0030 2310 942346, fax. 0030 2310 942336
 e-mail: info@thermansys.com
www.thermansys.com

Information and data contained in this document was considered correct at the time of publication.
 Thermansys® is reserving the right to make modifications as a result of design improvements.

VISIT OUR
ON-LINE SHOP AT:

www.tceramics.com

t-ceramics is the brand name of refractory
technical ceramics produced by
THERMANSYS
www.thermansys.com

Thermansys is a producer of High Temperature Electrical Furnaces, Vacuum Ovens, Precision
Vacuum Hot Plates and Refractory Technical Ceramics.

Contact details:

Ath. Stagiriti 7- Pilea, Thessaloniki Greece, 54352
tel. 0030 2310 942346, fax. 0030 2310 942336
e-mail: info@thermansys.com
www.thermansys.com

Information and data contained in this document was
considered correct at the time of publication.
Thermansys® is reserving the right to make modifications
as a result of design improvements.