DIAMOND CRUCIBLE COMPANY PVT LTD

RED DIAMOND

Subsidiary of Morganite Crucible India Ltd.

MELTING

HOLDING

TREATMENT

CASTING

Al

Cu

Ag

Au

Zn

Fe

Advanced Equipment for Your Advanced Needs

Morgan Molten Metal Systems

INFORMATION Crucibles

DESCRIPTION

Morganite Silicon Carbide Crucibles, Clay Graphite Crucibles and IsoPressed Crucibles are of superior quality as they undergo the most stringent quality-control test at our R&D laboratory.

The manufacturing plants at Aurangabad and Mehsana have the most modern processing facilities with state-of-the-art technology based on environment-friendly resin bonding / clay bonding and a quality system established as per international standards with an ISO 9001:2000 certification. Manufactured from carefully selected flake graphite and silicon carbide and bonded with resin, our silicon carbide crucibles offer the following advantages:

ADVANTAGES OF RESIN BONDED SILICON CARBIDE CRUCIBLES

High Resistance to Thermal Shock

Crucibles, in use, are often subjected to the stresses created by rapid and/or uneven changes of temperatures, which in extreme cases, can lead to premature failure.

Outstanding resistance to thermal shock is imparted to our crucibles as the heat is distributed quickly throughout the crucible, by usage of selective grades of flake graphite and silicon carbide.

High Resistance to Erosion

The flow of molten metal and charging the crucible with solid metal leads to abrasion and erosion of the inside wall.

The high proportion of silicon carbide in our crucibles imparts better strength, greater hardness, and high resistance to erosion.

High Resistance to Chemical Attack by Fluxes and Slags

Though graphite is chemically inert and resistant to corrosive chemicals, the bond is often susceptible to chemical attack by fluxes and slags.

Our crucibles made of chemically inactive graphite, silicon carbide and carbon, resist attack by the alkaline fluxes used for light alloys; the oxidising/reducing fluxes used for copper alloys and the corrosive slags formed from them.

High Resistance to Atmospheric Oxidation

Graphite oxidises progressively in air as the temperature is raised. Most crucibles have an external glaze to prevent this. As no external glaze is perfect by itself, invariably oxidation of graphite occurs, leading to loss of thermal conductivity and reduction in strength of the crucible.

To provide extra resistance to oxidation, we have protective agents incorporated in the body in addition to the external glaze.

Constant Melting Speed

The superior oxidation resistance of our crucibles ensures that they retain a constant melting speed to the end of their long life.

More heats per day means more output, but equally important is the consistency of output which enables the foundrymen to schedule their productive more effectively.

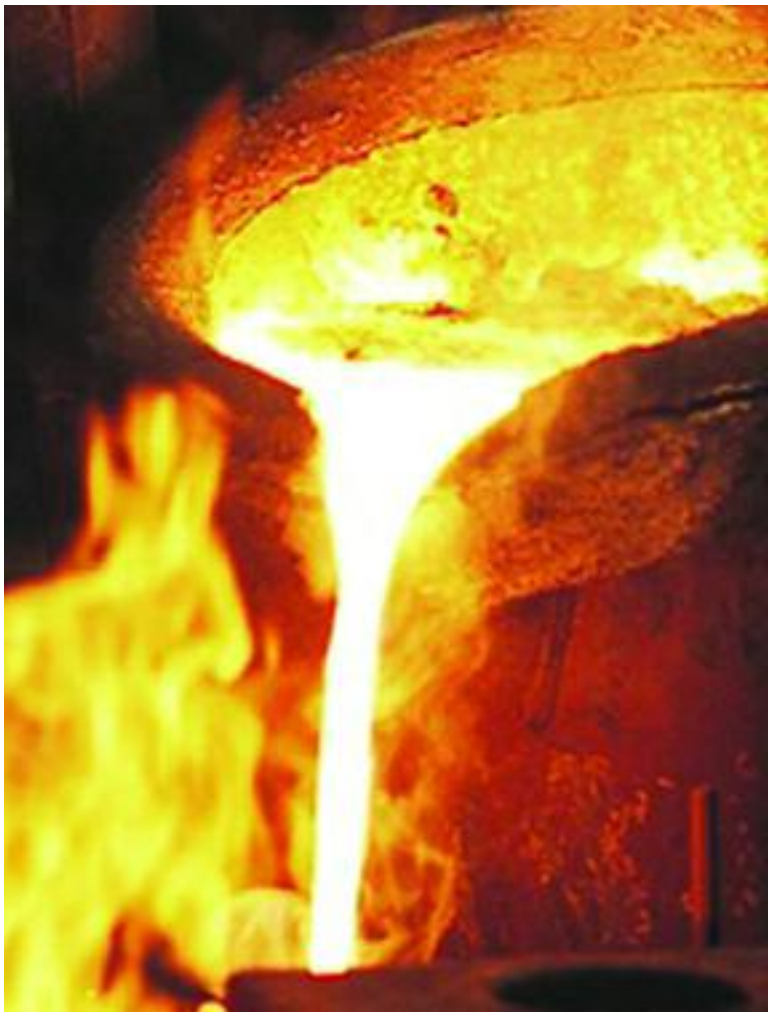
Fuel Economy

The amount of fuel needed to melt, in an ordinary crucible increases steadily as the crucible oxidises and loses speed. The consistent high melting speed of our crucibles makes for substantial fuel saving in comparison to other crucibles.

Lower Metal Loss

The amount of metal lost by oxidation during the melting process is proportional to the time taken to melt and cast the charge.

Our crucibles, with their higher than average melting speed, reduce the overall melting time to a minimum and consequently make an essential contribution for reducing metal losses.



MORGANITE CRUCIBLE INDIA LTD
B-11, MIDC, Waluj, 431 136 Aurangabad, INDIA Tel. (0240) 2554405, 2554406 • Fax. (0240) 2564554 • **www.morganmms.com**
212/C, G.I.D.C Estate Mehsana, 384 002 Gujarat, INDIA Tel. (02762) 254186, 250503, 2533132 • Fax. (02762) 252692 • **www.morganmms.com**

All dimensions are subject to normal manufacturing tolerances. MORGANITE CRUCIBLE reserves the right to change specifications at any time. Not responsible for any typographic errors.

Morgan Molten Metal Systems

CARE & USE Crucibles

HANDLING CRUCIBLES

- Always handle crucibles with care.
- Damage to glaze could adversely affect its performance.
- Never roll a crucible on a hard floor.

STORING CRUCIBLES

- Store crucibles in a warm, dry place.
- Stand crucibles on pallets, never directly on the floor.
- Never stack crucibles inside one another.
- When stacking crucibles, separate the layers with hardboard.

EXAMINATION OF THE FURNACE

- Before installing the crucible and stand in the furnace, check the condition of the refractory lining and make any necessary repairs.
- Remove any loose debris from the bottom of the furnace chamber.
- Ensure that the drain hole is clear and that the drain hole flap can move freely.
- In electric resistance furnaces check the condition of elements. Because of the risk of oxidation in electric resistance furnaces it is particularly important to eliminate the entry of air into the furnace chamber. The drain hole should be sealed with a thin zinc plate and all other apertures made air tight.

INSTALLING THE CRUCIBLE

- The use of a stand made of the same material will help to ensure uniform heating of the base of the crucible and so reduce thermal strains.
- The stand should have the same diameter as the base of the crucible in order to provide adequate support.
- For optimum heat transfer and melting efficiency:
  - The height of the stand should be such that the base of the Crucible is on level with the centre line of the burner.
  - The stand and crucible should be installed centrally in the furnace.

LIFT OUT FURNACES

- Sprinkle a thin layer of coke or other carbonaceous material on top of the stand to prevent the crucible from sticking to it.
- Always place the crucible centrally on the stand.
- Rocking and levering to free a crucible which has stuck to the stand can cause fractures in the lower wall of the crucible.

BALE OUT FURNACES

- Set the top cover bricks to leave a gap of 8 mm around the crucible to allow for expansion of the crucible and the furnace lining. Too small a gap can lead to cracking at the top of the crucible.
- Place a layer of insulating material, such as ceramic fibre over the top of the lining and the top edge of the crucible in order to insulate the metal top plate. Do not push the insulating material down between the cover bricks and the crucible.
- If the steel top ring is fitted, ensure that there is a gap of 12 mm between it and the inside of the crucible to allow for expansion. Too small a gap can lead to cracking at the top of the crucible.

TILTING FURNACES

- Set the stand on the metal stand in the recess at the base of the furnace. Ensure that it is firm, central and level.
- Spread cement evenly over the top of the stand excluding the spigot.
- Place the crucible centrally on to the stand.
- Cement the key/grip bricks on to their support bricks in the furnace lining, leaving 6-10 mm gap between crucible and key bricks.
- Insert cardboard or carbonaceous material in the gap.
- Place key bricks 75 mm below the top edge of the crucible.
- Leave a gap of about 40 mm below the spout, to avoid the crucible hanging up on the spout.

CHARGING

- As soon as the crucible becomes red hot all over, charge and melt immediately.
- Charge the crucible in a vertical position.
- Charge light scrap first to form a cushion for a heavier metal to follow.
- Use tongs to charge ingots.
- Place ingots and large pieces vertically.
- Do not pack the metal tightly in the crucible.

CRUCIBLE WARM UP PROCEDURE

- Crucible should be preheated empty.
- Do not charge ingot or scrap until the crucible is red hot.
- The burner flame should be controlled to ensure the crucible is brought up to red heat (950°C) as per the Heating Recommendations.

MELTING AND POURING

- Melt as quickly as possible.
- Avoid overheating the melt.
- Always melt to the lowest possible temperature compatible with the casting.
- Avoid stewing the molten metal for long periods.
- Avoid delay between heats and use the crucible for as many melts a day as possible.

MORGANITE CRUCIBLE INDIA LTD
B-11, MIDC, Waluj, 431 136 Aurangabad, INDIA Tel. (0240) 2554405, 2554406 • Fax. (0240) 2564554 • **www.morganmms.com**
212/C, G.I.D.C Estate Mehsana, 384 002 Gujarat, INDIA Tel. (02762) 254186, 250503, 2533132 • Fax. (02762) 252692 • **www.morganmms.com**

All dimensions are subject to normal manufacturing tolerances. MORGANITE CRUCIBLE reserves the right to change specifications at any time. Not responsible for any typographic errors.

Morgan Molten Metal Systems

FLUX ADDITIONS

- Ensure that the correct flux is used for:
  - The alloy being treated.
  - Temperature of the alloy.
- Use minimum quantity of flux to satisfy metallurgical requirements.
- Any unnecessary increase in melt temperature will result in accentuated attack on the crucible with a drastic reduction in crucible life.

CLEANING OUT

- Crucibles should be cleaned out by careful scraping when the crucible is red hot.
- Slag left in the crucible leads to rapid thinning of crucible wall in subsequent melts.
- Dross/Oxide left in the crucible leads to longer melt times, higher fuel consumption and shorter crucible life in subsequent melting.

Figure 1

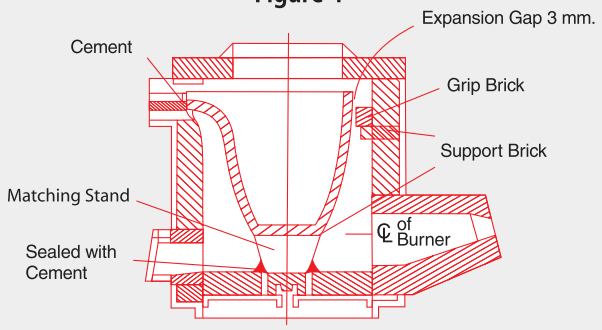


Figure 2

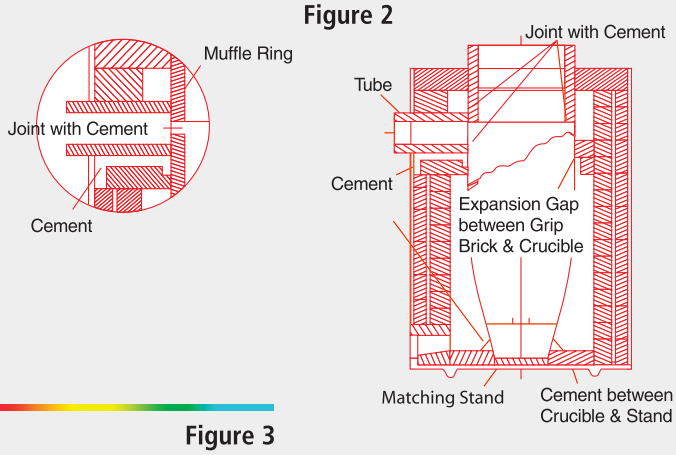


Figure 3

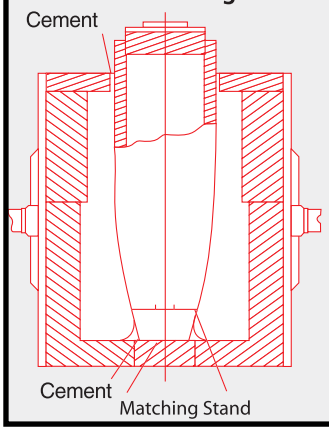
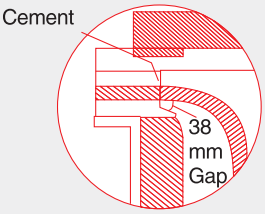


Figure 4

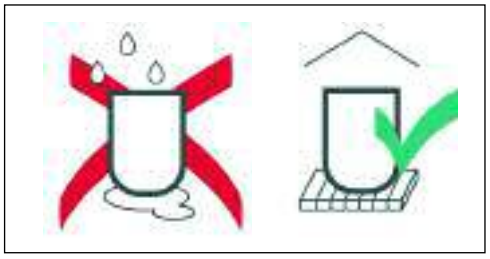


MORGANITE CRUCIBLE INDIA LTD
B-11, MIDC, Waluj, 431 136 Aurangabad, INDIA Tel. (0240) 2554405, 2554406 • Fax. (0240) 2564554 • **www.morganmms.com**
212/C, G.I.D.C Estate Mehsana, 384 002 Gujarat, INDIA Tel. (02762) 254186, 250503, 2533132 • Fax. (02762) 252692 • **www.morganmms.com**

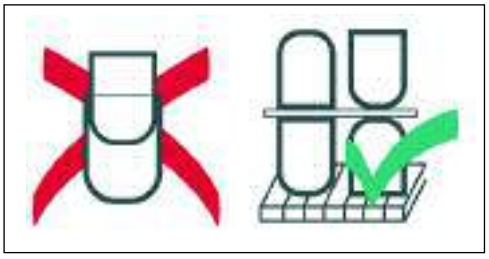
All dimensions are subject to normal manufacturing tolerances. MORGANITE CRUCIBLE reserves the right to change specifications at any time. Not responsible for any typographic errors.

Morgan Molten Metal Systems

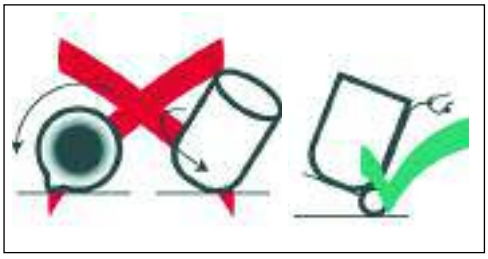
CARE & USE Crucibles



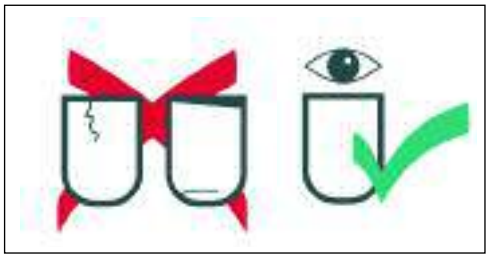
Store crucibles in a dry, warm area.



Do not stack inside another.



Do not roll crucibles.

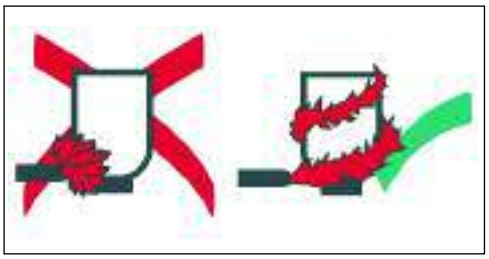


Check for cracks or transport damage before use.

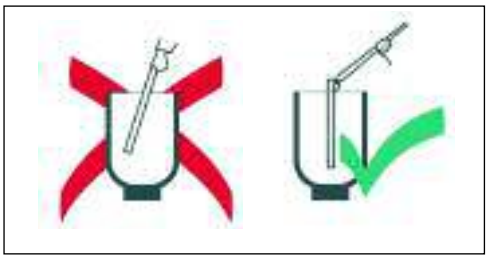
Base block must be flat, larger than crucible bottom and centered.

Use a ceramic fiber blanket to seal. Allow space between top and sides of furnace.

Use locating bricks in tilting furnaces and allow for expansion.

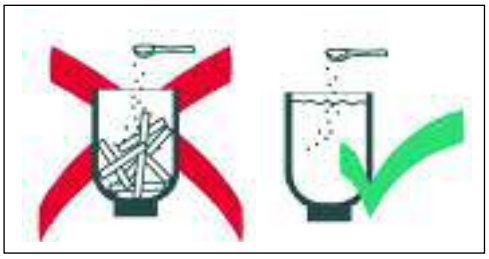


Tangential fire around crucible.



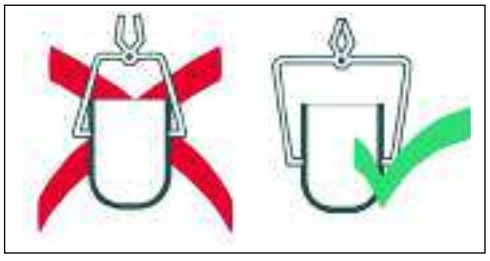
Do not drop, charge slowly, lower in with tongs.

First charge with returns, then ingots on top.

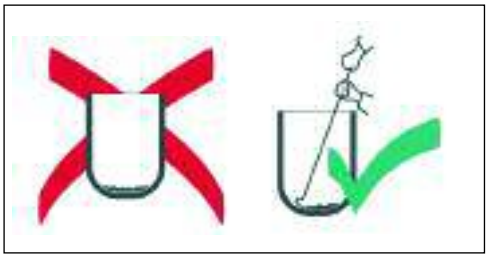


Only add flux after metal is molten.

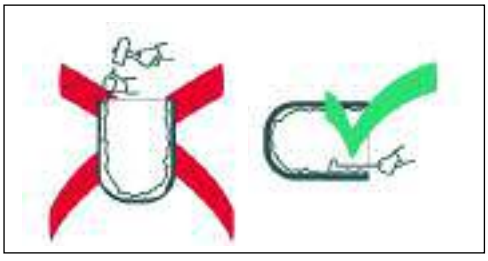
Avoid premature crucible failure by ensuring drain hole is sealed.



For lift-out, tongs must be placed on lower third of crucible. Fit tongs evenly on both sides.



Empty crucible before removing from furnace. Do not let metal solidify in crucible.



Clean carefully every day while still hot.

MORGANITE CRUCIBLE INDIA LTD
B-11, MIDC, Waluj, 431 136 Aurangabad, INDIA Tel. (0240) 2554405, 2554406 • Fax. (0240) 2564554 • **www.morganmms.com**
212/C, G.I.D.C Estate Mehsana, 384 002 Gujarat, INDIA Tel. (02762) 254186, 250503, 2533132 • Fax. (02762) 252692 • **www.morganmms.com**

All dimensions are subject to normal manufacturing tolerances. MORGANITE CRUCIBLE reserves the right to change specifications at any time. Not responsible for any typographic errors.

Morgan Molten Metal Systems

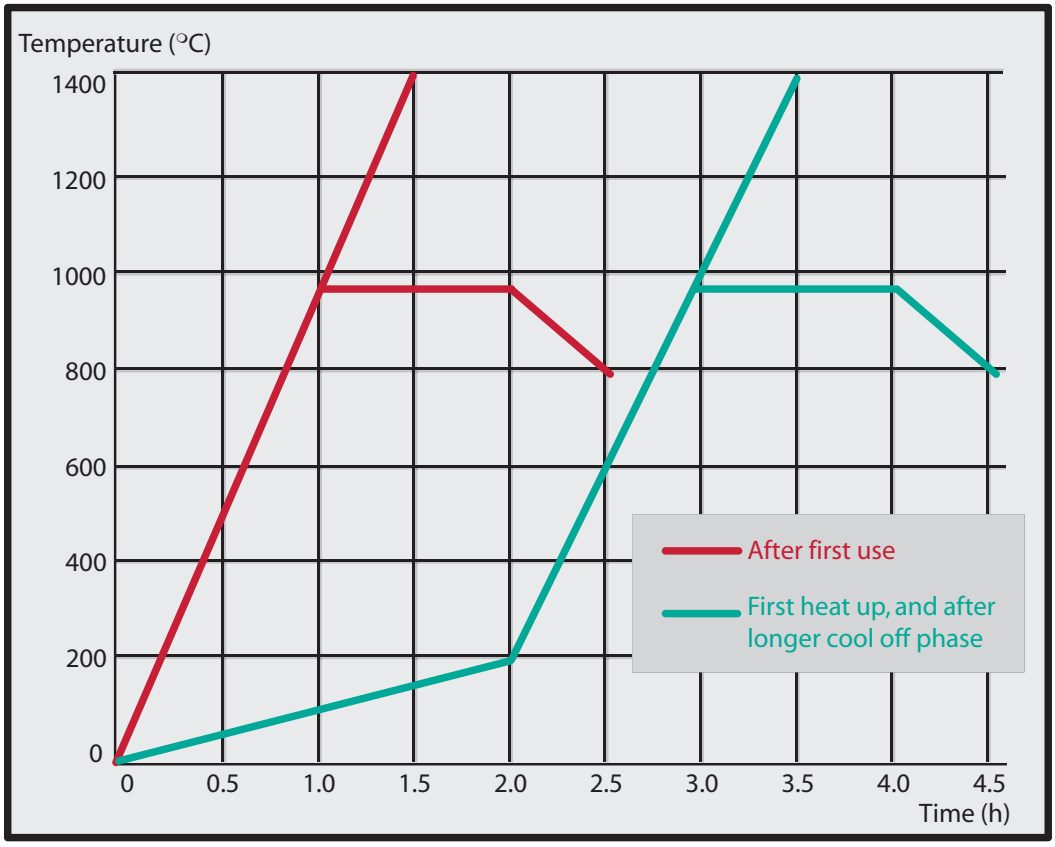
HEATING RECOMMENDATIONS FOR SILICON CARBIDE CRUCIBLES (SUPREX)

After installation in the furnace, the crucible should be heated up slowly to a temperature of 200°C (392°F) over a period of 2 hours, to eliminate any moisture that may be present. Afterwards, Silicon Carbide crucibles should be heated up to a temperature of 950°C (1742°F) on full power, if possible. Silicon Carbide crucibles used in a melting operation can be continuously heated up on full power until working temperature is reached. The crucible is then ready to be charged with care.

When using Silicon Carbide crucibles for holding, the temperature of 950°C (1742°F) should be reached and held for approximately 1 hour. This ensures even melting of the glaze with the additional anti-oxidation coating, which is essential to achieve the maximum possible crucible life. For holding crucibles this procedure should be carried out periodically, **but always before starting up again after a cool-down period.** This helps to compensate for the negative effects of low holding temperatures.

Each time the crucible is heated up after a cooling down phase, it should be heated following the procedure laid down for the first installation. However, the drying time of 2 hours can be omitted. **Should the Silicon Carbide crucible not be used for a longer period, it will be necessary to eliminate moisture, which may have been absorbed from slag.** In this case, the crucible should be heated up to a temperature of 200°C (392°F). After reaching this temperature, further heating should be continued as per the first installation.

The above recommendations refer to the use of new crucibles in existing furnaces. When installing a new Silicon Carbide crucible into a new furnace, the heating and drying instructions of the furnace manufacturer should be followed. If the furnace manufacturer prescribes a longer heating cycle (or curve), this procedure should be carried out without the crucible installed. It is essential that the crucible is installed in an absolutely dry furnace.



MORGANITE CRUCIBLE INDIA LTD
B-11, MIDC, Waluj, 431 136 Aurangabad, INDIA Tel. (0240) 2554405, 2554406 • Fax. (0240) 2564554 • **www.morganmms.com**
212/C, G.I.D.C Estate Mehsana, 384 002 Gujarat, INDIA Tel. (02762) 254186, 250503, 2533132 • Fax. (02762) 252692 • **www.morganmms.com**

All dimensions are subject to normal manufacturing tolerances. MORGANITE CRUCIBLE reserves the right to change specifications at any time. Not responsible for any typographic errors.

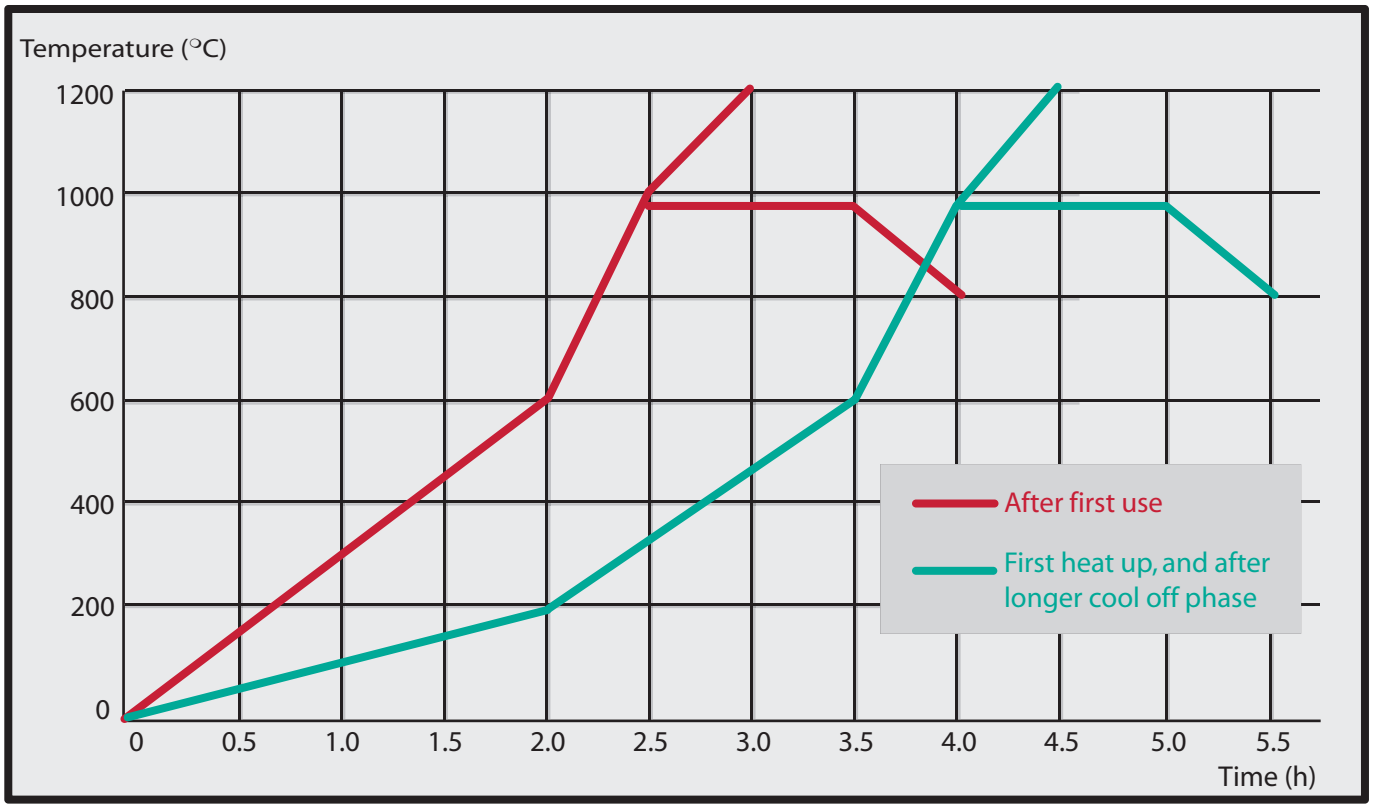
HEATING RECOMMENDATIONS FOR CLAY/GRAPHITE CRUCIBLES (SALAMANDER, ALPHA, SIGMA)

After installation in the furnace, the crucible should be heated up slowly to a temperature of 200°C (392°F) over a period of 2 hours, to eliminate any moisture that may be present. Afterwards, Clay/Graphite crucibles should be heated up to a temperature of 600°C (1112°F) on low power, before the full heating rate is used to reach 950°C (1742°F), or the desired working temperature, if higher.

When using Clay/Graphite crucibles for holding, the temperature of 950°C (1742°F) should be reached and held for approximately 1 hour. This ensures even melting of the glaze with the additional anti-oxidation coating, which is essential to achieve the maximum possible crucible life. For holding crucibles this procedure should be carried out periodically, **but always before starting up again after a cool-down period.** This helps to compensate for the negative effects of low holding temperatures.

Each time the crucible is heated up after a cooling down phase, it should be heated following the procedure laid down for the first installation. However, the drying time of 2 hours can be omitted. **Should the Clay/Graphite crucible not be used for a longer period, it will be necessary to eliminate moisture which may have been absorbed from slag.** In this case, the crucible should be heated up to a temperature of 200°C (392°F). After reaching this temperature, further heating should be continued as per the first installation.

The above recommendations refer to the use of new crucibles in existing furnaces. When installing a new Clay/Graphite crucible into a new furnace, the heating and drying instructions of the furnace manufacturer should be followed. If the furnace manufacturer prescribes a longer heating cycle (or curve), this procedure should be carried out without the crucible installed. It is essential that the crucible is installed in an absolutely dry furnace.



MORGANITE CRUCIBLE INDIA LTD
B-11, MIDC, Waluj, 431 136 Aurangabad, INDIA Tel. (0240) 2554405, 2554406 • Fax. (0240) 2564554 • **www.morganmms.com**
212/C, G.I.D.C Estate Mehsana, 384 002 Gujarat, INDIA Tel. (02762) 254186, 250503, 2533132 • Fax. (02762) 252692 • **www.morganmms.com**

All dimensions are subject to normal manufacturing tolerances. MORGANITE CRUCIBLE reserves the right to change specifications at any time. Not responsible for any typographic errors.

Morgan Molten Metal Systems

TROUBLESHOOTING GUIDE Crucibles

SYMPTOM	CAUSE
1. Vertical cracks	
a. Vertical cracks anywhere, crucible wall very thin on the crack and the crucible generally showing of wear.	1a. This indicates that the crucible has worn out and has cracked owing to thinning and loss of strength.
b. Vertical crack in chine, extending across the bottom. Crucible may be nearly new or unworn.	1b. This type of failure is due to excessively rapid heating of the chine when the crucible is cold and is known as "stunting". It is caused by putting a cold crucible into a hot fire or by warming up a cold crucible too fast. The condition is often accompanied by glaze flaking due to the thermal shock.
c. Vertical crack from the top edge.	1c. This failure can also be caused by rapid heating, especially when the bottom and chine of the crucible are heated much faster than the top. A "wedge" near the top edge can also cause this failure. Similarly, badly fitting tongs or a knock on the edge may cause some mechanical damage or distortion should be visible.
d. Vertical crack in wall not extending to the top or bottom.	1d. This is usually due to pressure from the inside that may be caused by the charge wedging into the crucible when cold, and subsequently expanding as it heats up. Cracks due to "wedging" in this manner are usually wider on the outside than on the inside and the edges of the cracks may show a "step" as if one section of the pot has been forced outwards.
2. Lateral cracks	
a. Near bottom — possibly resulting in the bottom coming off.	2a. This may be due to mechanical damage, such as an ingot being dropped in, or a blow from a poker. It may also be caused by thermal strains as in (1b).
b. Just about half way up in a “rapid” crucible.	2b. This failure may be caused by the crucible being stuck to its stand or fixed up in a bed of clinker. If the crucible is then gripped up rather high in the tongs and pulled hard by a crane or levered about to free it, it may part just below the tongs.
c. In spouted TP Crucibles, a lateral crack below the spout.	2c. This may be caused by bad crucible setting in the furnace. If fire clay is packed tightly under the spout when a new crucible is set, any subsequent contraction of the crucible will leave it suspended by its spot, causing the crack.
3. Star cracks	
a. In the base of the crucible.	3a. Due to thermal strains as in (1b).
b. In the side wall of crucible.	3b. Due to wedging as in (1d). Usually shows bulging.

MORGANITE CRUCIBLE INDIA LTD
B-11, MIDC, Waluj, 431 136 Aurangabad, INDIA Tel. (0240) 2554405, 2554406 • Fax. (0240) 2564554 • **www.morganmms.com**
212/C, G.I.D.C Estate Mehsana, 384 002 Gujarat, INDIA Tel. (02762) 254186, 250503, 2533132 • Fax. (02762) 252692 • **www.morganmms.com**

All dimensions are subject to normal manufacturing tolerances. MORGANITE CRUCIBLE reserves the right to change specifications at any time. Not responsible for any typographic errors.

Morgan Molten Metal Systems

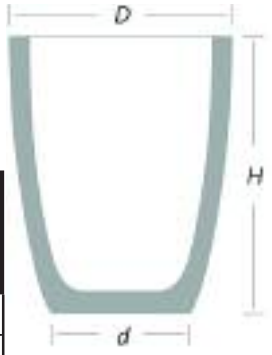
TROUBLESHOOTING GUIDE Crucibles

SYMPTOM	CAUSE
4. Holes in crucible	
a. A large hole in a crucible that has not worn thin.	4a. Almost invariably due to a heavy blow, as from throwing in an ingot. In such a case, the piece knocked out is usually much smaller on the side which was hit than on the other side.
b. Pinholes.	4b. Usually these are actually leaks on a crack. Break up and look for crack.
c. Crucible worn thin.	4c. Worn-out.
5. Excessive wear or erosion	
a. Inside at metal level.	5a. Caused by flux or metal oxides floating on the metal. Avoid excessive oxidation or flux addition and avoid "stewing" and over heating, do not add flux too soon.
b. Inside all over.	5b. Due to corrosive charge, such as Ferro chrome, or by flux added at the bottom of the crucible before charging metal. Can be minimised by avoiding overheating and stewing
c. At the bottom and chine, outside in coke fired furnaces.	5c. This is caused by attack of coke, ash and slag, due to poor coke and/or overheating and/or standing it on a hard floor when lumps of coke have stuck to the bottom.
d. Outside, in pits and craters.	5d. Due to attack fluid or flux which has soaked through the crucible and attacked on the outside which is hotter.
6. Miscellaneous	
a. Crocodile cracks outside.	6a. A network of cracks, like crocodile skin, are caused by perishing.
b. Slow melting.	6b. Also caused by perishing.
c. Flaking of glaze.	6c. This may be caused by thermal shocks as 1(b), the usual cause is putting a cold pot into a hot furnace.
d. Bottom bulged upwards and cracked.	6d. Due to setting the crucible down on a hard floor when a piece of coke or other material has stuck to bottom.
e. Bottom cracking when there is a thick dross layer inside.	6e. Due to expansion of the dross.
f. Green colouration outside crucible accompanied by softening.	6f. This is the result of long exposure to a high temperature over 1460°C.
g. Places detached from bottom or chine of new pot.	6g. Due to "bumping" of a damp pot.
h. Stunting	6h. Occurs due to differential expansion between any parts of the pot at excessively different temperatures. Do not subject the crucible to: rapid heating or uneven temperature distribution.
i. Oxidizing	6i. When crucible is subjected to an oxidizing atmosphere at temperature between 600°C and 900°C.

MORGANITE CRUCIBLE INDIA LTD
B-11, MIDC, Waluj, 431 136 Aurangabad, INDIA Tel. (0240) 2554405, 2554406 • Fax. (0240) 2564554 • **www.morganmms.com**
212/C, G.I.D.C Estate Mehsana, 384 002 Gujarat, INDIA Tel. (02762) 254186, 250503, 2533132 • Fax. (02762) 252692 • **www.morganmms.com**

All dimensions are subject to normal manufacturing tolerances. MORGANITE CRUCIBLE reserves the right to change specifications at any time. Not responsible for any typographic errors.

Morgan Molten Metal Systems



AC SHAPE SILICON CARBIDE CRUCIBLES

FOR OVER LIFT OUT AND BALE OUT FURNACES

Sr. No.	PATTERN	HEIGHT mm	OUTSIDE DIAMETER TOP mm	OUTSIDE DIAMETER BOTTOM mm	BRIMFUL CAPACITY WATER Kgs.	APPROXIMATE BRASS WORKING CAPACITY Kgs.
1	AC-20	270	220	150	5.10	38.30
2	AC-50	324	248	180	8.50	64.00
3	AC-60	362	276	190	11.00	83.00
4	AC-80	405	305	210	15.50	116.00
5	AC-100	410	328	230	17.40	131.00
6	AC-120	440	333	240	20.00	150.00
7	AC-150	452	385	230	27.30	205.00
8	AC-175	472	385	230	28.50	214.00
9	AC-180	498	385	230	30.40	228.00
10	AC-200	495	400	285	33.20	249.50
11	AC-205	505	430	250	37.80	284.00
12	AC-225	555	430	285	38.30	288.00
13	AC-230	541	430	250	40.00	301.00
14	AC-250	555	430	260	43.00	323.00
15	AC-255	585	450	250	48.00	361.00
16	AC-280	635	430	250	50.10	376.00
17	AC-300	555	440	310	44.50	334.00
18	AC-330	585	474	260	54.00	406.00
19	AC-350	630	474	260	59.50	447.00
20	AC-355	635	474	315	62.00	466.00
21	AC-365	665	475	260	65.50	492.00
22	AC-375	685	475	315	71.70	539.00
23	AC-400	650	530	315	78.60	591.00
24	AC-405	705	530	315	86.10	647.00
25	AC-410	685	527	315	82.00	616.00
26	AC-500	685	565	355	93.00	699.00
27	AC-510	720	565	355	97.00	729.00
28	AC-555	765	565	355	103.00	774.00
29	AC-610	800	565	355	115.00	864.00
30	AC-35	938	276	190	9.50	71.00

Notes

- The dimensions shown are nominal and subject to normal manufacturing tolerances.
- Our crucibles are recommended for non-ferrous alloys except those containing more than 30% of Nickel, Chromium or Iron.
- Working capacities are based on Brass Specific Gravity 8.35 and Aluminium Specific Gravity 2.7 and 90% of Brimful Capacity approx.

MORGANITE CRUCIBLE INDIA LTD
B-11, MIDC, Waluj, 431 136 Aurangabad, INDIA Tel. (0240) 2554405, 2554406 • Fax. (0240) 2564554 • **www.morganmms.com**
212/C, G.I.D.C Estate Mehsana, 384 002 Gujarat, INDIA Tel. (02762) 254186, 250503, 2533132 • Fax. (02762) 252692 • **www.morganmms.com**

All dimensions are subject to normal manufacturing tolerances. MORGANITE CRUCIBLE reserves the right to change specifications at any time. Not responsible for any typographic errors.

Morgan Molten Metal Systems

TPC SHAPE SILICON CARBIDE CRUCIBLES

For Over Top Crucibles for Tilting Furnaces

SR. NO.	PATTERN	H mm	OUTSIDE DIAMETER		BRIMFUL CAPACITY WATER Kgs	APPROXIMATE BRASS WORKING CAPACITY Kgs
			D mm	d mm		
1	TPC - 5	675	430	250	45.00	338.00
2	TPC - 8	800	450	295	68.20	512.00
3	TPC - 10	940	450	295	82.70	621.00

Spouted Crucibles for Tilting Furnaces

SR. NO.	PATTERN	H mm	OUTSIDE DIAMETER		BRIMFUL CAPACITY WATER Kgs	APPROXIMATE BRASS WORKING CAPACITY Kgs
			D mm	d mm		
1	TPC - 175	472	385	230	25.00	188.00
2	TPC - 400	600	385	280	30.00	225.00
3	TPC - 740	555	440	310	33.00	248.00
4	TPC - 843	675	430	250	44.40	334.00
5	TPC - 982	800	450	295	62.00	466.00
6	TPC - 12	940	450	295	73.70	554.00
7	TPC - 89	800	565	355	101.00	759.00

Spouted Basins for Tilting Furnaces

SR. NO.	PATTERN	H mm	OUTSIDE DIAMETER		BRIMFUL CAPACITY WATER Kgs	APPROXIMATE ALUMINIUM WORKING CAPACITY Kgs
			D mm	d mm		
1	TPC - 287	600	527	315	59.50	144.00
2	TPC - 387	630	616	355	93.00	226.00
3	TPC - 412	800	616	355	128.00	311.00
4	TPC - 587	890	775	460	225.00	547.00
5	TPC - 650	1025	775	460	247.00	600.00

Spout length is measured from the outside of the crucible.
Standard spout length is 146 mm.
Spout with length up to 280 mm is available.
Any basic model of AC and BC can be converted to spouted model.

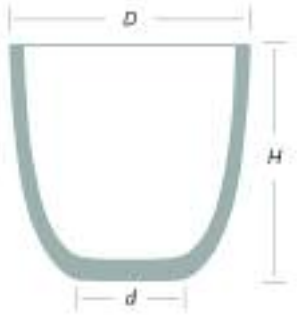
Notes

- The dimensions shown are nominal and subject to normal manufacturing tolerances.
- Our crucibles are recommended for non-ferrous alloys except those containing more than 30% of Nickel, ChromiuM or Iron.
- Working capacities are based on Brass Specific Gravity 8.35 and Aluminium Specific Gravity 2.7 and 90% of Brimful Capacity approx.

MORGANITE CRUCIBLE INDIA LTD
B-11, MIDC, Waluj, 431 136 Aurangabad, INDIA Tel. (0240) 2554405, 2554406 • Fax. (0240) 2564554 • **www.morganmms.com**
212/C, G.I.D.C Estate Mehsana, 384 002 Gujarat, INDIA Tel. (02762) 254186, 250503, 2533132 • Fax. (02762) 252692 • **www.morganmms.com**

All dimensions are subject to normal manufacturing tolerances. MORGANITE CRUCIBLE reserves the right to change specifications at any time. Not responsible for any typographic errors.

Morgan Molten Metal Systems



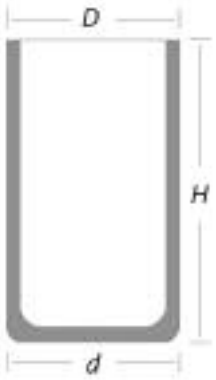
BC SHAPE SILICON CARBIDE CRUCIBLES

For Bale Out Furnaces

SR. NO.	PATTERN	H mm	OUTSIDE DIAMETER		BRIMFUL CAPACITY WATER Kgs	APPROXIMATE ALUMINIUM WORKING CAPACITY Kgs
			D mm	d mm		
1	BC - 166	400	527	315	44.50	108.00
2	BC - 167	450	527	315	51.50	125.00
3	BC - 168	492	527	315	59.50	144.50
4	BC - 171	600	527	315	73.60	179.00
5	BC - 202	500	610	355	79.90	194.00
6	BC - 302	630	616	355	110.00	267.00
7	BC - 401	700	616	355	124.00	301.00
8	BC - 402	800	616	355	145.10	352.50
9	BX - 247	750	775	460	202.30	491.50
10	BX - 263	890	775	460	236.60	575.00
11	BX - 700	1025	775	460	288.00	700.00
12	BX - 900	1245	765	460	386.00	938.00

STRAIGHT SHAPE SILICON CARBIDE CRUCIBLES

For Induction Furnaces



Pattern	H mm	Outside Diameter	Brimful Capacity Water Kgs	Approximate Brass Working Capacity Kgs
		D mm		
EX - 71	700	450	63.50	477.00
EX - 75	800	450	74.80	562.00

Notes

- The dimensions shown are nominal and subject to normal manufacturing tolerances.
- Our crucibles are recommended for non-ferrous alloys except those containing more than 30% of Nickel, Chromium or Iron.
- Working capacities are based on Brass Specific Gravity 8.35 and Aluminium Specific Gravity 2.7 and 90% of Brimful Capacity approx.

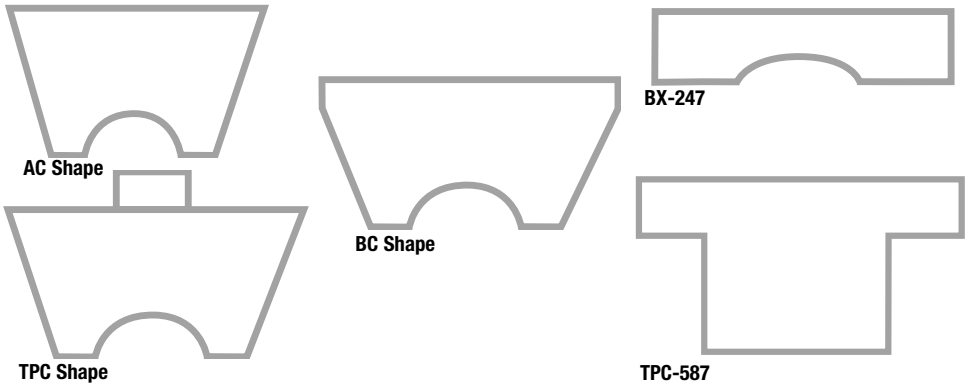
MORGANITE CRUCIBLE INDIA LTD
B-11, MIDC, Waluj, 431 136 Aurangabad, INDIA Tel. (0240) 2554405, 2554406 • Fax. (0240) 2564554 • **www.morganmms.com**
212/C, G.I.D.C Estate Mehsana, 384 002 Gujarat, INDIA Tel. (02762) 254186, 250503, 2533132 • Fax. (02762) 252692 • **www.morganmms.com**

All dimensions are subject to normal manufacturing tolerances. MORGANITE CRUCIBLE reserves the right to change specifications at any time. Not responsible for any typographic errors.

Morgan Molten Metal Systems

ACCESSORIES FOR USE WITH SUPREX CRUCIBLES

STANDS



PATTERN	TOP OD mm	BOTTOM OD mm	HEIGHT mm	SUITABLE FOR PATTERNS		
				AC	BC/BX	TPC
XRX 122	285	230	125	160, 175, 180, 200, 205, 225, 230, 250, 255, 330, 350, 365		175, 400
XRX 132/1	310	250	125	300, 355, 375, 400, 405, 410	166, 167, 168, 171	287, 355
XRX 132/1 (s)	310	250	125			740, 355, 843, 10, 12, 982, 8
XRX 202/1	360	250	125	500, 510, 610, 555	202, 302, 401, 402	387, 412
XRX 202/1 (s)	360	250	125			412, 89
XRX 247	425	425	115		247, 263, 700	
XRX 587	425	300	215			587, 650
XRX 360/50	360	360	50			
XRX 310/50	310	310	50			
SA 30/2	760	760	50			
SA 30/3	760	760	75			
SA 30/4	760	760	100			
SA 30/5	760	760	125			

Stand of different height also can be made available on order.

Stand with spigot also available for TPC model having recess.

MUFFLE RINGS

For the patterns above AC-160 Muffle Rings are available with maximum height of 250 mm.

Order to be placed as XMX & Model. e.g. For TPC-400 crucible, oder to be placed as XMX-T400.

Muffle rings increase thermal efficiency by providing additional space for the heating charge.

MORGANITE CRUCIBLE INDIA LTD
B-11, MIDC, Waluj, 431 136 Aurangabad, INDIA Tel. (0240) 2554405, 2554406 • Fax. (0240) 2564554 • **www.morganmms.com**
212/C, G.I.D.C Estate Mehsana, 384 002 Gujarat, INDIA Tel. (02762) 254186, 250503, 2533132 • Fax. (02762) 252692 • **www.morganmms.com**

All dimensions are subject to normal manufacturing tolerances. MORGANITE CRUCIBLE reserves the right to change specifications at any time. Not responsible for any typographic errors.

Morgan Molten Metal Systems

ISOSTATIC PRESSING TECHNOLOGY (CIP) is used to produce high quality crucibles… **"RED DIAMOND" SIGMA.**

CIP – A HOST OF HIGH-TECH ADVANTAGES

HOMOGENEITY

In CIP, an equal amount of pressure is applied simultaneously in all directions on the ceramic batch encased in the elastomeric mould. Since behaviour of the ceramic powder is directly related to the number of directions from which the pressure is applied, this process makes an optimal level of homogeneity possible. This makes CIP ideal for the manufacture of metal pouring refractories.

SWIFT TRANSFER

High Resistance: In CIP, the ceramic powder is contained in a flexible mould which is immersed in a liquid kept at very high pressures. This helps to compact the ceramic powder uniformly in all directions. This high compactness allows a steady and fast pace of heat transfer and electrical resistance.

HIGH & UNIFORM DENSITY

Because of equal and high pressure, the ceramic powder can be compacted at a very high and uniform density throughout the required shape. Isostatic Pressing is the benchmark process in the world's most technologically advanced regions.

The range of special features offered by CIP are:

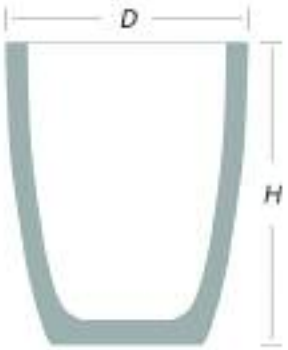
- Homogenous High Density and Strength
- High Thermal Conductivity
- High Fuel Efficiency & Energy Saving
- Virtually Zero Defects

MORGANITE CRUCIBLE INDIA LTD
B-11, MIDC, Waluj, 431 136 Aurangabad, INDIA Tel. (0240) 2554405, 2554406 • Fax. (0240) 2564554 • **www.morganmms.com**
212/C, G.I.D.C Estate Mehsana, 384 002 Gujarat, INDIA Tel. (02762) 254186, 250503, 2533132 • Fax. (02762) 252692 • **www.morganmms.com**

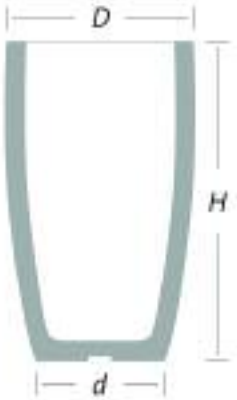
All dimensions are subject to normal manufacturing tolerances. MORGANITE CRUCIBLE reserves the right to change specifications at any time. Not responsible for any typographic errors.

Morgan Molten Metal Systems

RED DIAMOND "SIGMA" AI SHAPE (SMALL)
(ISOSTATIC CRUCIBLES)



TYPE SIZE	H mm	TOP D mm	BOTTOM d MM	BRIMFUL CAPACITY LITERS
AI 6/0	29	25	19	0.004
AI 5/0	35	32	25	0.009
AI 4/0	51	41	27	0.022
AI 3/0	54	48	32	0.036
AI 2/0	57	52	36	0.041
AI 1/0	72	60	42	0.069
AI 1/4	75	65	45	0.092
AI 1/2	80	74	50	0.133
AI 0.5	80	74	50	0.160
AI 1	95	92	65	0.280
AI 1.1	97	79	55	0.177
AI 1.2	100	80	54	0.187
AI 1.4	110	94	54	0.255
AI 1.9	125	104	65	0.405
AI 2	120	110	75	0.550
AI 2.1	110	102	65	0.366
AI 3	135	120	80	0.740
AI 3.1	130	110	70	0.534
AI 4	155	140	100	1.260
AI 4.1	140	115	75	0.655
AI 4.2	141	115	75	0.596
AI 5	165	140	100	1.370
AI 5.1	150	125	85	0.859
AI 5.2	155	127	87	0.937
AI 6	175	140	100	1.480
AI 6.1	165	106	90	0.986
AI 6.2	165	130	90	1.163
AI 8	180	155	105	1.780
AI 8.1	180	155	105	1.582
AI 10	200	175	120	2.368
AI 10.1	205	162	115	1.866
AI 12	210	175	120	2.526
AI 14	225	175	120	2.764
AI 16	230	200	120	3.850
AI 18	250	215	130	4.360
AI 20	265	230	140	5.430
AI 25	280	230	140	5.940
AI 30	280	255	165	7.540
AI 32	340	245	175	7.750
AI 34	360	245	175	8.304
AI 35	300	268	185	8.630
AI 40	315	268	185	9.190
AI 41	330	268	185	9.481
AI 50	330	305	195	10.560
AI 55	350	305	195	11.560
AI 60	375	307	195	12.080
AI 70	385	325	210	14.540
AI 80	410	325	210	15.780



RED DIAMOND "SIGMA" AI SHAPE (BIG)
(ISOSTATIC CRUCIBLES)

TYPE SIZE	H mm	TOP D mm	BOTTOM d MM	BRIMFUL CAPACITY LITERS
AI 85	430	325	210	16.540
AI 90	405	350	240	20.640
AI 100	410	350	240	20.960
AI 110	420	350	240	21.750
AI 120	435	350	240	22.970
AI 135	450	380	240	25.230
AI 150	475	380	240	26.630
AI 151	485	380	240	27.190
AI 180	500	380	240	28.460
AI 185	500	430	260	33.840
AI 195	500	410	295	35.580
AI 200	540	430	260	37.630
AI 225	565	430	260	40.020
AI 250	590	430	260	42.410
AI 255	545	440	295	48.360
AI 260	610	430	260	44.330
AI 300	585	475	320	55.000
AI 325	600	475	320	56.650
AI 326	600	490	280	59.190
AI 350	640	475	320	61.650
AI 351	640	490	280	64.260
AI 354	600	535	315	69.401
AI 355	600	560	360	75.830
AI 400	660	564	360	86.630
AI 401	660	540	315	79.398
AI 402	620	515	360	72.820
AI 405	680	540	315	82.560
AI 406	680	515	360	82.300
AI 450	705	564	360	95.390
AI 500	720	564	360	97.420
AI 501	720	545	315	89.063
AI 502	660	515	360	78.770
AI 510	740	545	315	93.770
AI 525	740	564	360	101.280
AI 550	760	564	360	104.620
AI 551	760	545	315	96.360
AI 552	720	520	360	88.080
AI 600	810	564	360	113.610
AI 601	810	548	315	104.790
AI 602	810	520	360	101.610
AI 603	810	564	360	107.170

Notes

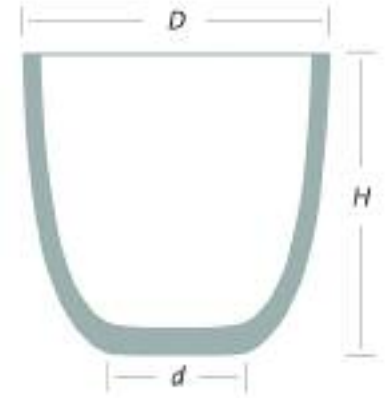
- The dimensions shown are nominal and subject to normal manufacturing tolerances.
- Our crucibles are recommended for non-ferrous alloys except those containing more than 30% of Nickel, Chromium or Iron.
- Working capacities are based on Brass Specific Gravity 8.35 and Aluminium Specific Gravity 2.7 and 90% of Brimful Capacity approx.

MORGANITE CRUCIBLE INDIA LTD
B-11, MIDC, Waluj, 431 136 Aurangabad, INDIA Tel. (0240) 2554405, 2554406 • Fax. (0240) 2564554 • **www.morganmms.com**
212/C, G.I.D.C Estate Mehsana, 384 002 Gujarat, INDIA Tel. (02762) 254186, 250503, 2533132 • Fax. (02762) 252692 • **www.morganmms.com**

All dimensions are subject to normal manufacturing tolerances. MORGANITE CRUCIBLE reserves the right to change specifications at any time. Not responsible for any typographic errors.

Morgan Molten Metal Systems

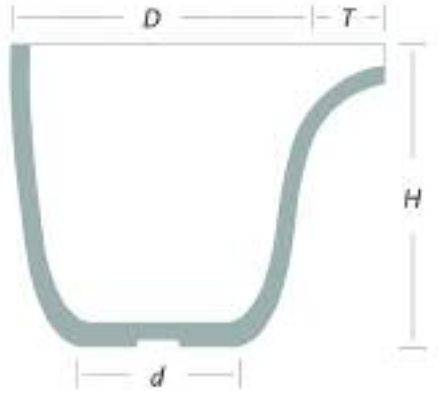
RED DIAMOND "SIGMA" BUI SHAPE



TYPE SIZE	H mm	TOP D mm	BOTTOM d mm	BRIMFUL CAPACITY LITERS
BUI 100	402	523	305	44.210
BUI 125	451	524	305	52.140
BUI 150	492	525	305	58.820
BUI 175	551	526	305	69.170
BUI 200	600	527	305	76.480
BUI 212	550	590	360	92.400
BUI 225	630	590	360	109.500
BUI 250	660	590	360	115.900
BUI 300	700	590	360	124.400
BUI 350	800	590	360	145.897

RED DIAMOND "SIGMA" TPI SHAPE (WITH SPOUT)

TYPE SIZE	H mm	TOP D mm	BOTTOM d mm	BRIMFUL CAPACITY LITERS
TPI 150	485	380	240	27.610
TPI 400	613	360	250	32.020
TPI 600	807	360	250	44.030
TPI 260	610	430	260	44.330
TPI 325	672	430	260	50.260
TPI 740	555	440	295	49.060
TPI 905	920	360	250	51.030
TPI 983	880	440	295	79.230
TPI 982	820	440	295	72.760
TPI 287	600	527	305	76.480
TPI 12	940	440	295	85.470
TPI 87	740	520	360	90.540
TPI 88	810	550	315	104.790
TPI 89	810	564	360	113.610
TPI 387	630	590	360	109.500
TPI 412	800	590	360	145.900



RED DIAMOND "SIGMA" TPI SHAPE (WITHOUT SPOUT)

TYPE SIZE	H mm	TOP D mm	BOTTOM d mm	BRIMFUL CAPACITY LITERS
TPI 4	613	360	250	32.020
TPI 5	707	360	250	38.020
TPI 6	807	360	250	44.030
TPI 8	820	440	295	72.460
TPI 9	880	440	295	79.230
TPI 10	940	440	295	85.470
TPI 904	914	360	250	50.650

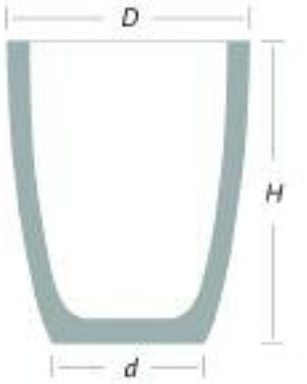
Notes

- The dimensions shown are nominal and subject to normal manufacturing tolerances.
- Our crucibles are recommended for non-ferrous alloys except those containing more than 30% of Nickel, Chromium or Iron.
- Working capacities are based on Brass Specific Gravity 8.35 and Aluminium Specific Gravity 2.7 and 90% of Brimful Capacity approx.

MORGANITE CRUCIBLE INDIA LTD
B-11, MIDC, Waluj, 431 136 Aurangabad, INDIA Tel. (0240) 2554405, 2554406 • Fax. (0240) 2564554 • **www.morganmms.com**
212/C, G.I.D.C Estate Mehsana, 384 002 Gujarat, INDIA Tel. (02762) 254186, 250503, 2533132 • Fax. (02762) 252692 • **www.morganmms.com**

All dimensions are subject to normal manufacturing tolerances. MORGANITE CRUCIBLE reserves the right to change specifications at any time. Not responsible for any typographic errors.

Morgan Molten Metal Systems



SALAMANDER CLAY-GRAPHITE CRUCIBLES

For Salamander Clay-Graphite Crucibles

SR. NO.	PATTERN NO.	WORKING CAPACITY BRASS Kgs	H mm	OUTSIDE DIAMETER	
				D mm	d mm
1	A5/0	0.09	35	32	24
2	A3/	0.22	52	46	30
3	A1/0	0.56	67	60	41
4	A0.5	1.00	78	68	48
5	A1	1.50	97	79	55
6	A1.5	2.08	100	90	59
7	A2	2.50	109	95	61
8	A3	3.70	127	105	70
9	A4	5.60	141	114	76
10	A5	6.80	152	124	86
11	A6	9.00	165	130	95
12	A7	11.30	175	140	105
13	A8	12.50	184	156	108
14	A10	15.50	200	160	110
15	A12	19.50	210	171	121
16	A16	23.00	232	184	130
17	A20	30.00	260	197	145
18	A25	36.00	280	210	155

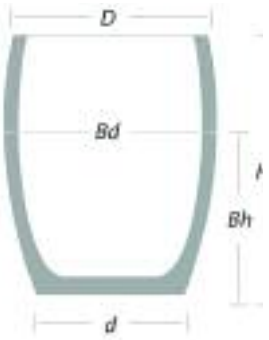
Working capacity is calculated as 90% of the brimful when melting brass, specific gravity 8.35.

Notes

- The dimensions shown are nominal and subject to normal manufacturing tolerances.

MORGANITE CRUCIBLE INDIA LTD
B-11, MIDC, Waluj, 431 136 Aurangabad, INDIA Tel. (0240) 2554405, 2554406 • Fax. (0240) 2564554 • **www.morganmms.com**
212/C, G.I.D.C Estate Mehsana, 384 002 Gujarat, INDIA Tel. (02762) 254186, 250503, 2533132 • Fax. (02762) 252692 • **www.morganmms.com**

All dimensions are subject to normal manufacturing tolerances. MORGANITE CRUCIBLE reserves the right to change specifications at any time. Not responsible for any typographic errors.



BILGE SHAPE CLAY-GRAPHITE CRUCIBLES

For Over Top Crucibles for Tilting Furnaces

SR. NO.	PATTERN	HEIGHT mm	OUTSIDE DIAMETER		BRIMFUL CAPACITY WATER Kgs	APPROXIMATE BRASS WORKING CAPACITY Kgs
			TOP mm	BOTTOM mm		
1	IC 1	102	93	58	0.268	2.00
2	IC 2	112	103	73	0.420	3.10
3	IC 4	146	121	85	0.890	6.70
4	IC 6	168	140	85	1.350	10.10
5	IC 10	205	158	120	2.100	15.80
6	IC 14	228	178	136	3.270	24.60

STRAIGHT SHAPE CLAY-GRAPHITE CRUCIBLES

For Induction Furnaces

PATTERN	H mm	TOP OUTSIDE D mm	BRIMFUL CAPACITY WATER Kgs	APPROXIMATE BRASS WORKING CAPACITY Kgs
EX-323	310	175	4.46	33.50
EX-350	310	220	5.40	40.60

Notes

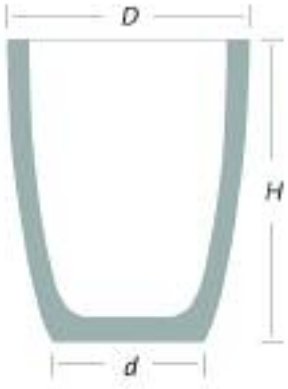
- The dimensions shown are nominal and subject to normal manufacturing tolerances.
- Our crucibles are recommended for non-ferrous alloys except those containing more than 30% of Nickel, Chromium or Iron.
- Working capacities are based on Brass Specific Gravity 8.35 and Aluminium Specific Gravity 2.7 and 90% of Brimful Capacity approx.

MORGANITE CRUCIBLE INDIA LTD
B-11, MIDC, Waluj, 431 136 Aurangabad, INDIA Tel. (0240) 2554405, 2554406 • Fax. (0240) 2564554 • **www.morganmms.com**
212/C, G.I.D.C Estate Mehsana, 384 002 Gujarat, INDIA Tel. (02762) 254186, 250503, 2533132 • Fax. (02762) 252692 • **www.morganmms.com**

All dimensions are subject to normal manufacturing tolerances. MORGANITE CRUCIBLE reserves the right to change specifications at any time. Not responsible for any typographic errors.

Morgan Molten Metal Systems

RED DIAMOND "ALPHA" A SHAPE (SMALL)
(CLAY GRAPHITE CRUCIBLES)



TYPE SIZE	H mm	TOP D mm	BOTTOM d mm	BRIMFUL CAPACITY LITRES
A 16	240	200	145	4.02
A 18	250	210	150	5.46
A 20	260	225	150	5.84
A 25	279	220	135	5.50
A 30	290	230	140	6.05
A 35	300	255	152	8.00
A 40	310	260	152	8.33
A 50	330	270	195	8.60
A 60	345	285	200	9.77
A 70	360	300	215	12.20
A 80	375	305	215	12.40
A 90	380	320	240	15.70
A 100	400	325	240	16.50

RED DIAMOND "ALPHA" A SHAPE (LARGE)
(CLAY GRAPHITE CRUCIBLES)

TYPE SIZE	H mm	TOP D mm	BOTTOM d mm	BRIMFUL CAPACITY LITRES
A 120	410	345	245	20.10
A 150	465	367	259	26.60
A 200	500	400	285	33.50
A 250	550	420	295	40.37
A 325	585	445	335	50.40
A 350	600	493	330	63.47
A 355	600	519	343	70.27
A 400	650	519	343	77.75
A 500	700	519	343	85.40
A 600	760	546	338	101.63
A 800	800	540	370	103.50
A 1000	822	616	420	149.90
A 1100	900	650	475	176.30
A 1300	1100	650	400	186.80
A 1500	950	715	370	205.70
A 2500	1080	742	370	246.80

Notes

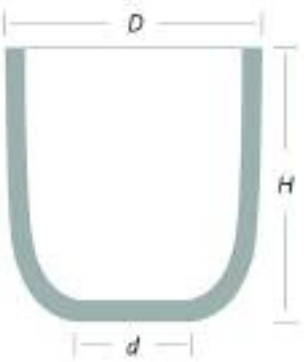
- The dimensions shown are nominal and subject to normal manufacturing tolerances.
- Our crucibles are recommended for non-ferrous alloys except those containing more than 30% of Nickel, Chromium or Iron.
- Working capacities are based on Brass Specific Gravity 8.35 and Aluminium Specific Gravity 2.7 and 90% of Brimful Capacity approx.

MORGANITE CRUCIBLE INDIA LTD
B-11, MIDC, Waluj, 431 136 Aurangabad, INDIA Tel. (0240) 2554405, 2554406 • Fax. (0240) 2564554 • **www.morganmms.com**
212/C, G.I.D.C Estate Mehsana, 384 002 Gujarat, INDIA Tel. (02762) 254186, 250503, 2533132 • Fax. (02762) 252692 • **www.morganmms.com**

All dimensions are subject to normal manufacturing tolerances. MORGANITE CRUCIBLE reserves the right to change specifications at any time. Not responsible for any typographic errors.

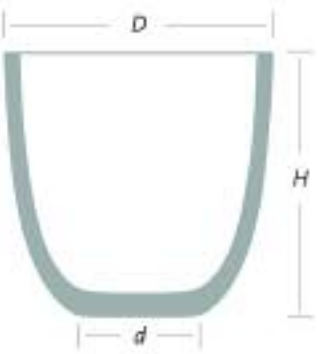
Morgan Molten Metal Systems

RED DIAMOND "ALPHA" B SHAPE
(CLAY GRAPHITE CRUCIBLES)



TYPE SIZE	H mm	TOP D mm	BOTTOM d mm	BRIMFUL CAPACITY LITRES
B 100	402	529	254	46.75
B 125	451	529	254	54.51
B 150	492	529	254	61.00
B 200	600	529	254	78.20
B 212	550	600	254	86.62
B 225	630	600	254	107.00
B 250	630	650	254	135.80
B 300	700	650	254	146.80
B 350	800	650	254	164.00
B 375	530	700	260	120.15
B 400	700	700	260	158.69

RED DIAMOND "ALPHA" BU SHAPE
(CLAY GRAPHITE CRUCIBLES)



TYPE SIZE	H mm	TOP D mm	BOTTOM d mm	BRIMFUL CAPACITY LITRES
BU 100	402	527	305	44.56
BU 125	451	527	305	52.77
BU 150	492	527	305	59.57
BU 175	551	527	305	69.35
BU 200	600	527	305	77.48
BU 211	505	615	356	81.50
BU 212	550	615	356	88.50
BU 225	630	615	356	109.60
BU 250	660	615	356	115.00
BU 300	700	615	356	125.00
BU 350	800	615	356	145.50
BU 500	750	775	420	199.25
BU 550	800	775	420	221.80
BU 600	900	775	420	250.49
BU 700	1000	775	420	277.77
BU 750	790	950	500	319.13
BU 1000	1050	950	500	466.71
BU 1300	1150	950	500	523.47

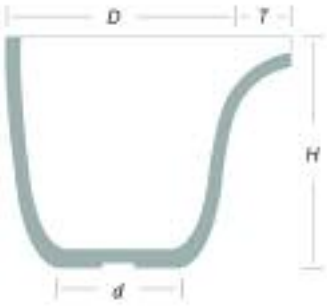
MORGANITE CRUCIBLE INDIA LTD
B-11, MIDC, Waluj, 431 136 Aurangabad, INDIA Tel. (0240) 2554405, 2554406 • Fax. (0240) 2564554 • **www.morganmms.com**
212/C, G.I.D.C Estate Mehsana, 384 002 Gujarat, INDIA Tel. (02762) 254186, 250503, 2533132 • Fax. (02762) 252692 • **www.morganmms.com**

All dimensions are subject to normal manufacturing tolerances. MORGANITE CRUCIBLE reserves the right to change specifications at any time. Not responsible for any typographic errors.

Morgan Molten Metal Systems

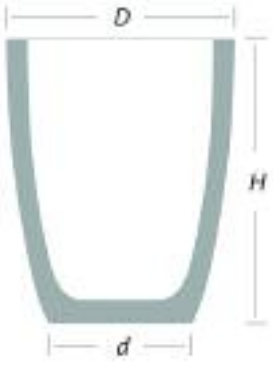
RED DIAMOND "ALPHA" TP SHAPE (WITH SPOUT)
(CLAY GRAPHITE CRUCIBLES)

TYPE SIZE	H mm	TOP D mm	BOTTOM d mm	BRIMFUL CAPACITY LITRES
TP 162	460	302	217	15.60
TP 173	489	300	237	16.09
TP 400	613	360	240	29.01
TP 600	807	365	248	43.55
TP 904	914	354	254	43.80
TP 325	672	421	254	45.00
TP 982	800	440	295	72.30
TP 287	600	527	305	77.48
TP 12	940	440	295	82.80
TP 89	760	546	338	101.63
TP 387	630	615	356	115.24
TP 412	800	615	356	147.40
TP 587	889	775	420	250.49
TP 987	1050	950	500	466.71



RED DIAMOND "ALPHA" TP SHAPE (WITHOUT SPOUT)
(CLAY GRAPHITE CRUCIBLES)

TYPE SIZE	H mm	TOP D mm	BOTTOM d mm	BRIMFUL CAPACITY LITRES
TP 901	762	292	235	26.30
TP 904	914	354	254	43.80
TP 8	815	440	295	70.90
TP 10	940	440	295	82.80
TP 14	1016	440	295	89.40
TP 15	975	540	370	126.00
TP 830	1160	540	370	155.00
TP 15P (PARTITION)	975	540	370	126.40



Notes

- The dimensions shown are nominal and subject to normal manufacturing tolerances.
- Our crucibles are recommended for non-ferrous alloys except those containing more than 30% of Nickel, Chromium or Iron.
- Working capacities are based on Brass Specific Gravity 8.35 and Aluminium Specific Gravity 2.7 and 90% of Brimful Capacity approx.

MORGANITE CRUCIBLE INDIA LTD
B-11, MIDC, Waluj, 431 136 Aurangabad, INDIA Tel. (0240) 2554405, 2554406 • Fax. (0240) 2564554 • **www.morganmms.com**
212/C, G.I.D.C Estate Mehsana, 384 002 Gujarat, INDIA Tel. (02762) 254186, 250503, 2533132 • Fax. (02762) 252692 • **www.morganmms.com**

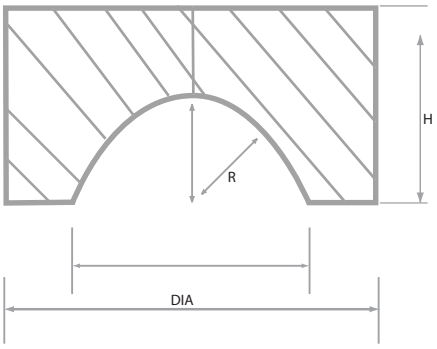
All dimensions are subject to normal manufacturing tolerances. MORGANITE CRUCIBLE reserves the right to change specifications at any time. Not responsible for any typographic errors.

Morgan Molten Metal Systems

- All dimensions are in mm

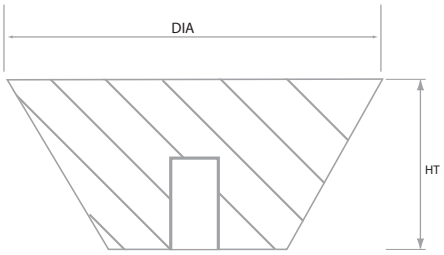
RED DIAMOND "ALPHA" STAND (CYLINDER TYPE)

TYPE SIZE	HEIGHT mm	DIAMETER mm
STAND A/1/2/3/4	125/150/200/250	200
STAND B/1/2/3/4	125/150/200/250	225
STAND C/1/2/3/4	125/150/200/250	260
STAND D/1/2/3/4	125/150/200/250	300



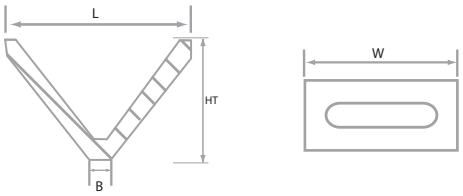
RED DIAMOND "ALPHA" STAND (TAPER TYPE)

TYPE SIZE	HEIGHT mm	DIAMETER mm
STAND A/1/2/3/4	125/150/200/250	250/200
STAND B/1/2/3/4	125/150/200/250	300/225
STAND C/1/2/3/4	125/150/200/250	360/260
STAND D/1/2/3/4	125/150/200/250	420/300



- The above table shows standard heights.
- Stands available with or without inside groove.
- Height can be manufactured as per customer requirement.

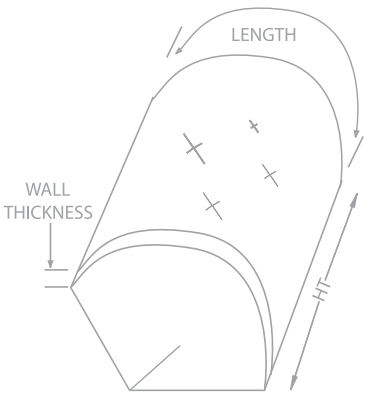
RED DIAMOND "ALPHA" BRAZING CRUCIBLE



DRG NO	LENGTH mm	WIDTH mm	BOTTOM mm	HEIGHT mm	CAPACITY LITERS
RD 207-A	760	320	190/210	310	13
LAUNDER	345	137		72	

RED DIAMOND "ALPHA" G.F. CONVERTER SEGMENT

DRG NO	LENGTH mm	HEIGHT mm	WALL THICKNESS mm
SEGMENT 393	658	840	65
SEGMENT 366	599	760	70
SEGMENT 328	587	640	50
SEGMENT 327	564	560	50
SEGMENT ESL	692	840	85
SEGMENT 420	850	760	70
SEGMENT 421	658	840	65
SEGMENT 422	720	830	50
SEGMENT 428	841	760	70



- Wall thickness as per customer requirement.

MORGANITE CRUCIBLE INDIA LTD
B-11, MIDC, Waluj, 431 136 Aurangabad, INDIA Tel. (0240) 2554405, 2554406 • Fax. (0240) 2564554 • **www.morganmms.com**
212/C, G.I.D.C Estate Mehsana, 384 002 Gujarat, INDIA Tel. (02762) 254186, 250503, 2533132 • Fax. (02762) 252692 • **www.morganmms.com**

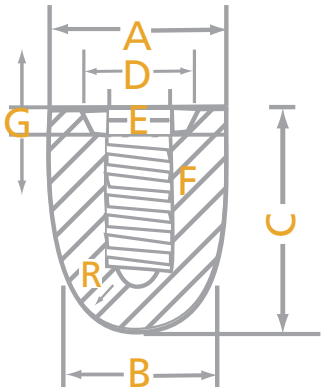
All dimensions are subject to normal manufacturing tolerances. MORGANITE CRUCIBLE reserves the right to change specifications at any time. Not responsible for any typographic errors.

Morgan Molten Metal Systems

- All dimensions are in mm

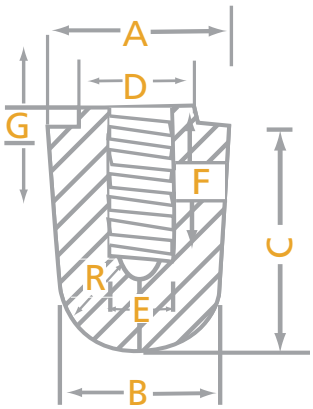
RED DIAMOND "ALPHA" STOPPER HEAD S TYPE

NOMINAL DIA	PATTERN NO.	A	B	C	D		E		F	G	R	P
90	S.0	90	80	120	68	62	33.5	23.5	13	12	40	6
105	S.1	105	90	130	78	72	38.5	28.5	13	12	45	6
120	S.2	120	110	125	86	72	38.5	28.5	13	12	55	6
140	S.3	140	120	145	86	72	38.5	28.5	13	12	60	6
155	S.4/2	155	130	155	97	82	38.5	28.5	13	12	65	6
170	S.5	170	130	170	115	97	38.5	28.5	13	12	65	6



RED DIAMOND "ALPHA" STOPPER HEAD RS TYPE

NOMINAL DIA	PATTERN NO.	A	B	C	D		E		F	G	R	P
90	RS.22	89	86	114	57	56	28	21	13	10	43	6
100	RS.23	100	88	130	64	62	38	28	13	10	44	6
115	RS.24	115	102	142	70	68	38	28	12	10	51	6
130	RS.26	130	110	130	72	70	37	28	12	10	55	6
ROTO-TYPE (90)	RS-395	90	84	100	64	63	58	50	12	10	44	4

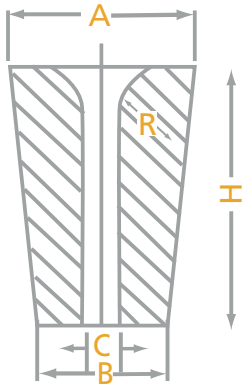


RED DIAMOND "ALPHA" STOPPER ROD

TYPE / SIZE	HEIGHT	DIAMETER	HOLE DIAMETER	RADIUS
RDI-059	475	105	42	35
RDI-078	450	90	42	35

RED DIAMOND "ALPHA" REFRACTORY NOZZLE

PATTERN NO.	TOP DIA A	BOTTOM DIA B	HEIGHT H	RADIUS R	VARIOUS BORE DIA C
NZS-1	139	99	200	50	20,23,26,30,35,40,45,55
NZ-T	120	140	90	50	35
NZ-J	120	140	90	50	40
NZ-DRS4	120	41	116	45	25



RED DIAMOND "ALPHA" SAGGERS

TYPE / SIZE	OD	ID	H
RD-413	950	850	500
RD-417	540	460	405
RD-418	600	525	405

MORGANITE CRUCIBLE INDIA LTD
B-11, MIDC, Waluj, 431 136 Aurangabad, INDIA Tel. (0240) 2554405, 2554406 • Fax. (0240) 2564554 • **www.morganmms.com**
212/C, G.I.D.C Estate Mehsana, 384 002 Gujarat, INDIA Tel. (02762) 254186, 250503, 2533132 • Fax. (02762) 252692 • **www.morganmms.com**

All dimensions are subject to normal manufacturing tolerances. MORGANITE CRUCIBLE reserves the right to change specifications at any time. Not responsible for any typographic errors.

Morgan Molten Metal Systems

TROUBLE FREE PYROMETRY

THE COST EFFECTIVE THERMOCOUPLE PROTECTION SYSTEM

The HotRod™ thermocouple sheath range offers a premium thermocouple protection system–providing excellent service life, good accuracy and response.

Supplied ready for use with a threaded 1/2" steel tube for rapid attachment to the furnace pyrometry system.

Includes removable plastic netting protection to minimise glaze damage in transit.

MORGANITE CRUCIBLE INDIA LTD
B-11, MIDC, Waluj, 431 136 Aurangabad, INDIA Tel. (0240) 2554405, 2554406 • Fax. (0240) 2564554 • **www.morganmms.com**
212/C, G.I.D.C Estate Mehsana, 384 002 Gujarat, INDIA Tel. (02762) 254186, 250503, 2533132 • Fax. (02762) 252692 • **www.morganmms.com**

All dimensions are subject to normal manufacturing tolerances. MORGANITE CRUCIBLE reserves the right to change specifications at any time. Not responsible for any typographic errors.

Morgan Molten Metal Systems

Benefits:

- Reduced fuel consumption
- Less down-time
- Less cost
- No tools needed for attachment

HOTROD™

Reference Numbers and Sizes

PATTERN	DIAMETER mm	HEIGHT mm	THREAD TYPE
VG1501067	44	1067	R 1/2
VG150914	44	914	R 1/2
VG150850	44	850	R 1/2
VG150762	44	762	R 1/2
VG150610	44	610	R 1/2
VG150457	44	457	R 1/2
VG150300	44	300	R 1/2
VG150255	44	255	R 1/2
VG150203	44	108	R 1/2
VG150155	44	155	R 1/2

MORGANITE CRUCIBLE INDIA LTD
B-11, MIDC, Waluj, 431 136 Aurangabad, INDIA Tel. (0240) 2554405, 2554406 • Fax. (0240) 2564554 • **www.morganmms.com**
212/C, G.I.D.C Estate Mehsana, 384 002 Gujarat, INDIA Tel. (02762) 254186, 250503, 2533132 • Fax. (02762) 252692 • **www.morganmms.com**

All dimensions are subject to normal manufacturing tolerances. MORGANITE CRUCIBLE reserves the right to change specifications at any time. Not responsible for any typographic errors.

Located Worldwide

Diamond Crucible Company PVT Ltd
212/C, GIDC Estate, Mehsana,
Gujarat-384002
Phone: (2762) 253132, 254186, 250503
Fax: (2762) 252692
Email: admin@dcconline.net

Marketing Offices:
Morganite Crucible INDIA LTD
407, Meghdoot Building,
94, Nehru Place,
New Delhi-110019
Fax : 011-2622401

MCIL CAT 004
Reprinted in August 2006
QTY.....in nos.

MORGANITE CRUCIBLE INDIA LTD.
B-11, MIDC Waluj, 431 136
Aurangabad
Ph: (0240) 2554405, 2554406
Fax: (0240) 2564554
Email: secrt@gmcltd.co.in

RED DIAMOND
ISO9001-2000

DNV

Morgan
Molten Metal Systems

A Subsidiary of The Morgan Crucible Company plc