

Suprex

These are a range of high quality carbon-bonded silicon carbide crucibles manufactured using the latest roller-forming technique and are designed to cater for an array of non-ferrous melting applications.

Suprex is available in three sub brands for variety of different application. Details as below:

Suprex

Suprex EL

Suprex E Plus

Introduction & Application

These are Morgan's premium quality crucibles developed for applications in fuel(oil,gas, coal) fired melting of aluminium, copper, zinc oxide & their alloys.

These are Morgan's premium quality crucibles developed for use in electric resistance holding & melting of aluminium, zinc & their alloys .

These are a notch above the regular suprex range & are developed using patented technology. They deliver enhanced product life & focus mainly on energy saving.

Typical Metal Casting Temperature

620°C - 1250°C

620°C - 900°C

620°C - 900°C

Performance Characteristics

- High consistent thermal conductivity
- Good erosion resistance
- Good resistance to corrosive attack by chemical treating agents
- Excellent thermal shock resistance
- High resistance to oxidation

- Fast melting speed
- Excellent thermal shock resistance
- High resistance to oxidation
- Good erosion resistance

- Extremely high oxidation resistance resulting in superior energy efficiency
- Consistent performance & repeatability
- High mechanical strength & erosion resistance
- Excellent thermal shock resistance

Identification

These are colored red for Aluminium and ZnO and are colored brown for Cu alloy and other high temperature applications in coal/oil fired furnaces.

These are colored parrot green. Product model numbers are suffixed with letters EL. E.g. BC401EL

These come in tan color with rim colored in silver. Product model numbers are suffixed with letters DE. E.g. BC247DE

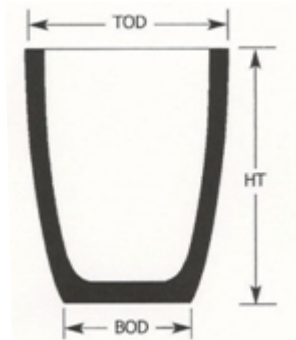


Please turn over for detailed range of shapes & sizes.

Suprex

“A” shape Silicon Carbide Crucibles for Lift Out & Bale Out Furnaces

PATTERN	PART DESCRIPTION	HT mm	OUTSIDE DIAMETER		BRIMFUL CAPACITY WATER Litres	APPR OXIMATE BRASS CAPACITY kgs.
			TOD mm	BOD mm		
AC31	A&0248H0324	324	248	180	8.5	64
AC36	A&0276H0338	338	276	190	9.5	71
AC41	A&0276H0362	362	276	190	11.0	83
AC61	A&0305H0405	405	305	210	15.5	116
AC81	A&0328H0410	410	328	230	17.4	131
AC101	A&0335H0440	440	335	240	20.0	150
AC121	A&0374H0452	452	374	250	22.2	167
AC160	A&0385H0452	452	385	230	27.3	205
AC175	A&0385H0472	472	385	230	28.5	214
AC180	A&0385H0498	498	385	230	30.4	228
AC190	A&0385H0548	548	385	230	34.0	255
AC200	A&0400H0495	495	400	285	33.2	249
AC205	A&0430H0505	505	430	250	37.8	284
AC230	A&0430H0541	541	430	250	40.0	301
AC230	A&0437H0580M	580	437	250	44.0	330
AC250	A&0430H0555	555	430	260	43.0	323
AC255	A&0450H0585	585	450	250	48.0	361
AC265	A&0437H0615	615	437	250	48.0	361
AC280	A&0437H0635	635	437	250	50.1	376
AC300	A&0440H0555	555	440	310	44.5	334
AC330	A&0474H0585	585	474	260	54.0	406
AC350	A&0474H0630	630	474	260	59.5	447
AC355	A&0474H0635	635	474	315	62.0	466
AC375	A&0474H0685	685	474	315	71.7	539
AC400	A&0530H0650	650	530	315	78.6	591
AC405	A&0530H0705	705	530	315	86.1	647
AC410	A&0527H0685	685	527	315	82.0	616
AC500	A&0565H0685	685	565	355	93.0	699
AC510	A&0567H0720	720	567	355	97.0	729
AC555	A&0570H0765	765	570	355	103.0	774
AC610	A&0572H0800	800	572	355	115.0	864
AC650	A&0585H0830	830	585	355	125.0	1089
AC700	A& 0585H0880M	880	585	355	131.0	980
AC1000	A&0616H0822M	822	616	420	142.0	1060



Note

- Crucible Working capacity = 90% of (Water liter capacity x Specific gravity of the metal)

Specific gravity of various metals are as below:

Aluminium = 2.72 Silver = 10.5
 Brass = 8.35 Zinc = 7.12
 Copper = 8.9 Iron = 7.85
 Gold = 19.3

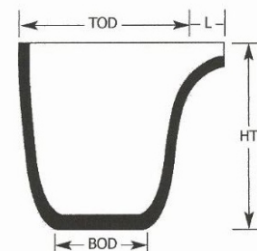
All dimensions are subject to normal manufacturing tolerances. Morgan reserves the right to change specifications at any time

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TPC shape Silicon Carbide Crucibles

"TP" Shape For Over Top Crucibles For Tilting Furnaces

PATTERN	PART DESCRIPTION	HT mm	OUTSIDE DIAMETER		BRIMFUL CAPACITY WATER Litres	APPR OXIMATE BRASS CAPACITY Kgs	RECESS
			TOD mm	BOD mm			
TPC5	P&0437H0675& -VT	675	437	250	55.0	413	Y
TPC8	P&0450H0800& -VT	800	450	295	68.2	512	Y
TPC10	P&0450H0940& -VT	940	450	295	82.7	621	Y



Spouted Basins For Tilting Furnaces

PATTERN	PART DESCRIPTION	HT mm	OUTSIDE DIAMETER		BRIMFUL CAPACITY WATER Litres	APPROXIMATE BRASS CAPACITY Kgs	SPOUT LENGTH IN mm	RECESS
			TOD mm	BOD mm				
TPC175	A&0385H0472 T-LA2H146	472	385	230	25.0	188	146	-
TPC355	A&0474H0635 T-LA2H146 -VT	635	474	315	53.0	398	146	Y
TPC400	P&0385H0600T-LA2H146 -VT	600	385	280	30.0	225	146	Y
TPC740	A&0440H0555 T-LA2H146	555	440	310	33.0	248	146	-
TPC843	P&0437H0675 T-LA2H146 -VT	675	437	250	44.4	334	146	Y
TPC982	P&0450H0800T-LA2H146 -VT	800	450	295	62.0	466	146	Y
TPC12	P&0450H0940T-LA2H146 -VT	940	450	295	73.7	554	146	Y
TPC983	P&0450H0800T-LA2K200 -VT	800	450	295	62.0	466	200	Y
TPC984	P&0450H0855 T-LA2K146 -VT	855	450	295	68.0	511	146	Y
TPC89	A&0572H0800 T-LA2J146 -VT	800	572	355	101.0	759	146	Y
TPC650	A&0585H0830MT -LA2J146	830	585	390	113.0	849	146	-

Spouted Basins For Tilting Furnaces

PATTERN	PART DESCRIPTION	HT mm	OUTSIDE DIAMETER		BRIMFUL CAPACITY WATER Litres	APPR OXIMATE ALUMINIUM CAPACITY Kgs	SPOUT LENGTH IN mm	RECESS
			TOD mm	BOD mm				
TPC287	BU0527H0600T-LA2J146	600	527	315	59.5	144	146	-
TPC387	BU0616H0630T-LA2J146	630	616	355	93.0	226	146	-
TPC412	BU0616H0800T-LA2J146	800	616	355	128.0	311	146	-
TPC412A	BU0616H0800T-LA2J146 -VT	800	616	355	128.0	311	146	Y
TPC588	BU0775H0890T-LA2J146	890	775	460	225.0	547	146	-
TPC264	BU0775H1000T-LA2P184	1000	775	460	247.0	600	184	-
TPC947	BU1000H0775T-LA2P184	1000	775	338	259.0	629	184	-
TPC849	BU0925H0775T-LA2J146	925	775	338	231.0	561	146	-
TPC852	BU1140H0850T-LA2P184	1140	850	450	395.0	957	184	-
TPC2600	BU1124H0850T-LA2I185	1244	850	350	418.5	1016	185	-

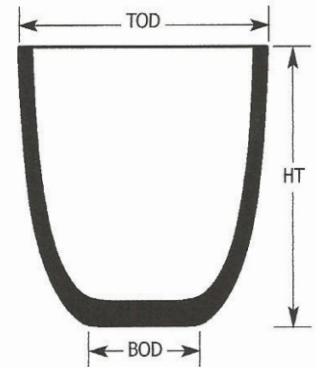
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Crucibles & Muffle Rings

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BC shape Silicon Carbide Crucibles for Bale Out furnaces

PATTERN	PART DESCRIPTION	HT mm	OUTSIDE DIAMETER		BRIMFUL CAPACITY WATER Ltrs	APPROXIMATE ALUMINIUM CAPACITY Kgs.
			TOD mm	BOD mm		
BC164	BU0517H0300	300	517	315	25.5	62
BC166	BU0527H0400	400	527	315	44.5	108
BC167	BU0527H0450	450	527	315	51.5	125
BC167 TW	BU0527H0450M& TW	450	527	315	50	121
BC168	BU0527H0492	492	527	315	59.5	145
BC1678TW	BU0527H0475M& TW	475	527	315	52	126
BC168TW	BU0527H0492M& TW	492	527	315	55	133
BC171	BU0527H0600	600	527	315	73.6	179
BC202	BU0616H0500	500	616	355	79.9	194
BC302	BU0616H0630	630	616	355	110	267
BC401	BU0616H0700	700	616	355	124	301
BC402	BU0616H0800	800	616	355	145.1	352
BC247	BU0775H0750	750	775	460	202.3	491
BC263	BU0775H0890	890	775	460	236.6	575
BC264	BU0775H1000	1000	775	460	288	700
BC265	BU0775H1245&-RW	1245	775	460	386	938
BC174	BU0397H0394	394	397	215	25	50
BC847	BU0775H0750	750	775	338	191	441
BC850	BU0850H0750	750	850	450	254	595
BC947	BU1000H0775	1000	775	338	294	714
BC849	BU0925H0775	925	775	338	265	644
BC1200	-	1150	960	460	520	1260



These crucible models can be supplied in Morgan patented energy efficient recipes "EL" or "E- Plus" for Electric Resistance Furnace melting & holding.

Muffle Rings

MODEL	TOD mm	BOD mm	HT mm	SUITABLE FOR MODELS
XMC71	385	370	280	TPC-400,
XMC122/1	450	450	255	TPC10,TPC12,TPC8,TPC843
XMC143/1	616	616	205	TPC-387,TPC412
XMC159/1	527	516	305	TPC287
XMC159/3	565	550	305	TPC89
XMC1600	850	850	240	TPC852,TPC1600,TPC1800

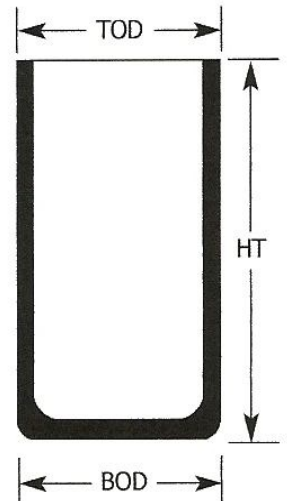


Muffle rings increase thermal efficiency by providing additional space for the heating charge

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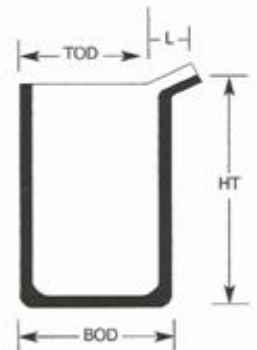
Straight shape Silicon Carbide Crucibles for Induction Furnaces

PATTERN NO.	TOD (mm)	HEIGHT (mm)	BOD (mm)	BRASS CAPACITY (Kg)	BRIMFUL CAPACITY (Water Litres)
EC323	165	318	165	25	4.3
EC1601	222	470	222	60	10
EC447	254	400	254	75	13
EC444	254	475	254	90	15
EC552	295	450	295	114	20
EC329	330	530	330	148	25
EC330	330	635	330	183	31
EC390	362	508	362	178	30
EC187	390	535	390	218	37
EC181	390	632	390	260	44
EC71	445	660	445	374	64
EC70	445	762	445	435	74
EC722	500	560	500	371	64
EC72	500	775	500	540	92
EC75	530	650	530	524	90
EC575	570	865	570	842	144
EC571	570	900	570	878	150
EC570	570	1000	570	980	168
EC650	645	1000	620	1072	183
EC652	650	1190	620	1327	227
EC800	800	1100	800	2199	376
EC905	905	1100	905	5194	889
EC9050	905	1850	905	8544	1462



Straight shape Silicon Carbide Crucibles with Spout

PATTERN NO.	TOD (mm)	HEIGHT (mm)	BOD (mm)	L (mm)	BRASS CAPACITY (Kg)	BRIMFUL CAPACITY (Water Litres)
TC1601R	222	470	222	140	56	7.5
TC1603R	222	470	222	276	56	7.5
TC447R	254	400	254	164	74	9.8
TC330R	330	635	330	200	182	24
TC182R	390	632	390	190	258	34
TC1821R	390	632	390	320	258	34
TC70R	445	762	445	265	435	58
TC577R	570	800	570	250	826	110
TC75R	450	800	450	200	178	73
TC800R	800	1100	800	250	695	372



Note:

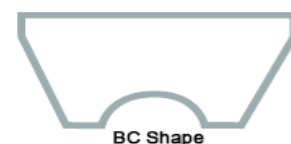
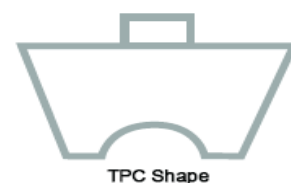
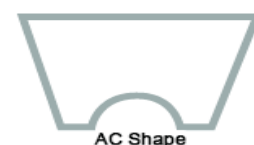
- Pyrometer pocket and hole in wall configurations are available to facilitate measurement of metal temperature
- Our crucibles are recommended for non-ferrous alloys except those containing more than 30% of Nickel, Chromium or Iron.
- Spout length is measured from outside of the crucible
- Standard Spout length is 146 mm
- Spout with length upto 280 mm is available
- Any Basic model of AC and BC series can be converted to spouted model.

All dimensions are subject to normal manufacturing tolerances. Morgan reserves the right to change specifications at any time

Suprex

Accessories for use with Silicon Carbide Crucibles Stands

PATTERN	TOD mm	BOD mm	HT Mm	SUITABLE FOR PATTERNS			Spigot
				AC	BC	TPC	
XRC 122/1	285	230	125	160,175,180 200,205,225 230,250,255, 330,350,365		175,400	N
XRC 122/1(S)	285	230	125			843,5	Y
XRC122/2	175	285	230				N
XRC122/3	100	285	230				N
XRC 132/1	310	250	125	300,355,375 400,405,410	166,167,168 171	287,355	N
XRC 132/1 (s)	310	250	125			740,355,843 10,12,982,8	Y
XRC132/2(S)	200	310	250				Y
XRC 132/3 (s)	310	250	300			740,355,843 10,12,982,983	Y
XRC132/4	175	310	250				N
XRC 132/4 (s)	310	250	175			740,843, 10,12,982,8	Y
XRC 132/5 (s)	310	275	75			740,843 10,12,982,8	Y
XRC 202/1	360	250	125	500,510,610 555	202,302,401 402	387,412	N
XRC 202/1 (s)	360	250	125			412,89	Y
XRC 202/2	360	250	175	500,510,610 555	202,302,401 402	387,412,89	N
XRC 202/2(S)	360	250	175			387,412,89	Y
XRC 202/3	360	250	225	500,510,610 555	202,302,401 402	387,412,	N
XRC 202/3(S)	360	250	225			387,412,89	Y
XRC 202/4	360	250	150	500,510,610 555	202,302,401 402	387,412,	N
XRC202/8	200	360	250				N
XRC 247	425	425	115		247,263,700		N
XRC 247/50	425	425	50		247,263,700		N
XRC 587	425	300	215			588,651	N
XRC 360/50	360	360	50				N
XRC360/75	75	360	360				N
XRC 310/50	310	310	50				N
XRC804	350	350	120		847		N
XRC2471	425	425	100		247,263, 264		N
XRC2474	425	425	150		247,263, 264		N
XRC2472	425	425	200		247,263, 264		N



Note:

- Stands of different heights can also be made available on order
- Stands with spigot also available for TPC models having recesses

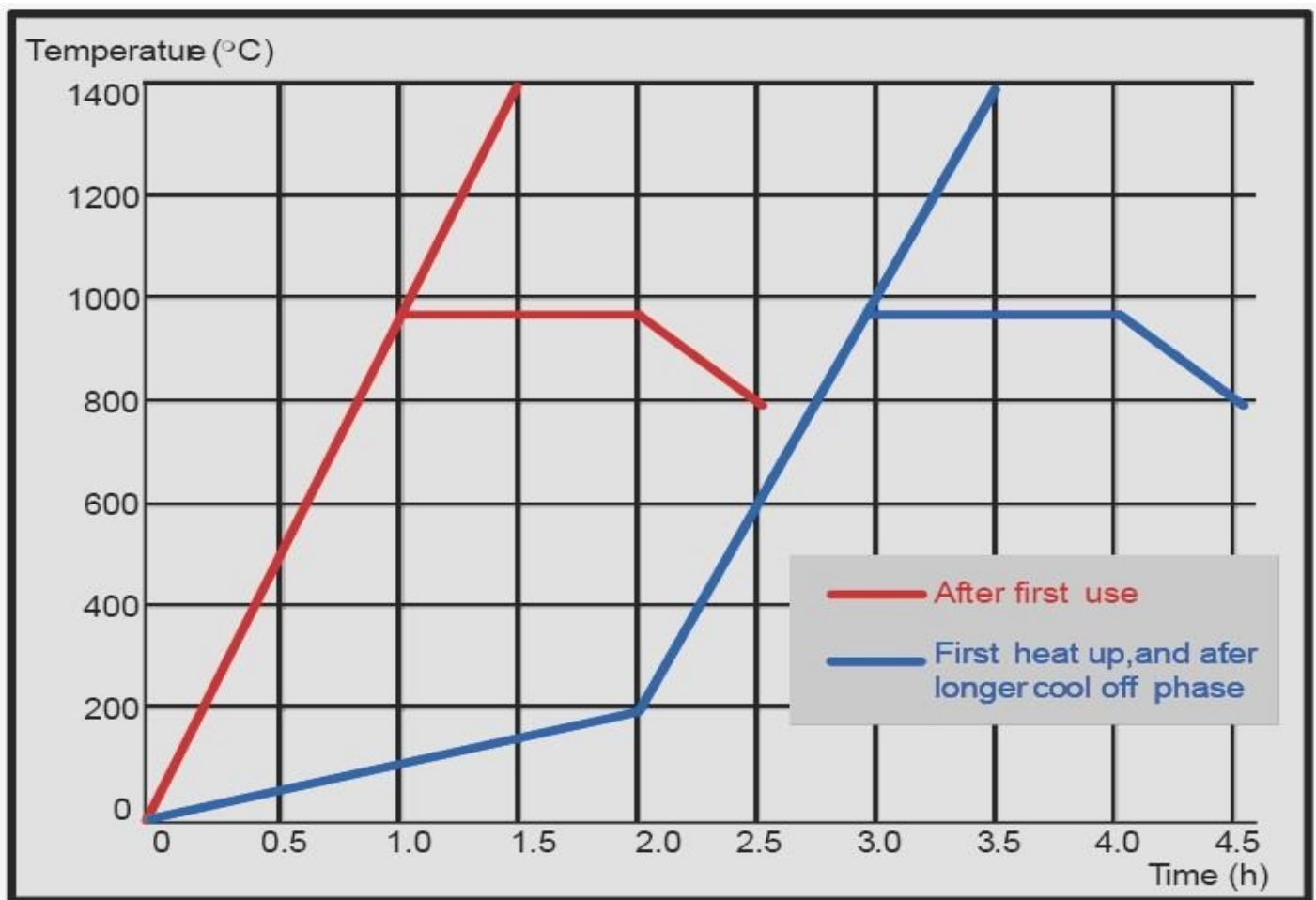
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Pre-heating Recommendations

Silicon Carbide Crucibles

Pre-heating cycle

- The crucible after installation in the furnace 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.
- Next, these 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 one hour. This ensures even melting of the glaze with the additional antioxidation coating, which is essential to achieve the maximum possible crucible life.



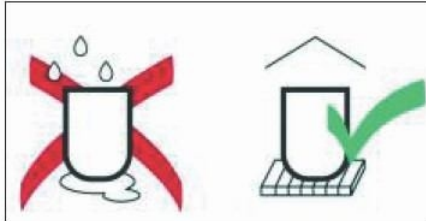
Note:

- For holding crucibles this procedure should be carried out periodically, but always before starting up again after a prolonged 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 or Clay Graphite crucible not be used for a long 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. It is essential that the crucible is installed in an absolutely dry furnace.

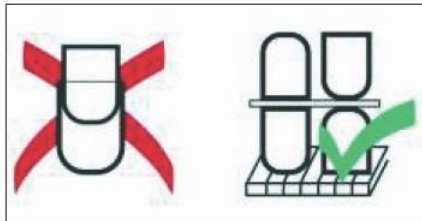
Care & Use

Recommendations for care and use of crucibles

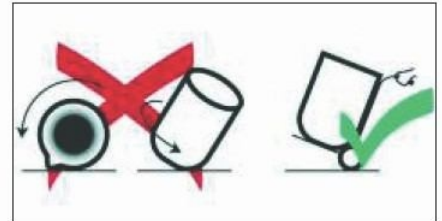
The following practices should be observed in order to achieve the maximum possible crucible life. If any further advice or information is required please contact our sales or technical staff.



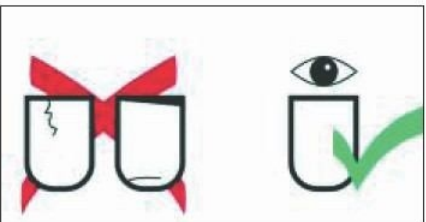
Store crucibles off the floor in a dry, warm place.



Do not nest one inside another. Separate layers with hardboard.



Do not roll crucibles. Move using a sack truck with padding.



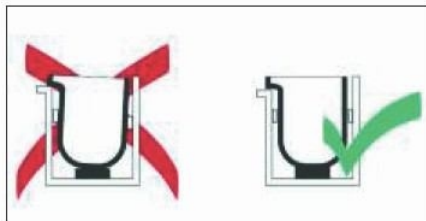
Check thoroughly for cracks or damage before use.



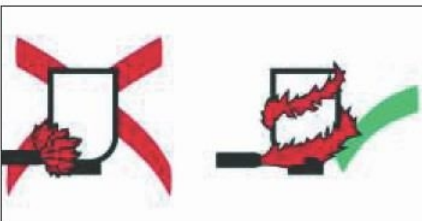
Use the correct crucible stand which must be central and support the whole base.



Allow space for expansion between crucible and furnace lining/cover.



Use correctly positioned grip bricks in tilting furnaces, leaving gaps for expansion. Do not hang crucible on spout.



The flame path must be tangential to the crucible.



Ingots should be loaded carefully into the crucible using tongs.



First charge with light returns, as a cushion, then add ingots vertically.



Only add flux after the metal is molten.



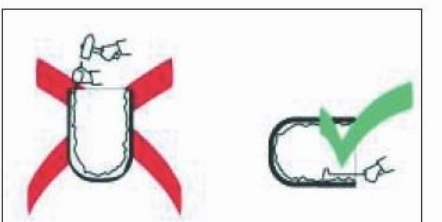
Avoid ingress of cold air by ensuring that the drain hole is sealed.



Lift-out tongs should hold crucible on its lower third and fit evenly on both sides.



The crucible must be emptied before switching off the furnace.



The crucible should be cleaned out carefully every day while still red hot.