

ISOSTATICALLY PRESSED MAGNESIA CRUCIBLES



Magnesia range of Isostatically Pressed Crucibles for melting high temperature alloys in vacuum melting furnaces.

Isostatically Pressed Magnesia Crucibles are available from 8 to 265 kg capacities in round and flat bottomed form.

Ant's Crucibles have excellent thermal shock resistance, a smooth surface finish and the non-wetting characteristics required by the vacuum furnace alloy caster.

With a uniformed homogeneous refractory body specifically designed with low porosity and high density, Ant's Magnesia Crucibles are perfect for increasing productivity and obtaining clean melts.

Metal erosion during the severe thermal heating cycle is reduced to a minimum. Clean metal with minimum casting inclusions are guaranteed.

Compatible with most aerospace alloys, Ant's Magnesia Crucibles have low thermal expansion properties which enable the foundry to reuse the crucible for multiple pours.

Magnesia Crucibles are less dense than Stabilised Zirconia Crucibles and are preferred by some foundries for X-ray analysis. They are also much cheaper and can improve the foundries running costs.

Specifically designed to achieve cleaner melts for longer

ISOPRESSED ROUND BOTTOMED CRUCIBLES

Dimensions					
Drg No.	ID (mm)	OD (mm)	IL (mm)	OL (mm)	Full Capacity kgs steel
624	97	119	270	290	12.6
613	102	128	254	272	13.1
621	102	128	305	325	15.8
620	108	127	199	210	11.5
655	110	125	210	230	12.6
629	116	137	275	305	18.5
601	118	137	265	290	18.3
605	120	144	229	250	16.4
612	120	138	250	275	18
673	120	140	305	318	22
643	120	140	305	330	21.8
656	120	137	365	390	26.2
889	125	150	230	255	18
632	125	150	250	270	19.5
644	125	150	305	330	23.7
636	125	150	350	370	27.2
833	131	148	315	335	26.9
614	140	165	305	330	30
610	140	165	355	375	35
842	143	173	274	291	28
829	143	173	455	500	46
842	150	170	380	400	42
885	150	170	420	440	47
858	152	175	305	330	35
813	158	190	380	410	47
825	200	230	370	400	100
802	228	260	430	470	111
801	245	278	440	465	132

ISOPRESSED FLAT BOTTOMED CRUCIBLES

Dimensions					
Drg No.	ID (mm)	OD (mm)	IL (mm)	OL (mm)	Full Capacity kgs steel
677	95	116	190	220	8.7
603	95	120	181	221	8.1
604	95	120	241	275	10.8
684	95	115	305	330	13.7
875	95	115	356	370	16
843	102	128	319	332	16
688	106	125	205	220	14.3
873	110	135	205	230	15
855	118	141	233	252	16
840	127	148	175	200	14
839	127	148	249	274	20
660	127	150	247	268	19.8
678	127	153	356	380	28.7
639	130	150	268	285	22.5
659	136	165	290	315	26.9
611	140	165	290	315	28.3
851	140	165	317	341	30
641	140	165	380	405	37
828	143	175	300	325	31
859	152	178	304	330	35
883	158	190	300	330	37
821	170	203	395	425	60
882	175	203	300	330	43
848	178	212	410	435	65
837	178	212	470	500	74
827	206	242	456	483	96
811	245	278	465	500	140
831	258	305	431	458	140
835	280	320	435	465	170
895	300	340	590	650	265



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Chemical Analysis	%
Mg ₀	93.30
Al ₂ O ₃	1.86
Fe ₂ O ₃	0.11
SiO ₂	2.09
CaO	2.41
Na ₂ O	0.05
K ₂ O	0.01

Physical

Apparent Porosity	21.73 %
Bulk Density	2770 Kgm ³

MIPEX DRY CRUCIBLE BACKING MIX

A carefully formulated Magnesia Spinel material to be used as a dry powder packing around induction crucibles. Because of its high thermal expansion it grips the crucible securely, and resistance to vitrification maintains free-flowing properties to compensate for expansion and contraction of the crucible. MIPEX is a specially formulated mix design which uses the optimum mineralogy and particle size distribution.

The use of this type of backing powder becomes increasingly important as the melt weight rises, when it is particularly important to give the best possible support and so maximize crucible life.

Although a variety of refractory aggregates can be used for this application, the inherently high thermal expansion of MIPEX means that it actually grips the crucible throughout the temperature range and then forms a spinel which will provide irreversible thermal expansion giving support even as crucibles cool down. MIPEX is specifically designed for use with Magnesia Crucibles

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