



Dyson Technical Ceramics manufactures a range of high density zirconia plate inserts, which are used within sliding gate plate applications. The inserts are generally used within a cast or pressed refractory plate.

Sliding Gate Plate inserts are an excellent solution to increasing the life span of sliding gate plates. Once a sliding gate plate becomes worn, the worn material can be removed and a high density DysonTC Zirconia Plate insert can be cemented/cast in its place, therefore extending the life of the sliding gate plate.

Dyson's zirconia products are particularly resistant to aggressive steel grades, with superior resistance to erosion, corrosion and thermal shock. Dyson offers two material grades for sliding gate plate inserts:

- Zirconia MX - High hot strength with increased thermal shock properties.
- Zirconia MZE - High strength, abrasion resistant with erosion resistant properties

Dyson manufactures a wide range of dimensionally accurate zirconia insert designs and has the ability to accommodate new designs.

Dyson Zirconia Sliding Gate Plate Inserts

Key Features/Benefits:

- High density plate inserts providing excellent erosion resistance
- Dimensionally accurate, with a smooth surface finish
- A comprehensive range of designs available
- Ability to make custom made plate insert designs

Zirconia Plate Insert Product Range:

Zirconia MX

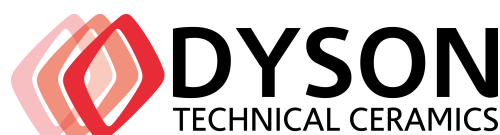
- High density material comprising 95% Zirconia
- High hot strength
- Increased thermal shock properties

Zirconia MZE

- Ultra high density comprising 96.5% Zirconia
- Excellent Strength
- Lower porosity providing increased erosion resistance
- High abrasion resistance



Zirconia Inserts for Sliding Gate Plate Applications		
	Zirconia MX	Zirconia MZE
General Properties		
Apparent Porosity (%)	15.5	10.0
Bulk Density (g/ml)	4.73	5.0
(lb/ft ³)	295	312
CCS (MPa)	225	320
M.O.R. (MPa)		
20°C	35	110
1500°C	8	15
Abrasion Resistance Index	46	12
Permanent Linear Change (%)		
2h @ 1700°C	NIL	NIL
Chemical Analysis (%)		
SiO ₂	1.6	0.2
Fe ₂ O ₃	0.1	0.1
Al ₂ O ₃	0.8	0.4
MgO	2.5	2.5
ZrO ₂ + HfO ₂	95.0	96.5



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