RFM STATIONARY DIFFUSER

DIFFUSER FOR REMOVING HYDROGEN GAS FROM ALUMINIUM ALLOYS

Pyrotek Reinforced Fibreglass Material (RFM®) Stationary Diffusers are used to remove absorbed gas and other impurities from molten melts.

The diffuser consists of:

- Steel gas delivery tubing—the same standard tubing design used in other systems
- RFM sleeve—adds thermal shock resistance to reduce cracking at the air-melt interface
- Dense refractory diffusing head—a porous gas diffusion head that creates an air-tight bond to the RFM sleeve

When charged with argon and inert gases, and submerged in molten aluminium the RFM Stationary Diffuser reduces hydrogen levels in molten melts. The inert gas passes through the central tube to the degassing head, then the gas is released as bubbles reacting with absorbed hydrogen. This system has smaller pore size, which yields smaller bubbles and allows for more efficient hydrogen removal.

The system shaft is RFM protected, has high thermal shock resistance, longer product life and reduced cracking at the air-melt interface. The RFM Stationary Diffuser is available in bell or "L" geometric options. Both typically, on average, last three times longer than comparable fused-silica tubes.

PHYSICAL PROPERTIES

Property	Value
"L" Shaped Width–mm (in)	321 (12.6)
Bell Bottom Diameter–mm (in)	102 (4)
Overall Lengths–mm (in)	460, 610, 910 (18, 24, 36)
Recommended Inert Gas Pressure*–kPa (psi)	48–103 (7–15)

** Based on the operation.*

Note: Standard 51 mm (2 in) nipple with 0.5 NPT (national pipe thread). Metric BSP (British standard pipe) threading is available.

WARNING: Never contact wet coating with molten metal.

BENEFITS

- Significant hydrogen reduction in melts
- Efficient hydrogen removal and gas diffusion
- Non-wetting surface minimizes dross buildup
- Excellent material strength
- Thermal shock resistant
- Aluminium attack resistant
- Durable construction
- Various designs are available for different applications

APPLICATIONS

- Furnace side wells
- Crucibles
- Other small receptacles or vessels requiring degas

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