

# VACUUM FORMED SHAPES FOR CONTINUOUS SHEET CASTING

## HEADBOXES AND TROUGHS

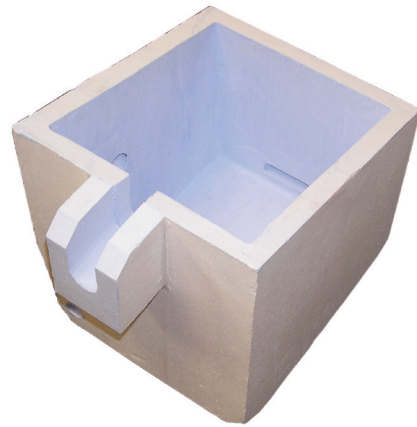
Vacuum formed headboxes and troughs are one-piece high-purity alumina silica fibre forms that eliminate metal leakage. The alumina silica fibres are bonded to create a smooth, homogeneous, finished surface that is thermal shock resistant and has low thermal conductivity. With proper treatment, they are reusable, for multiple casting campaigns. These insulating, lightweight shapes are custom formed for ease of installation and maximum performance at the lowest total cost.

Headboxes are available in variable heights and wall thickness for standard design vertical casters or tilt casters. Head level control notches, feedholes and surface coating can be added at the factory to prolong product life. Headboxes are also available in higher density options for added durability.

Troughs can be provided with hardened and heat treated surfaces, pre-drilled feedholes and surface coating. All of these help extend the trough's product life. The trough should be cleaned and recoated with bone ash or boron nitride after each use.

### BENEFITS

- One-piece design eliminates leaks
- Insulated to maintain metal temperature
- Thermal shock resistant
- No preheating required
- Lightweight
- Reusable for multiple casts
- Factory pre-drilled holes extend life and ensure hole alignment
- Custom designs available



### AVAILABILITY

The following standard vacuum shapes are available without a tooling charge. Contact a Pyrotek sales engineer for tooling charge pricing for non-standard sizes. Each of these shapes has a 25 millimetre (1 inch) wall thickness.

#### Standard Vacuum Formed Trough Exterior Sizes

- 1035 x 152 x 191 mm (40.75 x 6 x 7.5 in)
- 1219 x 127 x 229 mm (48 x 5 x 9 in)
- 1651 x 140 x 191 mm (65 x 5.5 x 7.5 in)
- 1702 x 127 x 203 mm (67 x 5 x 8 in)

#### Standard Vacuum Formed Headbox Exterior Dimensions

- 356 x 305 mm (14 x 12 in) with maximum height of 381 mm (15 in)
- 356 x 267 mm (14 x 10.5 in) with maximum height of 432 mm (17 in)
- 330 x 305 mm (13 x 12 in) with maximum height of 381 mm (15 in)

### STORAGE

Store in a dry location to avoid moisture absorption.

### HEALTH AND SAFETY

Prior to use, refer to the product safety data sheet for proper handling and required personal protective equipment.



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### PHYSICAL PROPERTIES

Property	Standard	HD47
Density—kg/m <sup>3</sup> (lb/ft <sup>3</sup> )	481 (30)	753 (47)
Modulus of Rupture—MPa (psi)	2.04 (296)	3.25 (471)
Continuous Use Temperature	1090°C (1994°F)	
Maximum Service Temperature	1260°C (2300°F)	
Thermal Conductivity—W/m·K (BTU·in/hr·ft <sup>2</sup> ·°F)		
at 540°C (1004°F)	0.15 (1.04)	0.20 (1.39)
at 815°C (1500°F)	0.21 (1.46)	0.28 (1.94)
Loss on Ignition at 1000°C (1832°F)	0–2%	
Shrinkage—Weight Loss at 730°C (1346°F)	<2%	

