Pyrotek SNIF SHEER NEO P-30HB and P-30i Systems

ADVANCED ALUMINIUM REFINING

The SNIF SHEER NEO P-30 Single Nozzle System provides a nominal continuous refining rate of 14,000 kg per hour. The system consists of a heated refining furnace, one SNIF SHEER NEO spinning nozzle, and PLC automated process and furnace heating controls.

The P-30 refining chamber is designed to optimize process gas bubble saturation throughout the melt to maximize spinning nozzle refining efficiency. An internal baffling system controls the flow of metal, ensuring efficient refining of the molten aluminium as it flows through the refining furnace. The baffle allows the metal to flow freely in and out of the furnace, but prevents air infiltration, a cause of excessive dross generation.

A significant design feature of the P-30 is its pre-fired refractory furnace lining cartridge that can be quickly and easily replaced. When the furnace refractory needs to be changed, the old cartridge is simply lifted out and replaced with a new one. The cartridge can be replaced in one or two days, possibly without removing the steel shell from the casting line. The system can be returned to service after a 30-hour preheat.

The lining cartridge consists of a dense, hot-face refractory and multiple insulation layers. All refractory is non-wetting and pre-cured. The cartridge is enclosed in foil to prevent moisture absorption while in storage and to minimize contact with the insulation during handling.

The P-30 is available with a choice of two heating systems. The P-30HB is heated by removable metallic heating elements installed in a graphite block. The P-30i is heated by a ceramic immersion heater suspended from the cover.

The P-30 furnace features a self--contained hydraulic cover lifter that raises the top to expose the entire surface of the bath for cleaning and servicing. In the closed position, the cover provides an excellent perimeter seal that prevents air infiltration and excess dross generation.

A tap-out drain is provided to empty the furnace for alloy changes or extensive cleaning. A tilting furnace is available as an option.

OPTIONS

The P-30 furnace can be ordered with the following options.

- Choice of immersion or graphite block heating system
- Hydraulic tilting system to empty the furnace between casts for cleaning or alloy changes
- Swivel mast that both lifts and rotates the cover
- Customized controls

Total Electrical Load (Maximum)*	
P-30i (Immersion Heater)	36 kW - 3 Phase
P-30HB (Heater Block)	34 kW - 3 Phase

** Primary voltage per customer requirements. Refer to installation drawings for electrical interconnection specifications for the equipment provided.*

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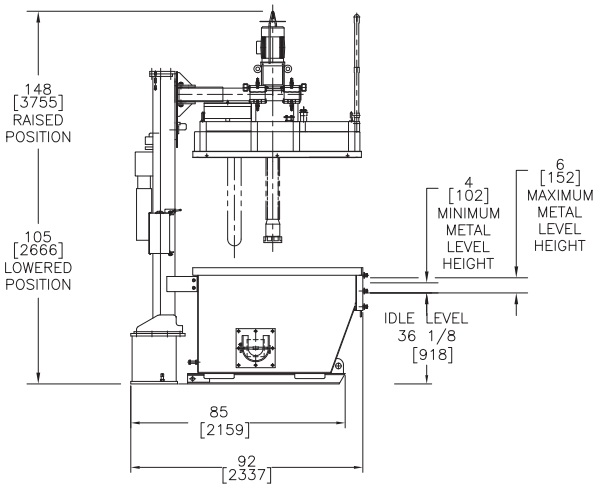
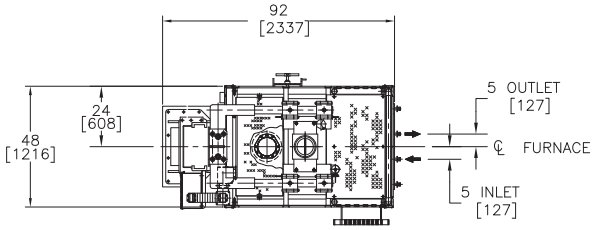
Gas Supply Requirements	
Cover Lift Mast (Plant Air)	4.2–6.3 kg/cm²
Process Gas (Argon Recommended)	≤ 9.2 Nm³/hr at 4.9–6.3 kg/cm²
Heater Block Purge Gas (P-30HB only) Argon (Recommended)	0.8 Nm³/hr at 3.5 kg/cm²
Chlorine (If Required)	≤ 0.46 Nm³/hr at 2.1 kg/cm²
Nm³/hr = normal cubic meter/hour (0°C, 1.01325 bar, abs.)	

Specifications	
Refining Furnace Capability, Nominal	14,000 kg/hr
Furnace Power Rating P-30i (Immersion)	25 kW
Furnace Power Rating P-30HB (Graphic Heater Block)	23 kW
Furnace Static Capacity P-30i (Immersion)	730 kg
Furnace Static Capacity P-30HB (Heater Block)	590 kg
Cover Lift Assembly Weight	817 kg
Estimated Furnace Assembly Weight (Including Cover, Static Metal Capacity, Cover Lift Assembly, and Spinning Nozzle)	5900 kg





NOTE: RIGHT HAND FURNACE ILLUSTRATED

Note: The physical and chemical properties listed represent typical, average values obtained in accordance with accepted test methods and are subject to normal manufacturing variations. They are supplied as a technical service and are subject to change without notice.

APR-23-EN-558

Product Type: 118
Commodity Code: 16004