

# RotoFeed



## Introduction

Clyde Materials Handlings RotoFeed range is designed to effectively inject solid materials into processes, either continuously or on a batch basis, to one or multiple points.

This system injects materials with accuracies of 2% by volume or 0.5% by weight, depending on the control method employed - volumetric or weigh related respectively. Materials can be injected into processes at distances of up to 500 metres, with back pressure of up to 30 bar(g).

The vessel utilises two unique Clyde products - the Dome Valve and the RotoFeed dispensing unit.

## The Unique Clyde Dome Valve

Central to the operating efficiency of all Clyde pneumatic conveying systems, or as a stand alone cut-off valve, the Clyde Dome Valve incorporates a unique and highly reliable inflatable sealing arrangement.

## RotoFeed - How it works

The RotoFeed machine consists of two pressure vessels, a rotating volumetric feeder at the outlet and valves to control the air supply, material flow and vessel pressures. The

volumetric feeder will be driven through a gearbox by a standard induction motor.

The dispensing vessel is used to provide a constant supply of material to the volumetric feeder. When material is being injected, the dispensing vessel will be pressurised. The lock vessel is used to periodically replenish the dispensing vessel with material. In this way, injection of material to the process can be continually maintained

The conveying air will enter the cupola along with the material and will leave the cupola along with the other process gases.

## RotoFeed applications

The RotoFeed system has been widely used in the steel and pig-iron industries, in order to continuously inject coal into their blast furnaces, reducing the requirement of coke, and allowing fines to be injected straight into the blast furnace.

Injection rates usually average at 185kg/ton of hot metal, although some operations have injected up to 210kg/ton.

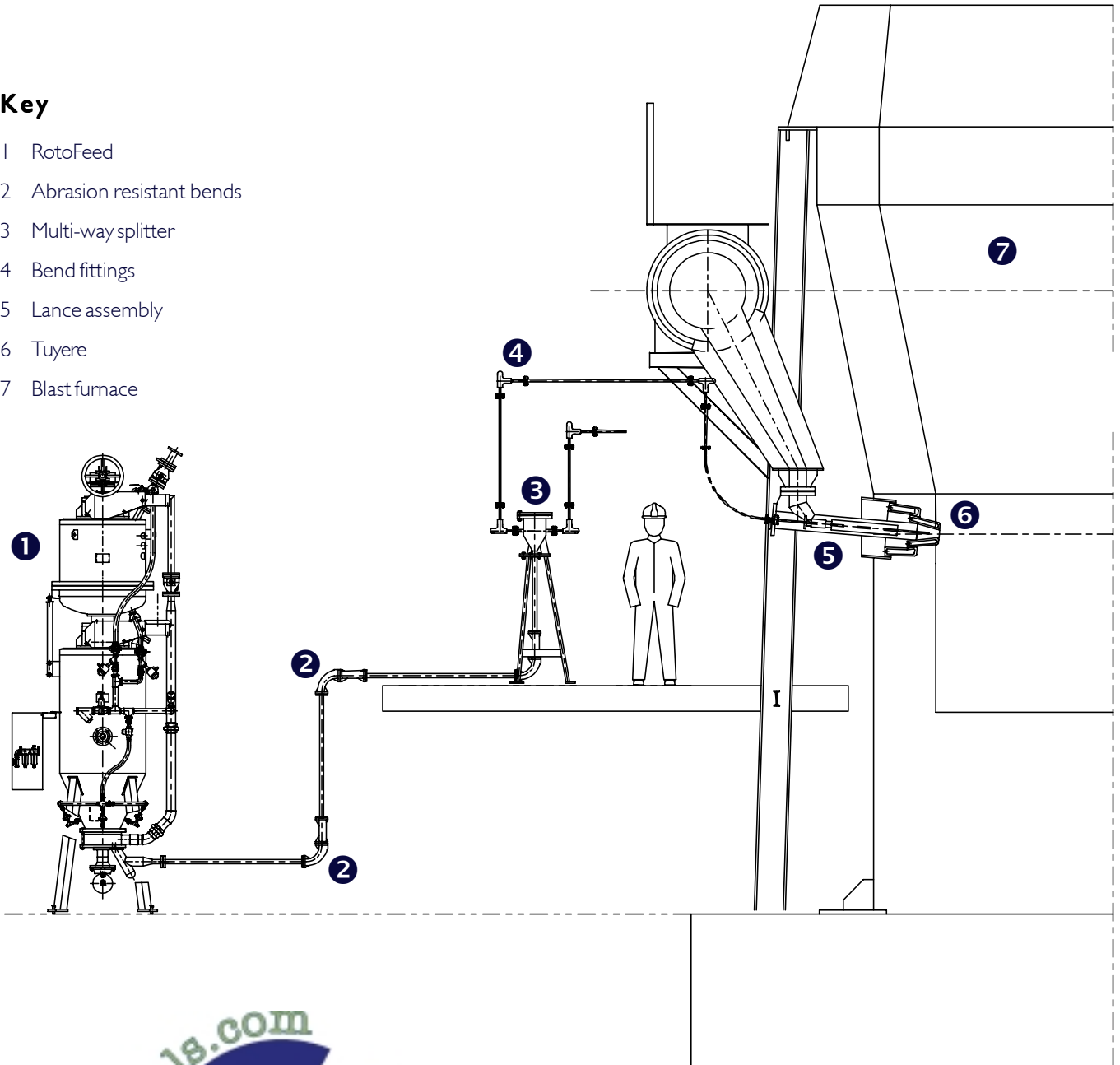
**Example:** A pulverised charcoal injector, with injection capacity equal or superior to 150kg/ton of pig iron.



# Injection

## Key

- 1 RotoFeed
- 2 Abrasion resistant bends
- 3 Multi-way splitter
- 4 Bend fittings
- 5 Lance assembly
- 6 Tuyere
- 7 Blast furnace



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*The Dome Valve is sold under the trade name of Spheri Valve in the United States of America.*