What Is a Full-Port Ball Valve?

A full-port ball valve, also known as a full-bore ball valve, is a type of valve commonly used to control the flow of fluids through pipes and tubing. It is called "full-port" because it has an internal diameter that is the same size as the pipe it is connected to.

The advantage of a full-port ball valve is that it maximizes flow while minimizing drops in pressure because the internal diameter of the valve matches that of the pipe, allowing for efficient flow of liquids or gases. This can be particularly important in applications where minimizing pressure loss is critical, such as in industrial processes or when working with high-viscosity fluids.

Full-port ball valves are commonly used in a wide range of industries, including oil and gas, petrochemical, water treatment, food processing, concrete and construction, and much more.

Discover Industries offers a large selection of Full-Port Valves. Ranging from 200-2000PSI, Discover carries NPT, flange, and Socket Weld; CF8, CF8M, Carbon Steel; and check out Discover Brand **EXCLUSIVE** 316SS High-Temperature valves!

What Is a Reduced-Port (Standard) Ball Valve?

A reduced-port ball valve, also known as a standard-port ball valve or reduced-bore ball valve, is a type of valve commonly used to control the flow of fluids through pipes and tubing. Unlike a full-port ball valve, which has an internal diameter that is approximately the same size as the pipe it is connected to, a reduced-port ball valve has a smaller internal diameter compared to the pipe. Typically, about one pipe size smaller, a 1” standard-port ball valve will have a 3/4” opening.

In the case of a reduced-port ball valve, the internal bore or opening of the valve is smaller than the pipe diameter. This design results in some level of flow restriction and pressure drop when compared to a full-port ball valve. As a result, reduced-port ball valves are less efficient in terms of flow capacity and can create more pressure loss in the system.

Reduced-port ball valves are typically used in applications where flow capacity is not the primary concern, and some level of pressure drop is acceptable. These valves are suitable for certain light industrial applications where cost savings or space constraints are important considerations. Examples include tanks, dispensers, and portable units.