Designing a Gas Blending Delivery System

BLENDING

CONCOA gas blending systems are designed to provide precise gas blends with repeatable accuracy. Each component of the CONCOA blending system is designed to optimize the performance of the overall system. As illustrated below, supply switchovers like the 632 and 640 are designed to exceed the BlendMaster's flow demand during the surge tank fill cycle. This is imperative to maintain a constant pressure drop across the BlendMaster's mixing valve assembly. When designing the system, it is important to understand the end user's usage patterns, plant layout, and processes.

To determine the usage pattern, take into consideration factors such as number of stations, duty cycle, number of shifts, number of days and weld type. Each factor plays an important role in determining both average and peak requirements.

Plant layout is an important consideration when sizing the piping system from the mixer. Length of run, looped or terminal configurations, valve type, number of elbows, pipe diameter, and point of use equipment are key plant layout factors.

Determine the entire factory's gas requirements by considering all cutting, welding, and blanketing applications. This will allow proper manifold capacity and cylinder selection. In some cases, a manifold or switchover can be sized to supply both the blender and another process teeing the outlet.