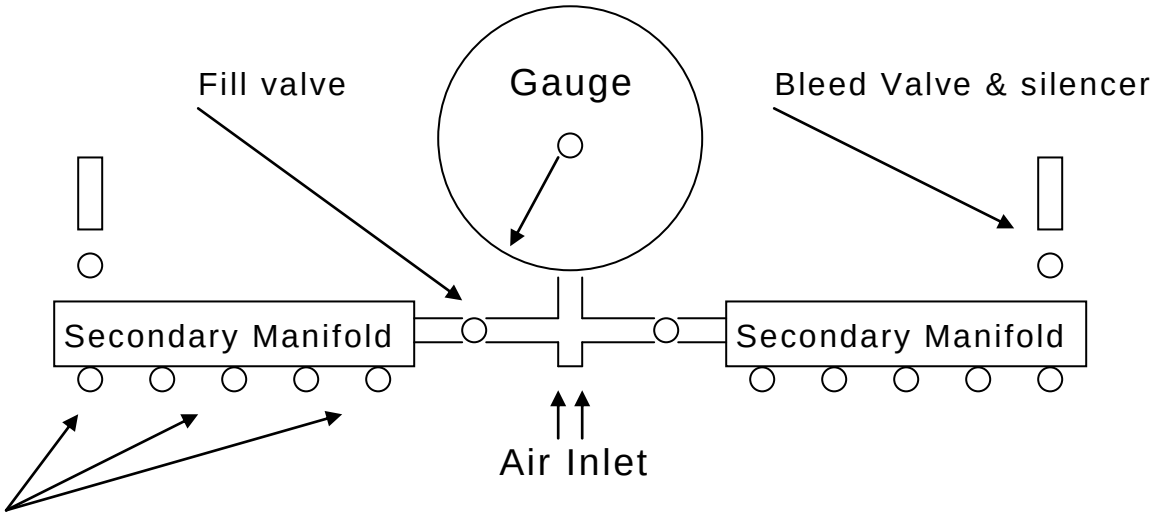
STARK INDUSTRIES

Caribbean Fill Manifold



Model CFM-10

Note: The fill hose valves are not normally required. If fewer tanks than the number of hoses on one manifold are filled - - - - spare tanks can be attached to the remaining fill hoses, or an independent hose may be included.

Spare hoses should always be on hand in case of a hose failure. Port plugs can also be kept on hand in case a replacement hose is not readily available.


CFM-20 @ Sunset Divers

Stark Industries recommends using additional SCUBA tanks in lieu of storage systems. This saves time money, & effort. It is also easier on the compressor.

CARIBBEAN FILL Manifold

The Stark Industries Caribbean Fill Panel was designed specifically for filling high numbers of SCUBA tanks where maximum efficiency is desired. This manifold combined with sufficient air flow from a compressor or storage system, allows a single operator to fill a large number of tanks in a minimum amount of time. This system is offered in a panel or manifold configuration; either way, the function is the same.

The basic design consists of two secondary manifolds that are supplied by a single inlet from a large compressor. (When storage is used, a primary manifold controls the air to and from each of the storage vessels and also supplies air to each of the secondary manifolds). Each secondary manifold is operated with a single inlet valve and a single bleed valve. The number of fill hoses on each manifold can vary from one to one hundred. If a primary manifold is required, it will usually incorporate a gauge and control valve for each storage vessel.

The operating procedure is as follows:

Empty tanks are attached to all of the fill hoses on one of the secondary manifolds and the valve to that manifold is opened to commence the filling process. The operator then attaches tanks to the other secondary manifold while the first group is filling. When the central gauge indicates the first batch of tanks are full, the operator closes the valve to that manifold and immediately opens the other manifold valve to commence filling the next batch of empty tanks. The SCUBA tank valves are then closed on the full tanks and the bleed valve is opened to release the pressure in the manifold and all fill hoses attached to it. The full tanks can then be exchanged for another batch of empty ones and the process begins once more.

The operator will have ample time in each cycle to bleed the system and exchange the tanks. On the larger systems a gauge is installed on each of the secondary manifolds so the operator has two gauges to verify the pressure of the tanks being filled as well as a gauge (one the other manifold) to indicate the pressure of the empty (or near empty) tanks before they are filled.

An independent hose may also be incorporated to be used when only one or two tanks are to be filled. This eliminates the need to place tanks on the other fill hoses when fewer than 10 tanks require filling. It also eliminates the need for valves on each hose.

A collateral benefit of this system is the reduction of the heat normally created by filling the tanks. Since there are more tanks on line it takes a longer time to fill them, but the fill time per tank stays the same. Thus the pressure loss after cool down is minimized or even eliminated entirely if enough fill hoses are utilized.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