

HYDRAULIC HOSE OVERVIEW & SELECTION GUIDE

Hose selection

Users often select hydraulic hoses based on the working pressure of the system. However other factors can dramatically affect hose assembly life. The following should be considered in the selection process:

Single wire braid versus double wire braid

Using high-tensile wire, single wire braid hoses will often have adequate working pressure for many systems. However, if used outside, cover damage that exposes the braid will result in corroded wires and hose failure. An extra braid separated by a rubber layer greatly extends hose life at a small premium.

Compact hoses versus standard hose

Modern manufacturing equipment allows single and double wire braided hoses to be manufactured to exacting tolerances. This process control has allowed the development of products with thinner covers and tubes, resulting in products with reduced weight, increased flexibility and, most importantly for OEM customers, reduced cost. However there is a trade-off. Thinner covers mean that the hoses are more easily damaged by abrasion and, as noted above, if the braid is exposed, it will result in an early failure. And, since all rubbers break down over time from exposure to ozone and weathering, a thinner cover generally reduces hose life, particularly in tight bend situations.

Spiral reinforced hose

To reach higher system pressures and retain flexibility, wires are applied in four or six spiralled layers rather than in braids



Fittings selection

Since hoses vary so much in pressure range, type of reinforcement, and size, there is no "one coupling fits all" solution. Broadly speaking, **OEM assemblers prefer two-piece crimp fitting systems.** Interchangeable crimp stems can be matched to a ferrule that is ideally suited to a given hose style. Two-piece fittings also have the advantage of inventory efficiency and flexibility.

In the after-market, **one-piece fittings that are designed to be used on the two or three most popular hose styles provide the most convenient and straightforward solution.** Compatible hose and coupling combinations are given on the following chart and again in the technical specification for each hose.

