

Determining whether a particular crimper has the capacity to handle the user's required range of hoses requires understanding that the primary limiting factor for crimping hydraulic hose is crimper tonnage, whereas industrial hose is limited by the diameter of the crimper opening.\*

A crimper's capacity can be understood in multiple ways: Hose Capacity, Maximum Opening with Dies, Opening by Die Size and Maximum Opening without Dies.

**Hose Capacity** – This value represents the largest hose that can be crimped depending on hose type, whether 1-2 wire, 4 spiral, 6 spiral or industrial. With hydraulic hose assemblies the Hose Capacity specification is sufficient to determine crimper suitability, as it generally is for industrial hose assemblies.

However, with industrial hose assemblies the crimper opening diameter must also be taken into consideration. The crimper may not be able to handle the stated hose size when larger than normal industrial couplings, such as ball and socket, bent and flanged couplings, are used. Additionally, the crimper may exceed the stated hose size when smaller fitting such as nipples and sanitary fittings are used.

**Maximum Opening with Dies** – This value represents the diameter of the crimper opening in its fully open position, with its largest die set inserted. This value is important as it provides the maximum opening dimension available when performing multiples of the same crimp (meaning the same crimp die is being used repeatedly).

Therefore, to determine whether a crimper can make a particular industrial hose assembly, you must first determine the largest outside diameter of the couplings being used, which for KOA Couplings can be found on pages 45-47. From that information, it can be determined if the crimper opening is large enough for the coupling to pass through.

**Opening by Die Size** - This value represents the diameter of the crimper opening relative to the particular die set being used. It's expressed as the sum of the die set size being used plus a particular value. Naturally, there's a smaller opening when doing smaller diameter crimps and vice versa.

*For example, the Opening by Die Size for the KC3-H170 is "die size + 61 mm", therefore if I'm crimping a 2" Tigerflex hose using a 63 mm die, my opening is  $63\text{ mm} + 61\text{ mm} = 124\text{ mm}$ , I can now compare that value to my fitting dimension; if I'm using a 2" female cam lock I can see from page 45 that with its maximum diameter of 97.2 mm it will easily pass through the 124 mm opening with the 63 mm dies in place.*

**Maximum Opening without Dies** – This value represents the diameter of the crimper opening in its fully opened position without any dies inserted, and is the absolute largest possible diameter of the crimper opening. In instances when the operator needs to pass a larger coupling through the crimper opening, it can be done so before the crimp dies are added. This method allows for the use of larger couplings, but is not efficient for performing multiples of the same crimp, as the crimping dies must be individually added and removed each time.

**\* Crimper tonnage can also be a limiting factor on heavier duty industrial hose and couplings. Contact Kuriyama Customer Service if any doubt exists.**

Because we continually examine ways to improve our products, we reserve the right to alter specifications or discontinue products without prior notice.