

## HOSE SETUP GUIDE

### SIMULTANEOUS BOLT TENSIONING

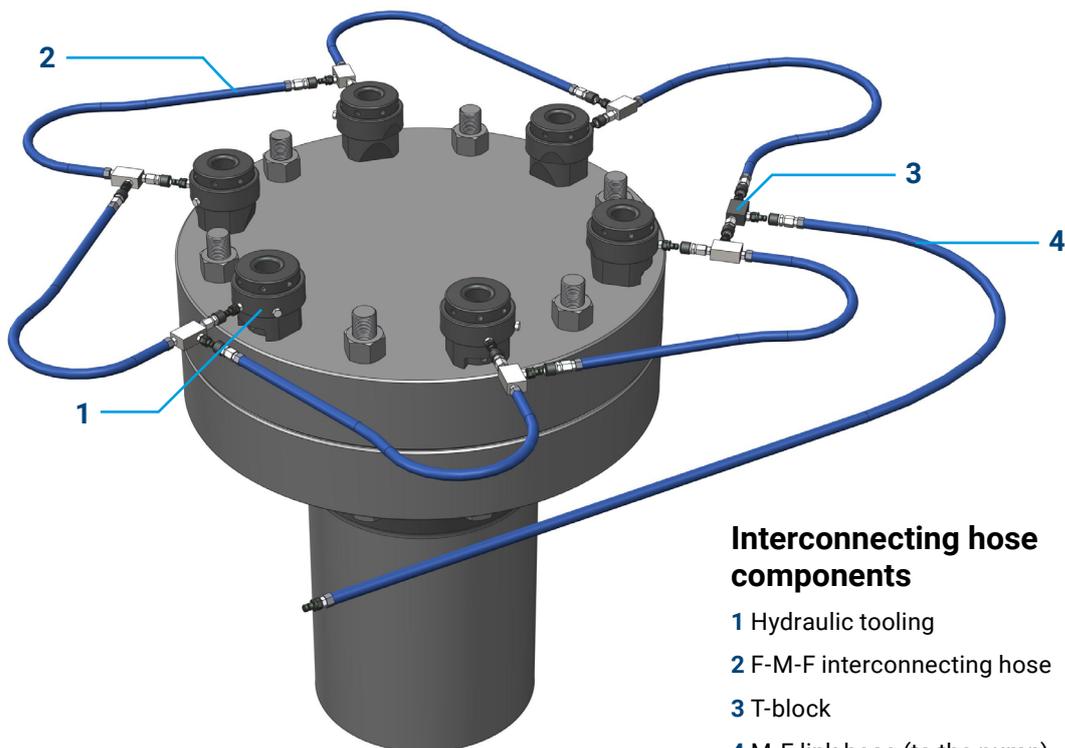
Simultaneous bolt tensioning improves the speed and efficiency when performing a tensioning operation on a multi stud application. Boltight recommend a minimum of 25% bolt coverage when tensioning a joint, with 100% coverage giving the largest advantage in speed and accuracy. When it is not possible to fit 1 tensioner per bolt, Boltight recommend reducing to 50% bolt coverage.

When tensioning bolts simultaneously the tensioning procedure is the same as tensioning a single bolt, however the hydraulic hose setup is different. The hydraulic hoses need to be interconnected in a pattern to allow effective oil flow and oil feed into each hydraulic tensioner simultaneously from a common pump unit.

There are multiple ways hoses can be connected however the common objective is to ensure that oil is safely supplied to each tool simultaneously. Ensure all hose safety instructions are understood and that the minimum bend radius is utilised when selecting the hose setup.

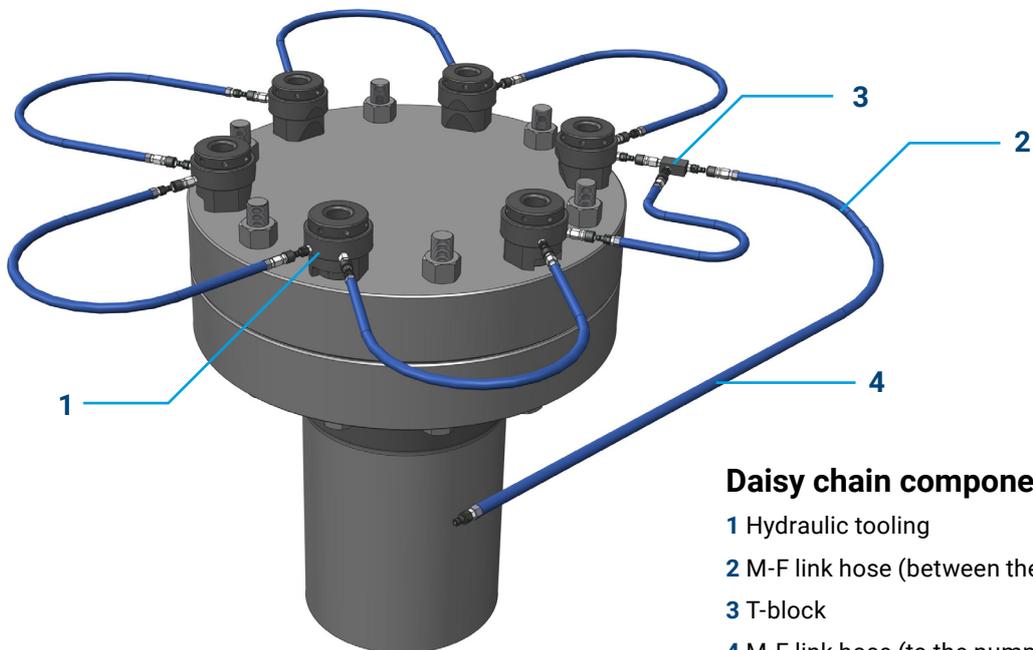
### Interconnecting hose arrangement

The interconnecting hose arrangement is the most commonly recommended hose setup. It is well suited for multiple tensioning tools in large groups. As the setup is 100% external, forming a hydraulic ring-main, it allows easy manual piston reset or quick reset for auto return tensioners.



## Daisy chain arrangement

The daisy chain arrangement is an affordable method of connecting multiple tools. It is best for simplicity, as only one type of hose needs to be specified, however with this setup oil must pass through every hydraulic cylinder increasing the resistance for manual piston reset or increasing the time reset takes for auto return tensioners.

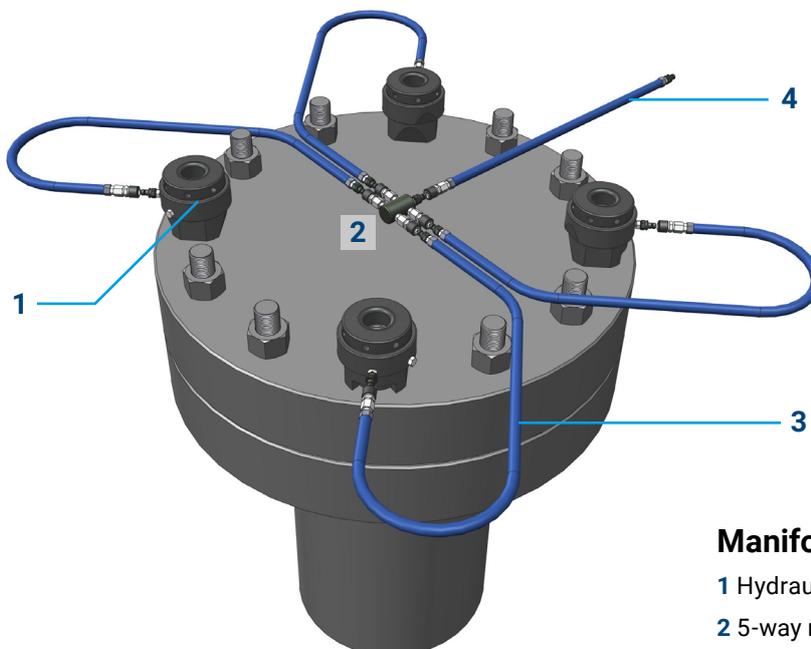


### Daisy chain components

- 1 Hydraulic tooling
- 2 M-F link hose (between the tools)
- 3 T-block
- 4 M-F link hose (to the pump)

## Manifold arrangement

The manifold arrangement is well suited to small groups of tensioning tools, particularly where the tensioner coverage pattern is spread out.



### Manifold components

- 1 Hydraulic tooling
- 2 5-way manifold
- 3 M-F link hose (to the tools)
- 4 M-F link hose (to the pump)