DIN 24° Cone

The DIN 24° cone male will mate with any of the three females shown. The male has a 24° seat, straight metric threads, and a recessed counterbore which matches the tube O.D. of the coupling used with it. The mating female is a 24° cone with a ring, a metric tube fitting or a universal 24° and 60° cone. There is a light and heavy series DIN coupling. Proper identification is made by measuring both the thread size and the tube O.D. (The heavy series has a smaller tube O.D., but a thicker wall section than the light.) When measuring the flare angle with the seat angle gauge, use the 12° gauge. (The seat angle gauge measures the angle from the connector centerline.)

![Diagram of DIN 24° Cone](image)

British Standard Pipe Parallel (BSPP)

The BSPP (parallel) male will mate with a BSPOR (parallel) female or a female port. The BSPP male has straight threads and a 30° seat. The BSPOR female has straight threads, a 30° seat, and an O-ring. The female port has straight threads and a spotface. The seal on the port is made with an O-ring or soft metal washer on the male.

The BSPP (parallel) connector is similar to, but not interchangeable with, the NPSM connector. The thread pitch is different in most sizes, and the thread angle is 55° instead of the 60° angle found on NPSM threads.

![Diagram of BSPP Male and Female Connectors](image)

British Standard Pipe Tapered (BSPT)

The BSPT (tapered) male will mate with a BSPT (tapered) female, or a BSPOR (parallel) female. The BSPT male has tapered threads. When mating with either the BSPT (tapered) female or the BSPOR (parallel) female port, the seal is made on the threads.

The BSPT connector is similar to, but not interchangeable with, the NPTF connector. The thread pitch is different in most sizes, and the thread angle is 55° instead of the 60° angle found on NPTF threads.

![Diagram of BSPT Male and Female Connectors](image)

Female British Flat-Face Swivel

The solid male British O-ring face seal fitting will mate with a swivel female British O-ring face seal fitting only. An O-ring rests in the O-ring groove in the male. A seal is made when the O-ring in the male contacts the flat face on the female.

![Diagram of Female British Flat-Face Swivel](image)