

SEAL WITH BELLOWS STYLE NOSE RING

ABSTRACT

A seal assembly between a wellhead housing (10) having a bore (12) and a casing hanger (18), has an inner seal leg (22) for sealing against hanger (18) and an outer seal leg (26) for sealing against housing (10). An extension (32) extends downward from outer seal leg (26) and has a downward facing shoulder (36) that rests on an upward facing shoulder (38) formed on a nose ring (37). Connection (34) connects seal ring (25) to the nose ring (37) with a lower portion of the nose ring (37) resting on the upward facing shoulder (38) of the casing hanger (18). Bellows (40) are formed on the nose ring (37) to increase lockdown capacity. Bellows (40) have an inner surface (42) that faces an outer profile (43) of the hanger (18), and an outer surface (46) on the bellow (40) that faces the bore (12) of the housing (10). When the bellows (40) are axially collapsed, they expand radially outward and contract radially inward into the bore (12) of the housing (10) and the outer profile (43) of the hanger (18).

Figure 1