CLAIMS

1. A valve device (100) for a wellhead, the valve device (100) comprising:
a valve (200) comprising first connection elements (201) configured for sealingly and removably mounting of the valve (200) in a port (301) of a wellhead (300) of a hydrocarbon well;
a spool unit (102) having a through-channel (101) extending between a first end (102a) and a second end (102b) of the spool unit (102), second connection elements (110) arranged in the through-channel (101), and a flange (103), the flange (103) configured for sealingly mounting the spool unit (102) to the wellhead (300), aligning the through-channel (101) with the port (301); and
a plug (400) comprising third connection elements (401) configured for sealingly and removably engaging the second connection elements (110) and attach the plug (400) in the through-channel (101), wherein the through-channel (101) has a first through-channel portion (101a) and a second through-channel portion (101b), the first through-channel portion (101a) configured to accommodate a part of the valve (200) and the second through-channel portion (101b) configured to accommodate the plug (400).

2. A valve device (100) according to claim 1, further comprising
a blind flange (500) removably mounted to the second end (102b) such as to cover an end opening (105) of the through-channel (101).

3. A valve device (100) according to claim 1 or 2, wherein
the valve (200) comprises a tool engagement element (202) configured for co-operation with a placement and removal tool (758), and/or
the plug (400) comprises a tool engagement element (402) configured for co-operation with the placement and removal tool (758).

4. A valve device (100) according to any one of the preceding claims, wherein the flange (103) comprises a first conduit (104) extending through a side wall (112) of the valve device (100) and into the through-channel (101).

5. A valve device (100) according to claim 1, wherein the first through-channel portion (101a) has a smaller cross section area than the second through-channel portion (101b).

6. A valve device (100) according to claim 1 or 5, wherein cross section area of the second through-channel portion (101b) is sufficiently larger to allow the valve (200) to pass therethrough.

7. A valve device (100) according to any one of claims 1, 5-6, further comprising an annular shoulder (106) arranged between the first through-channel portion (101a) and the second through-channel portion (101b).

8. to co-operate with the plug (400) for providing a metal-to-metal seal between the through-channel (101) and the plug (400).

9. A valve device (100) according to any one of claims 1, 6-8, wherein the spool unit (102) comprises a second conduit (107) extending through a side wall (112) of the valve device (100) and into the through-channel (101), and opening into the through-channel (101) between the first through-channel portion (101a) and the second through-channel portion (101b).

10. A valve device (100) according to any one of claims 1, 6-9, comprising a third conduit (111) extending through a side wall (112) of the valve device (100) and into the through-channel (101), and opening into the through-channel (101) in the first through-channel portion (101a), the third conduit (111) being configured to cooperate with an actuator port (8) of the valve (200).

11. A valve device (100) according to claim 10, wherein the third conduit (111) is configured to transmit a hydraulic control fluid to the valve (200).

12. A valve device (100) according to claim 10, wherein the valve (200) is electrically actuated and the third conduit (111) is configured to contain an electric supply line arranged for actuation of the valve (200).