

## PDPC and LWPC

### Pumpdown plug and liner wiper plug

#### APPLICATIONS

- Cementing operations during liner applications
- Wiping of the running string behind the cement with pumpdown plug
- Wiping of the liner behind the cement with liner wiper plug
- Separation of cement from the displacement fluid during cementing operations with pumpdown plug and liner plug

#### BENEFITS

- Improves cement integrity at the liner toe by separating displacement fluids in the running string and liner
- Reduces drillout times and operating costs with antirotation feature, which allows plugs to be drilled quickly

#### FEATURES

- Pumpdown plug that locks into upper section of liner wiper plug
- Liner wiper plug locking mechanism that provides protection against back pressure when locked and sealed to landing collar
- Compatibility of tool body elastomers with complex drilling fluids
- PDC drillable pumpdown plug and liner wiper plug

The pumpdown plug (PDPC) and liner wiper plug (LWPC) separate cement from the displacement fluid during liner cementing operations. Both plugs are required because of the large ID difference between the workstring and the liner.

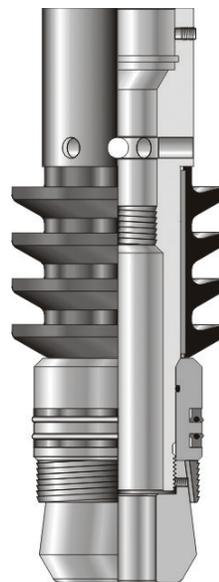
The PDPC, released from the cementing manifold at the surface between the cement and the displacement fluid, wipes cement from the drillpipe and lands in the LWPC. When this happens, the pressure increases and shears the LWPC, allowing both plugs to be displaced as a unit to the landing collar.

The LWPC plug, commonly shear pinned to the liner setting tool, has a hollow internal diameter that allows fluids and cement to pass through the plug until the PDPC latches into the upper part of the LWPC. The PDPC is then mechanically and hydraulically sealed to the LWPC, and the two plugs are sheared from the liner setting tool. After wiping the liner, the LWPC is latched and sealed to the landing collar, preventing the backflow of cement.

LWPCs and PDPCs are manufactured from high-grade aluminum, allowing for easier drillout with a PDC bit.



*PDPC pumpdown plug.*



*LWPC liner wiper plug.*

# PDPC and LWPC

## PDPC Specifications

### Drillpipe Size, in [mm]

2.375 [60.3]
2.875 [73.0]
3.500 [88.9]
4.000 [101.6]
4.500 [114.3]
5.000 [127.0]
5.500 [139.7]
6.625 [168.3]
7.000 [177.8]

### Mixed-String Drillpipe Size, in [mm]

2.375 × 2.875 [60.3 × 73.0]
2.375 × 3.500 [60.3 × 88.9]
2.875 × 3.500 [73.0 × 88.9]
3.500 × 4.500 [88.9 × 114.3]
3.500 × 5.000 [88.9 × 127.0]
4.000 × 4.500 [101.6 × 114.3]
4.500 × 5.000 [114.3 × 127.0]
4.500 × 5.500 [114.3 × 139.7]
5.000 × 5.500 [127.0 × 139.7]
5.000 × 6.625 [139.7 × 168.3]

## LWPC Specifications

Liner Size, <sup>†</sup> in [mm]	Weight, lbm/ft [kg/m]
2.875 [73.0]	6.50–10.40 [9.69–15.50]
3.500 [88.9]	12.80–15.50 [19.07–23.1]
3.500 [88.9]	7.70–10.30 [11.47–15.35]
4.000 [101.6]	9.50 [14.16]
4.000 [101.6]	11.00–11.60 [16.39–17.28]
4.000 [101.6]	14.00 [20.86]
4.000 [101.6]/4.500 [114.3] <sup>‡</sup>	13.50 [20.12]
4.500 [114.3]	9.50–13.50 [14.16–20.12]
4.500 [114.3]	15.10 [22.50]
4.500 [114.3]	16.60–17.70 [24.73–26.37]
4.500 [114.3]	18.80–21.60 [28.01–32.18]
5.000 [127.0]	11.50–15.00 [17.14–22.35]
5.000 [127.0]	18.00–24.20 [26.82–36.06]
5.000 [127.0]	26.70 [39.78]
5.500 [139.7]	14.00–17.00 [20.86–25.33]
5.500 [139.7]	20.00–28.40 [29.80–42.32]
5.500 [139.7]	32.30–36.40 [48.13–54.24]
6.625 [168.3]	20.00–32.00 [29.80–47.68]
7.000 [177.8]	17.00–26.00 [25.33–38.74]
7.000 [177.8]	29.00–38.00 [43.21–56.62]
7.000 [177.8]	41.00–44.00 [61.09–65.56]
7.000 [177.8]	49.50 [73.76]
7.625 [193.7]	24.00–26.40 [35.76–39.34]
7.625 [193.7]	29.70–39.00 [44.25–58.11]
7.625 [193.7]	42.80–53.06 [63.77–79.06]
7.750 [196.9]	46.10 [68.69]
8.625 [219.1]	24.00–40.00 [35.76–59.60]
8.625 [219.1]	44.00–52.00 [65.56–77.48]
9.625 [244.5]	32.30–40.00 [48.13–59.60]
9.625 [244.5]	43.50–53.50 [64.82–79.72]
9.625 [244.5]	58.40–61.00 [87.02–90.89]
9.625 [244.5]	71.80 [106.98]
9.875 [250.8]	62.80 [92.94]
10.750 [273.1]	51.00–55.00 [75.99–81.95]
10.750 [273.1]	60.70–71.10 [90.44–105.94]
10.750 [273.1]	73.20–85.30 [109.07–127.10]
11.750 [298.5]	54.00–65.00 [80.46–96.85]
11.625 [301.6]	17.80 [26.52]
13.375 [339.7]	54.00–72.00 [80.46–107.28]
16.000 [406.4]	65.00–84.00 [96.85–125.16]
16.000 [406.4]	94.00 [140.06]

<sup>†</sup>Other sizes available on request

<sup>‡</sup>Used for multistage stimulation liner string with a rupture disc valve restriction of 3.25 in

[www.slb.com/linerhangers](http://www.slb.com/linerhangers)

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