

# XLG Series Side Pocket Mandrels

## APPLICATIONS

- Subsea gas lift installations
- High-pressure deepwater gas lift installations
- High-performance and high-reliability gas lift installations

## BENEFITS

- Ability to maintain existing completion practices and surface facilities with no modifications
- Increased operating pressure envelope for deeper gas injection

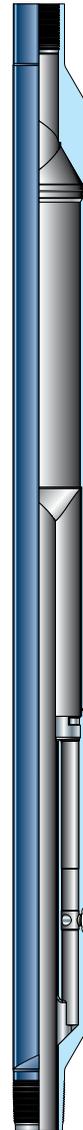
## FEATURES

- Large flow inlet and valve pocket bore to optimize fluid flow path
- Customized flush-mounted cable and control line bypass system
- Simplified hardware with familiar gas lift system techniques, eliminating need for learning curve

## High-pressure gas lift completions

The XLG Series side pocket mandrel is an integral part of the XLift\* high-pressure gas lift system. The XLG mandrel design features angled injection ports in the mandrel body and pocket to optimize the flow of injection gas, dramatically reducing the flow turbulence impinging on the internal diameter of the well casing and the gas flow path through the valve. The XLG mandrel design also allows for full-length, flush-mounted, cable/control line bypass. Unlike traditional side pocket mandrels that require guard systems that increase their outside geometry, the XLG mandrel allows for multiple cable/control line bypasses without altering the original outside drift diameter of the mandrel body.

The XLG mandrel accepts the XLift flow control system consisting of the 1 $\frac{3}{4}$ -in XLI gas lift valve, the 1 $\frac{3}{4}$ -in XLO orifice valve, the 1 $\frac{3}{4}$ -in XLO-B orifice valve with an integral burst disk, or the 1 $\frac{3}{4}$ -in XLD dummy valve. The integral valve latch is a ring type. These valve combinations are run and pulled with OXL Series kickover tools designed for the larger valve and latch combination and are based on the field-proven OK/OM type designs. The XLK running tool is similar to the RK running tool, and the valve is pulled with the appropriate JD Series pulling tool.



*XLG side pocket mandrel.*

# XLG Series Side Pocket Mandrels

## XLG Series Side Pocket Mandrel Specifications

|   |                           |                               |                                    |                      |
|---|---------------------------|-------------------------------|------------------------------------|----------------------|
| Tubing size, in OD; lbm/ft [kg/m]                                     | 4½; 12.6 [19]             | 5½; 17 [25]                   | 5½; 20 [30]                        | 5½; 23 [34]          |
| Min. ID, in [mm]  | 3.933 [100]               | 4.834 [123]                   | 4.695 [119]                        | 4.587 [117]          |
| Internal drift, in [mm]   | 3.833 [97]                | 4.767 [121]                   | 4.653 [118]                        | 4.545 [115]          |
| Max. OD, in [mm]  | 7.515 [191]               | 8.473 [215]                   | 8.296 [211]                        | 8.346 [212]          |
| External drift, in [mm]   | 7.625 [194]               | 8.525 [217]                   | 8.379 [213]                        | 8.525 [217]          |
| Recommended casing, in OD; lbm/ft [kg/m]                              | 8¾; 38 [57]               | 9.625; 47 [70]                | 9.625; 53.5 [80]                   | 9¾; 47 [70]          |
| Length, in [mm]   | 117.557 [2,986]           | 125 [3,175]                   | 134 [3,404]                        | 132.000 [3,353]      |
| Pocket size, in [mm]  | 1.75 [44]                 | 1.75 [44]                     | 1.75 [44]                          | 1.75 [44]            |
| Cable bypass envelope, in   | See footnote <sup>†</sup> | 1.046 × 0.614<br>(both sides) | 1.000 × 0.482 and<br>0.640 × 0.600 | 1.500 × 0.500        |
| Material <sup>†</sup>   | 410SS/13Cr                | 410SS/13Cr                    | INCONEL <sup>®</sup> alloy 718     | 410SS/13Cr           |
| Internal test pressure at ambient temperature, psi <sup>†</sup> [kPa] | 8,745 [60,295]            | 7,740 [53,365]                | 12,000 [82,737]                    | 7,500 [51,711]       |
| External test pressure at ambient temperature, psi <sup>†</sup> [kPa] | 8,570 [59,088]            | 6,290 [43,368]                | 11,000 [75,842]                    | 8,000 [55,158]       |
| Tensile strength at ambient temperature, lbf [N]                      | 288,000 [1,281,088]       | 397,000 [1,765,944]           | 641,000 [2,851,310]                | 466,000 [2,072,871]  |
| Thread weight <sup>†</sup> , lbm/ft                                   | 12.6                      | 17                            | 20                                 | 23.0                 |
| Thread type <sup>†</sup>  | New VAM <sup>®</sup>      | Tenaris <sup>®</sup> -3-SB    | VAM Top Hc                         | KS Bear <sup>®</sup> |
| Thread configuration <sup>†</sup>                                     | Box × pin                 | Box                           | Box                                | Box × pin            |
| Thread recuts   | See footnote <sup>†</sup> | 0                             | 2                                  | 2                    |

## XLG Series Side Pocket Mandrel Accessories

|                |                   |
|----------------|-------------------|
| Pulling tool   | 2.000-in JDC type |
| Mandrel series | XLG               |

<sup>†</sup>Alternative specifications, materials, sizes, and pressure ratings available on request.

[slb.com/gaslift](http://slb.com/gaslift)