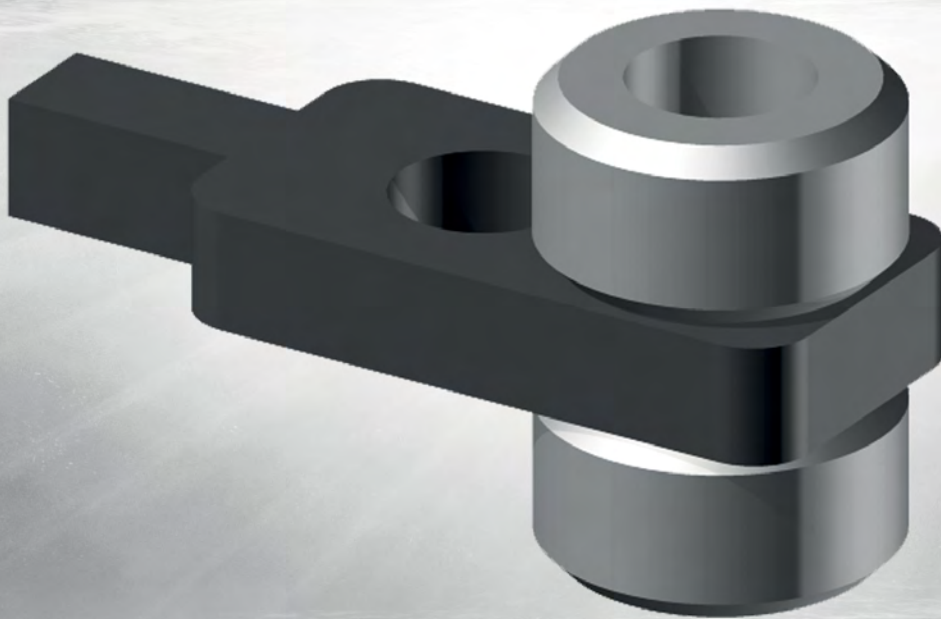


Going even deeper.

BALINIT® DLC coating increases the performance and reliability of XMT Valve Systems for deep water oil & gas production.



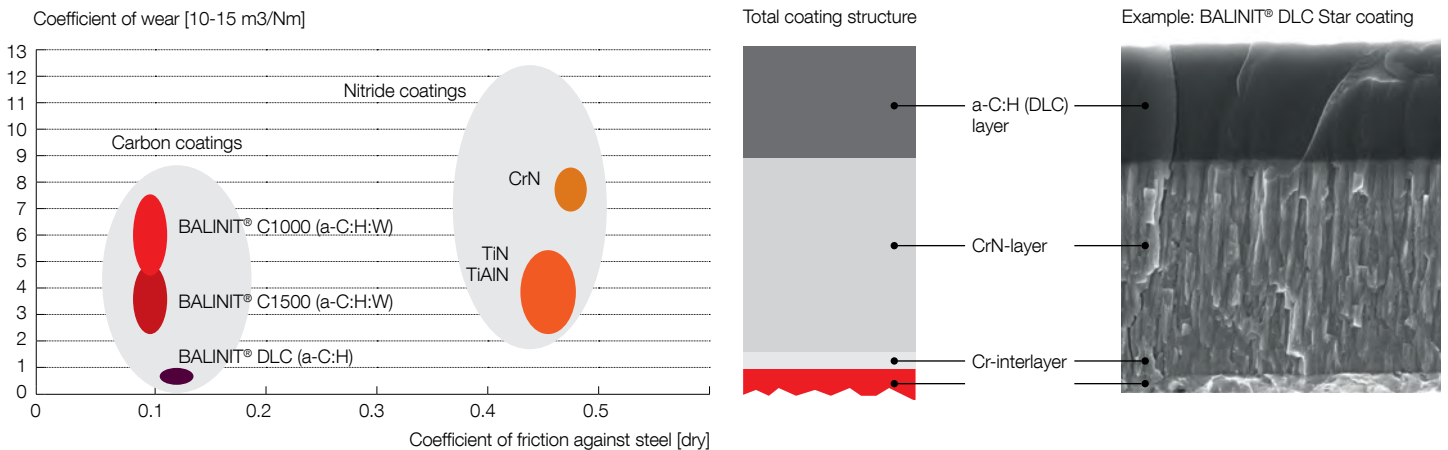
BALINIT® DLC is the key success factor for deep offshore oil & gas production.

Subsea XMT valves and actuators are among the most important systems for a safe and reliable deep water oil & gas production, especially as water depths exceed 10,000 ft (3 km) with pressure over 100 MPa and temperatures close to 180°C. Although the use of advanced nickel alloys (Inconel 725 & 625) in combination with high density HVOF thermal Spray WC coatings improved the anti-galling and sealing ability properties between valve seats and valve gates, the high friction problem remained unsolved. BALINIT® DLC is specifically designed for High Pressure High Temperature (HPHT) deep water conditions and provide unique frictional, wear and bearing load capacity properties. Thereby it is a key element for the reliable operation of XMT valves.

Your advantages with BALINIT® coated XMT Valve Systems.

- Reduction of coefficient of friction up to five times (COF: ~0.15 compared to steel)
- Reduction of friction torque in water, gas and at high temperature
- Excellent anti-galling and wear properties
- Superior seal performance
- Stability during exposure in High Pressure High temperature (HPHT) conditions

Low friction and high abrasive wear resistance are proven.



The abrasive wear resistance was measured by the ball crater method where a 20 mm ball rotates on the surface with continuous addition of diamond suspension. The friction is measured in a pin disk arrangement under dry condition against steel. Especially BALINIT® DLC and DLC STAR show a unique combination of low wear and low friction.

We recommend: BALINIT® DLC for lowest wear and friction.

| BALINIT® DLC and DLC STAR | | | |
|---------------------------|---------------------|-------------------|--------|
| Coating material | Micro-hardness (HV) | Typical thickness | Colour |
| DLC/CrN | >2000 | 2-4 µm | Black |

There's much more to talk about – please get in touch to discuss what we can do to improve your business.