

**aptus** is the third generation of **rime's** hydro-mechanical pulser main valve. it is designed from the ground up to provide reliable and effective pulsing in the harshest drilling conditions.

**aptus** maximizes the hydraulic efficiency of the lower end by optimizing pressure drops to increase the force available for reliable and robust activation of the valve. it also provides significantly better lcm tolerance through the use of multi stage filtering and ample flow area to avoid failures caused by debris compaction. the improved hydraulics of the **aptus** lower end coupled with a durable piston seal assembly helps operators create the cleanest, sharpest and strongest pulses in even the worst drilling and mud conditions. these improvements also significantly reduce the risk of hydraulic instability that is sometimes experienced with legacy lower ends.

the combination of optimized hydraulics, improved sealing and expanded lcm capability found in **aptus** allows operators to rest assured that their operations will not be compromised in drilling conditions where lcm, mud weight, flow rate or high temperatures would have caused failures and service interruptions in legacy equipment.

**aptus** incorporates a custom locking and latching system that reduces the risk of seal leakage and wash outs and allows for operation in multiple configurations, including unlatched, retrievable and locked down modes.

**aptus** provides significant performance improvements when run with **rime's slick-hd** or **direct-hd** servo pulsers and integrates seamlessly with **rime's** proprietary **slickride** shock mitigation tool.

- available in 4.75", 6.75" and 8.00" sizes
- optimized hydraulics and increased flow area
- significantly improved sealing system
- exceptional performance in lcm and high solids
- compatible with legacy mwd systems
- custom latching options available

