

# Hughes Christensen

## Vanguard™ TCI Bits

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### 17.25 in. (438.1 mm) VM-28G IADC 525

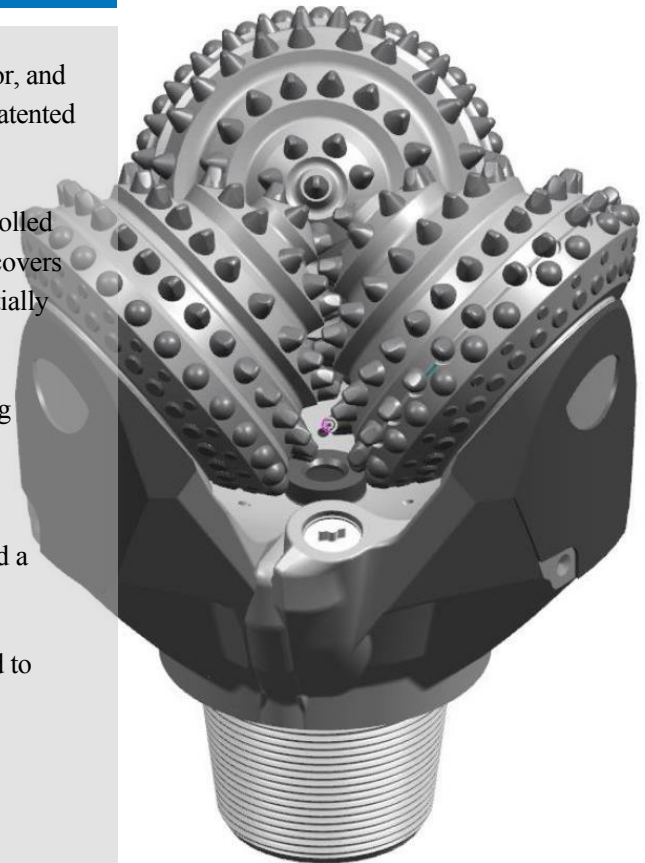
**Metal Face Seal & Bearing System** Longer bit life in high-RPM, motor, and high-temperature drilling applications, up to 350°F (177°C), with the patented VM metal-to-metal sealing system.

**STL Hardfacing** Increased bit life and reliability with a precisely controlled application of patented, highly wear-resistant STL™ hardfacing that covers the entire shirttail and leg areas for superior protection from the potentially damaging effects of hole-wall contact

**Shirttail and Leg Hardfacing** STL™ hardfacing is the industry's leading technology to strengthen legs and shirttails.

**Enhanced Gauge Wear Resistant** For directional and highly abrasive applications, tough ovoid-shaped inserts are added on the heel row and a generous amount of carbide inserts are added on the gauge.

**Center Jet** A fourth jet is positioned in the center of the bit and utilized to prevent bit balling and the associated reduction in penetration rate.



### Bit Specifications

Features	ATP,CH,JF,STL,CJ,J,GTCI	Bearing / Seal Package	Two Row Roller / Single Energizer MFS
Inner Row	Modified Double Angle Chisel	Nozzle Type	Standard
Heel Row	Conic	Center Jet Nozzle	FK or VF
Gauge Trimmers	N/A	Connection	7-5/8 REG API
Gauge Row	Gage	Makeup Torque	34.0 - 40.0 kft-lb (46.1 - 54.2 kNm)
Tooth Hardfacing	N/A	Approx. Shipping Weight	
OD Hardfacing	STL		

### Operating Recommendations\*

**Rotation Speed:** For Rotary and Motor Applications. **Max. Weight On Bit:** 37 - 95 klb (16 - 42 tn or kdaN)

\* The ranges of bit weight, RPM and max gpm shown is representative of typical operating parameters, but will not necessarily yield optimum bit life or lowest drilling cost. It is not recommended that the upper limits of both weight and RPM be run simultaneously. Contact your local Baker Hughes representative for recommendations in your area.

\*\* Recommend solids content of fluid to be approximately 3% or less.

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