

# Tornar® Wellbore Cleaning Technology

Clean and solids-free wellbore

## Features

- Superior annular velocity
- Balanced annular velocity in each wellbore
- Non-stop displacement
- Up to 150 rpm rotation speed
- Extra large bypass areas for eliminating flow restrictions
- Large ID to increase flow

## Benefits

- Time saving non-stop displacement
- Superior wellbore debris removal
- Easy operation
- Enhanced chemical cleaning



Contact your local Archer representative for more information on Tornar® wellbore cleaning technology for your well needs.

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A clean well is essential prior to running expensive and sensitive completion strings or other debris sensitive equipment. Therefore, the removal, collection, and verification of debris are extremely important in a wellbore. Archer's Tornar® wellbore cleaning equipment optimizes these operations.

## Superior annular velocity

The name Tornar® is derived from the word **Tornado** and **Archer**. Like a vortex of a tornado, Tornar®'s wellbore cleaning technology swiftly draws in and expels debris from the wellbore.

Coincidentally Tornar® is also a Spanish word which means return to or give back, which is exactly what Tornar® technology does; it returns the wellbore to a pristine and clean condition.



## Elements in efficient wellbore cleaning:

- **Balanced Annular Velocity** is essential to avoid debris settlements when there is a change in liner or casing ID. Through the use of innovative circulation valve technology, all sections of the wellbore will have a high annular velocity simultaneously.
- **Non-stop Displacement** is of the essence to enhance the chemical cleaning of a wellbore. Through the use of innovative circulation valve technology the wellbore can be displaced without stop in pumping. This saves time and optimizes the displacement process.
- **High Rotation speed** is important to create a turbulent flow and transport debris into the flow regime in the vertical section of a well.
- **High Annular Velocity** is important to transport debris out of the well. Each tool is designed to optimize and enhance annular velocity. The result is a constant superior annular velocity in all wellbore sections.
- **Fluid Rheology** is equally important to create a viscous coupling with the drillpipe and suspend debris in the flow regime.

All these elements together make Tornar® wellbore cleaning technology the best option for a **Clean and Solids Free Wellbore**.

Archer is a global oil services company with a heritage that stretches back over 40 years. With a strong focus on safety and delivering the highest quality products and services, Archer operates in 40 locations over 19 countries providing drilling services, well integrity & intervention, plug & abandonment and decommissioning to its upstream oil and gas clients. **We are Archer.**