

Jet Blaster

Engineered high-pressure jetting service

APPLICATIONS

- Wellbore cleanouts, such as sand lift, tubing-scale removal, sandscreen cleaning, and near-wellbore skin removal
- Cleanout of tubing deposits, such as paraffins, waxes, soluble scales, and cement

ADVANTAGES

- One-trip cleanout for quick job turnaround and increased ROI
- Reduced risk of damaging tubulars or downhole installations
- Lower treatment cost as a result of fewer chemical requirements
- Fluid energy that maximizes the performance of treatment fluids
- Monitoring of cleanout progress through a scalable drift ring, with no abrasive, metal-to-metal contact with completion equipment
- Treatment fluid-resistant jetting BHA
- BHA for pumping tailored chemical trains



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The Jet Blaster* engineered high-pressure jetting service is part of a complete wellbore cleanout package that includes CT job design and execution and pumping and chemical treatment applications. It is used with Jet Advisor* scale removal software and CoilCADE* coiled tubing design and evaluation software for a designed approach to wellbore cleanouts, including sand lift, tubing-scale removal, sandscreen cleaning, and near-wellbore skin removal. Jet Blaster service operations are planned and optimized and are a fast and cost-effective alternative to nozzles, positive displacement motors, impact hammers, and other wellbore cleanout equipment.

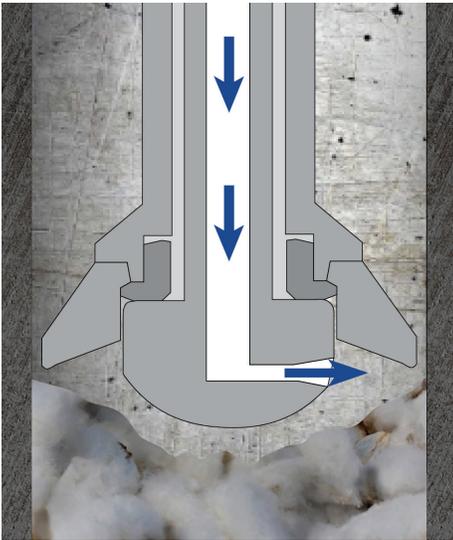
Job design

Based on the specific well parameters and the expected deposits, Jet Advisor software determines the best-performing Jet Blaster service configuration and helps in selecting the CT string. The type of deposit also determines the fluid selected for each treatment. The key design parameter is performance at the fluid-jet interface to minimize treatment time and the amount of chemicals required. CoilCADE software is used to verify that downhole fluid performance allows deposits to be safely carried out of the well.

Focused, high-energy fluid streams loosen compacted fills, while the high rate of fluid passing through the Jet Blaster service tool allows safer fill removal. Because the cleaning radius is not limited by tool geometry, the Jet Blaster service enables nondamaging cleanout of complex, delicate structures such as downhole screens, installations, gas lift mandrels, and sliding sleeves. The modular BHA design allows tailored, software-aided adaptation to specific tasks. Carbide nozzles, capsulated and lubricated heavy-duty bearings, and an operating temperature of up to 350 degF [177 degC] make the Jet Blaster service tool resistant to almost any chemical environment or abrasive fluid. It can be used in most wells and with virtually any combination of treating chemicals.

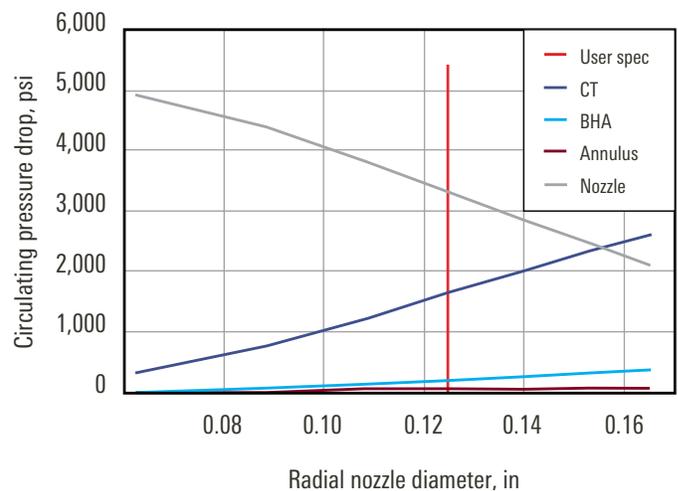
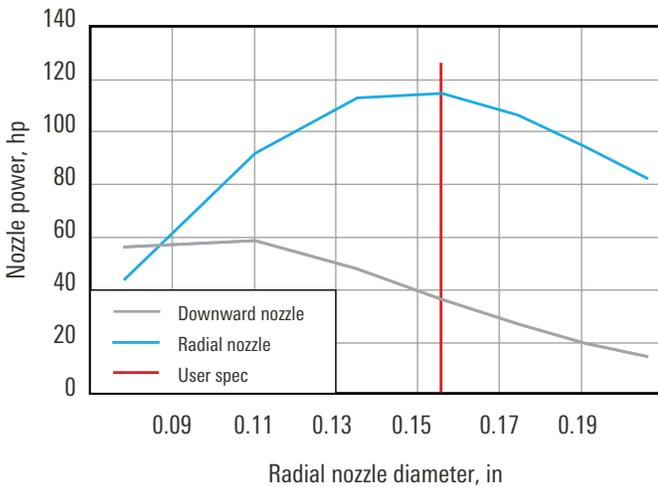
Effective downhole jetting requires the dissipation of fluid energy in the zone of interest, the tubing, the screen, or the formation—not in the tool itself or immediately at the nozzle exit. A coherent, high-velocity fluid stream is necessary. Performance enhancement is achieved through reduced energy losses across the swivel and nozzles. Effective downhole jetting does not rely on the erosion effect of cavitation; therefore, efficiency is not affected by wellbore depth.

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Carbide nozzles with swirl eliminators increase hydraulic efficiency while the drift ring controls ROP for positive, one-pass cleaning.

Specifications	1 ¹¹ / ₁₆ -in tool	2 ⁷ / ₈ -in tool
Technical		
Maximum temperature rating, degF [degC]	350 [177]	350 [177]
Maximum tensile load, lbf [kN]	26,667 [118.62]	72,000 [320.27]
Maximum compressive load, lbf [kN]	5,000 [22.24]	10,000 [44.48]
Chemical resistance	Entire jetting assembly for both tool sizes is H ₂ S resistant and chemically resistant to HCl (28%), mud acid, aromatic solvents (toluene and xylene), ethylenediamine tetra-acetic acid (EDTA), barium sulfate dissolvers, and nitrified fluids	
Other	Both tool sizes offer sweet and sour services per NACE and abrasive pumping	
Dimensional		
Drift ring and nozzle head length, ft [m]	0.1 [0.03]	0.1 [0.03]
Jet Blaster service module length, ft [m]	2.0 [0.61]	2.55 [0.77]
Downhole filter module length, ft [m]	2.1 [0.64]	2.4 [0.73]
Motorhead assembly length, ft [m]	2.4 [0.73]	2.92 [0.89]



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