BREAKTHRU™ CASING FLOTATION DEVICE

This product may be covered by one or more patents or pending patent applications.

OPTIMIZE YOUR PAY ZONE, MINIMIZE YOUR COSTS

Nine's BreakThru™ Casing Flotation Device allows operators to reach TD by eliminating components added to the casing string commonly used with conventional techniques. The highly engineered plug in the BreakThru Device uses an engineered material barrier, integral in a mechanism to shatter at a precise differential pressure. At the activation pressure, the barrier disintegrates into sand-like particles, easily circulated out, leaving a full bore casing string. This eliminates the need for a debris trap and significantly shortens the shoe track.

When run in combination with the Nine Energy approved float shoe, the BreakThru device significantly reduces the weight of the casing in the increasingly longer horizontal sections, reducing the risk of not getting the string to TD. Prejob modeling software determines the position of the BreakThru device in the casing string and pressure activation values. In wells where the tool has been run, there has been 99.9% success in casing reaching TD.

HOW DOES THE PLUG HANDLE HARSH DOWNHOLE ENVIRONMENTS?

The device is manufactured to perform. It is made from high-quality, ultra-durable engineered material, which can withstand extreme downhole temperatures and loads. Once the string is landed, pressure up to the activation pressure and the plug disintegrates, leaving the bore ready for cementing.

Features and Benefits

- Highly engineered barrier
- No debris trap required
- No landing collar required
- Gain full wellbore access
- Access extended pay zone

99.9% OF BREAKTHRU™ DEVICES LANDED IN FIRST ATTEMPT

Allowing operators to float casing to total depth and maximize operational efficiences.

BREAKTHRU™ CASING SPECS

Description inch (mm)	Tool O.D. inch (mm)	Machine I.D. inch (mm)	Overall Length inch (mm)	Tool Weight lb (kg)	Shearing Pressure Rating	Maximum Burst Pressure*	Maximum Collapse Pressure*	Maximum Tensile Rating*	Maximum Torque Rating*	Maximum Reliable Temperature
4.50 BT (114.3)	5.75 (146.1)	3.92 (99.6)	27.1 (688.0)	92.0 (41.7)	2,500-10,000 psi (17.2-69.0 MPa)	16,072 psi (110.8 MPa)	15,038 psi (103.7 MPa)	710,000 lbf (322,056 kgf)	18,000 ft.lbf (2488.58 kg.m)	302° F** (150°C)
5.00 BT (127.0)	5.88 (149.4)	4.21 (107.0)	29.2 (741.0)	97.0 (44.0)		15,354 psi (105.9 MPa)	14,411 psi (99.4 MPa)	538,160 lbf (244,109 kgf)	21,000 ft.lbf (2903.35 kg.m)	
5.50 BT (139.7) Slim-Line	6.50 (165.1)	4.89 (124.3)	22.2 (562.0)	73.0 (33.0)	2,500-7,500 psi (17.2-51.7 MPa)	13,000 psi (93.1 MPa)	12,800 psi (88.3 MPa)	670,000 lbf (303,912 kgf)	38,000 ft.lbf (5253.6883 kg.m)	250° F** (121°C)
5.50 BT (139.7) Slim-Line	6.50 (165.1)	4.78 (121.4)	28.5-29.6 (723.0-753.0)	108.5 (49.2)	2,500-10,000 psi (17.2-69.0 MPa)	15,148 psi (104.5 MPa)	14,200 psi (97.9 MPa)			302° F** (150°C)
5.50 BT (139.7)	7.09 (180.0)	4.78 (121.4)	29.0-30.2 (737.0-767.0)	150.0 (68.0)	2,500-12,500 psi (17.2-86.2 MPa)	17,582 psi (121.3 MPa)	16,345 psi (112.7 MPa)	1,226,266 lbf (556,234 kgf)	60,000 ft.lbf (8295.29 kg.m)	
6.00 BT (152.4)	7.50 (190.5)	5.20 (132.1)	32.5 (825.0)	190.5 (86.4)	2,500-11,500 psi (17.2-79.3 MPa)	16,728 psi (115.4 MPa)	15,608 psi (107.6 MPa)	1,046,670 lbf (474,769 kgf)	65,000 ft.lbf (8,970 kg.m)	

*Based on 125 ksi yield strength material.

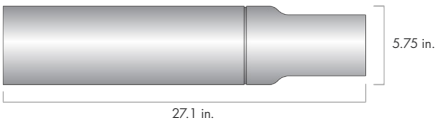
** Higher temperatures available on request

Other sizes and higher pressure/temperature ratings may be available upon request.

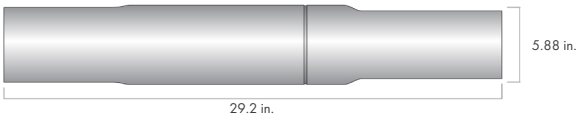
Casing Specs are according to API Tubing/Casing Dimension Chart Information.

AVAILABLE SIZES

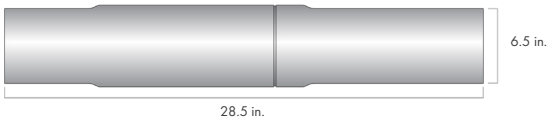
4.5 IN. CASING



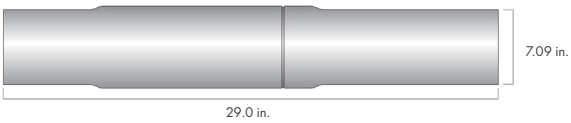
5.0 IN. CASING



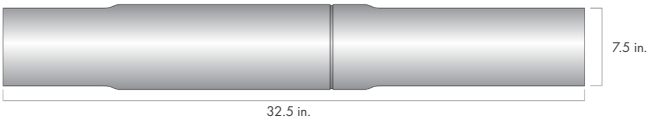
5.5 IN. CASING



5.5 IN. CASING



6.0 IN. CASING



For more information, and to find a representative near you, visit nineenergyservice.com