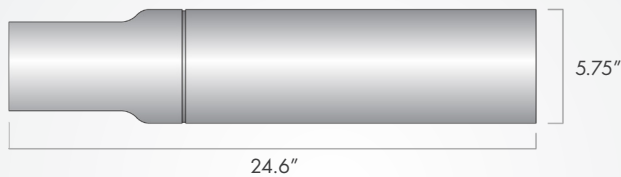


BREAKTHRU™ CASING FLOTATION DEVICE

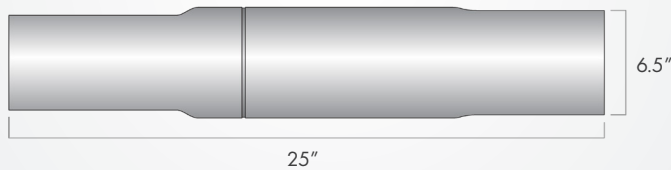


AVAILABLE SIZES

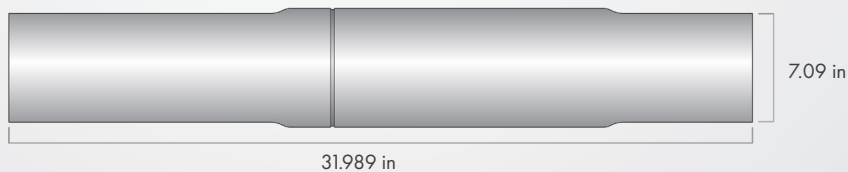
4.5" CASING



5.5" CASING



5.5" CASING



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 100% 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.

100%

OF BREAKTHRU™ DEVICES
LANDED IN FIRST ATTEMPT

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

MORE EFFICIENCY, MORE
SAVINGS, MORE RECOVERY

NO DEBRIS TO
SLOW YOU DOWN

LESS SHOE TRACK,
MORE PAY

Features and Benefits

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

BREAKTHRU™ CASING FLOTATION DEVICE



Dimensions			
OD	5.75"	6.5"	7.086 in"
Weight	81.6 lb	87.3 lb	147 lb
OAL	24.6"	24.92"	31.96"
Burst Rating	2500-8,500** psi	2500-8,500** psi	2500-8,500** psi
Temperature Rating	302 °	302 °	302 °
Make -Up Length	20.67"	20.98"	27.83"
Maximum OD	5.75"	6.5"	7.086"
Minimum ID	3.92"	4.78"	4.78"
Drift ID	3.795"	4.653"	4.653"
Material Grade	AISI 41xx with 125 KSI, 28-36HRC	AISI 41xx with 125 KSI, 28-36HRC	AISI 41xx with 125 KSI, 28-36HRC
Material min Yield Strength	125,000 psi	125,000 psi	125,000 psi
Burst Pressure	16,072 psi	15,148 psi	17,582 psi
Collapse Pressure	15,038 psi	14,200 psi	16,345 psi
Tensile Yield Strength	710,000 lbf	670,000 lbf	1,226,266 lbf
Yield Torque	8,300 ft-lb*	26,000 ft-lb*	40,000 ft-lb*