



# DS MicroSet™

DS MicroSet<sup>1</sup> is a Factory-Assembled, Performance-Assured™, length-optimized setting tool that provides exceptional reliability and performance. The disposable tool comes with a pre-installed custom power charge and igniter holder; enhancing safety and ease of use.

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|---|---|
| <b>Pre-Installed power charge eliminates explosive handling</b> | <b>Dual self-bleeding, controlled pressure release</b>    |
| <b>Smooth plug setting through controlled slow burn</b>         | <b>Positive shot confirmation from igniter disconnect</b> |
| <b>No firing head required</b>                                  | <b>100% maintenance free and disposable</b>               |

## EASY ASSEMBLY

DS MicroSet arrives at the wellsite fully assembled, and directly attaches to the string of DynaStage™ (DS) perforating systems. Wellsite preparation is easy and foolproof; only requiring insertion of the Intrinsicly Safe™ IS2™ IG Plug and Go igniter before being attached to the gun string, tested and run downhole.

DS MicroSet can be tested before deployment with the Infinity Surface Tester. Once the tool string is deployed and has reached the desired depth in the well bore, the power charge in the DS MicroSet is initiated from surface with the Infinity Firing Panel, starting the setting sequence.

Because DS MicroSet functions based on pressure generated from gas combustion, no hydraulic oil is required. This further improves reliability and reduces the risk of human error.

# The safest, most controllable and shortest disposable setting tool in the industry

## DESIGN SIMPLICITY

DS MicroSet is maintenance free, eliminating the many shortcomings of reusable setting tools, including metal fatigue associated with multiple cycles, and altered metallurgy due to high temperatures from power charge initiation. These issues can result in pressure leakage, reducing performance and increasing down-time.

Compatible with virtually any third-party frac plug, DS MicroSet is a “one-and-done” setting tool.

## ONE-STOP SHOP CONVENIENCE

DS MicroSet is an extension of the DynaStage (DS) family of Factory-Assembled, Performance-Assured perforating systems, and delivers a consistent level of safety, efficiency and reliability. The DS suite of products reduces customer reliance on multiple suppliers. Since all systems can be delivered factory assembled, directly to the well site, reliance on storage and assembly infrastructure also is reduced or eliminated.

DS MICROSET	#10 EQUIVALENT				#20 EQUIVALENT			
DynaStage Gun Size	2-3/4"	3-1/8"	3-3/8"	3-1/2"	3-1/8"	3-3/8"	3-1/2"	4"
Part Number	TBC	TBC	TBC	TBC	2330490	TBC	2330501	TBC
Outer Diameter	TBC mm / TBC"				97.3mm / 3.83"			
Weight	TBC kg / TBC lbs				21.5 kg / 47.4 lbs			
Tool Length	TBC mm / TBC"				620mm / 24.4"			
Total Makeup Length	TBC mm / TBC"				405mm / 15.95"			
Stroke Length	6"				7-1/2"			
Shear Force	40,000 lbf				60,000 lbf			
Hook-up Offset	7-1/2" Baker equivalent				6-1/2" Baker equivalent			
Pressure Rating	137.9 MPa / 20,000 psi				137.9 MPa / 20,000 psi			
Temperature Rating	up to 190degC / 375degF							
Power Charge	Included							
Shipping Class	UN0276 1.4C							

## CONTACT US

<sup>1</sup>Patent Pending



Industry's Most  
Compact Ballistic  
Release Tool

## DS Liberator™

The Factory-Assembled, Performance-Assured™ DS Liberator<sup>1</sup> ballistic release tool (BRT) from DynaEnergetics provides a fast and reliable means for disengaging from a stuck perforating tool string. DS Liberator gives you the confidence to pull to the safest working load of the wireline cable while attempting to free the string, without concern of unintentional separation of the cable. If increased cable tension is not sufficient, an explosive release mechanism can be activated, separating the string, and leaving a clean, retrievable fishing neck that can be attached to with a dedicated fishing assembly to work and retrieve the string.

### HOW IT WORKS

DS Liberator is installed between the cable head and the perforating system. The tool uses the same proven release mechanism found in DynaEnergetics' TCP auto release firing heads, and leverages explosive energy to create a reliable mechanical separation.

DS Liberator utilizes DynaEnergetics' IS2™ TF Plug and Go™ initiating technology, which prevents unintentional detonation from stray current, stray voltage or static electricity, and delivers the industry's highest level of safety and reliability. Installing the IS2 device is as simple as inserting a battery into a flashlight. DS Liberator is a reusable tool that requires minimal redress between runs, and does not require any additional explosive components. The tool can be disposed of after activation.

# Gain peace of mind when running perforating strings in high-angle and horizontal wells

## MINIMIZE RISKS ON EVERY RUN

At only 12-inches in length, DS Liberator is the industry's most compact ballistic release tool, creating more space in the tool string for additional perforating systems. The system is reusable until activated, and can be incorporated within any plug-and-perf operation.

You can't predict when your next stuck string will occur, but when it does, DS Liberator ensures you can safely and reliably achieve separation with minimal disruption, lost time or added cost.

## ONE-STOP SHOP CONVENIENCE

DS Liberator is an extension of the DynaStage (DS) family of Factory-Assembled, Performance-Assured perforating systems. The tool is fully compatible with our DS perforating systems, and with our DS MicroSet™ setting tool. Our systems deliver integration of the perforating string for a consistent level of safety, efficiency and reliability. The DS suite of products reduces customer reliance on multiple suppliers. Since all systems can be delivered factory assembled, directly to the well site, reliance on storage and assembly infrastructure also is reduced or eliminated.

## SPECIFICATIONS

Length	12.06 in. / 305 mm
OD	2.75 in. / 70 mm
Weight	17 lb / 8 kg
Max temperature	375 F / 190 C
Max pressure	20,000 psi / 137.9 MPa
Connections	1-5/8 in. 6ACME Pin/Box
Max tension	30,000 lb.

## FEATURED BENEFITS

Release with up to 2,000lbs over pull applied

Release with up to 15,000 psi hydrostatic pressure

No release on hydrostatic pressure alone

Compatible with IS2 TF enabled DS systems

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