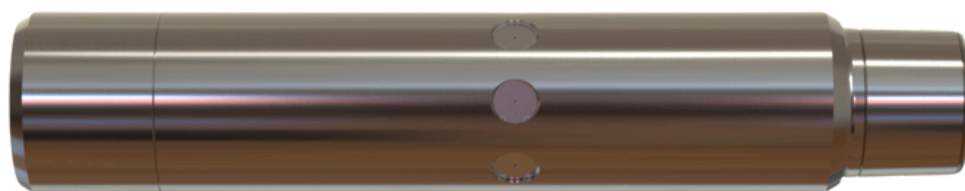


## RAPTOR OC™ MULTISTAGE SYSTEM



### OVERVIEW

Interra Energy's Raptor OC™ (Open-Close) Multistage System uses mechanically shifted sleeves that are opened with our Velocity™ Shifting Tool. Operators have the option of pumping the treatment down the tubing or annulus.

Interra's proprietary Raptor OC Coil Sleeve has a two-way shifting internal sleeve that provides full ID for future wellbore intervention. The positive-lock system also provides verification of sleeve position on surface. The internal sleeve pulls up to open, preventing unintended shifting during cementing and deployment of coiled tubing bottom hole assemblies (BHAs).

The Raptor OC sleeve additionally provides operators future refracture/recompletion and production options throughout the life of the well. Operators can optimize hydrocarbon recovery through manipulation of the internal sleeve to shut off water and gas.

### OPERATION

The Raptor OC Coil Sleeves are installed as part of the string during the casing installation. The tools are spaced within the wellbore based on client requirements to effectively target the reservoir. The system can be run in a cemented or open hole completion.

Interra's Velocity Shifting Tool is then deployed on coiled tubing (or jointed pipe) to open the first stage. The shifting tool is pulled upward to shift the sleeve open, providing reservoir access for stimulation. The Raptor OC sleeve provides the option of immediately closing each sleeve at the completion of the treatment.

If desired, the operator can run the Velocity Shifting Tool in conjunction with the Raptor Annular Frac Packer to provide an additional barrier of isolation below the BHA. The shifting tool is uniquely positioned below the annular frac packer protecting it from proppant during stimulation.

### FEATURES & BENEFITS

- Unlimited stimulation stages.
- Unrestricted full ID wellbore allows for future remediation and restimulation.
- High rate screen out recovery, reducing downtime.
- Shift up to open, preventing unintended shifting.
- Reduces re-opening run times, fluid usage and coil cycling.
- Long reach open and close capability.
- Raptor sleeve positive-lock system provides verification of sleeve position.
- Provides unlimited open-close capability for:
  - Selective stimulation and production for optimized recovery.
  - Zone closure immediately after stimulation to reduce sand inflow and promote fracture healing.
- Does not require a toe port to activate the first stage.
- Fully mechanical shifting, allowing the use of slim shifting BHAs in the event of casing deformation issues.

# RAPTOR OCT™

## MULTISTAGE SYSTEM

### SPECIFICATIONS

Raptor OC						
OD in / mm	Weight		OD		Sleeve ID	
	lb/ft	kg/m	in	mm	in	mm
4.5 / 114.3	11.6	17.26	5.500	139.70	4.000	101.60
	13.5	20.09	5.750	146.05	3.920	99.57
	15.1	22.47	5.750	146.05	3.826	97.18

Raptor Injector						
OD in / mm	Weight		OD		Sleeve ID	
	lb/ft	kg/m	in	mm	in	mm
4.5 / 114.3	11.6	17.26	5.500	139.70	4.000	101.60
	13.5	20.09	5.750	146.05	3.920	99.57