

Downhole Electric Cutting Tool (DECT)

Cut oilfield tubulars with precision control and no external damage

The **Downhole Electric Cutting Tool (DECT)** from Baker Hughes safely severs pipe without using dangerous chemicals or explosives, leaving a machine-shop-quality finish.

The DECT meets industry demands for reliable, high-precision cutting operations. The depth of penetration can be accurately controlled, which prevents damage to external casing strings and supports the use of packer retrieval operations. The remaining pipe can easily be fished using standard techniques that require no subsequent clean-up operations. In addition, it can be transported by helicopter because it contains no hazardous materials.

The DECT can be deployed on mono- or multi-conductor wireline. Depth correlation is achieved using a CCL, or by incorporating a no-go device into the tool string. Operation of the tool is controlled by a surface laptop and control panel. Once the tool is positioned on-depth, anchors are set and the cutting operation begins using the rotating cutting head located at the bottom of the tool. During the operation, cutting speed, cut penetration, and downhole microphone response are

monitored in real time to provide a clear indication of cut success. One main advantage of using the DECT is the speed with which it will cut pipe – most pipe sizes can be cut in approximately 5 minutes. In addition to its speed, using the DECT can save maintenance time due to no separate clean-up and the fact that it can be redressed at the wellsite.

The tool cuts pipe in both tension and compression, and cuts all grades of low and high alloy steels. In addition, multiple cuts are possible in a single run. There are two tool options for greater flexibility: the DECT001 with a cutting range of 3–6 in. 1 in., maximum wall thickness, and the DECT002 with a range of 4 $\frac{1}{2}$ –7 $\frac{5}{8}$ in. 0.875 in., maximum wall thickness. Both cut pipe in all orientations from vertical to horizontal.

Contact your Baker Hughes representative to learn how the DECT can help you improve your downhole cuts, prevent damage, and save cutting time or visit bakerhughes.com.

Applications

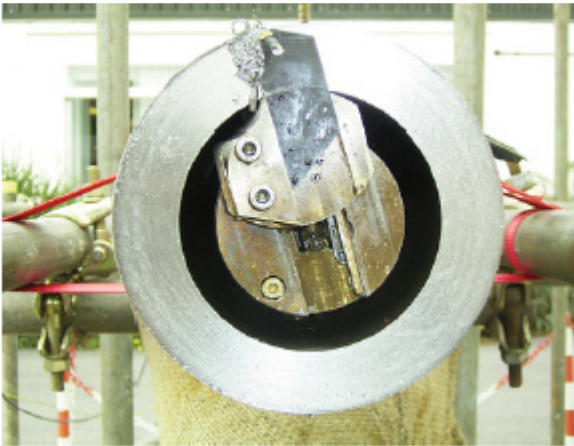
- Conventional or extreme drilling operations
- Pipe cutting in gas, oil, brine, or drilling mud
- Vertical or horizontal pipe sections
- Packer release where precise cuts are required
- Cutting in compression or tension scenarios

Benefits

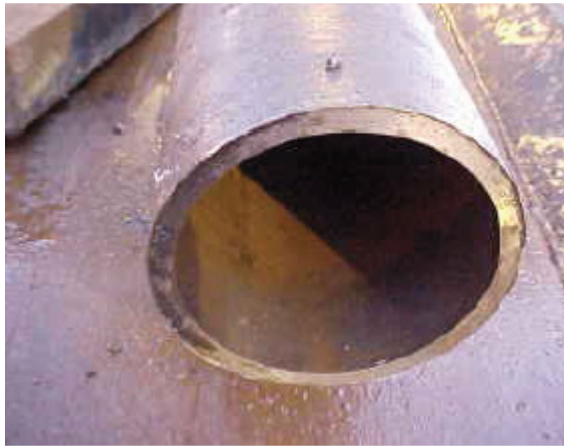
- Improves cutting accuracy and reliability
- Uses no chemicals or explosives for safer operation
- Saves time due to multiple cuts in a single run
- Simplifies subsequent maintenance and clean-up
- Operates in a wide range of conditions

Specifications:

	DECT001		DECT002	
Pipe size (OD)	3½ in. to 6 in. (89 mm to 152 mm)		4½ in. to 7 ⁵ / ₈ in. (114 mm to 194 mm)	
	3½ in. to 5 in. (89 mm to 127 mm)	4 in. to 6 in. (101.2 to 152 mm)	4½ in. to 7 in. (114 mm to 178 mm)	6 in. to 7 ⁵ / ₈ in. (152 to 194 mm)
Maximum wall thickness	0.75 in. (19 mm)	1.0 in. (25.4 mm)	0.875 in. (22.2 mm)	0.875 in. (22.2 mm)
Tool OD	2.75 in. (70 mm)	3.25 in. (82.6 mm)	3.625 in. (92.1)	4.7 in. (119.4 mm)
Cut point (from tool bottom)	3 in. (76 mm)			
Temperature rating	300°F (150°C)			
Pressure rating	15,000 psi (103.4 MPa)		20,000 psi (137.9 MPa)	
Toolstring length	16 ft to 25 ft (4.88 m to 7.62 m)			
Toolstring weight	170 lb to 240 lb (77 kg to 109 kg)			
Tool power requirements	1000 VDC/2A			



Inconel cut (high alloy steel)



L80 13Cr cut (low alloy steel)