

HT Downhole Electric Cutting Tool (DECT200)



DECT is the first intelligent pipe severing tool that meets industry demands for a reliable high precision, non-hazardous pipe cutter. DECT200 has been developed specifically for high temperature environments.

Description

The lower section of the DECT has a rotating head from which a cutting blade is advanced radially with each full rotation until the cut is complete. DECT is deployed into the well on wireline hepta-cable to cutting depth.

A surface power panel is used to communicate with the motorised section of the tool to set the anchors and operate the cutting head. As well as locking the tool in position, the anchors centralise the rotating head in the pipe.

During the cutting operation, tool status is monitored at the surface using a notebook PC to ensure sufficient power is being drawn by the tool without stalling the motor.

Approximate cutting time in 5 in., 19.5 lb/ft drill pipe is seven minutes.

Features

- High temperature version of standard DECT
- No hazardous chemicals or explosives
 - rig radio silence not required
- Helicopter transportable
 - DECT200 is not classed as hazardous goods
- Simple maintenance
 - can be redressed at wellsite
- Multiple cuts during a single wireline run
- Pipe cut cleanly allowing it to be easily retrieved
- Cuts all types of 4–5 1/2 inch drill pipe, casing and tubing
- Other heads and adapters available on request
- Cut pipe in horizontal well sections
 - additional centralisers required



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Specifications		
Temperature rating	400°F	204°C
Pressure rating	15,000 psi	103.4 MPa
Tool OD	3.25 in.	82.6 mm
Tool length	14.52 ft	4.42 m
Tool weight	116 lb	52.2 kg
Power supply	1000V DC 1500 mA	
Sensor measure point (from the bottom of the tool)	3.5 in.	89 mm
Anchoring range	3.48–5.00 in.	88.3–127 mm
Minimum pipe ID	3.48 in.	88.3 mm
Maximum pipe wall thickness	1.0 in.	25.4 mm
Maximum well deviation	Horizontal	Horizontal

Pipe sizes	
Tubing	4 in. 11 lb/ft to 4 in. 13.2 lb/ft
	4.5 in. 12.6 lb/ft to 4.5 in. 15.2 lb/ft
	5 in. 11.5 lb/ft to 5 in. 18 lb/ft
Casing	4.5 in. 9.5 lb/ft to 4.5 in. 15.1 lb/ft
	5 in. 11.5 lb/ft to 5 in. 18 lb/ft
	5.5 in. 14 lb/ft to 5.5 in. 20 lb/ft
Drill pipe	4.5 in. 20 lb/ft to 4.5 in. 22.82 lb/ft
	5 in. 16.25 lb/ft to 5 in. 25.6 lb/ft
	5.5 in. 19.2 lb/ft to 5.5 in. 21.9 lb/ft



Extended cutter blade



Cut section of casing