Drill Collar Severing Tool

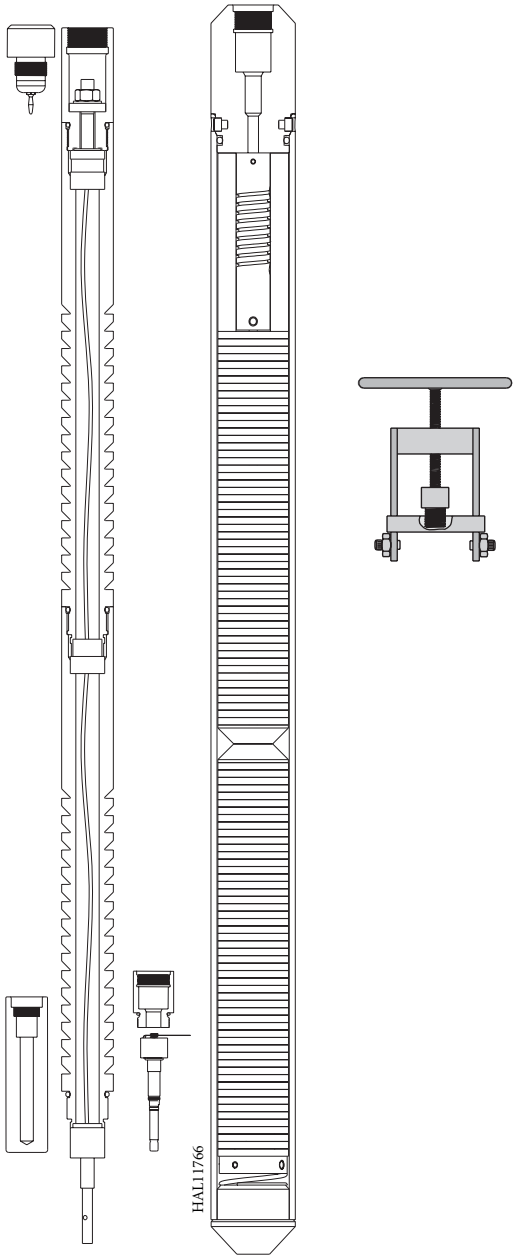
Jet Research Center developed the dual end severing tool for severing thick wall tubulars over 20 years ago. The technique is based on the colliding shock wave principle. Since its inception, the drill collar severing tool has been continuously refined, resulting in the industry-leading severance device for cutting drill collars and drillpipe in a wide variety of stuck pipe scenarios. The latest refinement to the tool has resulted in a standard explosive column length with superior performance. The secret to the success of the tool lies in the precisely-timed detonation of two equal and opposing shock fronts. The colliding shock is matched to a cartridge assembly at the mid-point of the assembly, designed to help focus the energy transmitted to the target. JRC developed the industry standard shock attenuating mandrel for use with drill collar severing tools and patented this technology (US patent 5,117,911). Drill collar severing tools can be used with JRC's proprietary RED® rig environment detonator, offering a high level of protection against stray voltage or inadvertent RF initiation.

Applications

Cutting drill collars and drillpipe in situations involving stuck pipe

Features

- Redesigned in 2002 for maximum performance
- Full range of sizes for virtually any severing requirement
- Suitable for hostile environment up to 400°F, 20,000 psi
- Higher temperature tools available for extreme temperature application
- Shock attenuating mandrel helps protect wireline tools.
- Quick assembly and deployment
- Industry standard connections can be run on any wireline unit
- Air freight classification (1.4s) provides rapid mobilization



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Drill Collar Capability Chart

Tool OD in. (cm)	Temperature and Pressure Rating	Length in.	Designed to Sever up to in.	Explosive Pellet Weight g	Cartridge Assembly Explosive Weight g	Loaded Tool Weight g
1 3/8 (3.5)	HMX - 400°F (204°C) 20,000 psi (138 Mpa) for 1 hour* HNS - 475°F (246°C) 20,000 psi (138 Mpa) for 1 hour*	36	3 1/2 OD DCs	20.7 × 28 pellets	4.8 × 2	589.2
1 3/4 (4.4)	HMX - 400°F (204°C) 20,000 psi (138 Mpa) for 1 hour* HNS - 475°F (246°C) 20,000 psi (138 Mpa) for 1 hour*	36	6 1/2 OD DCs	22.7 × 44 pellets	12.7 × 2	1024.2
2 (5.1)	HMX - 400°F (204°C) 20,000 psi (138 Mpa) for 1 hour* HNS - 475°F (246°C) 20,000 psi (138 Mpa) for 1 hour*	36	8 OD DCs	22.7 × 64 pellets	17.4 × 2	1487.8
2 5/8 (6.7)	HMX - 400°F (204°C) 20,000 psi (138 Mpa) for 1 hour* HNS - 475°F (246°C) 20,000 psi (138 Mpa) for 1 hour*	36	11 OD DCs	21.5 × 110 pellets	28.5 × 2	2422.1

* For high pressure application, in excess of 15,000 psi, JRC recommends the use of high pressure steel rated accessories.