

Drilling Disconnect

Coiled Tubing Products

Features

- Adjustable release pressure
- Simple, robust construction
- Large through bore

Benefits

- Torque and straight pull tolerant design
- Field redressable

The Hunting Drilling Disconnect is a robust, torque through disconnect that is released via a drop ball and hydraulic pressure.

This tool enables the operator to drop a ball and pressure up in order to disengage from a stuck drill bit or BHA. The tool can accommodate straight pull and torque loads without affecting the release mechanism.

The Drilling Disconnect is a cost effective, three-piece design, consisting of a Latch Sub, Piston and Housing. To release, a ball is dropped to seat on the top of the piston. At a predetermined pressure the shear screws will shear allowing the piston to move down and disengage the latch. A minimal over pull is required to release the latch allowing the drill string to be retrieved. The Housing, which is left in hole, has a substantial fishing neck left looking up for retrieval with a die collar or other fishing tools.

The tool can be fitted with a burst disc in the Housing in order to re-establish circulation if required.



Technical information

Tool size	3-3/4"	4-3/4"	6-3/4"
Upper end connection	2-7/8" AOH Tubing Box	3-1/2" API IF Box	4-1/2" API IF Box
Lower end connection	2-7/8" Hydril PH6 WT TBC Pin	3-1/2" API IF Pin	4-1/2" API IF Pin
Material	AISI 4145 (30-36 Rc)	AISI 4145 (30-36 Rc)	AISI 4145 (30-36 Rc)
Tensile yield (lbs)	143,900	178,000 ²	247,500
Torsional yield (lbf-ft) - Torque rating at drilling disconnect castellations	11,100	30,000	86,700
Torsional yield (lbf-ft) - Torque rating of pipe connection	5,225 ¹	12,900 ²	23,700 ³
OD (inches)	3.75"	4.75"	6.75"
ID (inches)	2.30"	2.30" / 2.438"	2.75"
Ball OD (inches)	2.38"	2.38" / 2.50"	2.00" / 3.25" / 3.375"
Make-up length (inch/mm)	36.8" / 935	46.4" / 1179	53.0" / 1346
Burst pressure rating (PSI/Mpa)	11,700 / 80.7	15,000 / 103.4	17,300 / 119.3

1 = 2-7/8" AOH connection calculated torque yield | 2 = 3-1/2" API IF drill pipe connection calculated torque yield | 3 = 4-1/2" API IF drill pipe connection torque yield

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Applied pressure

	Shear screw quantity	Tool OD - Shear Pin Pressure - Psi		
		3.750"	4.750"	6.750"
Applied Pressure Required per number of Shear Screws - Calculated	1	202	164	199
	2	404	328	399
	3	607	494	598
	4	809	659	798
	5	1011	824	997
	6	1213	989	1197
	7	1415	1154	1396
	8	1617	1319	1596
	9	1820	1484	1795
	10	2022	1649	1995
	11	2224	1814	2194
	12	2426	1979	2394

Screw Screws should be installed as evenly spaced as possible to achieve the most accurate disconnect at listed pressure.

Fishing Neck (after disconnect)	3.75" Drilling Disconnect	4.75" Drilling Disconnect	6.75" Drilling Disconnect
OD	3.75"	4.75"	6.75"
ID	3.13"	3.74"	5.31"
Depth (internal area for internal pulling tool)	7.25"	12.88"	14.88"
Depth (external length accepting overshot)	21.50"	25.50"	32.10"