

DUAL CIRCULATING SUB

The Circulating Sub is designed as a dual operational tool. By means of a ball drop, a sleeve can be shifted to give full flow to the annulus while isolating the tool string below the tool. If the tool string below the sub becomes obstructed, the sub is designed so a rupture disc can be burst to give circulation to the annulus. The disc can be preset for 3,000, 5,000, or 6,000 psi.

SPECIFICATIONS

OD IN (MM)	ID IN (MM)	CONNECTIONS BOX & PIN
1.688 (42.9)	0.375 (9.5)	1" AMMT
1 750.(44 5)	0.375 (9.5)	1" AMMT
2 125.(73 0)	0.430 (10.9)	1½" AMMT
3.125 (79.4)	0.563 (14.3)	2 ⅜" PAC



MOTOR HEAD ASSEMBLY

The Motorhead Assembly consists of a dual flapper check valve, hydraulic disconnect, drop ball circulation sub and emergency rupture disc. The tool has a large bore for circulation and is designed for high-vibration/high-torque and long milling operations. The tool is designed with internal and external fishing necks. All shear pins are isolated from treatment and well fluids and are not affected by jarring or bending momentum.

SPECIFICATIONS

AVAILABLE SIZES	MAX. BALL SIZE	MAX. W.P. PSI	YIELD LB	MAX. REQ. TENSILE LB	TORQUE FT/LB
1 ¾"	9/16"	5000	40.000	52.000	450
2 ⅛"	¾"	5000	53.000	67.000	800
2 ¼"	7/8"	5000	73.000	92.000	1000
2 ½"	1"	5000	77.000	96.000	1000
2 7/8"	1"	5000	120.000	144.000	1500
3 ⅛"	1 ⅛"	5000	120.000	144.000	1900
3 ½"	1 ⅛"	5000	180.000	215.000	3000
4 ⅛"	1 ¼"	5000	240.000	288.000	4000

**Note:** Torque is max. recommended operation torque.
All data is based on 120,000 PSI material.
Technical data is meant as guidelines and may change without notice.
Please call us with your request and we will confirm specifications.

Ratings and specifications are undergoing continuous changes due to market demands.

