



MAGNUM SERIES™

INNOVATION REVEALED

The **Magnum Series™** is a multi-configuration plug used to temporarily isolate multi-stage vertical or horizontal completion operations. The base model of the **Magnum Series™** is a ball drop configuration. When combined with three additional on-the-fly inserts (Bridge Plug, Flo-Back, or Flo-Back with Bio-Ball), this tool provides the service company with optimum on-site versatility. Comprised of proprietary composite material and having a low metallic content, the **Magnum Series™** can be quickly and easily milled and circulated back to surface.

Magnum Ball Drop: After setting, the tool remains open for fluid flow and allows wireline services to continue until the ball drop isolation procedure has started. Once the surface-dropped ball is pumped down and seated into the inner funnel top of the tool, the operator can pressure up against the plug to achieve isolation.

Magnum Bridge Plug: The Bridge Plug, or “Kill Plug,” has “top venting” ability, which allows for upper and lower equalizations during drill out.

Magnum Flo-Back: When the pressure below the plug is greater than the pressure above, the one-way check valve will allow the two zones to commingle. The operator can independently treat or test each zone and then remove the flo-back plug(s) in one trip with conventional milling or drilling tools.

Magnum Flo-Back with Bio-Ball: Also built with a one-way check valve, this plug temporarily isolates bottom hole pressure by utilizing an aqueous-soluble Bio-Ball sealer. After the Bio-Ball has dissolved, the check valve will allow bottom hole pressure to flow through the plug.

FEATURES

- Consistent drill times of 30 minutes or less
- Can be converted into a Magnum Series™ Cement Retainer
- Set on wireline, coiled tubing or production tubing using conventional setting tools
- Milled-out using coiled tubing or power swivel
- Millable cast iron slips
- Positive lock-up feature to ensure plugs do not spin while milling
- Utilizes conventional setting tools
- Patented precision shearing device
- Unique pump-down element design requires less fluid and pump pressure to deploy plug horizontally
- Efficient wireline deployment speeds of up to 450 feet per minute
- Custom O.D. plugs are available upon request



Pump-Down Ring Available
for Horizontal Applications



Composite Frac Plugs

CASING SPECS				PLUG SPECS						OPERATING RANGES			
O.D. inch (mm)	Weight Range lb/ft (kg/m)	Min. I.D. inch (mm)	Max. I.D. inch (mm)	O.D. inch (mm)	Ball Drop Min. I.D. inch (mm)	Flo-Back Min. I.D. inch (mm)	Length inch (mm)	Ball Size inch (mm)	Setting Tool	Low Temp/ Low PSI	Low Temp/ High PSI	Mid Temp/ High PSI	High Temp/ High PSI
4 (101.6)	9.50-11.00 (14.1-16.4)	3.48 (88.4)	3.55 (90.1)	3.19 (81.0)	1.25 (31.8)	0.50 (12.7)	26.0 (660.4)	1.75 (44.5)	Magnum "A-1", Baker #10 or Owen	250°F (121°C) 8K psi (55.2 Mpa)	250°F (121°C) 10K psi (68.9 Mpa)	300°F (149°C) 10K psi (68.9 Mpa)	375°F (191°C) 10K psi (68.9 Mpa)
4-1/2 (114.3)	9.50-13.50 (14.1-20.1)	3.92 (99.6)	4.09 (103.9)	3.57 (90.7)									
5 (127.0)	15.10-17.10 (22.5-25.4)	3.74 (95.0)	3.83 (97.2)	3.44 (87.4)									
	23.20 (34.5)	4.04 (102.7)	4.04 (102.7)	3.57 (90.7)									
	20.30-21.40 (30.2-31.8)	4.13 (104.8)	4.18 (106.3)	3.75 (95.3)									
5-1/2 (139.7)	11.50-18.00 (17.1-26.8)	4.28 (108.6)	4.56 (115.8)	3.92 (99.6)	1.80 (45.7)	0.63 (16.0)	28.0 (711.2)	2.13 (54.0)	Magnum "A-1", Baker #20 or Owen	Composite/ NBR Elastomer	Composite/ NBR Elastomer	Composite/ NBR Elastomer	Composite/ FKM Elastomer
	14.00 (20.8)	5.01 (127.3)	5.01 (127.3)	4.60 (116.8)									
	15.50-23.00 (23.1-34.2)	4.67 (118.6)	4.95 (125.7)	4.30 (109.2)									
6-5/8 (168.3)	23.00-28.40 (34.2-42.3)	4.44 (112.8)	4.67 (118.6)	4.13 (104.8)	2.50 (63.5)	1.0 (25.4)	31.5 (800.1)	2.75 (70.0)	Magnum "A-1", Baker #20 or Owen	Composite/ NBR Elastomer	Composite/ NBR Elastomer	Composite/ NBR Elastomer	Composite/ HNBR Elastomer
	24.00-32.00 (35.7-47.6)	5.68 (144.1)	5.92 (150.4)	5.38 (136.5)									
7 (177.8)	17.00-23.00 (25.3-34.2)	6.37 (161.7)	6.54 (166.1)	5.95 (151.1)	2.13 (54.0)	2.13 (54.0)	36.0 (914.4)	2.50 (63.5)	Magnum "A-1", Baker #20 or Owen	250°F (121°C) 5K psi (34.5 Mpa)	300°F (149°C) 5K psi (34.5 Mpa)	350°F (177°C) 5K psi (34.5 Mpa)	Composite/ HNBR Elastomer
	23.00-35.00 (34.2-52.1)	6.00 (152.5)	6.37 (161.7)	5.75 (146.1)									
7-5/8 (193.7)	24.00-33.70 (35.7-50.2)	6.78 (171.8)	7.03 (178.4)	6.25 (158.8)	2.50 (63.5)	2.5 (63.5)	40.0 (1016.0)	3.0 (76.2)	Magnum "A-1", Baker #20 or Owen	Composite/ NBR Elastomer	Composite/ NBR Elastomer	Composite/ HNBR Elastomer	Composite/ HNBR Elastomer
8-5/8 (219.1)	28.00-40.00 (41.7-59.5)	7.73 (196.2)	8.02 (203.7)	7.38 (187.3)									
9-5/8 (244.5)	32.30-40.00 (48.1-59.5)	8.84 (224.4)	9.00 (228.6)	8.38 (212.7)	2.50 (63.5)	2.5 (63.5)	40.0 (1016.0)	3.0 (76.2)	Magnum "A-1", Baker #20 or Owen	Composite/ NBR Elastomer	Composite/ NBR Elastomer	Composite/ HNBR Elastomer	Composite/ HNBR Elastomer
	43.50-53.50 (64.7-79.6)	8.54 (216.8)	8.76 (222.4)	8.13 (206.4)									

Casing Specs are according to API Tubing/Casing Dimension Chart Information.

OPTIONAL PUMP DOWN KIT SIZES

PUMP DOWN RING OD in. (mm)	DUROMETER	MATERIAL
3.00 (76.2)	70	Nitrile
3.25 (82.6)		
3.75 (95.3)		
4.00 (101.6)		
4.25 (108.0)		
4.40 (111.8)		
4.50 (114.3)		
4.90 (124.5)		

BRIDGE PLUG CONVERSION KIT AVAILABLE



For more information, and to find a representative near you, visit www.magnumoiltools.com.

Copyright © 2018 Magnum Oil Tools International, Ltd. All Rights Reserved.

Rev - July 3, 2018 11:35 AM

This presentation contains proprietary and/or confidential information that is the exclusive and sole property of Magnum Oil Tools International, Ltd. The presentation also includes information that contains intellectual property rights owned by and/or assigned to Magnum Oil Tools International, Ltd. The information from the presentation shall not be disclosed to any third party without express written consent from Magnum Oil Tools International, Ltd. prior to disclosure.