

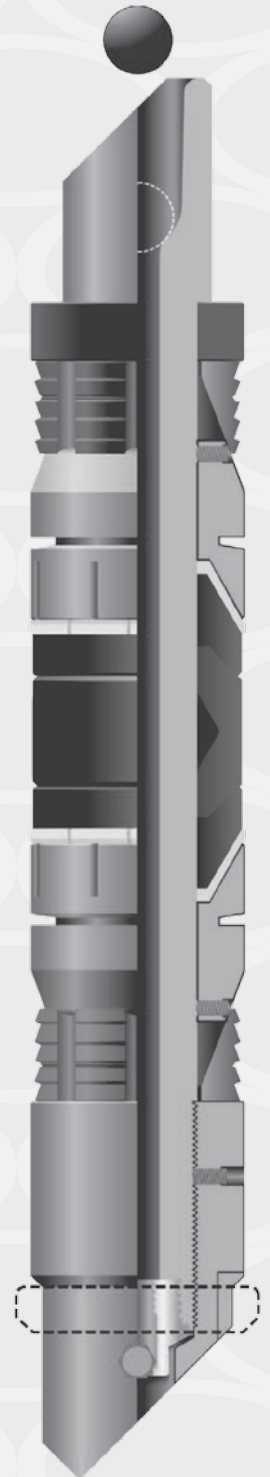


## Ball Drop Composite Frac Plug

The MOT **Ball Drop Composite Frac Plug** uses a ball drop procedure to isolate hydrocarbon formations for multi-stage frac operations. Mostly used for horizontal operations, the slim lightweight design makes deployment fast and efficient in vertical or horizontal wells. After setting, the Rapid Mill™ 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 in to the inner funnel top of the tool, the operator can pressure up against the plug to achieve isolation. Comprised of proprietary composite material and having a low metallic content, the Rapid Mill™ can be quickly and easily milled and circulated back to surface using conventional milling, drilling with a rig and tubing, or with coiled tubing.

### Features

- ▶ No tungsten carbide buttons or aluminum!
- ▶ Composite mandrel aids in fast drill-outs and time saved.
- ▶ Consistent drill times of 30 minutes or less
- ▶ Can be deployed on wireline, coiled tubing, tubing or drill pipe
- ▶ Designed for horizontal or vertical wells
- ▶ Dependable cast iron slips secure plug in place
- ▶ Unique pump down element design requires less fluid and pump pressure to deploy plug horizontally
- ▶ Setting is done via a universal setting sleeve and adapter.
- ▶ Positive lock-up feature to ensure lockup of multiple plugs in a single wellbore
- ▶ Custom O.D. available upon request
- ▶ Patent Pending



**Pump Down Wipers  
Available for  
Horizontal Applications**





## Ball Drop Composite Frac Plug

CASING SPECS				PLUG SPECS					OPERATING RANGES	
O.D. inch (mm)	WEIGHT RANGE lb/ft (kg/m)	min ID inch (mm)	MAX ID inch (mm)	O.D. inch (mm)	I.D. inch (mm)	LENGTH inch (mm)	BALL SIZE inch (mm)	SETTING TOOL	LOW TEMP/ LOW PSI	LOW TEMP HIGH PSI
4 (101.6)	9.50-11.00 (14.1-16.4)	3.476 (88.3)	3.548 (90.1)	3.188 (81.0)	0.630 (16.0)	24.0 (609.6)	1.5 (38.1)	Magnum "A-1", Baker #10 or Owen	250°F 8K PSI  (121°C) (55.2MPa)	250°F 10K PSI (121°C) (68.9MPa) Yellow Composite/ HSN Elastomer
4-1/2 (114.3)	9.50-13.5 (14.1-20.1)	3.920 (99.6)	4.090 (103.9)	3.570 (90.7)						
	15.10-17.10 (22.5-25.4)	3.754 (95.4)	3.826 (97.2)	3.440 (87.4)						
5 (127.0)	11.50-18.00 (17.1-26.8)	4.276 (108.6)	4.560 (115.8)	3.920 (99.6)	1.130 (28.7)		2.125 (54.0)	Magnum "A-1", Baker #20 or Owen	Green Composite/ HSN Elastomer	
5-1/2 (139.7)	14.00 (20.8)	5.012 (127.3)	5.012 (127.3)	4.600 (116.8)						
	15.50-23.00 (23.1-34.2)	4.670 (118.6)	4.95 (125.7)	4.300 (109.2)						

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

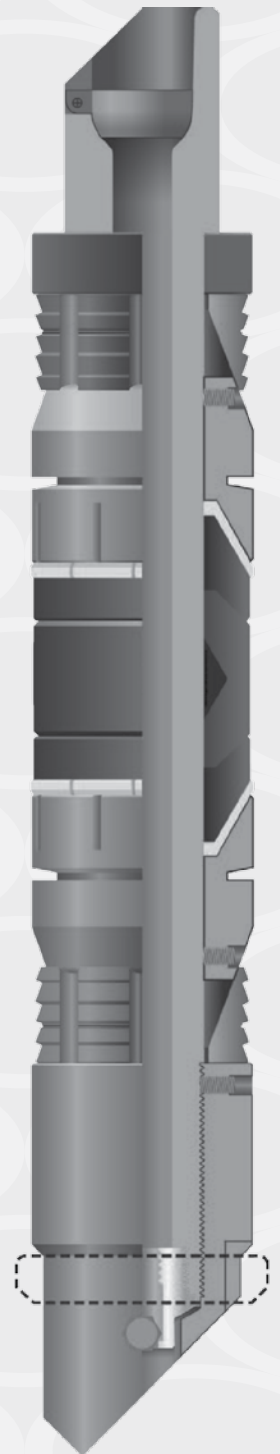


## Flo-Back Flapper Composite Frac Plug

The **MOT Flo-Back Flapper Composite Frac Plug** is used to isolate hydrocarbon formations for multi-stage frac operations. The slim lightweight design makes deployment fast and efficient in vertical or horizontal wells. Once the Rapid Mill™ Flo-Back Flapper is set, the flapper closes, allowing frac or perf operations above the tool to commence. After operations are complete, topside pressure is released and flow is allowed through the one-way opening. Comprised of proprietary composite material and having a low metallic content, the Rapid Mill™ can be quickly and easily milled and circulated back to surface using conventional milling, drilling with a rig and tubing, or with coiled tubing.

### Features

- ▶ No tungsten carbide buttons, and no aluminum!
- ▶ Consistent drill times of 30 minutes or less
- ▶ Can be deployed on wireline, coiled tubing, tubing or drill pipe
- ▶ Flapper spring mechanism is built for horizontal or vertical wells
- ▶ Dependable cast iron slips secure plug in place
- ▶ Unique pump down element design requires less fluid and pump pressure to deploy plug horizontally
- ▶ Setting is done via a universal setting sleeve and adapter.
- ▶ Positive lock-up feature to ensure lockup of multiple plugs in a single wellbore
- ▶ Custom O.D. available upon request
- ▶ Patent Pending



**Pump Down Wipers  
Available for  
Horizontal Applications**





## Flo-Back Flapper Composite Frac Plug

CASING SPECS				PLUG SPECS					OPERATING RANGES	
O.D. inch (mm)	WEIGHT RANGE lb/ft (kg/m)	min ID inch (mm)	MAX ID inch (mm)	O.D. inch (mm)	I.D. inch (mm)	LENGTH inch (mm)	BALL SIZE inch (mm)	SETTING TOOL	LOW TEMP/ LOW PSI	LOW TEMP HIGH PSI
4 (101.6)	9.50-11.00 (14.1-16.4)	3.476 (88.3)	3.548 (90.1)	3.188 (81.0)	0.630 (16.0)	24.0 (609.6)	1.5 (38.1)	Magnum "A-1", Baker #10 or Owen	250°F 8K PSI  (121°C) (55.2MPa)	250°F 10K PSI (121°C) (68.9MPa) Yellow Composite/ HSN Elastomer
4-1/2 (114.3)	9.50-13.5 (14.1-20.1)	3.920 (99.6)	4.090 (103.9)	3.570 (90.7)						
5 (127.0)	15.10-17.10 (22.5-25.4)	3.754 (95.4)	3.826 (97.2)	3.440 (87.4)						
5 (127.0)	11.50-18.00 (17.1-26.8)	4.276 (108.6)	4.560 (115.8)	3.920 (99.6)	1.130 (28.7)	24.0 (609.6)	2.125 (54.0)	Magnum "A-1", Baker #20 or Owen	Green Composite/ HSN Elastomer	250°F 10K PSI (121°C) (68.9MPa) Yellow Composite/ HSN Elastomer
5-1/2 (139.7)	14.00 (20.8)	5.012 (127.3)	5.012 (127.3)	4.600 (116.8)						
5-1/2 (139.7)	15.50-23.00 (23.1-34.2)	4.670 (118.6)	4.95 (125.7)	4.300 (109.2)						

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



## Pump-Down Plug – Multi-Stage Operations

The MOT **Pump-Down Plugs** are utilized mostly for multi-stage horizontal completions. Although all Composite Plugs can be equipped with Pump Down Wipers, the MOT Pump-Down Plug enables the wireline, guns, CCL, plug and other BHA's to be pumped to a desired depth. Once the depth is reached, Pump Down Plugs are then set like a conventional bridge plug. Comprised of proprietary composite material and having a low metallic content, the MOT Pump-Down Plug can be quickly and easily milled and circulated back to surface using conventional milling, drilling with a rig and tubing, or with coiled tubing.

**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 in to the inner funnel top of the tool, the operator can pressure up against the plug to achieve isolation.

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

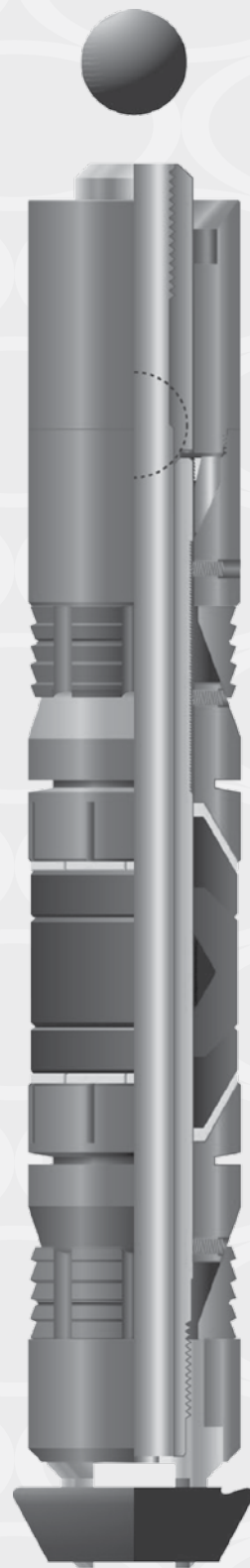
**Flo-Back:** When the pressure below the plug is greater than the pressure above, the one-way check valve will allow the two zones to commingle. The operator can independently treat or test each zone and then remove the flo-back plug(s) in one trip with conventional milling or drilling tools.

**Flo-Back with Bio-Ball:** Also built with a one-way check valve, this plug temporarily prevents sand from invading the upper zone and eliminates cross-flow problems by utilizing an Aqueous-Soluble Bio-Ball sealer. After the Bio-Ball has dissolved by

pressure, temperature, or fluid, the check valve will allow the two zones to commingle. The operator can then independently treat or test each zone and remove the flo-back plug in an under-balanced environment in one trip.

### Features

- ▶ Consistent drill times of 30 minutes or less
- ▶ Can be pumped to depth at 5 to 8 barrels/min
- ▶ Designed to be set in horizontal wells on wireline
- ▶ Millable cast iron slips
- ▶ Utilizes conventional setting tools
- ▶ Mill or drill multiple plugs in a single trip
- ▶ Low temp and high temp materials conducive to a wide range of environments
- ▶ Utilize conventional milling or drilling tools for plug removal
- ▶ Positive lock-up feature to ensure plugs do not spin while milling
- ▶ Patented precision shearing device
- ▶ High differential pressure rating
- ▶ Custom Plug O.D. available upon request
- ▶ Patent #6796376





## Pump-Down Plug - Multi-Stage Operations

CASING SPECS				PLUG SPECS					OPERATING RANGES			
O.D. inch (mm)	WEIGHT RANGE lb/ft (kg/m)	MIN ID inch (mm)	MAX ID inch (mm)	O.D. inch (mm)	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
3-1/2 (88.9)	7.7 (11.5)	3.068 (77.9)	3.068 (77.9)	2.825 (71.8)	0.750 (19.1)	17.50 (444.5)	1.0 (25.4)	Magnum "A-1", Baker #5 or Owen	Not Yet Available			
	9.30-10.20 (13.8-15.2)	2.922 (74.2)	2.992 (76.0)	2.725 (69.2)								
	12.95 (19.3)	2.75 (69.9)	2.75 (69.9)	2.500 (63.5)								
4 (101.6)	9.50-11.00 (14.1-16.4)	3.476 (88.3)	3.548 (90.1)	3.188 (81.0)	1.360 (34.5)	24.0 (609.6)	1.75 (44.5)	Magnum "A-1", Baker #10 or Owen	250°F 8K PSI  (121°C) (55.2MPa)	250°F 10K PSI  (121°C) (68.9MPa)	300°F 10K PSI  (149°C) (68.9MPa)	400°F 10K PSI  (204°C) / (68.9MPa)
4-1/2 (114.3)	9.50-13.5 (14.1-20.1)	3.920 (99.6)	4.090 (103.9)	3.570 (90.7)								
	15.10-17.10 (22.5-25.4)	3.754 (95.4)	3.826 (97.2)	3.440 (87.4)								
	18.80-20.00 (28.0-29.8)	3.640 (92.5)	3.640 (92.5)	3.375 (85.7)								
5 (127.0)	11.50-18.00 (17.1-26.8)	4.276 (108.6)	4.560 (115.8)	3.920 (99.6)								
5-1/2 (139.7)	14.00 (20.8)	5.012 (127.3)	5.012 (127.3)	4.600 (116.8)	1.900 (48.3)	2.125 (54.0)		Magnum "A-1", Baker #20 or Owen	Green Composite/ HSN Elastomer	Yellow Composite/ HSN Elastomer	Blue Composite/ HSN Elastomer	Blue Composite/ Viton Elastomer
	15.50-23.00 (23.1-34.2)	4.67 (118.6)	4.95 (125.7)	4.300 (109.2)								
7 (177.8)	17.00-20.00 (25.3-29.8)	6.456 (164.0)	6.538 (166.1)	5.950 (151.1)	2.500 (63.5)							
	23.00-32.00 (34.2-47.6)	6.094 (154.8)	6.366 (161.7)	5.750 (146.1)								
7-5/8 (193.7)	24.00-33.70 (35.7-50.2)	6.765 (171.8)	7.025 (178.4)	6.250 (158.8)								

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





## Low Temp/Low Pressure Plug

The MOT **Low Temp/Low Pressure** composite frac plug is a multi-configuration plug used to temporarily isolate multi-stage vertical or horizontal completion operations. The base model of the plug 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 Snub Nose™ can be quickly and easily milled and circulated back to surface.

**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 in to the inner funnel top of the tool, the operator can pressure up against the plug to achieve isolation.

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

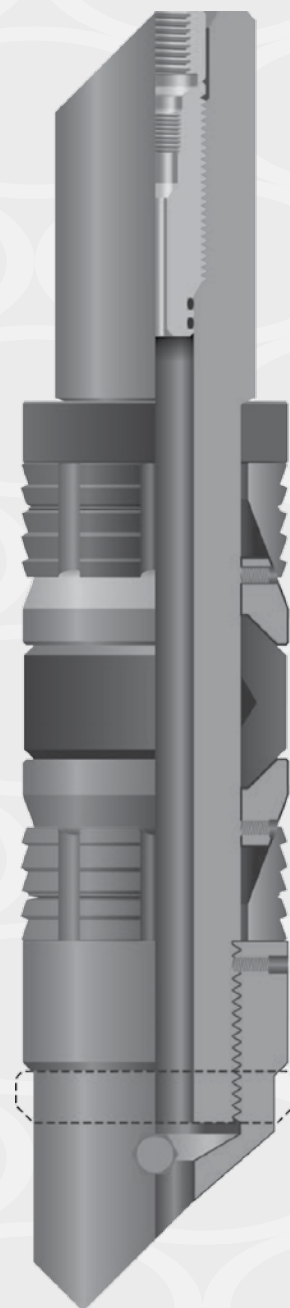
**Flo-Back:** When the pressure below the plug is greater than the pressure above, the one-way check valve will allow the two zones to commingle. The operator can independently treat or test each zone and then remove the flo-back plug(s) in one trip with conventional milling or drilling tools.

**Flo-Back with Bio-Ball:** Also built with a one-way check valve, this plug temporarily prevents sand from invading the upper zone and eliminates cross-flow problems by utilizing an Aqueous-Soluble Bio-Ball sealer. After the Bio-Ball has dissolved by pressure, temperature, or fluid, the check

valve will allow the two zones to commingle. The operator can then independently treat or test each zone and remove the flo-back plug in an under-balanced environment in one trip.

### Features

- ▶ No tungsten carbide buttons or aluminum!
- ▶ Composite mandrel aids in fast drill-outs and time saved.
- ▶ Consistent drill times of 15 minutes or less
- ▶ Can be deployed on wireline, coiled tubing, tubing or drill pipe
- ▶ Designed for horizontal or vertical wells
- ▶ Dependable patented cast iron slips secure plug in place
- ▶ Unique pump down element design requires less fluid and pump pressure to deploy plug horizontally
- ▶ Setting is done via a universal setting sleeve and adapter.
- ▶ Positive lock-up feature to ensure lockup of multiple plugs in a single wellbore
- ▶ Custom O.D. available upon request
- ▶ Patent Pending



**Pump Down Wipers  
Available for  
Horizontal Applications**



## Low Temp/Low Pressure Plug

CASING SPECS				PLUG SPECS						OPERATING RANGES	
O.D. inch (mm)	WEIGHT RANGE lb/ft (kg/m)	MIN ID inch (mm)	MAX ID inch (mm)	O.D. inch (mm)	BALL DROP MIN I.D. inch (mm)	FLOW BACK MIN I.D. inch (mm)	LENGTH inch (mm)	BALL SIZE inch (mm)	SETTING TOOL		
4 (101.6)	9.50-11.00 (14.1-16.4)	3.476 (88.3)	3.548 (90.1)	3.188 (81.0)	0.500 (12.7)	0.280 (7.1)	20.0 (508.0)	1.5 (38.1)	Magnum "A-1", Baker #10 or Owen	250°F 6K PSI (121°C) (41.4MPa)  Green Composite/ HSN Elastomer	
4-1/2 (114.3)	9.50-13.5 (14.1-20.1)	3.920 (99.6)	4.090 (103.9)	3.570 (90.7)							
	15.10-17.10 (22.5-25.4)	3.754 (95.4)	3.826 (97.2)	3.440 (87.4)							
5 (127.0)	11.50-18.00 (17.1-26.8)	4.276 (108.6)	4.560 (115.8)	3.920 (99.6)			21.0 (533.4)	1.5 (38.1)	Magnum "A-1", Baker #10, #20 or Owen		
5-1/2 (139.7)	14.00 (20.8)	5.012 (127.3)	5.012 (127.3)	4.600 (116.8)							
	15.50-23.00 (23.1-34.2)	4.670 (118.6)	4.95 (125.7)	4.300 (109.2)							

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





## Slim Plug with Wider Range Capabilities

The MOT **Slim Plug** long range composite frac plug enables operators to isolate wellbores in challenging applications. Because of the tool's slim outer diameter and expansive reach, The slip plug can pass through damaged casing, restricted internal casing diameters, or existing casing patches in the well bore. This tool can be set on wireline or coiled tubing. Comprised of proprietary composite materials, The Slim Plug also features dependable cast iron slips, superior element sealing package, and a rigid core to ensure the plug passes through the toughest of conditions. This plug is available in all the following configurations: Ball Drop, Bridge Plug, Flo-Back, and Flow-Back with Bio-Ball.

**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 in to the inner funnel top of the tool, the operator can pressure up against the plug to achieve isolation.

**Bridge:** The Bridge Plug, or "Kill Plug", has a "top venting" ability, which allows for upper and lower equalization during drill out.

**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.

**Flo-Back with Bio-Ball:** Also built with a one-way check valve, this plug temporarily prevents sand from invading the upper zone and eliminates cross-flow problems by

utilizing an Aqueous-Soluble Bio-Ball sealer. After the Bio-Ball has dissolved by pressure, temperature, or fluid, the check valve will allow the two zones to commingle. The operator can then independently treat or test each zone and remove the flo-back plug in an under-balanced environment in one trip.

### Features

- ▶ No tungsten carbide buttons!
- ▶ Can be deployed on wireline or coiled tubing
- ▶ Designed for horizontal or vertical wells
- ▶ Unique pump down element design requires less fluid and pump pressure to deploy plug horizontally
- ▶ Dependable cast iron slips secure plug in place
- ▶ Setting is done via a universal setting sleeve and adapter.
- ▶ Positive lock-up feature to ensure lockup of multiple plugs in a single wellbore
- ▶ Custom O.D. available upon request
- ▶ Patent Pending



**Pump Down Wipers  
Available for  
Horizontal Applications**



## Slim Plug with Wider Range Capabilities

CASING SPECS			PLUG SPECS				OPERATING RANGES				
O.D. inch (mm)	MIN ID inch (mm)	MAX ID inch (mm)	O.D. inch (mm)	BALL DROP 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
4-1/2 (114.3)	3.500 (88.9)	4.276 (108.6)	3.250 (82.6)	0.500 (12.7)	32.0 (812.8)	1.5 (38.1)	Owen 2-1/8" or 3-1/4" Multi-Stage	250°F 8K PSI  (121°C) (55.2MPa)	250°F 10K PSI  (121°C) (68.9MPa)	300°F 10K PSI  (149°C) (68.9MPa)	400°F 10K PSI  (204°C) (68.9MPa)
5-1/2 (139.7)	4.376 (111.1)	4.950 (125.7)	4.04 (103.1)	1.500 (38.1)	29.4 (746.8)	2.125 (54.0)		Green Composite/ HSN Elastomer	Yellow Composite/ HSN Elastomer	Blue Composite/ HSN Elastomer	Blue Composite/ Viton Elastomer

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