



PRESS RELEASE – FEBRUARY, 2021

DSI PBL® BOOSTER Bypass Tool

DSI launches PBL® BOOSTER Bypass Tool

PBL BOOSTER Bypass Tool is DSI's new option for splitting the flow during drilling, completion and workover operations.

By splitting the flow, the operator will achieve more effective continuous hole cleaning and well-bore management while retaining the ability to manage and reduce the ECD and maintain allowable flow rates through today's sophisticated down-hole tools. This innovative tool uses some unique features unmatched by any other circulation tool in the market.

Features and Benefits:

- Multiple activation capabilities
- Single-ball activation / de-activation cycles using proven ball-drop technology enables the operator to precisely determine when the tool is closed / open
- Standard interchangeable jetting nozzles are directed up-hole allowing for increased fluid velocity minimizing well-bore erosion and maximizing hole cleaning and motor performance
- Fluted main body has wear reduction coating applied in exterior contact areas to allow for increased well-bore interaction reducing vibration
- Completely mechanical; no electronics or hydraulics means operator ease-of-use and operating consistency.
- Integrated float minimizes tool length while maintaining well control
- Ability to activate or de-activate at any angle
- High-pressure / high-temperature capabilities
- Ten full ball cycles as standard; extended cycle tools available on request
- Customized hydraulics program to size tool nozzles for optimal performance

PBL BOOSTER Bypass Tool having a single-ball activation / de-activation cycle mechanism, permits a pre-calculated amount of drilling or completion fluid to pass through the Booster Tool and on the BHA below while the remaining fluid is diverted out of the Booster Tool ports. The ability to split the flow gives the operator more options on available hydraulics and hole cleaning parameters.

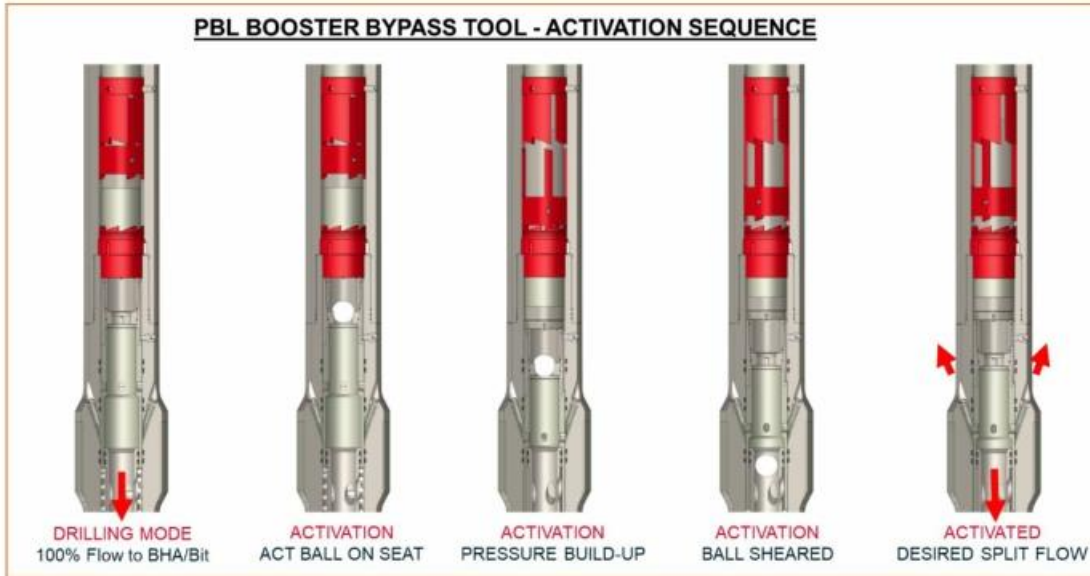
The proven PBL ball-drop technology enables operators to precisely determine when the tool is in closed / opened position and an integrated float minimizes tool length while maintaining well control. The tool can be cycled (opened and closed) 10 times.

Field interchangeable jetting nozzles are directed up-hole allowing for increased annular fluid velocity while minimizing well-bore erosion and maximizing hole cleaning. The fluted main body has a wear reduction coating applied in the exterior contact areas to allow for increased durability, well-bore interaction and reduced vibration. All of this contributes to higher tool reliability.

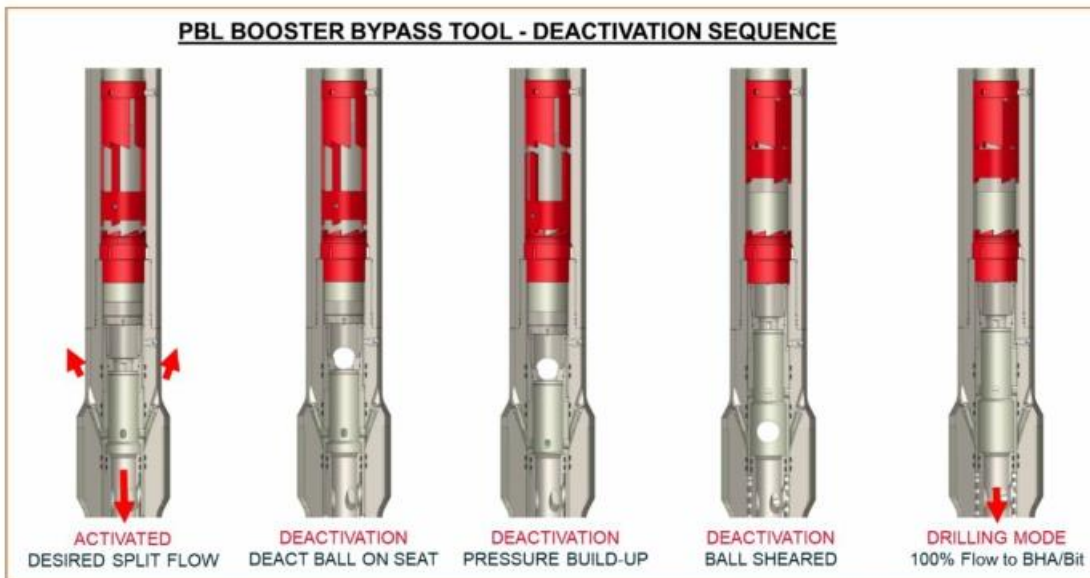




At the time split flow is required, a single ball is inserted and pumped down to the Booster Tool. After the ball lands on the seat, the blocked passage will allow the pressure to build and cause the sleeve to shift downwards. When the ball shear pressure is reached, the ball will shear through the seat and the ball drops into the ball catcher below. The spring-loaded sleeve travels upwards and remains in the open (split) position. In this position the ports in the sleeve are now aligned with the main body orifice allowing for the flow to split.



To close the Booster Tool, another single ball is pumped down. Pressuring up on the sleeve shifts it downwards until the ball shear pressure is reached and the ball shears through the seat. The spring-loaded sleeve travels upwards and remains in the closed position allowing for all of the flow to exit the bit.



Splitting the flow allows a much higher flow rate above the MWD-LWD and DD tools in the string. This enhances hole cleaning without altering drilling efficiency (at the bit).

Highlights of the Booster Tool:

- Flow in the tool remains in the optimum range
- Drilling parameters remain optimal at the bit



**BYPASS SYSTEMS
BY DSI**



- Proper ECD management allows optimized drilling operations in tight operational margin scenarios such as in deep water environment
- Better steerability
- Optimum motor bit and RSS performance
- Elimination of tool damage due to erosion and vibration during clean up

Technical Specifications:

Tool Size	5	6
Maximum O.D.	5.875	8.375
Minimum I.D.	1.400	1.800
Standard rig ends	NC 38	NC 50
Fishing neck I.D.	5.000	6.750
Number of stabilization pads	4	3
Number of nozzles	4	3
Nozzle size range	7/32	7/32 – 16/32
Activation / De-Activation ball size	1.5	2
Number of cycles	10	10
Flow area through tool (in2)	1.67	2.92
TFA through ports when tool is activated (min. in2)	0.148	0.111
TFA through ports when tool is activated (max. in2)	0.784	0.589
Weight (lbs)	460	1,198
Shoulder to shoulder length	120	150
Make-Up Torque (ft-lbs)	11,500	34,840

¹ Minimum Tool I.D. could vary if Activation Ball or Dart is used



Contact us:

For further details, please feel free to contact us on enquiries@dsi-pbl.com or technical.support@dsi-pbl.com