

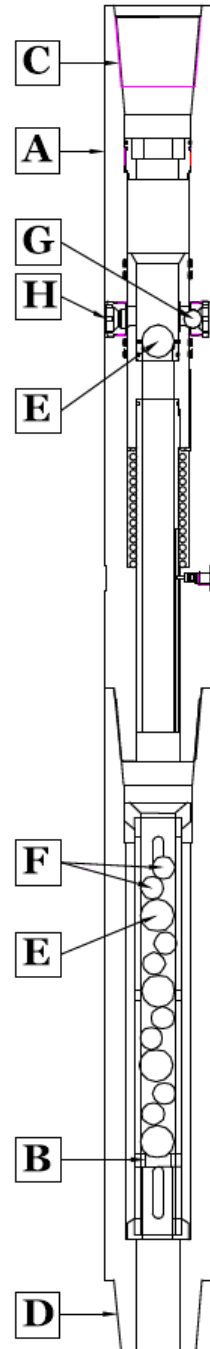


9 1/2" O.D.

**9 1/2" PBL BALL LOCK BYPASS SYSTEM  
TECHNICAL SHEET**

SERIAL #  
 A - TOOL O.D.  
 B - TOOL I.D.  
 FLOW AREA THROUGH TOOL (E)  
 C - BOX CONNECTION  
 D - PIN CONNECTION  
 E - ACTIVATION BALL/# TO ACTIVATE  
 DIAMETER / MATERIAL  
 SHEARING PRESSURE  
 F - DEACTIVATION BALL/# TO DEACT.  
 DIAMETER / MATERIAL  
 G - LOCKING BALL/# TO LOCK OPEN  
 DIAMETER / MATERIAL  
 SHEARING PRESSURE  
 H - SIZE OF PORT  
 NUMBER OF PORTS  
 TFA WHEN TOOL IS OPEN  
 MAX. FLOW CLOSED  
 MAX. / MIN. FLOW OPEN (ACTIVATED)  
 NUMBER OF CYCLES  
 OVERALL LENGTH  
 WEIGHT  
 TENSILE STRENGTH MAIN BODY  
 TENSILE STRENGTH CONNECTION  
 TORSIONAL STRENGTH MAIN BODY  
 TORSIONAL STRENGTH CONNECTION  
 MAKE UP TORQUE

	9.50"
	2.27"
	4.6 SQ.IN.
	7 5/8 REG
	7 5/8 REG
	1
	2 1/2" / Ertalyte
	2
	1 3/4" / Steel
	1
	1 3/8" / Ertalyte
	1.35"
	2
	2.863 SQ.IN
	1500 GPM
	2000 GPM / 200 GPM
	5
	8 - 10 FT
	1,800 LBS
	6,000,000 LBS
	1,718,834 LBS
	565,000 FT/LBS
	155,759 FT/LBS
	81,290 FT/LBS



NOTES  
 \* **NO THRU DRIFT WHEN BALLS ARE IN TOOL**  
 \* Tool is rated to operate in temp up to 420 degrees F  
 \* 2.27" ID to allow 2.25" Reamer Ball to pass through before activation  
 \* Standard ID = 1.50"