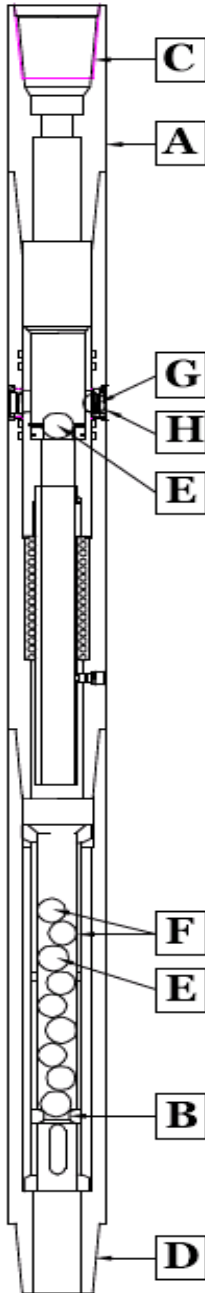




3 1/2" O.D.

**3 1/2" PBL BALL LOCK BYPASS SYSTEM
TECHNICAL SHEET**



- SERIAL #
- A - TOOL O.D.
- B - TOOL I.D.
- FLOW AREA THROUGH TOOL
- 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
- NUMBER OF CYCLES
- OVERALL LENGTH
- WEIGHT
- TENSILE STRENGTH
- TORSIONAL STRENGTH
- MAKE UP TORQUE

SERIAL #	
A - TOOL O.D.	3.50"
B - TOOL I.D.	1.00"
FLOW AREA THROUGH TOOL	1.07 SQ.IN.
C - BOX CONNECTION	2 3/8 IF
D - PIN CONNECTION	2 3/8 IF
E - ACTIVATION BALL/# TO ACTIVATE	1
DIAMETER	1 1/4"
MATERIAL	Torlon
SHEARING PRESSURE	
F - DEACTIVATION BALL/# TO DEACT.	2
DIAMETER	1 1/16"
MATERIAL	Steel
G - LOCKING BALL/# TO LOCK OPEN	1
DIAMETER	0.70"
MATERIAL	Torlon
SHEARING PRESSURE	
H - SIZE OF PORT	0.68"
NUMBER OF PORTS	2
TFA WHEN TOOL IS OPEN	0.72 SQ.IN.
NUMBER OF CYCLES	3
OVERALL LENGTH	5 - 6 FT
WEIGHT	132 LBS
TENSILE STRENGTH	490,000 LBS
TORSIONAL STRENGTH	19,000 FT/LBS
MAKE UP TORQUE	3,700 FT/LBS

NOTES
 * **NO THRU DRIFT WHEN BALLS ARE IN TOOL**
 * Tool is rated to operate in temp up to 420 degrees F

