

TOOL SIZE (INCHES)	2 7/8	3 1/8	3 1/2	4 3/4	6 1/4	6 1/2	6 3/4	8	8 1/4	9 1/2
NUMBER OF PORTS	2	2	2	2	2	2	2	2	2	2
DRIFT (WHEN NO BALLS ARE IN TOOL) (1)	0.562	0.562	1.00	1.25	1.27 (1.50)	1.27 (1.50)	1.27 (1.50)	1.50 (2.27)	1.50 (2.27)	1.50 (2.27)
DRIFT (WHEN BALLS ARE IN TOOL)	No drift	No Drift	No Drift	No Drift	No Drift	No Drift	No Drift	No Drift	No Drift	No Drift
MAXIMUM O.D. (")	2.88	3.125	3.5	4.75	6.25	6.5	6.75	8	8.25	9.5
STANDARD RIG ENDS (2)	2 3/8 PAC	2 3/8 REG	2 3/8 IF	3 1/2 IF	4 1/2 XH	4 1/2 IF/XH	4 1/2 IF	6 5/8 REG	6 5/8 REG	7 5/8 REG
ACTIVATION BALL SIZE (")	1	1	1 1/4	1 1/2	2	2	2	2 1/2	2 1/2	2 1/2
LOCKING BALL MATERIAL / SIZE (")	Torlon/ 0.700	Torlon/ 0.700	Torlon/ 0.700	Torlon/ 1 1/8	Ertalyte/ 1 1/8	Ertalyte/ 1 1/8	Ertalyte/ 1 1/8	Ertalyte/ 1 3/8	Ertalyte/ 1 3/8	Ertalyte/ 1 3/8
STEEL DE-ACTIVATION BALL SIZE (")	7/8	7/8	1 1/16	1 3/8	1 3/8	1 3/8	1 3/8	1 3/4	1 3/4	1 3/4
NO.OF BALLS NEEDED TO ACTIVATE TOOL	1	1	1	1	1	1	1	1	1	1
NO. OF BALLS NEEDED TO DE-ACTIVATE TOOL	2	2	2	2	2	2	2	2	2	2
NUMBER OF CYCLES	4	4	3	4	5	5	5	5	5	5
NUMBER OF CYCLES W/ DARTED BALL IN TOOL	2	2	2	3	3	3	3	4	4	4
FLOW AREA (SQ/IN) THROUGH TOOL	0.78	0.78	1.18	1.67	2.92	2.92	2.92	4.6	4.6	4.6
PORT DIAMETER (IN) STANDARD/AUTOLOCK	0.75/ 0.68	0.75/ 0.68	1.00/ 0.68	1.25/ 1.10	1.25/ 1.10	1.25/ 1.10	1.25/ 1.10	1.50/ 1.35	1.50/ 1.35	1.50/ 1.35
TFA (SQ/IN) WHEN TOOL IS OPEN (STANDARD)	0.884	0.884	1.571	2.454	2.454	2.454	2.454	3.534	3.534	3.534
TFA (SQ/IN) WHEN TOOL IS OPEN (AUTOLOCK)	0.72	0.72	0.72	1.901	1.901	1.901	1.901	2.863	2.863	2.863
WEIGHT (LBS)	115	115	132	300	750	800	800	1000	1000	1600
TENSILE STRENGTH (LBS)	415,000	490,000	490,000	1,000,000	1,900,000	2,500,000	3,100,100	3,500,000	3,700,000	6,000,000
TORSIONAL STRENGTH (LBS)	12,000	16,500	19,000	49,500	130,000	166,000	190,000	295,000	335,000	565,000
MAKE-UP TORQUE (FT-LBS)	2,200	3,000	3,700	11,500	26,710	34,190	34,840	41,800	45,450	81,290

(1) Standard drift listed, larger drifts are available to accommodate coring balls, reamer balls and wireline accessories

(2) Alternative Rig End Connections may be available