XEM Specifications

Revision History

Revision & Date		Description	CR/CN	Approvals
B	07SEP10	Initial Release	07-CHNG-0054	**Originator:** A. Logan **Reviewed By:** H. Hykaway (15SEP10) **Approved By:** D. Switzer (14SEP10)
AA	24FEB14	Added 9.5” and 11” Specifications	07-CHNG-0181 07-CHNG-0110	**Originator:** M. Campbell **Reviewed By:** J. Chung **Approved By:** J. Dobos

XEM Specifications

DESCRIPTION	Ø4.75"	Ø6.50"	Ø8.00"	Ø9.50"	Ø11.00"
Gap Sub ID	2.688±0.005”	2.813±0.005” – NC 46 3.250±0.005” – NC 50	3.500±0.002”	3.750 ± 0.005"	4.000 ± 0.002"
Gap Sub OD	4.750±0.025”	6.500±0.025”	8.000±0.025”	9.500 ± 0.025"	11.000 ± 0.025"
OD With Hard Banding	4.825±0.025”	6.575±0.025”	No Hard Banding	No Hard Banding	No Hard Banding
Available End Connections	NC 38 (3-1/2 IF)	NC 46 (4-1/2 XH) NC 50 (4-1/2 IF)	6-5/8 Regular	7 5/8" Regular	NC77
Connection Makeup Torque	9,400 ft.lbs	23,000 ft.lbs – NC 46 26,000 ft.lbs – NC 50	39,000 ft.lbs	63,000 ft.lbs	100,000 ft.lbs
Rotation	Up to 200 RPM, 20 - 80 RPM Typical				
Shock	1000 g, 1/2 msec, 1/2 Sine Shock				
Vibration	30 g, 30 - 500 Hz				
Maximum Operating Pressure	15,000 psi				
Maximum Operating Temperature	150°C (302°F) (3)				
Minimum Storage / Transportation Temperature	-40°C (-40°F)				
Maximum Sand Content by Volume	2%				
Maximum LCM Content	No Limits				
Maximum Axial Load	100,000 lbs Compression 500,000 lbs Tension	200,000 lbs Compression 1,000,000 lbs Tension	300,000 lbs. Compression 1,200,000 lbs Tension	440,000 lbs Compression 1,500,000 lbs Tension	600,000 lbs Compression 3,000,000 lbs Tension
Torsional Strength of Gap @ 150°C	10,000 ft.lbs	20,000 ft.lbs	55,000 ft.lbs	90,000 ft.lbs	120,000 ft.lbs
Gap Sub Overall Length	44.2"			45.2"	47.1"
Gap Sub Re-cut Length	6.50" Pin End & 4.75" Box End		5.50" Pin End & 4.75" Box End	5.50" Pin End & 5.80" Box End	6.50" Pin End & 6.50" Box End
Maximum Dogleg Severity Rotating	15° / 30m - Slick Collars 25° / 30m – Flex Collars	10° / 30m - Slick Collars 15° / 30m – Flex Collars	8° / 30m - Slick Collars 13° / 30m – Flex Collars	8° / 30 m - Slick Collars	8° / 30 m – Slick Collars
Flex Collar Requirements * **	Ø4.00" Flex Section Min. 2/3 Total Length (20' of 31') Collars Above and Below Gap Sub	Ø5.625" Flex Section Min. 2/3 Total Length (20' of 31') Collars Above and Below Gap Sub	Ø6.00" Flex Section Min. 2/5 Total Length (12.4' of 31') Collars Above and Below Gap Sub	N/A	
Recommended Maximum Flow Rate	1.2 m3/min (317 GPM)	2.0 m3/min (528 GPM)	4.0 m3/min (1056 GPM) (1) 3.4 m3/min (900 GPM) (2)	4.3 m3/min (1150 GPM)	5.1 m3/min (1350 GPM)
Typical Collar Bore	2-11/16" ID Collar	2-13/16" ID Collar	3-1/2" ID Collar (1) 3-1/4" ID Collar (2)	3-3/4" ID Collar	4" ID Collar
Drilling Fluid	Water Based Mud / Oil Based Mud / Air				
Tool Length (Probe Dependent)	Minimum 275" & Maximum 406"				
**Maximum Tool Weight (w/o collar) ** **	310 lbs	470 lbs	580 lbs	855 lbs	1155 lbs

** Maximum Tool Weight, including Gamma Probe
*** Contact Extreme Engineering for maximum dogleg severity if a different size flex collar is to be used
(1) Collar ID 3 1/2"
(2) Collar ID 3 1/4"
(3) Maximum temperature range for alkaline batteries is 50°C