

# XEM

## THE IDEAL MWD TOOL

**XEM™ IS THE IDEAL MWD TOOL** for all directional applications by giving precision inclination/azimuth, full MWD, gamma ray logging, and bore/annular pressure while drilling (PWD), during every connection allowing for performance drilling in over balanced, under balanced, and high LCM environments.

### CONSIDER. EFFICIENCY

Extreme's Survey on Connection™ allows for zero NPT as XEM™ works independently of the drilling process.

### CONSIDER. VERSATILITY

Ideal for all overbalanced and underbalanced applications, creating optimal performance in air drilling environments. Choose the data you need, from MWD quality tool facing for steering and gamma for formation correlation, on demand.

### CONSIDER. RELIABILITY

Our 24/7 Command Center watches all the activity of your rig in realtime and proactively troubleshoots while you drill.

### CONSIDER. COST

Reduced drilling time and personnel onsite means a considerable cost savings to the client.

### CONSIDER. SAFETY

Added safety by eliminating lithium battery use, and costly personnel on the wellsite.



DESCRIPTION	4.75"	6.50"	8.00"	11.00"
Gap Sub ID	2.688 ±0.010"	2.813 ±0.005"	3.500 +/-0.002"	3.500 ±0.0002"
Gap Sub OD	4.750 ±0.025"	6.500 ±0.025"	8.000 +/-0.025"	11.000 ±0.025"
Gap Sub OD With Hard Banding	4.825 ±0.025"	6.575 ±0.025"	No Hard Banding	
Connections	NC 38 (3 ½ IF)	NC 46 (4 ½ XH) NC 50 (4 ½ IF)	6 ⅝ Regular	API NC77
Connection Make up Torque (Torque value for NC 50)	9,400 ft. lbs.	23,000 ft. lbs.	39,000 ft. lbs.	100,000 ft. lbs.
Torsional Strength of Gap at 150°C	10,000 ft. lbs.	20,000 ft. lbs.	55,000 ft. lbs.	120,000 ft. lbs.
Gap Sub Overall Length	44.2"		45.2"	47.1"
Gap Sub ReCut Length	6.50" Pin End & 4.75" Box		5.50" Pin End & 4.75" Box End	6.50" Both Ends
Flex Collar Requirements**	4.00" Flex Sections Min. ⅔ Total Length (20' of 31') Collars Above and Below Gap Sub	5.625" Flex Sections Min. ⅔ Total Length (20' of 31') Collars Above and Below Gap Sub	6.00" Flex Sections Min. ⅔ Total Length (12.4' of 31') Collars Above and Below Gap Sub	N/A
Tool Length (Probe Dependant)	Min. 275" & Max. 406"			
Max. Tool Weight (without collar)	310 lbs.	470 lbs.	580 lbs.	1155 lbs.
Rotation	Up tp 200 RPM, 2080 RPM Typical			
Shock	1000 g, ½ msec, ½ Sine Shock			
Vibration	30 g, 30500 Hz			
Maximum Operating Pressure	15,000 psi			
Maximum Operation 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: (Compression)	100,000 lbs.	200,000 lbs.	300,000 lbs.	600,000 lbs.
Maximum Axial Load: (Tension)	500,000 lbs.	1,000,000 lbs.	1,200,000 lbs.	3,000,000 lbs.
Max. Dog Leg Severity Rotating: Slick Collars	15° / 100 ft.	10° / 100 ft.	8° / 100 ft.	8° / 100 ft.
Max. Dog Leg Severity Rotating: Flex Collars 25° / 100 ft. 15° / 100 ft.	13° / 100 ft.	N/A		
Max. Dog Leg Severity Sliding: Slick Collars	30° / 100 ft.	20° / 100 ft.	16° / 100 ft.	16° / 100 ft.
Max. Dog Leg Severity Sliding: Flex Collars	50° / 100 ft.	30° / 100 ft.	26° / 100 ft.	N/A
Recommended Maximum Flow Rate	317 GPM	528 GPM	1056 GPM <sup>(1)</sup> 900 GOM <sup>(2)</sup>	1350 GPM
Recommended Collar Bores	2 11/16" ID Collar	2 13/16" ID Collar	3 ½" ID Collar <sup>(1)</sup> 3 ¼" ID Collar <sup>(2)</sup>	4" ID Collar

\*\*\*Contact Extreme EngineeringTM for maximum Dogleg severity if a different size Flex Collar is to be used

\*\*Must be checked versus mating BHA connections

(1) Collar ID 31/2i (2) Collar ID 31/4i (3) Collar ID can be no more than 1/16i greater than the specified collar ID (4) Max temperature range for alkaline batteries is 50° C.

Use of Dynamx δ is suggested in air drilling applications.