



# CALSCAN

precision  
temperature pressure  
& flow measurement

## BEAR CYCLONE SEPARATOR

### Green Compact Separator - Zero Emissions

**The Bear Cyclone Separator** uses newly developed Gas-Liquid Cylinder Cyclone (GLCC) technology that greatly reduces size and pressure drop compared with standard separators. Combined with our innovative zero emissions control system we are able to not only save you money but eliminate the Green House Emissions.

### Eliminating Greenhouse Gas Emissions

Its been a dirty secret for decades that typical oil and gas production facilities use natural gas from the well as instrumentation air for their pneumatic controls. The resulting annual emissions in Canada alone are approximately 17 BSCF per year and greenhouse emissions nearing 6.3 million tonnes of well gas. Not only does this gas pollute the environment it also accounts for approximately \$100 million in lost revenues. On a per skid basis it means it cost about Ten Thousand Dollars a year just to run the instrumentation. Our revolutionary solar powered design, uses low power PLC's, flow computers and all electric controls that **completely eliminates** all fugitive well gas **emissions** saving money and the environment.

**Our Bear Cyclone Separators** are designed for various levels of expected performance. The momentum of the inlet process fluid generates a liquid vortex that allows sufficient gas and liquid separation to rapidly occur. This creates dryer gas, lower pressure drop, very compact separator size and light weight packages. It requires little maintenance and can be designed for all type of well head applications.

### The Smart Environment Choice

Our Bear Cyclone Separator will become the choice of the future for eliminating greenhouse gas emissions for field managers, supervisors, engineers and technicians responsible for lowering emissions at wellsites.

### Superior Value

Get an unprecedented combination of price and performance. Our separators are cost-competitive while offering superior performance, specifications, measurement accuracy and ease of installation and use.



Northern Alberta Installation June 2006

## Typical Flow Ranges for GLCC

Flowing Pressure		6" GLCC Flow		8" GLCC Flow		10" GLCC Flow	
PSIG	KPAG	MSCFD	e3m3/day	MSCFD	e3m3/day	MSCFD	e3m3/day
5	34	400	11.4	650	18.4	1000	28.4
10	69	500	14.1	725	20.5	1200	33.9
20	138	600	17.1	850	24.1	1450	41.6
50	345	700	19.8	1000	28.4	2200	60.0
100	689	1000	28.4	1300	36.8	2800	79.8
200	1379	1600	45.3	1900	54.0	3800	108.1
300	2068	2200	60.0	2500	71.5	4800	136.3
400	2758	2800	79.8	3100	87.2	5800	164.6
500	3447	3400	96.8	3700	103.9	6800	192.8
Inlet Pipe Size		Pressure Drop Across Separator		Pressure Drop Across Separator		Pressure Drop Across Separator	
2" Inlet		<i>Less than 1.3 PSI</i>		<i>Less than 2 PSI</i>		<i>Less than 2 PSI</i>	
3" Inlet				<i>Less than 1 PSI</i>		<i>Less than 1 PSI</i>	
4" Inlet				<i>Less than 0.3 PSI</i>		<i>Less than 0.3 PSI</i>	

Please call for free consultation on your specific application regarding higher pressure and higher flow ranges.



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