

"Quality by Design, Satisfaction by Performance"

## Flow And Mvt Systems, Components, Spares And Parts

### MUD FLOW-FILL INDICATOR - 80ZA101F (Equivalent to M-D MFC101A)



The Mud Flow-Fill Indicator displays mud flow rate and pump stroke rate or fill count and total strokes during drilling or tripping operations. The indicator displays return mud flow status (0 to 100%) on a 5 1/2" analog flow meter.

Pump strokes per minute and total pump strokes or fill pump strokes from either one of two mud pumps or both combined, is displayed on the large easy to read 7-digit electro-mechanical digital display. A 7-digit, back lit, Liquid Crystal Display is also available.

For drilling, HI and LOW mud flow alarm limits can be set. When these alarms are exceeded, a visual indicator is illuminated. External visual and audible alarms can also be actuated. For tripping, there is a returns indicator lamp. The indicator can drive two channels of a recorder, one channel is percent of flow and the other is combined pump stroke rate.

### Mud Volume Totalizer - 80ZA101V (Equivalent to M-D MVC101A)

The Mud Volume Totalizer monitors the level of drilling mud in each measured mud tank. It totalizes the volume of mud in any two or more tanks up to a total of six tanks as determined by the mud tank select switches. Two 5 1/2" analog meters display total mud volume and mud volume Gain/Loss of the selected mud tanks. The gain/loss meter has adjustable HI and LOW alarms. When either of these alarms are exceeded, a visual indicator on the totalizer is actuated. External visual and audible alarms can also be actuated.

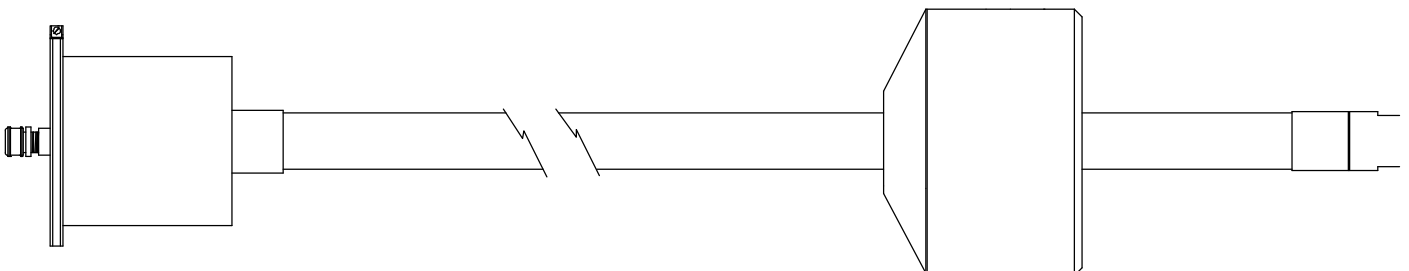
The totalizer can drive two channels of a recorder, one channel is total mud volume and the other is mud volume gain/loss.



### Mud Level Probe - 97ZA0924-8 (Equivalent to M-D H10924A-8)

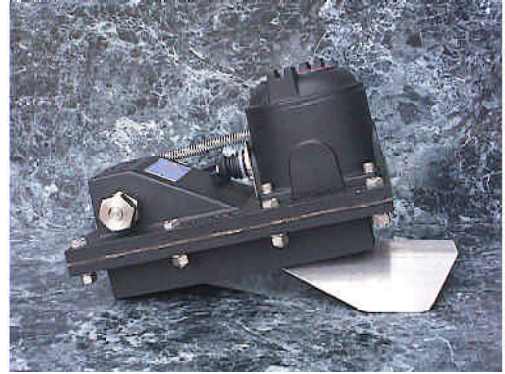
The Mud Level Probe is a stainless steel 2 1/2" diameter probe for installation in the mud tanks. It is available in several lengths, (8', 10' and 12' are

standard), has a 12" diameter polyethylene float and includes a probe support bracket assembly.

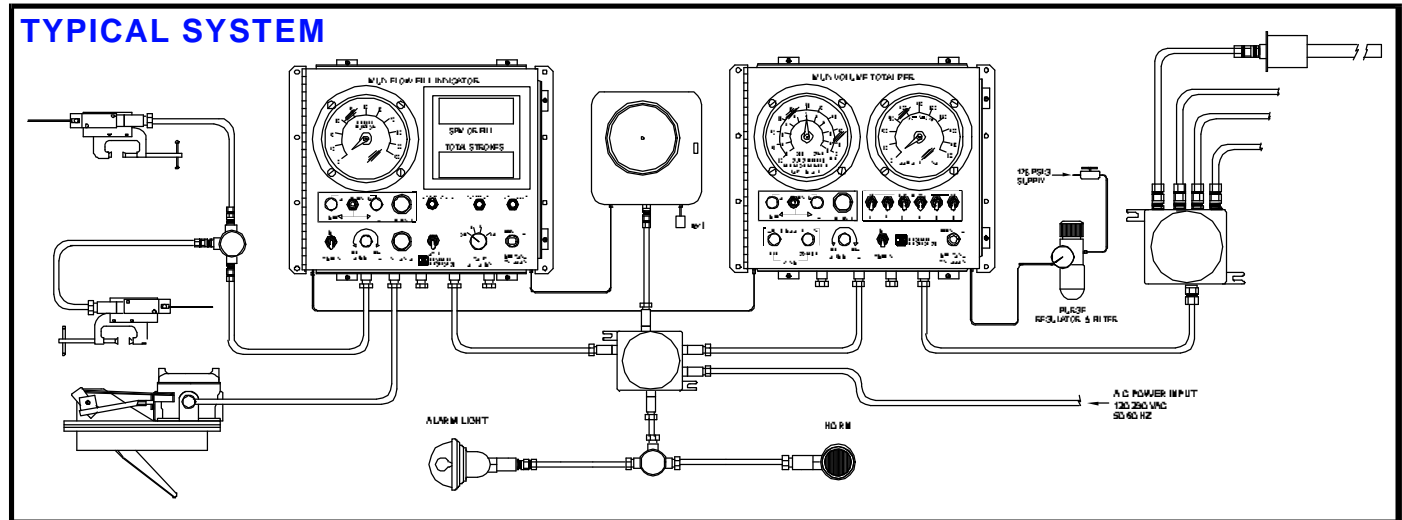


## Mud Flow Sensor - 97ZA0004 (Equivalent to M-D MFTX4A)

The Mud Flow Sensor is a paddle type sensor that monitors mud flow through the return line. The sensor is mounted on the return line with the paddle extending into the mud flow. Deflected by the force of the mud flow, the paddle drives a potentiometer which produces a DC analog signal that is proportional in amplitude to the position of the paddle. This voltage can be used to display mud flow information on the percent of flow meter in the Flow-Fill Indicator as percent of mud flow.



### TYPICAL SYSTEM



### SERIES "Z" EQUIVALENT BOARDS

M-D Part Number	I.E. Part Number	Description
PCB109A**	84ZB109A	DIGIT CONTROL BOARD
PCB114C	84ZB114C	ISOLATION AMPLIFIER
PCB168A	84ZA168A	ANALOG SIGNAL CONDITIONER
PCB177A	84ZB177A	POWER SUPPLY, MUD SYSTEM
PCB189A	84ZA189A	CALIBRATION BOARD
PCB190A	84ZA190A	MVT ANALOG CONDITIONER
PCB192A	84ZA192A	SIGNAL INTERFACE
380097**	84ZA0097	7 DIGIT E/M DISPLAY
380113	84ZA0113	2 CHANNEL RECORDER OUTPUT
** Replaces both boards	84ZA119A	7 DIGIT LCD DISPLAY

### Additional Information

These components can be supplied in various configurations depending on requirements. Packages are available with or without cables and/or junction boxes, for permanent installation or for moving from site to site.

We have a comprehensive stock of M-D equivalent parts for the above items plus other M-D electronic equipment.

For more information contact Innovative Electronics or your local representative.

For Additional Information Contact:



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