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## REAM HMI (Pumping/Cementing) Real Time Electronic Acquisition & Monitoring Human Machine Interface

MEDCO's REAM HMI system is a user-friendly data acquisition system that reads data from electronic sensors and display it on a WVGA HMI Coloured touch screen (800x480) wide screen, which acts as both an input and an output device. The system records the data on solid state SD memory card as well as USB, allowing remote monitoring of the data.

Available in several designs to suit individual needs ranging from portable Flight Case, Stainless Steel Enclosure to an optional Ex Certified system.

The system is made of two main parts, REAM is a microprocessor based data acquisition board, which collects data from electronic sensors, digitise the readings, and supply the appropriate power to the sensors. The HMI Human machine interface device that communicates with the REAM board to retrieve, display and store the data.

REAM has analogue, counters (frequency), quadrature input channels, The analogue channels accept signals from sensors with 0-5 vdc, 0-10 vdc, or 4-20 mA output. The frequency channels accept pulse signals produced by proximity switches, magnetic pickups. The quadrature signals are up/down counter, used for such measurements as depth, the REAM also has an out put relay channel for alarm and stop systems.

In addition to the REAM board, the HMI can communicate with many other devices such NuFlo MC-III Flow Analyser, and control devices such as Medco's Emergency Warning & Stop Module (EWSM).

The outputs are available on Web pages, they can be viewed remotely on a Local Area Network (LAN) or even a Wide Area Network (WAN), provided that proper Internet connections are available. There are many other features in the HMI and these can be tailored to client's request.

### Portable Configuration (FLIGHT CASE II)



# REAM HMI (Pumping/Cementing)

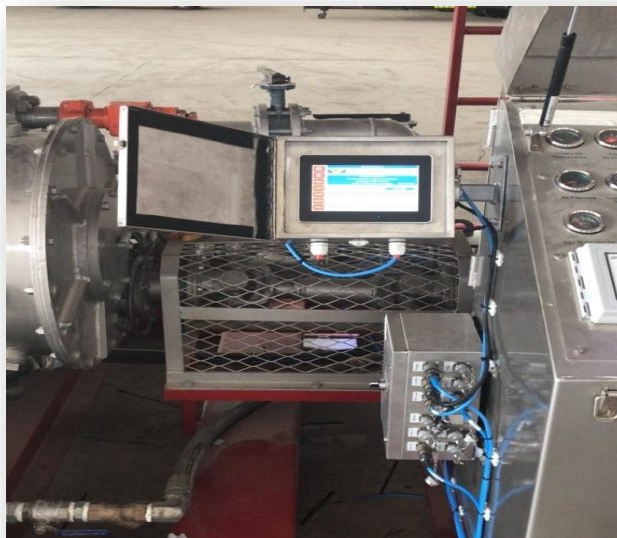


## Specifications

Power requirement:	10-36 vdc, max. of 36 Watts. Supplied with AC/DC converter 95 to 260 VAC.
Operating temperature:	-20 to 60 deg C.
<u>Channels</u>	
Available Parameters:	Circulation Pressure, Wellhead Pressure, Fluid/ N <sub>2</sub> Rate, Fluid/ N <sub>2</sub> Total.
Additional Parameters:	Casing Pressure, Fluid Density, Temperature.
Analogue In channels:	Standard 4 (16bit) 4-20 mA/0-10v.
Frequency In channels:	Standard 3.
Analogue Output:	Optional. Analogue inputs can be duplicated via loop splitters for electronic gauges
Digital Output:	(on/off) relay with an audible buzzer beacon alarm.

HMI	7" HMI coloured touch screen Human Machine Interface. <i>(also available in Larger 9" and 10" HMI screen in larger flight case)</i>
Dimensions	330x290x120mm
Weight	4.9 Kgs

## Fixed Configuration (Stainless Steel enclosure)



*For illustration purpose only*

## Specifications

Power requirement:	10-36 vdc, max. of 36 Watts. Supplied with AC/DC converter 95 to 260 VAC.
Operating temperature:	-20 to 60 deg C.
<u>Channels</u>	
Available Parameters:	Circulation Pressure, Wellhead Pressure, Fluid/ N <sub>2</sub> Rate, Fluid/ N <sub>2</sub> Total.
Additional Parameters:	Casing Pressure, Fluid Density, Temperature.
Analogue In channels:	Standard 4 (16bit) 4-20 mA/0-10v. <i>Expandable to any multiples of 4.</i>
Frequency In channels:	Standard 3. <i>Expandable to any multiples of 3.</i>
Analogue Output:	Optional. Analogue inputs can be duplicated via loop splitters.
Digital Output:	Optional. Binary (on/off) relay.

HMI	7" HMI coloured touch screen Human Machine Interface <i>(separate enclosure is optional), also available in 9", 10", 12", 15" larger screen</i>
Dimensions	300mm (H) x 200mm (W) x 150mm (D) 1.2mm gauge brushed 316 stainless steel 2mm zintec mounting plate