



## HM ... RV Turbine Flow Meters

HM...RV turbines are suitable for the precise flow measurement of fluid food and pharmaceutical products in filling systems.

Special features are dairy connections as per DIN 11851 and a construction which excludes dead spots facilitating complete sterilisation.



with local display type VTM



with VTEK/P pickup

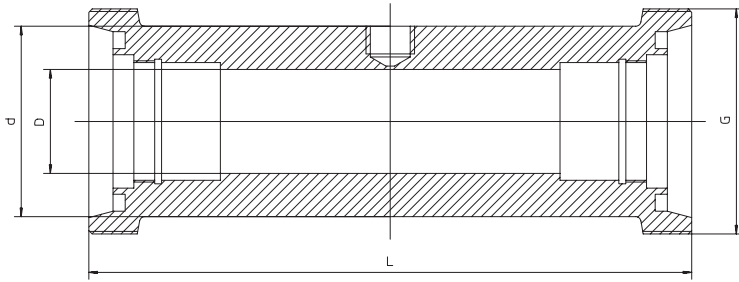
### Design and Principle

A light-weight turbinewheel is carried concentrically in the tube body. The fluid laminated by flow rectifiers rotates the wheel streaming against its axial direction. The r.p.m. of the turbinewheel is in proportion to the average flow velocity within the tube diameter and corresponds to the volume flow over a wide range.

The flow meters are equipped with pickups which will detect the r.p.m. of the turbinewheel without coming into contact with the measuring medium. The output signal of the pickup is amplified and converted to a flow-proportional pulse- or analogue signal (please also refer to separate pickup and amplifier datasheets). As an advantage over other measuring methods, turbine flow meters excel in short response times of 5–50 msec and providing an output signal with high resolution.



**Dimensions (mm)**



Type	Tube	L	D	d	G
HM 3/15 RV	15	90	4	28	Rd 34 x 1/8"
HM 5/15 RV	15	90	5	28	Rd 34 x 1/8"
HM 7/15 RV	15	90	7	28	Rd 34 x 1/8"
HM 9/15 RV	15	90	9	28	Rd 34 x 1/8"
HM 9/25 RV	25	150	9	45	Rd 52 x 1/6"
HM 11/25 RV	25	150	11	45	Rd 52 x 1/6"
HM 13/25 RV	25	150	13	45	Rd 52 x 1/6"
HM 17/25 RV	25	150	17	45	Rd 52 x 1/6"
HM 19/25 RV	25	150	19	45	Rd 52 x 1/6"
HM 24/40 RV	40	174	24	55	Rd 65 x 1/6"
HM 30/40 RV	40	174	30	55	Rd 65 x 1/6"
HM 36/50 RV	50	195	36	68	Rd 78 x 1/6"
HM 40/65 RV	65	227	40	79	Rd 95 x 1/6"
HM 50/65 RV	65	227	50	79	Rd 95 x 1/6"
HM 65/80 RV	80	294	65	95	Rd110x 1/4"

Further models on request.

**Pickups and Amplifiers**

- VTE\*/P Carrier-frequency pickup and amplifier  
for fluid temperatures up to +150°C and ambient temperatures up to +50°C
- VTM\* Local display unit with integral pickup and amplifier as well as analogue output  
for fluid temperatures up to +150°C and ambient temperatures up to +50°C
- IF\* and VIEG separated inductive pickup and amplifier  
for fluid temperatures up to +350°C

\* For details please refer to separate datasheets.

## Evaluation



### VTM Local Display Unit

#### Features

Display for real time values and totals  
Analogue output  
Divider output

#### Option

Protective cover with glass window



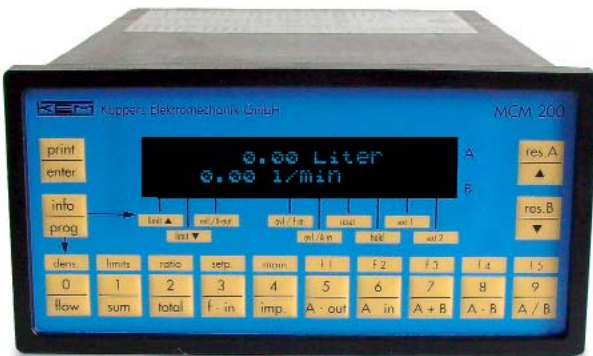
### MCM 400 Frequency Counter

#### Features

Display for real time values and totals  
Two relay outputs (limits)

#### Options

Analogue output  
Linearisation  
Protective cabinet



### MCM 200 Precision Evaluation Unit

#### Features

Batch counter  
Totaliser  
Ratio calculation  
Two-line VFD display  
Reverse-flow detection  
1:1 frequency output  
Six switch outputs

#### Options

Second channel  
Analogue in- and outputs  
PI controller card  
Linearisation  
Printer interface  
RS232/485  
Protective cabinet