

# DML Series

## Pelton Wheel Low Flowmeters

Pelton wheel flowmeters are the ideal solution for liquid and gas flow applications where high precision, very fast response time, compact design or high reliability are required. They are designed for long life under conditions of rapidly changing flow and temperature.

The tangential rotor blade design allows the DML to operate in very low flow ranges.



The DML series Pelton wheel flowmeters are well suited for a wide variety of flow applications requiring measurement of liquids and gases at very low flow velocities.

These include among others, monitoring of flow rates of fuels and coolants in engine test and engine construction, measurement of dosing quantities in the food, pharmaceutical and chemical industry, monitoring and measurement of ultrapure water in research and development, custody transfer of valuable fluids, etc..

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# Advantages

- Precision machined inlet and outlet orifices for improved linearity and reduced pressure loss
- Digital output signal for Interference-free transmission
- Precision sapphire jewel bearings for better repeatability and optimal results at low flow rates
- Wide measuring ranges
- Pulse sensor (pickoff) in the housing with integrated temperature sensor
- Dimensional compatibility with Flow Technology FTO series

# Specifications

● ● ● Made in Germany

## End Fitting Options:

- ½" G female threads (BSPP)

## Measurement Range:

- Liquid: 3.8 ml/min to 7600 ml/min
- Gas: 42ml/min to 8500 ml/min

## Accuracy Liquid:

Calibration accuracy:  $\pm 0,03\%$  o.R.  
Repeatability:  $\pm 0,1\%$  o.R.  
Accuracy:  $\pm 0,25\%$  (\*)  
Linearity:  $\pm 0,1\%$  (\*)

## Accuracy Gas:

Calibration accuracy:  $\pm 0,3\%$  o.R.  
Repeatability:  $\pm 0,2\%$  o.R.  
Accuracy:  $\pm 0,60\%$  (\*)  
Linearity:  $\pm 0,1\%$  (\*)

\* with Linearization Electronics

## Response Time:

- < 4 ms

## Operating Temperature Range:

- $-50^{\circ}$  C to  $+150^{\circ}$  C

## Operating Pressure:

- maximum 200 bar, with G (BSPP) female threads (Higher pressures are possible as special configurations.)

## Output Types:

- Pulse, Modulated Carrier (RF), Sinusoidal

## Standard Material of Construction:

- Stainless steel with Ceramic Ball Bearings or Sapphire Jewel Bearings

ATEX version also available

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# Measuring Ranges of TrigasDM Pelton Wheel Low Flow Flowmeters

Gas - Jewel Bearing, Code JG only

 <b>Model</b>	Standard Range		Extended Range		K-Factor <sup>1)</sup>	max. Frequency <sup>1)</sup>
	ml/min		ml/min		Pulse/ml	Hz
	min.	max.	min.	max.		
<b>DML0.6</b>	42,5	425	-	-	170	1200
<b>DML1.0</b>	70,8	708	57	848	85	1000
<b>DML2.0</b>	141,5	1415	99	1698	36	860
<b>DML4.0</b>	339,8	3398	226	5663	14	760
<b>DML5.0</b>	566,3	5663	425	8495	8,5	800

Liquid – Jewel Bearing, Code JL Only

 <b>Model</b>	Standard Range		Extended Range		K-Factor <sup>1)</sup>	max. Frequency <sup>1)</sup>
	ml/min		ml/min		Pulse/ml	Hz
	min.	max.	min.	max.		
<b>DML0.6</b>	7,57	75,7	3,8	303	211	270
<b>DML1.0</b>	30,3	303	11	605	119	600
<b>DML2.0</b>	94,6	946	38	1514	48	750
<b>DML4.0</b>	302,8	3028	76	4920	15	650
<b>DML5.0</b>	567,7	5677	189	7570	9	825

Liquid – Ball Bearing, Code BC and BA)

 <b>Model</b>	Standard Range		Extended Range		K-Factor <sup>1)</sup>	max. Frequency <sup>1)</sup>
	ml/min		ml/min		Pulse/ml	Hz
	min.	max.	min.	max.		
<b>DML0.6</b>	7,57	75,7	7,75	303	211	270
<b>DML1.0</b>	30,3	303	18,9	605	119	600
<b>DML2.0</b>	94,6	946	75,7	1514	48	750
<b>DML4.0</b>	302,8	3028	189,2	4920	15	650
<b>DML5.0</b>	567,7	5677	378,5	7570	9	825

<sup>1)</sup> The K-factors and frequency data are average values. Each turbine is calibrated according to customer specification and delivered with individual calibration certificates

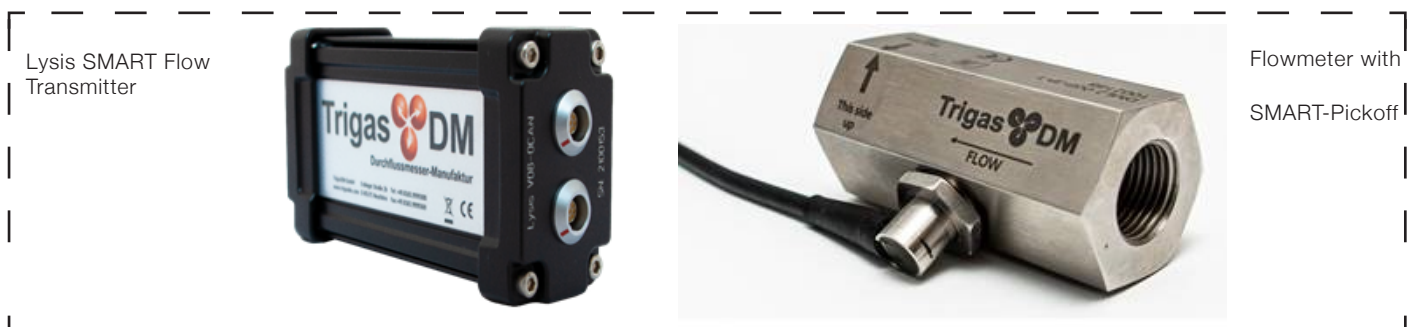
# Upgrade your DML flowmeter to SMART status with the Lysis/TriLIN Linearizer/Flow Computers and Smart Pickoff

With our Lysis/TriLIN families of Linearizers/Flow Computers it is now possible to optimize the accuracy of the flow measurement process by compensating for any non-linearity of the flowmeter itself as well as the effects of changes in Fluid Temperature and Viscosity.

The new Lysis Smart Pickoff simplifies this process further. As part of a DML flowmeter, it is programmed with the flowmeter performance curve and the process fluid properties.

When a Lysis linearizer is connected to the Smart Pickoff, it automatically recognizes and retrieves the stored data and uses them to perform the required flow corrections. This way, a Lysis Linearizer can be seamlessly used with ANY DML flowmeter equipped with a Smart Pickoff. Truly, a Plug-and-Measure solution, available with a variety of output options, including frequency, analog and CAN.

Both Lysis and Smart Pickoff have been miniaturized to fit in the smallest of places and operate over a range of  $-40^{\circ}\text{C}$  to  $+125^{\circ}\text{C}$ .



## About us

### Production of Flowmeters

A Flow Specialist with 35 years experience, TrigasDM offers quality measuring instruments, flow meter electronics and flow calibrators for both liquids and gases.

### Made in Germany

The development and manufacture of our products takes place exclusively in our facilities in Neufahrn, 20 km north of Munich.

## Contact



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[www.trigasdm.com](http://www.trigasdm.com)

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