

HM-U Hydraulic System Turbine Flow Meter

Common Uses

The HM-U Hydraulic System Turbine Flow Meter was designed specifically to measure hydraulic fluids. These meters ensure precise regulation and control of flow rates in hydraulic systems. The meter comes with built-in ports for temperature and pressure sensors to be installed directly. This allows customers to add additional instrumentation with less possible leak paths in a small footprint. The sensor is equipped with optional Bluetooth so customers can adjust K-factors, set alarms, totalization, and more all from their mobile device.

Applications include:

- Hydraulic system monitoring
- Test stands
- Mobile hydraulic measurement



Technical Specifications

General Meter Data	
4 Flow Ranges	0.25 to 158 gpm (across all meter sizes)
Measuring Accuracy	±2.5% M.V. over full range with 30cP fluid ±0.5% when used with linearized sensor
Repeatability	±0.5%
Max. Operating Pressure	up to 6,000 psi (420 bar)
Viscosity	30 cSt
End Connections	BSPF female
Two Additional Ports	1/4" BSPF ports for optional temperature and pressure sensors, (customer supplied)
Turndown	up to 15:1
Fluid Temperature Range	-40°F up to 248°F -40°C to 120°C (sensor dependent)
Ambient Temperature Range	-40°F to 185°F (-40°C to 85°C)

Meter Materials of Construction

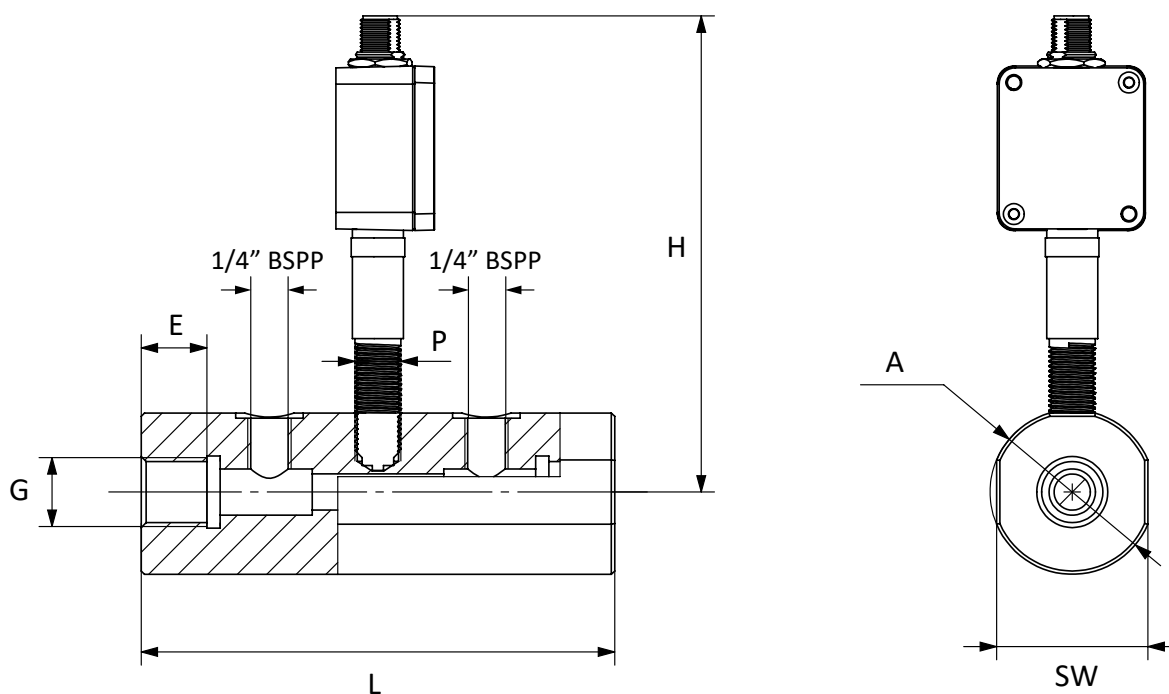
Body	Aluminum (DIN 3.4365)
Turbine Impeller	420RM Stainless Steel (DIN 1.4122)
Bearings	HM 007 - 011: Tungsten carbide sleeve bearing HM 022 - 030: Stainless steel ball bearings
Internals	303 Stainless Steel (DIN 1.4305)

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Meter Data - Sizes

Part Number	Flow Range		Maximum Pressure		Maximum Frequency
	GPM	LPM	PSI	Bar	Hz
HM 007 U	0.25 - 5.3	1.2 - 20	6,000	420	1800
HM 011 U	1.6 - 16	6 - 60	6,000	420	1350
HM 022 U	4.0 - 79	15 - 300	6,000	420	800
HM 030 U	10.6 - 158	40 - 600	6,000	420	860

Meter / Sensor Dimensions



Part Number	ØA	E	G	H*	L	P	SW
HM 007 U	1.95" (49.5mm)	.63" (16mm)	1/4" BSPP	1.86" (47.3mm)	4.61" (117mm)	M14x1.5	1.81" (46mm)
HM 011 U	1.97" (50mm)	.79" (20mm)	1/2" BSPP	1.93" (49mm)	5.67" (144mm)	M14x1.5	1.81" (46mm)
HM 022 U	2.54" (64.5mm)	1.4" (35.5mm)	1-1/4" BSPP	2.51" (63.8mm)	6.1" (155mm)	M14x1.5	2.36" (60mm)
HM 030 U	2.54" (64.5mm)	1.38" (35mm)	1-1/2" BSPP	2.51" (63.8mm)	7.13" (181mm)	M14x1.5	2.36" (60mm)

* The specified values result from the dimensions of the respective turbine plus EDGE sensor.

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Recommended Sensor

AW-Lake offers a wide selection of Sensors/Pickups and Monitors/Controllers to optimize flow measurement and deliver your flow data where you need it and in the format you need it.

HM-U Standard Sensor: EDGE Sensor

Output	Part Number
Pulse Output	EDG3-1A-17S
Analog Output	EDG3-1B-17S
Modbus Output	EDG3-1C-17S

** Consult factory for high temp (over 185°) pickup options.*



Additional Electronics Options:

Please contact Factory for Intrinsically Safe, High Temperature, Local or Remote Displays, or other sensor options.

Visit AW-Lake.com for more information.

EDGE Sensor Data

Supply Voltage Range	12-24VDC $\pm 10\%$; max. current draw 40-100mA (model-specific, contact factory)
Analog Output Options	Default: 4-20mA & 0-10V; Available through PC Toolkit or mobile app: 0-5V, 1-5V, 2-10V
Standard Max. Output	$\pm 2.5\%$ of max scaling (20.5mA/5.125V/10.25V)
Error Indication	$\pm 10\%$ of max scaling (22mA/5.5V/11V)
Analog Output Resolution	16 bit
Analog Output Update Time	100 mSec minimum
Pulse/Frequency Output	Default: Push/Pull output Optional: Sinking or Sourcing Easy setup through PC Toolkit
Close Proximity Wireless	Contains BT Transmitter Module (FCC ID: 12208A-01)

AW-Lake Mobile Toolkit

Monitor your flow from your phone and complete all setup of the EDGE Sensor quickly using AW-Lake Mobile Toolkit App using the below QR code:



Products may be subject to change without notice. Contact factory for the most up-to-date product information.