

HM-F Flanged Turbine Flow Meter

Common Uses

The HM-F series of turbine flow meters can handle low viscosity fluids flowing under extremely high pressure. They are best suited for use with hydraulic oil, fuel and other light oils when ANSI or tri-clamp flanges are required. The turbine wheel's low moment of inertia allows a fast acceleration from standstill up to full number of revolutions within 5 to 50 milli-seconds, making dynamic measurements possible.

Applications include:

- Consumption measurement
- Filling processes
- Dosing systems
- 2-component mixing & blending
- Test stands



Technical Specifications

General Meter Data	
8 Flow Ranges	1.32 to 2641.7 gpm (across all meter sizes)
Measuring Accuracy	±1% standard, ±0.5% with EDGE sensor
Repeatability	±0.05%
Pressure Rating	232 up to 3,626 psi 16 to 250 bar (at room temperature), defined by the specification of the flange connections
Viscosity	1 to 10 cSt
End Connections	Flange standard ASME Raised Face (RF) or DIN Form B
Turndown	up to 15:1
Fluid Temperature Range	-76°F up to 662°F -60°C to 350°C

Meter Materials of Construction

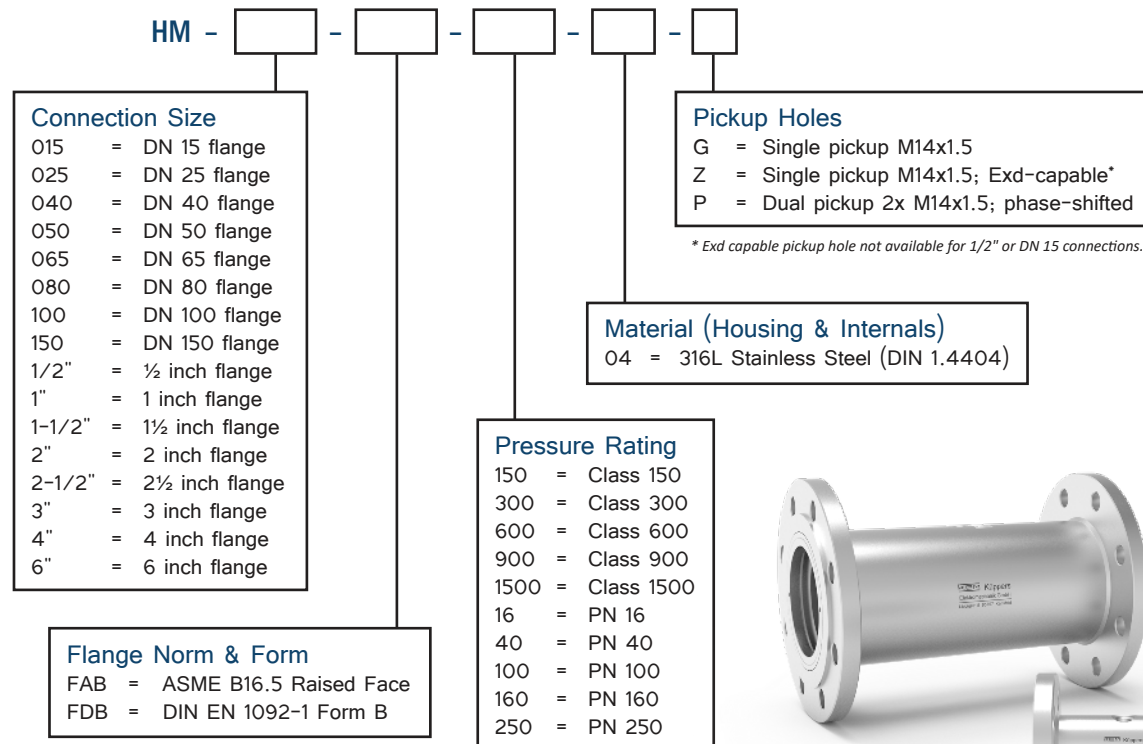
Housing	316L Stainless Steel (DIN 1.4404), other materials on request
Internals	316L Stainless Steel (DIN 1.4404), other materials on request
Wheels	AISI S31803 (DIN 1.4462), other materials on request
Bearing	Tungsten carbide sleeve bearing

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Meter Data - Sizes

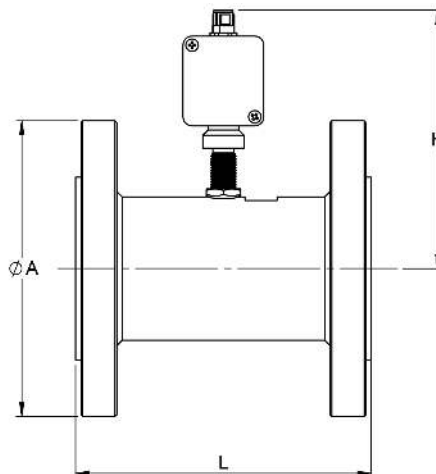
Connection Size	Flow Range (GPM)		K-Factor	Maximum Frequency
	Standard	Extended	pulses/gal	Hz
DN 15 - ½"	1.32 - 13.2	0.26 - 20	11,924.0	2625
DN 25 - 1"	5.28 - 66.0	0.79 - 66.0	1,684.5	1854
DN 40 - 1½"	13.2 - 198.1	2.64 - 198.1	401.3	1325
DN 50 - 2"	18.5 - 317.0	5.28 - 317.0	246.1	1300
DN 65 - 2½"	26.4 - 528.3	7.93 - 528.3	94.6	833
DN 80 - 3"	42.3 - 845.4	11.89 - 845.4	41.6	587
DN 100 - 4"	66.0 - 1320.9	--	26.5	583
DN 150 - 6"	92.5 - 2641.7	--	9.5	417

Part Number Guide



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Meter / Sensor Dimensions



Inch flanges as per ASME B 16.5, Raised Face (RF)

Connection Size	L	ØA - Flange diameter					H ³⁾
		Class 150	Class 300	Class 600	Class 900	Class 1500	
½ inch	5.00" 127 mm	3.54" 90 mm	3.74" 95 mm	3.74" 95 mm	Please use class 1500.	4.72" 120 mm	4.92" 125 mm
1 inch	5.50" 140 mm	4.33" 110 mm	4.92" 125 mm	4.92" 125 mm		5.91" 150 mm	5.20" 132 mm
1½ inch	6.00" 152 mm	4.92" 125 mm	6.10" 155 mm	6.10" 155 mm		7.09" 180 mm	5.51" 140 mm
2 inch	6.50" 165 mm	5.91" 150 mm	6.50" 165 mm	6.50" 165 mm		8.46" 215 mm	5.71" 145 mm
2½ inch	7.00" 178 mm	7.09" 180 mm	7.48" 190 mm	7.48" 190 mm		9.65" 245 mm	6.02" 153 mm
3 inch	10.00" 254 mm	7.48" 190 mm	8.27" 210 mm	8.27" 210 mm	9.45" 240 mm	—	6.30" 160 mm
4 inch	12.00" 305 mm	9.06" 230 mm	10.04" 255 mm	10.83" 275 mm	11.42" 290 mm	—	6.69" 170 mm
6 inch	14.00" 356 mm	11.02" 280 mm	12.60" 320 mm	13.98" 355 mm	—	—	7.68" 195 mm

Metric flanges as per DIN-EN 1092-1 Form B

Connection Size	L	ØA Flange Diameter					H ³⁾
		PN 16	PN 40	PN 100	PN 160	PN 250	
DN 15	5.00" 127 mm	Please use PN 40.	3.74" 95 mm	4.13" 105 mm	4.13" 105 mm	5.12" 130 mm	4.92" 125 mm
DN 25	5.50" 140 mm		4.53" 115 mm	5.51" 140 mm	5.51" 140 mm	5.91" 150 mm	5.20" 132 mm
DN 40	6.00" 152 mm		5.91" 150 mm	6.69" 170 mm	6.69" 170 mm	7.28" 185 mm	5.51" 140 mm
DN 50	6.50" 165 mm	6.50" 165 mm	6.50" 165 mm	7.68" 195 mm	7.68" 195 mm	7.87" 200 mm	5.71" 145 mm
DN 65	7.00" 178 mm	7.28" 185 mm	7.28" 185 mm	8.66" 220 mm	8.66" 220 mm	—	6.02" 153 mm
DN 80	10.00" 254 mm	7.87" 200 mm	7.87" 200 mm	9.06" 230 mm	9.06" 230 mm	—	6.30" 160 mm
DN 100	12.00" 305 mm	8.66" 220 mm	9.25" 235 mm	10.43" 265 mm	—	—	6.69" 170 mm
DN 150	14.00" 356 mm	11.22" 285 mm	11.81" 300 mm	13.98" 355 mm	—	—	7.68" 195 mm

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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-F 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.