

## Product Data Sheet

PS-00388, Rev. C

January 2008

# Micro Motion® Model D and DT Coriolis Flow and Density Meters

Micro Motion® Model D and DT sensors provide flow and density measurement for liquids, gases, and slurries — simply and directly.



### Features and benefits

- Dual-tube design for ease of installation and use
- Fits a wide range of line sizes for high flow rate capacity
- Special models available for high-pressure fluid containment



# Model D and DT feature comparison

Sensor model	Typical line size	Corrosion resistant materials	High pressure	High temperature	Purge fittings available	Rupture disk available
<i>Standard sensors</i>						
D150 Tefzel	1 to 2 inch (25 to 50 mm)	✓			✓	✓
D300	2 to 4 inch (50 to 100 mm)	✓			✓	✓
D600	6 to 10 inch (150 to 250 mm)					
<i>High pressure sensors</i>						
DH100	1/2 to 1 inch (15 to 25 mm)		✓			
DH150	1 to 1 1/2 inch (25 to 40 mm)		✓			
DH300	1 1/2 to 3 inch (40 to 80 mm)		✓			
<i>High temperature sensors</i>						
DT65	1/4 to 1/2 inch (6 to 15 mm)			✓		
DT100	1/2 to 1 inch (15 to 25 mm)			✓		
DT150	1 to 1 1/2 inch (25 to 40 mm)			✓		

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# Liquid flow performance

		Mass		Volume	
		lb/min	kg/h	gal/min	l/h
<b>Nominal flow range<sup>(1)</sup></b>					
Standard sensors	D150 Tefzel	0 to 1400	0 to 38,136	0 to 168	0 to 38,136
	D300	0 to 7000	0 to 190,680	0 to 839	0 to 190,680
	D600 <sup>(2)</sup>	0 to 40,000	0 to 1,090,909	0 to 4803	0 to 1,090,909
High-pressure sensors	DH100	0 to 400	0 to 10,896	0 to 48	0 to 10,896
	DH150	0 to 1400	0 to 38,136	0 to 168	0 to 38,136
	DH300	0 to 7000	0 to 190,680	0 to 839	0 to 190,680
High-temperature sensors	DT65	0 to 150	0 to 4086	0 to 18	0 to 4086
	DT100	0 to 400	0 to 10,896	0 to 48	0 to 10,896
	DT150	0 to 700	0 to 19,680	0 to 84	0 to 19,680
<b>Maximum flow rate<sup>(3)(4)</sup></b>					
Standard sensors	D150 Tefzel	2800	76,272	336	76,272
	D300	7000	190,680	839	190,680
	D600 <sup>(2)</sup>	60,000	1,636,364	7205	1,636,364
High-pressure sensors	DH100	800	21,792	96	21,792
	DH150	2800	76,272	336	76,272
	DH300	7000	190,680	839	190,680
High-temperature sensors	DT65	300	8172	36	8172
	DT100	800	21,792	96	21,792
	DT150	1400	38,136	168	38,136

(1) Micro Motion has adopted the terminology "nominal flow range." The upper limit of this range is the flow rate at which water at reference conditions causes approximately 15 psid (1 bar) of pressure drop.

(2) Specifications are for sensor paired with Micro Motion transmitters with MVD Technology. Contact Micro Motion for specifications with other Micro Motion transmitters.

(3) Maximum flow rate for volume measurement is based on a process-fluid density of 1 g/cm<sup>3</sup>. For fluids with density other than 1 g/cm<sup>3</sup>, the maximum volume flow rate equals the maximum mass flow rate divided by the fluid's density.

(4) Maximum flow rate calculated at a pressure drop of 29 psi (2 bar). Higher flow rates are possible with higher pressure drop.

## Liquid flow performance *continued*

### Mass flow accuracy<sup>(1)</sup>

All models except D600	Transmitter with MVD Technology	±0.15% <sup>(2)</sup>
	All other transmitters	±0.15% ±[(zero stability / flow rate) × 100]% of rate
Model D600	Transmitter with MVD Technology	±0.10% <sup>(3)</sup>
	All other transmitters	±0.15% ±[(zero stability / flow rate) × 100]% of rate

### Repeatability<sup>(1)</sup>

Transmitter with MVD Technology	±0.05% <sup>(2)</sup>
All other transmitters	±0.05% ±½(zero stability / flow rate) × 100% of rate

### Zero stability

		lb/min	kg/h	gal/min	l/h
Standard sensors	D150 Tefzel	0.30	9.0	0.036	9.0
	D300	0.70	19.2	0.084	19.2
	D600	2.5	66.0	0.300	66.0
High-pressure sensors	DH100	0.30	9.0	0.036	9.0
	DH150	1.2	32.6	0.144	32.6
	DH300	4.0	108.0	0.480	108.0
High-temperature sensors	DT65	0.03	0.84	0.004	0.84
	DT100	0.08	2.16	0.010	2.16
	DT150	0.14	3.84	0.017	3.84

(1) Flow accuracy includes the combined effects of repeatability, linearity, and hysteresis. All specifications for liquids are based on reference conditions of water at 68 to 77 °F (20 to 25 °C) and 15 to 30 psig (1 to 2 bar), unless otherwise noted.

(2) When flow rate < zero stability / 0.0015, accuracy = ±[(zero stability / flow rate) × 100]% of rate and repeatability = ±½(zero stability / flow rate) × 100% of rate.

(3) When flow rate < zero stability / 0.001, accuracy = ±[(zero stability / flow rate) × 100]% of rate and repeatability = ±½(zero stability / flow rate) × 100% of rate.

# Liquid flow performance *continued*

## Typical accuracy, turndown, and pressure drop

To determine accuracy, turndown, and pressure drop using your process variables, use Micro Motion's product selector at [www.micromotion.com](http://www.micromotion.com).

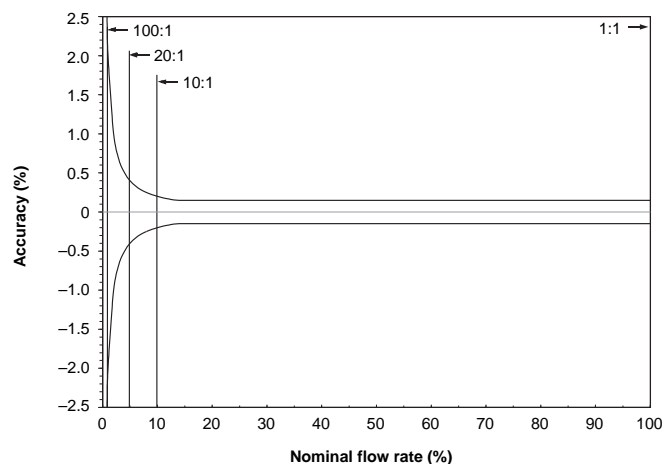
### Standard sensors with transmitter with MVD Technology

#### Accuracy ( $\pm$ %)

<i>Turndown</i>	<i>100:1</i>	<i>20:1</i>	<i>10:1</i>	<i>1:1</i>
D150 Tefzel	2.14	0.43	0.21	0.15
D300	1.0	0.2	0.15	0.15
D600	0.70	0.14	0.10	0.10

#### Pressure drop

<i>Turndown</i>	<i>100:1</i>	<i>20:1</i>	<i>10:1</i>	<i>1:1</i>
D150 Tefzel	psi	~0	0.1	0.2
	bar	~0	0.01	0.01
D300	psi	~0	0.1	0.2
	bar	~0	0.01	0.01
D600	psi	~0	0.1	0.1
	bar	~0	0.01	1.0



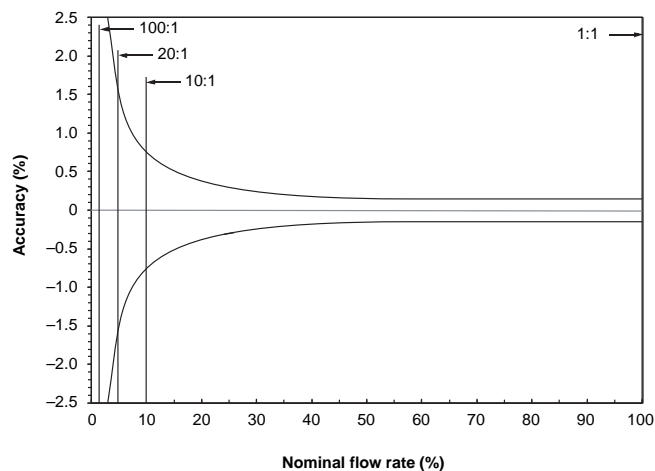
### High-pressure sensors with transmitter with MVD Technology

#### Accuracy ( $\pm$ %)

<i>Turndown</i>	<i>100:1</i>	<i>20:1</i>	<i>10:1</i>	<i>1:1</i>
DH100	7.5	1.5	0.75	0.15
DH150	8.57	1.71	0.86	0.15
DH300	5.71	1.14	0.57	0.15

#### Pressure drop

<i>Turndown</i>	<i>100:1</i>	<i>20:1</i>	<i>10:1</i>	<i>1:1</i>
DH100	psi	~0	0.1	0.2
	bar	~0	0.01	0.01
DH150	psi	~0	0.1	0.2
	bar	~0	0.01	0.01
DH300	psi	~0	0.1	0.3
	bar	~0	0.01	0.02



# Liquid flow performance *continued*

## Typical accuracy, turndown, and pressure drop

To determine accuracy, turndown, and pressure drop using your process variables, use Micro Motion's product selector at [www.micromotion.com](http://www.micromotion.com).

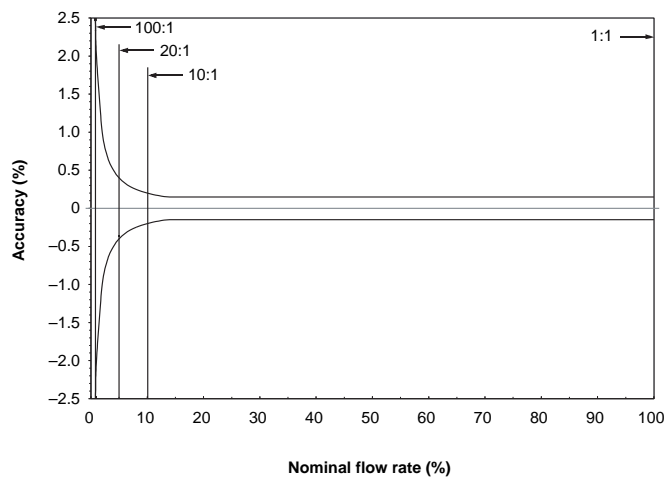
### High-temperature sensors with transmitter with MVD Technology

#### Accuracy ( $\pm$ %)

<i>Turndown</i>	<i>100:1</i>	<i>20:1</i>	<i>10:1</i>	<i>1:1</i>
DT65	2.0	0.40	0.20	0.15
DT100	2.0	0.40	0.20	0.15
DT150	2.0	0.40	0.20	0.15

#### Pressure drop

<i>Turndown</i>		<i>100:1</i>	<i>20:1</i>	<i>10:1</i>	<i>1:1</i>
DT65	psi	~0	0.1	0.2	13.2
	bar	~0	0.01	0.01	0.91
DT100	psi	~0	0.1	0.2	16.2
	bar	~0	0.01	0.01	1.12
DT150	psi	~0	0.1	0.1	4.6
	bar	~0	0.01	0.01	0.32



# Gas flow performance

When selecting sensors for gas applications, measurement accuracy is a function of fluid mass flow rate independent of operating temperature, pressure, or composition. However, pressure drop through the sensor is dependent upon operating temperature, pressure, and fluid composition. Therefore, when selecting a sensor for any particular gas application, it is highly recommended that each sensor be sized using Micro Motion's product selector, available at [www.micromotion.com](http://www.micromotion.com).

		lb/min	kg/h
<b>Nominal flow range<sup>(1)</sup></b>			
Standard sensors	D150 Tefzel	0 to 1400	0 to 38,136
	D300	—	—
	D600	0 to 40,000	0 to 1,090,909
High-pressure sensors	DH100	0 to 400	0 to 10,896
	DH150	0 to 1400	0 to 38,136
	DH300	—	—
High-temperature sensors	DT65	0 to 150	0 to 4086
	DT100	0 to 400	0 to 10,896
	DT150	0 to 700	0 to 19,680
<b>Maximum flow rate</b>			
Standard sensors	D150 Tefzel	2800	76,272
	D300	—	—
	D600	60,000	1,636,364
High-pressure sensors	DH100	800	21,792
	DH150	2800	76,272
	DH300	—	—
High-temperature sensors	DT65	300	8172
	DT100	800	21,792
	DT150	1400	38,136

(1) Micro Motion has adopted the terminology "nominal flow range." The upper limit of this range is the flow rate at which water at reference conditions causes approximately 15 psid (1 bar) of pressure drop.

## Gas flow performance *continued*

### Accuracy<sup>(1)</sup>

All models except D300 and DH300	Transmitter with MVD Technology	$\pm 0.65\%$ <sup>(2)</sup>
	All other transmitters	$\pm 0.65\% \pm [(\text{zero stability} / \text{flow rate}) \times 100]\%$ of rate

### Repeatability<sup>(1)</sup>

All models except D300 and DH300	Transmitter with MVD Technology	$\pm 0.30\%$ <sup>(2)</sup>
	All other transmitters	$\pm 0.30\% \pm [(\text{zero stability} / \text{flow rate}) \times 100]\%$ of rate

Zero stability		lb/min	kg/h
Standard sensors	D150 Tefzel	0.30	9.0
	D300	—	—
	D600	2.5	66.0
High-pressure sensors	DH100	0.30	9.0
	DH150	1.2	32.6
	DH300	—	—
High-temperature sensors	DT65	0.03	0.84
	DT100	0.08	2.16
	DT150	0.14	3.84

(1) Flow accuracy includes the combined effects of repeatability, linearity, and hysteresis. All specifications for liquids are based on reference conditions of water at 68 to 77 °F (20 to 25 °C) and 15 to 30 psig (1 to 2 bar), unless otherwise noted.

(2) When flow rate < zero stability / 0.0065, accuracy =  $\pm [(\text{zero stability} / \text{flow rate}) \times 100]\%$  of rate and repeatability =  $\pm [\frac{1}{2}(\text{zero stability} / \text{flow rate}) \times 100]\%$  of rate.



## Density specifications (liquid only)

		g/cm <sup>3</sup>	kg/m <sup>3</sup>
<b>Accuracy</b>			
Standard sensors	D150 Tefzel <sup>(1)</sup>	±0.002	±2.0
	D300	±0.0005	±0.5
	D300 Tefzel <sup>(1)</sup>	±0.001	±1.0
	D600	±0.0005	±0.5
High-pressure sensors	DH100	±0.002	±2.0
	DH150	±0.002	±2.0
	DH300	±0.001	±1.0
High-temperature sensors	DT65	±0.001	±1.0
	DT100	±0.001	±1.0
	DT150	±0.001	±1.0
<b>Repeatability</b>			
Standard sensors	D150 Tefzel	±0.001	±1.0
	D300	±0.0002	±0.2
	D300 Tefzel	±0.0005	±0.5
	D600	±0.0002	±0.2
High-pressure sensors	DH100	±0.001	±1.0
	DH150	±0.001	±1.0
	DH300	±0.0005	±0.5
High-temperature sensors	DT65	±0.0005	±0.5
	DT100	±0.0005	±0.5
	DT150	±0.0005	±0.5
<b>Range</b>	All models	0 to 5	0 to 5000

(1) Flow tubes are 316L stainless steel with Tefzel lining.

# Temperature specifications

<b>Accuracy</b>		±1 °C ± 0.5% of reading in °C	
<b>Repeatability</b>		±0.2 °C	
<b>Process fluid limits</b>		°F	°C
Standard sensors	D150 Tefzel <sup>(1)</sup>	+32 to +250	0 to +121
	D300	−400 to +400	−240 to +204
	D300 Tefzel <sup>(1)</sup>	+32 to +250	0 to +121
	D600 <sup>(2)</sup>	−58 to +140	−50 to +60
	With integral booster amplifier	−400 to +400	−240 to +204
High-pressure sensors	DH100, DH150, DH300	−400 to +400	−240 to +204
		−400 to +400	−240 to +204
High-temperature sensors	DT65, DT100, DH150	+32 to +800	0 to +426
<b>Ambient limits</b>		°F	°C
UL	All models except D600	+104 maximum	+40 maximum
	D600	−22 to +140	−30 to +60
CSA	All models except D600	−40 to +140	−40 to +60
	D600	−58 to +140	−50 to +60
ATEX	All models	Refer to graphs on pages 13–14.	

(1) Flow tubes are 316L stainless steel with Tefzel lining. Maximum allowable rate of sensor temperature change for Tefzel meters is 30 °F/hr (17 °C/h).

(2) Temperature limits for approved Model D600 sensors:

		<b>Process fluid</b>	<b>Ambient</b>
ATEX	integral booster amplifier	−4 to +140 °F (−20 to +60 °C)	−4 to +140 °F (−20 to +60 °C)
	remote booster amplifier	−4 to +189 °F (−20 to +87 °C)	−4 to +140 °F (−20 to +60 °C)
CSA	integral booster amplifier	−58 to +140 °F (−50 to +60 °C)	−58 to +140 °F (−50 to +60 °C)
	remote booster amplifier	−58 to +266 °F (−50 to +130 °C)	−58 to +140 °F (−50 to +60 °C)
UL	integral booster amplifier	−22 to +140 °F (−30 to +60 °C)	−22 to +140 °F (−30 to +60 °C)
	remote booster amplifier	−22 to +212 °F (−30 to +100 °C)	−22 to +140 °F (−30 to +60 °C)

(3) The remote booster amplifier has ambient temperature limits of −40 to +140 °F (−40 to +60 °C).

## Pressure ratings

		psi	bar
Flow tube rating <sup>(1)</sup>	D150 Tefzel <sup>(2)</sup>	1000	69
	D300	740	51
	D300 Tefzel <sup>(2)</sup>	740	51
	D600	625	43
	DH100	4937	340
	DH150	4790	330
	DH300	3110	214
	DT65 <sup>(3)</sup>	900	62
	DT100 <sup>(3)</sup>	900	62
	DT150 <sup>(3)</sup>	600	41

**PED compliance** Sensors comply to council directive 97/23/EC of 29 May 1997 on Pressure Equipment.

**Housing** All models Housing is not rated for pressure containment.

(1) Flow tube pressure rating at 77 °F (25 °C), according to ASME B31.3. For higher operating temperatures, tube pressure needs to be derated as follows:

Stainless steel sensors	Up to 300 °F (up to 148 °C)	None
	At 400 °F (204 °C)	7.2% derating
Nickel alloy sensors	Up to 200 °F (up to 93 °C)	None
	At 400 °F (204 °C)	9.2% derating

(2) Flow tubes are 316L stainless steel with Tefzel lining.

(3) Pressure rating at 800 °F (426 °C).

## Power supply

A power supply is required for the D600 booster amplifier.

Integral or remote mount booster amplifier 85–250 VAC, 50/60 Hz, 50 W maximum power

## Vibration limits (Model D600)

Meets IEC 68.2.6, endurance sweep, 5 to 2000 Hz, 50 sweep cycles at 1.0 g

# Environmental effects

## Process temperature effect

Process temperature effect is defined as the worst-case zero offset due to process fluid temperature change away from the zeroing temperature.

### % of nominal flow rate per °C<sup>(1)</sup>

Standard sensors	D150 Tefzel <sup>(2)</sup>	±0.002
	D300, D300 Tefzel <sup>(1)</sup> , D600	±0.004
High-pressure sensors	DH100, DH150, DH300	±0.01
High-temperature sensors	DT65, DT100, DT150	±0.002

## Temperature offset

The long-term temperature offset causes a shift in sensor calibration, which is attributed to a long-term change in the elasticity modulus as a result of sensor operation at elevated temperatures. The calibration shift is always negative and causes the flowmeter to read lower than the actual flow rate. The effects of this shift can be minimized with periodic calibration. Only Model DT sensors are affected.

### Offset

DT65, DT100, DT150	Above 600 °F (315 °C), -0.092% of rate per °C in addition to process temperature effect (above)
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## Pressure effect

Pressure effect is defined as the change in sensor flow and density sensitivity due to process pressure change away from the calibration pressure. Pressure effect can be corrected. Only the sensors listed below are affected.

### Pressure effect on flow accuracy

	% of rate per psi	% of rate per bar
D300	-0.009	-0.131
D300 Tefzel <sup>(1)</sup>	-0.009	-0.131
D600	-0.005	-0.073

### Pressure effect on density accuracy

	g/cm <sup>3</sup> per psi	kg/m <sup>3</sup> per bar
D300	-0.00001	-0.145
D300 Tefzel <sup>(2)</sup>	-0.00001	-0.145
D600	-0.0000031	-0.045

(1) Nominal flow rate is the upper limit of the nominal flow range.

(2) Flow tubes are 316L stainless steel with Tefzel lining.

# Hazardous area classifications

UL	D sensors, DH sensors	Class I, Div. 1, Groups C and D Class I, Div. 2, Groups A, B, C, and D Class II, Div. 1, Groups E, F, and G
	DT sensors	Class I, Div. 1, Groups C and D Class I, Div. 2, Groups A, B, C, and D
CSA	D sensors, DH sensors	Class I, Div. 1, Groups C and D Class I, Div. 2, Groups A, B, C, and D Class II, Div. 1, Groups E, F, and G
	DT sensors	Class I, Div. 1, Groups C and D Class I, Div. 2, Groups A, B, C, and D Class II, Div. 1, Groups E, F, and G
ATEX <sup>(1)</sup>	<b>D150</b> <b>DH100, DH150</b> II 2 G EEx ib IIB T1–T6 II 2 D IP65 T °C	
	<b>D300</b> <b>DH300</b> II 2 G EEx ib IIB T1–T6 II 2 D IP65 T °C	

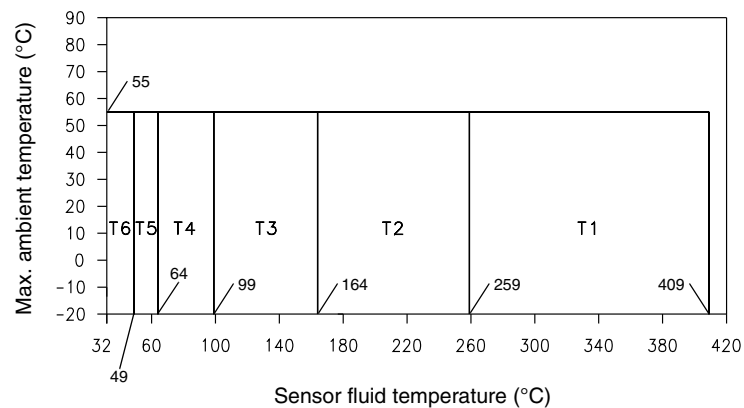
(1) ATEX “T” rating depends on the maximum temperature shown in the graphs above.

# Hazardous area classifications *continued*

ATEX<sup>(1)</sup>

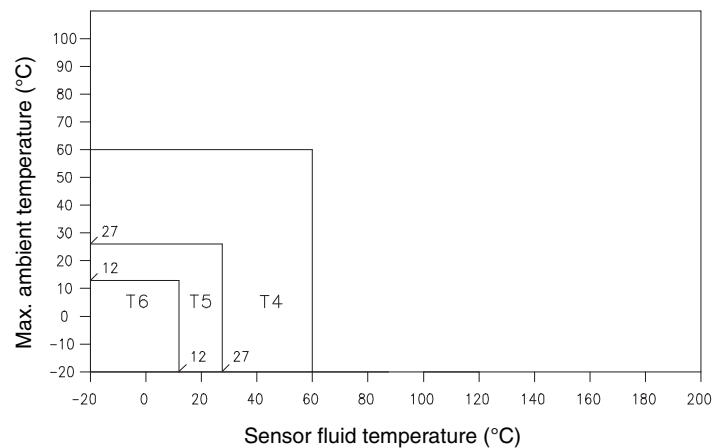
DT65, DT100, DT150

II 2 G EEx ib IIB T1–T6  
II 2 D IP65 T °C



D600 with integrally mounted booster amplifier

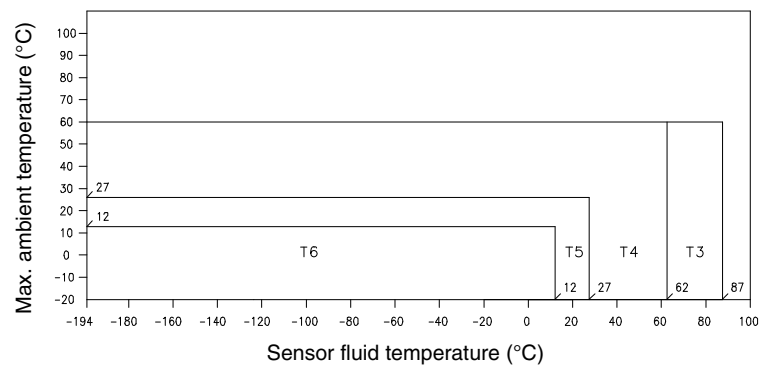
II 2 G EEx de [ib] IIB T4–T6  
II 2 D IP65 T °C



Note 1. Use the above graph to determine the temperature class for a given fluid and ambient temperature. The maximum surface temperature for dust is as follows: T6:T 80°C, T5:T 95°C, T4:T 128°C.

D600 with remote booster amplifier

II 2 G EEx de [ib] IIB T3–T6  
II 2 D IP65 T °C



Note 1. Use the above graph to determine the temperature class for a given fluid and ambient temperature. The maximum surface temperature for dust is as follows: T6:T 80°C, T5:T 95°C, T4:T 130°C, T3:T 155°C.

(1) ATEX “T” rating depends on the maximum temperature shown in the graphs above.

# Materials of construction

Sensors are available with the materials shown in the table below. For specific sensor material options, refer to the ordering information on pages 26–28. For wetted parts, material codes are:

SS	316L stainless steel flow tubes and flanges, CF-3M SS manifolds
Ni	Hastelloy® C-22 nickel alloy flow tubes and glands with Hastelloy CW-2M nickel alloy manifolds
Ni/SS	Hastelloy C-22 nickel alloy flow tubes with 316L SS manifolds and flanges
Lined	316L stainless steel flow tubes with Tefzel lining, CF-3M SS manifolds

Wetted parts <sup>(1)</sup>		SS	Ni	Ni/SS	Lined
Standard sensors	D150 Tefzel				◆
	D300	◆	◆		◆
	D600	◆			
High-pressure sensors	DH100	◆			
	DH150	◆			
	DH300	◆			
High-temperature sensors	DT65			◆	
	DT100			◆	
	DT150			◆	
<b>Housing</b>	304 stainless steel				
<b>Core processor</b>	Polyurethane-painted aluminum or 316L stainless steel; NEMA 4X (IP 65)				
<b>Junction box</b>	Polyurethane-coated aluminum; NEMA 4X (IP 65)				
<b>Booster amplifier</b>	Polyurethane-coated aluminum; NEMA 4X (IP66/67)				

(1) General corrosion guides do not account for cyclical stress, and therefore should not be relied upon when choosing a wetted material for your Micro Motion sensor. Please refer to Micro Motion's corrosion guide for material compatibility information.

## Weight

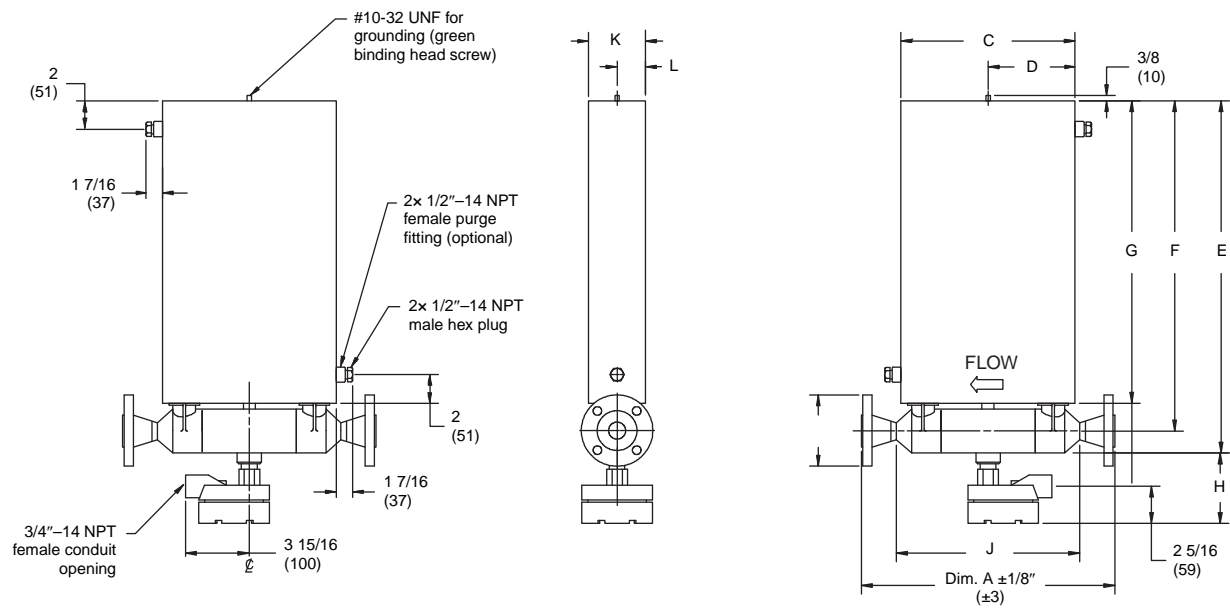
Approximate weight of sensors with noted process fittings.

		Process connection	lb	kg
Standard sensors	D150 Tefzel	1 1/2" ANSI CL150 WNRF flanges	46	20.9
	D300	3" ANSI CL150 WNRF flanges	113	60.4
	D600	6" ANSI CL150 WNRF flanges	958	435
High-pressure sensors	DH100	1 1/2" high-pressure, clamp-type flanges	80	36.4
	DH150	1 1/2" high-pressure, clamp-type flanges	80	36.4
	DH300	4" high-pressure, clamp-type flanges	218	99.1
High-temperature sensors	DT65	1/2" ANSI CL300 WNRF flanges	52	24
	DT100	1" ANSI CL300 WNRF flanges	105	48
	DT150	1 1/2" ANSI CL300 WNRF flanges	155	70

# Dimensions

## Models D100, D150, and DH150

Dimensions in *inches*  
(*mm*)



Dimensions<sup>(1)</sup>

		C	D	E	F	G	H	J	K	L
D150 Tefzel	inches (mm)	12 1/4 (311)	6 1/8 (156)	24 3/4 (629)	23 5/16 (592)	21 9/32 (541)	4 (102)	12 7/8 (327)	4 (102)	2 (51)
DH100	inches (mm)	12 1/4 (311)	6 1/8 (156)	24 27/32 (631)	23 13/32 (595)	21 3/8 (543)	4 (102)	12 7/8 (327)	4 (102)	2 (51)
DH150	inches (mm)	12 3/4 (324)	6 3/8 (162)	28 11/32 (720)	26 29/32 (683)	24 29/32 (633)	4 (102)	12 7/8 (327)	4 1/2 (114)	2 1/4 (57)

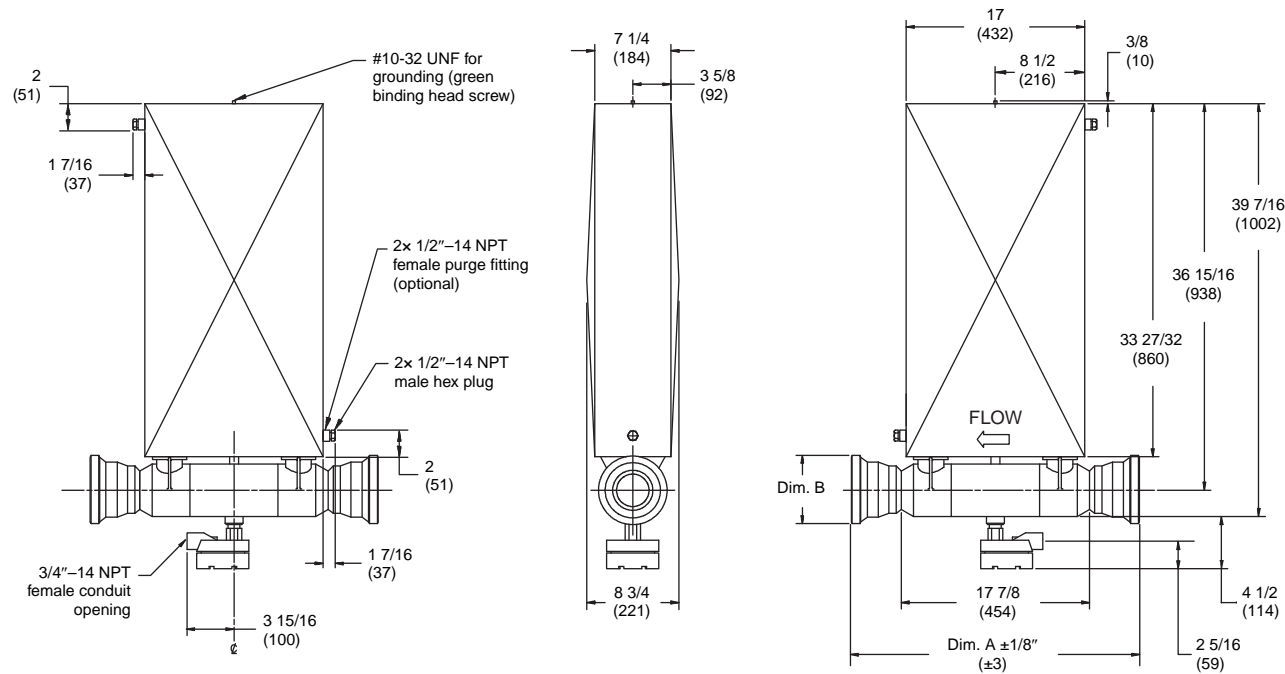
(1) For dimensions A and B, see the process fitting options on pages 23–25.



# Dimensions *continued*

## Models D300, D300 Tefzel, D300 Hastelloy, and DH300

Dimensions in *inches*  
(*mm*)

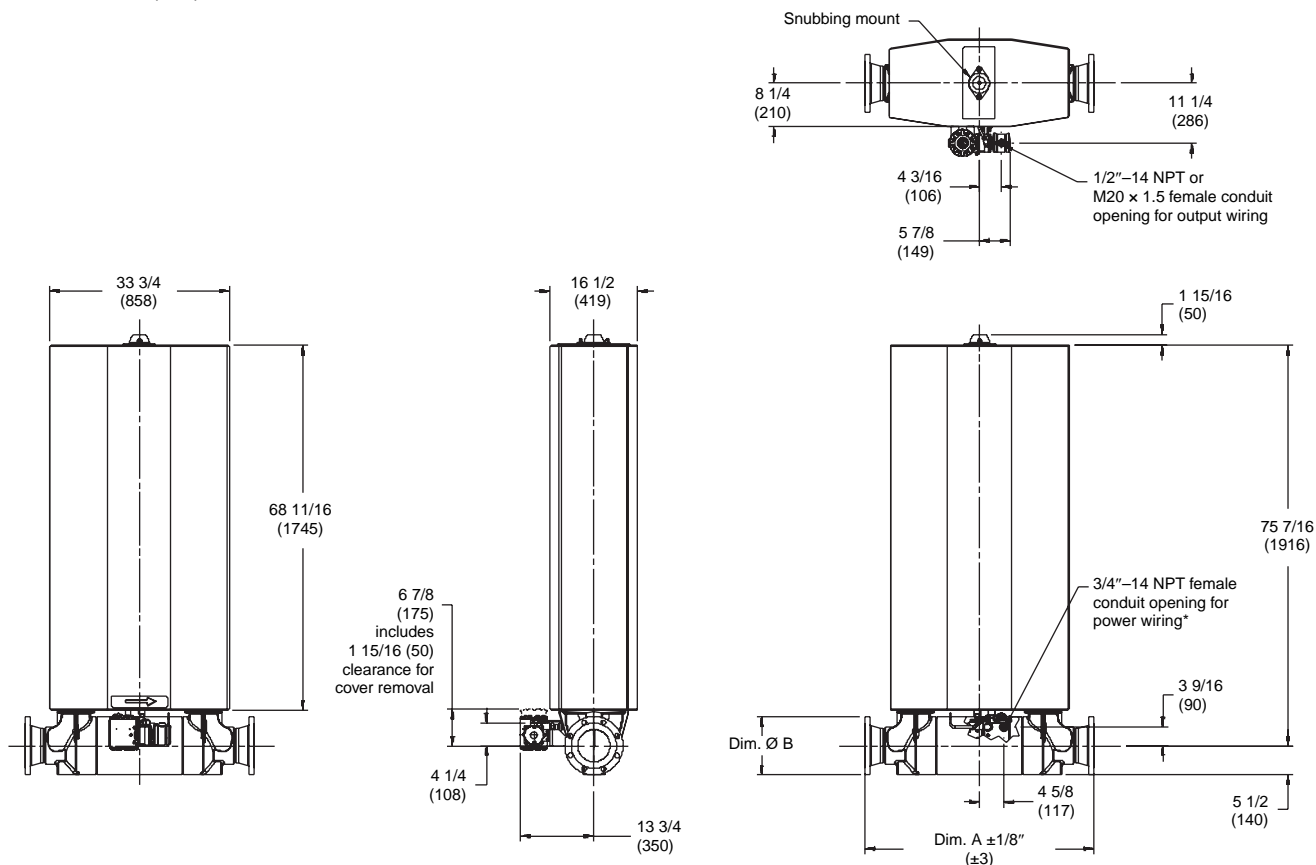


For dimensions A and B, see process fitting options on pages 23–25.

# Dimensions *continued*

## Model D600 with integrally mounted booster amplifier and core processor

Dimensions in *inches*  
(*mm*)



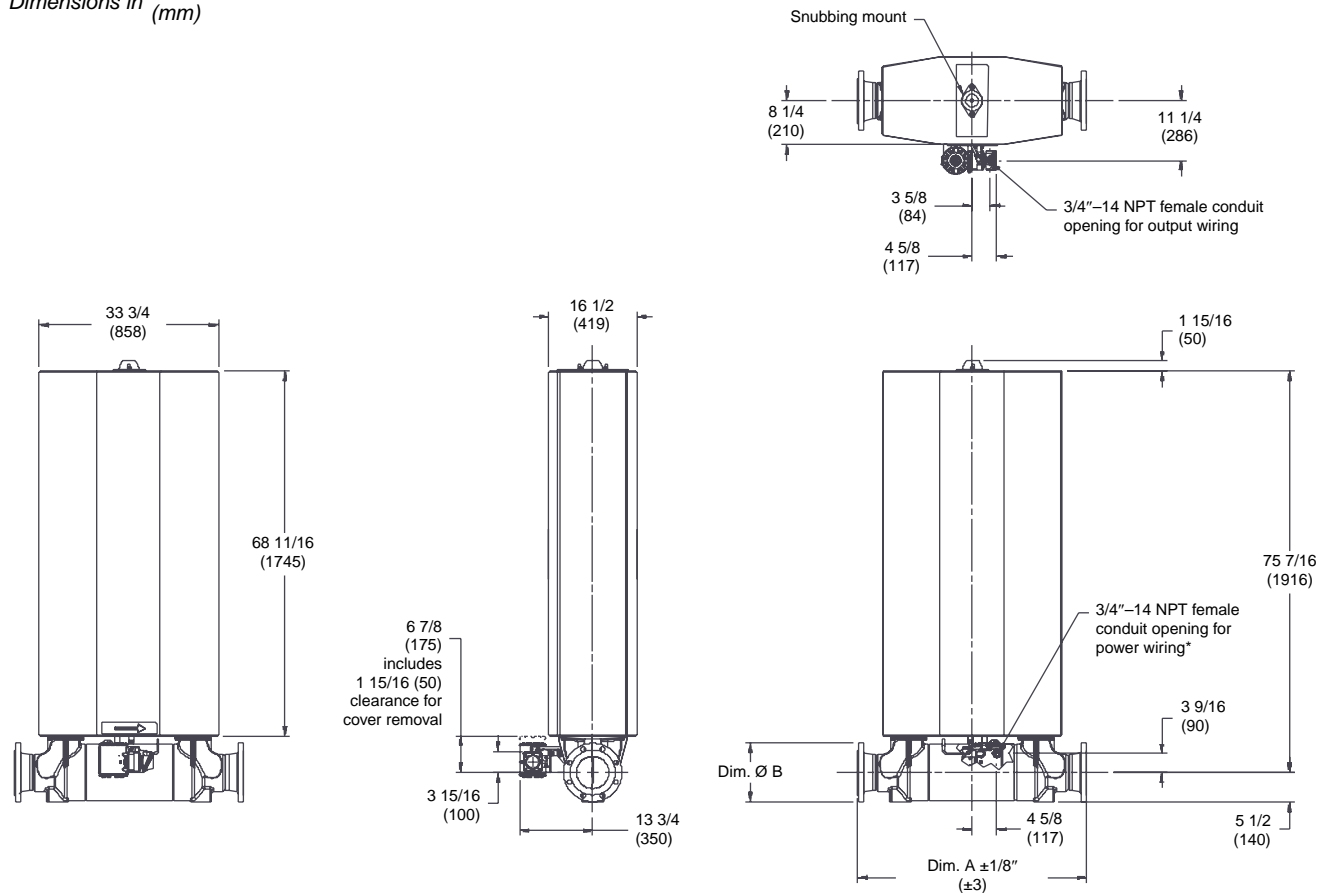
\* Adapters available in 1/2"-14 NPT or M20 x 1.5

For dimensions A and B, see process fitting options on pages 23–25.

# Dimensions *continued*

## Model D600 with integrally mounted booster amplifier and junction box

Dimensions in *inches*  
(*mm*)



\* Adapters available in  
1/2"-14 NPT or M20 x 1.5

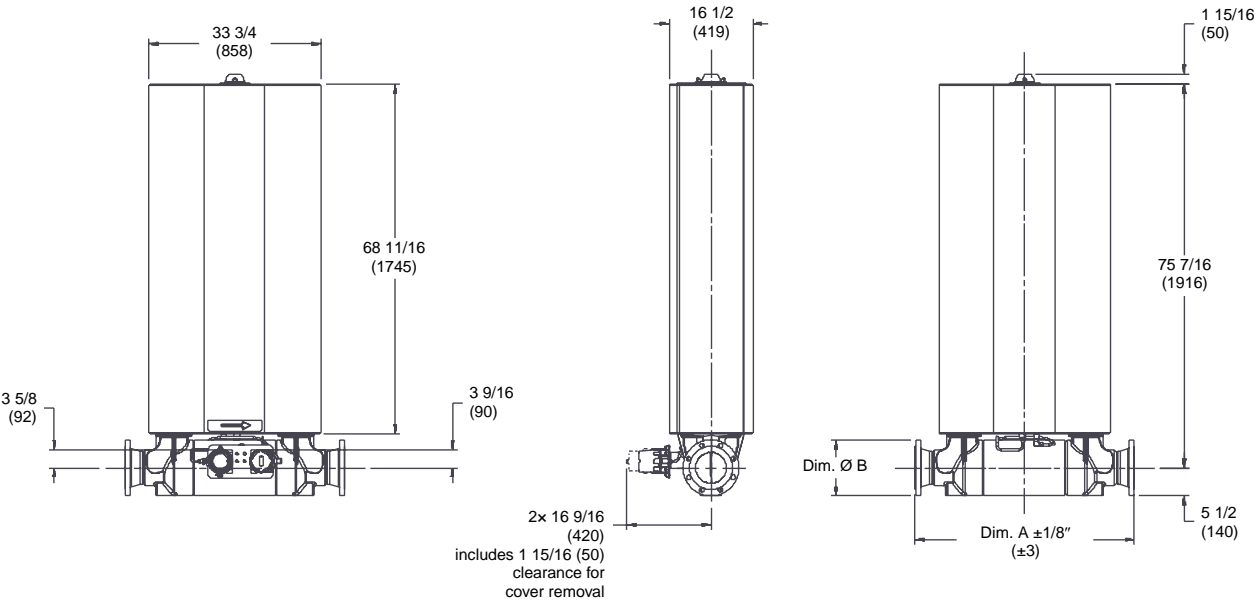
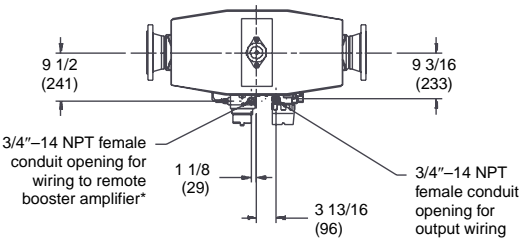
For dimensions A and B, see process fitting options on pages 23–25.

Dimensions *continued*

Model D600 with remote booster amplifier

Dimensions in *inches*  
(*mm*)

\* Adapters available in  
1/2"–14 NPT or M20 × 1.5

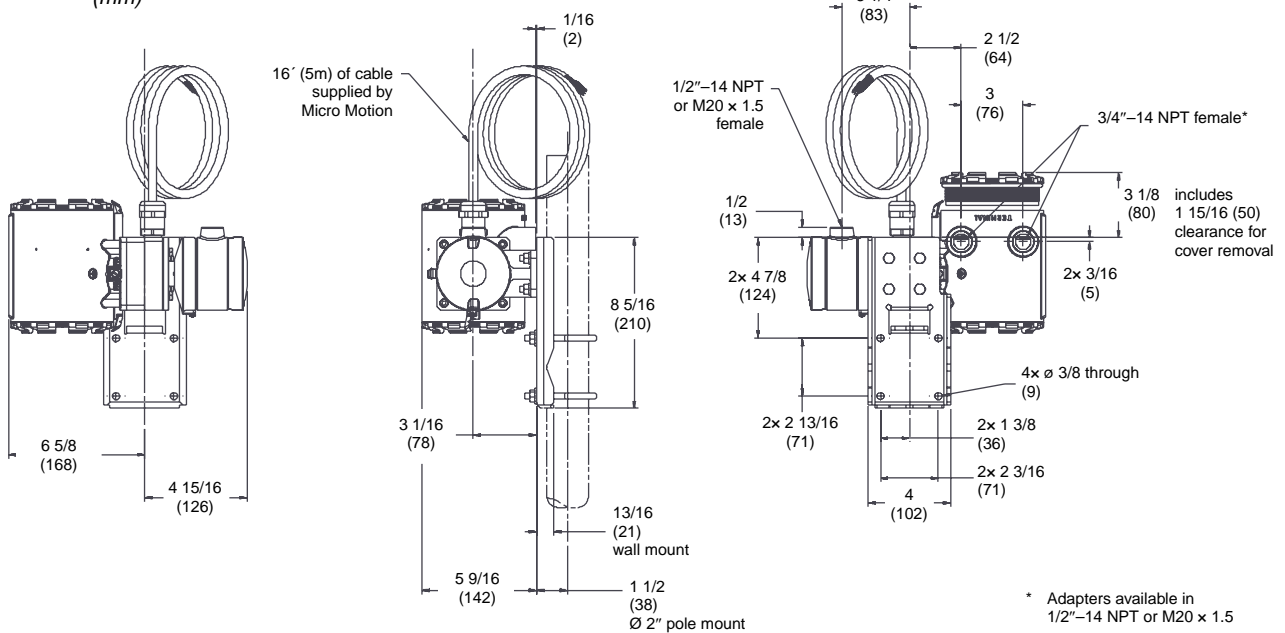


For dimensions A and B, see process fitting options on pages 23–25.

## Dimensions *continued*

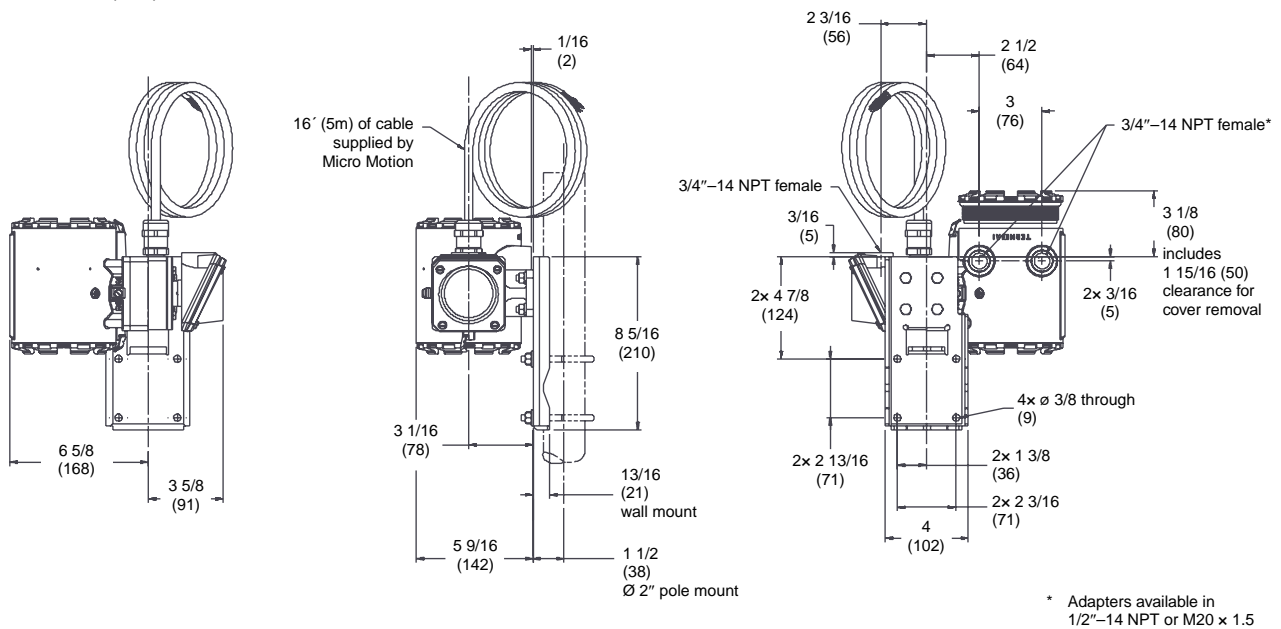
### Remote booster amplifier with core processor

Dimensions in *inches*  
(mm)



### Remote booster amplifier with junction box

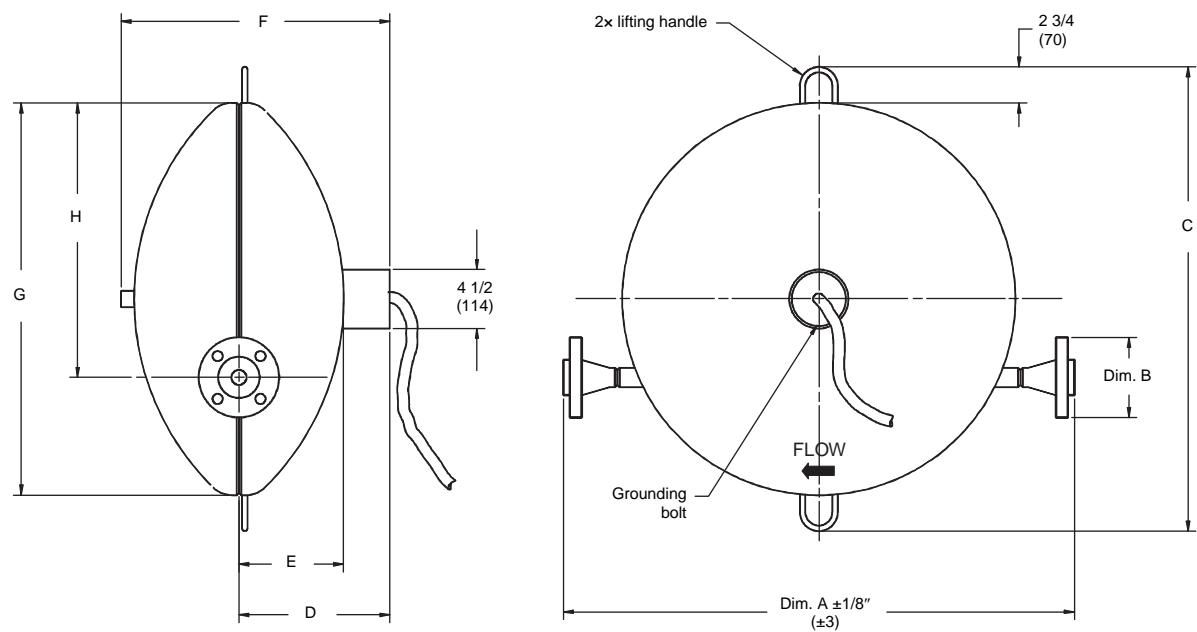
Dimensions in *inches*  
(mm)



Dimensions *continued*

Models DT65, DT100, and DT150

Dimensions in *inches*  
*(mm)*



		Dimensions <sup>(1)</sup>					
		C	D	E	F	G	H
DT65	inches (mm)	25 1/2 (648)	9 (229)	5 1/2 (140)	15 1/2 (394)	20 (508)	16 (406)
DT100	inches (mm)	29 1/2 (749)	10 (254)	6 1/2 (165)	17 1/2 (444)	24 (610)	18 (457)
DT150	inches (mm)	35 1/2 (902)	11 1/2 (292)	8 (203)	20 1/2 (521)	30 (762)	21 (533)

(1) For dimensions A and B, see the process fitting options on pages 23–25.

# Fitting options

	Fitting code	Dim. A face-to-face inches (mm)	Dim. B outside diameter inches (mm)
<b>DH100 fitting options<sup>(1)</sup></b>			
1 1/2-inch high-pressure clamp-type flange; size 11 seal ring <sup>(2)</sup>	140	17 1/2 (445)	3 1/8 (79)
1-inch ANSI CL900/1500 weld neck raised face flange	925	19 1/16 (484)	5 7/8 (149)
1-inch ANSI CL2500 weld neck raised face flange	927	20 9/32 (515)	6 1/4 (159)
DN25 PN250 weld face flange; DIN 2628 type E face	922	17 29/32 (455)	5 29/32 (150)
DN25 PN320 weld face flange; DIN 2629 type E face	923	18 15/16 (481)	6 15/16 (160)
DN25 PN400 weld face flange; DIN 2627 type E face	924	19 7/8 (505)	7 1/16 (179)
<b>DH150 fitting options<sup>(1)</sup></b>			
1 1/2-inch high-pressure clamp-type flange; size 14 seal ring <sup>(3)</sup>	154	17 1/2 (445)	3 1/8 (79)
1 1/2-inch ANSI CL900/1500 weld neck raised face flange	936	19 25/32 (502)	7 (178)
1 1/2-inch ANSI CL2500 weld neck raised face flange	938	22 1/32 (560)	8 (203)
DN40 PN160 weld neck flange; DIN 2638 type E face	932	17 13/16 (452)	6 11/16 (170)
DN40 PN250 weld neck raised face flange; DIN 2628 type E face	933	19 1/16 (484)	7 9/32 (185)
DN40 PN320 weld neck raised face flange; DIN 2629 type E face	934	19 23/32 (501)	7 11/16 (195)
DN40 PN400 weld neck raised face flange; DIN 2627 type E face	935	21 7/16 (545)	8 21/32 (220)
<b>D150 Tefzel fitting options<sup>(1)</sup></b>			
1 1/2-inch ANSI CL150 weld neck raised face flange	141	17 5/8 (448)	5 (127)
1 1/2-inch ANSI CL300 weld neck raised face flange	142	18 1/8 (460)	6 1/8 (156)
1 1/2-inch ANSI CL600 weld neck raised face flange	143	18 3/4 (476)	6 1/8 (156)
2-inch ANSI CL150 weld neck raised face flange	218	17 25/32 (452)	6 (152)
DN40 PN40 weld neck flange; DIN 2635 type C face	144	16 5/16 (414)	5 29/32 (150)

(1) Fittings listed here are standard options. Other types of fittings are available. The face to face dimensions for any custom fittings ordered using a 998 or 999 fitting code are not represented in this table. It is necessary to confirm face to face dimensions of these fittings at time of ordering. Contact your local Micro Motion representative.

(2) Oteco hub size: 1½ OC11. Mating connectors (not included): Grayloc hub size 1½ GR11, seal ring size 11; clamp size 1½, stainless steel.

(3) Oteco hub size: 1½ OC14. Mating connectors (not included): Grayloc hub size 1½ GR14, seal ring size 14; clamp size 1½, stainless steel.

## Fitting options *continued*

	Fitting code	Dim. A face-to-face inches (mm)	Dim. B outside diameter inches (mm)
<b>D300 stainless steel fitting options<sup>(1)</sup></b>			
3-inch ANSI CL150 weld neck raised face flange	155	23 1/4 (591)	7 1/2 (191)
3-inch ANSI CL300 weld neck raised face flange	156	24 (610)	8 1/4 (210)
3-inch ANSI CL600 weld neck raised face flange	157	24 3/4 (629)	8 1/4 (210)
3-inch sanitary fitting (Tri-Clamp compatible)	161	21 3/8 (543)	3 19/32 (91)
DN80 PN40 weld neck flange; DIN 2635 type C face	158	22 5/16 (567)	7 7/8 (200)
DN80 PN64 weld neck flange; DIN 2636 type E face	941	23 17/32 (598)	8 15/32 (215)
JIS 80mm 10K weld neck raised face flange	159	21 11/16 (551)	7 9/32 (185)
JIS 80 mm 20K weld neck raised face flange	160	22 5/16 (567)	7 7/8 (200)
<b>D300 Tefzel fitting options<sup>(1)</sup></b>			
3-inch ANSI CL150 weld neck raised face flange	155	23 1/4 (591)	7 1/2 (191)
3-inch ANSI CL300 weld neck raised face flange	156	24 (610)	8 1/4 (210)
DN80 PN40 weld neck flange; DIN 2635 type C face	158	22 5/16 (567)	7 7/8 (200)
<b>D300 Hastelloy fitting options<sup>(1)</sup></b>			
3-inch ANSI CL150 lap joint flange	203	25 5/8 (651)	7 1/2 (191)
3-inch ANSI CL300 lap joint flange	204	25 5/8 (651)	8 1/4 (210)
3-inch ANSI CL600 lap joint flange	949	25 5/8 (651)	8 1/4 (210)
DN80 PN40 lap joint flange; DIN 2656 type C face	211	25 5/8 (651)	7 7/8 (200)
JIS 80 mm 10K lap joint flange	210	25 5/8 (651)	7 9/32 (185)
<b>DH300 fitting options<sup>(1)</sup></b>			
4-inch high-pressure clamp-type flange; size 27 seal ring <sup>(2)</sup>	164	25 1/16 (637)	6 (151)
3-inch ANSI CL300 weld neck raised face flange	156	24 (610)	8 1/4 (210)
3-inch ANSI CL600 weld neck raised face flange	157	24 3/4 (629)	8 1/4 (210)
3-inch ANSI CL900 weld neck raised face flange	246	26 5/16 (668)	9 1/2 (241)
3-inch ANSI CL1500 weld neck raised face flange	946	27 5/8 (702)	10 1/2 (267)
3-inch ANSI CL2500 weld neck raised face flange	947	31 5/8 (803)	12 (305)
DN80 PN100 weld neck flange; DIN 2637 type E face	942	24 1/32 (610)	9 1/16 (230)
DN80 PN160 weld neck flange; DIN 2638 type E face	943	24 21/32 (626)	9 1/16 (230)
DN80 PN250 weld neck raised face flange; DIN 2628 type E face	944	25 29/32 (658)	10 1/32 (255)

(1) Fittings listed here are standard options. Other types of fittings are available. The face to face dimensions for any custom fittings ordered using a 998 or 999 fitting code are not represented in this table. It is necessary to confirm face to face dimensions of these fittings at time of ordering. Contact your local Micro Motion representative.

(2) Oteco hub size: 4 OC27. Mating connectors (not included): Grayloc hub size 4 GR27, seal ring size 27; clamp size 4, stainless steel.



## Fitting options *continued*

	Fitting code	Dim. A face-to-face inches (mm)	Dim. B outside diameter inches (mm)
<b>D600 fitting options<sup>(1)</sup></b>			
6-inch ANSI CL150 weld neck raised face flange	165	42 13/16 (1087)	11 (279)
6-inch ANSI CL300 weld neck raised face flange	166	43 9/16 (1107)	12 1/2 (317)
DN150 PN40 weld neck flange; DIN 2635 type C face	167	42 1/16 (1068)	11 55/64 (301)
JIS 150mm 10K weld neck raised face flange	168	40 15/32 (1028)	11 1/16 (281)
JIS 150mm 20K weld neck raised face flange	169	42 1/16 (1068)	12 1/16 (306)
<b>DT65 fitting options<sup>(1)</sup></b>			
1/2-inch ANSI CL300 weld neck raised face flange	114	23 7/8 (606)	3 3/4 (95)
1/2-inch ANSI CL600 weld neck raised face flange	115	23 7/8 (606)	3 3/4 (95)
DN15 PN40 weld neck flange; DIN 2635 type C face	116	22 1/4 (565)	3 3/4 (95)
JIS 15mm 20K weld neck raised face flange	118	22 1/4 (565)	3 3/4 (95)
<b>DT100 fitting options<sup>(1)</sup></b>			
1-inch ANSI CL300 weld neck raised face flange	129	29 23/32 (755)	4 7/8 (124)
1-inch ANSI CL600 weld neck raised face flange	130	30 7/32 (768)	4 7/8 (124)
DN25 PN40 weld neck flange; DIN 2635 type C face	131	28 (711)	4 17/32 (115)
JIS 25mm 20K weld neck raised face flange	133	28 (711)	4 59/64 (125)
<b>DT150 fitting options<sup>(1)</sup></b>			
1 1/2-inch ANSI CL300 weld neck raised face flange	142	39 1/32 (992)	6 1/8 (156)
1 1/2-inch ANSI CL600 weld neck raised face flange	143	39 43/64 (1008)	6 1/8 (156)
DN40 PN40 weld neck flange; DIN 2635 type C face	144	37 13/64 (945)	5 29/32 (150)
JIS 40mm 20K weld neck raised face flange	146	37 13/64 (945)	5 33/64 (140)

(1) Fittings listed here are standard options. Other types of fittings are available. The face to face dimensions for any custom fittings ordered using a 998 or 999 fitting code are not represented in this table. It is necessary to confirm face to face dimensions of these fittings at time of ordering. Contact your local Micro Motion representative.

# Ordering information — all models except D600

Model	Product description
	<b>Standard sensors</b>
DS150Z	Micro Motion Coriolis D-Series sensor; 1 1/2-inch (38 mm); standard pressure; Tefzel lining
DS300S	Micro Motion Coriolis D-Series sensor; 3-inch (75 mm); standard pressure; 316L stainless steel
DS300H	Micro Motion Coriolis D-Series sensor; 3-inch (75 mm); standard pressure; Hastelloy C-22
DS300Z	Micro Motion Coriolis D-Series sensor; 3-inch (75 mm); standard pressure; Tefzel lining
	<b>High-pressure sensors</b>
DH100S	Micro Motion Coriolis D-Series sensor; 1-inch (25 mm); high pressure; 316L stainless steel
DH150S	Micro Motion Coriolis D-Series sensor; 1 1/2-inch (38 mm); high pressure; 316L stainless steel
DH300S	Micro Motion Coriolis D-Series sensor; 3-inch (75 mm); high pressure; 316L stainless steel
	<b>High-temperature sensors</b>
DT065H	Micro Motion Coriolis D-Series sensor; 0.65-inch (17 mm); high temperature; Hastelloy C-22/316L stainless steel
DT100H	Micro Motion Coriolis D-Series sensor; 1-inch (25 mm); high temperature; Hastelloy C-22/316L stainless steel
DT150H	Micro Motion Coriolis D-Series sensor; 1 1/2-inch (38 mm); high temperature; Hastelloy C-22/316L stainless steel
<b>Code</b>	<b>Process connections</b>
###	See fitting options on pages 23–25.
<b>Code</b>	<b>Case options</b>
	<b>Models DS150Z and DS300Z</b>
S	Standard case
P	Purge fitting (two 1/2-inch NPT female)
	<b>Models DH100S, DH150S, and DH300S</b>
S	Standard case
	<b>Models DS300S and DS300H</b>
S	Standard case
P	Purge fitting (two 1/2-inch NPT female)
D	Metal rupture disk
R	Purge fittings and rupture disk
	<b>Models DT065H, DT100H, DT150H</b>
G	Standard high-temperature case
<b>Code</b>	<b>Approvals</b>
M	Micro Motion Standard (no approval)
N	Micro Motion Standard / PED compliant
U	UL
C	CSA
B	ATEX / PED compliant
P <sup>(1)</sup>	NEPSI
<b>Typical model number: DH150S 154 S U</b>	

(1) Available only with language code M (Chinese).

# Ordering information — Model D600

Model	Product description
DS600S	Micro Motion Coriolis D-Series sensor; 6-inch; standard pressure; 316L stainless steel
Code	Process connections
###	See fitting options on page 25.
Code	Case options
S	Standard case
Code	Electronics interface
K	Integral booster amplifier with core processor for connecting to a remotely mounted transmitter with MVD technology
M	Integral booster amplifier with 9-wire junction box
N	Remote booster amplifier with core processor for connecting to a remotely mounted transmitter with MVD technology
P	Remote booster amplifier with 9-wire junction box
Code	Conduit connections
	<b>Electronics interface codes K and N</b>
B	1/2-inch NPT — no gland
E	M20 — no gland
F	Brass/nickel cable gland (cable diameter 0.335 to 0.394 inches [8.5 to 10 mm])
G	Stainless steel cable gland (cable diameter 0.335 to 0.394 inches [8.5 to 10 mm])
	<b>Electronics interface codes M and P (9-wire junction box)</b>
A	3/4-inch NPT — no gland
H	Brass/nickel cable gland
J	Stainless steel cable gland
Code	Approvals
M	Micro Motion Standard (no approval)
N	Micro Motion Standard / PED compliant
U	UL
C	CSA
A	CSA C-US (U.S.A. and Canada)
Z	ATEX — Increased safety / PED compliant
F	ATEX — Flameproof / PED compliant
P <sup>(1)</sup>	NEPSI — Flameproof
Continued on next page	

(1) Available only with language code M (Chinese).

## Ordering information — Model D600 *continued*

Code	Language
A	Danish quick reference guide and English manual
D	Dutch quick reference guide and English manual
E	English quick reference guide and English manual
F	French quick reference guide and French manual
G	German quick reference guide and German manual
H	Finnish quick reference guide and English manual
I	Italian quick reference guide and English manual
J	Japanese quick reference guide and English manual
M	Chinese quick reference guide and English manual
N	Norwegian quick reference guide and English manual
O	Polish quick reference guide and English manual
P	Portuguese quick reference guide and English manual
S	Spanish quick reference guide and Spanish manual
W	Swedish quick reference guide and English manual
Code	Connection to booster amplifier
A	3/4-inch NPT conduit opening
B <sup>(1)</sup>	M20 brass/nickel adapter
C <sup>(1)</sup>	M20 stainless steel adapter
D <sup>(1)</sup>	1/2-inch NPT brass/nickel adapter
E <sup>(1)</sup>	1/2-inch NPT stainless steel adapter
Code	Measurement application software
Z	No measurement application software
Code	Future options
Z	Reserved for future use
Code	Factory options
Z	Standard product
X	ETO product
Typical model number: DS600S 165 S M A U E A Z Z Z	

(1) Not available with approval code U.







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