



**Badger Meter**

## How to Read an Encoder

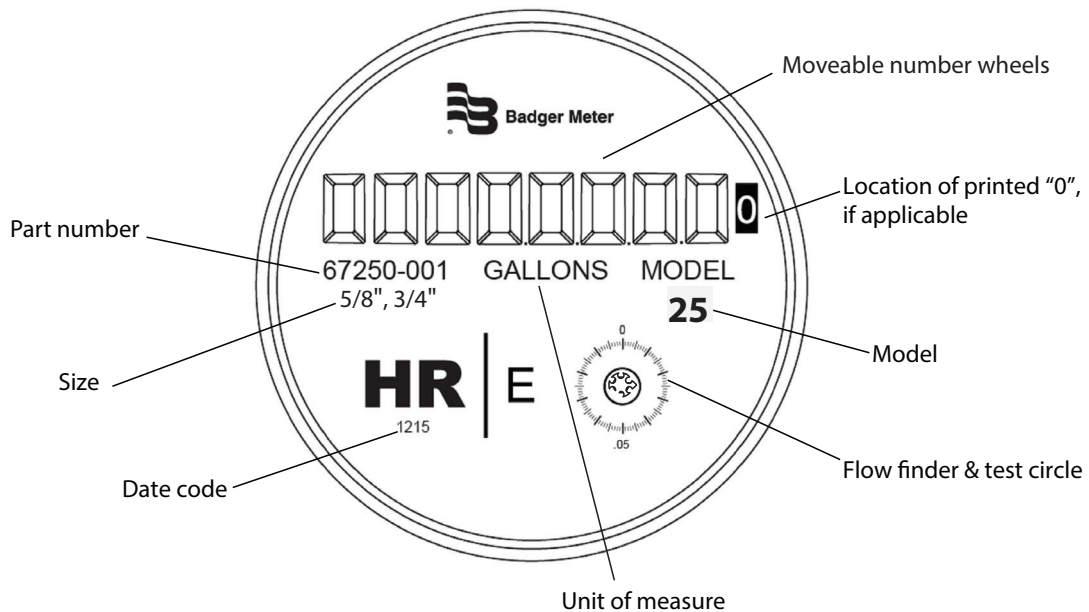
HR | E High Resolution Encoder

The HR-E high resolution encoder has an 8-wheel display to show consumption down to 1/10th gallon, 1/100th ft<sup>3</sup>, 1/1000th m<sup>3</sup>.

### UTILITY BILLING STANDARDS FOR METER READING

The HR-E is designed with white and black number wheels for local readability with the white number wheels corresponding to the “typical” utility standard meter reading units:

- Gallons – reading to the nearest 1000 gallons
- Cubic Feet – reading to the nearest 100 ft<sup>3</sup>
- Cubic Meters – reading to the nearest 1 m<sup>3</sup>



## GALLONS

Typical Billing Unit of 1000 Gallons

**Recordall® Disc LP, M25, M35, M40, M55, M70, Recordall CSM 2", 3", 4", 6" Low Side**

1 2 3 4 5 6 7 8

Meter reading to the nearest?	10th gallon = 1234567.8
	1 gallon = 1234567
	10 gallons = 123456
	100 gallons = 12345
Typical Billing Units →	1000 gallons = 1234

**Recordall Disc M120 & M170, Recordall TSM 1-1/2", 2", 3" & 4", Recordall CSM 2", 3" & 4" High Side, Recordall Combo 8" Low Side**

1 2 3 4 5 6 7 8

Meter reading to the nearest?	1 gallon = 12345678
	10 gallons = 1234567
	100 gallons = 123456
Typical Billing Units →	1000 gallons = 12345

**Recordall TSM 6", 8" & 10", Recordall CSM 6" High Side, Recordall Combo 8" High Side**

1 2 3 4 5 6 7 8 0

Meter reading to the nearest?	1 gallon = 123456780
	10 gallons = 12345678
	100 gallons = 1234567
Typical Billing Units →	1000 gallons = 123456

**Recordall TSM 12", 16" and 20"**

1 2 3 4 5 6 7 8 00

Meter reading to the nearest?	1 gallon = 1234567800
	10 gallons = 123456780
	100 gallons = 12345678
	1000 gallons = 1234567
Typical Billing Units →	10000 gallons = 123456

## CUBIC FEET

### Typical Billing Unit of 100 Cubic Feet

**Recordall Disc LP, M25, M35, M40, M55, M70, Recordall CSM 2", 3", 4", 6" Low Side**

1 2 3 4 5 6 7 8

Meter reading  
to the nearest?

100th ft<sup>3</sup> = 123456.78  
10th ft<sup>3</sup> = 123456.7  
1 ft<sup>3</sup> = 123456  
10 ft<sup>3</sup> = 12345  
100 ft<sup>3</sup> = 1234

Typical Billing Units →

**Recordall Disc M120 & M170, Recordall TSM 1-1/2", 2", 3" & 4", Recordall CSM 2", 3" & 4" High Side,  
Recordall Combo 8" Low Side**

1 2 3 4 5 6 7 8

Meter reading  
to the nearest?

10th ft<sup>3</sup> = 1234567.8  
1 ft<sup>3</sup> = 1234567  
10 ft<sup>3</sup> = 123456  
100 ft<sup>3</sup> = 12345

Typical Billing Units →

**Recordall TSM 6", 8" & 10", Recordall CSM 6" High Side, Recordall Combo 8" High Side**

1 2 3 4 5 6 7 8

Meter reading  
to the nearest?

1 ft<sup>3</sup> = 12345678  
10 ft<sup>3</sup> = 1234567  
100 ft<sup>3</sup> = 123456

Typical Billing Units →

**Recordall TSM 12" and 16"**

1 2 3 4 5 6 7 8 0

Meter reading  
to the nearest?

1 ft<sup>3</sup> = 123456780  
10 ft<sup>3</sup> = 12345678  
100 ft<sup>3</sup> = 1234567

Typical Billing Units →

**Recordall TSM 20"**

1 2 3 4 5 6 7 8 00

Meter reading  
to the nearest?

1 ft<sup>3</sup> = 1234567800  
10 ft<sup>3</sup> = 123456780  
100 ft<sup>3</sup> = 12345678

Typical Billing Units →

## CUBIC METERS

### Typical Billing Unit of 1 Cubic Meter

#### Recordall Disc LP, M25, M35, M40, M55, M70, Recordall CSM 2", 3", 4", 6" Low Side

1 2 3 4 5 **6 7 8**

Meter reading to the nearest?  Typical Billing Units →	$1000\text{th m}^3 = 12345.678$ $100\text{th m}^3 = 12345.67$ $10\text{th m}^3 = 12345.6$ $1\text{ m}^3 = 12345$ $10\text{ m}^3 = 1234$
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#### Recordall Disc M120 & M170, Recordall TSM 1-1/2", 2", 3" & 4", Recordall CSM 2", 3" & 4" High Side, Recordall Combo 8" Low Side

1 2 3 4 5 6 **7 8**

Meter reading to the nearest?  Typical Billing Units →	$100\text{th m}^3 = 123456.78$ $10\text{th m}^3 = 1234567.8$ $1\text{ m}^3 = 123456$ $10\text{ m}^3 = 12345$
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#### Recordall TSM 6", 8", 10" & 12", Recordall CSM 6" High Side, Recordall Combo 8" High Side

1 2 3 4 5 6 7 **8**

Meter reading to the nearest?  Typical Billing Units →	$10\text{th m}^3 = 1234567.8$ $1\text{ m}^3 = 1234567$ $10\text{ m}^3 = 123456$
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#### Recordall TSM 16" & 20"

1 2 3 4 5 6 7 8

Meter reading to the nearest?  Typical Billing Units →	$1\text{ m}^3 = 1234567$ $10\text{ m}^3 = 123456$
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