

# SZ Turbine Meters

## *For Gas Measurement*

**Compact, accurate SZ Turbine Meters** are ideally suited for measurement of natural gas, propane, butane, acetylene and a variety of other industrial gases including air at both high and low pressures. All meters are capable of pulse generation for transmission of data to accessory equipment.



# SZ Turbine Meters



## Features

- Lightweight, Aluminum Construction
- Maximum Working Pressure 175 PSI
- Permanently Lubricated Bearings
- Low Frequency / High Frequency
- Pulse Output Standard
- Rugged Mechanical Index Rotatable Through 360°
- Self Supporting Line Mount Design
- Mount in Any Position

Direct Read Odometer Type Index

Rangeability: 20 - 1

Operating Temp. 0°F - +140°F

Connections —

1" Female NPT

1 1/2" Female NPT

2" Wafer

3" Wafer

4" Wafer

} For installation  
between ANSI 150  
flanges.

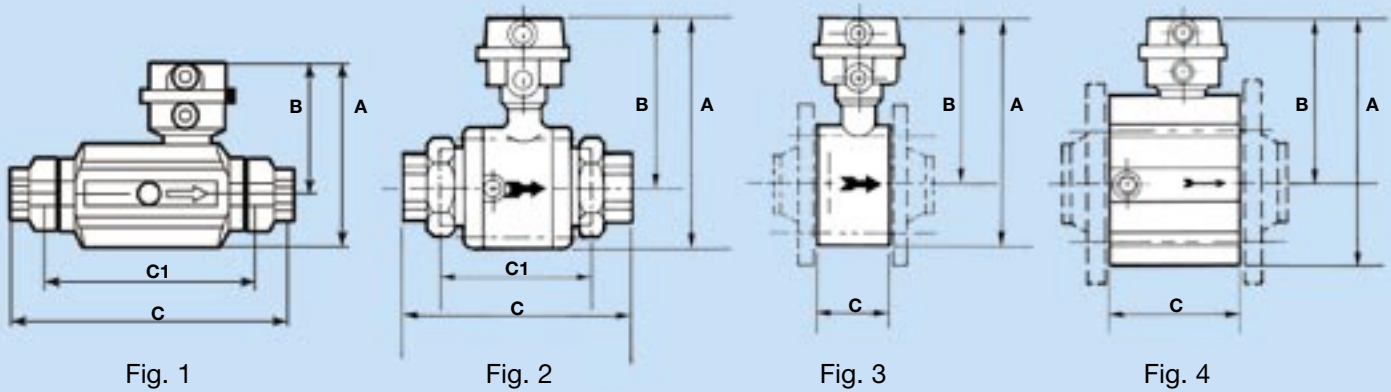
*Recommended for indoor application only.*

## Rated Capacity (SCFH) at Operating Pressure

Pressure PSI	SZ-1	SZ-2	SZ-40	SZ-65	SZ-100	SZ-160	SZ-250
4oz.	900	1500	2300	3500	5600	8800	15000
2	1020	1700	2610	3975	6360	9990	17040
5	1200	2000	3080	4690	7500	11795	20100
10	1500	2500	3860	5880	9410	14785	25200
15	1820	3000	4650	7070	11315	17780	31400
20	2125	3540	5430	8260	13220	20770	35400
25	2430	4050	6210	9450	15125	23765	40500
30	2735	4560	7000	10640	17030	26760	45600
40	3350	5580	8560	13025	20840	32750	55800
50	3950	6600	10120	15400	24650	38730	66000
60	4560	7620	11690	17790	28450	44720	76200
75	5550	9150	14035	21350	34170	53700	91530
100	7000	11700	17950	27310	43700	68670	117040
125	8540	14250	21800	33260	53220	83630	142550
150	10060	16800	25760	39210	62740	98600	168060
175	11600	19350	29680	45160	72270	113560	193575

Capacities based on 14.73 Atmospheric Pressure and 14.73 Base Pressure

## Dimension Data



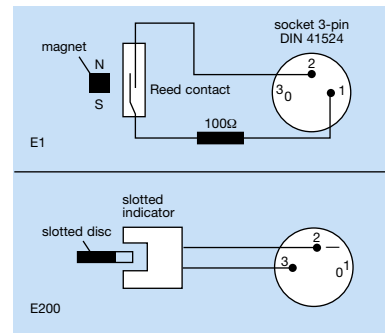
## Pressure Drop at Capacity

MODEL	FIG.	PIPE SIZE/CONNECTION	C	C1	A	B	INCHES WATER COLUMN	m Bar	WEIGHT (lbs)	SHIPPING WT. (approx.)
SZ-1	1	1" FNPT	9.45"	7.28"	6.26"	4.56"	0.9	2.2	4	7
SZ-2	1	1" FNPT	9.45"	7.28"	6.26"	4.56"	2.2	5.5	4	7
SZ-40	2	1½" FNPT	7.5"	5.0"	7.95"	5.9"	2.4	6.0	7	8
SZ-65	3	2" ANSI 150 WAFER	2.36"	—	7.95"	5.9"	4.8	12.0	3	7
SZ-100	4	3" ANSI 150 WAFER	4.73"	—	8.86"	5.9"	2.6	6.5	9	18
SZ-160	4	3" ANSI 150 WAFER	4.73"	—	8.86"	5.9"	5.6	14.0	9	18
SZ-250	4	4" ANSI 150 WAFER	5.9"	—	9.65"	6.5"	3.2	8.0	12	23

## Pulse Output Data

Model No.	Low Frequency E1 Form "A" Reed Switch Cubic Feet/Pulse	High Frequency E200 Proximity Sensor Pulses/Cubic Feet
SZ-1	1	50
SZ-2	1	50
SZ-40	10	25
SZ-65	10	25
SZ-100	100	2.5
SZ-160	100	2.5
SZ-250	100	2.5

## Technical Data

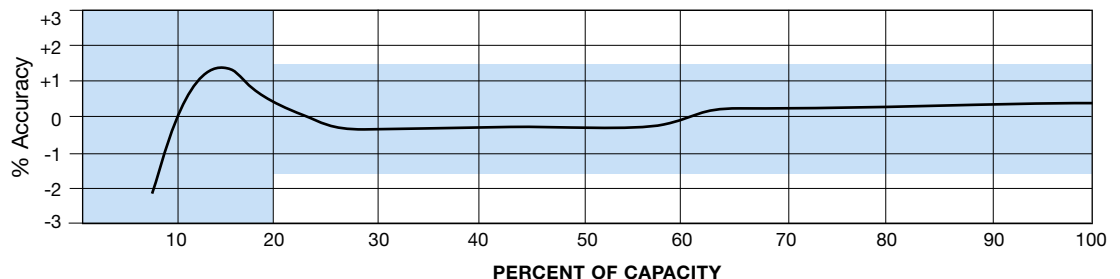


**E1 (series) reed contact**  
 Max. Voltage: 24 Vdc  
 Max. Current: 50mA  
 Max. Capacity: .25 Watts  
 Resistance: 100Ω ± 20%

**E200 pulser**  
 Standard Voltage:  
 $U_n = 8VDC$   
 Current consumption:  
 active surface open  
 $I \geq 2.1mA$   
 active surface closed  
 $I \leq 1.2mA$

## Models SZ-65 to SZ-250

The accuracy curve illustrates that the error over the maximum capacity range is within guaranteed limits. An increase of density — e.g. higher line pressure — does not change the accuracy.



# IMAC Electronic Remote Totalizer



The Remote Totalizer line is an inexpensive way to remote read, totalize, normalize, standardize and retransmit pulses or obtain an instantaneous flow rate. The products featured are all made in America by IMAC Systems, Inc.

## R1 Remote Totalizer - Pulse Counter

- Simple Pulse Counter
- Counts either low frequency (E1 Pulser) or high frequency (E200 Pulser)
- Battery powered with 7 - 10 year life
- Toggle reset inside enclosure
- 8-digit LCD display
- NEMA 4 Enclosure\*: 5" width x 5" height x 3 3/4" depth

## R2 Remote Totalizer - Remote Volume Totalizer

- Counts switch closures (E1 Pulser)
- Battery powered with 7 - 10 year life
- Divide capability by 2, 10 and 100
- Optional push button counter stop
- 6-digit LCD display
- Toggle reset inside enclosure
- NEMA 4 Enclosure\*: 5" width x 5" height x 3 3/4" depth

## R3 Remote Totalizer - Remote Fixed Factor Totalizer

- Counts either low frequency (E1 Pulser) or high frequency (E200 Pulser)
- Applies conversion factors to input pulses - to normalize, standardize, or convert measurement units
- Useful for fixed factor pressure conversion to show corrected volume
- Features a Form C relay for a factored pulse output
- 120 / 230 Volt AC power required

- 6-digit LCD display
- Toggle reset inside enclosure
- NEMA 4 Enclosure\*: 7 1/4" width x 9 1/4" height x 5" depth

## R4 Remote Totalizer - Remote Totalizer with Flow Rate Indication and Analog Output

- Accepts either low frequency (E1 Pulser) or high frequency (E200 Pulser)
- Displays volume and flow rate
- Can program measurement units in USCS (English Units) or SI (Metric Units) and apply fixed factors
- Generates a 4-20mA output proportional to flow rate
- 120 / 230 Volts AC power required
- 8-digit LCD display
- NEMA 4 Enclosure\*: 7 1/4" width x 9 1/4" height x 5" depth

\*NEMA 4 enclosures are intended for indoor and outdoor use. They provide protection against windblown dust, rain, splashing and hose directed water. The fiberglass reinforced polyester construction allows the product line to be nonconductive, lightweight and impact resistant.

\*\*The range for remote totalizers is 1000 ft. using 18 - 22 gauge shielded cable (available at IMAC)

\*\*\*The operating temperature range for the remote totalizers is -20° F to +145° F; the storage temperature is -40° F to +160° F