

# VARIABLE AREA FLOWMETERS



## SLZ SERIES METALLIC TUBE VARIABLE - AREA FLOWMETERS

### GENERAL

SLZ Series Variable Area Flowmeters with metallic measuring tube feature simplicity, reliability, wide application range, high precision and easy installation. Compared with glass tube flowmeters, this series has high pressure safety, high temperature safety, easy reading etc. has additional advantages. Petroleum, chemical, electricity, pharmacy, food, water processing industry etc. widely used in areas.

### ■ CONNECTION TYPE



Tri-Clamp Connection



Flange Connection



Threaded Connection

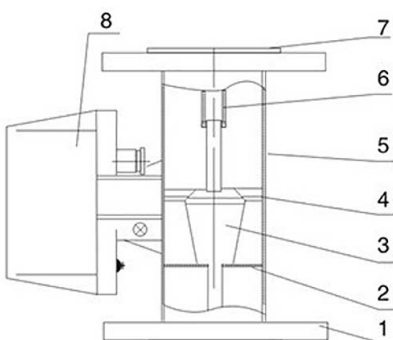


Flame-Proof Flange Connection

### ■ MAIN TECHNICAL SPECIFICATION

Measure Range	Water/Liquid (20°C) ( 2.5-10000) L/h Air (20°C) (0.07-750) m <sup>3</sup> /h
Range Ratio	10:1
Accuracy	± 1.5%, ± 2.5%
Fluid Working Pressure	DN15 - DN50: 40 Bar DN80 - DN150: 16 Bar
Working Temperature	-80°C ~ +200°C (PTFE ≤ +85°C)
Connection Types	* Flange Copnnection * Threaded Connection * Tri-Clamp Connection
Enviromental Temperature	-25°C ~+ 55°C
Fluid Viscosity	DN15 ≤ 50 mPa.S; DN25-DN100 ≤ 250 mPa.S
Electricity Signal Oututs	Output Signal: (4-20mA)
	Accuracy: 1%
	Temperature Influence: 0.5% / 10°C
	Power Supply: (13-30) VDC Power Supply Consume: ≤ 250 mW
Alarm Output	Power Supply: 24 (± 10%) VDC
	Power Loss : ≤ 3W
	Working Temperature: -25°C ~+ 60°C
Ex Proof	EXIbIIC5

### ■ CONSTRUCTION



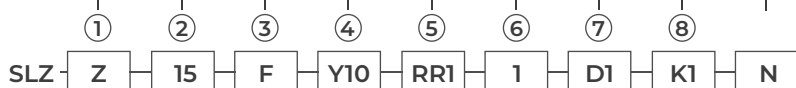
- |                      |                  |
|----------------------|------------------|
| 1- Flange Connection | 5- Tube Body     |
| 2- Guider            | 6- Stopper       |
| 3- Float             | 7- Spring Collar |
| 4- Measuring Tube    | 8- Indicator     |

# SLZ SERIES METALLIC TUBE VARIABLE-AREA FLOWMETERS

## MODEL SELECTION

Metallic Tube Variable - Area Flowmeters	
Z	Local Indicator
D	Local Indicator with 4-20MA Output
DE	LCD Display with 4-20MA Output
DN15-150	Flowmeter Size (mm)
<b>Structure From</b>	
Z	Flange Connection (ANSI1501bs)
D	Tri-camp Connection
DE	Threaded Connection
<b>Akış Yönü</b>	
Y10	Bottom - Top
Y20	Right - Left or Left - Right (Horizontal)
Y30	In & Out on the same side
Y40	In & Out on the differenr side
Y50	Bottom - Side
<b>Contacting Liquid</b>	
RRO	316 / oCr1 8Ni 12 Mo2Ti
RR1	304/ 1Cr18 Ni9Ti
RL	316L
RP	PTFE
TI	Titamium
HC	Hastelloy C
<b>Indicator</b>	
1	Aluminum Alloy
2	Stainless Steel
3	Flame - Proof Type
<b>Supply Power</b>	
D1	DC 24V Power Supply
D2	Battery Power Supply
N	N/A
<b>Alarm</b>	
K1	High Alarm Limit (HA) (Only "Z" Model)
K2	Low Alarm Limit (LA) (Only "Z" Model)
K12	One (HA) and One (LA) (Only "Z" Model)
N	N/A
<b>Additional Function</b>	
T	Heat Jacket Type
Z	Damp Type
B	Flame-Proof Type
H	Hart
N	N/A

Selection



■ MEASURING RANGE

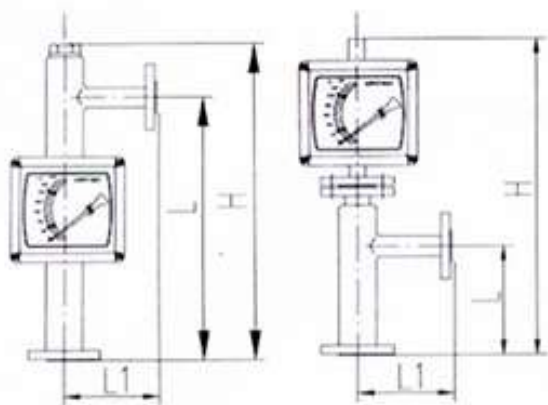
Diameter (mm)	Water (L/h) 20°C		Air (m <sup>3</sup> /h) 20°C	Maximum Pressure Loss (Bar)		Accuracy	Working Pressure
	RRO RRI RL	PTFE	RRO RRI RL	RRO RRI RL	PTFE		
15	1.6 - 16		0.05 - 0.5	0.65		±1.5%	≤ 40 Bar
	2.5 - 25		0.07 - 0.7	0.65			
	4 - 40	2.5 - 25	0.12 - 1.2	0.65	0.55		
	6 - 60	4 - 40	0.18 - 1.8	0.66	0.55		
	10 - 100	6 - 60	0.3 - 3	0.66	0.56		
	16 - 160	10 - 100	0.4 - 4.0	0.68	0.58		
	25 - 250	16 - 160	0.7 - 7.0	0.72	0.61		
	40 - 400	25 - 250	1.0 - 10	0.86	0.61		
	60 - 600	40 - 400	1.5 - 15	1.11	0.73		
20	80 - 800	60 - 600	2.5 - 25	1.11	0.73		
	100 - 1000	80 - 800	3.0 - 30	1.11	0.73		
	40 - 400	40 - 400	0.75 - 7.5	0.86	0.61		
25	60 - 600	60 - 600	1.2 - 12	1.11	0.73		
	100 - 1000	100 - 1000	1.8 - 18	1.11	0.73		
	40 - 400	40 - 400	1 - 10	0.65	0.59		
	60 - 600	50 - 500	1.5 - 15	0.65	0.62		
	80 - 800	60 - 600	2.5 - 25	0.70	0.70		
	100 - 1000	80 - 800	4 - 40	0.70	0.59		
	160 - 1600	100 - 1000	5 - 50	0.80	0.60		
	250 - 2500	160 - 1600	6 - 60	1.08	0.68		
32	400 - 4000	250 - 2500	8 - 80	1.58	0.92		
	500 - 5000	400 - 4000	10 - 100	1.62	1.10		
	600 - 6000	500 - 5000	15 - 150	1.65	1.20		
	160 - 1600	160 - 1600	3.0 - 30	0.80	0.60		
40	250 - 2500	250 - 2500	5.0 - 50	1.08	0.68		
	400 - 4000	400 - 4000	7.5 - 75	1.58	0.92		
	600 - 6000	600 - 6000		1.65	1.20		
50	400 - 4000	400 - 4000	3.0 - 30	0.80	0.65		
	600 - 6000	600 - 6000	5.0 - 50	1.1	0.68		
	1000 - 10000	1000 - 10000	7.5 - 75	1.62	0.94		
65	600 - 6000	400 - 4000	18 - 180	0.80	0.65		
	1000 - 10000	600 - 6000	25 - 250	1.10	0.68		
	1600 - 16000	1000 - 10000	40 - 400	1.62	0.94		
	2000 - 20000	1600 - 16000	50 - 500	1.70	1.45		
80	2500 - 25000	2000 - 20000	60 - 600	1.90	1.65		
	1200 - 12000	1200 - 12000	18 - 180	0.82	0.69		
	1600 - 16000	1600 - 16000	30 - 300	0.82	0.69		
100	2500 - 25000	2500 - 25000	37 - 370	1.55	1.19		
	1600 - 16000	1000 - 10000	50 - 500	0.82	0.69		
	2500 - 25000	1600 - 16000	60 - 600	1.55	1.19		
	4000 - 40000	2000 - 20000	100 - 1000	2.00	1.61		
125	5000 - 50000	2500 - 25000	150 - 1500	2.50	1.81		
	4000 - 40000	2000 - 20000	100 - 1000	0.84	0.81		
	5000 - 50000	2500 - 25000	150 - 1500	1.12	0.91		
	6000 - 60000	4000 - 40000	180 - 1800	2.00	1.65		
	8000 - 80000	5000 - 50000	240 - 2400	2.54	2.22		
150	10000 - 100000	8000 - 80000	300 - 3000	3.2	2.92		
	10000 - 100000	8000 - 80000	300 - 3000	4.2	3.85		
150	25000 - 125000	10000 - 100000		4.5	0.42		
	12500 - 125000	10000 - 100000		4.5	0.42		
150	15000 - 150000	12500 - 125000		6.0	0.58		

**NOTE: 1.** To ensure the working stability of the flowmeter, working pressure in liquids is 2 times the maximum pressure loss of the model and in the Air is not less than 5 times.

**2.** Above measuring range is for reference only, you can select other measuring ranges according to 10:1 range ratio.

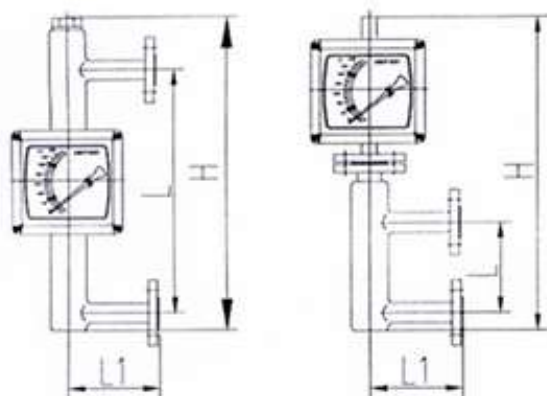
**3.** Flow meters can be custom made for you according to fluid density, viscosity, temperature, pressure and other parameters you supply at special order.

# CONNECTION TYPES AND DIMENSIONS



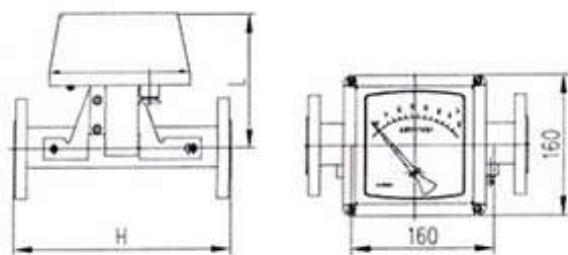
Y50 Bottom-Side  
(DN15 - 25)

Y50 Bottom-Side  
(DN50 - 100)

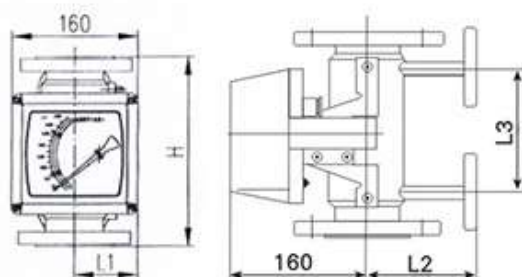


Y30 In - Out the  
Same Side  
(DN15 - 25)

Y30 In - Out  
Same Side  
(DN50 - 100)



Y20 From Right to Left, From Left to Right  
(Horizontal)



Heat Jacket - Flange Connection

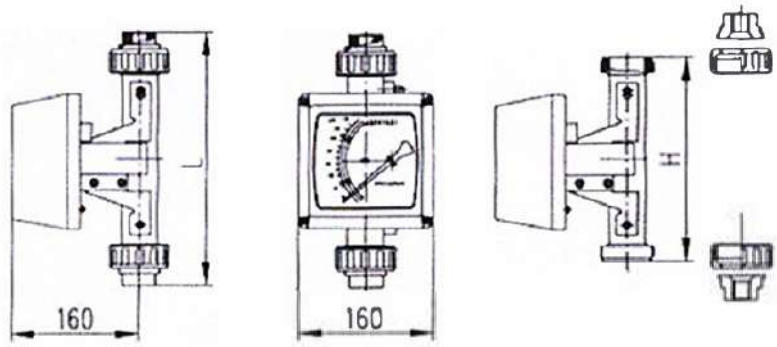
DN	H	L	L1
15	350	250	120
20	350	250	120
25	350	250	120
32	350	250	120
40	350	250	120
50	600	250	120
65	600	250	120
80	700	250	150
100	700	250	150

DN	H	L	L1
15	500	250	120
20	500	250	120
25	500	250	120
32	500	250	120
40	500	250	120
50	650	250	120
65	650	250	120
80	800	300	150
100	800	300	150

DN	H	L
15	250	160
20	250	160
25	250	160
32	250	160
40	250	160
50	250	160
65	250	160
80	250	160
100	250	160
125	250	160
150	300	160

DN	H	L1	L2	L3
15	250	84	116	150
20	250	84	116	150
25	250	95	128	150
32	250	99	132	150
40	250	99	132	150
50	250	111	144	150
65	250	111	144	150
80	250	130	183	150
100	250	146	179	150

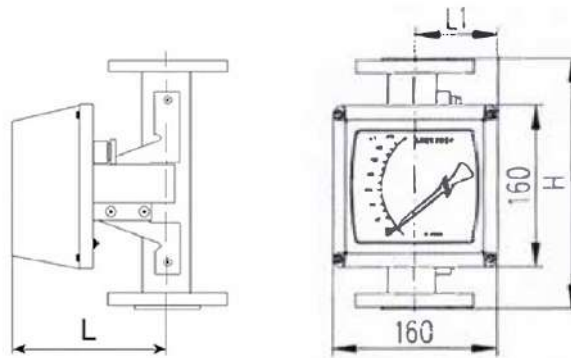
■ **THREADED CONNECTION**



Y10 From Bottom to Top Threaded Connection

DN	H	L	L1
15	250	315	G1/2"
20	250	315	G3/4"
25	250	315	G1"
32	250	315	G1-
40	250	315	G1-
50	250	315	G2"
65	250	315	G2-
80	250	330	G3"
100	250	330	G4"

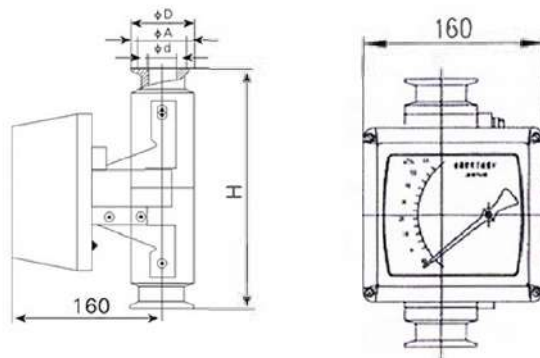
■ **FLANGE CONNECTION**



Y10 From Bottom to Top

DN	H	L	L1
15	250	160	80
20	250	160	80
25	250	160	89
32	250	160	91
40	250	160	91
50	250	160	104
65	250	160	104
80	250	160	130
100	250	160	137
125	250	160	137
150	300	160	137

■ TRI-CLAMP CONNECTION

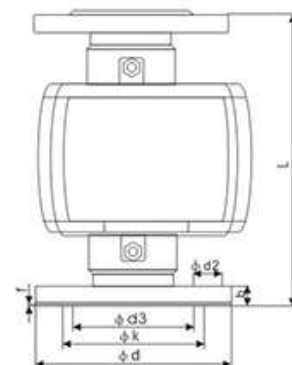


Y 10 Tri - Clamp Connection

DN	H	D	A	d
15	250	34	27.5	22
20	250	50.5	43.5	37
25	250	50.5	43.5	37
32	250	50.5	43.5	37
40	250	50.5	43.5	37
50	250	64	56.5	50
65	250	77.5	70.5	58
65	250	91	83.5	67
80	250	106	97	80
100	250	119	110	90

■ FLANGE AND OUTLINE DIMENSIONS

Size (mm) / Pressure (Bar)	Dimensions (mm)						
	Ød	Ød3	Øk	Ød2	b	f	L
15/4.0	95	45	65	4-Ø14	16	2	250
25/4.0	115	68	85	4-Ø14	18	2	250
50/4.0	165	102	125	4-Ø18	20	3	250
80/1.6	200	138	160	4-Ø18	20	3	250
100/1.6	220	162	180	4-Ø18	20	3	250
125/16	250	188	210	4-Ø18	22	3	250
150/1.6	285	218	240	4-Ø22	22	3	300

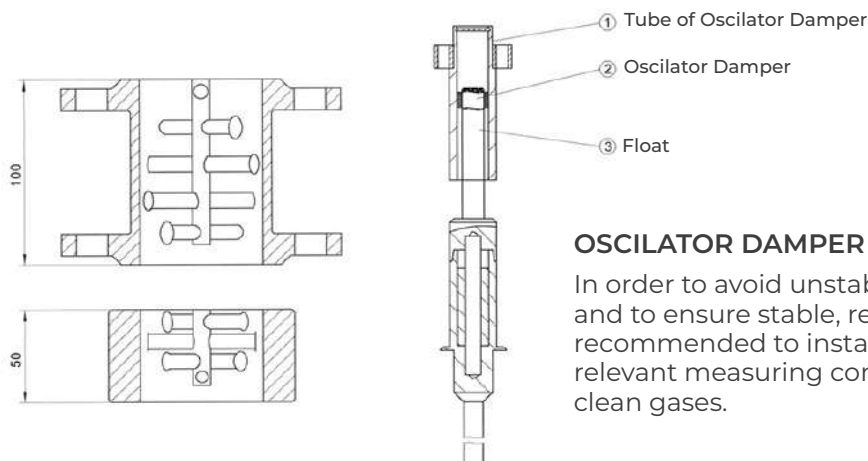


MAGNET FILTER

If the fluids contain ferromagnetic particles, it is very important to install the appropriate filters. The vertical positioning pattern of the filtering rods minimizes the pressure loss. Each filtering magnetic rod is lined with PTFE, which protects the rods from corrosion.

**Type 1:** (with socket connection) Height: 100mm

**Type 2:** (compressed) Height: 50 mm



OSCILATOR DAMPER

In order to avoid unstable pressure at the inlet of the flowmeters and to ensure stable, reliable and durable operation, it is recommended to install high-tech oscillation dampers on the relevant measuring components of the devices when measuring clean gases.