

## BFT Series General Electron Flowmeter

### General

BFT Series General Electron Flowmeter (hereafter call flowmeter), is a precise flowmeter to measure the flow of liquid in the tube. This flowmeter is a patent right product, which is independently researched and developed by the technicians in our company based on innovation and improvement of foreign latest advanced technology. It has the characteristic of high accuracy, compact size, wide flow range, strong anti-jammed, sands proof, anti-jamming, high-temperature, resistance, anti-corrosive, low power consumer, local LCD display, far transmit etc. It is widely used in petroleum, chemistry, metallurgy, light industry, especially applied in measurement of watery oil in oil field and measurement of low-viscosity sewage, finished oil and edible oil. The flowmeter is composed of four parts: body, core, sensor and meter head. The core is easily taken out from body, which is very convenient for the periodical maintenance. Applied with advanced electron technology and particular design, it remains high stability and anti-disturbance. It can be applied in explosion situation with the anti-explosion grade of EXdIBT4. For local display, this flowmeter is charged by inner lithium battery, which can continuously work for three years at least.

### Feature

- 1.High Accuracy, Large Turndown Ratio
- 2.Anti-High Temperature and Erosion-proof
- 3.Anti-impurity
- 4.Well Interchange
- 5.Local instant flow and total flow LCD display, distant signal transmission:
- 6.Measurable medium: Water, waste water, low viscosity oil, etc.



Patent No.:ZL-99223288.0

Picture 1



### Principle

When the liquid flows through the flowmeter, it pushes the wheel running. Within a certain flow range, the circling speed of wheel is direct proportional to the volume of the flow. When wheel running, the magnetic stainless slice of wheel will approach the loop of sensor and periodically change resistance of loop to result the emerge of impulse signal which is direct proportional with volume at the moment through the change of amount of loop's magnetism. This signal, after analyzed and amplified, will display instant and total flow separately.

### Ambient Condition

Ambient Temp.: -20°C~+55°C

Relative humidity: ≤85%

Atmosphere pressure: 86KPa-106KPa

### Technical Datum

1, Flow range, accuracy (Water & Oil)

Table 1

DN (mm)	Normal flow range (m <sup>3</sup> /h)				
	0,5% Oil	1% Oil	1% Water	1.5% Water	2.5% Water
8	0.15 ~ 0.7	0.1 ~ 0.8	0.15	0.1 ~ 0.8	0.08 ~ 0.8
15	0.2 ~ 1	0.15 ~ 1.2	0.2 ~ 1		0.12 ~ 1.5
20	0.3 ~ 1.5	0.3 ~ 3	0.3 ~ 1.5	0.3 ~ 3	0.2 ~ 4
25	1 ~ 5	0.6 ~ 6	1 ~ 5		0.5 ~ 7
40	3 ~ 15	2 ~ 15	3 ~ 15	2 ~ 15	1.5 ~ 15
50	4 ~ 20	2.5 ~ 25	4 ~ 20	2.5 ~ 25	2 ~ 25
80	/	/	10 ~ 80	10 ~ 100	6 ~ 100
100	/	/	30 ~ 200	20 ~ 200	18 ~ 250
150	/	/	50 ~ 300	40 ~ 400	30 ~ 400
200	/	/	100 ~ 500	60 ~ 600	70 ~ 700
250	/	/	200 ~ 1000	150 ~ 1500	120 ~ 1500
300	/	/	300 ~ 1500	250 ~ 2000	150 ~ 2000

3. Fluid Temp.: -40°C~+80°C, 0°C~+150°C
4. Working Pressure: 1.6, 2.5, 4.0, 6.3, 16, 25, 32, 42(MPa)
5. Pressure Loss: For DN8~DN50 <0.01MPa,  
For DN80~DN300 <0.03MPa
6. Anti-explosion Grade: ExdIIBT4
7. Output Signal: Pulse, 4-20mA Current Output or RS485

## Straight Type Outline Dimension

(See Picture 2 and Table 3)

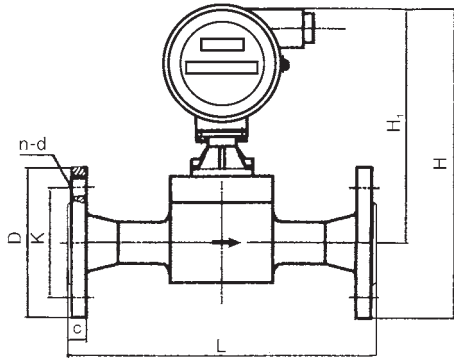
Table 2

DN (mm)	Nominal Pressure (MPa)	L	H	H <sub>1</sub>	D	K	n	d	c	Weight (kg)	Note
8	1.6 ~ 2.5	180	280	232	95	65	4	14	16	4.5	
15	1.6 ~ 2.5	180	280	232	95	65	4	14	16	4.5	
20	1.6 ~ 4.0	225	335	280	105	75	4	14	16	5.5	
25	1.6 ~ 4.0	270	340	280	115	85	4	14	16	8	
	16	270	340	280	140	100	4	23	28	17	
40	1.6 ~ 4.0	300	350	270	150	110	4	18	18	12	
	6.3	300	350	270	170	125	4	23	24	14	
	16	350	350	270	175	125	4	27	32	25	
	25	350	350	270	180	124	4	30	32	27	
50	42	350	350	270	205	146	4	33	44.5	30	
	1.6 ~ 4.0	378	350	270	165	125	4	18	20	14	
	6.3	378	360	270	180	135	4	23	26	16	
	16	320	375	270	215	165	8	25	36	30	
80	25	320	375	270	215	165	8	26	38.5	32	
	42	320	375	270	235	171	8	30	51	34	
	1.6	300	370	270	200	160	8	18	20	15	
2.5	300	370	270	200	160	8	18	22			
100	4.0	300	285	270	215	160	8	18	24		
	6.3	300	380	270	220	170	8	23	30	23	
150	1.6	350	405	295	220	180	8	18	20	18	
	2.5	350	410	295	230	190	8	23	24		
200	1.6	350	468	325	285	240	8	23	22	24	
	2.5	350	475	325	300	250	8	26	28		
250	1.6	350	515	345	340	295	12	23	24	50	
	2.5	350	525	345	360	310	12	26	30		
300	1.6	400	573	370	405	355	12	26	26	70	
	2.5	400	583	370	425	370	12	30	32		
300	1.6	450	630	400	460	410	12	26	28	95	
	2.6	450	643	400	485	430	12	30	36		

Note: We can custom made the flowmeter according to the requirement of the customer.

### Straight Type Outline Dimension

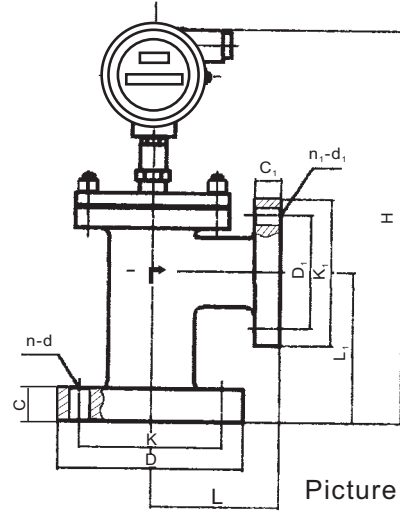
(See Picture 2 and Table 3)



Picture 2

### Corner Type Outline Dimension

(See Picture 3 and Table 4)



Picture 3

Table 3

DN (mm)	Nominal Pressure (MPa)	L	D	K	C	n	d	L <sub>1</sub>	D <sub>1</sub>	K <sub>1</sub>	c <sub>1</sub>	n <sub>1</sub>	d <sub>1</sub>	H	Weight (kg)
50	16	150	215	165	36	8	25	176	170	130	28	6	23	456	31
	25	150	215	165	40	8	25	176	170	130	28	6	23	456	
	32	170	210	160	40	8	27	176	190	145	40	6	27	456	
	42	150	235	171.5	51	8	30	176	170	130	28	6	23	456	
80	16, 25	185	255	200	45	8	30	210	240	188	45	6	30	490	50
	32	200	275	220	50	8	30	230	275	220	50	8	30	490	

Note: We can customize the flowmeter according to the requirement of the customer.

### Stainless Steel Type Outline Dimension (See Picture 2 and Table 4)

Table 4

DN (mm)	PN (MPa)	L	H	H <sub>1</sub>	D	k	n	d	C	Weight (kg)	Note:
15	1.6, 2.5	150	280	232	95	65	4	14	16	4.5	
20		150	335	280	105	75	4	14	16	4.5	
25		150	340	280	115	85	4	14	16	6	
40		150	350	270	150	110	4	18	18	8	
50		230	350	270	165	125	4	18	20	12	
80		225	370	270	200	160	8	18	20	15	
100	1.6	250	405	295	220	180	8	18	20	18	
150		300	468	325	285	240	8	23	22	24	
200		350	515	345	340	295	12	23	24	50	
250		400	573	370	405	355	12	26	26	70	
300		450	630	400	460	410	12	26	28	95	

Note: We can customize the flowmeter according to the requirement of the customer.

## Model Selection

Type	1	2	3	4	5	6	7	8	Note:
	DN	Structure	Nominal Pressure	Material	Exlosion	Work Temp.	Output Signal	Accuracy	
BFT	—								General Electron Flowmeter
	8								DN:8mm
	15								DN:15mm
	20								DN:20mm
	25								DN:25mm
	40								DN:40mm
	50								DN:50mm
	80								DN:80mm
	100								DN:100mm
	150								DN:150mm
	200								DN:200mm
	250								DN:250mm
	300								DN:300mm
		Z							Straight Connection Type
		J							Corner Connection Type
			1.6						PN: 1.6MPa
			2.5						PN: 2.5MPa / Class150
			4.0						PN: 4.0MPa
			6.3						PN: 6.3MPa / Class300
			16						PN: 16MPa / Class900
			25						PN: 25MPa / Class1500
			32						PN: 32MPa
			42						PN: 42MPa / Class2500
				G					Cast Steel
				SS304					304 Stainless Steel
				SS316					316 Stainless Steel
					A				General Type
					B				Anti-explosion: Exd $\phi$ BT4
						1			-40°C~+80°C
						2			0°C~+150°C
							F		Standard Pulse
							I		4~20mA Output
								05	Accuracy:0.5%
								10	Accuracy:1.0%
								15	Accuracy:1.5%
								20	Accuracy:2.0%

Example: BFT-50Z6.3SS304A2I1.0

Note:

BFT General Electron Flowmeter, Nominal Diameter:50mm, Straight Type, Nominal Pressure:6.3MPa, 304Stainless Steel, General Type, Ambient Temp.: -40°C~+80°C. 4-20mA Output, Accuracy:1.0%.

## Ordering Information:

- Nominal Diameter: DN\_\_\_\_\_mm;
- Fluid Pressure:Max.\_\_\_\_\_ Normal\_\_\_\_\_ Min.\_\_\_\_\_MPa;
- Fluid Temp.:\_\_\_\_\_°C;
- Fluid Name:\_\_\_\_\_;
- Fluid Density:\_\_\_\_\_g/cm<sup>3</sup>;
- Flow Range:Max.\_\_\_\_\_ Normal\_\_\_\_\_ Min.\_\_\_\_\_m<sup>3</sup>/h(kg/h);
- Output Signal:  Standard Pulse Output  4~20mA Current Output  RS-485 Output
- Accuracy:2.0%, 1.5%, 1.0%, 0.5%