

# **BNC** AUTOCONTROL FLOWMETER

## ROOTS FLOW METER



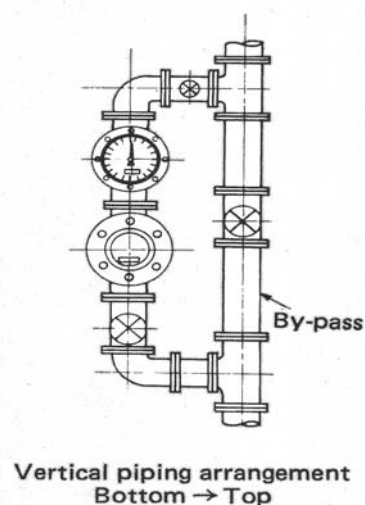
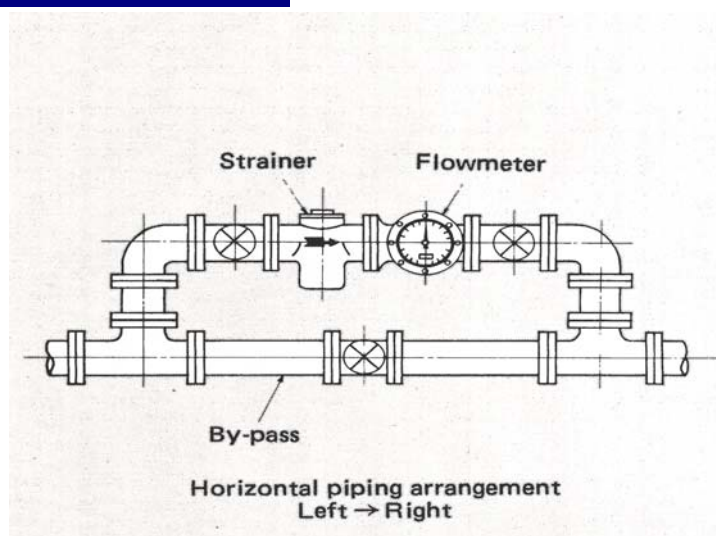
— **BNC** industrial co., ltd. —

## MODEL CODES:

Basic Model	Size	Max. temp.	Mat'l	Display/output	Connection	Description
RA	25					1" (25mm)
	40					1-1/2" (40mm)
	50					2" (50mm)
	80					3" (80mm) 35 M3/Hr
	80L					3" (80mm) 50 M3/Hr
	100					4" (100mm) 50 M3/Hr
	100L					4" (100mm) 120 M3/Hr
		-0				80 °C
		-1				120 °C
		-2				180 °C
			FC			FC 25
			SS			SUS316
				0		7 Digit LCD Totalizer
				1		Totalizer 8 Digit/ Reset 5 Digit
				2		Totalizer with Pulse Output
				3		Pulse output only
				4		5 digit Flowrate/8 digit Totalizer
				5		5 digit Flowrate/8 digit Totalizer/Pulse
				6		5 digit Flowrate/8 digit Totalizer/4-20 mA
				J10		JIS 10K FF
				J20		JIS 20K FF
				A15		ANSI 150#FF
				A30		ANSI 300#FF
				P10		PN 10
				P16		PN 16
				P20		PN 20



## INSTALLATION:



**BNC** industrial co., ltd.

Flow Range : Accuracy  $\pm 0.5\%$ Unit :  $\text{m}^3/\text{hour}$ 

Capacity type Note 1				Fluid		Petroleum								
						LPG	Gasoline	Kerosene	Light oil, grade-A heavy oi (high tem- perature)	Grade-A heavy oi	Grade-B heavy oil, Grade-C heavy oil, (high tem- perature)	Grade-C heavy oi		Highly viscous fluids
												0.1cP~	0.5cP~	
	Dia- meter	Terms Note 2	Viscosity											
25 40	25 40	Normal	Continuous	-	1~4.5	0.8~4.5	0.4~6	0.1~6	0.05~6	0.025~6	0.013~4.5	0.007~3.5		
			Intermittent	-	1~6	0.8~6	0.4~7	0.1~7	0.05~7	0.025~7	0.013~6	0.007~4.5		
		Maximum		-	7	7	8	8	8	8	7	6		
40 50	40 50	Normal	Continuous	-	2~9	1.5~9	0.8~13	0.25~13	0.1~13	0.05~13	0.02~9	0.01~7.5		
			Intermittent	-	2~13	1.5~13	0.8~15	0.25~15	0.1~15	0.05~15	0.02~13	0.01~9		
		Maximum		-	15	15	17	17	17	17	15	13		
80	80	Normal	Continuous	6.5~17	5~17	3.5~25	1.8~25	0.6~35	0.3~35	0.15~35	0.07~20	0.03~17		
			Intermittent	6.5~28	5~28	3.5~35	1.8~35	0.6~40	0.3~40	0.15~40	0.07~35	0.03~28		
		Maximum		35	35	40	40	45	45	45	35	28		
80L 100	80 100	Normal	Continuous	13~35	8~35	5~35	2.5~50	1~50	0.5~50	0.25~50	0.12~35	0.06~28		
			Intermittent	13~50	8~50	5~50	2.5~55	1~55	0.5~55	0.25~55	0.12~50	0.06~35		
		Maximum		55	55	55	60	60	60	60	55	50		
100L	100	Normal	Continuous	25~85	16~85	12~85	8~120	4~120	2~120	0.7~120	0.35~85	0.17~60		
			Intermittent	25~120	16~120	12~120	8~130	4~130	2~130	0.7~130	0.35~120	0.17~85		
		Maximum		130	130	130	140	140	140	140	130	120		

Capacity type Note 1				Dia-meter		Terms Note 2		Viscosity		Fluid		Water		Chemicals		Petrochemicals		
										Normal temperature (up to 80°C)	High temperature (80~120°C)	Concent- rater sulfuric acid	Cuastic soda (30%)	Plasticizer	Tar	Polyester		
														50cP	500cP	2000cP		
25 40	25 40	Normal	Continuous	0.8~3.5	1~2.8	0.4~2	0.1~4.5	0.05~4.5	0.013~4.5	0.007~3.5								
			Intermittent	0.8~4.5	1~3.5	0.4~2.8	0.1~6	0.05~6	0.013~6	0.007~4.5								
			Maximum	5	4.5	3.5	7	7	7	6								
40 50	40 50	Normal	Continuous	1.5~7.5	2~6	0.8~4.5	0.25~9	0.1~9	0.02~9	0.01~7.5								
			Intermittent	1.5~9	2~7.5	0.8~6	0.25~13	0.1~13	0.02~13	0.01~9								
			Maximum	10	9	7.5	15	15	15	13								
80	80	Normal	Continuous	3.5~15	5~10	3.5~12	0.6~20	0.3~20	0.07~20	0.03~17								
			Intermittent	3.5~20	5~17	3.5~15	0.6~35	0.3~35	0.07~35	0.03~28								
			Maximum	20	20	20	40	40	35	28								
80L 100	80 100	Normal	Continuous	5~28	8~22	2.5~17	1~35	0.5~35	0.12~35	0.06~28								
			Intermittent	5~35	8~28	2.5~22	1~50	0.5~50	0.12~50	0.06~35								
			Maximum	40	35	28	55	55	55	50								
100L	100	Normal	Continuous	12~60	16~50	8~40	4~85	2~85	0.35~85	0.17~60								
			Intermittent	12~85	16~60	8~40	4~120	2~120	0.35~120	0.17~85								
			Maximum	95	85	60	130	130	130	120								

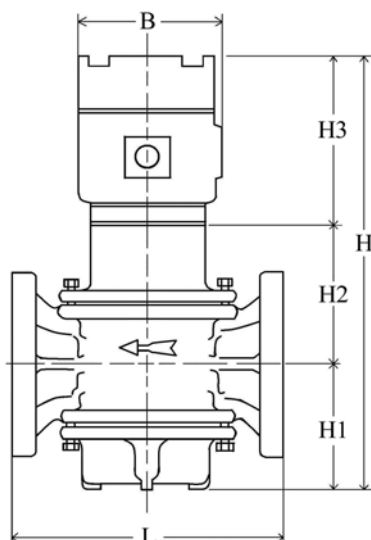
Remark: 1. Intermittent : continue flowing under 8 hours

2. Continuous: continue flowing 8-24 hours

3. Maximum: Only can working in short period

## Standard specifications

Counter	7 digit or 8 digit, rate 5 digit
Accuracy:	0.5% ( 0.2% possible )
Max. Pressure:	10kg/cm <sup>2</sup> or 20kg/cm <sup>2</sup>
Max. Temperature:	180°C
Connection	JIS, DIN, ANSI

Dimensions  
of flow meter

Model	L	H	B	H1	H2	H3	weight (kg)
RA25	200	288	115	78	70	140	15
RA40	200	288	115	78	70	140	18
RA50	250	340	115	105	95	140	22
RA80	320	420	115	144	136	140	45
RA80L/RA100	320	420	115	144	136	140	49
RA100L	450	653	115	260	253	140	116

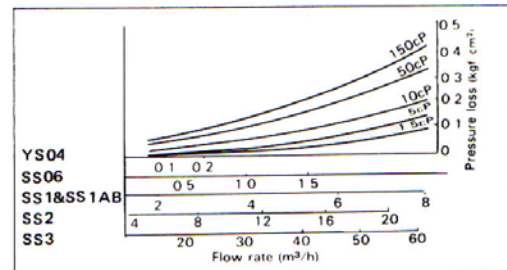
## STRAINER



### Common specifications

Construction		Bucket type (The bore 15mm is Y-type)
Fluid		Oil
Material	Body	Cast iron (FC25) or stainless steel (SUS304)
	Screen	Stainless steel (SUS304)
Mesh	For E7 type flowmeter	200 mesh
	For other type flowmeter	40 mesh (over 10 cp), 80 mesh (below 10 cp)
Paint color		Munsell 1.4 PB3.1/1.2

### Pressure loss characteristics

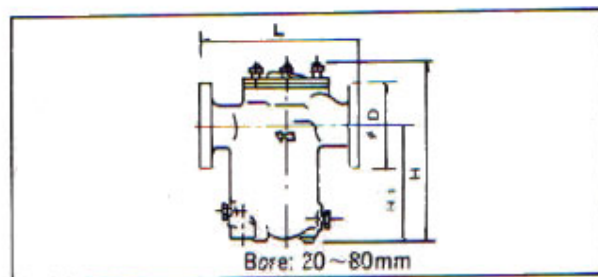
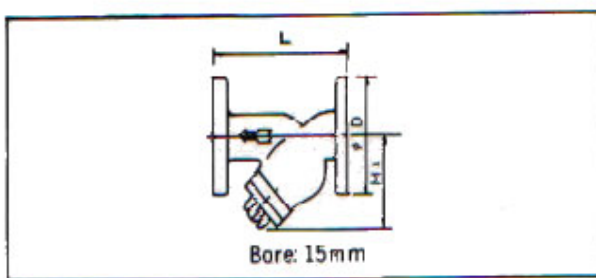


### Standard specifications for each model

Model	Bore (mm)	Flange rating	Max. working pressure (kgf/cm <sup>2</sup> )	Maximum flow m <sup>3</sup> /h (Note)	Dimensions (mm)				Weight (kg)
					D	L	H	H <sub>1</sub>	
Y S04	15	JIS 10kg/cm <sup>2</sup> FF	10	-	95	125	-	70	2
SS 06	20	JIS 10kg/cm <sup>2</sup> FF	10	1.5	100	180	147	110	7
SS 1	25	JIS 10kg/cm <sup>2</sup> FF	10	7	125	295	263	163	13
SS 1AB	40	JIS 10kg/cm <sup>2</sup> FF	10	7	140	295	263	163	16
SS 2	50	JIS 10kg/cm <sup>2</sup> FF	10	15	155	320	285	185	22
SS 3	80	JIS 10kg/cm <sup>2</sup> FF	10	60	185	395	380	259	41

Maximum flow is the value obtained when a pressure loss is below 0.5 kg/cm<sup>2</sup>  
at the fluid viscosity of 10 cps

### Dimensional drawing



## JACKETED FLOWMETERS



## STANDARD AIR SEPARATOR

