



TECHNICAL GUIDANCE

FOR MEASUREMENT OF DRAINAGE AND WATER
OF RIVER

S-102/S-752 SLURRY FLOWMETER

■ OUTLINE

S-102 series is the flowmeter to measure the slurry.
This flowmeter is optimal to measure the flow rate of the various liquids and water containing the solid in the drainage system and taking in the natural water.

Regarding the material, in addition to the stainless steel (SUS316L),

PVC is also available, which is suitable to measure the flow rate of the corrosive drainage including the acid.

S-752 series with alarm contact is also available.

■ STANDARD SPECIFICATION

Available size	: 15 mm(1/2") to 150 mm(6") PVC version is available for 25 mm, 40 mm, 50 mm, 80 mm, 100 mm and 150 mm.
Function	: S-102 Local indicator S-752 Local indicator + 1point or 2 points alarm
Measuring fluid	: Liquids

Size limit of solid contained in measuring fluid :

(mm)

Connection	15	20	25	40	50	65	80	100	125	150
Size ϕ	0.01	0.15	0.2	0.3	0.6	0.8	1.0	1.0	1.5	1.5

Note) It is not suitable for the measurement of opaque liquid or containing sludge which makes it difficult to see the indication. The recommendation is AS-1402 type flowmeter for the measurement of such liquid.

Operating pressure and temperature :

Material code 1 to 4

	Meter size 15 to 25 mm	Meter size 40 to 150 mm
to 120°C	1.4 MPa	1.0 MPa

Material code 5

	Meter size 25 to 100 mm	Meter size 150 mm
to 20°C	to 0.5 MPa	to 0.3 MPa
to 30°C	to 0.451 MPa	to 0.271 MPa
to 40°C	to 0.394 MPa	to 0.236 MPa
to 50°C	to 0.337 MPa	to 0.202 MPa
to 60°C	to 0.271 MPa	to 0.163 MPa

Allowable thermal shock : 80°C

Material : Material class 1 Carbon steel + SUS304
Material class SUS304
Material class 3 SUS316
Material class 4 SUS316L
Material class 5 PVC
Refer to MATERIAL for details

Connection : Standard JIS10K RF flange
(JIS10K FF flange for PVC version)

Flow direction : Bottom to Top side

Accuracy : $\pm 1.5\%$ F.S.($\pm 2\%$ for PVC version)

Rangeability : 10 : 2

Alarm contact : S-752 version is ready.

Alarm function : 1 or 2 points alarm can be additionally provided

Type of contact : Read switch (SPST) (Self-preservation)



Contact capacity : AC10VA, DC10W (Load resistance)

Max.voltage of output contact :

AC120V, DC100V

Max.current of output contact :

AC0.5A, DC0.5A

(Be careful of inrush current, surge voltage, etc.)

Setting accuracy : $\pm 1.5\%$ F.S. (Against flow calibration)

Reset span : Within 10%F.S. (Against flow calibration)

(Within 15% F.S. for PVC version)

Construction : Dust tight and water immersion proof IP67

■ RESTRICTIONS ON USE OF GLASS OR RESIN TUBE VARIABLE AREA FLOWMETERS

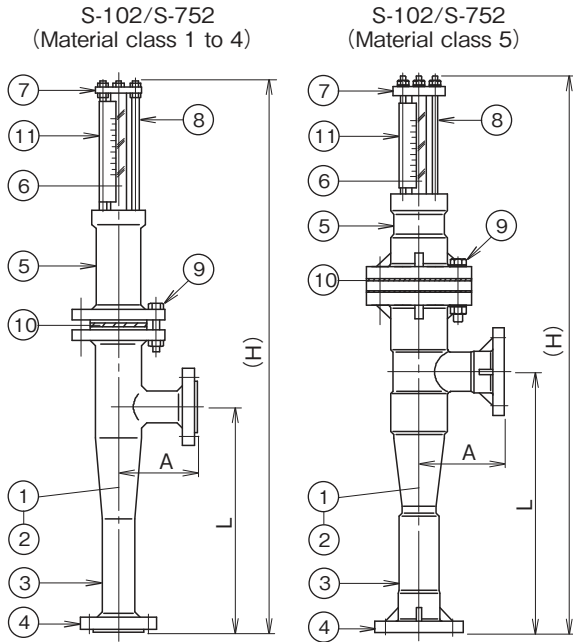


Observe followings when glass or resin tube variable area flowmeters are used.

Avoid the use of variable area flowmeters made of glass or resin tube for the following services.

- Liquid services subject to impulse pressure in the process.
- Secondary accidents might occur due to the breakage of glass or resin tube in such services :
 - Toxic fluids such as poisons, stimulant and narcotics
 - Flammable fluids
 - Explosive fluids
- The installation places of the flowmeters where breakage of glass might be caused by the accidents from the surrounding piping or equipment.
- On-off operation where breakage of glass might be caused by the collision of the float inside meter due to the abrupt change of flow.
- Services where the heat shock by abrupt change of temperature is expected.

DIMENSIONS and FLOW RATE



● S-102, S-752 Material: Metal (Material class 1 to 4)

Meter size (mm)	Flow rate (m³/h)※	Dimensions(mm)				Mass (Approx.) kg
		L	A	H		
				S-102	S-752	
15	0.1 to 0.8	300	80	690	760	9.5
20	2	350	100	800	860	9.5
25	4.8	350	100	810	870	9.5
40	9	380	130	880	930	13
50	20	420	130	940	1000	16
65	35	460	150	980	1030	25
80	50	480	150	1030	1080	30
100	90	550	200	1120	1170	50
125	130	570	250	1160	1200	64
150	190	590	250	1180	1220	88

※Above table is applicable for measurement of water. (Density 1.0g/cm³, Viscosity 1.0 mPa·s)

● S-102, S-752 Material : PVC (Material class 5)

Meter size (mm)	Flow rate (m³/h)※	Process flange connection size (mm)	Dimensions (mm)				Mass (Approx.) kg
			L	A	H		
		S-102			S-752		
25	0.8~3	20	310	100	810	860	3.5
		25	320	100	820	870	
		40	320	130	820	870	
40	6	25	390	120	920	970	5
		40	390	120	920	970	
		50	400	130	930	980	
50	20	40	450	150	980	1030	8
		50	460	150	980	1030	
		65	460	150	980	1030	
80	35	65	500	200	1100	1150	13
		80	460	180	1060	1110	
		100	500	220	1100	1150	
100	75	80	550	230	1240	1290	25
		100	550	250	1240	1290	
		125	600	250	1290	1340	
150	140	125	650	300	1420	1470	50
		150	650	300	1420	1470	

※Above table is applicable for measurement of water. (Density 1.0g/cm³, Viscosity 1.0 mPa·s)

PROCESS FLANGE CONNECTION SIZE FOR METER SIZES

Meter size (mm) \ Process flange size	15	20	25	40	50	65	80	100	125	150	200
15	○	○	○								
20	○	○	○								
25		○	○	○							
40			○	○	○						
50				○	○	○					
65					○	○	○				
80						○	○	○			
100							○	○	○		
125								○	○	○	
150									○	○	○

Refer to portion for PVC.

ORDERING INFORMATION

Specify the following for order or inquiry

Model S-102 S-752 (with alarm)

Fluid name _____

Density _____ Viscosity _____ mPa·s

Pressure _____ MPa Temperature _____ °C

Scale range _____ to _____ m³/h (Rangeability 10:2)

Connection _____ mm JIS10K Flange

Others _____

MATERIAL

No	Description	Class 1	Class 2	Class 3	Class 4	Class 5
1	Tapered tube	SUS304	SUS304	SUS316	SUS316L	PVC
2	Float ass'y	SUS304	SUS304	SUS316	SUS316L	PVC
3	Body	SGP	SUS304	SUS316	SUS316L	PVC
4	Flange	SS400	SUS304	SUS316	SUS316L	PVC
5	Chamber	SS400/SGP	SUS304	SUS316	SUS316L	PVC
6	Sight glass	Heat-resistant glass				
	Packing for sight glass	NBR (Special: FPM, EPDM etc.)				
7	Cover for sight glass	SS400	SUS304	SUS316	SUS316L	PVC
8	Support	SS400 (Special: SUS304)				
9	Bolts & nuts	SS400 (Special: SUS304)				
10	Packing	Class 1 to 4 : Non-asbestos or PTFE Class 5 : NBR (Special: FPM, EPDM etc.)				
11	Scale plate	A1050P				

Material Class 1 Class 2 Class 3 Class 4 Class 5

Packing NBR EPDM FPM ()

Packing for sight glass NBR EPDM FPM ()

In case of alarm version L at (_____ m³/h)

H at (_____ m³/h)

* Specification is subject to change without notice.



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