



OVAL FLOWMETER

Meter Size: 52, 53, 55, 56, 57
(Double Case Construction
with Powerful Magnetic Coupling)

GENERAL SPECIFICATION
GS.No.GBB125E-8N

■ GENERAL

The OVAL flowmeter is a positive displacement type flowmeter comprising a pair of oval gear rotors. It is capable of metering the actual quantity of the material passing through it with a high degree of accuracy over a wide flow range and accepts various kinds of liquids. It's accuracy, reliability and quality has made it a highly valued industrial instrument.



■ FEATURES

1. Simple design makes this meter easy to disassemble and allows for ease in maintenance and inspection.
2. Introduction of a powerful magnetic coupling makes this meter compatible with a variety of direct-reading registers and mechanical temperature compensator.
3. Compatible with a variety of pulse generators that allows a wide selection of remote flow instrumentation.
4. Can accept various kinds of liquids by selecting appropriate meter materials.
5. A complete line of models are available to meet a broad range of pressure and temperature requirements.

■ GENERAL SPECIFICATIONS

Meter Size			52, 53	55	56	57
Item						
Nominal Size, mm (inch)			25 (1")	40 (1·1/2")	50 (2")	50 (2")
Construction			Double case construction			
Transmission System			Magnetic coupling			
Materials	Outer Housing		SCPH2			
	Inner Housing, Rotors		SCS14A	SUS316		FC250, SCS13A
	Bearings		Carbon			
Linearity			±0.35% or ±0.15%			
Repeatability			±0.05% or ± 0.02%			
Operating Temp. Range	Linearity	±0.35%	-5 to +120°C 120°C to +200°C	-5 to +120°C		
		±0.15%	-5 to +60°C			
Liquids to be Metered			Water, petroleum, chemical liquids, etc.			
Finish			Body, Transmission Gear Box & Register, Case: Munsell 2.5G 8/2 Register Frame: Munsell N 1.5			

• Flange Ratings and Max. Operating Pressure: MPa

Pressure Rating	Housing Material	Flange Rating JIS						ANSI		
		10K	16K	20K	30K	40K	63K	150	300	600
30K	SCPH2	1.18	2.45	3.04	4.51	—	—	1.69	4.59	—
▲63K	SCPH2	—	—	—	—	6.08	9.51	—	4.59	9.19

NOTE: Reference temperature; 120°C

▲: Special

OVAL Corporation

<http://www.oval.co.jp/english>

Head Office (Tokyo): Tel. +81 3-3360-5121 Fax. +81 3-3365-8605
International Sales Division Email: SK10@oval.co.jp
Overseas Branch Offices: Beijing, Seoul, Singapore, Taipei

■ FLOW RANGE

● **Table A Flow Range for Liquid in General (Linearity: $\pm 0.35\%$) (Operating temp. range: -5 to $+120^\circ\text{C}$)**

Unit in m^3/h

Meter Size Nominal Bore Size Operating Condition	Type of Liquid Temp., Viscosity Range	Water		Liquids other than water (Unit in $\text{mPa}\cdot\text{s}$)						
		60°C max.	60 to 120°C	Less than 0.3	0.3 to 0.8	0.8 to 2	2 to 5	5 to 1000	1000 to 1500	1500 to 2000
52	25	Continuous	0.3 to 1	0.4 to 0.8	0.7 to 1.2	0.4 to 1.2	0.3 to 1.2	0.15 to 1.6	0.08 to 1.6	0.08 to 1.3
		Intermittent	0.3 to 1.5	0.4 to 1	0.7 to 1.8	0.4 to 1.8	0.3 to 1.8	0.15 to 2	0.08 to 2	0.08 to 1.7
53	25	Continuous	0.55 to 2	0.7 to 1.6	1.1 to 2.4	0.7 to 2.4	0.55 to 2.4	0.28 to 3.2	0.15 to 3.2	0.15 to 2.8
		Intermittent	0.55 to 3	0.7 to 2	1.1 to 3.6	0.7 to 3.6	0.55 to 3.6	0.28 to 4	0.15 to 4	0.15 to 3.5
55	40	Continuous	1 to 5	1.2 to 4	1.8 to 5.5	1.2 to 5.5	1 to 5.5	0.4 to 8	0.26 to 8	0.26 to 6.5
		Intermittent	1 to 7	1.2 to 5	1.8 to 8.5	1.2 to 8.5	1 to 8.5	0.4 to 10	0.26 to 10	0.26 to 8.5
		A.I.F.	9	6	10	10	10	10	8.5	7.5
56	50	Continuous	2 to 10	2.5 to 8	3.5 to 11	2.5 to 11	2 to 11	0.9 to 16	0.6 to 16	0.6 to 13
		Intermittent	2 to 14	2.5 to 10	3.5 to 17	2.5 to 17	2 to 17	0.9 to 20	0.6 to 20	0.6 to 17
		A.I.F.	18	12	20	20	20	20	17	15
57	50	Continuous	4 to 20	5 to 16	8 to 22	5 to 22	4 to 22	2 to 32	1.2 to 32	1.2 to 26
		Intermittent	4 to 30	5 to 20	8 to 35	8 to 35	4 to 35	2 to 40	1.2 to 40	1.2 to 34
		A.I.F.	35	25	40	40	40	40	34	30

● **Table B Flow Range for Liquid in General (Linearity: $\pm 0.15\%$) (Operating temp. range: -5 to $+60^\circ\text{C}$)**

Unit in m^3/h

Meter Size Nominal Bore Size Operating Condition	Type of Liquid Temp., Viscosity Range	Water		Liquids other than water (Unit in $\text{mPa}\cdot\text{s}$)					
		60°C max.	Less than 0.3	0.3 to 0.8	0.8 to 2	2 to 5	5 to 1,000	1000 to 1500	1500 to 2000
52	25	Continuous	0.6 to 1	1 to 1.2	0.7 to 1.2	0.5 to 1.2	0.25 to 1.6	0.15 to 1.6	0.15 to 1.3
		Intermittent	0.6 to 1.5	1 to 1.8	0.7 to 1.8	0.5 to 1.8	0.25 to 2	0.15 to 2	0.15 to 1.7
53	25	Continuous	1.1 to 2	1.6 to 2.4	1.1 to 2.4	0.75 to 2.4	0.4 to 3.2	0.22 to 3.2	0.22 to 2.8
		Intermittent	1.1 to 3	1.6 to 3.6	1.1 to 3.6	0.75 to 3.6	0.4 to 4	0.22 to 4	0.22 to 3.5
55	40	Continuous	2 to 5	2.7 to 5.5	1.8 to 5.5	1.5 to 5.5	0.6 to 8	0.4 to 8	0.4 to 6.5
		Intermittent	2 to 7	2.7 to 8.5	1.8 to 8.5	1.5 to 8.5	0.6 to 10	0.4 to 10	0.4 to 8.5
		A.I.F.	9	10	10	10	10	8.5	7.5
56	50	Continuous	4 to 10	5.2 to 11	3.5 to 11	3 to 11	1.4 to 16	0.9 to 16	0.9 to 13
		Intermittent	4 to 14	5.2 to 17	3.5 to 17	3 to 17	1.4 to 20	0.9 to 20	0.9 to 17
		A.I.F.	18	20	20	20	20	17	15
57	50	Continuous	7 to 20	12 to 22	8 to 22	6 to 22	3 to 32	2 to 32	2 to 26
		Intermittent	7 to 30	12 to 35	8 to 35	6 to 35	3 to 40	2 to 40	2 to 34
		A.I.F.	35	40	40	40	40	34	30

● **High Temp. Liquid Service Flow Range (Linearity: $\pm 0.35\%$) (Operating temp. range: in excess of $+120^\circ\text{C}$ up to $+200^\circ\text{C}$)**

Unit in m^3/h

Meter Size Nominal Bore Size Operating Condition	Type of Liquid Temp., Viscosity Range	Hot Water	High temp. Liquids other than water (Unit in $\text{mPa}\cdot\text{s}$)						
		—	Less than 0.3	0.3 to 0.8	0.8 to 2	2 to 5	5 to 1000	1000 to 1500	1500 to 2000
52	25	Continuous	0.4 to 0.72	1 to 1.2	0.8 to 1.2	0.5 to 1.2	0.25 to 1.2	0.15 to 1.2	0.15 to 1.1
		Intermittent	0.4 to 0.9	1 to 1.8	0.8 to 1.8	0.5 to 1.8	0.25 to 1.8	0.15 to 1.8	0.15 to 1.5
53	25	Continuous	0.7 to 1.4	2 to 2.4	1.4 to 2.4	0.9 to 2.4	0.35 to 2.4	0.28 to 2.4	0.28 to 2.2
		Intermittent	0.7 to 1.8	2 to 3.6	1.4 to 3.6	0.9 to 3.6	0.35 to 3.6	0.28 to 3.6	0.28 to 3.1

- NOTES:
1. In the Operating Condition column "Continuous" means continuous operation; "Intermittent" means no more than 8 hours operation a day, and "A.I.F." indicates allowable instantaneous flow rate.
 2. Flow range should be selected within the Continuous or Intermittent range specified.
 3. For applications where viscosity exceeds $1000\text{mPa}\cdot\text{s}$ (size 57: $200\text{mPa}\cdot\text{s}$), specially machined rotors are used.
 4. For high viscosity liquid more than $2000\text{Pa}\cdot\text{s}$, the meter is not applicable, ULTRA OVAL series are recommended instead.
 5. Regarding liquid ammonia, consult factory.

■ REGISTERS AND UNIT REGISTRATION

Register Model	Dial and Pointer		Total Counter	
	Volume per Point Rev. (L)	Min. Reading (L)	Max. Readout (L)	LSD Drum (L)
Direct-reading Register (LW11)	1	0.01	999 999	1
	10	0.1	9 999 990	10
	★ 100	1	99 999 900	100
Direct-reading Register w/Reset Counter (LW15)	10	0.1	9 999 998	2
	★ 100	1	99 999 980	20
	(Output Shaft) 10	0.1	99 999 999	1
Resettable Register (LW42, 43)	★ (Output Shaft) 100	1	999 999 990	10

★ : Standard. As to general specifications registers, refer to individual General Specification Sheets.

(LSD: Least Significant Digit)

★ : Small dial scale reading.

● Unit of Factored Pulse Generated

● Unit of Unfactored Pulse Generation

Meter Size	Pulse Unit Generator Signal Unit Volume per Pointer Rev. L/rev.	PG20EP-PG30SEP				PG30EP-PG30DEP				Max. Flow rate m³/h	PG30SEP Nominal Meter Factor (mL/P)	
		1P/rev.		10P/rev.		100P/rev.		1000P/rev.			Less than Full Scale (m³/h)	More than Full Scale (m³/h)
		Pulse Unit (L/P)	Freq. at Max. Flow rate (Hz)	Pulse Unit (L/P)	Freq. at Max. Flow rate (Hz)	Pulse Unit (L/P)	Freq. at Max. Flow rate (Hz)	Pulse Unit (L/P)	Freq. at Max. Flow rate (Hz)			
52	1	1	0.6	0.1	5.6	0.01	55.6	△ 0.001	555.6	2	7.731 (0.5)	15.463 (0.6)
	★10	10	0.06	1	0.6	0.1	5.6	0.01	55.6	2		
53	1	10	0.11	1	1.1	0.1	11.1	0.01	111.1	4	14.01 (1)	28.02 (2)
55	10	—	—	1	2.8	0.1	27.8	0.01	278	10	27.68 (2.3)	55.37 (2.4)
	★100	100	0.03	10	0.3	1	2.8	0.1	27.8			
56	10	—	—	1	5.6	0.1	55.6	0.01	556	20	59.72 (4.7)	119.45 (4.8)
	★100	100	0.06	10	0.6	1	5.6	0.1	55.6			
57	10	—	—	—	—	0.1	111	△ 0.01	1000 (Q=36)	40	156.86 (11)	313.7 (12)
	★100	100	0.11	10	1.1	1	11	0.1	111			

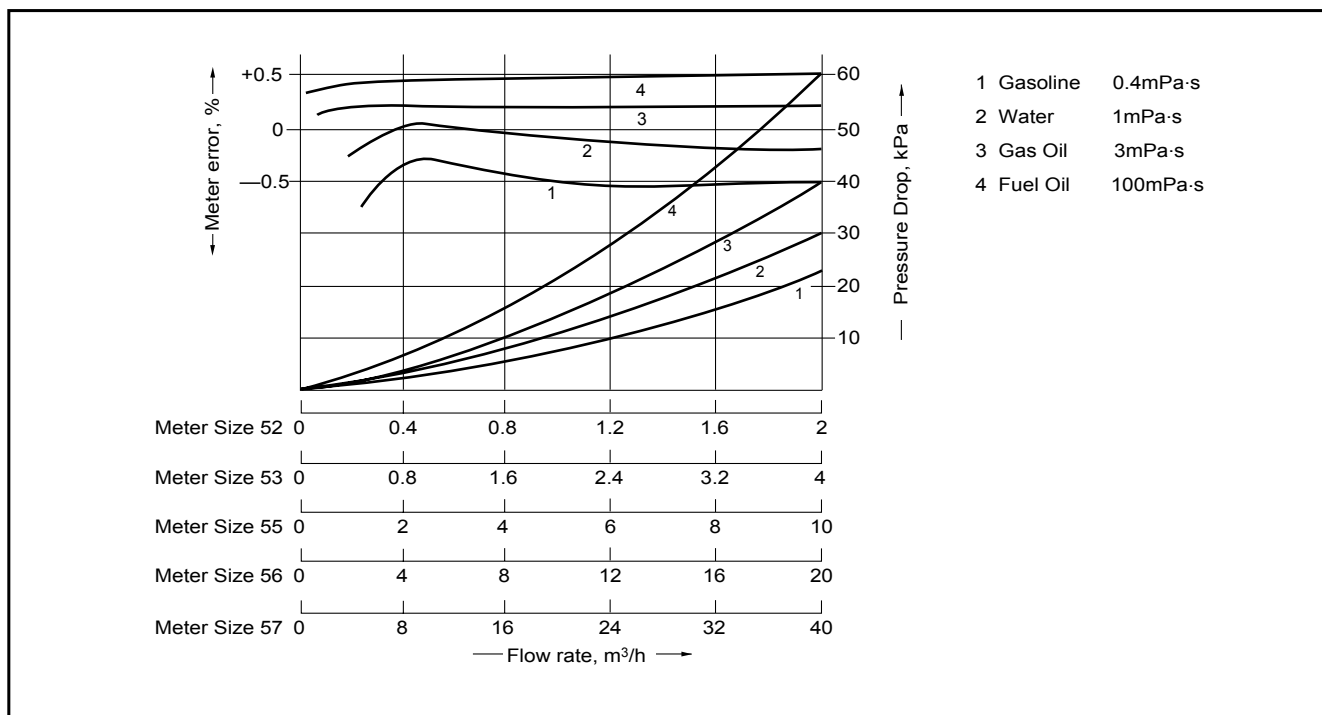
★ : Standard △: Unacceptable depending on particular specifications.

For detailed pulse generator specifications, see individual General Specification sheets.

● Full Scale for Flow rate Indicator or Recorder

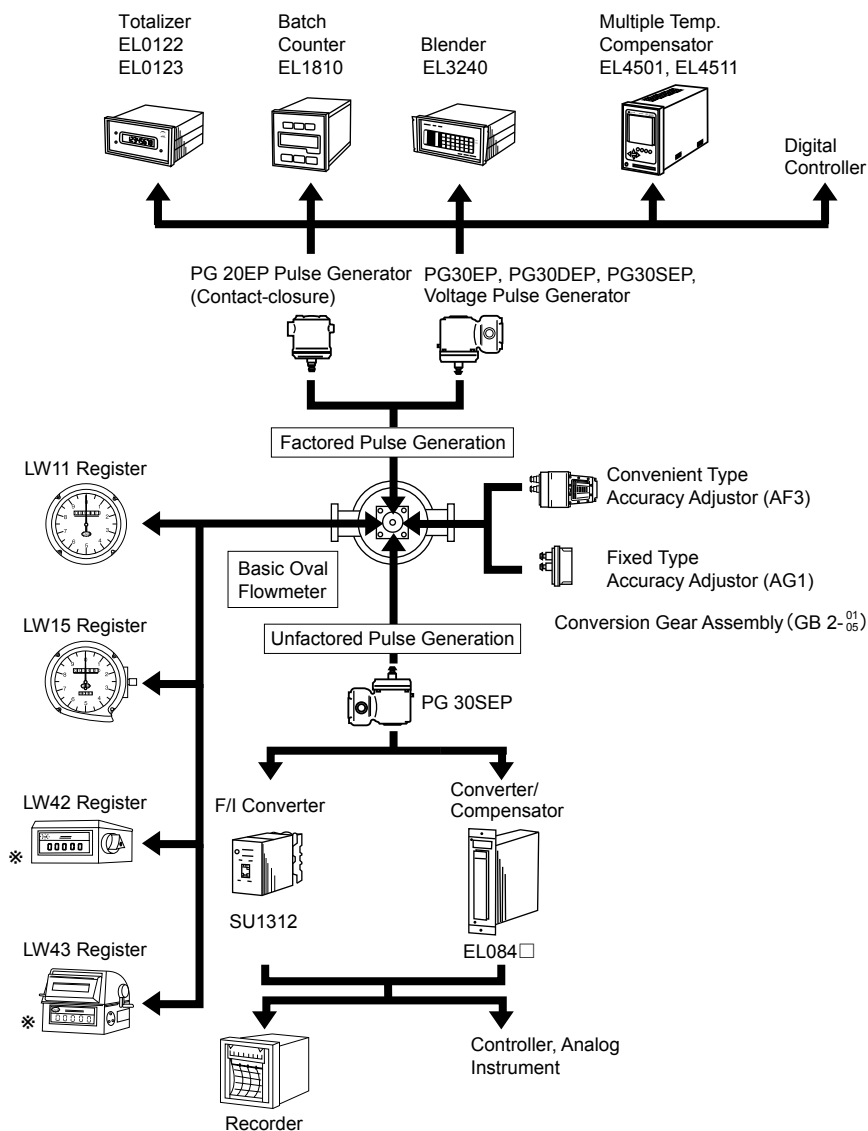
Meter Size	Full Scale m ³ /h						L/min.							
55	1.5	2	3	5	8	10	30	40	50	60	80	100	150	200
56	3	5	8	10	15	20	50	80	100	150	200	300	400	—
57	8	10	15	20	30	50	150	200	300	400	500	800	—	—

■ TYPICAL PERFORMANCE CHARACTERISTICS

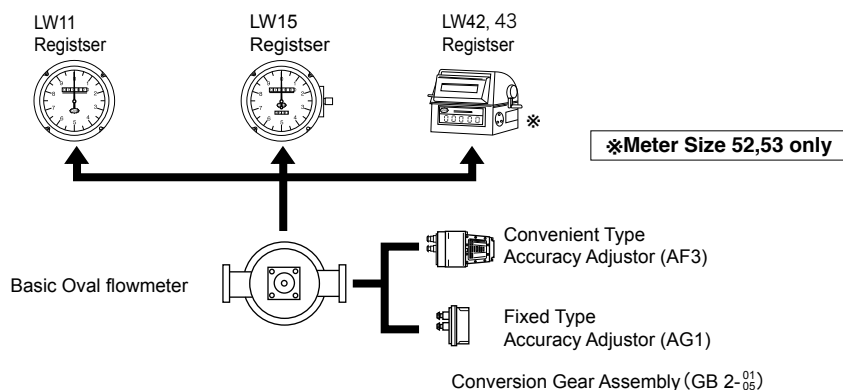


REGISTERS AND REMOTE INSTRUMENTATION SYSTEMS

● Direct-coupled Registers and Remote Instrumentation System with Pulse Generator Equipped



● Direct-coupled Registers without Pulse Generator



NOTES: 1. For details of the direct-coupled registers, pulse generators, receiving instruments, etc., see individual General Specification Sheets.

2. Flame-proof construction of pulse generators are available. For intrinsically safe construction, pulse repeater is provided.

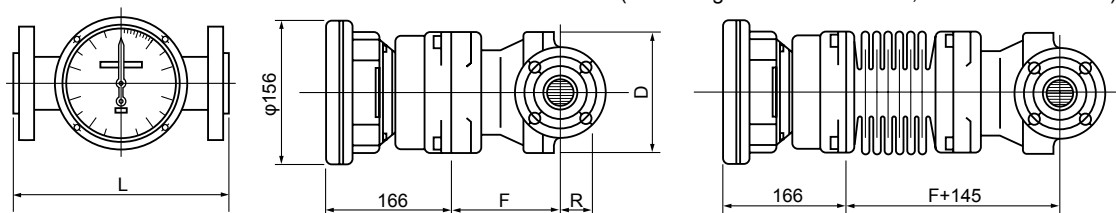
3. *: 52, 53 could not be installed.

DIMENSIONS (Unit in mm)

● Meter Size: 52, 53

Drawings below are with register model LW11 (LW13)

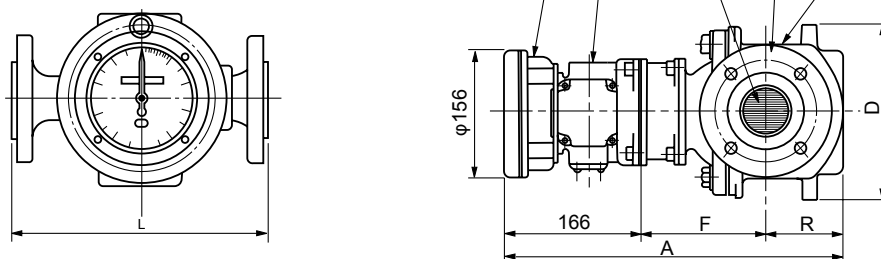
High Temp. Version
Cooling Fin Provided (exceeding 120°C up to 200°C)
(exceeding 80°C for PG30DEP, PG30SEP mounted)



Meter Size	Transmission System	Nominal Size	L		R	F	D	Approx. Weight (kg)
			Flange Rating					
			JIS 30k RF	ANSI 150RF				
52	2	25	250	239	109	65	172	28
53	2	25	250	239	114	85	172	29

● Meter Size: 55, 56, 57

(LW11 Register Installed)



Transmission Gear Box w/External Accuracy Adjustor (GB2-0 ¹/₅)

No.	Part Name
1	Outer housing
2	Flange
3	Oval Rotors
4	Conversion Gear Ass'y
5	Register

Meter Size	Pressure ratings	F	R	D	A	Approx. Weight kg
55	30K	201	71	200	438	34.5
	63K	205	83	206	454	45
56	30K	217	86	226	469	41.5
	63K	226	92	247	484	55
57	30K	233	115	297	514	76
	63K	260	127	310	553	90

In case of cooling fin coupled, add 145 mm to "F" above.

● Flange-to-Flange Dimensions (L)

Unit in mm

Meter Size	Pres. Rating	30K	▲63K	Meter Size	Pres. Rating	30K	▲63K	Meter Size	Pres. Rating	30K	▲63K
	Flange ratings	SCPH2	SCPH2		Flange ratings	SCPH2	SCPH2		Flange ratings	SCPH2	SCPH2
55	JIS 30K RF	310	—	56	JIS 30K RF	310	—	57	JIS 30K RF	400	—
	JIS 40K RF	—	314		JIS 40K RF	—	354		JIS 40K RF	—	434
	JIS 63K RF	—	330		JIS 63K RF	—	370		JIS 63K RF	—	450
	ANSI 150 RF	301	—		ANSI 150 RF	304	—		ANSI 150 RF	394	—
	ANSI 300 RF	307	—		ANSI 300 RF	310	—		ANSI 300 RF	400	—
	ANSI 600 RF	—	323		ANSI 600 RF	—	365		ANSI 600 RF	—	446

▲ : Special

■ PRODUCT CODE EXPLANATION

● Main code

Meter Size: 52, 53

Model: ①~③			①②③***-*****-***-*****-****
L	C	S	Element: stainless steel
Capacity (Nominal Diameter): ④~⑤			***④⑤*-*****-***-*****-****
5	2	25mm (1") ND (Big)	
5	3	25mm (1") ND (Big)	
Nominal diameter: ⑥			*****⑥-*****-***-*****-****
2		Nominal diameter (Big)	
Hyphen: ⑦			*****-*****-***-*****-****
Fluid category: ⑧			*****⑧***-***-*****-****
L		Liquid	
Temp. category: ⑨			*****-⑨***-***-*****-****
0		60°C and lower	
N		Over 60°C up to 80°C	
1		Over 60°C up to 120°C	
2		Over 120°C up to 200°C	
Major material: ⑩			*****-⑩***-***-*****-****
F		SCPH2	
Z		Special	
Process connection: ⑪~⑫			*****-***⑪⑫-***-*****-****
J	3	JIS 30K RF	
Z	9	Special	
Hyphen: ⑬			*****-*****-***-*****-****
Explosion-proof: ⑭			*****-*****-⑭***-*****-****
0		Non-explosionproof (no pulse generator)	
D		JIS explosionproof	
Ex-proof temp. class: ⑮			*****-*****-⑮*-*****-****
0		Non-explosionproof (no pulse generator)	
4		Ignition G4	
Regulations: ⑯			*****-*****-⑯***-*****-****
0		Standard	
G		High Pressure Gas Safety Act (Approved product)	※w/Material test certificate
H		High Pressure Gas Safety Act (Individual test)	※w/Material test certificate (Designed on PO issued)
J		High Pressure Gas Safety Act (Completion inspection)	※w/Material test certificate
L		Gas Business Act (Approved product)	※w/Material test certificate (Designed on PO issued)
M		Gas Business Act	※w/Material test certificate
Q		Electricity Business Act (Certificate required)	※w/Material test certificate (Designed on PO issued)
R		Electricity Business Act	※w/Material test certificate
T		Fire Service Act	※w/Material test certificate
A		Nuclear power	※w/Material test certificate (Designed on PO issued)
F		w/Material test certificate	
Z		Special	
Hyphen: ⑰			*****-*****-***-*****-****

Register: ⑱		*****-*****-***-⑳***-*****
1	LW11 AG1	±0.5% RD
2	LW11 AF3	±0.2% RD
3	LW15 AG1	±0.5% RD
4	LW15 AF3	±0.2% RD
Unfactored pulse generator: ㉑		*****-*****-***-㉑***-*****
0		No pulse generator
C		Unfactored pulse PG30SEP
L		Unfactored pulse PG30DEP
Z		Special
Factored pulse generator: ㉒		*****-*****-***-㉒***-*****
0		No pulse generator
B		Factored pulse PG30EP
C		Factored pulse PG30SEP
K		Factored pulse PG20EP
L		Factored pulse PG30DEP
Z		Special
Version: ㉓		*****-*****-***-㉓***-*****
A		Version A
Hyphen: ㉔		*****-*****-***-*****-****
Bearing: ㉕		*****-*****-***-*****-㉕***
0		Standard (carbon bearing)
8		Polymerizing liquid (carbon bearing)
Viscosity category: ㉖		*****-*****-***-*****-㉖***
2	Below 1000mPa.s	R3 sintered rotor
3	1000mPa.s and over	R3 special cut sintered rotor
7	Below 1000mPa.s (sintered rotors inapplicable)	R3 cut rotor
8	1000mPa.s and over (sintered rotors inapplicable)	R3 special cut cut rotor
Seal material: ㉗		*****-*****-***-*****-㉗***
F		O-ring (FPM), gasket (T#1120)
C		O-ring (IIR), gasket (T#1120)
Z		Special
Special: ㉘		*****-*****-***-*****-㉘***
0		Standard
Z		Special

■ PRODUCT CODE EXPLANATION

● Main code

Meter Size: 55, 56, 57

Model: ①~③			①②③***-****-***-****-****
L	C	S	Element: stainless steel
L	B	S	Element: cast iron
Capacity (Nominal Diameter): ④~⑤ ***④⑤*-****-***-****-****			
5	5		40mm (1・1/2") ND (Big)
5	6		50mm (2") ND (Big)
5	7		50mm (2") ND (Big)
Nominal diameter: ⑥ *****⑥-****-***-****-****			
2			Nominal diameter (Big)
Hyphen: ⑦ *****-****-***-****-****			
Fluid category: ⑧ *****⑧****-***-****-****			
L			Liquid
Temp. category: ⑨ *****-⑨***-***-****-****			
0			60°C and lower
N			Over 60°C up to 80°C
1			Over 80°C up to 120°C
2			Over 120°C up to 200°C
4			Over 200°C up to 300°C
Major material: ⑩ *****-***⑩*-***-****-****			
F			SCPH2
Z			Special
Process connection: ⑪~⑫ *****-***⑪⑫-***-****-****			
J	1		JIS 10K RF
J	B		JIS 16K RF
J	2		JIS 20K RF
J	3		JIS 30K RF
J	4		JIS 40K RF
J	6		JIS 63K RF
A	1		ASME 150 RF
A	3		ASME 300 RF
A	6		ASME 600 RF
P	1		JPI 150 RF
P	3		JPI 300 RF
P	6		JPI 600 RF
Z	9		Special
Hyphen: ⑬ *****-****-***-****-****			
Explosionproof: ⑭ *****-****-(⑭)*-****-****			
0			Non-explosionproof (no pulse generator)
D			JIS explosionproof
Ex-proof temp. class: ⑮ *****-****-(⑮)*-****-****			
0			Non-explosionproof (no pulse generator)
4			Ignition G4
Regulations: ⑯ *****-****-(⑯)-****-****			
0			Standard
G			High Pressure Gas Safety Act (Approved product) ※w/Material test certificate
H			High Pressure Gas Safety Act (Individual test) ※w/Material test certificate (Designed on PO issued)
J			High Pressure Gas Safety Act (Completion inspection) ※w/Material test certificate
L			Gas Business Act (Approved product) ※w/Material test certificate (Designed on PO issued)
M			Gas Business Act ※w/Material test certificate
Q			Electricity Business Act (Certificate required) ※w/Material test certificate (Designed on PO issued)
R			Electricity Business Act ※w/Material test certificate
T			Fire Service Act ※w/Material test certificate
A			Nuclear power ※w/Material test certificate (Designed on PO issued)
F			w/Material test certificate
Z			Special
Hyphen: ⑰ *****-****-***-****-****			

Register: ⑱ *****-****-(⑱)*-****		
1	LW11 AG1	±0.5% RD
2	LW11 AF3	±0.2% RD
3	LW15 AG1	±0.5% RD
4	LW15 AF3	±0.2% RD
5	LW42 AF3	57 and bigger sizes ±0.2% RD
6	LW43 AF3	57 and bigger sizes ±0.2% RD
Unfactored pulse generator: ⑲ *****-****-(⑲)*-****		
0		No pulse generator
C		Unfactored pulse PG30SEP
L		Unfactored pulse PG30DEP
Z		Special
Factored pulse generator: ⑳ *****-****-(⑳)*-****		
0		No pulse generator
B		Factored pulse PG30EP
C		Factored pulse PG30SEP
K		Factored pulse PG20EP
L		Factored pulse PG30DEP
Z		Special
Version: ㉑ *****-****-(㉑)-****		
A		Version A
Hyphen: ㉒ *****-****-***-****-****		
Bearing: ㉓ *****-****-***-****-(㉓)***		
0		Standard (carbon bearing)
8		Polymerizing liquid (carbon bearing)
Viscosity category: ㉔ *****-****-***-****-(㉔)*		
2		Below 1000mPa.s R3 sintered rotor
3		1000mPa.s and over R3 special cut sintered rotor
5		Below 200mPa.s (sintered rotors inapplicable) Cut rotor
6		200mPa.s and over (sintered rotors inapplicable) Special cut cut rotor
7		Below 1000mPa.s (sintered rotors inapplicable) R3 cut rotor
8		1000mPa.s and over (sintered rotors inapplicable) R3 special cut cut rotor
Seal material: ㉕ *****-****-***-****-(㉕)*		
F		O-ring (FPM), gasket (T#1120)
C		O-ring (IIR), gasket (T#1120)
V		Vortex
Z		Special
Special: ㉖ *****-****-***-****-(㉖)		
0		Standard
Z		Special

■ PRODUCT CODE EXPLANATION

● Additional code

Category of High Pressure Gas			
H	P	0	Other than High Pressure Gas
H	P	1	Toxic gas and flammable gas
H	P	2	Toxic gas
H	P	3	Flammable gas
H	P	4	Other than toxic or flammable gas
Accuracy			
R	0	5	±0.50% ACCURACY
L	0	1	±0.15% LINEARITY ※Only for export
L	0	3	±0.35% LINEARITY ※Only for export
R	0	2	±0.20% ACCURACY
R	9	9	Special
Operating condition			
F	C	0	Continuous
F	M	0	Intermittent
Special test (instrumental error)			
A	1	0	Taxed custody transfer
A	2	0	By certified measurer
A	6	0	Standard oil meter According to JMIF standard (Bore size 80mm and over)
A	7	0	Std. fuel oil meter, std. water meter
A	8	0	Std. fuel oil meter, std. water meter
A	9	9	Designation of instrumental error test method Addition of one (1) test point, etc.
Flow direction ※Must item			
F	R	0	R→L
F	L	0	L→R
F	U	0	T→B Electric conduit at the bottom
F	D	0	B→T Electric conduit at the bottom
Designated special paint on body			
B	C	0	Corrosion proof
B	A	0	Salinity and acid tolerance 120°C and lower
B	X	0	Customer designation
Designated special paint on transmitter			
S	F	0	Corrosion proof Special treatment
S	D	0	Salinity tolerance (Standard)
S	E	0	Acid tolerance Special treatment
S	X	0	Customer designated paint Special treatment
Cleansing			
T	W	0	Non-oil and non-water treatment
T	W	1	Non-oil and non-water treatment equivalent
T	C	0	CIP Choose countermeasure to sudden temp. change
Label			
N	P	J	Label (Japanese)
N	P	E	Label (English)

Document			
D	S	J	DWG and specifications for approval (Japanese)
D	S	E	DWG and specifications for approval (English)
D	R	0	Re-submission of DWG with specifications
D	C	J	Final DWG (Japanese)
D	C	E	Final DWG (English)
D	P	J	Calculation sheet (Japanese)
D	P	E	Calculation sheet (English)
S	E	J	Instrumental error test report (Japanese)
S	E	E	Instrumental error test report (English)
S	T	J	Pressure test report (Japanese)
S	T	E	Pressure test report (English)
S	A	J	Airtight test report (Japanese)
S	A	E	Airtight test report (English)
D	D	J	Dimensional check record (Japanese)
D	D	E	Dimensional check record (English)
S	P	J	Penetrant test report (Japanese) Welded part of pressure resistant vessel
S	P	E	Penetrant test report (English) Welded part of pressure resistant vessel
S	M	J	Magnetic particle inspection (Japanese) Welded part of pressure resistant vessel
S	M	E	Magnetic particle inspection (English) Welded part of pressure resistant vessel
S	R	J	Radiographic inspection (Japanese) Welded part of pressure resistant vessel
S	R	E	Radiographic inspection (English) Welded part of pressure resistant vessel
S	U	J	Ultrasonic inspection (Japanese) Welded part of pressure resistant vessel
S	U	E	Ultrasonic inspection (English) Welded part of pressure resistant vessel
S	X	J	PMI test report (Japanese)
S	X	E	PMI test report (English)
S	S	J	Impact test report (Japanese)
S	S	E	Impact test report (English)
D	Y	J	WPS/PQR (Japanese)
D	Y	E	WPS/PQR (English)
D	9	J	Photo (Japanese)
D	9	E	Photo (English)
D	T	J	Inspection procedure (Japanese)
D	T	E	Inspection procedure (English)
C	A	J	Inspection certificate: A set Only Japanese
C	B	J	Inspection certificate: B set Only Japanese
C	C	J	Inspection certificate: C set Only Japanese
C	D	J	Inspection certificate: D set Only Japanese
Witnessed by customer			
V	1	0	Required

■ When making inquiries, Please state following information:

Please fill out the following specifications when making inquiries.

1. Model	L _____
2. Fluid to be measured	Name _____ Viscosity _____ mPa•s Specific gravit _____
3. Flow rate (m ³ /h)	Maximum _____ Normal _____ Minimum _____
4. Fluid temperature (°C)	Maximum _____ Normal _____ Minimum _____
5. Ambient temperature (°C)	Maximum _____ Normal _____ Minimum _____
6. Pressure (MPa)	Maximum _____ Normal _____ Minimum _____
7. Flow direction	Right ⇄ Left, Bottom ⇄ Top
8. Flange connection	Nominal diameter _____ mm, Flange rating _____
9. Required accuracy (Linearity)	± _____ %
10. Explosion-proof construction	☐ Required class _____ ☐ Not required
11. Accessories	☐ Strainer, ☐ Air eliminator, ☐ Companion flange
12. Quantity	Including accessories _____
13. Receiving device	Type, manufacturer, model, specifications (input, output, power suppl , etc.)
14. Distance between the flow meter and the receiving device	_____ m

● Remote Instrumentation

1	Signal type and application (totalizer, indicator, recorder, controller, computer input, data logger input, batch, blend)
2	Pulse generator type and signal unit
3	Full scale and unit
4	Flowmeter to receiving instrument distance
5	Power source, voltage, frequency
6	Receiving instrument

● Automatic Batching

1	Quantity per batch, preset full scale
2	Time required for each batch
3	Daily total number of batch
4	Allowable error in each batch
5	Operating air pressure, power source, voltage, frequency
6	Valve used and accessories

The specification as of April, 2017 is stated in this GS Sheet. Specifications and design are subject to change without notice.

Sales Representative: