

FLOW SIGHT GLASS GAUGE

FW-1 – SINGLE WINDOW (Bilateral Flow ↔) **FW-2** – DOUBLE WINDOW (Bilateral Flow ↔)

FW-3 – FLANGE TYPE FOR BIG SIZE **FW-4** – DOUBLE WINDOW WITH HIGH PRESSURE

Technical Data

Service: For gases and liquid

Wetted Parts Material: Body- SS304(CF8), SS316(CF8M), SS316L(CF3M), and Duplex stainless steel-UNS J92205 (for FW-2 & 3 & 4), and WCB on request

WCB body is not available for explosion-proof (Ex) applications.

Window- Tempered glass; Gasket- Teflon or Sigma 533

Impeller- (1) ABS plastic, (2) PVDF, (3) PPS+40% glass fiber

Max. Working Temperature: For impeller- (1) ABS plastic: -25~70°C (White), (2) PVDF: -20~100°C (Red or White), (3) PPS+40% glass fiber: 0~200°C (Dark Brown)

Max. Working Pressure: FW-1 & FW-2: 16 kg/cm² @25°C Water
FW-3: Available for 16, 25 and 40 kg/cm² @25°C Water
FW-4: 50 kg/cm² @25°C Water

Connection: Threaded and Flange available

Size: (FW-1 & FW-2): ¼”(8A), ⅜”(10A), ½”(15A), ¾”(20A), 1”(25A), 1¼”(32A), 1½”(40A), 2”(50A)

Thread NPT or PF female; and Flange type available

(FW-3): 2”(50A) to 8”(200A) Flange type only

(FW-4): ½”(15A) to 1¼”(32A) Thread NPT female only

NOTE.

Operating Pressure Range: 0 to 16 kg/cm² (gauge) for Ex applications.

Approvals:

CE 2810



II 2G Ex h IIC Tx Gb



FW-1
(Single Window)

FW-2
(Double Window)



FW-3
(Flange, Double Window)

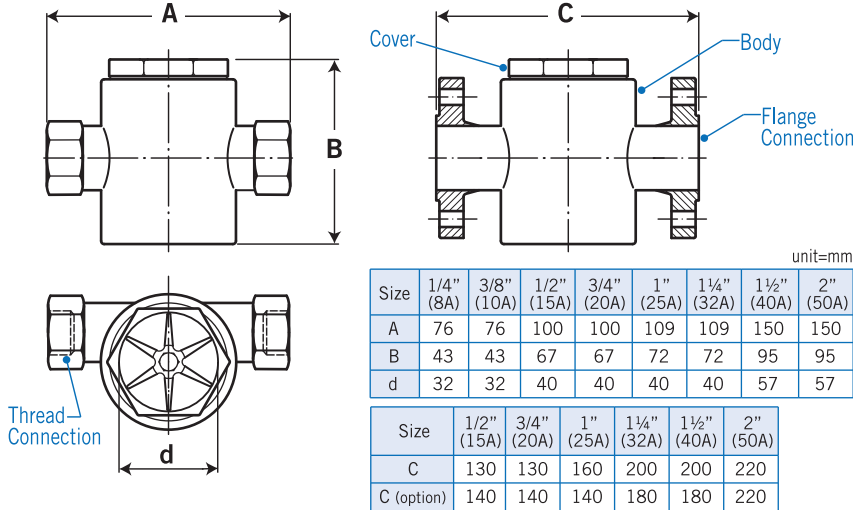


FW-4
(Double Window with High Pressure)

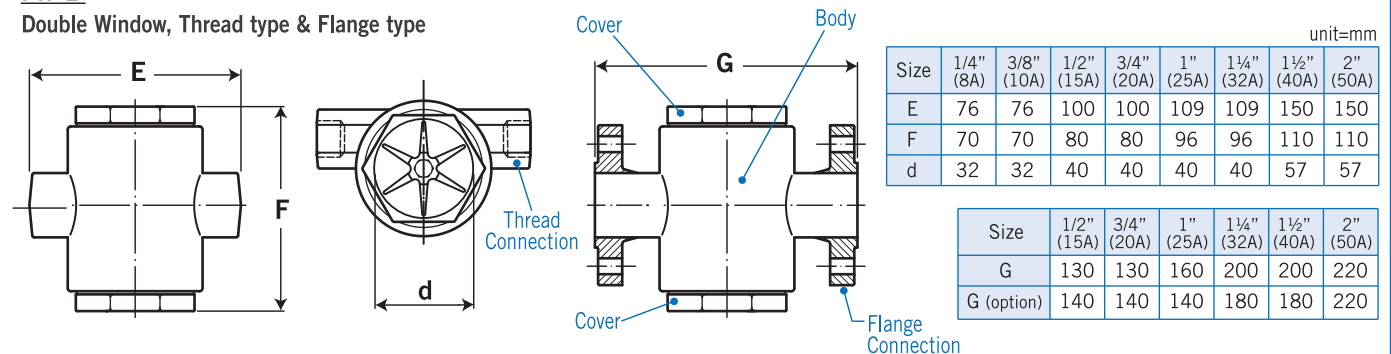
Dimension-mm

FW-1 Single Window, Thread type & Flange type

Body Material Code		S	S4	SL	WB
Material	Body / Flange	SS316(CF8M)	SS304(CF8)	SS316L(CF3M)	WCB / A105
	Cover	SS316(CF8M)	SS304(CF8)	SS316(CF8M)	WCB



FW-2 Double Window, Thread type & Flange type

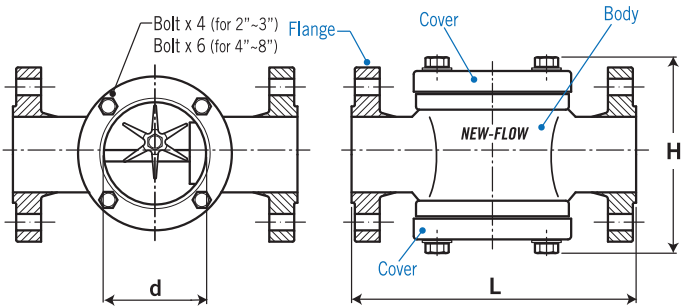


Body Material Code		S	S4	SL	DS	WB
Material	Body / Flange	SS316(CF8M)	SS304(CF8)	SS316L(CF3M)	Duplex S.S UNS J92205	WCB / A105
	Cover	SS316(CF8M)	SS304(CF8)	SS316(CF8M)	SS316(CF8M)	WCB

Dimension-mm

FW-3 Double Window, Flange type for big size

Body Material Code		S	S4	SL	DS	WB
Material	Body / Flange	SS316 (CF8M)	SS304 (CF8)	SS316L (CF3M)	Duplex S.S UNS J92205	WCB/A105
	Cover	SS316 (CF8M)	SS304 (CF8)	SS316 (CF8M)	SS316 (CF8M)	WCB

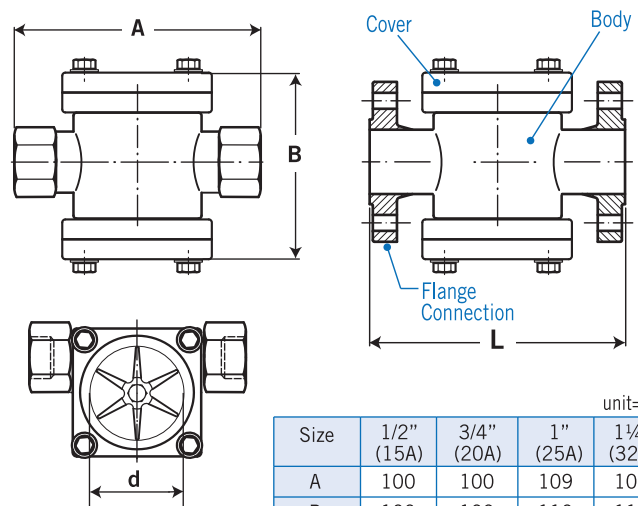


unit=mm

Size	2" (50A)	2½" (65A)	3" (80A)	4" (100A)	5" (125A)	6" (150A)	8" (200A)
d	65	84	84	109	148	170	222
H	146	164	183	212	247	276	345
L	220	270	270	320	380	420	500
L (option)	220	260	260	310	---	---	---
L (300LB)	---	---	---	---	---	---	---

FW-4 Double Window, with High Pressure

Body Material Code		S	S4	SL	DS	WB
Material	Body / Flange	SS316 (CF8M)	SS304 (CF8)	SS316L (CF3M)	Duplex S.S UNS J92205	WCB/A105
	Cover	SS316 (CF8M)	SS304 (CF8)	SS316 (CF8M)	SS316 (CF8M)	WCB



unit=mm

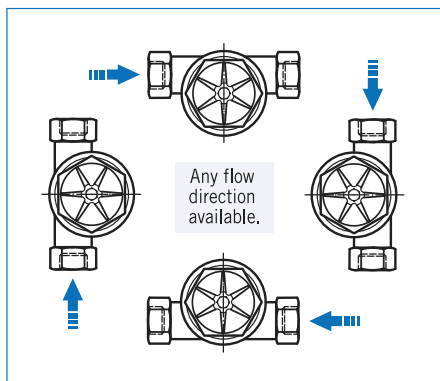
Size	1/2" (15A)	3/4" (20A)	1" (25A)	1¼" (32A)
A	100	100	109	109
B	100	100	110	110
d	43	43	43	43
L	130	130	160	200
L (option)	140	140	140	180

Optional for Impeller



NOTE. The temperature limit above-mentioned is only for the reference to the rotors. Please also considering the max. temperature of body in the operating.

Flow Direction



Ordering Information

FW	Code	Model		
	1	Single Window	3	Double Windows, Flange type for big size
	2	Double Windows	4	Double Windows with High Pressure
		Code	Type	
		T	Thread type	F Flange type
		Code	Body Material	
		S	SS316 (CF8M)	S4 SS304 (CF8) SL SS316L (CF3M) WB WCB Body (A105 flange)
		DS	Duplex S.S- UNS J92205 (only for FW-2, FW-3, FW-4)	
		Code	Gasket Material	
		T	Teflon	S Sigma 533
		Code	Impeller Material (color)	
		A	ABS, plastic (White)	C PVDF (Red)
		B	PVDF (White)	D PPS+40% glass fiber (Dark Brown)
		Code	Connection Size	
			(1) ¼"(8A) (2) ⅜"(10A) (3) ½"(15A) (4) ¾"(20A) (5) 1"(25A) (6) 1¼"(32A) (7) 1½"(40A) (8) 2"(50A)	
			<i>(code 9~15 for FW-3 only):</i>	
			(9) 2"(50A) (10) 2½"(65A) (11) 3"(80A) (12) 4"(100A) (13) 5"(125A) (14) 6"(150A) (15) 8"(200A)	
		Code	Connection Rating	
			(1) NPT female (2) PF female	
			(P1) PN2.5 (P2) PN6 (P3) PN10 (P4) PN16 (P5) PN25 (P6) PN40 (P7) PN63	
			(J1) JIS 5K (J2) JIS 10K (J3) JIS 16K (J4) JIS 20K (J5) JIS 30K (J6) JIS 63K	
			(U1) ANSI 75# (U2) ANSI 125# (U3) ANSI 150# (U4) ANSI 300# (U5) ANSI 600# (U6) ANSI 900#	
			(O) Option	
		Code	CE Mark for PED Request	
		3	Stamp	4 Without
		Code	Explosion Proof Certification Request	
		N	Without	C International IECEx Certification & Europe Union ATEX Certification IECEX & ATEX (Ex) II 2G) Certificate Ex h IIC xx Gb (*"xx" stand for Temperature classification. Please select it as below temp. condition.) [e.g. ½"(15A), Tprocess 100°C] Please select T4 as following, and the Explosion proof marks: Ex h IIC T4 Gb
		Code	Temperature Classification / Condition	
		N	Without Explosion proof certification	
		T2	[for size ½"(15A) to 2½"(65A)]: 175°C < Tprocess ≤ 270°C and Tamb ≤ 75°C [for size 3"(80A) and larger size]: 140°C < Tprocess ≤ 220°C and Tamb ≤ 75°C	
		T3	[for size ½"(15A) to 2½"(65A)]: 110°C < Tprocess ≤ 175°C and Tamb ≤ 75°C [for size 3"(80A) and larger size): 85°C < Tprocess ≤ 140°C and Tamb ≤ 75°C	
		T4	[for size ½"(15A) to 2½"(65A)]: 75°C < Tprocess ≤ 110°C and Tamb ≤ 75°C [for size 3"(80A) and larger size): 60°C < Tprocess and Tamb ≤ 75°C 75°C < Tprocess ≤ 85°C and Tamb ≤ 75°C	
		T5	[for size ½"(15A) to 2½"(65A)]: 60°C < Tprocess and Tamb ≤ 75°C [for size 3"(80A) and larger size): 48°C < Tprocess and Tamb ≤ 60°C	
		T6	[for size ½"(15A) to 2½"(65A)]: Tprocess and Tamb ≤ 60°C [for size 3"(80A) and larger size): Tprocess and Tamb ≤ 48°C	
		Code	Max. Working Pressure	
		0	16 kg/cm²	
		1	25 kg/cm² (for FW-3, see Note.)	
		2	40 kg/cm² (for FW-3, see Note.)	
		3	50 kg/cm² (for FW-4, see Note.)	
FW				Complete Ordering Code

WCB body is not available for Ex. applications.