2.11	FLOW SWITCH FOR FLUIDS

VALVOIND Srl Via Pascoli, 5 - 24060 Bagnatica (Bergamo) Tel. 035.681919-Fax. 035.684461

Valvoind
valvole industriali

AT 32008 — IP 65 FLOW SWITCH FOR WATER

It operates according to the proven paddle bellows principle. Switching point can be freely adjusted and the device mated to different nominal pipe sizes. The electrical device section is separated hermetically from the process fluid by means of a bellows. The devices can be installed in any position.

On request: body AISI 316 (P= 30 bar)

TECHNICAL DETAILS

Bellows of bronze, paddle of st. steel 1.4401 T-piece: steel zinc-plated
Max. medium temperature: -40 ... +120 °C
Max. ambient temperaturer: -35 ... +65 °C
Max. allowed pressure: brass 11 bar, stainless steel 30 bar
Max. pressure loss: approx. 0.01 ... 0.03 bar
Inlet and outlet pipe section: 5 times nominal pipe size
Case: base part ABS, cover PC (transparent)
Switching voltage: max. 24 - 250 VAC
Switching current: max.8A (inductive load) max.15A (resistive load)
Electr. connection: cable gland
Protection type: IP 65

Ø Tubazione	Flow rate (mc/h) Decreasing	Max. Value Increasing
1"	0,6-2	1,-2,1
1¼"	0,8-2,8	1,3-3
1½"	1,1-3,7	1,7-4
2"	2,2-5,7	3,1-6,1
2½"	2,7-6,5	4,0-7,0
3"	4,3-10,7	6,2-11,4
4"	11,4-27,7	14,7-29,0
5"	22,9-53,3	28,4-55,6
6"	35,9-81,7	43,1-85,1
8"	72,6-165,7	85,1-172,5

AT 32009 — FLOW SWITCH FOR HIGH TEMPERATURE + 204°C

Electric performances
UL, FM and ATEX / SAA; 10A @ 125/250 Vxa CSA; 5A @ 125/250 Vca; 5A resistive, 3A inductive @ 30 Vcc. Optional (not for UL and CSA or ATEX / SAA versions). MV option: gold contacts for dry circuits. Nominal performance 1A @ 125 Vac, 1A resistive, 0.5A ind. @ 30 Vcc. MT option: 5A @ 125/250 Vca
Electric connections
UL / CSA versions; copper wire section 16 g, length 152 mm, welded and mechanically joined ATEX / SAA versions: supplied with terminal board.
Switch body
Single piece, milled and reamed, in brass or 316 stainless steel: Other materials available on request.
Scoop: 316 stainless steel, 40 mm width. Other details in 430 stainless steel with silver welding. Other materials available on request. Operating pressure brass body: 70 bar stainless steel
Electric connection: Threaded Ø ¾ "NPTF
body: 138 bar

Process connection: Ø 1½ "NPT threaded
Connectable piping: from 1½ to 20 "

Options
AT ATEX / SAA construction
D DPDT contacts
MV gold contacts, for dry circuits
MT high temperature up to 204 ° C
TRI (for increasing flow)
TRD (for decreased flow), delayed relay.

Option:
2 SPDT contacts adjustable from 0-1 to 0-31 minutes.
316 stainless steel magnet holder (as replacement of the standard in Inox 430).
V = Installation on vertical pipe with upward flow.
OR installation on horizontal pipe (on specific request)

Weight 1.9 Kg

APROXIMATELY ON/OFF FLOW RATE FOR COLD WATER (lt / min)

SCOOP TYPE	PIPE											
	Ø 1½"	Ø 2"	Ø 3"	Ø 4"	Ø 6"	Ø 8"	Ø 10"	Ø 12"	Ø 14"	Ø 16"	Ø 18"	Ø 20"
1	26,7-11,7	56,7-30	167-83,3	367-150	800-450	1417-667	2267-1133	3400- 1700	4550-2267	5300-3033	7567-3783	9083- 4550
1,2	-	26,7-15	86,7-53,3	190-132	500-333	867- 567	700-950	2467-1317	3400-1900	4550-2467	5483-3033	6817- 3783
1,2,3	-	-	41,7-26,7	102-71,7	300-233	600-433	1133-683	1700-1033	2267-1317	2750-2083	3783-2267	4550- 2650
1,2,3,4	-	-	-	65-45	233-167	450-333	867- 567	1167-750	1633-1067	2083-1367	2650-1700	3217- 2083
1,2,3,4,5	-	-	-	-	152-113	300- 250	170- 383	750- 533	1100-750	1367-950	1733-1233	2183-1517

VALVOIND Srl Via Pascoli, 5 - 24060 Bagnatica (Bergamo) Tel. 035.681919-Fax. 035.684461

Valvoind
valvole industriali

AT 330 — FLOW SWITCH FOR 135°C - 10 BAR

It is used to signal an alarm with an ON / OFF the passage of a fluid in a pipe. In production there are different models of flow switches: to the valve body, pallet, with indication of flow rate, thermal dispersion. All suitable for the most varied industrial applications.

Features

- Horizontal mounting
- A single value of intervention (on request are provided two SPDT)
- Switching point adjustable from 20 to 50% of the value of Q max
- Accuracy of ± 5% of the value of Q max
- Maximum temperature 135 ° C
- Pressure up to 10 kg/cm2
- Maximum pressure drop 500 mm H2O

CODES	DN	L	Q max mc/h
AT30108	DN 40	200	12
AT30109	DN 50	230	15
AT30110	DN 65	280	30
AT30111	DN 80	330	40
AT30112	DN100	380	60
AT30113	DN125	420	100
AT30114	DN150	420	100

AT 301 — VHS FLOW SWITCH

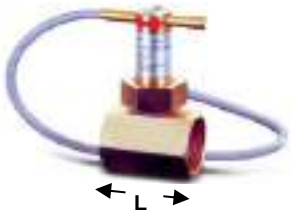
It can come in different nominal widths as well as set-point ranges which depends on the requirements of the application. It uses a modular method which makes it compatible to be used in many different applications. Moreover, it can handle a wide range of pressure and temperature. Applications include, industrial and cooling units, heating, portable water operations as well as heating application.

AT301..	Body: Brass
AT302..	Body: AISI 316
AT303..	Body: Ppo Noril

Switching voltage Max. 230 VAC
Switching current Max. 1 A
Rating Max. 26 VA, 20 W
Medium temperature: -25...110 °C
Ambient temperature: -25...80 °C
Degree of protection EN 60529: IP65

CODE	MODEL	Ø	TEMP MAX °C	PRESS MAX Bar	L mm	FLOW max. l/min	CALIBRATION (water 20°C) INCREASING lt/min	CALIBRATION (water 20°C) DECREASING lt/min
AT...02	VHS 08 M	1/4"	110°	25	50	45	2,1..2,7	1,8..2,4
AT...03	VHS 10 M	3/8"	110°	25	50	60	2,5..3,2	2,2..2,9
AT...04	VHS 15 M	1/2"	110°	25	50	67	3,4..4,2	3,0..3,8
AT...05	VHS 20 M	3/4"	110°	25	50	180	7,0..9,1	6,4..8,2
AT...06	VHS 25 M	1"	110°	25	50	195	13,5..17,0	12,0..15,5
AT...07	VHS 32 M	1¼"	110°	25	50	240	15,5..20,5	14,5..19,0
AT...08	VHS 40 M	1½"	110°	25	50	400	26,5..34,5	25,5..32,5
AT...09	VHS 50 M	2"	110°	25	50	400	39,5..51,0	39,0..50,0

AT 305 — FLOW SWITCH WITH REED CONTACTS



BODY: BRASS FF THREADED
FLUID TEMPER.: 70°C
PVC CABLE: 1,5 mt
MOUNTING: VERTICAL-HORIZONTAL
ATEX ON REQUEST

CODE	MODEL	Ø	L mm	Press. max. bar	FLOW max. l/min	CALIBRATION (water 20°C) INCREASING lt/min	CALIBRATION (water 20°C) DECREASING lt/min
AT30503	DW-R.10	3/8"	50	25	40	2,7-4,5	1,7-3,5
AT30504	DW-R.15	1/2"	50	25	45	4,5-6,5	3,0-5,5
AT30505	DW-R.20	3/4"	50	25	80	8,5-12	6,6-11
AT30506	DW-R.25	1"	50	25	130	13 - 20	11 - 19
AT30507	DW-R.32	1¼"	50	25	160	17 - 26	15 - 25
AT30508	DW-R.40	1½"	50	25	300	28 - 45	27 - 43
AT30509	DW-R.50	2"	120	25	500	45 - 58	43 - 56

CODE	MODEL	Ø	L mm	Press. max. bar	FLOW max. l/min	CALIBRATION (water 20°C) INCREASING lt/min	CALIBRATION (water 20°C) DECREASING lt/min
AT30802	PSR 1108	1/4"	50	100	30	2,3-4,7	1,6-4,6
AT30003	PSR 1110	3/8"	50	100	40	2,3-5,5	2,8-6,0
AT30004	PSR 1115	1/2"	50	100	45	2,5-6,4	1,9-6,3
AT30005	PSR 1120	3/4"	52	100	80	7,7-13,4	5,9-13,0
AT30006	PSR 1125	1"	56	100	130	7,4-18,2	7,3-17,2
AT30007	PSR 1132	1¼"	50	25	160	19,7-36,8	20,0-32,4
AT30008	PSR 1140	1½"	50	25	300	23,1-57,9	23,5-53,1

2.13	FLOW SWITCH FOR FLUIDS AND AIR

VALVOIND Srl Via Pascoli, 5 - 24060 Bagnatica (Bergamo) Tel. 035.681919-Fax. 035.684461

Valvoind
valvole industriali

AT 310 — SWK LOW VOLUME VARIABLE AREA FLOWMETER

The flow meters and monitors of model SWK operate on the known suspended float principle, however without using the generally known conical measuring tube. An orifice float moves in the direction of flow against the force of a spring in a cylindrical guide tube. The float contains a permanent magnet which operates a floating sealed contact (reed contact) mounted on the outside. The instruments are small and can be mounted in any orientation. Model SWK flow switches are ideally suited for monitoring low flows.

AT 310..	BODY: BRASS
AT 311..	BODY: AISI 316
AT 312..	BODY: PVC

Connection: G ½ female
Temp. max.: 100°C
Press. max.: 250bar
Switching range: 0.05 - 0.1 ... 13 - 24 l/min
Material: brass, stainless steel, PVC (1mt cable)
Protection: IP65

CODE	MODEL	Ø	L mm	range in lt/min
AT...03	SWK 1101	1/2"	90	0,05 - 1
AT...04	SWK 1102	1/2"	90	0,1 - 0,2
AT...05	SWK 1108	1/2"	90	0,2 - 0,8
AT...06	SWK 1118	1/2"	90	0,5 - 1,8
AT...07	SWK 1140	1/2"	90	1,7 - 4
AT...08	SWK 1190	1/2"	90	4 - 9
AT...09	SWK 1116	1/2"	90	8 - 16
AT...10	SWK 1124	1/2"	90	13 - 24

AT 315 — DSS ALL METAL FLOW SWITCH

The fl ow switches model DSS operate on the suspended fl oat principle, however not with a tapering measuring tube, but with a cylindrical fl oat and a slotted conical nozzle. This technology allows a very much more compact construction and offers considerable price advantages.

Switching range: 0.05 - 1.0 ... 10 - 110 l/min water
Connection: G ¼ ... G 1¼, ¼ ... 1¼" NPT female thread
Material: brass, stainless steel
pmax: 250 bar (brass), 350 bar (stainless steel)
tmax: 100°C
Accuracy: ±5 % of full scale

CODE	MODEL	Ø	L mm	Temp. max	range in lt/min
AT31503	DSS-1101H	1/4"	132	70°C	0,05..1
AT31504	DSS-1103H	1/4"	132	100°C	0,15..1,7
AT31505	DSS-1109H	1/4"	132	100°C	1..9
AT31506	DSS-1113H	1/4"	132	100°C	2,5..20
AT31507	DSS-1115H	3/4"	156	100°C	3..45
AT31508	DSS-1117H	3/4"	156	100°C	3,5..50
AT31509	DSS-1119H	1,¼"	165	100°C	100..110

MOUNTING: Vertical, upward flow

AT 32008 — IP65 PADDLE SWITCH AIR

The monitored air stream acts on the paddle and over a mechanism actuates the dust-proof microswitch that signals whether the set min. or max. volume of air flows. The flow monitor is suited for universal application as the switch/ signalling point can be finely adjusted over a broad range.

FIELD OF ACTION	SHUT: 1 m/s...8 m/s aria
PIN	2,5 m/s... 9,2 m/s aria
CONNECTIONS	SQUARE FLANGE
PADDLE MATERIAL	Inox
Max. press.	NO pressure
Max. temp.	85°C

Installation :	5 time the diameter a monte e a valle
Differential range	> 1 m/s
Voltage	max. 24/250 V
Supply:	max. 8 A

2.15	FLOW SWITCH

VALVOIND Srl Via Pascoli, 5 - 24060 Bagnatica (Bergamo) Tel. 035.681919-Fax. 035.684461

Valvoind
valvole industriali

AT 400 — PLEXIGLASS FLOWMETERS FOR MEDIUM FLOW

Variable area flow meters with glass measuring tube for small and large flows suitable for gases and liquids

MODEL R	Std Flow Rate		Connections							
	Water	Air	Threaded				Flanged			
codici	lt/h	Nmc/h	Ø	A	B	C	DN	A	B	C
AT400041	120	6	1/2"	127	35	40	15	127	60	35
AT400042	200	8								
AT400043	300	10								
AT400044	400	12								
AT400045	500	12								
AT400046	600	15	1/2"	160	40	45	20	160	80	40
AT400051	800		3/4"							
AT400052	1200									
AT400053	1500	25								
AT400061	2000		1"							
AT400062	3000	40	1"	190	40	50	25	190	80	45
AT400063	4000		1"							
AT400064	6000	60	1"	190	40	60	40	190	80	60
AT400071	8000		1¼"							
AT400081	12000	100	1½"							

Maximum working temperature: 70°C
Maximum working pressure: 10 bar
Precision: ±5% fs.
Junction: PVC, AISI 304, AISI 316

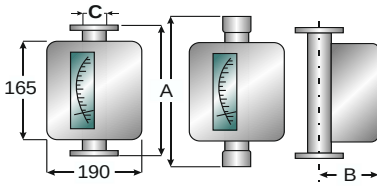
MODEL PL	Std Flow Rate		Connections							
	Water	Air	Threaded				Flanged			
codici	lt/h	Nmc/h	Ø	A	B	C	DN	A	B	C
AT403041	200	6	1/2"	180	35	40	15	180	60	35
AT403042	400	8								
AT403043	600	10								
AT403044	800	15	1/2"	220	40	25	15	220	80	40
AT403051	1200		3/4"				20			
AT403061	2000	25	1				25			
AT403062	4000	40	1"	260	40	50	25	260	80	45
AT403081	6000	60	1½"	260	40	60	40	260	80	60
AT403082	12000	100	1½"	260	40	75	40	260	80	75
AT403091	15000		2"				50			
AT403101	20000		2½"				65			
AT403102	30000		2½"				65			

AT 405 — METALLIC FLOWMETERS FOR LIQUIDS

We manufacture a full range of variable area and calibrated flange flowmeters allowing for a vast application for small and high liquid and gas flows.

CODE	DN	B	Flanged			Tri-Clamp		DIN	
			A	C		A	C	A	C
		mm	mm	ANSI	UNI	mm	Ø	mm	Ø
AT 40504	1/2"	125	250	1/2"	15	250	50	265	52x1/6
AT 40506	1"	130	250	1"	25	250	50	265	65x1/6
AT 40509	2"	150	250	2"	50	250	91	265	95x1/6
AT 40511	3"	160	250	3"	80	250	119	275	130x1/4
AT 40512	4"	180	250	4"*	100*	-	-	-	-

Connection:
Flanged ANSI - UNI
Threaded - NPT
Threaded DIN
Tri clamp
Weight: 5/6 Kg



Technical Features:
Measuring tube in AISI 316
Aluminium housing IP 66
Accuracy: ± 1,5% full scale value
Max pressure 40 Bar
Media temperature -196 °C +400 °C
Electronic transmitter 4-20 mA
Magnetic of reading transmission
Float and wetted parts in AISI 316
Measuring range: 1/10 - scale ~ 100 mm.
High pressure and temperature version
Intrinsecally safety transmitter EEx ia IIC T6, 4-20 mA
Min and/or max. contact SPDT, of inductive bistable type

Flow

Vertically mounted with ascending flow

Mod. TMN			
DN	Flow Water		DP max.
	COD.	ps=1/cps=1 (lt/h)	mbar
1/2"	A01	2,5 - 25	130
1/2"	A02	4 - 40	130
1/2"	A03	6,3 - 63	130
1/2"	A04	10 - 100	140
1/2"	A05	16 - 160	150
1/2"	A06	25 - 250	170
1/2"	A07	40 - 400	160
1/2"	A08	63 - 630	190
1"	A09	100 - 1000	90
1"	A10	160 - 1600	90
1"	A11	250 - 2500	120
1"	A12	400 - 4000	150
2"	A13	630 - 6300	190
2"	A14	1000 - 10000	210
2"	A15	1600 - 16000	230
2"	A16	2500 - 25000	300
3"	A17	4000 - 40000	230
4"	A18	6300 - 63000	240

Mod. TMG					
DN	Flow Water		Flow Air		DP max.
	COD.	ps=1 cps=1 (lt/h)	COD.	Nm3/h	mbar
1/2"	A01	2,5 - 25	B01	120 - 1200	50
1/2"	A02	4 - 40	B02	121 - 1200	55
1/2"	A03	6,3 - 63	B03	122 - 1200	55
1/2"	A04	10 - 100	B04	123 - 1200	35
1/2"	A05	16 - 160	B05	124 - 1200	35
1/2"	A06	25 - 250	B06	125 - 1200	35
1/2"	A07	40 - 400	B07	126 - 1200	30
1/2"	A08	63 - 630	B08	127 - 1200	30
1"	A09	100 - 1000	B09	128 - 1200	35
1"	A10	100 - 1000	B10	129 - 1200	40
1"	A11	160 - 1600	B11	130 - 1200	40
1"	A12	250 - 2500	B12	131 - 1200	45
1"	A13	400 - 4000	B13	132 - 1200	45
1"	A14	600 - 6000		133 - 1200	75
2"	A15	63 - 6300	B15	134 - 1200	45
2"	A16	1000 - 10.000	B16	135 - 1200	40
2"	A17	1600 - 16.000	B17	136 - 1200	40
2"	A18	2500 - 25.000	B18	137 - 1200	45
3"	A19	2500 . 25.000	B19	138 - 1200	45
3"	A20	4000 - 40.000	B20	139 - 1200	45
3"	A21	6300 - 63.000			80
4"	A22	6300 - 63.000			70
4"	A23	10.000 - 100.00(			100

2.16	INDIRECT READING FLOWMETERS

VALVOIND Srl Via Pascoli, 5 - 24060 Bagnatica (Bergamo) Tel. 035.681919-Fax. 035.684461

Valvoind
valvole industriali

AT 410

FLOWMETERS PATENDED FOR FIREFIGHTING PRESSURIZATION UNITS

Flowmeters patended with the EN12845 standard employed on firefighting pressurization units

The flow meter exploits the gauged-flange diaphragm principle.
It is made of a tapered pipe inside which a float is free to run. On the outside of the pipe, a graduated scale is located, the fluid rate is directly read on the scale, by the line that is shown in the figure beside.

TECHNICAL DATA

Accuracy:	± 3% del f.s.
Max pressure:	16 bar
Max Temperature:	100°C
Lenght of reading scale:	200 mm
Measurement Range:	01:10
Suitable for insertion in flanges:	UNI PN10/16; ANSI 150

Code		..08	..09	..10	..11	..12	..13	..14	..15	..16	..17
	model	STANDARD FULL SCALE WITH ΔP max10000mmH2O									
	DN	40	50	65	80	100	125	150	200	250	300
AT 410..	FBB.B	25	50	80	130	150	300	350	450	800	800
AT 411..		40	65	100	150	200	420	450	800	1000	1000
AT 412..		-	-	-	-	280	-	600	1000	1600	-

MATERIALS

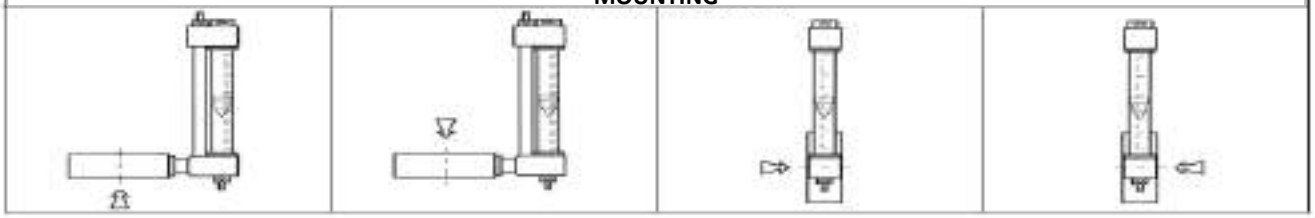
Diaphragm	AISI 316
Float	AISI 316
Gasket	NBR
Measuring Pipe	Policarbonate

Body materials: up to **DN100**

DN 40÷DN 100	**PA6V5010**
Over DN 100	**ACC.C + PA6V5010**

WORKING LIMITS OF PLASTIC FLOWMETERS TEMPERATURES				
BODY	**RANGE**	**6 bar**	**4 bar**	**1 bar**
PVC	-10 + 60°C	25°C	35°C	60°C
MOPLEN	-10 + 80°C	25°C	45°C	80°C
PVDF	-10 + 135°C	20°C	65°C	135°C

MOUNTING



2.50	VORTEX FLOW METERS

VALVOIND Srl Via Pascoli, 5 - 24060 Bagnatica (Bergamo) Tel. 035.681919-Fax. 035.684461

Valvoind
valvole industriali

CV 215

INLINE VORTEX FLOW METERS

Pro-V Flowmeters utilize three primary sensing elements – a vortex shedding velocity sensor, an RTD temperature sensor and a solid state pressure transducer to measure the mass flow rate of gases, liquids and steam.

Systems that use external process measurements to calculate mass flow may not provide adequate compensation as process conditions can change radically between the point of velocity measurement and the point where upstream or downstream pressure and temperature measurements are being made. Due to the fact the Pro-V multivariable flowmeter measures all of these parameters in a single location; it delivers a more accurate process measurement. As well, integrating multivariable output capability with a single line penetrationsimplifies system complexity and helps reduce initial equipment cost, installation cost and maintenance costs.

Features & Benefits

- Volumetric or mass flow monitoring of most liquids, gases, and steam
- Energy Monitoring – ability to compute and output energy use
- Easy to install and commission
- Reliable; no moving parts, no fluid to sensor contact
- High accuracy with rangeability up to 100:1
- Temperature up to 750 degrees F/ 398 degrees C
- Pressure up to 1500 psig
- Field configurable ranges, outputs, and displays
- 4-20mA loop-powered Mass Meter design saves on energy costs
- HART protocol communications Standard
- Modbus, BACnet communications available

Technical datas

Accuracy	Mass flow rate accuracy for gas and steam based on 50-100% of pressure range.
Repeatability	± .1% of rate
Wetted Materials	Standard 316L Stainless Steel, plus. (Optional Carbon Steel or Hastelloy C)
Available Sizes	From ½" (DN15) to 8" (DN200) other dimensions on request
Connection	Flanged ANSI 150 - 300 – 600; DIN / UNI PN 16 - 40 - 64; Wafer
Max Temperature	-40°C +260°C (ST); -40°C +400°C (HT)
Electronics Enclosure	L NEMA 4X IP66 Enclosure R, Remote Electronics NEMA 4X, IP66, (Specify cable length)
Power Requirements	DCL option: 12-36 VDC, 25mA, 1W max, loop powered (single output) - 12-36 VDC, 300mA, 9W max, (multiple outputs) - 100-240 VAC, 50/60Hz line power, 5W (multiple outputs)
Display	Alphanumeric 2 line x 16 character LCD digital display - Six pushbuttons for full field configuration
Output	Up to three analog signals (4-20 mA), three alarms, one totalizer pulse, HART
Totalizer Pulse	50 millisecond pulse, 40 VDC
Digital Output	Up to three signals to configure alarms
Multivariable option	Modbus or BACnet process monitoring
ATEX Approvals	Gas: II2G Ex d IIB + H2 T6 .. Dust: II2D Ex tD A21 IP66 T85°C

FLANGED VERSION			WEIGHT (Kg)		
DN	L	H	PN 16	PN 40	PN 63
	mm	mm	ANSI150	ANSI300	ANSI600
15	116	376	5.5	5.7	5.9
20	122	381	5.9	6.4	6.6
25	126	381	6.1	7.4	7.4
40	140	384	6.6	10.3	11.2
50	153	389	8.8	12.2	15.1
80	175	401	12.5	17.9	25.5
100	203	411	19.7	27.4	43.6
150	229	439	22	43.6	80.8
200	267	462	32.2	67.4	136

WAFER VERSION			
DN	L (mm)	H (mm)	Peso
25	71	376	4.6
40	71	384	5.4
50	76	389	6.4
80	102	401	10.3
100	119	411	15

2.51	CALIBRATED FLANGE FLOW METER

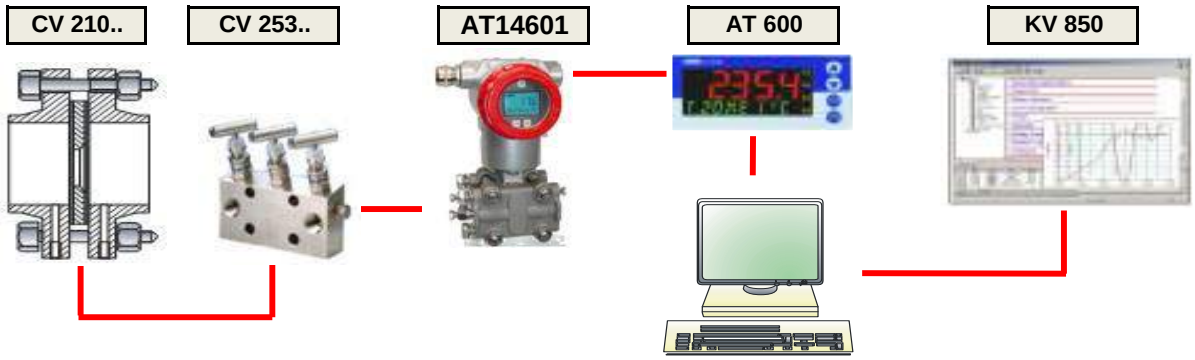
VALVOIND Srl Via Pascoli, 5 - 24060 Bagnatica (Bergamo) Tel. 035.681919-Fax. 035.684461

Valvoind
valvole industriali

CV 210 — CALIBRATED FLANGE FLOW METER

This measurement group shows the instantaneous flow rate and the totalization in engineering scales and it retransmits both values to an acquisition system.
The instrument is also equipped with UL - PED - CE certifications

The basic device is already equipped with one analog input, two binary inputs, two relay outputs, two logic outputs, as well as a voltage supply for 2-wire transmitters. Three extension slots can be fitted with additional inputs and outputs as well as interfaces. The high-contrast, multicolor LCD display for the measured value display and operator guidance consists of a five-digit seven-segment display (value display or parameter setting), an eight-digit 16-segment display with color change (value display, parameter name, channel name, process/alarm text as max. 24-digit running text or pseudo bar graph), and four relay status indications for the binary outputs. Four device keys and an optional setup PC program are available for operating and configuring the device.



For the determination of the calibrated disk it is necessary to specify:

Fluid - Pressure and operating temperature - Density - medium and full scale flow - Pipe diameter

CA 210 — CALOMETRIC FLOW SENSOR

The flow sensor measures and monitors flow velocities of water and aqueous media. The measurement method is based on the calorimetric measuring principle and therefore does not include any moving parts. The measured value can be output via an analog output of 0(4) to 20 mA. A variant with switching output is also available. The condition of the device is displayed using 3 LEDs. JUMO PINOS L01 can be used for a nominal pressure up to 25 bar and in a permitted flow range of 10 to 150 cm/s. A micro USB interface on the device and a setup program is available as an accessory for the simple startup of the flow sensor. A switching point can be set on-site using a push-button on the user interface.

Technical data

- easy programming with configuration program and USB interface
- simple assembly in every position (360 °)
- a choice used as a flow switch or flow meter with output analogue 0 (4) at 20mA or alarm with adjustable intervention point.

Measurable fluids water and aqueous solutions

Measuring range 0.1 to 1.5 m / s

Max. Nominal pressure 25 bar

Accuracy 10% of the measured value (≤ 0.5 m / s)

8% of the measured value

Response time 4s

Output signal 0 (4) at 20 nnA or alarm

Fluid temperature -25 to 80 ° C

Ambient temperature -25 to 70 ° C

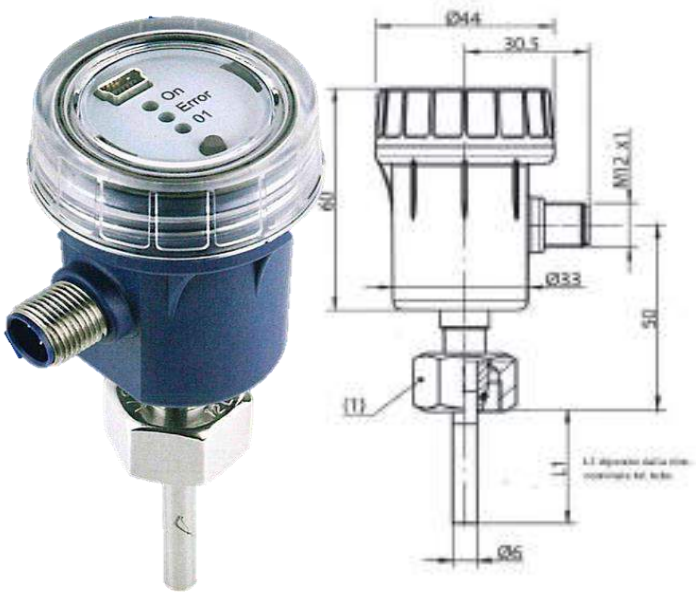
Degree of protection IP65 / 1P67

Housing material: plastic (PA)

process connection: INOX 1.4571

24V DC power supply ± 10%

Accessories: various mounting fittings for pipes from DN 20 to DN 100

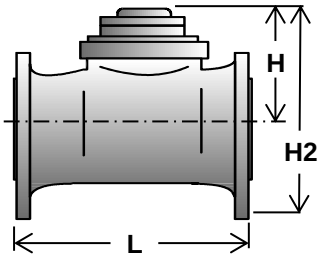


VALVOIND Srl Via Pascoli, 5 - 24060 Bagnatica (Bergamo) Tel. 035.681919-Fax. 035.684461

Valvoind
valvole industriali

CA 201

WOLTMANN WATER METERS
for clean water - Horizontal/Vertical Mounting



CODE	MODEL	Temp.	PULSER	
CA 201..	WEF	30°C	NO	
CA 202	WEC	130°C	NO	
CA 211..	WEF	30°C		YES
CA 212..	WEC	130°C		YES

	CODE	DN		FLOWRATE			SQUARE READING		DIMENSIONS			Weight
				MAX.	NOM.	min.±5%	MAX.	min:	L	H	H2	
		mm	"	m^3/h	m^3/h	m^3/h	m^3	lt	mm			Kg
WATERMETERS FOR CLEAN WATER	CA..09	50	2"	30	15	0,55	10^6	2	200	144	214	12
DIRECT READING	CA..10	65	2½"	50	25	0,6	10^6	4	200	144	234	14
MAGNETIC DRIVE	CA..11	80	3"	80	40	0,7	10^6	4	225	144	234	15
DRY DIAL	CA..12	100	4"	120	60	1,2	10^6	6	250	144	250	19
WITH REMOVAL DRUM	CA..13	125	5"	200	100	2,5	10^6	6	250	144	275	26
CLOSED CONSTRUCTION	CA..14	150	6"	300	150	3	10^7	12	300	180	310	35
EXTERNAL ADJUSTMENT DEVICE	CA..15	200	8"	500	250	5	10^7	12	350	180	338	47
MAX PRESSURE 10bar	CA..16	250	10"	800	400	10	10^7	15	450	235	438	75
HORIZONTAL/VERTICAL MOUNTING	CA..17	300	12"	1200	600	12	10^7	15	500	235	465	95

Measuring insert replaceable without removing the water meter from the pipeline

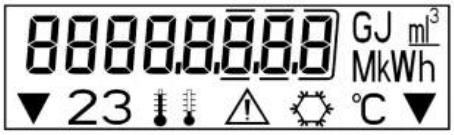
All models are approved according to MID Directive 2004/22/CE (modules B+D), in compliance with EN 14154, OIML R49 and ISO 4064 norms

CA 220

Electronic counter for thermal energy

MODEL UC

- Remote electronic counter to connect to a mechanic, ultrasonic, electromagnetic meter installed over a return pipe; it is suitable to measure the thermal energy on heating and cooling systems;
- Digital display with 8 digits plus special characters;
- Powered by 10 years+1 lithium battery or optionally by 220V external supply or by M-Bus supply;
- Optical communication with M-Bus protocol;
- Data retrieve via single key on 3 (main/technical/stastics) levels installation on DIN rail, on plastic housing or wall mounting;
- 2 additional pulse input to manage 2 reed switch pulsed hot/cold sanitary water meters via internal terminal block with quick connections.



Technical Data		
Temperature range	°C	1 ... 150 (optional 1 ...180)
Temperature difference heat	K	3 ... 100 (3 ... 130 for temperature measurement range 1°C – 180°C)
Temperature difference cooling	K	-3 ... -50
Calculation of heat from	K	ΔΘ>0.05
Calculation of cooling from	K	ΔΘ<-0.05
Resolution temperature	°C	0.01
Measurement cycle		every 30 sec (with external power supply 4 sec)
Power supply	standard	3.6V lithium (6+1 years)
	optional	220V External power supply
		Alimentazione M-Bus
Pulses value	standard	See adhesive label
	TX version	Possible values: 1 / 2.5 / 10 / 25 / 100 / 250 / 1.000
Unit	standard	MWh
	optional	kWh, GJ
		For TX versions depending on set pulse value
Interfaces	standard	infrared / 2 additional pulse
	optional	M-Bus
		2 output for volume and energy
Data Storage		E2PROM / daily
Max. data storage		3 each for flow and power
Billing dates		By choice
Monthly values		24
Protection class		IP65
Electromagnetic class		E1
Mechanical class		M1
Pulse input device		Microcontroller CMOS input class IB according to EN 1434-2:2007(D)
Dimensions	mm	length x width x height 189 x 123,7 x 45,8
Weight	g	250

2.56	MAGNETIC FLOWMETER

VALVOIND Srl Via Pascoli, 5 - 24060 Bagnatica (Bergamo) Tel. 035.681919-Fax. 035.684461

Valvoind
valvole industriali

CA 250

MAGNETIC FLOWMETER FOR CONDUCTIVE LIQUIDS

The magnetic flowmeter, today, is the best instrument for measuring the flow rate in the pressure pipes of electrically conductive liquids (a conductivity of some µS / cm is sufficient). In practice, the magnetic meter consists of an in-line sensor and an electronic converter that can be directly coupled (compact version) or mounted nearby (separate version). The in-line sensor is composed of a through tube with two static sensors on the inner wall. Not presenting internal moving parts is particularly suitable for waste water, fillers, fertilizers ... without any loss of load and especially without the need for constant maintenance.
These meters provide fast response times, together with great measurement accuracy and are available in wafer, flanged, threaded and insertable versions. from DN 3 to DN 2000 in pressure class up to ANSI 900.

VERSION		
COMPACT	SEPARATED	
IP 67	IP 68	
CODE	CODE	DESCRIPTION
CA 253..	CA 263..	WAFER with PTFE internal lining
CA 254..	CA 264..	Flanged with PTFE internal lining
CA 255..	CA 265..	Flanged with EBONY internal lining

Tri clamp

WAFER

FLANGED

code	DN	PN	FLOW RATE [m3/h]								
			@ 0,3 m/s (min)			@ 2 m/s (nominal)			@ 12 m/s (max)		
			m3/h	l/min	l/sec	m3/h	l/min	l/sec	m3/h	l/min	l/sec
CA...04	15	16	0,013	0,217	0,00362	0,09	1,5	0,025	0,454	7,57	0,126
	15		0,03	0,5	0,00833	0,2	4	0,06	1,2	20	0,333
	15		0,18	3	0,05	1,2	20	0,33	7,2	120	2
CA…05	20		0,375	6,25	0,10417	2,5	40	0,7	15	250	4,167
CA…06	25		0,54	9	0,15	3,6	60	1	21,6	360	6
CA…07	32		0,9	15	0,25	6	100	1,7	36	600	10
CA…08	40		1,35	22,5	0,375	9	150	2,5	54	900	15
CA…09	50		2,25	37,5	0,625	15	250	4,2	90	1.500	25
CA…10	65		3,6	60	1	24	400	6,8	144	2.400	40
CA…11	80		5,4	90	1,5	36	600	10	216	3.600	60
CA…12	100		9	150	2,5	60	1000	16	360	6.000	100
CA…13	125		13,5	225	3,75	90	1500	25,2	540	9.000	150
CA…14	150		18	300	5	120	2000	33	720	12.000	200
CA…15	200	10	36	600	10	240	4000	64	1.440	24.000	400
CA…16	250		54	900	15	360	6000	100	2.160	36.000	600
CA…17	300		72	1.200	20	480	8000	135	2.880	48.000	800
CA…18	350		105	1.750	29,2	700	11.670	195	4.200	70.000	1.166
CA…19	400		135	2.250	37,5	900	15.000	250	5.400	90.000	1.500
CA…20	450		180	3.000	50	1.200	19.320	320	7.200	120.000	2.000
CA…21	500		225	3.750	62,5	1.500	25.000	420	9.000	150.000	2.500
CA…22	600		300	5.000	83,3	2.000	33.330	560	12.000	200.000	3.333
CA…23	700		450	7.500	125	3.000	50.000	835	18.000	300.000	5.000
CA…24	800		540	9.000	150	3.600	60.000	1.000	21.600	360.000	6.000
CA…25	900		675	11.250	187,5	4.500	76.400	1.280	27.000	450.000	7.500
CA…26	1000		900	15.000	250	6.000	100.000	1.670	36.000	600.000	10.000

The values shown are indicative

2.60	VOLUMETRIC FLOWMETERS FOR LOW/MEDIUM VISCOSITY

VALVOIND Srl Via Pascoli, 5 - 24060 Bagnatica (Bergamo) Tel. 035.681919-Fax. 035.684461

Valvoind
valvole industriali

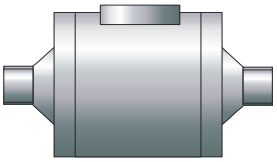
CA 700

PISTON VOLUMETRIC FLOWMETERS FOR LOW/MEDIUM VISCOSITY

These volumetric meters enable precise measurements and highly repetitive (better than ± 0.2%) with low and medium viscosity liquids 0 to 3000 cps.

Materials and versions

Body	AISI 316-PVC-PP-PVDF-PTFE
Piston	PTFE Aluminium PVC PCTFE PEEK
Connection	GAS-DIN-CLAMP-ISS-Flange UNI-ASA
Sensors	REED-REED with LED indicator



Code		CA701..		CA702..		CA703..		CA704..		Flow l/h lt / h		Pulses	Weight Kg	
	BODY	AISI 316		PVC		PP		PVDF						
	Ø	°C	bar	°C	bar	°C	bar	°C	bar	Min	Max.	cc	AISI	PVC
CA...04	Ø 1/2"	80	10							30	400	8,5	1	0,4
CA...06	Ø 1"	80	10	35	3,5	45	3,5	60	3,5	200	2200	50	4	1,5
CA...08	Ø 1½"	80	10	35	3,5	45	3,5	60	3,5	400	6000	220	13	2,7
CA...09	Ø 2"	80	10	35	3,5	45	3,5	60	3,5	500	9000	500	21	3,8
CA...11	Ø 3"	80	10	35	3,5	45	3,5	60	3,5	800	20000	500 **	26	6

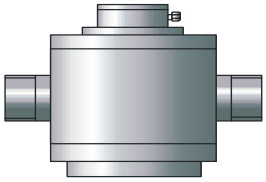
** 2 reed

CA 705

VOLUMETRIC METERS DISC NUTATING FOR MEDIUM/HIGH VISCOSITY

The liter counters to disc nutante are particularly suitable for the measurement of liquid medium and high viscosity for decanting liquids and allows also the measurement of liquids that are not perfectly clean or with small percentages of solids in suspension. Made exclusively of AISI 316.

CA705..	ADN	PER MEDIE VISCOSITA'
CA706..	SDN	PER ALTISSIME VISCOSITA'

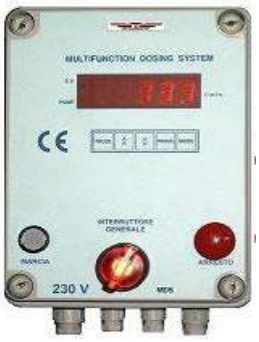


AISI 316

Code		CA705..		CA706..		temp.	press.
	Model	ADN		SDN			
	Ø	Min	Max.	Min	Max.	°C	bar
CA...06	Ø 1"	200	5.400	300	9.000	80	10
CA...08	Ø 1½"	1.000	12.000	900	13.000	80	10
CA...09	Ø 2"	2.000	22.000	2.200	25.000	80	10
CA...10	Ø 2½"	2.800	30.000	3.000	44.000	80	10
CA...11	Ø 3"			4.000	60.000	80	10

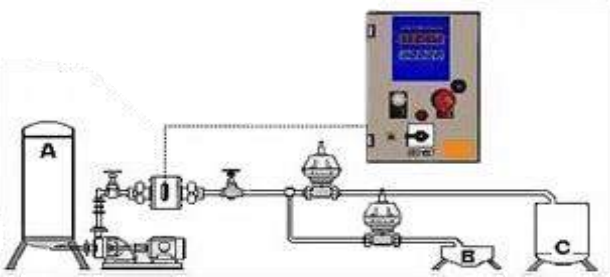
CA 710

DOSING UNIT



Logic a microprocessor
It combines in a single multifunction dosing system all start-stop commands and outputs useful to the realization of an automatic dosing system.

Dose predeterminable quantities
Totalize (reset)
Indicates the speed in liters / sec
It divides the impulses of the liter counter
Percentage the impuses [!]
Transmits data remotely
Accept remote commands (in-out)
Autostop if there are no pulses
Autostop with pre-set time
It does not lose data [e2prom]
Controls pump and valves



3.30	FLOW INDICATORS (SIGHT GLASS) THREATED CONNECTIONS

VALVOIND Srl Via Pascoli, 5 - 24060 Bagnatica (Bergamo) Tel. 035.681919-Fax. 035.684461

Valvoind
valvole industriali

SP 101 — FLOW INDICATORS - THREATED - SINGLE GLASS

BRASS

INOX

SUITABLE FOR FLUIDS

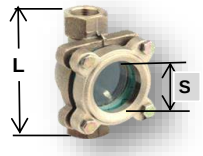
SIGHT GLASS FOR STEAM					
CODES	BODY	TOUGHENED GLASS	w/ INTEGRAL FLAPPERS	PRESS.	TEMP.
SP101..	BRONZE			PN 16	150°C

SIGHT GLASS FOR FLUID w/ FLOATING BALL						
SP201..	BRONZE	polycarbonate	Moplen	FLUIDS	PN 10	110°C
SP202..		PIREX	PTFE		PN 6	280°C
SP203..		toughened glass	Moplen		PN 16	110°C
SP205..	AISI 316	polycarbonate	Moplen		PN 10	110°C
SP206..		PIREX	PTFE		PN 6	280°C

BRONZE BODY				
CODES	SP201.. / SP 203..			
	Ø	L	H	S
SP...03	3/8"	109	40	44
SP...04	1/2"	97	72	44
SP...05	3/4"	100	76	44
SP...06	1"	103	80	44

STAINLESS STELL BODY				
CODES	SP205.. / SP 206..			
	Ø	L	H	S
SP...04	1/2"	105	73	44
SP...05	3/4"	105	73	44
SP...06	1"	105	73	44

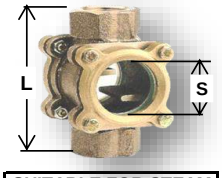
BRONZE SIGHT GLASS FOR STEAM



w/ INTEGRAL FLAPPERS

codes	Ø	L	H	S
SP10103	3/8"	107	40	44
SP10104	1/2"	95	40	44
SP10105	3/4"	100	44	44
SP10106	1"	107	46	44
SP10107	1¼"	128	57	50
SP10108	1½"	137	60	50
SP10109	2"	164	72	63
SP10110	2½"	180	80	82

SP 102 — BRONZE FLOW INDICATORS- THREATED - PN 16 - DOUBLE TEMPERED GLASSES



SUITABLE FOR STEAM
Vertical and Horizontal

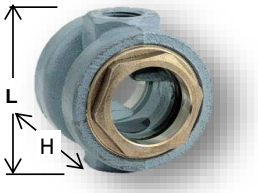
CODES	DESCRIPTION	Application
SP102..	W/ INTEGRAL FLAPPERS	STEAM
SP212..	W/ FLOATING MOPLEN BALL	FLUIDS

Body:	Bronze
Glass:	Tempered crystal
Max Temperature:	150°C
Pressure(120°C):	16 bar
Connections:	Gas Threated

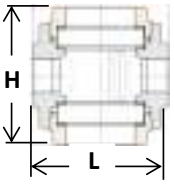
SUITABLE FOR STEAM
Vertical

codes	Ø	L	H	S
SP...03	3/8"	107	40	44
SP...04	1/2"	95	40	44
SP...05	3/4"	100	44	44
SP...06	1"	107	46	44
SP...07	1¼"	128	57	50
SP...08	1½"	137	60	50
SP...09	2"	164	72	63
SP...10	2½"	180	80	82

SP 107 — CAST IRON FLOW INDICATORS - THREATED - PN 16 - DOUBLE TEMPERED GLASS

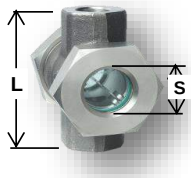


Apllication:	Steam system
Body:	bronze
Glass:	Tempered Crystal
Max Temperature:	150°C
Pressure:	16 bar (120°C)
Connections:	gas threated



codes	Ø	L	H
SP10704	1/2"	80	82
SP10705	3/4"	90	94
SP10706	1"	90	94
SP10707	1¼"	-	-
SP10708	1½"	110	130
SP10709	2"	110	130

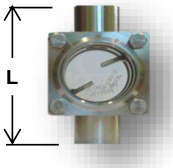
SP 103-104 — STEEL FLOW INDICATORS - PN 16 - DOUBLE GLASS



Application		Steam system
Body	SP 103..	A105 STEEL
	SP 104..	AISI 316
Glass:		Tempered Crystal
Max Temperature:		150°C
Pressure(120°C):		16 bar
Connections:		gas threated

codes	Ø	L	H	S
SP...04	1/2"	90	80	28
SP...05	3/4"	90	80	28
SP...06	1"	100	90	35
SP...07	1¼"	127	110	55
SP...08	1½"	127	110	55
SP...09	2"	140	125	65

SP 108-109 — STEEL FLOW INDICATORS - PN25 - DOUBLE TEPERED GLASS



Application		Steam system
Body	SP 103..	A105 STEEL
	SP 104..	AISI 316
Glass:		Tempered Crystal
Max Temperature:		150°C
Pressure(120°C):		16 bar
Connections:		gas threated
ON REQUEST:		**PN40**

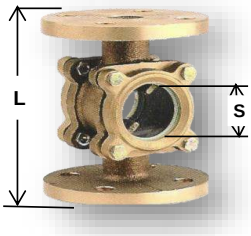
codes	Ø	L
SP...04	1/2"	105
SP...05	3/4"	105
SP...06	1"	105
SP...07	1¼"	130
SP...08	1½"	140
SP...09	2"	155

3.31	FLANGED FLOW INDICATORS

VALVOIND Srl Via Pascoli, 5 - 24060 Bagnatica (Bergamo) Tel. 035.681919-Fax. 035.684461

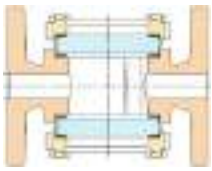
Valvoind
valvole industriali

SP 106 — BRONZE FLOW INDICATORS - FLANGED - PN16 - DOUBLE TEMPERED GLASS



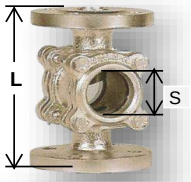
Apllication:	Steam system, water and compatible fluids
Body:	bronze W/ integral flapers
Glass:	Tempered Crystal
Max Temperature:	150°C
Pressure:	16 bar (120°C)
Connections:	UNI PN16 flanged

on request for liquid application with floating teflon ball without integral flappers



codes	Ø	L	S
SP10604	15	112	44
SP10605	20	121	44
SP10606	25	135	44
SP10607	32	148	50
SP10608	40	178	50
SP10609	50	201	63
SP10610	65	239	82
SP10611	80	259	94
SP10612	100	300	110

SP 110-120 — FLOW INDICATORS - FLANGED - COUPLE CRYSTAL



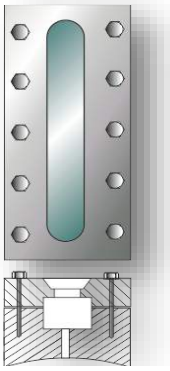
Application: Steam system, water and compatible fluids
Connection: UNI and ANSI Flanged

Code	Body	PN	glass	Temp.
SP 110..	Cast iron	PN 10/16 ASA150	tempered crystal	160°C
SP 115..	WCB.A216			
SP 120..	CF8M.A351			
SP 130..	WCB.A216	ASA 300		
SP 131..	CF8M.A351	ASA 300		
SP 111..	Cast iron	PN 10/16/25 ASA150	Borosilicate	280°C
SP 116..	WCB.A216			
SP 121..	CF8M.A351			
SP 140..	WCB.A216	ASA 300		
SP 141..	CF8M.A351	ASA 300		
SP 117..	WCB.A216	PN 25 ANSI 300	Mica	320°C
SP 122..	CF8M.A351			

A) without elements – B) with tap glass washer - C) with internal clapet - D) with sinners
It is suitable for use in applications with temperatures in exces of 500°C
for liquid application with floating teflon ball without integral flappers

codes	DN	L	S
SP...04	15	95	45
SP...05	20	150	45
SP...06	25	160	45
SP...07	32	180	50
SP...08	40	200	50
SP...09	50	230	60
SP...10	65	290	85
SP...11	80	310	85
SP...12	100	350	105
SP...13	125	400	140
SP...14	150	480	160
SP...15	200	600	170
SP...16	250	730	255

LK 300 — FLOW INDICATORS FOR TANK



Customized flow indicators with banding radius based on tank diamenter (Ø).
Made of AISI 304/316.
Can be rettamgular or circular, and feature backlighting

working pressure on request