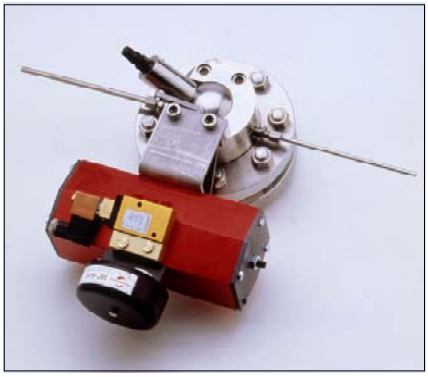
SATRON PASVE pH Mounting & Service Valve



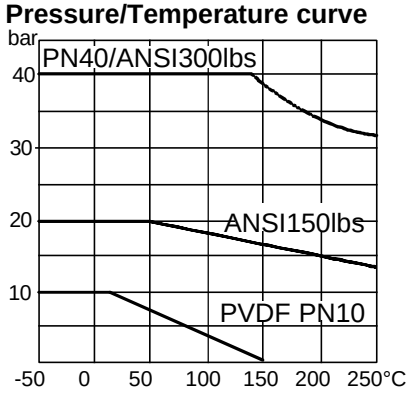
PASVE® pH is a mounting/service valve for pH sensors. It can be used with practically all pH sensors in this size category.
PASVE® pH allows the cleaning and calibration of pH sensors without stopping the process. When required, this can be done automatically. To protect the sensor in abrasive processes, it can be turned to the measuring position only for the duration of the actual measurement.
PASVE® pH is available in a manually operated type or equipped with a pneumatic or electric actuator.

TECHNICAL

Applicable pH sensors
Refer to the Selection Table.

Max. operating pressure/ temperature
40 bar, 250 °C, (see the appended table). Min. operating temp. -50°C. Sensor-specific limitations should also be taken into account in applications.

Pressure/Temperature curve



PVDF curve is valid in water and other clean liquids

Materials
Wetted parts: AISI316L, Titanium, Hastelloy® C276, Duplex and for type **F** PVDF.
Seals: PTFE, or PTFE with carbon and graphite filling.

Weight
PASVE pHC 4.7 kg, PASVE pHP 4.8 kg, PASVE pHF 8.9 kg,
Actuator 5.5 kg

Selection Table

PASVE pH

Mounting type

		Wetted parts (C, B and P)	
C	On container or horizontal pipe , welded	Code	Material
B	On container or vertical pipe, body 15º, welded	**none**	AISI316L (std.)
P	Shape the body to be suitable to the pipe, welded	**3**	Hastelloy® C276
F	On flange	**6**	Titanium
T	Flow-through, threaded connection	**8**	Duplex
D	Flow-through, flange connection		

Process connection type, specified for mounting type F

Flanges		Wetted parts	
Code	Type	Code	Material
D	DN80 PN40	**2**	AISI316L
C	DN100 PN40	**3**	Hastelloy® C276
A	ANSI 3"/150 lps	**6**	Titanium
B	ANSI 3"/300 lps	**8**	Duplex
G	ANSI 4"/300 lps	**P1**	PVDF PN10
E	JIS 10K 80	(P1 only for flange codes D,A,E)	
F	JIS 40K 80		

Process connection type, specified for mounting type T

Threads		Wetted parts	
Code	Type	Code	Material
2	1" - NPT	**2**	AISI 316L
4	1.5"- NPT	**3**	Hastelloy® C276
5	2" - NPT	**6**	Titanium
		8	Duplex

Process connection type, specified for mounting type D

Flanges		Flanges		Wetted parts	
Code	Type	Code	Type	Code	Material
G	DN25 PN40	**R**	JIS 10K 40	**2**	AISI316L
H	ANSI 1"/150	**S**	JIS 10K 40	**3**	Hastelloy® C276
J	ANSI 1"/300	**T**	DN50 PN40	**6**	Titanium
K	JIS 10K 25	**U**	ANSI 2"/150	**8**	Duplex
L	JIS 40K 25	**V**	ANSI 2"/300		
M	DN40 PN40	**X**	JIS 10K 50		
N	ANSI 1.5"/150	**Y**	JIS 40K 50		
P	ANSI 1.5"/300				

Seals

0	PTFE + 20C + 5Gr / FPM (std.)
1	PTFE 100% / FPM
2	PTFE +20C+5Gr / FFPM
3	PTFE 100% / FFPM
4	PTFE + 20C + 5Gr / FPM+AISI316 / PTFE 50 % (Hard)
5	PTFE 100% / FPM+AISI316 / PTFE 50% (Hard)
6	PTFE 100% / FPM + PVDF 100% (Hard)

Sensor connection
Sensor connection types, see page 3

Pt100 temperature sensor

0	No PT100 sensor
X	With PT100 sensor (Measuring range -50 ... +200°C

Actuator

MD	No actuator (manually operated)	**AE1**	Electric actuator 230 V 50 Hz
AD	Double-action actuator	**AE3**	Electric actuator 115 V 60 Hz
AS	Spring-return actuator		

Solenoid for actuator (only for actuator types **AD** and **AS**)

1	230 V AC 50 Hz 2 W (as standard)	**3**	115 V AC 60 Hz 2 W
2	24 V DC 2.5 W (also EEx dm)	**4**	28 V DC 0.4 W (EEx ia)

Solenoid explosion proof

0	No explosion proof	**2**	EEx ia IIC T6 (only 28V)
1	EEx m II T5	**3**	EEx dm IIC T5/T6 (only 24V)

Position switches

0	None	**A**	Position switch EEX ib IIC T5/T6
X	Equipped with position switches		
E	Position switch NAMUR, DIN 19234		

Special options

Z1	For oxygen use	**Z4**	Cutting ball
Z2	Process side flushing	**Z5**	Diamond-coated ball
Z3	Actuator (AS) reverse action	**Z6**	Ceramic-coated ball

Documentation

Installation and operating instructions		Material certificates	
IE	English	**0**	No material certificate
IF	Finnish	**MC1**	SFS-EN 10204-2.1 (DIN50049-2.1)
		MC2	SFS-EN 10204-2.2 (DIN50049-2.2)
		MC3	SFS-EN 10204-3.1B (DIN50049-3.1B)

Specification example: PASVE pH D U2 0 O2 X AD3 1 E Z1 IEMC1

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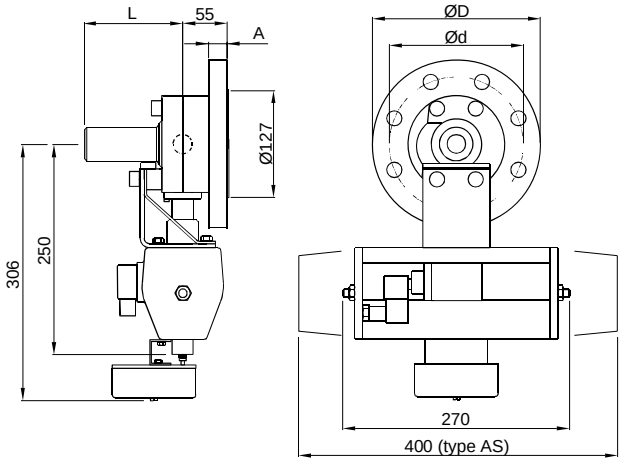
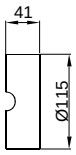
SATRON PASVE pH Mounting & Service Valve

Pasve pH with pneumatic actuator

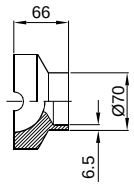
PASVE pHF
(Flange type)



PASVE pHC
(Welded on container or)



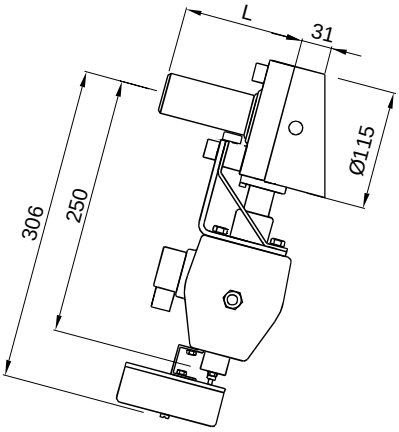
PASVE pHP
(Shape the body to be suitable to the pipe, welded)



PASVE pHF

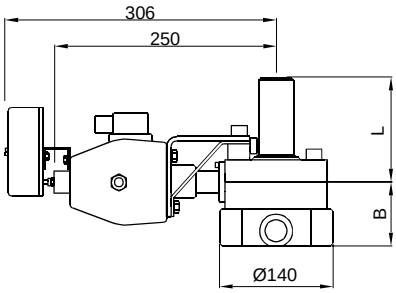
FLANGE Code	Type	ØD	Ød	A
A	ANSI 3" 150 lb	191	152.4	22
B	ANSI 3" 300 lb	210	168.3	27
C	DN100 PN40	220	180	26
D	DN80 PN40	200	160	22
E	JIS 10K 80	185	150	20
F	JIS 40K 80	210	170	30

PASVE pHB
(Welded on container or vertical pipe, body 15º)

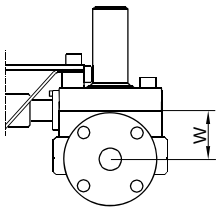


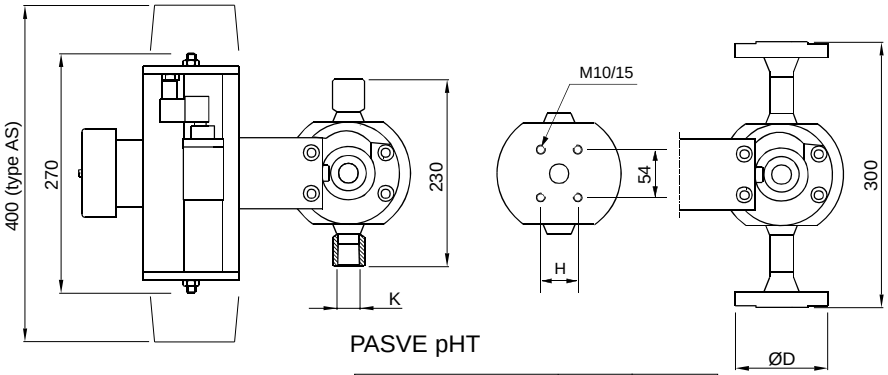
L depends on the sensor type

PASVE pHT
(Flow-through, threaded connection)



PASVE pHD
(Flow through, flange connection)





Dimensions (in mm)

PASVE pHD

FLANGE Code	Type	W	ØD	H
H	ANSI 1" 150 lbs	55	108	48
J	ANSI 1" 300 lbs	55	124	48
U	ANSI 2" 150 lbs	68	153	76
V	ANSI 2" 300 lbs	68	165	76
G	DN25 PN40	55	115	48
T	DN50 PN40	68	165	76

PASVE pHT

THREAD Code	Type (dim.K)	B	H
2	1" - NPT	77	48
4	1.5" - NPT	92	64
5	2" - NPT	104	76

Surface temperature

Ambient temperature °C	Temperature class
70	T6
85	T5
120	T4

European Directive Information

ATEX directive (94/9/EC)
Satron Instruments Inc. complies with the ATEX directive.

European Pressure Equipment Directive (PED) (97/23/EC)
- Sound Engineering Practice

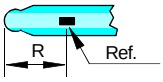
European Certification

Ex II 3 GD

Sensor connection

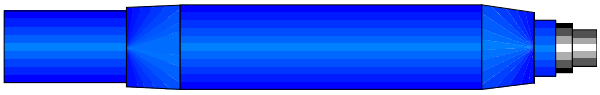
Standard sensor connection PG13.5 / length 120 mm

Code	dimension R
S	R < 30 mm
M	R < 20 mm
L	R < 10 mm

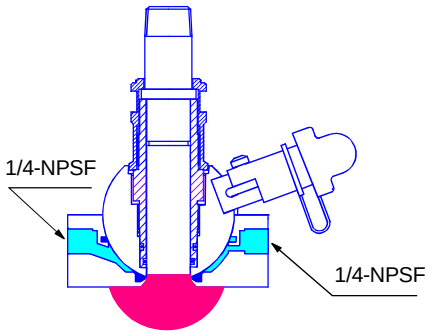


Special sensor connection types

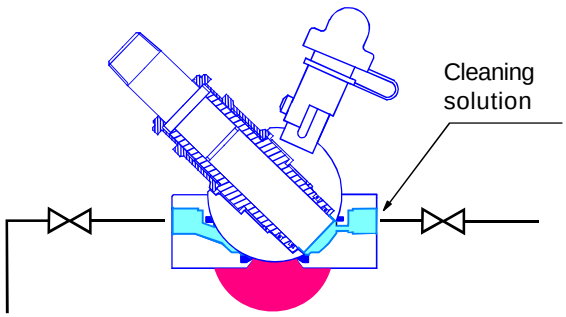
Code	Sensor
A1	Satron S508
A2	in-line Satron S508 (manual only)
B1	Broadley-James Dynaprobe II
B2	Broadley-James S410
B3	Broadley-James DynaProbe ST856
C1	Honeywell Durafet II, smooth tip
C2	Honeywell Meredian II and Durafet II guarded tip
E1	Endress+Hauser CPF81
E2	Endress+Hauser CPF81 -flat glass
F1	Foxboro 871A
F2	Foxboro 871pH
F3	Foxboro PH10-3
F4	Foxboro PH10-2
G1	Lange (GLI) PD1P1.99
G2	Lange (GLI) DPD1P1.99
O2	Orbisphere (31110)
R1	Rosemount 389
R2	Rosemount 385+
R4	Rosemount 396TUpH
R6	Rosemount 396P
R9	Rosemount 3300HT/HTVP
T1	ABB TB556 (38 mm insertion depth), flat glass
T2	ABB TB557
T3	ABB TB564
T4	ABB TB561
T5	in-line ABB TB564 (manual only)
T6	in-line ABB TB561 (manual only)
T7	ABB TB556 (28 mm insertion depth), flat glass
Y1	Yokogawa FU20 - - NPT
Y2	Yokogawa FU20 - - FSM



OPERATING POSITIONS

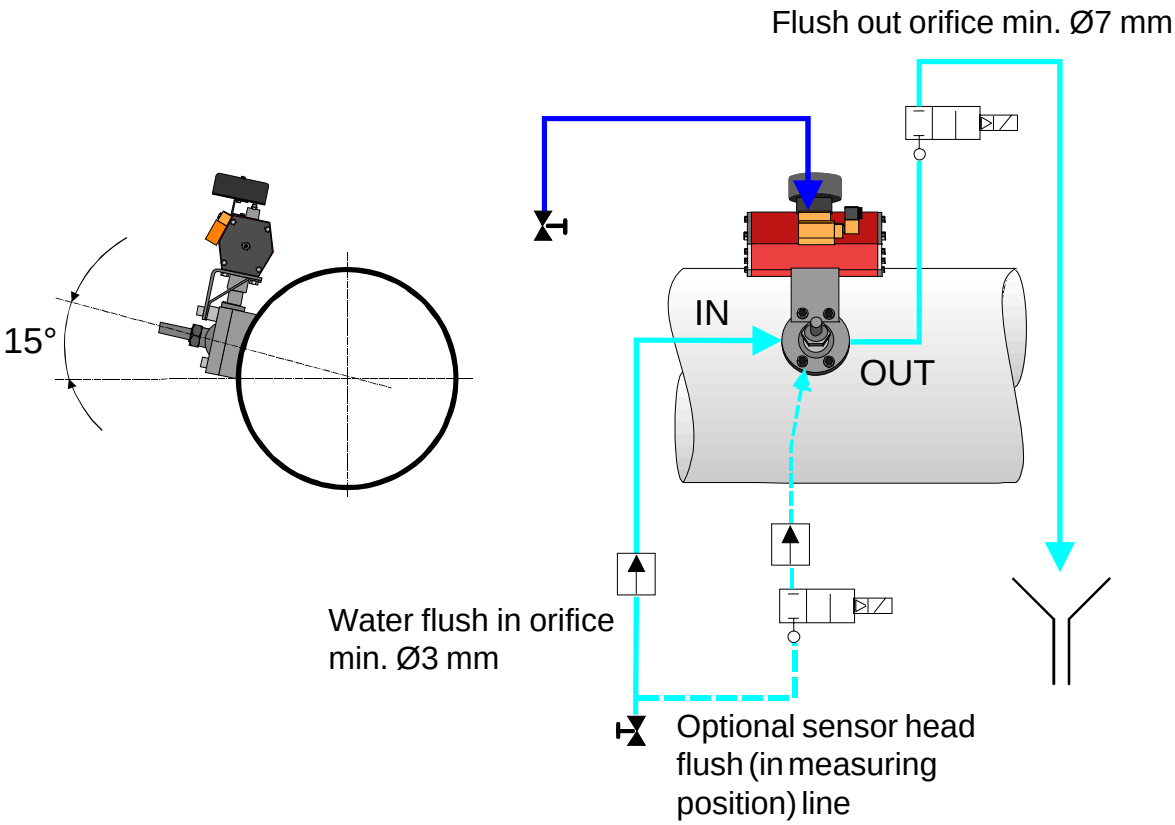


Measuring position
Sensor in measurement. Valve's and sensor's water cooling through flushing channel.



Servicing and calibration position
Sensor turned to cleaning, calibrating and protective position without stopping the process.

PASVE® pH Installation in horizontal pipe



PASVE® pH Installation in vertical pipe