



PASVE® pH is a mounting/service valve for pH sensors. It can be used with practically all pH sensors in this size category in the most demanding measurement locations.

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 SPECIFICATIONS

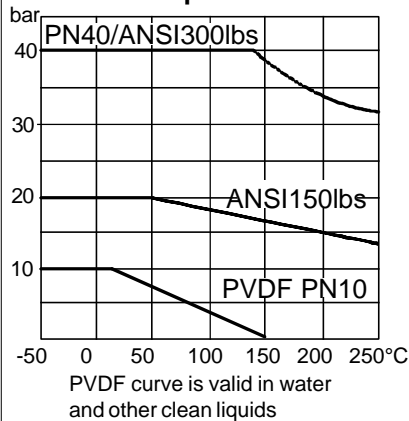
Compatible pH sensors

Refer to the Selection Table.

Max. operating pressure/temperature

40 bar, 250 °C, (see the below table).
Min. operating temp. -50°C.
Sensor-specific limitations should be taken into account by the application.

Pressure/Temperature curve



Materials

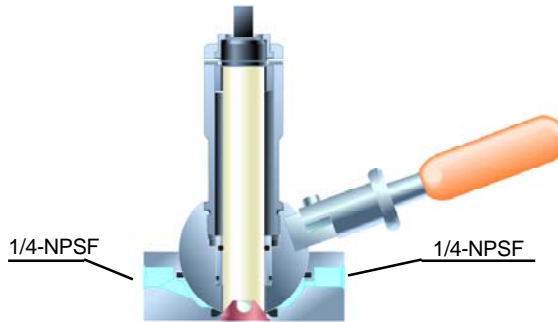
Wetted parts: AISI316L, AISI904L, Titanium, Hastelloy® C276, Duplex, 254 SMO® and PVDF.

Seals: PTFE, PTFE with carbon and graphite filling or PTFE 50%+AISI316 50% mixture

Weight

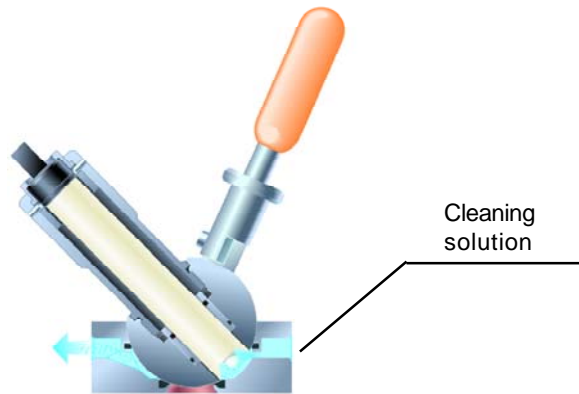
PASVE pHC 4.7 kg, PASVE pHP 4.8 kg,
PASVE pHF 8.9 kg,
Actuator 5.5 kg

OPERATING POSITIONS



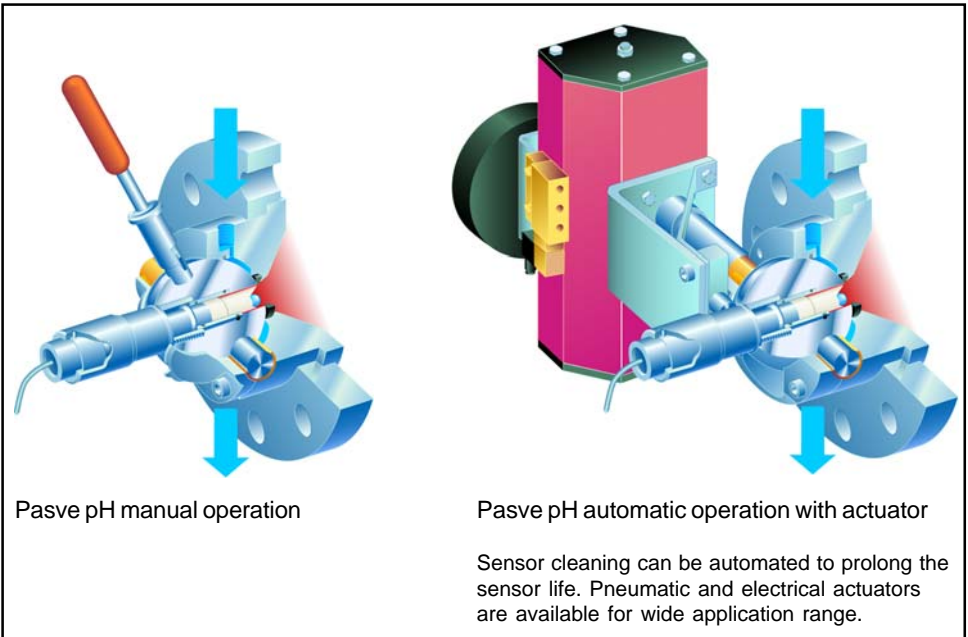
Measuring position

Sensor in measurement position.
(Flushing channel can be used for watercooling the sensor and valve)



Service and calibration position

Sensor is turned inside the valve for cleaning, calibrating or sensor change without stopping the process.



Sensor cleaning can be automated to prolong the sensor life. Pneumatic and electrical actuators are available for wide application range.

Hastelloy is the registered trademark of Haynes International.

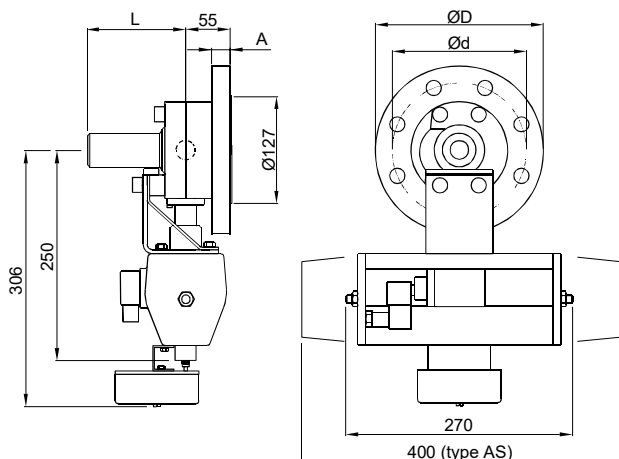
254 SMO is the registered trademark of Outokumpu Stainless Inc.

Pasve is the registered trademark of Satron Instruments Inc.

We reserve the right for technical modifications without prior notice.

Pasve pH with pneumatic actuator

PASVE pHF
(Flange type)



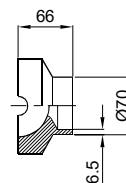
PASVE pHC

(Welded on a container or a horizontal pipe, instructions on manual page 10)



PASVE pHP

(Shape the body for the pipe Ø before welding, instructions on manual page 11)

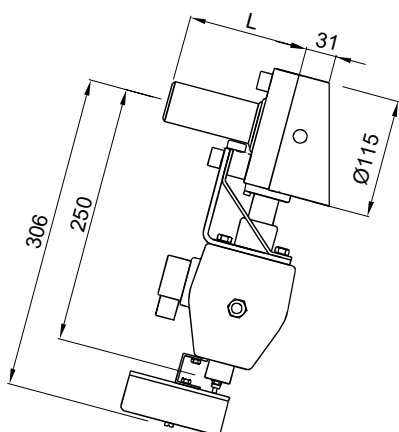


PASVE pHF

FLANGE		ØD	Ød	A
Code	Type			
K	ANSI 2½" 150 lbs	172	139.7	22
A	ANSI 3" 150 lbs	191	152.4	22
B	ANSI 3" 300 lbs	210	168.3	27
H	ANSI 4" 150 lbs	229	190.5	26
G	ANSI 4" 300 lbs	254	200	29
T	DN50 PN40	165	125	20
D	DN80 PN40	200	160	22
J	DN100 PN10/16	220	180	22
C	DN100 PN40	235	190	26
E	JIS10K 80	185	150	20
F	JIS40K 80	210	170	30

PASVE pHB

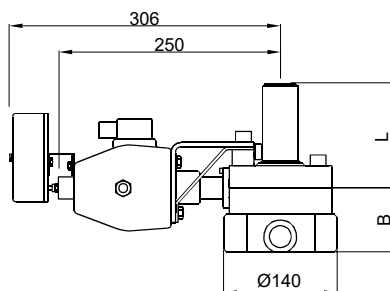
(Welded on a container or a vertical pipe, body 15°)



L depends on the sensor type

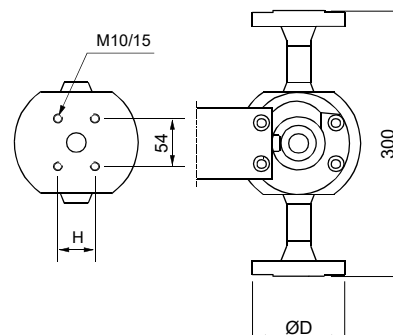
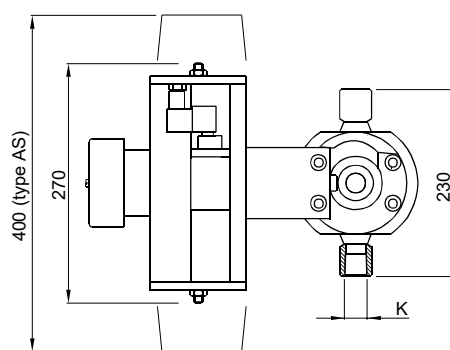
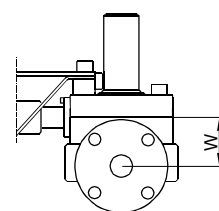
PASVE pHT

(Flow-through body, threaded connection)



PASVE pHD

(Flow through body, flange connection)



PASVE pHD

FLANGE		W	ØD	H
Code	Type			
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

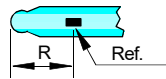
THREAD		B	H
Code	Type (dim.K)		
2	1" - NPT	77	48
4	1.5" - NPT	92	64
5	2" - NPT	104	76

Dimensions (mm)

Sensor connection

Standard sensor connection PG13.5 / Ø12 mm / length 120 mm

Code dimension R
S R < 30 mm

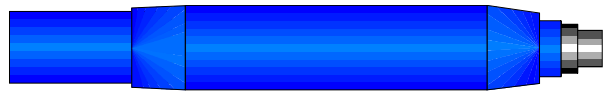


Check the sensor datasheet for the reference point location!

Special sensor connection types

Code Sensor

- A3 ASTi 3/4"-1" MNPT inline (manual only)
- C1 Honeywell Durafet II, smooth tip
- C2 Honeywell Durafet II, guarded tip
- D1 Barben BAT 546 1,5" insertion depth
- D4 Barben BAT551/561 100mm (3,94") insertion depth
- D9 Barben BAT551 100mm insertion depth inline (manual only)
- E3 E+H CPF81-1, protection quard 23 mm insertion depth
- E4 E+H CPF81-2, flat glass
- E5 E+H CPF81D, CPF81E, flat glass, Memosens connector
- E6 E+H CLS21D-C1E1
- E7 E+H CPF82E, Memosens
- F1 Foxboro 871A
- F2 Foxboro 871pH
- F3 Foxboro PH10-3
- F4 Foxboro PH10-2
- F5 Foxboro PH10-2 inline (manual only)
- F6 Foxboro PH10-3 inline (manual only)
- K1 Krohne Smartpat PH-2390
- O2 Orbisphere 311xx
- R1 Rosemount/Emerson 389
- R2 Rosemount/Emerson 385+ (insertion version)
- R4 Rosemount/Emerson 396
- R5 Rosemount/Emerson 396P inline (manual only)
- R6 Rosemount/Emerson 396P
- R9 Rosemount/Emerson 3300HT/HTVP
- RA Rosemount/Emerson 3500VP
- RB Rosemount/Emerson RB-546, 0,5" insertion depth
- RC Rosemount/Emerson 3900/3900VP
- T1 ABB TB556, 1.5" insertion depth
- T2 ABB TB557, flat glass
- T3 ABB TB564, flat glass
- T4 ABB TB561 / Barben 551/561, flat glass, 100 mm insertion depth
- T7 ABB TB556, flat glass, 1.1" insertion depth
- T8 ABB 500 PRO-D
- T9 ABB TB561 inline (manual only)
- TA ABB TB564 inline (manual only)
- TB ABB 500 PRO-D inline (manual only)
- V2 Vanlondon TP571



Surface temperature

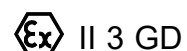
Ambient temperature °C	Temperature class
70	T6
85	T5
120	T4

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:



Selection Table
PASVE pH
Mounting type

	Wetted parts (C, B and P)
C Welded on a container or a horizontal pipe (*)	Code Material
B Welded on a container or a vertical pipe, body 15°	2 AISI316L (EN 1.4404), std.
P Body with a weld neck (**)	3 Hastelloy® C276 (EN 2.4819)
F Flange mounting	4 AISI904L (EN 1.4539)
T Flow-through body, threaded connection	6 Titanium Ti-2 (EN 3.7035)
D Flow-through body, flange connection	8 Duplex (EN 1.4462)
	K 254 SMO®

Process connection type, specified for mounting type F

Flanges		Flanges		Wetted parts	
Code	Type	Code	Type	Code	Material
T	DN50 PN40 (***)	A	ANSI 3"/150 lbs	2	AISI316L (EN 1.4404)
D	DN80 PN40	B	ANSI 3"/300 lbs	3	Hastelloy® C276 (EN 2.4819)
J	DN100 PN10/16	H	ANSI 4"/150 lbs	4	AISI904L (EN 1.4539)
C	DN100 PN40	G	ANSI 4"/300 lbs	6	Titanium Ti-2 (EN 3.7035)
K	ANSI 2 1/2"/150 lbs (***)	E	JIS 10K 80	8	Duplex (EN 1.4462)
		F	JIS 40K 80	K	254 SMO®
				P1	PVDF PN10 (***)

(P1 only suitable for flange codes D,A,E)

Process connection type, specified for mounting type T

Threads		Wetted parts	
Code	Type	Code	Material
2	1" - NPT	2	AISI316L (EN 1.4404)
4	1.5" - NPT	3	Hastelloy® C276 (EN 2.4819)
5	2" - NPT	4	AISI904L (EN 1.4539)
		6	Titanium Ti-2 (EN 3.7035)
		8	Duplex (EN 1.4462)
		K	254 SMO®

Process connection type, specified for mounting type D

Flanges		Flanges		Wetted parts	
Code	Type	Code	Type	Code	Material
G	DN25 PN40	U	ANSI 2"/150	2	AISI316L (EN 1.4404)
M	DN40 PN40	V	ANSI 2"/300	3	Hastelloy® C276 (EN 2.4819)
T	DN50 PN40	K	JIS 10K 25	4	AISI904L (EN 1.4539)
H	ANSI 1"/150	R	JIS 10K 40	6	Titanium Ti-2 (EN 3.7035)
J	ANSI 1"/300	S	JIS 10K 40	8	Duplex (EN 1.4462)
N	ANSI 1.5"/150	X	JIS 10K 50	K	254 SMO®
P	ANSI 1.5"/300	L	JIS 40K 25		
		Y	JIS 40K 50		

Seals

0 PTFE + 20C + 5Gr / FPM (std.)	4 PTFE + 20C + 5Gr / FPM+AISI316 / PTFE 50 % (Hard)
1 PTFE 100% / FPM	5 PTFE 100% / FPM+AISI316 / PTFE 50% (Hard)
2 PTFE +20C+5Gr / FFPM	6 PTFE 100% / FPM + PVDF 100% (Hard)
3 PTFE 100% / FFPM	7 PTFE + 20C + 5Gr / EPDM
	8 PTFE 100% / EPDM

Sensor connection

Sensor connection types, see page 3

Pt100 temperature sensor

0 No sensor
X With 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	A0 No actuator, fittings to the actuator

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

0 No solenoid valve	2 24 V DC 2.5 W (also EEx dm)	4 28 V DC 0.4 W (EEx ia)
1 230 V AC 50 Hz 2 W (as standard)	3 115 V AC 60 Hz 2 W	

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 (not available for all configurations, ask for compatibility)

Z1 For oxygen use	Z4 Cutting ball
Z2 Process side flushing	Z5 Diamond-coated ball
Z3 Actuator (AS) reverse action	Z7 Process side flushing through the ball, only Ø12 / L = 120mm sensors

Documentation
Installation and operating instructions

IE English
IF Finnish

Material certificates

0 No material certificate	(*) = Pipe Ø>DN60 with disassembly before welding, more information on manual page 10
MC1 SFS-EN 10204-2.1 (DIN50049-2.1)	(**) = Body can be shaped to fit pipe with Ø>DN70
MC2 SFS-EN 10204-2.2 (DIN50049-2.2)	(***) = Only available with manual operation MD
MC3 SFS-EN 10204-3.1B (DIN50049-3.1B)	

Specification example: PASVE pH D U2 0 O2 XAD3 1 E Z1 IEMC1