

# PSV STATION

A family of compact, digital, easy operated and transportable stations, for test and calibration of safety and relief valves, with connections from ½" to 10" and pressures up to 10000 psig (700 bar).



# PRESYS®



## PSV STATION

They have a unique acquisition system that allows automatic detection of opening pressures (SET) and valve closing (RESEATING).

The **PRESYS** PSV station is a complete solution, composed of a test bench that communicates with the calibration software Isoplan-5®, emitting complete and detailed certificates and test reports for pressure safety valves (PSV) and pressure relief valves (PRV). Isoplan PSV-5 Calibration Software one license included.

Pneumatic and hydraulic versions available.

Hybrid version with independent pneumatic and hydraulic operating circuits.

Configurable Digital indicator according to the E.U. of the tested valve.

Available units: psi, bar, MPa, kPa, kgf/cm<sup>2</sup>, gf/cm<sup>2</sup> (others units under consult).

Easy to install and ready to use.

Nitrogen or air operated for pneumatic versions and, water or oil for hydraulic versions.

### PRESSURE RANGES AVAILABLE\*

500 psig (35 bar) / 1000 psig (70 bar) / 3000 psig (210 bar) / 5000 psig (350 bar)  
10000 psig (700 bar)      \*other pressures on request

## STANDARD FEATURES

- ▣ AUTOMATIC ACQUISITION of SET and RESEATING values.
- ▣ 0.1 % FS High accuracy digital pressure acquisition and measurement system.
- ▣ Calibration certificates for all pressure indicators.
- ▣ Ball valve to isolate high pressure accumulator.
- ▣ Pressurized valve sinalization.
- ▣ Data book of internal pressure vessels.
- ▣ High-strength 6mm polycarbonate shield for operator protection.
- ▣ Threaded valves up to 2", with set thread female NPT adapter's kit for up to 5000 psi (350 bar).
- ▣ Mounting flanged valves: from 1" (DN 25) to 10" (DN 250).
- ▣ Manual bubble counter Assembly, with flange adapters in accordance with API-527.
- ▣ Easy to operated control panel with precision regulators for fine adjustment of pressure.
- ▣ Manual clamping system with up to 4 clamps.
- ▣ Manifold block for external pressure standard gauge with fast connection – tool free. It can be used as gauge calibration port.
- ▣ Compact dimensions (H x W x D): 1220 mm (48,0 in) x 1000 mm (39,4 in) x 1300 mm (51,2 in),
- ▣ 450 kg (992 lbs), total height with shield: 1900 mm (74,8 in).
- ▣ Suspension eyelet for easy transport.

# PSV STATION

## INCLUDED ACCESSORIES

### Set thread female NPT adapters



Sizes:  
 $\frac{1}{2}$ ",  $\frac{3}{4}$ ", 1",  $1\frac{1}{4}$ ",  $1\frac{1}{2}$ " e 2".  
Maximum pressure up to 5000 psi (350 bar)  
Other size/pressure, under consult.

### Bubble counter assembly



With flange adapters, clamps and  
bubble jar (API 527)

### Manual clamping system



With 4 clamps set

### Flange adapters for test



For test flanged valves from  $\frac{1}{2}$ " (DN 15) to 10" (DN 250)  
With 9 polyurethane O-ring gasket.

## OPTIONAL ACCESSORIES

- Station operating Training.
- Extra digital pressure transducers for better accuracy measurements.
- Split Assembly, with command panel and test table separated.
- Spare O-ring gasket kit for flange test adapters.
- RTJ Flange Adapters.



<b>PRESYS</b>		<b>Calibration Certificate</b>					
N.: 1/2016							
COMPANY: PRESYS INSTRUMENTS CO.							
INSTRUMENT: SAFETY VALVE		REG. NUMBER: CRN 06715550					
FUNCT.: BOILER PROTECTION		TAG: PSV-1231004 - 10 bar					
SECTOR: PLANT A/BOILER 1		CALIBRATION PERIOD: 12 Months					
CRITICALITY: SECURITY		PROC.: P-CO-04					
O.S.: SAP001							
<b>PROCESS OPERATION INFORMATION</b>							
Associated Equipment: B-403		Operating Temperature: Not Informed					
Operating Pressure: Not Informed		PMTP: Not Informed					
<b>INSTRUMENT SPECIFICATION</b>							
Manufacturer: HANSEN USA		Fluid: AIR					
Model: HANSEN USA		Body Material: STEEL					
Fixed Assets: N/A		Seat Material: STAINLESS STEEL					
Input Connections: 2 1/2"		Pressure Class: 150#					
Output Connection: 3"		Manufacturing Standard: ASME VIII					
Threaded or Flanged Connection: FLANGED		Hole: F					
<b>CALIBRATION AND ADJUSTMENT</b>							
<b>INITIAL CALIBRATION</b>							
	Reference (bar)	Reading 1 (bar)	Average (bar)	Error (bar)	Blowdown (%)	U (bar)	
SET PRESSURE	11,00	10,70	10,70	0,30	43,93	0,14	
RESEATING PRESSURE	6,50	6,00	6,00	-0,50			
Leakage: LEAKING Internal State: GOOD							
<b>FINAL CALIBRATION</b>							
	Reference (bar)	Reading 1 (bar)	Reading 2 (bar)	Reading 3 (bar)	Average (bar)	Error (bar)	Blowdown (%)
SET PRESSURE	11,00	10,76	10,76	10,74	10,75	-0,25	42,7
RESEATING PRESSURE	6,50	6,25	6,06	6,16	6,16	-0,34	
<b>COMMENTS:</b>							
- Used Norm: ASME VIII (Gas)							
<b>SUMMARY OF PERFORMED SERVICES</b>							
PARTS REPLACED SEATS				NOZZLE MACHINED,			
SEAT: GRINDING, LAPPING				SPRING VERIFIED			
STEM POLISHED				UPPER SEALING SEALED			
CLEANING SOLVENT, SANDBLASTED				LOWER SEALING: SEALED			
PAINTING: ALUMINUM 600°C							
<b>LEAK TEST</b>							
FLUID: AIR		NUMBER OF BUBBLES: 2		MINUTES			
<b>SHIFTING LIFT</b>							
GOOD							
<b>CALIBRATION CONDITIONS</b>							
LOCATION: PRESYS MAINTENANCE LABORATORY				TEMPERATURE: 21°C			
HUMIDITY: 65%				PRESS: 1 atm			
<b>USED STANDARDS</b>							
MODEL: DMY-2017-Light-1112-0-0-3-0-1 S.N.: 005.09.15 Cert. N.: R3060.07.15 Next Calib.: 15/09/2016 Scale: Pressure PSV (G)							
INITIAL DIAG.: Not Approved				FINAL DIAG.: Approved			
CALIBRATION: 18/02/2016				NEXT: 18/02/2017			
<b>COMMENTS</b>							
Used Norm: ASME VIII (Gas)							

# CERTIFICATE

<b>PRESYS</b>		<b>Calibration Certificate</b>	
N.: 1/2016			
COMPANY: PRESYS INSTRUMENTS CO.			
INSTRUMENT: SAFETY VALVE		REG. NUMBER: CRN 06715550	
FUNCT.: BOILER PROTECTION		TAG: PSV-1231004 - 10 bar	
SECTOR: PLANT A/BOILER 1		CALIBRATION PERIOD: 12 Months	
CRITICALITY: SECURITY		PROC.: P-CO-04	
O.S.: SAP001			
<b>CALIBRATION GRAPHIC</b>			
SAFETY VALVE - Final Calibration 1		SAFETY VALVE - Final Calibration 2	
SAFETY VALVE - Final Calibration 3			
<b>PHOTOGRAPHIC REPORT</b>			
Reception		Disassembled	
Completed			
Jean Marc		William Johnson	
Exécutant		Responsable	
18/02/2016 17:10:08		18/02/2016 17:10:12	

The set pressure and reseating pressure are automatically registered and display on the digital pressure registration system and can be send in real-time to the ISOPLAN® Software.

ISOPLAN® calibration software allows you to record all your safety valves technical information and calibration operations in a strong database in order to meet your safety regulations.

It will generate the full calibration report that will include the calibration graphics, calculation of *blowdown*, photos of the valve before and after maintenance as well as any technical relevant information.

**PRESYS** PSV Workstation is delivered ready to use and we provide training by internet conference or on-site on request. **PRESYS** products are developed in a technology context combining high quality and reliability, using a continuous improvement process. With a global presence in most regions of the world, directly or with specialized and trained distributors, **PRESYS** provides you with the right solution for you application or calibration needs, always benefiting of our entire technical support.