

Technical Specification of Horizontal Floor Mounted Double Post PSV Test Bench
Material Code 5928010011

Instruction to Vendor

1. VENDOR MUST FILL-UP THE "VENDOR'S RESPONSE COLUMN IN THE SPECIFICATION SHEET, 'A' FOR ACCEPTANCE AND 'NA' FOR NOT ACCEPTANCE THE PURCHASER'S TECHNICAL Specification of Horizontal Floor Mounted Double Post PSV Test Bench, POINT WISE . A SEPARATE DEVIATION LIST , NAMING "ANNEXURE-X, DEVIATION LIST" , SHOULD BE GIVEN BY THE VENDOR FOR ALL POINTS WHICH ARE NOT ACCEPTABLE TO THE VENDOR , WHERE ALL THE DEVIATIONS SHALL NECESSARILY BE EXPLAINED POINTWISE WITH OFFERED ALTERNATIVES AND RETURN BACK ALL THE SHEETS DULY SIGNED ALONG WITH THE OFFER.Vendor should provide technical catalogues of offered model of Test Bench and all other accessories metioned below supporting the technical specifications.

2. ALL THE SPECIFICATIONS/POINTS MUST NECESSARILY BE FILLED IN. ANY POINT LEFT OUT IS DEEMED AS NOT ACCEPTED WITHOUT ANY REASON THEREOF WHERE EVER " VENDOR TO SPECIFY" IS MENTIONED, VENDOR MUST FILL REQUIRED DETAILS.

3. RELEVANT COMPLETE TECHNICAL LITERATURE HAS TO BE ENCLOSED FOR EVERY OFFERED MODEL.

4. FOR ANY CONTRADICTIONARY POINTS IN THE SPECIFICATIONS AND SCOPE OF SUPPLY ,VENDOR SHALL REFER TO BCPL FOR CLARIFICATIN BEFORE SUBMITTING THE OFFER.

SL No.	Description	UOM	Range/Qnty	VENDOR'S RESPONSE		
	Horizontal Floor Mounted Double Post PSV Test Bench with capability for both Pneumatic and Hydraulic Testing having NPT screwed and flanged connection			A' for Acceptance	NA' for Not Acceptable	Remarks / Deviation
1	General Specification					
	The PSV Test Bench shold be complete in all respect to be enable testing of PSVs as per following Standards: 1.ASME Section VIII Div 1 ; 2.API 520/521/526/527/576; 3. ISO 4126; 4. ANSI B 16.5(for Flanges) and ANSI B2.1(for Threaded Valves) 5. OISD 132					
a	Model No.(Technical Catalogue to be provided)		Vendor to Specify			
c	Type of mounting		Horizontal Floor Mounted Skid and valves are mounted in vertical position			
d	Test Pressure-By Air (Capacity)	PSIG	Minimum 5000			
e	Test Pressure-By Water (Capacity)	PSIG	Minimum 5000			
f	Test Port		Minimum 2 No.s (both ports can be used for flanged and screwed types Valves)			
g	Pneumatic Test Port	No.s	Minimum 1			
h	Pneumatic / Hydraulic Test Port	No.s	Minimum 1			
i	Simultaneous Operation of both Test Port	Both test port can be used simultaneously for testing PSVs				
j	Air Supply Pressure - BCPL Scope (To be used in absence of Air Compressor)	PSIG	Approx 75			
k	Water Supply pressure - BCPL Scope	PSIG	Approx 30			
l	Valve Sizes to be tested -Flanged	Inch	0.5 to 10			
m	Valve Sizes to be tested -Screwed	Inch NPT	0.5 to 2			
n	The necessary adapter plates and couplings shall be provide to cover the above requirements. Also the bench shall be provided with all necessary piping/tubing, fittings and instruments enabling to perform the PSV testing of sizes as mentioned above. One Port shall be exclusively for pneumatic testing and second one for shall have provision for both pneumatic and hydraulic testing.					
2	Main Test Bench Dimension(Approx)	mm X mm Xmm	Vendor to Specify			
3	Test Bench items					
	Item	Material	Make			
a	Tubing	SS	Swagelok / Parkar / Sandvik			
b	Valves	SS	Swagelok / Parkar / Hofmann/Hoke & Butech			
c	Fittings	SS	Swagelok / Parkar / Hofmann			
d	Test Chamber	SS				
e	Main Frame Assembly	IS 226 or Equivalent				
f	Air Receiver	A106 Gr B or or Equivalent				
4	Details of Input Supply and Drain lines with End Connection					
	Item	End Connection	Size			
a	Water Line	NPTF	1/2"			
b	Air Supply	NPTF	1/2"			
c	Drain Line	NPTF	1/4" or 1/2"			
d	Nitrogen Line (From Nitrogen cylinder) for direct operation	NPTF	1/2"			
5	Air-to-Air Booster					
a	Make		Vendor to Specify			
b	Model		Vendor to Specify			
c	Pressure Ratio		1:60 (Minimum)			
6	High Pressure Receiver	No.s	Vendor to Specify type, make, model			
7	Hydro Pneumatic Booster					
a	Make		Vendor to Specify			
b	Model		Vendor to Specify			
c	Pressure Ratio		1:100 (Minimum)			
8	Hydro Pneumatic Accumulator					
a	Make		Vendor to Specify			
b	Model		Vendor to Specify			
c	Min Working Pressure	barg	400			
d	Test Pressure	barg	1.5 times max working pressure			
e	Temp Range	Degree C	Vendor to Specify			
f	Minimum Capcity	Litres	5			
g	Nitrogen Charging kit for Hydropneumatic accumulator	Set	1			

9	Air Compressor					
	Electric Motor Driven Air Cooled, splash/Dry lubricated, suction,discharge receiver mounted reciprocating type air compressor with following characteristics	No.s	1			
a	Make	Either of these makes only	Any of the following makes: Ingersoll Rand/Chicago Pneumatic/Atlas Copco / Elgi/KPCL /KG Khosla			
b	Model		Vendor to Specify			
c	Min Delivery pressure	PSIG	250			
d	Discharge Temperature		Vendor to specify			
e	Minimum Discharge Receiver Capacity	Liters	300			
f	Suction Strainer/Filter		Vendor to specify			
g	The compressor should be ready with all inter stage connected piping/valves/traps/accumulator and Safety Devices		Vendor to confirm			
h	Interstage/After Stage Cooling		Air Cooled			
i	Power Supply available BCPL		415 VAC/3 PH/50 HZ ;			
j	Minimum Discharge Rate		60 CFM			
k	Air Dryer		To achieve air with dew point 5-7 Degree centigrade			
l	Moisture Trap	No.s	As per vendor design			
10	Adapter Plate					
a	For mounting 6" to 8" PSVs	No.s	2			
b	For mounting 10" PSVs	No.s	2			
c	For mounting screwed valves	No.s	2			
11	Adapter Couplings					
	For mounting screwed valves from 1/2" to 2" NPT male and female end connections in all possible standard sizes	Nos	9			
12	Calibrated Pressure Gauge for Measuring test pressure					
a	Make - Wika / Ashcroft / UE / Asco	Vendor to specify any of the following makes from Wika / Ashcroft / UE / Asco				
b	0-1.6 kg/cm2: 0.05 minimum resolution;+/-0.5% Accuracy	No.s	2			
c	0-4 kg/cm2: 0.05 minimum resolution;+/-0.5% Accuracy	No.s	2			
d	0-6 kg/cm2: 0.2 minimum resolution;+/-0.5% Accuracy	No.s	2			
e	0-10 kg/cm2: 0.2 minimum resolution;+/-0.5% Accuracy	No.s	2			
f	0-25 kg/cm2: 0.2 minimum resolution;+/-0.5% Accuracy	No.s	2			
g	0-60 kg/cm2: 0.5 minimum resolution;+/-0.5% Accuracy	No.s	2			
h	0-100 kg/cm2: 0.5 minimum resolution;+/-0.5% Accuracy	No.s	2			
i	0-250 kg/cm2: 2 minimum resolution;+/-0.5% Accuracy	No.s	2			
j	0-400 kg/cm2: 2 minimum resolution;+/-0.5% Accuracy	No.s	2			
k	0-600 kg/cm2: 5 minimum resolution;+/-0.5% Accuracy	No.s	2			
13	For controlling and monitoring the pressures, required pressure gauges and needle/ball valves etc are to be provided for the bench by the vendor.	No.s	Vendor to provide P&ID showing pressure gauges at the time of bidding and the same to be supplied.			
14	Supply of any particular item which is necessary for the test bench.	Lot				
15	Spare Sets of O rings	Set	2			
16	Seat Leak Apparatus					
a	Seat Leak test Apparatus for flanged outlet upto 4"	Set	1			
b	Seat Leak test Apparatus for flanged outlet upto(6"-10")	Set	1			
17	Installation & Commissioning of the complete Pressure Safety Valve Test Bench along with Associate facilities supplied with the Test Bench					
18	Additional Documents to be submitted with Bid					
	System set up with P&ID and GA drawing and operating principle. Submission of Technical Catalogue of Test Bench and all associated equipments like Air Compressor, Motor, fittings etc is mandatory. Bidder also needs to provide all related design calculation for the whole system.					
19	Certificates (To be provided during dispatch)					
a	Material Test Certificate					
b	Radiography Report					
c	Hydro test Report					
d	Third Party Inspection Report form any of CEIL, DNV, BVQI, PDIL, EIL, MECO					
e	Calibration Certificate of Pressure Gauges from NABL accredited laboratory in India					
f	PESO/CCOE certification(If Applicable as per statutory requirement)					
20	Warranty					
	Warranty shall be for 18 Months from the date of despatch or 12 months from date of commissioning of the system, whichever is earlier.					
21	Training					
	Vendor to impart training to owner's engineers at owner's site (Central Workshop, Lepetkata, and Dibrugarh, Assam) for acquaintance of supplied system.					
22	O&M Spares					
	Vendor to specify two years O&M spares separately with minimum one year validity and this will be part of evaluation. But ordering of these spares will not be compulsory along with the order of main equipment.					
23	Special Tools and Tackles					
	Any special tools, tackles and consumables required for testing of PSVs should be provided. No separate payment shall be made for this purpose. Price of the same should be included with the offer					
24	Additional Features					
	The test bench should have the facility to test Pilot operated PSVs					
25	Safety Features					
	Adequate No.s of Pressure relief valves to be provided and system should be equipped with standard safety features					

