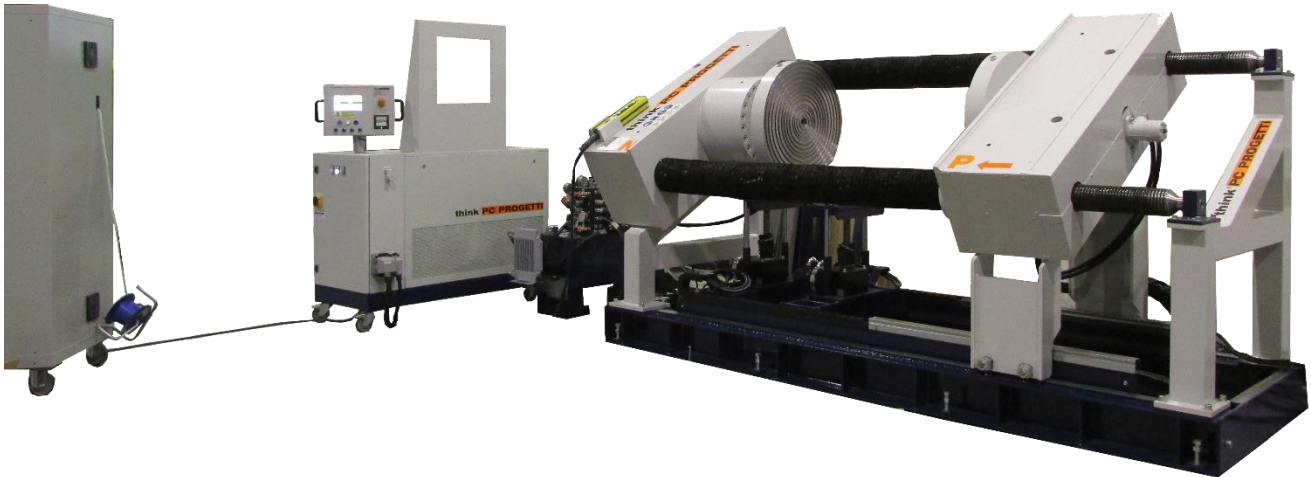


Control Valves High Performance Test Bench



Specification:

Double screwed column + cylinder.

Combined clamping inner radial seal + proportional press control.

Horizontal test rig with combined clamping style: inner radial seal + proportional press clamping facilities.

The mobile reaction bridge is moved by two screwed columns that assure the complete absence of external forces on valve body and an hydraulic cylinder can make pressing clamping with or without proportional control.

This prerogative makes it conform to the most diffuse international test standards.

The rig is controlled by pressurization skid; to have more information about please consult dedicated technical data sheets.

Hydraulic/pneumatic pressurization skid

Controlled by electronic PLC configured by LCD touch screen monitor.

Logic could store test data, set-points, times and leak limits. Pressure set point is automatically reached.

Leak could be measured by electronic bubbles counter or precision water column for H₂O leak (height measured by pressure transmitter).

Vacuum pump could be installed to assure the [Patent Pending] absence of air inside valve's body before filling it with water; in order to reduce test time and increase operator's safety.

All wet process components are stainless steel made and dimensioned for a working pressure of 700 Bar”g”.

It has a high filling flow ability and the recovering of test fluid is automatic. Metal to metal needle valves assure high reliability.

A 24cIn thermal printer could be installed to printout a simple test report without connect an external PC windows based supervision with certification software **TestREC7.3** installed.

The software and process option it has, make it compliant with the most diffuse test standards.

Pressure Skid

Control type :

AUTOMATIC – System controlled by electronic PLC and LCD touch screen monitor. A software procedure guides the operator through test procedure in a step by step sequence. Operator can repeat or jump single test according to his conveniences.

Test report can be printed out as ticket from without the use of PC. All test parameters (pressure levels, thresholds, testing time est.) can be inserted through LCD touch screen monitor.

Reference Standard:

API 6D, API598, ANSI/ASME B16.34, ANSI/FCI 70-2, IEC 60534-4, EN 12266-1, ANSI/ASME B16.104, ANSI/ISA S75.01 & ANSI/ISA S75.02

Certification Software:

INCLUDED – TestREC7.3

Valve kind to test:

Shut-Off valves / Control Valves 2 ways/PSV

Pressure measure:

Pressure transmitter 4-20mA, 700 Bar”g”, accuracy 0.1% F.S. Pressure ports are available for external sample analogue manometer.

Leak Detection Instrument:

<i>Test</i>	<i>Instrument</i>	<i>Descriptions</i>
Cl. II to IV Seat leakage with water	Digital flow meters	Turbine flow meters: 300 –3000 ml/min- res. 2.5 cc 1500 – 20000 ml/min – res. 8cc + Drain
Cl. IV Seat leakage with air	Digital flow meters	Mass flow meters: 0 – 10 SLPM Acc. 1.5% 0 – 150 SLPM Acc. 1.5% + Drain
Cl. V Seat leakage Test with water	Water column digital flow meter	Max. height: 1000 mm Resolution: 1mm (0.1 ml) Max. flow: 0.01 – 70,00 ml/min
Cl. VI Seat leakage test with air	Digital Bubbles counting	Digital bubbles counter: Max. 3 bubbles/sec

Working Pressure:

3.5 - 700 Bar"g"	with H ₂ O
0.5 - 7 Bar"g"	with Air
1 – 700 Bar"g"	With Gas (W/Bore plugs only)

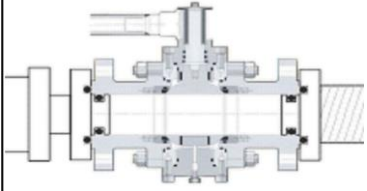
Actuator Control Panel:

- 220V-50Hz 16A Magnetothermic & differential 30mA prot.
- 24V / 48 V DC with On/Off selector and signal light
- 0-21mA DC signal generator w fixed step @ 4/8/12/16/20 mA
- 0-50mA generator.
- 0-20 Psi generator
- 0-100 Psi generator

Available test session:

Item	Description	Pressure range	Test Fluid
1	Shell test	3.5 – 700 Bar"g"	H2O + synthetic oil 5% /GAS(Air & N ₂)
2	Leak Test – Seat (P side) high pressure	3.5 – 700 Bar"g"	H2O + synthetic oil 5% /GAS(Air & N ₂)
3	Leak Test – Seat (N side) high pressure	3.5 – 700 Bar"g"	H2O + synthetic oil 5% /GAS(Air & N ₂)
4	Leak Test – Seat (P side) Low pressure	0.5 – 7 Bar"g"	Air
5	Leak Test – Seat (N side) Low pressure	0.5 – 7 Bar"g"	Air

Mechanical structure:

Rig type	HORIZONTAL – DOUBLE REACTION SCREW Valve flow axis is parallel to soil Reaction columns 30° respect soil. Suitable for accommodation of by-pass valves	
Clamping style	Type 3 : COMBINED Proportional Pressing & Inner radial bore  <div style="border: 1px solid black; background-color: yellow; padding: 5px; width: fit-content; margin-left: auto; margin-right: auto;"> <p>“ Inner radial bore seal” (Bore plugs) without any external effort on valve body “Proportional Press” with seal on flat face, Pressing force is controlled by PLC to reduce effort on valve body at minimum terms.</p> </div>	
Total reaction power	13 - 250 TON	Proportional Press
	0 – 250 TON	Bore plugs
Valve flange dia.	Max. 900	mm
Min. valve length	0	mm
Max. valve length	1500	mm
Plateau for RF valves	INCLUDED: O-ring Seal adaptors for flanged valves Range ½”-16” – Adaptors for small valve size included	

(*) Operative limits for **Pressing Clamping & Bore Plugs Radial Seals Bore**

		1”	2”	4”	6”	8”	10”	12”	14”	16”
ANSI-150	250Tons									
ANSI-300	250Tons									
ANSI-600	250Tons									
ANSI-900	250Tons									
ANSI-1500	250Tons									
ANSI-2500	250Tons									

(*)Note: Indicated values has been calculated for shell test and with API-6D nominal minimum bore size (added by 50mm in case of press clamping) and they have to be considered as reference only. For more accurate information please contact our technical office or consult instruction book delivered along the rig.

