

# think PC PROGETTI



#### Dear customer,

Given the demands of the global market and the cost of raw materials, European valve producers must ensure the absolute quality of their product if they are to keep their market share.

For this reason, your investment in control & testing equipment is critical. THINK' PC PROGETTI offers a complete

range of rigs capable of testing your products according to the most rigorous international standards.

The skill of our technical staff, our flexibility in production, and our quick turnaround on new projects make PC PROGETTI a reliable partner, trusted by the biggest manufacturers in Italy and international groups.

Our technicians have years of background and experience specifically in high pressure equipment, allowing them to quickly install and set up the plant.

Our product range includes vertical benches, horizontal benches, and single pressurization skids; each unit could be designed according to the customer special request. The automatic benches can be connected to a PC using our proprietary software that allows you to download test data and print out the testing certification so often required today.

Welcome at THINK' PC PROGETTI and be our guest!

# think'PC PROGETTI

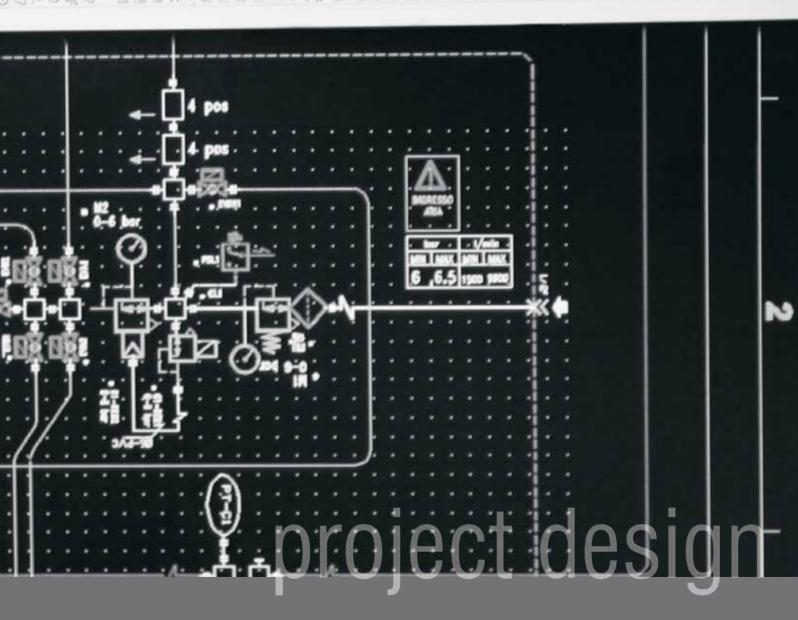
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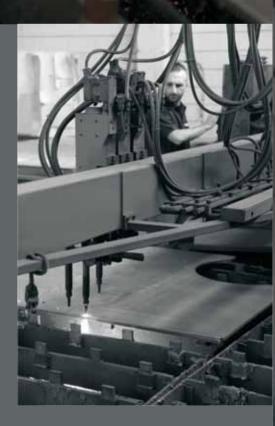


### think PC PROGETTI

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# Metal cutting







think'PC PROGETTI

# & welding

think PC PROGETTI





# Lathing













# Index

### Horizontal test bench.

pag	moa	Clamp type		
18	BO-2V/2800	2	2800 TON	with bore plugs clamping.
19	BO-2V/2500	2	2500 TON	with bore plugs clamping.
20	BO-2V/2400	2	2400 TON	with bore plugs clamping.
21	BO-2V/1800	2	1800 TON	with bore plugs clamping.
22	BO-2V/1600	2	1600 TON	with bore plugs clamping.
23	BO-2V/1200	2	1200 TON	with bore plugs clamping.
24	BO-2V/600	2	600 TON	with bore plugs clamping.
25	BO-2V/450	2	450 TON	with bore plugs clamping.
26	BO-2V/250	2	250 TON	with bore plugs clamping.
27	BO-2V/150	2	150 TON	with bore plugs clamping.
28	BO-2CV/750	3	750 TON	with combined clamping.
29	BO-2CV/450	3	450 TON	with combined clamping.
30	BO-2CV/250	3	250 TON	with combined clamping.
31	BO-2CV/100	3	100 TON	with combined clamping.

#### Horizontal test bench with 30° column disposal

pag	mod	Clamp typ	e	
32	BO30-2CV/750	3	750 TON	with combined clamping.
33	BO30-2CV/500	3	500 TON	with combined clamping.
34	BO30-2CV/250	3	250 TON	with combined clamping.
35	BO30-2CV/250L	3	250 TON	with combined clamping.
36	BO30-CV/40P	3	40 TON	with combined clamping.
37	BO30-CV/50P	3	50 TON	with combined clamping.

#### Horizontal test bench with 45° column disposal

pag	mod C	lamp typ	е
38	BO45-2CV/3000	3	3000 TON
39	BO45-2CV/2000	3	2000 TON
40	BO45-2CV/500	3	500 TON
41	BO45-2CV/400	3	400 TON
42	BO45-2V/850	2	850 TON
43	BO45-2V/600	2	600 TON

with combined clamping. with combined clamping. with combined clamping. with combined clamping. with bore plugs clamping with bore plugs clamping

#### Horizontal test benches for PIPE test

pag	mod	Clamp typ	e	
44	BOT-2CV/2000	3	200 TON	combined clamping
45	BOT-2CS/1200	1	1200 TON	press clamping
45	BOT-2VS/600	2	600 TON	bore/radial plugs clamping

#### Vertical test benches

pag	mod	Clamp type	•						
46	BV-PMC/1200	1	1200 TON	mobile bridge, with press clamping.					
47	BV-PMC/850	1	850 TON	mobile bridge, with press clamping.					
48	BV-PMC/650W	1	650 TON	mobile bridge, with press clamping.					
49	BV-PMC/650	1	650 TON	mobile bridge, with press clamping.					
50	BV-PMC/550	1	550 TON	mobile bridge, with press clamping.					
51	BV-PMC/500	1	500 TON	mobile bridge, with press clamping.					
52	BV-PMC/500S	1	500 TON	mobile bridge, with press clamping.					
53	BV-PMC/350	1	350 TON	mobile bridge, with press clamping.					
54	BV-PMC/200-2	1	200 TON	mobile bridge, 2 test places, with press clamping.					
55	BV-PMC/200S	1	200 TON	mobile bridge, with press clamping.					
56	BV-PMC/120L	1	120 TON	mobile bridge, with press clamping.					
57	BV-PMC/100-2	1	100 TON	mobile bridge, 2 test places, with press clamping.					
58	BV-PMC/100	1	100 TON	mobile bridge, with press clamping.					
59	BV-PMV/600	1	600 TON	mobile bridge, with bore plugs clamping.					
60	BV-PMV/350	1	350 TON	mobile bridge, with bore plugs clamping.					
61	BV-2V/800	2	800 TON	with bore plugs clamping.					
62	BV-1V/200	2	200 TON	with bore plugs clamping.					
63	BV-CV/100	3	100 TON	mobile bridge, with combined clamping.					
64	BV-CCV/20	3	20 TON	mobile bridge, with combined clamping & valve actuator					
65	BV-CCV/15	3	15 TON	mobile bridge, with combined clamping.					

#### Multiple stations test benches

pag	moa C	Jamp typ	e		
66	BV-3V/360	2	360 TON	3 st.	with bore plugs clamping.
67	BV-3V/270	2	270 TON	3 st.	with bore plugs clamping.
68	BV-3V/150L	2	150 TON	3 st.	with bore plugs clamping.
69	BV-3V/150	2	150 TON	3 st.	with bore plugs clamping.
70	BV-3CV/240	3	240 TON	3 st.	with combined clamping.
71	BV-5CV/150	3	150 TON	3 st.	with combined clamping.
72	BV-5CV/100	3	100 TON	3 st.	with combind clamping.
73	BV-3CV/30	3	30 TON	3 st.	with combined clamping.
74	BV-5MV/20	4	20 TON	5 st.	with claws clamping.

Wat	ter immersion GAS	s test <u>benches</u>		
pag 75 76 77	mod         Clamp typ           BVI-V/20         2           BV-3CVI/60         3           BOI-V/450         2	pe 20TON 60TON 450TON	Vertical test bench Vertical test bench Horizontal test bench	
	ecial applications			
<b>pag</b> 78 79 80 80 81 81 82 82 82 83	mod BV-5C-He/10 SKA-100/He SKC-100 SKMM-100/ICRYO SKMM-50/TC + CRYO VE SkMM-100/FS SKMM-100/IC BPA-30K BPA-250K BO-CV/40SA	SSEL	Microleakage vacuum test bench Helium Spectrometer for microleakage vacuum test Cycling endurance test Hyberbaric chamber pressurization skid SKID for cryogenic temperature control & cryogenic vessel. Gas pressurization skid for Cryogenic test. Skid pressurizzazione test firesafe. Actuator test bench Test bench for high speed production line.	Horizontal test bench
PS\ pag	/ test benches mod Clamp typ	pe		
84 85 85 86 86	BV-M/90         5           BV-M/60         5           BR-M/90         5           BR-M/15         5           SKMM-100/PSV         5	90TON 60TON 90TON 15TON	Vertical test rig, claws clamping Vertical test rig, claws clamping Tilting test rig, claws clamping Tilting test rig, claws clamping Pressurization skid with clamping tool for PSV & bullet proof test chamber.	ntal Horizontal nch test bench 30°
87 87	SKA-PSV - SKA-PSV2 -		Hydraulic & pneumatic pressurization skid for PSV valve Hydraulic pressurization skid for PSV valve	Horizontal test bench 45°
	omatic pressurizat	ion skid		
88/89 88/89 88/89	9 SKA-100/S 9 SKA-100 9 SKA-250 9 SKA-500		120 L/min water flow, Compact design 120 L/min water flow 240 L/min water flow 470 L/min water flow	Horizontal test bench PIPE
88/89 88/89	ni-automatic press	urization skid	940 L/min water flow 1880 L/min water flow	Vertical test bench
90/91 90/91 90/91 90/91	SKM-100 SKM-250 SKM-500 SKM-1000 SKM-2000		120 L/min water flow 240 L/min water flow 470 L/min water flow 940 L/min water flow 1880 L/min water flow	Vertical Multiple stations
92/93 92/93	nual pressurization SKMM-10 SKMM-80/GAS SKMM-100	ı skid	10L/min water flow Low pressure GAS test, with 50L x2 bottle support 120L/min wate flow	Special Water applications immersion GAS
92/93 92/93 92/93	8 SKMM-50/GAS-B2 8 SKMM-100/GAS-B2 8 SKMM-100/GAS-B3 8 SKMM-100/GAS-B3		High pressure GAS High pressure GAS High pressure GAS, with LCD and control PLC High pressure GAS, with explosion proof test chamber	Special application
Acc pag	essories			
94 94 95 95 95 95	CCMP-200 SK-PC01 CV-X PLT-600 / PLT-2000 RE-01 BC-01		High pressure AIR compressor Computer console with personal computer Valve support tools Plateau loading tools Electronic data recorder Portable Electronic bubbles counter	ress. PSV kid
	tification software			
96/97 96/97	TestREC5.4-M 7 TestREC5.4 7 TestREC5.4-PSV		Certification software for SKM class skids (MODBUS) Certification software for SKA class skids (SYSWAY) Certification software for SKM class skids for PSV test (MODBUS)	

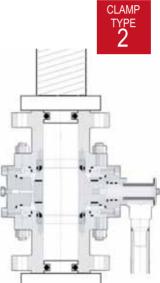
# Clamping styles



#### **Pressing:**

Proportionally controlled or On/Off The reaction against water hidrostatic force inside the valve, is made by an hydraulic cylinder. It can be controlled by a proportional oil regolation to the effective water presure inside the valve or simply with a ON/OFF control to the total amount of force needed. Proportional press block, allow the system to strongly reduce the forces result on valve body. Not suggested to test BW ending

Not suggested to test BW ending valves.



#### Inner radial:

No external forces applied on valve body. The tightness is made by a Oring seal the work on the inner side of valve body. This block style allow the valve to expand itself under the pressure test solicitation. Is the test style suggested by most diffused test standards. Inner radial style need a low ruggedness grade of walls of

valve body, allowing O-ring to made the tightness. Specially suggested for BW ending valves.



#### **Combined:**

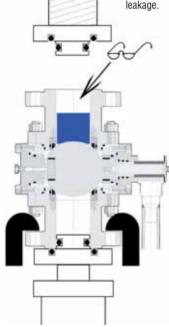
Suitable for all valves kind. It is a combination of style "1" and "2". In one test rig there are all the block possibility. Operatore could choose the best one accordly to the valve kind.



#### Universal: Visual leak test.

It has the same block ability of Tightness type "3", plus

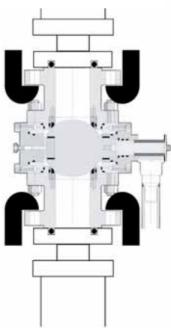
the claws added to one clamping side, allow the user to made a visual check of the seat leakage.



CLAMP	
TYPE	
6	

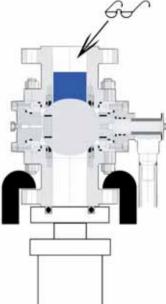
# **Double Claws:**

Both valve side are clamped with clamping style "5".





**Claws only:** Visual leak test. It has the same block ability of Tightness type "3", plus the claws B side, allow the user to made a visual check of the seat leakage.





#### DOUBLE SCREWED COLUMN **INNER RADIAL SEAL (BORE PLUGS) AVAILABLE UP TO 5000 TON**



Horizontal test rig with inner radial seal clamping style. The mobile reaction bridge is moved by two screwed columns that assure the complete absence of external forces on valve body. This prerogative makes it conform to the most diffuse international test standards. In the basement, a water tank is installed as water reservoir for test procedures. The rig is controlled by SKA-1000 pressurization skid; to have more information about please consult dedicated technical data sheets. The rig

CLAMP

TYPE 2

CE

Reaction force

Length max Length min Column inner distance Basement water tank Terminations allowed Clamping style Reference standard Electric supply Dimensions

2800 TON (See working limits table) 3600 mm 600 mm 2400 mm 2900 Liter ca. BW, SW, RF, RJ Type 2 – Inner radial ISO, DIN, API, ANSI, ASTM, FCI, BS (Other on request). 3PH + T, 380V@50Hz, 12KW 5900 (L) x 3560 (P) x 2950 (H)

#### Mechanical assembly options available 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 •• See page 98 for details

#### \*Working limits INNER RADIAL SEAL, ANSI VALVE, SHELL TEST:

	DN	20"	24"	26"	28"	30"	32"	34"	36"	40"	42"	48"	56"	60"
ANSI-150	TON													
ANSI-300	TON													
ANSI-600	TON													
ANSI-900	TON													
ANSI-1500	TON													
ANSI-2500	TON													

Horizontal test bench

## BO-2V/2500 Horizontal test bench

#### DOUBLE SCREWED COLUMN INNER RADIAL SEAL (BORE PLUGS)



#### CE CLAMP TYPE 2

Horizontal test rig with inner radial seal clamping style. The mobile reaction bridge is moved by two screwed columns that assure the complete absence of external forces on valve body. This prerogative makes it conform to the most diffuse international test standards.

The rig is controlled by "SKA or SKM class" pressurization skid; to have more information about please consult dedicated technical data sheets. The rig could be completed with several options and accessories, please contact our sales office to have more information. In the basement, a water tank is

In the basement, a water tank is installed as water reservoir for test procedures.

Reaction force

Dimensions

2500 TON

(See working limits table) 5400 mm 800 mm 2500 mm 2200 mm

2500 mm 2200 mm 3500 Liters ca. BW, SW, RF, RJ Type 2 – Inner radial ISO, DIN, API, ANSI, ASTM, FCI, BS (Other on request). 3PH + T, 380V@50Hz, 10KW 7800 (L) x 3610 (P) x 2910 (H)

#### \*Working limits INNER RADIAL SEAL, ANSI VALVE, SHELL TEST:

	DN	24"	26"	28"	30"	32"	34"	36"	40"	42"	48"	56"
ANSI-150	TON											
ANSI-300	TON											
ANSI-600	TON											
ANSI-900	TON											
ansi-1500	TON											
ANSI-2500	TON											

\*Note: Showed data has been calculated considering Shell test pressure and nominal bore size according to API-6D. For further details please contact our technical office.

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#### DOUBLE SCREWED COLUMN INNER RADIAL SEAL (BORE PLUGS)



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Horizontal test rig with inner radial seal clamping style. The mobile reaction bridge is moved by two screwed columns that assure the complete absence of external forces on valve body. This prerogative makes it conform to the most diffuse international test standards. In the basement, a water tank is installed as water reservoir for test procedures. The rig is controlled by "SKA or SKM class"pressurization skid; to

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түре **2** 

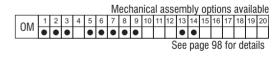
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SKA of SKM class" pressurization skid; to have more information about please consult dedicated technical data sheets. The rig could be completed with several options and accessories, please contact our sales office to have more information.

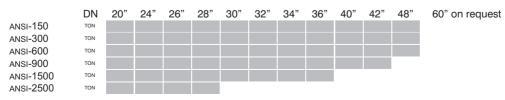
Reaction force Length max Length min Column inner distance Basement water tank Terminations allowed Clamping style Reference standard Electric supply Dimensions

#### 2400 TON (See working limits table) 3900 mm 2000 mm 2900 Liters ca. BW, SW, RF, RJ Type 2 – Inner radial ISO, DIN, API, ANSI, ASTM, FCI, BS (Other on request). 3PH + T, 380V@50Hz, 10KW

5800 (L) x 3360 (P) x 2950 (H)



★Working limits INNER RADIAL SEAL, ANSI VALVE, SHELL TEST:



# BO-2V/1800 Horizontal test bench

DOUBLE SCREWED COLUMN INNER RADIAL SEAL (BORE PLUGS)





Horizontal test rig with inner radial seal clamping style. The mobile reaction bridge is moved by two screwed columns that assure the complete absence of external forces on valve body. This prerogative makes it conform to the most diffuse international test standards.

In the basement, a water tank is installed as water reservoir for test procedures.

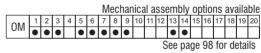
The rig is controlled by **SKA 1000** pressurization skid; to have more information about please consult dedicated technical data sheets. The rig could be completed with several options and accessories, please contact our sales office to have more information.

Reaction force Length max Length min Column inner distance Basement water tank Terminations allowed Clamping style Reference standard Electric supply Dimensions

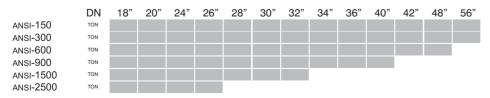
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1800 TON

(See working limits table) 4000 mm 600 mm 2400 mm 2900 Liters ca. BW, SW, RF, RJ Type 2 – Inner radial ISO, DIN, API, ANSI, ASTM, FCI, BS (Other on request). 3PH + T, 380V@50Hz, 10KW 6500 (L) x 3700 (P) x 2600 (H)



#### ★Working limits INNER RADIAL SEAL, ANSI VALVE, SHELL TEST:





#### DOUBLE SCREWED COLUMN INNER RADIAL SEAL (BORE PLUGS)



Horizontal test rig with inner radial seal clamping style. The mobile reaction bridge is moved by two screwed columns that assure the complete absence of external forces on valve body. This prerogative makes it conform to the most diffuse international test standards. In the basement, a water tank is installed as water reservoir for test procedures. The rig is controlled by "SKM or SKA class" pressurization skid; to have more information about please consult dedicated technical data sheets. The rig could be completed with several options and accessories, please contact our sales office to have more information.

Mechanical assembly options available

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See page 98 for details

5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

OM

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available

on request

CLAMP

TYPE 3

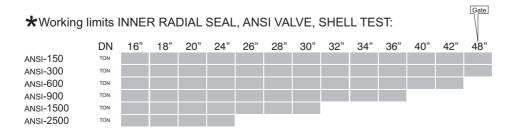
CLAMP

түре **2** 

Reaction force

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Length max Length min Column inner distance Basement water tank Terminations allowed Clamping style Reference standard Electric supply Dimensions 1600 TON (See working limits table) 4000 mm 600 mm 1700 mm 2000 Liters ca. BW, SW, RF, RJ Type 2 – Inner radial ISO, DIN, API, ANSI, ASTM, FCI, BS (Other on request). 3PH + T, 380V@50Hz, 10KW 6237 (L) x 2989 (P) x 2150 (H)



# BO-2V/1200 Horizontal test bench

#### DOUBLE SCREWED COLUMN INNER RADIAL SEAL (BORE PLUGS)



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on skid; to accessories, please contact our

have more information about please consult dedicated technical data sheets. The rig could be completed with several options and sales office to have more information.

Reaction force	: 1200	0 TON	

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#### Length max Lenath min Column inner distance Lifter Basement water tank Terminations allowed Clamping style Reference standard Electric supply Dimensions

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(See working limits table) 3000 mm 200 mm 1700 mm Optional 2000 Liters ca. BW, SW, RF, RJ Type 2 – Inner radial ISO, DIN, API, ANSI, ASTM, FCI, BS (Other on request). 3PH + T, 380V@50Hz, 6KW 5100(L) x 2650(P) x 1760(H)

#### Mechanical assembly options available 7 8 9 10 11 12 13 14 15 16 17 18 19 20 OM 1 2 3 4 5 5 7 5 • • • See page 98 for details

★Working limits INNER RADIAL SEAL, ANSI VALVE, SHELL TEST:

	DN	6"	8"	10"	12"	14"	16"	18"	20"	24"	26"	28"	30"	32"	34"	36"	40"
ANSI-150	TON																
ANSI-300	TON																
ANSI-600	TON																
ANSI-900	TON																
ANSI-1500	TON																
ANSI-2500	TON																

BO-2V/600 Horizontal test bench

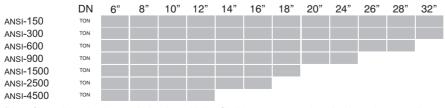
DOUBLE SCREWED COLUMN INNER RADIAL SEAL (BORE PLUGS)



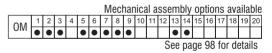


Reaction force Length max Length min Column inner distance Loading height Basement water tank Lifter Screw dust protection Terminations allowed Clamping style Reference standard Electric supply Dimensions 600 TON (See working limits table) 2000 mm 250 mm 1350 mm 1500 mm 1100 litres See Option See Option BW, SW, RF, RJ Type 2 – Inner radial ISO, DIN, API, ANSI, ASTM, FCI, BS (Other on request). 3PH + T, 380V@50Hz, 7KW 3730(L) x 2276(P) x 1800(H)

#### ★Working limits INNER RADIAL SEAL, ANSI VALVE, SHELL TEST:



\*Note: Showed data has been calculated considering Shell test pressure and nominal bore size according to API-6D. For further details please contact our technical office.





Horizontal test rig with inner radial seal clamping style. The mobile reaction bridge is moved by two screwed columns that assure the complete absence of external forces on valve body. This prerogative makes it conform to the most diffuse international test standards. In the basement, a water tank is installed as water reservoir for test procedures.

The rig is controlled by **SKA-100** pressurization skid; to have more information about please consult dedicated technical data sheets. The rig could be completed with several options and accessories, please contact our sales office to have more information. BO-2V/450 Horizontal test bench

DOUBLE SCREWED COLUMN INNER RADIAL SEAL (BORE PLUGS)



Horizontal test rig with inner radial seal clamping style. The mobile reaction bridge is moved by two screwed columns that assure the complete absence of external forces on valve body. This prerogative makes it conform to the most diffuse international test standards.

In the basement, a water tank is installed as water reservoir for test procedures.

The rig is controlled by **SKA-100** pressurization skid; to have more information about please consult dedicated technical data sheets. The rig could be completed with several options and accessories, please contact our sales office to have more information.

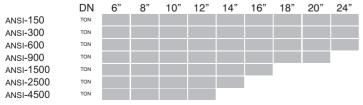
Reaction force Length max Length min Column inner distance Loading height Basement water tank Lifter Screw bellows Terminations allowed Clamping style Reference standard Electric supply Dimensions

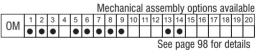
0 mm 1060 mm 950 mm 400 Liters See Option See Option BW, SW, RF, RJ Type 2 – Inner radial ISO, DIN, API, ANSI, ASTM, FCI, BS (Other on request). 3PH + T, 380V@50Hz, 7KW 3570(L) x 1650(P) x 1240(H) (Mechanical stand only)

450 TON (See working limits table)

#### ★Working limits INNER RADIAL SEAL, ANSI VALVE, SHELL TEST:

2000 mm





BO-2V/250 Horizontal test bench

DOUBLE SCREWED COLUMN INNER RADIAL SEAL (BORE PLUGS)



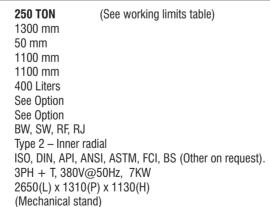


Horizontal test rig with inner radial seal clamping style. The mobile reaction bridge is moved by two screwed columns that assure the complete absence of external forces on valve body. This prerogative makes it conform to the most diffuse international test standards. In the basement, a water tank is installed as water reservoir for test procedures.

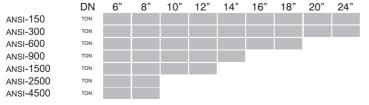
The rig is controlled by **SKA-100** pressurization skid; to have more information about please consult dedicated technical data sheets. The rig could be completed with several options and accessories, please contact our sales office to have more information.

Reaction force Length max Length min Column inner distance Loading height Basement water tank Lifter Screw dust protection Terminations allowed Clamping style Reference standard Electric supply Dimensions

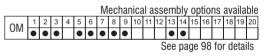
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#### \*Working limits INNER RADIAL SEAL, ANSI VALVE, SHELL TEST:



\*Note: Showed data has been calculated considering Shell test pressure and nominal bore size according to API-6D. For further details please contact our technical office.



# [Patent Pending]

Horizontal test bench

# BO-2V/150 Horizontal test bench

DOUBLE SCREWED COLUMN INNER RADIAL SEAL (BORE PLUGS)



Horizontal test rig with inner radial seal clamping style. The mobile reaction bridge is moved by two screwed columns that assure the complete absence of external forces on valve body. This prerogative makes it conform to the most diffuse international test standards.

In the basement, a water tank could be installed as water reservoir for test procedures.

The rig is controlled by **SKA-100** pressurization skid; to have more information about please consult dedicated technical data sheets. The rig could be completed with several options and accessories, please contact our sales office to have more information.

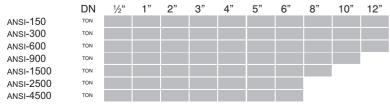
Reaction force Length max Length min	:	<b>150 TON</b> 1300 mm 50 mm	(See working limits table)	M 0M 1 2 3 4 5 6 7 • • • • • • • •

																				ble
DM	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
JIVI	٠	٠	٠		٠	٠	٠	٠	٠					٠						
												S	ee	pa	qe	98	fo	r de	etai	ils

Reaction force Length max Length min Column inner distance Loading height Basement water tank Lifter Screw dust protection Terminations allowed Clamping style Reference standard Electric supply Dimensions

50 mm 700 mm 990 mm 200 Liters See Option BW, SW, RF, RJ Type 2 – Inner radial ISO, DIN, API, ANSI, ASTM, FCI, BS (Other on request). 3PH + T, 380V@50Hz, 7KW 2545(L) x 1110(P) x 1170(H) (Mechanical stand)

#### ★Working limits INNER RADIAL SEAL, ANSI VALVE, SHELL TEST:



# BO-2CV/750 Horizontal test bench

DOUBLE SCREWED COLUMN + CYLINDER COMBINED CLAMPING INNER RADIAL SEAL + PROPORTIONAL PRESS CONTROL



Horizontal test rig with combined clamping style: inner radial seal + 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. In the basement, a water tank is installed as water reservoir for test procedures.

The rig is controlled by **SKA-100** pressurization skid; to have more information about please consult dedicated technical data sheets. The rig could be completed with several options and accessories, please contact our sales office to have more information.



Reaction force Valve lenght max Valve lenght min Column clearance Basement vessel Lifter Valve kind Clamping Style Reference standard Pneumatic supply Alimentazione elettrica

Dimensions.

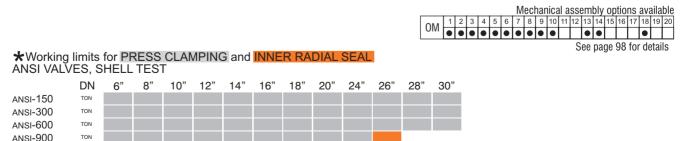
ANSI-1500

ANSI-2500

TON

TON

**750 TON** (See working limits table) 1800 mm /3000 mm 150 mm 1200 mm 900 Litres Optional BW, SW, RF, RJ Inner radial & Pressing ISO, DIN, API, ANSI, ASTM, FCI, BS (Other on request). 7 bar @ 2000 NI/min Dry air not lubricated 3PH + T, 380V@50Hz 3450(L) x 2000 (P) x 2000(H)



\*Note: Indicated values has been calculated for shell test and with API-6D nominal minimum bore size and they have to be considered as reference only. Press clamping style limits are based on bore size increased by 50 mm. For more accurate information please contact our technical office or consult instruction book delivered along the rig.

# BO-2CV/450 Horizontal test bench

DOUBLE SCREWED COLUMN + CYLINDER COMBINED CLAMPING INNER RADIAL SEAL + PROPORTIONAL PRESS CONTROL





Reaction force	:	450 TON
		(See working limits t
Length max	:	1300 mm
Length min	:	0 mm
Column inner distance	:	1060
Loading height	:	1040 mm from soil
Basement water tank	:	470 Litres
Terminations allowed	:	BW, SW, RF, RJ
Clamping style	:	Type 3 – Combined
		Inner radial clamping
Reference standard	:	ISO, DIN, API, ANSI,
Electric supply	:	3PH + T, 380V@50
Dimensions	:	3270(L) x 1650(P) x

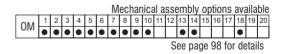
<b>450 TON</b> (See working limits table) 1300 mm 0 mm 1060
1040 mm from soil 470 Litres BW, SW, RF, RJ
Type 3 – Combined
Inner radial clamping & Pressing clamping with Proportional control. ISO, DIN, API, ANSI, ASTM, FCI, BS (Other on request). 3PH + T, 380V@50Hz, 10KW 3270(L) x 1650(P) x 1400(H) (Mechanical structure)

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

CLAMP

TYPE 3

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. In the basement, a water tank is installed as water reservoir for test procedures. The rig is controlled by SKA-100 pressurization skid; to have more information about please consult dedicated technical data sheets. The rig could be completed with several options and accessories, please contact our sales office to have more information.



★Working limits for PRESS CLAMPING and INNER RADIAL SEAL ANSI VALVES, SHELL TEST

	DN	6"	8"	10"	12"	14"	16"	18"	20"	24"
ansi-150	TON									
ansi-300	TON									
ANSI-600	TON									
ansi-900	TON									
ansi-1500	TON									
ansi-2500	TON									

\*Note: Indicated values has been calculated for shell test and with API-6D nominal minimum bore size and they have to be considered as reference only. Press clamping style limits are based on bore size increased by 50 mm. For more accurate information please contact our technical office or consult instruction book delivered along the rig. [Patent Pending]

BO-2CV/250 Horizontal test bench

DOUBLE SCREWED COLUMN + CYLINDER COMBINED CLAMPING INNER RADIAL SEAL+ **PROPORTIONAL PRESS CONTROL** CE





Horizontal test rig with combined clamping style: inner radial seal + 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 SKA-100 pressurization skid; to have more information about please consult dedicated technical data sheets. The rig could be completed with several options and accessories, please contact our sales office to have more information.

Patent Pending]

Reaction force Valve length max Valve length min Column inner distance Loading height Basement water tank Terminations allowed Clamping style

Reference standard

TON

Electric supply Dimensions

(See working limits table) 1500 mm 0 mm 900 950 mm from soil 370 Litres BW. SW. RF. RJ Type 3 – Combined Inner radial clamping & Pressing clamping with Proportional control. ISO, DIN, API, ANSI, ASTM, FCI, BS (Other on request). 3PH + T, 380V@50Hz, 7KW 2880(L) x 1310(P) x 1400H) (Mechanical structure)

250 TON

•

Mechanical assembly options available 8 9 10 11 12 13 14 15 16 17 18 19 20 2 3 4 5 6 0M • • See page 98 for details ★Working limits for PRESS CLAMPING and INNER RADIAL SEAL ANSI VALVES, SHELL TEST DN 2 3" 6' 8" 10' 12" 14' 16" 18" 20" 24" 4' ANSI-150 TON ANSI-300 TON ANSI-600 TON ANSI-900 TON ANSI-1500 TON ANSI-2500

\*Note: Indicated values has been calculated for shell test and with API-6D nominal minimum bore size and they have to be considered as reference only. Press clamping style limits are based on bore size increased by 50 mm. For more accurate information please contact our technical office or consult instruction book delivered along the rig

# BO-2CV/100 Horizontal test bench

DOUBLE SCREWED COLUMN + CYLINDER COMBINED CLAMPING INNER RADIAL SEAL+ **PROPORTIONAL PRESS CONTROL** CE



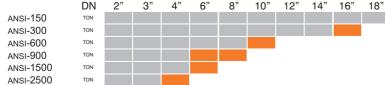
Reaction force

	•	100 1011
		(See working limits table)
Valve length max	:	1300 mm
Valve length min	:	0 mm
Column inner distance	:	900
Loading height	:	1140 mm from soil
Basement water tank	:	170 Litres
Terminations allowed	:	BW, SW, RF, RJ
Clamping style	:	Type 3 – Combined
		Inner radial clamping & Pressing clamping with
		Proportional control.
Reference standard	:	ISO, DIN, API, ANSI, ASTM, FCI, BS (Other on request).
Electric supply	:	3PH + T, 380V@50Hz, 7KW
Dimensions	:	2600(L) x 1290(P) x 1400H) (Mechanical structure)

Mechanical assembly options available 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 OM •• • See page 98 for details

[Patent Pending]

★Working limits for PRESS CLAMPING and INNER RADIAL SEAL	
ANSI VALVES, SHELL TEST	



\*Note: Indicated values has been calculated for shell test and with API-6D nominal minimum bore size and they have to be considered as reference only. Press clamping style limits are based on bore size increased by 50 mm. For more accurate information please contact our technical office or consult instruction book delivered along the rig.

#### combined clamping style: inner radial seal + press clamping facilities. The mobile reaction bridge is moved by two screwed

CLAMP

TYPE 3

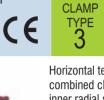
Horizontal test rig with

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 SKA-100 pressurization skid; to have more information about please consult dedicated technical data sheets. The rig could be completed with several options and accessories, please contact our sales office to have more information.

Horizontal test bench

BO30-2CV/750 Horizontal test bench with 30°column disposal

DOUBLE SCREWED COLUMN + CYLINDER COMBINED CLAMPING INNER RADIAL SEAL + PROPORTIONAL PRESS CONTROL







Reaction force	:	750 TON (See working limits table)
Valve length max	:	2200 mm
Valve length min	:	0 mm
Column inner distance	:	1500
Loading height	:	1350 mm from soil
Basement water tank	:	950 Litres
Terminations allowed	:	BW, SW, RF, RJ
Clamping style	:	Type 3 – Combined
		Inner radial clamping & Pressing clamping with Proportional control.
Reference standard	:	ISO, DIN, API, ANSI, ASTM, FCI, BS (Other on request).
Electric supply	:	3PH + T, 380V@50Hz, 10KW
Dimensions	:	4630(L) x 2300(P) x 2170(H) (Mechanical structure)

*Working	limits	for PF	RESS	CLAN	<b>N</b> PIN	G and	INNE	RRA	DIAL	SEAL	
ANSI VAL	VES, S	HELL	TES	Г							
	DN	6"	8"	10"	12"	14"	16"	18"	20"	24"	26"
ansi-150	TON										
ansi-300	TON										
ansi-600	TON										
ansi-900	TON										

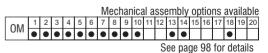
ANSI-1500

ANSI-2500

TON

TON

(\*)Note: Indicated values has been calculated for **shell test** and with **API-6D** nominal minimum bore size + 50mm 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



BO30-2CV/500

### Horizontal test bench with 30° column disposal

DOUBLE SCREWED COLUMN + CYLINDER COMBINED CLAMPING INNER RADIAL SEAL + PROPORTIONAL PRESS CONTROL



Reaction force Valve length max Valve length min Column inner distance Loading height

Basement water tank Terminations allowed Clamping style

Reference standard Electric supply Dimensions :

500 TON (See working limits table) 1760 mm 0 mm 1160 800 mm from basement 1000mm from soil 25° inclination from soil 470 Litres BW, SW, RF, RJ Type 3 – Combined Inner radial clamping & Pressing clamping with Proportional control. ISO, DIN, API, ANSI, ASTM, FCI, BS (Other on request). 3PH + T, 380V@50Hz, 10KW

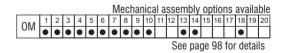
3450(L) x 2000(P) x 2000(H) (Mechanical structure)

CLAMP TYPE

Horizontal test rig with combined clamping style: inner radial seal + 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. Complete flow meters set could be installed (See option) to perform Seat leakage test on control valves.

The rig is controlled by **SKA-100** pressurization skid; to have more information about please consult dedicated technical data sheets. The rig could be completed with several options and accessories, please contact our sales office to have more information.



#### ★Working limits for PRESS CLAMPING and INNER RADIAL SEAL ANSI VALVES, SHELL TEST

	DN	6"	8"	10"	12"	14"	16"	18"	20"	24"
ANSI-150	TON									
ANSI-300	TON									
ANSI-600	TON									
ansi-900	TON									
ansi-1500	TON									
ansi-2500	TON									

(\*)Note: Indicated values has been calculated for **shell test** and with **API-6D** nominal minimum bore size + 50mm 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

BO30-2CV/250 Horizontal test bench with 30°column disposal

### DOUBLE SCREWED COLUMN + CYLINDER COMBINED CLAMPING INNER RADIAL SEAL+ PROPORTIONAL PRESS CONTROL



Horizontal test rig with combined clamping style: inner radial seal + 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 SKA-100 pressurization skid; to have more information about please consult dedicated technical data sheets. The rig could be completed with several options and accessories, please contact our sales office to have more information.

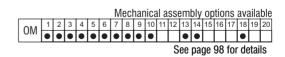
CLAMP

TYPE 3

Reaction Power
Columns disposal
Valve lenght max
Valve lenght min
Column clearance
Basement vessel
Lifter
Valve kind
Clamping Style
Reference standard
Pneumatic supply

Electrical supply Dimensions.

<b>250 TON</b> (See working limits table)
1750mm
0 mm
1100 mm
400 litres
Optional
BW, SW, RF, RJ
Inner radial & Pressing
ISO, DIN, API, ANSI, ASTM, FCI, BS (Other on request).
7 bar @ 2000 NI/min
Dry air not lubricated
3PH + T, 380V@50Hz
3300(L) x 1650(P) x 1600(H)



#### ★Working limits for PRESS CLAMPING and INNER RADIAL SEAL ANSI VALVES, SHELL TEST DN 6" 8" 10" 12" 14" 16" 18" 20" 24"

	DN	ю	0	10	12	14	10	10	20	24
ansi-150	TON									
ansi-300	TON									
ansi-600	TON									
ansi-900	TON									
ansi-1500	TON									
ansi-2500	TON									

(\*)Note: Indicated values has been calculated for **shell test** and with **API-6D** nominal minimum bore size + 50mm 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

BO30-2CV/250L

## Horizontal test bench with 30° column disposal

DOUBLE SCREWED COLUMN + CYLINDER COMBINED CLAMPING INNER RADIAL SEAL+ PROPORTIONAL PRESS CONTROL



**Reaction Power** 250 TON (See working limits table) Columns disposal 30° Valve lenght max 1600mm Valve lenght min 0 mm Column clearance 1150mm Basement vessel 400 Litres Lifter Optional BW. SW. RF. RJ Valve kind **Clamping Style** Inner radial & Pressing Reference standard ISO, DIN, API, ANSI, ASTM, FCI, BS (Other on request). 7 bar @ 2000 NI/min Pneumatic supply Dry air not lubricated Alimentazione elettrica 3PH + T, 380V@50Hz ÷ Dimensions. 3300(L) x 1650(P) x 1600(H)

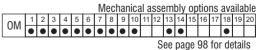
Horizontal test rig with combined clamping style: inner radial seal + press clamping facilities.

CLAMP

TYPE 3

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. In the basement, a water tank is installed as water reservoir for test procedures. Complete flow meters set could be installed (see option) to perform seat leakage test on control valves.

The rig is controlled by **SKA-100** pressurization skid; to have more information about please consult dedicated technical data sheets. The rig could be completed with several options and accessories, please contact our sales office to have more information.



#### ★Working limits for PRESS CLAMPING and INNER RADIAL SEAL ANSI VALVES, SHELL TEST DN 6 8' 10" 12" 14' 16 18 20' 24" 26" 28" 30" 32" ANSI-150 TON ANSI-300 TON ANSI-600 TON ANSI-900 TON

ANSI-1500 TON ANSI-2500 TON (\*)Note: Indicated values has been calculated for **shell test** and with **API-6D** nominal minimum bore <u>size + 50mm</u> 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



SINGLE SCREWED COLUMN + CYLINDER COMBINED CLAMPING AUTOMATIC OPENING FRONT PROTECTION SHUT-OFF VALVE ASSET



40 TON (see working limits table)

Type 1 – on/off or proportional (option) Type 2 – bore plugs.

On/off & proportional (option) ISO, DIN, API, ANSI, ASTM, FCI, BS

700 bar (water) - 6 bar (AIR)

3PH + T, 380V@50Hz, 5KW

2810(L) x 600(P) x 1670(H)

6.5 bar @ 1100 NI/min

(other on request)

(Other on request).

550 mm

50 mm

460 mm

830 mm

70L/min 36m<sup>3</sup>/h (Option)

See table

100 Liters RF, RTJ, BW, SW Horizontal test rig with combined clamping style: inner radial seal + press clamping facilities. The mobile reaction bridge is moved by one 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. In the basement, a water tank is installed as water reservoir for test procedures. Test process is controlled by

CLAMP

TYPE 3

CE

lest process is controlled by electronic PLC & LCD touch screen. Test data can be printed out on 24cln thermal printer directly in test area or be downloaded by serial connection (standard) to Windows based PC with TestREC3.0 certification software. Operator safety is granted by front protection with automatic opening.

Reaction force Valve length max Valve length min Columns inner distance Loading height Basement water tank Termination allowed Clamping style

Clamping force control Reference standards

Filling Flow Vacuum pump Standard flow meter Max pressure Pneumatic supply Electric supply

sure : ic supply : supply :

Dimensions

 Mechanical assembly options available
 Mechanical assembly options available

 OM
 1
 2
 3
 4
 5
 6
 7
 8
 9
 10
 11
 12
 13
 14
 15
 16
 17
 18
 19
 20

## ★Working limits for PRESS CLAMPING and INNER RADIAL SEAL ANSI VALVES, SHELL TEST

	DN	1/2"	1"	2"	3"	4"	5"	6"	8"
ANSI-150	TON								
ANSI-300	TON								
ANSI-600	TON								
ANSI-900	TON								
ANSI-1500	TON								
ANSI-2500	TON								
ansi-4500	TON								

(\*)Note: Indicated values has been calculated for **shell test** and with **API-6D** nominal minimum bore size + 30mm 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 BO30-CV/50P Horizontal test bench

with 30° column disposal

SINGLE SCREWED COLUMN + CYLINDER COMBINED CLAMPING AUTOMATIC OPENING FRONT PROTECTION CONTROL VALVE ASSET



Reaction force 50 TON (see working limits table) Valve length max 620 mm Valve length min 0 mm Columns inner distance : 590 mm Loading height 885 mm Basement water tank 100 Liters RF, RTJ, BW, SW Termination allowed Type 1 – on/off or proportional (option) Clamping style Type 2 – bore plugs. Clamping force control : On/off & proportional (option) ISO, DIN, API, ANSI, ASTM, FCI, BS Reference standards (Other on request). Filling Flow 70L/min 36m /h (Option) Vacuum pump Standard flow meter See table 700 bar (water) - 6 bar (AIR) Max pressure Pneumatic supply 7 bar @ 2000 NI/min Electric supply 3PH + T, 380V@50Hz, 5KW (other on request) Dimensions 3670(L) x 600(P) x 1700(H)

MEASURE TYPE INSTRUMENTATION TEST KIND Fluid WATER CI. II to IV Seat leakage Digital flow meters Turbine flow meters 300 - 3000 ml/min res. 2.5 cc 201 CI. IV Seat leakage ΔIR Digital flow meters Mass flow meters: 1) 0,1 SLPM 2) 1 SLPM 3) 10 SLPM 4) 100 SLPM CI. V Seat leakage test WATER Water column Digital water column digital flow meter Max height: 700 mm Resolution: 1mm (0.01 ml) Bubbles counter Digital bubbles counter: CI. VI Seat leakage test AIR Max 3 bubbles/sec





	DN	1/2"	1"	2"	3"	4"	5"	6"	8"	10"	12"
ansi-150	TON										
ansi-300	TON										
ANSI-600	TON										
ansi-900	TON										
ansi-1500	TON										
ANSI-2500	TON										

(\*)Note: Indicated values has been calculated for **shell test** and with **API-6D** nominal minimum bore size + 30mm 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 Horizontal test rig with combined clamping style: inner radial seal + press clamping facilities. The mobile reaction bridge is moved by one 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. A Spacer of 600mm is placed on fixed bridge side to accommodate large actuator. The unit has a control panel for control pneumatic / electrical actuators. In the basement, a water tank is installed as water reservoir for test procedures. Test process is controlled by electronic PLC & LCD touch screen. Test data can be printed out on 24cln thermal printer directly in test area or be downloaded by serial connection (standard) to Windows based PC with TestRÉC5.4 certification software. Operator safety is granted by front protection with automatic opening.

CLAMP

TYPE

3

BO45-2CV/3000 Horizontal test bench with 45° column disposal

DOUBLE SCREWED COLUMN + CYLINDER COMBINED CLAMPING INNER RADIAL SEAL+ PROPORTIONAL PRESS CONTROL CE



Test rig for valve with combined clamping style. Both pressing & bore plugs sealing style are available. It has two screwed reaction columns to setting up maximum pipe length. Reaction bridge is moved by hydraulic command. Valve load is made vertically with over head traveling crane, and final positioning is made by TWQ lifter. In the basement there is water tank protected by a step able grate.

CLAMP

TYPE 3

Pressurization skid control clamping with proportional pressing to ensure minimum mechanical effort on valve castings. The rig is controlled by SKA-2000 pressurization skid; to have more information about please consult dedicated technical data sheets. The rig could be completed with several options and accessories, please contact our sales office to have more information.

Mechanical assembly options available

See page 98 for details

0M

Reaction force • 3000 TON (See working limits table) Valve length max 6400 mm Valve length min 1750 mm Max valve Ø 2900 mm Distance center valve/soil 2800 mm : Basement water vessel 5000 L Camping style Type 3: Combined · Reference standard ISO, DIN, API, ANSI, ASTM, FCI, BS (Other on request). : Pneumatic supply 6.5 bar @ 2000 NI/min : Drv air not lubricated Electrical supply 3PH + T, 380V@50Hz, 10KW : Dimensions 11500(L) x 4500(P) x 5500(H) •

★Working limits for PRESS CLAMPING and INNER RADIAL SEAL ANSI VALVES, SHELL TEST

	DN	20"	24"	26"	28"	30"	32"	34"	36"	40"	42"	48"	56"	60"	66"
ANSI-150	TON														
ANSI-300	TON														
ANSI-600	TON														
ansi-900	TON														
ANSI-1500	TON														
ansi-2500	TON														

(\*)Note: Indicated values has been calculated for shell test and with API-6D nominal minimum bore size + 80mm 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

BO45-2CV/2000

# Horizontal test bench with 45° column disposal

# DOUBLE SCREWED COLUMN + CYLINDER COMBINED CLAMPING INNER RADIAL SEAL+ PROPORTIONAL PRESS CONTROL CE



Reaction force		2000 I UN
		(See working limits table)
Valve length max	:	2900 mm
Valve length min	:	0 mm
Column inner distance	:	2100
Loading height	:	2070 mm from soil - 45° i
Basement water tank	:	2000 Litres
Terminations allowed	:	BW, SW, RF, RJ
Clamping style	:	Type 3 – Combined
		Inner radial clamping & Pr
Reference standard	:	ISO, DIN, API, ANSI, ASTN
Electric supply	:	3PH + T, 380V@50Hz, 1

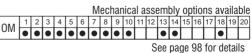
Dopation force

Dimensions

2000 TON

:	2900 mm
:	0 mm
:	2100
:	2070 mm from soil - 45° inclination from soil
:	2000 Litres
:	BW, SW, RF, RJ
:	Type 3 – Combined
	Inner radial clamping & Pressing clamping with Proportional control.
:	ISO, DIN, API, ANSI, ASTM, FCI, BS (Other on request).
:	3PH + T, 380V@50Hz, 10KW
:	6000(L) x 3000(P) x 3570(H)

(Mechanical structure)



★Working limits for PRESS CLAMPING and INNER RADIAL SEAL ANSI VALVES, SHELL TEST

	DN	12"	14"	16"	18"	20"	24"	26"	28"	30"	32"	34"	36"	40"	42"	48"
ANSI-150	TON															
ANSI-300	TON															
ANSI-600	TON															
ansi-900	TON															
ansi-1500	TON															
ANSI-2500	TON															

(\*)Note: Indicated values has been calculated for shell test and with API-6D nominal minimum bore size + 80mm 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

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

CLAMP

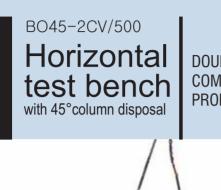
TYPE 3

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. In the basement, a water tank is installed as water reservoir for test procedures.

Complete flow meters set could be installed (See option) to perform Seat leakage test on control valves.

The rig is controlled by SKA-1000 pressurization skid: to have more information about please consult dedicated technical data sheets. The rig could be completed with several options and accessories, please contact our sales office to have more information.

[Patent Pending]



DOUBLE SCREWED COLUMN + CYLINDER COMBINED CLAMPING INNER RADIAL SEAL+ **PROPORTIONAL PRESS CONTROL** CE



Valve length max Valve length min Column inner distance

Reaction force

Loading height

Basement water tank Terminations allowed Clamping style

Reference standard Electric supply Dimensions

500 TON					
(See working limits table)					
1760 mm					
0 mm					
1160					
800 mm from basement					
1000mm from soil 45°	inclination from soil				
470 Litres					
BW, SW, RF, RJ					
Type 3 – Combined					
Inner radial clamping & Pressing	clamping with Proportic	onal c	ont	tro	I.
ISO, DIN, API, ANSI, ASTM, FCI,	BS (Other on request).				
3PH + T, 380V@50Hz, 10KW					
3450(L) x 2000(P) x 2000(H			1	2	3
(Mechanical structure)		OM	•	•	•

# \*Working limits for PRESS CLAMPING and INNER RADIAL SEAL ANSI VALVES, SHELL TEST

:

•

	DN	6″	8	10	12	14	16	18	20	24
ansi-150	TON									
ansi-300	TON									
ansi-600	TON									
ansi-900	TON									
ansi-1500	TON									
ansi-2500	TON									

(\*)Note: Indicated values has been calculated for shell test and with API-6D nominal minimum bore size + 50mm 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



Horizontal test rig with combined clamping style: inner radial seal + 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. In the basement, a water tank is installed as water reservoir for test procedures. Complete flow meters set could be installed (See option) to perform Seat leakage test on control valves.

The rig is controlled by SKA-500 pressurization skid; to have more information about please consult dedicated technical data sheets. The rig could be completed with several options and accessories, please contact our sales office to have more information.

 Mechanical assembly options available

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See page 98 for details

BO45-2CV/400

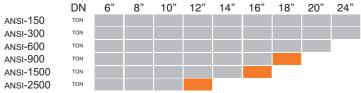
# Horizontal test bench with 45° column disposal

DOUBLE SCREWED COLUMN + CYLINDER COMBINED CLAMPING INNER RADIAL SEAL+ PROPORTIONAL PRESS CONTROL



Reaction force	:	400 TON							
		(See working limits table)							
Valve length max	:	1600 mm							
Valve length min	:	0 mm							
Column inner distance	:	1400							
Loading height	:	1320 mm from soil							
Basement water tank	:	900 Litres							
Terminations allowed	:	BW, SW, RF, RJ							
Clamping style	:	Type 3 – Combined							
		Inner radial clamping & Pressing clamping with Proportion	onal c	ont	rol				
Reference standard	:	ISO, DIN, API, ANSI, ASTM, FCI, BS (Other on request).							
Electric supply	:	3PH + T, 380V@50Hz, 10KW							Ν
Dimensions	:	3450(L) x 2000(P) x 2000(H) (Mechanical structure)	OM	1	2	3 4	5	6	7
					a [/				

# ★Working limits for PRESS CLAMPING and INNER RADIAL SEAL ANSI VALVES, SHELL TEST



(\*)Note: Indicated values has been calculated for **shell test** and with **API-6D** nominal minimum bore size + 50mm 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

Horizontal test rig with combined clamping style: inner radial seal + 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. In the basement, a water tank is installed as water reservoir for test procedures. Complete flow meters set could be installed (see option) to perform seat leakage test on

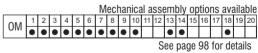
CLAMP

TYPE 3

control valves. The rig is controlled by **SKA-100** pressurization skid; to have more information about please consult dedicated

technical data sheets. The rig could be completed with several options and accessories, please contact our sales office to have more information.

[Patent Pending]



BO45-2V/850 Horizontal test bench with 45° column disposal

# DOUBLE SCREWED COLUMN INNER RADIAL SEAL (BORE PLUGS)



Horizontal test rig with inner radial seal clamping style. The mobile reaction bridge is moved by two screwed columns that assure the complete absence of external forces on valve body. This prerogative makes it conform to the most diffuse international test standards.

CLAMF

TYPE

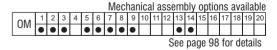
CE

The 45° columns disposal, allow the vertical loading of the valve to be tested by crane or horizontal loading by fork lifter. Be side, the vertical loading height is reduced.

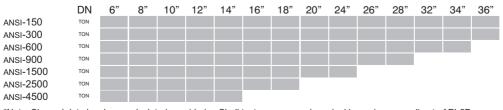
In the basement, a water tank is installed as water reservoir for test procedures.

The rig is controlled by "SKM or SKA class" pressurization skid; to have more information about please consult dedicated technical data sheets. The rig could be completed with several options and accessories, please contact our sales office to have more information.

Reaction force 850 TON (See working limits table) Valve length max 3000 mm Valve length min 200 mm Column inner distance 1300 mm Loading height 900 mm 1100 Liters Basement water tank See Option Lifter Screw dust protection See Option Terminations allowed BW, SW, RF, RJ Clamping style Type 2 – Inner radial Reference standard ISO, DIN, API, ANSI, ASTM, FCI, BS (Other on request). 3PH + T, 380V@50Hz, 7,5KW Electric supply Dimensions 4700(L) x 2340(P) x 2300(H) •



### \*Working limits INNER RADIAL SEAL, ANSI VALVE, SHELL TEST:



\*Note: Showed data has been calculated considering Shell test pressure and nominal bore size according to API-6D. For further details please contact our technical office.

BO45-2V/600

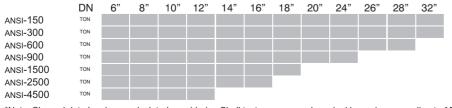
# Horizontal test bench with 45° column disposal

DOUBLE SCREWED COLUMN INNER RADIAL SEAL



Reaction force	:	600 TON (See working limits table)
Valve length max	:	2500 mm
Valve length min	:	600 mm
Column inner distance	:	1300 mm
Loading height	:	1400 mm
Basement water tank	:	1000 Liters
Lifter	:	See Option
Screw dust protection	:	See Option
Terminations allowed	:	BW, SW, RF, RJ
Clamping style	:	Type 2 – Inner radial
Reference standard	:	ISO, DIN, API, ANSI, ASTM, FCI, BS (Other on request).
Electric supply	:	3PH + T, 380V@50Hz, 7,5KW
Dimensions	:	4200(L) x 2340(P) x 2300(H)

### \*Working limits INNER RADIAL SEAL, ANSI VALVE, SHELL TEST:



\*Note: Showed data has been calculated considering Shell test pressure and nominal bore size according to API-6D. For further details please contact our technical office.



Horizontal test rig with inner radial seal clamping style. The mobile reaction bridge is moved by two screwed columns that assure the complete absence of external forces on valve body. This prerogative makes it conform to the most diffuse international test standards.

The 45° columns disposal, allow the vertical loading of the valve to be tested by crane or horizontal loading by fork lifter. Beside, the vertical loading height is reduced. In the basement, a water tank is

installed as water reservoir for test procedures. The rig is controlled by

**SKA-100** or **SKM-100** pressurization skid; to have more information about please consult dedicated technical data sheets. The rig could be completed with several options and accessories, please contact our sales office to have more information.

[Patent Pending]

 Mechanical assembly options available

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BOT-2CV/2000 Horizontal test benches for PIPE test

DOUBLE SCREWED COLUMN + CYLINDER COMBINED CLAMPING PROPORTIONAL PRESS CONTROL



Test rig for valve with Combined clamping style. Both pressing & bore plugs sealing style are available. It has two screwed reaction columns to setting up maximum pipe length. Reaction bridge is moved by hydraulic command. Valve load is made vertically with over head traveling crane, and final positioning is made by two lifter. In the basement there is water tank protected by a step able grate. Pressurization skid control clamping with proportional pressing to ensure minimum mechanical effort on valve castings. The rig is controlled by SKA-2000 pressurization skid;

CLAMP

TYPE 3

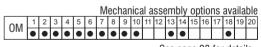
to have more information about please consult dedicated technical data sheets. The rig could be completed with several options and accessories, please contact our sales office to have more information.

Reaction force	:
Max pipe length	:
Min pipe length	:
Max pipe Ø	:
Distance center valve/soil	:
Basement water vessel	:
Camping style	:
Reference standard	:
Pneumatic supply	:

Electrical supply Dimensions

.. .

### 2000 TON 5400 mm 750 mm 2600 mm 2530 mm 3000L Type 3: Combined ASTM, API, DIN 6.5 bar @ 2000 NI/min Dry air not lubricated 3PH + T, 380V@50Hz, 12KW 10500(L) x 3500(P) x 4300(H)



See page 98 for details



# Horizontal test benches for PIPE test

# BOT-2CSV/600

RADIAL CLAMPING, 600 TON

# BOT-2CSC/1200

PROPORTIONAL PRESS CLAMPING 1200 TON

CE



BOT-2CSV/600

### Reaction power Clamping type Max pipe length Min pipe length Max pipe Ø Distance center pipe to soil Basement water vessel Reference standard Max Test pressure Filling Flow Pre-filling vacuum Pneumatic supply

Electrical supply Dimensions

# BOT-2CSV/600

600 TON #2:External radial 7100 mm 1500 mm 1020 mm 1550 mm 6000 L ASTM B862, ASTM B 861 700 / 1050 bar 500 L/min 160 m³/h 6.5 bar @ 1100 NI/min Dry air not lubricated 3PH + T, 380V@50Hz, 5KW 9700(L) x 2500(P) x 2180(H)

# Mechanical assembly options available 0M 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 0 • <td

### BOT-2CSC/1200

1200 TON #1: Proportional pressing 12400 mm 2000 mm 1250 mm 1250 mm 1770 mm 14000 L ASTM B862, ASTM B 861 700 / 1050 bar 1000 L/min 160 m³/h 6.5 bar @ 1500 Nl/min Dry air not lubricated 3PH + T, 380V@50Hz, 10KW 15000(L) x 2720(P) x 2650(H) Test rig for pipes; Proportional Pressing clamping style. It has two reaction columns with sector to setting up maximum pipe length. Reaction bridge is moved by hydraulic command. Pipe load is made vertically with over head traveling crane, and final positioning is made by three lifter with centering/calibrating device included. In the basement there

CLAMP

TYPE

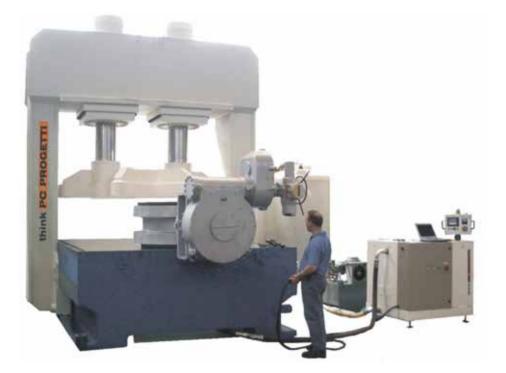
included. In the basement there is water tank protected by a step able grate. Pressurization skid control clamping with proportional.

The rig is controlled by SKA-1000 pressurization skid; to have more information about please consult dedicated technical data sheets. The rig could be completed with several options and accessories, please contact our sales office to have more information.



# BV-PMC/1200 Vertical test bench

MOBILE BRIDGE PROPORTIONAL PRESS CLAMPING



Reaction force 1200 TON (see working limits table) Working stands 1 (two on request) Valve lenght max 1265 mm Valve lenght min 265 mm Columns inner distance 2900 mm Loading plate height 1200 mm Bridge course 2200 mm 2x Ø460/350, corsa 1000 mm Cylinder Basement water tank c. 350 I External water tank 3000 I Terminations allowed RF. RJ Clamping style Type 1 – Proportional Compression (flange surface). Clamping force control Automatic within 5..100% interval, proportionalto the hidrostatic pressure inside the valve under test. Reg. gain controlled by the operator. ISO, DIN, API, ANSI, ASTM, FCI, BS (Other on request). Reference standards 6.5 bar @ 1100 NI/min Pneumatic supply Electric supply 3PH + T, 380V@50Hz, 12KW 3900(L) x 3700(P) x 4920(H) Dimensions

# Mechanical assembly options available OM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 0 1 1 18 19 10 11 12 13 14 15 16 17 18 19 20 0 1</td

# ★Working limits for PRESS Clamping, DIN VALVES, SHELL TEST

 DN
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 2000
 2200
 2400

 PN-10
 TON
 Image: Strain Stra

\*Note: Showed data has been calculated considering SHELL test pressure and nominal bore size increased by 80mm. For further details please contact our technical office.

Vertical test rig with controlled pressing clamp; the press force is controlled automatically according to the water pressure inside valve, and the result load is reduced to minimal therms. Mobile upper side bridge allow vertical loading of the valve and the possibility to have double working stand; while the first is working, the second could be prepared for next piece. In the basement there is a water tank and an external water tank could be add as option. The use of a opened castle as upper side reaction structure, allow the user to make visual inspection of valve seat during the test. The rig is controlled by

CLAMP

TYPE

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I ne rig is controlled by SKA-100 pressurization skid; to have more information about please consult dedicated technical data sheets. The rig could be completed with several options and accessories, please contact our sales office to have more informations.

# BV-PMC/850 Vertical test bench

# **MOBILE BRIDGE** PROPORTIONAL PRESS CLAMPING



### Reaction force

### 850 TON в.

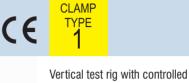
Reaction force		830 I UN
		(See working limits table)
Working stand	:	1 ,
Allowed size	:	DN500 / DN2000
Valve length max	:	1000 mm (seal adapttors included)
Valve length Min	:	250mm
Columns inner distance	:	2400 mm
Loading heigh	÷	1100mm
Bridge course	÷	1600 mm
Water Tank	:	3000L External
Termination allowed	:	RF
Clamping style	:	Type: 1 – Proportional pressing
Clamping force control	:	Automatic within 10%-100% interval, proportional to hydrostatic
		pressure inside the valve under test.
Ref standard	:	ISO, DIN, API, ANSI, ASTM, FCI, BS (Other on request).
Hydraulic test	:	H2O 100 bar MAX
Pneumatic test	:	0.5 bar – 6 bar
Pneumatic supply	:	6.5 bar @ 1100 NI/min - Dry air not lubricated
Electric supply	:	3PH + T, 380V@50Hz, 10KW
Dimension	:	3100(L) x 3500(P) x 4080 (H)

### Mechanical assembly options available 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 • Μ See page 98 for details

### ★Working limits for PRESS Clamping, DIN VALVES, SHELL TEST

	DN	700	800	900	1000	1200	1300	1400	1500	1600	1800	2000
PN-10	TON											
PN-16	TON											
PN-25	TON											
PN-40	TON											
PN-64	TON											

\*Note: Showed data has been calculated considering SHELL test pressure and nominal bore size increased by 80mm. For further details please contact our technical office



pressing clamp; the press force is controlled automatically according to the water pressure inside valve, and the result load is reduced to minimal terms. Mobile upper side bridge allow vertical loading of the valve and the possibility to have double working stand; while the first is working, the second could be prepared for next piece. In the basement there is a water tank and an external water tank could be add as option. The use of a opened castle as upper side reaction structure (see picture), allow the user to make visual inspection of valve seat during the test.

The rig is controlled by SKA-250 pressurization skid; to have more information about please consult dedicate technical data sheet. The rig could be completed with several options and accessories, please contact our sales office to have more information.

[Patent Pending]

47



MOBILE BRIDGE PROPORTIONAL PRESS CLAMPING

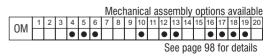


Reaction force:Working stands:Allowed sizes:Valve length max:Valve length min:Columns inner distance:Loading plate height:Bridge course:Basement water tank c.:Terminations allowed:Clamping style:Clamping force control:

Reference standards Pneumatic supply Electric supply Dimensions 650 TON (see working limits table) 1 (2 on request) DN700/DN2000, PN16/PN64 750 mm 250 mm 2400 mm 1000 mm 1600 mm 220 Liter RF. RJ Type 1 – Proportional Compression (flange surface). Automatic within 5..100% interval, proportional to the hydrostatic pressure inside the valve under test. ISO, DIN, API, ANSI, ASTM, FCI, BS (Other on request). 6.5 bar @ 1100 NI/min - Dry air not lubricated 3PH + T, 380V@50Hz, 9.65KW 3100(L) x 3260(P) x 3500(H)

### ★Working limits for PRESS Clamping, DIN VALVES, SHELL TEST

700	800	900	1000	1200	1300	1400	1500	1600	1800	2000
	700	700 800	700 800 900	700 800 900 1000	700 800 900 1000 1200	700 800 900 1000 1200 1300	700 800 900 1000 1200 1300 1400	700 800 900 1000 1200 1300 1400 1500	700         800         900         1000         1200         1300         1400         1500         1600           800         900         1000         1200         1300         1400         1500         1600           800         900         1000         1200         1300         1400         1500         1600           800         900         1000         1200         1300         1400         1500         1600           800         900         1000         1200         1300         1400         1500         1600           800         900         1000         1200         1300         1400         1500         1600           800         900         1000         1200         1300         1400         1500         1600           800         900	700         800         900         1000         1200         1300         1400         1500         1600         1800



Vertical test rig with controlled pressing clamp; the press force is controlled automatically according to the water pressure inside valve, and the result load is reduced to minimal terms. Mobile upper side bridge allow vertical loading of the valve and the possibility to have double working stand; while the first is working, the second could be prepared for next piece. In the basement there is a water tank and an external water tank could be add as option. The use of a opened castle as upper side reaction structure (see picture), allow the user to make visual inspection of valve seat during the test. The rig is controlled by

CLAMP

TYPE

CE

SKA-100 pressurization skid; to have more information about please consult dedicate technical data sheet. The rig could be completed with several options and accessories, please contact our sales office to have more information.

\*Note: Showed data has been calculated considering SHELL test pressure and nominal bore size increased by 80mm. For further details please contact our technical office.

# BV-PMC/650 Vertical test bench

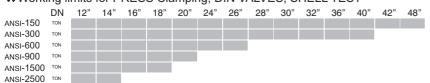
# **MOBILE BRIDGE PROPORTIONAL PRESS CLAMPING**





Reaction force Working stands Allowed sizes Valve length max Valve length min Columns inner distance Loading plate height Bridge course Basement water tank c. Terminations allowed Clamping style		650 TON (see working limits table) 1 ( 2 on request) DN700/DN2000, PN16/PN64 (A) 1250 mm (B) 200 mm (C) 1600 mm (D) 1000 mm (E) 1300 mm 220 Liter RF, RJ Type 1 – Proportional Compression (flange surface).
Clamping force control	:	Automatic within 5100% interval, proportional to the hydrostatic
Protection against water jet Reference standards Pneumatic supply Electric supply Dimensions		pressure inside the valve under test. Armoured glass on 3 side + front door on request ISO, DIN, API, ANSI, ASTM, FCI, BS (Other on request). 6.5 bar @ 1100 NI/min - Dry air not lubricated 3PH + T, 380V@50Hz, 10KW 2350(L) x 2900(P) x 4240(H)

### \*Working limits for PRESS Clamping, DIN VALVES, SHELL TEST



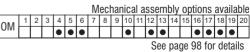


Vertical test rig with controlled pressing clamp; the press force is controlled automatically according to the water pressure inside valve. and the result load is reduced to minimal terms. Mobile upper side bridge allow vertical loading of the valve and the possibility to have double working stand; while the first is working, the second could be prepared for next piece. In the basement there is a water tank and an external water tank could be add as option. The use of a opened castle as upper side reaction structure (see picture), allow the user to make visual inspection of valve seat during the test.

The rig has a armoured glass protection on 3 side. Frontal side can be closed by mobile horizontal sliding gate (optional).

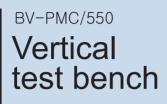
Upper side crociera is equipped with fast connection (photo 2) for sealing plateau, and mounting tool is included as well (photo 1). The rig is controlled by

SKA-100 pressurization skid; to have more information about please consult dedicate technical data sheet. The rig could be completed with several options and accessories, please contact our sales office to have more information.



[Patent Pending]

### \*Note: Showed data has been calculated considering SHELL test pressure and nominal bore size increased by 50mm. For further details please contact our technical office



MOBILE BRIDGE PROPORTIONAL PRESS CLAMPING



Reaction force 550 TON (see working limits table) Working stands 1 (2 on request) Valve length max 1500 mm Valve length min 700 mm Columns inner distance 2200 mm Loading plate height 1000 mm Bridge course 1250 mm Cylinder Ø400/280, stoke 800 mm Basement water tank c. 220 Liter Terminations allowed RF, RJ Type 1 – Proportional Compression (flange surface). Clamping style Clamping force control Automatic within 5..100% interval, proportional to the hydrostatic pressure inside the valve under test. Reg. gain controlled by the operator. Reference standards ISO, DIN, API, ANSI, ASTM, FCI, BS (Other on request). Pneumatic supply 6.5 bar @ 1100 NI/min Electric supply 3PH + T, 380V@50Hz, 12KW 3020(L) x 2200(P) x 4200(H) Dimensions

# Mechanical assembly options available OM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 0 1 0 <td

### ★Working limits for PRESS Clamping, DIN VALVES, SHELL TEST

DN 600 700 800 900 1000 1200 1300 1400 1500 1600 1800 2000

PN-10	TON						
PN-16	TON						
PN-25	TON						
PN-40	TON						
PN-64	TON						

Vertical test rig with controlled pressing clamp; the press force is controlled automatically according to the water pressure inside valve, and the result load is reduced to minimal terms. Mobile upper side bridge allow vertical loading of the valve and the possibility to have double working stand; while the first is working, the second could be prepared for next piece. In the basement there is a water tank and an external water tank could be add as option. The use of a opened castle as upper side reaction structure (see picture), allow the user to make visual inspection of valve seat during the test. The rig is controlled by

CLAMP

TYPE

CE

**SKA-100** pressurization skid; to have more information about please consult dedicate technical data sheet. The rig could be completed with several options and accessories, please contact our sales office to have more information.

\*Note: Showed data has been calculated considering SHELL test pressure and nominal bore size increased by 80mm. For further details please contact our technical office.

BV-PMC/500 Vertical test bench

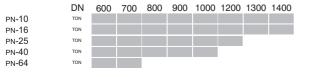
# MOBILE BRIDGE PROPORTIONAL PRESS CLAMPING



Reaction force Working stands Allowed sizes Valve length max Valve length min Columns inner distance Loading plate height Bridge course Cylinder Basement water tank c. Terminations allowed Clamping style Clamping force control

Reference standards Pneumatic supply Electric supply Dimensions 1 (2 on request) DN600/DN1400, PN16/PN64 (A) 1140 mm (B) 200 mm (C) 1750 mm (D) 1000 mm (E) 850 mm Ø430/300, course 430 mm 220 Liters RF, RJ Type 1 – Proportional Compression (flange surface). Automatic within 5.,100% interval, proportional to the hydrostatic pressure inside the valve under test. ISO, DIN, API, ANSI, ASTM, FCI, BS (Other on request). 6.5 bar @ 1100 NI/min Dry air not lubricated 3PH + T, 380V@50Hz, 9.65KW (11.15 KW with vacuum pump) 2300(L) x 2000(P) x 2800(H)

### ★Working limits for PRESS Clamping, DIN VALVES, SHELL TEST





Vertical test rig with proportional pressing clamp; the press force is controlled automatically according to the water pressure inside valve. and the result load is reduced to minimal terms. Mobile upper side bridge allow vertical loading of the valve and the possibility to have double working stand; while the first is working, the second could be prepared for next piece. In the basement there is a water tank and an external water tank could be add as option. The use of a opened castle as upper side reaction structure. allow the user to make visual inspection of valve seat during the test.

The rig is controlled by **SKA-100** pressurization skid; to have more information about please consult dedicated technical data sheets. The rig could be completed with several options and accessories, please contact our sales office to have more information.

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 Image: Image of the state of the state

[Patent Pending]

### \*Note: Showed data has been calculated considering SHELL test pressure and nominal bore size increased by 50mm. For further details please contact our technical office.

# BV-PMC/500S Vertical test bench

MOBILE BRIDGE PROPORTIONAL PRESS CLAMPING



Reaction force Working stands Valve length max Valve length min Columns inner distance Loading plate height Bridge course Basement water tank c. Terminations allowed Clamping style Clamping force control

Protection against water jet : Reference standards : Pneumatic supply : Electric supply : Dimensions :

500 TON (see working limits table) 1 (2 on request) 70`0 mm 200 mm 1000 mm 1000 mm 850mm 150 Liters RF, RJ Type 1 – Proportional Compression (flange surface). Automatic within 5..100% interval, proportional to the hydrostatic pressure inside the valve under test. Armoured steel on 3 side + mobile front door ISO, DIN, API, ANSI, ASTM, FCI, BS (Other on request). 6.5 bar @ 1100 NI/min - Dry air not lubricated 3PH + T, 380V@50Hz, 10KW 1460(L) x 2360P) x 2600H)

### $\bigstar$ Working limits for PRESS Clamping, ANSI VALVES, SHELL TEST

	DN	6"	8"	10"	12"	14"	16"	18"	20"	24"
ansi-150	TON									
ANSI-300	TON									
ANSI-600	TON									
ansi-900	TON									
ANSI-1500	TON									
ANSI-2500	TON									



think

CLAMP TYPE

(6

Vertical test rig with controlled pressing clamp; the press force is controlled automatically according to the water pressure inside valve, and the result load is reduced to minimal terms. Mobile upper side bridge allow vertical loading of the valve and the possibility to have double working stand; while the first is working, the second could be prepared for next piece. In the basement there is a water tank and an external water tank could be add as option. The use of a opened castle as upper side reaction structure (see picture), allow the user to make visual inspection of valve seat during the test.

The rig has a armoured steel protection on 3 side. Frontal side can be closed by mobile horizontal sliding gate (optional). The rig is controlled by

**SKA-100** pressurization skid; to have more information about please consult dedicate technical data sheet. The rig could be completed with several options and accessories, please contact our sales office to have more information.

 Mechanical assembly options available

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 Image: Image of the imag

BV-PMC/350 Vertical test bench

# **MOBILE BRIDGE PROPORTIONAL PRESS CLAMPING**



350 TON (see working limits table)

1 (2 on request)

Reaction force Working stands Valve lenght max Valve lenght min Columns inner distance Loading plate height Bridge course Basement water tank c. Terminations allowed Clamping style Clamping force control Reference standards

Pneumatic supply

Electric supply Dimensionis

1280 mm 180 mm 1620 mm 900 mm 780 mm 200 Liters RF, RJ Type 1 – Proportional Compression (flange surface). Automatic within 5..100% interval, proportional to the hydrostatic pressure inside the valve under test. ISO, DIN, API, ANSI, ASTM, FCI, BS (Other on request). 6.5 bar @ 1100 NI/min - Dry air not lubricated 3PH + T, 380V@50Hz, 12KW 2140(L) x 1700(P) x 4050(H)

CLAMP CE TYPE

> Vertical test rig with controlled pressing clamp; the press force is controlled automatically according to the water pressure inside valve, and the result load is reduced to minumal terms. Mobile upper side bridge allow vertical loading of the valve and the possibility to have double working stand; while the first is working, the second could be prepared for next piece. In the basement there is a water tank and an external water tank could be add as option. The use of a opened castle as upper side reaction structure, allow the user to make visual inspection of valve seat during the test.

> The rig is controlled by SKA-100 pressurization skid; to have more information about please consult dedicated technical data sheets. The rig could be completed with several options and accessories, please contact our sales office to have more information.

[Patent Pending]

See page 98 for details

 Mechanical assembly options available

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OM

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# \*Working limits for PRESS Clamping, DIN VALVES, SHELL TEST

	DN	300	350	400	450	500	600	700	800	900	1000	1200
PN-10	TON											
PN-16	TON											
PN-25	TON											
PN-40	TON											

\*Note: Showed data has been calculated considering SHELL test pressure and nominal bore size increased by 50mm. For further details please contact our technical office.

BV-PMC/200-2 Vertical test bench

# DOUBLE LOADING PLACES MOBILE BRIDGE PROPORTIONAL PRESS CLAMPING

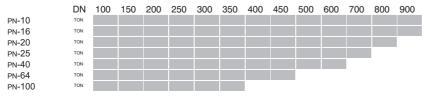


200 TON (see working limits table)

Reaction force Working stands Valve lenght max Valve lenght min Columns inner distance Loading plate height Bridge course Basement water tank c. Terminations allowed Clamping style Clamping force control

Clamping force control Reference standards Pneumatic supply Electric supply Dimensions 1 (2 on request) 970 mm 100 mm 1200 mm 900 mm 900 mm 200 Liters RF, RJ Type 1 – Proportional Compression (flange surface). Automatic within 5..100% interval, proportional to the hydrostatic pressure inside the valve under test. ISO, DIN, API, ANSI, ASTM, FCI, BS (Other on request). 6.5 bar @ 1100 NI/min - Dry air not lubricated 3PH + T, 380V@50Hz, 12KW 1600(L) x 1900(P) x 3000(H)

★Working limits for PRESS Clamping, DIN VALVES, SHELL TEST



Vertical test rig with controlled pressing clamp; the press force is controlled automatically according to the water pressure inside valve, and the result load is reduced to minimal terms. Mobile upper side bridge allow vertical loading of the valve and the possibility to have double working stand; while the first is working, the second could be prepared for next piece. In the basement there is a water tank and an external water tank could be add as option. The use of a opened castle as upper side reaction structure (see picture), allow the user to make visual inspection of valve seat during the test.

CLAMP

TYPE

CE

The rig has a armoured steel protection on 3 side. Frontal side can be closed by mobile horizontal sliding gate (optional). The rig is controlled by **SKA-100** pressurization skid; to have more information about please consult dedicate technical data sheet. The rig could be completed with several options and accessories, please contact our sales office to have more information.

 Mechanical assembly options available

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See page 98 for details

\*Note: Showed data has been calculated considering SHELL test pressure and nominal bore size increased by 50mm. For further details please contact our technical office.

# BV-PMC/200S Vertical test bench

# MOBILE BRIDGE PROPORTIONAL PRESS CLAMPING WITH AUTOMATIC VALVE MARKING MICRO-PERCUSSION

CLAMP TYPE

> Vertical test rig with controlled pressing clamp; the press force is controlled automatically

> according to the water pressure inside valve, and the result load is reduced to minimal terms. Mobile upper side bridge allow

> vertical loading of the valve. In the basement there is a water tank and an external water tank could be add as option. The use of a opened castle as upper side reaction structure (see picture), allow the user to make visual inspection of valve

seat during the test. The rig has a armoured steel protection on 3 side. Frontal side can be closed by mobile horizontal sliding gate (optional). A marking machine is connected directly to control PLC to mark serial number un tested pieces. The rig is controlled by



Reaction force Valve length max Valve length Min DN min-max Loading heigh Water Tank Termination allowed Clamping style Clamping force control

Protection against water jet

Ref standard

Hydraulic test Pneumatic test

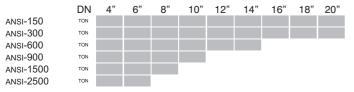
Electric supply

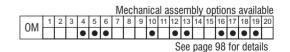
Dimension

Pneumatic supply

450 mm 50mm DN1" – DN 20" 950mm 300L External RF, RTJ Type: 1 –Proportional pressing Automatic within 5%-100% interval, proportional to hydrostatic pressure inside the valve under test. armored steel 3 side + mobile front door ISO, DIN, API, ANSI, ASTM, FCI, BS (Other on request). H2O 700 bar MAX 0.5 bar – 6 bar 6.5 bar @ 1100 NI/min - Dry air not lubricated 3PH + T, 380V@50Hz, 10KW 1100(L) x 1325 (P) x 2020 (H)

### ★Working limits for PRESS Clamping, ANSI VALVES, SHELL TEST





**SKA-100** pressurization skid; to have more information about please consult dedicate technical data sheet. The rig could be completed with several options and accessories, please contact our sales office to have more information. Vertical test ben

# [Patent Pending]

\*Note: Showed data has been calculated considering SHELL test pressure and nominal bore size increased by 50mm. For further details please contact our technical office.

# BV-PMC/120L Vertical test bench

# MOBILE BRIDGE PROPORTIONAL PRESS CLAMPING



Reaction force	:
Valve length max	:
Valve length Min	:
Max valve flange Diameter	:
DN min-max	:
Loading heigh	:
Water Tank	:
Termination allowed	:
Clamping style: Type	:
Clamping force control	:

Protection against water jet: Reference standards : Hydraulic test : Pneumatic test : Pneumatic supply : Elecric supply : Dimensions :

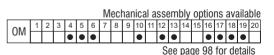
450 mm
50mm
1290mm
DN100 – DN 900
850mm
300L External
RF, RTJ
1 – Proportional pressing
Automatic within 5%-100% interval, proportional to
hydrostatic pressure inside the valve under test.
armored steel 3 side + mobile front door
ISO, DIN, API, ANSI, ASTM, FCI, BS (Other on request).
H2O 200 bar MAX (Other on request)
0.5 bar – 6 bar
6.5 bar @ 1100 NI/min - Dry air not lubricated
3PH + T, 380V@50Hz, 10KW
1730(L) x 2450 (P) x 2380 (H)

120 TON (See working limits table)

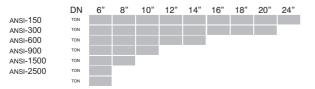
# CE CLAMP

Vertical test rig with controlled pressing clamp; the press force is controlled automatically according to the water pressure inside valve, and the result load is reduced to minimal terms. Mobile upper side bridge allow vertical loading of the valve and the possibility to have double working stand; while the first is working, the second could be prepared for next piece. In the basement there is a water tank and an external water tank could be add as option. The use of a opened castle as upper side reaction structure (see picture), allow the user to make visual inspection of valve seat during the test.

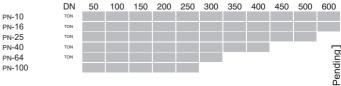
The rig has a armoured steel protection on 3 side. Frontal side can be closed by mobile horizontal sliding gate (optional). A marking machine is connected directly to control PLC to mark serial number un tested pieces. The rig is controlled by SKA-100 pressurization skid; to have more information about please consult dedicate technical data sheet. The rig could be completed with several options and accessories, please contact our sales office to have more information



### \*Working limits PRESS CLAMPING, ANSI VALVES SHELL TEST



★Working limits PRESS CLAMPING, DIN VALVES SHELL TEST



\*Note: Showed data has been calculated considering SHELL test pressure and nominal bore size increased by 50mm. For further details please contact our technical office.

BV-PMC/100-2 Vertical test bench

# DOUBLE LOADING PLACES **MOBILE BRIDGE PROPORTIONAL PRESS CLAMPING**



Reaction force

request).

Working stands Valve length max Vave length min Columns inner distance Loading height Bridge course Cylinder Basement water tank Terminations allowed Clamping style Clamping force control test

Reference standards • Pneumatic supply

(See working limits table) 650 mm 150 mm 800 mm 750 mm 900 mm Ø200/140, stroke 500 mm 220 Liters BW, SW, RF, RJ

Type 1 – Proportional Compression (flange surface). Automatic within 5..100% interval, proportional to the hydrostatic pressure inside the valve under

PN-10

PN-16

PN-25

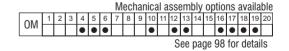
PN-40

PN-64

PN-100

ISO, DIN, API, ANSI, ASTM, FCI, BS (Other on

6.5 bar @ 1100 NI/min - Dry air not lubricated

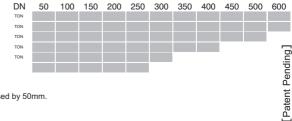


\*Working limits PRESS CLAMPING, ANSI VALVES SHELL TEST

**100 TON** 

	DN	6"	8"	10"	12"	14"	16"	18"	20"	24"
ANSI-150	TON									
ANSI-300	TON									
ANSI-600	TON									
ANSI-900	TON									
ANSI-1500	TON									
ANSI-2500	TON									
	TON									

★Working limits PRESS CLAMPING, DIN VALVES SHELL TEST



\*Note: Showed data has been calculated considering SHELL test pressure and nominal bore size increased by 50mm. For further details please contact our technical office

Vertical test rig with controlled pressing clamp; the press force is controlled automatically according to the water pressure inside valve, and the result load is reduced to minimal terms. Mobile upper side bridge allow vertical loading of the valve and the possibility to have double working stand; while the first is working, the second could be prepared for next piece. In the basement there is a water tank and an external water tank could be add as option. The use of a opened castle as upper side reaction structure, allow the user to make visual inspection of valve seat during the test. The rig is controlled by SKA-100 pressurization skid: to have more information about please consult dedicated technical data sheets. The rig could be completed with several options and accessories, please contact our sales office to have more information.

**CLAMP** 

TYPE

CE

# BV-PMC/100 Vertical test bench

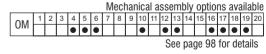
MOBILE BRIDGE PROPORTIONAL PRESS CLAMPING



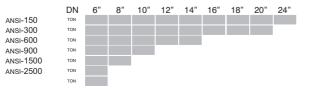
Reaction force Valve length max Valve length Min DN min-max Loading heigh Water Tank Termination allowed Clamping style Clamping force control

Protection against water jet Ref standard Hydraulic test Pneumatic test Pneumatic supply Elecric supply Dimension

100 TON (See working limits table) 270 mm 0mm DN2" – DN 24" 910 mm 300L External RF, RTJ, Wafer Type: 1 – Proportional pressing Automatic within 10%-100% interval, proportional to hydrostatic pressure inside the valve under test. available on request. ISO, DIN, API, ANSI, ASTM, FCI, BS (Other on request). H20 700 bar (other on request) 0.5 bar - 6 bar 6.5 bar @ 1100 NI/min - Dry air not lubricated 3PH + T, 380V@50Hz, 12KW 1260(L) x 1925 (P) x 2110(H)



\*Working limits PRESS CLAMPING, ANSI VALVES SHELL TEST



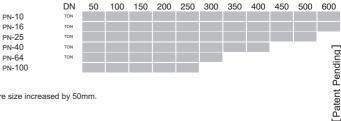
\*Note: Showed data has been calculated considering SHELL test pressure and nominal bore size increased by 50mm. For further details please contact our technical office. CLAMP TYPE 1

CE

Vertical test rig with controlled pressing clamp; the press force is controlled automatically according to the water pressure inside valve, and the result load is reduced to minimal terms. Mobile upper side bridge allow vertical loading of the valve and the possibility to have double working stand; while the first is working, the second could be prepared for next piece. In the basement there is a water tank and an external water tank could be add as option. The use of a opened castle as upper side reaction structure (see picture), allow the user to make visual inspection of valve seat during the test.

The rig is controlled by **SKA-100** pressurization skid; to have more information about please consult dedicate technical data sheet. The rig could be completed with several options and accessories, please contact our sales office to have more information.

★Working limits PRESS CLAMPING, DIN VALVES SHELL TEST



BV-PMV/600 Vertical test bench

# SINGLE SCREWED COLUMN **INNER RADIAL SEAL** (BORE PLUGS)



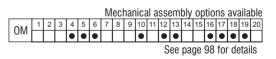


### Reaction force

Valve length max Valve length min Column inner distance Basement water tank Terminations allowed Clamping style Reference standard Electric supply Dimensions

600 TON

(See working limits table) 3000 mm 700 mm 1720 mm 300 Liters ca. BW, SW, RF, RJ Type 2 – Inner radial ISO, DIN, API, ANSI, ASTM, FCI, BS (Other on request). 3PH + T, 380V@50Hz, 10KW 2420 (L) x 3250 (P) x 7350 (H)

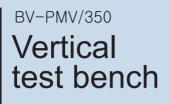


### ★EXAMPLE for Operative limits with BORE PLUG CLAMPING STYLE

	DN	10"	12"	14"	16"	18"	20"	24"	28"	30"	32"	36"
ansi-150	TON											
ANSI-300	TON											
ANSI-600	TON											
ansi-900	TON											
ansi-1500	TON											
ansi-2500	TON											

\*Note: Showed data has been calculated considering Shell test pressure and nominal bore size according to API-6D. For further details please contact our technical office

[Patent Pending]



SINGLE SCREWED COLUMN INNER RADIAL SEAL (BORE PLUGS)



CLAMP TYPE 2

Vertical test rig with inner radial seal clamping style. The mobile reaction bridge is moved by one screwed column that assure the complete absence of external forces on valve body. This prerogative makes it conform to the most diffuse international test standards. In the basement, a water tank could be installed as water reservoir for test procedures (see Option).

The rig is controlled by **SKM-100** pressurization skid; to have more information about please consult dedicated technical data sheets. The rig could be completed with several options and accessories, please contact our sales office to have more information.

Reaction force

Valve length max Valve length min Column inner distance Basement water tank Terminations allowed Clamping style Reference standard Electric supply Dimensions **350 TON** (See working limits table) 1200 mm 0 mm 650 mm 300 Liters ca. BW, SW, RF, RJ Type 2 – Inner radial ISO, DIN, API, ANSI, ASTM, FCI, BS (Other on request). 3PH + T, 380V@50Hz, 7KW 1140 (L) x 1880(P) x 4100 (H)

★Working limits INNER RADIAL SEAL, ANSI VALVE, SHELL TEST:

	DN	2"	3"	4"	5"	6"	8"	10"	12"
ANSI-150	TON								
ansi-300	TON								
ANSI-600	TON								
ansi-900	TON								
ansi-1500	TON								
ANSI-2500	TON								

\*Note: Showed data has been calculated considering Shell test pressure and nominal bore size according to API-6D. For further details please contact our technical office.



Mechanical assembly options available

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BV-2V/800 Vertical test bench

# DOUBLE SCREWED COLUM INNER RADIAL SEAL (BORE PLUGS)

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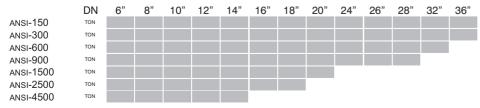
Reaction force

### 800 TON (See working limits table)

Valve length max Valve length min Columns inner distance Loading height Terminations allowed Clamping style Reference standard Electric supply Dimensions 2000 mm 250 mm 1350 mm 1400 mm BW, SW, RF, RJ Type 2 – Inner radial ISO, DIN, API, ANSI, ASTM, FCI, BS (Other on request). 3PH + T, 380V@50Hz, 7KW 2290(L) x 2400(P) x 3770(H)

# Mechanical assembly options available OM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 • <td

### ★Working limits INNER RADIAL SEAL, ANSI VALVE, SHELL TEST:



\*Note: Showed data has been calculated considering Shell test pressure and nominal bore size according to API-6D. For further details please contact our technical office.



Vertical test rig with inner radial seal clamping style. The mobile reaction bridge is moved by two screwed columns that assure the complete absence of external forces on valve body. This prerogative makes it conform to the most diffuse international test standards.

The rig is controlled by **SKA-100** pressurization skid; to have more information about please consult dedicated technical data sheets. The rig could be completed with several options and accessories, please contact our sales office to have more information.

[Patent Pending]



SINGLE SCREWED COLUMN INNER RADIAL SEAL (BORE PLUGS)



Vertical test rig with inner radial seal clamping style. The mobile reaction bridge is moved by one screwed column that assure the complete absence of external forces on valve body. This prerogative makes it conform to the most diffuse international test standards. In the basement, a water tank could be installed as water reservoir for test procedures (see Option).

CLAMP

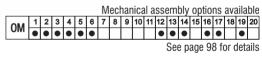
түре **2** 

CE

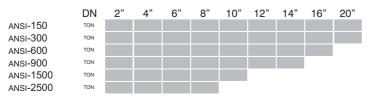
The rig is controlled by **SKM-100** pressurization skid; to have more information about please consult dedicated technical data sheets. The rig could be completed with several options and accessories, please contact our sales office to have more information.

Reaction force Valve length max Valve length min Column inner distance Terminations allowed Clamping style Reference standard Electric supply Dimensions

### 200 TON (See working limits table) 1000 mm 900 mm BW, SW, RF, RJ Type 2 – Inner radial ISO, DIN, API, ANSI, ASTM, FCI, BS (Other on request). 3PH + T, 380V@50Hz, 7KW 1340 (L) x 1790(P) x 3240 (H)



### ★Working limits INNER RADIAL SEAL, ANSI VALVE, SHELL TEST:



\*Note: Showed data has been calculated considering Shell test pressure and nominal bore size according to API-6D. For further details please contact our technical office.

COMBINED CLAMPING INNER RADIAL SEAL + PROPORTIONAL PRESS CLAMPING



100 TON (See working limits table)

Reaction force Valve length max Valve length min Column inner distance Basement water tank Terminations allowed Clamping style

Reference standard

Electric supply

Dimensions Dimensions 0 mm 900 300 Litres BW, SW, RF, RJ Type 3 – Combined Inner radial clamping & Pressing clamping with Proportional control. ISO, DIN, API, ANSI, ASTM, FCI, BS (Other on request). 3PH + T, 380V@50Hz, 7KW 1400(L) x 900(P) x 2500(H) (Mechanical structure) 2290(L) x 2400(P) x 3770(H)

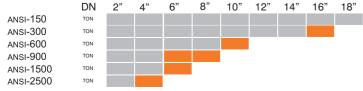
 Mechanical assembly options available

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# ★Working limits for PRESS CLAMPING and INNER RADIAL SEAL ANSI VALVES, SHELL TEST

1000 mm



(\*)Note: Indicated values has been calculated for **shell test** and with **API-6D** nominal minimum bore size + 50mm 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

Vertical test rig with combined clamping style: inner radial seal + press clamping facilities. The mobile reaction bridge is moved by screwed column 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. In the basement, a water tank could be installed as water reservoir for test procedures (see Option).

The rig is controlled by **SKA-100** pressurization skid; to have more information about please consult dedicated technical data sheets. The rig could be completed with several options and accessories, please contact our sales office to have more information.

[Patent Pending]



# BV-CCV/20 Vertical test bench

PRESS CLAMPING PROPORTIONAL CONTROL AUTOMATIC TEST VALVE ACTUATOR

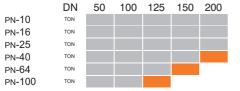


CE CLAMP TYPE

> Fully automatic vertical test rig with controlled pressing clamp; the press force is controlled automatically according to the water pressure inside valve, and the result load is reduced to minimal terms. It has a 90° hydraulic actuator, that let it move the valve accord to the test sequence. The high resolution differential pressure drop leak detection is used to measure leak rate according to DIN 12266-1 for GAS leakage. A mobile loading plate makes loading operations simple. A mobile vertical protection assures operator's safety in case of seal blow. An electronic PLC control all test operations, and the operator has a LCD touch screen monitor to set-up test sequence.

Reaction force Valve length max Valve length min	:	<b>20 TON</b> (see working limits table) 505 mm 30 mm	0M 1 2 3 4 5 6 • • • • • •	
DN min – MAX	:	DN20DN200		See page 98 for details
Loading height	:	900 mm		
Water tank	:	External 220 Liters		
Terminations allowed	:	BW, SW, RF, RJ		
Clamping style	:	Type 1 – Proportional Compression (flange surface).		
Clamping force control	:	Automatic within 5100% interval, proportional to the hy		
		inside the valve under test. Reg. gain controlled by the op	perator.	
Reference standards	:	ISO, DIN, API, ANSI, ASTM, FCI, BS (Other on request).		
Hydraulic test	:	H2O w/oil 5% , 3-40bar (200bar, 650bar, as option)		
Pneumatic test	:	0,5 – 6 bar		
Pneumatic supply	:	6.5 bar @ 1100 NI/min - Dry air not lubricated		
Electric supply	:	3PH + T, 380V@50Hz, 5KW		
Dimensions	:	1550(L) x 1050(P) x 2250(H)		

# ★Working limits for PRESS CLAMPING and INNER RADIAL SEAL DIN VALVES, SHELL TEST



(\*)Note: Indicated values has been calculated for **shell test** and with **API-6D** nominal minimum bore size + 30mm 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

# BV-CCV/15 Vertical test bench

# PRESS CLAMPING **PROPORTIONAL CONTROL** AUTOMATIC TEST



### CLAMP CE TYPE 3

Vertical test rig with automatic test sequence. Combined clamping style: Proportional press clamping & inner radial seals. A protection against water jets surround the valve under test and it is automatically controlled with pneumatic cylinders. An PLC control test sequence that can be configured by a LCD touch screen.

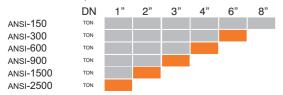
65

Full automatic test cicle with leakage flan mesuring (water fail)

Reaction force Valve length max Valve length Min	:	<b>15 TON</b> (See working limits table) 590 mm 50mm	Mechanical assembly options available           OM         1         2         3         4         5         6         7         8         9         10         11         12         13         14         15         16         17         18         19         20           OM         • <t< th=""></t<>
DN min-max	÷	DN1" – DN 8"	See page 98 for details
Loading heigh	:	900mm	
Water Tank	:	300L External	
Termination allowed	:	BW. SW, RF, RTJ	
Clamping style	:	Type: 3 – Combined: Proportional pressing & inner radia	l seal (bore plugs)
Clamping force control	:	Automatic within 5%-100% interval, proportional to hyd	rostatic pressure
		inside the valve under test.	
Reference standards	:	ISO, DIN, API, ANSI, ASTM, FCI, BS (Other on request).	
Hydraulic test	:	H2O 700 bar MAX	
Pneumatic test	:	0.5 bar – 6 bar	
Pneumatic supply	:	6.5 bar @ 1100 NI/min - Dry air not lubricated	
Electric supply	:	3PH + T, 380V@50Hz, 5KW	
Dimension	:	730(L) x 1010 (P) x 2340 (H)	

730(L) x 1010 (P) x 2340 (H) : ★Working limits for PRESS CLAMPING and INNER RADIAL SEAL ANSI VALVES, SHELL TEST





(\*)Note: Indicated values has been calculated for shell test and with API-6D nominal minimum bore size + 30mm 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

# BV-3V/360 Multiple stations test bench

# **INNER RADIAL SEAL (BORE PLUGS) 3 LOADING TRAY**



Reaction force

Valve lenght max Valve lenght min Inner column distance Basement water tank Terminations allowed Clamping style Reference standard

Pneumatic supply Electrical supply Dimensions

### **360 TON** 120 TON/screw (See working limits table) 1000 mm 150 mm 580 mm 400 Liters : BW, SW, RF, RJ : Type 2 – Inner radial ISO, DIN, API, ANSI, ASTM, FCI, BS : (Other on request). 6.5 bar @ 2000 NI/min 3PH + T. 380V@50Hz. 5KW : 2200(L) x 1200(P) x 2750H)

240 TON 80 TON/screw	OM
700 mm	
150 mm	
580 mm	
400 Liters	
BW, SW, RF, RJ	
Type 2 – Inner ra	adial
ISO, DIN, API, AI	
(Other on reques	st).
6.5 bar @ 2000	NI/min
0011 T 0001/4	

CLAMP CE TYPE

> Vertical test rig with inner radial seal clamping style. 3 test places, for contemporary pressure test. The screwed columns assure the complete absence of external forces on valve body. This prerogative makes it conform to the most diffuse international test standards.

The rig is controlled by **SKMM-100** pressurization skid; to have more information about please consult dedicated technical data sheets. The rig could be completed with several options and accessories, please contact our sales office to have more information.

40 TON																			ava		
	014	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
D TON/screw		٠	٠	٠		٠	٠					٠	٠	•	٠		٠	•			
)0 mm													S	ee	ра	ge	98	foi	r de	etai	ls

rm, fci, bs 3PH + T. 380V@50Hz. 5KW 2200(L) x 1200(P) x 2450H)

### ★Operative limits for INNER RADIAL SEAL – ANSI Valve: Shell test at 1,5 x PN 240TON 360TON



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\*Note: RIG without protection for bunker use. Indicated values has been calculated for shell test and with API-6D nominal minimum bore size 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.

# BV-3V/270 Multiple stations test bench

INNER RADIAL SEAL (BORE PLUGS) 3 LOADING TRAY DIFFERENTIATED LOAD

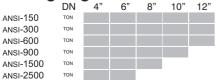


Reaction force

2x125 TON (lateral) 1x200 TON (Central) (See working limits table) Valve length max 1200 mm Valve length min 500 mm Station to station dist. 650 mm Loading height 970 mm Screw stroke 700 mm Loading tray 3 independent Basement water tank 450 Liters BW, SW, RF, RJ Terminations allowed Type 2 - Inner radial Clamping style Reference standard ISO, DIN, API, ANSI, ASTM, FCI, BS (Other on request). Pneumatic supply 6.5 bar @ 1100 NI/min Electrical supply 3PH + T, 380V@50Hz, 5KW Dimensions 2200(L) x 1200(P) x 2750H)

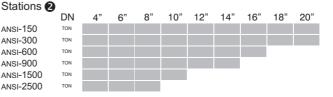
3x90 TON

# ★Working limits INNER RADIAL SEAL - ANSI valve Stations ③ and ④



### \*Working limits INNER RADIAL SEAL - ANSI valve

OM



\*Note: Showed data has been calculated considering SHELL test pressure and nominal bore size according to API-6D. For further details please contact our technical office.

CE Z

seal clamping style. 3 test places, for contemporary pressure test. The screwed columns assure the complete absence of external forces on valve body. This prerogative makes it conform to the most diffuse international test standards. Different screw diameter let you to extend valve range that could be tested (See working limits). The rig is controlled by SKMM-100 pressurization skid; to have more information about please consult dedicated technical data sheets. The rig could be completed with several options and accessories, please contact our sales office to have more information.

Mechanical assembly options available

8 9 10 11 12 13 14 15 16 17 18 19 20

See page 98 for details

[Patent Pending]

# BV-3V/150L Multiple stations test bench

# **INNER RADIAL SEAL (BORE PLUGS) 3 LOADING TRAY** DIFFERENTIATED LOAD



standards.

The rig is controlled by SKA-100 pressurization skid; to have more information about please consult dedicated technical data sheets. The rig could be completed with several options and accessories, please contact our sales office to have more information.

Vertical test rig with inner radial seal clamping style. 3 test places, for

contemporary pressure test. The screwed columns assure the complete absence of external forces on valve body. This prerogative makes it conform to the most diffuse international test

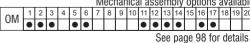
Reaction force

		2 X / 5 I UN
		3 x 50TON
		(See working limits table)
Valve lenght max	:	700mm ,
Valve lenght min	:	0 mm
Max flange diameter	:	450 mm
Basement water tank	:	400 Liters
Terminations allowed	:	BW, SW, RF, RJ
Clamping style	:	Type 2 – Inner radial
Reference standard	:	ISO, DIN, API, ANSI, ASTM, FCI, BS (Other on request).
Pneumatic supply	:	6.5 bar @ 1100 NI/min
Electrical supply	:	3PH + T, 380V@50Hz, 5KW
Dimensions	:	1860(L) x 1250(P) x 2750(H)

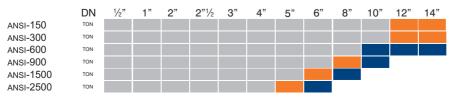
**150 TON TOT** 

1x150 TON 2 v 75 TON

:



### \*Working limits INNER RADIAL SEAL - ANSI valve 3 x 50TON 2 x 75TON 1 x 150TON



Mechanical assembly options available 8 9 10 11 12 13 14 15 16 17 18 19 20



\*Note: Showed data has been calculated considering Shell test pressure and nominal bore size according to API-6D. For further details please contact our technical office.

# BV-3V/150 Multiple stations test bench

# INNER RADIAL SEAL (BORE PLUGS) 3 LOADING TRAY





Reaction force

Valve lenght max

Valve lenght min

Max flange diameter

Basement water tank

Terminations allowed Clamping style

Loading tray stroke

Reference standard

Pneumatic supply

Electrical supply

Dimensions

# 150 TON TOT 50 TON/screw (See working limits table) 700mm 0 mm 450 mm 400 Liters BW, SW, RF, RJ Type 2 – Inner radial 300 mm ISO, DIN, API, ANSI, ASTM, FCI, BS (Other on request). 6.5 bar @ 1100 NI/min 3PH + T, 380V@50Hz, 5KW 1860(L) x 1250(P) x 2750(H)

# Mechanical assembly options available OM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 • <td

### ★Working limits INNER RADIAL SEAL - ANSI valve

	DN	1/2"	1"	2"	<b>2</b> "½	3"	4"	5"	6"	8"	10"
ANSI-150	TON										
ANSI-300	TON										
ANSI-600	TON										
ANSI-900	TON										
ansi-1500	TON										
ANSI-2500	TON										

\*Note: Showed data has been calculated considering Shell test pressure and nominal bore size according to API-6D. For further details please contact our technical office.

Vertical test rig with inner radial seal clamping style. 3 test places, for contemporary pressure test. The screwed columns assure the complete absence of external forces on valve body. This prerogative makes it conform to the most diffuse international test standards.

69

The rig is controlled by **SKA-100** pressurization skid; to have more information about please consult dedicated technical data sheets. The rig could be completed with several options and accessories, please contact our sales office to have more information.

[Patent Pending]

# BV-3CV/240 Multiple stations test bench

# COMBINED CLAMPING, CYLINDER+SCREW 3 LOADING TRAY



### Vertical test rig with, combined clamping style. It has 3 test places, with combined clamping. With the hydraulic cylinder (bottom side), operator can test flanged valves with proportional controlled press clamp, where the press force is controlled automatically according to the water pressure inside valve, and the result load is reduced to minimal terms; with the screwed columns he can test BW, SW termination using the inner radial seal. The combination of that two different clamping style, makes the rig suitable for all valve kinds. Each station has its own loading tray that simplify

CLAMP

TYPE 3

CE

loading procedure. Nr.3 units independents. The unit could be controlled by **SKA-100** pressurization skid.

See page 98 for details

Mechanical assembly options available

### Reaction force Valve length max Valve length min Distance between columns Basement water tank Terminations allowed Clamping type

Clamping force control

Loading tray stroke Reference standard Pneumatic supply Electric supply Dimensions

240 TON TOT								I
80 TON/screw (See working limits table)	OM	1	2	3	4	5	6	7
1000 mm	UN	•	•	•	•	•	•	
150 mm								
580 mm								
400 Liters								
RF, RJ, BW, SW								
Type 3 - Combined								
51	raatat			~~				
Automatic within 5100% interval, proportional to the hyd			JIE	55	ure			
inside the valve under test. Reg. gain controlled by the ope	rator							
350 mm								
ISO, DIN, API, ANSI, ASTM, FCI, BS (Other on request)								
6.5 bar @ 1100 NI/min - Dry air not lubricated								
3PH + T, 380V@50Hz, 5KW								
2200(L) x 1200(P) x 2750H)								

### ★Working limits for PRESS CLAMPING and INNER RADIAL SEAL ANSI VALVES, SHELL TEST

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	,											
	DN	1/2"	1"	2"	2"1/2	3"	4"	5"	6"	8"	10"	12"
ansi-150	TON											
ANSI-300	TON											
ANSI-600	TON											
ansi-900	TON											
ansi-1500	TON											
ANSI-2500	TON											

\*Note: Indicated values has been calculated for shell test and with API-6D nominal minimum bore size and they have to be considered as reference only. Press clamping style limits are based on bore size increased by 50 mm. For more accurate information please contact our technical office or consult instruction book delivered along the rig.

# BV-5CV/150 Multiple stations test bench

COMBINED CLAMPING, CYLINDER + SCREW



Vertical test rig with, combined clamping style. It has 5 test places, with combined clamping. With the hydraulic cylinder (bottom side), operator can test flanged valves with proportional controlled press clamp, where the press force is controlled automatically according to the water pressure inside valve, and the result load is reduced to minimal terms; with the

CLAMP

TYPE 3

CE

OM

screwed columns he can test BW. SW termination using the inner radial seal.

The combination of that two different clamping style, makes the rig suitable for all valve kinds.

The unit could be controlled by SKA-100 pressurization skid. Please contact our sales office to have more information.

 Mechanical assembly options available

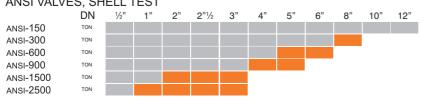
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See page 98 for details

Reaction force **150 TON** 5 x 30 TON (See working limits) Valve lenght max 650mm Valve lenght min 0 mm Max flange diameter 580 mm Basement water tank 400 Liters BW, SW, RF, RJ Terminations allowed Type 3 - Combined Clamping style Reference standard Pneumatic supply 6.5 bar @ 1100 NI/min Electrical supply 3PH + T, 380V@50Hz, 5KW Dimensions 3280(L) x 1250(P) x 2750(H)

# ISO, DIN, API, ANSI, ASTM, FCI, BS (Other on request).

# ★Working limits for PRESS CLAMPING and INNER RADIAL SEAL ANSI VALVES, SHELL TEST



\*Note: Indicated values has been calculated for shell test and with API-6D nominal minimum bore size and they have to be considered as reference only. Press clamping style limits are based on bore size increased by 50 mm. For more accurate information please contact our technical office or consult instruction book delivered along the rig

# BV-5CV/100 Multiple stations test bench

COMBINED CLAMPING, CYLINDER+SCREW





CLAMP

TYPE 3 Vertical test rig with combined clamping style. It has 5 test places, with combined clamping. With the hydraulic cylinder (bottom side), operator can test flanged valves with proportional controlled press clamp, where the press force is controlled automatically according to the water pressure inside valve, and the result load is reduced to minimal terms; with the screwed columns he can test BW, SW termination using the inner radial seal. The combination of that two different clamping style, makes

the rig suitable for all valve kinds.

Two feeding table with rolls, can simplify the loading operations (option). The unit could be controlled by SKA-100 pressurization skid.

Dimensions

Reaction force	:	100 TON 20 TON/screw (See working limits tables).	Mechanical assembly options available           0M         1         2         3         4         5         6         7         8         9         10         11         12         13         14         15         16         17         18         19         20
Valve length max	:	500 mm	
Valve length min	:	50 mm	See page 98 for details
Distance between places	:	300 mm	
Basement water tank	:	200 Litres	
Terminations allowed	:	RF, RJ, BW, SW	
Clamping type	:	Type 3 - Combined	
Clamping force control	:	Automatic within 5100% interval, proportional to the the valve under test. Reg. gain controlled by the opera	
Reference standard	:	ISO, DIN, API, ANSI, ASTM, FCI, BS (Other on request	
Pneumatic supply	:	6.5 bar @ 1100 NI/min - Dry air not lubricated	/
Electric supply	:	3PH + T, 380V@50Hz, 5KW	

# 2106(L) x 1420(P) x 2536(H) (skid not included)

# ★Working limits for PRESS CLAMPING and INNER RADIAL SEAL ANSI VALVES, SHELL TEST

	DN	1/2"	1"	2"	2"1⁄2	3"	4"	5"	6"
ansi-150	TON								
ANSI-300	TON								
ANSI-600	TON								
ANSI-900	TON								
ANSI-1500	TON								
ANSI-2500	TON								

\*Note: Indicated values has been calculated for shell test and with API-6D nominal minimum bore size and they have to be considered as reference only. Press clamping style limits are based on bore size increased by 50 mm. For more accurate information please contact our technical office or consult instruction book delivered along the rig

### BV-3CV/30 Multiple stations test bench

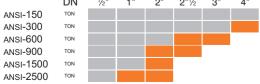
COMBINED CLAMPING, CYLINDER+SCREW



#### Reaction force • **30 TON** 10 TON/screw (See working limits tables) 740 mm Valve length max Valve length min 150 mm Distance between columns : 300mm Basement water tank 100 Liters RF, RJ, BW, SW Terminations allowed Clamping type Type 3 - Combined Clamping force control On/OFF Reference standard ISO, DIN, API, ANSI, ASTM, FCI, BS (Other on request). Pneumatic supply 6.5 bar @ 2000 NI/min - Dry air not lubricated Electric supply 3PH + T, 380V@50Hz, 5KW

1300(L) x 1420(P) x 2100(H)

#### ★Working limits for PRESS CLAMPING and INNER RADIAL SEAL ANSI VALVES, SHELL TEST DN ½" 1" 2" 2"½ 3" 4"



Dimensions

\*Note: Indicated values has been calculated for shell test and with API-6D nominal minimum bore size and they have to be considered as reference only. Press clamping style limits are based on bore size increased by 20 mm. For more accurate information please contact our technical office or consult instruction book delivered along the rig.

clamping style. It has 3 test places, with combined clamping. With the hydraulic cylinder (bottom side), operator can test flanged valves with proportional controlled press clamp, where the press force is controlled automatically according to the water pressure inside valve, and the result load is reduced to minimal terms; with the screwed columns he can test BW, SW termination using the inner radial seal.

Vertical test rig with combined

CLAMP

TYPE

CE

3 4 5 6

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ΟM

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The combination of that two different clamping style, makes the rig suitable for all valve kinds.

Two feeding table with rolls, can simplify the loading operations (option). The unit could be controlled by **SKA-100** pressurization skid.

 Mechanical assembly options available

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See page 98 for details

[Patent Pending]

Vertica Multiple station:



#### UNIVERSAL CLAMPING



Vertical test rig with universal clamping style: - Claws on RF/RJ valves

- Press clamping
- Inner radial seal.

5 test places, for contemporary pressure test. The screwed columns assure the complete absence of external forces on valve body. This prerogative makes it conform to the most diffuse international test standards. Upper side Reaction Bridge can be removed with a 90° rotation flag style. In this way, loading procedures are more easy.

Water recovering is automatic even for check valve. A device to open check value is available on request. The rig is controlled by **SKA-100** pressurization skid; to have more information about please consult dedicated technical data sheets. The rig could be completed with several options and accessories, please contact our sales office to have more information.



Reaction force

Valve length max Valve length min Inner column distance Basement water tank Terminations allowed Clamping style Reference standard Pneumatic supply Electrical supply Dimensions

#### 5 x 20 TON/screw (see working limits table) 500 mm 500 mm 500 mm 450 Liters BW, SW, RF, RJ Type 4 – Universal ISO, DIN, API, ANSI, ASTM, FCI, BS (Other on request). 6.5 bar @ 1100 Nl/min 3PH + T, 380V@50Hz, 7KW 3640(L) x 1638(P) x 2261H)

# Mechanical assembly options available OM 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 OM • <t

#### ★Working limits for PRESS CLAMPING and INNER RADIAL SEAL DIN VALVES, SHELL TEST



(\*)Note: Indicated values has been calculated for shell test and with nominal minimum bore size + 30mm 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

#### BVI-V/20

# Water immersion GAS test benches

Reaction force Valve length max Valve length min Clearance between columns Water vessel Camping style Reference standard Max pressure Pneumatic supply Electrical supply

610mm 200 mm 800 mm 480L Type 2: Inner radial seal API 6D 50 bar 6.5 bar @ 2000 NI/min Dry air not lubricated 3PH + T, 380V@50Hz, 3KW

**20 TON** 

1150L x 1900 P x 2810 H

#### WORKING LIMITS TABLE

Dimensions



\*Note: Showed data has been calculated considering Shell test pressure and nominal bore size according to API-6D. For further details please contact our technical office.

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014	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
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See page 98 for details

#### Water immersion, air test rig. It has been designed to discover bubbles leakage in valve casting. Water vessel is vertically moved in order to save testing time. A clamping system will let the operator to mount the valve directly on testing position.

Version to be installed

in concrete BUNKER

TON

[Patent Pending]



VERTICAL LOADING **IMMER RADIAL SEALS** 

(BORE PLUGS)



### BV-3CVI/60 Water immersion GAS test benches

#### COMBINED CLAMPING PROPORTIONAL PRESS CONTROL CYLINDER + SCREW



3 station Vertical test rig with







Reaction force Valve length max Valve length min Distance between places Water immersion vessel Water Heating Terminations allowed Clamping type Clamping force control

Reference standard

Pneumatic supply

Electric supply

Dimensions

60 TON 20 TON/screw (See working limits tables). 500 mm 0 mm 400 mm D. 290mm x 550H Automatic 20-40°C RF, RJ, BW, SW Type 3 - Combined Automatic within 5..100% interval, proportional to the hydrostatic pressure inside the valve under test. Reg. gain controlled by the operator ISO, DIN, API, ANSI, ASTM, FCI, BS (Other on request). 6.5 bar @ 2000 NI/min - Dry air not lubricated 3PH + T, 380V@50Hz, 5KW 1960L x 1040P x 2640H /2950 H MAX

★Working limits for PRESS CLAMPING and INNER RADIAL SEAL ANSI VALVES, SHELL TEST

	DN	1/2"	1"	2"	<b>2</b> "1/2	3"	4"
ANSI-150	TON						
ansi-300	TON						
ANSI-600	TON						
ansi-900	TON						
ANSI-1500	TON						
ANSI-2500	TON						

 Mechanical assembly options available

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(\*)Note: Indicated values has been calculated for **shell test** and with **API-6D** nominal minimum bore size + 20mm 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

# BOI-V/450 Water immersion GAS test benches

HORIZONTAL LOADING **INNER RADIAL SEALS** (BORE PLUGS)



Version to be installed in concrete BUNKER

(E



Horizontal test rig with inner radial seal clamping style. The mobile reaction bridge is moved by one screwed column that assure the complete absence of external forces on valve body. This prerogative makes it conform to the most diffuse international test standards.

A vessel around the valve can be filled with water to check visually external leakage under GAS test. The rig is controlled by SKMM/GAS pressurization skid; to have more information about please consult dedicated technical data sheets. The rig could be completed with several options and accessories, please contact our sales office to have more information.

Reaction force	:	450 TON (See working limits table)
Valve length max	:	1550 mm
Valve length min	:	150 mm
Column inner distance	:	1034 mm
Loading height	:	868mm (heigh of flow axes from soil)
Vessel inner dimension	:	1930(L) x 1065(P) x 1100(H)
Vessel capacity	:	2260 L
Filling/ Recovering pumps	:	500 L/min – 1.1KW
Terminations allowed	:	BW, SW, RF, RJ
Clamping style	:	Type 2 – Inner radial
Reference standard	:	ISO, DIN, API, ANSI, ASTM, FCI, BS (Other on request).
Electric supply	:	3PH + T, 380V@50Hz, 7KW
Dimensions	:	4750(L) x 1690(P) x 1415(H)

#### WORKING LIMITS TABLE

\*Operative limits for INNER RADIAL SEAL: Shell test at 1,5 x PN DN 2" 3" 6" 8" 10" 12" 14" 16" 18' 24' 4" 20 ANSI-150 TON ANSI-300 TON ANSI-600 TON ANSI-900 TON ANSI-1500 TON ANSI-2500 TON ANSI-4500 TON

Mechanical assembly options available 8 9 10 11 12 13 14 15 16 17 18 19 20 OM ••



\*Note: Indicated values has been calculated for shell test and with API-6D nominal minimum bore size 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.

### BV-5C He/10 Special applications

### He Test 5 WAY CLAMPING SYSTEM HELIUM CASTING MICROLEAKAGE TEST

## CE



Vertical test test with press clamping system for 5 valve ports (included inner seat). It is able to perform Helium micro-leakage test on natural gas pressure reducer casting boby.

Helium test is performed by pressurizing the casting at low pressure (5 bar abs) under high vacuum chamber. The rig is able to catch leakage visible only by high pressure gas test with soap bubbles detections. This prerogative allow the customers to reduce operational risk avoid expensive gas test bunkers.

The rig is controlled by **SKA-100/He** pressurization SKID. Please read dedicatyed data sheets for further information.



Reaction force Products allowed.

Valve length max Valve length min H max H max Terminations allowed Clamping style

Electric supply Dimensions

#### 10 TON

:

:

:

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. . .

Natural GAS pressure reducer
Range 1/2"-3" (DN15-DN80)
400 mm
140 mm
400 mm
140 mm
BW, RJ
Type 1 – Press Clamping 5 ways
Inlet
Outlet
Тор
Bottom
Inner SEAT
3PH + T, 380V@50Hz, 10KW
3500 (L) x 2500 (P) x 2200 (H)

## SKA-100/He Special applications

### He Test MICROLEAKAGE HELIUM TEST Vacuum/Pressurization SKID

## CE

c PC PROGETTI



SKID for micro-leakage HELIUM test for castings.

It has been designed to control full automatic clamping rigs based on overpressure leak test of "Integral Method – Vacuum Hood Test". Casting is pressurized at low pressure with helium (5 bar abs) and a vacuum chamber which is evacuated by an auxiliary pump and which is connected to a leak detector (spectrometer) is used as the hood. The search gas escaping through the leaks is converted in alectrical signals which are immediately displayed. This method permits the detection of very small leaks and is especially suited for automatic industrial leak detection. The skid include pre-test with air pressure drop to verify the absence of macro-leakage and evacuation service pump to remove air from test piece and recover helium (option).

High vaccum Pump (Vaccum Hood)	:	75 m³/h @ 5x10³ mbar MAX
Service vacuum pump	:	40 m³/h @ 0.5 mbar
Max working pressure	:	10 bar abs
Smallest detectable leak	:	1 x 10 <sup>-7</sup> mbar l s <sup>-1</sup> (other on rquest)
Electric supply Dimensions	:	3PH + T, 380V@50Hz, 10KV 3500 (L) x 2500 (P) x 2200 (H

	3PH + T, 380V@50Hz, 10KW
•	
:	3500 (L) x 2500 (P) x 2200 (H)
	:

# Special applications

SKC-100 PRESSURE CYCLING PRESSURIZATION SKID



## CE

Automatic skid for endurance test on trunnion mounted ball valves. System supply a total leakage flow of 0.7L/min (0,5 L/min on downstream side + 0,2 L/min from cavity). Control System will beinterfaced directly to a axial piston motor able to perform open/close movement on valve under test with adjustable torque. Cycling is controlled by PLC and a configuration LCD touch screen.

Allowed fluids Supply water pressure MAX working pressure Accumulator Compression ratio Motor torque Connection Pressure measure Accessories included Electrical supply Dimension

H20 + olio em. 5% 2.5 - 8 bar 250 bar 60 L 60:1 4,52Nm/bar, MAX 45 Kgm NPT 3/8" LCD Touch screen Manuale d'uso e manutenzione. 2PH + T, 220V@50Hz 600(L) x 1150(P) x 1500(H)

SKMM-100/CRYO PRESSURIZATION SKID FOR **CRYO TEMPERATURE** GAS TEST



Automatic skid for endurance test on trunnion mounted ball valves. System supply a total leakage flow of 0.7L/min (0,5 L/min on downstream side + 0,2 L/min from cavity). Control System will beinterfaced directly to a axial piston motor able to perform open/close movement on valve under test with adjustable torque. Cycling is controlled by PLC and a configuration LCD touch screen.

Max Working pressure $N_2$	:	1050 bar
Min Working pressure $N_2$	:	0.5 bar
GAS Booster opt	:	150:1
ATEX certification opt.	:	Available
Process valve	:	"Metal to metal" needle valve & "soft seat" bypass valve
Process style	:	Unidirectional
HP Fluid allowed	:	GAS (N2, He, AIR)
Control system	:	Manual valve & Electrical lighted pushbuttons
		installed on graphical synoptic panel
Pressure measure	:	4-20mA Pressure transmitter+7-seg Digital Display
Temperature measure	:	N°5 TC K type & 7-seg Digital Display
Ref. Standard	:	BS-6364 (CRYO TEST)
Serial Interface	:	RS-485 MODBUS PROTOCOL
Certification software	:	TestREC3.0-M
Leakage detection AIR / GAS	:	ANSI Bubbler, Bubbles counter. Volumetric bubbler.
Process Connections	:	NPT 1/2"-F, HP 1/4"
Service air supply	:	7bar @ 2000 L/min Other available on request
Electrical supply	:	2Ph+T 220V@50Hz 1KW Other available on request
Dimensions	:	700(L) x 1120(P) x 1120(H)

# Special applications

#### SKMM-50/TC + CRYO VESSEL MOVABLE CRYOGENIC TEST VESSEL WITH TEMPERATURE CONTROL PANEL



SKMM-50/TC

#### SKMM-100/FS MOVABLE FIRE SAFE TEST PRESSURIZATION SKID

COMPLETE UNIT FOR FIRE SAFE TEST according to API-607 / API 589 / API – 6FA PRESSURIZATION SKID for FIRE SAFE TEST according to API-607 / API 589 / API – 6FA This pressurization skid has all process equipment to perform FIRE SAFE test on valve with stem packing or quarter turn shutoff valves. It has up to 8 thermocouples with calorimeter cubes (where necessary). Internal water reservoir of 120L. max working pressure 1600 bar. Full digital report through RS232 MODBUS RTU connection, data collection with certification software TestREC5.2-M.

Allowed fluids Water reservoir Max working pressure Filling flow Air driven booster ratio Reference std Temperature measure Pressure measure Water level measure Plenty water internal 120L 700/ 1050/ 1380/ 1600 bar 70L/min 1:100/ 1:150/ 1:225 / 1:250 API-607 / API-589 / API-6FA Nr. 8 TC type K with Digital display Nr. 2 pressure transmitters with Digital Display. Nr. 1 Pressure transmitter with Digital Display Special

# CE

Cryogenic test vessel is now available with temperature control panel.

CV-350

CV-1000

CV-3000

On – off style temperature control is able to fix cryogenic bath temperature in the range 0 / -196 °C. Nr.4 TC K type are installed: 1 fr bath temperature, 3 for custom application. All temperature signals are connected to certification softare TestREC5.0-CRYO .

Temperature control Temerature measure Temperature range Cryo Vessel Dim Digital On/Off style Nr. 4 TC type K -196°C / +100°C 350 Liters - 1000 L x 500 P x 700 H 1070 Liters - 1500 L x 750 P x 950 H 3000 Liters - 2000 L x 1000 P x 1500 H

# Special applications

SKMM-100/IC HYBERBARIC CHAMBER PRESSURIZATION SKID



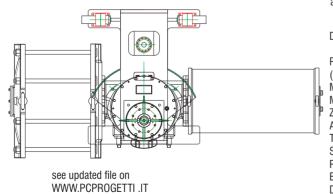
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Pressurization skid able to control hyperbaric chamber. Up to 10000 m dept simulation, with 40L valume compesantion with high pressure accumulators. PSV protection on max dept . GAS & Water test facilities included.

Automatic Filling/Recovering of water into hyperbaric chamber.

Simulated dept Compensated volume Gas test Water test Filling flow Dimension 1000m, 4500 m, 7000 m, 10000 m 10L / 40L Up to 1000 bar Up to 1380 bar 120 L / 470 L 600(L) x 1150(P) x 1500(H)

BPA-30K BPA-250K AUTOMATIC RIG FOR DYNAMIC & STATIC GENERATED TORQUE OF JOKE ACTUATORS.



Automatic rig for dynamic & static generated torque of joke actuators. It can measure an accurate characterization of the torque performance vs. movement angle.

The brake is controlled by DC servo drive and a PLC. The configuration is performed both through LCD or supervisor Windows software (TestREC5.4). The brake can be sold along with SKMM-100 pressurization skid to control actuator supply.

Dati tecnici:		BPA-30K	BPA-250K
Reaction torque (brake ability) Movement angle Movement time Zero adj. Accuracy Torque test Static meas. Points Pneumatic supply	: : : : : : : : : : : : : : : : : : : :	30.000 Nm 0 – 100° 30sec / 3 min +/- 5° +/- 0,1% Dynamic / Static 22.5° / 45° / 67.5° / 90° 7 bar @ 500 NL/min	250.000 Nm 0-100° 1min / 5 min +/- 5° +/- 0,1% Dynamic / Static 22.5° / 45° / 67.5° / 90° 7 bar @ 500 NL/min
		2200(L) x 1960(P) x 1200(H)	2700(L) x 2600(P) x 1600(H)
Accuracy Torque test Static meas. Points	:	+/- 0,1% Dynamic / Static 22.5° / 45° / 67.5° / 90° 7 bar @ 500 NL/min 3PH , 380V@50Hz, 3KW	+/- 0,1% Dynamic / Static 22.5° / 45° / 67.5° / 90° 7 bar @ 500 NL/min 3 PH , 380V@50Hz, 15KW

### BO-CV/40SA Special applications

VERTICAL TEST RIG WITH COMBINED CLAMPING, VALVE ACTUATOR AND TRANSPORT CONVEJOR



Think'PC PROGETTI New test unit designed to perform high speed API / DIN full valve test procedures directly on 2 ways valve production line. Special product support pallets rolling on conveyor, allow perfect alignment. Clamping procedure is fully automatic with 4-axes positioning control, with proportional press clamping to reduce mechanical stress to minimum terms. Valve Opening / Closing movements are even automatic, controlled by torque programmable hydraulic actuator.

CLAMP

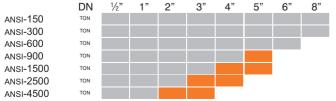
TYPE 3

Rig is configured by TestREC5.2 Windows based software package that can store recipes & test data of each tested product.

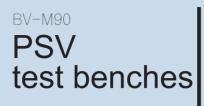
Reaction force	:	40 TON
Length max	:	760 mm
Length min	:	90 mm
Loading height	:	1250 - 1500 mm (Automatic regulation)
Basement water tank	:	100 Liters
Termination allowed	:	RF, RTJ, BW, SW
Clamping style	:	Type 1 – with proportional (option)
Clamping force control	:	Proportional pressing
Reference standards	:	ISO, DIN, API, ANSI, ASTM, FCI, BS (Other on request).
Filling Flow	:	70L/min
Vacuum pump	:	36m /h (Option)
Max pressure	:	100 bar (water) - 12 bar (AIR)
Pneumatic supply	:	7 bar @ 2000 NI/min
Electric supply	:	3PH + T, 380V@50Hz,10KW (other on request)
Dimensions	:	2060(L) x 1160(P) x 4100(H)

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### ★Working limits for PRESS CLAMPING and INNER RADIAL SEAL ANSI VALVES, SHELL TEST



(\*)Note: Indicated values has been calculated for **shell test** and with **API-6D** nominal minimum bore size + 30mm 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



#### CLAWS CLAMPING WITH PROTECTION PERIMETER





Test rig with claws clamping. Test of RF or RTJ valve could be executed in the real working conditions. The clamping is hydraulic on/off type. This prerogative makes it suitable for PSV valve and for flow valves.

The auto-centering movement of claws and tilting is controlled hydraulically or pneumatically (as option). In the basement there is a tank for test fluid and additional tank are allowable.

It can be controlled by standard pressurization skid; in the picture you can see mod. **SKMM-100-G** 

Reaction force	:	<b>90 TON</b> (See working limits table)
Ø flange max	:	530 / 650 / 860mm
Ø flange min	:	90mm
Flange thickness max	:	140mm
Tilt angle	:	FIXED (no tiltable)
Basement water tank	:	200L
Terminations allowed	:	RF, RJ
Clamp type	:	Hydraulic cylinder w/claws
Clamping force control	:	On/Off typeRange 10100 ton
Reference standard	:	SO, API, ASME, ASTM
Pneumatic supply	:	6.5 bar @ 1100 NI/min
	:	Dry air not lubricated
Electrical supply	:	3PH +T380V@50Hz, 2KW
Dimensions	:	1465(L) x 2100(P) x 1900(H)

DN					6"		10"	12"		16"
bar	700	700	678	510	287	183	127	94	65	52

Test rigs for Pressure safety valves (PSV), Pressure relief valves and breather Standard rigs are available up to 16" flanged valves, with different valves, According to API-527 test standard, have two main prerogative:

Clamping is performed by claws which have the benefit to do not apply mechanical effort on valve body, and mechanical strength can be applied in same way of real application in order to verify resistance of mechanical design of flanged ends.

Pressurization must be supported by adequate volume tank able to "supply" enough discharge flow to verify correct seat lift and blow down ability of the components under test.

Rigs described in this pages are available for both media water & GAS (Nitrogen/Air) with different style of claws clamping : manual fixing, manual auto-centering, hydraulic auto-centering.

nominal load as indicated in working limits tables. Different sizes range are available on request, as well as tilt ability design even for large sizes range. Bullet proof protection perimeter can be added as option to ensure maximum safety level to the operators. Several process options can be selected to made performance & leakage test procedure according API standards rules.

Electrical & pneumatic driven compressor are available for GAS supply. Dedicated software package **TestREC5.4-PSV** is available to collect test data, store them in test data base and to pint out complete certification of valve performance (Simmer points, Pop pressure, Re-Seat pressure, Blow down. Seat Lift measure & Leak rate).

**60 TON** 

Computer console with Windows computer and laser printer are available as well.

#### BV-M60





Reaction force

		(See working limits table)
Ø flange max	:	530 / 650 / 860mm
Ø flange min	:	90mm
Flange thickness max	:	90mm
Tilt angle	:	FIXED (no tiltable)
Basement water tank	:	2001
Terminations allowed	:	RF, RJ
Clamp type	:	Hydraulic cylinder w/claws Clamping force
control		On/Off type
Range	:	10100 ton
Reference standard	:	ISO, API, ASME, ASTM
Pneumatic supply	:	6.5 bar @ 1100 NI/min Dry air not lubricated
Electrical supply	:	3PH + T380V@50Hz, 2KW
Dimensions	:	1250(L) x 700P) x 1250(H)

•

DN	1"	2"			6"	8"	10"	12"	14"	16"
bar	700	700	452	340	191	122	85	62	43	35

BR-M90



CLAMP TYPE 5

#### Reaction force

Ø flange max	:
Ø flange min	:
Flange thickness max	:
Tilt angle	:
Basement water tank	:
Terminations allowed	:
Clamp type	:
Clamping force control	:
Reference	
ASTM	
Pneumatic supply	:
Dry air not lubricated	:
Electrical supply	:
Dimensions	
	•

**90 TON** (See working limits table) 530 / 650 / 860mm 90mm 140mm -5 .. +95° 2001 RF. RJ Hydraulic cylinder w/claws On/Off typeRange 10..100 ton standard ISO, API, ASME, 6.5 bar @ 1100 NI/min

3PH + T380V@50Hz, 2KW 1465(L) x 2100(P) x 1900(H)

DN		2"	3"		6"	8"	10"		14"	16"	
bar	700	700	678	510	287	183	127	94	65	52	

## PSV test benches

#### SKMM-100/PSV



# CE



Reaction force

Ø flange max Ø flange min Flange thickness max Tilt angle Terminations allowed Clamping force control Reference standard Pneumatic supply

Electrical supply Dimensions



(See working limits table) 300mm 90mm 40mm FIXED (no tiltable) RF, RJ Clamp type DIN T-Bolts ISO, API, ASME, ASTM 6.5 bar @ 1100 NI/min Dry air not lubricated 3PH + G 380V@50Hz, 2KW 700L x 1250 P x 1900 H

**10 TON** 

:

BR-M15





:	15 TON
	(See working limits table)
:	400mm
:	90mm
:	10 65mm
:	0+90°
:	RF, RJ
:	Hydraulic cylinder w/claws
:	On/Off typeRange 1.515 TON
:	ISO, API, ASME, ASTM
:	6.5 bar @ 1100 NI/min
	Dry air not lubricated
:	3PH + T380V@50Hz, 3KW
:	1180(L) x 1230(P) x 1060(H)

DN	1"	2"	3"	4"	6"	8"
bar	340	191	113	85	48	30

#### SKA-PSV HIDRAULIC AND PNEUMATIC PRESSURIZATION SKID FOR PSV VALVES



SKA-PSV2 HIDRAULIC PRESSURIZATION SKID FOR PSV VALVES



Pressurization skid dedicated to small size PSV calibration procedures. It is controlled by PLC and a touch screen LCD terminal. A local printout on 24cln thermal paper is available as option. Dedicated software for PSH set-point, pop and reseat pressure value. It has water reservoir inside cabinet in order to be independent during test performance.

A fine regulation for water or gas pressurization, complete the standard furniture.

Allowed size	:	NPT $\frac{1}{2}$ , $\frac{3}{4}$ , 1", 1" $\frac{1}{2}$ (clamp stand for flanged valve available on
request)		
Allowed fluid	:	H2O + synt. oil 5%, N2, AIR
MAX pressure	:	200 bar / 650 bar / 1000 bar
Water Booster	:	N°1 Booster 0,3HP
		(2° booster option)
Fine regulation	:	IncludedInternal HP
tank	:	Optional
Internal water reservoir	:	50 L
Reference standard	:	ISO-4126
Connection	:	$\frac{1}{4}$ " - $\frac{1}{2}$ " - $\frac{3}{4}$ " - 1"
Manometer	:	Digital 4dg cl. 0,15%
Filling pump	:	Centrifugal 70L/min
Electrical supply	:	3PH + Ť, 380V@50Hz 1KW
Gas supply	:	Max 200 bar
Dimension	:	600(L) x 1160(P) x 1460(H)

Pressurization skid dedicated to small size PSV calibration procedures. It is controlled by PLC and a touch screen LCD terminal. A local printout on 24cln thermal paper is available as option. Dedicated software for PSH set-point, pop and reseat pressure value. It has water reservoir inside cabinet in order to be independent during test performance.

A fine regulation for water pressurization, complete the standard furniture.

Allowed size	:	NPT 1/2", 3/4", 1", 1"1/2 (clamp stand for flanged valve available on
request)		
Allowed fluid	:	H2O + synt. oil 5%
MAX pressure	:	200 bar / 650 bar / 1000 bar
Booster	:	N°1 Booster 0,3HP
		(2° booster option)
Fine regulation	:	IncludedInternal HP
tank	:	Optional
Internal fluid reservoir	:	50 L
Reference standard	:	ISO-4126
Connection	:	$\frac{1}{4}$ " - $\frac{1}{2}$ " - $\frac{3}{4}$ " - 1"
Manometer	:	Digital 4dg cl. 0,15%
Filling pump	:	Centrifugal 70L/min
Electrical supply	:	3PH + T, 380V@50Hz 1KW
Dimension	:	600(L) x 1160(P) x 1460(H)
Deserve entire envilable		

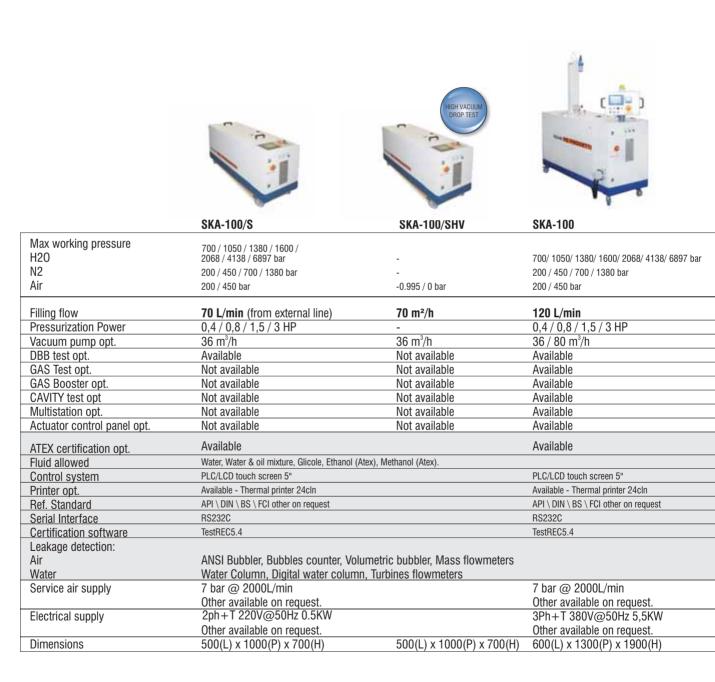
 OP
 1
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 OP
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### SKA Automatic pressurization Skid

**€** € ∞ III 2/3/- G c X

#### Mechanical assembly options available OP 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 OP • <t



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 (option) by electronic bubbles counter or precision water column for H20 leak (height measured by pressure transmitter). Vacuum pump could be installed (option) to assure the

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 (up to 2800 bar as option). It has a high filling flow ability and the recovering of test fluid is automatic. Metal to metal needle valves assure high reliability. A 24cln thermal printer

(option) could be installed to printout a simple test report without connect an external PC windows based supervision with certification software TestREC2.0 installed.

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

Mechanical assembly options available           OP         1         2         3         4         5         6         7         8         9         10         11         12         13         4         15         16         17         10 <td< th=""><th>Mechanical assembly options available OP 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 OP 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0</th><th>Mechanical assembly options available           OP         1         2         3         4         5         7         8         9         10         11         12         15         16         17         18         9         10         11         12         15         16         17         18         19         10         11         12         15         16         17         18         19         10         11         12         15         16         17         18         19         10         11         12         15         16         17         18         19         10         11         12         15         16         17         18         19         10         11         12         15         16         17         18         19         10         11         12         15         16         <t< th=""><th>Mechanical assembly options available           OP         1         2         3         4         5         6         7         8         9         10         11         2         13         14         15         16         17         18         19         20           OP         I         I         I         I         I         I         1         12         13         14         15         16         17         18         19         20</th></t<></th></td<>	Mechanical assembly options available OP 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 OP 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Mechanical assembly options available           OP         1         2         3         4         5         7         8         9         10         11         12         15         16         17         18         9         10         11         12         15         16         17         18         19         10         11         12         15         16         17         18         19         10         11         12         15         16         17         18         19         10         11         12         15         16         17         18         19         10         11         12         15         16         17         18         19         10         11         12         15         16         17         18         19         10         11         12         15         16 <t< th=""><th>Mechanical assembly options available           OP         1         2         3         4         5         6         7         8         9         10         11         2         13         14         15         16         17         18         19         20           OP         I         I         I         I         I         I         1         12         13         14         15         16         17         18         19         20</th></t<>	Mechanical assembly options available           OP         1         2         3         4         5         6         7         8         9         10         11         2         13         14         15         16         17         18         19         20           OP         I         I         I         I         I         I         1         12         13         14         15         16         17         18         19         20
SKA-250	СП (П) (П) (П) (П) (П) (П) (П) (П) (П) (П	SKA-1000	SKA-2000
700/ 1050/ 1380/ 1600/ 2068/ 4138/ 6897 bar	700/ 1050/ 1380/ 1600 bar	700/ 1050/ 1380/ 1600 bar	700/ 1050/ 1380/ 1600 bar
200 / 450 / 700 / 1380 bar	200 / 450 / 700 bar	200 / 450 / 700 bar	200 / 450 / 700 bar
200 / 450 bar	200 / 450 bar	200 / 450 bar	200 / 450 bar
240 L/min	470 L/min	940 L/min	1880 L/min
0,4 / 0,8 / 1,5 / 3 HP	3 / 6 / 9 HP	3 / 6 / 9 / 12 HP	4,5 / 6 / 9 / 12 HP
80 / 160 m³/h	80 / 160 m³/h	160 / 240 m3/h	160 / 240 m³/h
Available	Available	Available	Available
Available	Available	Available	Available
Available	Available	Available	Available
Available	Available	Available	Available
Available	Available	Available	Available
Available	Available	Available	Available
Available	Available	Available	Available
PLC/LCD touch screen 5"	PLC/LCD touch screen 5"	PLC/LCD touch screen 5"	PLC/LCD touch screen 5"
Available - Thermal printer 24cln	Available - Thermal printer 24cln	Available - Thermal printer 24cln	Available - Thermal printer 24cln
API \ DIN \ BS \ FCI other on request	API \ DIN \ BS \ FCI other on request	API \ DIN \ BS \ FCI other on request	API \ DIN \ BS \ FCI other on request
RS232C	RS232C	RS232C	RS232C
TestREC5.4	TestREC5.4	TestREC5.4	TestREC5.4
7 bar @ 2000L/min	7 bar @ 2000L/min	7 bar @ 4000L/min	7 bar @ 4000L/min g
Other available on request.	Other available on request.	Other available on request.	7 bar @ 4000L/min Other available on request.
3Ph+T 380V@50Hz 6 KW	3Ph+T 380V@50Hz 7,5KW	3Ph+T 380V@50Hz 10KW	3Ph+T 380V@50Hz 10KW
Other available on request.	Other available on request.	Other available on request.	
600(L) x 1500(P) x 1900(H)	1300(L) x 1300(P) x 1900(H)	1300(L) x 1700(P) x 1900(H)	1300(L) x 2000(P) x 1900(H)
			L gnibu

### SKM Semi automatic Pressurization Skid

### **CE** (Ex)<sub>II 2/3/- G c X</sub>



## Mechanical assembly options available OP 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 OP • <t

## Mechanical assembly options available OP 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 • <td

Max working pressure		
$H_2O$	700 / 1050 / 1380 / 1600 / 2068 / 4138 / 6897 bar	700 / 1050 / 1380 / 1600 / 2068 / 4138 / 6897 bar
N <sub>2</sub>	200 / 450 / 700 / 1380 bar	200 / 450 / 700 / 1380 bar
Air	200 / 450 bar	
Filling flow	120 L/min	240 L/min
Pressurization Power	0,4 / 0,8 / 1,5 / 3 HP	0,4 / 0,8 / 1,5 / 3 HP
Vacuum pump	36 / 80 m³/h	36 / 80 m³/h
DBB test opt.	Available	Available
GAS Test opt.	Available	Available
GAS Booster opt.	Available	Available
CAVITY test opt	Available	Available
Multistation option	Available (2 to 5 stations control)	Available (2 to 5 stations control)
Actuator control panel opt.	Available	Available
ATEX certification opt.	Available	Available
Fluid allowed	Water, Water & oil mixture, Glicole, Ethanol (Atex), Methanol (Atex	,
Control system	Electrical lighted pushbuttons installed on graphical synoptic panel	
Ref. Standard	API \ DIN \ BS \ FCI	API \ DIN \ BS \ FCI
Serial Interface	RS485 MODBUS PROTOCOL	RS485 MODBUS PROTOCOL
Certification software	TestREC3.0-M	TestREC3.0-M
Leakage detection		
Air	ANSI Bubbler, Bubbles counter, Volumetric bubbler, Mass flowme	ters
Water	Water Column, Digital water column, Turbines flowmeters	
Service air supply	7 bar @ 2000L/min	7 bar @ 2000L/min
	Other available on request.	Other available on request.
Electrical supply	3Ph+T 380V@50Hz 5KW	3Ph+T 380V@50Hz 5,5KW
	Other available on request.	Other available on request.
Dimensions	600(L) x 1300(P) x 1900(H)	600(L) x 1500(P) x 1900(H)

Hydraulic/pneumatic pressurization skid. Semi-automatic control with command on control

console.

Each process element (valves & pump) is controlled by the operator by luminous pushbuttons. Leak could be measured (option) by electronic bubbles counter or precision water column for H<sup>2</sup>O leak (height

measured by pressure transmitter). Vacuum pump could be installed (option) to assure the

### 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 (up to 2100 bar as option). It has a high filling flow ability and the recovering of test fluid is automatic. Metal to metal needle valves assure high reliability.

The "manual" nature of this skid, allow the operator to perform test on the valve (or test sequences) non contemplated into the reference test standard.

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Mechanical assembly options available OP 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 ••••••••••••••••••••••••••••••••••••	Mechanical assembly options available           OP         1         2         3         4         5         6         7         8         9         10         11         12         13         14         15         16         17         18         9         10         11         12         13         14         15         16         17         18         19         10         11         12         13         14         15         16         17         18         9         10         11         12         13         14         15         16         17         18         19         10         11         12         13         14         15         16         17         18         19         10         11         12         13         14         15         16         17         18         19         10         11         12         14         16	Mechanical assembly options available OP 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 ••••••••••••••••••••••••••••••••••••
700 / 1050 / 1380 / 1600 bar 200 / 450 / 700 bar	700 / 1050 / 1380 / 1600 bar 200 / 450 / 700 bar	700 / 1050 / 1380 / 1600 bar 200 / 450 / 700 bar

470 L/min	940 L/min	1880 L/min
3 / 6 / 9 HP	3 / 6 / 9 / 12 HP	4,5 / 6 / 9 / 12 HP
80 / 160 m³/h	160 / 240 m³/h	160 / 240 m³/h
Available	Available	Available
Available (2 to 5 stations control)	Available (2 to 5 stations control)	Available (2 to 5 stations control)
Available	Available	Available
Available	Available	Available
/ wallablo	///////////////////////////////////////	Wallabio
API \ DIN \ BS \ FCI	API \ DIN \ BS \ FCI	API \ DIN \ BS \ FCI
RS485 MODBUS PROTOCOL	RS485 MODBUS PROTOCOL	RS485 MODBUS PROTOCOL
TestREC3.0-M	TestREC3.0-M	TestREC3.0-M

7 bar @ 2000L/min	7 bar @ 4000L/min	7 bar @ 4000L/min	S
Other available on request.	Other available on request.	Other available on request.	ů č
3Ph+T 380V@50Hz 7,5KW	3Ph+T 380V@50Hz 10KW	3Ph+T 380V@50Hz 10KW	iq Ö
Other available on request.	Other available on request.	Other available on request.	
1300(L) x 1300(P) x 1900(H)	1300(L) x 1700(P) x 1900(H)	1300(L) x 2000(P) x 1900(H)	

# SKMM Manual Pressurization Skid

CE



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-
-

 Max Working pressure			
H <sub>2</sub> O	700 / 1200 / 2100 bar	-	700 / 1050 / 1380 / 1600 / 2068 / 4138 / 6897 bar
N <sub>2</sub> :		200 bar	200 / 450 / 700 / 1000 bar
AIR :	-	200 bar	200 / 450 bar
 Filling flow H <sub>2</sub> 0	10L /min	-	120 L/min
Vacuum pump	-	-	36 m³/h (80 m³/h on request)
DBB test opt.	Available	-	Available
GAS Booster opt	-	-	Available
 CAVITY test	Available	Available	Available
 ATEX certification opt.	Available	Available	Available
 Process style	Unidirectional	Unidirectional	Bidirectional, with or without bypass valve
 HP Fluid allowed	Water, Water & oil mixture. Glicole, Ethanol / Methanol (Atex).	GAS (N2, He, AIR)	Water, Water & oil mixture. Glicole, Ethanol (Atex). Methanol (Atex), GAS (N2, He, AIR)
 Control system	Manual needle valve	Manual needle valve	Manual valve & Electrical lighted pushbuttons installed
 		on graphical synoptic panel	on graphical synoptic panel
 Pressure measure	Pressure port for master gauge	4-20mA Pressure transmitter + 7-seg DigitAL Display	4-20mA Pressure transmitter + 7-seg Digital Display
Ref. Standard	API / DIN / BS / FCI	API / DIN / BS / FCI	API / DIN / BS / FCI
 Serial Interface	RS-485 MODBUS PROTOCOL	RS-485 MODBUS PROTOCOL	RS-485 MODBUS PROTOCOL
Certification software	Option TestREC5.4-M	Option TestREC5.4-M	Option TestREC5.4-M
Leakage detection			
AIR / GAS	-	ANSI Bubbler, Bubbles counter.	ANSI Bubbler, Bubbles counter.
		Volumetric bubbler, Mass Flowmeters	Volumetric bubbler, Mass Flowmeters
Water		-	Water column, Digital water column,
			Turbine flowmeters.
Process Connections	BSPP 1/2 "-F / HP 1/4"-F	NPT 1/2"-F, HP 1/4"-F	BSPP 1"-F
Service air supply	7bar @ 2000 L/min Other available on request	-	7bar @ 2000 L/min Other available on request
Electrical supply	-	2Ph+G 220V@50Hz 1KW	3Ph+G 380V@50Hz 3KW
		Other available on request	Other available on request
Dimensions	300(L) x 700(P) x 350(H)	600(L) x 800(P) x 1580(H)	700(L) x 1120(P) x 1120(H)

Hydraulic/pneumatic pressurization skid. Controlled by electrical pushbutton on a graphical synoptic panel or manual needle valves (GAS). Every process element is controlled directly by the operator; main safety garrison for wrong maneuvers has been included. This make the SKID very flexible to any testing procedure. Leak could be measured (option) by electronic bubbles counter, high accuracy water column (API), turbine flow meter and mass flow meter (FCI 70-2). Vacuum pump could be installed (option) to assure the 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 (1200/2100 bar as option). It has a high filling flow ability and the recovering of test fluid is automatic. Metal to metal needle valves assure high reliability. A PC windows based for data recording could be included, instrumentation supplied with MODBUS serial interface protocol (TestREC2.0-M).

SKMM-50/Gas/B2	SKMM-100/Gas/B2	SKMM-100/Gas/B3	SKMM- 100/GAS - B4
-	-	-	-
200 bar	450 / 700 / 1380 bar	1050 bar	N2 60 / 200/ 700 bar contemporary,
200 bar	-	-	AIR 60 / 200 bar contemporary
-	-	-	-
-	-	-	
-	Available	-	-
Available	Available	Available	Available
Available	Available	Available	Available
Available	Available	Available	Available
Bidirectional	Bidirectional	Bidirectional.	Bidirectional
GAS (N2, He, AIR)	GAS (N2, He, AIR)	GAS (N2, He)	GAS (N2, He)
Manual needle valve	Manual valve & Electrical lighted pushbuttons	Manual valve & Electrical lighted pushbuttons	Manual valve & Electrical lighted pushbuttons
on graphical synoptic panel	installed on graphical synoptic panel	installed on graphical synoptic panel	installed on graphical synoptic panel
Analog pressure gauge	4-20mA Pressure transmitter + 7-seg Digital Display	4-20mA pressure trasmitter + LCD	4-20mA pressure trasmitter + 7-seg Digital Display
API / DIN / BS / FCI	API / DIN / BS / FCI	API / DIN / BS /FCI	API / DIN / BS /FC
-	RS-485 MODBUS PROTOCOL	RS-232	RS-485 MODBUS PROTOCOL
-	Option TestREC5.4-M	Option TestREC5.4	Option TestREC5.4-M
ANSI Bubbler, Bubbles counter. Volumetric bubbler, Mass Flowmeters	ANSI Bubbler, Bubbles counter. Volumetric bubbler, Mass Flowmeters	ANSI Bubbler, Bubbles counter, Volumetric bubbler.	ANSI Bubbler, Bubbles counter, Volumetric bubbler.
Water column, Digital water column, Turbine flowmeters.	-		-
BSPP 1/4"	NPT 1/2"-F, HP 1/4"-F	NPT 1/2"-F / HP 1/4"-F / HP 3/8"-F	NPT 1/2"-F / HP 1/4"-F / HP 3/8"-F
-	7bar @ 2000 L/min Other available on request	7bar @ 2000 L/min Other available on request	7bar @ 2000 L/min Other available on request
2Ph+G 220V@50Hz 1KW	2Ph+G 220V@50Hz 1KW	2Ph+G 220V@50Hz 1KW	2Ph+G 220V@50Hz 1KW
Other available on request	Other available on request	Other available on request	Other available on request
600(L) x 600(P) x 1020(H)	700(L) x 1120(P) x 1120(H)	700(L) x 1120(P) x 1120(H)	1000 (L) x 1280 (P) x 2000 (H) Bullet proof class BR6 dim. 900 (L) x 700 (P) x 700 (H)



### Accessories

#### CCMP/200 **AIR COMPRESSOR**

SK-PC01



PERSONAL COMPUTER CONSOLE

7 18 19 20

# CE

Air compressor skid. It is formed by electric 3 stage compressor able to pressurize ambient air up to 330 bar as std. Reservoir tank and final pressure booster are available as options. Maximum outlet pressure: 1000 bar.

Outlet pressure Flow ability	:	330 bar std 1000 bar con opt. booster 200 SL/min (8 min to pressurize 10 L vessel up to 200 bar).
Final booster Reservoir tank Noise level Electrical supply	: : :	Optional – Available on request 150 L @ max 330 bar 79 Db (ISO-3746) 3PH + T, 380V@50Hz, 5KW
Pneumatic supply	:	6.5 bar @ 2500 NI/min Dry not lubricated ISO-8573 Level 4
Dimensions	:	90(L) x 2100(P) x 2100(H)

#### Console for windows passed Personal Computer. Ideal for workshop certification applications.

The console included:

Cabinet mounted on wheels with ventilation equipment Personal computer with LCD 18.5" screen. Keyboard & mouse CCD bar code reader. B/W Laser printer.

Persnal Computer	:	Processor Intel Core 2 Duo E7500 (or above) (2.93GHz, 1066MHz, 3MB) - SO Windows 7 Professional HD 320GB Serial ATA (7,200 Rpm) - RAM 3GB
LCD screen	:	Widescreen 18.5 E1910H - 18,5" Visible area 470 mm – Black color - Brightness 250 cd / m²– contrasto 1000:1
Printer	:	LASER monochrome A4 24 ppm, 600x600 dpi
Electric supply Dimensions	:	2PH + T, 220V@50Hz, 1KW 717 (L) x 595 (P) x 1625 (H)

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### Accessories



CV-1200 CV-1700 CV-2200 CV-2700

700mm - 1200mm 1000kg 1000mm – 1700mm 1000Kg 1500mm – 2200mm 1000Kg 2200mm – 2700mm 1000Kg

#### RE-01 PORTABLE DIGITAL RECORDER FOR PRESSURE MESURE



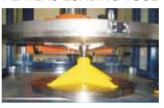
Portable digital recorder for pressure mesure. Recorder data can be stored on USB key. Certification software supplied along the unit, can read encrypted data on USB data storage to print out full waveforms.

#### ACP-01 Actuator control panel



#### PLT-600. PLT-2000 PLATEAU LOADING TOOL

CE



Plateau loading tools. With this accessories it is possible to install sealing plateau on vertical rig rapidly and under high safety conditions. It is available in 2 size: 600Kg - 2000Kg

#### BC-01 PORTABLE DIGITAL **BUBBLES COUNTER**

Portable digital bubbles counter. Impedance variation detector amplifier is able to detect bubbles release from 1/4" glass pipe .

Leak Flow Connessioni Electric supply Dimensions

max 3 bubbles /sec BSPP 1/4" 2PH + T, 220V@50Hz, 100W 220 (L) x 268 (P) x 95 (H)

Pneumatic Supply Sources	:
Pneumatic Control Signal	:
Electrical Supply sources	:
Electrical control signal	:

HART USB2.0 connection Assembly asset

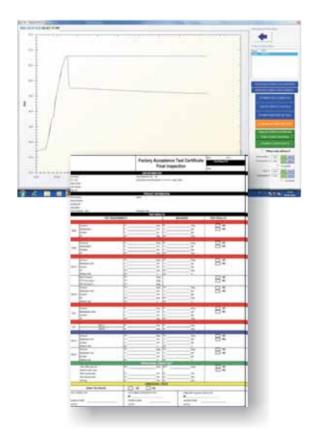
0-6 bar @ 3500 NL/min, w/analog indication (1x)
0-6 bar @ 340 NL/min, w/analog indication (2x)
6 bar, fixed supply DN 6mm (3x)
6 bar, fixed supply DN 12mm (3x)
0-145.0 PSI @ 770NL/min with digital indication, 10 turns
controls potentiometer
0 – 260V @ 1A , with digital indication,
0 – 110V DC, with digital indication.
0 - 30 V DC @ 3A with digital indication, 10 turns controls
potentiometer
0 – 21,0 mA @ 1200 ohm with digital indication, 10 turns
controls potentiometer
Available on request.
Fixed / Portable

# Certification software

#### TestREC5.4-PSV

#### CERTIFICATION SOFTWARE MODBUS INTERFACE FOR PSV TEST





## CE

TestREC is a new software for test machines monitoring and management, that allows the operator a complete control of the test process from a safety distance. The test data are read in real time from the machine and displayed on PC Monitor, so that the operator is aware at any time of the test progress and advised of any problem. TestREC record all the valves tests results on a searchable database to produce graphs and statistics, helping the manufacturer to identify the critical issues in their products and simplify the problem-solving phase.

The operator puts the valve data and can decide whether to use one pre-installed process configuration (recipes) or manually arrange and save any setting of the test bench in the database in order to create their own recipes.

The data collected by the PLC are stored in real time and showed up to 7 channels simultaneously in a clear and simple chart window.

The chart window desing allows the test bench full control at a glance by the operator and the immediate recognition of potentially critical situations. TestREC has a full tool of Graphic reports.

Any data channel of any test performed at any time can be retrieved and showed in clear and exhaustive charts. A test certificate report can be printed in PDF format, and the test charts results can be added to the report.

Technical Specifications :

- · Up to 10 channels simultaneous retrieved
- Multi-threaded process to ensure continuity of data reading in conjunction with the graphical display
- · Management of the double Y axis graph in real-time and historical data
- · Fully customizable recipes
- English and Italian languages
- · Database management with integrated data backup and restore
- Compatible with all Windows versions from XP Sp3 onwar
- Pressure vs. time, Temperatures vs time Zoom, Hold and auto-stop registration ability indications of simmer point, POP pressure, blowdown range, pressure drop.
- · Certifications export in PDF format or XLS

# Certification software

#### TestREC 5.4-M

#### CERTIFICATION SOFTWARE MODBUS INTERFACE



#### TestREC 5.4 SYSWAY CERTIFICATION SOFTWARE



# CE

TestREC5.4 FS allow to connect a Windows based PC at pressurization skid class SKM with instrumentation for

FIRE SAFE TEST according to API-589 / API-607 or CRYO TEST(N°7 thermocouple K, N°4 Pressures, N°1 water Level transmitter); it can download data and printout a test report. SW control a communication between PC and Instrumentation (RS485 e/o MODBUS Protocol). There are several working option and a useful setup utility to verify the accuracy of pressure transmitters installed on skid.

Test session started with TestREC3.0-M could be stopped, saved, printed and recalled from memory to be completed.

TestREC3.0-M could be installed on following hardware or superior:

PC: Windows 7 Memory RAM: 256M Hard-Disk: 100MB min free space CD-ROM: 16x Porta seriale: RS-232C 9-pin

Access controlled Operative sessions Trends:	:	Identification password On-line connected to test rig, Off-line to edit or modify saved test report Pressure vs. time, Temperatures vs time Zoom, Hold and auto-stop registration ability Possibilità di Zoom, Hold della depressione, auto-arresto.
Data format	:	Waveforms data stored in csv file format
Printout	:	Product data and historical report stored in ASCII file test report printout with social LOGO and waveforms in A4
- milliout	•	full page format.

TestREC5.4 allow to connect a Windows based PC at pressurization skid class SKA and configure test sequence, modify test parameters, and downloading data to printout a test report. SW control a bidirectional communication between product & test database and PLC on test rig. There are several working option and a useful setup utility to verify the accuracy of pressure transmitters installed on skid. Test session started with TestREC2.0 could be stopped, saved, printed and recalled from memory to be completed. A historical register saved in ASCII file can give the produced pieces, OK / K0 test results.

Option Torque Trend (fig. 4) allow to display waveform of torque vs. movement angle; useful to check nominal values of break to open, running e break to close torque. The samples are collect by DMA transfer (available only on test rigs with torque measure facilities).

TestRec2.0 could be installed on following hardware or superior:

PC: Windows 7 Memory RAM: 256M

Hard-Disk: 100MB min free space CD-ROM: 16x

Porta seriale: RS-232C 9-pin

Access controlled	:	Identification password
Operative sessions	:	On-line connected to test rig, Off-line to edit or modify saved test report
Trends	:	Pressure vs. time, Temperature vs time (option), torque vs. angle (option)
		Zoom, Hold and auto-stop registration ability
		Possibility di Zoom, Hold of pressure measure, auto-stop of recording.
		Historical report with: date, time, serial number, test results
Data formats	:	Waveforms data stored in csv file format
		Product data and historical report stored in ASCII file
Printout	:	test report printout with social LOGO and waveforms in A\$ full page format
		A\$ full page format

### Mechanical Optionals

#### 1 PROTECTION BELLOWS Plastic fiber protection bellows for screwed columns. This option avoid eccessive dust deposit on greased columns and demages due collision against valve during loading procedures. BORE PLUGS SET 2 Set OF Plugs for inner radial bore sealing, designed for BW ending valves. Size range for each pressure class must be declared in PO. Set Of Plugs for inner radial bore sealing, designed for RF ending valves. Size range for each pressure class must be declared in PO. Set Of Plugs for inner radial bore sealing, designed for RTJ ending valves. Size range for each pressure class must be declared in PO. а b. c. 3 **O.D. BORE PLUGS** Set of female Plugs for external radial sealing, designed for PUBs ending valves or pipes. Size range must be declared in P.O. FLAT SEAL PLATEAU SET 4 Two O-Ring plateau designed for RF flanged valves with API minimum bore requirment. Size range must be declared in P.O. Two O-Ring plateau designed for RTJ flanged valves with API minimum bore requirment. Size range must be declared in P.O. b. WIRELESS REMOTE CONTROLLER 5 Wireless remote radio controller for rig movement command. Option include receiver, transmitter, rechargeble battery set and re-charges. 6 **AISI BASEMENT WATER VESSEL** Basement water vessel made in AISI-304 SS (standard vessel in made in carbon steel zink plated). HYDRAULIC VALVE LIFTER 7 a. Lower lifter trolley with hydraulic cylinder 5 TON max lifting force. Stroke: 300 mm b. Double Lower lifter trolley with hydraulic cylinder 2 x 5TON max lifting force. Stroke: 300 mm c. Double Lower lifter trolley with hydraulic cylinder 2 x 10 TON max lifting force. Stroke: 300 mm SCREW JACK VALVE LIFTER 8 a. Lower lifter trolley with screw-jack hydraulically controlled 10 TON max lifting force. Stroke: 400 mm. Other on request. b. Double Lower lifter trolley with screw-jack hydraulically controlled 2 x 10 TON max lifting force. Stroke: 400 mm. Other on request. c. Double Lower lifter trolley with screw-jack hydraulically controlled 2 x 20 TON max lifting force. Stroke: 400 mm. Other on request. d. Double Lower lifter trolley with screw-jack hydraulically controlled 2 x 30 TON max lifting force. Stroke: 400 mm. Other on request. 9 **V SUPPORT for LIFTERS** V support accessory for std lifters. Max Ø 800 manual adjustment. 10 PROPORTIONAL PRESSING CONTROL Oil unit with proportional pressure regulation up to 400 bar. a. b. Oil unit with proportional pressure regulation up to 250 bar. 11 LOADING TRAY a. Loading tray with hydraulic orizontal movement . Stroke 300 mm. Max load 300Kg b. Loading tray with hydraulic orizontal movement . Stroke 400 mm. Max load 500Kg WATER JET PROTECTION a. Steel frontal protection manually moved with balance weights guides. (vertical) b. Steel frontal protection automatically moved. (vertical) c. Steel frontal protection 2 wings, warranty moved. MODULAR CONCRATE / STEEL / WOOD/AI PANELS PROTECTIONS 13 a Linear element 1800L x 2300H Linear element 3600L x 2300H b. 90° Linear armored concrate panel 1200L x 2200H c. Sliding GATE 2x1800 doors d. MODULAR CONCRATE PANELS PROTECTIONS 14 a. Linear armored concrate panel 2000L x 2200H 90° Linear armored concrate panel 2000L x 2200H 15 ON REQUEST 16 **BULLET PROOF GLASS PROTECTION** Perimetral protection made in bulled proof PR6 grade cristals with steel structure; protection is designed according customer requirement. 17 FLOOR "V" SUPPORT Floor lifter tool with V support for Valve . MAX load: 200 Kg. Stroke: 300 mm Floor lifter tool with V support for Valve . MAX load: 500 Kg. Stroke: 500 mm а b. Floor lifter tool with V support for Valve . MAX load: 1000 Kg. Stroke: 700 mm 18 HIGH SAFETY OIL UNIT Oil unit able to ensure clamping force even with electrical power breakdown or air supply failure. Indicated in case of GAS TEST. PLATEAU LOADING TOOLS 19 a Up to 600 kg b. Up to 2000 kg. 20 ↓ 21 **ON SPECIAL REQUEST**

# Test process Optionals

1	2	VACUUM GROUP Pneumatic Venturi vacuum pump with water separator with automatic drain facilities. 40 m <sup>9</sup> /h
	b.	80 m <sup>3</sup> /h
	c.	160 m <sup>3</sup> /h
2		DBB Test (Trunnion mounted Ball Valves) Double Block and bleed test facilities. Contemporary pressurization of both valve side and leak flow collection from valve cavity.
3		CAVITY Test (Trunnion mounted Ball Valves)
_		Test equiment for ball cavity pressurization. This option allow the user to veryfy tighness for double piston effect seats or pressure set for self reliving seats.
4	b.	GAS Test High pressure test with GAS. Double discharge line and EMERGECY shut-off valve GAS Test up to 200 bar GAS Test up to 460 bar GAS Test up to 1050 bar
5		GAS BOOSTER Air driven GAS BOOSTER. Pressurization system supplied by N2/He tank. This option must be purchased even option Nr. 4
6		BUBBLES DIGITAL COUNTER
		ANSI bubbler with counting sensor. Max 3 bubbles/sec. PLC interface. ANSI bubbler with counting sensor. Max 3 bubbles/sec. Portable STAND Alone counter.
7	a.	DIGITAL WATER COLUMN Digital water column. Indication of cubic centimer. PLC Interface.
_		Digital water column. Indication of cubic centimer. Portable STAND alone flowmeter.
8		H2O TURBINE FLOW METER SET - PLC INTERFACE 300 - 3000 mL/min
		300 – 3000 ml/min res. 2.5 cc   1500 – 20000 ml/min – res. 8cc 300 – 3000 ml/min res. 2.5 cc   1500 – 20000 ml/min – res. 8cc   3000 – 60000 ml/min – res. 25cc
9	a.	H2O TURBINE FLOW METER SET - 7 seg DISPLAY 300 - 3000 mL/min
	b.	
10		MASS AIR FLOW METER SET
	b.	0.1 SLPM   1 SLPM   10 SLPM   100 SLPM 1 SLPM - 1.5% F.S.   25 SLPM - 1.5% F.S.   150 SLPM - 1.5% F.S. 3 SLPM - 1.5% F.S.   50 SLPM - 1.5% F.S.   2000 SLPM - 1.5% F.S.
11		VOLUMETRIC BUBBLER
		Max Volume 150 cc Max Volume 1700 cc
12	a.	ELECTRIC ACTUATOR CONTROL PANEL 0- 30V DC 5A - Power supply
		0 - 21 mA DC signal
13	υ.	380V-50Hz 16 A - 3 phase Back/Farward PNEUMATIC ACTUATOR CONTROL PANEL
		0-100 PSI @ 2000 SLPM Supply 0-60 PSI signal
14	а	MULTISTATION PROCESS ASSET 3 Test places
_		5 Test places
15		ATEX CONFORMITY Ethil / Methil alcool Diesel
16	υ.	WATER TANK
17	a.	500L. b. 1000L. c. 2000L. d. 3000L. e. 6000L. f. 10000 L. CERTIFICATION SOFTWARE
	a.	Omrom 1000
18	b.	Modbus convertitore 1500 WORKING PRESSURE UPGRADE a. 1050 bar b. 1380 bar c. 1600 bar d. 2068 bar e. 4136 bar
19		VIDEO CAMERA FOR INSPECTION / SURVEILANCE
		a. Inner articulated camera b. Inner non articulated camera c. Survailence camera whit posizionig joysrier
20		CYCLING ENDURANCE TEST a. with 40L. accumulator & leakage simulators b. without accumulator & leakage simulators
21 ↓ 22		ON SPECIAL REQUEST

# Valves Test Benches Think PC PROGETTI

Think' PC PROGETTI s.r.l. **Head quarter** Via dell'Artigianato, 3 22069 ROVELLASCA (CO) – ITALIA Tel. +39.02 96749415 SKYPE: think.pc.progetti info@pcprogetti.it www.pcprogetti.it



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