Catalogue 2022

REVALVE

Since 1962

VALVE TEST & REPAIR EQUIPMENT

REVALVE VALVE TEST & REPAIR EQUIPMENT

Since 1962

The “PKTBA” CJSC, introduces the "REVALVE" as its own international brand delivering high quality industrial equipment for valve testing, manufacturing and repair operations that corresponding to the latest industrial standards as API, ASME, ASTM, GOST, DIN, ISO, etc.

All these features embodied at our wide product range:

- horizontal and vertical valve test units with NPS range from ½" up to 72" and clamping force up to 4000 tones;
- advanced product line of grinding/lapping units;
- stationary machining centers (borers) for valve trim components processing;
- welding overlaying and hard-facing automation;
- portable valve test and repair systems;
- mobile workshops based on the sea freight containers for on shore and

Above listed range of equipment created by using of innovative technologies

demands.

What makes REVALVE the unique solution provider?

Full cycle valve repair and test process equipment from one reputed manufacturer.

Our wide product range and in-house engineering department inspired by more than 90 highly skilled engineers, allow us to provide our clients with custom build equipment and create design projects of the maintenance and production workshops as per client demands.

Premium quality of the REVALVE products ensured by company QMS certified by TUV as per ISO 9001-2015.

We have unique half-century equipment designing and

references worldwide.

REVALVE has its own manufacturing facilities that occupies 25000 m², equipped with full production cycle machinery with total capacity of 258 units that give us unique capabilities to build any type of equipment in-house.

Full-cycle in-house production means quality control for each manufacturing process.

Service life of our equipment is minimum 10 years.

Our service policy offers 18 months of warranty and post-warranty service for the supplied equipment. We perform installation and commissioning supervision. Machines and equipment supplied by REVAVLE always accompanied with reach set of spare parts, tools, and accessories.

We provide operation and service training for the supplied

personal is a key for safe process operation.

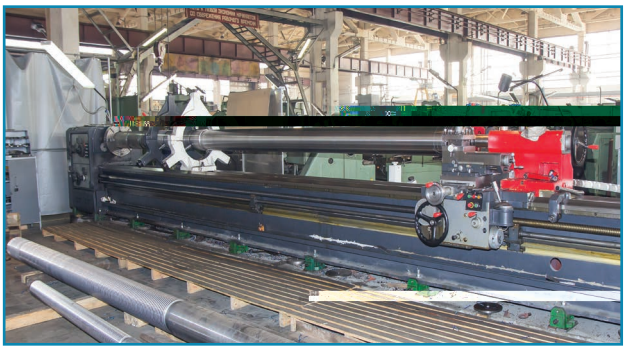
Our “Client-Care Policy” makes us reliable and trusted partner for stable operation of your business.

We are the leading vendor for such renowned Russian oil and gas companies as Gazprom, Rosneft, Transneft, Lukoil, Surgutneftegaz, NOVATEK, as well as for biggest valve manufacturing factories and Nuclear Power Plants.

cooperation with Belgium, Spain, Czech Republic, USA, Bolivia, Turkey, UAE, Saudi Arabia, Oman, Qatar, Egypt, South Korea, Australia, Thailand, Nigeria, Serbia, Bulgaria, Ukraine, Kazakhstan, Uzbekistan, Turkmenistan, etc.

TÜV International Certification
TÜV THÜRINGEN
TIC
Система менеджмента качества
ISO 9001
• клиентоориентированность
• удовлетворённость клиента
• непрерывное совершенствование
• действенность системы / действенность процесса
ID 15 100 169665
www.tuev-thueringen.de

Production workshop №1



Production workshop №2

CONTENT

THE GENERAL TECHNOLOGICAL SCHEME

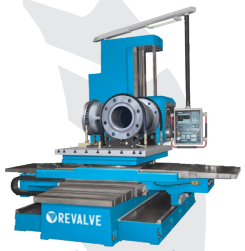
2 Washing and cleaning of pipeline valve

3 Disassembling and detection of defects

4 Tooling of sealing surfaces

5 Welding of sealing surfaces

1 Pipeline valve to repair



6 Tooling of sealing surfaces

7 Grinding and lapping of sealing surfaces

8 Assembling of pipeline valve

9 Testing of pipeline valve for strength, density, gate and environmental leakage

10 Painting and drying

11 Pipeline valve are ready for use

HOW TO MAKE PROPER CHOICE OF REPAIR AND TEST EQUIPMENT:

The choice should be based on both the tested and repaired valve parameters and the characteristics of the repair and testing equipment itself:

- pipeline valve type;
- nominal bore (DN) and pressure (PN);

- valve connection type (BW, RF, RTJ, etc.);
- test medium (water, air, nitrogen, oil, etc.);
- valve position during the tests (horizontal / vertical / inclined / immersion);
- specify compliance with test standard;
- computer-aided measurements, parameter recording and test reports;
- equipment capacity per shift;
- number of operating personnel.

OUR TEAM

The result of continuous and creative work of several generations of our employees brought REVALVE to the leader position in the industry. Up to date the REVALVE employs over than 900 highly educated specialists.

The commercial department is focused on a best customer service and accompanies the contract from the moment of the inquiry receiving up to the putting equipment into operation.

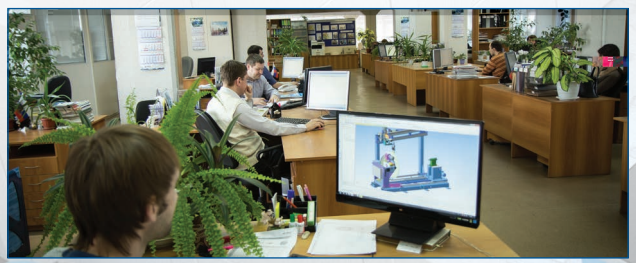


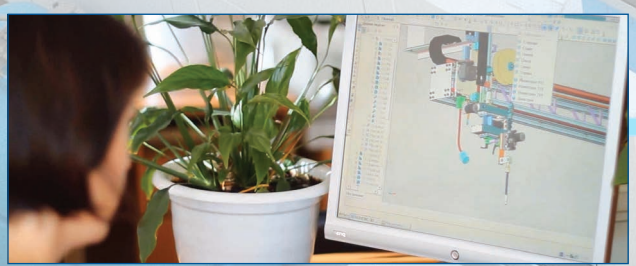


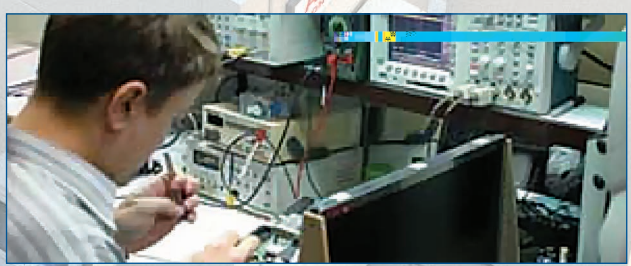

DESIGNING DEPARTMENT

More than 90 talented engineers of our designing department are creating a design of the latest versions of the equipment, as well as special customized editions of equipment.

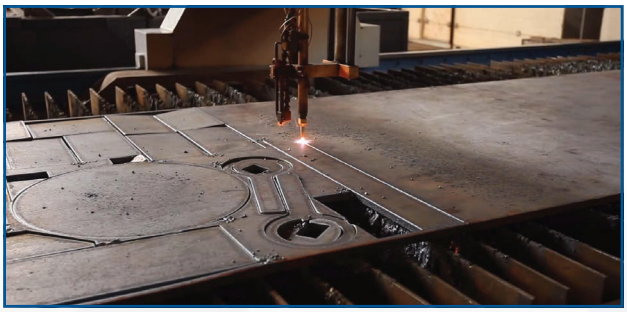
Supreme quality of our products achieved by using a professional software package such as three-dimensional modeling system Compass-3D, Solid Works and integrated automatic design system Altium Designer, which help us to reduce cost, improve product quality and accelerate the production cycle.





PRODUCTION CYCLE



QUALITY CONTROL

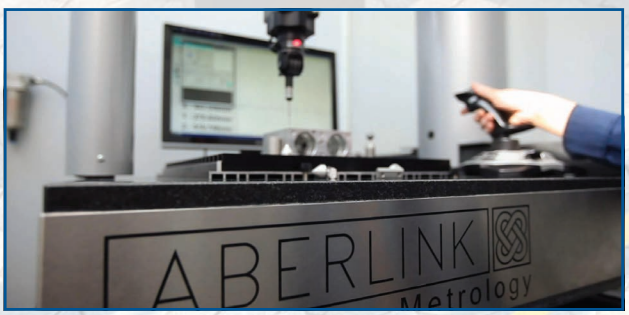
products are tested under the overload conditions, according to the program and test procedures. Testing process is takes place in the safety bulletproof enclosure, which ensures safety of operating personnel.

Quality control has always been an essential element at every stage of manufacturing. All the outsourced parts and materials undergo 100% incoming control.

At the REVALVE all parts used in the production cycle are tracked by using the bar-coding system, which provides

of machined parts we are using traditional measurement devices and ABERLINK coordinate measuring machine.

of EN 60204-1, EN ISO 12100, EN 2006/42/EC, EN 2004/108/EC, EN 2006/95/EC, and supplied with CE marking and declaration of conformity with EU requirements.



WARRANTY AND AFTER SALES SERVICE

Our company attaches the utmost importance to appropriate training of future operators of the equipment to ensure safe operation and maintenance of supplied equipment.

The REVALVE is a client oriented company and our customer care policy based on a long term partnership with our esteemed clients. REVALVE service department is always ready to perform immediate after sale service of supplied equipment.

Through the decades REVALVE supplies products to the largest enterprises of Russia, CIS, Europe, Africa and South-East Asia.

Cooperating with REVALVE is the guarantee of reliable and safe operation of your business!

PROJECT ENGINEERING OF VALVE REPAIR AND TESTING FACILITIES

The REVALVE has the unique advantage of being the only valve repair and testing equipment manufacturer capable to provide the know-how, required for setting up a valve repair and testing workshop with all required equipment from one manufacture.

valve repair and testing workshops projects for a broad range of industry sectors worldwide.

1. Selection of equipment as per customer operation requirements.
2. Workshop general processes.
3. Equipment layout and foundation plan for equipment installation.
4. Power and source supply engineering.
5. Manufacturing of valves overhauling equipment.
6. Engineering of turnkey workshop projects.
7. Installation start up and training of equipment operators.
8. Customized equipment engineering and manufacturing.

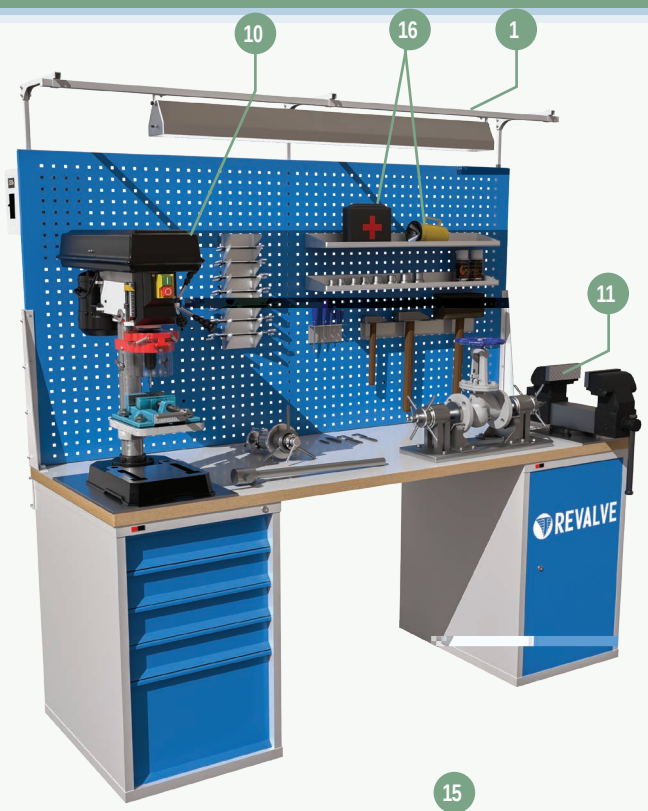
project stage, with our vast variety of engineering service packages, to ensure project implementation from its beginning to installation and start up of equipment.

Our commitment is improving of long term, safe and reliable operation of valve maintenance facilities at the end users sites.

RMR
WORK STATION FOR VALVES ASSEMBLING/DISASSEMBLING
DN 15...1200 mm

PURPOSE:

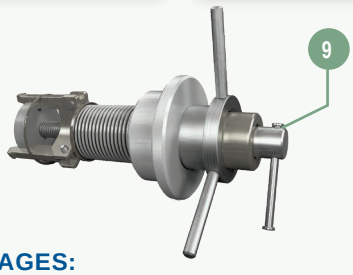
- **RMR-4, RMR-5** - disassembling and assembling of the wedge, stop, control, and shut-off valves.
- **RMR-4-1** - disassembling and assembling and performing preliminary pneumatic tests of the wedge, stop, control, and shut-off valves at a pressure of up to 6 bar (90 psi).
- **RMR-6** - disassembling and assembling of the wedge and parallel-seat gate valve.
- **RMR-PPK** - disassembling and assembling of the safety valves.
- **RMR-SH** - disassembling and assembling of the slab gate valves.
- **RMR-AFK** - disassembling and assembling of the wellhead valves (Cross-type Christmas Tree).
- **UPG** - unit is designed for nuts unscrewing, screwing, and cutting (where it is impossible to unscrew).
- **TGR** - mobile trolley for valve transportation.



OPTIONAL:

UPG

Rail trolley



ADVANTAGES:

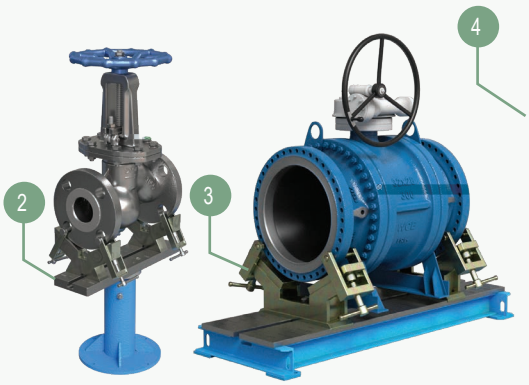
RMR is a set of accessory equipment to ensure fast and efficient disassembly and assembly of the pipeline valves.
The work bench with lockers, safety screen and lamp (1).
The bench for disassembly and assembly of the pipeline valves DN 15...300 mm and safety valves (2).
For convenience, the bench can be adjusted by height.
The bench for disassembly and assembly of the pipeline valves with nominal bore DN 300...600 mm (3).
For convenience, the bench is equipped with a ladder (4).
The bench for preliminary pneumatic tests of the pipeline valves DN 50...300 mm (5).
Rack under the oil station (6).
The stand with swinging boom, balance beam, replaceable screwdrivers and air preparation unit (7).
The hydraulic press for pressing-in (pressing-out) of bush sleeves of the gate valves (8).
The device for compressing the disk springs of the gate valves (9).
The drilling machine for repair jobs (10).
Vice (11).
The stand with pneumatic screwdriver for installation and

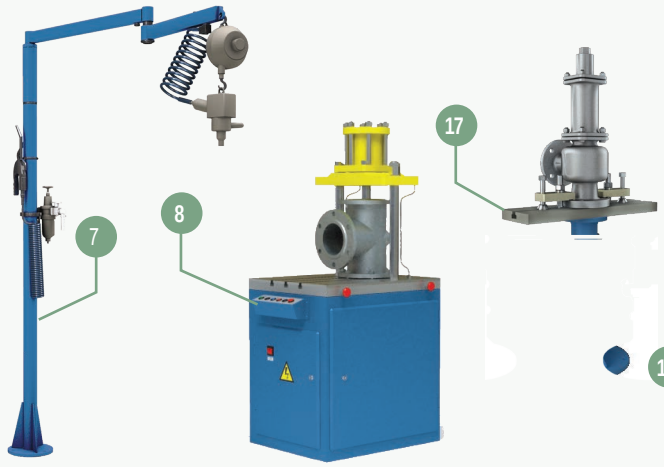
The height-adjusted movable support (13).
The hydraulic crane with load-carrying capacity 500 kg (14).
Each work station delivery set includes a fitting tool kit (15), rechargeable flashlight (16), and the first aid kit (16).
The stand for safety valves disassembly/assembly (17).
The bench for disassembly and assembly of the pipeline valves DN 700...1200 mm (18). For convenience, the bench is equipped with a repair site (19).

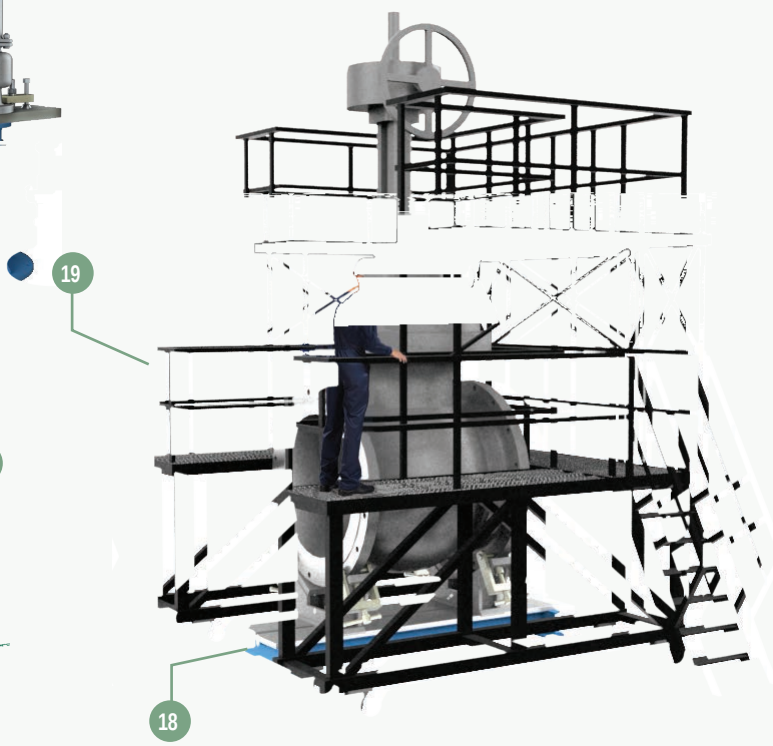
SPECIFICATIONS:

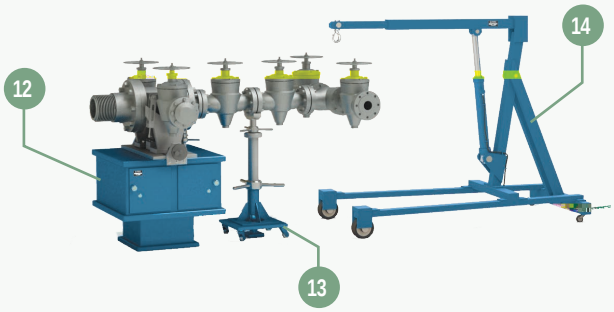
Model	Usable range DN, mm (")	Weight, kg
RMR-4	15…300 (½...12)	500
RMR-4-1	50…350 (2...14)	1300
RMR-5	15…600 (½...24)	810
RMR-6	700...1200 (28…48)	3800
RMR-PPK	15…300 (½...12)	490
RMR-SH	65, 80 (2½, 3)	1280
RMR-AFK	65 (2½)	370

RMR
WORK STATION FOR VALVES ASSEMBLING/DISASSEMBLING
DN 15...1200 mm









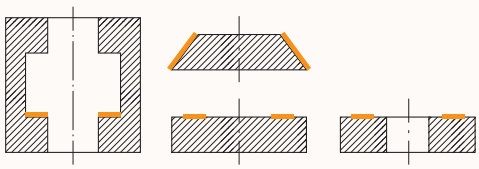
COMPLETE SET:

COMPLETE SET	RMR-4	RMR-4-1	RMR-5	RMR-6	RMR-PPK	RMR-SH	RMR-AFK
Work bench with lockers and safety screen (1)	+	+	+	+	+	+	
Bench (2)	+	+	+			+	
Bench (3)			+				
Ladder (4)			+				
Bench for preliminary pneumatic tests up to 6 bar (90 psi) (5)		+					
Rack under the oil station (6)		+					
Stand with swinging zigzag boom and pneumatic screwdriver (7)	+	+	+		+	+	
Hydraulic press (8)						+	
Device for compressing the disk springs of the gate valves (9).						+	
Bench drilling machine (10)	+	+	+	+	+	+	
Vice (11)	+	+	+	+	+	+	
Stand (12)							+
Movable support (13)							+
Hydraulic crane (14)							+
Fitting tool kit (15)	+	+	+	+	+	+	+
Rechargeable flashlight (16)	+	+	+	+	+	+	
First aid kit (16)	+	+	+	+	+	+	+
Stand for safety valves disassembly/assembly (17)					+		
Bench for disassembly/assembly of the wedge and parallel-seat gate valve (18)				+			
Repair site (19)				+			

UN
MACHINES FOR HARDFACING/OVERLAYING OF PIPELINE VALVES PARTS
DN 50...1200 mm (2…48″)

PURPOSE:

- automated hardfacing/overlaying of pipeline parts and elements with diameter from 50 up to 1200 mm (2...48") with or without electrode oscillation with submerged arc process or in an atmosphere of shielding gases (MIG/MAG processes) with full wire.



Weld pad

ADVANTAGES:

The machines are fitted out with forced cooling of the welding unit and a set of water-cooled welding heads.
The electrode oscillating mechanism allows to increase the width of the overlayed seam up to 60 mm

workpiece in three coordinates (tilt angle and position

Machines control system are based on industrial controller thus allowing operator to set hardfacing/ overlaying parameters (oscillation amplitude, amplitude velocity, number of faceplate revolutions, and length of welding seam) through a touch screen control panel.

The unit is equipped with remote controller.

than 10 min.
The set of spare parts includes a set of tools, wearing parts kit and first aid kit.
Welding zone backlighting.
The machines allow to perform hardfacing/overlaying of internal cylindrical surfaces and welding of girth welding seams in horizontal plane (overlaying of sealing rings, welding of flanges).*
The machines allow to reach a hardness of surfacing of 60 HRC and above.**
Welding sources of any manufacturers.

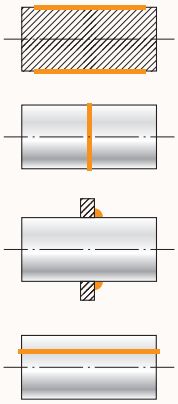
SPECIFICATIONS:

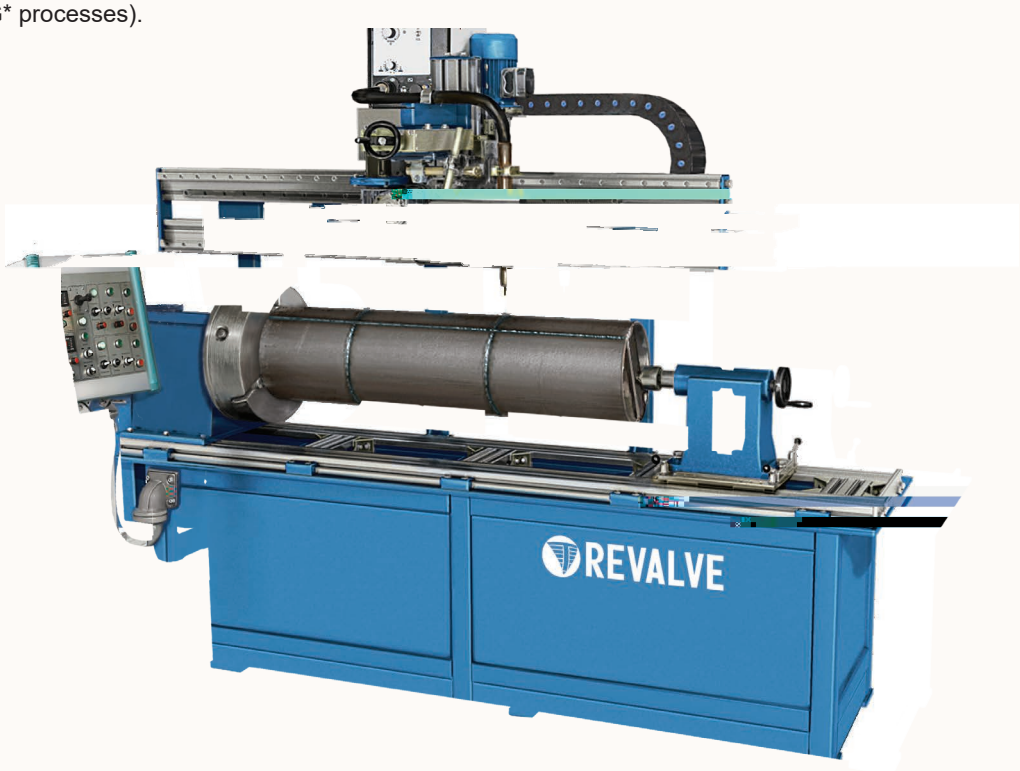
Parameter	UN-1		UN-2		UN-3	
	G	F	G	F	G	F
Valve range, DN, mm	50…300 (2...12)		50…600 (2...24)		300…1200 (12...48)	
Faceplate rotation speed, rpm	0,08...4,5				0,0125...1,25	
Tilt angle of the table, degrees	0...10					
Arc protection method						
Power supply, V/Hz	400/50 (480/60*)					
	up to 600					
Electrode-wire diameter, mm	1…1,6 (0,039...0,063)	2…5 (0,079...0,197)	1…1,6 (0,039...0,063)	2…5 (0,079...0,197)	1…1,6 (0,039...0,063)	2…5 (0,079...0,197)
Wire feed rate, m/h (in/h)	100…1200 (3937...47244)	50…400 (1969...15748)	100…1200 (3937...47244)	50…400 (1969...15748)	100…1200 (3937...47244)	50…400 (1969...15748)
Capacity, kg/h	up to 5	up to 15	up to 5	up to 15	up to 5	up to 15
Overall dimensions, mm						
Weight (machine/power source/ control panel), kg	1120/240/60		1250/240/60		4100/240/60	

UNG-400-1300-800-KN
MACHINE FOR HARDFACING/OVERLAYING OF ROTATING BODIES

PURPOSE:

- automated hardfacing/overlaying of shafts, spindles and rods with diameter of up to 400 mm (16") with consumable electrode in an atmosphere of shielding gases (MIG/MAG/TIG* processes).





ADVANTAGES:

The machine is completed with forced cooling welding head and bended water-cooled burner for welding of fillet welds.

The machine allows hardfacing/overlaying of cylindrical workpieces with length up to 1250 mm (49").

The control system of the machine is implemented on the basis of industrial controller, which allows the operator to set the parameters of welding (range of oscillations, velocity of the oscillations, number of the faceplate revolutions, length of overlaying etc.) on the touch screen of control panel and to perform welding process in automatic mode.

Electrode oscillating mechanism provides greater performance of the hardfacing/overlaying process.*

The machine allows to perform hardfacing/overlaying of cylindrical surfaces and welding of girth seams with automatic filling of the cutting edge.*

The machine can be equipped with an additional (second) welding head to provide its greater performance.

SPECIFICATIONS:

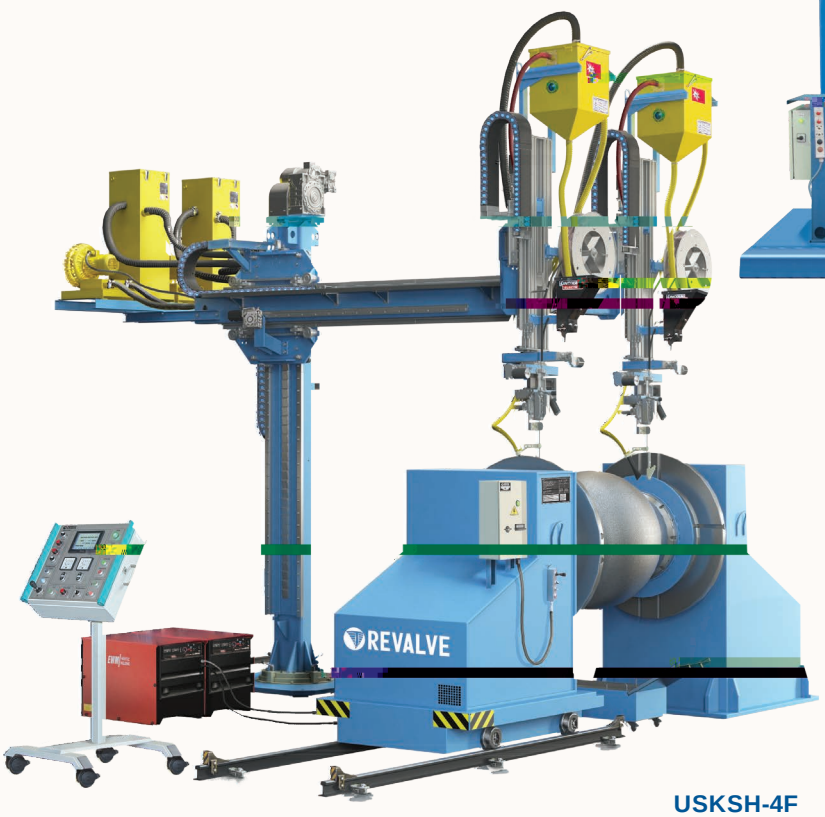
Parameter	UNG-400-1300-800-KN
Valve range, DN, mm	25...400 (1...16)
	800
	1000 (39)
	1300 (51)
Vertical travel of welding head, mm	180 (7)*
Horizontal travel of welding head, mm	1300 (51)
Welded workpiece rotation speed, rpm (continuously adjustable)	0,05...3
Horizontal travel of welding head along welding seam, mm	±50 (±2)
Tailstock displacement, mm	1300 (51)
Amount of the quill movement, mm	40 (1,6)
Arc protection method	gas
Core wire diameter, mm	1,0; 1,2; 1,6 (0,039; 0.047; 0,069)
Rated welding current at 100% duty cycle (40 ° C), A	450
Power supply, V/Hz	400/50
Weight (machine/power supply unit), kg	1040/129

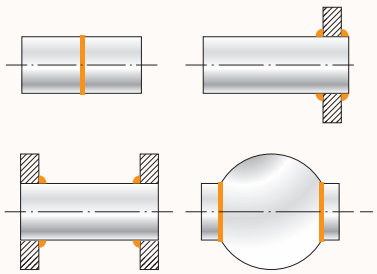
USKSH
WELDING UNITS FOR GIRTH SEAM WELDING OF PIPELINE PARTS DN 15...1400 mm (½…56″)

PURPOSE:

- girth seam welding of pipeline parts with diameter from 15 up to 1400 mm (½ ... 56") with MIG/MAG process.

USKSH-2G





USKSH-4F

ADVANTAGES:

Simultaneous operation of two welding heads provides high performance of the unit.
Standard set of the units includes: rotator, gantry, two welding heads and two welders.
Tilting rotator face-plate.
Continuous adjustment of welding speed.
Control systems of the units are based on industrial controller, thus allowing operator to set welding parameters (welding speed, number of faceplate revolutions etc.) while using touch sensitive control panel.

The welding units can be optionally completed with the following accessories:*

-
- tactile and optical seam tracking system;
- electrode oscillating mechanism;
- water recycling station (SOV);
- video control system;
- idle roller bed;
- welding sources of any manufacturers.

Simplicity and ease of operation.
Certification by the National Agency on Welding Qualification for any group of technical devices on hazardous production facilities.

SPECIFICATIONS:

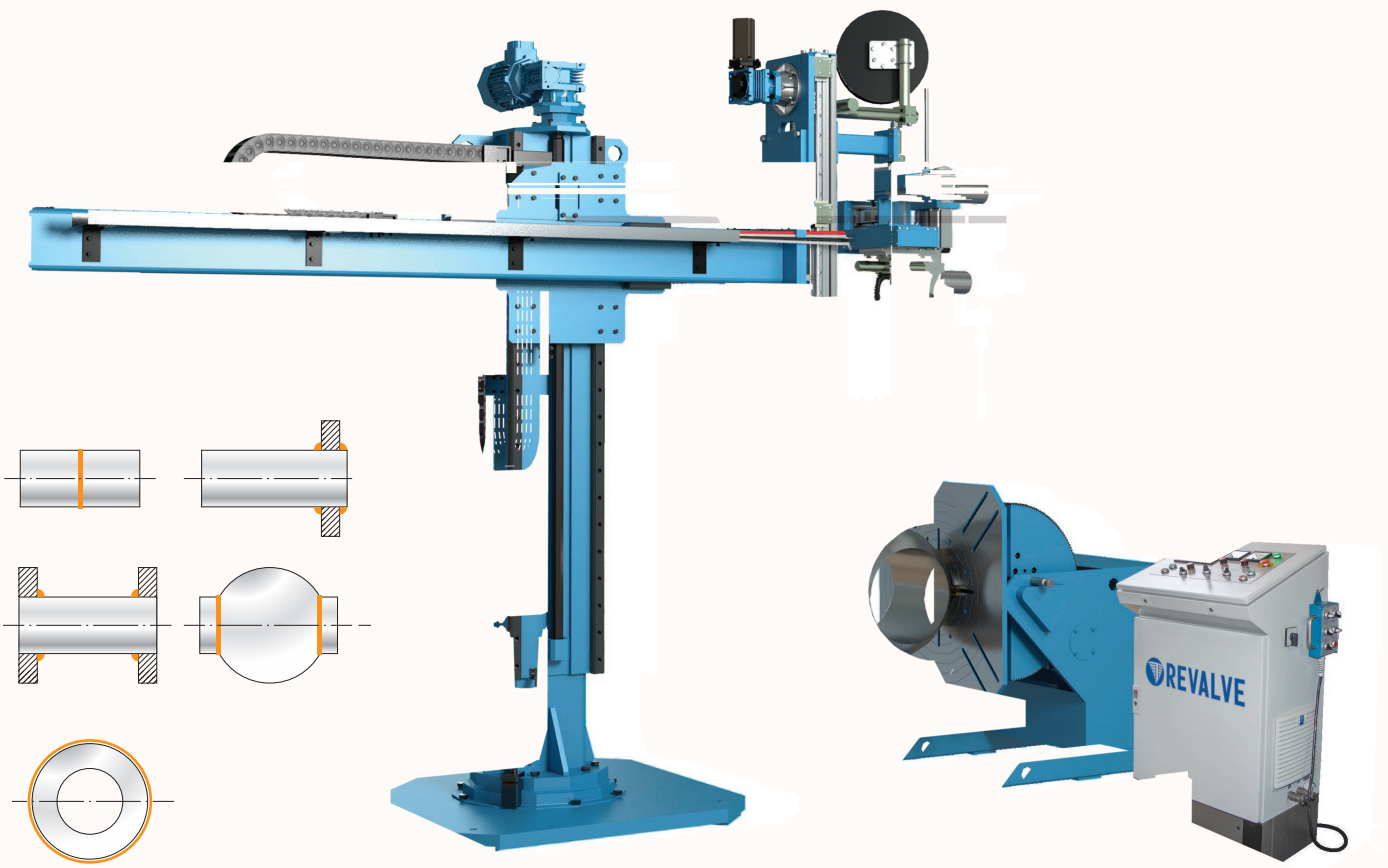
Parameter	USKSH-1G	USKSH-2G(F)	USKSH-3G(F)	USKSH-4F
Valve range, DN, mm	15...125 (½...5)	150...350 (6...14)	300...700 (12...28)	700...1400 (28...56)
Load capacity including the device, kg	500	2000	10000	30000
Welding head number, pcs	2			
Arc protection	gas			
Diameter of electrode wire, mm	1,0; 1,2; 1,6 (0,039; 0,047; 0,069)	1,0; 1,2; 1,6 (2...5) (0,039; 0.047; 0,069) (0,079...0,2)	1,2; 1,6 (2...5) (0,047; 0,069) (0,079...0,2)	2...5 (0,079...0,2)
Rated welding current, at 100% duty cycle, A	350	420 (600)	420(1000)	1000

UNG-900-1200-3000-KNV

AUTOMATED SYSTEM FOR BALL VALVE TRIM COMPONENTS CLADDING WITH OPTIONAL DEVICES FOR BALL VALVE BODY CIRCULAR WELDING DN 50…600 mm (2…24″)

PURPOSE:

- automatic GTAW cladding (overlaying) of ball, trim components surfaces of the ball valves.



ADVANTAGES:

Machine implies using a variety of hardfacing/overlaying methods of the metal layers. Such, as: submerged gas-shielded hardfacing/overlaying with wire electrode, submerged hardfacing/overlaying with tape electrode, and also plasma powder hardfacing/overlaying. Broad equipment application for various technical tasks.

Width of hardfacing/overlaying can reach 60...90 mm (2"...3") after one pass. That leads to significant increase in hardfacing/overlaying productivity.

Completely programmable course of the torch movement relative to the overlayed plug minimizes the influence of human factor on the welding result.

Optionally: systems of video surveillance and storage of data received during the welding process.

Application of high-precision slideways, modules of linear movement, ball screws allow to increase frequency of coordinate movement.

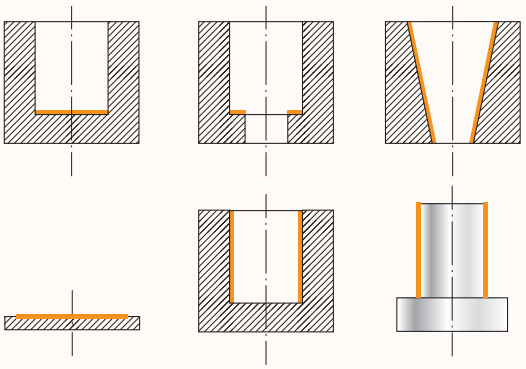
SPECIFICATIONS:

Parameter	UNG-900-1200-3000-KNV
	2000
Internal diameters of processed parts, mm	50…600 (2...24)
	up to 900 (35)
	up to 1000 (39)
	350
Weight, kg	5000

UNG-KNV
MACHINES FOR HARDFACING/OVERLAYING OF CYLINDERS

PURPOSE:

- surfaces of cylinders with consumable electrode in an



UNG-750-400-400-KNV-A

ADVANTAGES:

Compact size.

The control systems of the machines allows to program the unit to perform hardfacing/overlaying of several types of parts.

The hardfacing/overlaying process may consist of several passes with different overlaying rate, the presence of transverse oscillation, different oscillation parameters (range, speed etc.).

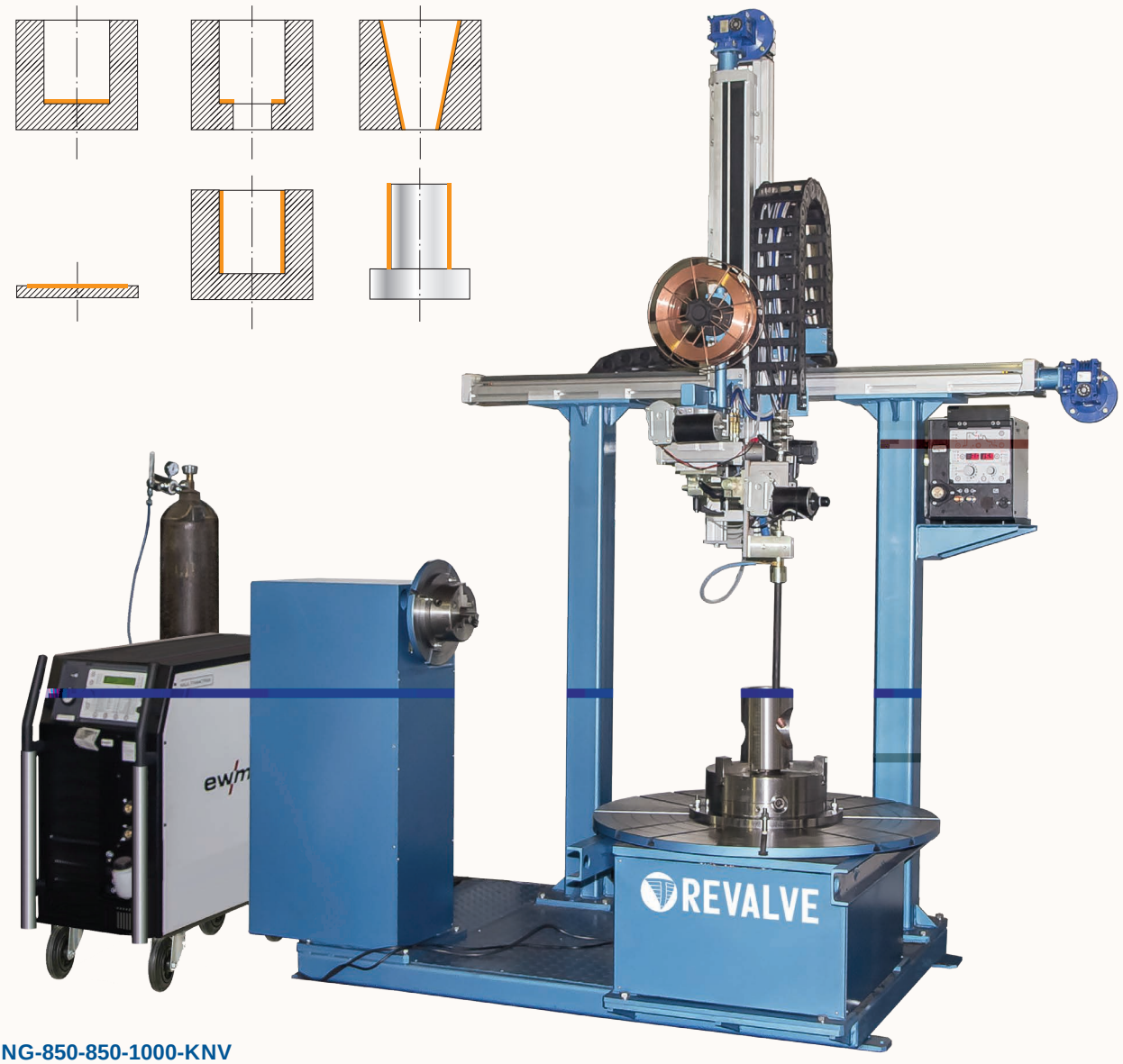
Automation of hardfacing/overlaying process provides

Availability of flat surfaces hardfacing/overlaying.

Minimum internal diameter of overlayed workpiece is 16 mm .

Water-cooled welding head.

UNG-KNV
MACHINES FOR HARDFACING/OVERLAYING OF CYLINDERS



UNG-850-850-1000-KNV

SPECIFICATIONS:

Parameter	UNG-750-400-400-KNV-A	UNG-850-850-1000-KNV
Horizontal travel of welding head, mm	550 (22)	1400 (55)
Travel of a welding head along “zenith”, mm	100 (4)	100 (4)
Vertical travel of a welding head, mm	400 (16)	1000 (39)
Rotator load capacity, kg	400	300
Rotator faceplate rotation speed, rpm	0,05÷7	0,2÷5
Tilt angle of a rotator faceplate, deg.	0÷50	-
Electrode-wire diameter, mm	1,6; 2,8 (0,069; 0,11)	1,0; 1,2; 1,6 (0,039; 0,047; 0,063)
Rated welding current, at 100% duty cycle, A	420	
	5÷450	
Range of welding voltage, V	15÷35	15÷31
Arc protection method	gas	
	35	45
Power supply, V/Hz	400/50	
:		
- machine;		
- power source.		
Weight (machine/power source), kg	970/125	1220/129

SP
FLAT LAPPING (POLISHING) MACHINES DN 50...600 mm (2...24″)

PURPOSE:

- machine is designed for lapping (polishing) of the flat sealing surfaces of the gate valve wedges, valve

- special-configuration SP-600 is used for lapping the end-seal rings.

TYPES OF MACHINED PARTS:

- wedges of the gate and christmas-tree valves;
- valve (global valve) spools;
- end-seal rings of the pumps;
- other flat-surface parts.

LAPPING-PLATE DIAMETER:

- **SP-1200**: Ø 1250 mm . for the wedges of the gate valves, and DN 40…200 mm for the spools of the valves.
- **SP-600**: Ø 620 mm). For the wedges of the gate valves DN 50…150 mm .

SP-1200

SP-600

ADVANTAGES:

Each point of the lapped surface of the parts makes surface.

The machines are equipped with the polishing-compound supply device.

The spent compound is collected in a special tank.

The lapping time is automatically controlled by the timer.

The machines are equipped with the smooth start device with the lapping-plate speed adjustment.

The machines are designed so that the lapping disc can be adjusted during its operation.

SPECIFICATOIN:

Parameter	SP-1200	SP-600
Valve range, DN, mm	50…600 (2...24)	15...150** / 50...150** (½...6** / 2...6)
Lapping-plate diameter, mm	1250 (49)	620 (24)
Number of cartridges	3 / 1	3
Internal diameter of the cartridges, mm	550 / 830 (21 / 32)	266 (10)
Machined-surface roughness,	0,08…0,1	0,08...0,1
Machined-surface nonflatness (accuracy), mkm	0,6	
Lapping-plate speed, rpm	5…40	10...50
Installed power, kW	8	4
Electric power supply, V/Hz	400/50 (480/60*)	
Working pressure of network air, bar (psi)	6,3 (91)	-
Weight, kg	2100	630

*

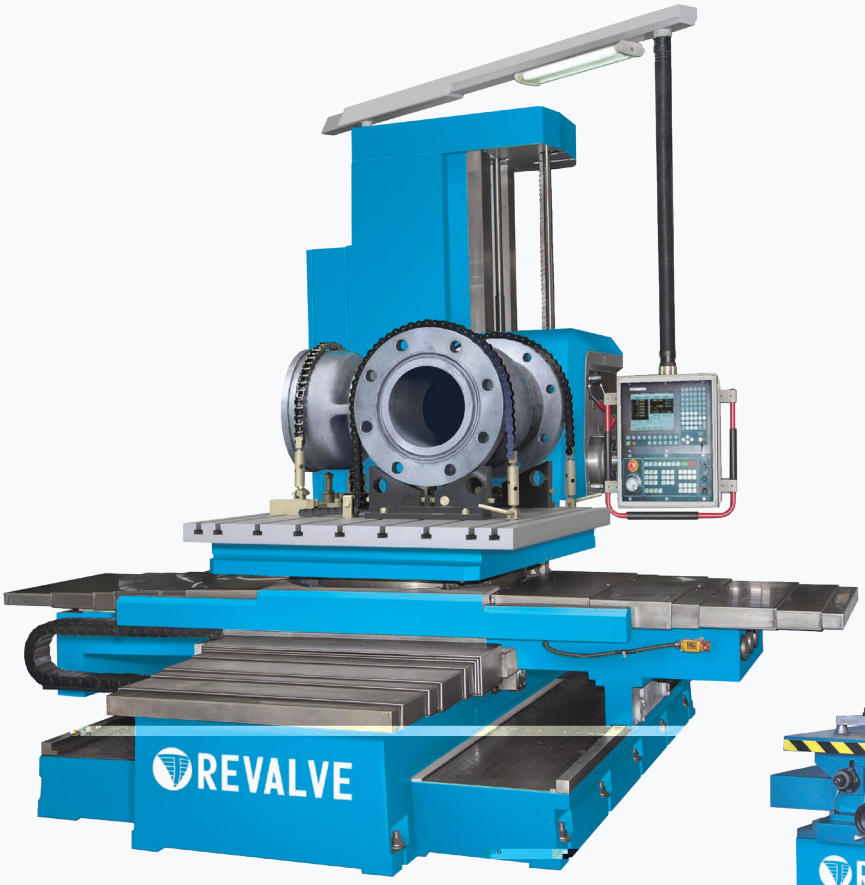
SR
SPECIALIZED BORING MACHINE FOR MECHANICAL TREATMENT OF VALVE TRIM COMPONENTS DN up to 1200 mm (48″)

PURPOSE:

- treatment (drilling, boring, milling) of pipeline valves, including treatment of main-line and medium sized flanges, seal faces of bodies and gate wedges, flanges and welding ends edges for welding of DN up to 1200 mm .

TREATED ITEMS:

- wedge gate valves.



SR-1200

SR-800

ADVANTAGES:

An advanced high performance machines with automated continuous control system.

Precise cutting and a wide range of technological functions create conditions for its versatile application thus providing treatment of both seal faces of the valve body as well as a flanges at a single placement on the bench.

CNC control system provides continuous machine

provides automated tilted positioning of the table, allowing treatment of seal faces of the fittings with different angles of a wedge chamber.

Implementation of placing and clamping devices provides quick placement of the valves and fittings to the machine table.

SPECIFICATIONS:

Parameter	SR-1200	SR-800
Valve range, DN, mm	600...1100 (24...43)	50...1000 (2...39)
Diameter of carrier spindle, mm	130 (5)	-
Cone cavity of the carrier spindle	ISO 50	-
Transverse displacement of table, mm	2000 (79)	±100 (4)
Lengthwise,	1600 (63)	±120 (5)
Support motion,	170 (7)	100 (4)
Vertical travel of spindle head, mm	2000 (79)	1200 (47)
Tilt angle of the table, degrees	-	±12
Securing face of the table, mm		
(lbs)	25000 (55116)	2000 (4409)
Total power consumption, kW	82	28
Electric power supply, V/Hz	400/50	
Weight, kg	37450	12500

SPSH
MACHINES FOR GRINDING & LAPPING OF THE PIPELINE VALVES DN 15...1000 mm (½...40")

PURPOSE:
- machines are designed for grinding and lapping of the flat sealing surfaces of the housings and wedges of the gate valves, housings and spools of the stop valves (globe valves), safety valves and other flat surfaces.

TYPE OF VALVE:
- gate valve;
- globe valve;*
- safety valve.*

DN OF VALVE:
Stationary units:
- **SPSH-600-N**: DN 50…600 mm ;
- **SPSH-1000-N**: DN 300…1000 mm .

Unit with two tilting tables:
- **SPSH-600-NN**: DN 50…600 mm .

Table base units:
- **SPSH-300-NN**: DN 15…300 mm ;
- **SPSH-300-VV**: DN 15…300 mm (½
- **SPSH-300-NV**: DN 15…300 mm (½ .

SPSH-1000-N

ADVANTAGES:
The tilted table with adjustable tilt angle simplifies the installation procedure and allows machining of sealing surfaces at various tilt angles.
The coordinate device ensures the part installation by three coordinates (tilt angle and positioning with respect

To make installation procedure of workpiece more simple the column can turn on 290° relatively its base.
Digital indication of spindle rotational speed is provided.
The tool drawer unit allows to store replaceable accessories.

Uniform lapping plate and the adapter with eccentric allows to achieve high flatness of the surface.
Machines allow to conduct processing of valve parts on

and valve fastening on the second one (SPSH-600-NN, SPSH-300-NN, SPSH-300-VV).

to increase the capacity of sealing surfaces treatment process (SPSH-300-VV).
Lathe three-jaw chuck allows to install the valve bodies and spools of small size (SPSH-300-VV).

SPSH
MACHINES FOR GRINDING & LAPPING OF THE PIPELINE VALVES DN 15...1000 mm (½...40″)

SPSH-600-N

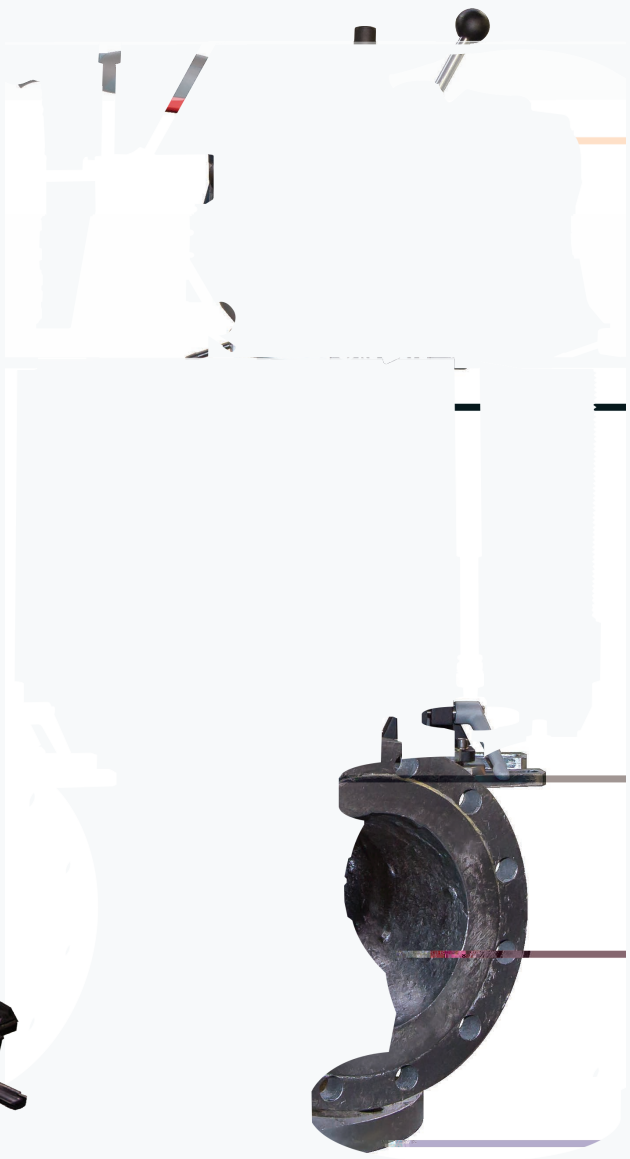
SPSH-300-VV

SPECIFICATIONS:

Parameter	SPSH-1000-N	SPSH-600-N	SPSH-600-NN	SPSH-300-NN	SPSH-300-VV	SPSH-300-NV
Valve range, DN, mm	300…1000 (12...40)	50…600 (2...24)			15…300 (½...12)	
valve flange, mm	1255 (50)	890 (36)			500 (19)	
mounted valve, mm	1750 (69)	1150 (46)		700 (27)		750 (30)
part, kg	2500	1000			500	
Dimensions of the table working surface, mm					Ø 500 (19)	
Tilt angle of the table, degrees	0…12					
Spindle rotation speed adjustment	stepless					
Spindle rotation speed, rpm	10…150	14…200		10…240		
	0,2…0,4					
Installed power, kW	2,0	2,6		2,0	3	2,2
Power supply, V/Hz	400/50					
Weight (with tooling package), kg	3100	1420	2120	1200		

COMPLETE SET:

-



PUR-KK-100, PUR-KP-150

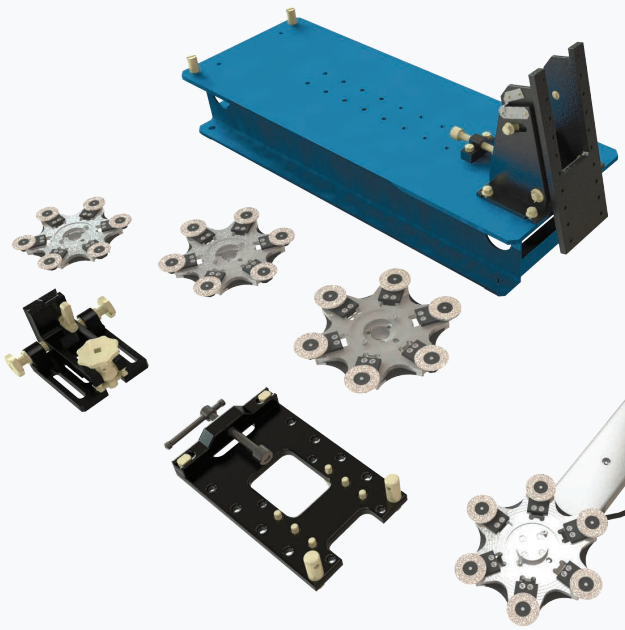
PORTABLE MACHINE FOR GRINDING AND LAPPING OF GLOBE & SAFETY VALVES DN 8...150 mm (5/16...6")

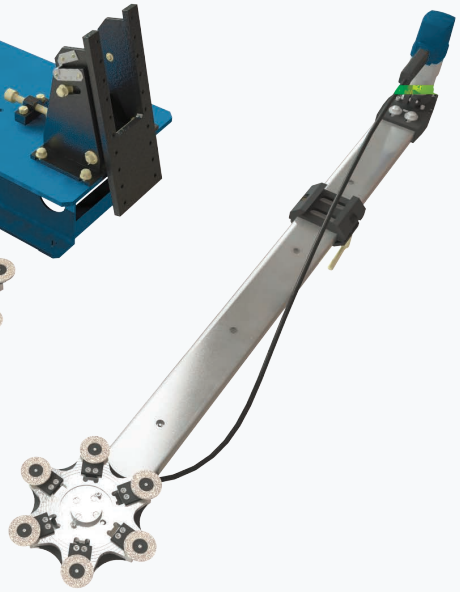
SPECIFICATIONS:

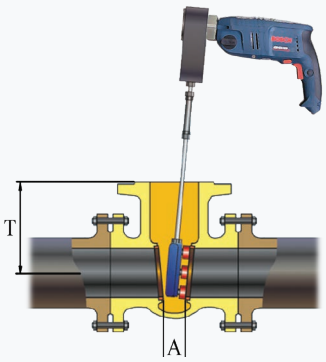
Parameter	GLOBE AND SAFETY VALVES	
	PUR-KK-100	PUR-KP-150
Valve range, DN, mm	8...100 mm	8...150 mm
actuator flange end), mm	330 (13)	260 (10)
Pneumatic-driven machine		
	1300	1300
Drive power on 6,3 bar pressure, kW	0,7	0,7
Air consumption, l/min	1000	1000
Air drive pressure, bar	6,3±0,5	6,3±0,5
Machine with non-accumulator electric drive (wired)		
st gear/ 2nd gear)	1000/2800	1000/2800
Power consumption, kW	1,2	1,2
Drive torque, N m (1st gear/ 2nd gear)	33,0/13,0	33,0/13,0
Power supply, V/Hz	220/50	220/50
Machine with accumulator electric drive (wireless)		
st gear/ 2nd gear)	500/1700	500/1700
Drive torque, N m (1st gear/ 2nd gear)	24,0/11,0	24,0/11,0
Weight of the machine (w/o packing), kg	13,3	10
Packed weight, kg	27,5	22

PUR-1, PUR-2, PUR-3, PUR-450

PORTABLE MACHINE FOR GRINDING AND LAPPING OF GATE VALVES DN 50...1000 mm (2...40")



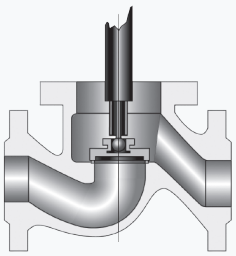




SPECIFICATION:

Parameter	PUR-1	PUR-2	PUR-3	PUR-450
Valve range, DN, mm	50…250 (2...10)	200…600 (8...24)	600…1000 (24...40)	80…450 (3...18)
Immersion depth - T, mm	635 (25)	1000 (40)	1110 (44)	1000 (40)
	40 (2)	87 (3)	200 (8)	45 (2)
Electric drive:				
- power supply, V/Hz;	230 /50			
- power consumption, kW.	1,3	1,6	1,3	1,6
Pneumatic drive:				
- power, kW;	0,83	1,17	0,8	1,17
- air flow rate, m³/min (gl/min);	1,6 (423)			
- compressed-air working pressure, bar (psi).	6,3 (91)			
Weight, kg:				
- the heaviest mounted assembly;	13,6	22	68	16
- set.	49	190	360	140

PUR-5
PORTABLE MACHINE FOR GRINDING & LAPPING OF GLOBE & SAFETY VALVES DN 32...200 mm (1¼...8")



SPECIFICATIONS:

Parameter	GLOBE AND SAFETY VALVES
	PUR-5
Valve range, DN, mm	32...200 mm (1¼...8) (25...200 mm (1...8) for safety valve)
Electric drive:	
- power supply, V/Hz;	230 / 50
- power consumption, kW.	1,3
Pneumatic drive:	
- power, kW;	0,83
- air flow rate, m³/min (gl/min);	1,6 (423)
- compressed-air working pressure, bar (psi).	6,3 (91)
	200 (8)
Weight, kg:	
- the heaviest mounted assembly;	7
- set (with pneumatic and electric drive).	60

MOBILE WORKSHOPS

PURPOSE:

- Ready-to-use mobile workshops based on offshore containers are highly useful for maintaining of valves on the end-user site or on the offshore platforms during a shutdown or if a regular on call repair is required.

- Modular design of mobile workshops allows to adopt them as per customer requirements and climate conditions. Workshops lineup allows to solve all kind of issues with valves overhauling at sites such as high pressure testing, calibration and maintenance of different kind of valves.

AVAILABLE FUNCTIONS OF THE WORKSHOPS:

1. Disassembling/assembling of the valves.
2. Washing/sandblasting of the valve parts.

- shell test acc. to API 598, API 6D, ISO 5208 etc.;
- seat leakage test (cavities A to B, B to A) acc. to API 598, API 6D, ISO 5208 etc.;
- backseat test acc. to API 598, API 6D, ISO 5208 etc.;
- DBB/DIB test acc. to API 598, API 6D;
- control valve seat leakage test, acc. to ANSI FCI 70.2, IEC 60534-4, EN 1349 etc.

4. Testing of pressure safety valves:
   - set pressure definition acc. to API 526, ASME Section VIII, API RP 576;
   - reseat pressure definition acc. to API 526, ASME Section VIII, API RP 576;
   - seat leakage test acc. to API 527.
5. Test reports forming.
6. Grinding and lapping of sealing surfaces.
7. Minor machining of the valve parts.

FOR CUSTOMER CONVENIENCE, WORKSHOP CAN BE EQUIPPED WITH:

1. Jib or overhead crane 0,5 ton or 1 ton capacity.
2. Heating, ventilating and air conditioning (HVAC system).
3. Armored wall between operator and testing room with door interlock.
4. Pressure isolated operator room.
5. Remote video control (CCTV).
6. Various furniture (wardrobe, chairs, table etc.).
7. Doors or gates on the sides of the workshop.
8. Portable on-site PSV testing unit.
9. Portable grinding and lapping unit.

WORKSHOPS ARE BASED ON:

- 10ft sea container;
- 20ft sea container (dry-cube and high-cube);
- 40ft sea container (dry-cube and high-cube).

UPON REQUEST, WORKSHOPS ARE CERTIFIED FOR:

- CSC for easy transportation;
- DNV GL 2.7-1 for offshore use;
-

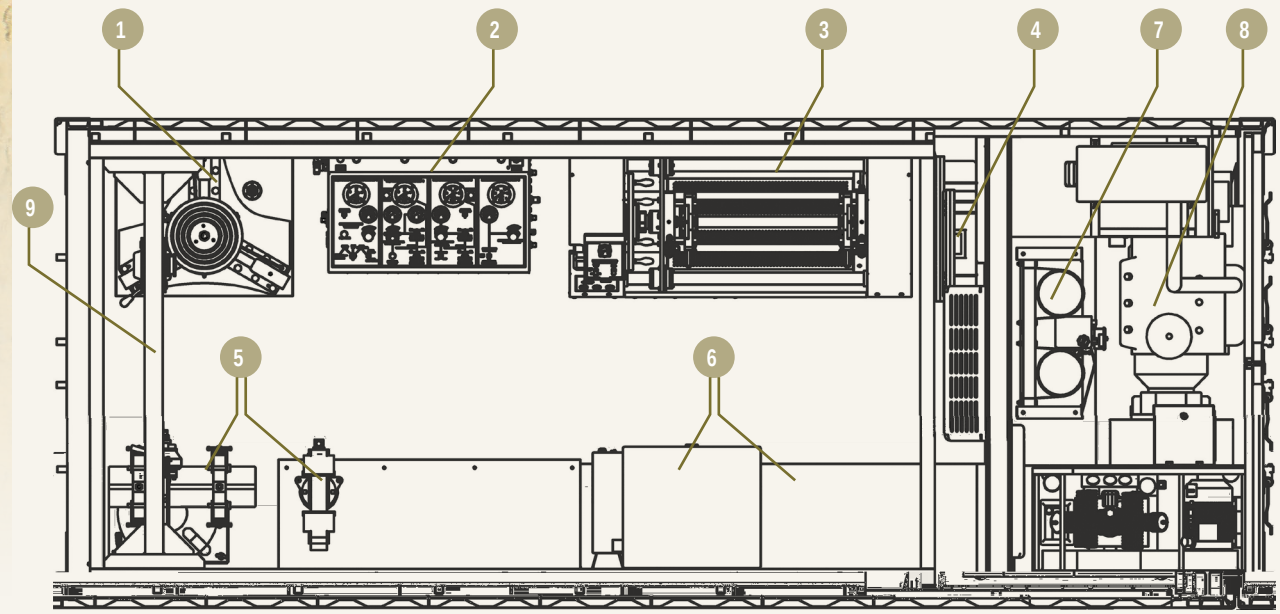
WORKSHOPS ARE DESIGNED FOR VARIOUS CLIMATE ZONES FROM -55 TO +50 C°

20FT TRUCK-MOUNTED TESTING WORKSHOP
FOR SHUT OFF & CONTROL VALVES

MM-TR 20

COMPLETE SET:

1. Clamping system for PSV up to DN 300 mm (12").
2. Control station.
3. Horizontal clamping system for shut-off and control valves up to DN 250 mm (10").
4. Portable machine for grinding and lapping.
5. Work station for valves assembling/ disassembling DN 300 mm (12").
6. Valve washing/cleaning machines.
7. Compressor unit.
8. Diesel generator.
9. Jib/overhead crane.

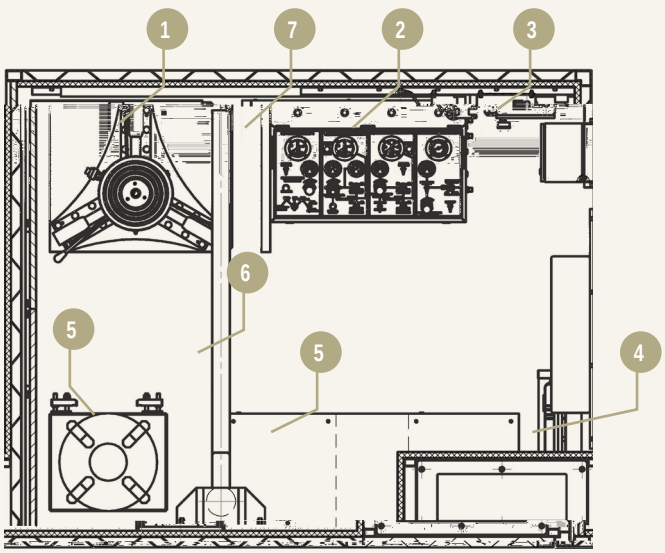


10FT OFFSHORE WORKSHOP
FOR PSV TESTING AND MINOR REPAIRING

MM-T 10

COMPLETE SET:

1. Clamping system for PSV up to DN 300 mm (12").
2. Control station.
3. Computer registration system.
4. Portable machine for grinding and lapping.
5. Work station for valves assembling / disassembling DN 300 mm (12").
6. Jib crane.
7. Safety fence.



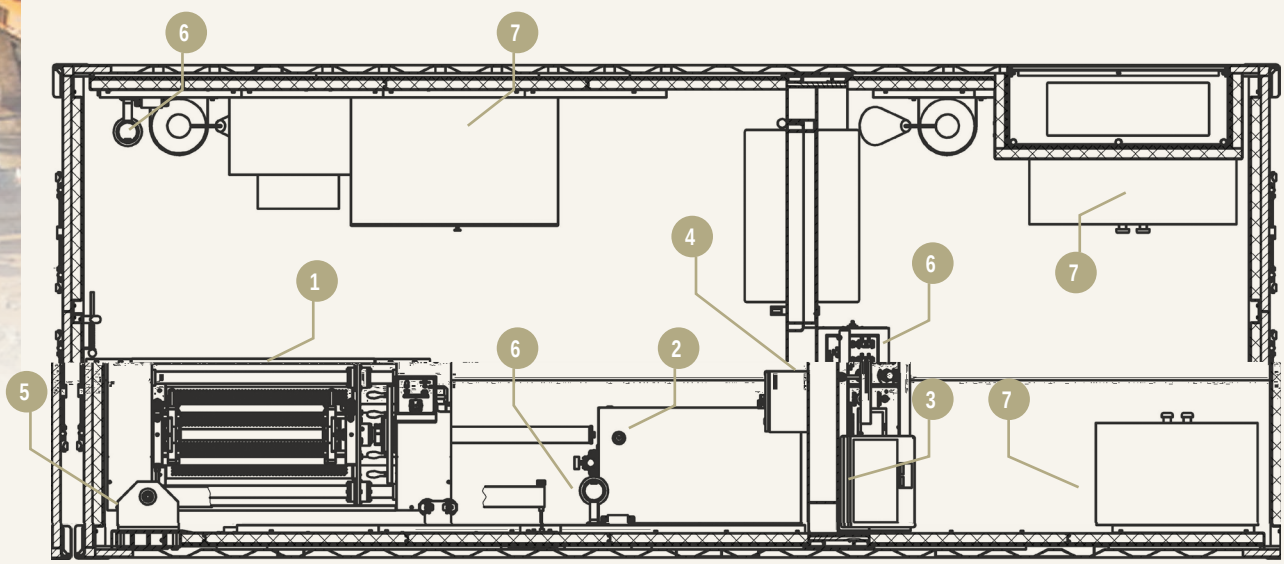
20FT ONSHORE WORKSHOP

FOR HP GAS/LIQUID TESTING OF SHUT OFF VALVES WITH PRESSURE ISOLATED OPERATOR ROOM

MM-T 20

COMPLETE SET:

1. Horizontal clamping system for shut-off and control valves up to DN 250 mm (10").
2. Control station.
3. Computer registration system.
4. Armored wall with door.
5. Jib crane.
6. Remote video control (CCTV).
7. Storage units.



EQUIPMENT FOR TESTING

HORIZONTAL TEST BENCHES FOR HYDRAULIC AND PNEUMATIC TESTING OF SHUT OFF & CONTROL VALVES

PURPOSE:

- shell test acc. to API 598, API 6D, ISO 5208 etc.;
- seat leakage test (cavities A to B, B to A) acc. to API 598, API 6D, ISO 5208 etc.;
- backseat test acc. to API 598, API 6D, ISO 5208 etc.;
- DBB/DIB test acc. to API 598, API 6D;
- control valve seat leakage test, acc. to ANSI FCI 70.2, IEC 60534-4, EN 1349 etc.

TESTED VALVES:

- gate valves;
- ball valves;
- butterfly valves;
- check valves;
- plug valves;
- control valves.

CONNECTION TYPE:

- flanged (according to ASME B 16.5, ASME B 16.47, GOST 12815 etc.);
- welded ends (according to ASME B 16.25, GOST 16037, etc.);*
- set of sealing adapters available.*

ADVANTAGES:

Clamping of tested valve is provided by hydraulic cylinder. Optionally test bench can be equipped with clamping by hydraulic cylinder, during high pressure testing.*

Clamping unit can be provided with radial sealing type or self-sealing adapters.*

Two-sided gate sealing during tests does not require the tested valve rearrangement, which significantly reduces the test time.

The bench is equipped with a special system for air removal from the tested valve, which improves safety, productivity, reliability of the obtained data, and obviates the need for additional air drain.*

The bench is equipped with the water-collection tray with stainless steel tank.*

Test preparation time is significantly reduced by using the high-pressure quick-connect hoses.

The bench is quickly adjusted to face-to-face dimensions of valve by using the hydraulically or electrically driven cross-head.

The patented design of the self-sealing adapters ensures the test reliability, protects the valves against

All water-wetted parts are corrosion-proof.

The bench can be equipped with replaceable sealing adapters.*

Increased-diameter hoses reduce the time of the valve filling with the test medium.

Test bench can be equipped with valve lifting platforms for valve positioning and support during testing.*

DEPENDENCE OF THRUST FORCE (T) ON VALVE CHARACTERISTICS:

DN, mm (") / class	10	15 (½)	20 (¾)	25 (1)	32 (1 ¼)	40 (1 ½)	50 (2)	65 (2 ½)	80 (3)	100 (4)	125 (5)	150 (6)	200 (8)	250 (10)	300 (12)	350 (14)	400 (16)	500 (20)	600 (24)	700 (28)	750 (30)	800 (32)	900 (36)	1000 (40)	1050 (42)	1200 (48)	1250 (50)	1300 (52)	1400 (56)
cl.150	15	15	15	15	15	15	15	15	15	15	15	15	15	40	40	40	65	100	100	160	160	250	350	350	350	500	500	500	500
cl.300	15	15	15	15	15	15	15	15	15	15	15	40	40	65	65	100	100	220	250	350	500	500	600	750	750	1100	1100	1100	1300
cl.600	15	15	15	15	15	15	15	15	15	40	40	40	65	100	160	220	220	350	500	750	750	850	1100	1300	1600	2000	2000	2800	2800
cl.900	15	15	15	15	15	15	15	15	15	40	40	65	100	160	220	250	350	600	750	1100	1100	1300	1600	2000	2800	2800	3200	3200	4000
cl.1500	15	15	15	15	15	15	15	40	40	65	100	100	160	220	350	500	600	850	1300	1600	2000	2800	2800	3200	4000				
cl.2500	15	15	15	15	15	15	40	40	65	100	160	160	250	350	600	750	1100	1600	2000	2800	3200	4000							

Parameters based on face sealing of RF flanged valves.

OPTIONAL:


CRS-M
p. 64


PGS
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UK
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SOV
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VU
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B, SVN
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SI-PRA
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BR
p. 69


MIP-W
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S-6-1400/4000, S-6-1400/3200, S-6-1400/2800
TEST BENCHES FOR SHUT OFF & CONTROL VALVES DN 400...1400 mm (16...56")

S-6-1400/4000

Maximum test pressure, bar (psi)

DN, mm (")	cl.150...900		cl.1500			cl.2500
	235 (3400)	305 (4400)	395 (5700)	435 (6300)	530 (7600)	630 (9100)
600...800 (24..32)	■	■	■	■	■	
900 (36)	■	■	■	■	■	#
1000 (40)	■	■	■	■		
1050 (42)	■	■	■			
1200 (48)	■	■				
1400 (56)	■					

by use of inner Radial seal adapters.

S-6-1400/3200

Maximum test pressure, bar (psi)

DN, mm (")	cl.150...600	cl.900			cl.1500		cl.2500
	185 (2600)	240 (3400)	315 (4500)	345 (5000)	420 (6000)	595 (8600)	630 (9100)
500...700 (20...28)	■	■	■	■	■	■	
800 (32)	■	■	■	■	■	■	#
900 (36)	■	■	■	■	■		
1000 (40)	■	■	■	■	#		
1050 (42)	■	■	■				
1200 (48)	■	■					
1400 (56)	■						

S-6-1400/2800

Maximum test pressure, bar (psi)

DN, mm (")	cl.150...600		cl.900		cl.1500		cl.2500
	160 (2300)	210 (3000)	275 (4000)	305 (4400)	375 (5400)	520 (7500)	630 (9100)
400...700 (16...28)	■	■	■	■	■	■	■
800 (32)	■	■	■	■	■	■	
900 (36)	■	■	■	■	■		
1000 (40)	■	■	■	■			
1050 (42)	■	■	■				
1200 (48)	■	■	#				
1400 (56)	■						

SPECIFICATIONS:

Parameter	S-6-1400/4000	S-6-1400/3200	S-6-1400/2800
	4000	3200	2800
	800/3400 (32/134)	800/3400 (32/134)	600/3400 (24/134)
Distance between the screws, mm	2950 (115)		2620 (103)
Weight, kg	80000	70000	60000

S-6-1200/2000, S-5-1050/1600, S-5-1050/1300
TEST BENCHES FOR SHUT OFF & CONTROL VALVES DN 150...1400 mm (6...56")

S-6-1200/2000

Maximum test pressure, bar (psi)

DN, mm (")	cl.150...300	cl.600			cl.900	cl.1500		cl.2500	
	120 (1700)	165 (2400)	200 (2900)	230 (3300)	285 (3700)	360 (5200)	470 (6800)	630 (9100)	650 (9400)
400...500 (16...20)									
600 (24)									
700 (28)									
800 (32)									
900 (36)									
1000 (40)					#				
1050 (42)				#	#				
1200 (48)*									
1400 (56)*									

S-5-1050/1600

Maximum test pressure, bar (psi)

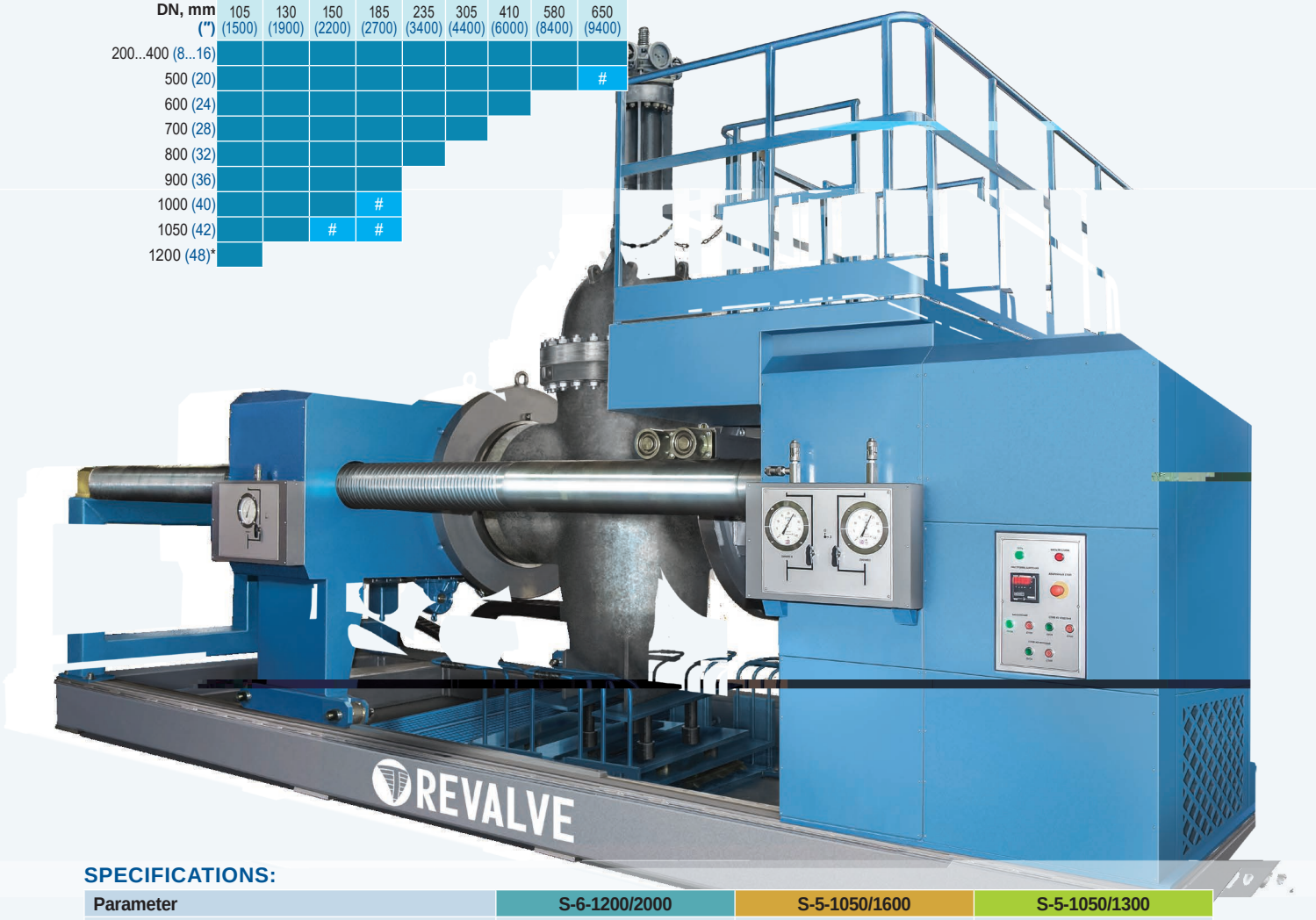
DN, mm (")	cl.150...300		cl.600			cl.900	cl.1500		cl.2500
	100 (1500)	130 (1900)	160 (2300)	185 (2700)	230 (3300)	290 (4200)	375 (5400)	505 (7300)	650 (9400)
400...500 (16...20)									
600 (24)									
700 (28)									
800 (32)									
900 (36)						#			
1000 (40)									
1050 (42)									
1200 (48)*									
1400 (56)*									

by use of inner Radial seal adapters.

S-5-1050/1300

Maximum test pressure, bar (psi)

DN, mm (")	cl.150...300			cl.600	cl.900		cl.1500		cl.2500
	105 (1500)	130 (1900)	150 (2200)	185 (2700)	235 (3400)	305 (4400)	410 (6000)	580 (8400)	650 (9400)
200...400 (8...16)									
500 (20)									#
600 (24)									
700 (28)									
800 (32)									
900 (36)									
1000 (40)				#					
1050 (42)			#	#					
1200 (48)*									



SPECIFICATIONS:

Parameter	S-6-1200/2000	S-5-1050/1600	S-5-1050/1300
	2000	1600	1300
stationary cross-heads, mm	600/3400 (23/134)	600/3400 (23/134)	400/2600 (16/102)
Distance between the screws, mm	2500 (98)	2000 (78)	1750 (69)
Weight, kg	40000	34000	30000

S-5-900/850, S-6-800/750, S-5-1000/600, S-5-600/500

TEST BENCHES FOR SHUT OFF & CONTROL VALVES DN 100...1400 mm (4...56")

S-5-900/850

Maximum test pressure, bar (psi)

DN, mm (")	cl.150...300		cl.600		cl.900	cl.1500		cl.2500
	100 (1500)	120 (1700)	155 (2200)	200 (2900)	270 (3900)	380 (5500)	585 (8500)	650 (9400)
200...350 (8...14)	■	■	■	■	■	■	■	■
400 (16)	■	■	■	■	■	■	■	#
500 (20)	■	■	■	■	■	■		
600 (24)	■	■	■	■	■			
700 (28)	■	■	■	■	#			
800 (32)	■	■	■					
900 (36)	■	■						
1000 (40)*	■							

S-6-800/750

Maximum test pressure, bar (psi)

DN, mm (")	cl.150...300			cl.600	cl.900		cl.1500	cl.2500
	85 (1200)	105 (1500)	135 (2000)	175 (2500)	235 (3400)	335 (4900)	515 (7500)	650 (9400)
150...350 (6...14)	■	■	■	■	■	■	■	■
400 (16)	■	■	■	■	■	■	■	
500 (20)	■	■	■	■	■	■	#	
600 (24)	■	■	■	■	■			
700 (28)	■	■	■	■				
800 (32)	■	■	■	#				
900 (36)*	■	■						
1000 (40)*	■							

S-5-1000/600

Maximum test pressure, bar (psi)

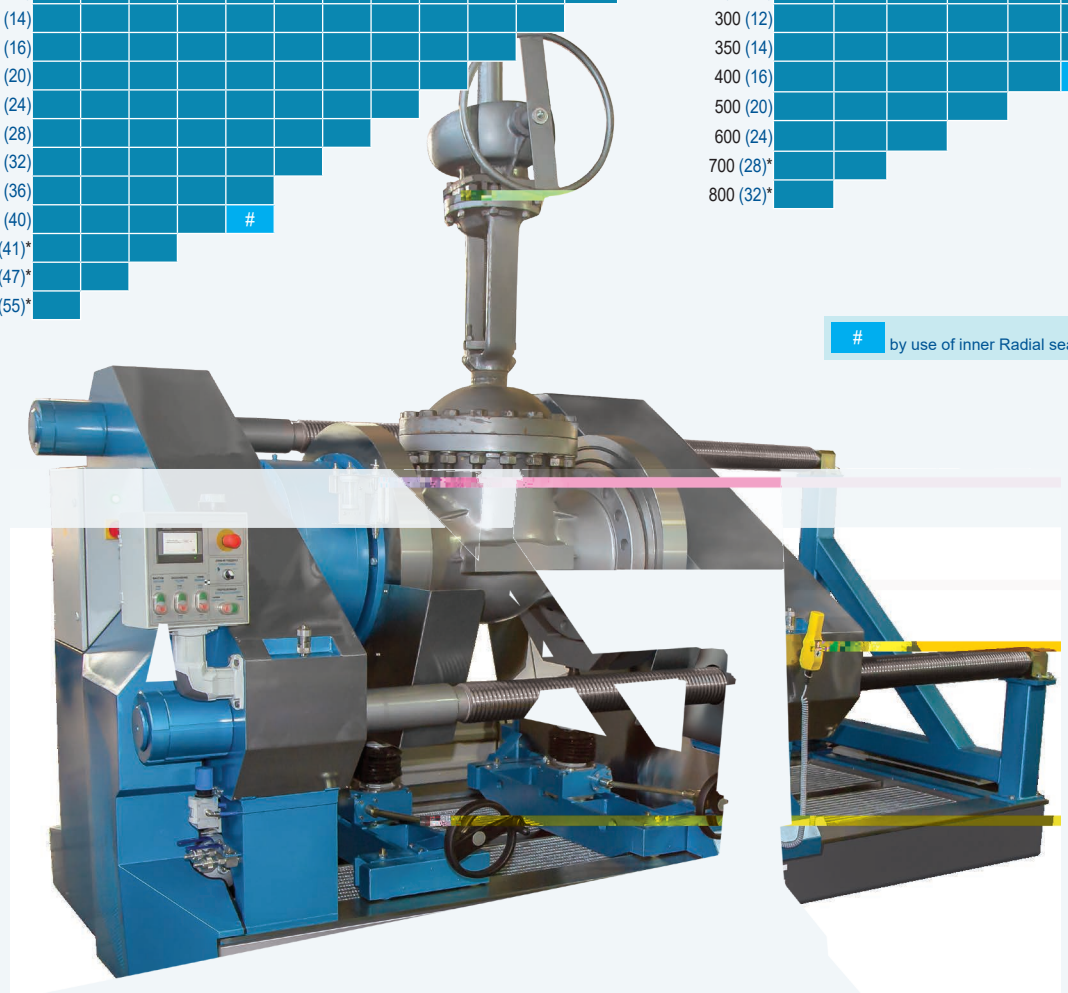
DN, мм (")	cl.150				cl.300		cl.600		cl.900	cl.1500		cl.2500
	40 (580)	50 (700)	60 (900)	70 (1000)	85 (1200)	110 (1500)	140 (2000)	190 (2800)	265 (3900)	410 (6000)	535 (7800)	650 (9400)
100...300 (4...12)	■	■	■	■	■	■	■	■	■	■	■	■
350 (14)	■	■	■	■	■	■	■	■	■	■	■	
400 (16)	■	■	■	■	■	■	■	■	■	■		
500 (20)	■	■	■	■	■	■	■	■	■			
600 (24)	■	■	■	■	■	■	■	■				
700 (28)	■	■	■	■	■	■	■					
800 (32)	■	■	■	■	■	■						
900 (36)	■	■	■	■	■							
1000 (40)	■	■	■	■	#							
1050 (41)*	■	■	■									
1200 (47)*	■	■										
1400 (55)*	■											

S-5-600/500

Maximum test pressure, bar (psi)

DN, mm (")	cl.150...300		cl.600	cl.900		cl.1500		cl.2500
	90 (1300)	115 (1700)	155 (2200)	220 (3200)	330 (4800)	435 (6300)	570 (8300)	650 (9400)
100...250 (4...10)	■	■	■	■	■	■	■	■
300 (12)	■	■	■	■	■	■	■	#
350 (14)	■	■	■	■	■	■		
400 (16)	■	■	■	■	■	#		
500 (20)	■	■	■	■				
600 (24)	■	■	■					
700 (28)*	■	■						
800 (32)*	■							

by use of inner Radial seal adapters.

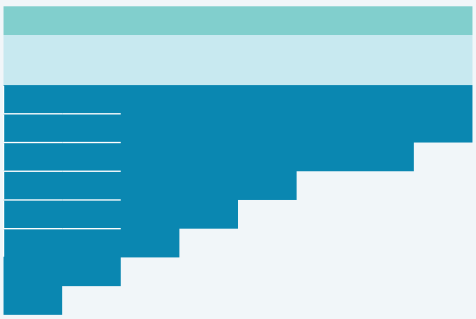


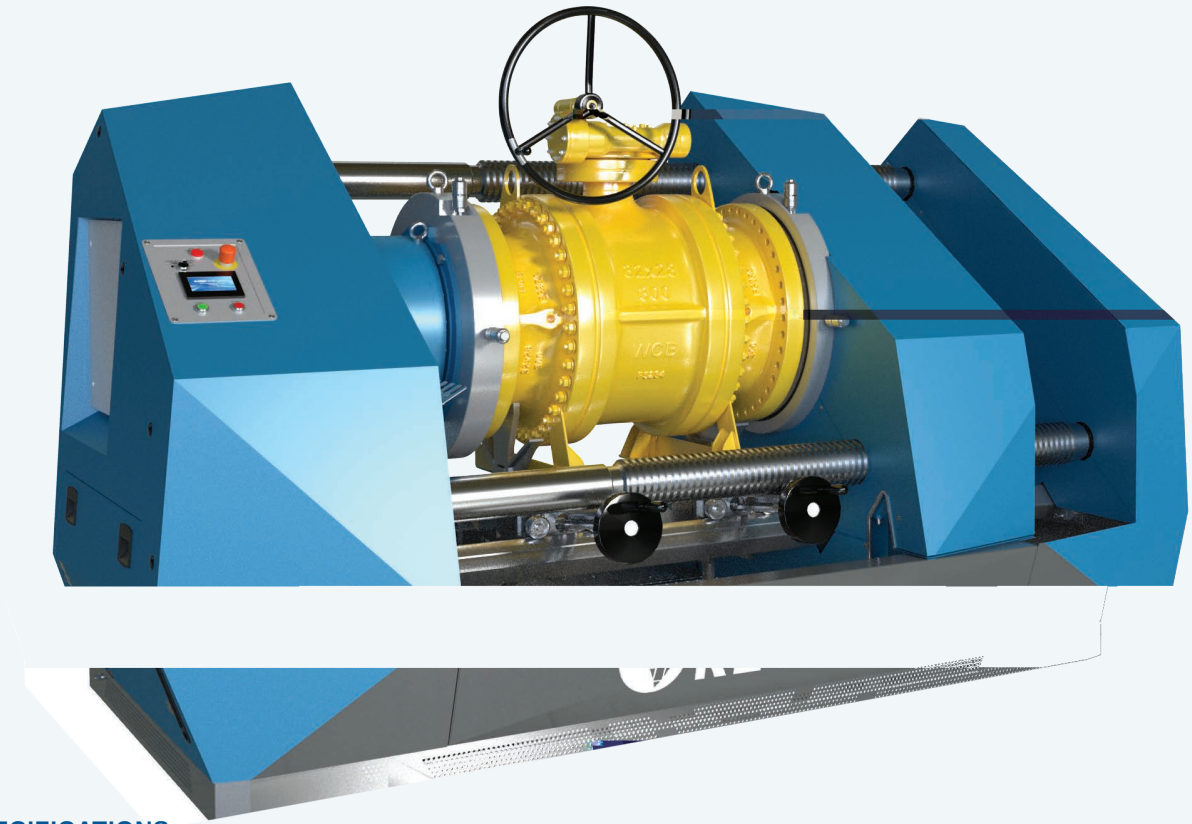
SPECIFICATIONS:

Parameter	S-5-900/850	S-6-800/750	S-5-1000/600	S-5-600/500
	850	750	600	500
stationary cross-heads, mm	400/2300 (15/90)	220/2800 (8/110)	170/2800 (6/110)	170/2125 (7/84)
Distance between the screws, mm	1532 (60)	1620 (64)	1675 (66)	1120 (44)
Weight, kg	24000	15000	12000	7475

S-5-600/350, S-5-500/250, S-6-500/160, S-5-600/500
TEST BENCHES FOR SHUT OFF & CONTROL VALVES DN 10...700 mm (⅜...28″)

S-5-600/350





SPECIFICATIONS:

Parameter	S-5-600/350	S-5-500/250	S-6-500/160	S-5-600/500
(lbs)	350	250	160	500
cross-heads, mm	150/2125 (6/84)	100/1270 (4/50)	66/1506 (2½ / 4)	2125 (84)
Distance between the screws, mm	1090 (43)	816 (32)	1004 (40)	1120 (44)
Weight, kg	6300	3640	3436	7475

S-5-300/65, S-5-150/40

TEST BENCHES FOR SHUT OFF & CONTROL VALVES DN 10...400 mm (⅜...16")

S-5-300/65

Maximum test pressure, bar (psi)

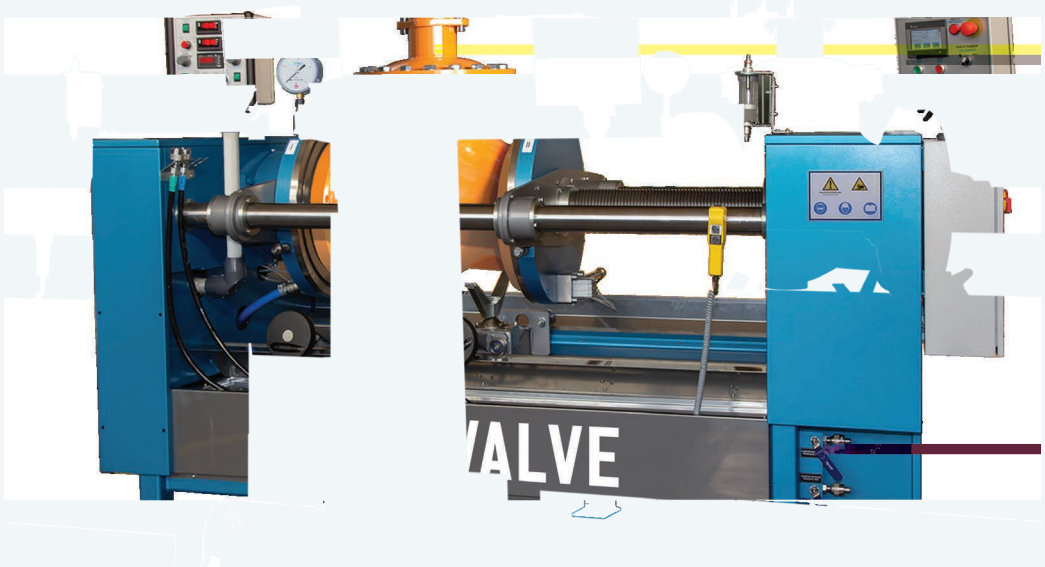
DN, mm (")	cl.150	cl.300		cl.600	cl.900	cl.1500	cl.2500
	63 (900)	80 (1100)	100 (1500)	160 (2300)	250 (3600)	400 (5800)	650 (9400)
10...100	■	■	■	■	■	■	■
125 (5)	■	■	■	■	■	■	
150 (6)	■	■	■	■	■		
200 (8)	■	■	■	■			
250 (10)	■	■	■				
300 (12)	■	■					
350 (14)*	■						

S-5-150/40

Maximum test pressure, bar (psi)

DN, mm (")	cl.150...600	cl.900	cl.1500	cl.2500
	150 (2200)	250 (3600)	420 (6000)	650 (9400)
10...65	■	■	■	■
80 (3)	■	■	■	■
100 (4)	■	■	■	
125, 150 (5, 6)	■	■		

by use of inner Radial seal adapters.



SPECIFICATIONS:

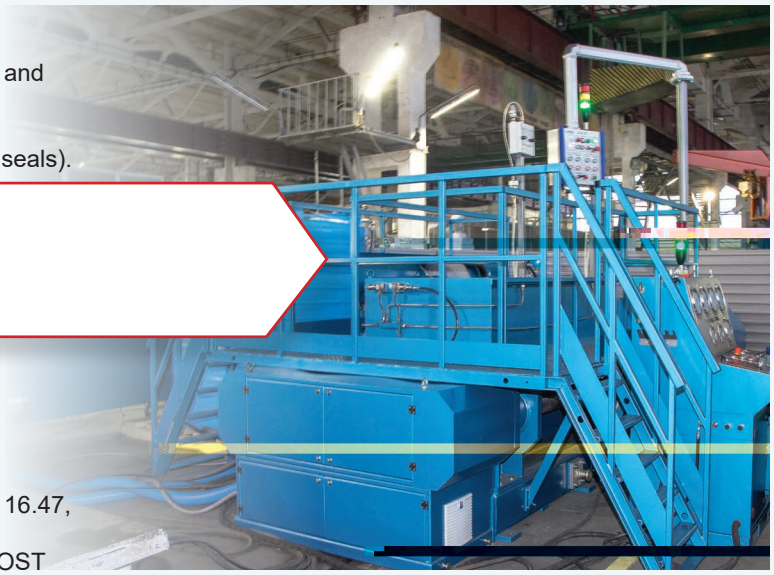
Parameter	S-5-300/65	S-5-150/40
	65	40
cross-heads, mm	60/900 (2/35)	40/600 (1/23)
Distance between the screws, mm	525 (20)	337 (13)
Weight, kg	1675	885

S-5P-600/500

TEST BENCHES FOR SUBMERGED TESTING SHUT OFF & CONTROL VALVES DN 10...600 mm (....24")

PURPOSE:

- submerged gas testing of pipeline valves;
- testing of the body part materials for strength and density (shell test);
- gate tightness tests;
- environmental leakage tests (including gland seals).

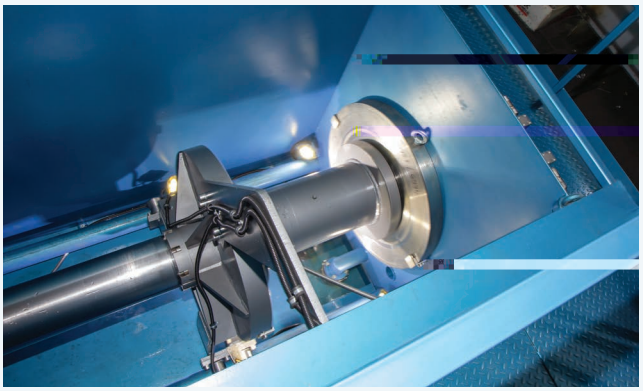


TESTED VALVES:

- cryogenic valves;
- gate valves;
- ball valves;
- butterfly valves;
- check valves;
- control valves;
- globe valves.

CONNECTION TYPE:

- flanged (according to ASME B 16.5, ASME B 16.47, GOST 12815 etc.);
- welded ends (according to ASME B 16.25, GOST 16037, etc.);*
- threaded-ends for a small size valves;*
- set of sealing adapters available.*



ADVANTAGES:

Clamping of tested valve is provided by hydraulic cylinder. Optionally test bench can be equipped with clamping by hydraulic cylinder, during high pressure testing.*

Clamping unit can be provided with radial sealing type or self-sealing adapters.*

Two-sided gate sealing during tests does not require the tested valve rearrangement, which significantly reduces the test time.

The bench is equipped with a special system for air removal from the tested valve, which improves safety, productivity, reliability of the obtained data, and obviates the need for additional air drain.*

The bench is equipped with the water-collection tray with stainless steel tank.*

Test preparation time is significantly reduced by using the high-pressure quick-connect hoses.

The bench is quickly adjusted to face-to-face dimensions of valve by using the hydraulically or electrically driven cross-head.

The patented design of the self-sealing adapters ensures the test reliability, protects the valves against

All water-wetted parts are corrosion-proof.

The bench can be equipped with replaceable sealing adapters.*

Increased-diameter hoses reduce the time of the valve filling with the test medium.

Test bench can be equipped with valve lifting platforms for valve positioning and support during testing.*

OPTIONAL:


CRS-M
p. 64


PGS
p. 46


UK
p. 66


SOV
p. 67


VU
p. 67


B, SVN
p. 68


SI-PRA
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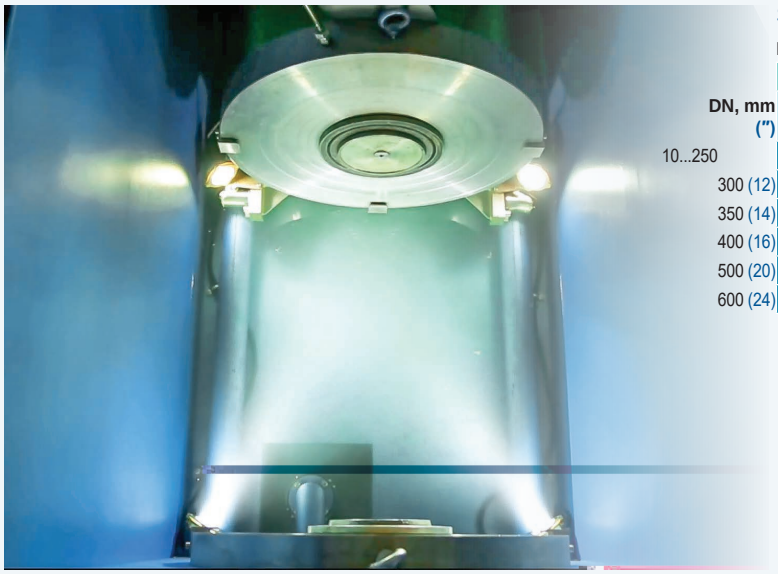
BR
p. 69


MIP-W
p. 69

S-5P-600/500

TEST BENCHES FOR SUBMERGED TESTING SHUT OFF & CONTROL VALVES DN 10...600 mm (....24")



S-5P-600/500

Maximum test pressure, bar (psi)

DN, mm (")	cl.150...600	cl.900		cl.1500		cl.2500
	160 (2300)	230 (3300)	355 (5100)	460 (6600)	615 (8900)	630 (9100)
10...250	■	■	■	■	■	■
300 (12)	■	■	■	■	■	#
350 (14)	■	■	■	■		
400 (16)	■	■	■	#		
500 (20)	■	■				
600 (24)	■					

by use of inner Radial seal adapters.

SPECIFICATIONS:

Parameter	S-5P-600/500
	500
	180/1850 (7/73)
Distance between the screws, mm	1300 (51)
Power supply, V/Hz	400/50
Motor power, kW	18
Weight, kg	12300

S-5P-80/6-5

MULTI-STATION TEST BENCH FOR SUBMERGED GAS TESTING OF SHUT OFF VALVES DN 15...80 mm (½...3″)

PURPOSE:

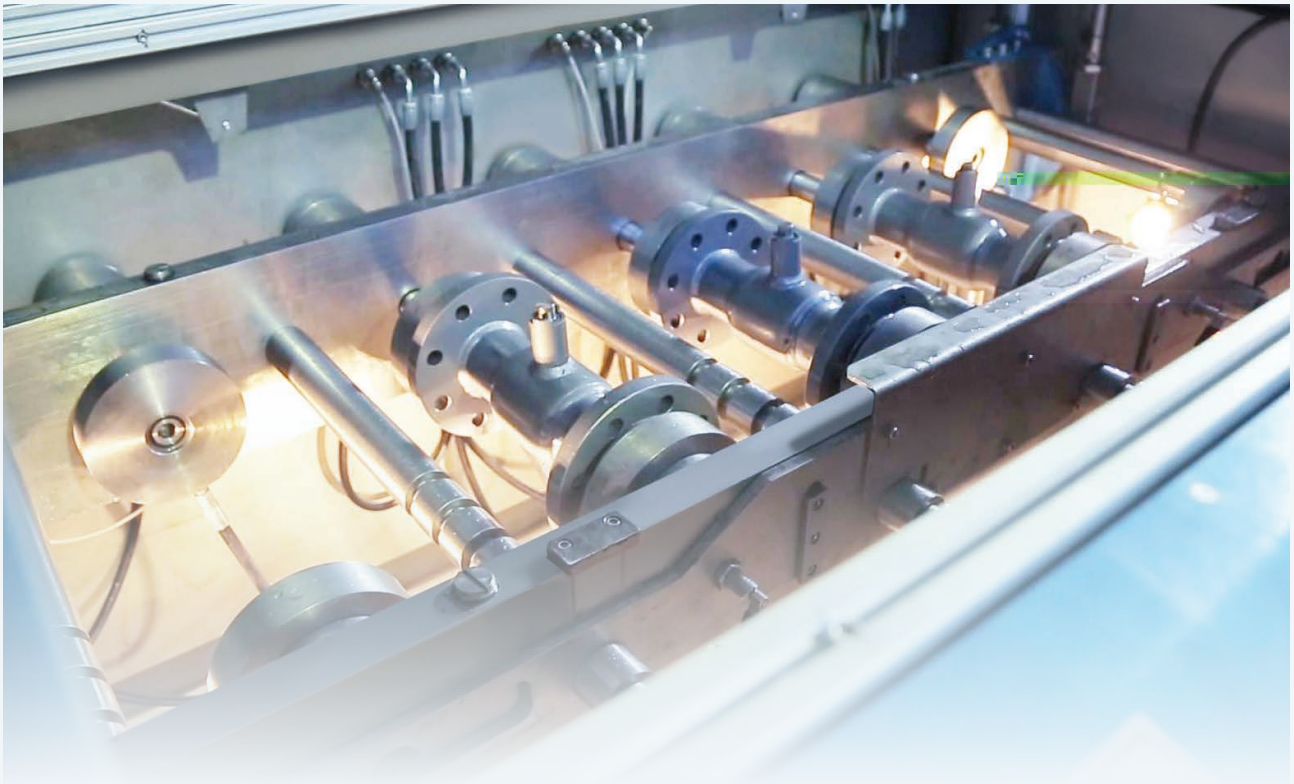
- submerged gas testing of pipeline valves;
- testing of the body part materials for strength and density (shell test);
- gate tightness tests;
- environmental leakage tests (including gland seals).

TESTED VALVES:

- cryogenic valves;
- gate valves;
- stop valves (globe valves).

CONNECTION TYPE:

- flanged (according to ASME B 16.5, GOST 12815 etc.);
- welded ends (according to ASME B 16.25, GOST 16037, etc.).



ADVANTAGES:

The tank, power rack, piping and all parts of the test bench that are submerged under water are made of stainless steel. The two-sided gate seal tests do not require the tested valve rearrangement, which significantly reduces the test time. Test from one to five

The clamp of tested valves is made by hydraulic cylinders mounted on each test station, independently of each other.

The power frame is disposed within the water tank and submerged under water to a depth from 0 to 600 mm .
For easy installation of valves to be tested the power rack rises above the tank.
For easy inspection of tested valves the tank of the test bench is provided with an internal illumination.
Test preparation time is significantly reduced by using the high-pressure quick-connect hoses.
Stainless steel power rack of test bench is actuated by two pneumatic cylinders.

S-5P-80/6-5

MULTI-STATION TEST BENCH FOR SUBMERGED GAS TESTING OF SHUT OFF VALVES DN 15...80 mm (½...3″)

S-5-80/6-5

Maximum test pressure, bar (psi)*

DN, mm (″)	cl.150...300		cl.900		cl.1500	cl.2500
	95 (1300)	135 (1900)	225 (3200)	330 (4700)	475 (6800)	630 (9100)
15...32 (½...1¼)						#
40 (1½)					#	
50 (2)						
65 (2½)						
80 (3)						

by use of inner Radial seal adapters.

SPECIFICATIONS:

Parameter	S-5P-80/6-5
	6
	30
	115/510 (4/18)
Distance between the screws, mm	270 (11)
Power supply, V/Hz	400/50
Weight, kg	2650

EQUIPMENT FOR TESTING
VERTICAL TEST BENCHES FOR HYDRAULIC AND PNEUMATIC TESTING OF SHUT OFF & CONTROL VALVES

PURPOSE:

- shell test acc. to API 598, API 6D, ISO 5208 etc.;
- seat leakage test (cavities A to B, B to A) acc. to API 598, API 6D, ISO 5208 etc.;
- backseat test acc. to API 598, API 6D, ISO 5208 etc.;
- DBB/DIB test acc. to API 598, API 6D;
- control valve seat leakage test, acc. to ANSI FCI 70.2, IEC 60534-4, EN 1349 etc.

TESTED VALVES:

- gate valves;
- ball valves;
- stop valves (globe valves);
- check valves;
- butterfly gates;
- plug valves;
- control valves.

CONNECTION TYPE:

- flanged (according to ASME B 16.5, GOST 12815 etc.);
- welded ends (according to ASME B 16.25, GOST 16037, etc.);
- threaded-end;*
- true union.*

ADVANTAGES:

Clamping of tested valve is provided by hydraulic cylinder. Optionally test bench can be equipped with clamping by hydraulic cylinder, during high pressure testing.*

Two-sided gate sealing during tests does not require the tested valve rearrangement, which significantly reduces the test time.

The bench is equipped with the water-collection tray with stainless steel tank.*

Test preparation time is significantly reduced by using the high-pressure fast coupling hoses.

The bench is quickly adjusted to face-to-face dimensions of valve by using the electrically driven cross-head.

The patented design of the self-sealing adapters ensures the test reliability, protects the valves against

All water-wetted parts are corrosion-proof.

The bench can be equipped with replaceable sealing adapters.*

Increased-diameter hoses reduce the time of the valve filling with the test medium.

Turning upper cross-head is used to simplify the valve installation procedure before testing.

Test preparation time is significantly reduced by using the high-pressure quick-connect hoses.

Fast clamping and centering of the tested valve is ensured due to synchronized travel of the clamps.

Test bench allows visual detection of seat leakage point.

DEPENDENCE OF THRUST FORCE (T) ON VALVE CHARACTERISTICS:

DN, мм (") / class	10	15 (½)	20 (¾)	25 (1)	32 (1 ¼)	40 (1 ½)	50 (2)	65 (2 ½)	80 (3)	100 (4)	125 (5)	150 (6)	200 (8)	250 (10)	300 (12)	350 (14)	400 (16)	500 (20)	600 (24)	700 (28)	750 (30)	800 (32)
cl.150	15	15	15	15	15	15	15	15	15	15	15	15	15	40	40	40	60	100	100	160	160	160
cl.300	15	15	15	15	15	15	15	15	15	15	15	15	40	60	60	100	160	220				
cl.400	15	15	15	15	15	15	15	15	15	15	40	40	40	60	100	160	160	220				
cl.600	15	15	15	15	15	15	15	15	15	15	40	40	60	100	160	220	220					
cl.900	15	15	15	15	15	15	15	15	15	40	40	60	100	160	220							
cl.1500	15	15	15	15	15	15	15	40	40	40	60	100	160	220								
cl.2500	15	15	15	15	15	15	40	40	40	100	100	160										

Parameters based on face sealing of RF fanged valves.

OPTIONAL:


CRS-M
p. 64


PGS
p. 46


UK
p. 66


SOV
p. 67


VU
p. 67


B, SVN
p. 68


SI-PRA
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BR
p. 69


MIP-W
p. 69

S-3-800/160, S-3-600/220, S-3-600/160

TEST BENCHES FOR SHUT OFF & CONTROL VALVES DN 10...800 mm (⅜...32″)

S-3-800/160

Maximum test pressure, bar (psi)

DN, mm (″)	-	cl.150		cl.300		cl.600		cl.900	cl.1500	cl.2500
	25 (300)	35 (500)	50 (700)	70 (1000)	110 (1500)	145 (2100)	190 (2800)	275 (4000)	420 (6100)	630 (9100)
10...150	■	■	■	■	■	■	■	■	■	■
200 (8)	■	■	■	■	■	■	■	■	■	
250 (10)	■	■	■	■	■	■	■	■		
300 (12)	■	■	■	■	■	■	■	#		
350 (14)	■	■	■	■	■	■				
400 (16)	■	■	■	■	■					
500 (20)	■	■	■	■						
600 (24)	■	■	■							
700 (28)	■	■								
800 (32)	■	#								

S-3-600/220

Maximum test pressure, bar (psi)

DN, mm (″)	cl.150...300		cl.600		cl.900	cl.1500		cl.2500	
	70 (1000)	100 (1500)	150 (2200)	200 (2900)	265 (3900)	380 (5500)	580 (8500)	1050 (15000)	1100 (16000)
10...125	■	■	■	■	■	■	■	■	■
150 (6)	■	■	■	■	■	■	■	■	
200 (8)	■	■	■	■	■	■	■	#	
250 (10)	■	■	■	■	■	■			
300 (12)	■	■	■	■	■				
350 (14)	■	■	■	■	#				
400 (16)	■	■	■						
500 (20)	■	■							
600 (24)	■								

S-3-600/160

Maximum test pressure, bar (psi)

DN, mm (″)	cl.150	cl.300		cl.600		cl.900	cl.1500	cl.2500
	50 (700)	70 (1000)	110 (1600)	145 (2100)	190 (2800)	270 (3900)	400 (5800)	630 (9100)
10...150	■	■	■	■	■	■	■	■
200 (8)	■	■	■	■	■	■	■	
250 (10)	■	■	■	■	■	■		
300 (12)	■	■	■	■	■	#		
350 (14)	■	■	■	■				
400 (16)	■	■	■					
500 (20)	■	■						
600 (24)	■							

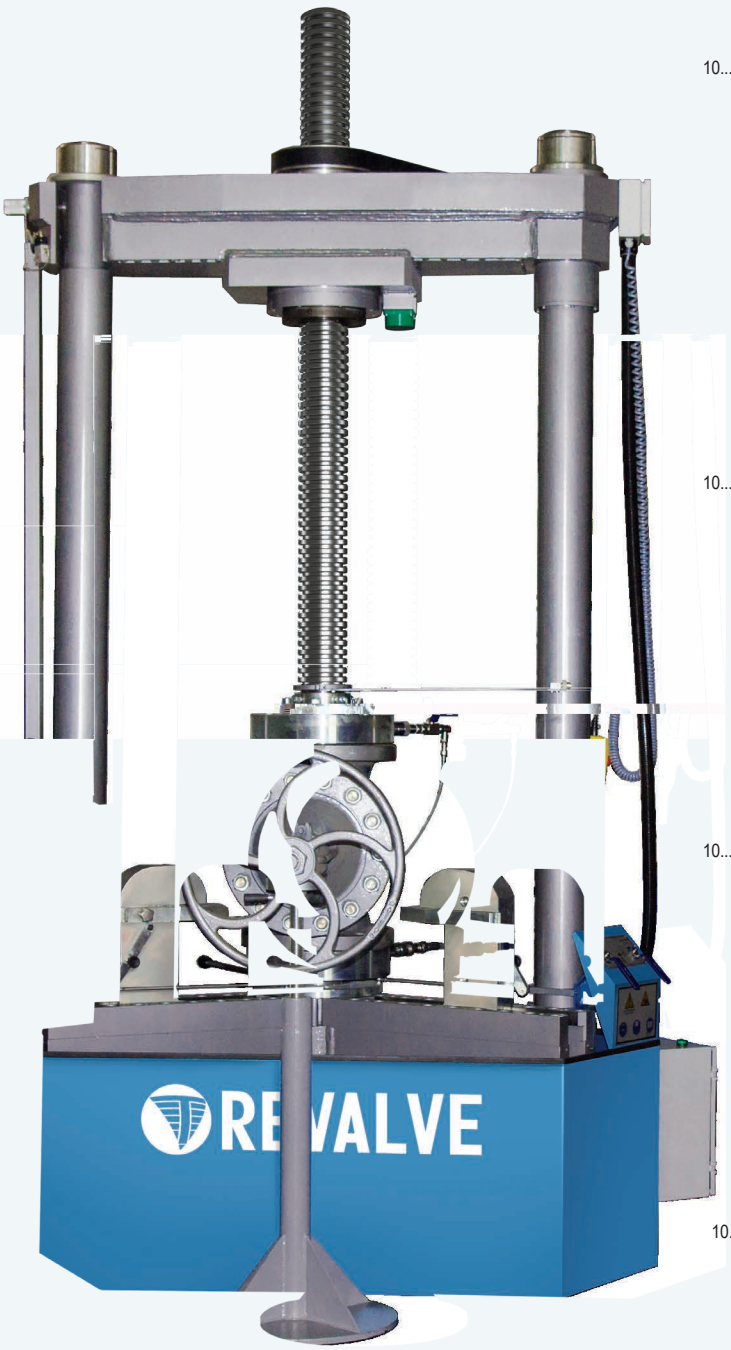
by use of inner Radial seal adapters.

SPECIFICATIONS:

Parameter	S-3-800/160	S-3-600/220	S-3-600/160
	160	220	160
	160/1020 (6/40)	160/910 (6/36)	90/840 (3/33)
	94 (3)	115 (4)	94 (3)
cross-heads, mm	80/1450 (3/57)	160/1445 (6/57)	90/1255 (4/50)
Distance between the columns, mm	1150 (45)	970 (38)	900 (35)
Weight, kg	4170	3813	3391

S-3-600/100, S-3-500/160, S-3-500/100, S-3-500/60

TEST BENCHES FOR SHUT OFF & CONTROL VALVES DN 10...600 mm (⅜...24″)



S-3-600/100

Maximum test pressure, bar (psi)

DN, mm (″)	cl.150 30 (400)	cl.150 45 (600)	cl.300 70 (1000)	cl.300 90 (1300)	cl.300 120 (1700)	cl.600 170 (2500)	cl.900 265 (3800)	cl.1500 450 (6500)	cl.2500 630 (9100)
10...125	■	■	■	■	■	■	■	■	■
150 (6)	■	■	■	■	■	■	■	■	
200 (8)	■	■	■	■	■	■	■		
250 (10)	■	■	■	■	■	■			
300 (12)	■	■	■	■	■				
350 (14)	■	■	■	■					
400 (16)	■	■	■						
500 (20)	■	■							
600 (24)	■								

S-3-500/160

Maximum test pressure, bar (psi)

DN, mm (″)	cl.150...300 70 (1000)	cl.150...300 110 (1300)	cl.600 145 (2100)	cl.600 190 (2800)	cl.900 270 (3900)	cl.1500 400 (5800)	cl.2500 630 (9100)
10...150	■	■	■	■	■	■	■
200 (8)	■	■	■	■	■	■	
250 (10)	■	■	■	■	■		
300 (12)	■	■	■	■	#		
350 (14)	■	■	■				
400 (16)	■	■					
500 (20)	■						

S-3-500/100

Maximum test pressure, bar (psi)

DN, mm (″)	cl.150 45 (600)	cl.300 70 (1000)	cl.300 90 (1300)	cl.300 120 (1700)	cl.600 170 (2500)	cl.900 265 (3800)	cl.1500 450 (6500)	cl.2500 630 (9100)
10...125	■	■	■	■	■	■	■	■
150 (6)	■	■	■	■	■	■	■	
200 (8)	■	■	■	■	■	■		
250 (10)	■	■	■	■	■			
300 (12)	■	■	■	■				
350 (14)	■	■	■					
400 (16)	■	■						
500 (20)	■							

S-3-500/60

Maximum test pressure, bar (psi)

DN, mm (″)	cl.150 25 (300)	cl.150 40 (500)	cl.150 55 (700)	cl.300 70 (1000)	cl.300 100 (1500)	cl.600 150 (2200)	cl.900 280 (4000)	cl.1500 400 (5800)	cl.1500 600 (8700)	cl.2500 630 (9100)
10...80	■	■	■	■	■	■	■	■	■	■
100 (4)	■	■	■	■	■	■	■	■	■	#
125 (5)	■	■	■	■	■	■	■	■		
150 (6)	■	■	■	■	■	■	■			
200 (8)	■	■	■	■	■	■				
250 (10)	■	■	■	■	■					
300 (12)	■	■	■	■						
350 (14)	■	■	■							
400 (16)	■	■								
500 (20)	■									

by use of inner Radial seal adapters.

SPECIFICATIONS:

Parameter	S-3-600/100	S-3-500/160	S-3-500/100	S-3-500/60
	100	160	100	60
	90/840 (4/33)	90/730 (4/28)	90/730 (4/28)	90/730 (4/28)
	115 (4)	94 (3)	115 (4)	
cross-heads, mm	72/1252 (3/49)	77/1146 (3/45)	112/1160 (4/45)	70/1000 (3/39)
Distance between the columns, mm	900 (35)	750 (29)	770 (30)	775 (31)
Weight, kg	2680	3112	2452	1803

S-3-400/60, S-3-400/40, S-3-300/40, S-3-250/15

TEST BENCHES FOR SHUT OFF & CONTROL VALVES DN 10...400 mm (⅜... 16")

S-3-400/60

Maximum test pressure, bar (psi)

DN, mm (")	cl.150 40 (500)	55 (700)	cl.300 70 (1000)	100 (1500)	cl.600 150 (2200)	cl.900 280 (4100)	cl.1500 400 (5800)	600 (8700)	cl.2500 630 (9100)
10...80									
100 (4)									#
125 (5)									
150 (6)									
200 (8)									
250 (10)									
300 (12)									
350 (14)									
400 (16)									

S-3-400/40

Maximum test pressure, bar (psi)

DN, mm (")	- 25 (300)	cl.150 35 (500)	45 (600)	cl.300 70 (1000)	105 (1500)	cl.600 190 (2800)	cl.900 250 (3600)	cl.1500 405 (5900)	cl.2500 630 (9100)
10...80									
100 (4)									
125 (5)									
150 (6)							#		
200 (8)									
250 (10)									
300 (12)									
350 (14)									
400 (16)		#							

S-3-300/40

Maximum test pressure, bar (psi)

DN, mm (")	cl.150 45 (600)	cl.300 70 (1000)	105 (1500)	cl.600 190 (2800)	cl.900 250 (3600)	cl.1500 405 (5900)	cl.2500 630 (9100)
10...80							
100 (4)							
125 (5)							
150 (6)					#		
200 (8)							
250 (10)							
300 (12)		#					

S-3-250/15

Maximum test pressure, bar (psi)

DN, mm (")	- 25 (300)	cl.150 37,5 (500)	cl.300 70 (1000)	95 (1400)	cl.600 150 (2200)	cl.900 240 (3500)	320 (4600)	cl.1500 540 (7800)	cl.2500 630 (9100)
10...40									
50 (2)									#
65 (2½)								#	
80 (3)									
100 (4)									
125 (5)									
150 (6)									
200 (8)									
250 (10)		#							

by use of inner Radial seal adapters.

SPECIFICATIONS:

Parameter	S-3-400/60	S-3-400/40	S-3-300/40	S-3-250/15
	60	40		15
	90/580 (4/23)		90/460 (4/18)	
	115 (4)			
cross-heads, mm	70/1005 (2/40)	78/943 (3/37)	56/871 (2/34)	22/636 (1/25)
Distance between the columns, mm	630 (25)	645 (25)	500 (19)	480 (19)
Weight, kg	1597	1083	860	629

TEST BENCHES WITH SLIDING TABLE FOR HYDRAULIC AND PNEUMATIC TESTING OF SHUT-OFF VALVES

PURPOSE:

- testing of the body part materials for strength and density (shell test);
- gate tightness tests;
- environmental leakage tests (including gland seals);
- pressure safety valves gate tightness test;
- pressure safety valves operation test.

TESTED VALVES:

- gate valves;
- shut-off valves (globe valves);
- check valves;
- butterfly valves;
- ball and plug valves;
- pressure safety valves.

CONNECTION TYPE:

- flanged;*
- welded ends;*
- nozzle ;*
- coupling;*
- trunnion.*

ADVANTAGES:

All water-wetted elements are corrosion-proof.

Benches are equipped with interchangeable adapters for testing the butt-welded valves. *

Power hydraulics of the clamping unit is operated by the oil pumping station, which increases the test benches service life.

Two-sided gate sealing during tests does not require the tested valve rearrangement, which significantly reduces the test preparation time.

Turning upper crosshead simplifies the installation of valves prior to testing.

Using the high-pressure hoses with quick-release connections (QRC) significantly reduces the test time.

Installation mode of the tested valves allows visual detection of seat leakage point.

Installation and testing process is fully mechanized (little effort is involved when working with large valves) for facilitating the operation.

Increased diameter pipes are used for reducing the valves filling time with test medium.

Quick clamping and alignment of the tested item due to simultaneous movement of the claws.

Test benches use the special system of air removal from the tested item, which improves safety, performance, reliability of the data obtained and eliminates the need for additional air release. *

Possibility of carrying out flanged valves testing for gate tightness at vertical and horizontal position of main

OPTIONAL:

CRS-M  p. 64

PGS  p. 46

UK  p. 66

SOV  p. 67

VU  p. 67

B, SVN  p. 68

SI-PRA  p. 69

BR  p. 69

MIP-W  p. 69

S-3-500/400V, S-3-400/450
TEST BENCHES FOR SHUT OFF & CONTROL VALVES DN 50...500 mm (2...20")

S-3-500/400V

Maximum test pressure, bar (psi)

DN, mm (")	cl.600 170 (2500)	cl.900 270 (3900)	cl.1500 470 (6800)	cl.2500 700 (10200)	cl.2500 750 (10900)
32...200 (1...8)	■	■	■	■	■
250 (10)	■	■	■	■	
300 (12)	■	■	■		
400 (16)	■	■			
500 (20)	■				

S-3-400/450

Maximum test pressure, bar (psi)

DN, mm (")	cl.900 300 (4400)	cl.1500 500 (7300)	cl.2500 750 (10900)
50...250 (2...10)	■	■	■
300 (12)	■	■	
400 (16)	■		

SPECIFICATIONS:

Parameter	S-3-500/400V	S-3-400/450
	400	450
(")	160/900 (6/35)	
(")	160 (6)	
(")	300/1500 (12/60)	
Distance between the columns, mm (")	970 (38)	
Power supply, V/Hz	400/50	
Motor power, kW	25,0	
Weight, kg	4635	5100

TILTING TEST BENCHES
FOR HYDRAULIC AND PNEUMATIC TESTING OFF SHUT OFF & CONTROL VALVES

PURPOSE:
- shell test acc. to API 598, API 6D, ISO 5208 etc.;
- seat leakage test (cavities A to B, B to A) acc. to API 598, API 6D, ISO 5208 etc.;
- backseat test acc. to API 598, API 6D, ISO 5208 etc.;
- DBB/DIB test acc. to API 598, API 6D;
- control valve seat leakage test, acc. to ANSI FCI 70.2, IEC 60534-4, EN 1349 etc.

TESTED VALVES:
- gate valves;
- ball valves;
- globe valves;
- check valves;
- butterfly gates;
- plug valves.

CONNECTION TYPE:
- flanged RF, FF, RTJ (according to ASME B 16.5, ASME 16.47 etc.);
- BW (according to ASME B 16.25, etc.);
- flangeless (lug, wafer type).

ADVANTAGES:
Adjustable valve testing position: valves intended to operate vertically are tested vertically, valves intended to use horizontally are tested horizontally;
Quicker valve mounting and centering because of three simultaneously moved claws.
No airtraps during filling, the valve is filled vertically and then tilted to horizontal position.
Possibility to observe sealing surface during leakage test (45 degrees tilted valve).
Clamping of tested valve is provided by hydraulic cylinder. Optionally test bench can be equipped with clamping by hydraulic cylinder, during high pressure testing.
Two-sided gate sealing during tests does not require the tested valve rearrangement, which significantly reduces the test time.
The bench is equipped with the water-collection tray.
Test preparation time is significantly reduced by using the high-pressure fast coupling hoses.
The bench is quickly adjusted to face-to-face dimensions of valve by using the electrically driven cross-head.
All water-wetted parts are corrosion-proof.
Increased-diameter hoses reduce the time of the valve filling with the test medium.

OPTIONAL:

CRS-M

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SOV

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B, SVN

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BR

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MIP-W

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S-4-400/25, S-4-400/270, S-4-300/40

TEST BENCHES FOR SHUT OFF & CONTROL VALVES DN 15...400 mm (½...16")

S-4-400/25

Maximum test pressure, bar (psi)

DN, mm (")	-	-	-	cl.150	cl.300	cl.600	cl.900	cl.1500
	17 (600)	23 (600)	30 (600)	45 (600)	65 (1500)	120 (2800)	250 (4100)	400 (5900)
15...80 (½...3)	■	■	■	■	■	■	■	■
100 (4)	■	■	■	■	■	■	■	
150 (6)	■	■	■	■	■	■		
200 (8)	■	■	■	■	■			
250 (10)	■	■	■	■				
300 (12)	■	■	■					
350 (14)	■	■						
400 (16)	■							

S-4-400/270

Maximum test pressure, bar (psi)

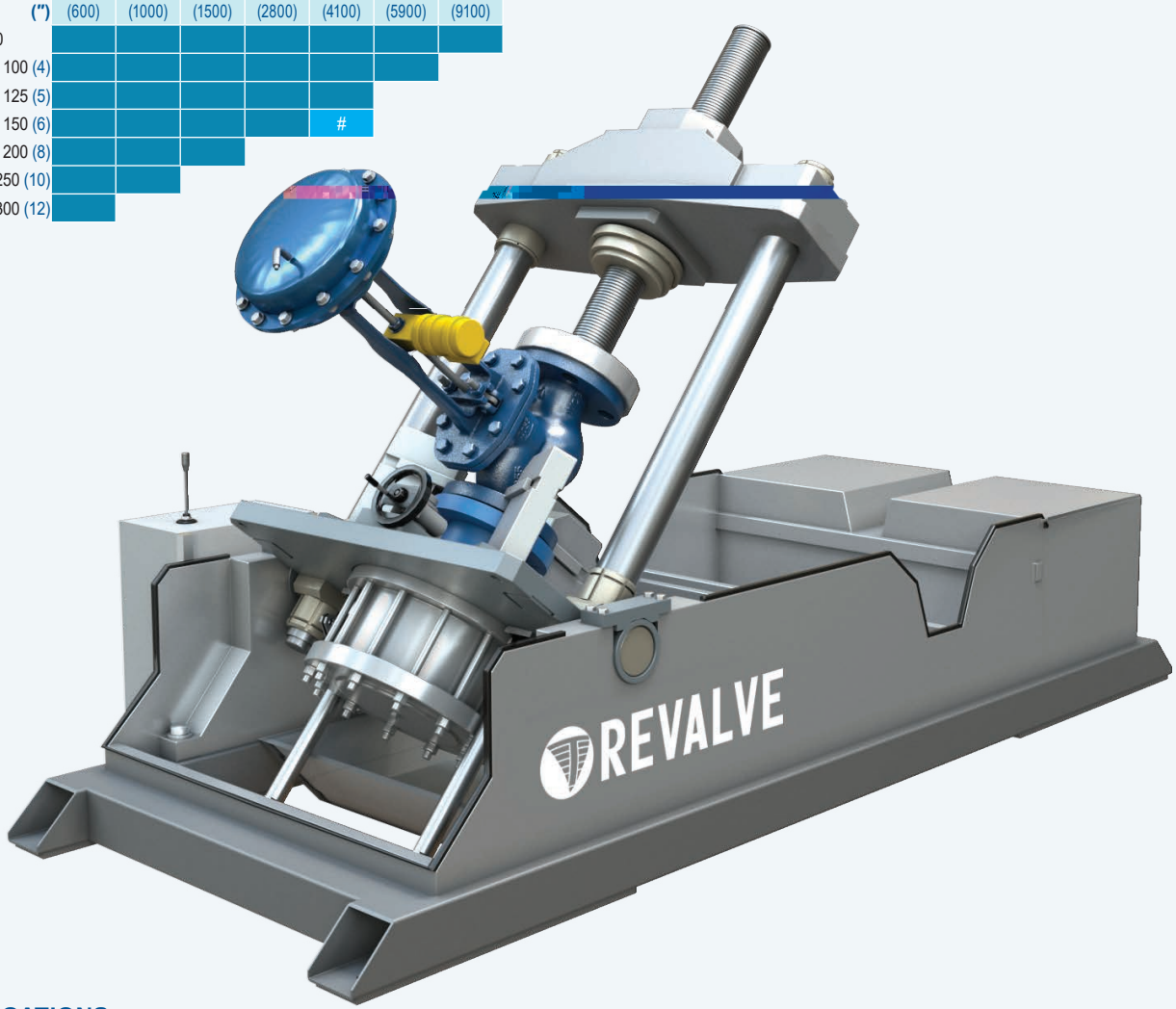
DN, mm (")	cl.150...600	cl.900		cl.1500	cl.2500
	190 (2700)	245 (3500)	330 (4700)	485 (7000)	630 (9100)
50...200 (2...8)	■	■	■	■	■
250 (10)	■	■	■	■	
300 (12)	■	■	■	#	
350 (14)	■	■			
400 (16)	■				

S-4-300/40

Maximum test pressure, bar (psi)

DN, mm (")	cl.150	cl.300		cl.600	cl.900	cl.1500	cl.2500
	45 (600)	75 (1000)	105 (1500)	195 (2800)	285 (4100)	410 (5900)	630 (9100)
10...80	■	■	■	■	■	■	■
100 (4)	■	■	■	■	■	■	
125 (5)	■	■	■	■	■		
150 (6)	■	■	■	■	#		
200 (8)	■	■	■				
250 (10)	■	■					
300 (12)	■						

by use of inner Radial seal adapters.



SPECIFICATIONS:

Parameter	S-4-400/25	S-4-400/270	S-4-300/40
	25	270	40
	90/580 (3/23)	160/670 (6/26)	160/460 (6/18)
	115 (4)	110 (4)	44 (2)
	70/1000 (2/39)	180/800 (7/31)	170/730 (7/29)
Distance between the columns, mm	645 (25)	1115 (44)	760 (30)
Power supply, V/Hz		400/50	
Motor power, kW		5,5	
Weight, kg	3000	5500/2210	1320/470

PGS
CONTROL STATIONS

PURPOSE:

- pressure source for hydraulic tests of valves and pressure vessels;
- supplies as a control panel of the test bench;
- as well as independent pressure source.

PGS-A

FUNCTIONS:

1. Hydraulic test medium pressure up to 1600 bar (23200 psi).
2. Continuous (stepless) pressure control for:
   - hydraulic tests 10...1600 bar (145…23200 psi);
   - pneumatic tests 0,5...10 bar (7…145 psi)
     (0,5...200 bar (7…2900 psi) or 0,5...400 bar (7…5800 psi)).*
3. Smooth control of the test-bench hydraulic clamping cylinder.
4. Automatic maintaining of achieved test pressure.
5. Control of the test process by the pressure-gage panel with the measurement accuracy of 1.0 % (0.6% as requested by customer).
6. The PGS is equipped with sockets to connect additional

7. The PGS, can be connected to the CRS-M for recording of test data.

OPTIONS:

- **PGS-P** edition is equipped with the automatic proportional clamping control system. PLC controlled system allows to perform testing

  compression applied to the valve body during testing using automated proportional clamping pressure adjustment in hydraulic cylinder, relatively to testing pressure.
- **PGS-M** mobile version of control station, that allow to perform testing at sites (blind flanges are not included).
- **PGS-A** edition allow to perform testing of valves in automatic mode. Also can be provided with proportional clamping control system. The range of process automation should be negotiated and stated at the order stage in technical specification to the contract of supply.

PGS
CONTROL STATIONS

COMPLETE SET:

- pressure source unit with the bench control panel:
  - 1 or 2 pneumohydraulic boosters (according to model);
  - monitoring, adjustment, and control equipment;
- air preparation unit;
- preliminary and fine water filters;
- pedal for the valve-clipping control during the test (see C);
- air and water leakage control unit;
- a set of high-pressure quick-connect hoses;
- a set of spare parts, tools, and accessories;
- safety fence (see B);
- embedded integrated computer registration system CRS-M (see D).

DESIGN:

- **floor-mounted design;**
- **suspendable design;**
- **mobile design;**
- **integrated design.**

ADVANTAGES:

The PGS control circuit uses pneumatically controlled gate elements. This releases the operator from opening and closing numerous needle valves and makes the unit control process simple and reliable.

The equipment has separate filling line to reduce the test preparation time.

For convenience, control of the hydraulic clamping cylinder of the test bench can be performed from the control panel and remote pedal (see C).

coupling joints with warranted operation life of 10,000 cycles, which significantly reduces the time required to complete preparation and final operations.

The compressed-air supply line has the air-preparation unit and ensures class 0 air supply even when the pneumatic network contains polluted air.

is equipped with a fine water filter.

MULTI-STATION TEST BENCHES
FOR HYDRAULIC AND PNEUMATIC TESTING FOR SHUT OFF & CONTROL VALVES

PURPOSE:
- shell test acc. to API 598, API 6D, ISO 5208 etc.;
- seat leakage test (cavities A to B, B to A) acc. to API 598, API 6D, ISO 5208 etc.;
- backseat test acc. to API 598, API 6D, ISO 5208 etc.;
- DBB/DIB test acc. to API 598, API 6D;
- control valve seat leakage test, acc. to ANSI FCI 70.2, IEC 60534-4, EN 1349 etc.

TESTED VALVES:
- gate valves;
- globe valves;
- check valves;
- butterfly gates;
- ball and plug valves.

CONNECTION TYPE:
- flanged (according to ASME B 16.5, GOST 12815, etc.);
- welded ends (according to ASME B 16.25, GOST16037, etc.).

ADVANTAGES:
Increased productivity due to simultaneous testing of multiple valves.
Testing in semi-automatic and automatic modes which affects the testing quality.
Digital flowmeters allows to check the leakage rate of valve on each station with leakage class automatic definition.

All the wetted parts are made of stainless steel.
Two-side leakage test (A to B, B to A) without valve reinstallation (optional feature).

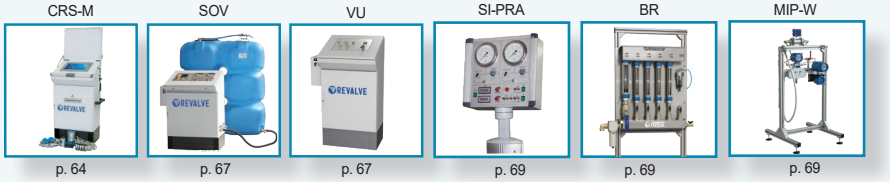
DBB/DIB tests are available for each station (optional feature)
Valve actuators are controlled remotely (optional feature).
Computerized registration system allows to create test reports for each station (optional feature).
Safety screen to improve operator safety (optional feature).
Remote video control (CCTV, optional feature).

DEPENDENCE OF THRUST FORCE (T) ON VALVE CHARACTERISTICS:

DN, мм (") / class	10	15 (½)	20 (¾)	25 (1½)	32 (1¼)	40 (1 ½)	50 (2)	65 (2 ½)	80 (3)	100 (4)	125 (5)	150 (6)	200 (8)	250 (10)	300 (12)
cl. 150	10	10	10	10	10	10	10	10	10	10	25	25	60	60	100
	10	10	10	10	10	10	10	10	10	10	25	25	60	60	100
	10	10	10	10	10	10	10	10	10	10	25	25	60	60	100
	10	10	10	10	10	10	10	10	10	10	25	25	60	60	100
cl. 300	10	10	10	10	10	10	10	10	10	10	25	25	60	60	10
cl. 400	10	10	10	10	10	10	10	10	10	10	25	25	60	60	100
cl. 600	10	10	10	10	10	10	10	10	10	25	25	60	60	100	160
cl. 900	10	10	10	10	10	10	10	10	25	25	60	60	100	160	
cl. 1500	10	10	10	10	10	10	25	25	60	60	60	100	160		
cl. 2500	10	10	10	10	10	25	25	60	60	100	160	160			

Parameters based on face sealing of RF fanged valves.

OPTIONAL:



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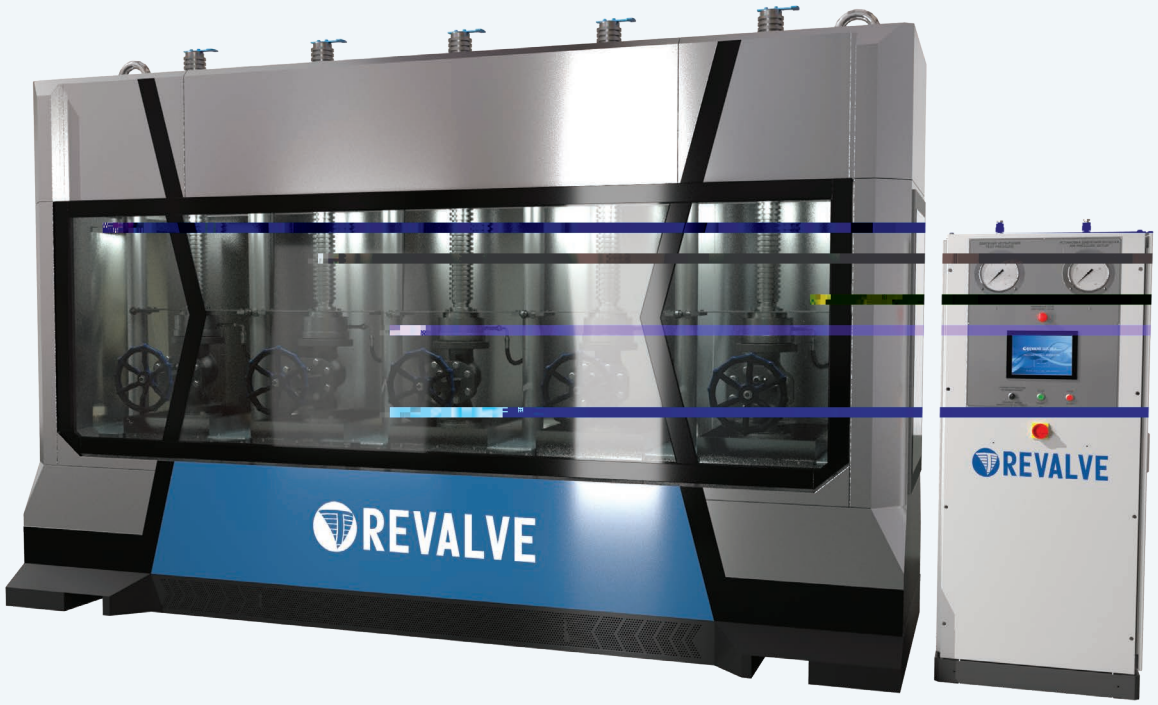
S-3-300/150-3, S-3-250/60-5

MULTI-STATION TEST BENCH FOR SHUT OFF & CONTROL VALVES DN 10...300 mm (...12")

S-3-300/150-3



S-3-250/60-5

SPECIFICATIONS:

Parameter	S-3-100/10-3	S-3-150/25-3	S-3-250/60-3	S-3-300/100-3	S-3-300/150-3	S-3-100/10-5	S-3-150/25-5	S-3-250/60-5
Number of posts	3					5		
clamped flange, mm	100 (4)	150 (6)	250 (10)	300 (12)	300 (12)	100 (4)	150 (6)	250 (10)
reinforcement length, mm	450 (18)	600 (24)	750 (30)	800 (32)	1000 (40)	450 (18)	600 (24)	750 (30)
Distance between the columns, mm	-	400 (16)	500 (20)	580 (22)	650 (25)	-	400 (16)	500 (20)
adjacent posts, mm	300 (12)	-	-	-	-	300 (12)	-	-
Power supply, V/Hz	400/50							

TEST BENCHES
FOR TESTING AND ADJUSTMENT OF PRESSURE SAFETY AND VACUUM RELIEF VALVES

PURPOSE:
Test benches are designed for hydraulic and pneumatic testing of spring loaded, pilot-operated with DN 10...400 mm (¼...16"), according to the following standards:
- set pressure test according to API 526;
- seat tightness test according to API 527.

Advanced test system design, provides correspondence of the PSV test process to requirements of the following standards:
- API RP 576;
- API 526, 527;
- ISO 4126-1;
- ASME BPVC Section VIII;
- ASME PTC 25.

TESTED VALVES TYPES:
- spring loaded PSVs;
- pilot-operated PSVs.

TESTED VALVE SIZES:
- DN 15...400 mm (½...16") flanged PSVs;
- DN 10...50 mm (¼...2") threaded PSVs.

CLAMPING UNIT

DESIGN FEATURES:
Clamping system design based on integrated high performance hydraulic cylinder, stainless steel base that serves as storage tank for hydraulic test medium. Clamping of valve need to be tested, provided by test table actuated by hydraulic cylinder and three synchronized claws thats centering and fastening of inlet PSV flange.
Increased inner diameter of test system tubing and high pressure hoses provides dynamic spool lifting during set pressure test, as well as smooth and accurate reseating, same time serves to avoid the seats surface damages while closing.
Use of special Nickel and Chrome coatings and stainless steel elements of clamping unit water wetted surfaces provides stable operation in hard environmental conditions with high level of humidity.
«Pockets» for set of sealing adapters storing.
Built-in stainless steel test fluid storage tank .
Adapters for PSV inlet flange face sealing for valves with DN 15...400 mm (½... 12") of the following types: FF, SG, RF, LM, LG, RTJ as per ASME B 16.5.
Plugs for PSV outlet flange face sealing with fittings for quick connection of drop/bubble counter tubing.

OPTIONS:
- Set of adapters with standard RTJ gasket for inlet flange sealing, designed accord-ing to ASME B 16.5.
- Sealing adapters for thread-type PSV sealing DN 15...50 mm (½...2").
- Safety fence for provision of operators safety in accordance with HSE requirements available in several editions:
  - surrounding (two sheets metal blocks) safety fence with bullet proof windows, gates safety locking device and remote operated video control system;
  - safety screen at control station for protection of operator's from splashes;
  - safety fence arrangement mounted around clamping unit.
- Portable muffler provides noise level reduction at PSVs outlet during pop testing.
- Test unit elements can be positioned on the mobile platform with forklift pockets for easier unit transportation to the end-users sites.

DEPENDENCE OF THRUST FORCE (TF) ON VALVE CHARACTERISTICS:

DN, мм (") / class	10	15 (½)	40 (1 ½)	50 (2)	80 (3)	100 (4)	150 (6)	200 (8)	250 (10)	300 (12)	400 (16)
cl.150	15	15	15	15	15	15	15	15	15	40	40
cl.300	15	15	15	15	15	15	15	15	40	40	
cl.600	15	15	15	15	15	15	40	40	60		
cl.900	15	15	15	15	15	40	40	60			
cl.1500	15	15	15	15	40	40	60				
cl.2500	15	15	15	40	40	60					

Parameters based on face sealing of RF fanged valves.

S-1-400/60, S-1-400/40, S-1-300/40
TEST BENCH FOR SAFETY VALVES DN 10...400 mm (⅜...16")

S-1-400/40

Maximum test pressure, bar (psi)

DN, mm (")	cl.150			cl.300		cl.600	cl.900	cl.1500	cl.2500
	25 (400)	35 (500)	45 (700)	70 (1000)	105 (1500)	190 (2800)	250 (3600)	405 (5900)	630 (9100)
10...80 (¼...3)	■	■	■	■	■	■	■	■	■
100 (4)	■	■	■	■	■	■	■	■	
125 (5)	■	■	■	■	■	■	■		
150 (6)	■	■	■	■	■	■			
200 (8)	■	■	■	■	■				
250 (10)	■	■	■	■					
300 (12)	■	■	■						
350 (14)	■	■							
400 (16)	■								

S-1-400/40

S-1-300/40

Maximum test pressure, bar (psi)

DN, mm (")	cl.150	cl.300		cl.600	cl.900	cl.1500	cl.2500
	45 (700)	70 (1000)	105 (1500)	190 (2800)	250 (3600)	405 (5900)	630 (9100)
10...80 (¼...3)	■	■	■	■	■	■	■
100 (4)	■	■	■	■	■	■	
125 (5)	■	■	■	■	■		
150 (6)	■	■	■	■			
200 (8)	■	■	■				
250 (10)	■	■					
300 (12)	■						

S-1-300/40

PSV test unit can be based on a several types of clamping systems, which clamping force and performance capabilities will be calculated according to PSV type, diameter and required pressure rating.

SPECIFICATIONS:

Parameter	S-1-400/60	S-1-400/40		S-1-300/40
	3 claws	3 claws	2 claws	3 claws
	60	40		
Tested valve sizes, mm	10...400			10...300
clamped flange, mm	90/580 (4/23)		90/610 (4/24)	90/460 (4/18)
clamped flange, mm	115 (4)			
mm				
Weight, kg	1050	607	538	466

S-1-250/15, S-1R-250/15 (mobile stand)
TEST BENCH FOR SAFETY VALVES DN 10...250 mm (⅜...10″)

S-1-250/15

Maximum test pressure, bar (psi)

DN, мм	cl.150		cl.300		cl.600	cl.900		cl.1500	cl.2500
	25 (400)	35 (500)	70 (1000)	95 (1400)	150 (2100)	240 (3500)	320 (4600)	540 (7800)	630 (9100)
10...40 (¼...2)	■	■	■	■	■	■	■	■	■
50 (2)	■	■	■	■	■	■	■	■	
65 (3)	■	■	■	■	■	■	■		
80 (3)	■	■	■	■	■	■			
100 (4)	■	■	■	■	■				
125 (5)	■	■	■	■					
150 (6)	■	■	■						
200 (8)	■	■							
250 (10)	■								

S-1R-250/15 (MOBILE STAND)

Maximum test pressure, bar (psi)

DN, мм	cl.150		cl.300			cl.900	
	24 (300)	40 (500)	63 (1000)	100 (1400)	125 (1700)	200 (2800)	250 (3600)
10...65	■	■	■	■	■	■	■
80	■	■	■	■	■	■	
100	■	■	■	■	■		
125	■	■	■	■			
150	■	■	■				
200	■	■					
250	■						

S-1-250/15

S-1R-250/15 (MOBILE STAND)

DESIGN FEATURES:

The PKTBA-S-1R-250/15 stand is mobile, it can be installed and connected in any place where it is necessary to carry out tests that meet the operating conditions and have media supplied to the stand according to the specified characteristics.

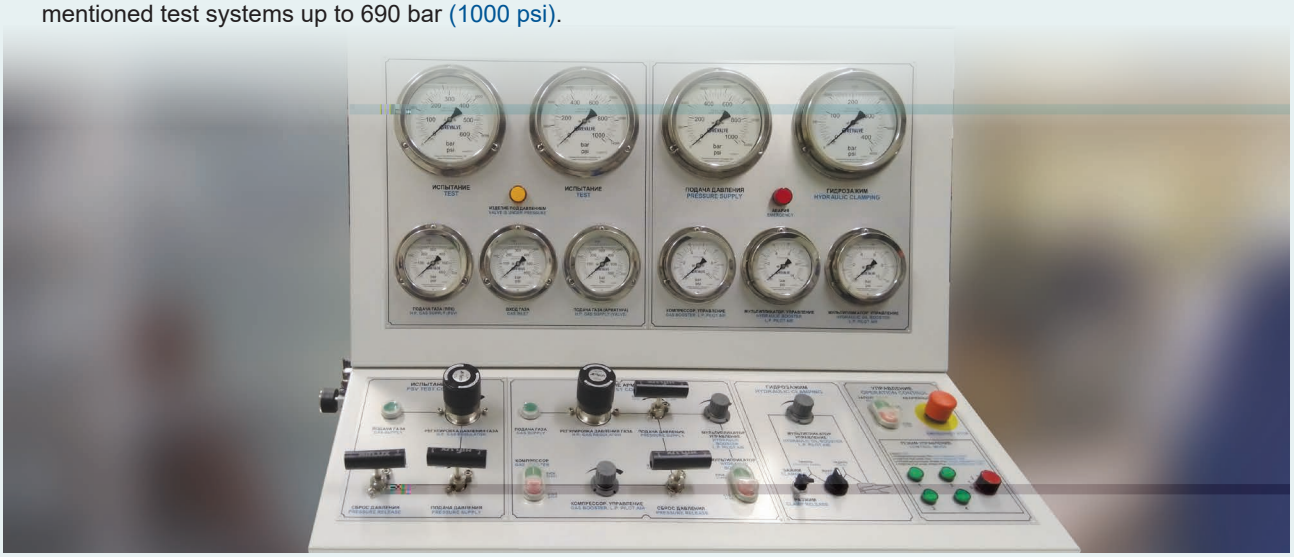
ТЕХНИЧЕСКИЕ ХАРАКТЕРИСТИКИ:

Parameter	S-1-250/15	S-1R-250/15 (mobile stand)
	3 claws	
	15	
Tested valve sizes, mm	10...250	
	90/460 (4/18)	90/405 (4/16)
	115 (4)	48 (2)
Weight, kg	369	450

CONTROL STATION

THE CONTROL STATION HAS MODULE CONSTRUCTION AND CAN BE EQUIPPED WITH THE FOLLOWING SYSTEMS ACCORDING TO THE CUSTOMER REQUIREMENTS:

- **High pressure hydraulic clamping control system.**
  Mandatory system providing comfortable and quick operation of the clamping unit.
- **Pneumatic test system up to 400 bar (5800 psi).**
  Test system allowing to test the most PSV's (according to API 526/527, up to class 1500) with gas/nitrogen test (5800 psi). Compressor unit or booster with accumulators available as an option.
- **Hydraulic and pneumatic test system up to 400 bar (5800 psi).**
  Test system allowing to test the most PSV's (according to API 526/527, up to class 1500) with liquid or gas/nitrogen test (5800 psi).
  Compressor unit or booster with accumulators available as an option.
- **Pneumatic test system up to 690 bar (10000 psi).**
  Optional system based on pneumatic-actuated booster. Used for gas testing of PSV up to class 2500 and higher. (500 psi).
- **Hydraulic test system up to 690 bar (10000 psi).**
  Optional system used for hydraulic testing of PSV up to class 2500 and higher. Based on pneumatic-actuated (500 psi).
- **Pneumatic and Hydraulic test system up to 690 bar (10000 psi).**
  Optional system required for high pressure PSV testing with gas and liquid mediums. Combines both above-mentioned test systems up to 690 bar (1000 psi).



DESIGN FEATURES:

Clamping system control is equipped with safety interlock that prevents tested valve unclamping while tested valve is under pressure higher than 1 bar.

Test process controlled by needle, regulating and isolation valves of world A-class manufacturers.

Test systems up to 400 bar (5800 psi) are equipped with additional test vessels for increasing of test line volume. Additional test medium volume provides dynamic spool lifting and precise determination of PSV set point, test line residual pressure, helps in accurate reseating point determination, saving PSV sealing surfaces from damages while reseating.

Equipment complies with following standards:ISO 4126-1, API RP 576, ASME BPVC Section VIII, which are establishing the requirements for the accuracy of the safety valve setting, and the ASME PTC 25 standard, which regulates the speed of the pressure gaining when 90% of the set pressure is reached.

Systems are equipped with additional lower pressure range gauges for more accurate test parameters measuring at low pressure testing. These pressure gauges are equipped with automatic shut-off devices to avoid pressure gauge damages while test pressure

To improve safety and avoid the risk of involuntary increasing of the test pressure, system control panel is equipped with a duplicate test line control button, to raise test pressure the operator shall hold the button pressed (two-handed control system)

Test medium, gas or liquid, can be selected by using switch at the control panel.

The control panel equipped with emergency stop button.

Control stations with hydraulic test systems are equipped with pneumatically driven pump for quick water filling of tested valve.

The control panel is equipped with protective screen with a large protective window of durable polycarbonate

Test mediums undergoes through fine filters, all water wetted parts are made of corrosion proof materials improving long service life of the test system.

MP-SRV-40
TEST BENCH FOR SAFETY VALVES DN 10...300 mm (⅜...12″)

PURPOSE:
- Mobile Safety Relief Valve Testing bench designed for hydraulic and pneumatic testing of Pressure Safety/Relief Valves (spring-weight and pilot operated) with pressure up to 350 Bar and 40 ton-force hydraulic clamping.

TESTED VALVES:
- spring loaded SRVs;
- pilot-operated SRVs.

Advanced test system design, provides correspondence of the SRV test process to requirements of the following international standards:
- Set pressure testing and adjusting of SRVs according to API 526 and ISO 4126-1;
- Seat tightness test of SRVs according to API 527;

Due to modern engineering solutions our equipment meets the requirements of the following standards:

- API RP 576;
- ASME BPVC Section VIII;
- ASME PTC 25.

TYPES OF TESTED VALVES:
Pressure Safety/Relief Valves (spring-weight and pilot operated) 15...300 mm (½...12") with RF/RTJ connection (as per ASME B16.5) and NPT connections.

- DN 10...300 mm flanged SRVs;
- DN 10...50 mm (¼...2") threaded SRVs.

MP-SRV-40
TEST BENCH FOR SAFETY VALVES DN 10...300 mm (⅜...12″)

ADVANTAGES:

Clamping system design based on integrated high performance hydraulic cylinder, stainless steel base that serves as storage tank for hydraulic test medium. Clamping of valve need to be tested, provided by test table actuated by hydraulic cylinder and three

inlet SRV flange.
Emergency stop button. In case of emergency and contingency by pressing the red button the pressure supply immediately stops protecting the operator, personnel and the tested valve. The tested unit stays clamped and stable, the testing pressure is released.
Safety interlock system. Unclamping automatically becomes impossible when a test pressure at the clamping station above 3 Bar so that yellow warning lamp indicates the presence of test pressure.

unintended pressure increase during pneumatic, hydraulic testing and ensure the safety operation the station is equipped with a safety button.
Light signalization. Light signal on the control station automatically indicates that the valve is under pressure and respectively being deactivated when the pressure below 3 Bar.
Increased inner diameter of test system tubing and high-pressure hoses provides dynamic spool lifting during set pressure test, as well as smooth and accurate reseating same time serves to avoid the seats surface damages while closing.

MP-SRV-40

Maximum test pressure, bar (psi)

DN, mm (")	cl.150	cl.300	cl.600	cl.900	cl.1500
	45 (600)	70 (1000)	105 (1500)	190 (2800)	350 (5100)
10...100	■	■	■	■	■
150 (6)	■	■	■	■	
200 (8)	■	■	■		
250 (10)	■	■			
300 (12)	■				

Use of special Nickel and Chrome coatings and stainless steel elements of clamping unit water wetted surfaces provides stable operation in hard environmental conditions with high level of humidity.
«Pockets» for set of sealing adapters storing.
Built-in stainless steel test fluid storage tank.
Adapters for SRV inlet flange face sealing for valves with DN 15...400 mm (½...12") of the following types: FF, SG, RF, LM, LG, RTJ as per ASME B 16.5.
Plugs for SRV outlet flange face sealing with fittings for quick connection of drop/bubble counter tubing.

OPTIONS:

- Set of adapters with standard RTJ gasket for inlet flange sealing, designed according to ASME B 16.5.
- Sealing adapters for thread-type SRV sealing DN 15...50 mm (½ ... 2").
- Safety fence for provision of operators safety in accordance with HSE requirements available in several editions:
  - surrounding (two sheets metal blocks) safety fence with bullet proof windows, gates safety locking device and remote operated video control system;
  - safety screen at control station for protection of operator's from splashes;
  - strong and robust 4-side safety screen made

    (polycarbonate) on a rigid metal base surrounding the clamping unit.
- Portable muffler provides noise level reduction at SRVs outlet during pop testing.
- Test unit elements can be positioned on the mobile platform with forklift pockets for easier unit transportation to the end-users sites.
- REVALVE can optionally provide the clamping unit with two claws that is able to perform testing most of SRV types.
- Computer Registration System is built-in to the control station for easy process operation and test monitor. Designed for continuous test data measuring and storing final reports as well as printing test protocols at workshop printer via Wi-Fi quick connection. Software package is customized and operator friendly so doesn't require special skills to launch and run the system. The package can be translated into the required native language upon request.
- Compressor unit. Serve for provision of the test system with constant supply of high-pressure air for valve test testing. The compressor unit consists of a piston-type compressor placed into the acoustic rigid cabinet and mounted on the base. There are pressure transmitter, pressure gauge and control panel are on the frame for an operator use. Storage cylinder area consists of 3 carbon steel rigid cylinders made of

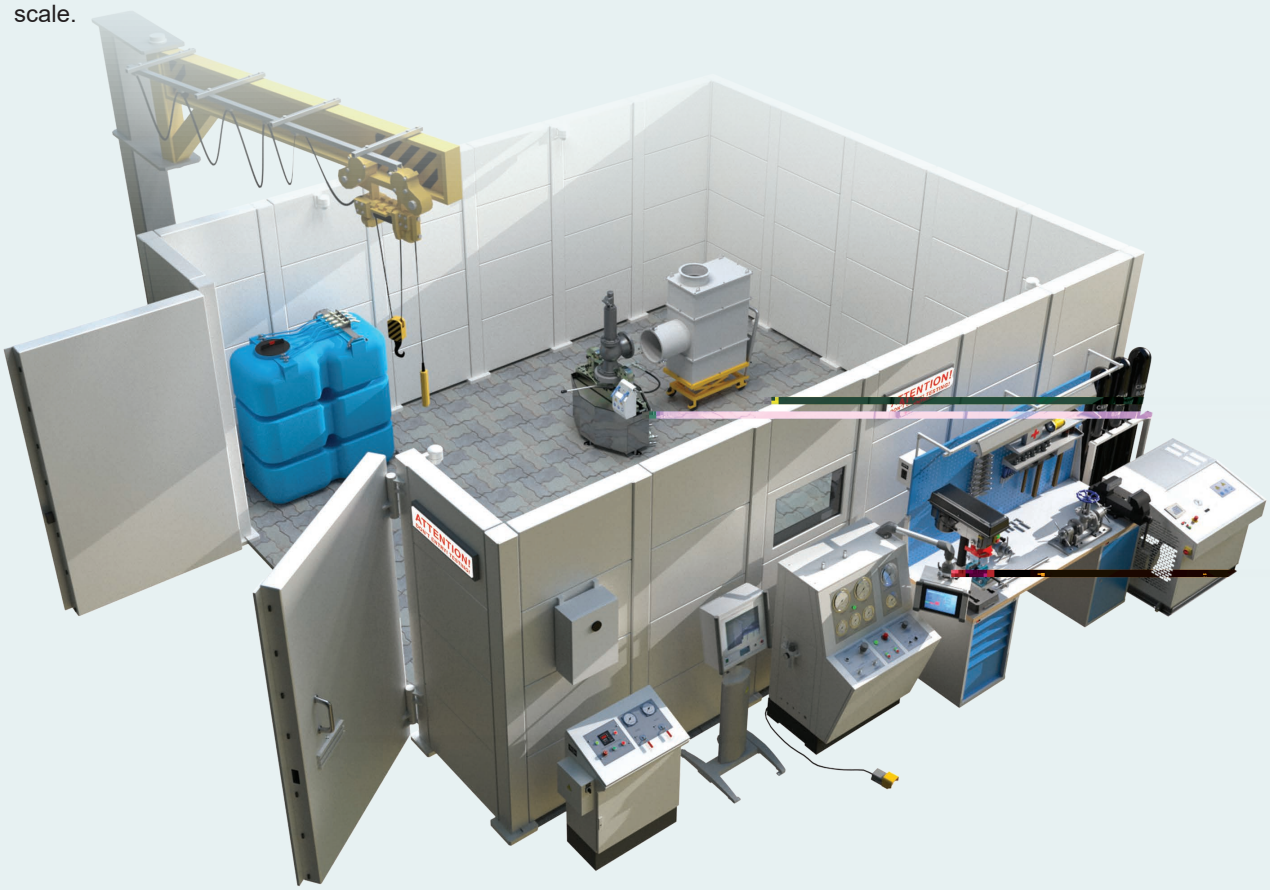
SPECIFICATIONS:

Parameter	MP-SRV-40
	3 claws
	40
Tested valve sizes, mm	10...300
	90/460 (4/18)
	125 (5)
Weight, kg	485

TEST BENCHES
FOR TESTING & ADJUSTMENT OF PRESSURE SAFETY & VACUUM RELIEF VALVES

OPTIONS:

- High pressure booster based gas test system with gas accumulators.
- High pressure compressor unit (air up to 400 bar/ 5800 psi) with compressed air accumulators up to 150 liters.
- Compressed air saving system. Especially required when customer needs to test a large number of valves within short time period without recharging vessels or compressed air accumulators.
- Computer Registration System.
- CRS-M-based Semi-Automatic Test System.
- Device for breather (pressure vacuum relief) valves testing. Designed for mounting of pressure vent and breather valves DN 50...500 mm (2...20"). Control panel provides testing with overpressure up to 2 bar and vacuum depth of up to 500 mm (20") of water column scale.
- Pressure vent and breather valves testing control system can be either integrated into the general control panel of PSV test system or be carried out in a separate cabinet, as per request of the client.
- Upon customers demand test system can be customized to meet specific test parameters.



OPTIONAL:

RMR-PPK

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CRS-M

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PGS

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UK

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B

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SVN

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MSSH

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S-1-600/10-DKM
BREATHER VALVES TESTING UNIT IN THE RANGE OF DN 50...600 mm (2...24")

PURPOSE:
- unit is designed for quick and convenient testing of breather valves 50...600 mm (2...24") with vacuum up to 0,8 bar and

TESTED VALVES:
- breather valves DN 50...600 mm (2...24");
- emergency vacuum vents with DN 50...600 mm (2...24").

S-1-600/10-DKM

Maximum test pressure, bar (psi)

DN, mm (")	0,8 (12)	3 (44)	4,5 (65)	6 (87)
50...400 (2...16)				
500 (20)				
600 (24)				

CONNECTION TYPE:
- flanged.

TESTING STANDARDS:
The valves are tested according to API 2000:
- set vacuum test;
- set pressure test;
- seat leakage in vacuum conditions;
-

TEST OPERATION CONTROL:
-
-

panel.

ADVANTAGES:

Air reservoir under the tested valve which is mandated by API 2000.
Volume under the valve allows to pressurize smoothly without pressure hammering.

Unique technology for defining the valve leakage on vacuum.

High-accuracy U-shape manometer used for small pressure values.
Computerized registration system allows to create test reports (optional feature).

SPECIFICATIONS:

Parameter	S-1-600/10-DKM
	4 claws
	10
	780 (31)
	30 (1)
Weight, kg	403

SI-25M
TEST BENCH FOR TESTING SPRINGS OF SAFETY VALVES Ø 25...300 mm (1...12″)

PURPOSE:
- testing of the PSV spring with preset load and measuring of the spring deformation;
- testing of the PSV spring with preset deformation and measuring of the load required for it;
- checking the spring permanent deformation;
- test report forming.

TESTED VALVES:
- springs Ø 25...300 mm .

ADVANTAGES:
Computer-aided automated control system with a touch screen display.
Tests of all the main standard sizes of springs used in safety valves.
Ready-to-use skid.
Recording, archiving, and printing-out of the test protocols
No human factor influence on the test results.
Can be integrated to the company local network.

SPECIFICATIONS:

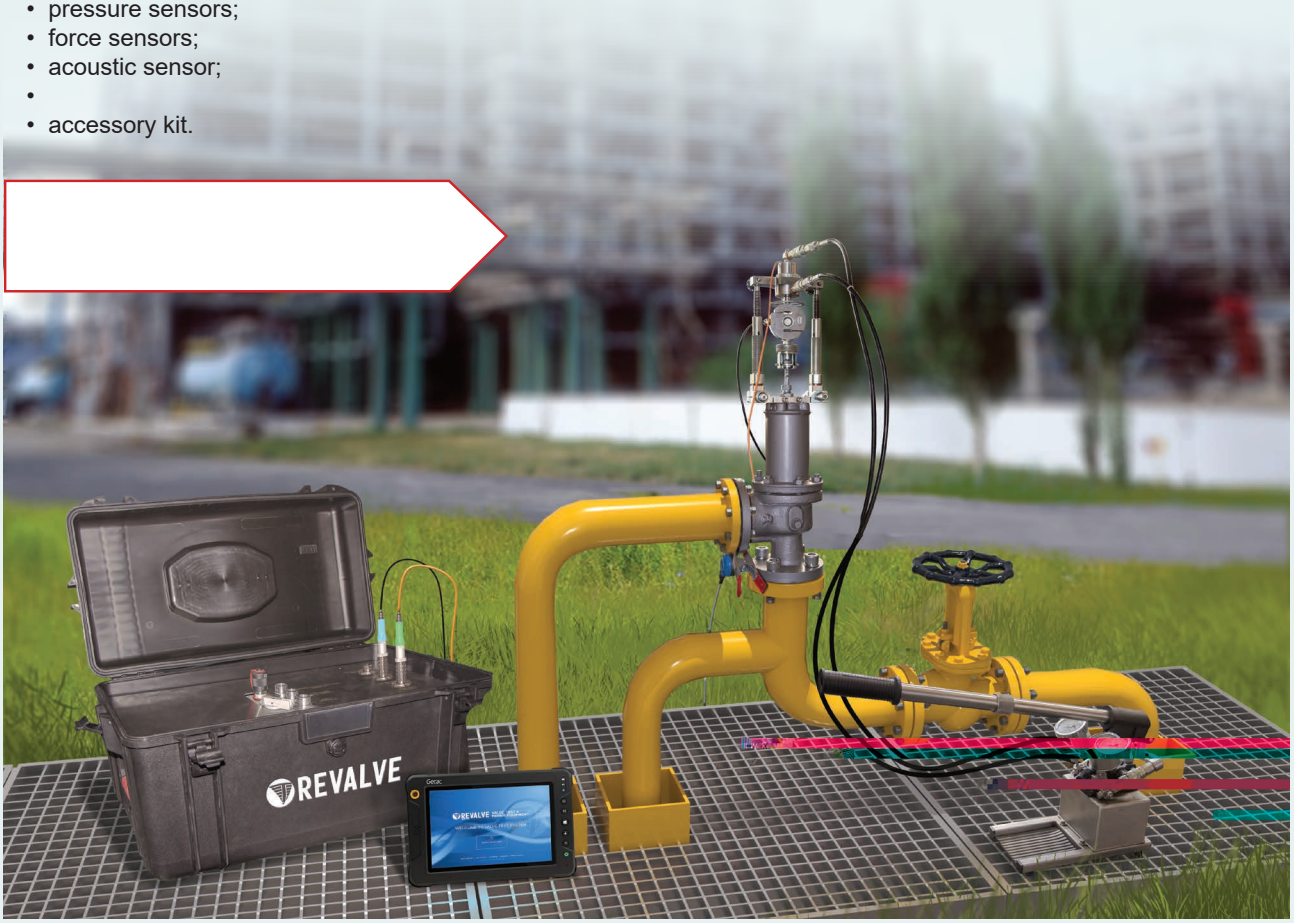
Parameter	SI-25M
	25…300 (1...12)
Free height of springs, mm	50…500 (2...20)
Controlled-load range, kg	5…10000
Power supply, V/Hz	400/50
Motor power, kW	4,5
The weight of the bench and the control panel, kg	1220

D-14-EX
PORTABLE MEASURING SYSTEMS

PURPOSE:
- testing of all types of spring operated Pressure Safety Valves in their operational pipeline position without plant shut-down.

MACHINE CONFIGURATION CHART:
- test rig;
-
- industrial computer;
- pressure sensors;
- force sensors;
- acoustic sensor;
-
- accessory kit.

TESTED PRODUCTS:
- spring-loaded safety valves with manual opening mechanism.



ADVANTAGES:
Allows testing of spring operated safety valves directly on their operational pipeline position without plant shut-down.
High accuracy of test results due to use of four interchangeable pressure sensors with accuracy class of 0.25% (with ranges of 16, 40, 100 and 250 Bar) as well as three interchangeable force sensors with class of accuracy 0.03% (with ranges of 2; 20; 50 kN).
Small device weight makes it convenient to move across the plant.
energy during testing.
Universal mounting bracket simplify installation of the unit.
Allows testing of Pressure Safety Valves on the pipeline under pressure and without it.

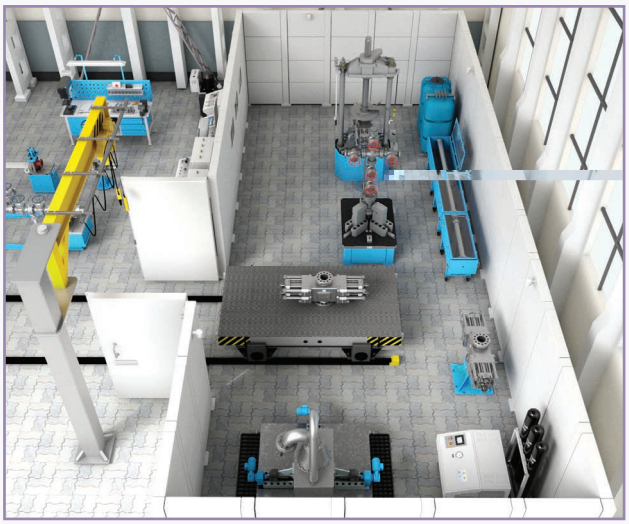
Acoustic sensor allows to determine set point precisely
Emergency valve closing system.
Availability of vast PSVs database (over 6000 items).

SPECIFICATIONS:

Parameter	D-14-EX
Spool traveling mechanism actuator	hydraulic
	2,0; 20,0; 50,0
	yes
	-10...+50
:	
- spool traveling mechanism;	
- control unit;	
Weight, kg	60

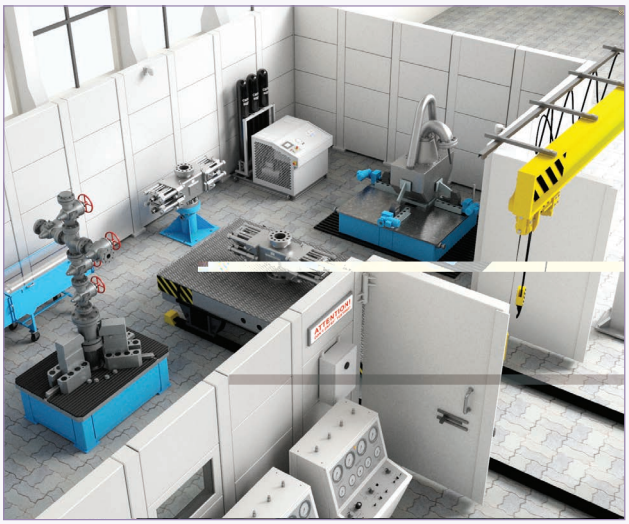
COMPLEX FOR TESTING
WELLHEAD AND ANTI-BLOWOUT EQUIPMENT

PURPOSE:
- strength and density testing of the body parts materials and welds under pressurized test medium;
- environmental leakage tests;
- gate tightness tests;
- anti-blowout equipment tightness tests.



TESTED VALVES:
- christmas tree valves;
- swivels;
- drilling heads;
- gate valves;
- adapter spools;
- casing heads;
- well flushing equipment set;
- preventers (ram and annular BOPs);
- packers;
- high-pressure hoses;
- wellhead.

TESTING MEDIUM:
- water;
- water with corrosion inhibitor of purity class not rougher than 14 according to GOST 17216 (code 19/16 according to ISO 4406).



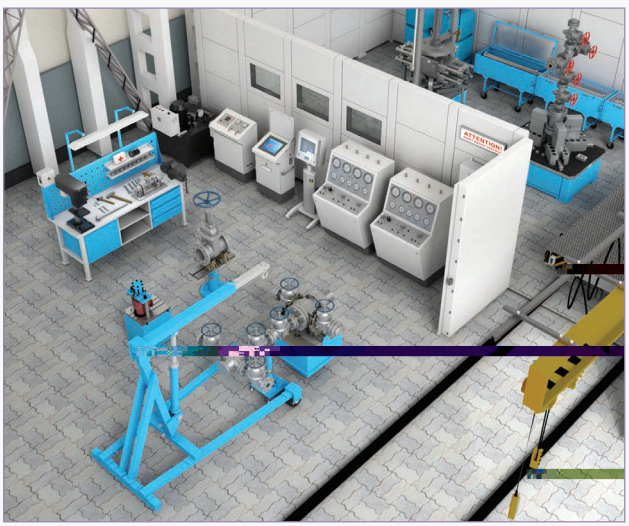
valves, is acceptable in agreement with REVALVE.

ADVANTAGES:
Two-sided gate tightness tests do not require the tested-valve rearrangement, which significantly reduces the test time.

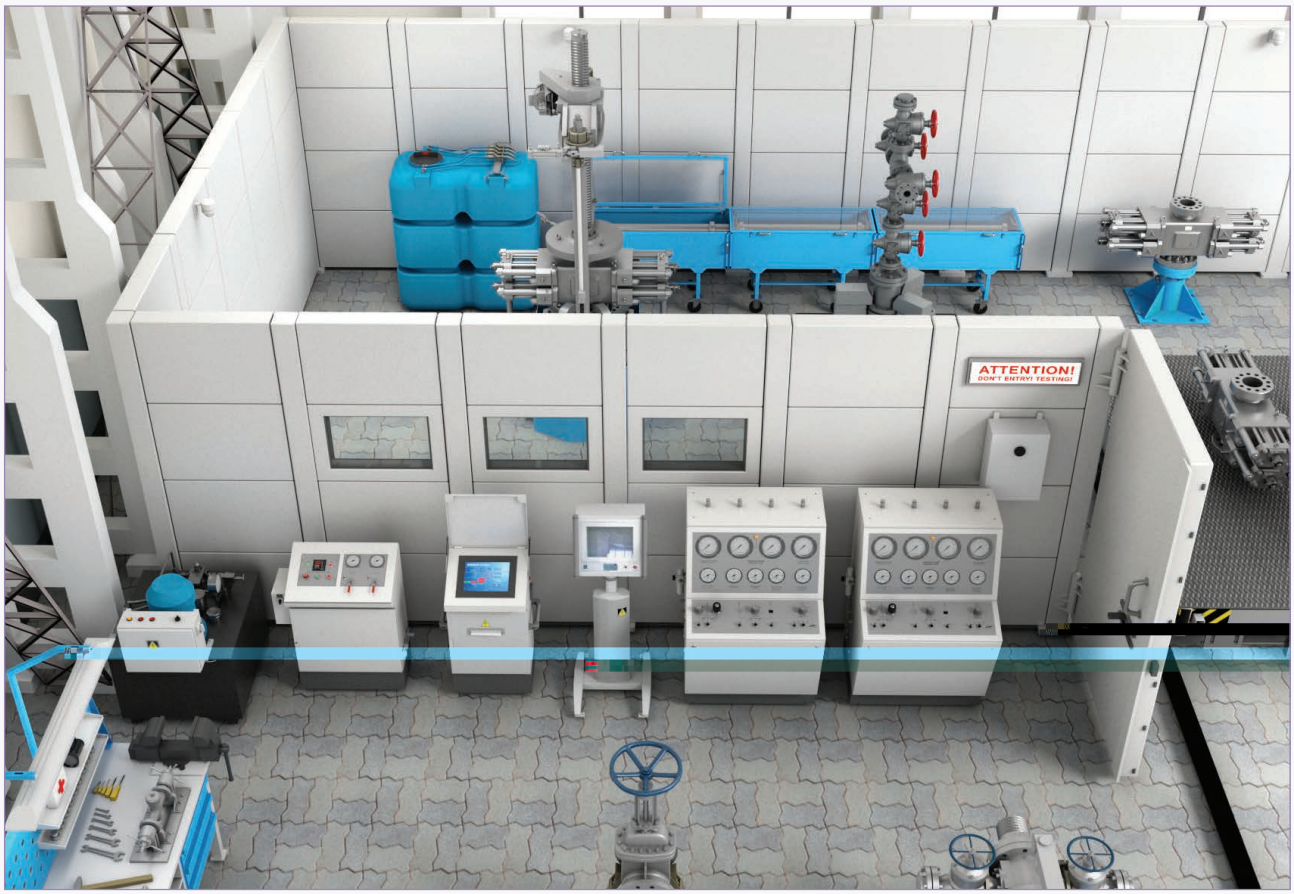
The patented design of the self-sealing blind flanges

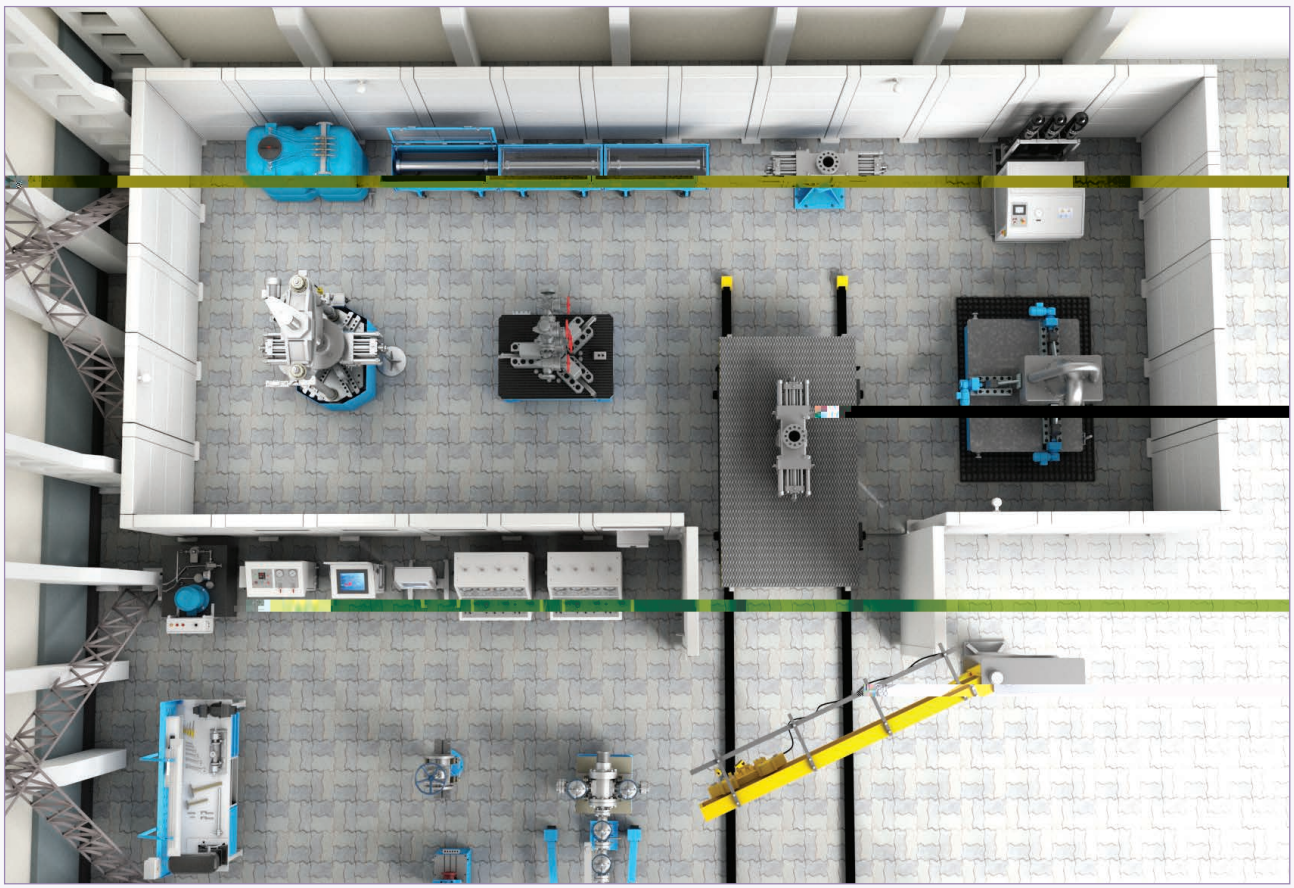
ensures the test reliability, protects the valves against

Accuracy and veracity of testing results are provided by controlling and additional gages as well as by computer registration system CRS-M.



SI-PVO
COMPLEX FOR TESTING WELLHEAD AND ANTI-BLOWOUT EQUIPMENT





UNIT №1
VERTICAL TEST BENCH FOR TESTING THE WELLHEAD AND ANTI-BLOWOUT EQUIPMENT DN 50...280 mm (2...11”)

PURPOSE:
- strength and density testing of the body parts materials and welds under pressurized test medium;
- environmental leakage tests;
- gate tightness tests;
- anti-blowout equipment tightness tests.

TESTED VALVES:
- wellhead equipment (slab gate valves, spools, tee-bends, cross-heads etc.);
- anti-blowout equipment (small-sized preventors).

CONNECTION TYPE:
- flanged;
- non-flanged.

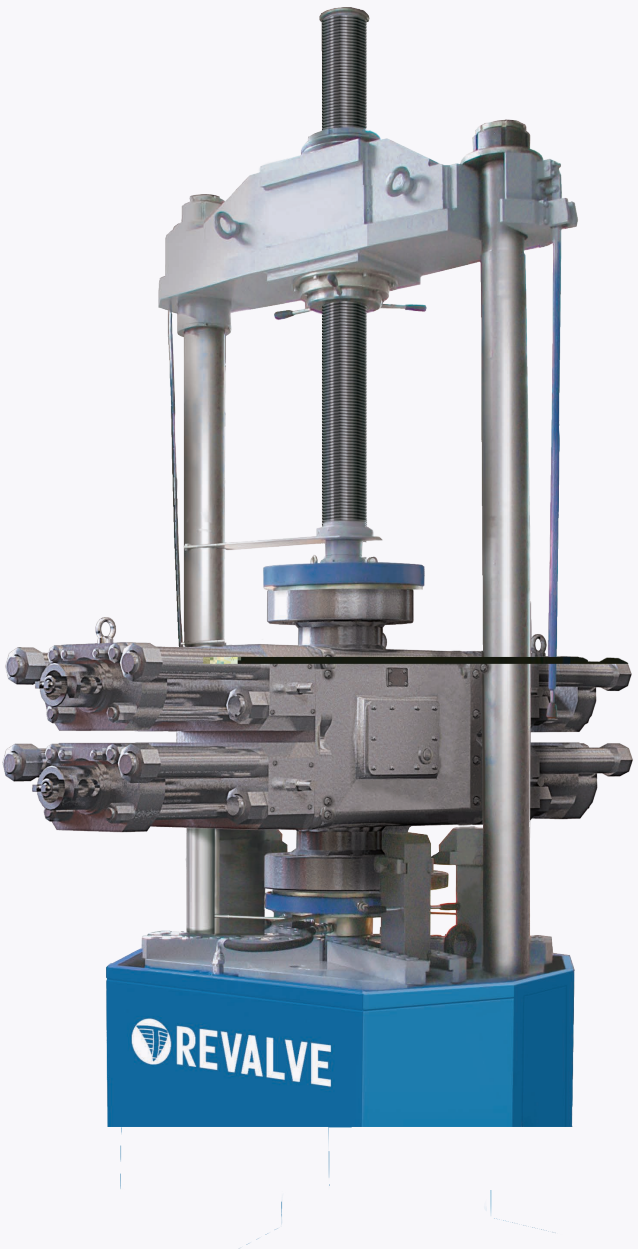
TESTING MEDIUM:
- water;
- water with corrosion inhibitor of purity class not rougher than 14 according to GOST 17216 (code 19/16 according to ISO 4406).

valves, is acceptable in agreement with REVALVE.

UNIT №1

Maximum test pressure, bar (psi)

DN, mm (")	280 (4061)	420 (6090)	700 (10150)	1050 (15225)
50...100 (2...4)	■	■	■	■
180...230 (7...9)	■	■		
280 (11)	■			



ADVANTAGES:
The bench is equipped with replaceable blind flanges for testing non-flanged valves*. This releases the operation from welding (lock-pin screwing) of the blind flanges to the pipes.
Side opening upper cross-head simplifies the valve installation procedure before testing.
Use of high-pressure hoses with fast couplings reduces test preparation time.

SPECIFICATIONS:

Parameter	UNIT №1
	220
Motor power, kW	1,1
Actuating medium of hydraulic cylinder clamp	Industrial oil of purity class not lower than 14 according to GOST 17216
Weight, kg	3813

UNIT №4

VERTICAL TEST BENCH FOR TESTING THE WELLHEAD AND ANTI-BLOWOUT EQUIPMENT DN 100...425 mm (4...17”)

PURPOSE:

- strength and density testing of the body parts materials and welds under pressurized test medium;
- environmental leakage tests;
- gate tightness tests.

TESTED VALVES:

- wellhead and anti-blowout equipment.

TYPE OF CONNECTION:

- flanged;
- non-flanged.

TESTING MEDIUM:

- water;
- water with corrosion inhibitor of purity class not rougher than 14 according to GOST 17216 (code 19/16 according to ISO 4406).

UNIT №4

Maximum test pressure, bar (psi)

DN, mm (")	280 (4061)	420 (6090)	700 (10150)	1050 (15225)	1400 (20305)
100 (4)					
180 (7)					
230 (9)					
280 (11)					
350 (14)					
425 (17)					

valves, is acceptable in agreement with REVALVE.

SPECIFICATIONS:

Parameter	UNIT №4
	275/872 (11/34)

UNIT №5

VERTICAL TEST BENCH FOR TESTING THE WELLHEAD AND ANTI-BLOWOUT EQUIPMENT DN 50...425 mm (2...17″)

PURPOSE:

- wellhead and anti-blowout equipment;
- christmas tree and injection tree valves.

TESTED VALVES:

- christmas tree;
- injection tree;
- blowout prevention equipment.

TYPE OF CONNECTION:

- flanged.

TESTING MEDIUM:

- water;
- water with corrosion inhibitor of purity class not rougher than 14 according to GOST 17216 (code 19/16 according to ISO 4406).

valves, is acceptable in agreement with REVALVE.

ADVANTAGES:

compression, which protects the valves against deformation and ensures the test reliability.
The floor, caisson (pit) and safety fence installations are offered as options.
Clamping unit equipped with powerful hydraulic cylinder installed in the basement of the test bench. Hydraulic system of the clamping unit use oil as operating medium,

Fast clamping of the tested product is provided with pneumatic cylinders providing synchronized travel of the clamps.
Optional application of hydraulic clamping unit with self-sealing adapters and medium separator allows to achieve even wider range of tested products.

OPTIONAL:

CRS-M

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PGS

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SOV

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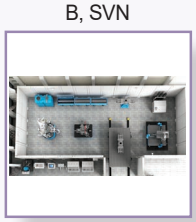
B, SVN



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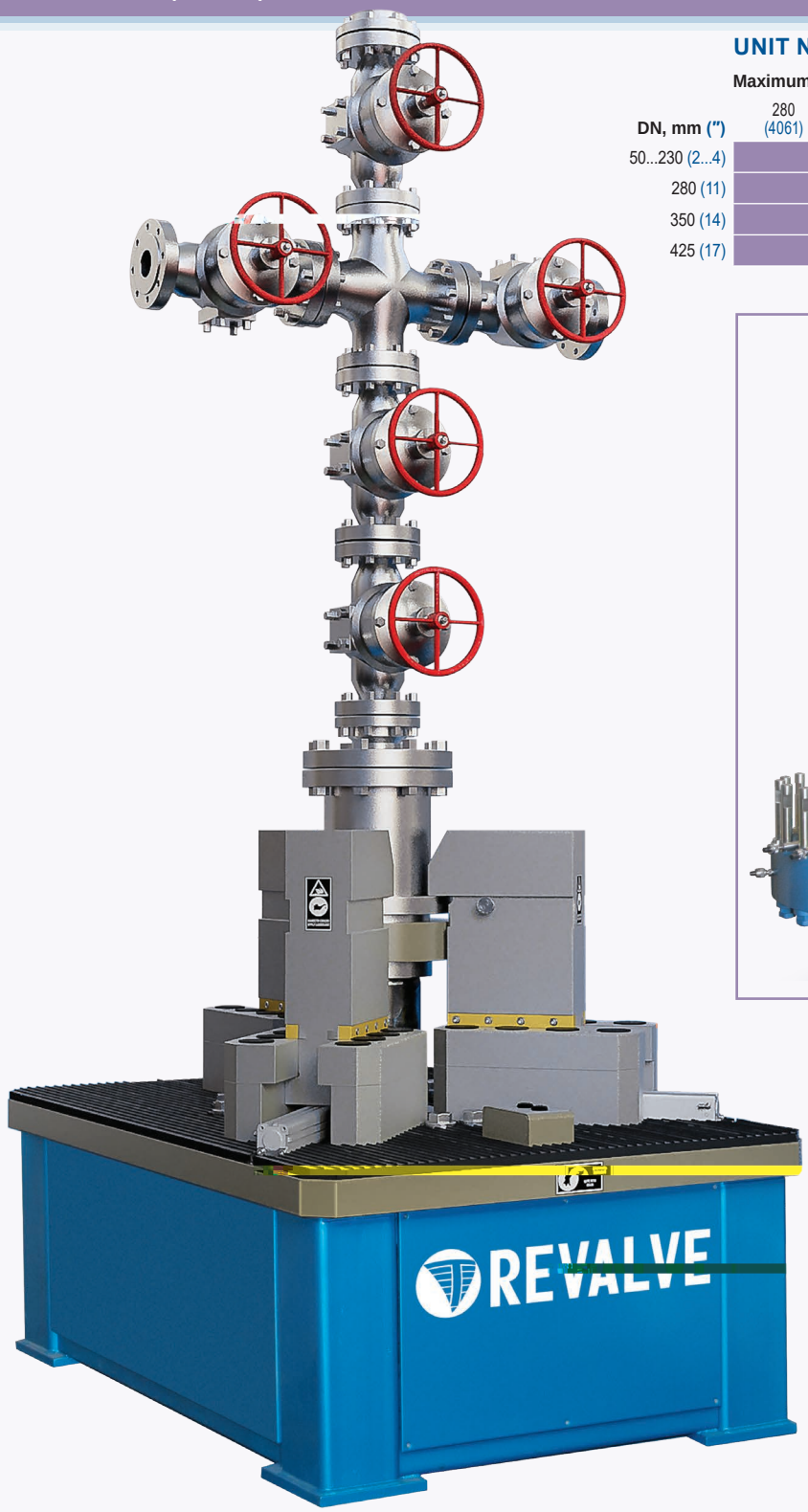
UNIT №5

VERTICAL TEST BENCH FOR TESTING THE WELLHEAD AND ANTI-BLOWOUT EQUIPMENT DN 50...425 mm (2...17")



UNIT №5

Maximum test pressure, bar (psi)*

DN, mm (")	280 (4061)	420 (6090)	700 (10150)	1050 (15225)
50...230 (2...4)				
280 (11)				
350 (14)				
425 (17)				

SPECIFICATIONS:

Parameter	UNIT №5
	700
	165/560 (550/705*)
(psi)	340 (4930)
Air pressure, supplied to pneumatic cylinders providing travel of the clamps, bar (psi)	4+2 (58+29)
Weight, kg (bench)	3855

** If using of the hydroclamped blind flanges.*

CRS-M
COMPUTER REGISTRATION SYSTEM

PURPOSE:
- the system is designed for measuring pressure, test medium leakage through the valve gate, temperature of the test medium and ambient air, HDD saving and printing out of the test protocols (testing in accordance with API, ANSI FCI, ISO, GOST, DIN and other standards).

TEST TYPES:
- hydraulic and pneumatic tests of the valves for strength and density (shell test);
- hydraulic and pneumatic tests of the shut-off valves for leakage;
- hydraulic and pneumatic tests of the safety valve gate seal by the adjustment pressure;
- hydraulic and pneumatic tests of the well-head and anti-blowout equipment by the working pressure;
- safety valve adjustment (measuring the valve full lift, set and reseating pressure).

DESIGN:
- floor-mounted design;
- suspendable design;
- mobile design;
- integrated design.

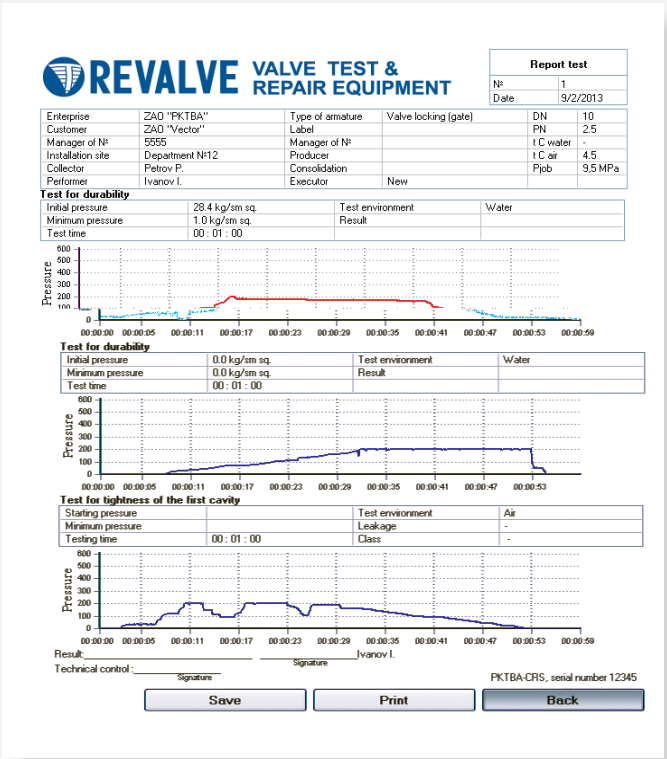
ADVANTAGES:
No human influence on the test results. Automatic recording of the test results. Integration into the company network is possible.
High reliability and accuracy of the results are ensured by the pressure and leakage gauges, as well as industrial computer.
Software package is made for easy operation with the system, and allows to input necessary valve data as: DN, PN, test standard, types of test, operator and manufacturer details, sensor calibration parameters. When testing process has been finalized CRS-M system generates a report with real time testing

in archive on internal HDD.

FUNCTIONS:
1. Leakage measurement by bubbles (drops) and actual volume during the shut-off valve tests and the leakage class (determination during hydraulic and pneumatic tests. For measurement of leakages according to ANSI FCI 70.2 (Class II-VI) ANSI B16.104 unit requires upgrade to CRS-M-R version.
2. Measuring of the test-medium pressure during hydraulic and

permissible error of 0.4% or smaller.
3. Test medium and surrounding air temperature measurement during hydraulic tests. (Not included in CRS-M-M.)
4. Pressure measurement at the time of popping, full opening, and reseating of the safety valve gate during the valve test and adjustment.
5. Graphic output of the test results.
6. Electronic and paper saving and storing of the test protocols with possible data transmission.
7. Test data base development for each item.
8. Test result printout.
9. Leakage measurement during the control valve tests (when using additional flowmeters).

CRS-M
COMPUTER REGISTRATION SYSTEM



REVALVE VALVE TEST & REPAIR EQUIPMENT

Report test	
№	1
Date	9/2/2013

Enterprise	ZAO "PKTBA"	Type of armature	Valve locking (gate)	DN	10
Customer	ZAO "Vector"	Label		PN	2.5
Manager of №	5555	Manager of №		t C water	-
Installation site	Department №12	Producer		t C air	4.5
Collector	Petrov P.	Consolidation		Pjob	9,5 MPa
Performer	Ivanov I.	Executor	New		

Test for durability

Initial pressure	28.4 kg/sm sq.	Test environment	Water
Minimum pressure	1.0 kg/sm sq.	Result	
Test time	00 : 01 : 00		

Pressure

Test for durability

Initial pressure	0.0 kg/sm sq.	Test environment	Water
Minimum pressure	0.0 kg/sm sq.	Result	
Test time	00 : 01 : 00		

Pressure

Test for tightness of the first cavity

Starting pressure		Test environment	Air
Minimum pressure		Leakage	-
Testing time	00 : 01 : 00	Class	-

Pressure

Result:_____ _____Ivanov I.
Signature

Technical control:_____
Signature

PKTBA-CRS, serial number 12345

Save | Print | Back

SPECIFICATIONS:

Parameter	CRS-M
Operating medium	water, air*
(psi)	1600 (23200)
(fl oz)	12/15 (0,4 / 0,5)
Reduced pressure measurement error, %	±0,4
Reduced leakage measurement error, %	±3,0
Test medium and surrounding air temperature measurement range, C° (F°)	0...+60 (+32...+140)
Absolute error of the temperature measurement, C° (F°)	±1 (±34)
Power supply, V/Hz	230/50 (110/60)
Power consumption, kW	0,6
	depending on system design

*

(3,38 f oz)

particles: size from 50 up to 100 microns (0,002-0,004") Requirements for air: size of solid particles not more than 40 (0,002")

UK
AUTOMATED COMPRESSOR UNIT

PURPOSE:

- pressure source for high pressure pneumatic tests of valves and pressure vessels;
- independent pressure source.

COMPLETE SET:

- air compression and supply unit:
  - compressor;
  ;
  - monitoring, adjustment, and control unit;
  - piping and automatic equipment system;
  - additional available boosters (in UK-2 and UK-3).
- spare parts, tools, and accessories.

ADVANTAGES:

High pressure compressor unit with 150 l receiver, will provide you with long term reliable operation of testing unit, instead of air boosters which require monthly overhauling, and replacing of piston rings, which requires time and skilled operators.

The compressor unit is specially designed for use with test bench, which reduces its cost compared to large compressors supplying the required pressure.

The compressor unit is designed for long-term continuous operation.

The unit control system automatically maintains the cylinder pressure within the specified limits and ensures the unit shutdown in case of emergency.

It has 2 individually adjusted high- and low-pressure output lines.

Compressed air backup is up to 150 l .

Stepwise air volume adjustment in the cylinders (55 - 110 - 165 l (15-29-43 gl)) allows to reduce the high pressure generation time.

SPECIFICATIONS:

Parameter	UK-1	UK-2	UK-3	UK-3M
(psi)	64 (928)	200 (2900)	350 (5075)	400 (5800)
Pneumatic unit capacity reduced to initial conditions, nl/min	250			300
Pressure buildup time, min:				
(13 gl) receiver;	15	40	70	85,0
(0.3 gl) tank.	0,3	0,8	1,75	
Receiver volume, l (gl)	165 (43)		110 (27)	
Motor power, kW	5,5			10,0
Power supply, V/Hz	400/50			
(compressor/receiver)	1212×1620×2130			/
Weight, kg	650			620

SOV
RECYCLING WATER SUPPLY STATION

PURPOSE:

- autonomous recycling process water supply station for test benches and pneumohydraulic stations included in composition thereof as well as for other units applying process water.

ADVANTAGES:

Operation in automated mode with maintained set output water pressure.
The unit provides water supply for consumers through two lines with a separate adjustment of pressure for each one.
The unit stops automatically when water level in the tank reaches minimum.
Modular structure of the unit allow increasing of SOV tank volume up to 12 m³.*
Provides hydraulic testing without main process water supply line in the workshop.
Water drainage from several units (up to 4) to the tank. Providing a closed cycle of water recirculation.
The tank may be placed at 10 m distance away from the control panel.
Possible application of water with corrosion inhibitors and other.*

VU
VACUUM SYSTEM

PURPOSE:

- air drainage from tested pipeline valves clamped at the test bench before filling with process water. Recommended for use with horizontal test benches.

ADVANTAGES:

Provides significant reduction of time needed for filling of the tested products with water. Recommended to use with horizontal clamping units in case if tested valves are not equipped with relieve valves.
High degree of vacuumizing (up to -0.95 bar).
Essential for horizontal bench for testing of large inner diameter valves and fittings from DN 400 mm (16") and higher.
Equipped with automated control system which allows switching off the unit when the required level of vacuumization is reached.
Can be used as vacuum creation unit in set with PGS unit in other fields of applications such as breather valves testing.
Compatible with all types of test benches from REVALVE product range as well as for use as a

B
SAFETY FENCE FOR HIGH PRESSURE TESTING

PURPOSE:
- provision of safety protection in case of depressurization of the tested valves or connecting elements during hydraulic and pneumatic testing.

OPTIONAL:
- Video control system (SVN).

SVN

COMPLETE SET:
- columns;
- panels (with or without window);
- swing gates (sliding*);
- sliding roof*;
- lighting/warning panel;
- electrical cabinet;
- pneumatic safety locking device.*

TYPICAL SIZES (LXWXH):*
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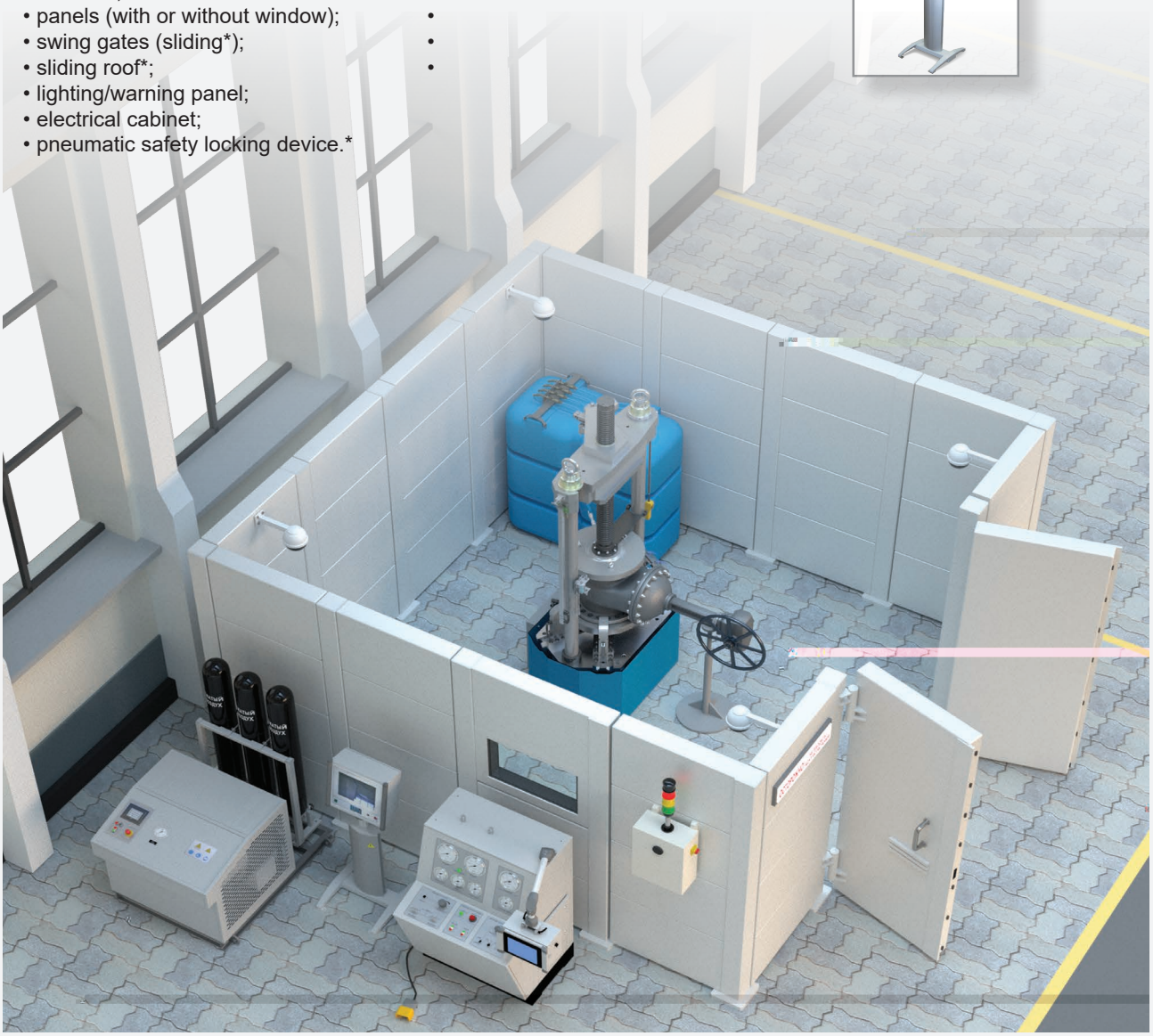
-
-
-



ADVANTAGES:
Set of modules allows mounting of safety fence of various types and sizes with possible placement of gates at various sides.
The panels of safety fence are provided with viewing windows of certified armoured glass.
In the safety fencing provided the locking mechanism of the entrance gates during gas testing.

Armoured protection is mounted at the site. The columns are installed at foundations using foundation (anchor) bolts.
In order to provide electrical safety panels and gates are facilitated with grounding bolts.

SPECIFICATIONS:

Parameter	B
Height, mm	2500 (96)
Blank panel width, mm	1000 (40)
Width of blank panel with windows, mm	1000 (40)
Window dimensions, mm	
Width of swinging gates, mm	1600 (63)

SI-PRA
TEST UNIT FOR TESTING OF CONTROL VALVE ACTUATORS

PURPOSE:

- operation testing, valve closure element harmonization and insensitivity adjustment for valves with diaphragm actuators and actuators of control valves with pneumatic and electric control.

SPECIFICATIONS:

Parameter	SI-PRA
Air pressure control range , bar (psi):	
- channel I;	from 0 to 4 (58)
- channel II.	from 0 to 7 (102)
Pressure gauge accuracy rating, at least	0,6
	from 0 to 20
Adjustment range of voltage acc. to load, at least 3 kOhm, V	from 0 to 30
	4, 8, 12, 16, 20
- voltage acc. to load, at least 15 Ohm, V	24
Power voltage of the tested products, V/W	24/20
Milliammeter and voltmeter accuracy rating, at least	0,6
Air pressure supplied to the bench, bar (psi), at least	7,5 (109)*
Supply power, V/Hz	230/50
Weight, kg	75

MG
HYDRAULIC DRIVE UNIT

PURPOSE:

- pressurized oil supply unit, with pressure rate adjustment by safety valve settings into system, for various hydroficated equipment.

COMPLETE SET:

- hydraulic tank volume 160 l;
- pumping unit;
- control system;
- filters (suction, inlet, drain);
- safety valves;
- gauge;
-
- oil level indicator.

ADVANTAGES:

A large volume of hydraulic tank with the possibility of refitting* allows to perform a wide range operations.

Built-in sensor shuts off the unit automatically when oil achieves a minimum level.

sensor provides long smooth operation of the hydraulic drive unit due to oil cooling.
Pollution indication of a drain filter allows to replace the filter element in time for guaranteed oil purity.
Gear pump is oil-immersed to reduce noise and to provide favorable conditions for the unit operation.

SPECIFICATIONS:

Parameter	MG
Hydraulic tank rated capacity, dm³	155
Pumping unit type	gear
Rated pumping capacity, l/min	14
Pumping unit motor power, kW	7,5
Supply voltage, V/Hz	400/50
pressure, bar (psi)	5/210 (72,5/3046)
	300

MSSH
MUFFLER FOR HIGH PRESSURE PSV GAS TESTING

PURPOSE:

-

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ADVANTAGES:

Using the muffler during operation provides safety valve noise level reduction to a safe level.

reducing the mechanical impurities (dust, particles, scale, etc).
Specially designed on a mobile stand with height adjustment.
Adapters kit allows you to connect unit to almost any safety valve with DN up to 300 mm (more than DN 300 mm - on request).

SPECIFICATIONS:

Parameter	MSSH
transition pipe), mm	925…1555 (37…62)
Weight, kg (reduction noise/set of replacement parts)	210/80

OUR CERTIFICATES

CONTACT:

Export Department
Tel.: +7 (8412) 200-201
E-mail: sales@revalve.com

ADDRESS:

75 Pobedy Ave., Penza, 440060, Russia

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REVALVE by «PKTBA» CJSC
75 Prospekt Pobedy, Penza, 440060, Russia

e-mail: sales@revalve.com
www.revalve.com