

VALVING-DEVALVING MACHINE

MODELS 520-001, 520-002, 520-009

INSTRUCTIONAL MANUAL

Designed for inserting and removing compressed gas cylinder valves from industrial gas cylinders. Features a smooth hydraulic operation with torque control setting and adjustable valve wrench.

Please read this entire manual prior to operation



Model No.	Motor Size (HP)	Electrical Specifications (*)
520-001	2	115V-1Phase-60Hz
520-002	2	230/460V-3Phase-60Hz
520-009	5	230/460V-3Phase-60Hz

(*) 50Hz electrical is offered for those countries that require

Important: Before beginning setup:

- Make sure that your floor can safely handle a minimum weight of 2000 Lbs (valving machine weighs 1300Lbs)
- A ceiling height of 12' (144") is required
- Proper electrical is in place
- 60 psi @ 6CFM is available
- 20 Gallons of hydraulic fluid is available

Set Up of Equipment

- Check for any visible damage that may have occurred during shipping. If there is any visible damage, please contact the delivery company to file a damage claim - be sure to keep all packaging material for inspection.
- Unpack valving machine from wooden shipping pallet
- Using a forklift or crane - carefully maneuver the machine to its upright position
- When the machine is in the proper location, secure the base plate to the floor at the supplied 4 holes in the base plate.
- Fill the hydraulic reservoir with hydraulic fluid until the sight gauge shows 1/2 full. The hydraulic fluid should be a viscosity of 238 SUS or 46 ISO grade.
- At the back of the machine is a black hose marked "Air Supply". Hook up your pre-regulated 60 psi of air to this hose.
- The electrical cord is provided with a male plug, due to the many different styles of plugs available you may need to change to fit your electrical outlet. The electrical can be hard wired if desired.

Your Model: _____

Serial No. _____



Hydro-Test Products Inc.

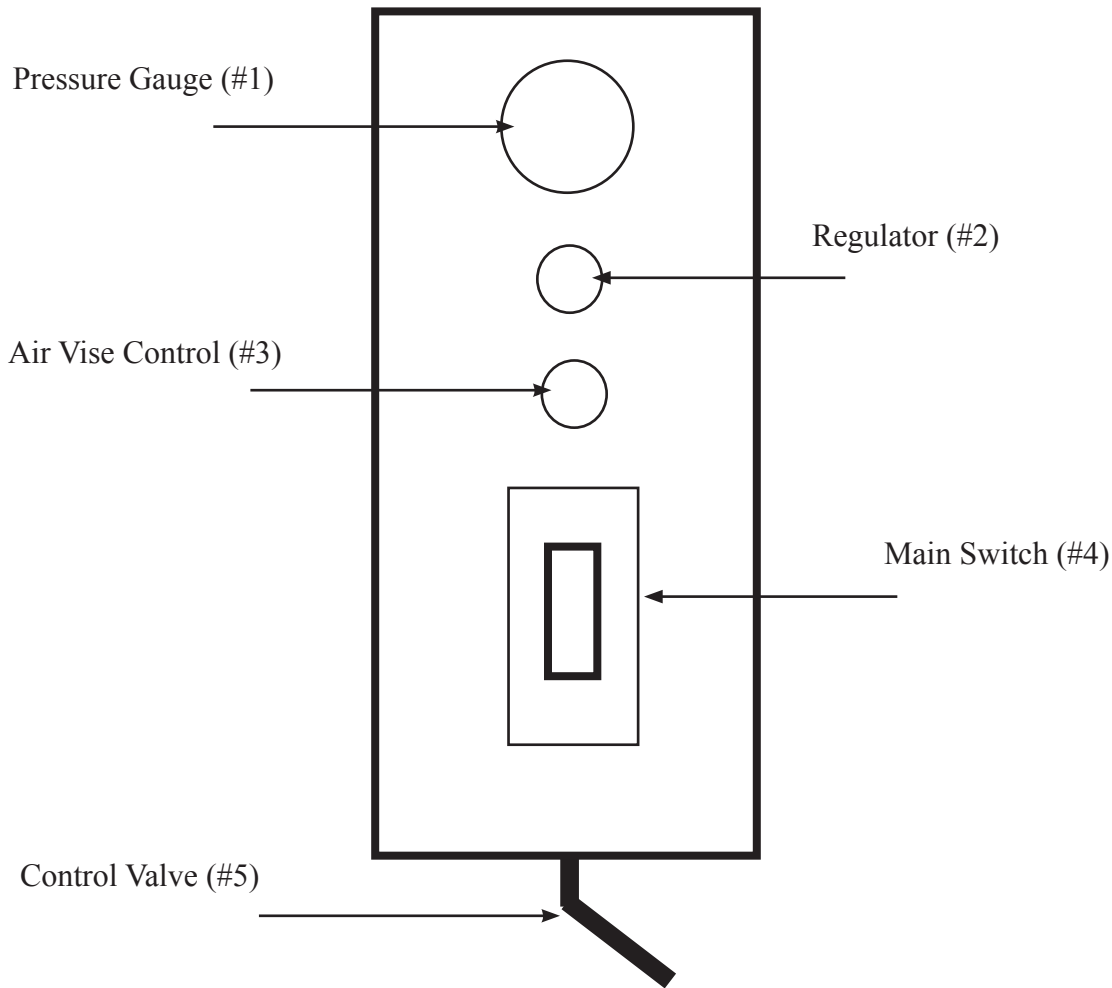
85 Hudson Road
Stow, MA 01775

Tel: 800-225-9488
Fax: 978-897-1942
www.hydro-test.com



Basic Operation

Inside Control Box



- (1) **Pressure Gauge** - Monitors the adjusted pressure applied to the valve being tightened.
- (2) **Regulator** - This is to adjust the force applied to the valve being tightened only.
- (3) **Air Vise Control** - to open and close the vise move this valve from the center position to close and back to center position to open.
- (4) **Main Switch** - To start and stop the electric motor, which powers the hydraulic power unit.
- (5) **Control Valve** - Lifting 'up' or pushing 'down' on this handle will control the direction the Wrench turns.



Hydro-Test Products Inc.

85 Hudson Road
Stow, MA 01775

Tel: 800-225-9488
Fax: 978-897-1942
www.hydro-test.com



Basic Operation

STEP# 1 Open the belt assembly from in front of the vise

STEP# 2 Place a cylinder that you wish to work on in the vise. Make sure that the cylinder neck is above the top of the vise(you may have to use the shelf, supplied, to do this). Also, make sure that the cylinder is placed firmly against the back of the vise.

STEP# 3 Close the vise and secure the locking pins, supplied, which hold the belt in place.

STEP# 4 Move the #3 valve to close the vise.

WARNING: Make sure that all foreign objects and body parts (fingers) are clear of the area between the cylinder and vise belt

STEP# 5 Pull the wrench down and lock it onto the cylinder valve with the tap of a hammer. **NOTE** make sure that the wrench is not up against the back side of the valve. It may make it easier to align the wrench to the flats of the valve if you start the power unit and push up or down on the control valve.

STEP# 6 Start the power unit, switch#4

STEP# 7 Move the control valve handle either up or down depending on whether you're installing or removing the valve. If you're removing the valve the pressure gauge on the control panel will not work. This is due to the fact that the hydraulic fluid bypasses the adjustable regulator. If your installing a valve then we suggest that you first install the valve by hand until it is tight. Back off the adjustable regulator all the way. Move the control valve handle into the correct position to tighten the valve. Turn the regulator adjusting knob clockwise until the valve just starts to turn. (*note the pressure gauge reading*) now that you've adjusted the inward force applied to the valve you can continue with all similar valves and they will all be installed with approximately the same force. Repeat this procedure for other type valves.

Note About Torque Setting:

There is no set correlation between psi and torque on the valving machine. The pressure gauge is simply an indicator that can be used to determine how tightly a valve is inserted. (ie; you cannot reliably determine what psi value equals to torque value without first "calibrating" your machine with a known torque value.) It is recommended that when you first use this machine, use a know torque value on a valve and cylinder assembly. Assemble valving machine wrench to valve. Start the machine and slowly adjust the regulator and observe when the wrench starts to move the valve. At that point the pressure reading equals the known torque value and that psi value can now be used as a baseline for other torque values.

Anyone that inserts valves into compressed gas cylinders, should have the CGA Pamphlet P-38 for further discussion and information on torque values.



Hydro-Test Products Inc.

85 Hudson Road
Stow, MA 01775

Tel: 800-225-9488

Fax: 978-897-1942

www.hydro-test.com



Maintenance

Daily	Check hydraulic fluid level
	Check condition of vise belt and pull pins
	Check condition of support cables and pulleys
Weekly	Check condition of wrench assembly
	Check all hydraulic hoses and fittings
Monthly	Check the condition of hydraulic fluid and replace when it appears discolored or dirty. It is recommended practice to replace the hydraulic fluid yearly under normal conditions.

Trouble-Shooting

Problem	Cause	Solution
Cylinder "twist" in Vise	Belt worn	Replace belt (key#8)
	Inadequate air pressure to vise	Check air pressure
Wrench will not turn	Low hydraulic fluid	Check sight gauge on hydraulic reservoir and fill as required
	Blockage in hydraulic line to gear motor	Replace hydraulic line

Parts Breakdown

Key	Part No.	Description
1	120-007	Torque control valve
2	120-022	Hydraulic control valve assembly
3	140-022	Torque control gauge
4	210-035	Spline for wrench
5	520-025	Complete adjustable wrench assembly (includes spline)
6	210-044	Pulley for counter balance weight (4 per unit)
7	130-030	Replacement vise pad (used on vise angle iron)
8	210-054	Replacement retraining belt for vise
9	210-028	Air bladder for vise station
10	120-024	Vise control air valve
11	210-106	Pull bar for vise belt (2 required)
12	210-030	Pull pin for vise
13	120-021	Pivot point fixture for hydraulic valve assembly
14	210-046	Safety cable for counter balance weight and vise belt (sold by ft)
15	210-047	U-Type clamp for safety cable
16	510-012	Small cylinder vise fixture
17	210-058	Nylon cable for belt, attaches lacing to pull bar, 18" length

Other major components are available, ie; hydraulic motor, hydraulic pump, gear motor, etc ... please contact our sales office for pricing