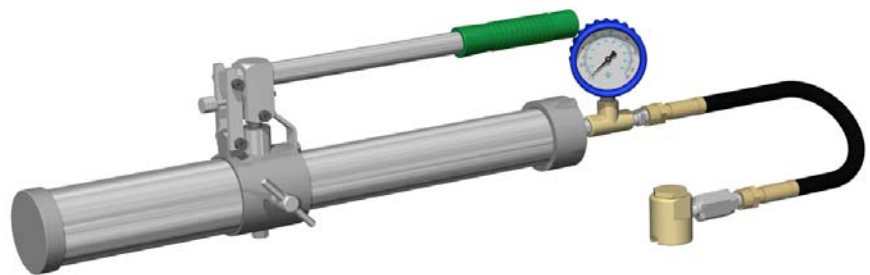

Owner's Manual

Hydraulic Hand Gun



By Sealweld Corporation

We trust you will find the lessons detailed in this program useful when maintaining the valves at your facility. Should you have any questions regarding any of these procedures, or if you know of any successful procedures you would like to share, please contact us at:

Sealweld Corporation

106, 4116-64 Ave. S.E., Calgary, Alberta, Canada T2C 2B3
Telephone: 1-403-236-0043 Fax: 1-403-236-5487
TOLL FREE 1-800-661-8465
Email: info@sealweld.com
Web Site: www.sealweld.com

Sealweld (USA), Inc.

6450 Skyview drive, Houston, Texas, USA 77041
Telephone: 1-713-466-7373 Fax: 1-713-466-7778
TOLL FREE 1-800-624-4301
Email: info@sealweld.com
Web Site: www.sealweld.com

ValvePro® Technical Support

Telephone: 1-403-236-0043 Fax: 1-403-236-5487
Email: support@valvepro.com
Web Site: www.valvepro.com

The information in this handbook is intended as a guide only.
Always consult the valve manufacturers recommended maintenance procedures.
No warranty is written or implied.

Use of product and/or company names is for reference only.

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Read This First

Hydraulic Hand Gun Owner's Manual

The Hydraulic Hand Gun is a hand-held hydraulic sealant injection pump capable of generating 10,000 PSI discharge pressure. The working principle is simple, as the handle is stroked hydraulic fluid pushes the piston in the sealant barrel. Continue stroking the handle and pressure will continue to increase.

Once line pressure is exceeded sealant will begin to enter the valves sealant chamber. When a sufficient quantity of sealant has been injected the gun may be removed from the fitting on the valve by opening the by-pass valve # 7 and slipping off the giant buttonhead coupler # 17G from the fitting.

Read this manual thoroughly BEFORE operating.



The gun operator should be familiar with the working principals and the mechanical limitations of the pipeline valve being serviced.

ALWAYS keep the gun in excellent working condition and loaded with your standard valve lubricant/ sealant compound.

Repair or replace broken or missing parts. Use only high-pressure hose components with a minimum working pressure of 10,000 PSI. NEVER carry the gun by the handle unless the handle latch or carrying chain is secured.

ALWAYS leave the by-pass valve # 7 open when the gun is not in use.

Loading Instructions

How To Load a Hydraulic Hand Gun

- 1) Relieve any internal gun pressure by opening the by-pass valve # 7 one full turn. Turn it counter-clockwise to relieve pressure. Look at the 15,000 PSI gauge # 17B to make sure the pressure is (0 PSI) zero.
- 2) Detach the giant buttonhead coupler # 17G from the fitting on the valve.
- 3) Remove sealant barrel cap # 1 from sealant barrel # 3.
- 4) If the sealant barrel will not unscrew easily, double check to make sure by-pass valve # 7 is OPEN. The handle # 10 may be used to increase leverage, the stub on the sealant barrel cap # 1 fits into the hole at the end of the handle # 10.
- 5) Place the head assembly (sealant barrel cap # 1 and hydraulic pump hose assembly # 17) in a clean, dry place to avoid any contamination.
- 6) Look inside the sealant barrel # 3, you should see the piston assembly # 2 at the end of the sealant barrel # 3. If sealant is found in the sealant barrel # 3, scoop the remaining sealant out by hand or re-attach the head assembly and resume pumping operations until it is empty.
- 7) The Hydraulic Hand Gun is now ready to load.

To Load a Cartridge

Use a (12) twelve ounce cartridge in this type of gun.

With an EZ-LOADER

The use of cartridge type lubricant/ sealants has been found to greatly reduce the risk of product contamination and trapped air in any pump. The Sealweld EZ-LOADER was designed to make loading cartridges quick and easy.

With the piston assembly # 2 at the top of the sealant barrel # 3 and the by-pass valve # 7 open, follow these EZ-LOADER instructions:

- 1) Remove the adapter ring from the EZ-LOADER. Check that the barrel is empty. If not, remove the empty cartridge from inside the EZ-LOADER by pulling the T-handle back, then pushing it forward.
- 2) Push the T-handle fully into the EZ-LOADER. Remove the cap from the sealant cartridge and then place the opened end of the cartridge in to the EZ-LOADER, as the cartridge enters the T-handle will push out. Or you can pull cartridge into EZ-LOADER with T-handle.

- 3) When the cartridge is fully inserted, pull the pull-tab off the bottom of the cartridge.
- 4) Re-attach and tighten the adapter ring onto the EZ-LOADER.
- 5) Attach the EZ-LOADER to the sealant barrel # 3 but leave the threads loose. Gently push the EZ-LOADER T-handle forward until contact is made between sealant and piston assembly # 2; this forces any trapped air to escape through loose threads. Tighten EZ-LOADER assembly to the sealant barrel # 3.
- 6) Set the EZ-LOADER T-handle on the floor with the end of the hydraulic hand gun pointing up. Make sure the rod on the EZ-LOADER is properly aligned so it can slide in and does not bend.



- 7) Push down on the body of the hydraulic hand gun. The T-handle on the EZ-LOADER should slide in as hydraulic hand gun slides down. This action will transfer the sealant from the EZ-LOADER into the hydraulic hand gun.
- 8) When the T-handle on the EZ-LOADER is fully inserted, the sealant barrel is full of sealant.
- 9) Unscrew the EZ-LOADER from the sealant barrel # 3.
- 10) Remember to remove the empty cartridge from the EZ-LOADER as soon as you have finished reloading.
- 11) To make sure that there is no air trapped at the end of the sealant barrel # 3. Push the sealant forward in the sealant barrel by closing the by-pass valve # 7 and stroke the handle # 10 until the sealant is level with the end of the sealant barrel # 3.
- 12) Screw the head assembly onto the end of the sealant barrel # 3 and tighten firmly then open by-pass valve # 7 one full turn.

13) The hydraulic hand gun is now ready.

Always relieve pressure BEFORE detaching coupler from the valve. Relieve pressure by opening the by-pass valve when the gun is not in use.

Without an EZ-LOADER

With the piston assembly # 2 at the top of the sealant barrel # 3 and the by-pass valve # 7 open, follow these instructions:

- 1) Remove the lid from the grease gun cartridge.
- 2) Place the cartridge over the OUTSIDE of sealant barrel # 3 (place the sealant barrel # 3 inside the cartridge).
- 3) Place your palm over the end of the cartridge then place the gun on the floor in an upright position.
- 4) Slowly push the cartridge down over the sealant barrel # 3, when the cartridge has bottomed out (feel the cartridge for the top of the sealant barrel # 3), remove the pull tab from the end of the cartridge. The empty cartridge should slide off the sealant barrel # 3 quite easily. Wipe any excess sealant from the outside of the sealant barrel # 3 with penetrating fluid and a clean rag. Take care not to contaminate the sealant.

Sealweld® has developed a shorter cartridge specifically for the hydraulic hand gun, ask for the Hydraulic Gun cartridge.

- 5) The longer (1) one pound cartridges can still be used, instead of pulling the tab off the end of the cartridge you should cut the remaining 1-1/2" from the end of the cartridge and then pull the empty sleeve off.
- 6) Replace and tighten the head assembly onto sealant barrel # 3, close by-pass valve # 7 and begin pumping by stroking Handle # 10.
- 7) The Hydraulic Hand Gun is now ready.

To Load a Stick-Type Grease

With the piston assembly # 2 at the top of the sealant barrel # 3 and the by-pass valve # 7 open, follow these instructions:

- 1) Push the piston assembly # 2 to the bottom of the sealant barrel # 3 with Handle # 10, be very careful not to scratch or score the inside of the sealant barrel.
- 2) Clean any contaminants such as sand or dirt from the stick and remove the plastic wrapping.
- 3) Put the stick into the sealant barrel # 3.
- 4) Replace and tighten the head assembly onto sealant barrel # 3, close the by-pass valve # 7 and begin pumping by stroking handle.
- 5) The Hydraulic Hand Gun is now ready.

To Load a Grease Bag or Gun-Pack

- 1) Push the piston assembly # 2 to the bottom of the sealant barrel # 3 with handle # 10, be very careful not to scratch or score the inside of the sealant barrel.
- 2) Clean any contaminants such as sand or dirt from the bag.
- 3) Cut the end from the bag and squeeze the contents into the sealant barrel # 3.
- 4) DO NOT place the bag or any other foreign material into the sealant barrel # 3. Keep air pockets to a minimum.
- 5) Replace and tighten the head assembly, onto sealant barrel # 3.
- 6) The Hydraulic Hand Gun is now ready.

Operating Instructions

How To Operate a Hydraulic Hand Gun

ALWAYS leave the by-pass valve # 7 open when the gun is not in use.

With the gun loaded as instructed:

- 1) Close by-pass valve # 7, close only hand-tight. NEVER use a wrench or force the valve.
- 2) Begin to build pressure by stroking the handle # 10. Watch the sealant discharge from the giant buttonhead coupler # 17G at the end of the hydraulic pump hose assembly # 17. When sealant discharges with no air pockets you may attach the giant buttonhead coupler # 17G to the fitting on the valve.
- 3) As pressure builds watch the pressure 15,000 PSI gauge # 17B, once you become familiar with reading the gauge properly you will be able to judge when sealant begins to enter the valve.

Consult "The Digital HANDBOOK of Valve Lubrication & Maintenance" for more information on Pressure Gauge Reading Techniques.

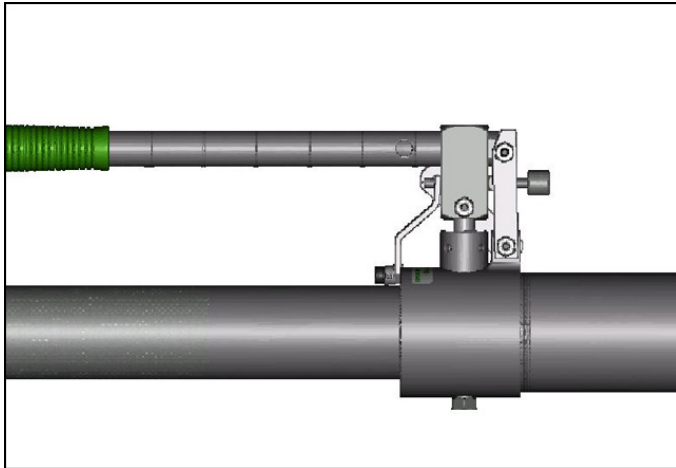
- 4) When finished servicing the valve, open the by-pass valve # 7 and slide the giant buttonhead coupler # 17G off the fitting on the valve.

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Troubleshooting Hints

Minor Repairs to the Hydraulic Hand Gun

NEVER carry the gun by the handle # 10 unless it is secured by the latch or a chain.



Keep the gun fully loaded or push the piston assembly # 2 to the bottom of the sealant barrel # 3 when not in use.

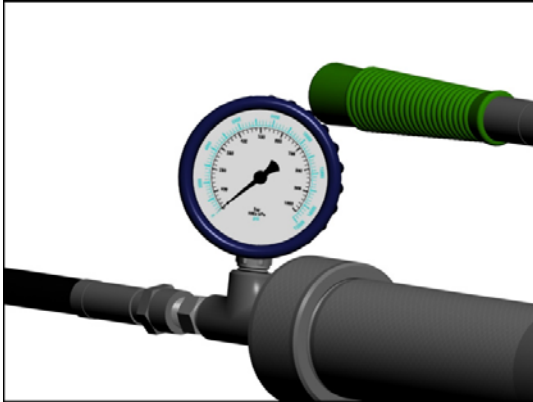
Leave the by-pass valve # 7 OPEN when not in use. NEVER open the by-pass valve # 7 more than (1) one full turn.

Keep all threaded connections tight. Replace any leaking components. Use penetrating fluid and a clean rag to keep the gun clean. This will reduce the risk of contaminants entering the pipeline valve sealant system.

Periodically check that the hydraulic relief valve # 8 in the fluid bag # 12 is functioning properly. This can be accomplished by removing the extra high-pressure hose # 17 from the high-pressure tee # 17C and placing a high-pressure 1/4" NPT plug in its place. Pressure up the gun while watching the 15,000 PSI gauge # 17B. The gauge will build pressure to approximately 11,000 PSI before relieving back to 9,500 PSI. If pressure builds past 11,500 PSI the hydraulic relief valve # 8 should be adjusted or replaced.

If the gun will not operate without holding it at an unusual angle. This indicates that air has entered the hydraulic fluid bag # 12. The gun should be repaired, consult the troubleshooting instructions.

Occasionally sealant will enter the 15,000 PSI gauge # 17B bourdon tube and the gauge will fail to return to (0 PSI) zero. If this occurs make sure all pressure sources have been eliminated then remove the 15,000 PSI gauge # 17B and replace. To ensure longer service life for 15,000 PSI Gauge # 17B, before replacing the gauge, dig a quantity of sealant out of the high-pressure tee # 17C. Fill the cavity with a light weight hydraulic fluid before replacing gauge.



How To Refill Hydraulic Fluid

This procedure will determine if your gun needs repair or is simply low on hydraulic fluid. Any type of hydraulic fluid may be used, but DO NOT MIX different types of hydraulic fluid together in the system.

If the refilling procedure does not solve your gun problem, we recommend you take the gun in for repair. If you are not familiar with the proper repair procedures you should send the gun in to Sealweld® for repair.

Fluid Bag Filling Instructions

- 1) Open by-pass valve # 7, check the 15,000 PSI gauge # 17B to make sure internal pressure is relieved from system.
- 2) Remove head assembly (sealant barrel cap # 1 and hydraulic pump hose assembly # 17) from sealant barrel # 3.
- 3) Remove handle # 10.
- 4) Push piston assembly # 2 to the bottom of the sealant barrel # 3 with the handle # 10, be careful not to scratch the inside of the sealant barrel # 3.
- 5) Turn the gun so that sealant barrel # 3 is pointing down, secure in a vise.
- 6) Remove fluid bag barrel cap # 14.
- 7) Remove the bleeder cap screw and washer from fluid bag # 12. Use a 5/8" wrench to secure the fluid bag # 12 and an Allen key to remove the bleeder cap screw.
- 8) Using a squeeze bottle, add hydraulic fluid very slowly. Work your fingers around the top of the fluid bag # 12 to displace any air bubbles inside. Continue until you are satisfied that all of the air bubbles have

escaped. If possible, leave the hydraulic hand-held gun in this position with the bleeder cap screw removed for 5 to 10 minutes.

- 9) Slowly stroke the pump handle # 10 3-5 times to help remove any air that is trapped in the pump body assembly # 4. The piston assembly # 2 should not move with the by-pass valve # 7 open.
- 10) Once fluid bag # 12 is refilled, attach the bleeder cap screw and washer to the fluid bag # 12. Use a 5/8" wrench to secure the fluid bag # 12 and an Allen key to tighten the bleeder cap screw.
- 11) Put fluid bag barrel cap # 14 back onto the hydraulic hand gun.
- 12) Reload the hydraulic hand gun with sealant, replace the head assembly onto sealant barrel # 3, close by-pass valve # 7.
- 13) The hydraulic hand gun is now ready for use, to prevent air from entering the hydraulic system. NEVER tighten by-pass valve # 7 more than hand-tight. If fluid is detected leaking out from the by-pass valve # 7, the hydraulic hand gun should be repaired immediately.

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Parts List

How To Order Hydraulic Hand Gun Parts

Parts can be identified by referring to the illustration number. Ordering parts by the part number is the best way to ensure satisfaction.

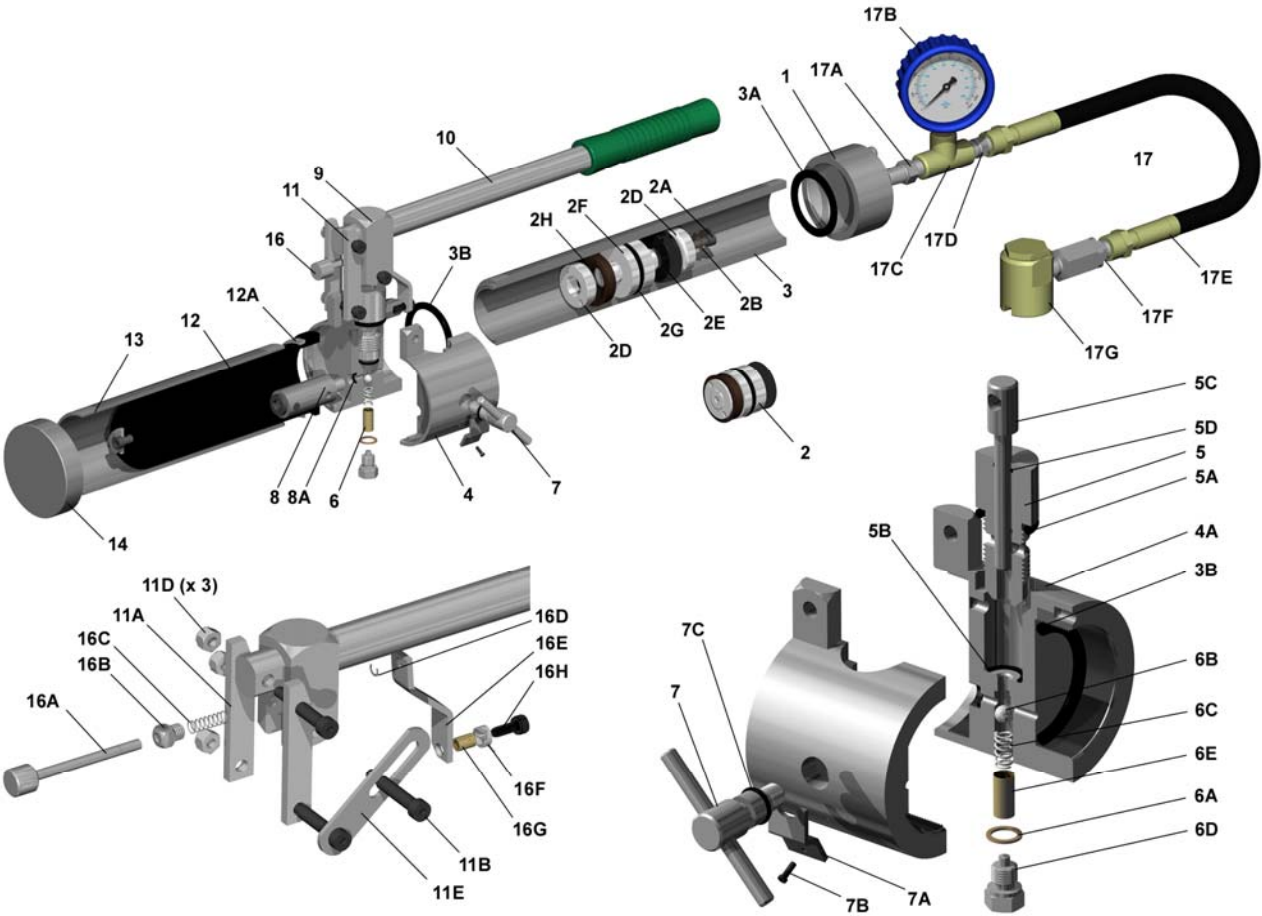


Illustration #	Description	Order Part #	Qty. Req'd
1	Sealant Barrel Cap	R-HG07	1
2	Piston Assembly	R-HG08	1
2A	Cap Screw	R-HG08A	1
2B	Copper Washer	R-HG08BA	1
2D	Washer Nut	R-HG08C	2
2E XX	Nylon Piston Cup	R-A8-20C	1
2F	Piston Body	R-HG08E	1
2G X	Piston O-Ring	R-A8-20E	1
2H XX	Inner Leather Cup	R-HG08H	1
3	Sealant Barrel	R-HG09	1
3A XX	Barrel Gasket	R-HG10A	1
3B X	Barrel O-Ring - Nitrile	R-A8-19C	1
4	Pump Body Assembly	R-HG11	1
4A	Pump Body - Bare	R-HG11A	1
5 XXX	Hydraulic Pump Cylinder	R-HG11B	1
5A X	Cylinder Neck O-Ring - Nitrile	R-HG11C	1
5B X	Bottom Cylinder O-Ring - Nitrile	R-HG11D	1
5C XXX	Pump Piston	R-HG11E	1
5D X	Pump Piston O-Ring	R-HG08B	1
6 XX	Check Valve Assembly	R-HG11F	1
6A	Copper Washer	R-HG11FA	1
6B	Ball – ¼"	R-HG11FB	1
6C	Check Valve Spring	R-HG11FC	1
6D	Check Valve Screw	R-HG11FD	1
6E	Check Valve Screen	R-HG11FE	1
7 XX	By-Pass Valve	R-HG11G	1
7A	By-Pass Valve Stop	R-HG11H	1
7B	Cap Screw	R-HG11I	1
7C X	By-Pass Valve O-Ring - Nitrile	R-HG31	1
8	Hydraulic Relief Valve	R-HG11J	1
8A X	Hydraulic Relief O-Ring - Nitrile	R-HG11K	1
9	Fulcrum Assembly	R-HG12	1
10	Handle	R-HG13	1
11	Linkage Assembly	R-HG14	1
11A	Link	R-HG14A	2
11B	Bolts	R-HG14B	3
11D	Lock Nuts	R-HG14C	3
11E	Fulcrum Link	R-HG14E	1
XX	Hydraulic Fluid	R-HOPINT	1
12 XX	Fluid Bag	R-HG15	1
12A	Fluid Bag Seal Ring	R-HG15A	1

Illustration #	Description	Order Part #	Qty. Req'd
13	Fluid Bag Barrel	R-HG16	1
14	Fluid Bag Barrel Cap	R-HG17	1
16	Handle Latch Assembly	R-HG30	1
16A	Stem & Knob	R-HG30A	1
16B	Latch Screw	R-HG30B	1
16C	Stem Spring	R-HG30C	1
16D	Retainer	R-HG30D	1
16E	Latch Arm	R-HG30E	1
16F	Latch Spring	R-HG30F	1
16G	Latch Sleeve	R-HG30G	1
16H	Cap Screw	R-HG30H	1
17	Hydraulic Pump Hose Assembly	H-H-HOSE	1
17A	Adapter - 1/4" M X 1/4" M	H-AD-4M4M	1
17B	15,000 PSI Gauge with Guard	H-GD-01C	1
17C	High-Pressure TEE - 1/4"	H-T-444	1
17D	Adapter - 1/4" M x 1/2" - 27 M	H-AD-4M7M	1
17E	Extra High-Pressure Hose - 18"	H-HS-18XHP	1
17F	Straight Swivel 1/4" M X 1/2"-27M	H-SV-ST1	1
17G	Giant Buttonhead Coupler	H-CPSG-2	1
X	O-Ring Repair Kit	R-HGOREP	1
XX	Minor Repair Kit	R-HGMIN	1
XXX	Major Repair Kit	R-HGMAJ	1

Please note:

X includes all parts with a single **X** illustration number.

XX includes all parts with a single **X** AND all parts with a double **X** illustration number.

XXX includes all parts with a single **X**, double **X** and triple **X** illustration number.

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Warranty

Hydraulic Hand Gun Warranty

Sealweld® warrants its products only against defects in materials and workmanship.

Sealweld Corporation's liability and customer's exclusive remedy under this warranty extends for a period of one (1) year from the date of Sealweld Corporation's shipment and is expressly limited to repayment of purchase price, repair or replacement, at Sealweld Corporation's option, during said period, upon proof satisfactory to Sealweld® and upon customers returning and prepaying all charges on such products to factory or warehouse designated by Sealweld®. Warranty excludes normal wear items such as packings, seals and filters. Also excluded is equipment subject to corrosion, contamination, negligence, accident, or units, which have been altered in any way.

This warranty is made expressly in lieu of all other warranties, express, implied or statutory, with respect to quality, merchantability, or fitness for a particular purpose.

Contact Information

Sealweld Corporation – Canada

106, 4116 – 64 Ave. S.E.

Calgary, Alberta

CANADA T2C 2B3

TOLL FREE 1-800-661-8465

PHONE 1-403-236-0043

FAX 1-403-236-5487

EMAIL info@sealweld.com

URL <http://www.sealweld.com>



Sealweld (USA), Inc.

6450 Skyview Drive

Houston, Texas

USA 77041

TOLL FREE 1-800-624-4301

PHONE 1-713-466-7373

FAX 1-713-466-7778

EMAIL info@sealweld.com

URL <http://www.sealweld.com>



ValvePro® Technical Support

TOLL FREE 1-800-661-8465

PHONE 1-403-236-0043

FAX 1-403-236-5487

EMAIL support@valvepro.com

URL <http://www.valvepro.com>

