



A D I V I S I O N O F W E L D C O A

CO2 SUPPLY SYSTEMS

FOR EXTRACTION APPLICATIONS



EXTRACTCOA.WELDCOA.COM
335 E Sullivan Rd, Aurora, IL 60505 | 1 (630) 806-2000



EXTRACTCOA IS A NEW DIVISION OF WELDCOA

a long standing, **proven** industry leader in
cryogenics, liquids and compressed gas

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“ IF YOU ARE WORKING WITH GAS, YOU SHOULD BE WORKING WITH WELDCOA. ”

Brandon Mathis, Operations Manager with Hemp Solutions



WE HAVE DEVELOPED EQUIPMENT AND CONTROLS TO SUPPLY CARBON DIOXIDE TO OUR CUSTOMERS IN A CONTROLLED, SAFE MANNER THAT DELIVERS QUICK ROI RESULTS.

We meet our customers requirements by determining the best system design using a variety of equipment:

- Cylinder Manifold System
- Bulk Storage Tanks
- Pump/Vaporizer Skid Unit
- Buffer Vessel Stations
- Specially Designed Controls

THE BENEFITS YOU WILL SEE:

- Increased the Flow Rate
- Increased in the Extraction Cycles
- Reduced the Charging Time
- Reduced Cylinder Handling and Labor

WHO WE ARE

WE'RE FOCUSED ON YOUR SUCCESS.

Weldcoa works because we're focused on your success. Since 1968 we've worked hard to engineer solutions, manufacture equipment, and provide uncompromising service to our customers, who use gases in the production of their products.

Everything we do is driven by our motivation to improve your business. We can help you achieve your goals and maximize your returns.

IF IT INVOLVES GASES, WE CAN HELP.

Our history of innovation has always been driven by the needs of our customers. As new applications for high pressure gases, cryogenics, high pressure liquids and supercritical fluid began to emerge, we met the challenge with effective solutions to deliver on the growing demand in emerging markets.

Constant innovation has become our hallmark, one which our customers have grown to depend upon, and so can you.

OUR EQUIPMENT DOES WHAT IT'S DESIGNED TO DO.

We are a US manufacturer that designs, engineers, manufactures, programs and tests our equipment and automation in-house.

The equipment we built decades ago is still operating today, doing what it was intended to do and more. Clients that made initial investments have continued to engage us in the development of additional solutions to grow their businesses.

REGARDLESS OF THE SCALE OF THE SOLUTION WE PROVIDE, YOU CAN EXPECT:

- Quality manufacturing
- Performance testing
- The use of advanced technologies
- Training and Support

WE GO THE EXTRA MILE.

It's in our nature to be curious. We truly enjoy investigating, learning, developing, testing and creating solutions for any application involving gas. Our cross-disciplinary team of experts bring an in-depth knowledge of gases to every project. You can count on their passion and commitment to make your project a success.



BULK CO2 SUPPLY SYSTEMS

FOR GAS (AND/OR SUPERCRITICAL) APPLICATIONS



Our Extractcoa™ Bulk CO2 Gas Supply System is best suited for Extraction Equipment of 40 Liters or Larger. The system can feed into your current extraction equipment, drastically improving the volume and condition of the CO2 supply as well as the efficiency in your operation.

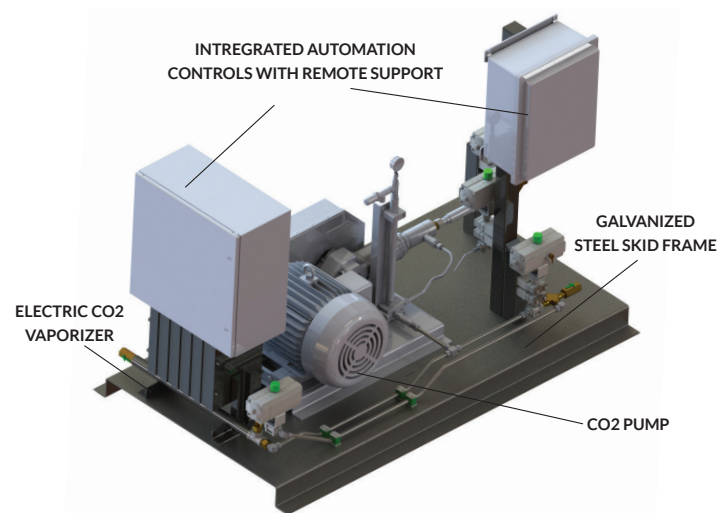
THE BENEFITS YOU WILL SEE:

- Increase the Flow Rate
- Increase in the Extraction Cycles
- Reduce the Charging Time
- Reduce Cylinder Handling and Labor

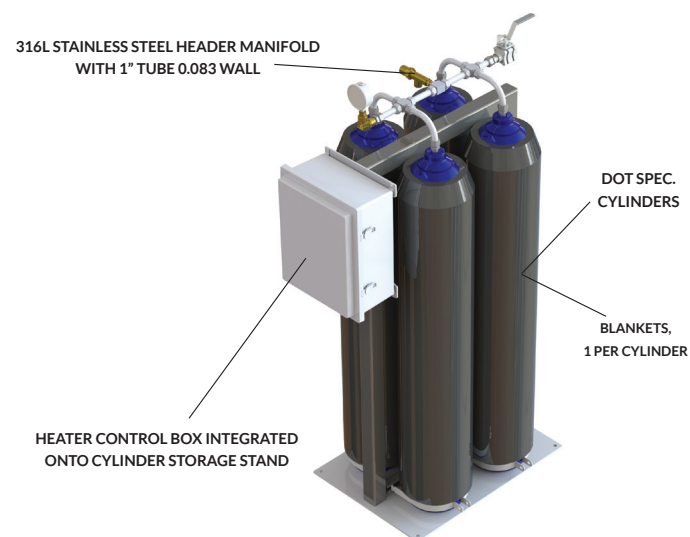
EVERY WELDCOA SYSTEM IS:

- ✓ 100% Hydrostatically pressure tested to 1.5 times the MAWP
- ✓ 100% Nitrogen leak tested
- ✓ Inspected and thoroughly tested to the highest safety standards before shipment
- ✓ Inspected again and validated once system is installed and operating
- ✓ Made in the USA

Every skid unit is specifically designed to be remotely supported for optimum performance, reliability and safety.



CO2 MODULAR PUMP/VAPORIZER SKID UNIT



CO2 MODULAR BUFFER VESSEL STATION

HOW A BULK GAS CO2 SUPPLY SYSTEM WORKS



BULK TANK OR MICROBULK UNIT:

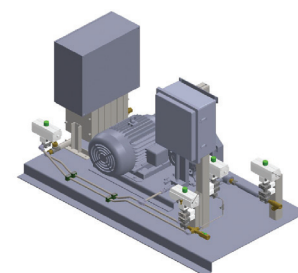
CO2 is stored in this unit in a Liquid Phase. Weldcoa does not manufacture bulk tanks or microbulks however we do have a long history of working with tanks and have close relationships with bulk tank suppliers in the gas industry. The components that are needed for this unit, in order to be compatible with our modular skid, are liquid withdrawal and gas/liquid return ports. The tank size will be determined by the extractor size and the number of cycles to be run per day.



WELDCOA CO2 MODULAR LIQUID/GAS SKID UNIT

The Skid Unit consists of a CO2 pump, automation controls, vaporizer, piping and valve assemblies, all on a steel skid base.

This modular unit is provided, tested, and remotely supported by Weldcoa.



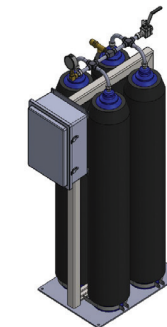
CO2 product, in a Liquid Phase, is piped from the bulk tank into the Pump (which is on the skid unit) and then piped out of the Pump, in a Liquid Phase, into the Vaporizer (which is also on the skid unit). Once in the Vaporizer, the CO2 product is converted into a Gas Phase and is then piped to the Buffer Vessel Station(s) still in a Gas Phase. This process is managed and controlled by Weldcoa's automation.



WELDCOA GAS BUFFER VESSEL STATIONS

The number of Buffer Vessel Stations needed depends on your volume and quantity of your extraction equipment. This process is managed and controlled by Weldcoa's automation, holding the CO2 product in Gas Phase at 750 to 900 PSIG. As the client's extraction volume increases, they can easily accommodate the demand by adding another Buffer Vessel Station to increase their storage capacity.

This modular unit is provided, tested, and remotely supported by Weldcoa.



From the Buffer Vessel Stations, the CO2 product, still in a Gas Phase, is piped into the Extractor inlet.

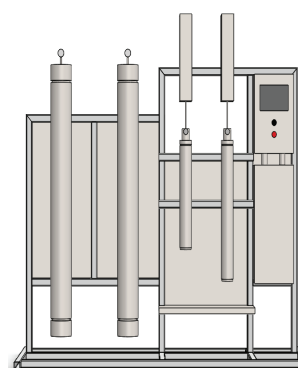


EXTRACTION MACHINE:

Typically, an Extractor consists of a Solvent Chamber(s) ranging from 2 to 400 Liters, an Expansion Chamber(s), an oil collection vessel, a CO2 gas recovery system and automated controls with an operator touchscreen terminal. None of this is provided by Weldcoa.

From the inlet, the CO2 product, in Gas Phase is piped into the main Solvent Chambers of the Extraction Machine where the temperature and pressure of the CO2 product is then adjusted, converting the CO2 product from a Gas Phase into a Supercritical Phase. The time it takes to fill up the Solvent Chamber and regulate it to these specific parameters is called the "Charging Time".

Once the correct temperature and pressure are achieved, the system pumps the supercritical CO2 in a loop for a specific amount of time. This is called the "Looping Cycle". As the material passes through the Expansion Chamber the Supercritical CO2 converts back into a Gas Phase, allowing the oil to decondense and drop into the oil collection vessel, providing a final product/yield from the extraction process. When the entire cycle is complete, the CO2 gas is vented into a recovery system for reuse in the next charging cycle.



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BULK CO2 SUPPLY SYSTEMS

FOR LIQUID APPLICATIONS

HOW A BULK LIQUID CO2 SUPPLY SYSTEM WORKS



The Extractcoa™ Bulk CO2 Liquid Supply System are best suited for Extraction Equipment of 40 Liters or Larger. The system can feed into your current extraction equipment, drastically improving the volume and condition of the CO2 supply as well as the efficiency in your operation.

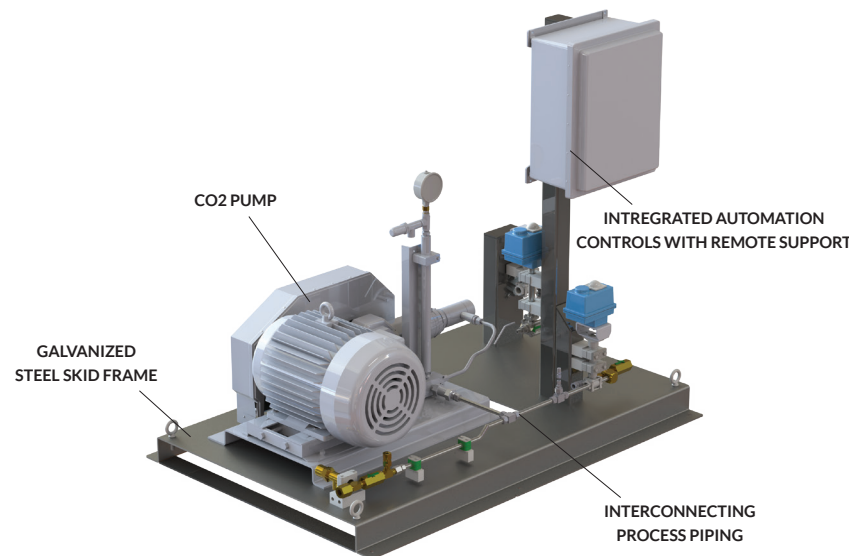
THE BENEFITS YOU WILL SEE:

- Increase the Flow Rate
- Increase in the Extraction Cycles
- Reduce the Charging Time
- Reduce Cylinder Handling and Labor

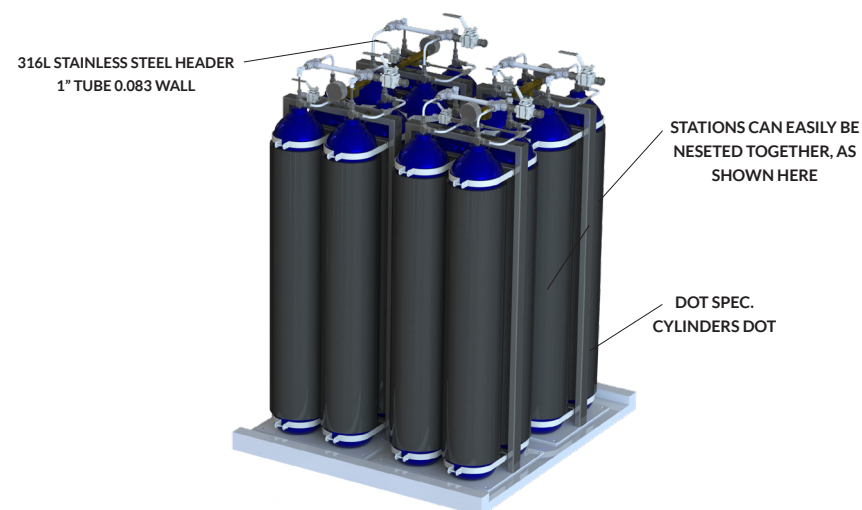
EVERY WELDCOA SYSTEM IS:

- ✓ 100% Hydrostatically pressure tested to 1.5 times the MAWP
- ✓ 100% Nitrogen leak tested
- ✓ Inspected and thoroughly tested to the highest safety standards before shipment
- ✓ Inspected again and validated once system is installed and operating
- ✓ Made in the USA

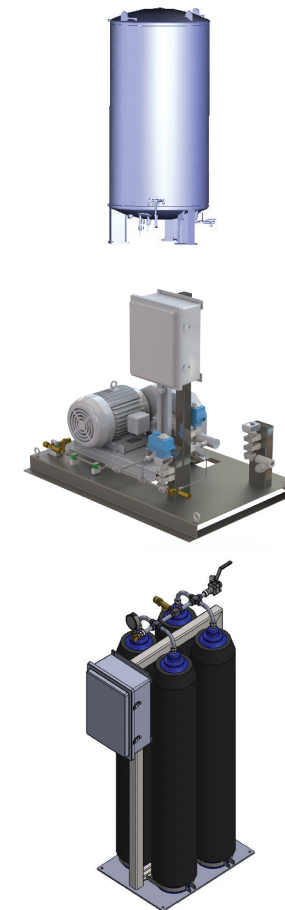
Every skid unit is specifically designed to be remotely supported for optimum performance, reliability and safety.



CO2 MODULAR LIQUID SKID UNIT



CO2 MODULAR LIQUID BUFFER VESSEL STATION



BULK TANK OR MICROBULK UNIT:

CO2 is stored in this unit in a Liquid Phase. Weldcoa does not manufacture bulk tanks or microbulks however we do have a long history of working with tanks and have close relationships with bulk tank suppliers in the gas industry. The components that are needed for this unit, in order to be compatible with our modular skid, are liquid withdrawal and gas/liquid return ports. The tank size will be determined by the extractor size and the number of cycles to be run per day.

WELDCOA CO2 MODULAR LIQUID SKID UNIT

The Skid Unit consists of a CO2 pump, automation controls, vaporizer, piping and valve assemblies, all on a steel skid base. **This modular unit is provided, tested, and remotely supported by Weldcoa.**

CO2 product, in a Liquid Phase, is piped from the bulk tank into the Pump (which is on the skid unit) and then piped out to the Buffer Vessel Station(s) still in Liquid Phase. This process is managed and controlled by Weldcoa's automation.

WELDCOA LIQUID BUFFER VESSEL STATIONS

The number of Buffer Vessel Stations needed depends on your volume and quantity of your extraction equipment. This process is managed and controlled by Weldcoa's automation, holding the CO2 product in Liquid Phase at 750 to 900 PSIG. As the client's extraction volume increases, they can easily accommodate the demand by adding another Buffer Vessel Station to increase their storage capacity.

This modular unit is provided, tested, and remotely supported by Weldcoa.

From the Buffer Vessel Stations, the CO2 product, still in a Gas Phase, is piped into the Extractor inlet.

EXTRACTION MACHINE:

Typically, an Extractor consists of a Solvent Chamber(s) ranging from 2 to 400 Liters, an Expansion Chamber(s), an oil collection vessel, a CO2 gas recovery system and automated controls with an operator touchscreen terminal. None of this is provided by Weldcoa.

From the inlet, the CO2 product, in Liquid Phase is piped into the main Solvent Chambers of the Extraction Machine where the temperature and pressure of the CO2 product is then adjusted. The time it takes to fill up the Solvent Chamber and regulate it to these specific parameters is called the "Charging Time".

Once the correct temperature and pressure are achieved, the system pumps the Liquid CO2 in a loop for a specific amount of time. This is called the "Looping Cycle". When the entire cycle is complete, the CO2 is vented into a recovery system for reuse in the next charging cycle.



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CO2 LINEAR MANIFOLD AND STAND

FOR BOTH GAS AND LIQUID APPLICATIONS



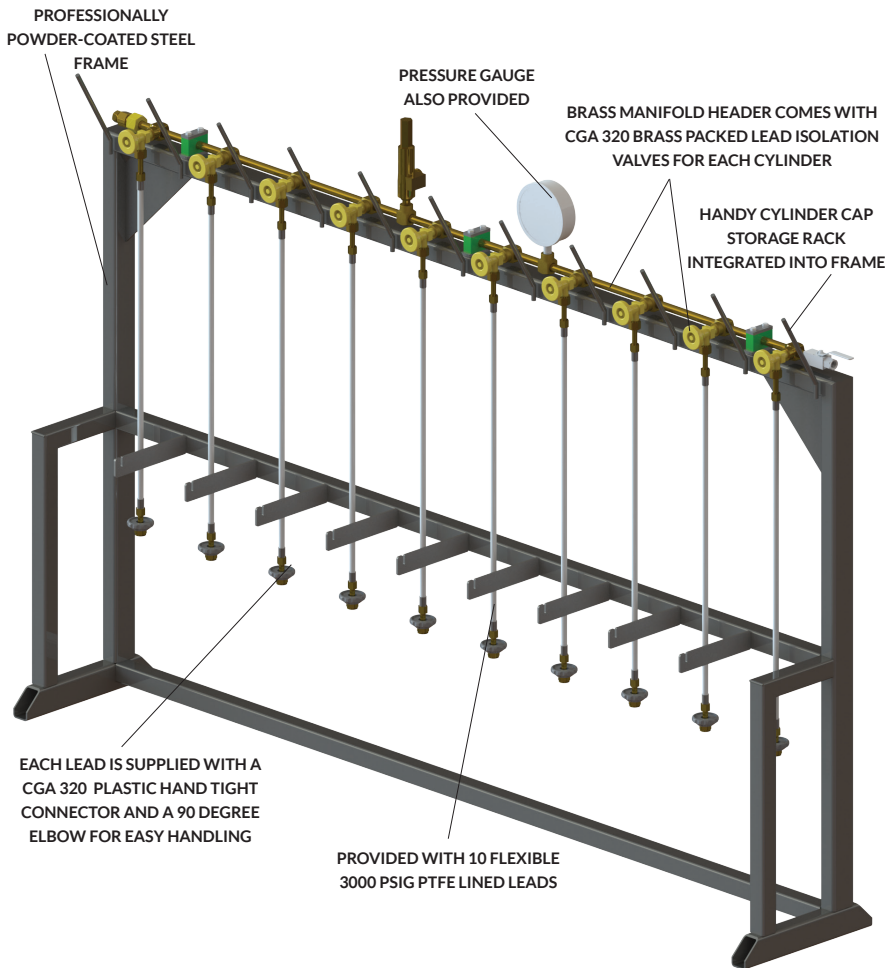
THE EXTRACTCOA™ CO2 LINEAR MANIFOLD AND STAND SYSTEM

are best suited for Extraction Equipment of 10 Liters to 40 Liters. The system can easily and safely feed into your current extraction equipment, providing an effective supply process. Installation is straight forward and cost effective.

Weldcoa's manufacturing process has been developed over the last 50 years and continues to be refined. Building the equipment in the controlled environment at our plant prior to delivery reduces labor, engineering and overall costs dramatically.

EVERY WELDCOA SYSTEM IS:

- ✓ 100% Hydrostatically pressure tested to 1.5 times the MAWP
- ✓ 100% Nitrogen leak tested
- ✓ Inspected and thoroughly tested to the highest safety standards before shipment
- ✓ Built and engineered at Weldcoa
- ✓ Made in the USA



CO2 MODULAR LINEAR MANIFOLD AND STAND SYSTEM

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LET'S START WITH THE CYLINDERS...

CO2 is stored in cylinders in Liquid Phase. Once the cylinders are rolled up to the stand and connected to the leads, the system is able to feed CO2 straight into your extractor machine's process piping. Depending on your needs; dip-tube cylinders can be connected for liquid withdrawal or standard cylinders can be connected for gas withdrawal.

Please note, Weldcoa does not manufacture cylinders however we do have a long history of working with cylinders and have close relationships with cylinder suppliers in the gas industry. We would be happy to connect you with both a cylinder and/or CO2 supplier if needed.



VERSATILE AND EASY TO USE

The Linear Manifold Station comes with 10 cylinder bays each with their own cylinder securement rail which is integrated into the frame.

Isolation valves are included for each cylinder bay as well, so you do not have to use all 10 bays if not desired.

The frame is slim and can easily fit into facilities where space concerns are limited. System is also modular, so more stands can be added to expand and change with your business requirements.

OUR TEAM OF EXPERIENCED PROFESSIONALS IS READY TO SUPPORT YOU

We're with you every step of the way!

CONTACT US TODAY!



Visit our new website for the latest information at
EXTRACTCOA.WELDCOA.COM



Call us at
(630) 806-2000



Or email our team at
SALES@WELDCOA.COM

When it comes to supplying CO2 to your extractor machine(s) Weldcoa can help you, not only with the equipment and automation, but with the most basic of questions to the most complex as well.

Purchasing a Weldcoa product opens the door for you to access our deep bench of seasoned gas industry experts. Become a Weldcoa client and gain access to our knowledgeable team.

THANK YOU FOR GIVING US THE OPPORTUNITY TO EARN YOUR BUSINESS!



CUSTOMIZED ENGINEERED SYSTEMS • FABRICATED STEEL PRODUCTS • LONG-TERM SUPPORT • TRAINING & EDUCATION

EMPOWERING PRODUCTIVITY



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