

# All about



Besides CO2 Production Plants we also manufacture and supply:

- CO2 Stack Gas Recovery Plants
- CO2 Gas Recovery Systems for Dry Ice Machines
- Dry Ice Slices/Block/Pelletizer Machines
- Dry Ice Blasting Systems **ASCOJET**
- Cryogenic and CO2 Static and Transportable Tanks
- CO2 Pumps and Cylinder Filling Systems
- CO2 Atmospheric Vaporisers
- CO2 Detectors
- CO2 Flowmeters
- Low to Low Pressure CO2 Transfer Pumps
- CO2 Testing Equipment (Dew Point / Purity / Carbonation)
- Ancillary CO2 Equipment

Contact us for further details or offer:

**Switzerland (Head Office)**  
 Industriestr. 2, CH-8590 Romanshorn  
 Tel. + 41 71 466 80 80 Fax + 41 71 466 80 66  
 e-mail: info@ascoco2.com

**ASCO CARBON DIOXIDE LTD**

www.ascoco2.com

**New Zealand**  
 P.O.Box 16134, NZ-Christchurch  
 Tel. + 64 3 349 7029 Fax + 64 3 349 4337  
 e-mail: info@asco.co.nz

1319e

# ASCO CO<sub>2</sub> PRODUCTION PLANTS



HPA (High Performance Automatic) 500 kg/hr CO2 Production Plant during test at ASCO factory

- **ASCO's** advanced CO2 plant designs employ the latest technology for refined high performance, user friendly controls, flexible layout and ultra efficient operation. The result is lowest possible CO2 production costs, extended plant life and minimum environmental effect.
- Each plant is assembled (to agreed layout), tested to the fullest extent possible and finish painted in our factory before despatch. This ensures your satisfaction - and ours!
- **ASCO** CO2 generators can be engineered to operate from diesel, kerosene, or natural gas fuels. A dual fuel model is also available. This flexibility allows customers to select their most economic fuel.
- Our skilled and experienced engineers ensure each new **ASCO** plant is correctly installed and commissioned and operators trained in proper operation and maintenance procedures.

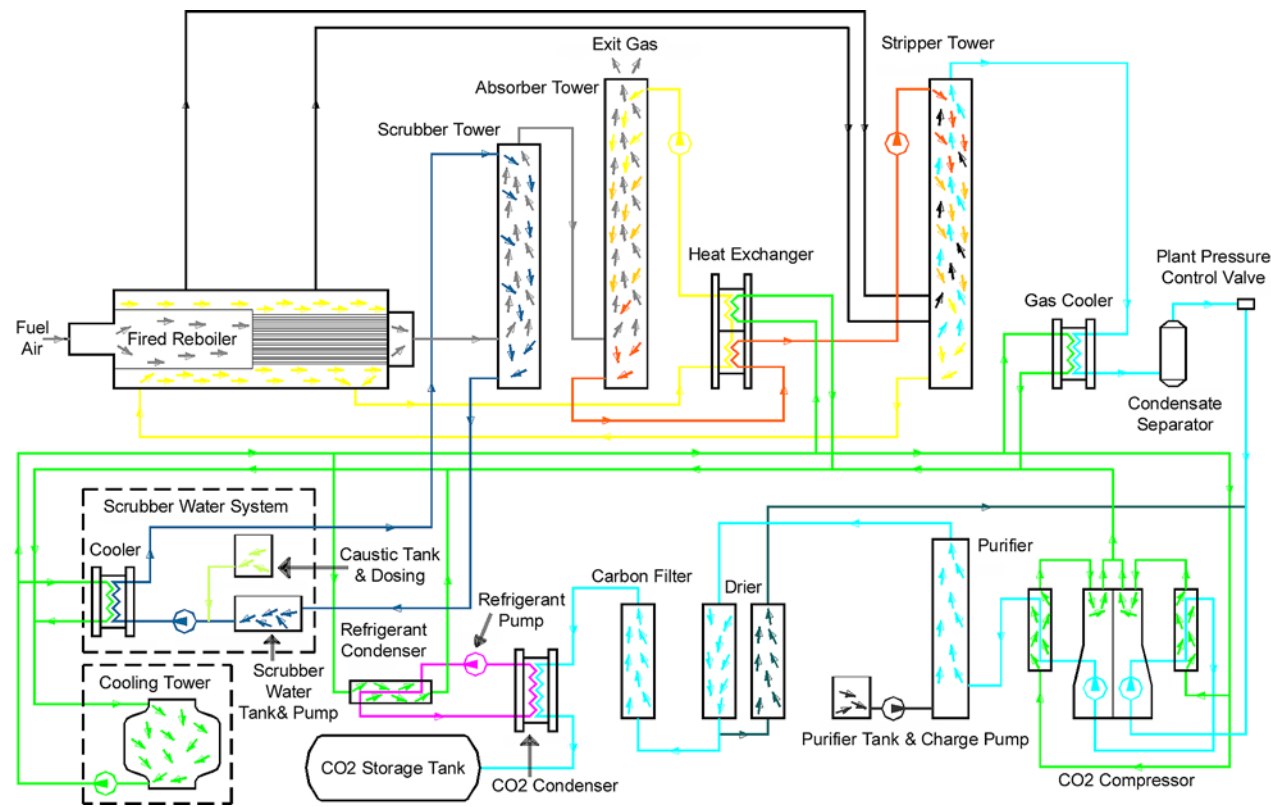


Diagram shows process streams only. Actual plant configurations may vary.

**Process Description**

The fuel is burned under carefully controlled conditions. After water/soda ash scrubbing, CO2 from the flue gas is absorbed into a monoethanolamine based solution which is subsequently heated by the combustion process to release the raw CO2 gas.

The CO2 is then led to a vertical, two stage, dry running (oil free) compressor and on to the high pressure, potassium permanganate purifier.

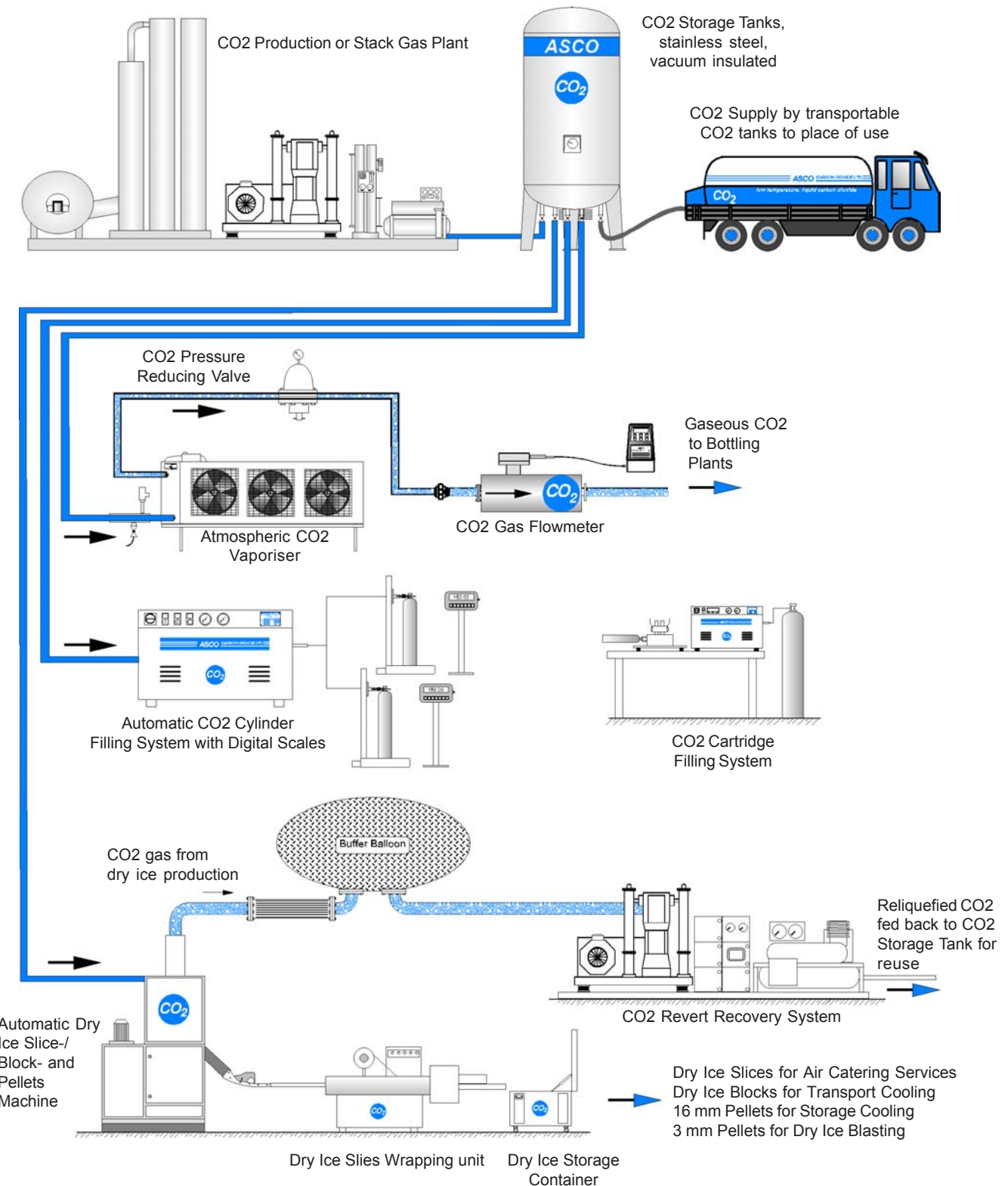
After thorough drying in an automatic twin tower molecular sieve drier, the CO2 receives final purification in an activated carbon filter prior to feeding into an R404a refrigeration loop in the liquefier. The pure, liquefied CO2 can then be fed to a bulk CO2 storage tank.

This continuous process is efficient, reliable and safe. The CO2 meets international food-grade quality standards and is used daily by the world's top gas companies, soft drink and beer brands in over 100 countries.



Two views of the Compressor / Drier / Liquefier Module (HPA500)

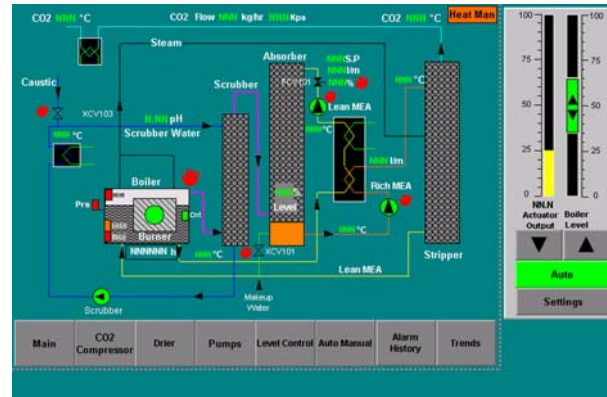
**COMPLETE YOUR ASCO CO<sub>2</sub> PRODUCTION PLANT WITH SOME OF OUR MANY ACCESSORIES**



# PLC CONTROLLED ASCO CO<sub>2</sub> PRODUCTION PLANT WITH TOUCH SCREEN DISPLAY

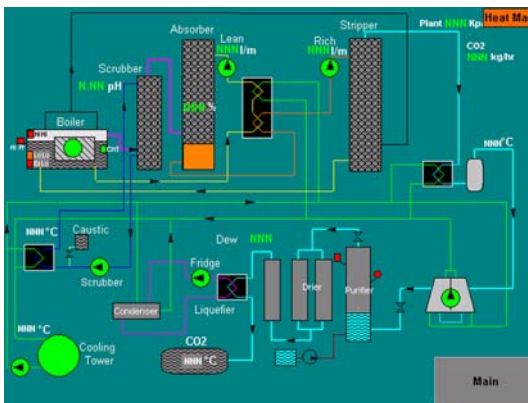


Main Menu

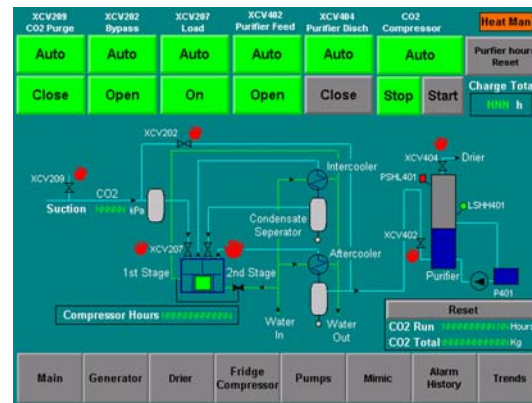


Generator

These screens are only some of those available for effective and convenient control and monitoring of ASCO CO<sub>2</sub> Production Plants



General Mimic



CO<sub>2</sub> Compressor

# ASCO HIGH PERFORMANCE CO<sub>2</sub> PRODUCTION PLANTS

Feature	Benefit
Modular Configuration	Compact, modular design means fast and easy installation and provides a watch clipping economical use of available space, covering a variety of different layouts.
Burner	Efficient, reliable combustion of fuel. Instant push button start.
Inline Scrubber water recirculation and treatment system	Designed to handle all the process scrubbing water, this system recycles, neutralises and sheds the process heat from the water all in one circuit. This significantly reduces the volume of water discharged to drain, providing an economical and environmentally friendly water system.
Single Absorber Tower	Space saving, reduced complexity of design while still maintaining efficient absorption.
Process Towers Location	Option of indoor or outdoor installation of all process towers allows flexibility of layout in a variety of different situations. Outdoor location also reduces the required weather protection for the system.
Dry Running CO <sub>2</sub> Compressor	Specially designed for use with CO <sub>2</sub> gas, the dry running compressor means there is no possibility of CO <sub>2</sub> contamination with oil.
High Pressure Stainless Steel Purifier	Longer residence time provides ultra efficient NO <sub>x</sub> and H <sub>2</sub> S removal.
Carbon Filter	A high capacity carbon filtration column is installed in the CO <sub>2</sub> gas inlet line to the liquefier, to provide further assurance of pure and odour-free CO <sub>2</sub> .
Centralised Control Panel and Panelview	Automatic plant operation and panelview provide visual display and one touch readouts of process data from a centralised position.



## NEW FEATURE

Now available is remote panelview option, to allow monitoring of the CO<sub>2</sub> plant from the comfort of your own office, or central control room.



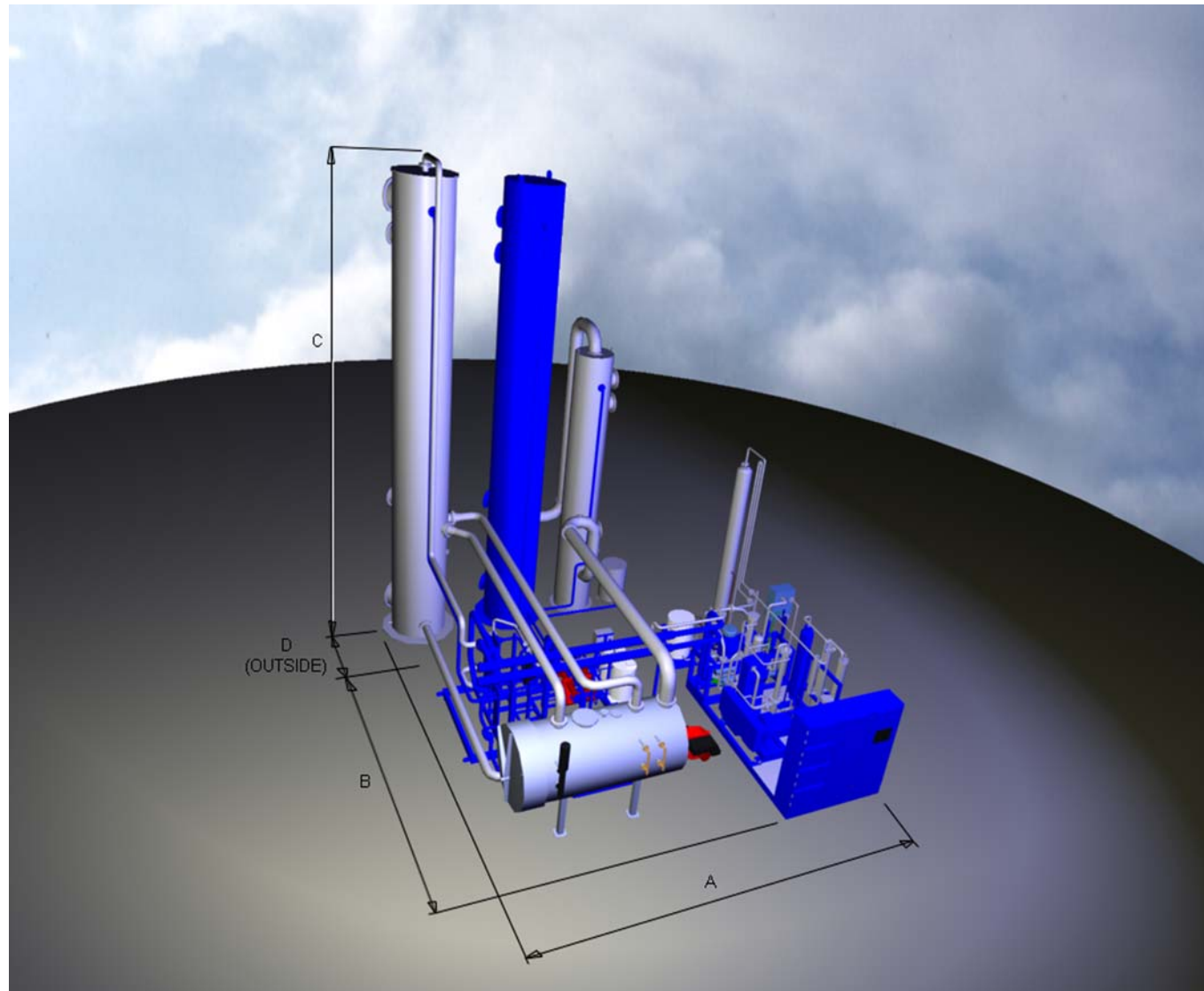
Outdoor Towers



Process Unit



High Pressure Purifier



Schematic layout of typical **ASCO** CO2 production plant

- The design of **ASCO** High Performance CO2 production plants has evolved from over 80 years commercial operation as a major CO2 and dry ice producer. This unique advantage means **ASCO** plants are engineered with performance and the end user very much in mind.
- Plant construction is from carefully selected materials to give a good balance between plant life, strength and capital cost i.e. maximum value for money.
- **ASCO** CO2 plants are compact in design and layout to make best use of space in you factory.

**CO<sub>2</sub> PLANT SPECIFICATIONS**

Dimensions in mm				
Capacity	A	B	C	D
70 kg/hr	Skid mounted towers 3875 x 4320 x 4360 (LxWxH)			
160 kg/hr	8630	5350	9960	1560
285 kg/hr	7670	6200	10160	1400
500 kg/hr	9000	6675	11390	1900
1000 kg/hr	17325	7290	16830	2500

Utility Consumptions			
Capacity	Fuel (diesel) L/h	Water m3/h	Power kW
70 kg/hr	31	0.6	33
160 kg/hr	67	1.5	55
285 kg/hr	120	2.6	92
500 kg/hr	210	4.6	159
1000 kg/hr	420	8.7	313

**Guarantee**

Our equipment is guaranteed against faulty design, workmanship or materials for a period of 12 (twelve) months after start up date, or 18 (eighteen) months from date of despatch, whichever period expires earlier.

**Modifications**

We reserve the right to modify any part of the specifications in order to benefit the buyer with the proven results of our ongoing research and development.