

# CO<sub>2</sub> Storage

## Polyurethane insulated ASCO CO<sub>2</sub> Storage Tanks



**ASCO** polyurethane insulated (PU) Storage Tanks are constructed in various standard sizes, ranging from 10t to 100t capacity of liquid carbon dioxide. Each unit is compactly designed, simple and safe to operate and easily installed.

The **ASCO** pressure vessels are designed and built per PED and AD2000, maximum allowable working pressure is 24 bar (348.09 psi). Tanks are supplied complete with all pipework in stainless steel, valves and safety devices (as described in our tank flow diagram).



**ASCO** PU insulated CO<sub>2</sub> Storage Tanks are available as vertical and horizontal version.

Insulated, completely pre-wired electrical system with control cabinet, level-indicator media6 or loadcell, pressure build-up heater, safety devices, valves, pipework. All our systems are completely pretested before shipment.

Capacities given is based on a 95 % full volume. Vessels are insulated with 150 to 200 mm (5.91 to 7.87 in) polyurethane foam, covered by an aluminium sheet and are primed.

The tank content can be shown either by differential pressure indicator and pressure gauge or load cells.

### Specifications

Pressure vessel:	Made of carbon steel, 24 bar (348.09 psi) design pressure
Insulation:	PU insulated, 150-200 mm (6-8 in), covered by aluminium sheet
Piping:	Stainless steel
Contents gauge:	Differential pressure measuring device (outlet 4-20 mA)
Filling connections:	According to flow diagram
Approval:	ED 2014/68/EU and AD2000

ASCO reserves the right to modify all specifications without prior notice.

## PU insulated ASCO CO<sub>2</sub> Storage Tanks: Overview standard capacities

### Available standard capacities vertical PU insulated ASCO CO<sub>2</sub> Storage Tanks:

Tank capacity (liquid CO <sub>2</sub> in kg) (lb)	Dimensions (height × diameter in mm) (in)	approx. empty weight in kg (lb)	part no.
9'800 (21'605)	5'250 × 1'800 (207 x 71 in)	4'800 (10'582)	4046602
14'700 (32'408)	7'250 × 1'800 (285 x 71 in)	5'300 (11'684)	4046603
17'650 (38'912)	8'750 × 1'800 (344 x 71 in)	6'500 (14'330)	4046604
22'550 (49'714)	10'250 × 1'800 (404 x 71 in)	7'800 (17'196)	4046605
29'500 (65'036)	8'250 × 2'400 (325 x 94 in)	9'500 (20'944)	4046606
39'150 (86'311)	9'750 × 2'400 (384 x 94 in)	11'200 (24'692)	4046607
48'900 (101'780)	12'550 × 2'400 (494 x 94 in)	13'600 (29'983)	4046608
58'700 (129'411)	14'550 × 2'400 (573 x 94 in)	14'850 (32'739)	4046609
97'850 (215'722)	14'000 × 3'200 (55 x 126 in)	25'800 (56'879)	4046610

### Available standard capacities horizontal PU insulated ASCO CO<sub>2</sub> Storage Tanks:

Tank capacity (liquid CO <sub>2</sub> in kg) (lb)	Dimensions (length × diameter in mm) (in)	approx. empty weight in kg (lb)	part no.
9'800 (21'605)	5'805 × 1'900 (229 x 75 in)	4'000 (8'818)	4046592
14'700(32'408)	7'305 × 1'900 (288 x 73 in)	5'000 (11'023)	4046593
17'650 (17'650)	8'800 × 1'900 (346 x 73 in)	6'000 (13'228)	4046594
22'550 (49'714)	10'300 × 1'900 (406 x 73 in)	7'000 (15'432)	4046595
29'500 (65'036)	11'800 × 1'900 (465 x 73 in)	8'600 (18'960)	4046596
39'150 (86'311)	10'800 × 2'400 (425 x 73 in)	10'300 (22'708)	4046597
48'900 (101'780)	14'000 × 2'400 (551 x 73 in)	13'600 (29'983)	4046598
58'700 (129'411)	15'500 × 2'400 (610 x 94 in)	15'000 (33'069)	4046599
97'850 (215'722)	13'500 × 3'000 ((531 x 118 in)	29'500 (65'036)	4046600

All horizontal PU insulated ASCO CO<sub>2</sub> Storage Tanks are delivered skid-mounted.

## PU insulated ASCO CO<sub>2</sub> Storage Tanks: Standard scope of supply

- back-up valves on filling liquid and gas line
- 2 liquid withdrawal valves
- 2 gas withdrawal valves
- refrigeration coil

**Additionally either a load cell or a differential pressure indicator (Media 6) has to be chosen (see options).**

## Vertical PU insulated ASCO CO<sub>2</sub> Storage Tanks: Available standard capacities

Pos. 001

### ASCO CO<sub>2</sub> VT PU Storage Tank, 10t (22'046.2 lb) TÜV/PED

10t vertical, with a maximum filling weight of **9'800 kg (21'605.30 lb)**

- diameter: 1'800 mm (70.87 in) / height: 5'250 mm (206.69 in)
- empty weight: approx. 4'800 kg (10'582.19 lb)
- working temperature: -40 °C to +20 °C

Safety valve setting 24 bar (348.09 psi), vessel made of carbon steel, PU insulated

Tank to be supplied complete with all pipework in stainless steel, valves and safety devices.

Incl.:

- back-up valves on filling liquid and gas line
- 2 liquid withdrawal valves
- 2 gas withdrawal valves
- refrigeration coil

part no.

4046602



Pos. 002

### ASCO CO<sub>2</sub> VT PU Storage Tank, 15t (33'069.3 lb) TÜV/PED

15t vertical, with a maximum filling weight of **14'700 kg (32'407.95 lb)**

- diameter: 1'800 mm (70.87 in) / height: 7'250 mm (285.43 in)
- empty weight: approx. 5'300 kg (11'684.50 lb)
- working temperature: -40 °C to +20 °C

Safety valve setting 24 bar (348.09 psi), vessel made of carbon steel, PU insulated

Tank to be supplied complete with all pipework in stainless steel, valves and safety devices.

Incl.:

- back-up valves on filling liquid and gas line
- 2 liquid withdrawal valves
- 2 gas withdrawal valves
- refrigeration coil

part no.

4046603



Pos. 003

### ASCO CO<sub>2</sub> VT PU Storage Tank, 18t (39'683.2 lb) TÜV/PED

18t vertical, with a maximum filling weight of **17'650 kg (38'911.59 lb)**

- diameter: 1'800 mm (70.87 in) / height: 8'750 mm (344.49 in)
- empty weight: approx. 6'500 kg (14'109.58 lb)
- working temperature: -40 °C to +20 °C

Safety valve setting 24 bar (348.09 psi), vessel made of carbon steel, PU insulated

Tank to be supplied complete with all pipework in stainless steel, valves and safety devices.

Incl.:

- back-up valves on filling liquid and gas line
- 2 liquid withdrawal valves
- 2 gas withdrawal valves
- refrigeration coil

part no.

4046604



## Vertical PU insulated ASCO CO<sub>2</sub> Storage Tanks: Available standard capacities

Pos. 004

### ASCO CO<sub>2</sub> VT PU Storage Tank, 23t (50'706.3 lb) TÜV/PED

23t vertical, with a maximum filling weight of **22'550 kg (49'714.24 lb)**

- diameter: 1'800 mm (70.87 in) / height: 10'250 mm (403.54 in) empty weight: approx. 7'800 kg (17'196.06 lb)
- working temperature: -40 °C to +20 °C

Safety valve setting 24 bar (348.09 psi), vessel made of carbon steel, PU insulated

Tank to be supplied complete with all pipework in stainless steel, valves and safety devices.

Incl.:

- back-up valves on filling liquid and gas line
- 2 liquid withdrawal valves
- 2 gas withdrawal valves
- refrigeration coil

part no.

4046605



Pos. 005

### ASCO CO<sub>2</sub> VT PU Storage Tank, 30t (66'138.7 lb) TÜV/PED

30t vertical, with a maximum filling weight of **29'500 kg (65'036.37 lb)**

- diameter: 2'400 mm (94.49 in) / height: 8'250 mm (324.80 in)
- empty weight: approx. 9'500 kg (20'943.91 lb)
- working temperature: -40 °C to +20 °C

Safety valve setting 24 bar (348.09 psi), vessel made of carbon steel, PU insulated

Tank to be supplied complete with all pipework in stainless steel, valves and safety devices.

Incl.:

- back-up valves on filling liquid and gas line
- 2 liquid withdrawal valves
- 2 gas withdrawal valves
- refrigeration coil

part no.

4046606



Pos. 006

### ASCO CO<sub>2</sub> VT PU Storage Tank, 40t (88'184.9 lb) TÜV/PED

40t vertical, with a maximum filling weight of **39'150 kg (86'310.98 lb)**

- diameter: 2'400 mm (94.49 in) / height: 9'750 mm (383.86 in)
- empty weight: approx. 11'200 kg (24'691.77 lb)
- working temperature: -40 °C to +20 °C

Safety valve setting 24 bar (348.09 psi), vessel made of carbon steel, PU insulated

Tank to be supplied complete with all pipework in stainless steel, valves and safety devices.

Incl.:

- back-up valves on filling liquid and gas line
- 2 liquid withdrawal valves
- 2 gas withdrawal valves
- refrigeration coil

part no.

4046607



## Vertical PU insulated ASCO CO<sub>2</sub> Storage Tanks: Available standard capacities

Pos. 007

### ASCO CO<sub>2</sub> VT PU Storage Tank, 50t (110'231.1 lb) TÜV/PED

50t vertical, with a maximum filling weight of **48'900 kg (107'806.05 lb)**

- diameter: 2'400 mm (94.49 in) / height: 12'550 mm (494.09 in)
- empty weight: approx. 13'600 kg (29'982.87 lb)
- working temperature: -40 °C to +20 °C

Safety valve setting 24 bar (348.09 psi), vessel made of carbon steel, PU insulated

Tank to be supplied complete with all pipework in stainless steel, valves and safety devices.

Incl.:

- back-up valves on filling liquid and gas line
- 2 liquid withdrawal valves
- 2 gas withdrawal valves
- refrigeration coil

part no.

4046608



Pos. 008

### ASCO CO<sub>2</sub> VT PU Storage Tank, 60t (132'277.4 lb) TÜV/PED

60t vertical, with a maximum filling weight of **58'700 kg (139'411.35 lb)**

- diameter: 2'400 mm (94.49 in) / height: 14'550 mm (572.83 in)
- empty weight: approx. 14'850 kg (32'738.65 lb)
- working temperature: -40 °C to +20 °C

Safety valve setting 24 bar (348.09 psi), vessel made of carbon steel, PU insulated

Tank to be supplied complete with all pipework in stainless steel, valves and safety devices.

Incl.:

- back-up valves on filling liquid and gas line
- 2 liquid withdrawal valves
- 2 gas withdrawal valves
- refrigeration coil

part no.

4046609



Pos. 009

### ASCO CO<sub>2</sub> VT PU Storage Tank, 100t (220'462 lb) TÜV/PED

100t vertical, with a maximum filling weight of **97'850 kg (215'722.32 lb)**

- diameter: 3'200 mm (125.98 in) / height: 14'000 mm (551.18 in)
- empty weight: approx. 25'800 kg (56'879.26 lb)
- working temperature: -40 °C to +20 °C

Safety valve setting 24 bar (348.09 psi), vessel made of carbon steel, PU insulated

Tank to be supplied complete with all pipework in stainless steel, valves and safety devices.

Incl.:

- back-up valves on filling liquid and gas line
- 2 liquid withdrawal valves
- 2 gas withdrawal valves
- refrigeration coil

part no.

4046610



## Horizontal PU insulated ASCO CO<sub>2</sub> Storage Tanks: Available standard capacities

Pos. 010

### ASCO CO<sub>2</sub> HT PU Storage Tank, 10t TÜV/PED

part no.

4046592

10t horizontal, with a maximum filling weight of **9'800 kg (21'605.30 lb)**



- diameter: 1'900 mm (74.80 in) / length: 5'805 mm (228.54 in)
- empty weight: approx. 4'000 kg (8'818.49 lb)
- working temperature: -40 °C to +20 °C

Safety valve setting 24 bar (348.09 psi), vessel made of carbon steel, PU insulated

Tank to be supplied complete with all pipework in stainless steel, valves and safety devices, skid-mounted.

Incl.:

- back-up valves on filling liquid and gas line
- 2 liquid withdrawal valves
- 2 gas withdrawal valves
- refrigeration coil

Pos. 011

### ASCO CO<sub>2</sub> HT PU Storage Tank, 15t TÜV/PED

part no.

4046593

15t horizontal, with a maximum filling weight of **14'700 kg (32'407.95 lb)**



- diameter: 1'900 mm (74.80 in) / length: 7'305 mm (287.60 in)
- empty weight: approx. 5'000 kg (11'027.11 lb)
- working temperature: -40 °C to +20 °C

Safety valve setting 24 bar (348.09 psi), vessel made of carbon steel, PU insulated

Tank to be supplied complete with all pipework in stainless steel, valves and safety devices, skid-mounted.

Incl.:

- back-up valves on filling liquid and gas line
- 2 liquid withdrawal valves
- 2 gas withdrawal valves
- refrigeration coil

Pos. 012

### ASCO CO<sub>2</sub> HT PU Storage Tank, 18t TÜV/PED

part no.

4046594

18t horizontal, with a maximum filling weight of **17'650 kg (38'911.59 lb)**



- diameter: 1'900 (74.80 in) / length: 8'800 mm (346.46 in)
- empty weight: approx. 6'000 kg (13'227.74 lb)
- working temperature: -40 °C to +20 °C

Safety valve setting 24 bar (348.09 psi), vessel made of carbon steel, PU insulated

Tank to be supplied complete with all pipework in stainless steel, valves and safety devices, skid-mounted.

Incl.:

- back-up valves on filling liquid and gas line
- 2 liquid withdrawal valves
- 2 gas withdrawal valves
- refrigeration coil

## Horizontal PU insulated ASCO CO<sub>2</sub> Storage Tanks: Available standard capacities

Pos. 013

### ASCO CO<sub>2</sub> HT PU Storage Tank, 23t TÜV/PED

part no.

4046595

23t horizontal, with a maximum filling weight of **22'550 kg (49'714.24 lb)**

- diameter: 1'900mm (74.80 in) / length: 10'300 mm (405.51 in)
- empty weight: approx. 7'000 kg (15'432.36 lb)
- working temperature: -40 °C to +20 °C



Safety valve setting 24 bar (348.09 psi), vessel made of carbon steel, PU insulated

Tank to be supplied complete with all pipework in stainless steel, valves and safety devices, skid-mounted.

Incl.:

- back-up valves on filling liquid and gas line
- 2 liquid withdrawal valves
- 2 gas withdrawal valves
- refrigeration coil

Pos. 014

### ASCO CO<sub>2</sub> HT PU Storage Tank, 30t TÜV/PED

part no.

4046596

30t horizontal, with a maximum filling weight of **29'500 kg (65'036.37 lb)**

- diameter: 1'900mm (74.80 in) / length: 11'800 mm (464.57 in)
- empty weight: approx. 8'600 kg (18'959.75 lb)
- working temperature: -40 °C to +20 °C



Safety valve setting 24 bar (348.09 psi), vessel made of carbon steel, PU insulated

Tank to be supplied complete with all pipework in stainless steel, valves and safety devices, skid-mounted.

Incl.:

- back-up valves on filling liquid and gas line
- 2 liquid withdrawal valves
- 2 gas withdrawal valves
- refrigeration coil

Pos. 015

### ASCO CO<sub>2</sub> HT PU Storage Tank, 40t TÜV/PED

part no.

4046597

40t horizontal, with a maximum filling weight of **39'150 kg (86'310.98 lb)**

- diameter: 2'400mm (94.49 in) / length: 10'800 mm (425.20 in)
- empty weight: approx. 10'300 kg (22'707.61 lb)
- working temperature: -40 °C to +20 °C



Safety valve setting 24 bar (348.09 psi), vessel made of carbon steel, PU insulated

Tank to be supplied complete with all pipework in stainless steel, valves and safety devices, skid-mounted.

Incl.:

- back-up valves on filling liquid and gas line
- 2 liquid withdrawal valves
- 2 gas withdrawal valves
- refrigeration coil



## Horizontal PU insulated ASCO CO<sub>2</sub> Storage Tanks: Available standard capacities

Pos. 016

### ASCO CO<sub>2</sub> HT PU Storage Tank, 50t TÜV/PED

50t horizontal, with a maximum filling weight of **48'900 kg (107'806.04 lb)**

- diameter: 2'400mm (94.49 in) / length: 14'000 mm (551.18 in)
- empty weight: approx. 13'600 kg (29'982.87 lb)
- working temperature: -40 °C to +20 °C

Safety valve setting 24 bar (348.09 psi), vessel made of carbon steel, PU insulated

Tank to be supplied complete with all pipework in stainless steel, valves and safety devices, skid-mounted.

Incl.:

- back-up valves on filling liquid and gas line
- 2 liquid withdrawal valves
- 2 gas withdrawal valves
- refrigeration coil

part no.

4046598



Pos. 017

### ASCO CO<sub>2</sub> HT PU Storage Tank, 60t TÜV/PED

60t horizontal, with a maximum filling weight of **58'700 kg (129'411.35 lb)**

- diameter: 2'400mm (94.49 in) / length: 15'500 mm (610.24 in)
- empty weight: approx. 15'000 kg (33'069.34 lb)
- working temperature: -40 °C to +20 °C

Safety valve setting 24 bar (348.09 psi), vessel made of carbon steel, PU insulated

Tank to be supplied complete with all pipework in stainless steel, valves and safety devices, skid-mounted.

Incl.:

- back-up valves on filling liquid and gas line
- 2 liquid withdrawal valves
- 2 gas withdrawal valves
- refrigeration coil

part no.

4046599



Pos. 018

### ASCO CO<sub>2</sub> HT PU Storage Tank, 100t TÜV/PED

100t horizontal, with a maximum filling weight of **97'850 kg (215'722.34 lb)**

- diameter: 3'000mm (118.11 in) / length: 13'500 mm (531.50 in)
- empty weight: approx. 29'500 kg (65'036.37 lb)
- working temperature: -40 °C to +20 °C

Safety valve setting 24 bar (348.09 psi), vessel made of carbon steel, PU insulated

Tank to be supplied complete with all pipework in stainless steel, valves and safety devices, skid-mounted.

Incl.:

- back-up valves on filling liquid and gas line
- 2 liquid withdrawal valves
- 2 gas withdrawal valves
- refrigeration coil

part no.

4046600





## Vertical & horizontal PU insulated ASCO CO<sub>2</sub> Storage Tanks: Options

Pos. 019	<b>Refrigeration unit for ASCO CO<sub>2</sub> H/VT PU10-30t Storage Tank</b>	<b>part no.</b>	<b>4046612</b>
Pos. 020	<b>Refrigeration unit for ASCO CO<sub>2</sub> H/VT PU40-100t Storage Tank</b>	<b>part no.</b>	<b>4046613</b>
Pos. 021	<b>Heating unit for ASCO CO<sub>2</sub> H/VT PU Storage Tank</b> Heating unit to hold the pressure stable inside the tank	<b>part no.</b>	<b>4046614</b>
Pos. 022	<b>Load cell for ASCO CO<sub>2</sub> H/VT PU Storage Tank</b> Load cell instead of differential pressure indicator Media 6	<b>part no.</b>	<b>4046615</b>
Pos. 023	<b>Media 6 for ASCO CO<sub>2</sub> H/VT PU Storage Tank</b> Differential pressure indicator Media 6 for liquid level indication instead of load cell	<b>part no.</b>	<b>4046616</b>

**Please note that the standard version of the tanks is NOT equipped with any filling level indication! Therefore one of the options (part no. 4046615 or 4046616) must be chosen.**