

## CANFLEX MODEL CRT-1500 Rectangular Shaped Tank for Transport on MTRV or LVSR Vehicles

### 1.0 Introduction

The CRT-1500 is a Canflex Rectangular shape Tank “CRT” designed to be placed on a flatbed configuration of a MTRV or LVSR vehicle.

The CRT primary function is to store and dispense fuel.

This bladder has a tie down harness to secure the bladder to the truck’s bed, a lateral strap webbing harness integrated on the the bladder and an internal baffling system in both longitudinal and radial directions.



## 2.0 Fuel rated Rectagular shaped Bladder – CRT-1500

The material used for the fabrication of the Canflex Rectangular shaped Tank (CRT) meets the requirements for containment of hydrocarbons / Diesel Fuel, Oil Spill per MIL-PRF-32233. This fabric has a total weight of 45.0 oz/sq. yd. (1530 g/ m<sup>2</sup>), with the strength characteristics shown in Table-2 below. All seams used to construct the CRT are R/F welded with a 2.5" and 4" die. **No sewing or gluing shall be used.** The resulting seam strength of the welds is equal to or greater than the strength of the parent fabric.

**Table 1 Characteristics for CANFLEX “Rectangular Shaped Tank”**

| Model      | Capacity                 | Filled Dimension |        |      | Dry weight w/o accessories |
|------------|--------------------------|------------------|--------|------|----------------------------|
|            |                          | W                | L      | H    | Aprox. Weight              |
|            | m <sup>3</sup> / Barrels | m                | m      | M    | Kg                         |
| Gallons US | inches                   | inches           | Inches | Lb   |                            |
| CRT-1500   | 5.67 / 35.7              | 1.72             | 5.48   | 0.61 | 181                        |
|            | 1,500                    | 68               | 216    | 24   | 400                        |

## 3.0 Fittings and Items (bolted , welded)

The Tank fittings are made from cast anodized marine grade aluminum. Nuts, bolts, and washers integral to the fittings are made of stainless steel. The fittings are bolted through the main body of the Pillow Tank to a cast marine grade aluminum backing plate. Each fitting is mounted on a patch having a greater diameter than the outside diameter of the particular fitting (anti-chafe patch).

- One 2” NPT connection c/w male camlok, located at the lower edge of the tank.  
**Purpose: Filling / Offloading connection**
- One x 2” NPT female connection c/w female camlok, located across the top of the tank.  
**Purpose: Pressure release vent**
- 2 x Pocket / sleeves welded on the longitudinal direction of the tank.  
**Purpose: Enclosed polyester webbing straps**
- One welded degradation marker that consists of 10 test strips (2”x8”) made of the same pattern material as the tank’s body. The strips are welded on a rectangular patch, which is welded on exterior top of the tanks.

**Purpose: To quantify the degradation of the fabric and weld strength over time.**

**Table 2 - Material Strength Results  
CANFLEX CFL4590NESU**

**1.0 BASE FABRIC**

|     |                    |                       |                      |
|-----|--------------------|-----------------------|----------------------|
| 1.1 | Base Fabric Weight | 14 oz/yc <sup>2</sup> | 476 g/m <sup>2</sup> |
| 1.2 | Fiber / Style      | Nylon / Style 90      |                      |

**2.0 COATED FABRIC**

|     |                      |  |   |
|-----|----------------------|--|---|
| 2.1 | Total Weight         | 45 ±2 oz/yc <sup>2</sup>                       | 1530 ±68 g/m <sup>2</sup>                   |
| 2.2 | Coating Type         | Urethane                                       |   |
| 2.3 | Coating Distribution | 50/50  |   |
| 2.4 | Sealing Properties   | <input checked="" type="checkbox"/> Dielectric | <input checked="" type="checkbox"/> Thermal |

**3.0 MATERIAL PROPERTIES**

|     |                            | <u>Standard</u> | <u>Metric</u> | ASTM TEST<br>METHODS |
|-----|----------------------------|-----------------|---------------|----------------------|
| 3.1 | Tensile Strength, 1" Strip |                 |               |                      |
|     | Warp                       | 700 lbs         | 3,110 N       | D751-B               |
|     | Fill                       | 650 lbs         | 2,890 N       |                      |
| 3.2 | Tear Strength, Tongue      |                 |               |                      |
|     | Warp                       | 55 lbs          | 245 N         | D751-B (mod)         |
|     | Fill                       | 55 lbs          | 245 N         |                      |
| 3.3 | Puncture, Screwdriver      | 225 lbs         | 1,000 N       | D751                 |
| 3.4 | Ply Adhesion               | 40 lbs/2 in     | 178 N/5 cm    | D751 (mod)           |
| 3.5 | Adhesion, RF               | 40 lbs/in       | 70 N/cm       | D751                 |
| 3.6 | Adhesion, Thermal          | 40 lbs/in       | 70 N/cm       | D751                 |
| 3.7 | Low Temp                   | -50 °F          | -46 °C        | D2136                |
| 3.8 | High Temp, Cont/Interm.    | 160 / 180 °F    | 71 / 82 °C    | D1204                |

*Comments: This product designed for primary containment hydrocarbons per / MIL-PRF-32233*

#### 4.0 List of all unattached accessories included with the Tank

- 1 X 2" x 90° elbow female x male camlok connection.
- 1 X 2" ball valve w/ female & male camlock conn. with cap, to attach to above elbow.  
**Purpose: Filling / Offloading**
- 1 X Spark /Flame Arrestor with 2" x 10" aluminum anodized pipe , in accordance with MIL specs. It is located at center top of the tank.  
**Purpose: Spark Arrestor/ Pressure release vent.**
- 1 X 2" ball valve w/ male & female camlock conn. with plug, to attach to above spark arrestor / vent. **Purpose: Filling / Offloading**
- 2 x circumferential polyester webbing straps on the longitudinal direction of the tank  
**Purpose: Added longitudinal strenght around the tank**
- 2 X 5/8" Safety shackle with bolt & cotter pin  
**Purpose: Hold webbing straps mentioned above**
- Internal baffles in the width (4 x radial) & length (2 x longitudinal) direction of the tank.  
**Purpose: To reduce sloshing / dumping of fluid while transport**
- 1 x Restrain System consists of 6" diameter SS "O" rings with 3" webbing straps with soft eye ends at ends.
- One maintenance kit that contains following items:
  - 1 x Tool Box (for the 4 units)
  - 1 x 8oz Can of Patch Cement with MSDS;(Not available if Air Freight)
  - 2 x 10" circles of coated bladder material;
  - 4 x 7" circles of coated bladder material;
  - 1x roller;
  - 1x knife;
  - 1 x Operational Guidelines



*CRT-1500 Canflex Rectangular Tank*



*Internal Baffels*



*CRT-1500 with 2" elbow & ball valve*



*Internal Baffels in action – 60m/h to 0 m/h Brake Stop*

## 5.0 Shipping, Transportation and Packing *OPTIONS*

### OPTION 1:

#### Shipping/Storage Container (marine-grade plywood)

PART#: CFX1

#### Characteristics:

- Clip-Lok style plywood box capable of housing the tank and all its accessories
- Made of 3/4" Heat-treated Marine-Grade plywood complies with ISPM 15 standards, certified for International Exports
- Quickly assembled or taken apart with no nails or screws
- Two air vents with screen for air circulation
- Easily and quickly flat-packed, reducing transport and storage volume
- Forklift slots on all sides
- Suitable for transport by road, rail, sea or air.
- Coated with weather resistant epoxy paint
- Dimensions: 45x48x29"H  
(1.14m X 1.21m X 0.73m H)
- Weight empty: 180 lbs (82 Kg)



## **OPTION 2:**

### **Shipping/Storage Container (marine-grade aluminum)**

**PART # ALCNT2**

#### **Characteristics:**

- Two screened air vents
- Cable hoist lifting points (8)
- Fork lift slots on all sides
- Fold down and removable side door
- Locking lid
- 2" bottom drain w/ male camlock
- Aluminum Container Accessory Kit (ALCNT-KIT 2)
- OD: 1.62m X 1.62m X 1.35m High  
(64" X 64" X 53.5" High)
- Volume: 2.83 m3 (100 ft3)
- Weight: 235 Kg (520 lb); WLL: 2900 Kg (6400 lbs)
- Dimensions: 45x48x29"H  
(1.14m X1.21m X 0.73m H)



#### **6.0 Labels**

- Size and function of all aluminum fittings (i.e., FILL/DRAIN ; DRAIN ,VENT)
- Safety and Warning Labels
- CANFLEX ID label screened with Serial Number and Tank capacity
- Label screened on opposite sides with either Customer Name

#### **7.0 Certifications & Pressure Test**

- Each Tank is pressure tested according to our Quality Management System ISO-9001-2015
- CANFLEX (USA) INC operates a Quality Management System which complies with the requirements of ISO 9001-2015. CANFLEX (USA) INC holds Certificate No: FM 517957

# Specifications

| MODEL    | CAPACITY                               | WIDTH       | LENGTH      | HEIGHT      | FILL / OFFLOAD Quantity | VENT Quantity |
|----------|--|-------------|-------------|-------------|-------------------------|---------------|
|          | m <sup>3</sup> / Liters<br>Gallons USA | m<br>inches | m<br>inches | m<br>inches |                         |               |
| CRT-1500 | 5.67 / 5678                            | 1.72        | 5.48        | 0.61        | 1                       | 1             |
|          | 1,500                                  | 68          | 216         | 24          |                         |               |

**FUEL rated fittings:**

FLANGES: Anodized aluminum with Stainless Steel fasteners  
 CAMLOCK: (Cam & Groove quick coupling): Anodized Aluminum  
 Ball Valve: rated for fuel  
 Gaskets: BUNA N (Fuel)

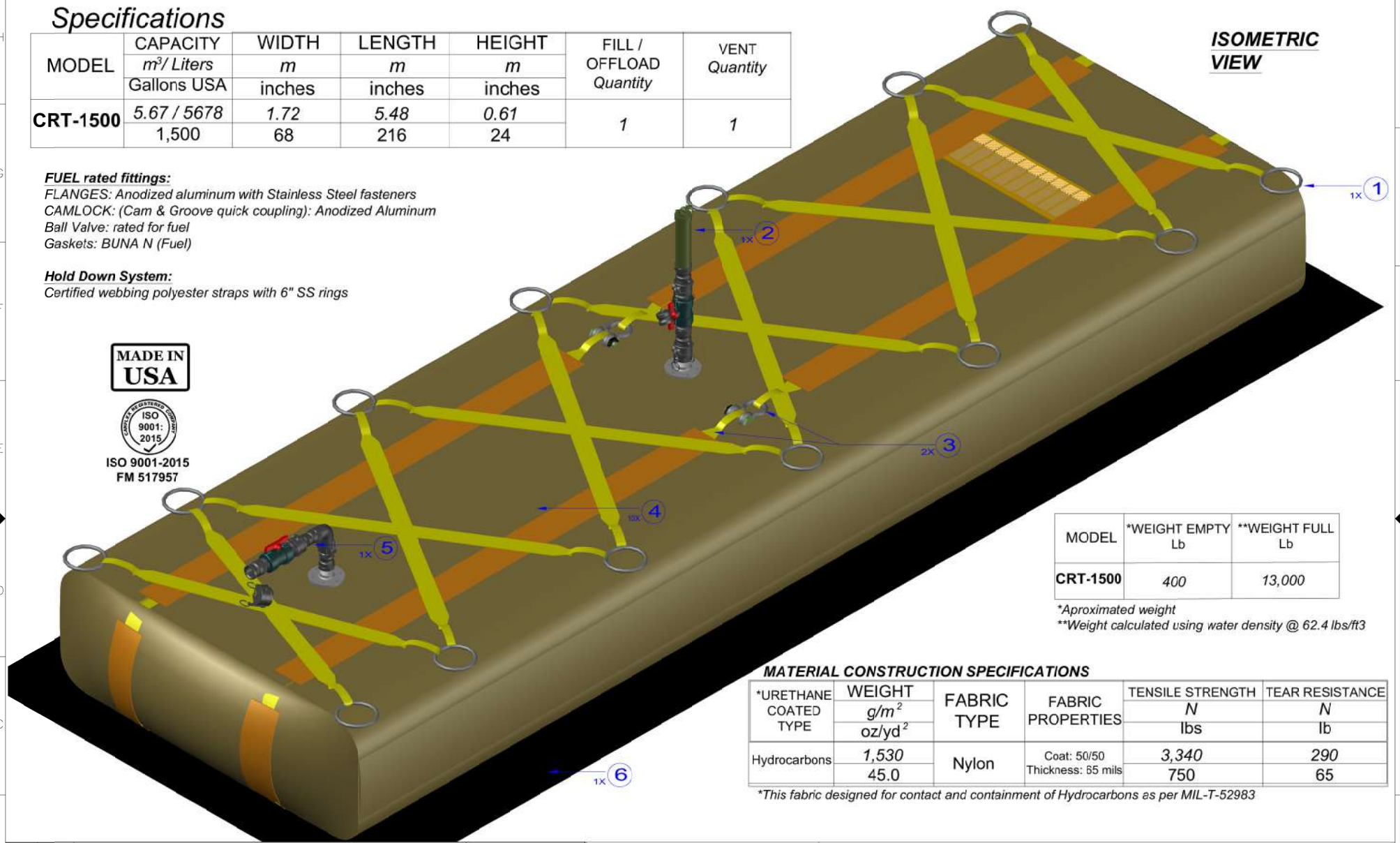
**Hold Down System:**

Certified webbing polyester straps with 6" SS rings



ISO 9001-2015  
FM 517957

**ISOMETRIC VIEW**



| MODEL    | *WEIGHT EMPTY Lb | **WEIGHT FULL Lb |
|----------|------------------|------------------|
| CRT-1500 | 400              | 13,000           |

\*Approximated weight  
 \*\*Weight calculated using water density @ 62.4 lbs/ft3

**MATERIAL CONSTRUCTION SPECIFICATIONS**

| *URETHANE COATED TYPE | WEIGHT<br>g/m <sup>2</sup><br>oz/yd <sup>2</sup> | FABRIC TYPE | FABRIC PROPERTIES                 | TENSILE STRENGTH | TEAR RESISTANCE |
|-----------------------|--|-------------|-----------------------------------|------------------|-----------------|
|                       |  |             |                                   | N<br>lbs         | N<br>lb         |
| Hydrocarbons          | 1,530  | Nylon       | Coat: 50/50<br>Thickness: 65 mils | 3,340            | 290             |
|                       | 45.0   |             |                                   | 750              | 65              |

\*This fabric designed for contact and containment of Hydrocarbons as per MIL-T-52983

| ITEM NO.  | QTY. REQD. | DESCRIPTION   | PART #           |
|-----------|------------|---|------------------|
| 1         | 1          | CERTIFIED 3" WEBBING STRAPS WITH "O" SS rings ASSY            | 3" X 6SS/1500    |
| 2         | 1          | PRESSURE RELEASE - VENT & SPARK ARRESTOR W/ VALVE (MIL SPECS) | SPRK/2X10/BV     |
| 3         | 2          | LATERAL 3" CERTIFIED WEBBING W/ 5/8" SAFETY SHACKLE           | 3" POLY/ SKL-063 |
| 4         | 10         | TEST TABS MADE OF PATTERN MATERIAL                            | TEST/TAB         |
| 5         | 1          | 2" OFFLOAD / FILL PORT - BALL VALVE, ELBOW W/ CAMLOCKS & CAP  | 20BV/20CAL/FXB   |
| 6         | 1          | ABRASION / GROUND SHEET (18oz PVC)                            | GS/234X86        |
| NOT SHOWN | 1          | BUFFLE SYSTEM- RADIAL & LONGITUDINAL                          | BFL/1500/LXR     |
| NOT SHOWN | 1          | CLIP-LOK WOOD BCX- STORAGE & TRSPORTATION (48X45X29")         | CFX1             |



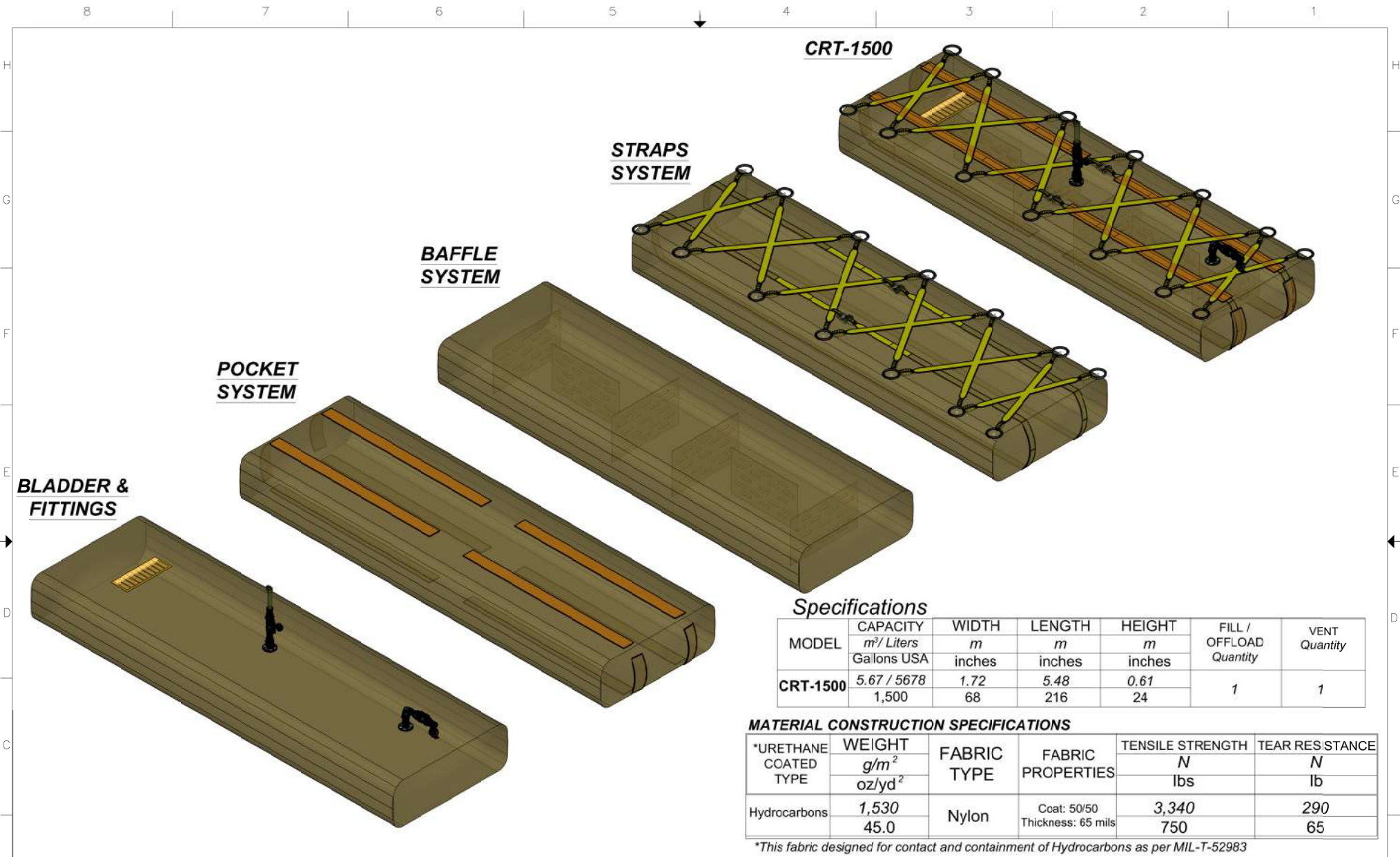
**PROJECT: RECTANGULAR SHAPED TANK FOR  
 MTVR or LVSR Vehicle  
 "NAVFAC"**

SCALE: N.T.S  
 DATE: 12/03/2019

**CRT-1500**

DRAWN: F.Y. DRWG #: 0820-01  
 REVISED: 12/02/2020

**CANFLEX USA INC. PO BOX 1014 , 412 30th St , Anacortes,WA,98221,USA  
 Tel:(206)282-8233 ; Web: www.canflexinc.com**



**Specifications**

| MODEL    | CAPACITY                               | WIDTH       | LENGTH      | HEIGHT      | FILL / OFFLOAD Quantity | VENT Quantity |
|----------|--|-------------|-------------|-------------|-------------------------|---------------|
|          | m <sup>3</sup> / Liters<br>Gallons USA | m<br>inches | m<br>inches | m<br>inches |                         |               |
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**MATERIAL CONSTRUCTION SPECIFICATIONS**

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|-----------------------|--|-------------|-----------------------------------|------------------|-----------------|
|                       | g/m <sup>2</sup><br>oz/yd <sup>2</sup> |             |                                   | N<br>lbs         | N<br>lb         |
| Hydrocarbons          | 1,530                                  | Nylon       | Coat: 50/50<br>Thickness: 65 mils | 3,340            | 290             |
|                       | 45.0                                   |             |                                   | 750              | 65              |

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| MODEL    | *WEIGHT EMPTY Lb | **WEIGHT FULL Lb |
|----------|------------------|------------------|
| CRT-1500 | 400              | 13,000           |

\*Aproximated weight  
\*\*Weight calculated using water density @ 62.4 lbs/ft3



**PROJECT: RECTANGULAR SHAPED TANK FOR  
MTVR or LVSR Vehicle  
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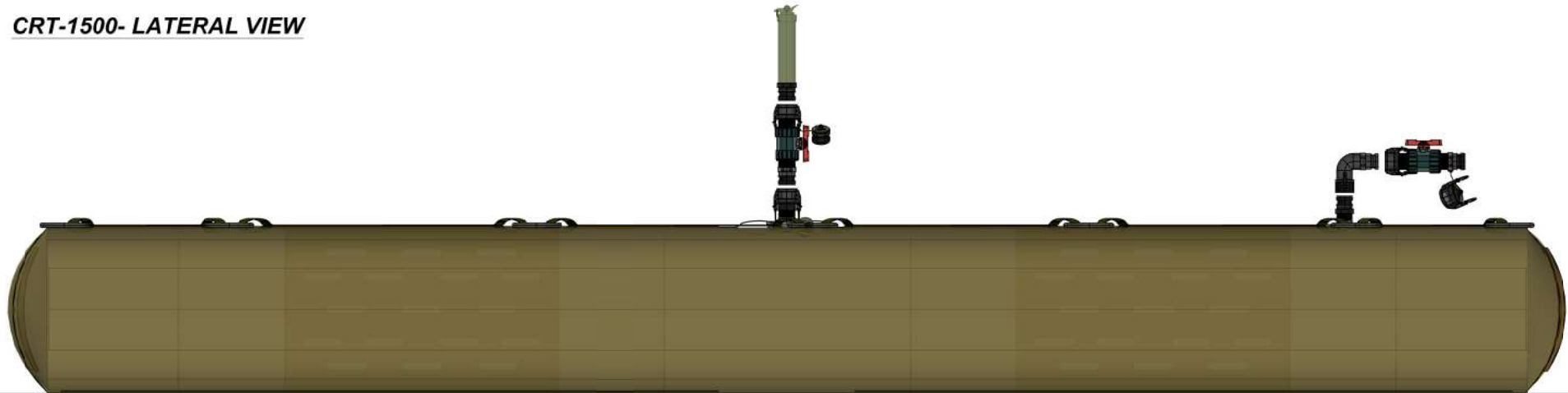
**CRT-1500**

DRAWN: F.Y. DRWG #:0820-02  
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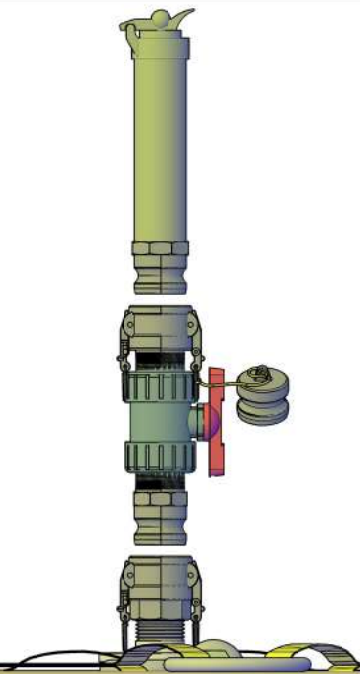
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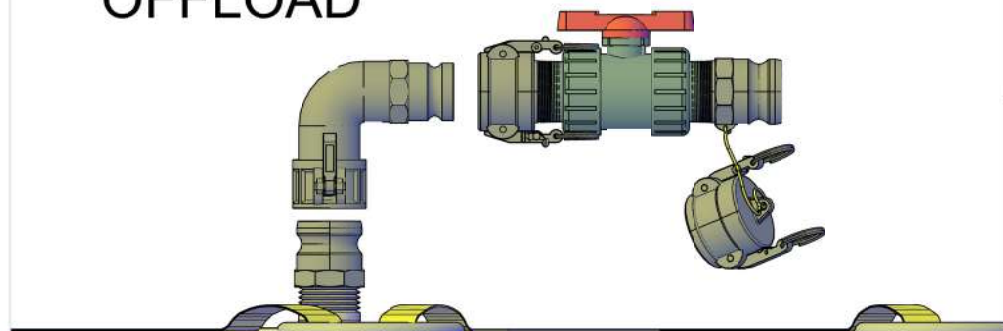
**CRT-1500- LATERAL VIEW**



**VENT**



**FILL /  
OFFLOAD**



**FITTINGS  
DETAIL**



**PROJECT: Fitting Arrangement  
RECTANGULAR SHAPED TANK FOR  
MTVR or LVSr Vehicle  
"NAVFAC"**

**CRT-1500**

DRAWN: F.Y. DRWG #:1120-25

SCALE: N.T.S

DATE: 12/02/2020

REVISED: .....

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