09

PART NINE

Handholes & Vaults

Canyon Modular Vaults Tech Feature

1 **Modular**
Panels in 12" & 24" height
Stack to increase height
Field replaceable

2 **Optional sealed entry**
Fast knock out
Mechanical reducer/seal

3 **Quick Clip**
No bolts, nuts, or tools
Installs in less than half the time

4 **Optional Floor**
Clean environment
Prevents vegetation
Anti-slip
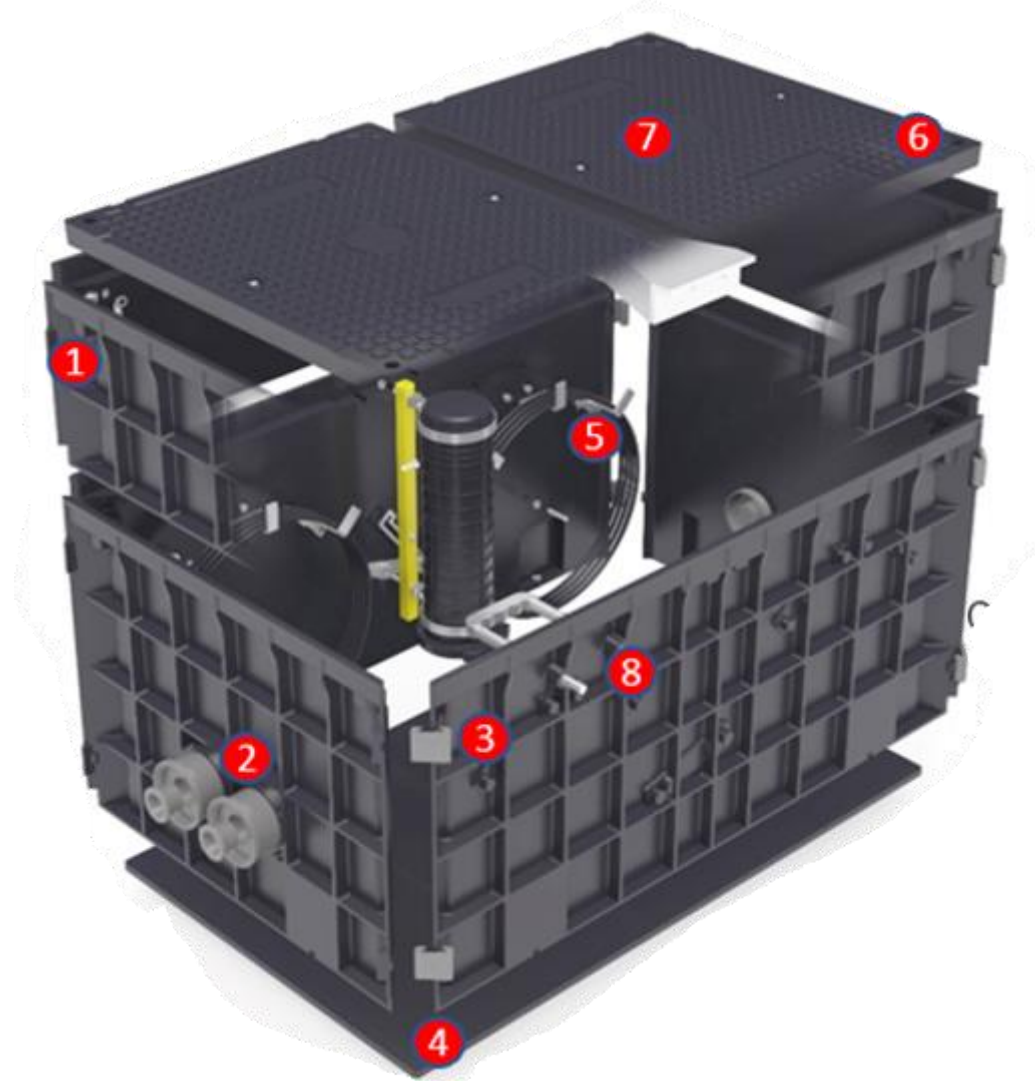
5 **Storage & Mounting Options**
Clean access & max storage
Application customizable

6 **Covers**
Stainless hex bolt or custom locking
Cabinet mountable

7 **Customer Logo**
Customer logo on metal plate
Easy install and customization

8 **Knock Down = ships flat on pallet**
Low transport cost.
70% faster install vs. concrete

Customizable, Space Saving, Light, Strong, *Grab-n-Go Modular Solution*

SCTE 77 Vault Ratings = Use Case

APPLICATION	LOADING REQUIREMENTS			
Light Duty Pedestrian Traffic Only	Vertical	Test Load	13.3kN	3000 pounds
TIER 5 Sidewalk applications with a safety factor for occasional non-deliberate vehicular traffic	Vertical	Design Load Test Load	22.2 kN 33.3 kN	5000 pounds 7500 pounds
	Lateral	Design Load Test Load	28.7 kPa 43.1 kPa	600 pounds/sq.ft. 900 pounds/sq.ft. (1800/2700 pounds/ lateral load plate)
TIER 8 Sidewalk applications with a safety factor for non-deliberate vehicular traffic	Vertical	Design Load Test Load	35.6 kN 53.4 kN	8000 pounds 12000 pounds
	Lateral	Design Load Test Load	28.7 kPa 43.1 kPa	600 pounds/sq.ft. 900 pounds/sq.ft. (1800/2700 pounds/ lateral load plate)
TIER 15 Driveway, parking lot, and off-roadway applications subject to occasional non-deliberate heavy vehicular traffic	Vertical	Design Load Test Load	66.7 kN 100.1 kN	15000 pounds 22500 pounds
	Lateral	Design Load Test Load	38.3 kPa 57.5 kPa	800 pounds/sq.ft. 1200 pounds/sq.ft. (2400/3600 pounds/ lateral load plate)
TIER 22 Driveway, parking lot, and off-roadway applications subject to occasional non-deliberate heavy vehicular traffic	Vertical	Design Load Test Load	100.1 kN 150.1 kN	22500 pounds 33750 pounds
	Lateral	Design Load Test Load	38.3 kPa 57.5 kPa	800 pounds/sq.ft. 1200 pounds/sq.ft. (2400/3600 pounds/ lateral load plate)
AASHTO H-20 Deliberate vehicular traffic applications.	Certified precast concrete, cast iron, or AASHTO-recognized materials.			

Table 1 – Design / Test Loads

Light Duty: Flowerpot & Handholes
- **10x14x10 Flowerpot**
- 12x12x12 Handhole
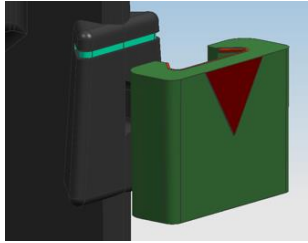- **12x16x12 Handhole**
- Modular vaults available in 90 days

Tier 5: Need Opportunity
- Modular vaults available in 90 days
- Pads are Tier 5 for handling ease

Tier 15 & Tier 22 Modular Vaults
- **Available now & in stock**
- **12x12x12**
- **12x18x18**
- **17x30x24**
- **24x36x24**
- **30x48x36**

17x30 Modular Vault Anatomy

Ultra High Rise: 48"

Quick Clip Fastener

High Rise: 36"

24"
Base

Base Height: 24"

12"
Riser

24"
Base

24"
Base

24"
Base

24"
Base

S: Short Side Wall

L: Long Side Wall
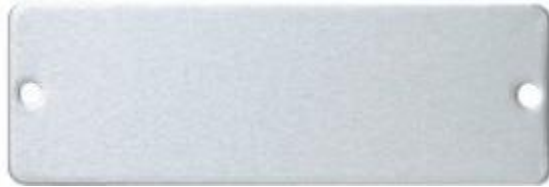
RS: Riser Short Side Wall

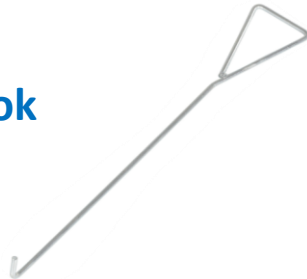RL: Riser Long Side Wall
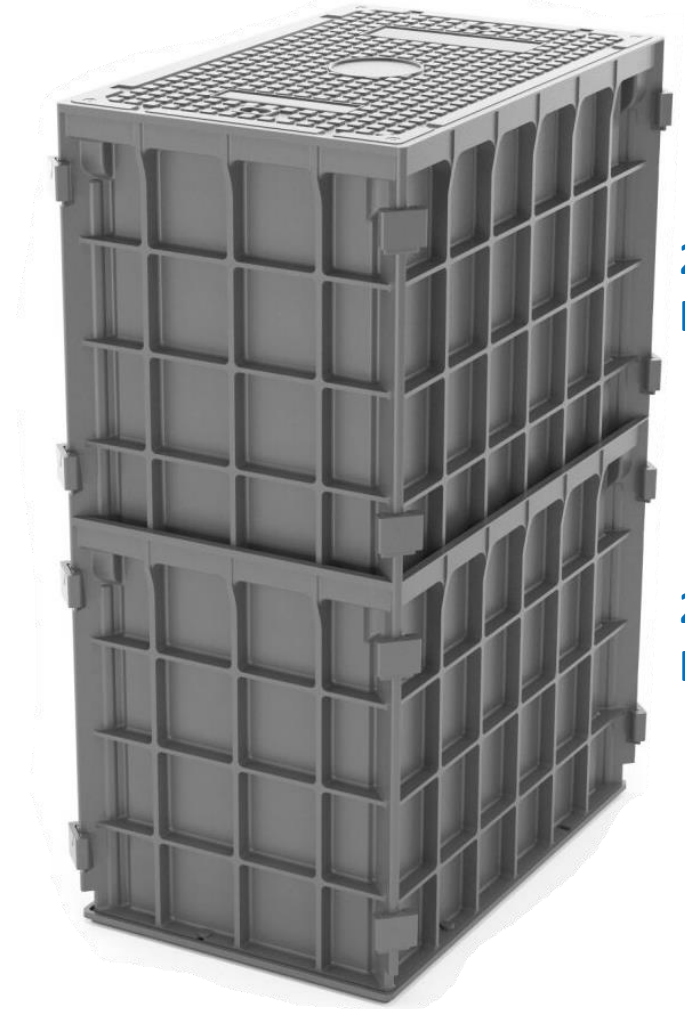
Vault Accessories

Name Plate
- Included per Lid

Cover Hook
- 2x Included

Fiber Hooks
- Included

Smart Ball
ID Marker
- Read/Write @ 2'
- 360 Sense @ 5'
- 50yr. life
- Application colors

Smart Coin
ID Marker
- Read/Write @ 1.5'
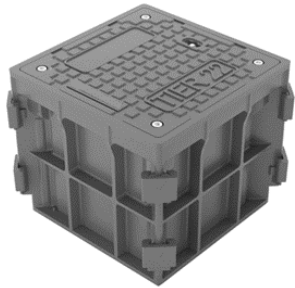- 360 Sense @ 2
- 50yr. life
- Application colors

Grounding Plate
- Galvanized Steel
- With Connector

Released Handholes and Vaults

- *** Standard sizes**
  Optional colors available

Modular Handholes

12x12x12*   12x18x18*

Modular Vaults & Handholes Rated Tier 15 & 22

Light Duty Handholes

12x16x12*   6x9x9
            10x14x10*

Small Modular Vault

17x30x24*
17x30x36
17x30x48

Medium Modular Vault

24x36x24*
24x36x36
24x36x48

Large Vault

30x48x36*

Advantage of SureAlign Vaults Solution

Lightweight & stronger than steel: Maintains shape in all environments

Easy, Fast Install: No crane, no Tools, easy to use

Environmental resistant: Doesn't degrade, deteriorate or break if dropped

Modularity: Stack to add depth, ships flat, field replaceable parts

Easy transport and low logistics cost: 20 vaults per pallet, easy to lift

Radio Friendly: Allows location radio signals to be read

SureAlign Vault-1730 Series Tier 22 Ordering Info

Order Assembly Part #

- **Includes: Vault + Accessories**
  - S = short side
  - L = long side
  - C = cover
  - RS = Riser short side
  - RL = Riser long side

- **Includes Accessories:**
  - Clips for corner connections
  - SS Bolts and Nuts for cover
  - 4x Fiber J brackets w/ mount
  - ID Marker bracket w/ mount
  - 2x Cover lifting hooks

	SA-HDV-1730A	SA-HDV-1730B	SA-HDV-1730C
MOQ: 20 pcs. **Ships: 3 pallets** • 40 Short Side • 40 Long Side • 20 Covers			
Internal Size (inch) WxLxH	17x30x24	17x30x36	17x30x48
External Size (inch) WxLxH	21x33x24	21x33x36	21x33x48
Weight (lbs)	109.25	147.17	170.53
Side Wall parts included			
SA-HDVP-1730S	2	2	4
SA-HDVP-1730L	2	2	4
SA-HDVP-1730C	1	1	1
SA-HDVP-1730RS	0	2	0
SA-HDVP-1730RL	0	2	0

Order Spare Part #

- Ala-carte ordering of individual vault walls
- See accessories page for ordering information

Side Wall Parts	Description	Size (inch)	Weight (lbs)
SA-HDVP-1730S	Short Side Wall for SA-HDV-1730A/B/C	22x24	13.36
SA-HDVP-1730L	Long Side Wall for SA-HDV-1730A/B/C	34x24	17.28
SA-HDVP-1730C	Cover for SA-HDV-1730A/B/C	21x32	47.97
SA-HDVP-1730RS	Riser-Short Side Wall for SA-HDV-1730B	22x12	8.16
SA-HDVP-1730RL	Riser-Long Side Wall for SA-HDV-1730B	34x12	10.8

SureAlign Vault-2436 Series Tier 22 Ordering Info

Order Assembly Part #

- **Includes: Vault + Accessories**
    - S = short side
    - L = long side
    - C = cover
    - RS = Riser short side
    - RL = Riser long side

- **Includes Accessories:**
    - Clips for corner connections
    - SS Bolts and Nuts for cover
    - 4x Fiber J brackets w/ mount
    - ID Marker bracket w/ mount
    - 2x Cover lifting hooks

Order Spare Part #

- Ala-carte ordering of individual vault walls
- See accessories page for ordering information

	SA-HDV-2436A	SA-HDV-2436B	SA-HDV-2436C
MOQ:20 pcs. **Ships: 3 pallets** • 40 Short Side • 40 Long Side • 20 Covers			
Internal Size (inch) WxLxH	24x36x24	24x36x36	24x36x48
External Size (inch) WxLxH	27x39x24	27x39x36	27x39x48
Weight (lbs)	158.15	204.89	244.65
Side Wall parts included			
SA-HDVP-2436S	2	2	4
SA-HDVP-2436L	2	2	4
SA-HDVP-2436C	1	1	1
SA-HDVP-2436RS	0	2	0
SA-HDVP-2436RL	0	2	0

Side Wall Parts	Description	Size (inch)	Weight (lbs)
SA-HDVP-2436S	Short Side Wall for SA-HDV-2436A/B/C	26x24	19.97
SA-HDVP-2436L	Long Side Wall for SA-HDV-2436A/B/C	39x24	23.28
SA-HDVP-2436C	Cover for SA-HDV-2436A/B/C	26x39	71.65
SA-HDVP-2436RS	Short-Short Side Wall for SA-HDV-2436B	26x12	9.7
SA-HDVP-2436RL	Short-Long Side Wall for SA-HDV-2436B	39x12	13.67

SureAlign Vault-3048 Series Tier 22 Ordering Info

Order Assembly Part #

- **Includes: Vault + Accessories**
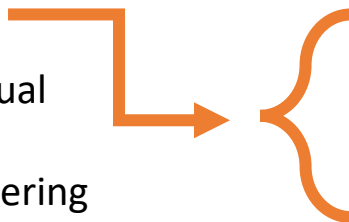 - S = short side
  - L = long side
  - C = cover
  - RS = Riser short side
  - RL = Riser long side

- **Includes Accessories:**
  - SS Assembly hardware
  - SS Bolts and Nuts for cover
  - 4x Fiber J brackets w/ mount
  - ID Marker bracket w/ mount
  - 2x Cover lifting hooks

Order Spare Part #

- Ala-carte ordering of individual vault walls
- See accessories page for ordering information

SA-HDV-3048	
MOQ: 10 pcs. Ships: 3 pallets • 20 Short Side • 20 Long Side • 20 Covers	
Internal Size (inch) WxLxH	30x48x36
External Size (inch) WxLxH	32x50x36
Weight (lbs)	326.98
Side Wall parts included	
SA-HDVP-2436S	2
SA-HDVP-2436L	2
SA-HDVP-2436C	2
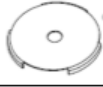
Side Wall Parts	Description	Size (inch)	Weight (lbs)
SA-HDVP-3048S	Short Side Wall for SA-HDV-3048	33x36	34.96
SA-HDVP-3048L	Long Side Wall for SA-HDV-3048	51x36	61.33
SA-HDVP-3048C	Cover for SA-HDV-3048	26x39, 2 Lids	67.2

SureAlign Vault Accessory Spares

17x30 & 24x36

Assemble P/N	Specifications	QTY	Description	Reference Picture
SA-HDV-ACC-CL652	Clip, Dimension 63x50x22 mm	8	Connect Side walls	
SA-HDV-ACC-SHSM1270	Socket Head Screw, M12X70 mm	4	Fasten lid onto walls	
SA-HDV-ACC-NUTM12	Nut, M12	4	Buried into Side wall, work with screw	
SA-HDV-ACC-SHSM1216	Socket Head Screw, M12X16	1	Fasten and unfasten the screw	
SA-HDV-ACC-BKT822	J-Bracket, Dimension 80x25x25 mm	4	Holding FOSC or loop cable	
SA-HDV-ACC-STSM419	Self-tapping Screw , M4X19 mm	8	Fasten J-Bracket onto walls	
SA-HDV-ACC-MC75	Marker Case, Diameter 75 mm	1	Holding marker in, at lid back	
SA-HDV-ACC-SHSM1016	Socket Head Screw, M10X16	1	Screw Marker Case at lid back	
SA-HDV-ACC-WasherM10	Washer, 11X20mm (inner and outer diameter)	1	Fasten on Marker Case	
SA-HDV-ACC-HK30	Hook, S.S 30mm Long	2	Per 2 vault equip 1 pair of hook	

30x48

Assemble Parts	Specifications	QTY	Description	Reference Picture
SA-HDV-ACC-HHSM12100	Hex Head Screw, M12X100mm	4	Fasten lid onto walls	
SA-HDV-ACC-SNUTM12	Square Nut, M12, Customized	4	Buried into walls, work with lid screw	
SA-HDV-ACC-SNC3020	Square Nut Case, 31X20mm	4	Load square nut into walls	
SA-HDV-ACC-FHSM610	Flat Head Screw, Cross pattern, Flat Head	8	Fasten nut case onto walls	
SA-HDV-ACC-HSDM12	HEX Screw Driver for HEX Head M12	1	Fasten and unfasten the screw	
SA-HDV-ACC-BKT822-1	J-Bracket1, Dimension 80x25x25mm, big hole	4	Holding FOSC or loop cable	
SA-HDV-ACC-HHSM820	Hex Head Screw, M8X20mm	8	Fasten J-Bracket onto walls	
SA-HDV-ACC-HHSM860	Hex Head Screw, M8X60mm	12	Fasten 2 walls	
SA-HDV-ACC-NUTM8	M8 Nut	20	For J-Bracket and wall connecting bolt	
SA-HDV-ACC-MC75	Marker Case, Diameter 75mm	1	Holding marker in, at lid back	
SA-HDV-ACC-SHSM1016	Socket Head Screw, M10X16	1	Screw Marker Case at lid back	
SA-HDV-ACC-WasherM10	Washer, 11X20mm (in and out diameter)	21	Fasten on Marker Case, J-Bracket, and Wall connect Bolt	
SA-HDV-ACC-HK30	Hook, S.S 30mm Long	2	Per 2 vault equip 1 pair of hook	