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## MT-UPM-R7-1P-DNC-10KVA-SW-BB-A3-BM-CZ-1ZZ-M1

# 10 KVA Overhead Distribution Transformer, Pole Mount, 7200V Delta Primary, 120V Secondary, Mineral Oil/ONAN, Copper, Light Grey - 100Hz

**Product ID: 325931**



Image: MT-UPM-R7-1P-DNC-10KVA-SW-BB-A3-BM-CZ-1ZZ-M1

**Larson Electronics LLC manufactures a wide variety of products, including custom built to spec designs. The pictures displayed for this unit are a general representation of form factor for the product line and may not accurately represent this exact configuration in every detail due to custom builds and changes between similar products in our standard catalog. The specifics for this configuration are listed in the specification table and supporting documentation (CAD files, Dimensional Drawing, Name Plate Diagram, Wiring Diagram, etc.). This means that specific details (receptacles, plugs, wires, connections, mounting brackets, external finishes, etc.) may not be accurately represented in images vs specifications. Please review specifications and do not order based solely on images.**

**MT-UPM-R7-1P-DNC-10KVA-SW-BB-A3-BM-CZ-1ZZ-M1 Pole Mount Overhead Transformer**

**Transformer Type:** Overhead Distribution Transformer, Conventional Type
**Transformer Configuration:** Liquid Filled Pole Mounted
**Transformer Polarity Type:** Additive
**Phase:** Single Phase
**Capacity:** 10 KVA
**Primary Voltage:** 7200V
**Primary Voltage Switch:** N/A
**Primary Voltage Class:** 8.7 kV Class
**Primary Phasor:** Delta
**Primary BIL:** 75 kV
**Secondary Voltage:** 120V (L-N)
**Secondary Voltage Class:** 1.2 kV Class
**Secondary Phasor:** Single Winding, Single Phase
**Secondary BIL:** 30 KV
**Frequency:** 100 Hz
**Temperature Rise:** 65°C
**Insulation Rating:** Class E Insulation - 120°C, 248°F
**Forced Air (Fans):** None
**Cooling Class:** ONAN; Self-Cooled
**Tap Changer:** 5-Position Tap Changer w/ External Operating Handle
**Tap Qty:** (2) FCAN Above, (2) FCBN Below
**Tap %:** 2.5%
**Tap Changer Switch Location:** Middle of Tank Body, Left of Mounting Provisions
**Impedance:** 1.0-4.5% Typical

**Ratings**

Meets/Exceeds DOE 2016 Efficiency Ratings
Meets/Exceeds CSA Efficiency Ratings
Complies with ANSI / IEEE C57 12.00
Complies with ANSI / IEEE C57 12.10
Complies with ANSI / IEEE C57 12.30
Complies with ANSI / IEEE C57 12.31
Complies with ANSI / IEEE C57 12.35
Complies with ANSI / IEEE C57.12.90
Complies with ANSI / IEEE C62.11
Complies with ANSI / IEEE C62.22
Complies with ANSI / IEEE C2
Complies with ANSI / IEEE C37.47
Complies with ANSI Z535.4
Complies with ASTM D3487
Complies with ASTM D6871
Complies with 10 CFR Part 431
Complies with CAN / CSA C233.1-87
Complies with CAN / CSA C802.1-13
Complies with CSA C2.2:06
Complies with CAN / CSA C50
Complies with NEMA TP-1 2002

**Features:**
Lifting Lugs Included

**Primary Connection Type:** Live Bushing Lug
**Primary Connection Arrangement:** Side Mounted
**Primary Termination:** Wet Processed High Voltage Porcelain Bushing, ANSI 70 Light Grey
**Primary Connection Qty:** (2)
**Primary Lightning Arrestors:** N/A
**Primary Lightning Mounting Provision:** Mounting Provisions for Installing Lightning Arrestors on H1 & H2 Primary Terminals
**Primary Lightning Arrestors Voltage Rating:** N/A
**Primary Lightning Arrestors MCOV Rating:** N/A
**Secondary Connection Type:** Live Bushing Lug
**Secondary Connections:** Lug Terminals
**Secondary Connection Qty:** (2)
**Secondary Neutral Connection:** Secondary X2 Neutral Grounded to Tank via 1/2"-13 UNC Tapped Hole, 7/16" Deep Bung & Copper Ground Strap
**Terminals:** Tin Plated Primary and Secondary - Accepts Copper or Aluminum Connections
**Grounding Provisions:** (1) Lug w/ Grounding Strap, Tank Grounding Lug
**Transformer Protection:** N/A
**Load Break Switch:** N/A
**Efficiency Standard(s):** Meets DOE 2016 Standards, Meets CSA Standards Meets ANSI/IEEE Standards
**K-Factor Rating (Harmonic Mitigation):** K-1 (Standard)
**Pulse Drive Rating:** N/A
**Insulation Fluid:** Mineral Oil, Type II, Non-PCB Fluid
**Fluid Capacity*:** 5.38 Gallons
**Fluid Weight*:** 48.5 lbs
**Liquid Level Indicator:** Internal In-Tank Oil Level Line
**Temperature Indicator:** N/A
**Pressure/Vacuum Indicator:** N/A
**Pressure Relief Device:** Included, Automatic Action
**Fault Indicator:** N/A
**Oil Level Marking:** Internal
**Fill Valve:** N/A (Tank Filled via Removable Lid)
**Drain Valve:** 1/2" NPT Port w/ Removable Bolt
**Winding Material:** Copper
**Ambient Temperature Rating:** 40°C
**Ambient Operating Temperature Range:** -40°C to +40°C (-50°F to +104°F)
**Sound Level:** 48 dBA (Complies To NEMA TR-1)
**Elevation Level:** 3,300ft Above Sea Level (2,000m)
**Core Material:** Cold Rolled Grain Oriented Silicon Steel
**Nameplate Material:** Stainless Steel
**Tank Material:** Coated Steel
**Housing Material:** Coated Steel w/ Corrosion Resistant Cover Band, Removable Top Cover
**Hardware Material:** Stainless Steel Hardware
**Paint Type:** Weatherproof and UV Resistant Epoxy Coating and Undercoating
**Finish Color:** Munsell™ 5BG 7.0/0.4 Light Grey (ANSI #70)
**Mounting:** Double Hanger Bracket
**Mounting:** Pole Mount via Hanger Brackets
**Lifting Lugs:** Included
**Dimensions*:** 18.5"-W x 21.65"-D x 35.83"-H
**Tank Diameter*:** 13.39"
**Dry Weight*:** 99.21 lbs
**Total Weight (Liquid Filled)*:** 217 lbs
*Please note that numbers are approximate and subject to change

Corrosion Resistant Cover Band
Non-PCB Insulating Fluid

**Efficiency:** 98.30%
*Based on transformer operating at 50% of nameplate base kVA.*

**Load Losses Based on 85°C Reference Temp.**
**No Load Loss (in watts):** +/- 47W
**Full Load Loss (in watts):** +/- 156W
**Total Load Loss (in watts):** +/- 203W
***Note:*** Losses offered are typical only, not guaranteed

**Labeling:**
Externally Stencilled (Painted) KVA Rating
Externally Stencilled (Painted) Voltage Rating
External Non-PCB Label
External Barcode Label
Stainless Steel Riveted Nameplate

**Factory Tests:**
Ratio Tests - on all tap connections
Phase Sequence/Polarity Test
Resistance test of all windings
Exciting current test
No-load Loss (Wattage) Test (witnessed by SEPTA)
Impedance and full load loss Test (witnessed by SEPTA)
Insulation resistance test with at least 1 KV megger
Dielectric withstand test (Applied potential - Induced potential), (witnessed by SEPTA)
Impulse Test (witnessed by SEPTA)
Power Factor Test (witnessed by SEPTA)
Temperature Rise Test (witnessed by SEPTA)
Percent regulation at 85%, 90%, and 95% Power Factor
"Gas-in-oil" analysis and "dielectric breakdown voltage" tests

**Shipping:**
Shipped on pallet on open flatbed
Palletized on Wooden Pallet w/ Skid Pockets
Pallet Skid Facing Outward Sides of Truck
***Note:*** For low quantity purchases, enclosed truck can be requested
***Note:*** Crated shipping in lieu of palletizing can be done upon request for an additional fee

**Special Orders - Special Requirements**
Contact us for special requirements
**Toll Free:** 1-800-369-6671
**Intl:** 1-903-270-1187
**Fax:** 1-903-765-7664
**E-mail:** sales@larsonelectronics.com

**The MT-UPM-R7-1P-DNC-10KVA-SW-BB-A3-BM-CZ-1ZZ-M1 Overhead Distribution Pole Mounted Transformer from Larson Electronics offers powerful, reliable and efficient**

**power distribution in outdoor and public locations. The low operating costs, low heat emissions and low cost of ownership make this transformer ideal for a wide range of applications and businesses. This power distribution system is designed for overhead, pole mount installations and use.**

***PLEASE NOTE: ANY FREE SHIPPING OFFERS DO NOT APPLY TO POWER DISTRIBUTION PANELS, TRANSFORMERS, OR SUBSTATIONS***

**Transformer Features:** With a transformer rating of 10 KVA, the industrial transformer features a primary voltage of 7200V Delta and a secondary voltage of single-phase 120V (L-N). This transformer connects to a three phase electrical grid system to provide single phase low voltage power for indoor distribution. This pole mount transformer features porcelain high-voltage, dual bushings on the primary side and three bushings on the secondary side. Equipped with copper windings and a grain oriented steel core, this overhead distribution transformer consists of one coil and two core loops. Tin plated terminals on the primary and secondary sides accept copper or aluminum connections.

The MT-UPM-R7-1P-DNC-10KVA-SW-BB-A3-BM-CZ-1ZZ-M1 is air cooled and does not have fans or mounting provisions for fans. This unit features a 65°C temperature rise for reduced heat waste, increased reliability and longer life. The combination of low temperature rise and high efficiency makes this unit suitable for use in electrical rooms, air conditioned spaces in buildings, underground vaults and similar locations, in addition to outdoor areas.

**Insulation Fluid:** The MT-UPM-R7-1P-DNC-10KVA-SW-BB-A3-BM-CZ-1ZZ-M1 features mineral oil insulation fluid. Internal marking is available for proper oil level monitoring. We offer transformers with FR-3 oil fluid, if needed.

**Gauges:** There are no gauges on this transformer. We can add liquid level, temperature and pressure/vacuum gauges at an additional cost. Standard liquid level, temperature and pressure/vacuum gauges are analog, manual reading types.

**Pressure Relief Device:** An automatic pressure relief device is included with this transformer.

**Rapid Rise Relay:** There are no rapid rise relays on the unit. This safety component is designed for protection when a rapid increase in tank pressure occurs. The relay is suitable for detecting sudden pressure fluctuations above predetermined safe limits.

**Surge arresters:** This system is not equipped with lightning arresters. Mounting provisions for installing customer provided lightning arresters on the H1 and H2 primary terminals are included for installing arresters in-field.

**Valves:** The MT-UPM-R7-1P-DNC-10KVA-SW-BB-A3-BM-CZ-1ZZ-M1 is not equipped with fill or drain valves. The transformer can be filled by removing the top lid. A drain port w/ bolt plug is equipped.

**Protection Fuses:** This transformer does not contain fuses or circuit breakers. For units without protection fuses, upstream protection is provided. We recommend provisions for protection fuses when possible, as blown fuses may require more frequent oil changes.

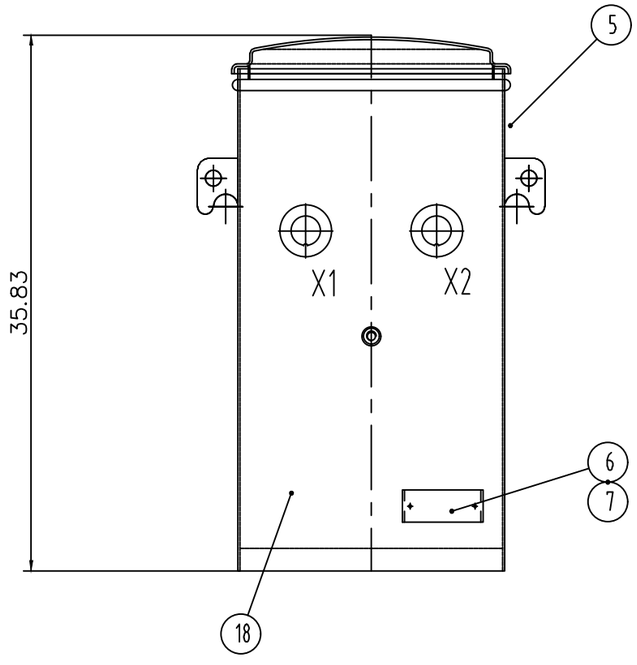
**Mount:** The heavy-duty enclosure makes the unit suitable for outdoor applications. Equipped with hanger brackets and lifting lugs, this overhead power distribution system can be mounted on poles.

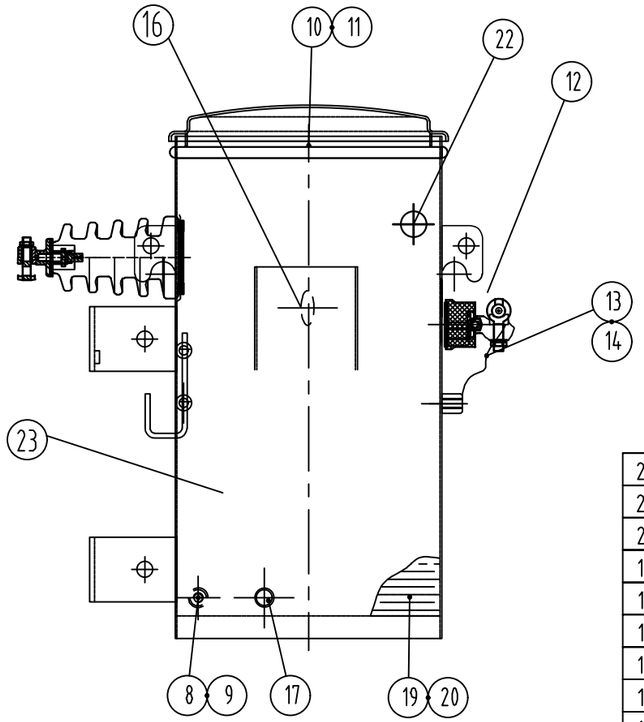
**Benefits:** The MT-UPM-R7-1P-DNC-10KVA-SW-BB-A3-BM-CZ-1ZZ-M1 heavy-duty transformer offers many benefits to consumers. This transformer provides owners with significant energy savings, as well as offering environmental benefits. Higher efficiency not only extends the life of the transformer, but also turns into cost savings for owners in the form of lower energy bills and decreased cost of ownership.

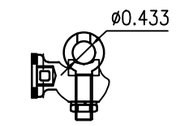
We offer completely self protected (CSP) pole mount overhead transformers at an additional cost.

**Applications:** General purposes, industrial sites, electrical rooms, public locations, manufacturing facilities, steel plants, offshore, commercial, military, processing plants, electric power distribution, utilities, public locations and more.

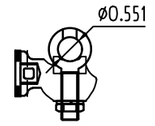
Larson Electronics is a manufacturer and as such can build stationary and portable transformer systems to your specifications. Although we carry several models of power distribution transformer systems, we can deliver custom ordered units almost as quickly as our prebuilt units. If this model does not meet your needs, please contact us at 1-800-369-6671 or sales@larsonelectronics.com to discuss your specific requirements.



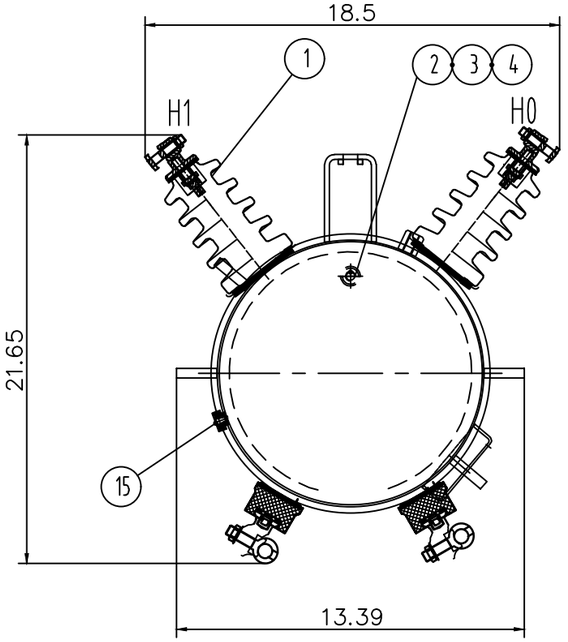



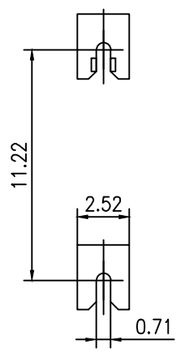

HV terminal



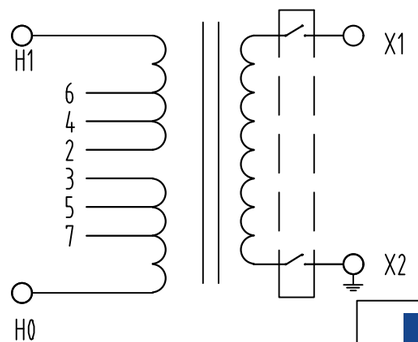

LV terminal




hanger bracket




wiring diagram




| No. | Code | Name | QTY | Material | Unit Weight | Total Weight | Remark |
|---|---|---|---|---|---|---|---|
| 23 | | Painting | 1 | 10bg 6/1 Blue Grey | | | |
| 22 | | LV CB | 1 | | | | with light |
| 20 | | core&coil | 1 | | | | |
| 19 | | insulation oil | (1) | mineral oil | | | |
| 18 | | tank | 1 | coated steel | | | |
| 17 | | drain valve | 1 | | | | |
| 16 | | tap changer | 1 | | | | |
| 15 | | pressure relief device | 1 | | | | |
| 14 | | washer 12 | 2 | Stainless steel | | | |
| 13 | | bolt M12×25 | 1 | Stainless steel | | | |
| 12 | | LV bushing | 2 | | | | |
| 11 | | sealing gasket | 1 | | | | |
| 10 | | tank cover | 1 | coated steel | | | |
| 9 | | washer 12 | 2 | Stainless steel | | | |
| 8 | | bolt M12×30 | 1 | Stainless steel | | | |
| 7 | | screw M4X6 | 2 | | | | SS |
| 6 | | nameplate | 1 | | | | |
| 5 | | hold down gear | 1 | | | | |
| 4 | | grounded pad | 1 | 0.3 copper | | | inner tank |
| 3 | | washer 12 | 2 | | | | black coated |
| 2 | | bolt M12×20 | 2 | | | | black coated |
| 1 | | HV bushing | 2 | | | | |

LARSON MAGNETICS

9419 E US HWY 175,
KEMP, TX 75143

TITLE

MT-UPM-R7-1P-DNC-10KVA-SW-BB-A3
-BM-CZ-1ZZ-M1

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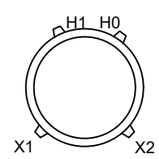
# SINGLE PHASE POLE MOUNTED TRANSFORMER
## MT-UPM-R7-1P-DNC-10KVA-SW-BB-A3-BM-CZ-1ZZ-M1

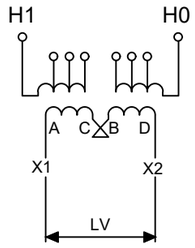
| | | | | | |
|---|---|---|---|---|---|
| Phase: | 1PH | 10 KVA | Serial NO. | | |
| Impedance | | 1.0 - 4.5 % | Product ID | 326039 | |
| BIL | | 60/30 kV | Vol of Oil | 5.38 | Gal |
| HV | | 7200 V | Total Mass | 217 | LBS |
| LV | | 120 V | HV/LV Con. | Copper | |
| Freq. | | 100 Hz | Cooling | ONAN | |
| Phasor | | Ii6 | Temp.Rise: | 65°C | |

Tank must be solidly grounded-NON-PCB Mineral Oil
Additive Polarity

| HV | Taps | Amps |
|---|---|---|
| 7565 | 1/A | 1.3 |
| 7380 | 2/B | 1.4 |
| 7200 | 3/C | 1.4 |
| 7020 | 4/D | 1.4 |
| 6845 | 5/E | 1.5 |

| LV | Amps |
|---|---|
| 120 | 83.3 |




ANSI C57.12.20-DOE 2016 Compliant-Manufactured 2025.10

LARSON MAGNETICS

Larson Magnetics LLC
Kemp, TX USA

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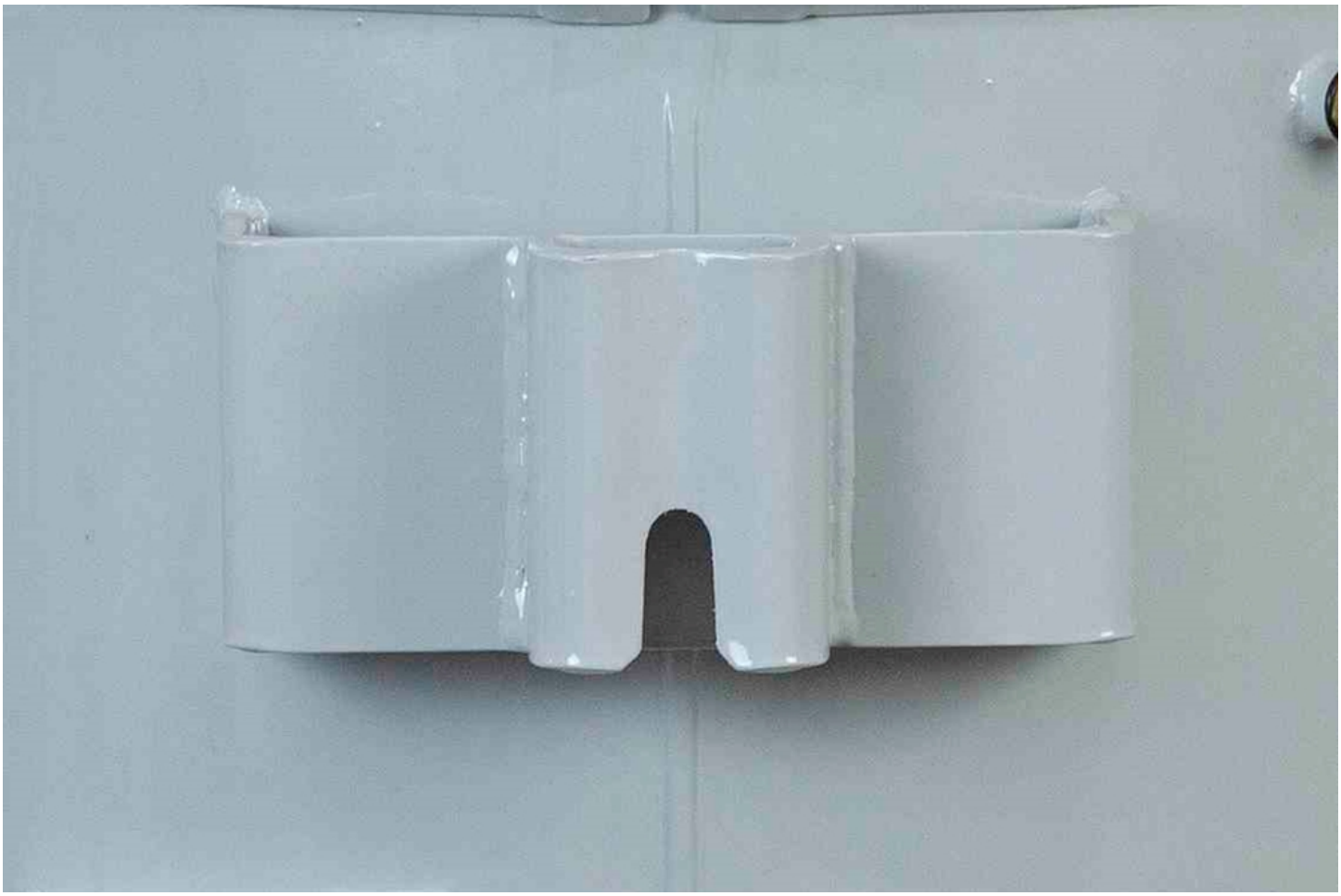
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# Frequently Asked Questions (FAQ)

There are no Faqs