

Wind Turbine Tower Protection

Maximize wind tower protection.

Elastimold® MVI switchgear

- EPDM molded rubber construction with stainless steel hardware and mechanism boxes
- All switchgear components are fully sealed and submersible
- Combines vacuum interruption and current-limiting fault protection
- High fault current interrupting capability up to 25kA symmetrical for MVI and 50kA symmetrical for MCLVI
- Deadfront construction insulates, shields and eliminates exposed live parts
- Compact and lightweight small footprint enables components to fit in tight padmount, subsurface, vault, riser-pole or tower installations
- Can be installed almost anywhere and in any position — hanging from ceiling, wall mounted, mounted at an angle or riser-pole mounted
- Variety of electronic controls for optimum overcurrent protection
- Entirely solid-dielectric, deadfront design requires no maintenance and is 100% environmentally friendly
- No greenhouse gases are used, and no byproducts are produced during interruption
- Units can be operated manually or via SCADA

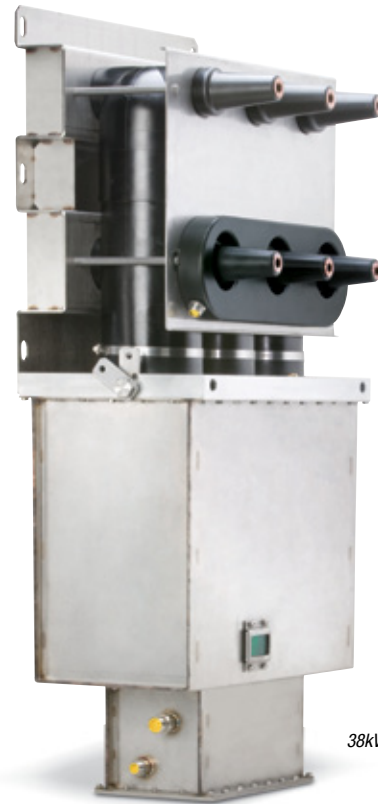
38kV/25kA Molded Vacuum Interrupter (MVI)

The 38kV/25kA MVI incorporates Elastimold's proven combination of EPDM molded insulation with a vacuum interrupter. This latest addition to our solid-dielectric family of switchgear features a 25kA symmetrical fault interrupting vacuum bottle and a magnetic actuator mechanism.

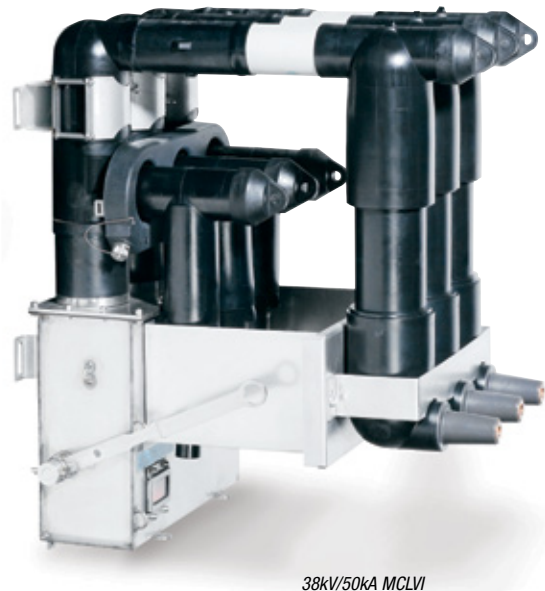
The MVI will work with a broad line of control options, ranging from our Elastimold 80MAX Control to a variety of Schweitzer Engineering Laboratories controls. The small, lightweight unit is maintenance-free and environmentally friendly, containing no gas or oil, and is ideal for subsurface, vault, tower, padmount or riser-pole applications.

38kV/50kA Molded Current-Limiting Vacuum Interrupter (MCLVI)

The 38kV/50kA MCLVI incorporates Elastimold's proven combination of EPDM molded insulation with a current-limiting fuse and a fault interrupting vacuum bottle. This addition to our solid-dielectric family of switchgear uses a vacuum interrupter to clear low-magnitude faults in series with a Hi-Tech® current-limiting fuse to clear higher-magnitude faults, substantially reducing energy let-through. The unit also includes our current sensors and self-powered protective control. If a single current-limiting fuse clears a fault, the MCLVI will sense an imbalance and trip to prevent single phasing. This small, lightweight unit is maintenance-free and environmentally friendly, containing no gas or oil, and is available for subsurface, vault, tower, padmount or riser-pole applications. Choose a stacked (shown), linear or back-to-back arrangement. When used for transformer protection, the fuses can be coordinated with the vacuum interrupter so that the fuses will only operate in the event of a transformer failure.



38kV/25kA MVI



38kV/50kA MCLVI

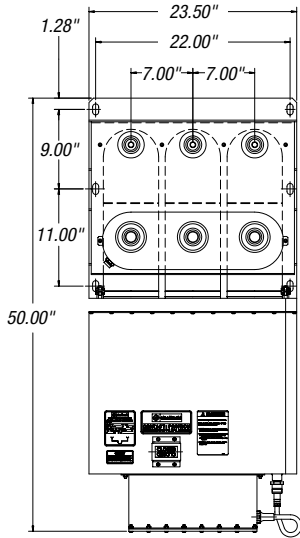
Power & High Voltage — Elastimold® Molded Reclosers, Switches & Switchgear

Wind Turbine Tower Protection

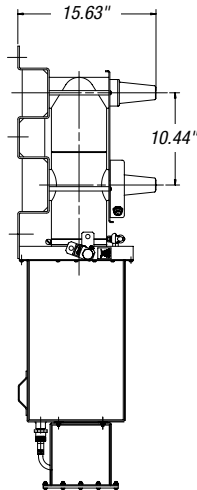
Dimensional Information

38kV/25kA MVI

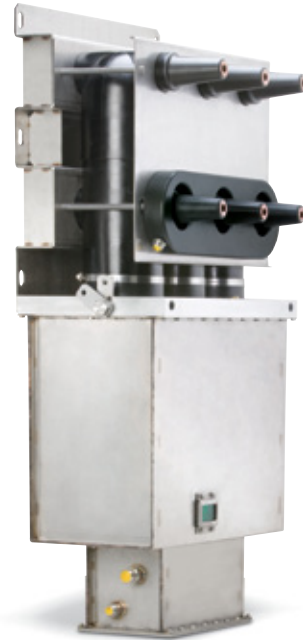
- Weight: 300 lbs.



Front View

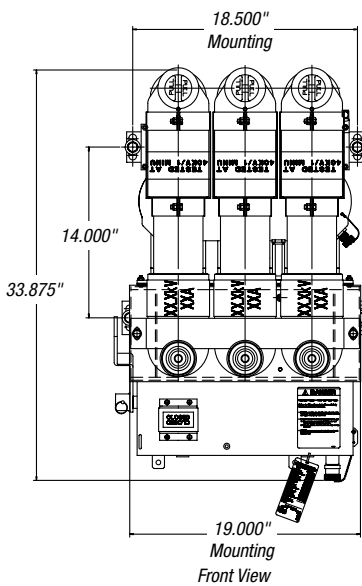


Side View

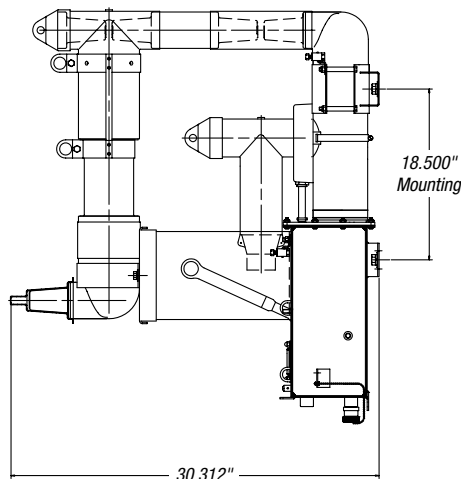


38kV/50kA MCLVI

- Weight: 280 lbs.



Front View



Side View



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Molded Vacuum Interrupter Controls

80MAX External Control with Three-Phase Trip

The 80MAX Control mounts externally to the interrupter mechanism and provides the ability to select an overcurrent trip level and ground. This control uses the E-Set software, which enables programming via a computer using the MVI-STP-USB adapter. E-Set features custom TCC curves and provides access to last fault event information, as well as real-time current per phase.

The E-Set II software is accessible via a computer connection to view or modify settings. Phase and ground trip, as well as inrush restraint, are available. The E-Set software enables the user to connect to the 80MAX Control, either in the shop or in the field, to program or change settings. An MVI-STP-USB programming connector is required to connect between the PC and the MVI. With a computer connected to the MVI control, the user can view real-time currents, the number of overcurrent protection operations, current magnitude of the last trip and the phase/ground fault targets. This is the standard control option.

Note: E-Set software can be downloaded from www.elastimoldswitchgear.com.



Curves (25kA Interrupter only)

CURVE NO.	CURVE REFERENCE NO.	CURVE TYPE
Relay Curves (minimum trip 30–600A)		
01	MVI-TCC-01	E Slow
02	MVI-TCC-02	E Standard
03	MVI-TCC-03	Oil Fuse Cutout
04	MVI-TCC-04	K
05	MVI-TCC-05	Kearney QA
06	MVI-TCC-06	Cooper EF
07	MVI-TCC-07	Cooper NX-C
08	MVI-TCC-08	CO-11-1
09	MVI-TCC-09	CO-11-2
10	MVI-TCC-10	T
11	MVI-TCC-11	CO-9-1
12	MVI-TCC-12	CO-9-2
13	MVI-TCC-13	Cooper 280ARX
14	MVI-TCC-14	F
16	MVI-TCC-16	Kearney KS
17	MVI-TCC-17	GE Relay
18–23	MVI-TCC-18–23	CO-8-1–CO-8-6
24–27	MVI-TCC-24–27	CO-9-3–CO-9-6
28–31	MVI-TCC-28–31	CO-11-3–CO-11-6

Fuse Curves (minimum trip 10–200A)

54	MVI-TCC-54	E Slow
55	MVI-TCC-55	E Standard
56	MVI-TCC-56	Oil Fuse Cutout
57	MVI-TCC-57	K
58	MVI-TCC-58	Kearney QA
59	MVI-TCC-59	Cooper NX-C
60	MVI-TCC-60	T

Consult factory for 50kA Interrupter Curves.



Besides the Elastimold interrupter controls, the SEL-351R relay from Schweitzer Engineering Laboratories can also be used with Elastimold MVI and MCLVI molded vacuum interrupters.

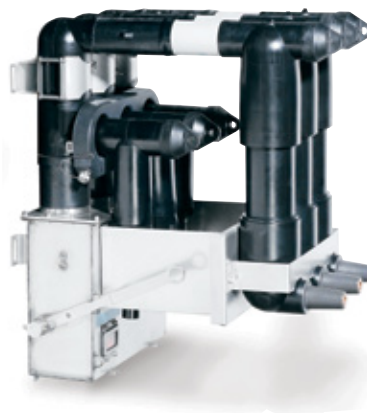
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Reliable, compact and environmentally friendly protection for wind turbine towers.

Certified Tests

MVI Molded Vacuum Fault Interrupters have been designed and tested per applicable portion of IEEE, ANSI, NEMA and other industry standards, including:

- ANSI C37.60 Standard for Fault Interrupters
- ANSI C37.41 Standard for Current Limiting Fuse Design and Testing
- IEEE 386 Standard for Separable Connectors and Bushing Interfaces



38kV/50kA MCLVI



38kV/25kA MVI

Electrical Characteristics of 38kV MVI and MCLVI

	MVI	MCLVI
Voltage Class (kV)	35	35
Maximum Design Voltage (kV)	38	38
Frequency (Hz)	50/60	50/60
BIL Impulse Withstand (kV)	150	150
One-Minute AC Withstand (kV)	70	70
Five-Minute DC Withstand (kV)	103	103
Continuous Current (Amp)	630	55*
Load Interrupting & Loop Switching Current (Amp)	630	630
Capacitor or Cable Charging Interrupting (Amp)	40	40
Symmetrical/Asymmetrical Interrupting Capability (kA)	25/40	50/NA
Current Sensor Ratio	1000:1	1000:1
Ambient Temperature Range	-40° C–65° C	-40° C–65° C

* Continuous current equates to over 165% of the rated current for a 2MW tower at 34.5kV.

MVI and MCLVI Series

CAT. NO.	DESCRIPTION
WMVI3-21-38-66	3-Phase, 38kV Molded Vacuum Interrupter, 600A Bushings
MCLVI3-21-38-22	3-Phase, 38kV Current-Limiting Molded Vacuum Interrupter, 200A Bushing Wells
MCLVI3-21-38-66	3-Phase, 38kV Current-Limiting Molded Vacuum Interrupter, 600A Bushings
M38CLF1	Replacement Fuse