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LAHMEYER COMPACT SUBSTATIONS

PLANNING FOLDER

LAHMEYER
Compactstation

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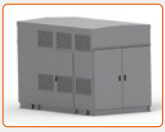
LAHMEYER COMPACT SUBSTATIONS



LAHMEYER COMPACT SUBSTATIONS

STANDARD PRODUCTS

Selection criteria:

Substation type	Access	Max. transformer power	Max. substation dimensions L x W x H (in mm)	Max. transformer dimensions [2,3] L x W x H (in mm)
LCS-E.83	front access	630 kVA	3,000 x 1,340 x 2,517	1,500 x 1,100 x 1,980
LCS-E.84	front access	800 kVA	3,000 x 1,690 x 2,517	1,500 x 1,450 x 1,980
NDV 630	side access	630 kVA	3,000 x 1,600 x 2,480	1,600[1] x 900 x 1,900
NDV 1100	front/side access	1,600 kVA	3,000 x 2,400 x 2,550	1,820 x 1,600 x 2,000
NDV 2510	front access	2,000 kVA	3,000 x 2,400 x 2,680	2,100 x 1,400 x 2,250
WPS 2500	side access	4,000 kVA	4,500 x 2,500 x 3,080	2,500 x 2,150 x 2,250

[1] when used a four field MV Switchgear, the maximum length is 1,280 mm
[2] dimensions valid for oil-immersed transformers;
for cast resin transformers consider the protection circuit
[3] height dimensions do not include wheels (wheelbase – terminals)

When installing in a substation, please note that, in accordance with DIN EN 62271-202, if certain ambient conditions in combination with the enclosure class are present, the transformer's nominal power is subject to a reduction in accordance with the load profile and the ambient conditions.

Furthermore, the rated current of the low-voltage switchgear may also be subject to a reduction of the operating current depending on the prevailing ambient conditions.

LAHMEYER COMPACT SUBSTATION

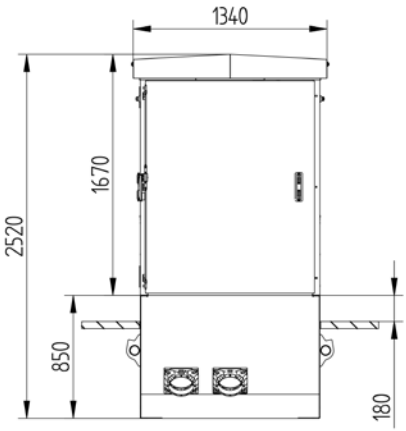
LCS-E.83

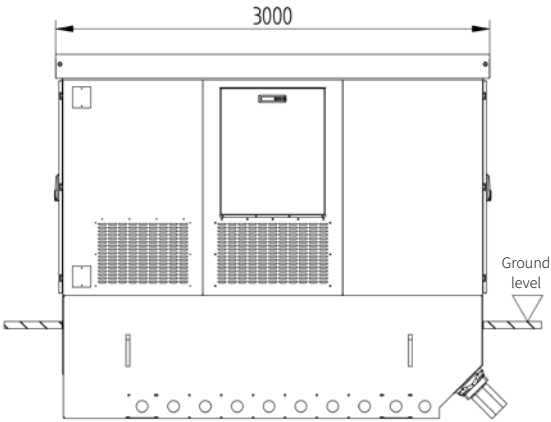
Technical data	LCS-E.83
Power	up to 630 kVA
Rated voltage	up to 24 kV
Measurement	LV-metering possible
Access	Front access
Use	Utility and customer substation
Footprint	Closed doors 3.6 m^2 Open doors 6.6 m^2
Total dimensions (L x W x H)	3,000 x 1,340 x 2,517 mm
Empty weight	approx. 1,050 kg
Total weight	max. 5,500 kg

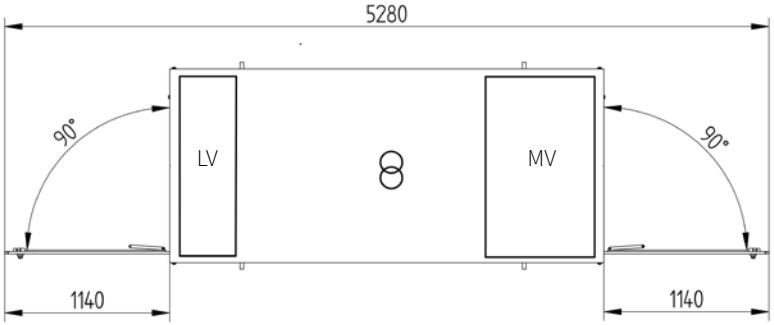
Design	
Temperature class	630 kVA (15 K)
Accessibility	Transformer compartment with lockable snap-on panels, MV/LV compartment with lockable doors
Material properties	Sheet steel, zinc-plated and powder coated
Standard colour	Pebble grey (RAL 7032)
Bottom basement	Steel basement with integrated oil leakage sump
Cable insert	LV open MV open, sealed cable entry as an option (HAUFF)

Equipment		
MV compartment	Switchgear	ABB SafePlus Air, Schneider RM AirSeT
		CF; CCF
	MV-metering	- -
Transformer	DIN distribution transformer	up to 630 kVA
	Cast resin transformer	according to the necessary protection circuit (400 kVA)
LV distribution panel	Switching devices	Automatic circuit breakers up to 1,000 A NH fuse switch-disconnectors up to 1,250 A
	Busbar system	max. 1,000 A
	Outgoing feeder options	NH strip-type fuse switch disconnectors (sizes 00, 2 or 3); up to 11 outgoing feeders, direct connection or circuit breaker
Additional compartments		possible on side panel
Possible add-ons		Protection and remote control equipment, fuses, metering devices, lighting, grounded sockets, earthing and short-circuit equipment

Dimensional drawings:







LAHMEYER COMPACT SUBSTATION

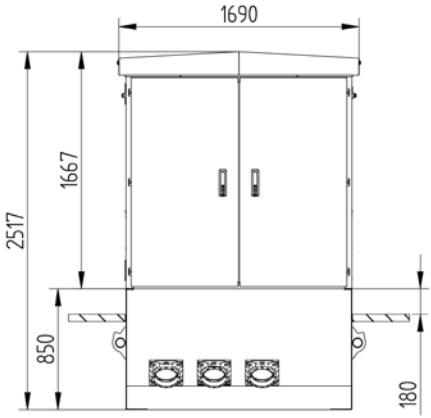
LCS-E.84

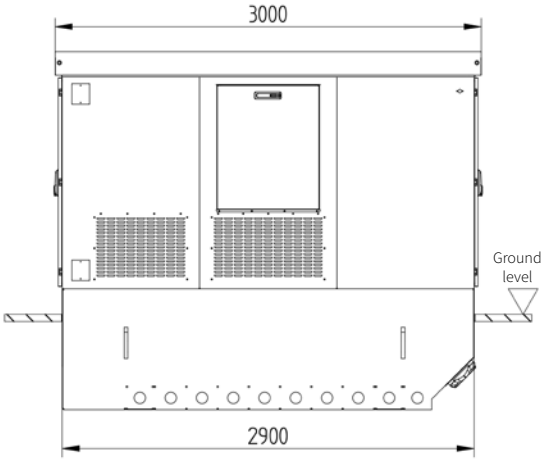
Technical data	LCS-E.84
Power	up to 800 kVA
Rated voltage	up to 24 kV
Measurement	LV-metering possible
Access	Front access
Use	Utility and customer substation
Footprint	Closed doors 4.7 m^2 Open doors 7.5 m^2
Total dimensions (L x W x H)	3,000 x 1,690 x 2,517 mm
Empty weight	approx. 1,250 kg
Total weight	max. 5,800 kg

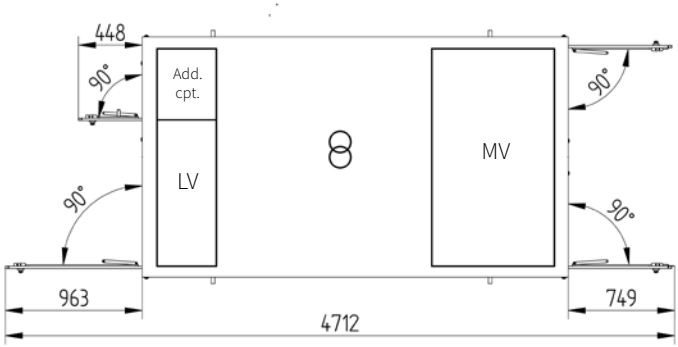
Design	
Temperature class	800 kVA (15 K)
Accessibility	Transformer compartment with lockable snap-on panels, MV/LV secondary equipment compartment with lockable doors
Material properties	Sheet steel, zinc-plated and powder coated
Standard colour	Pebble grey (RAL 7032)
Bottom basement	Steel basement with integrated oil leakage sump
Cable insert	LV open MV sealed cable entry (HAUFF)

Equipment		
MV compartment	Switchgear	ABB SafePlus Air, Schneider RM AirSeT
		CCF; CCCF, CCFF
	MV-metering	- -
Transformer	DIN distribution transformer	up to 800 kVA
	Cast resin transformer	according to the necessary protection circuit (630 kVA)
LV distribution panel	Switching devices	Automatic circuit breakers up to 1,250 A NH fuse switch-disconnectors up to 1,250 A
	Busbar system	max. 1,250 A
	Outgoing feeder options	NH strip-type fuse switch disconnectors (sizes 00, 2 or 3); up to 8 outgoing feeders, direct connection or circuit breaker
Additional compartments		Secondary equipment compartment on front panel
Possible add-ons		Protection and remote control equipment, fuses, metering devices, lighting, grounded sockets, earthing and short-circuit equipment

Dimensional drawings:







LAHMEYER COMPACT SUBSTATION
NDV 630

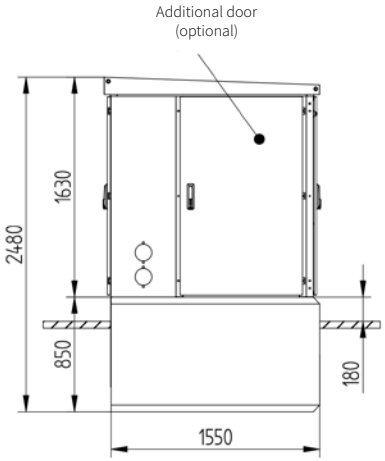
Technical data	NDV 630
Power	up to 630 kVA
Rated voltage	up to 24 kV
Measurement	LV- & MV-metering possible
Access	Side access
Use	Utility, customer or interface substation
Footprint	Closed doors 4.7 m^2 Open doors 9.0 m^2
Total dimensions (L x W x H)	3,000 x 1,600 x 2,480 mm
Empty weight	approx. 1,000 kg; approx. 3,560 kg (concrete basement)
Total weight	max. 7,500 kg (concrete basement)

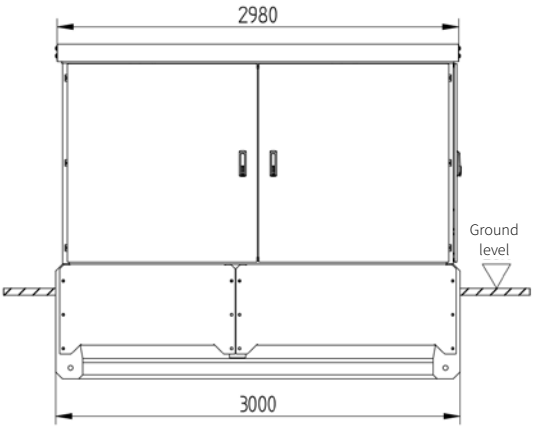
Design	
Temperature class	up to 630 kVA (20 K)
Accessibility	Transformer compartment with lockable snap-on panels, and/or door, MV/LV compartment with lockable doors
Material properties	Sheet steel, zinc-plated and powder coated
Standard colour	Pebble grey (RAL 7032)
Bottom basement	Steel or concrete
Cable insert	LV open MV open, sealed cable entry available (HAUFF)

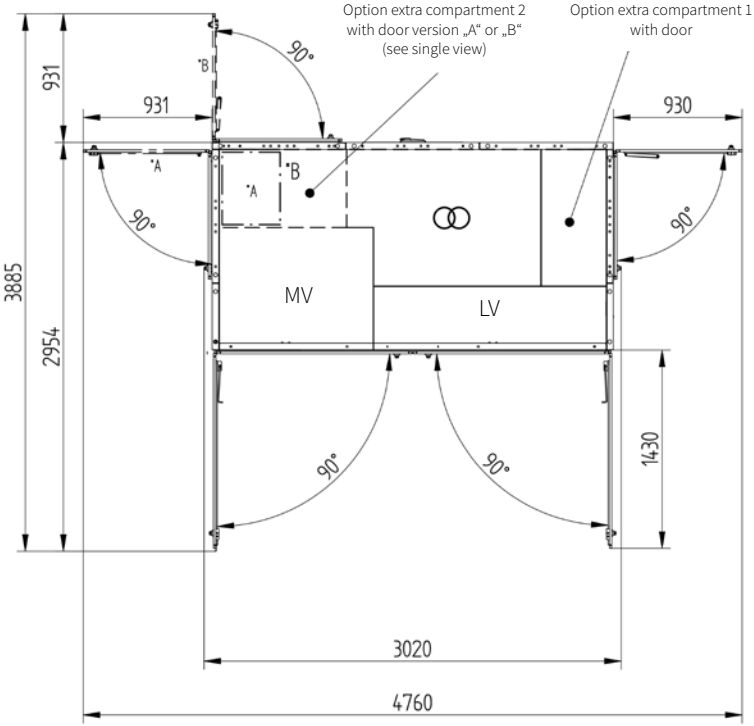
Equipment		
MV compartment	Switchgear	Siemens 8DJH24, Schneider RM AirSeT
		CCF; CCCF, CCFF
	MV-metering	SBG metering cubicle 3 current / voltage transformers
Transformer	DIN distribution transformer	up to 630 kVA
	Cast resin transformer	according to the necessary protection circuit (400 kVA)
LV distribution panel	Switching devices	Automatic circuit breakers up to 1,250 A NH fuse switch-disconnectors up to 1,250 A
	Busbar system	max. 1,250 A
	Outgoing feeder options	NH strip-type fuse switch disconnectors (sizes 00, 2 or 3); up to 19 outgoing feeders, direct connection or circuit breaker
Additional compartments		different sizes on front and side panels
Possible add-ons		Protection and remote control equipment, fuses, metering devices, lighting, grounded sockets, earthing and short-circuit equipment

Concrete basement:

Dimensional drawings (concrete basement):

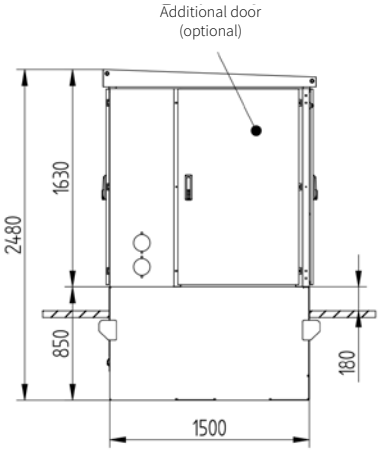


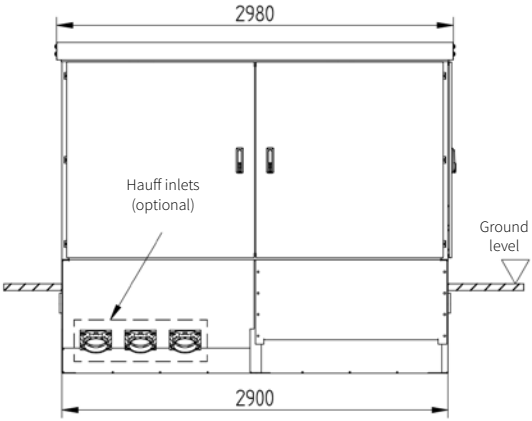


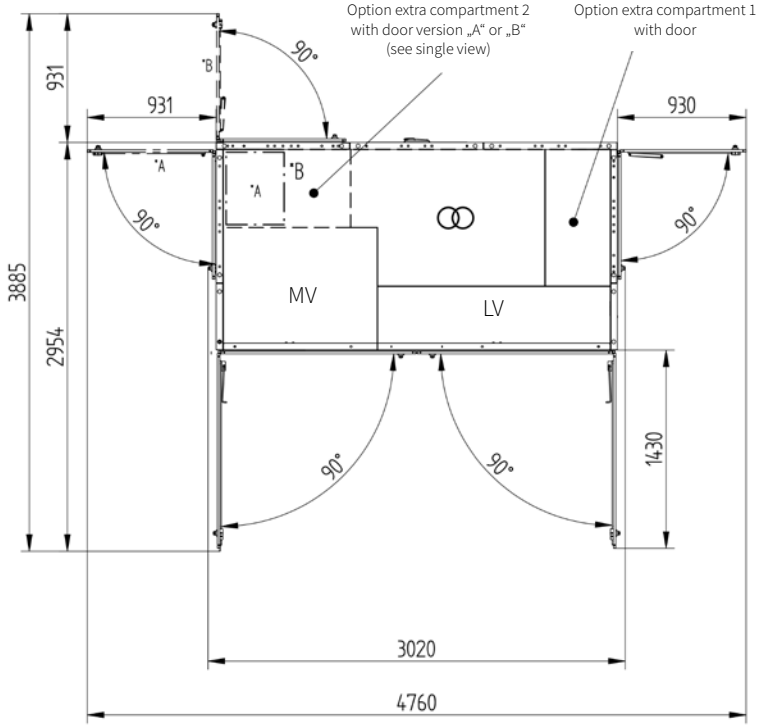


Steel basement:

Dimensional drawings (steel basement):







LAHMEYER COMPACT SUBSTATION
NDV 1100

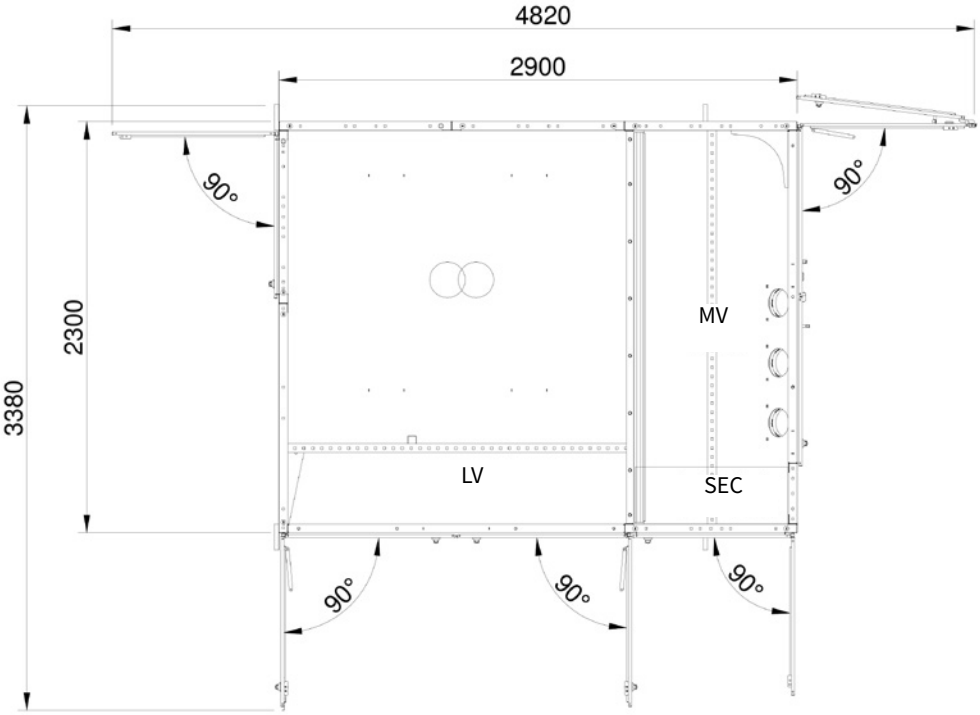
Technical data	NDV 1100
Power	up to 1,600 kVA
Rated voltage	up to 24 kV
Measurement	LV-metering possible
Access	Front and side access
Use	Utility, customer or interface substation
Footprint	Closed doors 6.7 m^2 Open doors 16.2 m^2
Total dimensions (L x W x H)	3,000 x 2,400 x 2,550 mm
Empty weight	approx. 1,700 kg
Total weight	max. 7,000 kg

Design	
Temperature class	up to 1,600 kVA (20 K)
Accessibility	Transformer compartment, MV/LV/Secondary equipment compartment (SEC) with lockable doors and/or snap-on panels
Material properties	Sheet steel, zinc-plated and powder coated
Standard colour	Pebble grey (RAL 7032)
Bottom basement	Steel basement with integrated oil leakage sump
Cable insert	LV open MV open, sealed cable entry available (HAUFF)

Equipment		
MV compartment	Switchgear	ABB SafePlus Air, Schneider RM AirSeT
		Up to 5 fields
	MV-metering	- -
Transformer	DIN distribution transformer	up to 1,600 kVA
	Cast resin transformer	according to the necessary protection circuit (1,000 kVA)
LV distribution panel	Switching devices	Automatic circuit breakers up to 2,500 A NH fuse switch-disconnectors up to 2,000 A
	Busbar system	max. 2,500 A
	Outgoing feeder options	NH strip-type fuse switch disconnectors (sizes 00, 2 or 3); up to 18 outgoing feeders, direct connection or circuit breaker
Additional compartments		different sizes possible on front and side panels
Possible add-ons		Protection and remote control equipment, fuses, metering devices, lighting, grounded sockets, earthing and short-circuit equipment

NDV 1100

Dimensional drawing:



LAHMEYER COMPACT SUBSTATION

NDV 2510

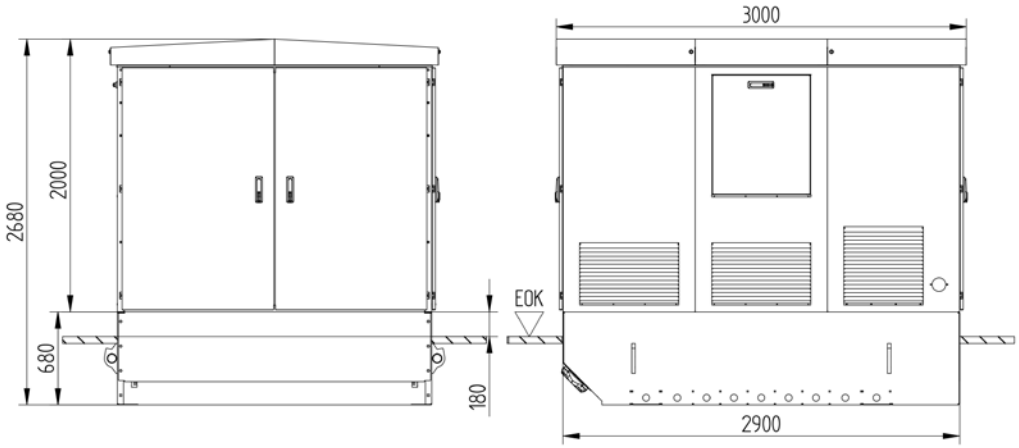
Technical data	NDV 2510
Power	up to 2,000 kVA
Rated voltage	up to 24 kV
Measurement	LV- & MV-metering possible
Access	Front access
Use	Utility, customer or interface substation
Footprint	Closed doors 6.7 m^2 Open doors 17.0 m^2
Total dimensions (L x W x H)	3,000 x 2,400 x 2,680 mm
Empty weight	approx. 1,600 kg
Total weight	max. 9,200 kg

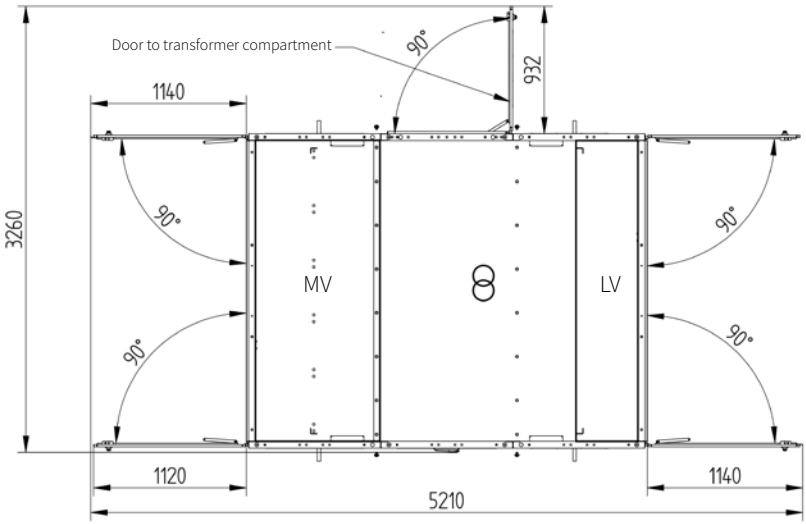
Design	
Temperature class	up to 2,000 kVA (15 K)
Accessibility	Transformer compartment with lockable snap-on panels and/or door, MV/LV compartment with lockable doors
Material properties	Sheet steel, zinc-plated and powder coated
Standard colour	Pebble grey (RAL 7032)
Bottom basement	Steel basement with integrated oil leakage sump
Cable insert	LV open MV open, sealed cable entry available (HAUFF)

Equipment		
MV compartment	Switchgear	Siemens 8DJH24, ABB SafePlus Air
		Up to 6 fields
	MV-metering	SBG metering cubicle 3 current / voltage transformers
Transformer	DIN distribution transformer	up to 2,000 kVA
	Cast resin transformer	according to the necessary protection circuit (1,250 kVA)
LV distribution panel	Switching devices	Automatic circuit breakers up to 3,200 A NH fuse switch-disconnectors up to 2,000 A
	Busbar system	max. 3,200 A
	Outgoing feeder options	NH strip-type fuse switch disconnectors (sizes 00, 2 or 3); up to 21 outgoing feeders, direct connection or circuit breaker
Additional compartments		different sizes possible on side panels
Possible add-ons		Protection and remote control equipment, fuses, metering devices, lighting, grounded sockets, earthing and short-circuit equipment

NDV 2510

Dimensional drawings:





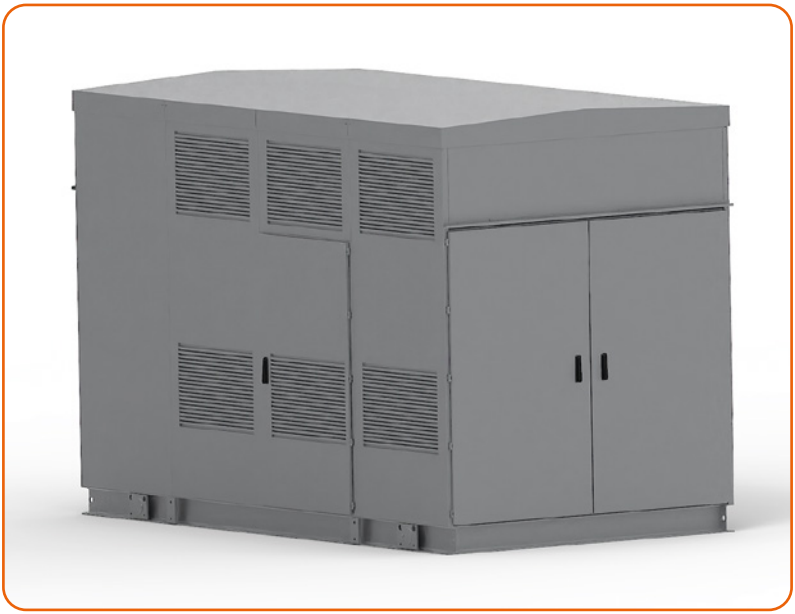
LAHMEYER COMPACT SUBSTATION
WPS 2500

Technical data	WPS 2500
Power	up to 4,000 kVA
Rated voltage	up to 36 kV
Measurement	LV- & MV-metering possible
Access	Front access
Use	Utility, customer or interface substation
Footprint	Closed doors 11.5 m^2 Open doors 23.5 m^2
Total dimensions (L x W x H)	4,500 x 2,500 x 3,080 mm
Empty weight	approx. 3,100 kg
Total weight	max. 13,500 kg

Design	
Temperature class	up to 4,000 kVA (20 K)
Accessibility	Transformer compartment, MV/LV/Secondary equipment compartment with lockable doors and/or snap-on panels
Material properties	Sheet steel, zinc-plated and powder coated
Standard colour	Pebble grey (RAL 7032)
Bottom basement	with separate oil leakage sump
Cable insert	open

Equipment		
MV compartment	Switchgear	Siemens 8DJH24, five fields, Siemens 8DJH36, four fields
		ABB SafePlus Air 36 kV, four fields
	MV-metering	SBG metering cubicle (up to 20 kV), Metal clad combined transformer (up to 30 kV)
Transformer	DIN distribution transformer	up to 4,000 kVA
	Cast resin transformer	according to the necessary protection circuit (2,500 kVA)
LV distribution panel	Switching devices	Automatic circuit breakers up to 4,000 A NH fuse switch-disconnectors up to 2,000 A
	Busbar system	max. 3,800 A
	Outgoing feeder options	NH strip-type fuse switch disconnectors (sizes 00, 2 or 3); up to 22 outgoing feeders, direct connection or circuit breaker
Additional compartments		different sizes possible on side panels
Possible add-ons		Protection and remote control equipment, fuses, metering devices, lighting, grounded sockets, earthing and short-circuit equipment

WPS 2500



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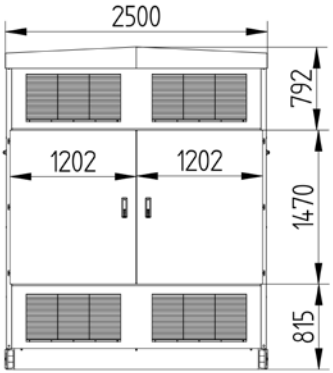
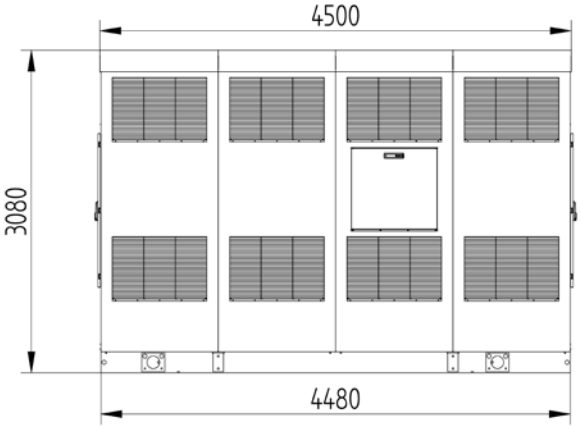
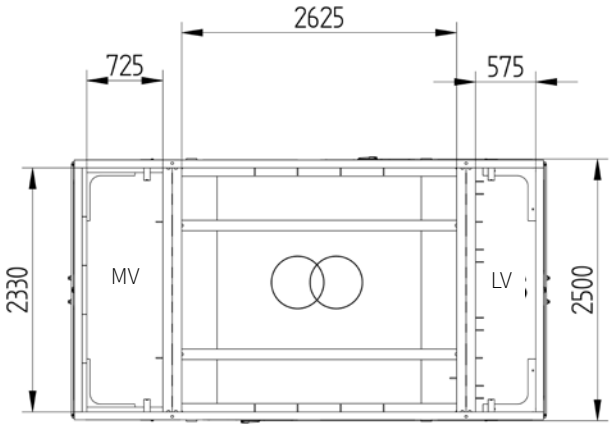
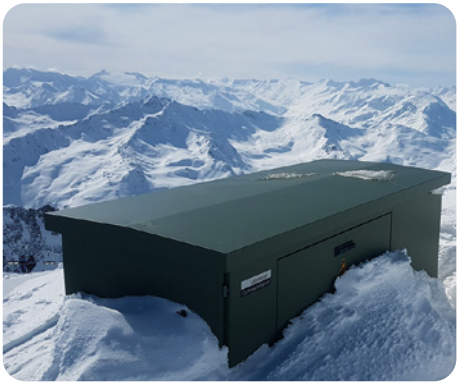






APPLICATIONS AND EXAMPLES



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