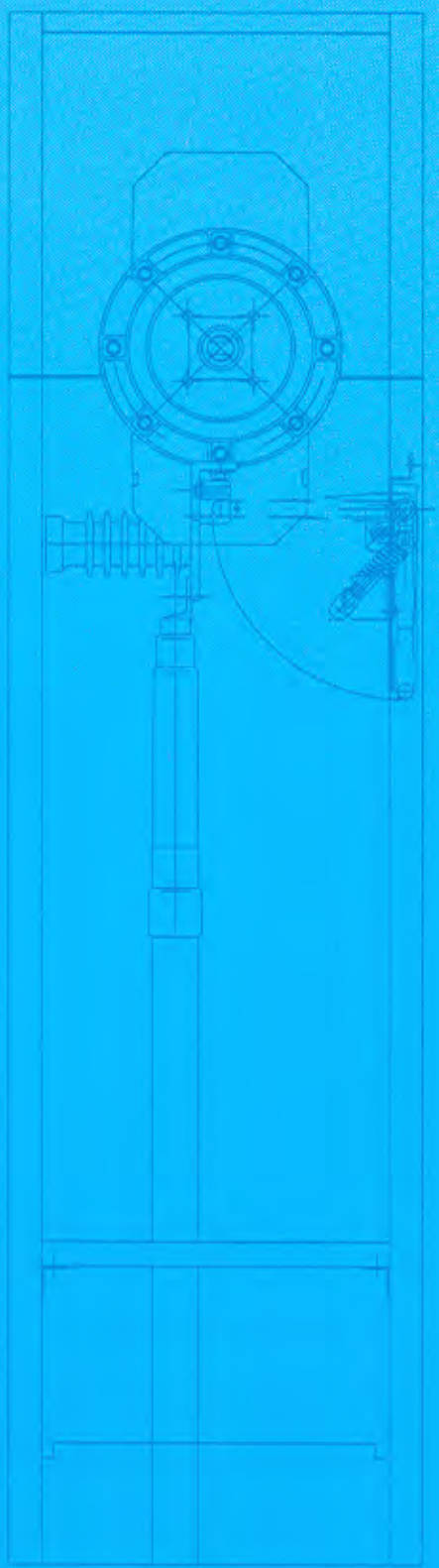
THE DF-2 MODULAR SYSTEM



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DF-2

TABLE OF CONTENTS

CHAPTER 1: INTRODUCTION TO THE DF-2 SYSTEM 4
1. GENERAL 4
2. FUNCTIONAL CUBICLES 4
3. CERTIFICATION 4

DF-2-A RATINGS 5
DF-2-P RATINGS 6

CHAPTER 2: THE DF-2 MODULAR SYSTEM CONCEPT 7
DF-2 7

CHAPTER 3: CUBICLE DESCRIPTIONS 8
DF-K 8
DF-A 9
DF-P 10
DF-C 11
DF-T 12
DF-D 14
DF-DD
DF-KC
DF-DW 15
DF-EDN-D 16
DF-EDN-LK 17

CHAPTER 4: DF-2 INSTALLATION MANUAL 18

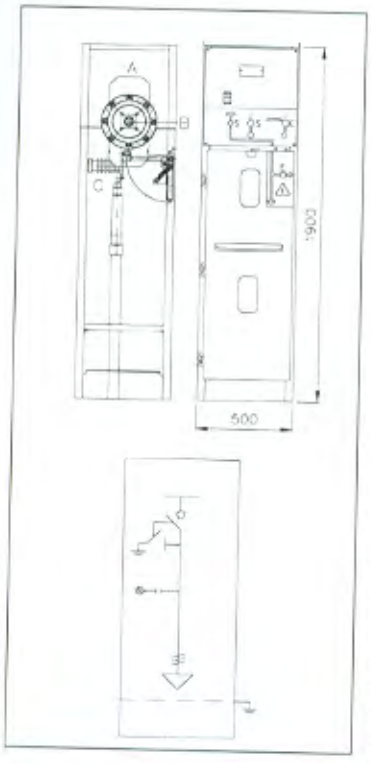
CHAPTER 5: STANDARD CONFIGURATIONS 25
DF-D 25
DF-DW 25
DF-EDN-D 26
DF-EDN-LK 26
DF-K 27
DF-A 27
DF-A + DF-K 28
DF-P 28
DF-C 29

CHAPTER 6: INSTALLATION PROCEDURES 30

CHAPTER 7: PRODUCTION METHODS 32

CHAPTER 8: RESISTANCE TO INTERNAL ARCING 34

DF-2 CHAPTER 1: INTRODUCTION TO DF-2 SYSTEM



SPECIAL 800A OPTION

All models available in 800A rating (conforming to CEI 298-Class E3) with 800A bus-bars

1. GENERAL

All models available in 800A rating (conforming to CEI 298-Class E3) with 800A bus-bars

The DF-2 system is based on a modular concept: the cubicles constitute functional units produced in standard series. In this way the DF-2 system satisfies the most exacting norm specifications in rational and cost-effective manner.

The cubicles can be installed in electric control panels rated to 24 KV.

The choice of standard cubicles is practically unlimited. Among these are: switches to disconnect under load, HRC fuse equipped disconnect under load switches; as well as fixed and plug-in SF-6 and vacuum circuit breakers. The large range facilitates layout of even the most complex distribution and transforming stations.

Since switching occurs in an SF-6 atmosphere, cubicle size is reduced, which is particularly useful when space is limited or valuable.

At the same time, the cubicles include function lockouts and can be installed close to high capacity users on the factory floor, thus reducing transmission power loss to the strict minimum.

The cubicles are equipped with a pressure-evacuation system protecting the operator against internal arcing.

2. FUNCTIONAL CUBICLES

The DF-2 system includes the following functional units, all of which can be delivered with optional equipment according to customer specifications:

- **DF-A** : Incoming cubicle
- **DF-P** : Fuse protection cubicle
- **DF-C** : Metering cubicle
- **DF-K** : Bus-bar and cable cubicle
- **DF-T** : Transformer cubicle
- **DF-D** : Protection cubicle: SF-6 circuit breaker with integrated relays
- **DF-D-W** : Protection cubicle: plug-in SF-6 circuit breaker cubicle with integrated relays
- **DF-EDN-D** : Protection cubicle: vacuum + SF-6 circuit breaker
- **DF-EDN-LK** : Connection cubicle
- **DF-DD** : Double-disconnect circuit breaker cubicle
- **DF-KC** : 6KV contactor cubicle
- **DF-DW** : Plug-in circuit breaker cubicle

3. CERTIFICATION

The DF-2 system is certified for the following norms: CEI 298 KEMA

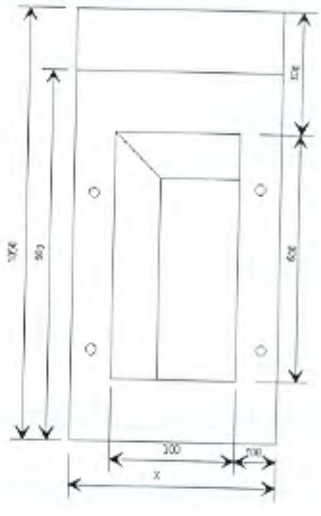
International norms:
CEI 298 Appendix AA
CEI 129
CEI 420
CEI 694
CEI 60265

Belgian norm:
C 64-701

Certification pending:
HN64S41

ATTENTION!!

When installing cubicles:
• The foundation or floor must be perfectly horizontal
• Insure sufficient access door size; (if site does not open directly to exterior, insure that all intermediary doors are of sufficient size).



DF-2-A RATINGS (CERTIFIED BY KEMA)

DF-2-A contains a switch disconnector and an earth switch

1. SWITCH DISCONNECTOR

Test	Specification	Test Results			
Insulation level	IEC 265 IEC 265 IEC 694	Power Frequency withstand voltage 1 min - To earth and between phase : 38 kV - Across the isolating distance : 45 kV Impulse withstand voltage 1.2/50 µsec 15 pos. and 15 neg. pulses per phase - To earth and between phase : 95 kV - Across the isolating distance : 110 kV			
Current making and breaking capacity	IEC 129 - 265	Component		Temperature rise	
				Allowed	Measured
		Terminals		65°C	37°C
		Contact on bus-bar		65°C	38,3°C
		Bus-bar		65°C	38°C
	IEC 265	Rated current Short-time current	800 A 25 kA/1 sec		
	IEC 265	Number of operations	Type of operations	Current (Amp)	Cos. φ
	Duty 1	100	CO	800	0,7
	Duty 3	20	CO	40	0,15
	Duty 4	20	CO	20	cap
		1	withstand	25.000/1 sec 63.000 peak	0,7
	Duty 5	5	C	63.000	0,7
	Duty 5	2	CO	800	0,7
Mechanical Endurance Test	IEC 265 IEC 298	1000 operating cycles			

2. EARTH SWITCH

Current making and breaking capacity	IEC 129	Peak withstand current Short time current	50 kA 20 kA/1 sec		
	IEC 129	Number of operations : 5	Type of operations : C	Current (Amp) : 50.000	Cos. φ 0,7
Mechanical Endurance Test	IEC 265	1000 operating cycles			

3. CUBICLE

Internal arc (Pehla)	IEC 298 appendix AA	20 ka/1 sec All 6 criteria fullfilled
Enclosure	IEC 298	IP4X

DF-2-P RATINGS (CERTIFIED BY KEMA)

DF-2-P contains a fuse-switch combination and an earth switch

1. FUSE-SWITCH COMBINATION

Test	Specification	Test Results			
Insulation level	IEC 420 IEC 298 IEC 694	Power Frequency withstand voltage 1 min - To earth and between phase : 38 kV - Across the isolating distance : 45 kV Impulse withstand voltage 1.2/50 µsec 15 pos. and 15 neg. pulses per phase - To earth and between phase : 95 kV - Across the isolating distance : 110 kV			
Current making and breaking capacity	IEC 129 - 420	Component		Temperature rise	
				Allowed	Measured
		Fuse bottom		75°C	36,2°C
		Fuse top		75°C	42,6°C
	IEC 420	Rated current	63 A		
	IEC 420	Number of operations	Type of operations	Current (Amp)	Cos. φ
		1	(O)	20.000	0,7
		1	C(O)	20.000	0,7
		1	(O)	2.150	0,7
		1	C(O)	2.150	0,7
		2	(O)	172	0,7
		3	(O)	710	0,7
Mechanical Endurance Test	IEC 420 - 298	1000 operating cycles			

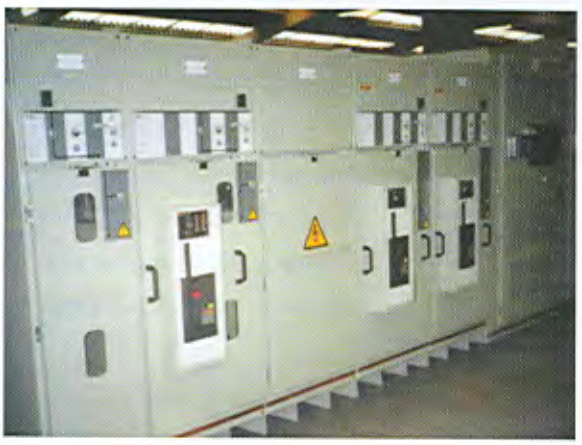
2. EARTH SWITCH

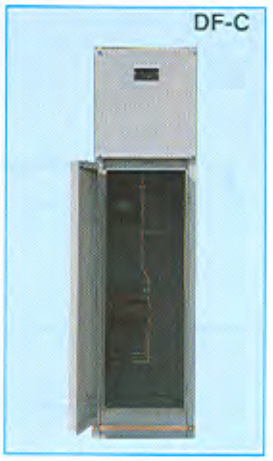
Current making and breaking capacity	IEC 129	Peak withstand current Short time current	50 kA 20 kA/1 sec		
	IEC 129	Number of operations : 2	Type of operations : C	Current (Amp) : 50.000	Cos. φ 0,7
Mechanical Endurance Test	IEC 265	1000 operating cycles			

3. CUBICLE

Internal arc (Pehla)	IEC 298 appendix AA	20 ka/1 sec All 6 criteria fullfilled
Enclosure	IEC 298	IP4X

THE DF-2 MODULAR CONCEPT
CHAPTER 2: THE DF-2 MODULAR CONCEPT





DF-2

The DF-2 concept is based on a modular system consisting of several functional units which permits rational layout of any distribution or transforming station.
By combining the appropriate functional cubicles, any desired MV station can be constructed. The cubicles themselves can be tailored to customer needs by selection of factory options, providing exceptional safety protection to the user.

The nine basic cubicles are:

- DF-A : Incoming cubicle with under load disconnect switch
- DF-P : HPC fused protection cubicle with fuse protected switch disconnector
- DF-C : Metering cubicle
- DF-K : Bus-bar and cable cubicle
- DF-T : Transformer cubicle
- DF-D : Protection cubicle: SF-6 circuit breaker with integrated relays
- DF-D-W : Protection cubicle: plug-in SF-6 circuit breaker cubicle with integrated relays
- DF-KC : 6KV contactor cubicle
- DF-EDN-LK : Connection cubicle
- DF-DD : Double-disconnect circuit breaker cubicle

DF-K

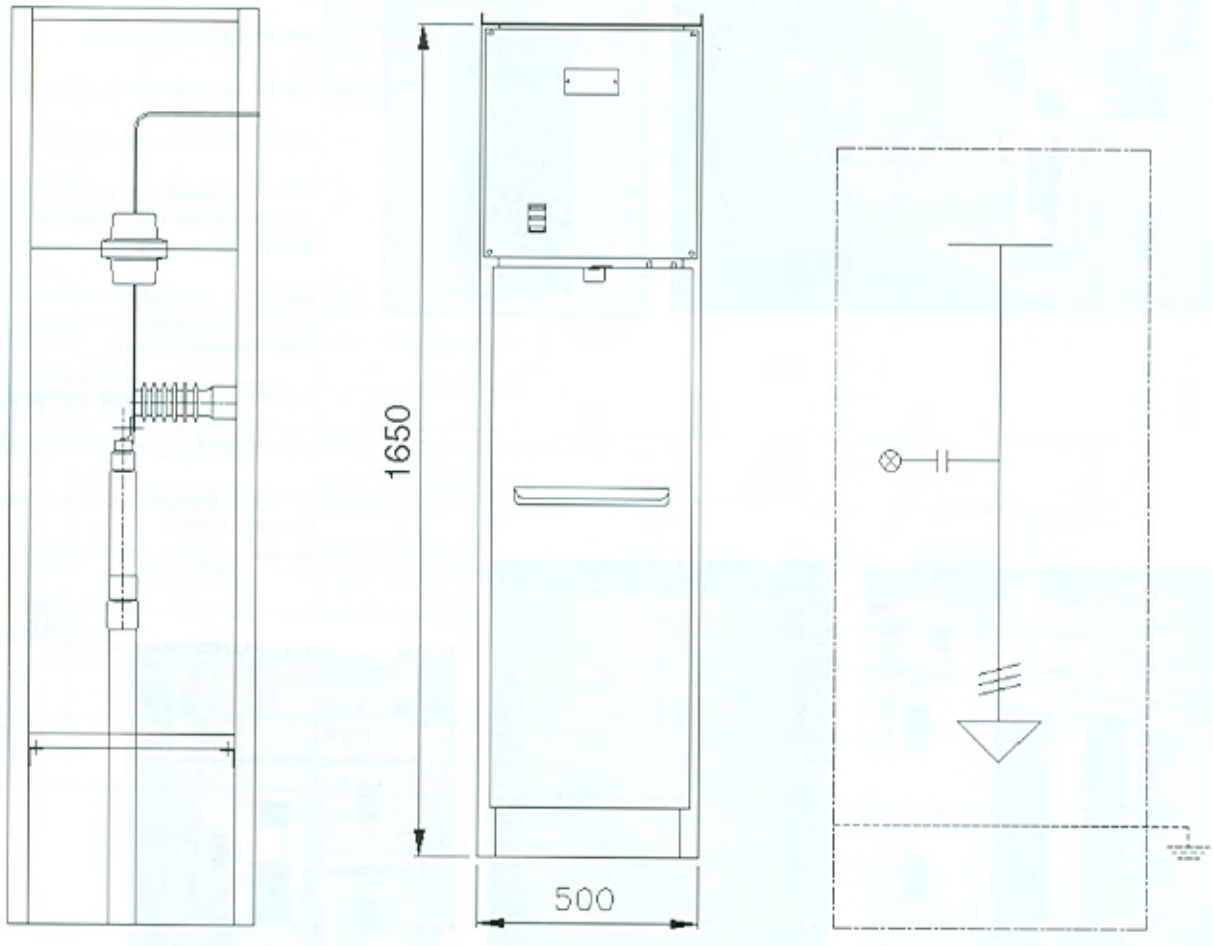
CHAPTER 3: CUBICLE DESCRIPTIONS

DF-K type cubicles are designed for the connection of a supply cable or contain a set of bus-bars.

OPTIONAL EQUIPMENT:

- Neon indicators activated by capacitance resistances
- Short circuit indicator (to be specified by customer)
- Earthing spheres
- Bus-bar current transformers
- Voltage transformers, with or without protection in bus-bar
- Socle height: 200 or 400 mm

Other specifications available on request



DF-A

SWITCH FOR DISCONNECT UNDER LOAD :	17,5 kV 800 A 25 kA	24 kV 400 A 12,5 kA	24 kV 1250 A 20 kA

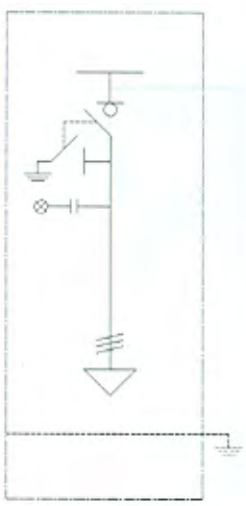
STANDARD EQUIPMENT:

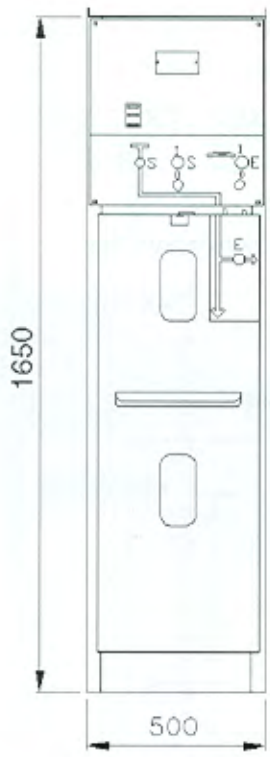
- Doorlocks
- Closable and lockable earth switch
- Cable junction-box support
- Capacitance voltage indicator allowing parallel testing
- Low voltage compartment

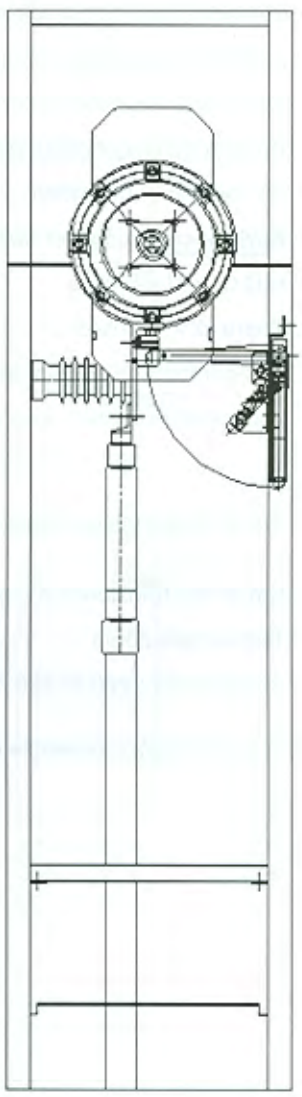
OPTIONAL EQUIPMENT :

- Auxiliary contact block
- Keylock on switch disconnector
- Keylock on earth switch
- Keylock on switch disconnector and earth switch
- Doors without locks
- Short circuit signal (customer specified)
- xV AC/DC servo-motor control
- Test access doors
- Socle height: 200 or 400 mm

Other specifications available on request.







DF-P

FUSE-SWITCH DISCONNECTOR WITH TRIPPING DEVICE :

17,5 kV	24 kV
630 A	400 A
25 kA	12,5 kA

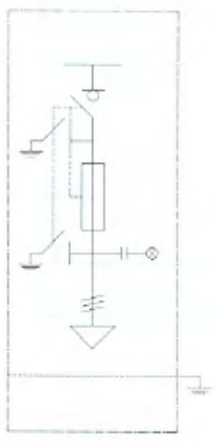
STANDARD :

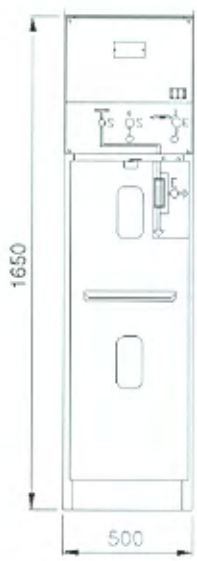
- Doorlocks
- Closable and lockable double earth switch
- Automatic disconnect when any fuse tripping
- Neon indicators activated by capacitance resistances
- Low voltage compartment

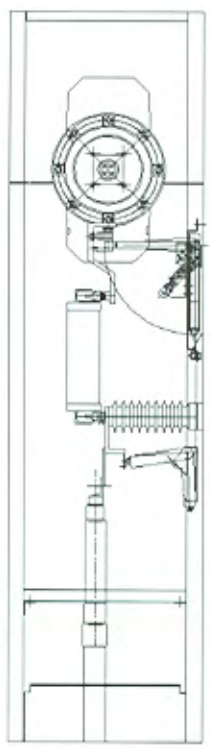
OPTIONAL EQUIPMENT :

- Auxiliary contact block
- Solenoid opening coil xV/ AC/DC
- 220V AC time-delay minimum voltage coil
- xV AC/DC servo-motor control
- Keylock on disconnect switch
- Keylock on earth switch
- Keylock on disconnect switch and earth switch
- H.R.C. xkV xA fuses
- Spare xkV xA fuses
- Bus-bar set and bus-bar insulators
- Voltage transformer: xV/xV xVA CLx
- Set of three voltage transformers $\frac{\frac{xkV}{\sqrt{3}}}{\frac{xV}{\sqrt{3}}}$ x VA CLx
- Set of two transformers: two-pole xkV/xV xVA CLx
- Test access doors
- Socle height : 200 or 400 mm

Other specifications available on request.







DF-C

STANDARD :

- Two current transformers and two voltage transformers delivered by electricity supplier

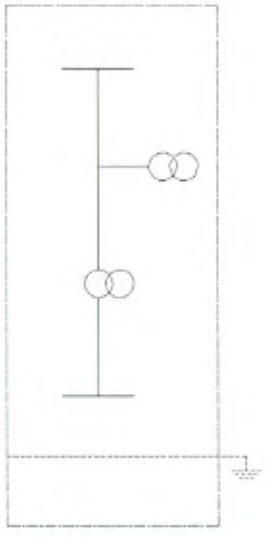
OPTIONAL EQUIPMENT :

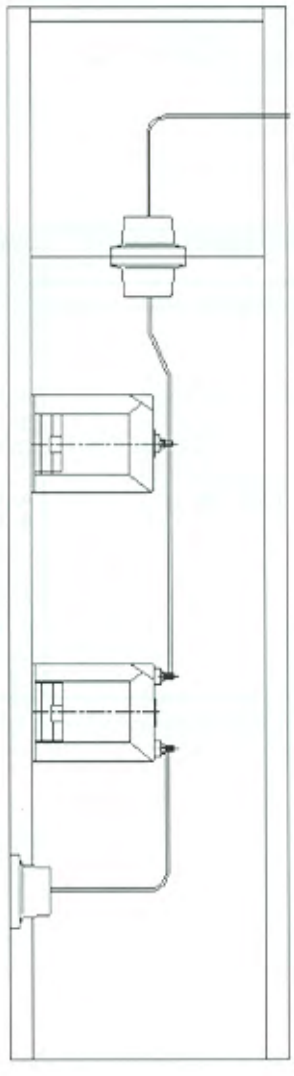
- Supplementary current transformers
- Supplementary voltage transformers with or without medium and low voltage protection
- Metering system with 3 CT and 3 VT
- Metering panel with KWh meter and KVArh meter (to be specified)
- Low voltage compartment
- Socle height: 200 or 400 mm

Other specifications available on request.

SPECIFICATIONS :

CT	- Iprim	= xA	Isec. = xA
	- xVA		
	- CLx		
	- Isol. CL	= xkV	
	- Ith.	= xkA/1sec.	
VT	- Uprim	= xkV	Usec. = xV
	- xVA		
	- CLx		
	- Insul level = xkV		





DF-T

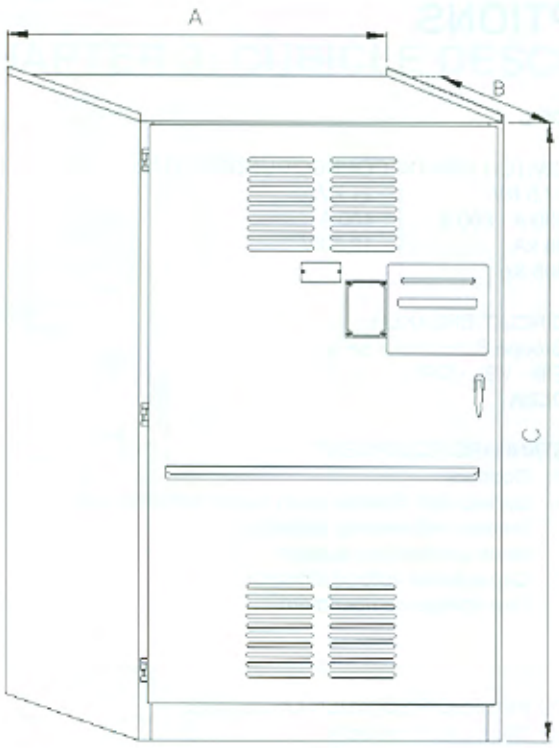
The DF-T cubicle is the result of many years of experience in the design and installation of power transformers. Special attention has been given to the ventilation system and the unit is designed so that the transformer can easily be removed and replaced.
The DF-T has protection class IP4X, so that the cubicle can, if necessary, safely be installed in an assembly workshop just beside to a high capacity user.

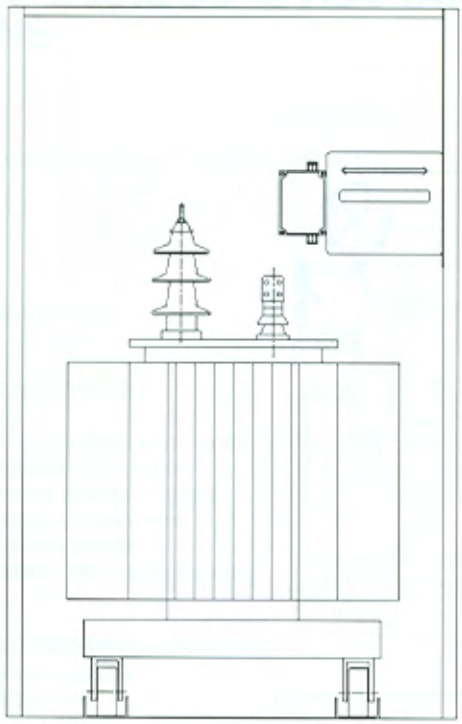
OPTIONAL EQUIPMENT :

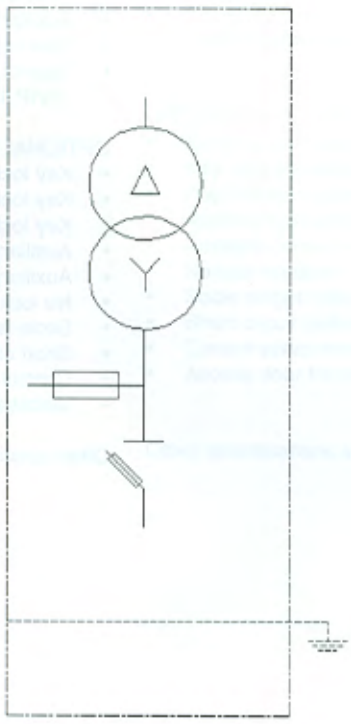
- Keylock with medium voltage protection
- Keylock with low voltage protection
- Compartment with bus-bars above transformer unit
- Low voltage compartment
- Oil reservoir
- Artificial ventilation
- Inspection window

If it is desired to equip the DF-T with a low voltage switch, switch specifications should be given.

TRANSFORMER POWER	DIMENSIONS OIL	 DRY
100 - 160 KVA	A: 1000 (length)	A: 1400
	B: 1050 (depth)	B: 1050
	C: 1900 (height)	C: 1900
250 - 630 kVA	A: 1400	A: 1800
	B: 1150	B: 1150
	C: 2100	C: 2100
800 - 1000 kVA	A: 1800	A: 2200
	B: 1150	B: 1150
	C: 2100	C: 2100
1250 - 2000 kVA	A: 2200	A: 2500
	B: 1500	B: 1500
	C: 2400	C: 2400
Other specifications available on request.		


A
B
C

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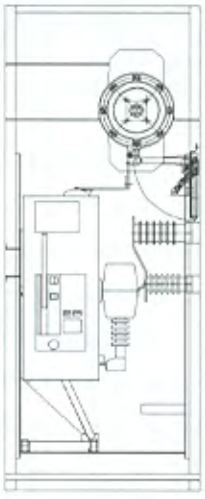
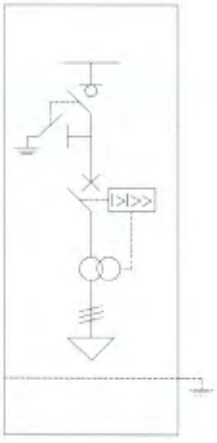
DF-D

CHAPTER 3: CUBICLE DESCRIPTIONS





DF-D

SWITCH FOR DISCONNECT UNDER LOAD

17,5 KV	24 kV
630 A - 800 A	400 A
25 kA	12,5 kV
405 Kg	

CIRCUIT BREAKER:
Groupe Schneider - SF set
EIB - VBL - DPI
DEBA

STANDARD EQUIPMENT:
- Doorlock
- Locked and closable earth switch before circuit breaker with making capacity
- cable junction box support
- Capacitance voltage indicator
- Low voltage-compartment

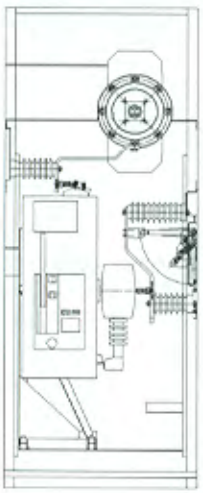
TO BE SPECIFIED WHEN ORDERING:
- Short-circuit capacity
- Nominal current
- Insulating voltage
- Control servo-motor, xV AC/DC
- Closing solenoid, xV AC/DC
- Opening solenoid, xV AC/DC
- no voltage solenoid xV AC/DC
- Time-delay no voltage solenoid xV CC/AC
- Auxiliary contact block
- Opening/closing operations counter
- Type of protection relays (VIP 13 - 200 - 201) DPI

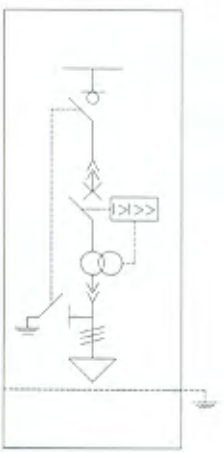
OPTIONAL EQUIPMENT
- Key lock on disconnect switch
- Key lock on earth switch
- Key lock on disconnect switch and earth switch
- Auxiliary contact block on disconnect switch
- Auxiliary contact block on earth switch
- No lock on door
- Socle height: 200 or 400 mm
- Short circuit indicator (customer specified)
- Control servo-motor, xV AC/DC
- Access door for test

Other specifications available on request.

DF-D-W

CHAPTER 3: CUBICLE DESCRIPTIONS





DF-D-W

SWITCH FOR DISCONNECT UNDER LOAD

17,5 KV	24 kV
630 A - 800 A	400 A
25 kA	12,5 kV
405 Kg	

CIRCUIT BREAKER:
Schneider - SF set

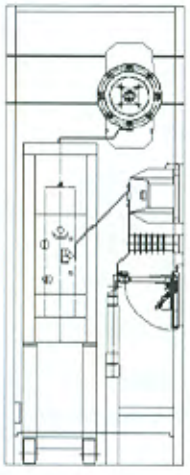
STANDARD EQUIPMENT:
- Doorlock
- Locked and closable earth switch before circuit breaker
- Cable junction box support
- Capacitance voltage indicator
- Low voltage compartment
- Plug-in circuit breaker
- Earth switch with making capacity

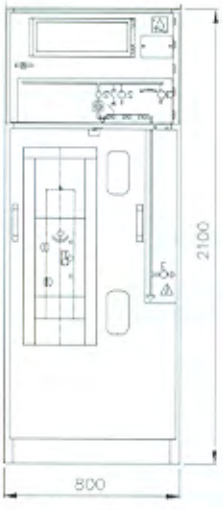
TO BE SPECIFIED WHEN ORDERING:
- Short-circuit capacity
- Nominal current
- Insulating voltage
- Control servo-motor, xV AC/DC
- Closing solenoid, xV AC/DC
- Opening solenoid, xV AC/DC
- No voltage solenoid xV AC/DC
- Time-delay no voltage solenoid xV AC/ DC
- Auxiliary contact block
- Opening/closing operations counter
- Type of protection relays (VIP 13 - 200 - 201)

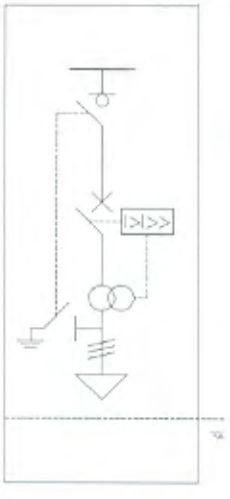
OPTIONAL EQUIPMENT
- Key lock on disconnect switch
- Key lock on earth switch
- Key lock on disconnect switch and earth switch
- Auxiliary contact block on disconnect switch
- Auxiliary contact block on earth switch
- No lock on door
- Socle height: 200 or 400 mm
- Short circuit indicator (customer specified)
- Control servo-motor, xV AC/DC
- Access door for test

Other specifications available on request.

DF-EDN-D







DF-EDN-D

SWITCH FOR DISCONNECT UNDER LOAD
17,5 kV
630 A - 800 A
25 kA
530 Kg

CIRCUIT BREAKER TYPE:
EIB-VB5L (under vacuum)
Schneider SF-6

STANDARD EQUIPMENT
- Doorlock
- Locked and closable earth switch before circuit breaker
- Cable junction box support
- Capacitance voltage indicator
- Low voltage compartment
- Earth switch with making capacity

TO BE SPECIFIED WHEN ORDERING:
- Short-circuit capacity
- Nominal current
- Insulating voltage
- Control servo-motor, xV AC/DC
- Closing solenoid, xV AC/DC
- Opening solenoid, xV AC/DC
- Low voltage level solenoid xV AC/DC
- Time-delay low voltage level solenoid
- Auxiliary contact block
- Opening/closing operations counter

CURRENT TRANSFORMERS SPECIFICATIONS
- Ip : x A
- Is : x A
- x VA
- Cl x
- Insul. Class = x kV
- Ith : x KA/1 sec

Relays to be specified when ordering

OPTIONAL EQUIPMENT
- Key lock on disconnect switch
- Key lock on earth switch
- Key lock on disconnect switch and earth switch
- Auxiliary contact block on disconnect switch
- Auxiliary contact block on earth switch
- No lock on door
- Socle height: 200 or 400 mm
- Short circuit indicator (customer specified)
- Control servo-motor, xV AC/DC
- Access door for test
- Earthing spheres before circuit breaker

Other specifications available on request

DF-EDN-LK

DF-EDN-LK

SWITCHES FOR DISCONNECT UNDER LOAD
17,5 kV
630 A - 800 A
25 kA
353 Kg
STANDARD EQUIPMENT

- Doorlock
- Low voltage compartment

OPTIONAL EQUIPMENT

- Key lock on disconnect switch
- Key lock on earth switch
- Key lock on disconnect switch and earth switch
- Auxiliary contact block on disconnect switch
- Auxiliary contact block on earth switch
- No lock on door
- Socle height: 200 or 400 mm
- Short circuit indicator (customer specified)
- Control servo-motor, xV AC/DC
- Access door for test
- Earthing spheres before circuit breaker

Other specifications available on request

OPTIONAL EQUIPMENT

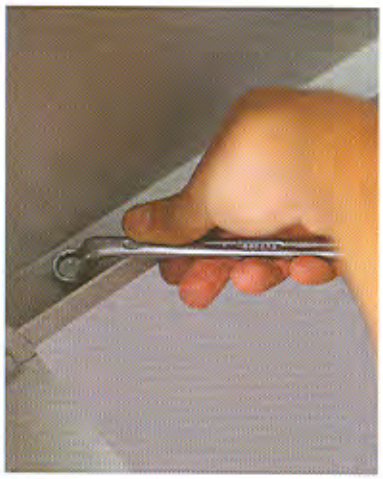
- Auxiliary contact block on disconnect switch 1
- Auxiliary contact block on earth switch 2
- xV AC/DE servo-motor control switch 1
- xV AC/DC servo-motor control switch 2
- Capacitance voltage indicator switch 1
- Capacitance voltage indicator switch 2
- Earthing sphere switch 1
- Earthing sphere switch 2
- Socle height: 200 or 400 mm
- Short circuit indicator (customer specified)
- Control servo-motor, xV AC/DC
- Access door for test
- Mechanical lock between switches
- No lock on door

Other specifications available on request

CHAPTER 4: DF-2 INSTALLATION MANUAL

1. INSTALLATION OF DF CUBICLES

1. DF cubicles are delivered palettized with 4 lifting-rings.



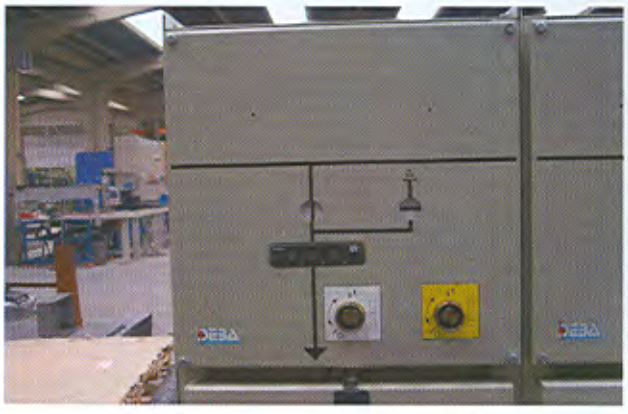
2. To remove cubicle from palette, open cable compartment and remove the 4 nuts in the 4 lower corners.

3. To remove lifting rings, unscrew bolts.

4. Place the cubicles side by side, bolt them together with the supplied bolts using the openings in the housings.

CHAPTER 4: DF-2 INSTALLATION MANUAL

2. ACCESS TO CABLE COMPARTMENT



1. Begin with switch disconnector in closed position, i.e. with the switch symbol in vertical position.

2. Place the operation handle on the switch disconnector control and turn counterclockwise to open the switch disconnector. The switch disconnector symbol is now horizontal.

3. Place the operation handle on the earth switch control.

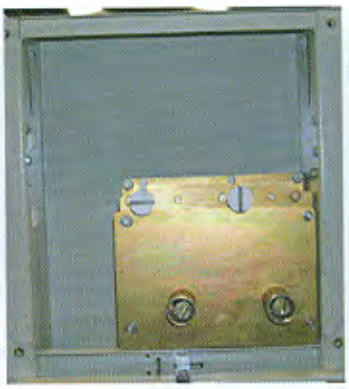
4. Turn the operation handle clockwise until the earth switch is closed. The switch symbol is vertical.

5. Using both hands on the handle, lift and open the door. The cable compartment is now accessible.

DF-2 INSTALLATION MANUAL

3. ACCESS TO THE LOW VOLTAGE COMPARTMENT

1. Access is by the front panel: unscrew the four mounting nuts.



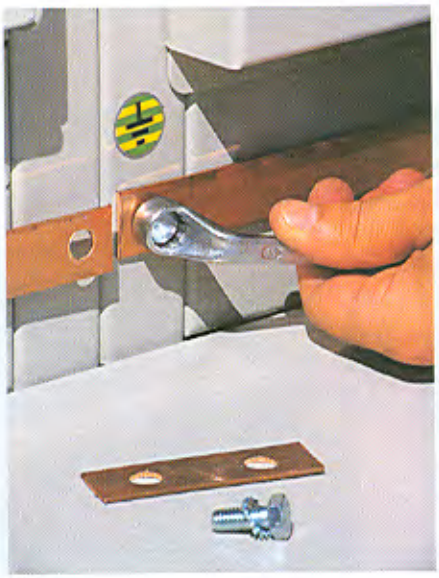
2. Remove the panel: the compartment is now accessible.

4. ACCESS TO THE BUS-BAR COMPARTMENT

3. Access is from the top: unscrew the top cover.

5. FITTING THE BUS-BARS AND EARTH CONNECTION

1. Place the bus-bars between the switch posts. Tighten the supplied holddown bolts to 22 Nm.



2. To fit the earth connector, first unscrew the holddown bolts on the copper earth strips (at the bottom front of the cubicle).

3. Place the copper connector and attach using the bolts.

DF-2 INSTALLATION MANUAL

6. FITTING SIDE PANELS

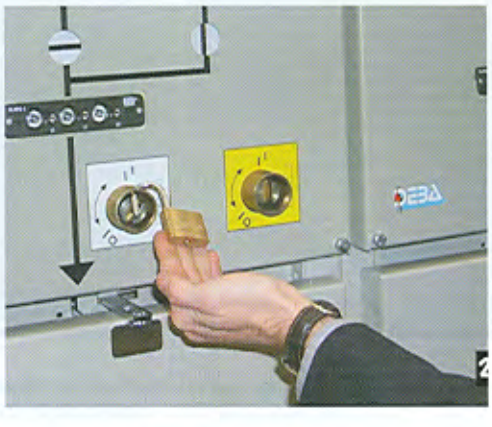
1. When the cubicles are installed side by side and interconnected by the copper bus-bar, the side panels (left and right) should be fitted. Place the panels against the sides of cubicles, line up the mounting holes, and attach the panels using the supplied nuts and bolts.

7. MEASURING PHASE SEQUENCE

1. The phase sequence is easily measured using the voltage indicators on the insulators. Using a voltmeter, measure the voltage difference between the corresponding phases located in the middle. If there is no voltage difference, the sequence is correct. Verify by measuring the voltage difference between the phases, there should be voltage differences between L1-L2-L3.

8. LOCKING THE DOOR AND THE SWITCH CONTROL

1. As standard equipment, all the doors can be padlocked using a stud located above the door.

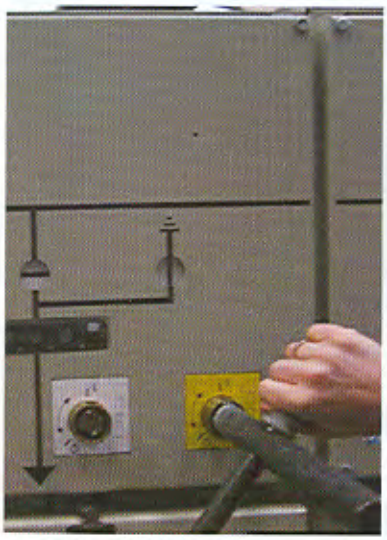


2. The switch control can be padlocked in any position.

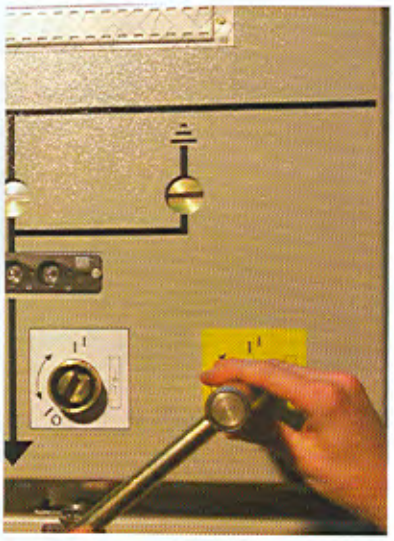
DF-2 INSTALLATION MANUAL

9. EARTH SWITCH OPERATION

1. Close the cubicle door: using both hands on the door handle, lift the door, close the door and push down.

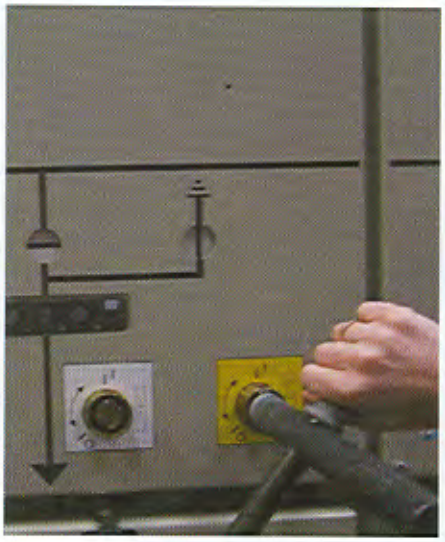


2. Place the operation handle on the right hand control. The switch-off of the earth switch symbol is vertical.

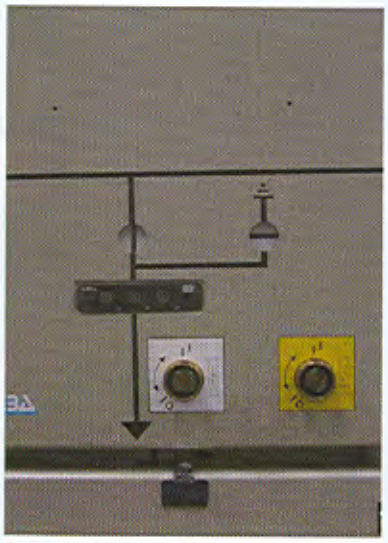


3. Turn the operation handle counter-clockwise to open the earth switch. The switch-off symbol of the switch is now horizontal.

10. OPERATION OF SWITCH FOR DISCONNECT UNDER LOAD



1. Place the handle in the opening of the left hand control. The switch symbol is hori zontal.



2. Turn the handle clockwise to close the switch. The switch symbol is vertical. The switch control can be locked in position.

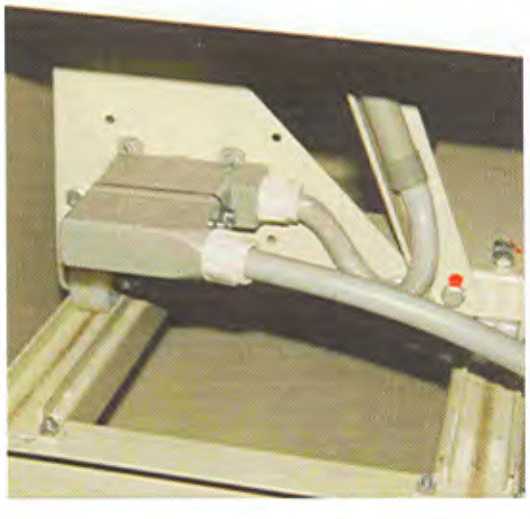
DF-2 INSTALLATION MANUAL

11. REMOVING THE CIRCUIT BREAKER

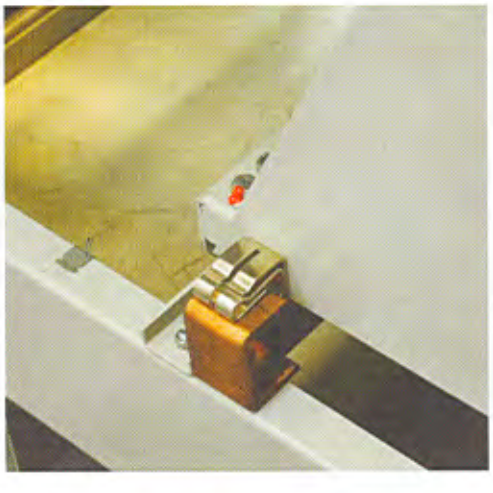
1. To remove the circuit breaker from a DF-D cubicle, disconnect the flexible connectors on the input side of the circuit breaker, keeping the flexible connector attached to the circuit breaker.

2. Disconnect the connectors on the out let side of the circuit breaker, keeping the flexible connector attached to the circuit breaker.

3. Place the circuit breaker locking lever in open position. The locking lever is located on the upper left side of the cable compartment. The circuit breaker can now be removed.



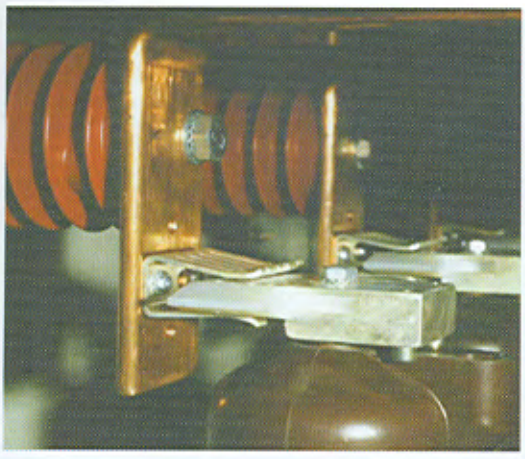
4. The low voltage supply plug should always be unplugged when removing the circuit breaker and replaced when reinstalling the circuit breaker.



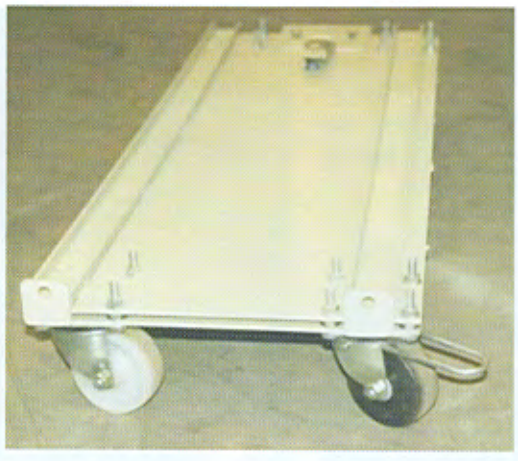
5. The circuit breaker frame is equipped with a movable earth contact which automatically insures correct earthing of the circuit breaker.

DF-2 INSTALLATION MANUAL

12. MOVABLE CONTACTS AND TRUCK FOR CIRCUIT BREAKER



1. To remove the circuit breaker from a DF-D-W cubicle, simply place the locking lever in open position and remove the circuit breaker.



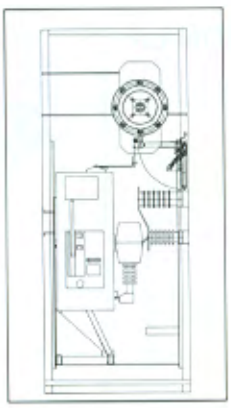
2. Truck for DF-D-W
   A truck is available to transport the circuit breaker after the circuit breaker has been removed.

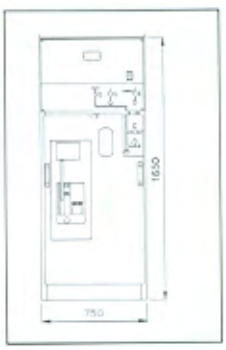
STANDARD CONFIGURATIONS

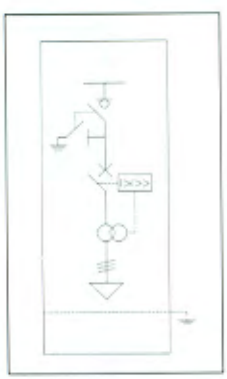
Other configurations and specifications available on demand.

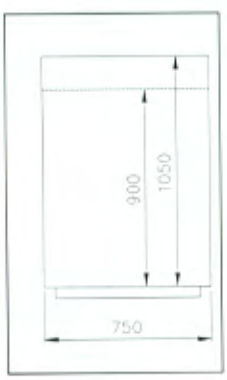
CHAPTER 5: STANDARD CONFIGURATIONS

DF-D

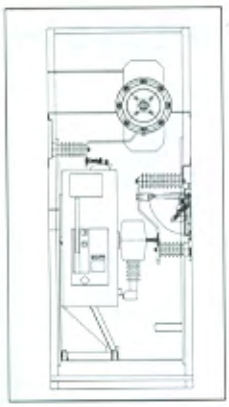


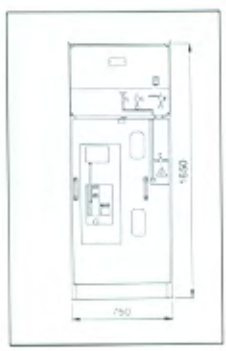


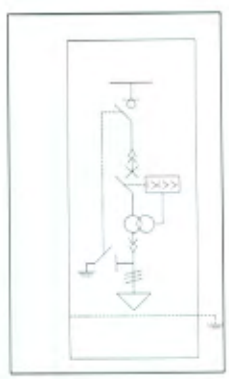




DF-D-W





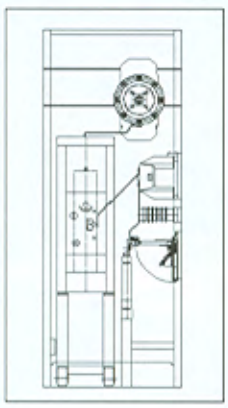


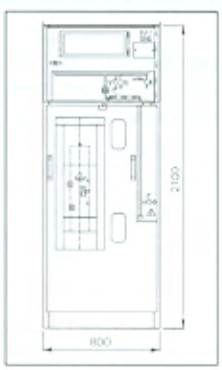
STANDARD CONFIGURATIONS

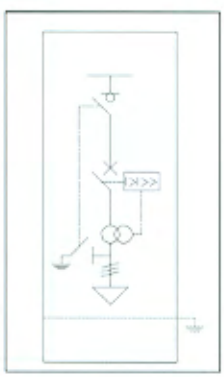
Other configurations and specifications available on demand.

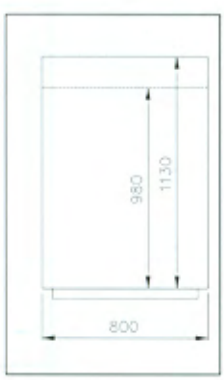
CHAPTER 5: STANDARD CONFIGURATIONS

DF-EDN-D

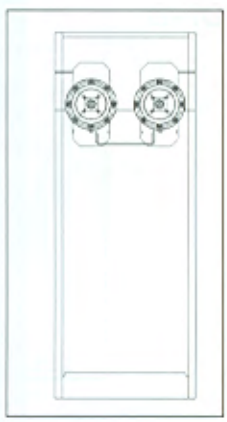


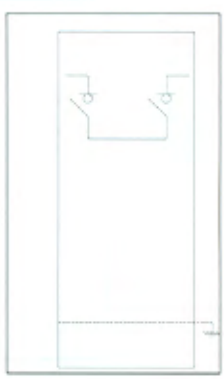






DF-EDN-LK

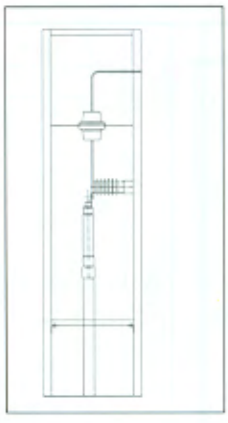


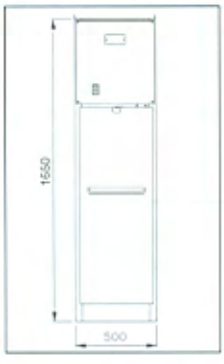


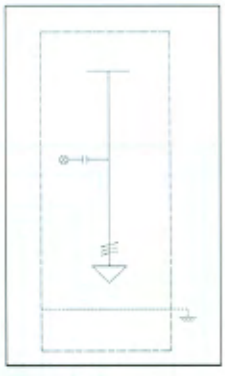
DF-2

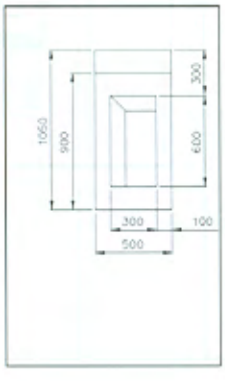
CHAPTER 5: STANDARD CONFIGURATIONS

DF-K

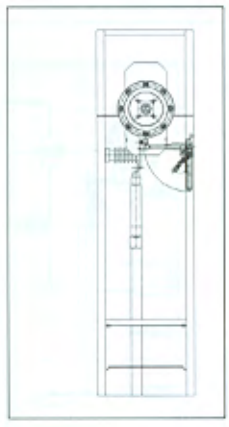


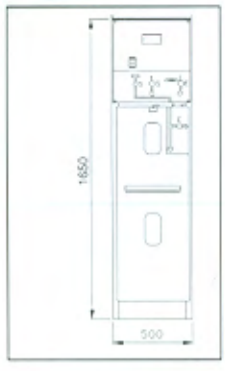


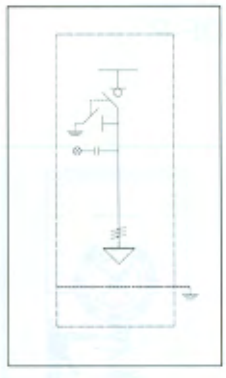


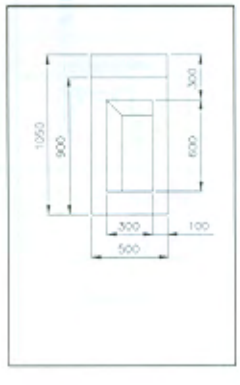


DF-A





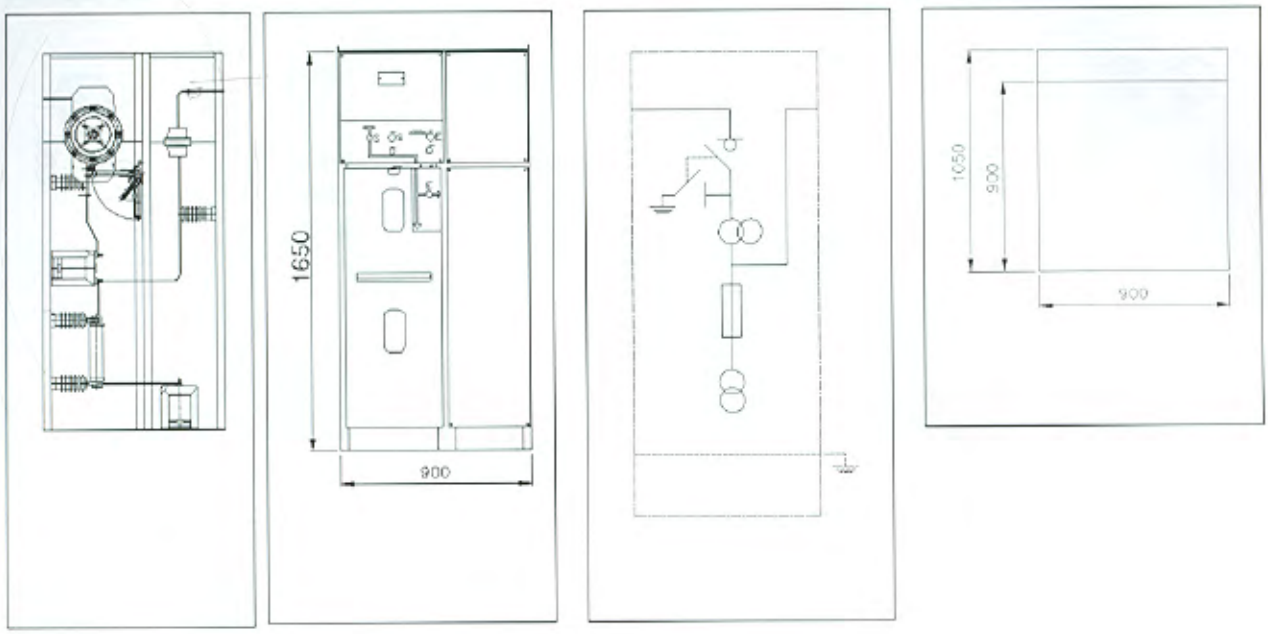




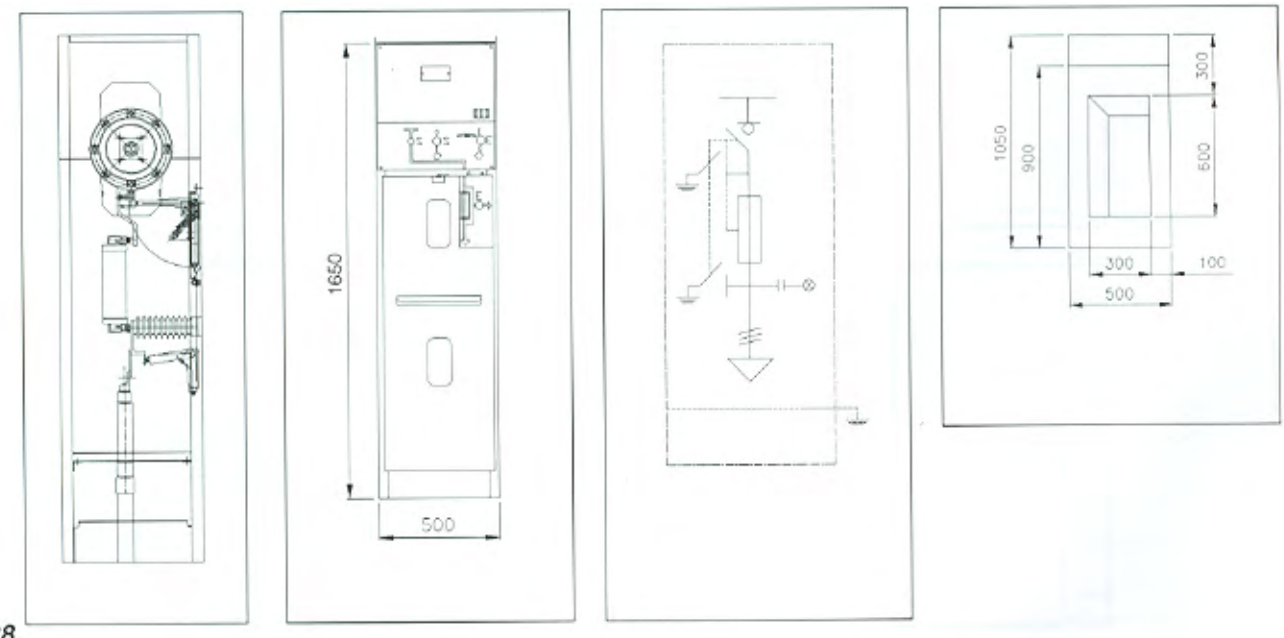
DF-2

CHAPTER 5: STANDARD CONFIGURATIONS

DF-A + DF-K

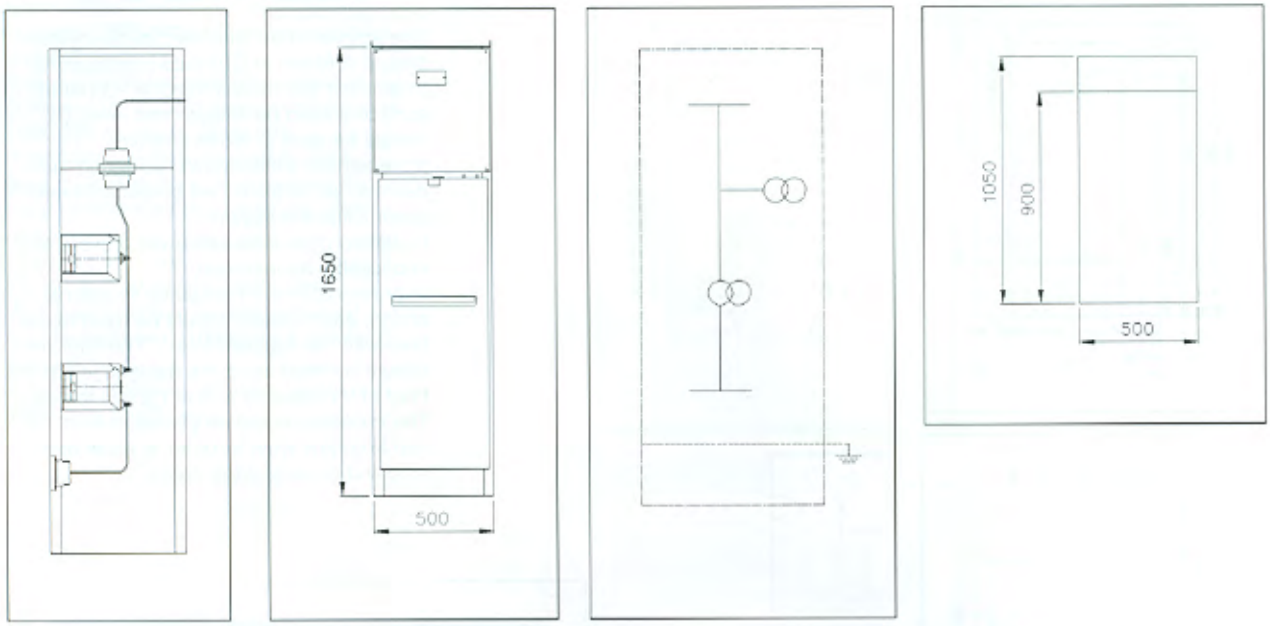


DF-P

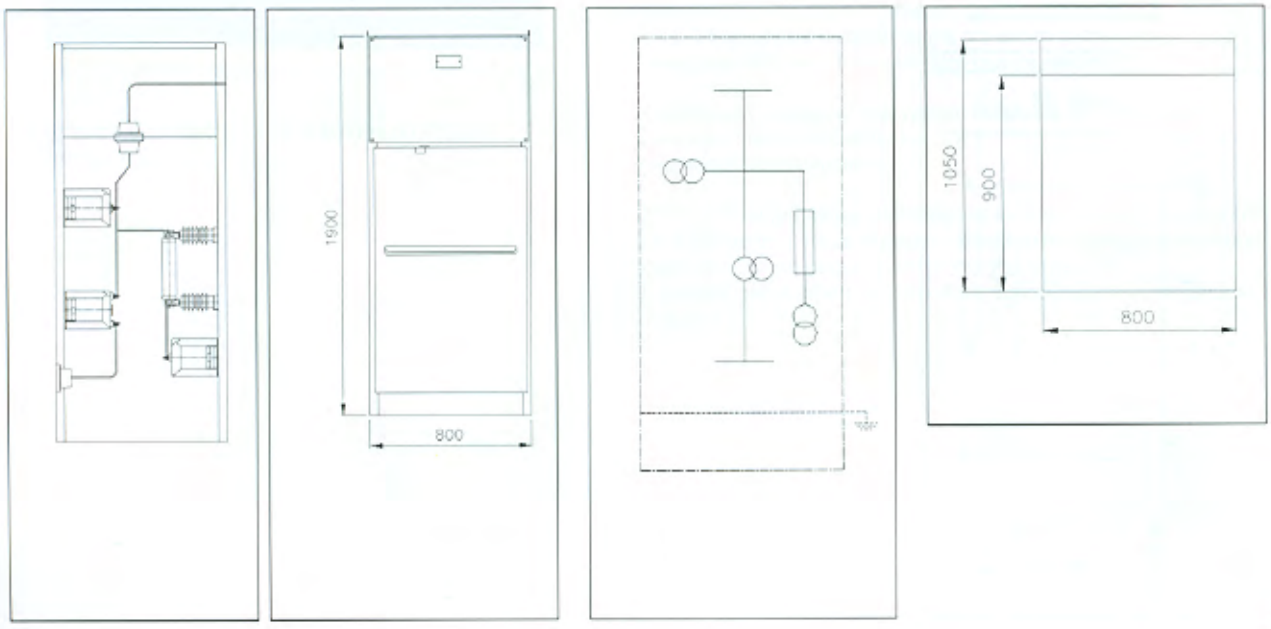


CHAPTER 5: STANDARD CONFIGURATIONS

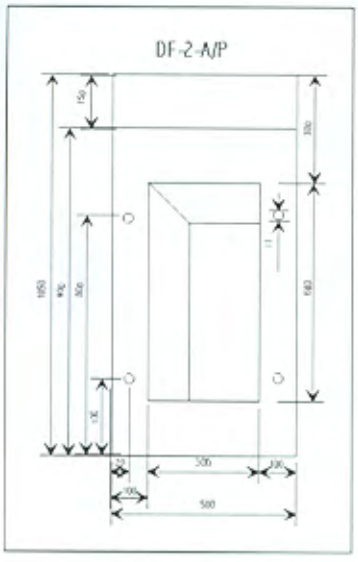
DF-C

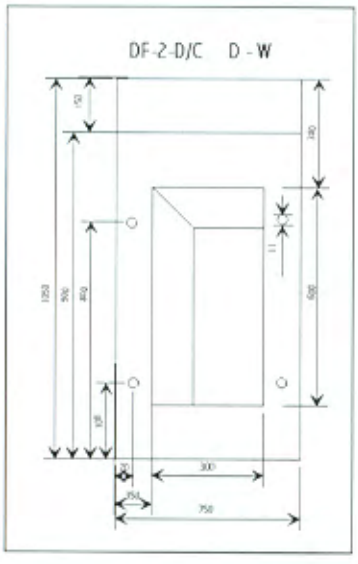


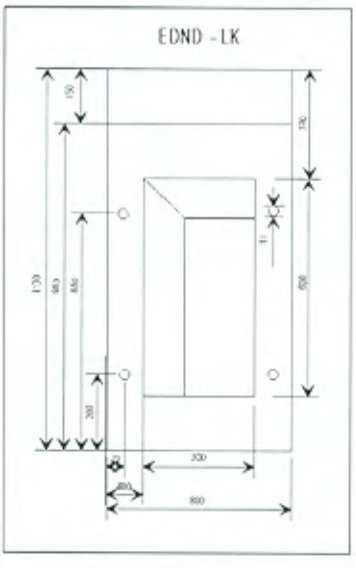
DF-C



CHAPTER 6 : INSTALLATION







INSTALLATION

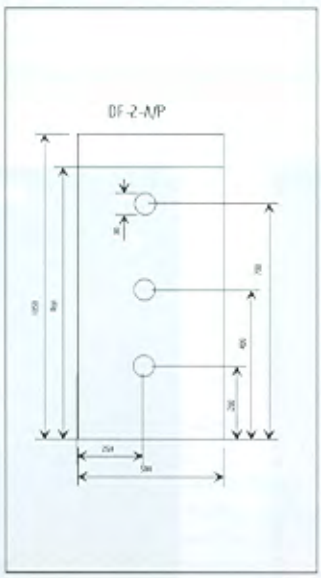
Due to the reduced size of the functional units, the DF-2 system is perfectly suited to sites where available space is limited or in a difficult location.
The emplacement destined for the system should conform to CEI recommendations. In practice this means that the supporting surface should be smooth and level, i.e. should be level to within 2 mm/m.
If the surface conforms to CEI recommendations, no problems will be encountered in assembling the system.
In addition, the installation will present an impeccable appearance.
In order to provide resistance to internal arcing, each cubicle should be fixed to the floor with the supplied bolts. The cubicles should be fixed using the holes at left at the front of the housing and at right at the rear.
The cubicles should be placed at least 50 mm from any walls in order to allow opening and closing of the doors.

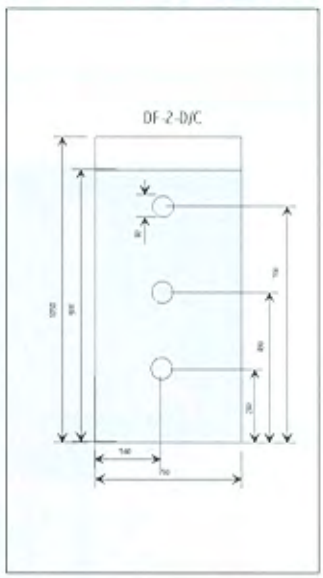
INSTALLATION

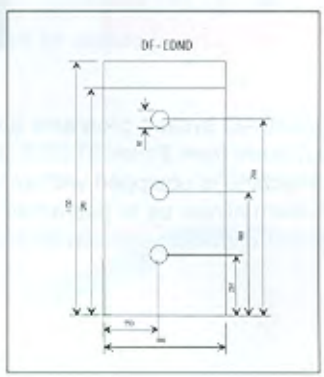
Minimum free ceiling height: **2200 mm**.
For dry transformers with power rating of 1250kVA or more, minimum free ceiling height is **2500 mm**.

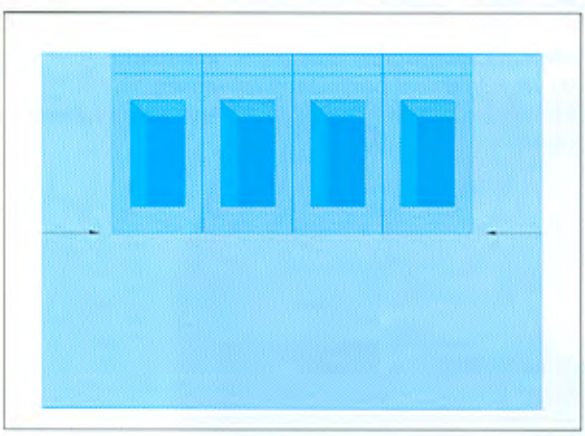
Free horizontal opening for access to cubicles: **800 mm** or local recommandations.
Free horizontal opening for access to cubicles with transformers with ratings of 1000 kVA or more: **2000 mm**.
If the installation is not directly accessible to the exterior, all intermediary doors must conform to the dimensions given above.

Minimum door height: **2000 mm**.
Width according to cubicles installed: cubicle width plus **100 mm** for normal access.
If only DF-A/P/C/D installed, height of **2000 mm** is sufficient.









For detailed dimensions: see drawings on this and preceding page.

When the system is not installed on the ground floor, a panel giving access to the level where the system is installed should be provided. Minimum panel dimensions are those of the largest cubicle used plus 400 mm. (see standard configurations)

The modular design of the system facilitates the installation of the units and their interconnection.
(see installation directions)

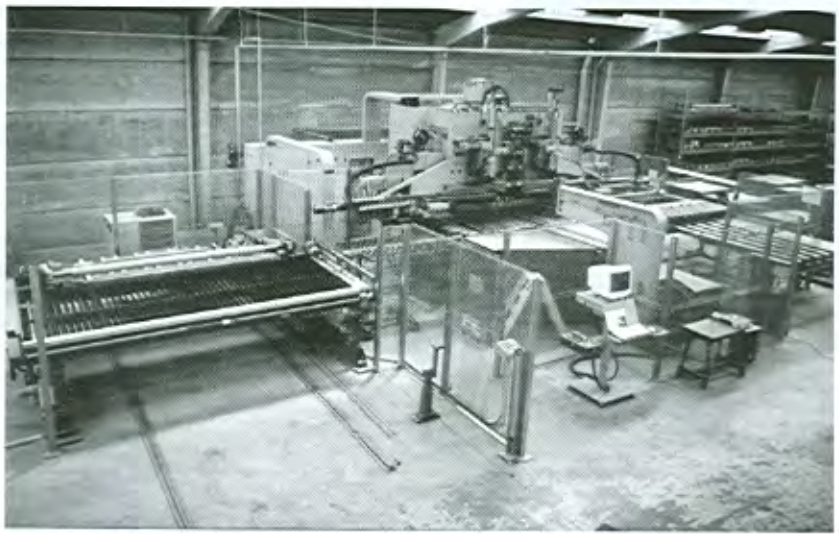
DF-2 cabinet housings are designed for indoor use. They should be installed in a space suitable for such use. Temperature (maximum 45∞C) and humidity within normal limits.
If several transformers are installed, adequate ventilation should be assured.

DF-2

CHAPTER 7: PRODUCTION METHODS

The DF-2 system is the result of modern design techniques combined with ergonomic and environmentally safe production methods.

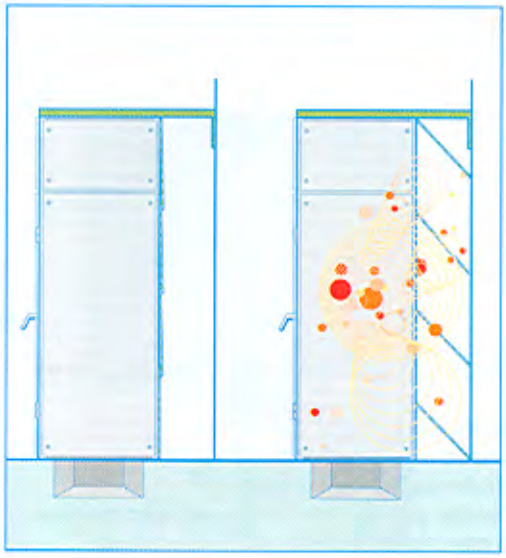
A sophisticated CAD/CAO system programs a digit controlled (CNC) laser. Cubicle elements are cut to a tolerance of 0.01 mm without burrs from 2 mm ST.37.2 sheet stock.
The laser cutting machine is equipped with an automatic feed system allowing continuous 24 hr operation.
This production system allows us to guarantee extremely short delivery delays at particularly low prices.
After laser cutting, the elements and panels are formed on a numerically controlled folding stand and welded semi-automatically.



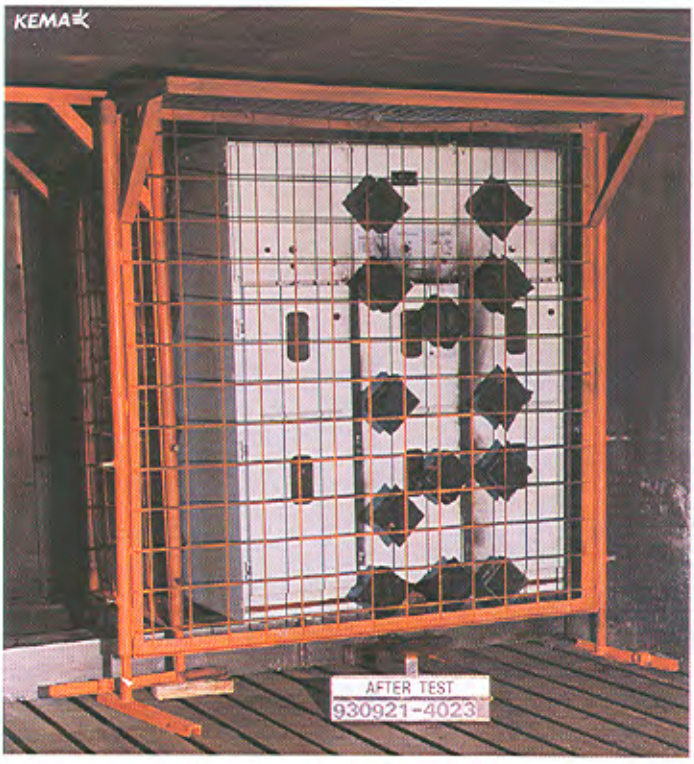
Finally, assembly bolts are welded to the elements by a digit controlled station. The elements are now ready to be painted.
The panels, suspended from a chain conveyor, then pass through a preparation tunnel.
There the different elements are cleaned, degreased, phosphated and rinsed with clean water.
After neutralization and rinsing with demineralized water, the panels pass through a drying oven.
They then enter a paint cabin where powder nozzles coat them with polyester powder in a semi-automatic process.
Finally, all the elements pass through a muffle-oven to be cooked for 10 minutes at 200∞C.
In the assembly shop, the cubicles are assembled, tested and packaged for shipping.

CHAPITER 8 :

RESISTANCE TO INTERNAL ARCING



In ordinary cubicles, arcing which occurs in a medium tension cubicle due to a defect, often causes serious damage and can severely injure the operator.
The DF-2 system is designed to resist injury to the operator and to the installation.
The arcing is limited to the compartment in which it occurs and does not propagate towards the operator nor towards other compartments.
Submitted to tests at 20 kA/1s at a nominal voltage of 17.5 kV, all criteria of the norm CEI 298, appendix AA were satisfied.



EXPERTS IN MEDIUM VOLTAGE CUBICLES

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