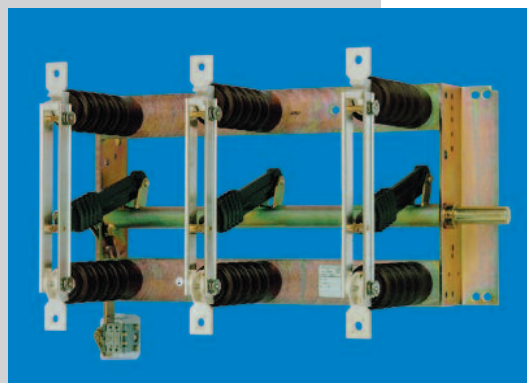
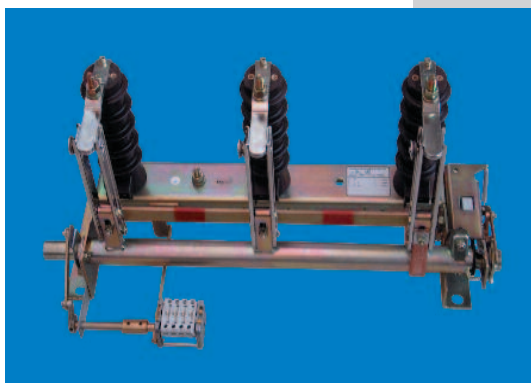


**DRIESCHER -**  
**Indoor disconnectors**  
**Indoor earthing switches**  
**Indoor fuse holders**

- Rated voltage  $U_r$   
12 kV - 40,5 kV
- Rated current  $I_r$   
630 A - 6300 A
- Rated short-time withstand  
current  $I_k$   
up to 80 kA



ITr

**ELEKTROTECHNISCHE WERKE**  
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# DRIESCHER - indoor disconnectors – indoor fuse holders – indoor earthing switches

in accordance with EN 62271-102

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## General

The various 3-pole **earthing switch ES** models can be used at rated voltages of 12 kV, 17.5 kV, 24 kV, 36 kV and 38.5 kV. 20 kA, 31.5 kA, 50 kA, 63 kA and 72 kA have been specified as rated short-time withstand currents.

Earthing switches up to a rated short-time withstand current of 31.5 kA have a short-circuit making capacity and are categorised under electrical class E1. For rated short-time withstand currents of 50 kA and above, the earthing switches do not have a short-circuit making capacity and are classified accordingly under electrical class E0. 1 and 2-pole earthing switches are available on request.

Our various 1, 2 and 3-pole **disconnector ITr** models are designed for use in a rated voltage range of between 12 kV and 40.5 kV, and a rated current range of between 630 A and 6300 A. Depending on the model, the rated short-time withstand current has been successfully demonstrated up to 80 kA for a duration of 1 or 3 seconds. The disconnectors listed are designed to switch off the power in medium voltage networks.

All switching devices have undergone a type test according to EN 62271-102.

**Each switching device is accompanied by a set of instructions (B731) for transport, assembly and commissioning.**

## General

### Explanation of the mechanical and electrical classes:

#### **Mechanical classes** (in accordance with EN 62271-102)

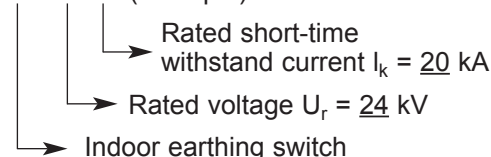
- for disconnector class M0 = 1.000 mechanical switching operations
- for disconnector class M1 = 2.000 mechanical switching operations
- for disconnector class M2 = 10.000 mechanical switching operations
- for earthing switch class M0 = 1.000 mechanical switching operations

#### **Electrical class for earthing switches**

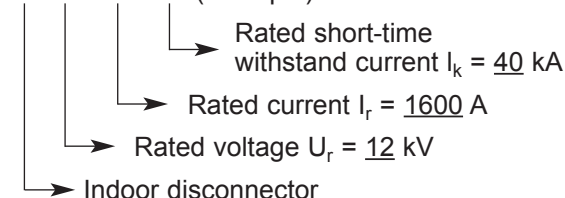
- E0 = without short-circuit making capacity
- E1 = with short-circuit making capacity for 2 making operations

### Explanation of the type designation:

#### **ES 24-20** (example)



#### **ITr 12-1600-40** (example)



The disconnectors and earthing switches are also available in single and multi-pole versions and are classified according to the number of added poles.  
(e.g. 4-pole disconnector: ITr 24-1600-20-4)

## Operating conditions

The devices can be operated up to an installation altitude of 1000 m above sea level. In the case of installation altitudes over 1000 m, it is necessary to correct the rated insulation level on the switching device.

The switching devices are designed for use under normal operating conditions in accordance with EN 62271-1.

Additional applicable atmospheric limit values include the following:

Ambient temperature:

Highest ambient temperature: +40°C

Highest average temperature over 24 hours: +35°C

Lowest ambient temperature: -25°C

(in accordance with „minus 25 indoors“ class)

## Technical description

### **General**

The earthing switches for the E1 class are generally equipped with a switch spring to facilitate a rapid switch-on process.

The base frames of the switching devices are electro-galvanised and chromated. Current paths are made of electrolytic copper and are galvanically silver plated. Rust-proof compression springs ensure sufficient contact pressure for the entire service life of the product.

### **Design features**

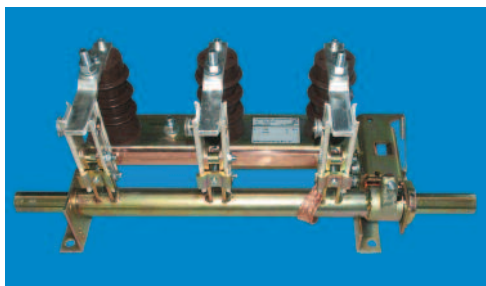
All DRIESCHER disconnectors and earthing switches are generally equipped with a continuous drive shaft ( $\varnothing=30$  mm).

This makes it possible to attach a motor drive on either the left or right-hand side.

Disconnectors with a rated current of 2500 A and higher have contact elements with a silver-graphite coating on the impact side.

## DRIESCHER – 3-pole indoor earthing switch

**ES 12-... ; (Ur 12 kV)**

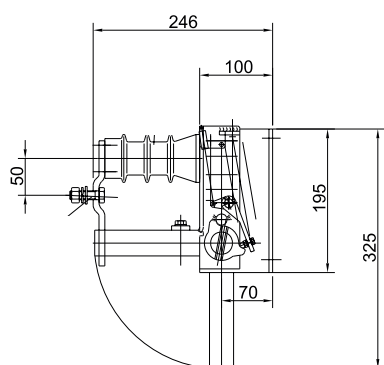


### Accessories:

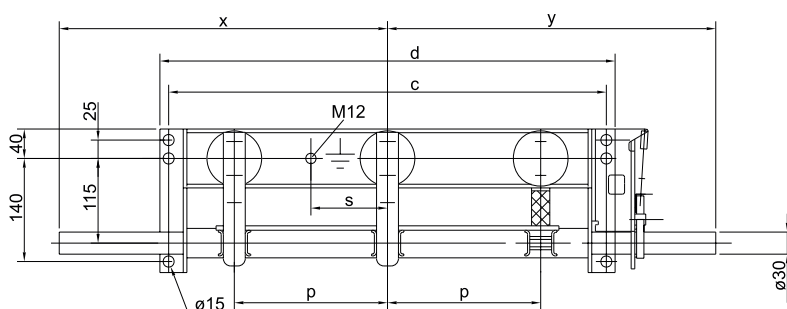
- Auxiliary switch
- Motor drive (UM 10 and UM 50)
- Mechanical interlocking device
- Optional: electrical class E0

| Switch type                               | ES 12-20                | ES 12-31,5 | ES 12-50 |
|-------------------------------------------|-------------------------|------------|----------|
| Rated voltage                             | U <sub>r</sub> 12 kV    | 12 kV      | 12 kV    |
| Rated frequency                           | f <sub>r</sub> 50/60 Hz | 50/60 Hz   | 50/60 Hz |
| Rated short-time withstand current        | I <sub>k</sub> 20 kA    | 31.5 kA    | 50 kA    |
| Rated short-circuit duration              | t <sub>k</sub> 3 s      | 3 s        | 1 s      |
| Rated peak withstand current              | I <sub>p</sub> 50 kA    | 80 kA      | 125 kA   |
| Rated short-circuit making current        | I <sub>ma</sub> 50 kA   | 80 kA      | –        |
| Rated lightning impulse withstand voltage | U <sub>p</sub>          |            |          |
| - phase to earth                          | 75 kV                   | 75 kV      | 75 kV    |
| Rated power frequency withstand voltage   | U <sub>d</sub>          |            |          |
| - phase to earth                          | 28 kV                   | 28 kV      | 28 kV    |
| Diagram number                            | 096806                  | 096809     | 111746   |
| Mechanical service life                   | M1                      | M1         | M1       |
| Electrical class                          | E1                      | E1         | E0       |
| Weight (approx.)                          | 19 kg                   | 22 kg      | 50 kg    |
| Phase spacing p, mm                       | 155/210/250             | 210/250    | 210      |

**Diagram for ES 12-20 / Diagram number 096806 and ES 12-31,5 / Diagram number 096809**



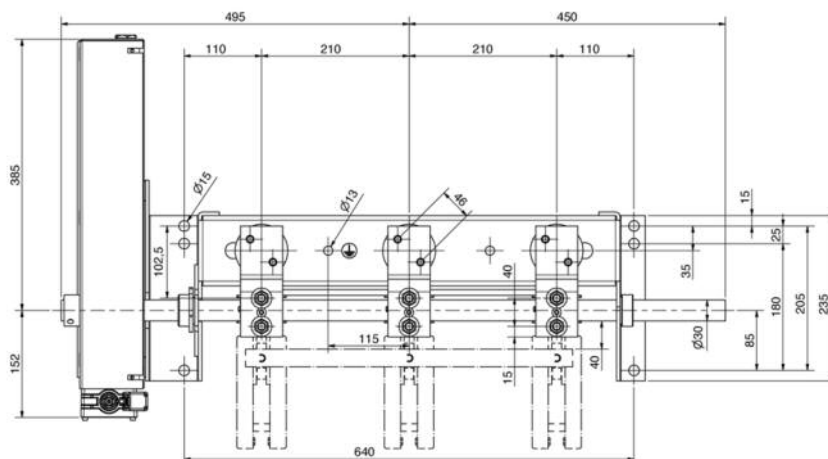
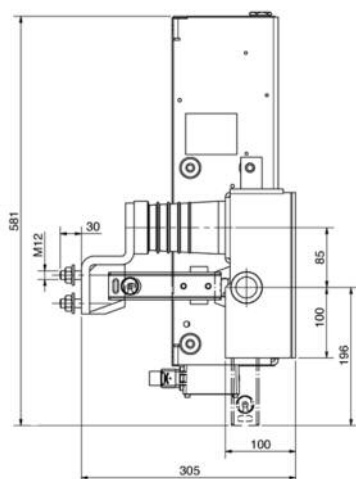
Connection and attachment dimensions identical for ES 12-31.5.

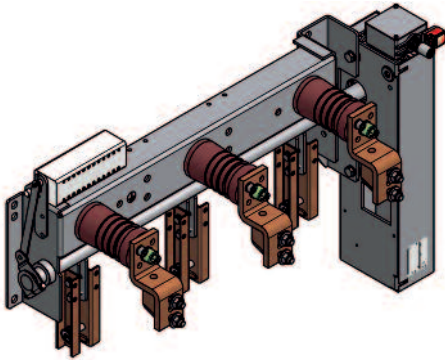


| ES 12-20 |     |     |       |     |     |
|----------|-----|-----|-------|-----|-----|
| p        | c   | d   | s     | x   | y   |
| 155      | 450 | 474 | 77.5  | 287 | 340 |
| 210      | 600 | 624 | 105   | 450 | 450 |
| 250      | 640 | 674 | 122.5 | 370 | 385 |

| ES 12-31.5 |     |     |       |     |     |
|------------|-----|-----|-------|-----|-----|
| p          | c   | d   | s     | x   | y   |
| 210        | 600 | 624 | 105   | 450 | 450 |
| 250        | 640 | 674 | 122.5 | 380 | 380 |

**Diagram for ES 12-50 / Diagram number 111746**



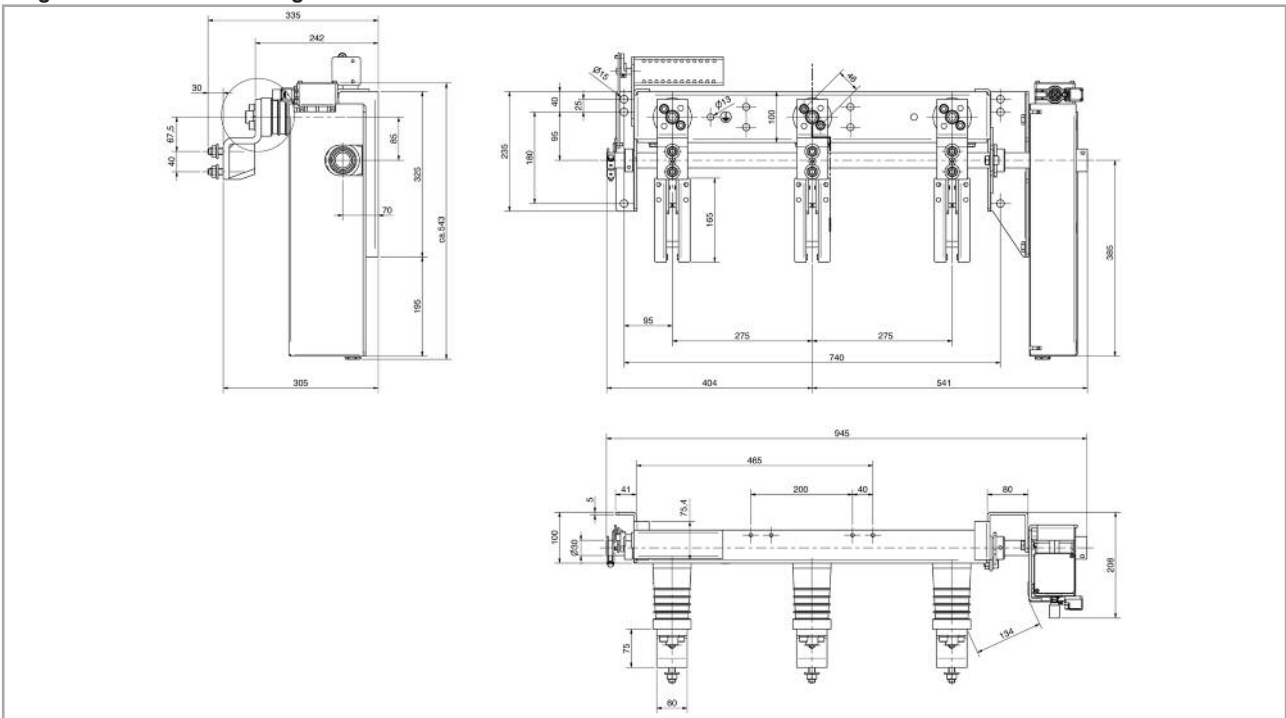


### Accessories:

- Auxiliary switch
- Motor drive (UM 10 and UM 50)
- Mechanical interlocking device

| Switch type                               | ES 17,5-50              | ES 17,5-63 | ES 17,5-72 |
|-------------------------------------------|-------------------------|------------|------------|
| Rated voltage                             | U <sub>r</sub> 17,5 kV  | 17,5 kV    | 17,5 kV    |
| Rated frequency                           | f <sub>r</sub> 50/60 Hz | 50/60 Hz   | 50/60 Hz   |
| Rated short-time withstand current        | I <sub>k</sub> 50 kA    | 63 kA      | 72 kA      |
| Rated short-circuit duration              | t <sub>k</sub> 1 s      | 1 s        | 1 s        |
| Rated peak withstand current              | I <sub>p</sub> 130 kA   | 164 kA     | 197 kA     |
| Rated lightning impulse withstand voltage | U <sub>p</sub>          |            |            |
| - phase to earth                          | 95 kV                   | 95 kV      | 95 kV      |
| Rated power frequency withstand voltage   | U <sub>d</sub>          |            |            |
| - phase to earth                          | 38 kV                   | 38 kV      | 38 kV      |
| Diagram number                            | 115702                  | 115712     | 117630     |
| Mechanical service life                   | M0                      | M0         | M0         |
| Electrical class                          | E0                      | E0         | E0         |
| Weight (approx.)                          | 50 kg                   | 60 kg      | 65 kg      |
| Phase spacing p, mm                       | 275                     | 275        | 300        |

**Diagram for ES 17.5-50 / Diagram number 115702**



# DRIESCHER – 3-pole indoor earthing switch

ES 17,5-... ; (Ur 17,5 kV)

Diagram for ES 17,5-63 / Diagram number 115712

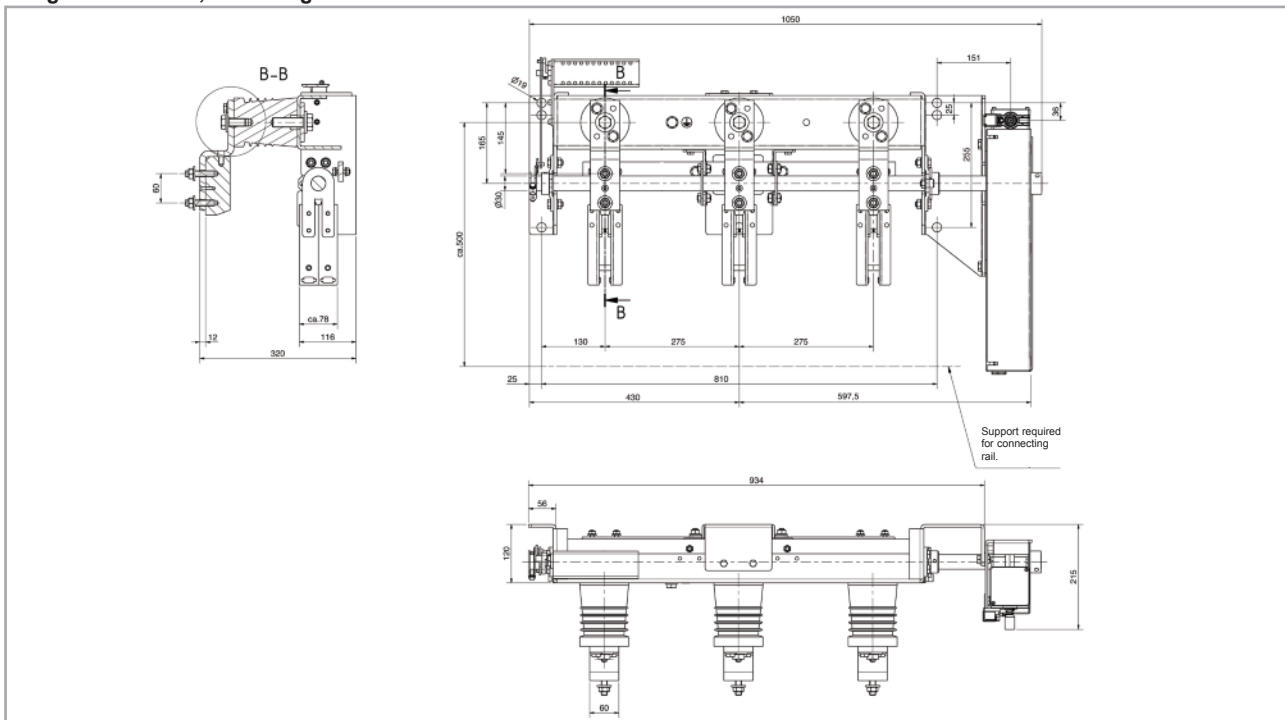
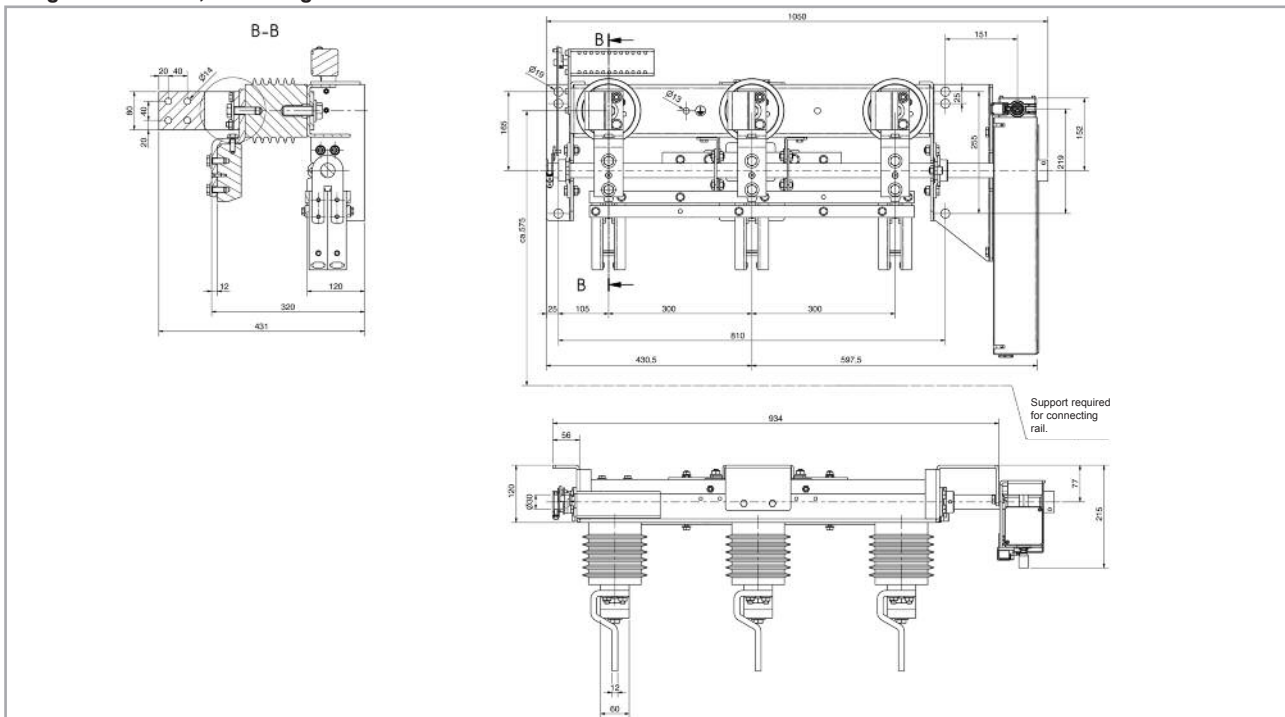
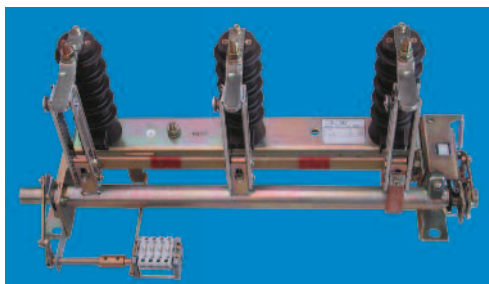


Diagram for ES 17,5-72 / Diagram number 117630



## DRIESCHER – 3-pole indoor earthing switch

### ES 24-... ; (Ur 24 kV)



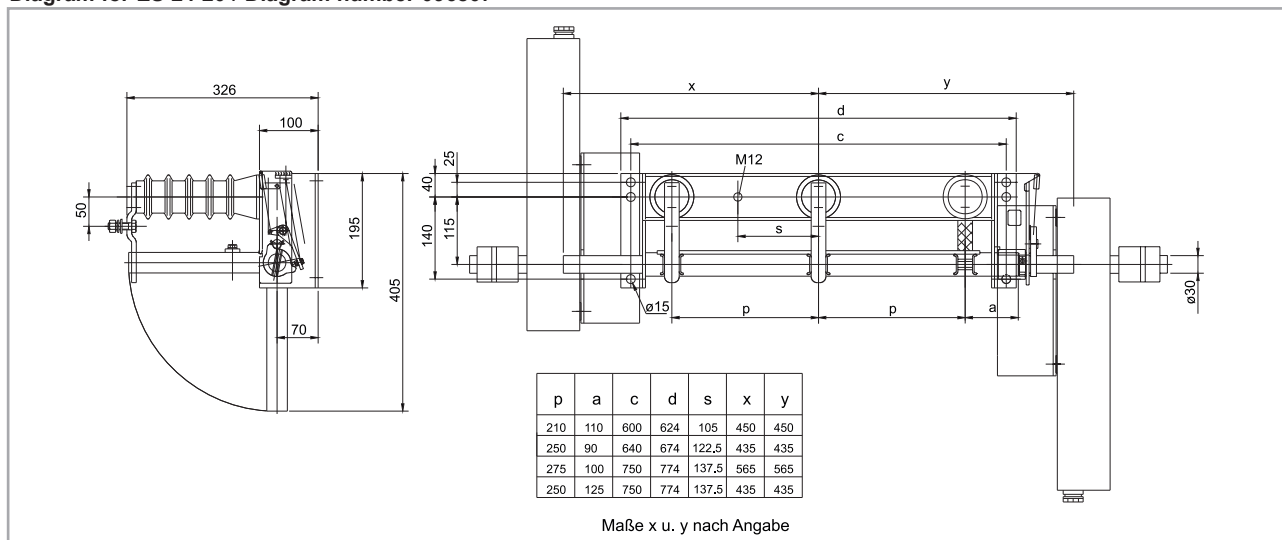
#### Accessories:

- Auxiliary switch
- Motor drive (UM 10 and UM 50)
- Mechanical interlocking device
- Optional: electrical class E0

| Switch type                               | ES 24-20       | ES 24-31,5 |
|-------------------------------------------|----------------|------------|
| Rated voltage                             | $U_r$ 24 kV    | 24 kV      |
| Rated frequency                           | $f_r$ 50 Hz    | 50 Hz      |
| Rated short-time withstand current        | $I_k$ 20 kA    | 31,5 kA    |
| Rated short-circuit duration              | $t_k$ 3 s      | 3 s        |
| Rated peak withstand current              | $I_p$ 50 kA    | 80 kA      |
| Rated short-circuit making current        | $I_{ma}$ 50 kA | 80 kA      |
| Rated lightning impulse withstand voltage | $U_p$          |            |
| - phase to earth                          | 125 kV         | 125 kV     |
| Rated power frequency withstand voltage   | $U_d$          |            |
| - phase to earth                          | 50 kV          | 50 kV      |
| Diagram number                            | 096807         | 096810     |
| Mechanical service life                   | M1             | M1         |
| Electrical class                          | E1             | E1         |
| Weight (approx.)                          | 24 kg          | 27 kg      |
| Phase spacing p, mm                       | 210/250/275    | 250/275    |

| Switch type                               | ES 24-50     | ES 24-63 | ES 24-72 |
|-------------------------------------------|--------------|----------|----------|
| Rated voltage                             | $U_r$ 24 kV  | 24 kV    | 24 kV    |
| Rated frequency                           | $f_r$ 50 Hz  | 50 Hz    | 50 Hz    |
| Rated short-time withstand current        | $I_k$ 50 kA  | 63 kA    | 72 kA    |
| Rated short-circuit duration              | $t_k$ 1 s    | 1 s      | 1 s      |
| Rated peak withstand current              | $I_p$ 130 kA | 164 kA   | 197 kA   |
| Rated lightning impulse withstand voltage | $U_p$        |          |          |
| - phase to earth                          | 125 kV       | 125 kV   | 125 kV   |
| Rated power frequency withstand voltage   | $U_d$        |          |          |
| - phase to earth                          | 50 kV        | 50 kV    | 50 kV    |
| Diagram number                            | 115827       | 115834   | 117988   |
| Mechanical service life                   | M1           | M1       | M1       |
| Electrical class                          | E0           | E0       | E0       |
| Weight (approx.)                          | 55 kg        | 60 kg    | 90 kg    |
| Phase spacing p, mm                       | 300          | 300      | 300      |

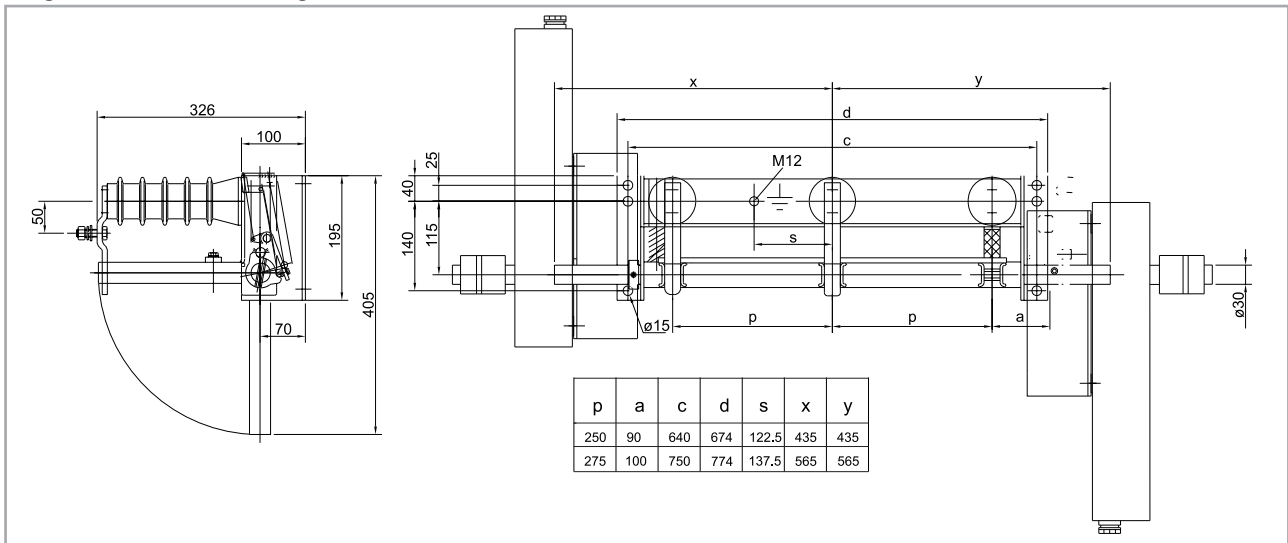
#### Diagram for ES 24-20 / Diagram number 096807



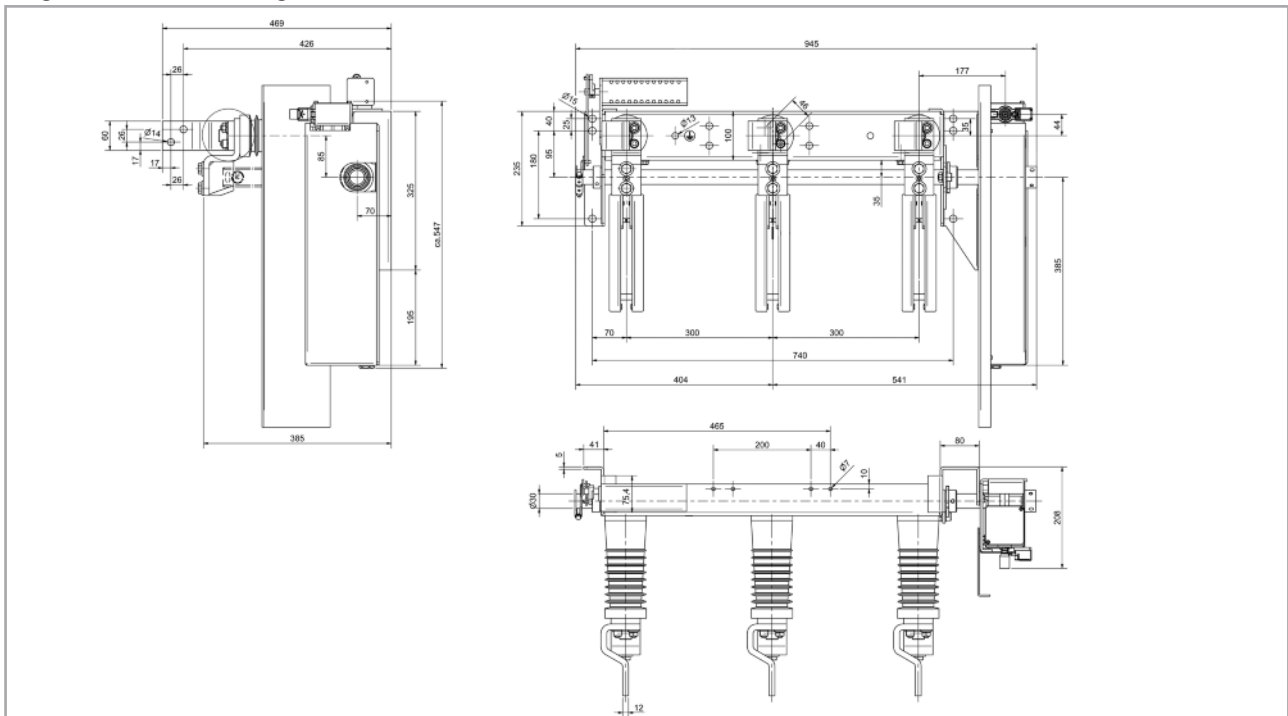
## DRIESCHER – 3-pole indoor earthing switch

**ES 24-... ; (Ur 24 kV)**

**Diagram for ES 24-31,5 / Diagram number 096810**



**Diagram for ES 24-50 / Diagram number 115827**



# DRIESCHER – 3-pole indoor earthing switch

ES 24-... ; (Ur 24 kV)

Diagram for ES 24-63 / Diagram number 115834

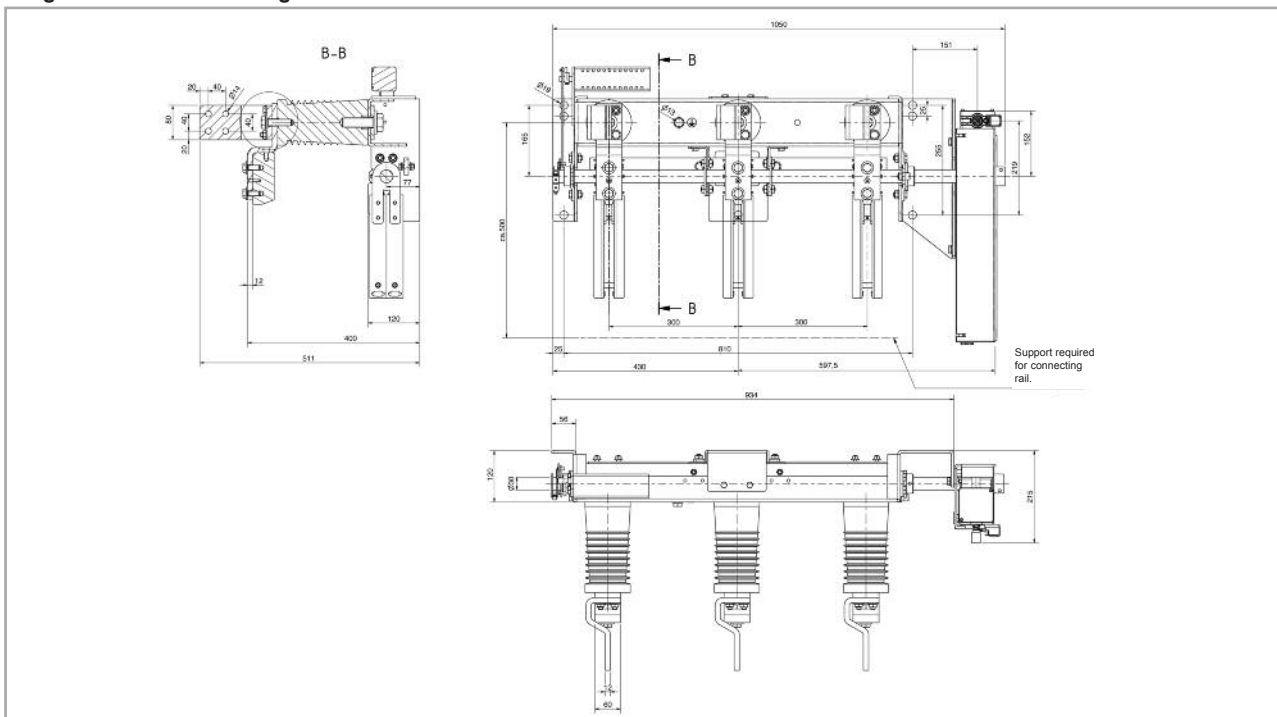
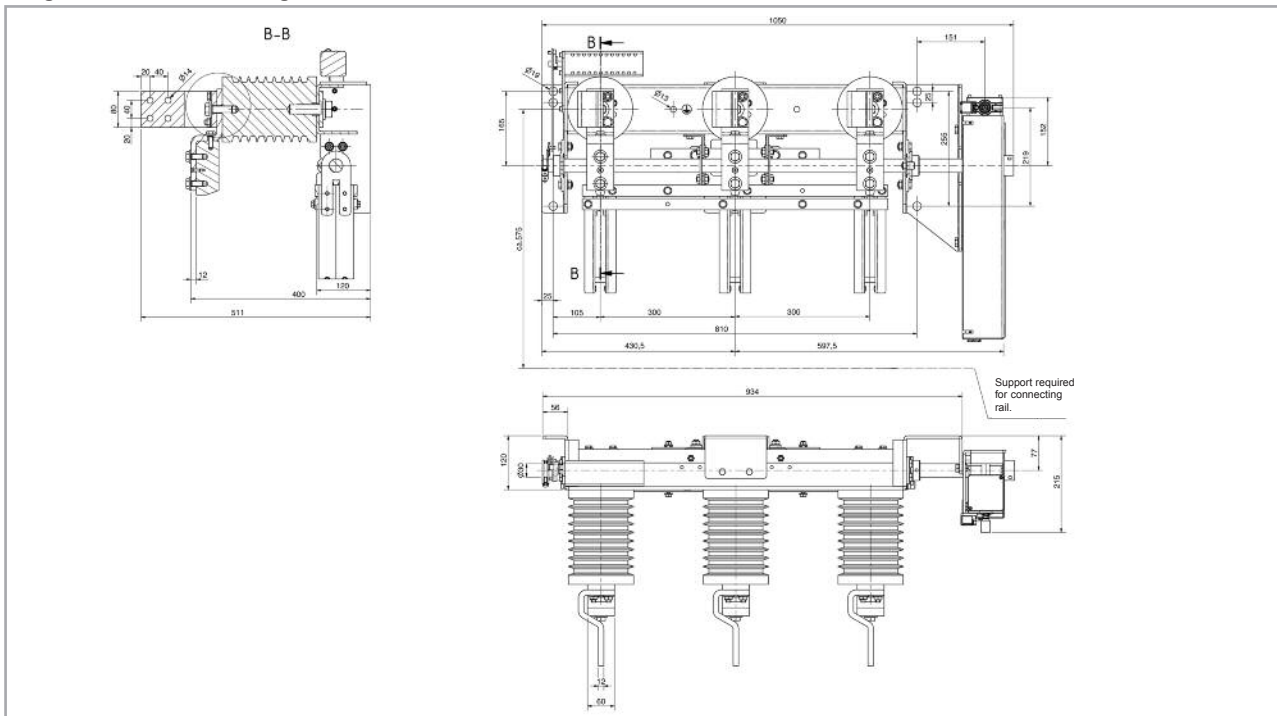


Diagram for ES 24-72 / Diagram number 117988



## DRIESCHER – 3-pole indoor earthing switch

### ES 36-... ; (Ur 36 and 38,5 kV)

| Switch type                               | ES 36-20       | ES 36-31,5 | ES 36-20  | ES 36-31,5 |
|-------------------------------------------|----------------|------------|-----------|------------|
| Rated voltage                             | $U_r$ 36 kV    | 36 kV      | 38,5 kV   | 38,5 kV    |
| Rated frequency                           | $f_r$ 50 Hz    | 50 Hz      | 50 Hz     | 50 Hz      |
| Rated short-time withstand current        | $I_k$ 20 kA    | 31,5 kA    | 20 kA     | 31,5 kA    |
| Rated short-circuit duration              | $t_k$ 3 s      | 3 s        | 3 s       | 3 s        |
| Rated peak withstand current              | $I_p$ 50 kA    | 80 kA      | 50 kA     | 80 kA      |
| Rated short-circuit making current        | $I_{ma}$ 50 kA | 50 kA*     | 50 kA     | 50 kA*     |
| Rated lightning impulse withstand voltage | $U_p$          |            |           |            |
| - phase to earth                          | 170 kV         | 170 kV     | 180 kV    | 180 kV     |
| Rated power frequency withstand voltage   | $U_d$          |            |           |            |
| - phase to earth                          | 70 kV          | 70 kV      | 80 kV     | 80 kV      |
| Diagram number                            | 096808         | 096811     | 103605    | 104999     |
| Mechanical service life                   | M1             | M1         | M1        | M1         |
| Electrical class                          | E1             | E1         | E1        | E1         |
| Weight (approx.)                          | 40 kg          | 43 kg      | 44 kg     | 46 kg      |
| Phase spacing p, mm                       | 275**/400      | 400        | 275**/400 | 400        |

#### Accessories:

- Auxiliary switch
- Motor drive (UM 10 a. UM 50)
- Mechanical interlocking device
- Optional: electrical class E0

\*Short-circuit making current  $I_{ma}$  restricted to 50 kA.

\*\*With phase barriers only

Diagram for ES 36-20,  $U_r$  36 kV / Diagram number 096808 and ES 36-31,5 / Diagram number 096811

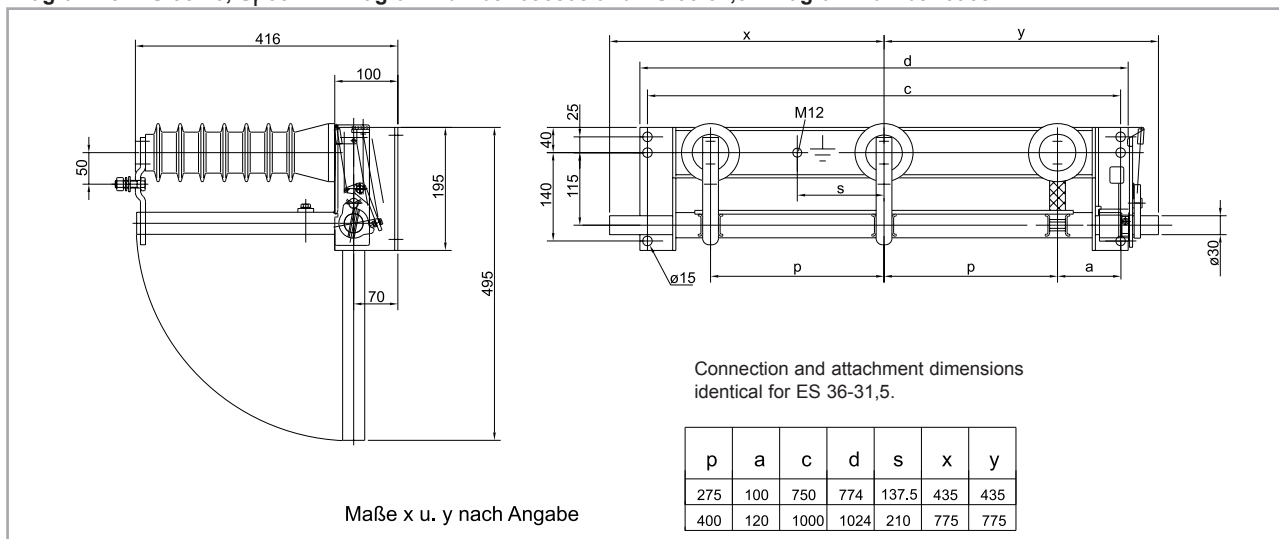
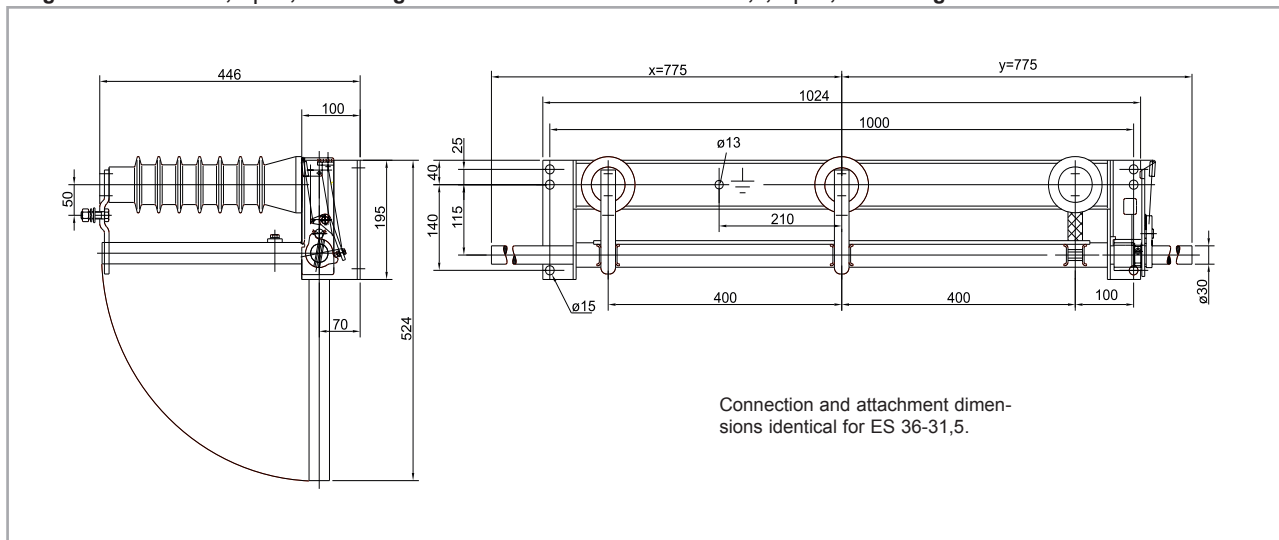


Diagram for ES 36-20,  $U_r$  38,5 kV / Diagram number 103605 and ES 36-31,5,  $U_r$  38,5 kV / Diagram number 104999



## DRIESCHER – 3-pole indoor disconnecter

### ITr 12-...-... ; (Ur 12 kV, Ir 630 - 6300 A)

| Switch type                               | ITr 12-630-20  | ITr 12-1600-40 | ITr 12-2500-40 | ITr 12-2500-50 |
|-------------------------------------------|----------------|----------------|----------------|----------------|
| Rated voltage                             | $U_r$ 12 kV    | 12 kV          | 12 kV          | 12 kV          |
| Rated frequency                           | $f_r$ 50/60 Hz | 50/60 Hz       | 50/60 Hz       | 50/60 Hz       |
| Rated current                             | $I_r$ 630 A    | 1600 A         | 2500 A         | 2500 A         |
| Rated short-time withstand current        | $I_k$ 20 kA    | 40 kA          | 40 kA          | 50 kA          |
| Rated short-circuit duration              | $t_k$ 3 s      | 3 s            | 3 s            | 1 s            |
| Rated peak withstand current              | $I_p$ 50 kA    | 100 kA         | 100 kA         | 130 kA         |
| Rated lightning impulse withstand voltage | $U_p$          |                |                |                |
| - phase to earth                          | 75 kV          | 75 kV          | 75 kV          | 75 kV          |
| - via the isolating distance              | 85 kV          | 85 kV          | 85 kV          | 85 kV          |
| Rated power frequency withstand voltage   | $U_d$          |                |                |                |
| - phase to earth                          | 28 kV          | 28 kV          | 28 kV          | 28 kV          |
| - via the isolating distance              | 32 kV          | 32 kV          | 32 kV          | 32 kV          |
| Diagram number                            | 099824         | 116715         | 100813         | 116972         |
| Mechanical service life                   | M2             | M2             | M1             | M1             |
| Motor drive                               | Optional       | Optional       | Optional       | Optional       |
| Optional Earthing switch                  | ES 12-20       | ES 12-31,5     | ES 12-31,5     | ES 12-31,5     |
| Weight (approx.)                          | 20 kg          | 32 kg          | 55 kg          | 60 kg          |
| Phase spacing p, mm                       | 155/210        | 210            | 210            | 210            |



Fig.: ITr 12-1600-40

#### Accessories:

- Auxiliary switch
- Motor drive (UM 10 and UM 50)
- Earthing switch
- Mechanical interlocking device

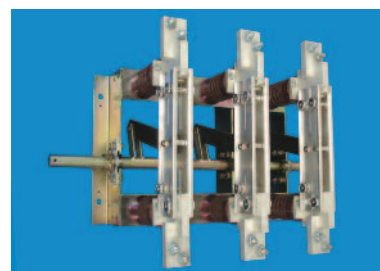


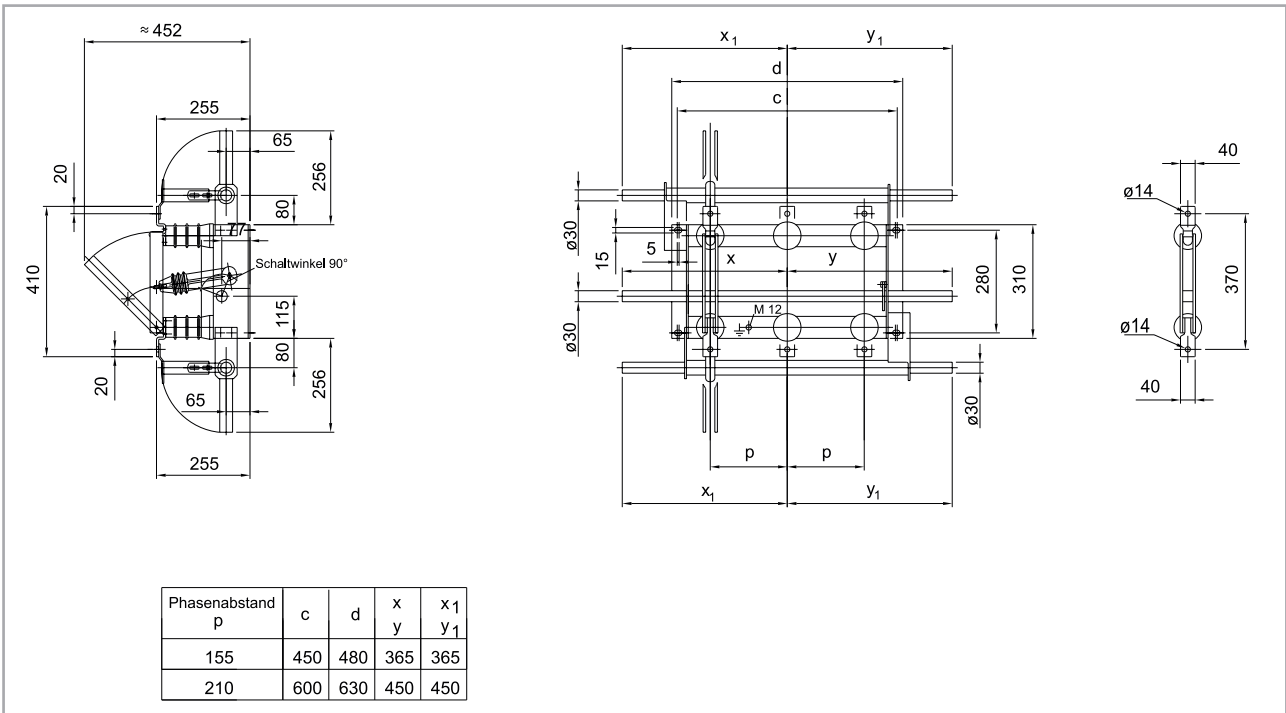
Fig.: ITr 12-2500-40

| Switch type                               | ITr 12-4000-50 | ITr 12-6300-63 |
|-------------------------------------------|----------------|----------------|
| Rated voltage                             | $U_r$ 12 kV    | 12 kV          |
| Rated frequency                           | $f_r$ 50/60 Hz | 50/60 Hz       |
| Rated current                             | $I_r$ 4000 A   | 6300 A         |
| Rated short-time withstand current        | $I_k$ 50 kA    | 63 kA          |
| Rated short-circuit duration              | $t_k$ 3 s      | 3 s            |
| Rated peak withstand current              | $I_p$ 125 kA   | 160 kA         |
| Rated lightning impulse withstand voltage | $U_p$          |                |
| - phase to earth                          | 75 kV          | 75 kV          |
| - via the isolating distance              | 85 kV          | 85 kV          |
| Rated power frequency withstand voltage   | $U_d$          |                |
| - phase to earth                          | 28 kV          | 28 kV          |
| - via the isolating distance              | 32 kV          | 32 kV          |
| Diagram number                            | 103229         | 110310         |
| Mechanical service life                   | M1             | M1             |
| Motor drive                               | standard UM10  | standard UM10  |
| Optional Earthing switch                  | ES 12-31,5     | ES 12-31,5     |
| Weight (approx.)                          | 91 kg          | 125 kg         |
| Phase spacing p, mm                       | 250            | 350            |

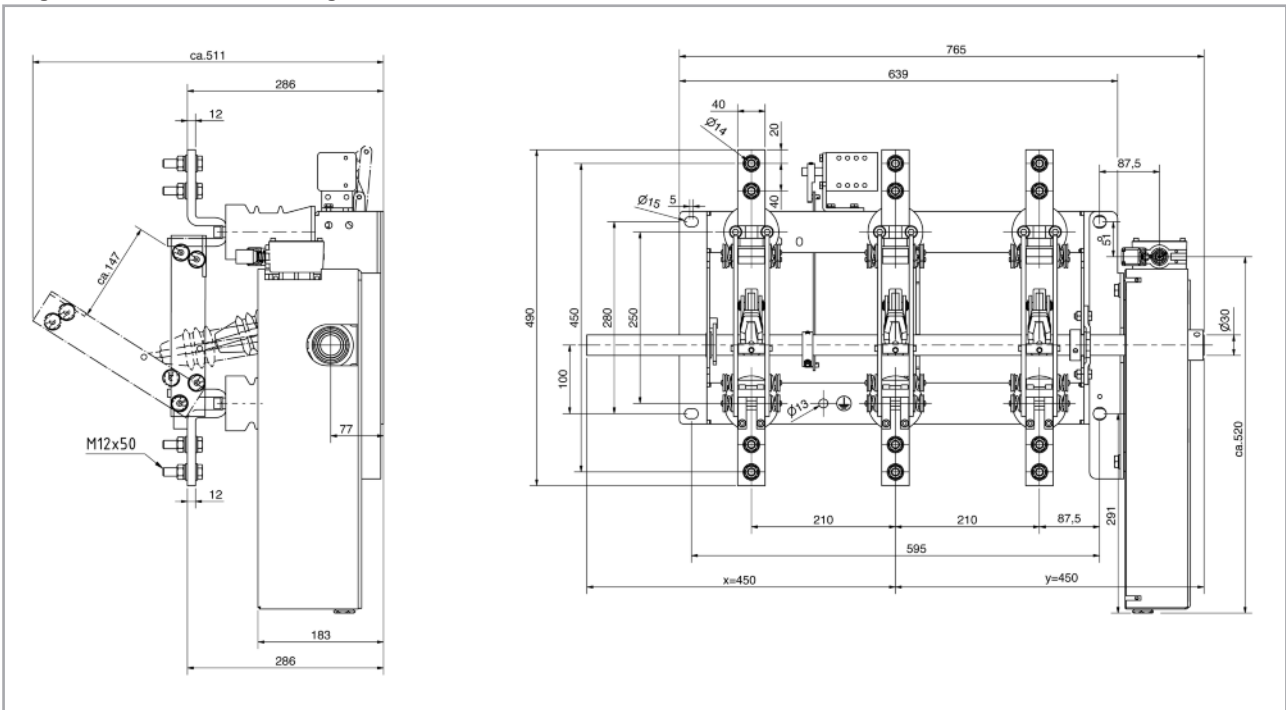
## DRIESCHER – 3-pole indoor disconnect

**ITr 12-...-... ; (Ur 12 kV, Ir 630 and 1600 A)**

**Diagram for ITr 12-630-20 / Diagram number 099824**



**Diagram for ITr 12-1600-40 / Diagram number 116715**



## DRIESCHER – 3-pole indoor disconnecter

**ITr 12-...-... ; (Ur 12 kV, Ir 2500 A)**

Diagram for ITr 12-2500-40 / Diagram number 100813

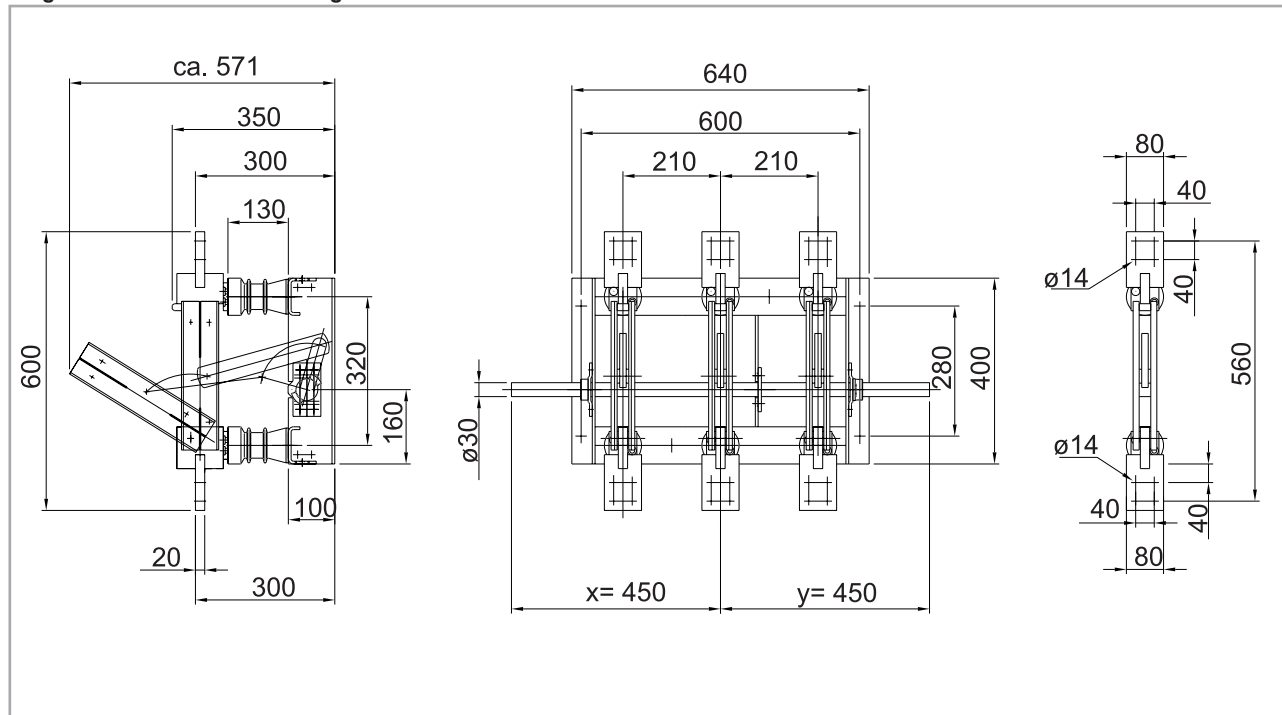
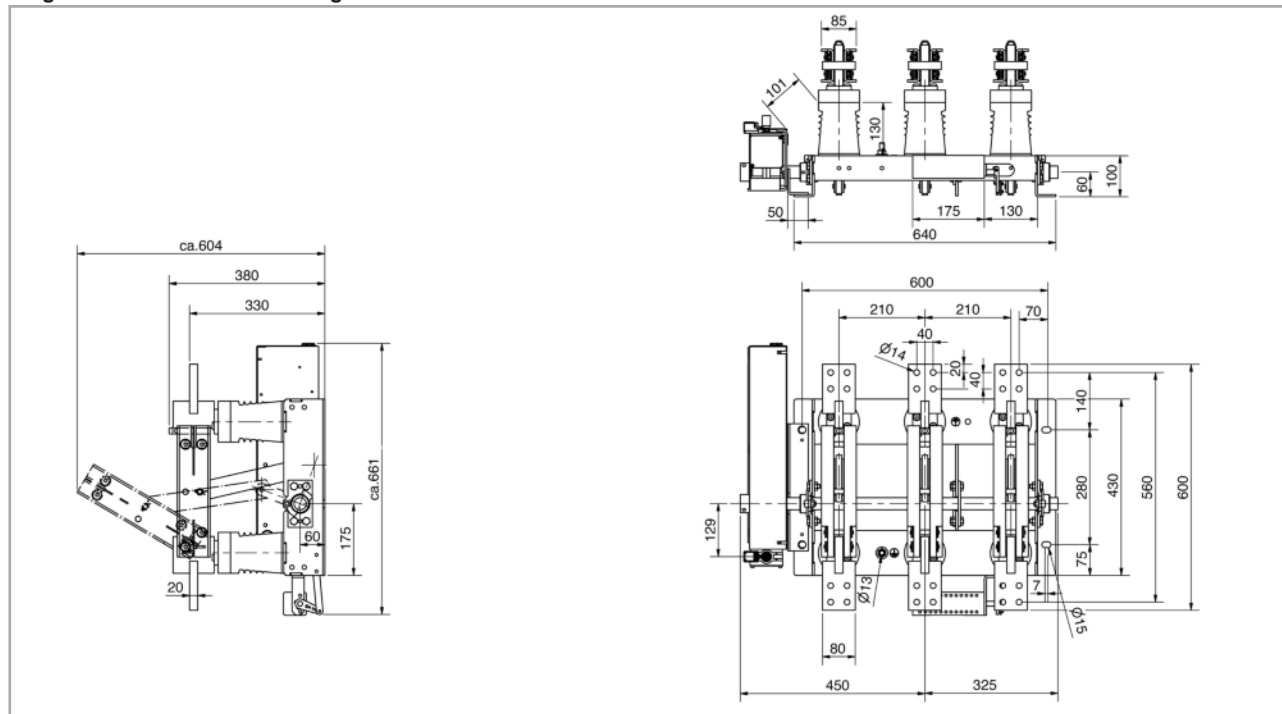


Diagram for ITr 12-2500-50 / Diagram number 116972



## DRIESCHER – 3-pole indoor disconnecter

**ITr 12-...-... ; (Ur 12 kV, Ir 4000 and 6300 A)**

Diagram for ITr 12-4000-50 / Diagram number 103229

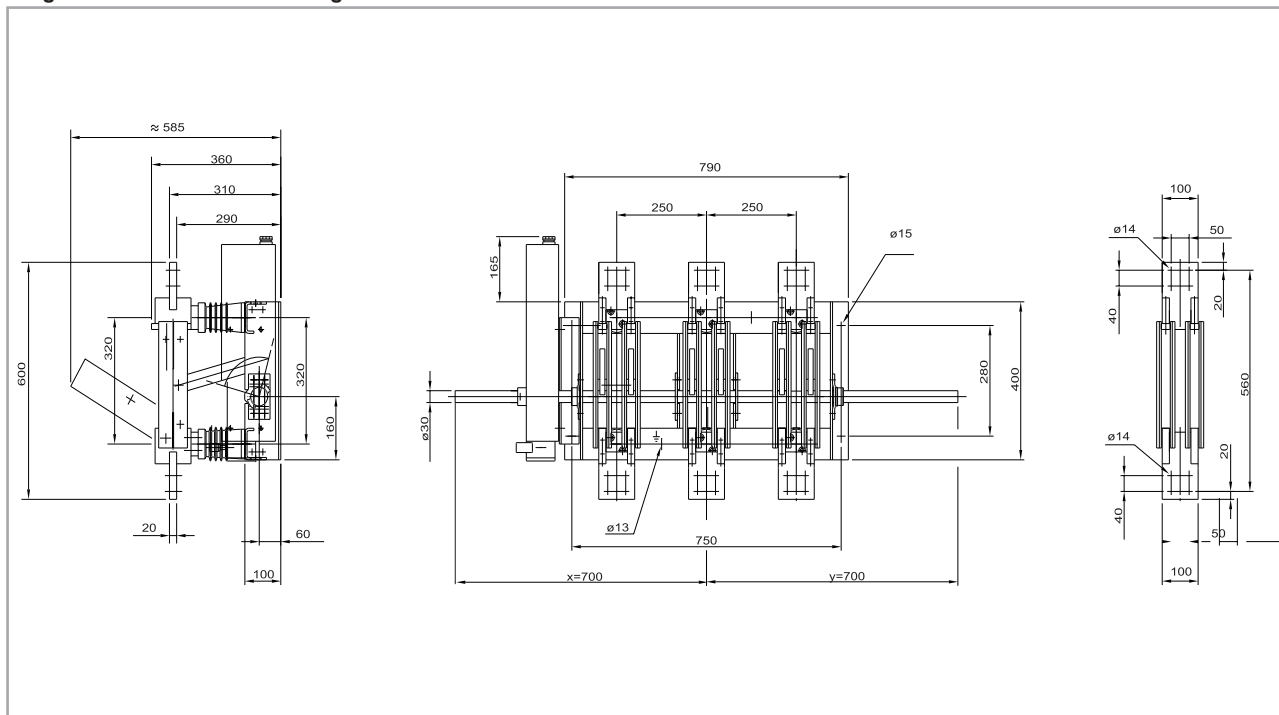
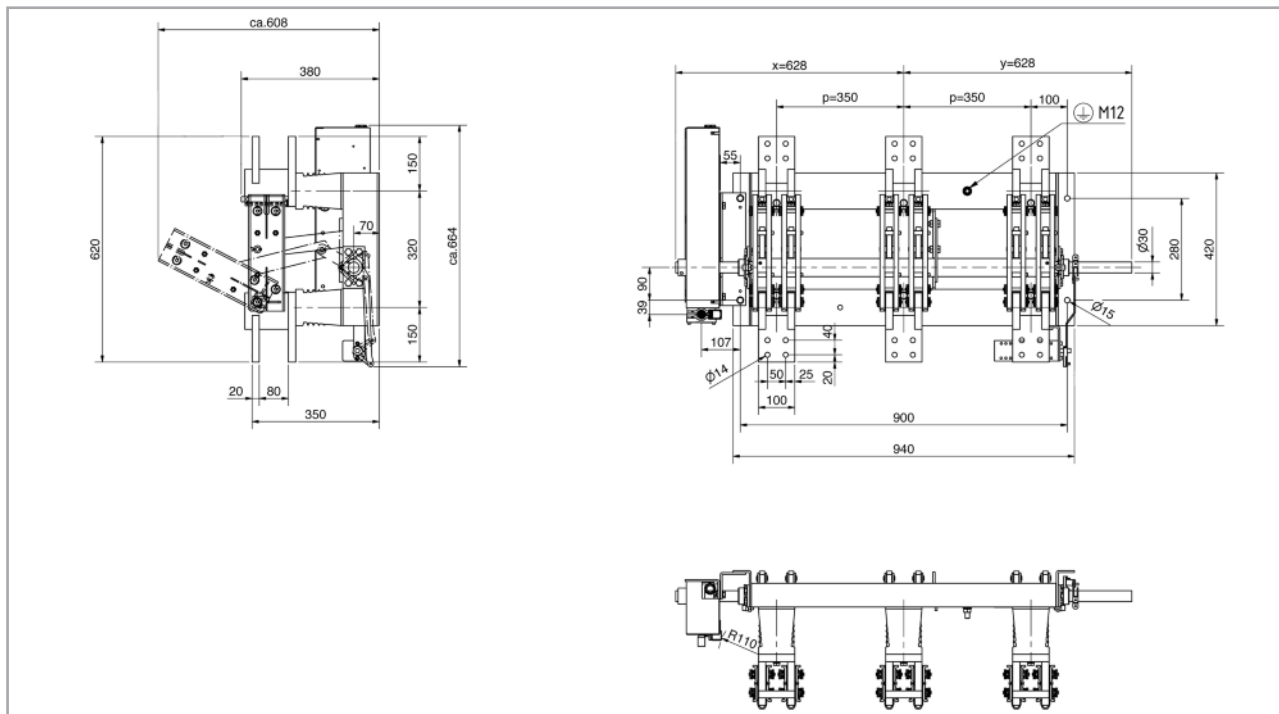


Diagram for ITr 12-6300-63 / Diagram number 110310



## DRIESCHER – 3-pole indoor disconnecter

### ITr 17,5-...-... ; (Ur 17,5 kV, Ir 4000 A and 6300 A)

| Switch type                                               |       | ITr 17,5-4000-50 | ITr 17,5-4000-63 | ITr 17,5-4000-72 |
|-----------------------------------------------------------|-------|------------------|------------------|------------------|
| Rated voltage                                             | $U_r$ | 17,5 kV          | 17,5 kV          | 17,5 kV          |
| Rated frequency                                           | $f_r$ | 50/60 Hz         | 50/60 Hz         | 50/60 Hz         |
| Rated current                                             | $I_r$ | 4000 A           | 4000 A           | 4000 A           |
| Rated short-time withstand current                        | $I_k$ | 50 kA            | 63 kA            | 72 kA            |
| Rated short-circuit duration                              | $t_k$ | 3 s              | 1s / 3s          | 1s / 3s          |
| Rated peak withstand current                              | $I_p$ | 137 kA           | 173 kA           | 198 kA           |
| Rated lightning impulse withstand voltage                 | $U_p$ |                  |                  |                  |
| - phase to earth                                          |       | 95 kV            | 95 kV            | 95 kV            |
| - via the isolating distance                              |       | 110 kV           | 110 kV           | 110 kV           |
| Rated power frequency withstand voltage                   | $U_d$ |                  |                  |                  |
| - phase to earth                                          |       | 38 kV            | 38 kV            | 38 kV            |
| - via the isolating distance                              |       | 45 kV            | 45 kV            | 45 kV            |
| Mechanical service life                                   |       | M1               | M1               | M1               |
| Phase spacing p, mm                                       |       | 275              | 275              | 350              |
| Motor drive                                               |       | standard UM10    | standard UM10    | standard UM10    |
| Weight (approx.)                                          |       | 100 kg           | 100 kg           | 105 kg           |
| Diagram number for disconnectors with upright connections |       | 115475           | 115807           | 117987           |
| Diagram number for disconnectors with flat connections    |       | 115664           | 115808           | 118140           |
| Diagram number for disconnector/earthing combination      |       | 117988           | 117500           | on request       |

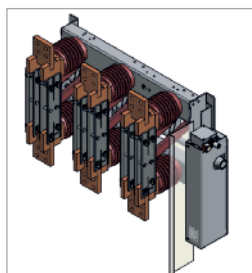


Fig.: ITr 17,5-4000-63  
with flat connection

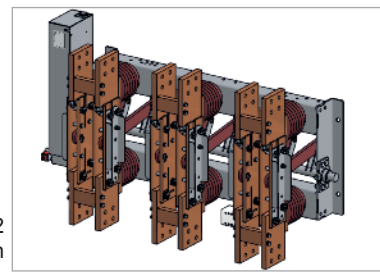


Fig.: ITr 17,5-6300-72  
with upright connection

| Switch type                                            |       | ITr 17,5-6300-50 | ITr 17,5-6300-63 | ITr 17,5-6300-72 | ITr 17,5-6300-80 |
|--------------------------------------------------------|-------|------------------|------------------|------------------|------------------|
| Rated voltage                                          | $U_r$ | 17,5 kV          | 17,5 kV          | 17,5 kV          | 17,5 kV          |
| Rated frequency                                        | $f_r$ | 50/60 Hz         | 50/60 Hz         | 50/60 Hz         | 50/60 Hz         |
| Rated current                                          | $I_r$ | 6300 A           | 6300 A           | 6300 A           | 6300 A           |
| Rated short-time withstand current                     | $I_k$ | 50 kA            | 63 kA            | 72 kA            | 80 kA            |
| Rated short-circuit duration                           | $t_k$ | 1s / 3s          | 1s / 3s          | 1 s              | 1 s              |
| Rated peak withstand current                           | $I_p$ | 137 kA           | 173 kA           | 197 kA           | 208 kA           |
| Rated lightning impulse withstand voltage              | $U_p$ |                  |                  |                  |                  |
| - phase to earth                                       |       | 95 kV            | 95 kV            | 95 kV            | 95 kV            |
| - via the isolating distance                           |       | 110 kV           | 110 kV           | 110 kV           | 110 kV           |
| Rated power frequency withstand voltage                | $U_d$ |                  |                  |                  |                  |
| - phase to earth                                       |       | 38 kV            | 38 kV            | 38 kV            | 38 kV            |
| - via the isolating distance                           |       | 45 kV            | 45 kV            | 45 kV            | 45 kV            |
| Mechanical service life                                |       | M1               | M1               | M1               | M1               |
| Phase spacing p, mm                                    |       |                  |                  |                  |                  |
| Motor drive                                            |       | standard UM10    | standard UM10    | standard UM10    | standard UM10    |
| Weight (approx.)                                       |       | 115 kg           | 120 kg           | 125 kg           | 125 kg           |
| Diagram no. for disconnectors with upright connections |       | 115809           | 115678           | 117949           | 117956           |
| Diagram no. for disconnectors with flat connections    |       | on request       | on request       | on request       | on request       |
| Diagram no. for disconnector/earthing combination      |       | 117482           | 115790           | on request       | on request       |

## DRIESCHER – 3-pole indoor disconnecter

**ITr 17,5-...-... ; (Ur 17,5 kV, Ir 4000 A)**

Diagram for ITr 17,5-4000-50 flat connection / Diagram number 115664

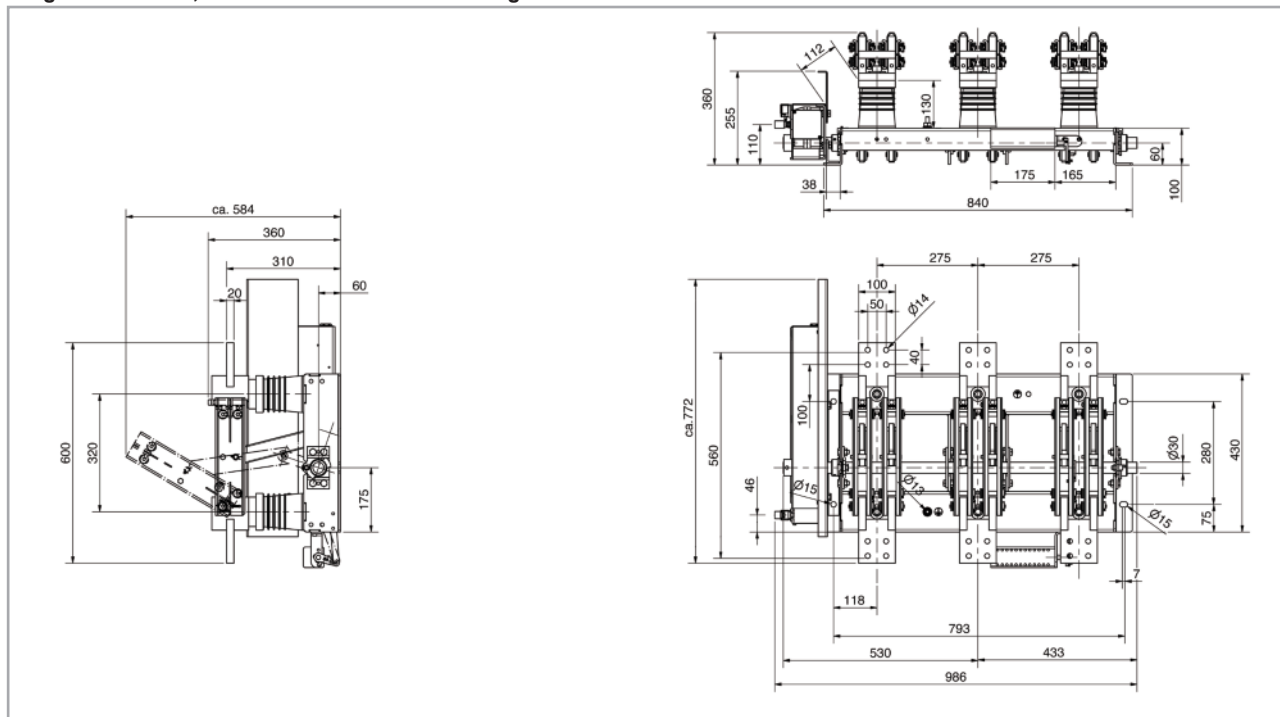
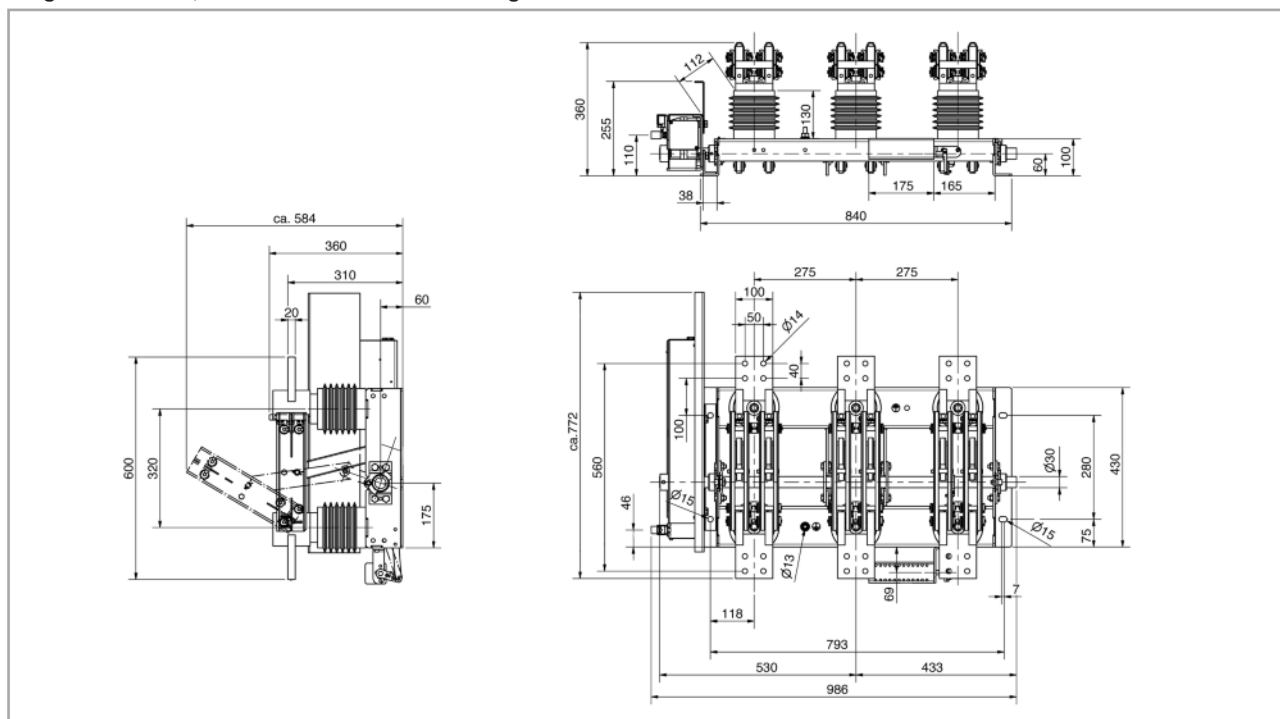


Diagram for ITr 17,5-4000-63 flat connection / Diagram number 115808



## DRIESCHER – 3-pole indoor disconnecter

**ITr 17,5-...-... ; (Ur 17,5 kV, Ir 4000 A and 6300 A)**

Diagram for ITr 17,5-4000-72 flat connection / Diagram number 118140

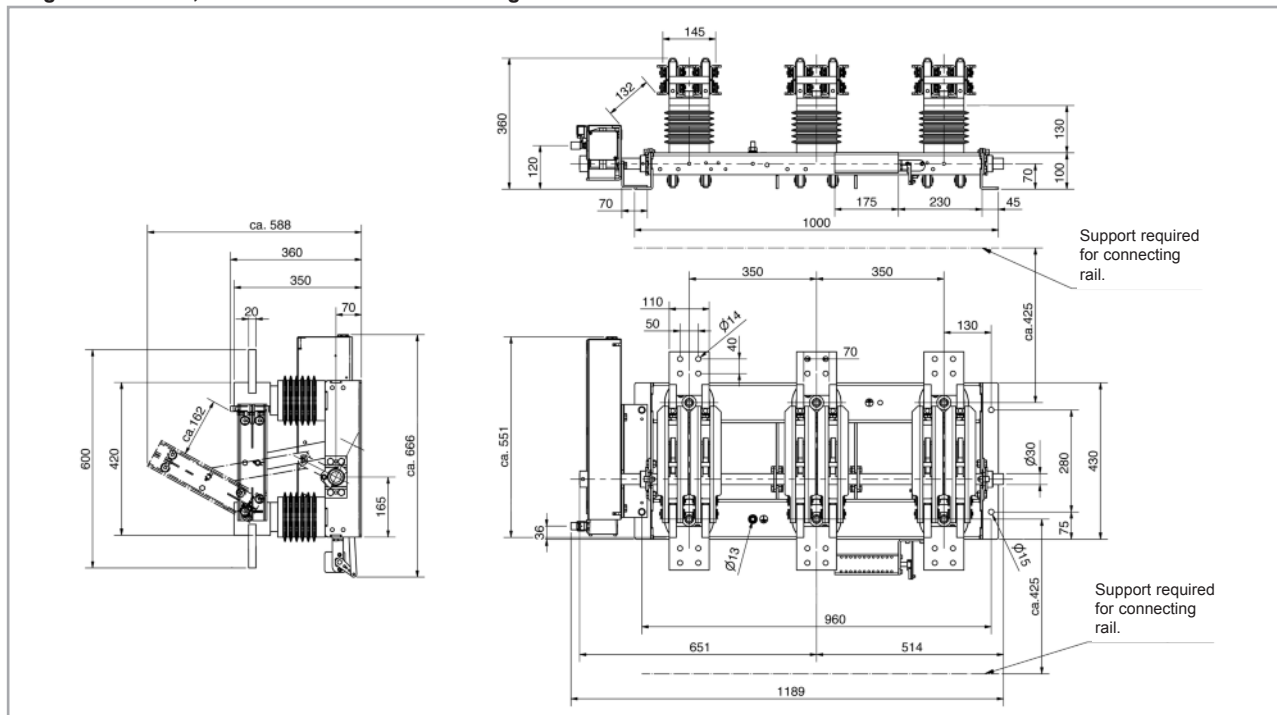
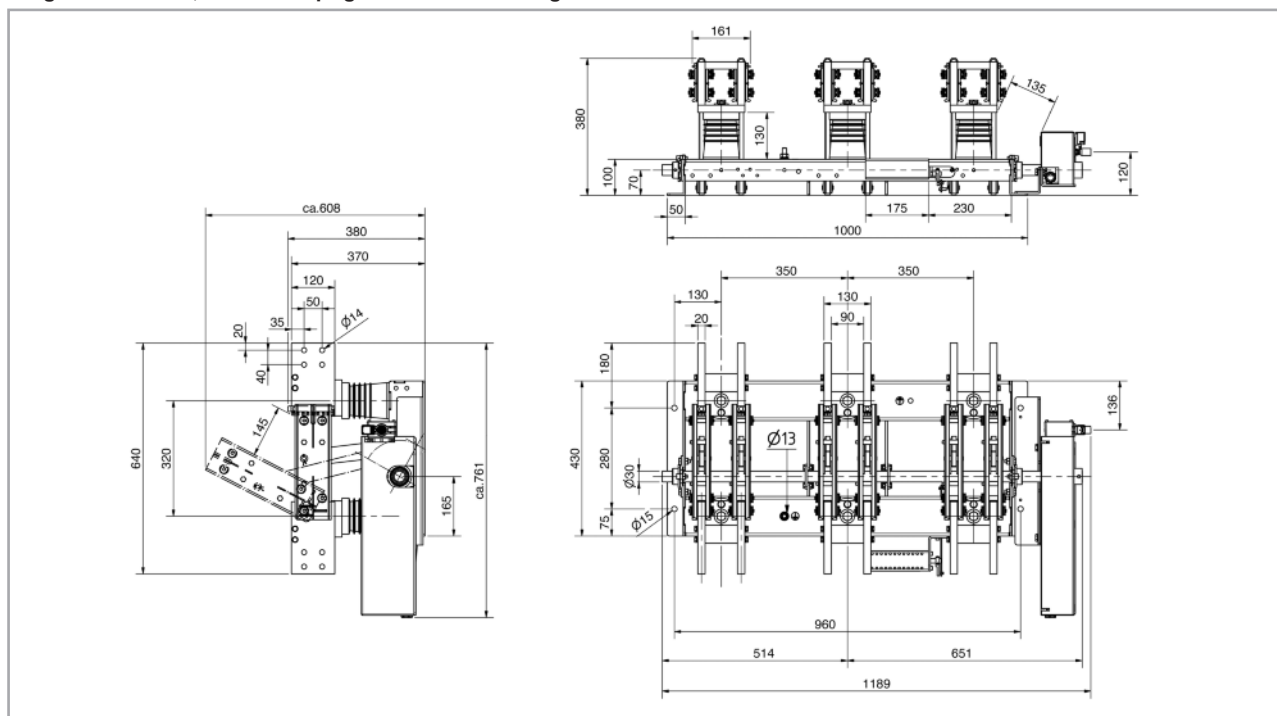


Diagram for ITr 17,5-6300-50 upright connection / Diagram number 115809



## DRIESCHER – 3-pole indoor disconnecter

**ITr 17,5-...-... ; (Ur 17,5 kV, Ir 6300 A)**

Diagram for ITr 17,5-6300-63 upright connection / Diagram number 115678

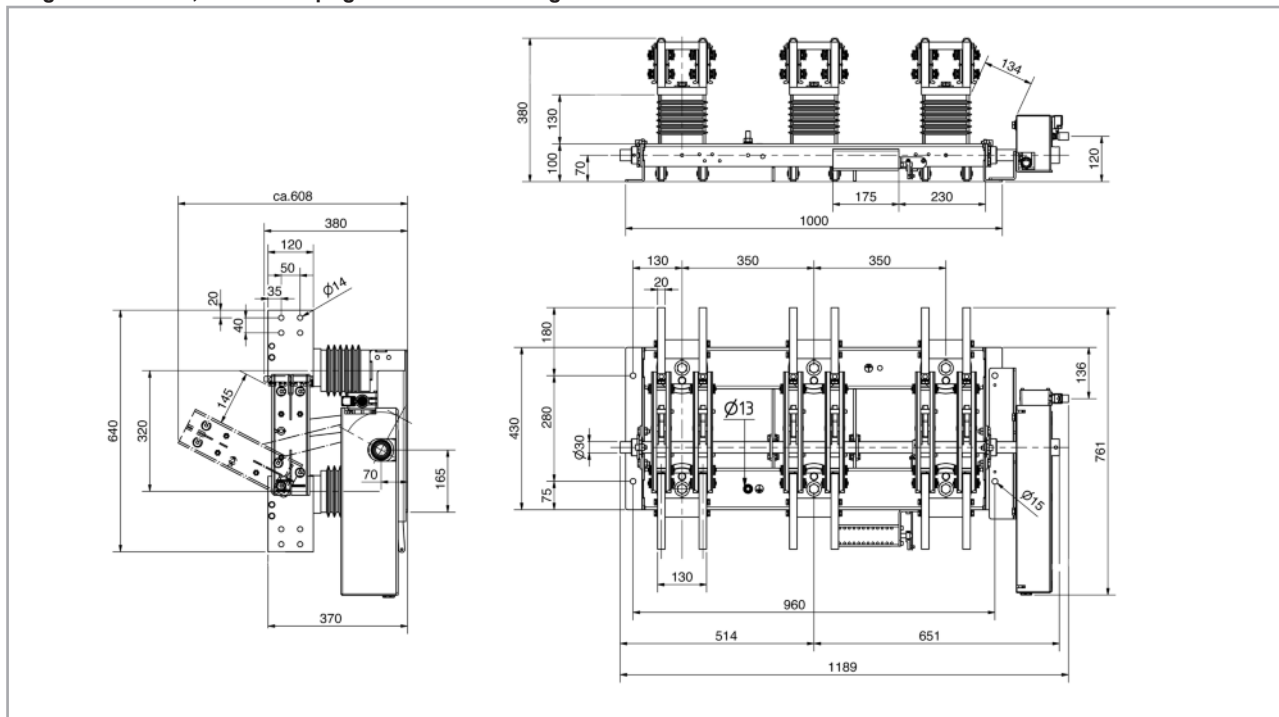
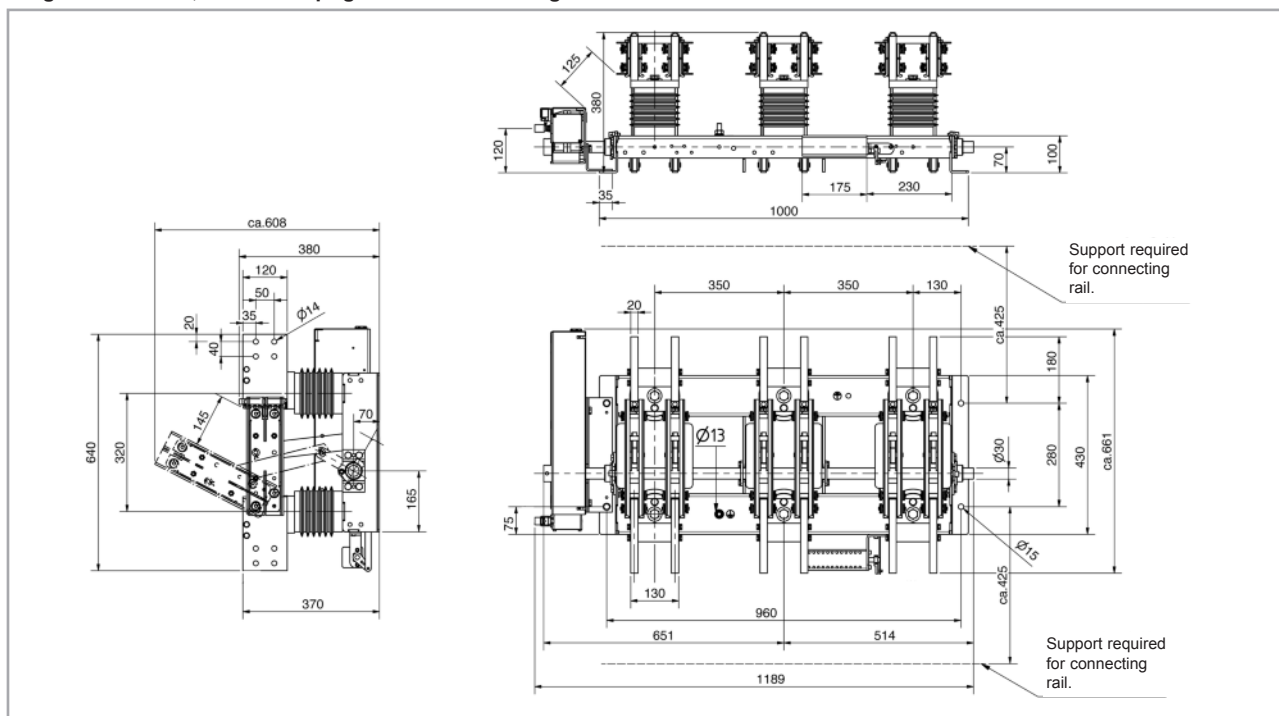


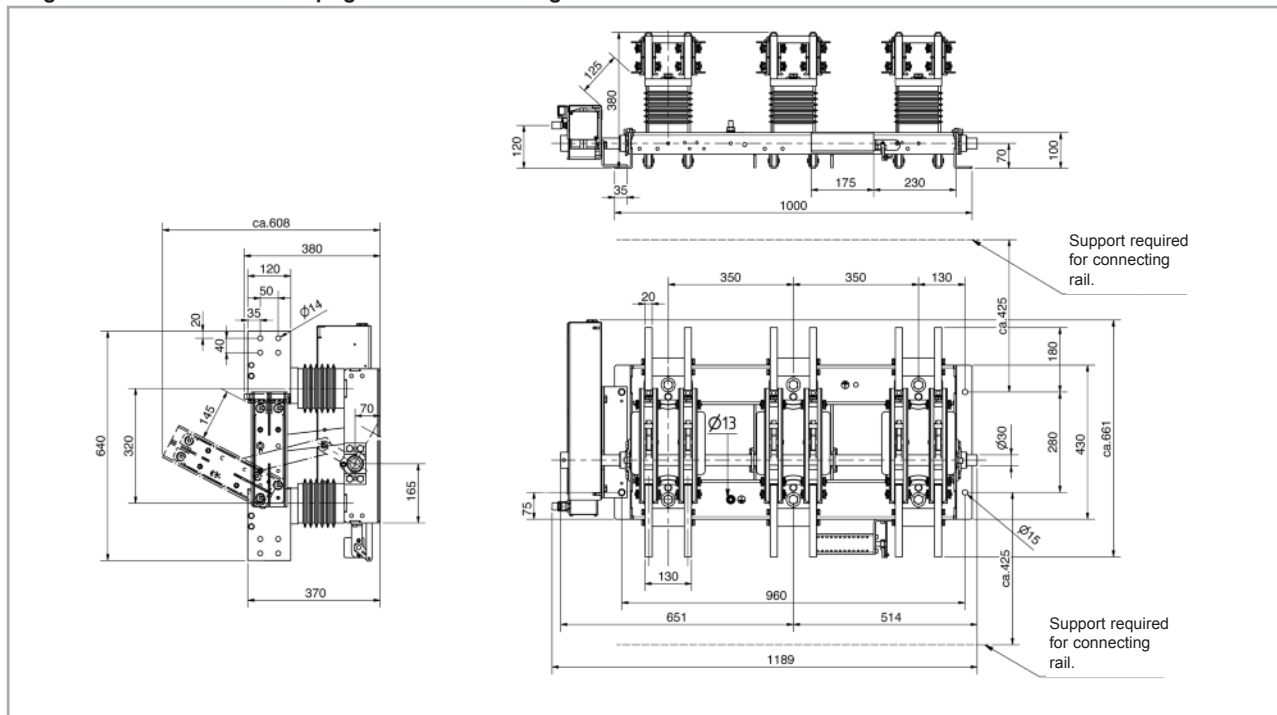
Diagram for ITr 17,5-6300-72 upright connection / Diagram number 117949



## DRIESCHER – 3-pole indoor disconnecter

**ITr 17.5-...-... ; (Ur 17.5 kV, Ir 6300 A)**

Diagram for ITr 17.5-6300-80 upright connection / Diagram number 117956



## DRIESCHER – 3-pole indoor disconnecter

### ITr 24-...-... ; (Ur 24 kV, Ir 630 - 6300 A) with flat connection

| Switch type                                            |       | ITr 24-630-20 | ITr 24-800-25 | ITr 24-1600-31,5 | ITr 24-1600-40 |
|--------------------------------------------------------|-------|---------------|---------------|------------------|----------------|
| Rated voltage                                          | $U_r$ | 24 kV         | 24 kV         | 24 kV            | 24 kV          |
| Rated frequency                                        | $f_r$ | 50/60 Hz      | 50/60 Hz      | 50/60 Hz         | 50/60 Hz       |
| Rated current                                          | $I_r$ | 630 A         | 800 A         | 1600 A           | 1600 A         |
| Rated short-time withstand current                     | $I_k$ | 20 kA         | 25 kA         | 31,5 kA          | 40 kA          |
| Rated short-circuit duration                           | $t_k$ | 3 s           | 1 s           | 3 s              | 1 s            |
| Rated peak withstand current                           | $I_p$ | 50 kA         | 63 kA         | 80 kA            | 100 kA         |
| Rated lightning impulse withstand voltage              | $U_p$ |               |               |                  |                |
| - phase to earth                                       |       | 125 kV        | 125 kV        | 125 kV           | 125 kV         |
| - via the isolating distance                           |       | 145 kV        | 145 kV        | 145 kV           | 145 kV         |
| Rated power frequency withstand voltage                | $U_d$ |               |               |                  |                |
| - phase to earth                                       |       | 50 kV         | 50 kV         | 50 kV            | 50 kV          |
| - via the isolating distance                           |       | 60 kV         | 60 kV         | 60 kV            | 60 kV          |
| Mechanical service life                                |       | M2            | M2            | M2               | M2             |
| Motor drive                                            |       | Optional      | Optional      | Optional         | Optional       |
| Optional Earthing switch                               |       | ES 24-20      | ES 24-31,5    | ES 24-31,5       | ES 24-31,5     |
| Weight (approx.)                                       |       | 31 kg         | 35 kg         | 50 kg            | 55 kg          |
| Diagram number for disconnectors with flat connections |       | 099825        | 112623        | 099847           | 112624         |
| Phase spacing p, mm                                    |       | 245/275       | 275           | 275              | 275            |

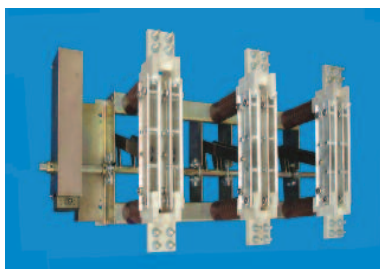


Fig.: ITr 24-4000-50

#### Accessories:

- Motor drive (UM10 and UM50)
- Auxiliary switch and earthing switch
- Mechanical interlocking device



Fig.: ITr 24-630-20

| Switch type                                            |       | ITr 24-2500-40 | ITr 24-2500-50 | ITr 24-4000-50 | ITr 24-6300-63 |
|--------------------------------------------------------|-------|----------------|----------------|----------------|----------------|
| Rated voltage                                          | $U_r$ | 24 kV          | 24 kV          | 24 kV          | 24 kV          |
| Rated frequency                                        | $f_r$ | 50/60 Hz       | 50/60 Hz       | 50/60 Hz       | 50/60 Hz       |
| Rated current                                          | $I_r$ | 2500 A         | 2500 A         | 4000 A         | 6300 A         |
| Rated short-time withstand current                     | $I_k$ | 40 kA          | 50 kA          | 50 kA          | 63 kA          |
| Rated short-circuit duration                           | $t_k$ | 3 s            | 1 s            | 3 s            | 1s / 3s        |
| Rated peak withstand current                           | $I_p$ | 100 kA         | 125 kA         | 125 kA         | 160 kA         |
| Rated lightning impulse withstand voltage              | $U_p$ |                |                |                |                |
| - phase to earth                                       |       | 125 kV         | 125 kV         | 125 kV         | 125 kV         |
| - via the isolating distance                           |       | 145 kV         | 145 kV         | 145 kV         | 145 kV         |
| Rated power frequency withstand voltage                | $U_d$ |                |                |                |                |
| - phase to earth                                       |       | 50 kV          | 50 kV          | 50 kV          | 50 kV          |
| - via the isolating distance                           |       | 60 kV          | 60 kV          | 60 kV          | 60 kV          |
| Mechanical service life                                |       | M1             | M1             | M1             | M1             |
| Motor drive                                            |       | Optional       | Optional       | standard UM10  | standard UM10  |
| Optional Earthing switch                               |       | ES 24-31,5     | ES 24-31,5     | ES 24-31,5     | ES 24-31,5     |
| Weight (approx.)                                       |       | 75 kg          | 85 kg          | 142 kg         | 210 kg         |
| Diagram number for disconnectors with flat connections |       | 100812         | 117088         | 115630         | 117673         |
| Phase spacing p, mm                                    |       | 275            | 275            | 400            | 350            |

## DRIESCHER – 3-pole indoor disconnecter

**ITr 24-...-... ; (Ur 24 kV, Ir 630 and 800 A) with flat connection**

Diagram for ITr 24-630-20 / Diagram number 099825

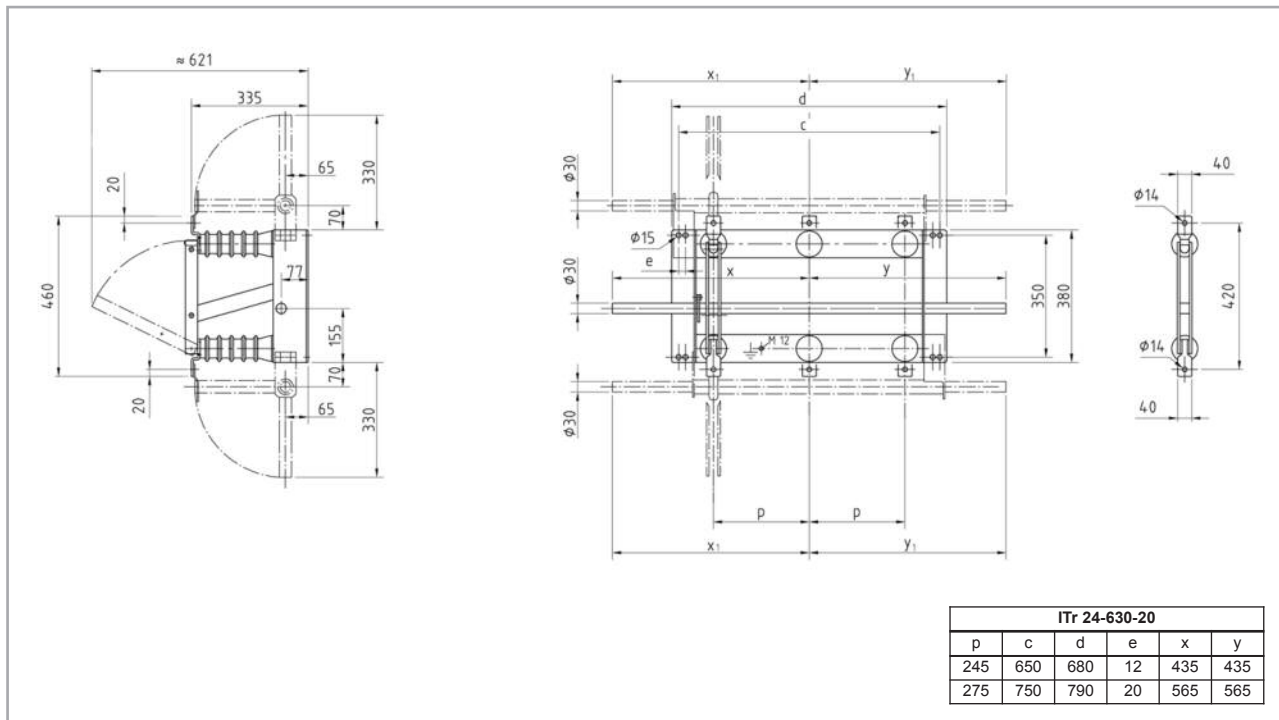
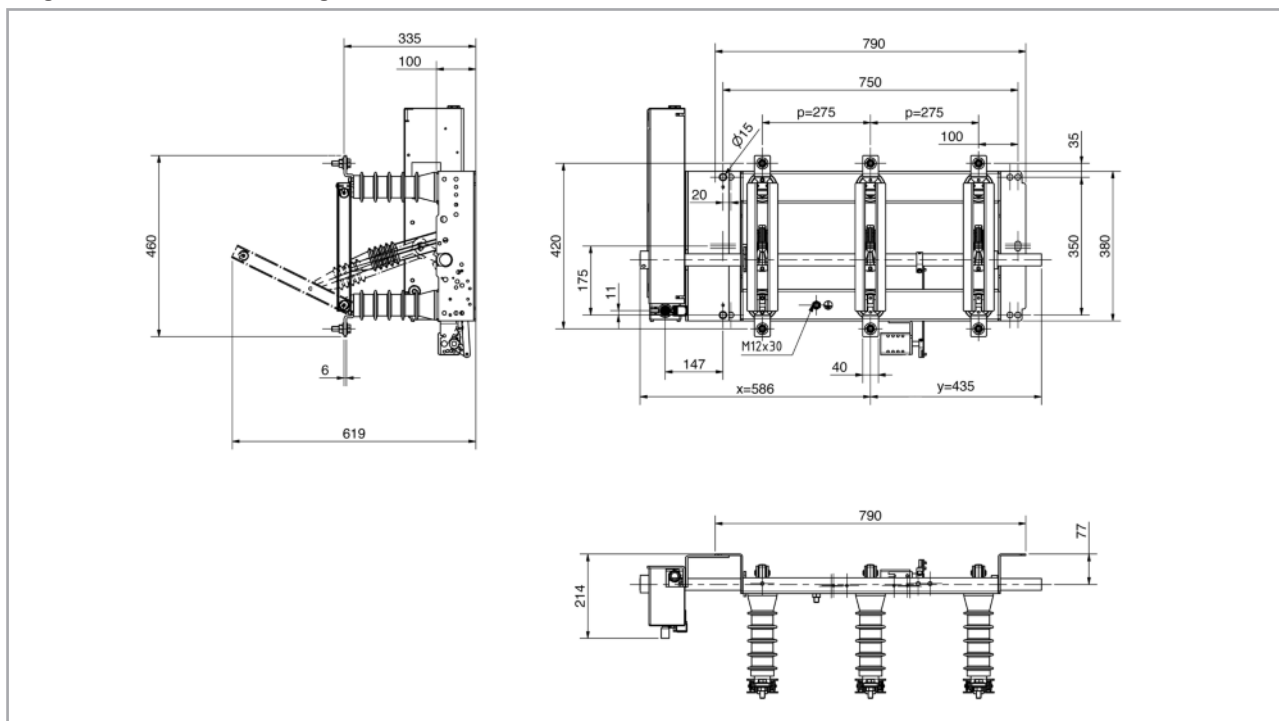


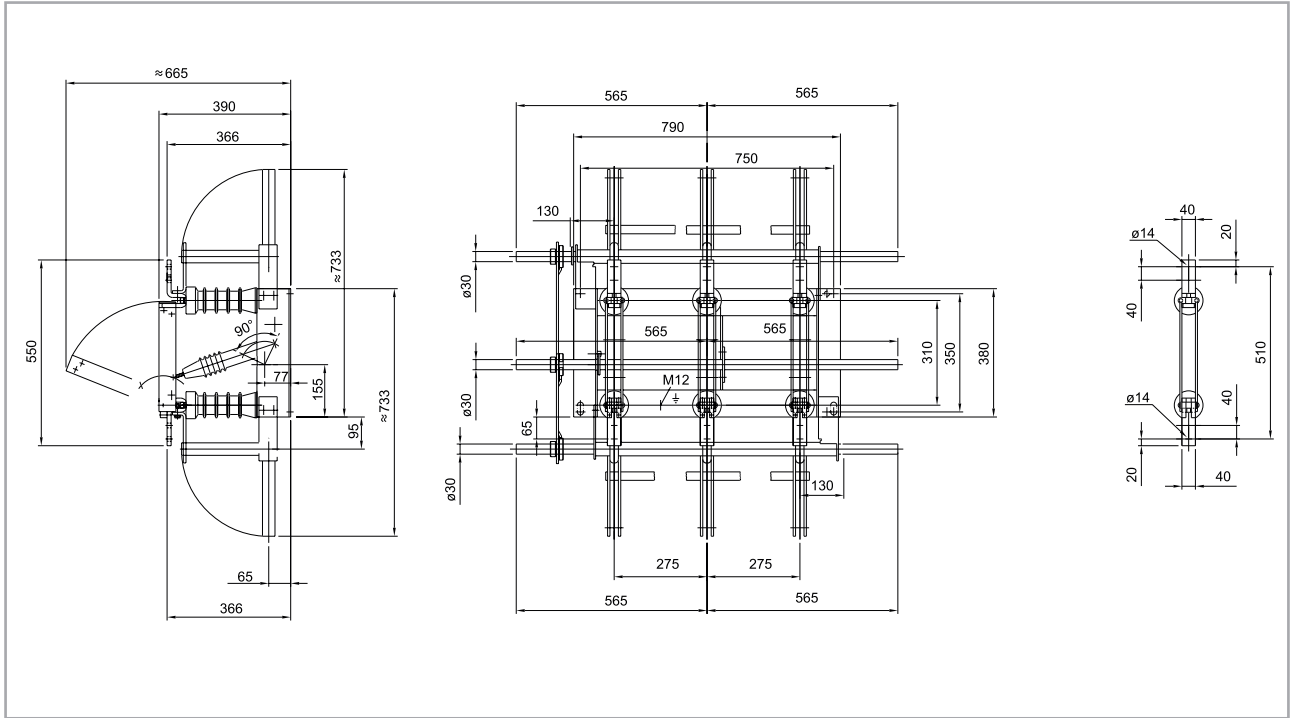
Diagram for ITr 24-800-25 / Diagram number 112623



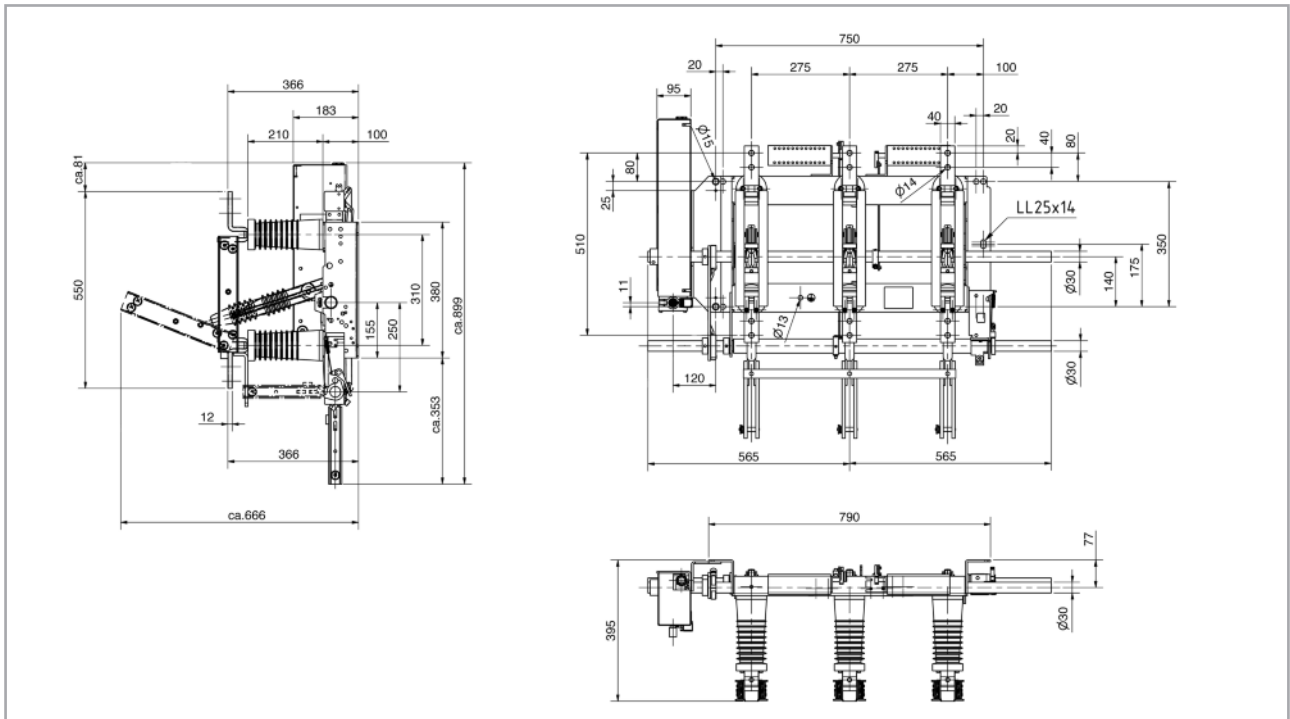
## DRIESCHER – 3-pole indoor disconnecter

**ITr 24-...-... ; (Ur 24 kV, Ir 1600 A) with flat connection**

**Diagram for ITr 24-1600-31,5 / Diagram number 099847**



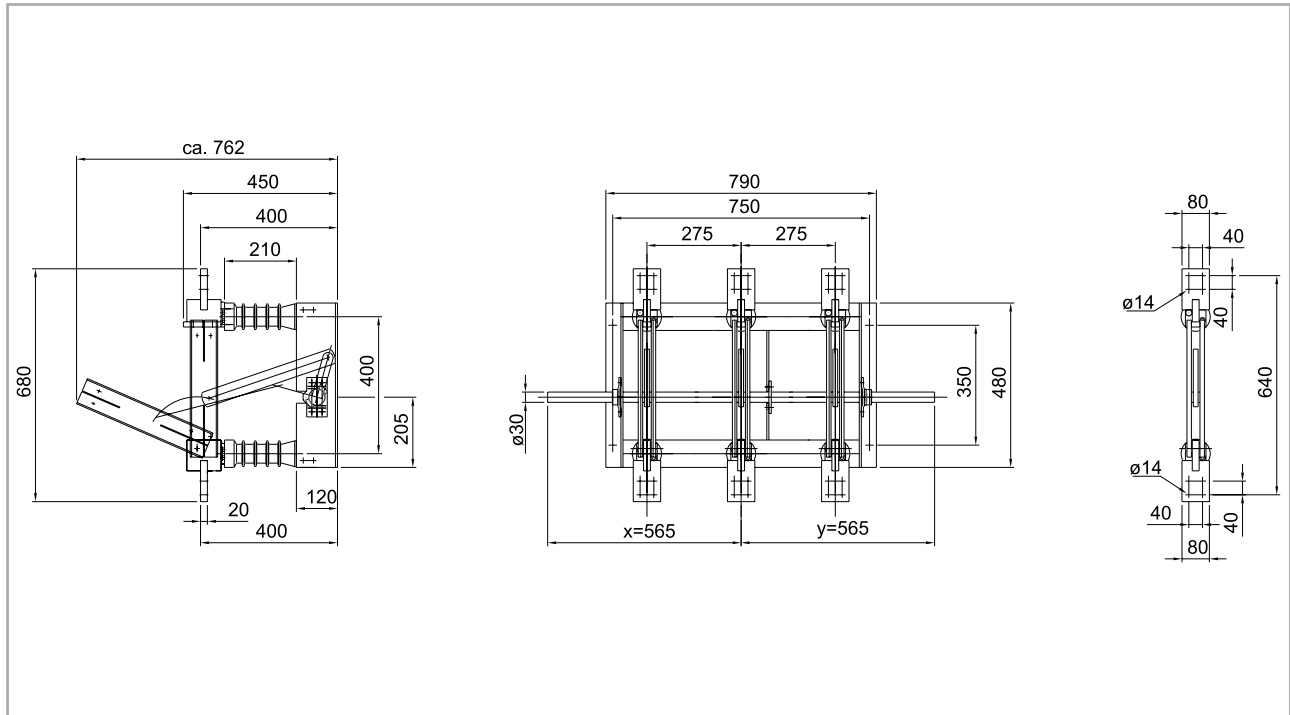
**Diagram for ITr 24-1600-40 / Diagram number 112624**



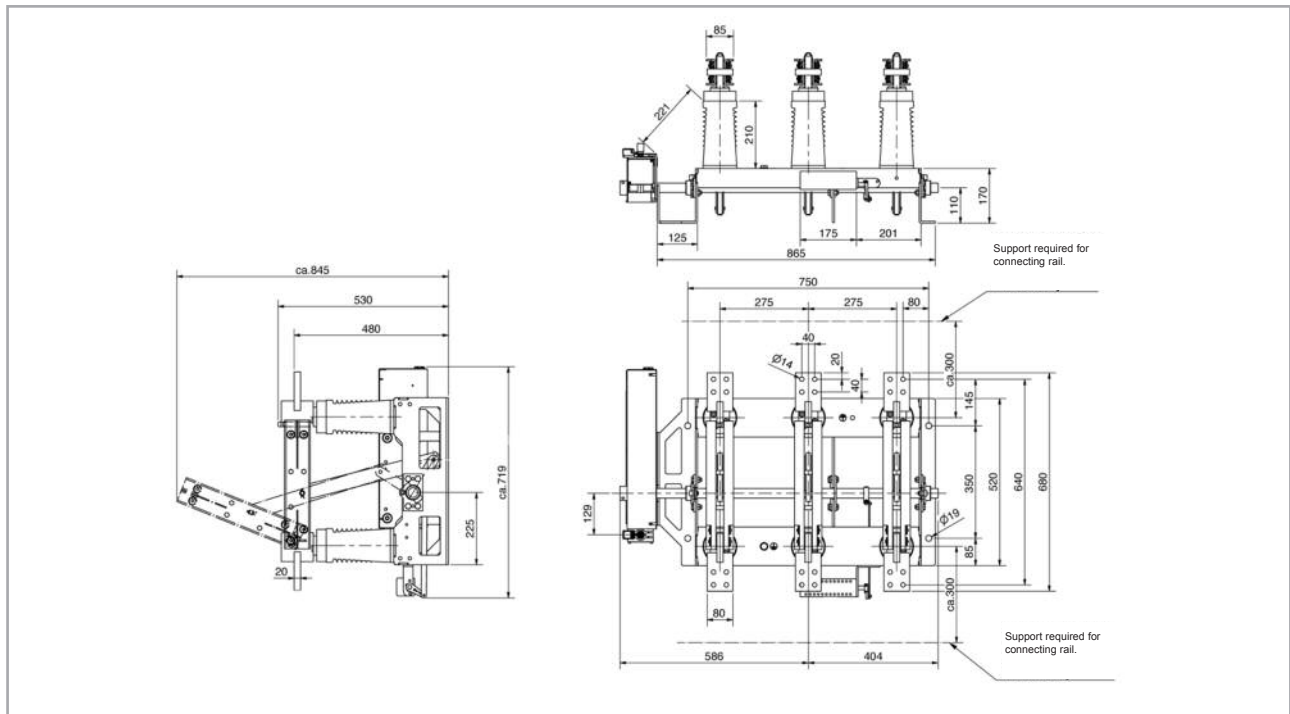
## DRIESCHER – 3-pole indoor disconnect

ITr 24-...-... ; (Ur 24 kV, Ir 2500 A) with flat connection

**Diagram for ITr 24-2500-40 / Diagram number 100812**



**Diagram for ITr 24-2500-50 / Diagram number 117088**



## DRIESCHER – 3-pole indoor disconnecter

**ITr 24-...-... ; (Ur 24 kV, Ir 4000 and 6300 A) with flat connection**

Diagram for ITr 24-4000-50 / Diagram number 115630

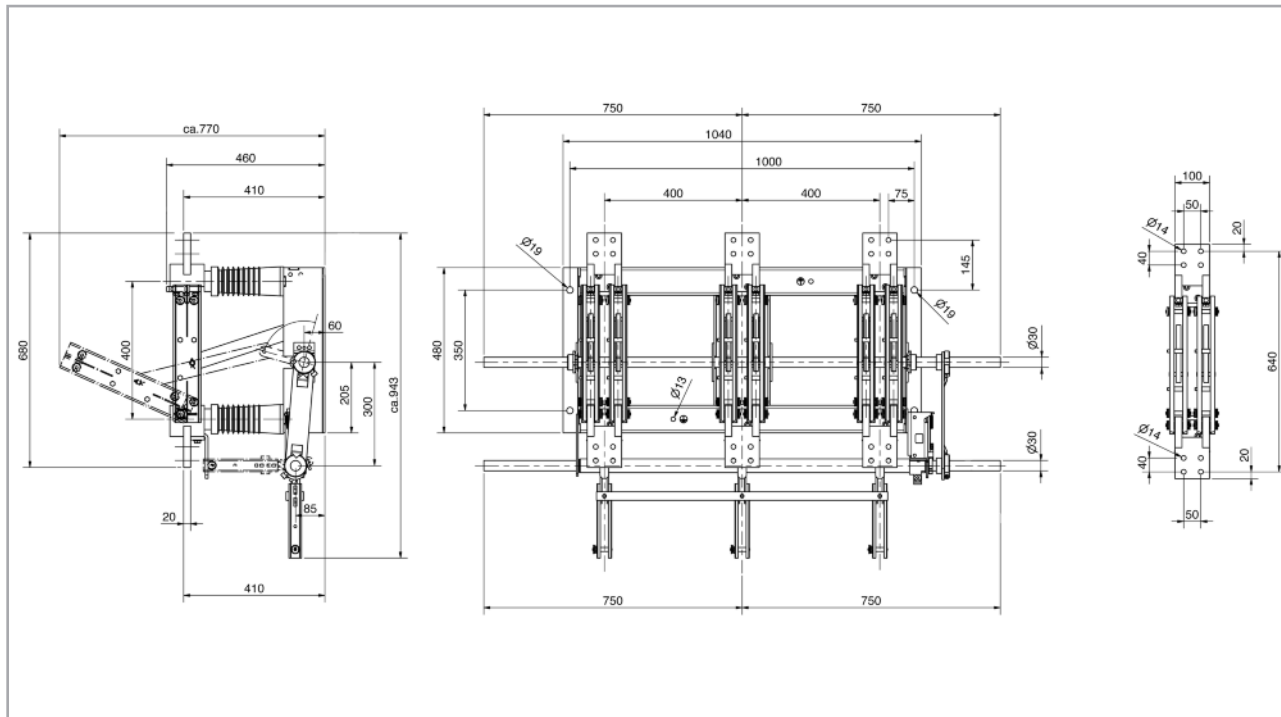
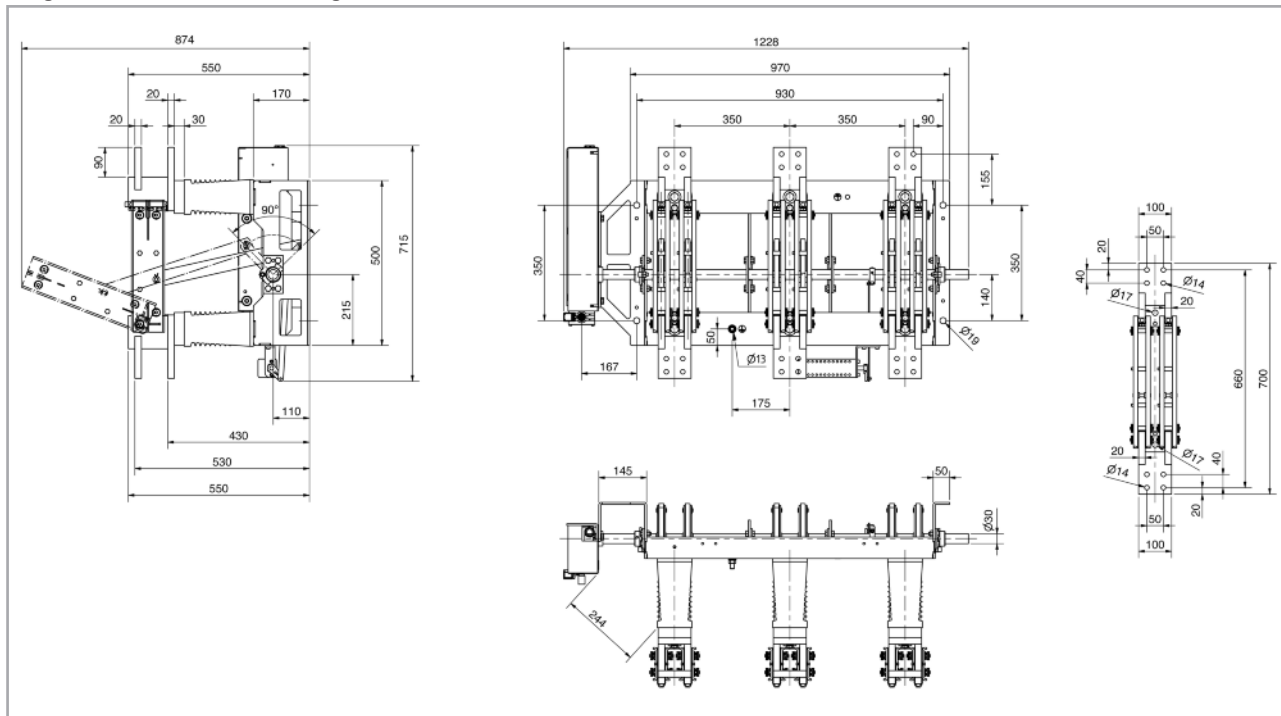


Diagram for ITr 24-6300-63 / Diagram number 117673



## DRIESCHER – 3-pole indoor disconnecter

### ITr 24-...-... ; (Ur 24 kV, Ir 4000 A and 6300 A) with upright connection

| Switch type                                               |       | ITr 24-4000-50 | ITr 24-4000-63 | ITr 24-4000-72 |
|-----------------------------------------------------------|-------|----------------|----------------|----------------|
| Rated voltage                                             | $U_r$ | 24 kV          | 24 kV          | 24 kV          |
| Rated frequency                                           | $f_r$ | 50/60 Hz       | 50/60 Hz       | 50/60 Hz       |
| Rated current                                             | $I_r$ | 4000 A         | 4000 A         | 4000 A         |
| Rated short-time withstand current                        | $I_k$ | 50 kA          | 63 kA          | 72 kA          |
| Rated short-circuit duration                              | $t_k$ | 3 s            | 1 s / 3 s      | 1 s            |
| Rated peak withstand current                              | $I_p$ | 137 kA         | 173 kA         | 198 kA         |
| Rated lightning impulse withstand voltage                 | $U_p$ |                |                |                |
| - phase to earth                                          |       | 125 kV         | 125 kV         | 125 kV         |
| - via the isolating distance                              |       | 145 kV         | 145 kV         | 145 kV         |
| Rated power frequency withstand voltage                   | $U_d$ |                |                |                |
| - phase to earth                                          |       | 50 kV          | 50 kV          | 50 kV          |
| - via the isolating distance                              |       | 60 kV          | 60 kV          | 60 kV          |
| Mechanical service life                                   |       | M1             | M1             | M1             |
| Motor drive                                               |       | standard UM10  | standard UM10  | standard UM10  |
| Weight (approx.)                                          |       | 130 kg         | 150 kg         | 150 kg         |
| Diagram number for disconnectors with upright connections |       | 117196         | 117246         | 117948         |
| Phase spacing p, mm                                       |       | 350            | 350            | 350            |

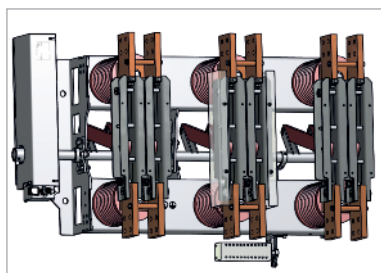


Fig.: ITr 24-4000-50  
with upright connection

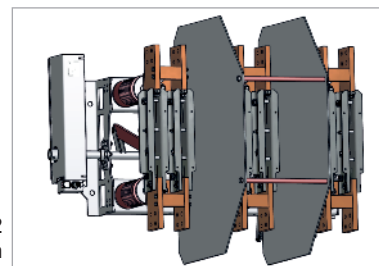


Fig.: ITr 24-6300-72  
with upright connection

| Switch type                                               |       | ITr 24-6300-50 | ITr 24-6300-63 | ITr 24-6300-72 |
|-----------------------------------------------------------|-------|----------------|----------------|----------------|
| Rated voltage                                             | $U_r$ | 24 kV          | 24 kV          | 24 kV          |
| Rated frequency                                           | $f_r$ | 50/60 Hz       | 50/60 Hz       | 50/60 Hz       |
| Rated current                                             | $I_r$ | 6300 A         | 6300 A         | 6300 A         |
| Rated short-time withstand current                        | $I_k$ | 50 kA          | 63 kA          | 72 kA          |
| Rated short-circuit duration                              | $t_k$ | 3 s            | 1 s / 3 s      | 1 s            |
| Rated peak withstand current                              | $I_p$ | 137 kA         | 164 kA         | 197 kA         |
| Rated lightning impulse withstand voltage                 | $U_p$ |                |                |                |
| - phase to earth                                          |       | 125 kV         | 125 kV         | 125 kV         |
| - via the isolating distance                              |       | 145 kV         | 145 kV         | 145 kV         |
| Rated power frequency withstand voltage                   | $U_d$ |                |                |                |
| - phase to earth                                          |       | 38 kV          | 38 kV          | 38 kV          |
| - via the isolating distance                              |       | 45 kV          | 45 kV          | 45 kV          |
| Mechanical service life                                   |       | M1             | M1             | M1             |
| Motor drive                                               |       | standard UM10  | standard UM10  | standard UM10  |
| Weight (approx.)                                          |       | 190 kg         | 230 kg         | 230 kg         |
| Diagram number for disconnectors with upright connections |       | 117958         | 117985         | 117986         |
| Phase spacing p, mm                                       |       | 350            | 350            | 350            |

## DRIESCHER – 3-pole indoor disconnecter

**ITr 24-...-... ; (Ur 24 kV, Ir 4000 A) with upright connection**

Diagram for ITr 24-4000-50 upright connection / Diagram number 117196

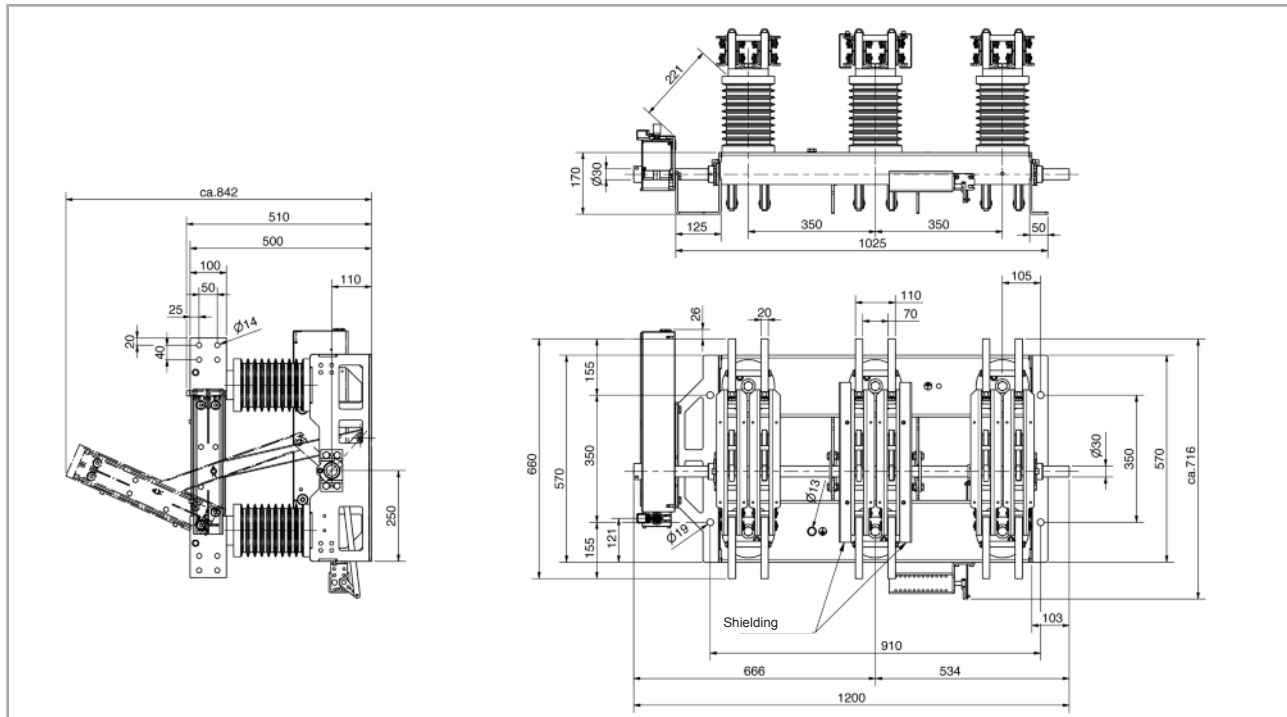
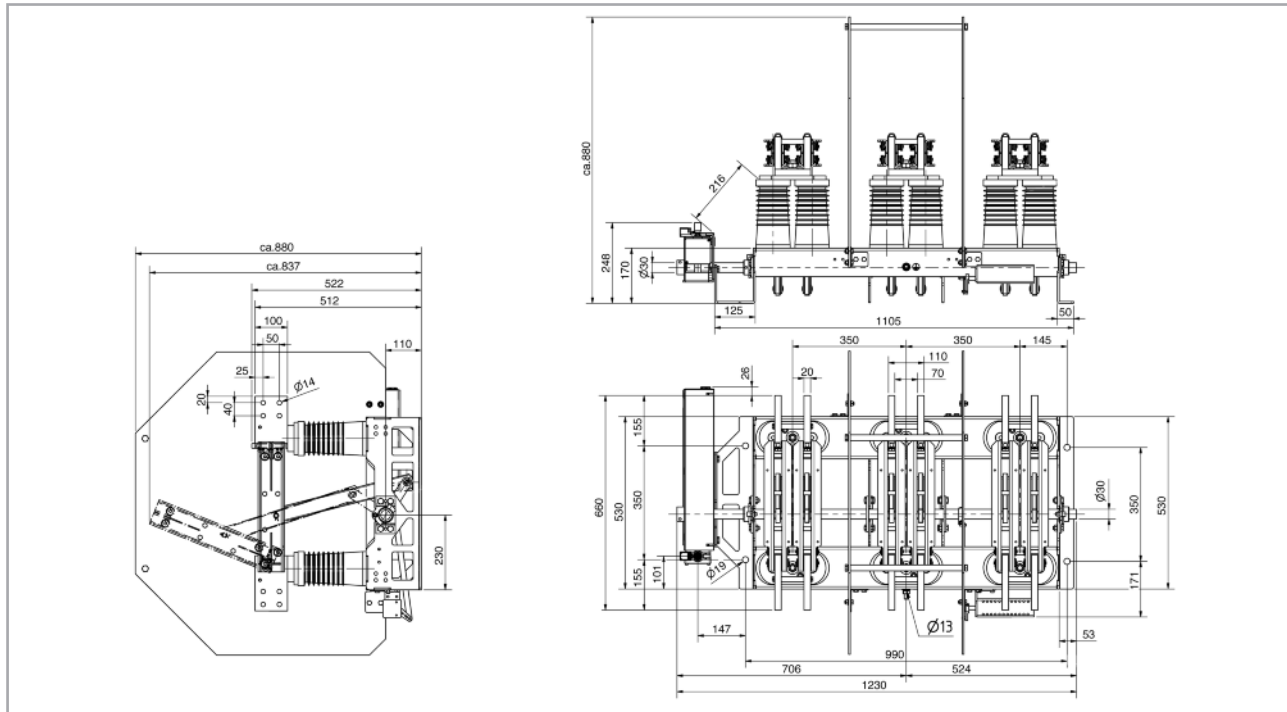


Diagram for ITr 24-4000-63 upright connection / Diagram number 117246

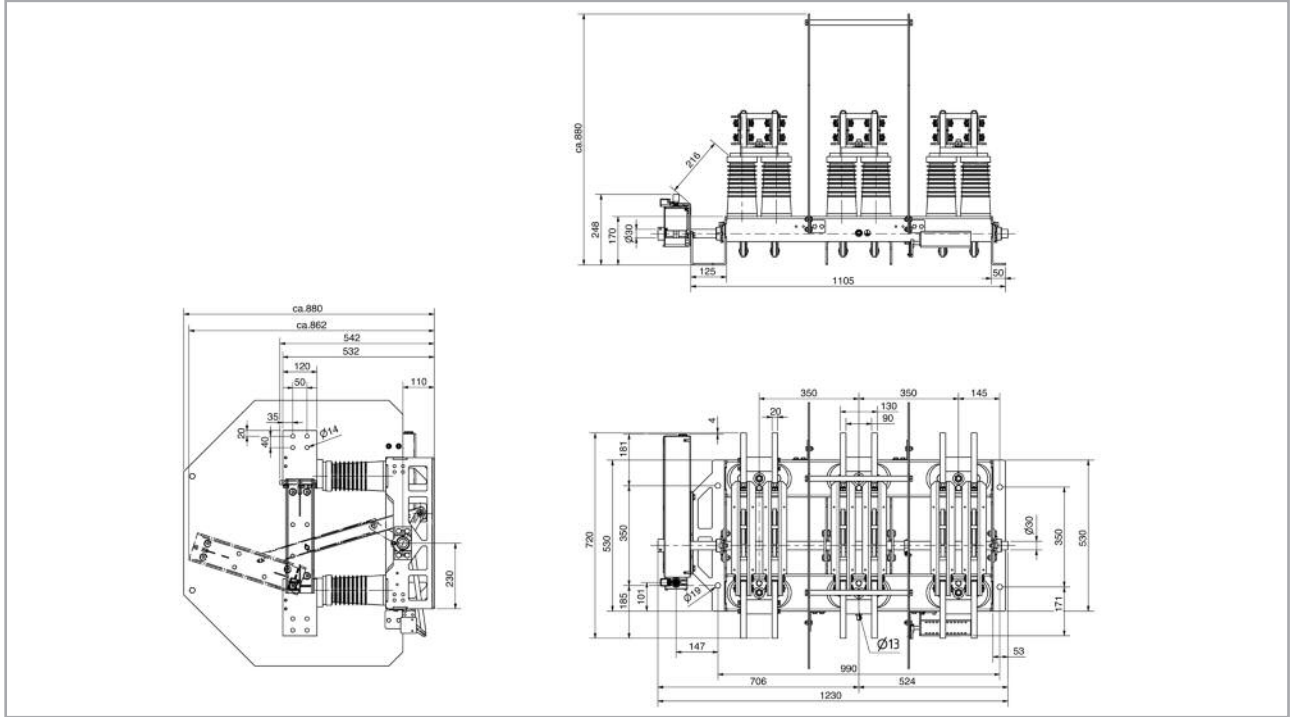




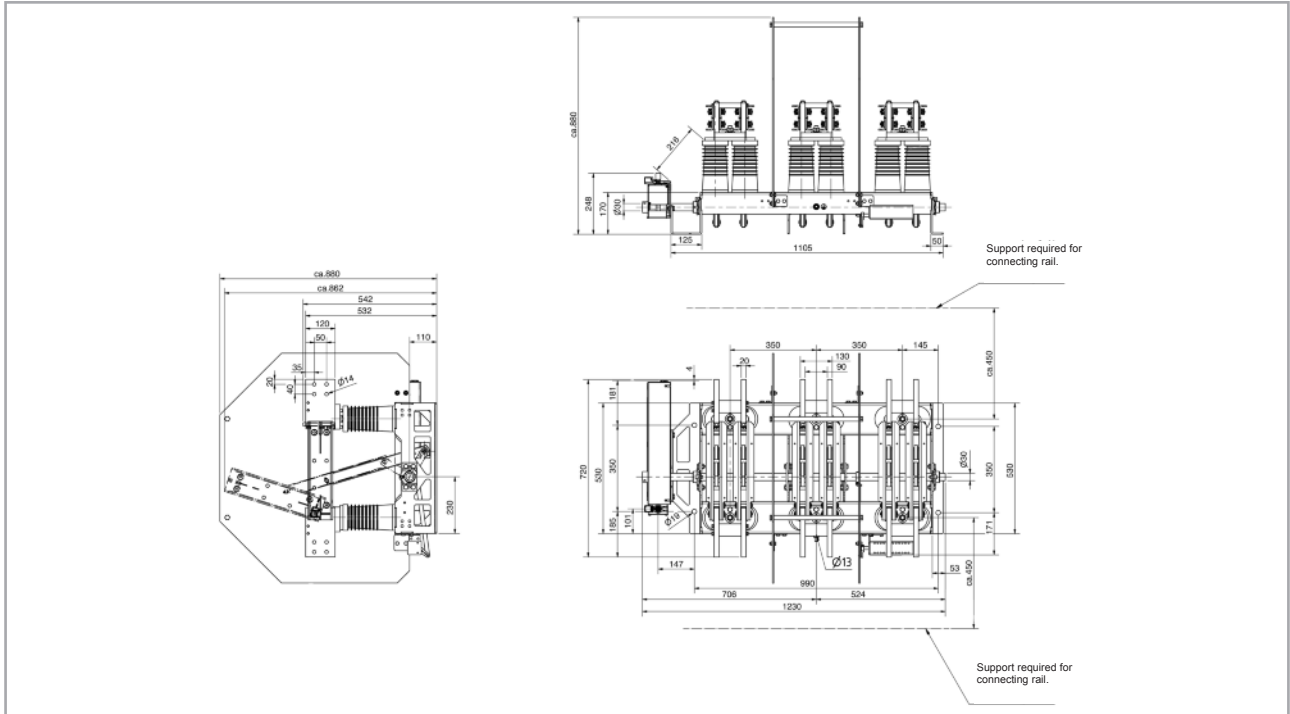
## DRIESCHER – 3-pole indoor disconnecter

**ITr 24-...-... ; (Ur 24 kV, Ir 6300 A) with upright connection**

**Diagram for ITr 24-6300-63 upright connection / Diagram number 117985**



**Diagram for ITr 24-6300-72 upright connection / Diagram number 117986**





## DRIESCHER – 3-pole indoor disconnecter

**ITr 36-...-... ; (Ur 36 kV, Ir 1600 A and 2500 A)**

Diagram for ITr 36-1600-40 / Diagram number 102811

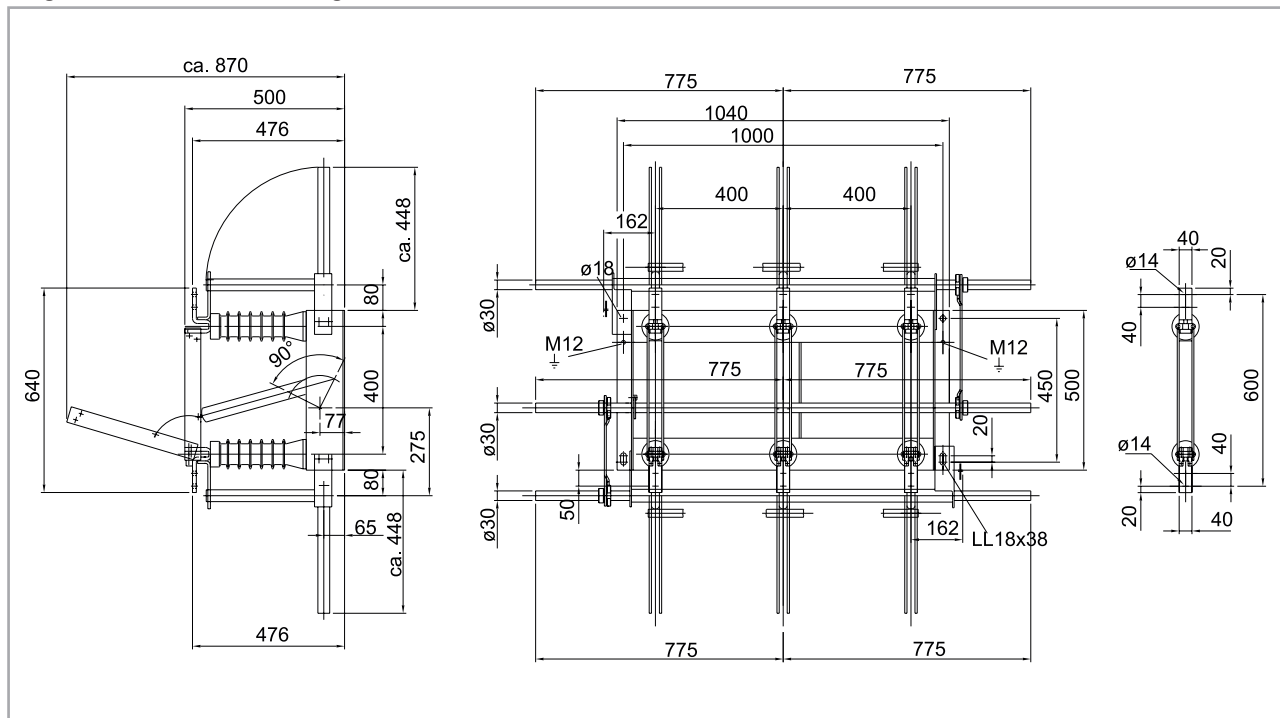
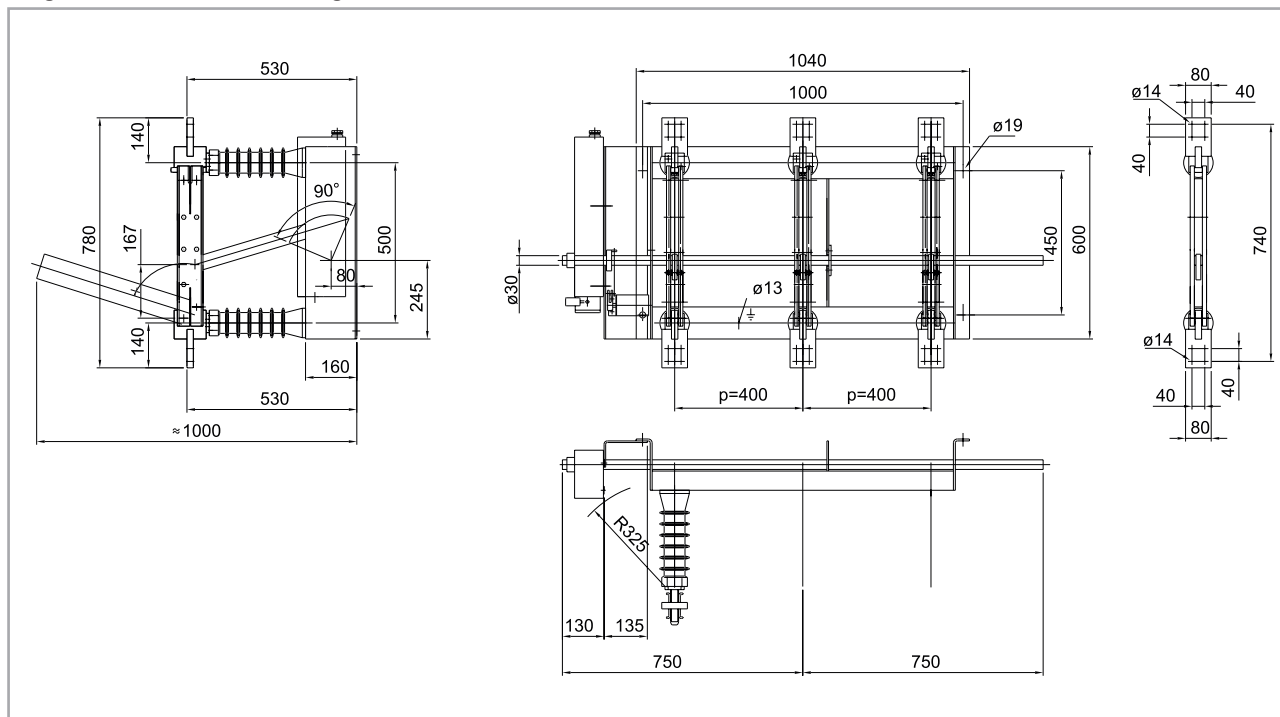


Diagram for ITr 36-2500-50 / Diagram number 101187



## DRIESCHER – 3-pole indoor disconnecter

### ITr 36/38,5-...-... ; (Ur 38,5 kV)

| Switch type                               |       | ITr 38,5-630-20 | ITr 38,5-1600-40 | ITr 36-2500-50 |
|-------------------------------------------|-------|-----------------|------------------|----------------|
| Rated voltage                             | $U_r$ | 38,5 kV         | 38,5 kV          | 38,5 kV        |
| Rated frequency                           | $f_r$ | 50 Hz           | 50 Hz            | 50 Hz          |
| Rated current                             | $I_r$ | 630 A           | 1600 A           | 2500 A         |
| Rated short-time withstand current        | $I_k$ | 20 kA           | 40 kA            | 50 kA          |
| Rated short-circuit duration              | $t_k$ | 3 s             | 3 s              | 3 s            |
| Rated peak withstand current              | $I_p$ | 50 kA           | 100 kA           | 125 kA         |
| Rated lightning impulse withstand voltage | $U_p$ |                 |                  |                |
| - phase to earth                          |       | 180 kV          | 180 kV           | 180 kV         |
| - via the isolating distance              |       | 210 kV          | 210 kV           | 210 kV         |
| Rated power frequency withstand voltage   | $U_d$ |                 |                  |                |
| - phase to earth                          |       | 80 kV           | 80 kV            | 80 kV          |
| - via the isolating distance              |       | 90 kV           | 90 kV            | 90 kV          |
| Diagram number                            |       | 099827          | 104596           | 110770         |
| Mechanical service life                   |       | M2              | M2               | M2             |
| Motor drive                               |       | Optional        | Optional         | Optional       |
| Optional Earthing switch                  |       | ES 38,5-20      | ES 38,5-31,5*    | ES 38,5-31,5*  |
| Weight (approx.)                          |       | 43 kg           | 66 kg            | 66 kg          |
| Phase spacing p, mm                       |       | 400             | 400              | 400            |

\*Short-circuit making current  $I_{ma}$  restricted to 50 kA.

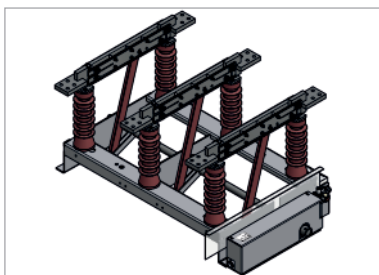
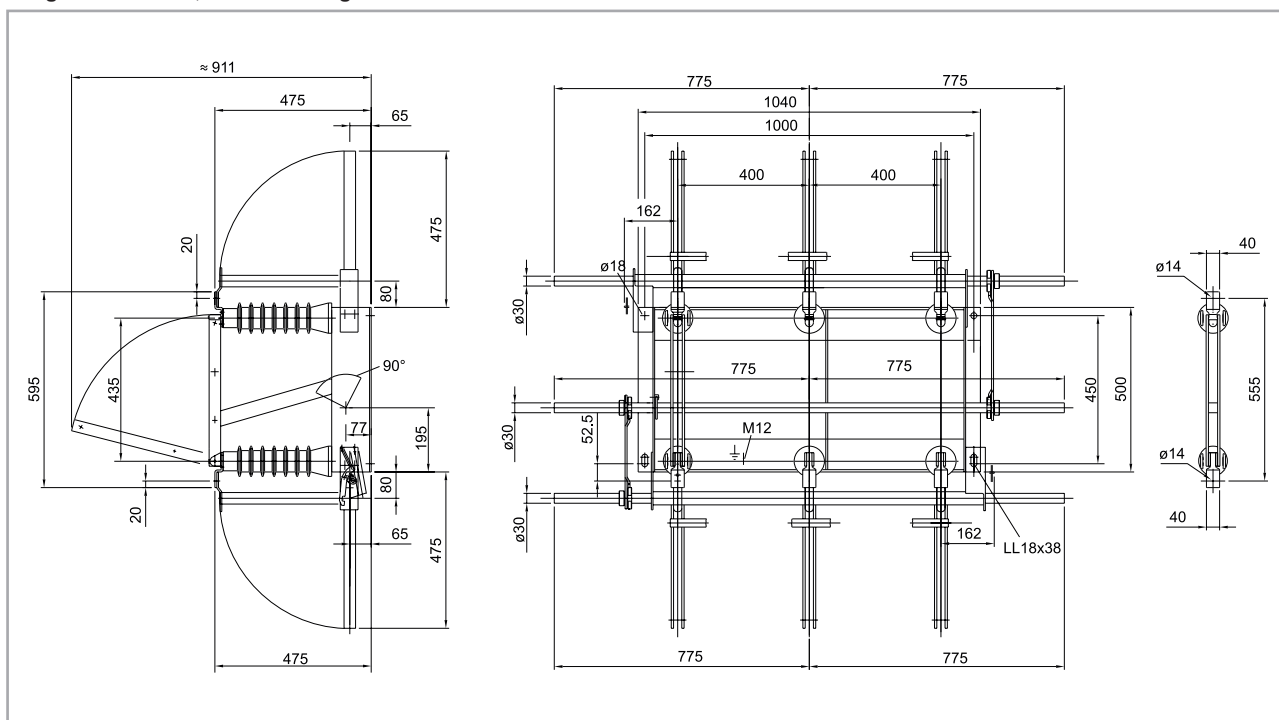


Fig.: ITr 38,5-1600-40

#### Accessories:

- Earthing switch
- Mechanical interlocking device
- Motor drive (UM 10 and UM 50)
- Auxiliary switch

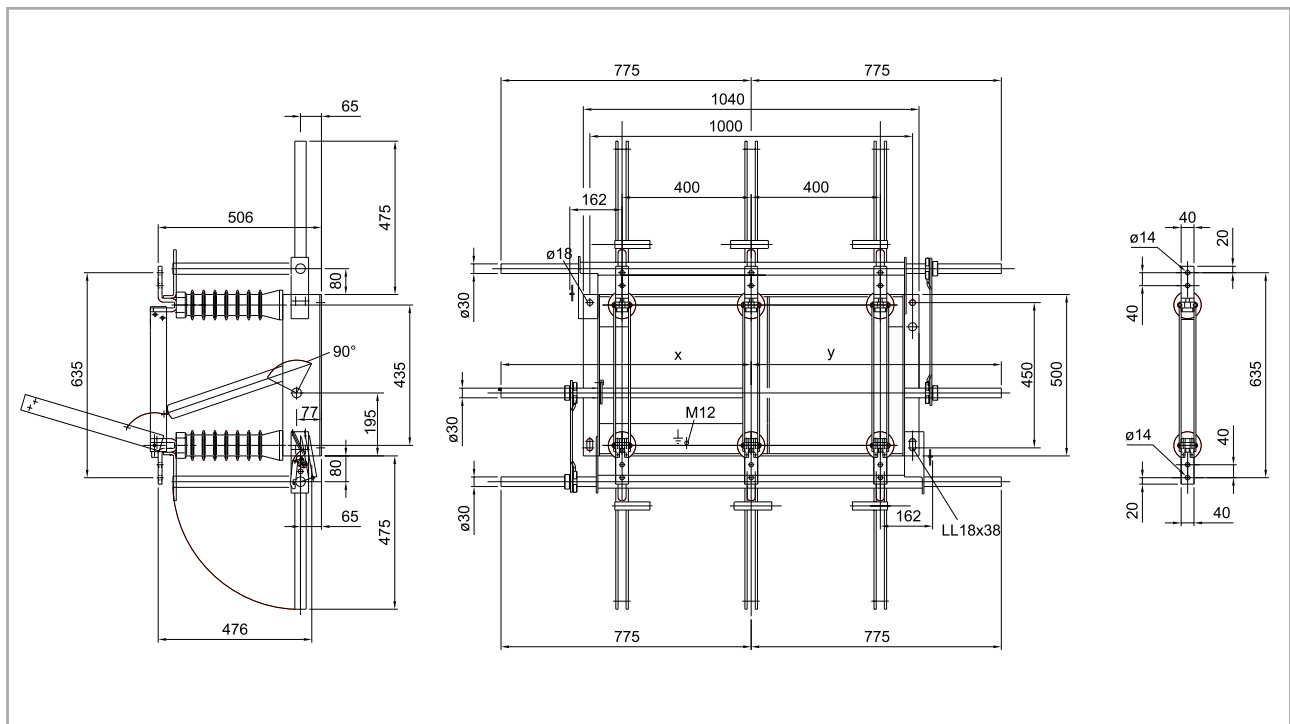
Diagram for ITr 38,5-630-20 / Diagram number 099827



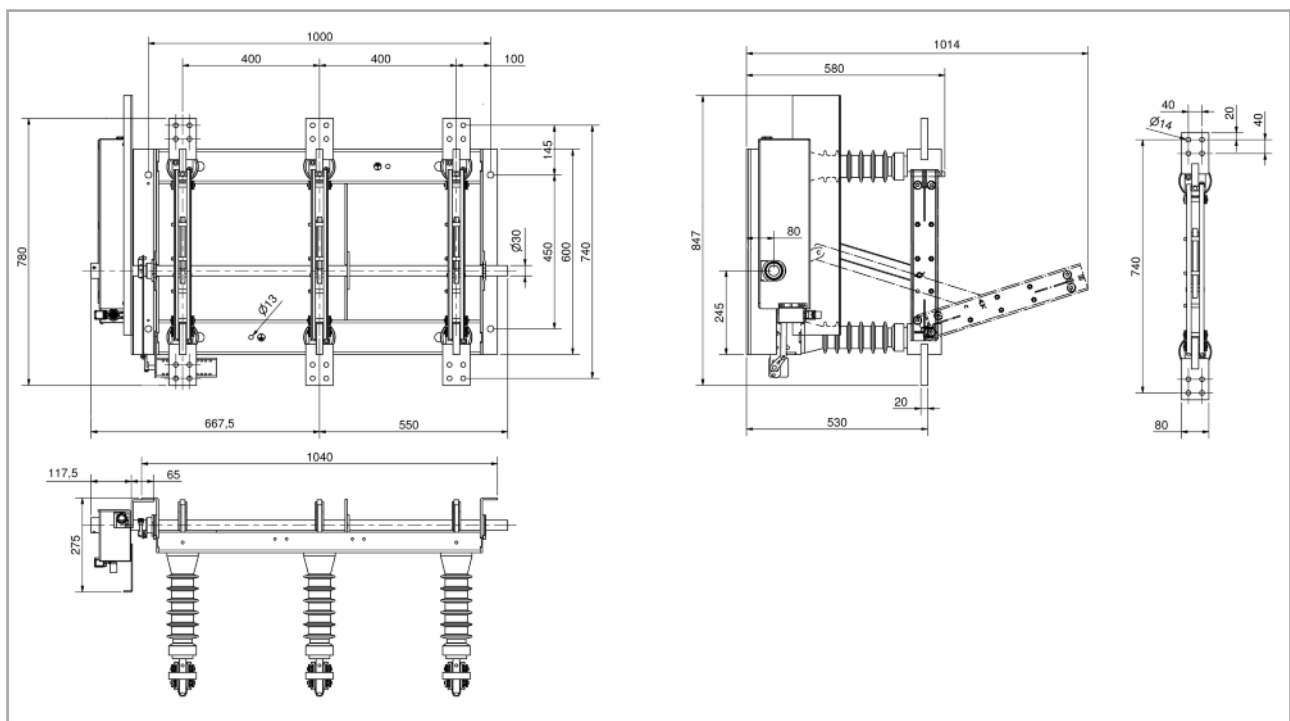
## DRIESCHER – 3-pole indoor disconnecter

ITr 38,5-...-... ; (Ur 38,5 kV)

**Diagram for ITr 38,5-1600-40 / Diagram number 104596**



**Diagram for ITr 36-2500-50 / Diagram number 110770**



## DRIESCHER – 3-pole indoor disconnecter

### ITr 36/38,5-...-... ; (Ur 40,5 kV)

| Switch type                               |       | ITr 38,5-1600-40 | ITr 38,5-2500-50 | ITr 36-4000-50 |
|-------------------------------------------|-------|------------------|------------------|----------------|
| Rated voltage                             | $U_r$ | 40,5 kV          | 40,5 kV          | 40,5 kV        |
| Rated frequency                           | $f_r$ | 50/60 Hz         | 50/60 Hz         | 50/60 Hz       |
| Rated current                             | $I_r$ | 1600 A           | 2500 A           | 4000 A         |
| Rated short-time withstand current        | $I_k$ | 40 kA            | 50 kA            | 50 kA          |
| Rated short-circuit duration              | $t_k$ | 3 s              | 3 s              | 3 s            |
| Rated peak withstand current              | $I_p$ | 100 kA           | 125 kA           | 125 kA         |
| Rated lightning impulse withstand voltage | $U_p$ |                  |                  |                |
| - phase to earth                          |       | 180 kV           | 180 kV           | 180 kV         |
| - via the isolating distance              |       | 210 kV           | 210 kV           | 210 kV         |
| Rated power frequency withstand voltage   | $U_d$ |                  |                  |                |
| - phase to earth                          |       | 80 kV            | 80 kV            | 80 kV          |
| - via the isolating distance              |       | 90 kV            | 90 kV            | 90 kV          |
| Diagram number                            |       | 108705           | 108367           | 113928         |
| Mechanical service life                   |       | M2               | M2               | M2             |
| Motor drive                               |       | Optional         | Optional         | standard UM10  |
| Optional Earthing switch                  |       | ES 38,5-31,5*    | ES 38,5-31,5*    | ES 38,5-31,5*  |
| Weight (approx.)                          |       | 75 kg            | 115 kg           | 175 kg         |
| Phase spacing p, mm                       |       | 400              | 500              | 500            |

\*Short-circuit making current  $I_{ma}$  restricted to 50 kA.

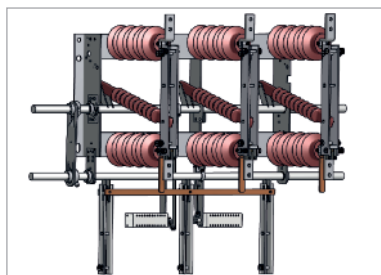
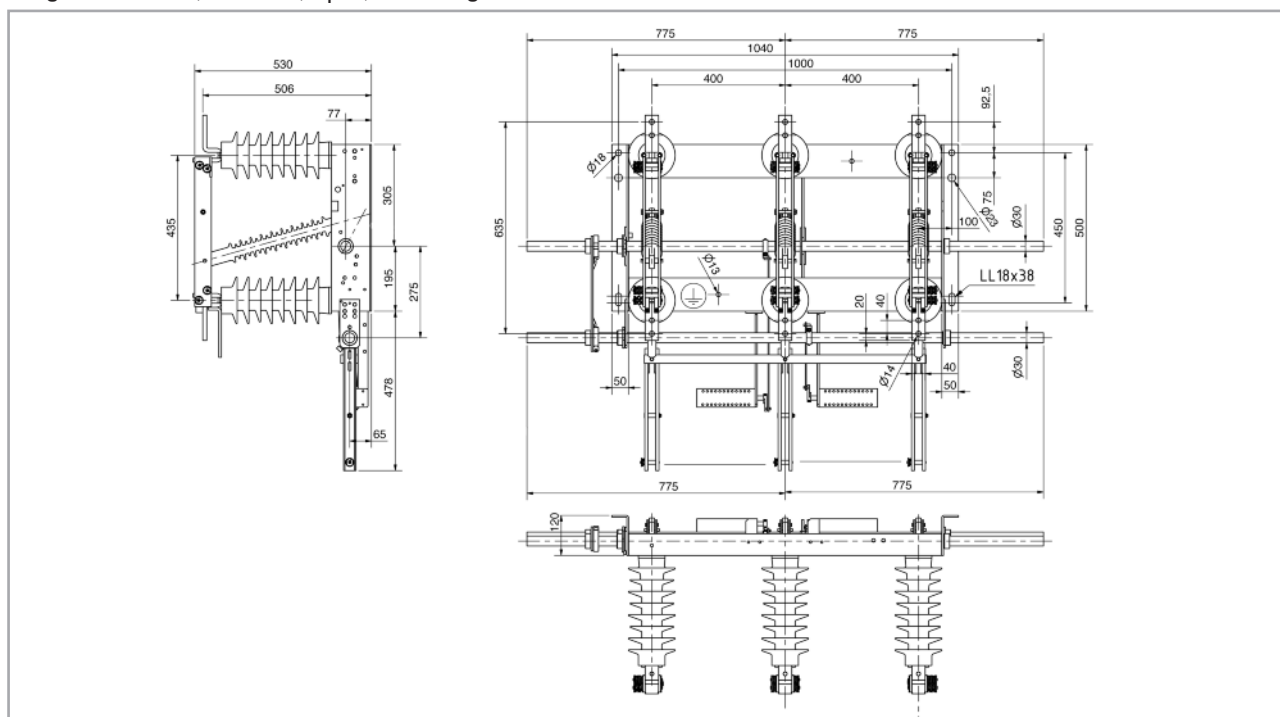


Fig.: ITr 38,5-1600-40

#### Accessories:

- Earthing switch
- Mechanical interlocking device
- Motor drive (UM 10)
- Auxiliary switch

Diagram for ITr 38,5-1600-40,  $U_r$  40,5 kV / Diagram number 108705



# DRIESCHER – 3-pole indoor disconnecter

**ITr 36/38,5-...-... ; (Ur 40,5 kV)**

Diagram for ITr 38,5-2500-50, U<sub>r</sub> 40,5 kV / Diagram number 108367

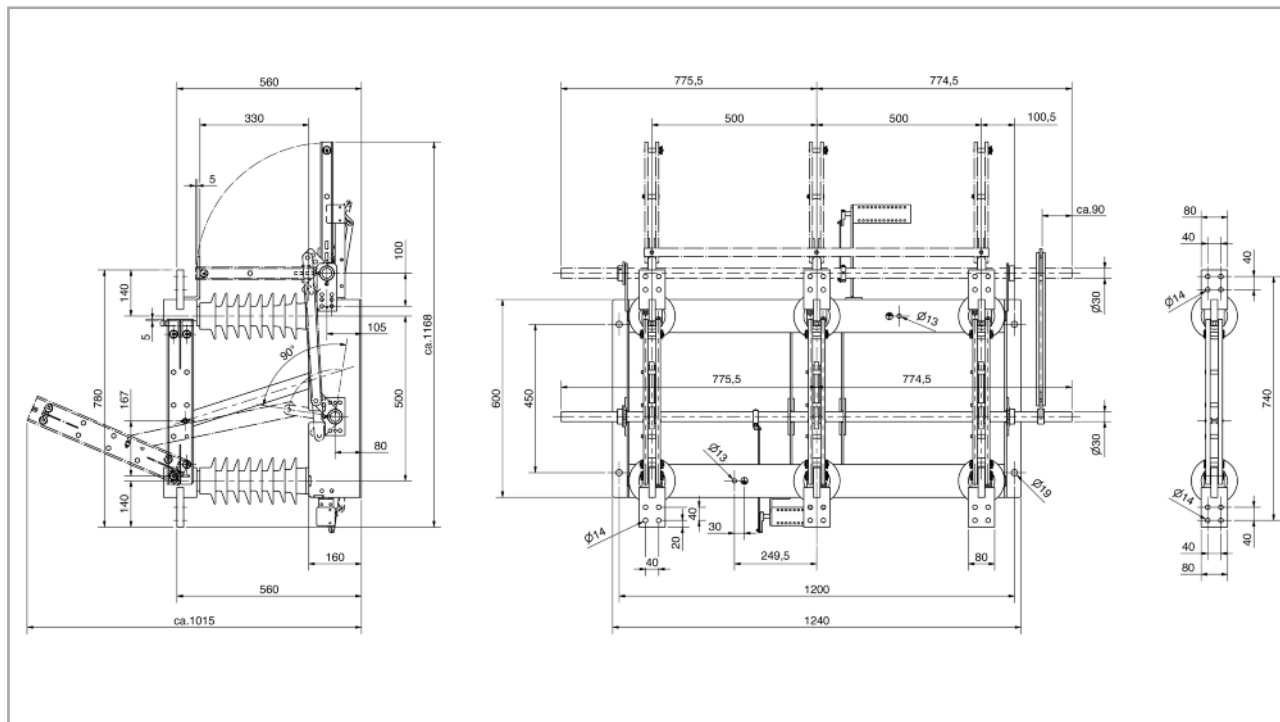
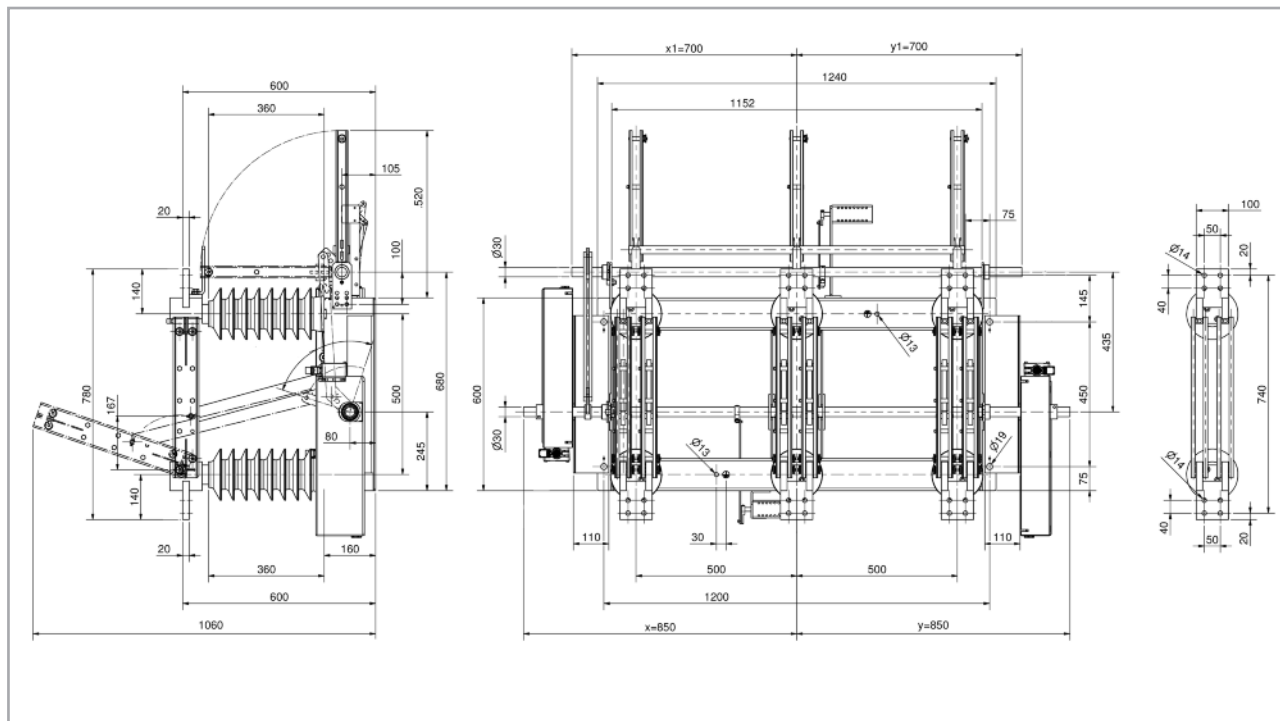


Diagram for ITr 36-4000-50, U<sub>r</sub> 40,5 kV / Diagram number 113928



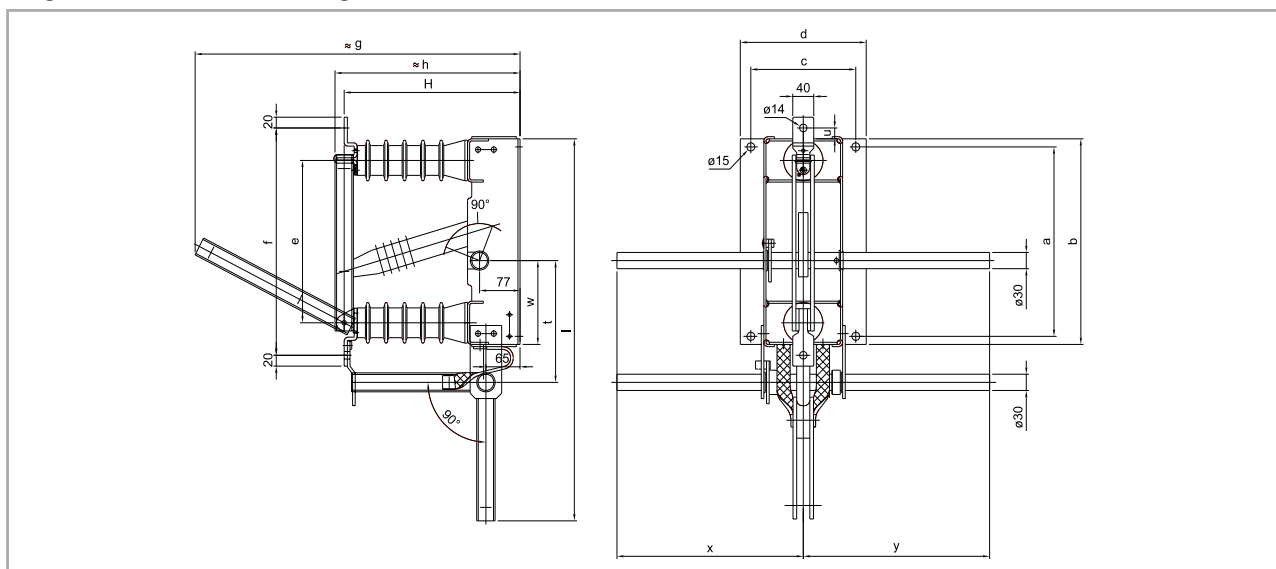
## DRIESCHER – 1-pole indoor disconnecter

### ITr ...-630-20-1 (Ur 12 - 36 kV)

| Switch type                               |       | ITr 12-630-20-1   | ITr 24-630-20-1   | ITr 36-630-20-1   |
|-------------------------------------------|-------|-------------------|-------------------|-------------------|
| Rated voltage                             | $U_r$ | 12/ $\sqrt{3}$ kV | 24/ $\sqrt{3}$ kV | 36/ $\sqrt{3}$ kV |
| Rated frequency                           | $f_r$ | 50/60 Hz          | 50/60 Hz          | 50/60 Hz          |
| Rated current                             | $I_r$ | 630 A             | 630 A             | 630 A             |
| Rated short-time withstand current        | $I_k$ | 20 kA             | 20 kA             | 20 kA             |
| Rated short-circuit duration              | $t_k$ | 3 s               | 3 s               | 3 s               |
| Rated peak withstand current              | $I_p$ | 50 kA             | 50 kA             | 50 kA             |
| Rated lightning impulse withstand voltage | $U_p$ |                   |                   |                   |
| - phase to earth                          |       | 75 kV             | 125 kV            | 170 kV            |
| - via the isolating distance              |       | 85 kV             | 145 kV            | 195 kV            |
| Rated power frequency withstand voltage   | $U_d$ |                   |                   |                   |
| - phase to earth                          |       | 28 kV             | 50 kV             | 70 kV             |
| - via the isolating distance              |       | 32 kV             | 60 kV             | 80 kV             |
| Diagram number                            |       | 028932/1          | 028932/2          | 028932/3          |
| Mechanical service life                   |       | M2                | M2                | M2                |
| Motor drive                               |       | Optional          | Optional          | Optional          |
| Weight without motor drive (approx.)      |       | 12 kg             | 16 kg             | 20 kg             |

- Accessories:**
- Auxiliary switch
  - Motor drive (UM 10 and UM 50)
  - Earthing switch
  - Mechanical interlocking device

Diagram for ITr 24-630-20-1 / Diagram number 028932



| Switch type | Rated voltage kV | a | b | c | d | e | f | ≈g | ≈h | H | I | t | u | w | x | y |
|-------------|------------------|---|---|---|---|---|---|----|----|---|---|---|---|---|---|---|
|-------------|------------------|---|---|---|---|---|---|----|----|---|---|---|---|---|---|---|

|                 |                |     |     |     |     |     |     |     |     |     |     |     |    |     |       |       |
|-----------------|----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|-----|-------|-------|
| ITr 12-630-20-1 | 12/ $\sqrt{3}$ | 280 | 310 | 180 | 220 | 250 | 370 | 454 | 273 | 255 | 566 | 195 | 30 | 115 | 355   | 355   |
| ITr 24-630-20-1 | 24/ $\sqrt{3}$ | 350 | 380 | 200 | 240 | 300 | 420 | 619 | 353 | 335 | 706 | 225 | 20 | 155 | 355   | 355   |
| ITr 36-630-20-1 | 36/ $\sqrt{3}$ | 450 | 500 | 200 | 240 | 400 | 520 | 833 | 463 | 445 | 926 | 255 | 10 | 195 | 417.5 | 417.5 |

## DRIESCHER – 1-pole indoor disconnecter

### ITr ...-1600-40-1 (Ur 12 - 36 kV)

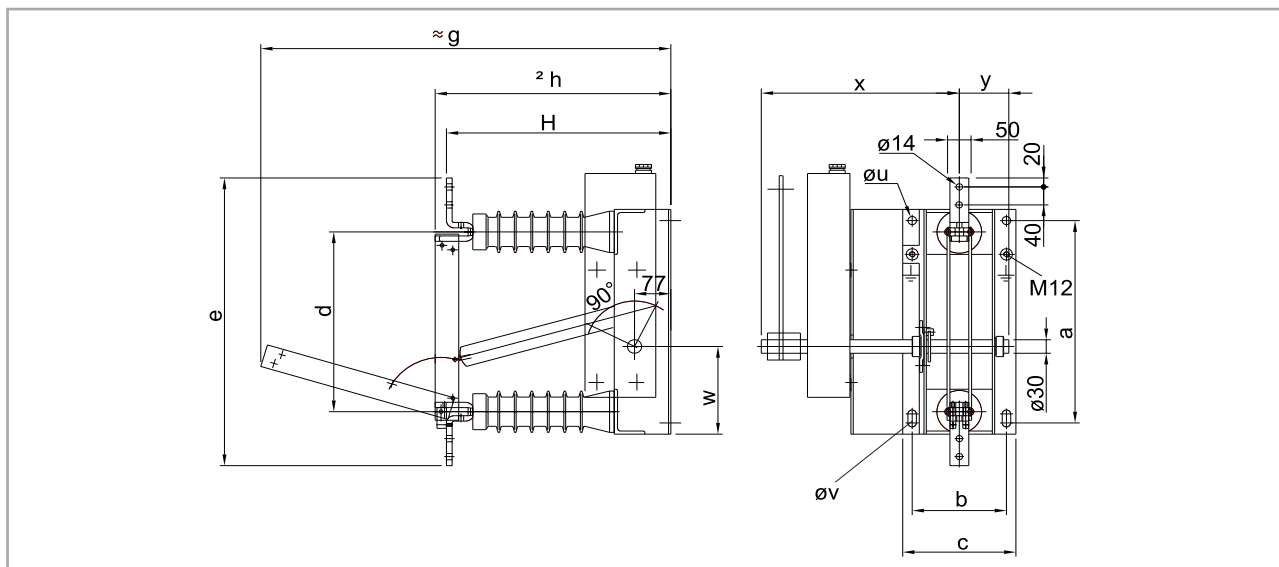
| Switch type                               |       | ITr 12-1600-40-1  | ITr 24-1600-40-1  | ITr 36-1600-40-1  |
|-------------------------------------------|-------|-------------------|-------------------|-------------------|
| Rated voltage                             | $U_r$ | 12/ $\sqrt{3}$ kV | 24/ $\sqrt{3}$ kV | 36/ $\sqrt{3}$ kV |
| Rated frequency                           | $f_r$ | 50 Hz             | 50 Hz             | 50 Hz             |
| Rated current                             | $I_r$ | 1600 A            | 1600 A            | 1600 A            |
| Rated short-time withstand current        | $I_k$ | 40 kA             | 40 kA             | 40 kA             |
| Rated short-circuit duration              | $t_k$ | 3 s               | 3 s               | 3 s               |
| Rated peak withstand current              | $I_p$ | 100 kA            | 100 kA            | 100 kA            |
| Rated lightning impulse withstand voltage | $U_p$ |                   |                   |                   |
| - phase to earth                          |       | 75 kV             | 125 kV            | 170 kV            |
| - via the isolating distance              |       | 85 kV             | 145 kV            | 195 kV            |
| Rated power frequency withstand voltage   | $U_d$ |                   |                   |                   |
| - phase to earth                          |       | 28 kV             | 50 kV             | 70 kV             |
| - via the isolating distance              |       | 32 kV             | 60 kV             | 80 kV             |
| Diagram number                            |       | IT4-059842        | IT4-101566        | IT4-095922        |
| Mechanical service life                   |       | M2                | M2                | M2                |
| Motor drive                               |       | Optional          | Optional          | Optional          |
| Weight without motor drive (approx.)      |       | 20 kg             | 25 kg             | 30 kg             |



- Accessories:**
- Auxiliary switch
  - Motor drive (UM 10 and UM 50)
  - Earthing switch
  - Mechanical interlocking device

Fig.: ITr 36-1600-40-1

Diagram for ITr ...-1600-40-1



| Switch type      | Rated voltage kV | a   | b   | c   | d   | e   | ≈g  | ≈h  | H   | u  | v       | w   | x   |
|------------------|------------------|-----|-----|-----|-----|-----|-----|-----|-----|----|---------|-----|-----|
| ITr 12-1600-40-1 | 12/ $\sqrt{3}$   | 280 | 180 | 220 | 250 | 490 | 525 | 315 | 286 | 15 | 15      | 115 | 311 |
| ITr 24-1600-40-1 | 24/ $\sqrt{3}$   | 350 | 200 | 240 | 310 | 550 | 665 | 390 | 366 | 15 | 15      | 155 | 311 |
| ITr 36-1600-40-1 | 36/ $\sqrt{3}$   | 450 | 200 | 240 | 400 | 640 | 870 | 500 | 476 | 18 | LL18x38 | 195 | 420 |

1-pole switching device with higher rated current available on request.

## DRIESCHER – 2-pole indoor disconnecter

### ITr ...-630-20-2 ; (Ur 12 and 24 kV)

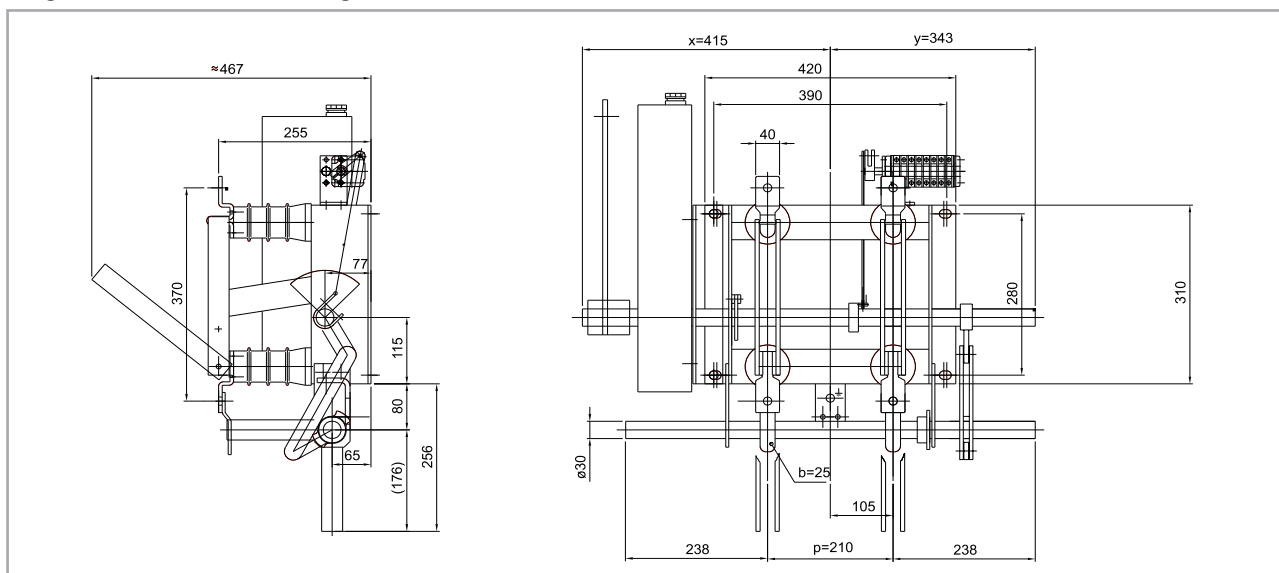
| Switch type                               |       | ITr 12-630-20-2 | ITr 24-630-20-2 |
|-------------------------------------------|-------|-----------------|-----------------|
| Rated voltage                             | $U_r$ | 12 kV           | 24 kV           |
| Rated frequency                           | $f_r$ | 50/60 Hz        | 50/60 Hz        |
| Rated current                             | $I_r$ | 630 A           | 630 A           |
| Rated short-time withstand current        | $I_k$ | 20 kA           | 20 kA           |
| Rated short-circuit duration              | $t_k$ | 3 s             | 3 s             |
| Rated peak withstand current              | $I_p$ | 50 kA           | 50 kA           |
| Rated lightning impulse withstand voltage | $U_p$ |                 |                 |
| - phase to earth                          |       | 75 kV           | 125 kV          |
| - via the isolating distance              |       | 85 kV           | 145 kV          |
| Rated power frequency withstand voltage   | $U_d$ |                 |                 |
| - phase to earth                          |       | 28 kV           | 50 kV           |
| - via the isolating distance              |       | 32 kV           | 60 kV           |
| Diagram number                            |       | 100427          | 108084          |
| Mechanical service life                   |       | M2              | M2              |
| Motor drive                               |       | Optional        | Optional        |
| Earthing switch                           |       | Optional        | Optional        |
| Weight without motor drive (approx.)      |       | 30 kg           | 45 kg           |
| Phase spacing p, mm                       |       | 210             | 275             |

1-pole switching device with higher rated current available on request.

#### Accessories:

- Auxiliary switch
- Motor drive (UM 10 and UM 50)
- Mechanical interlocking device

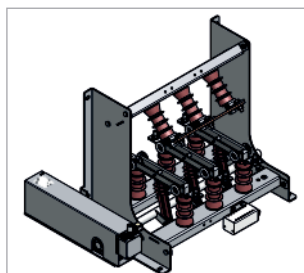
Diagram for ITr 12-630-20-2 / Diagram number 100427



### DRIESCHER – 3-pole indoor changeover disconnecter

## ITru 12 kV (Ur 12 kV)

| Switch type                               |       | ITru 12-630-20 | ITru 12-1600-40 |
|-------------------------------------------|-------|----------------|-----------------|
| Rated voltage                             | $U_r$ | 12 kV          | 12 kV           |
| Rated frequency                           | $f_r$ | 50 Hz          | 50 Hz           |
| Rated current                             | $I_r$ | 630 A          | 1600 A          |
| Rated short-time withstand current        | $I_k$ | 20 kA          | 40 kA           |
| Rated short-circuit duration              | $t_k$ | 3 s            | 3 s             |
| Rated peak withstand current              | $I_p$ | 50 kA          | 100 kA          |
| Rated lightning impulse withstand voltage | $U_p$ |                |                 |
| - phase to earth                          |       | 75 kV          | 75 kV           |
| - via the isolating distance              |       | 85 kV          | 85 kV           |
| Rated power frequency withstand voltage   | $U_d$ |                |                 |
| - phase to earth                          |       | 28 kV          | 28 kV           |
| - via the isolating distance              |       | 32 kV          | 32 kV           |
| Diagram number                            |       | 111949         | 111853          |
| Mechanical service life                   |       | M2             | M2              |
| Motor drive                               |       | Optional       | Optional        |
| Weight (approx.)                          |       | 50 kg          | 60 kg           |

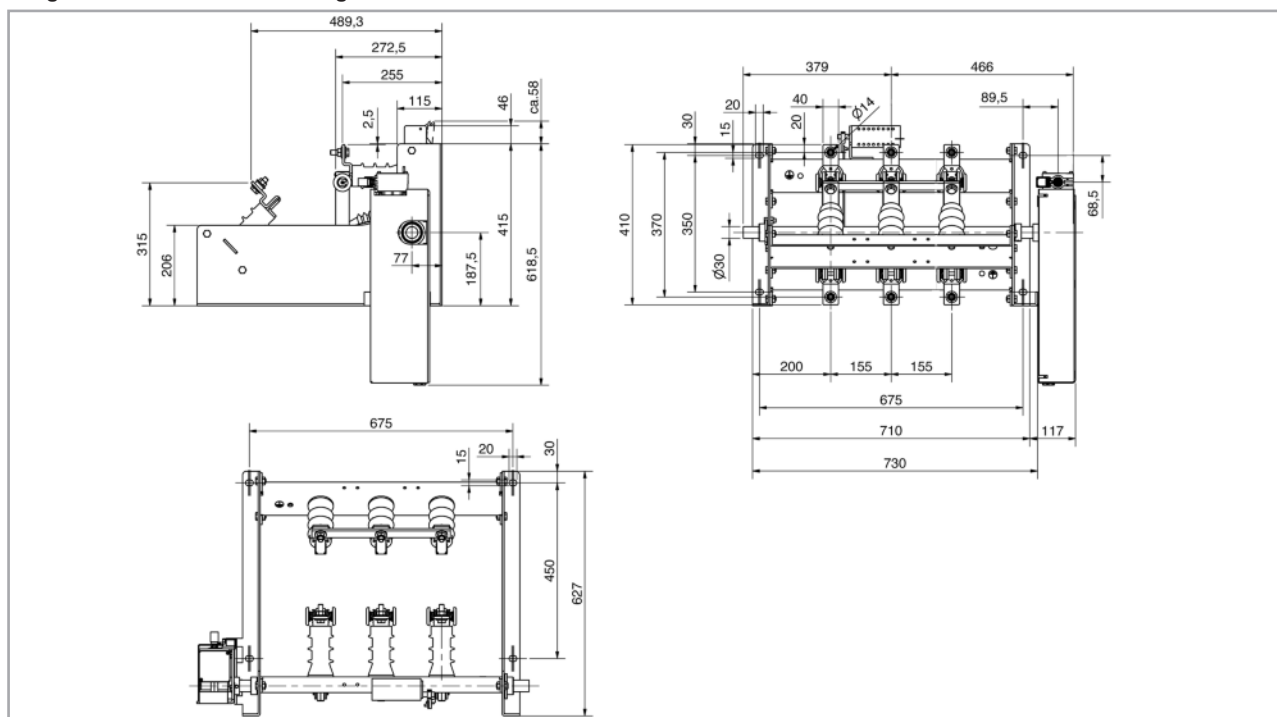


### Accessories:

- Motor drive (UM 10 and UM 15)
- Auxiliary switch
- Mechanical interlocking device

Fig.: ITru 12-630-20

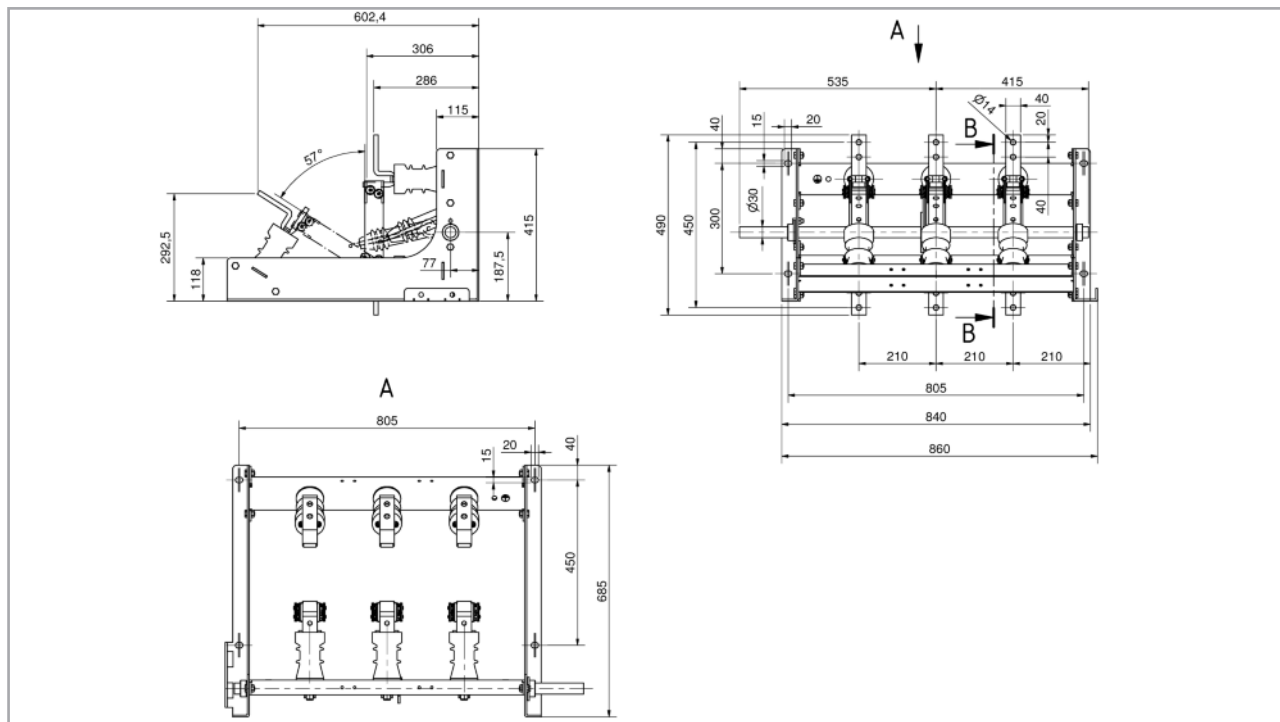
**Diagram for ITru 12-630-20 / Diagram number 111949**



# DRIESCHER – 3-pole indoor changeover disconnecter

## ITru 12 kV (Ur 12 kV)

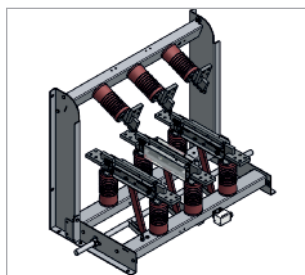
Diagram for ITru 12-1600-40 / Diagram number 111853



### DRIESCHER – 3-pole indoor changeover disconnecter

### ITru 24 kV and 36 kV (Ur 24 kV and 36 kV)

| Switch type                               |       | ITru 24-1600-31,5 | ITru 24-2500-50 | ITru 36-630-20 |
|-------------------------------------------|-------|-------------------|-----------------|----------------|
| Rated voltage                             | $U_r$ | 24 kV             | 24 kV           | 36 kV          |
| Rated frequency                           | $f_r$ | 50 Hz             | 50 Hz           | 50 Hz          |
| Rated current                             | $I_r$ | 1600 A            | 2500 A          | 630 A          |
| Rated short-time withstand current        | $I_k$ | 31,5 kA           | 50 kA           | 20 kA          |
| Rated short-circuit duration              | $t_k$ | 3 s               | 3 s             | 3 s            |
| Rated peak withstand current              | $I_p$ | 80 kA             | 125 kA          | 50 kA          |
| Rated lightning impulse withstand voltage | $U_p$ |                   |                 |                |
| - phase to earth                          |       | 125 kV            | 125 kV          | 170 kV         |
| - via the isolating distance              |       | 145 kV            | 145 kV          | 195 kV         |
| Rated power frequency withstand voltage   | $U_d$ |                   |                 |                |
| - phase to earth                          |       | 50 kV             | 50 kV           | 70 kV          |
| - via the isolating distance              |       | 60 kV             | 60 kV           | 80 kV          |
| Diagram number                            |       | 111961            | 118369          | 117251         |
| Mechanical service life                   |       | M2                | M2              | M2             |
| Motor drive                               |       | Optional          | Optional        | Optional       |
| Weight (approx.)                          |       | 70 kg             | 80 kg           | 90 kg          |

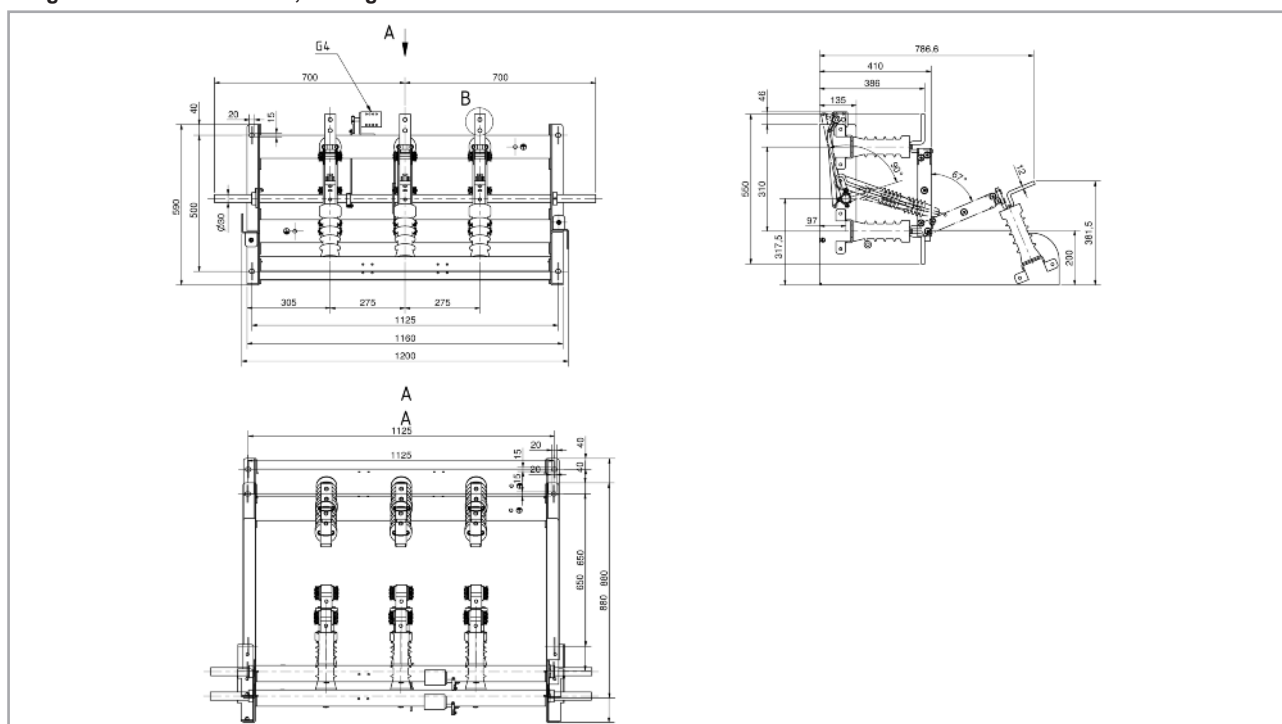


### Accessories:

- Motor drive (UM 10 and UM 15)
- Auxiliary switch
- Mechanical interlocking device

Fig.: ITru 24-2500-50

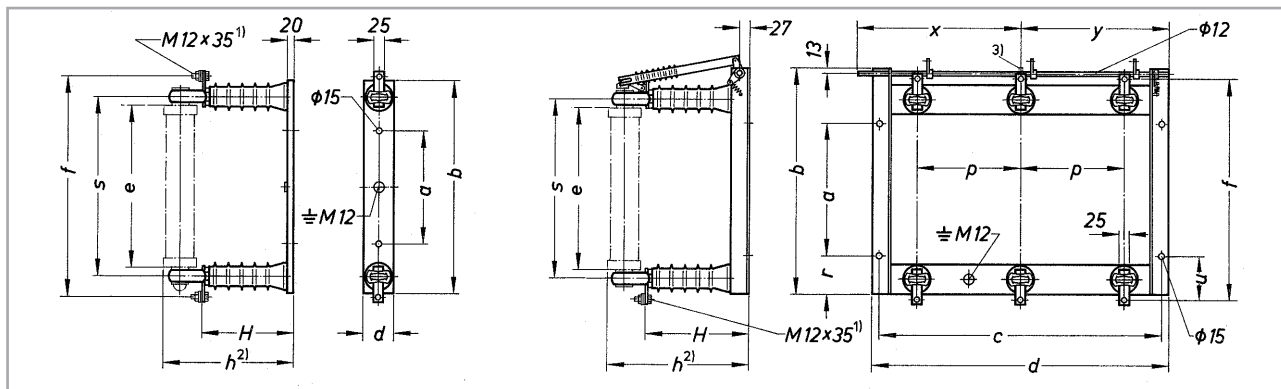
**Diagram for ITru 24-1600-31,5 / Diagram number 111961**





## DRIESCHER - 1-pole and 3-pole indoor fuse holders

Ur 12 kV, 24 kV and 36 kV for HV-HBC fuses in accordance with EN 60282-1



|                                           |       |          |          |          |
|-------------------------------------------|-------|----------|----------|----------|
| Rated voltage                             | $U_r$ | 12 kV    | 24 kV    | 36 kV    |
| Rated frequency                           | $f_r$ | 50/60 Hz | 50/60 Hz | 50/60 Hz |
| Rated power frequency withstand voltage   | $U_d$ | 28 kV    | 50 kV    | 70 kV    |
| Rated lightning impulse withstand voltage | $U_p$ | 75 kV    | 125 kV   | 170 kV   |
| Rated current                             | $I_r$ | 200 A    | 200 A    | 200 A    |
| Dimension „e“ from fuse link              |       | 292 mm   | 442 mm   | 537 mm   |

### • 1-pole fuse holders

| Rated voltage kV | Part number | a   | b   | d   | f   | h   | H   | s   | Weight kg | Diagram number |
|------------------|-------------|-----|-----|-----|-----|-----|-----|-----|-----------|----------------|
| 12/√3            | 733 14000   | 180 | 405 | 80  | 435 | 267 | 167 | 325 | 3,5       | IT 4-002510    |
| 24/√3            | 733 24000   | 300 | 565 | 80  | 585 | 347 | 247 | 475 | 5,5       | IT 4-002510    |
| 36/√3            | 733 34000   | 380 | 670 | 100 | 680 | 437 | 337 | 570 | 11,1      | IT 4-002510    |

### • 3-pole fuse holders

| Rated voltage kV | Part number without tripping device | Part number with tripping device | p   | a   | b   | c    | d    | f   | h   | H   | r     | s   | u     | x   | y   | Weight kg |
|------------------|-------------------------------------|----------------------------------|-----|-----|-----|------|------|-----|-----|-----|-------|-----|-------|-----|-----|-----------|
| 12               | 733 11000                           | —                                | 210 | 280 | 428 | 600  | 640  | 435 | 297 | 197 | 52,5  | 325 | 77,5  | —   | —   | 15,5      |
| 12               | —                                   | 733 12000                        | 210 | 280 | 428 | 600  | 640  | 435 | 297 | 197 | 52,5  | 325 | 77,5  | 360 | 320 | 18,0      |
| 24               | 733 21000                           | —                                | 275 | 350 | 598 | 750  | 790  | 585 | 377 | 277 | 102,5 | 475 | 117,5 | —   | —   | 26,0      |
| 24               | —                                   | 733 22000                        | 275 | 350 | 598 | 750  | 790  | 585 | 377 | 277 | 102,5 | 475 | 117,5 | 435 | 395 | 29,0      |
| 36               | 733 31000                           | —                                | 400 | 450 | 693 | 1000 | 1040 | 680 | 467 | 367 | 100   | 570 | 115   | —   | —   | 40,0      |
| 36               | —                                   | 733 32000                        | 400 | 450 | 693 | 1000 | 1040 | 680 | 467 | 367 | 100   | 570 | 115   | 560 | 520 | 43,7      |

Diagram number IT 3-005308

Please see brochure 791 for information on HV-HBC fuses  
Please see brochure 773 for information on HV-HBC fuse tongs

**DRIESCHER - indoor disconnectors, indoor earthing switches  
and indoor fuse holders**

Notes

[illegible]

## **Our range of products includes:**

### **Medium-voltage systems**

- Single-bus and duplicate-bus switchgear
- Non-withdrawable, withdrawable and truck-type units
- Compact switchgear assemblies
- Customer-specific models
- Industrial systems
- Power factor correction equipment

### **Medium-voltage switches**

- Indoor switches, disconnectors, and earthing switches (single and triple pole)
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- Outdoor switches (low oil content and vacuum)
- Railway switches for power supply and catenary
- High-voltage high-breaking-capacity fuses
- Customer-specific models

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- Open-framework design
- Enclosed break devices (up to 6.300 A)
- MCC - Motor Control Center
- Cable and fixed-station distribution cabinets

### **Low-voltage switchgear**

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- Switch and fuse blocks

### **Compact sub-station**

- Concrete construction
- Container construction

### **Driving gear**

- Hand-operated and motor-operated mechanisms
- Indoor and outdoor driving gear

### **Accessories**

- For medium and low voltages
- For station equipment
- Insulators (0,5 kV - 38,5 kV)
- Plastic and glass-reinforced plastic screening

### **Service**

- Maintenance and Service of all switches and switchgear
- Training courses and seminars
- Thermography; Live-line working

Dimensions, weights, diagrams and descriptions in this brochure are non-binding. Subject to change without notice.

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