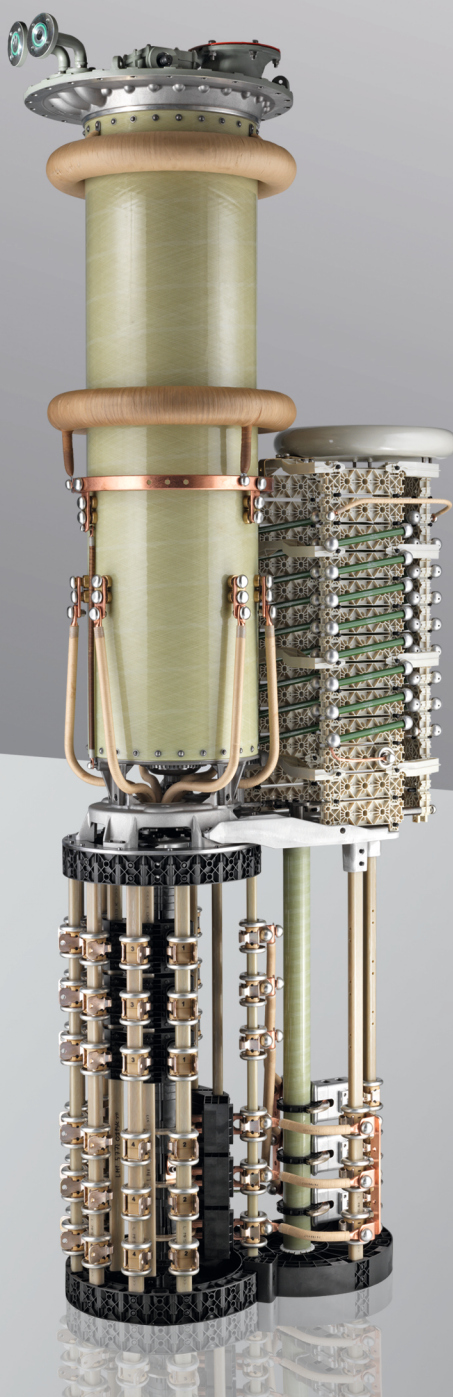




Modelos del selector RC/RD/RDE/RE/RF

Hoja suplementaria / Datos técnicos

4360563/05 ES



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Las instrucciones de servicio originales han sido redactadas en alemán.



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1 Introducción

Esta documentación técnica sirve de ayuda para seleccionar el producto adecuado.

Las instrucciones para el montaje y la puesta en servicio incluyen descripciones detalladas para montar, conectar y poner en servicio el producto correspondiente de forma segura y correcta.

Las instrucciones de servicio incluyen descripciones detalladas para la vigilancia durante el servicio, la solución de averías y el mantenimiento del producto correspondiente.

Esta documentación técnica está exclusivamente dirigida a personal especializado con la autorización y formación necesarias.

1.1 Validez

Este documento es válido para los siguientes productos:

- VACUTAP® VM® con selectores RC, RD, RDE
- OILTAP® R con selectores RC, RD, RDE, RE, RF
- OILTAP® M con selectores RC, RD, RDE

1.2 Integridad

Esta documentación técnica solo se considera completa junto con la documentación obligatoria correspondiente.

Los siguientes documentos se consideran documentación obligatoria:

- datos técnicos TD 61 –parte general– (disponibles bajo demanda)
- datos técnicos –parte específica del producto– (disponibles bajo demanda), especialmente para:
 - VACUTAP® VM®: TD 2332907
 - OILTAP® R: TD 115
 - OILTAP® M: TD 050
- la documentación técnica entregada con la confirmación de pedido y el suministro.

Tenga en cuenta además las leyes, normas y directivas válidas en general, así como la normativa sobre prevención de accidentes y sobre protección del medio ambiente del respectivo país de uso.



2 Generalidades

2.1 Denominaciones del cambiador de tomas bajo carga VACUTAP® VM®

Ejemplo: VM III 650 Y – 72,5 / RC – 10 19 1W R

| Denominación | | Significado | Modelo | Posibles parámetros |
|--------------|---|--|--|---------------------|
| VM | = | Tipo | VACUTAP® VM® | VM |
| III | = | Número de fases | 1 fase | I |
| | | | 2 fases | II |
| | | | 3 fases | III |
| 650 | = | I_{um} [A] = corriente nominal de paso máxima | VM I 651, VM II 652, VM III 650 Y | 650 |
| | | | VM I 802 | 800 |
| | | | VM I 1002 | 1000 |
| | | | VM I 1203 | 1200 |
| | | | VM I 1503 | 1500 |
| 650 | = | Número de sectores equipados | 3 (en Y) | 0 |
| | | | 1 | 1 |
| | | | 2 | 2 |
| | | | 3 | 3 |
| Y | = | Aplicaciones | solo si se emplea con punto neutro | Y |
| 72,5 | = | U_m [kV] = máxima tensión para medios de producción | | 72,5 |
| | | | | 123 |
| | | | | 170 |
| | | | | 245 |
| | | | | 300 |
| RC | = | Modelo del selector | | RC |
| | | | | RD |
| | | | | RDE |
| 10 | = | Número de posiciones de servicio máximas sin preselector | Número de contactos en el círculo de contactos del selector: | |
| | | | 10 | 10 |
| | | | 12 | 12 |
| | | | 14 | 14 |
| | | | 16 | 16 |



| Denominación | | Significado | Modelo | Posibles parámetros |
|--------------|---|--|--------|---------------------|
| 10 | = | Número de posiciones de servicio máximas sin preselector | 18 | 18 |

Tabla 1: Explicación de la denominación de tipo para VACUTAP® VM® (1)

| Denominación | | Significado | Modelo | Posibles parámetros |
|--------------|---|--|---|---------------------|
| 19 | = | Número de posiciones de servicio máximas con preselector (inversor o paso grueso) | Número de contactos en el círculo de contactos del selector de tomas: | |
| | | | 10 | 19 |
| | | | 12 | 23 |
| | | | 14 | 27 |
| | | | 16 | 31 |
| | | | 18 | 35 |
| 1W | = | Posiciones medias | 0 posiciones medias (sin preselector) | 0 |
| | | | 1 posición media | 1 |
| | | | 3 posiciones medias | 3 |
| 1W | = | preselector | Inversor | W |
| | | | Paso grueso | G |
| R | = | Tipo de guía del potencial | Resistencias de guía montadas | R |
| | | | Contactos para resistencia de guía y resistencias de guía sobre placa | S |
| | | | Contactos para resistencia de guía con resistencias de guía montadas | P |

Tabla 2: Explicación de la denominación de tipo para VACUTAP® VM® (2)



2.2 Denominaciones del cambiador de tomas bajo carga OILTAP® M

Ejemplo: **M III 600 Y – 72,5 / RC – 10 19 1W R**

| Denominación | | Significado | Modelo | Posibles parámetros |
|--------------|---|--|--|---------------------|
| M | = | Tipo | OILTAP® M | M |
| III | = | Número de fases | 1 fase | I |
| | | | 2 fases | II |
| | | | 3 fases | III |
| 600 | = | I_{um} [A] = corriente nominal de paso máxima | M I 601, M II 602, M III 600 Y | 600 |
| | | | M I 802 | 800 |
| | | | M I 1203 | 1200 |
| | | | M I 1503 | 1500 |
| 600 | = | Número de sectores equipados | 3 (en Y) | 0 |
| | | | 1 | 1 |
| | | | 2 | 2 |
| | | | 3 | 3 |
| Y | = | Aplicaciones | solo si se emplea con punto neutro | Y |
| 72,5 | = | U_m [kV] = máxima tensión para medios de producción | | 72,5 |
| | | | | 123 |
| | | | | 170 |
| | | | | 245 |
| | | | No en Y | 300 |
| RC | = | Modelo del selector | | RC |
| | | | | RD |
| | | | | RDE |
| 10 | = | Número de posiciones de servicio máximas sin preselector | Número de contactos en el círculo de contactos del selector: | |
| | | | 10 | 10 |
| | | | 12 | 12 |
| | | | 14 | 14 |
| | | | 16 | 16 |
| | | | 18 | 18 |

Tabla 3: Explicación de la denominación de tipo para OILTAP® M (1)



| Denominación | | Significado | Modelo | Posibles parámetros |
|--------------|---|--|---|---------------------|
| 19 | = | Número de posiciones de servicio máximas con preselector (inversor o paso grueso) | Número de contactos en el círculo de contactos del selector de tomas: | |
| | | | 10 | 19 |
| | | | 12 | 23 |
| | | | 14 | 27 |
| | | | 16 | 31 |
| | | | 18 | 35 |
| 1W | = | Posiciones medias | 0 posiciones medias (sin preselector) | 0 |
| | | | 1 posición media | 1 |
| | | | 3 posiciones medias | 3 |
| 1W | = | preselector | Inversor | W |
| | | | Paso grueso | G |
| R | = | Medidas para polarización | Resistencias de guía montadas | R |
| | | | Contactos para resistencia de guía y resistencias de guía sobre placa | S |
| | | | Contactos para resistencia de guía con resistencias de guía montadas | P |

Tabla 4: Explicación de la denominación de tipo para OILTAP® M (2)



2.3 Denominaciones del cambiador de tomas bajo carga OILTAP® R

Ejemplo: R III 1200 Y – 72,5 / RC – 10 19 1W R

| Denominación | | Significado | Modelo | Posibles parámetros |
|--------------|---|--|---|---------------------|
| R | = | Tipo | OILTAP® R | R |
| III | = | Número de fases | 1 fase | I |
| | | | 2 fases | II |
| | | | 3 fases | III |
| 1200 | = | I_{um} [A] = corriente nominal de paso máxima | R I 1201, R I 1202, R II 1202, R III 1200 Y | 1200 |
| | | | R I 2002, R I 2003 | 2000 |
| | | | R I 2402 | 2400 |
| | | | R I 3003 | 3000 |
| 1200 | = | Número de sectores equipados | 3 (en Y) | 0 |
| | | | 1 | 1 |
| | | | 2 | 2 |
| | | | 3 | 3 |
| Y | = | Aplicaciones | solo si se emplea con punto neutro | Y |
| 72,5 | = | U_m [kV] = máxima tensión para medios de producción | | 72,5 |
| | | | | 123 |
| | | | | 170 |
| | | | | 245 |
| | | | | 300 |
| | | | solo como modelo para montaje en cuba tipo campana | 362 |
| RC | = | Modelo del selector | | RC |
| | | | | RD |
| | | | | RDE |
| | | | | RE |
| | | | | RF |
| 10 | = | Número de posiciones de servicio máximas sin preselector | Número de contactos en el circuito de contactos del selector: | |
| | | | 10 | 10 |
| | | | 12 | 12 |



| Denominación | | Significado | Modelo | Posibles parámetros |
|--------------|---|--|--------|---------------------|
| 10 | = | Número de posiciones de servicio máximas sin preselector | 14 | 14 |
| | | | 16 | 16 |
| | | | 18 | 18 |

Tabla 5: Explicación de la denominación de tipo para OILTAP® R (1)

| Denominación | | Significado | Modelo | Posibles parámetros |
|--------------|---|--|---|---------------------|
| 19 | = | Número de posiciones de servicio máximas con preselector (inversor o paso grueso) | Número de contactos en el círculo de contactos del selector de tomas: | |
| | | | 10 | 19 |
| | | | 12 | 23 |
| | | | 14 | 27 |
| | | | 16 | 31 |
| | | | 18 | 35 |
| 1W | = | Posiciones medias | 0 posiciones medias (sin preselector) | 0 |
| | | | 1 posición media | 1 |
| | | | 3 posiciones medias | 3 |
| 1W | = | preselector | Inversor | W |
| | | | Paso grueso | G |
| R | = | Medidas para polarización | Resistencias de guía montadas | R |
| | | | Contactos para resistencia de guía y resistencias de guía sobre placa | S |
| | | | Contactos para resistencia de guía con resistencias de guía montadas | P |

Tabla 6: Explicación de la denominación de tipo para OILTAP® R (2)

3 Datos técnicos

3.1 Solicitaciones de tensión admisibles

Este apartado describe las solicitaciones de tensión admisibles de cambiadores de tomas bajo carga mono-fásicos y de múltiples fases.

Al elegir el cambiador de tomas bajo carga debe comprobar que las solicitaciones máximas que se producen no superen las tensiones nominales soportables pertinentes en las distancias de aislamiento.

3.1.1 Distancias de aislamiento de los modelos del selector RC, RD, RDE, RE, RF

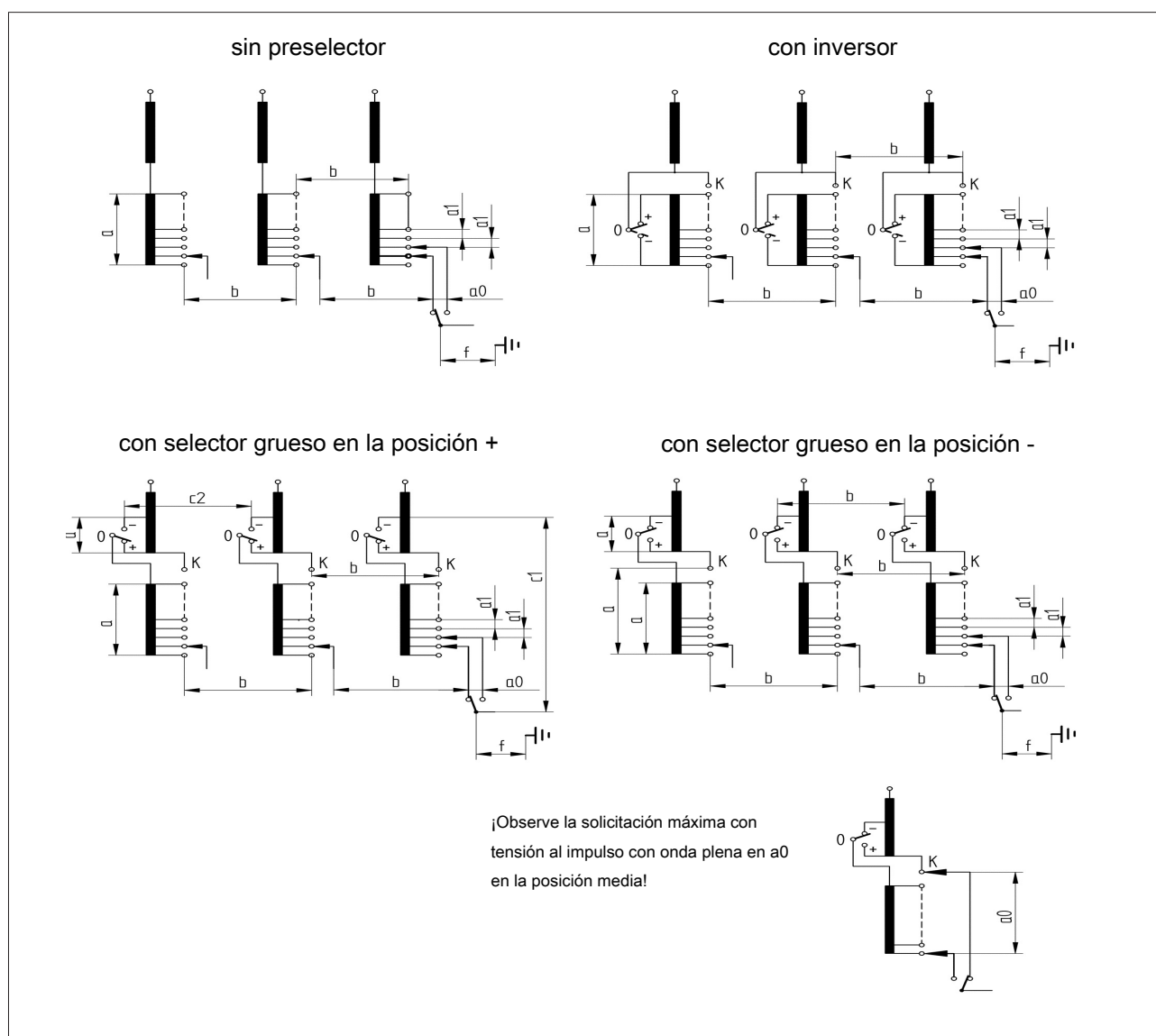


Figura 1: Distancias de aislamiento de los modelos del selector RC, RD, RDE, RE, RF



| | |
|--|---|
| a0 | entre la toma seleccionada y preseleccionada en el ruptor |
| a1 | entre contactos del selector de tomas del devanado de una toma (conectada o sin conectar) |
| a | entre el principio y el fin de un arrollamiento de tomas fino y, en el modelo con devanado de regulación gruesa, entre el principio y el fin de un devanado de regulación gruesa. Indicación para la conexión con paso grueso en la posición (-) del preselector: En caso de solicitación con tensión de impulso, es preciso observar la tensión soportable admisible "a" entre el fin de un devanado de regulación gruesa conectado a un contacto K del selector de tomas y el contacto del selector de tomas al final del arrollamiento de tomas fino de la misma fase. |
| b | entre los contactos del selector de tomas de distintas fases y entre los contactos del preselector de distintas fases que estén conectados con el principio/fin de un arrollamiento de tomas fino o con un contacto del selector de tomas |
| f | entre la derivación del ruptor y tierra |
| Adicionalmente en caso de conexión con paso grueso en la posición (+) del preselector: | |
| c1 | de un contacto del preselector (-) a la derivación de la misma fase |
| c2 | entre contactos del preselector (-) de distintas fases |

Observación:

El cambiador de tomas bajo carga VACUTAP® VM® y el OILTAP® M solo pueden combinarse con los modelos del selector RC, RD y RDE.



3.1.2 Conmutaciones ejecutables con los modelos del selector correspondientes

Las conmutaciones indicadas a continuación también pueden ejecutarse para preselectores con inversor y 3 posiciones medias (3W) y para preselectores con paso grueso y 3 posiciones medias (3G).

| sin preselector | | con inversor | | con selector grueso | |
|-----------------|---------------------|--------------|---------------------|---------------------|---------------------|
| Conexión | Modelo del selector | Conexión | Modelo del selector | Conexión | Modelo del selector |
| 10050 | RC/RD/RDE/RE/RF | 10071W | RC/RD/RDE | 10071G | RC/RD/RDE |
| 10060 | RC/RD/RDE/RE/RF | 10081W | RC/RD/RDE | 10081G | RC/RD/RDE |
| 10070 | RC/RD/RDE/RE/RF | 10091W | RC/RD/RDE | 10091G | RC/RD/RDE |
| 10080 | RC/RD/RDE/RE/RF | 12101W | RC/RD/RDE | 12101G | RC/RD/RDE |
| 10090 | RC/RD/RDE/RE/RF | 14111W | RC/RD/RDE | 14111G | RC/RD/RDE |
| 10100 | RC/RD/RDE/RE/RF | 14121W | RC/RD/RDE | 14121G | RC/RD/RDE |
| 12110 | RC/RD/RDE/RE/RF | 16131W | RC/RD/RDE | 16131G | RC/RD/RDE |
| 12120 | RC/RD/RDE/RE/RF | 16141W | RC/RD/RDE | 16141G | RC/RD/RDE |
| 14130 | RC/RD/RDE/RE/RF | 18151W | RC/RD/RDE | 18151G | RC/RD/RDE |
| 14140 | RC/RD/RDE/RE/RF | 18161W | RC/RD/RDE | 18161G | RC/RD/RDE |
| 16150 | RC/RD/RDE/RE/RF | 10191W | RC/RD/RDE/RE/RF | 10191G | RC/RD/RDE/RE/RF |
| 16160 | RC/RD/RDE/RE/RF | 12231W | RC/RD/RDE/RE/RF | 12231G | RC/RD/RDE/RE/RF |
| 18170 | RC/RD/RDE/RE/RF | 14271W | RC/RD/RDE/RE/RF | 14271G | RC/RD/RDE/RE/RF |
| 18180 | RC/RD/RDE/RE/RF | 16311W | RC/RD/RDE/RE/RF | 16311G | RC/RD/RDE/RE/RF |
| | | 18351W | RC/RD/RDE/RE/RF | 18351G | RC/RD/RDE/RE/RF |

Tabla 7: Conexiones ejecutables

El selector conforme a la conexión 12111W(G) se ejecuta como 14111W(G).

El selector conforme a la conexión 14131W(G) se ejecuta como 16131W(G).

El selector conforme a la conexión 16151W(G) se ejecuta como 18151W(G).

El selector conforme a la conexión 18171W(G) no es ejecutable.

Observación:

El cambiador de tomas bajo carga VACUTAP® VM® y el OILTAP® M solo pueden combinarse con los modelos del selector RC, RD y RDE.



3.1.3 Nivel de aislamiento nominal en el ruptor

Nivel de aislamiento nominal en el ruptor VACUTAP® VM®

| Distancia de aislamiento a0 | VACUTAP® VM® |
|---|--------------|
| Impulso con onda plena 1,2/50 µs | ≤ 150 kV |
| Tensión de reacción del varistor con impulso con onda plena 1,2/50 µs ($U_{100\%}(t)_{\text{normalizado}} \neq U_{75\%}(t)_{\text{normalizado}}$) | ≥ 45 kV |
| Tensión residual con 3 kA de impulso de corriente | 56 kV |
| 50 Hz, 1 min | 20 kV |

Tabla 8: VACUTAP® VM® distancia de aislamiento a0

Nivel de aislamiento nominal en el ruptor OILTAP® M

| Distancia de aislamiento a0 | OILTAP® M | |
|---|---------------------------|----------------------------------|
| | Con descargador de chispa | Con descargador de óxido de cinc |
| Impulso con onda plena 1,2/50 µs | ≤ 150 kV | ≤ 150 kV |
| Tensión de reacción del descargador de chispa con impulso con onda plena 1,2/50 µs | ≥ 90 kV | - |
| Tensión de reacción del varistor con impulso con onda plena 1,2/50 µs ($U_{100\%}(t)_{\text{normalizado}} \neq U_{75\%}(t)_{\text{normalizado}}$) | - | ≥ 45 kV |
| Tensión residual con 3 kA de impulso de corriente | - | ≤ 120 kV |
| 50 Hz, 1 min | 20 kV | 20 kV |

Tabla 9: OILTAP® M distancia de aislamiento a0

Nivel de aislamiento nominal en el ruptor OILTAP® R

| Distancia de aislamiento a0 | OILTAP® R | | |
|---|--|---|---|
| | Um ≤ 72,5 kV sin descargador de sobretensiones | Um > 72,5 kV con descargador de óxido de cinc, R2 ≥ 2,33 ohmios | Um > 72,5 kV con descargador de óxido de cinc, R2 < 2,33 ohmios |
| Impulso con onda plena 1,2/50 µs | ≤ 140 kV | ≤ 150 kV | ≤ 150 kV |
| Tensión de reacción del varistor con impulso con onda plena 1,2/50 µs ($U_{100\%}(t)_{\text{normalizado}} \neq U_{75\%}(t)_{\text{normalizado}}$) | - | ≥ 45 kV | ≥ 55 kV |
| Tensión residual con 3 kA de impulso de corriente | - | ≤ 110 kV | ≤ 85 kV |
| 50 Hz, 1 min | 30 kV | 22 kV | 27 kV |

Tabla 10: OILTAP® R distancia de aislamiento a0

3.1.4 Nivel de aislamiento nominal del aislamiento interno en el selector R

La tensión máxima de servicio admisible en cada uno de los tramos del selector corresponde a la mitad del valor de los valores indicados a continuación para la tensión aplicada (AC).

| Distancia de aislamiento | | Modelo del selector | | | | |
|--------------------------|-----|---------------------|-----|-----|-------|-------|
| | | RC | RD | RDE | RE | RF |
| a1 | LI | 150 | | | | |
| | LIC | 165 | | | | |
| | SI | 100 | | | | |
| | CA | 30 | | | | |
| a | LI | 400 | 500 | 550 | 670 | 670 |
| | LIC | 440 | 550 | 605 | 735 | 735 |
| | SI | 260 | 325 | 355 | 435 | 435 |
| | CA | 100 | 145 | 165 | 220 | 220 |
| b ¹⁾ | LI | 400 | 500 | 550 | 670 | 670 |
| | LIC | 440 | 550 | 605 | 735 | 735 |
| | SI | 260 | 325 | 355 | 435 | 435 |
| | CA | 120 | 160 | 180 | 220 | 280 |
| c1 | LI | 550 | 590 | 660 | 900 | 900 |
| | LIC | 605 | 645 | 725 | 990 | 990 |
| | SI | 355 | 385 | 430 | 585 | 585 |
| | CA | 180 | 210 | 250 | 320 | 320 |
| c2 ¹⁾ | LI | 550 | 590 | 660 | 930 | 1 000 |
| | LIC | 605 | 645 | 725 | 1 020 | 1 100 |
| | SI | 355 | 385 | 528 | 605 | 650 |
| | CA | 195 | 230 | 280 | 340 | 370 |

Tabla 11: Nivel de aislamiento nominal del aislamiento interno en el selector R

LI: tensión de impulso de onda plena (kV, 1,2/50 μ s)

LIC: tensión de impulso de onda cortada (kV, 1,2/50/3 μ s)

SI: tensión de impulso de maniobra (kV, 250/2500 μ s)

AC: tensión aplicada (kV, 50 Hz, 1 min)

¹⁾ Se suprime con cambiador de tomas bajo carga monofásico

3.2 Guía del potencial del arrollamiento de tomas fino

Durante su conmutación mediante el inversor o el selector grueso, el arrollamiento de tomas fino se aísla galvánicamente un breve periodo de tiempo del devanado principal. Entonces, adquiere un potencial que resulta de las tensiones de los devanados adyacentes y de las capacidades de acoplamiento a estos devanados o a piezas conectadas a tierra.

Este desplazamiento de potencial del arrollamiento de tomas fino provoca las correspondientes tensiones entre los contactos del preselector de desconexión, ya que un contacto siempre está unido al arrollamiento de tomas fino y el otro contacto siempre está unido al devanado principal. Esta tensión se denomina tensión de reparación U_w .

Al aislar los contactos del preselector debe interrumpirse una corriente capacitiva condicionada por las capacidades de acoplamiento indicadas arriba del arrollamiento de tomas fino. Esta corriente se denomina corriente de desconexión I_s .

La tensión de reparación U_w y la corriente de desconexión I_s pueden provocar fenómenos de descarga no admisibles en el preselector. El margen admisible de la tensión de reparación U_w y la corriente de desconexión I_s puede verse en las siguientes figuras.

El "Active Gas Inhibition System" (AGIS o sistema de inhibición de gas activo) reduce la cantidad de gas generada durante una conexión de preselector. Para más información sobre la tensión de reparación y la corriente de desconexión véanse los Datos técnicos TD 61 - Parte general.

Tensión de reparación U_w y corriente de desconexión I_s sin resistencia de guía

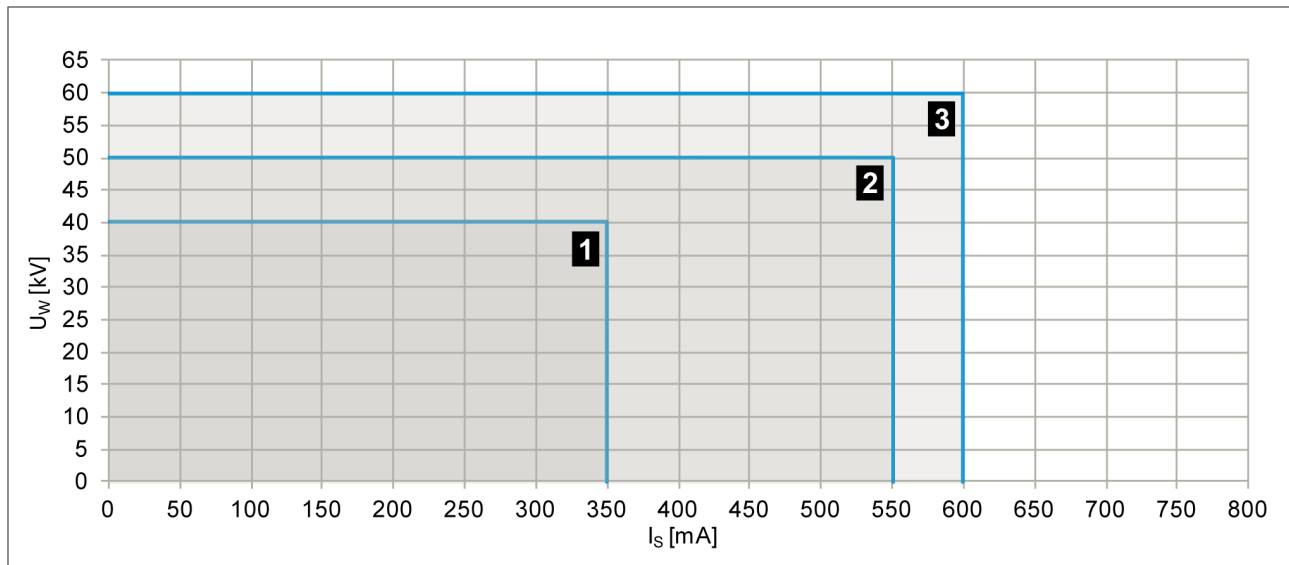


Figura 2: Valores orientativos para U_w e I_s sin resistencia de guía R_p para los modelos del selector RC, RD, RDE, RE, RF

1 Modelos del selector RC, RD, RDE sin AGIS

2 Modelos del selector RC, RD, RDE con AGIS

3 Modelos del selector RE, RF con AGIS



Tensión de reaparición U_w y corriente de desconexión I_s con resistencia de guía

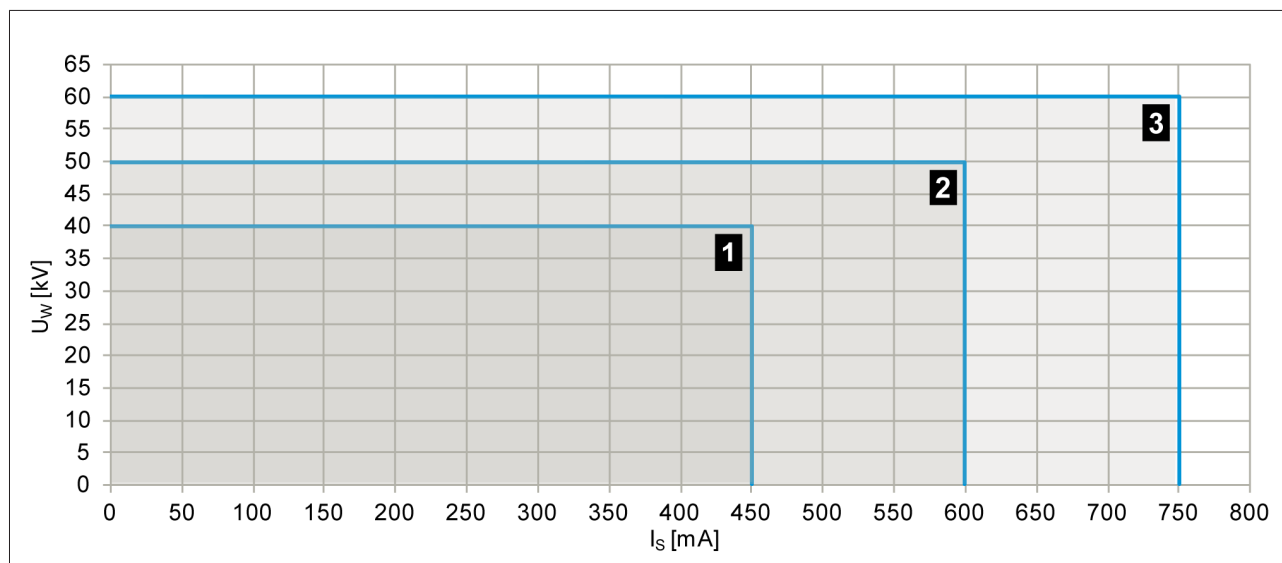


Figura 3: Valores orientativos para U_w e I_s con resistencia de guía R_p para los modelos del selector RC, RD, RDE, RE, RF

| | |
|---|---|
| 1 Modelos del selector RC, RD, RDE sin AGIS | 2 Modelos del selector RC, RD, RDE con AGIS |
| 3 Modelos del selector RE, RF con AGIS | |

4 Ejecuciones especiales

4.1 Puentes paralelos para conexiones en paralelo

Los puentes paralelos permiten la distribución de corriente en los contactos de conexión de 2 o 3 niveles del selector. Los puentes paralelos solo se suministran para los siguientes cambiadores de tomas bajo carga:

VACUTAP® VM I 1503

OILTAP® M I 1503

OILTAP® R I 2002/2003 y OILTAP® R I 3003

Los puentes paralelos en los terminales del selector resultan imprescindibles cuando el arrollamiento de tomas se ha arrollado en dos o varios conductores parciales y cada una de estas fases parciales se conduce a modo de toma a los contactos de conexión del selector.

Esta medida evita de manera segura lo siguiente:

- el arrastre de corrientes de compensación a las vías de circulación de corriente del selector y ruptor
- un arco voltaico de conmutación en contactos móviles del selector
- sobretensiones entre terminales del selector contiguos conectados en paralelo

4.2 Combinación de cambiadores de tomas bajo carga VACUTAP® VM® para conexión en triángulo

El cambiador de tomas bajo carga VM II 652 también se puede utilizar con el cambiador de tomas bajo carga de una columna VM I 651 como combinación de cambiadores de tomas bajo carga de dos columnas VM I 651/VM II 652 para el ajuste de tensión de arrollamientos del transformador en conexión en triángulo.

Esta combinación se denomina VM III K ("K" para combinación). Para ello, los arrollamientos de tomas pueden preverse según el siguiente gráfico:

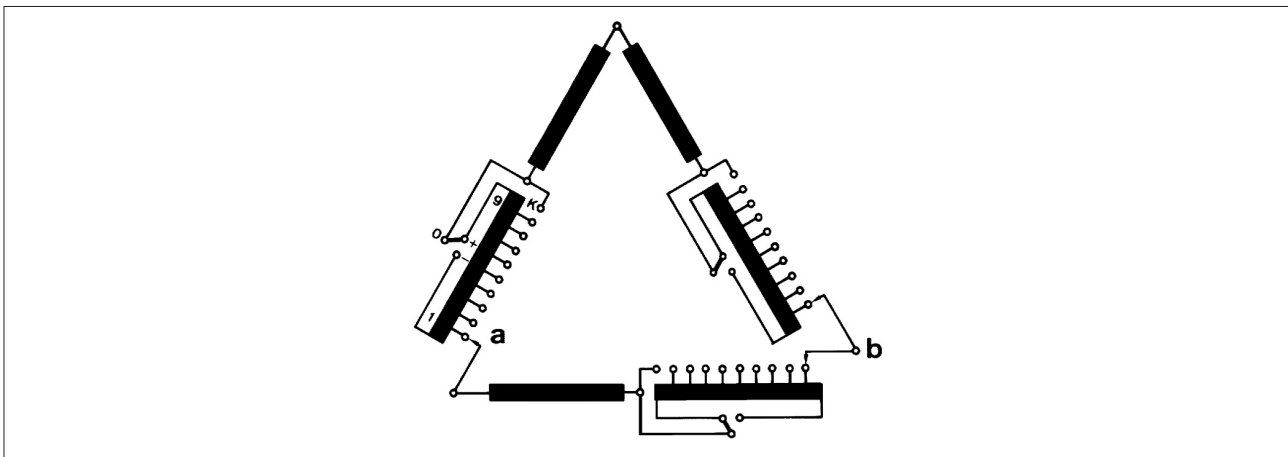


Figura 4: Combinación de cambiadores de tomas bajo carga VM III K para conexión en triángulo: VM I 651/VM II 652 (a = VM I 651, b = VM II 652)

4.3 Combinación de cambiadores de tomas bajo carga OILTAP® M para conexión en triángulo

El cambiador de tomas bajo carga M II 602 también se puede utilizar con el cambiador de tomas bajo carga de una columna M I 601 como combinación de cambiadores de tomas bajo carga de dos columnas M I 601/M II 602 para el ajuste de tensión de arrollamientos del transformador en conexión en triángulo.

Esta combinación se denomina M III K ("K" para combinación). Para ello, los arrollamientos de tomas pueden preverse según el siguiente gráfico:

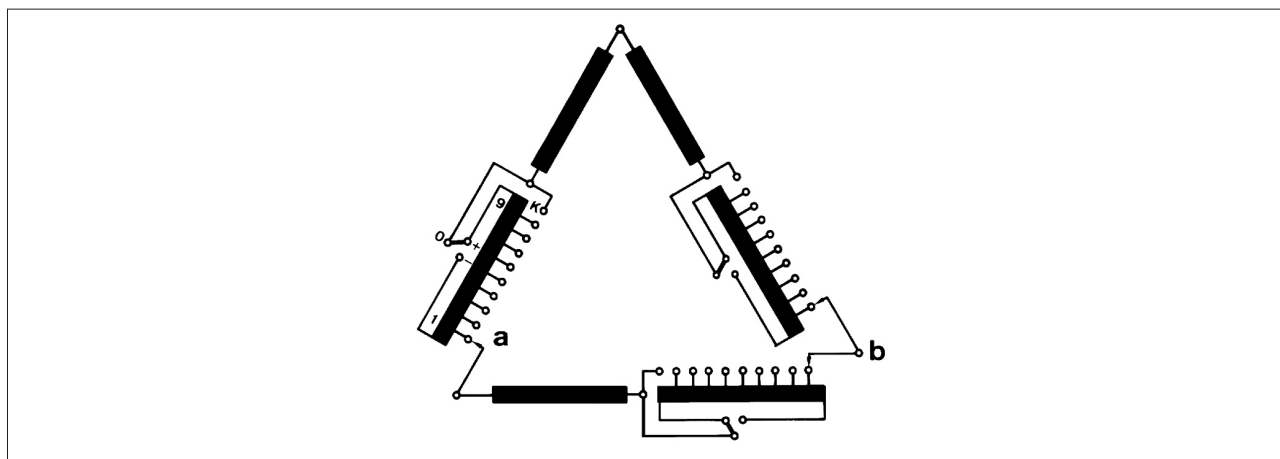


Figura 5: Combinación de cambiadores de tomas bajo carga M III K para conexión en triángulo: M I 601/M II 602 (a = M I 601, b = M II 602)

4.4 Combinación de cambiadores de tomas bajo carga OILTAP® R para conexión en triángulo

El cambiador de tomas bajo carga R II 1202 también se puede utilizar con el cambiador de tomas bajo carga de una columna R I 1201 como combinación de cambiadores de tomas bajo carga de dos columnas R I 1201/R II 1202 para el ajuste de tensión de arrollamientos del transformador en conexión en triángulo.

Esta combinación se denomina R III K ("K" para combinación). Para ello, los arrollamientos de tomas pueden preverse según el siguiente gráfico:

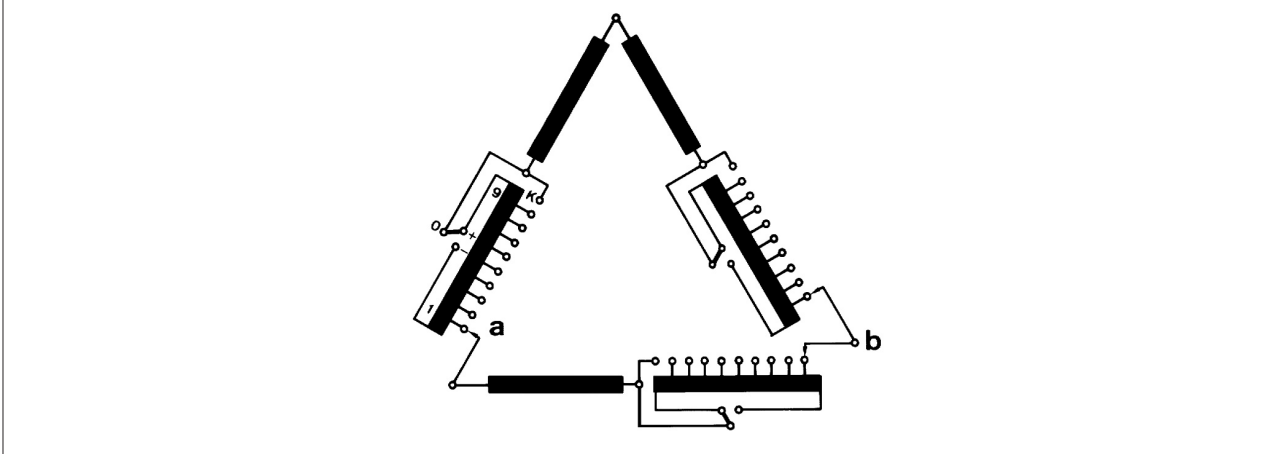


Figura 6: Combinación de cambiadores de tomas bajo carga R III K para conexión en triángulo: R I 1201/R II 1202 (a = R I 1201, b = R II 1202)



5 Dibujos

5.1 Vista general de los modelos VACUTAP® VM®, OILTAP® M y OILTAP® R

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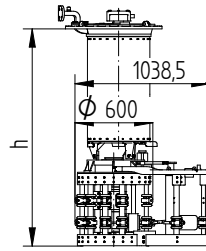
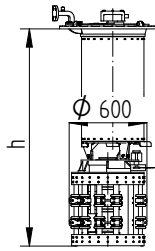
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| CHKD. 23.01.2018 | MENZELS | CHANGE NO. |
| STANDJ 23.01.2018 | PRODASTSCHUK | 1085481 |
| | | SCALE 1:20 |

WITHOUT CHANGE-OVER SELECTOR 0

WITH CHANGE-OVER SELECTOR
 (REVERSING / COARSE CHANGE-OVER SELECTOR) W, G

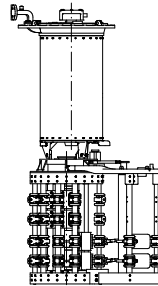
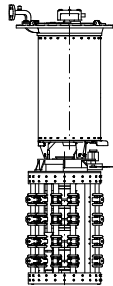
VM I 651
 VM I 802
 VM I 1002
 VM I 1203

 M I 601
 M I 802
 M I 1203



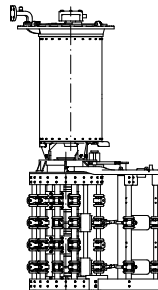
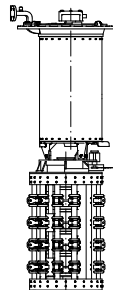
| Um [kV] | h [mm] | |
|---------|---------------|----------|
| | SELECTOR SIZE | |
| | RC | RD / RDE |
| 72,5 | 1665 | 1745 |
| 123 | 1795 | 1875 |
| 170 | 1925 | 2005 |
| 245 | 2025 | 2105 |
| 300 | 2177 | 2257 |

VM I 1503
 M I 1503



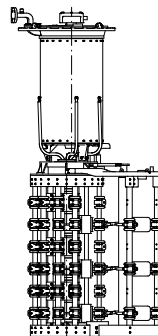
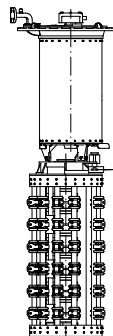
| Um [kV] | h [mm] | |
|---------|---------------|----------|
| | SELECTOR SIZE | |
| | RC | RD / RDE |
| 72,5 | 1965 | 2045 |
| 123 | 2095 | 2175 |
| 170 | 2225 | 2305 |
| 245 | 2325 | 2405 |
| 300 | 2477 | 2557 |

VM II 652
 M II 602



| Um [kV] | h [mm] | |
|---------|---------------|----------|
| | SELECTOR SIZE | |
| | RC | RD / RDE |
| 72,5 | 2005 | 2165 |
| 123 | 2135 | 2295 |
| 170 | 2265 | 2425 |
| 245 | 2365 | 2525 |
| 300 | 2517 | 2677 |

VM III 650 Y
 M III 600 Y



| Um [kV] | h [mm] | |
|---------|---------------|----------|
| | SELECTOR SIZE | |
| | RC | RD / RDE |
| 72,5 | 2345 | 2585 |
| 123 | 2475 | 2715 |
| 170 | 2605 | 2845 |
| 245 | 2705 | 2945 |

SELECTOR SIZE RC 72,5kV DISPLAYED

DIMENSION
 IN mm
 EXCEPT AS
 NOTED



ON-LOAD TAP-CHANGER OILTAP® M, VACUTAP® VM
 TYPE OVERVIEW - SELECTOR SIZE RC/RD/RDE

SERIAL NUMBER

MATERIAL NUMBER 100100081E SHEET 1/1

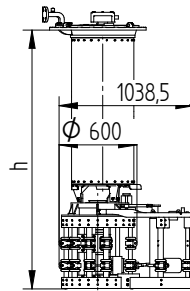
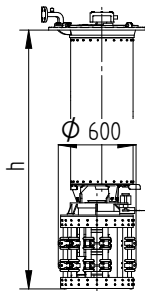
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| CHKD. 23.01.2018 | MENZELS | SCALE |
| STANDJ 23.01.2018 | PRODASTSCHUK | 1085481 |
| | | 120 |

WITHOUT CHANGE-OVER SELECTOR 0

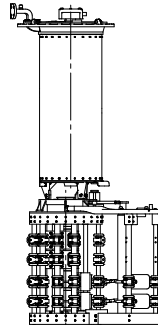
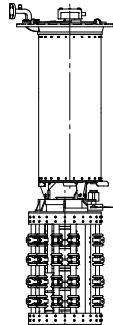
WITH CHANGE-OVER SELECTOR
 (REVERSING / COARSE CHANGE-OVER SELECTOR) W, G

R I 1201
 R I 1202



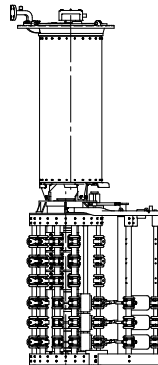
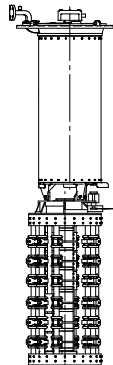
| Um [kV] | h [mm] | |
|---------|---------------|----------|
| | SELECTOR SIZE | |
| | RC | RD / RDE |
| 72,5 | 1984 | 2064 |
| 123 | 2114 | 2194 |
| 170 | 2214 | 2294 |
| 245 | 2314 | 2394 |
| 300 | 2460 | 2540 |
| 362 | 2590 | 2670 |

R I 2002
 R I 2003
 R I 2402



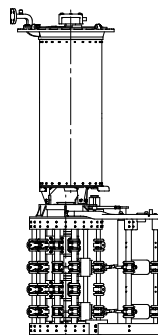
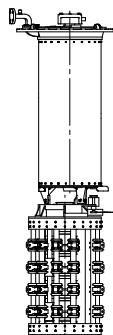
| Um [kV] | h [mm] | |
|---------|---------------|----------|
| | SELECTOR SIZE | |
| | RC | RD / RDE |
| 72,5 | 2284 | 2364 |
| 123 | 2414 | 2494 |
| 170 | 2514 | 2594 |
| 245 | 2614 | 2694 |
| 300 | 2760 | 2840 |
| 362 | 2890 | 2970 |

R I 3003



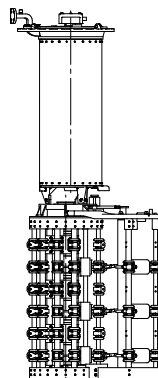
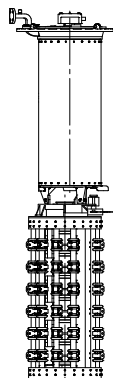
| Um [kV] | h [mm] | |
|---------|---------------|----------|
| | SELECTOR SIZE | |
| | RC | RD / RDE |
| 72,5 | 2584 | 2664 |
| 123 | 2714 | 2794 |
| 170 | 2814 | 2894 |
| 245 | 2914 | 2994 |
| 300 | 3060 | 3140 |
| 362 | 3190 | 3270 |

R II 1202



| Um [kV] | h [mm] | |
|---------|---------------|----------|
| | SELECTOR SIZE | |
| | RC | RD / RDE |
| 72,5 | 2324 | 2484 |
| 123 | 2454 | 2614 |
| 170 | 2554 | 2714 |
| 245 | 2654 | 2814 |
| 300 | 2800 | 2960 |
| 362 | 2930 | 3090 |

R III 1200 Y



| Um [kV] | h [mm] | |
|---------|---------------|----------|
| | SELECTOR SIZE | |
| | RC | RD / RDE |
| 72,5 | 2664 | 2904 |
| 123 | 2794 | 3034 |
| 170 | 2894 | 3134 |
| 245 | 2994 | 3234 |
| 300 | 3140 | 3380 |
| 362 | 3270 | 3510 |

SELECTOR SIZE RC 72,5kV DISPLAYED

DIMENSION
 IN mm
 EXCEPT AS
 NOTED



ON-LOAD TAP-CHANGER OILTAP® R
 TYPE OVERVIEW - SELECTOR SIZE RC/RD/RDE

SERIAL NUMBER

MATERIAL NUMBER 100100061E SHEET 1/1

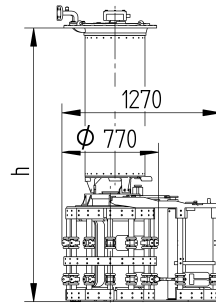
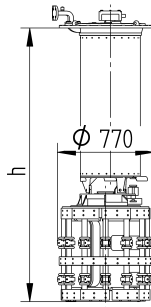
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| CHKD. 19.10.2016 | HILTNER | CHANGE NO. |
| STAND. 20.10.2016 | PRODASTSCHUK | 1077666 |
| | | SCALE 1:20 |

WITHOUT CHANGE-OVER SELECTOR 0

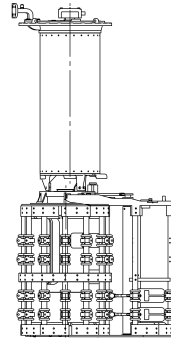
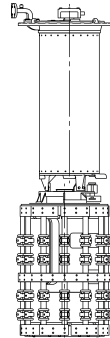
WITH CHANGE-OVER SELECTOR
 (REVERSING / COARSE CHANGE-OVER SELECTOR) W, G

R I 1201
 R I 1202



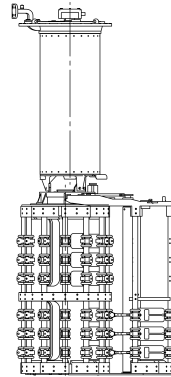
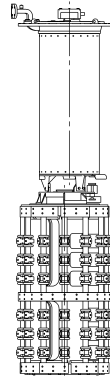
| Um [kV] | h [mm] | |
|---------|---------------|----|
| | SELECTOR SIZE | |
| | RE | RF |
| 72,5 | 2185 | - |
| 123 | 2315 | - |
| 170 | 2415 | - |
| 245 | 2515 | - |
| 300 | 2661 | - |
| 362 | 2791 | - |

R I 2002
 R I 2003
 R I 2402



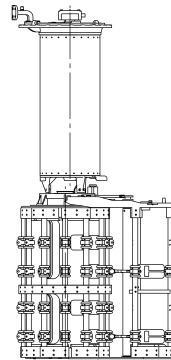
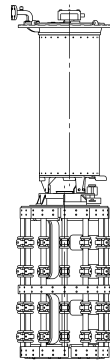
| Um [kV] | h [mm] | |
|---------|---------------|----|
| | SELECTOR SIZE | |
| | RE | RF |
| 72,5 | 2485 | - |
| 123 | 2615 | - |
| 170 | 2715 | - |
| 245 | 2815 | - |
| 300 | 2961 | - |
| 362 | 3091 | - |

R I 3003



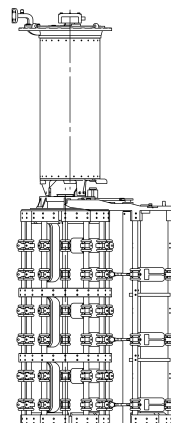
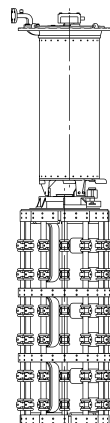
| Um [kV] | h [mm] | |
|---------|---------------|----|
| | SELECTOR SIZE | |
| | RE | RF |
| 72,5 | 2785 | - |
| 123 | 2915 | - |
| 170 | 3015 | - |
| 245 | 3115 | - |
| 300 | 3261 | - |
| 362 | 3391 | - |

R II 1202



| Um [kV] | h [mm] | |
|---------|---------------|------|
| | SELECTOR SIZE | |
| | RE | RF |
| 72,5 | 2645 | 2725 |
| 123 | 2775 | 2855 |
| 170 | 2875 | 2955 |
| 245 | 2975 | 3055 |
| 300 | 3121 | 3201 |
| 362 | 3251 | 3331 |

R III 1200 Y



| Um [kV] | h [mm] | |
|---------|---------------|------|
| | SELECTOR SIZE | |
| | RE | RF |
| 72,5 | 3165 | 3325 |
| 123 | 3295 | 3455 |
| 170 | 3395 | 3555 |
| 245 | 3495 | 3655 |
| 300 | 3641 | 3801 |
| 362 | 3771 | 3931 |

SELECTOR SIZE RE 72,5KV
 DISPLAYED

DIMENSION
 IN mm
 EXCEPT AS
 NOTED



ON-LOAD TAP-CHANGER OILTAP® R
 TYPE OVERVIEW - SELECTOR SIZE RE/RF
 DIMENSION DRAWING

SERIAL NUMBER

MATERIAL NUMBER
 100169160E

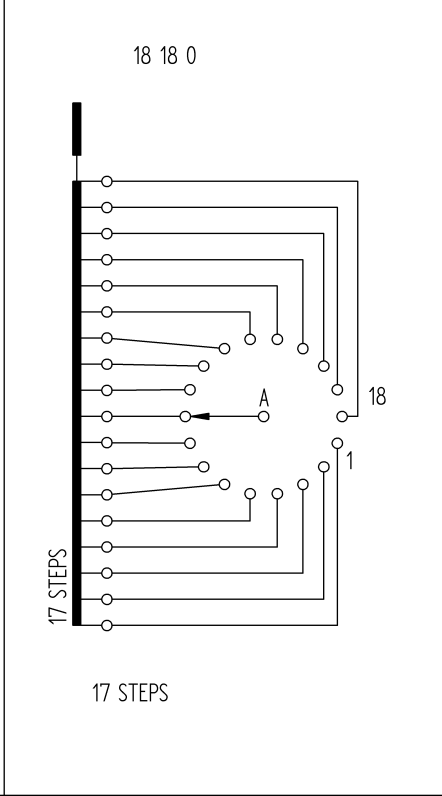
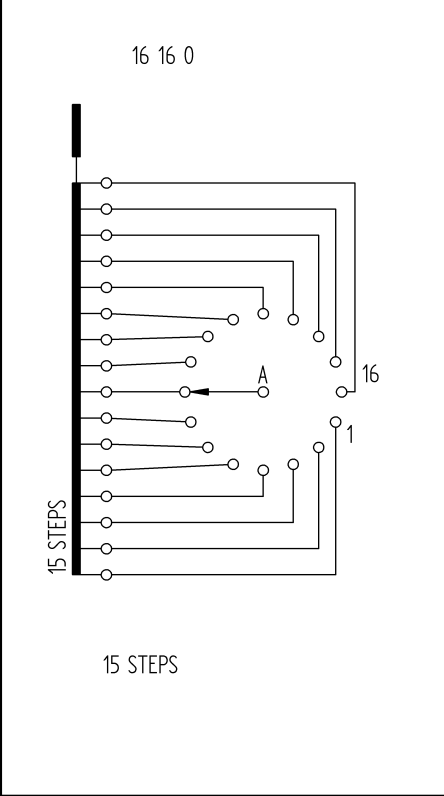
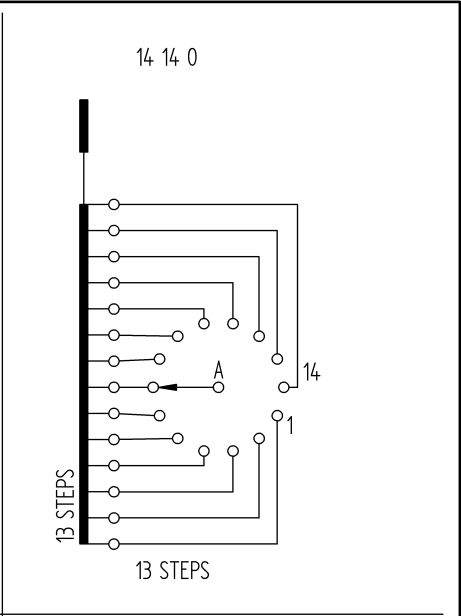
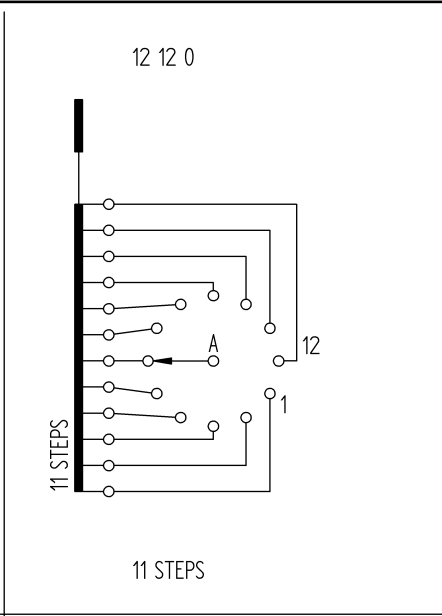
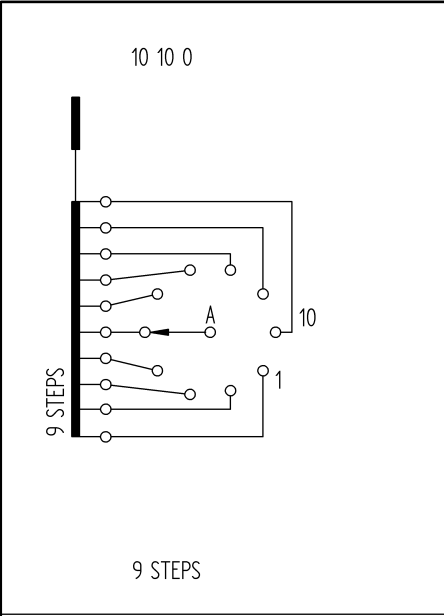
SHEET
 1/1



5.2 Esquemas de conexiones básicos, denominación de los contactos según la norma MR

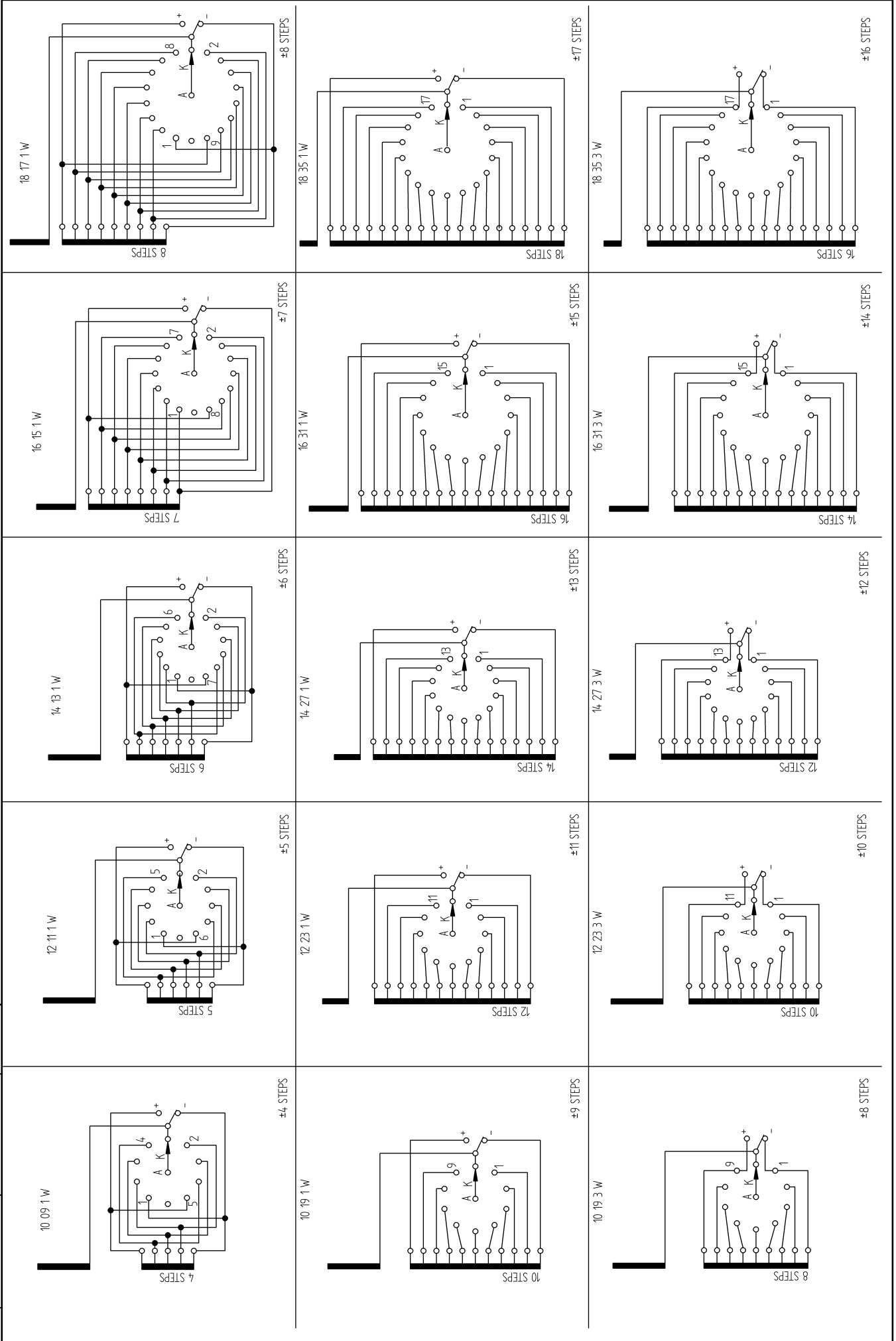
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| CHKD. 19.10.2016 | HILTNER | CHANGE NO. |
| STAND. 20.10.2016 | PRODASTCHUK | 1077666 |
| | | SCALE |
| | | - |



| | | | | | | |
|--|--|--|--|--|-------------------------------|----------------|
| DIMENSION IN mm EXCEPT AS NOTED | | | ON-LOAD TAP-CHANGER OILTAP® M, RM, R, G AND VACUTAP® VM, VR BASIC CONNECTION DIAGRAMS WITHOUT CHANGE-OVER SELECTOR (WITHOUT 22 22 0) | | SERIAL NUMBER | |
| | | | | | MATERIAL NUMBER 100103261E | SHEET 1 / 3 |

| | | |
|-------------------|--------------|--------------------|
| DATE | NAME | DOCUMENT NO. |
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| CHKD. 19.10.2016 | HILTNER | CHANGE NO. |
| STAND. 20.10.2016 | PRODASTSCHUK | 1077666 |
| | | SCALE |
| | | - |



DIMENSION
IN mm
EXCEPT AS
NOTED



ON-LOAD TAP-CHANGER OILTAP® M, RM, R, G AND VACUTAP® VM, VR
BASIC CONNECTION DIAGRAMS
WITH REVERSING CHANGE-OVER SELECTOR

SERIAL NUMBER

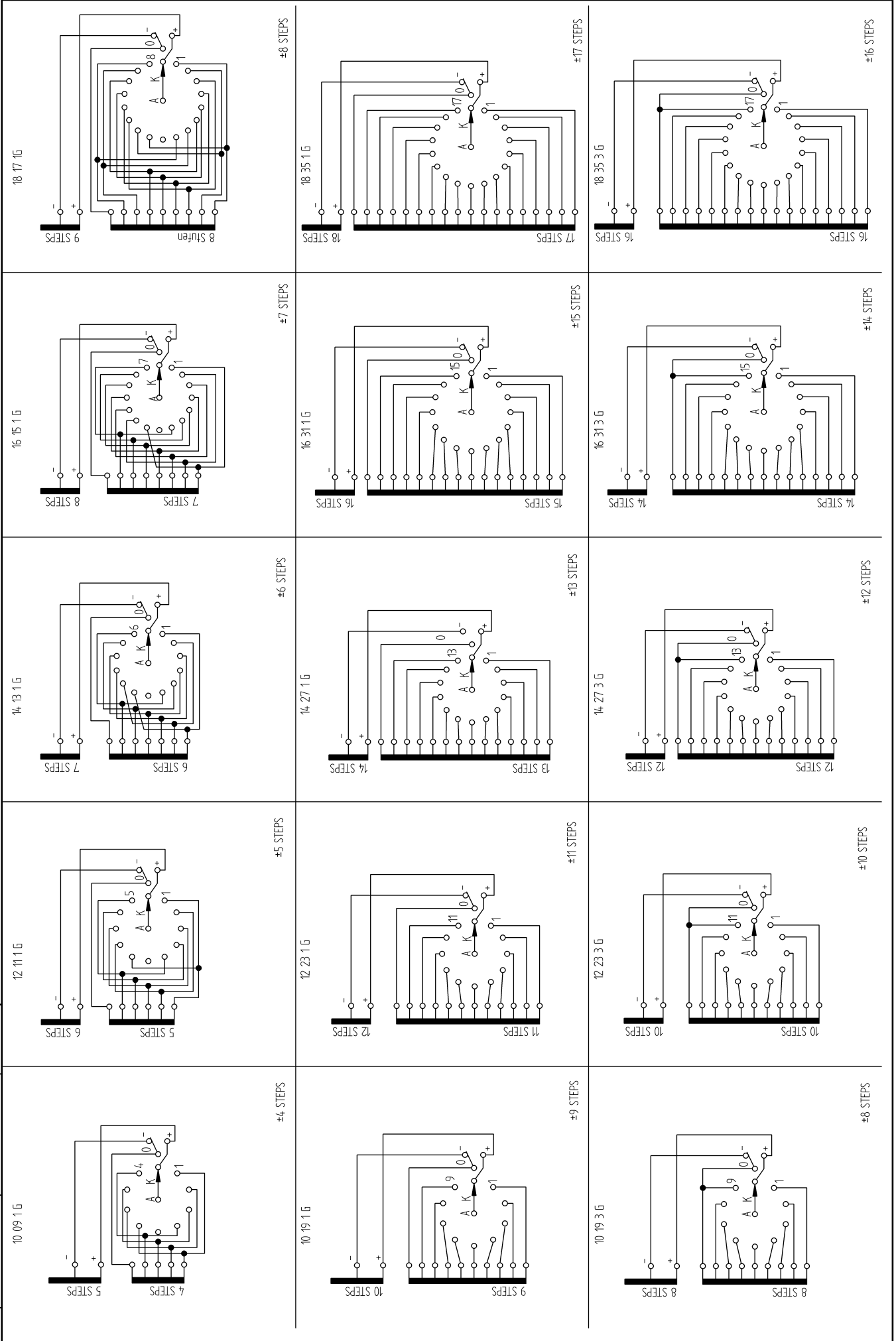
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SHEET
2 / 3

| | | |
|-------------------|-------------|--------------------|
| DATE | NAME | DOCUMENT NO. |
| 05.10.2016 | LIPINSKI | SED 4357321 001 02 |
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| SCALE | PRODAJSCHUK | 1077666 |
| STAND. 20.10.2016 | | - |

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DIMENSION
IN mm
EXCEPT AS
NOTED



ON-LOAD TAP-CHANGER OILTAP® M, RM, R, G AND VACUTAP® VM, VR
BASIC CONNECTION DIAGRAMS
WITH COARSE CHANGE-OVER SELECTOR

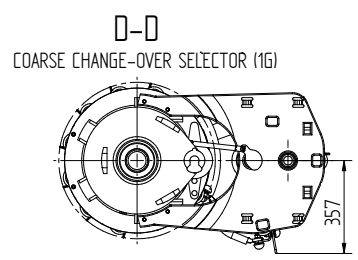
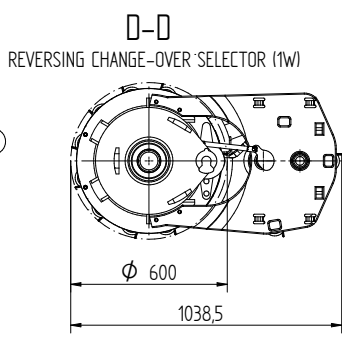
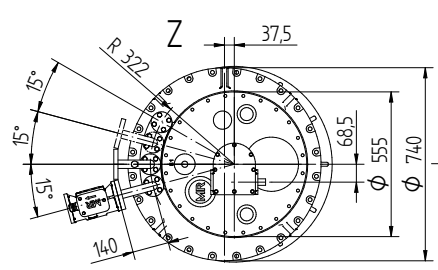
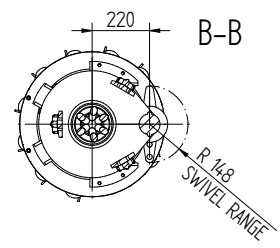
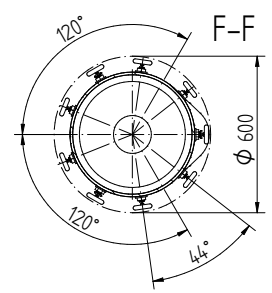
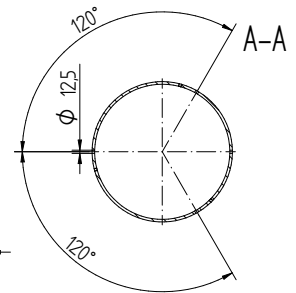
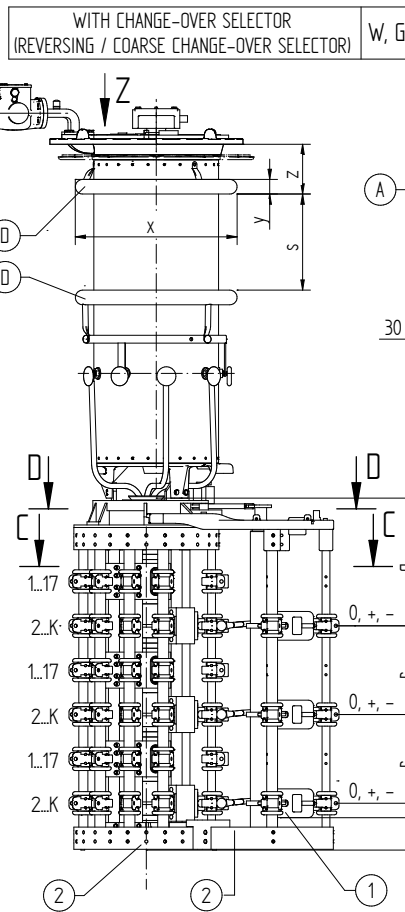
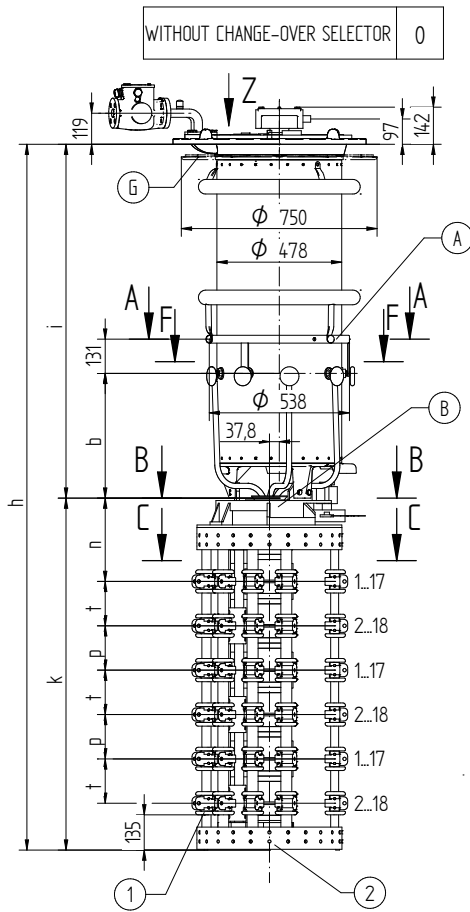
| | |
|-----------------|-------|
| SERIAL NUMBER | |
| MATERIAL NUMBER | SHEET |
| 100103261E | 3 / 3 |



5.3 Dibujos acotados VACUTAP® VM® y OILTAP® M

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| DATE | NAME | DOCUMENT NO. |
| DFTR. 09.01.2018 | RAEDLINGER | SED 4311295 001 04 |
| CHKD. 23.01.2018 | MENZELS | SCALE 1:10 |
| STANDJ 23.01.2018 | PRODASTSCHUK | CHANGE NO. 1085481 |



FOR THE TYPE OF OLTC-HEAD REFER TO ORDER-SPECIFIC DRAWING OF THE OLTC-HEAD AND DRIVE SHAFTS

- (M) - DRIVE SIDE OF SELECTOR
- (A) - ON-LOAD TAP-CHANGER CURRENT TAKE-OFF TERMINAL
- (B) - IS CONNECTED TO POTENTIAL OF (A)
- (D) - SHIELDING RINGS FOR UM OF 170 kV OR GREATER
- (G) - SUPPORTING FLANGE FOR BELL-TYPE TANK INSTALLATION IS OPTIONAL
- (1) - BOTTOM-MOST LIVE PARTS; THESE ARE CONNECTED TO THE POTENTIAL OF THE ASSOCIATED AND/OR WIRED CONNECTION CONTACT
- (2) - SELECTOR BASE IS MADE OF INSULATING MATERIAL

- THE DETAILED CONNECTION DIAGRAM IS BINDING FOR THE DESIGNATION OF THE CONNECTION CONTACTS AND PHASES
- C-C REFER TO 10009030
- D-D - TYPE WITH CONNECTING LEAD 3W/3G REFER TO 10010019
- FOR INHERENT DRAWINGS REFER TO 10009819

DIMENSION IN mm EXCEPT AS NOTED



ON-LOAD TAP-CHANGER OILTAP® M, VACUTAP® VM
 MIII600Y, VMIII650Y-72.5...245-RC/RD/RDE
 DIMENSION DRAWING

| | |
|-----------------|-------|
| SERIAL NUMBER | |
| MATERIAL NUMBER | SHEET |
| 100097912E | 1/2 |

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OILTAP® M / VACUTAP® VM

| SELECTOR SIZE | | RC | | | | RD / RDE | | | | |
|--------------------|----|------|------|-------|-------|----------|------|-------|-------|-----|
| Um [kV] | | 72,5 | 123 | 170 | 245 | 72,5 | 123 | 170 | 245 | |
| DIMENSIONS [mm] | h | 2345 | 2475 | 2605 | 2705 | 2585 | 2715 | 2845 | 2945 | |
| | b | 478 | 478 | 478 | 478 | 478 | 478 | 478 | 478 | |
| | i | 996 | 1126 | 1256 | 1356 | 996 | 1126 | 1256 | 1356 | |
| | s | M | - | - | 309 | 409 | - | - | 309 | 409 |
| | | VM | - | - | 268 | 368 | - | - | 268 | 368 |
| | z | - | - | 191 | 191 | - | - | 191 | 191 | |
| | x | - | - | Ø 620 | Ø 620 | - | - | Ø 620 | Ø 620 | |
| | y | - | - | Ø 56 | Ø 56 | - | - | Ø 56 | Ø 56 | |
| | k | 1349 | | | | 1589 | | | | |
| | n | 319 | | | | 359 | | | | |
| | t | 170 | | | | 210 | | | | |
| | p | 170 | | | | 210 | | | | |
| | r | 340 | | | | 420 | | | | |
| | q | 489 | | | | 569 | | | | |
| OIL VOLUME [dm³] | | 130 | 150 | 170 | 190 | 130 | 150 | 170 | 190 | |
| DISPLACEMENT [dm³] | | 216 | 239 | 272 | 272 | 222 | 245 | 278 | 278 | |
| MAX. WEIGHT [kg] | M | 385 | 390 | 395 | 400 | 396 | 401 | 406 | 411 | |
| | VM | 415 | 420 | 425 | 430 | 426 | 431 | 436 | 441 | |

| | | |
|------------|--------------|--------------------|
| DATE | NAME | DOCUMENT NO. |
| 09.01.2018 | RAEDLINGER | SED 4311295 001 04 |
| 23.01.2018 | MENZELS | CHANGE NO. |
| 23.01.2018 | PRODASTSEHIK | 1085481 |
| DFTR. | SCALE | 1:10 |
| CHKD. | | |
| STAND | | |

DIMENSION
IN mm
EXCEPT AS
NOTED



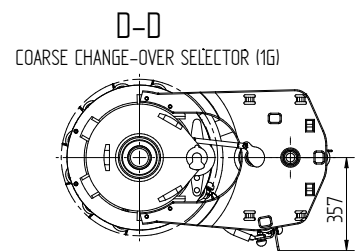
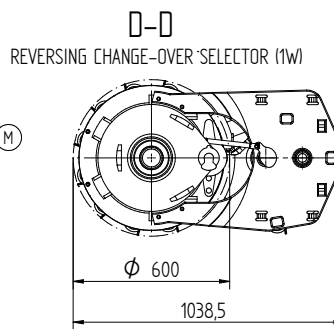
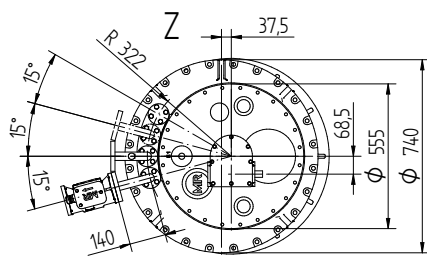
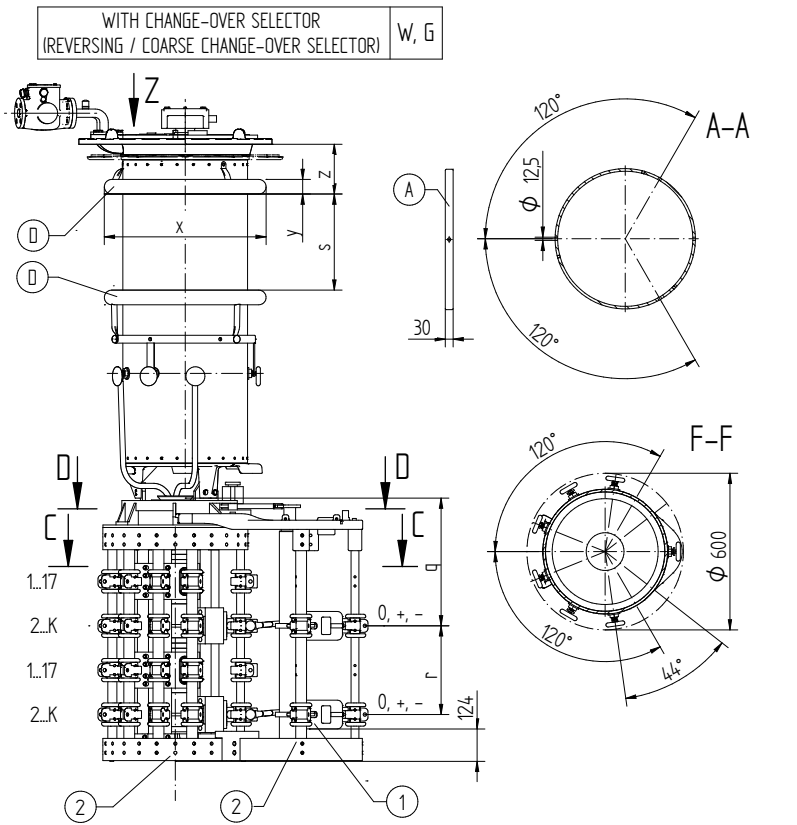
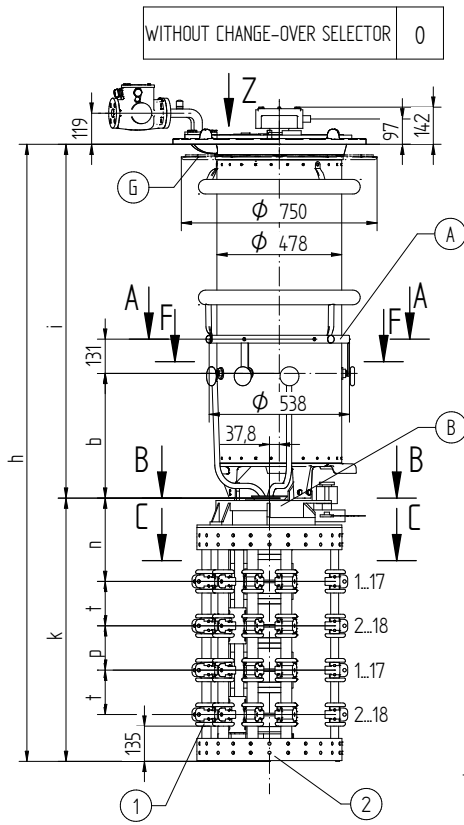
ON-LOAD TAP-CHANGER OILTAP® M, VACUTAP® VM
MIII600Y, VMIII650Y-72,5...245-RC/RD/RDE
DIMENSION DRAWING

SERIAL NUMBER

| | |
|-----------------|-------|
| MATERIAL NUMBER | SHEET |
| 100097912E | 2/2 |

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| 23.01.2018 | MENZELS | SCALE |
| 23.01.2018 | PRODASTSCHUK | 1:10 |
| | | CHANGE NO. |
| | | 1085481 |



FOR THE TYPE OF OLTC-HEAD REFER TO ORDER-SPECIFIC DRAWING OF THE OLTC-HEAD AND DRIVE SHAFTS

- (M) - DRIVE SIDE OF SELECTOR
- (A) - ON-LOAD TAP-CHANGER CURRENT TAKE-OFF TERMINAL
- (B) - IS CONNECTED TO POTENTIAL OF (A)
- (D) - SHIELDING RINGS FOR UM OF 170 KV OR GREATER
- (G) - SUPPORTING FLANGE FOR BELL-TYPE TANK INSTALLATION IS OPTIONAL
- (1) - BOTTOM-MOST LIVE PARTS; THESE ARE CONNECTED TO THE POTENTIAL OF THE ASSOCIATED AND/OR WIRED CONNECTION CONTACT
- (2) - SELECTOR BASE IS MADE OF INSULATING MATERIAL

- THE DETAILED CONNECTION DIAGRAM IS BINDING FOR THE DESIGNATION OF THE CONNECTION CONTACTS AND PHASES
- C-C REFER TO 10009030
- D-D - TYPE WITH CONNECTING LEAD 3W/3G REFER TO 10010019
- FOR INHERENT DRAWINGS REFER TO 10009819

DIMENSION
 IN mm
 EXCEPT AS
 NOTED



ON-LOAD TAP-CHANGER OILTAP® M, VACUTAP® VM
 M11602, VM11652-72,5...300-RC/RD/RDE
 DIMENSION DRAWING

SERIAL NUMBER

MATERIAL NUMBER
 100097922E

SHEET
 1/2

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OILTAP® M / VACUTAP® VM

| SELECTOR SIZE | | RC | | | | | RD / RDE | | | | | |
|--------------------|-----|------|------|-------|-------|-------|----------|------|-------|-------|-------|-----|
| Um [kV] | | 72,5 | 123 | 170 | 245 | 300 | 72,5 | 123 | 170 | 245 | 300 | |
| DIMENSIONS [mm] | h | 2005 | 2135 | 2265 | 2365 | 2517 | 2165 | 2295 | 2425 | 2525 | 2677 | |
| | b | 478 | 478 | 478 | 478 | 478 | 478 | 478 | 478 | 478 | 478 | |
| | i | 996 | 1126 | 1256 | 1356 | 1508 | 996 | 1126 | 1256 | 1356 | 1508 | |
| | s | M | - | - | 309 | 409 | 520 | - | - | 309 | 409 | 520 |
| | | VM | - | - | 268 | 368 | 520 | - | - | 268 | 368 | 520 |
| | z | - | - | 191 | 191 | 191 | - | - | 191 | 191 | 191 | |
| | x | - | - | Ø 620 | Ø 620 | Ø 620 | - | - | Ø 620 | Ø 620 | Ø 620 | |
| | y | - | - | Ø 56 | Ø 56 | Ø 56 | - | - | Ø 56 | Ø 56 | Ø 56 | |
| | k | 1009 | | | | | 1169 | | | | | |
| | n | 319 | | | | | 359 | | | | | |
| | t | 170 | | | | | 210 | | | | | |
| | p | 170 | | | | | 210 | | | | | |
| | r | 340 | | | | | 420 | | | | | |
| q | 489 | | | | | 569 | | | | | | |
| OIL VOLUME [dm³] | | 130 | 150 | 170 | 190 | 210 | 130 | 150 | 170 | 190 | 210 | |
| DISPLACEMENT [dm³] | | 203 | 226 | 259 | 277 | 304 | 207 | 230 | 263 | 281 | 308 | |
| MAX. WEIGHT [kg] | M | 340 | 345 | 350 | 355 | 360 | 347 | 352 | 357 | 362 | 367 | |
| | VM | 370 | 375 | 380 | 385 | 390 | 377 | 382 | 387 | 392 | 397 | |

| | | |
|------------|--------------|--------------------|
| DATE | NAME | DOCUMENT NO. |
| 09.01.2018 | RAEDLINGER | SED 4313440 001 05 |
| 23.01.2018 | MENZELS | CHANGE NO. |
| 23.01.2018 | PRODASTSCHUK | 1085481 |
| DFTR. | SCALE | 1:10 |
| CHKD. | | |
| STAND | | |

DIMENSION
IN mm
EXCEPT AS
NOTED



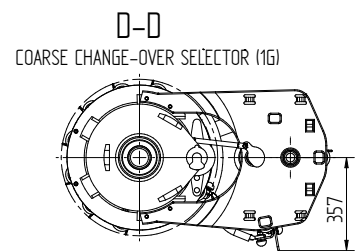
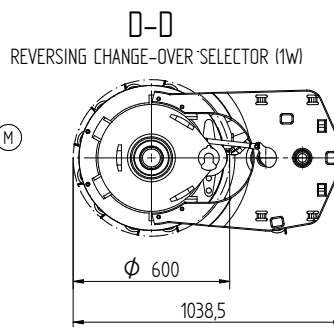
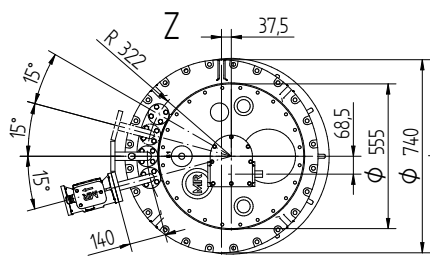
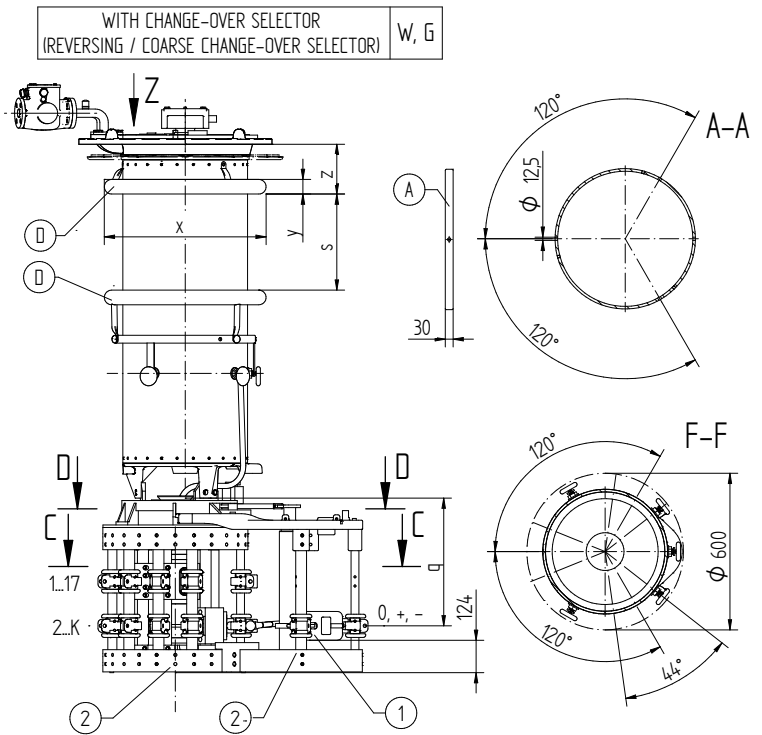
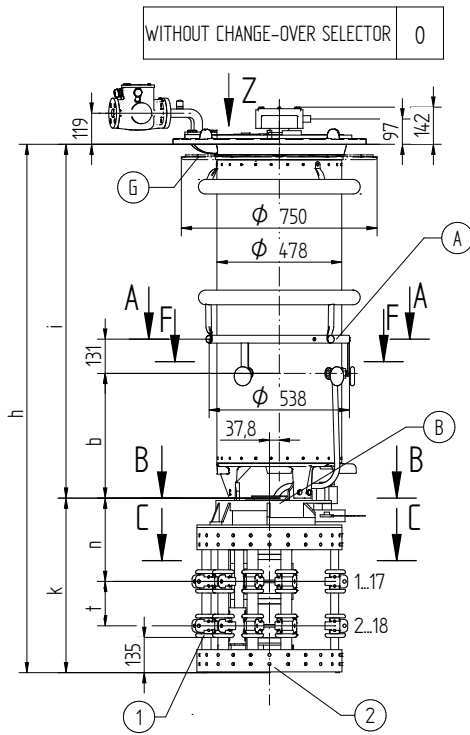
ON-LOAD TAP-CHANGER OILTAP® M, VACUTAP® VM
 M11602, VM11652-72,5...300-RC/RD/RDE
 DIMENSION DRAWING

SERIAL NUMBER

| | |
|-----------------|-------|
| MATERIAL NUMBER | SHEET |
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| 09.01.2018 | RAEDLINGER | SED 4313317 001 05 |
| 23.01.2018 | MENZELS | CHANGE NO. |
| 23.01.2018 | PRODASTSCHUK | 1085481 |
| | | SCALE |
| | | 1:10 |



FOR THE TYPE OF OLTC-HEAD REFER TO ORDER-SPECIFIC DRAWING OF THE OLTC-HEAD AND DRIVE SHAFTS

- (M) - DRIVE SIDE OF SELECTOR
- (A) - ON-LOAD TAP-CHANGER CURRENT TAKE-OFF TERMINAL
- (B) - IS CONNECTED TO POTENTIAL OF (A)
- (D) - SHIELDING RINGS FOR UM OF 170 kV OR GREATER
- (G) - SUPPORTING FLANGE FOR BELL-TYPE TANK INSTALLATION IS OPTIONAL
- (1) - BOTTOM-MOST LIVE PARTS; THESE ARE CONNECTED TO THE POTENTIAL OF THE ASSOCIATED AND/OR WIRED CONNECTION CONTACT
- (2) - SELECTOR BASE IS MADE OF INSULATING MATERIAL

- THE DETAILED CONNECTION DIAGRAM IS BINDING FOR THE DESIGNATION OF THE CONNECTION CONTACTS AND PHASES
- C-C REFER TO 10009030
- D-D - TYPE WITH CONNECTING LEAD 3W/3G REFER TO 10010019
- FOR INHERENT DRAWINGS REFER TO 10009819

DIMENSION
IN mm
EXCEPT AS
NOTED



ON-LOAD TAP-CHANGER OILTAP® M, VACUTAP® VM
 MI601, VM1651-72.5...300-RC/RD/RDE
 DIMENSION DRAWING

SERIAL NUMBER

MATERIAL NUMBER
100097932E

SHEET
1 / 2

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OILTAP® M / VACUTAP® VM

| SELECTOR SIZE | | RC | | | | | RD / RDE | | | | | |
|--------------------|-----|------|------|-------|-------|-------|----------|------|-------|-------|-------|-----|
| Um [kV] | | 72,5 | 123 | 170 | 245 | 300 | 72,5 | 123 | 170 | 245 | 300 | |
| DIMENSIONS [mm] | h | 1665 | 1795 | 1925 | 2025 | 2177 | 1745 | 1875 | 2005 | 2105 | 2257 | |
| | b | 478 | 478 | 478 | 478 | 478 | 478 | 478 | 478 | 478 | 478 | |
| | i | 996 | 1126 | 1256 | 1356 | 1508 | 996 | 1126 | 1256 | 1356 | 1508 | |
| | s | M | - | - | 309 | 409 | 520 | - | - | 309 | 409 | 520 |
| | | VM | - | - | 268 | 368 | 520 | - | - | 268 | 368 | 520 |
| | z | - | - | 191 | 191 | 191 | - | - | 191 | 191 | 191 | |
| | x | - | - | Ø 620 | Ø 620 | Ø 620 | - | - | Ø 620 | Ø 620 | Ø 620 | |
| | y | - | - | Ø 56 | Ø 56 | Ø 56 | - | - | Ø 56 | Ø 56 | Ø 56 | |
| | k | 669 | | | | | 749 | | | | | |
| | n | 319 | | | | | 359 | | | | | |
| | f | 170 | | | | | 210 | | | | | |
| q | 489 | | | | | 569 | | | | | | |
| OIL VOLUME [dm³] | | 130 | 150 | 170 | 190 | 210 | 130 | 150 | 170 | 190 | 210 | |
| DISPLACEMENT [dm³] | | 190 | 213 | 246 | 264 | 291 | 192 | 215 | 248 | 266 | 293 | |
| MAX. WEIGHT [kg] | M | 296 | 301 | 306 | 311 | 316 | 300 | 305 | 310 | 315 | 320 | |
| | VM | 326 | 331 | 336 | 341 | 346 | 330 | 335 | 340 | 345 | 350 | |

| | | | |
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| DFTR. | 09.01.2018 | NAME | DOCUMENT NO. |
| CHKD. | 23.01.2018 | RAEDLINGER | SED 4313317 001 05 |
| STAND | 23.01.2018 | MENZELS | CHANGE NO. |
| | | PRODASTSCHUK | 1085481 |
| | | | SCALE |
| | | | 1:10 |

DIMENSION
IN mm
EXCEPT AS
NOTED

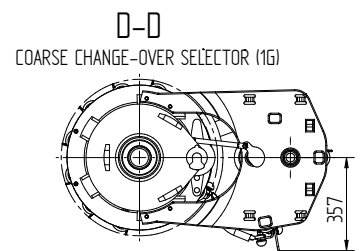
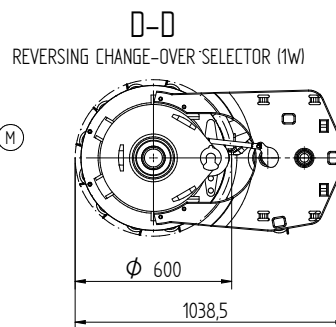
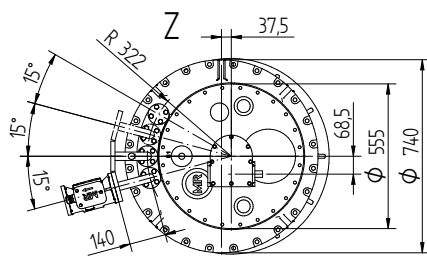
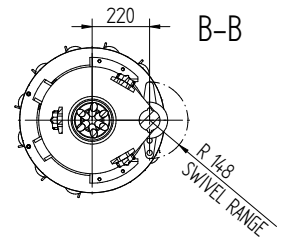
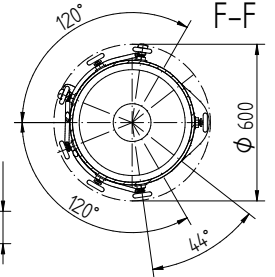
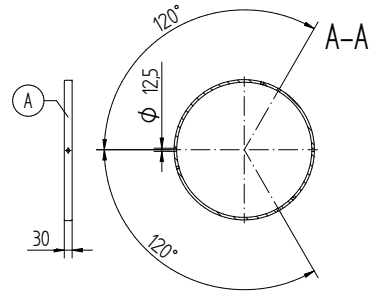
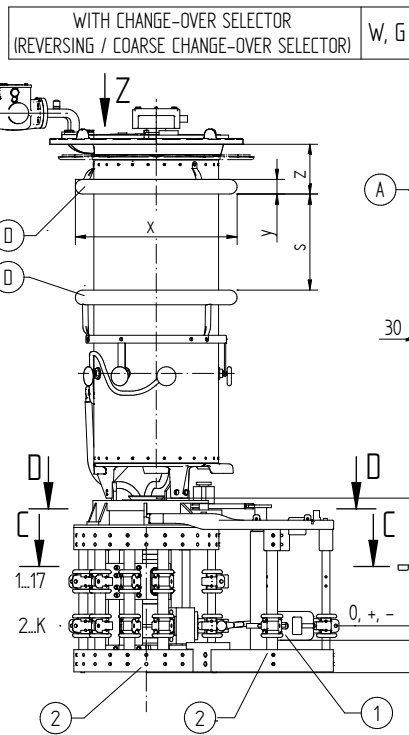
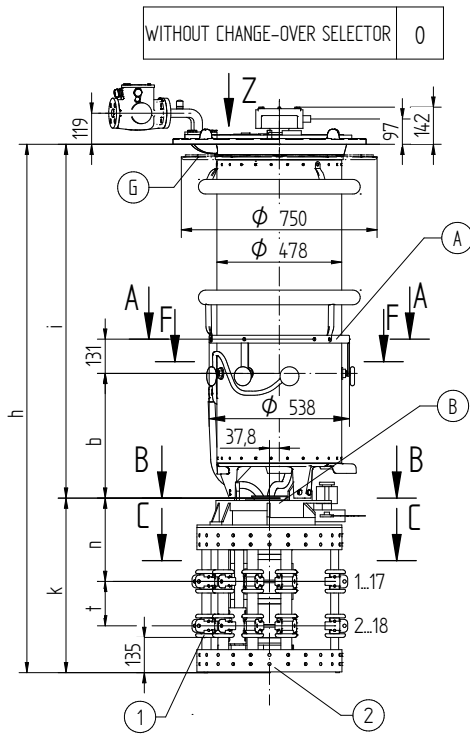


ON-LOAD TAP-CHANGER OILTAP® M, VACUTAP® VM
 MI601, VMI651-72,5...300-RC/RD/RDE
 DIMENSION DRAWING

SERIAL NUMBER

| | |
|-----------------|-------|
| MATERIAL NUMBER | SHEET |
| 100097932E | 2/2 |

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FOR THE TYPE OF OLTC-HEAD REFER TO ORDER-SPECIFIC DRAWING OF THE OLTC-HEAD AND DRIVE SHAFTS

- (M) - DRIVE SIDE OF SELECTOR
- (A) - ON-LOAD TAP-CHANGER CURRENT TAKE-OFF TERMINAL
- (B) - IS CONNECTED TO POTENTIAL OF (A)
- (D) - SHIELDING RINGS FOR UM OF 170 kV OR GREATER
- (G) - SUPPORTING FLANGE FOR BELL-TYPE TANK INSTALLATION IS OPTIONAL
- (1) - BOTTOM-MOST LIVE PARTS; THESE ARE CONNECTED TO THE POTENTIAL OF THE ASSOCIATED AND/OR WIRED CONNECTION CONTACT
- (2) - SELECTOR BASE IS MADE OF INSULATING MATERIAL

- THE DETAILED CONNECTION DIAGRAM IS BINDING FOR THE DESIGNATION OF THE CONNECTION CONTACTS AND PHASES
- C-C REFER TO 10009030
- D-D - TYPE WITH CONNECTING LEAD 3W/3G REFER TO 10010019
- FOR INHERENT DRAWINGS REFER TO 10009819

| | | |
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| DATE | NAME | DOCUMENT NO. |
| 09.01.2018 | RAEDLINGER | SED 4313499 001 05 |
| 23.01.2018 | MENZELS | CHANGE NO. |
| 23.01.2018 | PRODASTSCHUK | 1085481 |
| DFTR. | SCALE | 1:10 |
| CHKD. | | |
| STANDJ | | |

DIMENSION
 IN mm
 EXCEPT AS
 NOTED



ON-LOAD TAP-CHANGER OILTAP® M, VACUTAP® VM
 M1802, VM1802/1002-72,5...300-RC/RD/RDE
 DIMENSION DRAWING

SERIAL NUMBER

MATERIAL NUMBER
 100097942E

SHEET
 1 / 2

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OILTAP® M / VACUTAP® VM

| SELECTOR SIZE | | RC | | | | | RD / RDE | | | | | |
|--------------------|-----|------|------|-------|-------|-------|----------|------|-------|-------|-------|-----|
| Um [kV] | | 72,5 | 123 | 170 | 245 | 300 | 72,5 | 123 | 170 | 245 | 300 | |
| DIMENSIONS [mm] | h | 1665 | 1795 | 1925 | 2025 | 2177 | 1745 | 1875 | 2005 | 2105 | 2257 | |
| | b | 478 | 478 | 478 | 478 | 478 | 478 | 478 | 478 | 478 | 478 | |
| | i | 996 | 1126 | 1256 | 1356 | 1508 | 996 | 1126 | 1256 | 1356 | 1508 | |
| | s | M | - | - | 309 | 409 | 520 | - | - | 309 | 409 | 520 |
| | | VM | - | - | 268 | 368 | 520 | - | - | 268 | 368 | 520 |
| | z | - | - | 191 | 191 | 191 | - | - | 191 | 191 | 191 | |
| | x | - | - | Ø 620 | Ø 620 | Ø 620 | - | - | Ø 620 | Ø 620 | Ø 620 | |
| | y | - | - | Ø 56 | Ø 56 | Ø 56 | - | - | Ø 56 | Ø 56 | Ø 56 | |
| | k | 669 | | | | | 749 | | | | | |
| | n | 319 | | | | | 359 | | | | | |
| | t | 170 | | | | | 210 | | | | | |
| q | 489 | | | | | 569 | | | | | | |
| OIL VOLUME [dm³] | | 130 | 150 | 170 | 190 | 210 | 130 | 150 | 170 | 190 | 210 | |
| DISPLACEMENT [dm³] | | 190 | 213 | 246 | 264 | 291 | 192 | 215 | 248 | 266 | 293 | |
| MAX. WEIGHT [kg] | M | 296 | 301 | 306 | 311 | 316 | 300 | 305 | 310 | 315 | 320 | |
| | VM | 326 | 331 | 336 | 341 | 346 | 330 | 335 | 340 | 345 | 350 | |

| | | | |
|-------|------------|--------------|--------------------|
| DFTR. | 09.01.2018 | NAME | DOCUMENT NO. |
| CHKD. | 23.01.2018 | RAEDLINGER | SED 4313499 001 05 |
| STAND | 23.01.2018 | MENZELS | CHANGE NO. |
| | | PRODASTSCHUK | 1085481 |
| | | | SCALE |
| | | | 1:10 |

DIMENSION
IN mm
EXCEPT AS
NOTED



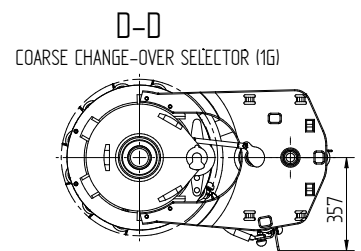
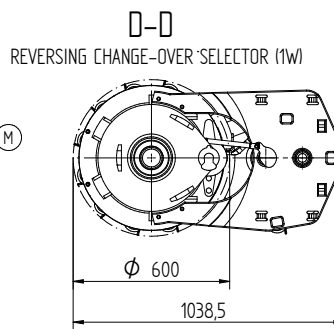
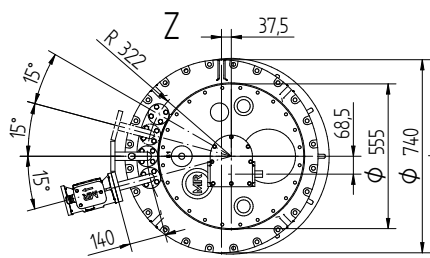
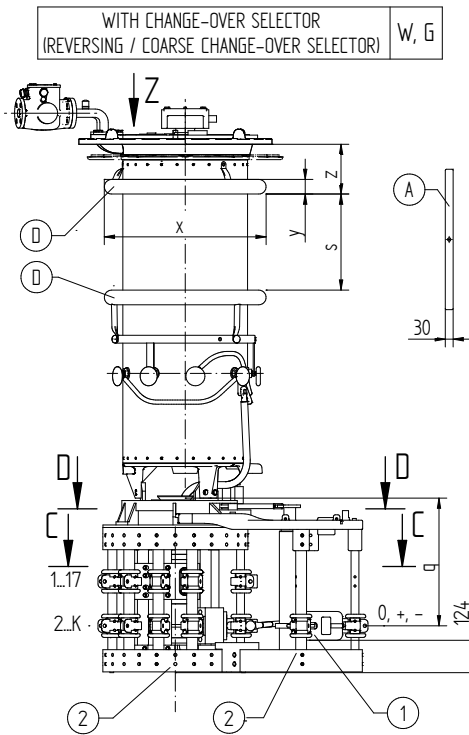
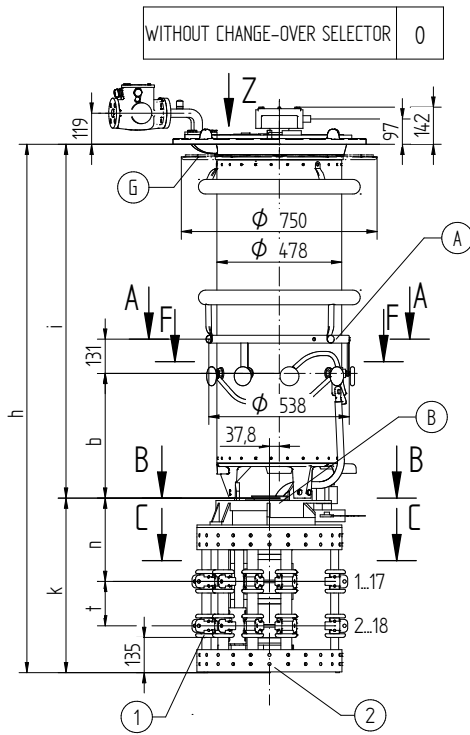
ON-LOAD TAP-CHANGER OILTAP® M, VACUTAP® VM
M1802, VM1802/1002-72,5...300-RC/RD/RDE
DIMENSION DRAWING

SERIAL NUMBER

| | |
|-----------------|-------|
| MATERIAL NUMBER | SHEET |
| 100097942E | 2/2 |

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| | | |
|------------|--------------|--------------------|
| DATE | NAME | DOCUMENT NO. |
| 09.01.2018 | RAEDLINGER | SED 4313554_001_05 |
| 23.01.2018 | MENZELS | SCALE |
| 23.01.2018 | PRODASTSCHUK | 1:10 |
| | | CHANGE NO. |
| | | 1085481 |



FOR THE TYPE OF OLTC-HEAD REFER TO ORDER-SPECIFIC DRAWING OF THE OLTC-HEAD AND DRIVE SHAFTS

- (M) - DRIVE SIDE OF SELECTOR
- (A) - ON-LOAD TAP-CHANGER CURRENT TAKE-OFF TERMINAL
- (B) - IS CONNECTED TO POTENTIAL OF (A)
- (D) - SHIELDING RINGS FOR UM OF 170 kV OR GREATER
- (G) - SUPPORTING FLANGE FOR BELL-TYPE TANK INSTALLATION IS OPTIONAL
- (1) - BOTTOM-MOST LIVE PARTS; THESE ARE CONNECTED TO THE POTENTIAL OF THE ASSOCIATED AND/OR WIRED CONNECTION CONTACT
- (2) - SELECTOR BASE IS MADE OF INSULATING MATERIAL

- THE DETAILED CONNECTION DIAGRAM IS BINDING FOR THE DESIGNATION OF THE CONNECTION CONTACTS AND PHASES
- C-C REFER TO 10009030
- D-D - TYPE WITH CONNECTING LEAD 3W/3G REFER TO 10010019
- FOR INHERENT DRAWINGS REFER TO 10009819

DIMENSION
 IN mm
 EXCEPT AS
 NOTED



ON-LOAD TAP-CHANGER OILTAP® M, VACUTAP® VM
 M11203, VM11203-72,5...300-RC/RD/RDE
 DIMENSION DRAWING

SERIAL NUMBER

MATERIAL NUMBER
 100097952E

SHEET
 1/2

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OILTAP® M / VACUTAP® VM

| SELECTOR SIZE | | RC | | | | | RD / RDE | | | | | |
|--------------------|----|------|------|-------|-------|-------|----------|------|-------|-------|-------|-----|
| Um [kV] | | 72,5 | 123 | 170 | 245 | 300 | 72,5 | 123 | 170 | 245 | 300 | |
| DIMENSIONS [mm] | h | 1665 | 1795 | 1925 | 2025 | 2177 | 1745 | 1875 | 2005 | 2105 | 2257 | |
| | b | 478 | 478 | 478 | 478 | 478 | 478 | 478 | 478 | 478 | 478 | |
| | i | 996 | 1126 | 1256 | 1356 | 1508 | 996 | 1126 | 1256 | 1356 | 1508 | |
| | s | M | - | - | 309 | 409 | 520 | - | - | 309 | 409 | 520 |
| | | VM | - | - | 268 | 368 | 520 | - | - | 268 | 368 | 520 |
| | z | - | - | 191 | 191 | 191 | - | - | 191 | 191 | 191 | |
| | x | - | - | ∅ 620 | ∅ 620 | ∅ 620 | - | - | ∅ 620 | ∅ 620 | ∅ 620 | |
| | y | - | - | ∅ 56 | ∅ 56 | ∅ 56 | - | - | ∅ 56 | ∅ 56 | ∅ 56 | |
| | k | 669 | | | | | 749 | | | | | |
| | n | 319 | | | | | 359 | | | | | |
| | t | 170 | | | | | 210 | | | | | |
| | q | 489 | | | | | 569 | | | | | |
| OIL VOLUME [dm³] | | 130 | 150 | 170 | 190 | 210 | 130 | 150 | 170 | 190 | 210 | |
| DISPLACEMENT [dm³] | | 190 | 213 | 246 | 264 | 291 | 192 | 215 | 248 | 266 | 293 | |
| MAX. WEIGHT [kg] | M | 296 | 301 | 306 | 311 | 316 | 300 | 305 | 310 | 315 | 320 | |
| | VM | 326 | 331 | 336 | 341 | 346 | 330 | 335 | 340 | 345 | 350 | |

| | | | |
|--------|------------|--------------|--------------------|
| DFTR. | 09.01.2018 | NAME | DOCUMENT NO. |
| CHKD. | 23.01.2018 | RAEDLINGER | SED 4313554-001 05 |
| STANDJ | 23.01.2018 | MENZELS | CHANGE NO. |
| | | PRODASTSCHUK | 1085481 |
| | | | SCALE |
| | | | 1:10 |

DIMENSION
IN mm
EXCEPT AS
NOTED

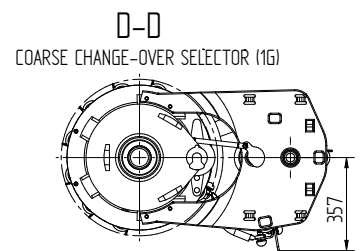
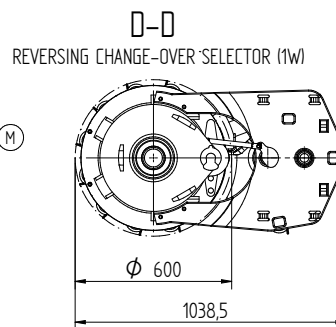
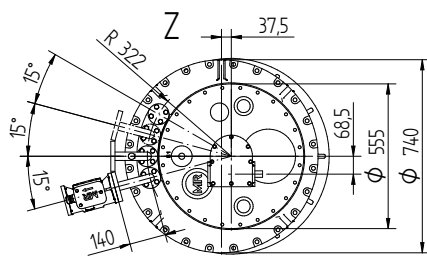
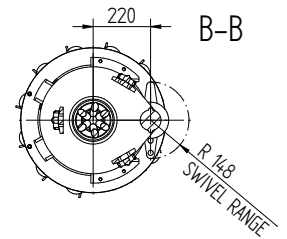
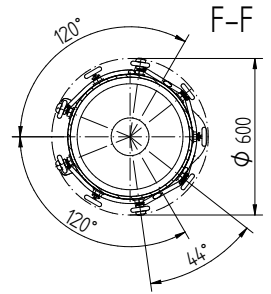
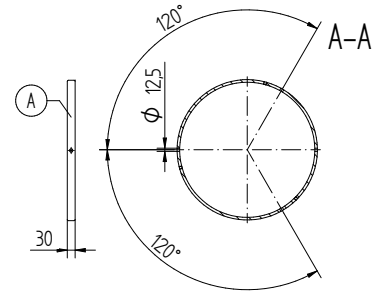
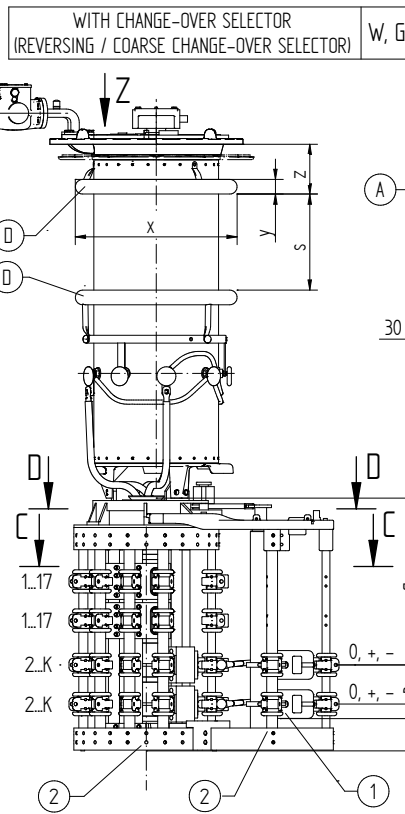
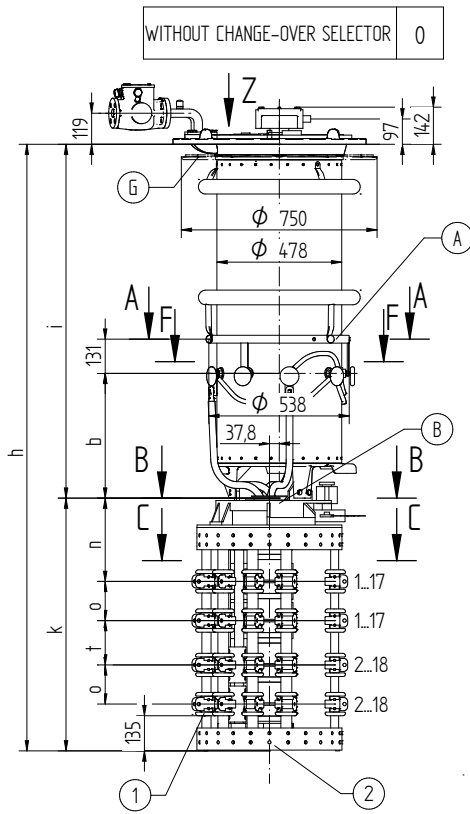


ON-LOAD TAP-CHANGER OILTAP® M, VACUTAP® VM
M11203, VMI1203-72,5...300-RC/RD/RDE
DIMENSION DRAWING

SERIAL NUMBER

| | |
|-----------------|-------|
| MATERIAL NUMBER | SHEET |
| 100097952E | 2/2 |

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FOR THE TYPE OF OLTC-HEAD REFER TO ORDER-SPECIFIC DRAWING OF THE OLTC-HEAD AND DRIVE SHAFTS

- (M) - DRIVE SIDE OF SELECTOR
- (A) - ON-LOAD TAP-CHANGER CURRENT TAKE-OFF TERMINAL
- (B) - IS CONNECTED TO POTENTIAL OF (A)
- (D) - SHIELDING RINGS FOR UM OF 170 kV OR GREATER
- (G) - SUPPORTING FLANGE FOR BELL-TYPE TANK INSTALLATION IS OPTIONAL
- (1) - BOTTOM-MOST LIVE PARTS; THESE ARE CONNECTED TO THE POTENTIAL OF THE ASSOCIATED AND/OR WIRED CONNECTION CONTACT
- (2) - SELECTOR BASE IS MADE OF INSULATING MATERIAL

- THE DETAILED CONNECTION DIAGRAM IS BINDING FOR THE DESIGNATION OF THE CONNECTION CONTACTS AND PHASES
- C-C REFER TO 10009030
- D-D - TYPE WITH CONNECTING LEAD 3W/3G REFER TO 10010019
- FOR INHERENT DRAWINGS REFER TO 10009819
- CONNECTING OF PARALLEL SELECTOR PLANES REFER TO 10009916

| | | |
|-------------------|--------------|--------------------|
| DATE | NAME | DOCUMENT NO. |
| DFTR. 12.01.2018 | RAEDLINGER | SED 4313912 001 05 |
| CHKD. 23.01.2018 | MENZELS | SCALE 1:10 |
| STANDJ 23.01.2018 | PRODASTSCHUK | CHANGE NO. 1085481 |

DIMENSION IN mm EXCEPT AS NOTED



ON-LOAD TAP-CHANGER OILTAP® M, VACUTAP® VM
 M11503, VM11503-72,5...300-RC/RD/RDE
 DIMENSION DRAWING

SERIAL NUMBER

MATERIAL NUMBER 100097962E SHEET 1/2

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OILTAP® M / VACUTAP® VM

| SELECTOR SIZE | | RC | | | | | RD / RDE | | | | | |
|--------------------|----|------|------|-------|-------|-------|----------|------|-------|-------|-------|-----|
| Um [kV] | | 72,5 | 123 | 170 | 245 | 300 | 72,5 | 123 | 170 | 245 | 300 | |
| DIMENSIONS [mm] | h | 1965 | 2095 | 2225 | 2325 | 2477 | 2045 | 2175 | 2305 | 2405 | 2557 | |
| | b | 478 | 478 | 478 | 478 | 478 | 478 | 478 | 478 | 478 | 478 | |
| | i | 996 | 1126 | 1256 | 1356 | 1508 | 996 | 1126 | 1256 | 1356 | 1508 | |
| | s | M | - | - | 309 | 409 | 520 | - | - | 309 | 409 | 520 |
| | | VM | - | - | 268 | 368 | 520 | - | - | 268 | 368 | 520 |
| | z | - | - | 191 | 191 | 191 | - | - | 191 | 191 | 191 | |
| | x | - | - | ∅ 620 | ∅ 620 | ∅ 620 | - | - | ∅ 620 | ∅ 620 | ∅ 620 | |
| | y | - | - | ∅ 56 | ∅ 56 | ∅ 56 | - | - | ∅ 56 | ∅ 56 | ∅ 56 | |
| | k | 969 | | | | | 1049 | | | | | |
| | n | 319 | | | | | 359 | | | | | |
| | t | 170 | | | | | 210 | | | | | |
| | o | 150 | | | | | 150 | | | | | |
| | r | 150 | | | | | 150 | | | | | |
| | q | 639 | | | | | 719 | | | | | |
| OIL VOLUME [dm³] | | 130 | 150 | 170 | 190 | 210 | 130 | 150 | 170 | 190 | 210 | |
| DISPLACEMENT [dm³] | | 220 | 243 | 276 | 294 | 321 | 222 | 245 | 278 | 296 | 323 | |
| MAX. WEIGHT [kg] | M | 356 | 361 | 366 | 371 | 376 | 360 | 365 | 370 | 375 | 380 | |
| | VM | 386 | 391 | 396 | 401 | 406 | 390 | 395 | 400 | 405 | 410 | |

| | | |
|-------------------|--------------|--------------------|
| DATE | NAME | DOCUMENT NO. |
| DFTR. 12.01.2018 | RAEDLINGER | SED 4313912 001 05 |
| CHKD. 23.01.2018 | MENZELS | CHANGE NO. |
| STANDJ 23.01.2018 | PRODASTSCHUK | 1085481 |
| | | SCALE |
| | | 1:10 |

DIMENSION
IN mm
EXCEPT AS
NOTED



ON-LOAD TAP-CHANGER OILTAP® M, VACUTAP® VM
 M11503, VMI1503-72,5...300-RC/RD/RDE
 DIMENSION DRAWING

SERIAL NUMBER

| | |
|-----------------|-------|
| MATERIAL NUMBER | SHEET |
| 100097962E | 2/2 |

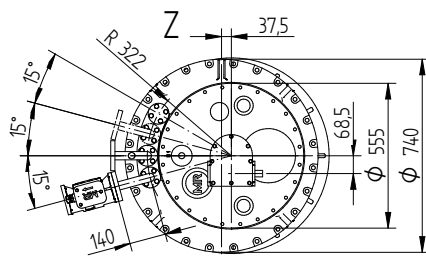
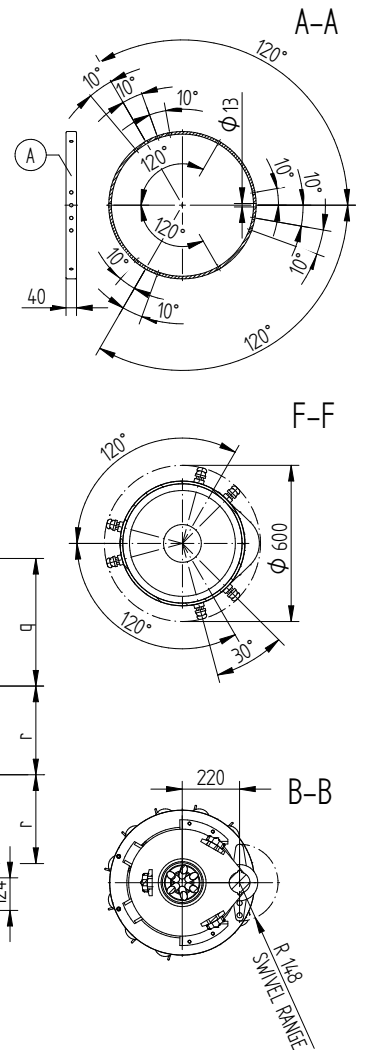
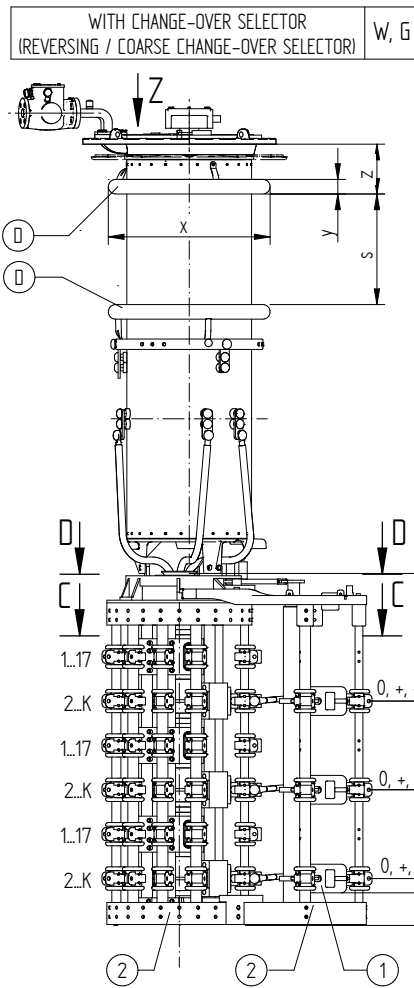
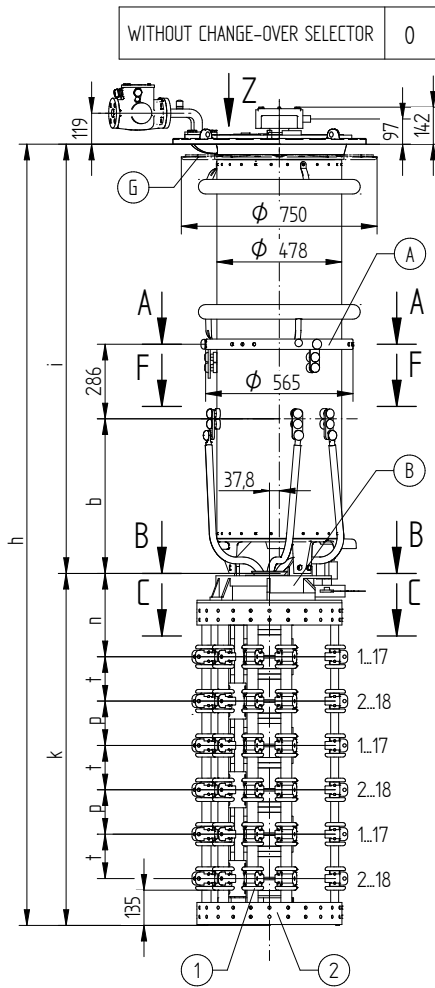


5.4 Dibujos acotados OILTAP® R

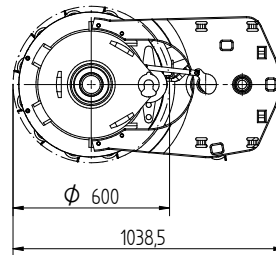
5.4 Dibujos acotados OILTAP® R



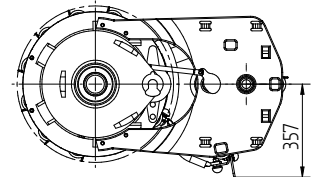
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D-D REVERSING CHANGE-OVER SELECTOR (1W)



D-D COARSE CHANGE-OVER SELECTOR (1G)



FOR THE TYPE OF OLTC-HEAD REFER TO THE ORDER-SPECIFIC DRAWING OF THE OLTC-HEAD AND DRIVE SHAFTS

- (M) - DRIVE SIDE OF SELECTOR
- (A) - ON-LOAD TAP-CHANGER CURRENT TAKE-OFF TERMINAL
- (B) - IS CONNECTED TO POTENTIAL OF (A)
- (D) - SHIELDING RINGS FOR UM OF 170 kV OR GREATER
- (G) - SUPPORTING FLANGE FOR THE BELL-TYPE TANK INSTALLATION:
WITH 72,5kV-300kV AVAILABLE
WITH 362kV OBLIGATORY
- (1) - BOTTOM-MOST LIVE PARTS, THESE ARE CONNECTED TO THE POTENTIAL OF THE ASSOCIATED AND/OR WIRED CONNECTION CONTACT
- (2) - SELECTOR BASE IS MADE OF INSULATING MATERIAL

- THE DETAILED CONNECTION DIAGRAM IS BINDING FOR THE DESIGNATION OF THE CONNECTION CONTACTS AND PHASES
- C-C REFER TO 10009030
- FOR INHERENT DRAWINGS REFER TO 10009731
- D-D - TYPE WITH CONNECTING LEAD 3W/3G REFER TO 10010019

| | | |
|-------------------|--------------|--------------------|
| DATE | NAME | DOCUMENT NO. |
| DFTR. 15.01.2018 | RAEDLINGER | SED 4245972 001 05 |
| CHKD. 23.01.2018 | MENZELS | CHANGE NO. |
| STANDJ 23.01.2018 | PRODASTSCHUK | 1085481 |
| | | SCALE 1:10 |

DIMENSION IN mm EXCEPT AS NOTED



ON-LOAD TAP-CHANGER OILTAP® R
 RIII1200Y-72,5...362-RC/RD/RDE
 DIMENSION DRAWING

SERIAL NUMBER

| | |
|-----------------|-------|
| MATERIAL NUMBER | SHEET |
| 100089882E | 1/2 |

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OILTAP® R

| SELECTOR SIZE | | RC | | | | | |
|--------------------|-----|------|------|-------|-------|-------|-------|
| Um [kV] | | 72,5 | 123 | 170 | 245 | 300 | 362 |
| DIMENSIONS [mm] | h | 2664 | 2794 | 2894 | 2994 | 3140 | 3270 |
| | b | 592 | 592 | 592 | 592 | 592 | 592 |
| | i | 1315 | 1445 | 1545 | 1645 | 1791 | 1921 |
| | s | - | - | 324 | 424 | 529 | 562 |
| | z | - | - | 191 | 191 | 191 | 228 |
| | x | - | - | ∅ 620 | ∅ 620 | ∅ 620 | ∅ 695 |
| | y | - | - | ∅ 56 | ∅ 56 | ∅ 56 | ∅ 100 |
| | k | 1349 | | | | | |
| | n | 319 | | | | | |
| | t | 170 | | | | | |
| | p | 170 | | | | | |
| | r | 340 | | | | | |
| q | 489 | | | | | | |
| OIL VOLUME [dm³] | | 168 | 188 | 203 | 218 | 240 | 255 |
| DISPLACEMENT [dm³] | | 275 | 298 | 326 | 344 | 370 | 414 |
| MAX. WEIGHT [KG] | | 495 | 500 | 505 | 510 | 515 | 520 |

OILTAP® R

| SELECTOR SIZE | | RD / RDE | | | | | |
|--------------------|-----|----------|------|-------|-------|-------|-------|
| Um [kV] | | 72,5 | 123 | 170 | 245 | 300 | 362 |
| DIMENSIONS [mm] | h | 2904 | 3034 | 3134 | 3234 | 3380 | 3510 |
| | b | 592 | 592 | 592 | 592 | 592 | 592 |
| | i | 1315 | 1445 | 1545 | 1645 | 1791 | 1921 |
| | s | - | - | 324 | 424 | 529 | 562 |
| | z | - | - | 191 | 191 | 191 | 228 |
| | x | - | - | ∅ 620 | ∅ 620 | ∅ 620 | ∅ 695 |
| | y | - | - | ∅ 56 | ∅ 56 | ∅ 56 | ∅ 100 |
| | k | 1589 | | | | | |
| | n | 359 | | | | | |
| | t | 210 | | | | | |
| | p | 210 | | | | | |
| | r | 420 | | | | | |
| q | 569 | | | | | | |
| OIL VOLUME [dm³] | | 168 | 188 | 203 | 218 | 240 | 255 |
| DISPLACEMENT [dm³] | | 280 | 303 | 331 | 349 | 375 | 419 |
| MAX. WEIGHT [KG] | | 508 | 513 | 518 | 523 | 528 | 533 |

| DATE | NAME | DOCUMENT NO. |
|-------------------|--------------|--------------------|
| DFTR. 15.01.2018 | RAEDLINGER | SED 4245972_001 05 |
| CHKD. 23.01.2018 | MENZELS | CHANGE NO. |
| STAND. 23.01.2018 | PRODASTSCHUK | 1085481 |
| | | SCALE 1:10 |

DIMENSION
IN mm
EXCEPT AS
NOTED

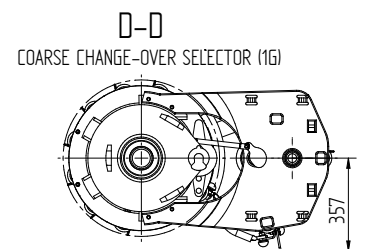
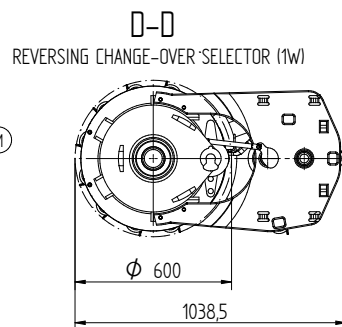
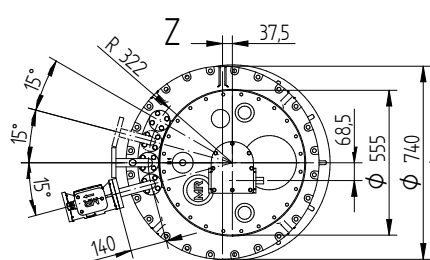
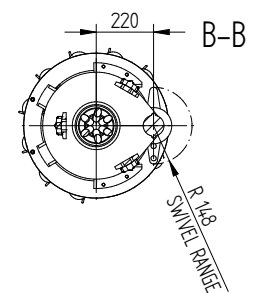
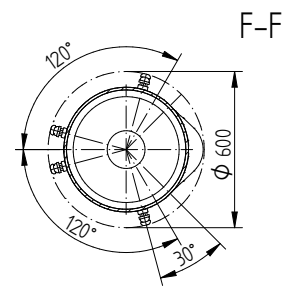
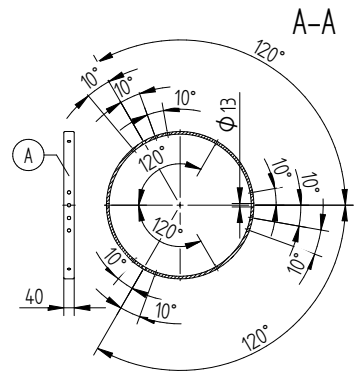
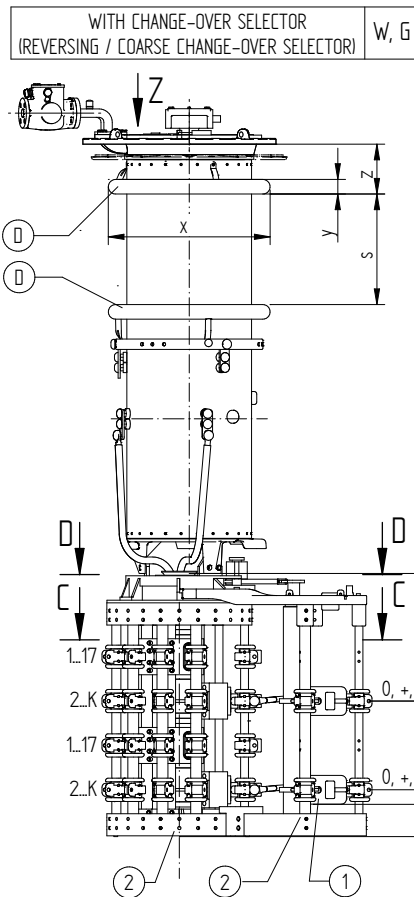
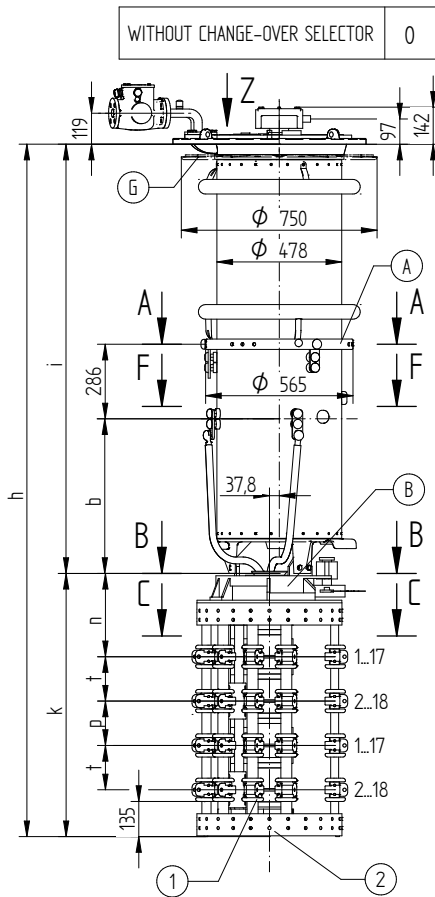


ON-LOAD TAP-CHANGER OILTAP® R
R111200Y-72,5...362-RC/RD/RDE
DIMENSION DRAWING

SERIAL NUMBER

| | |
|-----------------|-------|
| MATERIAL NUMBER | SHEET |
| 100089882E | 2/2 |

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FOR THE TYPE OF OLTC-HEAD REFER TO THE ORDER-SPECIFIC DRAWING OF THE OLTC-HEAD AND DRIVE SHAFTS

| | | |
|-------------------|--------------|---------------------|
| DATE | NAME | DOCUMENT NO. |
| DFTR. 15.01.2018 | RAEDLINGER | SED 43037/15 001 05 |
| CHKD. 23.01.2018 | MENZELS | CHANGE NO. |
| STANDJ 23.01.2018 | PRODASTSCHUK | 1085481 |
| | | SCALE 1:10 |

- (M) - DRIVE SIDE OF SELECTOR
- (A) - ON-LOAD TAP-CHANGER CURRENT TAKE-OFF TERMINAL
- (B) - IS CONNECTED TO POTENTIAL OF (A)
- (D) - SHIELDING RINGS FOR UM OF 170 kV OR GREATER
- (G) - SUPPORTING FLANGE FOR THE BELL-TYPE TANK INSTALLATION:
WITH 72,5kV-300kV AVAILABLE
WITH 362kV OBLIGATORY
- (1) - BOTTOM-MOST LIVE PARTS, THESE ARE CONNECTED TO THE POTENTIAL OF THE ASSOCIATED AND/OR WIRED CONNECTION CONTACT
- (2) - SELECTOR BASE IS MADE OF INSULATING MATERIAL

- THE DETAILED CONNECTION DIAGRAM IS BINDING FOR THE DESIGNATION OF THE CONNECTION CONTACTS AND PHASES
- C-C REFER TO 10009030
- FOR INHERENT DRAWINGS REFER TO 10009731
- D-D - TYPE WITH CONNECTING LEAD 3W/3G REFER TO 10010019

DIMENSION IN mm EXCEPT AS NOTED



ON-LOAD TAP-CHANGER OILTAP® R
 RII1202-72.5...362-RC/RD/RDE
 DIMENSION DRAWING

| | |
|-----------------|-------|
| SERIAL NUMBER | |
| MATERIAL NUMBER | SHEET |
| 100096742E | 1/2 |

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OILTAP® R

| SELECTOR SIZE | | RC | | | | | |
|--------------------|-----|------|------|-------|-------|-------|-------|
| Um [kV] | | 72,5 | 123 | 170 | 245 | 300 | 362 |
| DIMENSIONS [mm] | h | 2324 | 2454 | 2554 | 2654 | 2800 | 2930 |
| | b | 592 | 592 | 592 | 592 | 592 | 592 |
| | i | 1315 | 1445 | 1545 | 1645 | 1791 | 1921 |
| | s | - | - | 324 | 424 | 529 | 562 |
| | z | - | - | 191 | 191 | 191 | 228 |
| | x | - | - | ∅ 620 | ∅ 620 | ∅ 620 | ∅ 695 |
| | y | - | - | ∅ 56 | ∅ 56 | ∅ 56 | ∅ 100 |
| | k | 1009 | | | | | |
| | n | 319 | | | | | |
| | t | 170 | | | | | |
| | p | 170 | | | | | |
| r | 340 | | | | | | |
| q | 489 | | | | | | |
| OIL VOLUME [dm³] | | 168 | 188 | 203 | 218 | 240 | 255 |
| DISPLACEMENT [dm³] | | 261 | 284 | 312 | 330 | 356 | 400 |
| MAX. WEIGHT [KG] | | 446 | 451 | 456 | 461 | 466 | 471 |

OILTAP® R

| SELECTOR SIZE | | RD / RDE | | | | | |
|--------------------|-----|----------|------|-------|-------|-------|-------|
| Um [kV] | | 72,5 | 123 | 170 | 245 | 300 | 362 |
| DIMENSIONS [mm] | h | 2484 | 2614 | 2714 | 2814 | 2960 | 3090 |
| | b | 592 | 592 | 592 | 592 | 592 | 592 |
| | i | 1315 | 1445 | 1545 | 1645 | 1791 | 1921 |
| | s | - | - | 324 | 424 | 529 | 562 |
| | z | - | - | 191 | 191 | 191 | 228 |
| | x | - | - | ∅ 620 | ∅ 620 | ∅ 620 | ∅ 695 |
| | y | - | - | ∅ 56 | ∅ 56 | ∅ 56 | ∅ 100 |
| | k | 1169 | | | | | |
| | n | 359 | | | | | |
| | t | 210 | | | | | |
| | p | 210 | | | | | |
| r | 420 | | | | | | |
| q | 569 | | | | | | |
| OIL VOLUME [dm³] | | 168 | 188 | 203 | 218 | 240 | 255 |
| DISPLACEMENT [dm³] | | 265 | 288 | 316 | 334 | 360 | 404 |
| MAX. WEIGHT [KG] | | 454 | 459 | 464 | 469 | 474 | 479 |

| DATE | NAME | DOCUMENT NO. |
|------------------|--------------|---------------------|
| DFTR. 15.01.2018 | RAEDLINGER | SED 43037/15 001 05 |
| CHKD. 23.01.2018 | MENZELS | CHANGE NO. |
| STAND 23.01.2018 | PRODASTSCHUK | 1085481 |
| | | SCALE 1:10 |

DIMENSION
IN mm
EXCEPT AS
NOTED

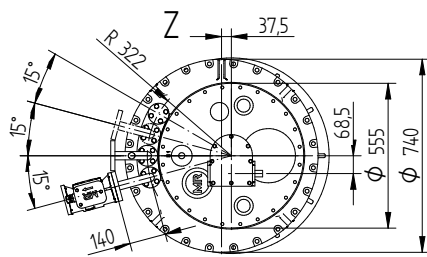
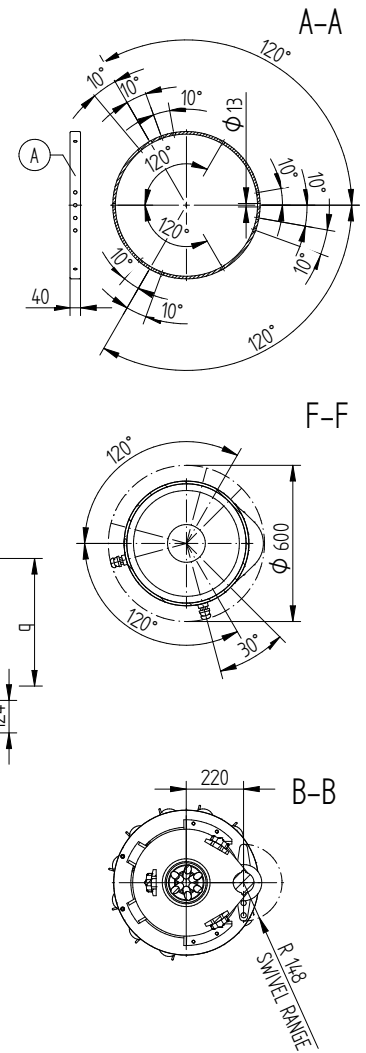
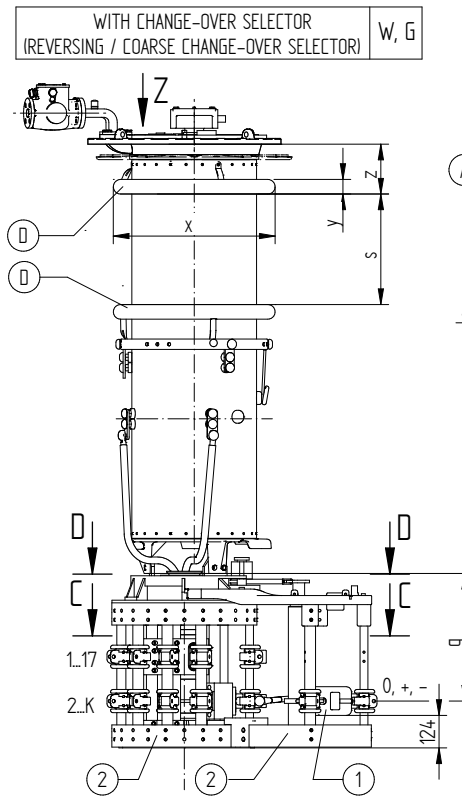
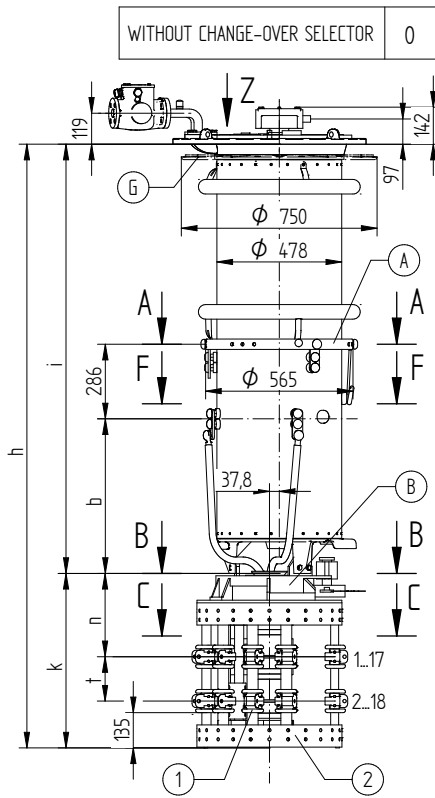


ON-LOAD TAP-CHANGER OILTAP® R
R11202-72,5...362-RC/RD/RDE
DIMENSION DRAWING

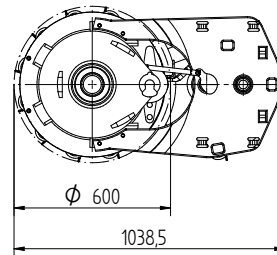
SERIAL NUMBER

| | |
|-----------------|-------|
| MATERIAL NUMBER | SHEET |
| 100096742E | 2/2 |

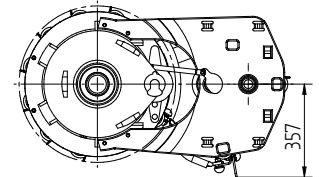
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D-D REVERSING CHANGE-OVER SELECTOR (1W)



D-D COARSE CHANGE-OVER SELECTOR (1G)



FOR THE TYPE OF OLTC-HEAD REFER TO THE ORDER-SPECIFIC DRAWING OF THE OLTC-HEAD AND DRIVE SHAFTS

- (M) - DRIVE SIDE OF SELECTOR
- (A) - ON-LOAD TAP-CHANGER CURRENT TAKE-OFF TERMINAL
- (B) - IS CONNECTED TO POTENTIAL OF (A)
- (D) - SHIELDING RINGS FOR UM OF 170 kV OR GREATER
- (G) - SUPPORTING FLANGE FOR THE BELL-TYPE TANK INSTALLATION:
WITH 72,5kV-300kV AVAILABLE
WITH 362kV OBLIGATORY
- (1) - BOTTOM-MOST LIVE PARTS, THESE ARE CONNECTED TO THE POTENTIAL OF THE ASSOCIATED AND/OR WIRED CONNECTION CONTACT
- (2) - SELECTOR BASE IS MADE OF INSULATING MATERIAL

- THE DETAILED CONNECTION DIAGRAM IS BINDING FOR THE DESIGNATION OF THE CONNECTION CONTACTS AND PHASES
- C-C REFER TO 10009030
- FOR INHERENT DRAWINGS REFER TO 10009731
- D-D - TYPE WITH CONNECTING LEAD 3W/3G REFER TO 10010019

| | | |
|-------------------|--------------|--------------------|
| DATE | NAME | DOCUMENT NO. |
| DFTR. 15.01.2018 | RAEDLINGER | SED 4302994_001 05 |
| CHKD. 23.01.2018 | MENZELS | CHANGE NO. |
| STANDJ 23.01.2018 | PRODASTSCHUK | 1085481 |
| | | SCALE 1:10 |

DIMENSION IN mm EXCEPT AS NOTED



ON-LOAD TAP-CHANGER OILTAP® R
 R11201-72,5...362-RC/RD/RDE
 DIMENSION DRAWING

SERIAL NUMBER

| | |
|-----------------|-------|
| MATERIAL NUMBER | SHEET |
| 100096782E | 1/2 |

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OILTAP® R

| SELECTOR SIZE | | RC | | | | | |
|--------------------|-----|------|------|-------|-------|-------|-------|
| Um [kV] | | 72,5 | 123 | 170 | 245 | 300 | 362 |
| DIMENSIONS [mm] | h | 1984 | 2114 | 2214 | 2314 | 2460 | 2590 |
| | b | 592 | 592 | 592 | 592 | 592 | 592 |
| | i | 1315 | 1445 | 1545 | 1645 | 1791 | 1921 |
| | s | - | - | 324 | 424 | 529 | 562 |
| | z | - | - | 191 | 191 | 191 | 228 |
| | x | - | - | ∅ 620 | ∅ 620 | ∅ 620 | ∅ 695 |
| | y | - | - | ∅ 56 | ∅ 56 | ∅ 56 | ∅ 100 |
| | k | 669 | | | | | |
| | n | 319 | | | | | |
| | t | 170 | | | | | |
| q | 489 | | | | | | |
| OIL VOLUME [dm³] | | 168 | 188 | 203 | 218 | 240 | 255 |
| DISPLACEMENT [dm³] | | 248 | 271 | 299 | 317 | 343 | 387 |
| MAX. WEIGHT [KG] | | 399 | 404 | 409 | 414 | 419 | 424 |

OILTAP® R

| SELECTOR SIZE | | RD / RDE | | | | | |
|--------------------|-----|----------|------|-------|-------|-------|-------|
| Um [kV] | | 72,5 | 123 | 170 | 245 | 300 | 362 |
| DIMENSIONS [mm] | h | 2064 | 2194 | 2294 | 2394 | 2540 | 2670 |
| | b | 592 | 592 | 592 | 592 | 592 | 592 |
| | i | 1315 | 1445 | 1545 | 1645 | 1791 | 1921 |
| | s | - | - | 324 | 424 | 529 | 562 |
| | z | - | - | 191 | 191 | 191 | 228 |
| | x | - | - | ∅ 620 | ∅ 620 | ∅ 620 | ∅ 695 |
| | y | - | - | ∅ 56 | ∅ 56 | ∅ 56 | ∅ 100 |
| | k | 749 | | | | | |
| | n | 359 | | | | | |
| | t | 210 | | | | | |
| q | 569 | | | | | | |
| OIL VOLUME [dm³] | | 168 | 188 | 203 | 218 | 240 | 255 |
| DISPLACEMENT [dm³] | | 249 | 272 | 300 | 318 | 344 | 388 |
| MAX. WEIGHT [KG] | | 403 | 408 | 413 | 418 | 423 | 428 |

| | | |
|------------|--------------|--------------------|
| DATE | NAME | DOCUMENT NO. |
| 15.01.2018 | RAEDLINGER | SED 4302994_001 05 |
| 23.01.2018 | MENZELS | CHANGE NO. |
| 23.01.2018 | PRODASTSCHUK | 1085481 |
| DFTR. | SCALE | 1:10 |
| CHKD. | | |
| STAND. | | |

DIMENSION
IN mm
EXCEPT AS
NOTED

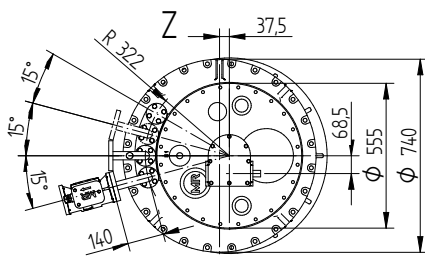
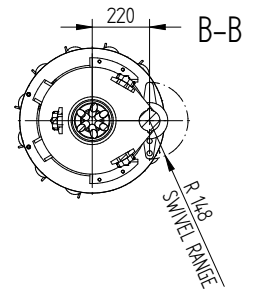
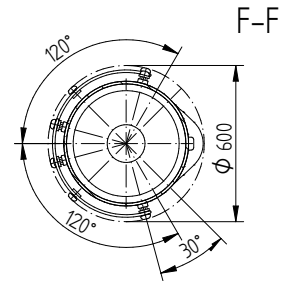
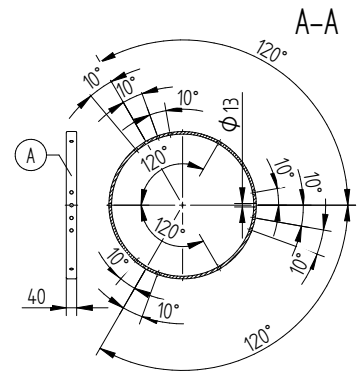
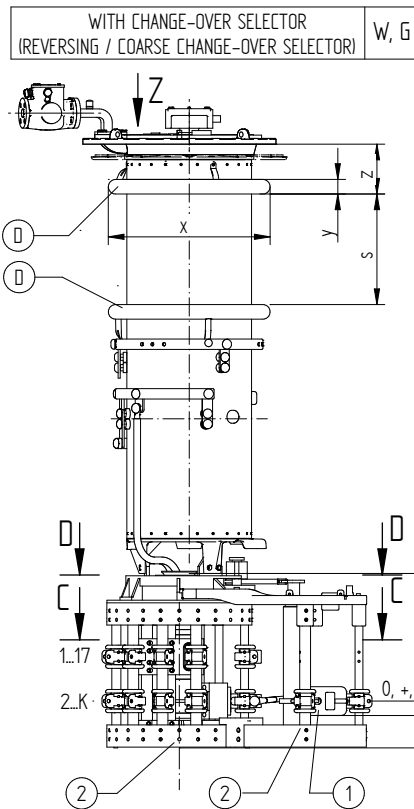
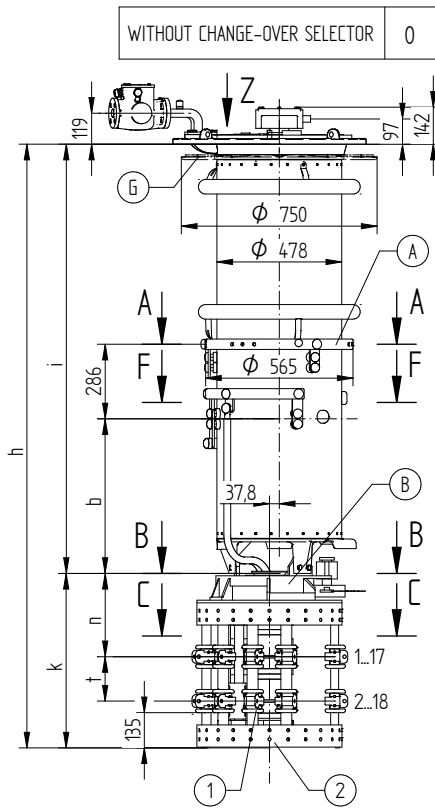


ON-LOAD TAP-CHANGER OILTAP® R
R11201-72,5...362-RC/RD/RDE
DIMENSION DRAWING

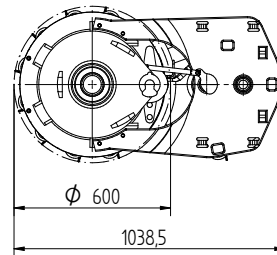
SERIAL NUMBER

| | |
|-----------------|-------|
| MATERIAL NUMBER | SHEET |
| 100096782E | 2/2 |

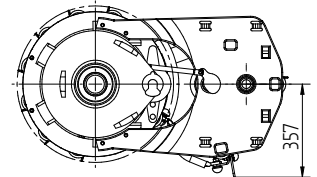
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D-D REVERSING CHANGE-OVER SELECTOR (1W)



D-D COARSE CHANGE-OVER SELECTOR (1G)



FOR THE TYPE OF OLTC-HEAD REFER TO THE ORDER-SPECIFIC DRAWING OF THE OLTC-HEAD AND DRIVE SHAFTS

- (M) - DRIVE SIDE OF SELECTOR
- (A) - ON-LOAD TAP-CHANGER CURRENT TAKE-OFF TERMINAL
- (B) - IS CONNECTED TO POTENTIAL OF (A)
- (D) - SHIELDING RINGS FOR UM OF 170 kV OR GREATER
- (G) - SUPPORTING FLANGE FOR THE BELL-TYPE TANK INSTALLATION:
 WITH 72,5kV-300kV AVAILABLE
 WITH 362kV OBLIGATORY
- (1) - BOTTOM-MOST LIVE PARTS, THESE ARE CONNECTED TO THE POTENTIAL OF THE ASSOCIATED AND/OR WIRED CONNECTION CONTACT
- (2) - SELECTOR BASE IS MADE OF INSULATING MATERIAL

- THE DETAILED CONNECTION DIAGRAM IS BINDING FOR THE DESIGNATION OF THE CONNECTION CONTACTS AND PHASES
- C-C REFER TO 10009030
- FOR INHERENT DRAWINGS REFER TO 10009731
- D-D - TYPE WITH CONNECTING LEAD 3W/3G REFER TO 10010019

| | | |
|-------------------|--------------|--------------------|
| DATE | NAME | DOCUMENT NO. |
| DFTR. 15.01.2018 | RAEDLINGER | SED 4305239 001 05 |
| CHKD. 23.01.2018 | MENZELS | CHANGE NO. |
| STANDJ 23.01.2018 | PRODASTSCHUK | 1085481 |
| | | SCALE 1:10 |

DIMENSION IN mm EXCEPT AS NOTED



ON-LOAD TAP-CHANGER OILTAP® R
 R11202-72,5...362-RC/RD/RDE
 DIMENSION DRAWING

SERIAL NUMBER

MATERIAL NUMBER 100096822E
 SHEET 1/2

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OILTAP® R

| SELECTOR SIZE | | RC | | | | | |
|--------------------|-----|------|------|-------|-------|-------|-------|
| Um [kV] | | 72,5 | 123 | 170 | 245 | 300 | 362 |
| DIMENSIONS [mm] | h | 1984 | 2114 | 2214 | 2314 | 2460 | 2590 |
| | b | 592 | 592 | 592 | 592 | 592 | 592 |
| | i | 1315 | 1445 | 1545 | 1645 | 1791 | 1921 |
| | s | - | - | 324 | 424 | 529 | 562 |
| | z | - | - | 191 | 191 | 191 | 228 |
| | x | - | - | ∅ 620 | ∅ 620 | ∅ 620 | ∅ 695 |
| | y | - | - | ∅ 56 | ∅ 56 | ∅ 56 | ∅ 100 |
| | k | 669 | | | | | |
| | n | 319 | | | | | |
| | t | 170 | | | | | |
| q | 489 | | | | | | |
| OIL VOLUME [dm³] | | 168 | 188 | 203 | 218 | 240 | 255 |
| DISPLACEMENT [dm³] | | 248 | 271 | 299 | 317 | 343 | 387 |
| MAX. WEIGHT [KG] | | 399 | 404 | 409 | 414 | 419 | 424 |

OILTAP® R

| SELECTOR SIZE | | RD / RDE | | | | | |
|--------------------|-----|----------|------|-------|-------|-------|-------|
| Um [kV] | | 72,5 | 123 | 170 | 245 | 300 | 362 |
| DIMENSIONS [mm] | h | 2064 | 2194 | 2294 | 2394 | 2540 | 2670 |
| | b | 592 | 592 | 592 | 592 | 592 | 592 |
| | i | 1315 | 1445 | 1545 | 1645 | 1791 | 1921 |
| | s | - | - | 324 | 424 | 529 | 562 |
| | z | - | - | 191 | 191 | 191 | 228 |
| | x | - | - | ∅ 620 | ∅ 620 | ∅ 620 | ∅ 695 |
| | y | - | - | ∅ 56 | ∅ 56 | ∅ 56 | ∅ 100 |
| | k | 749 | | | | | |
| | n | 359 | | | | | |
| | t | 210 | | | | | |
| q | 569 | | | | | | |
| OIL VOLUME [dm³] | | 168 | 188 | 203 | 218 | 240 | 255 |
| DISPLACEMENT [dm³] | | 249 | 272 | 300 | 318 | 344 | 388 |
| MAX. WEIGHT [KG] | | 403 | 408 | 413 | 418 | 423 | 428 |

| DATE | NAME | DOCUMENT NO. |
|-------------------|--------------|--------------------|
| DFTR. 15.01.2018 | RAEDLINGER | SED 4305239 001 05 |
| CHKD. 23.01.2018 | MENZELS | CHANGE NO. |
| STANDJ 23.01.2018 | PRODASTSCHUK | 1085481 |
| | | SCALE 1:10 |

DIMENSION
IN mm
EXCEPT AS
NOTED

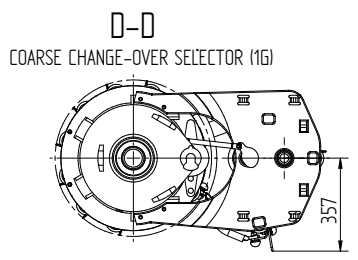
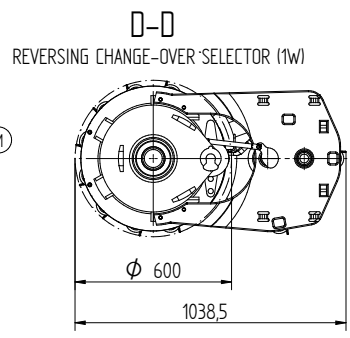
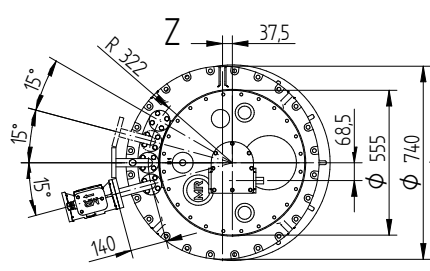
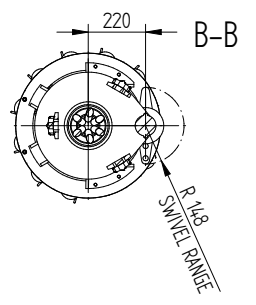
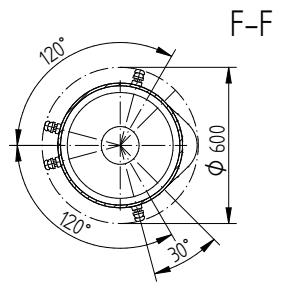
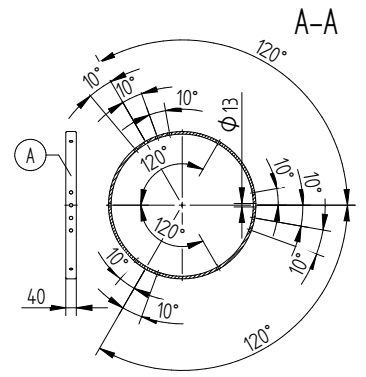
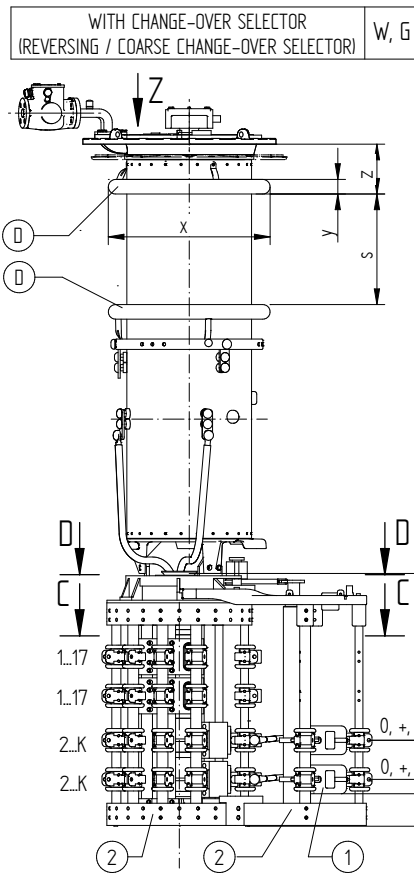
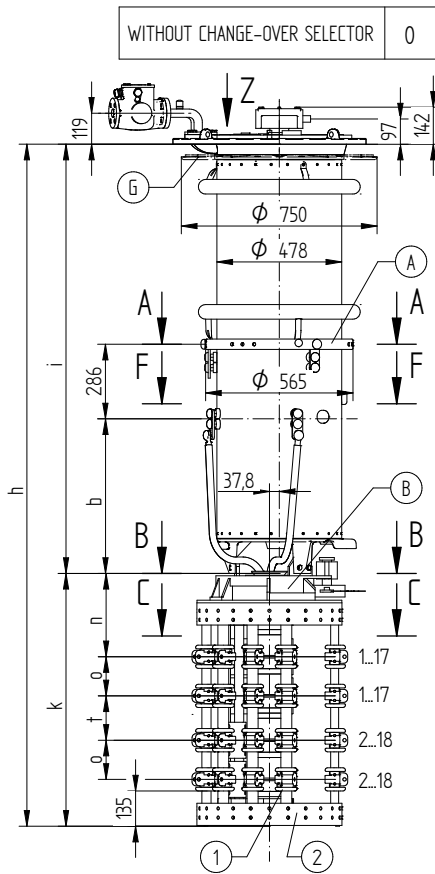


ON-LOAD TAP-CHANGER OILTAP® R
R11202-72,5...362-RC/RD/RDE
DIMENSION DRAWING

SERIAL NUMBER

| | |
|-----------------|-------|
| MATERIAL NUMBER | SHEET |
| 100096822E | 2/2 |

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FOR THE TYPE OF OLTC-HEAD REFER TO THE ORDER-SPECIFIC DRAWING OF THE OLTC-HEAD AND DRIVE SHAFTS

| | | |
|-------------------|--------------|--------------------|
| DATE | NAME | DOCUMENT NO. |
| DFTR. 15.01.2018 | RAEDLINGER | SED 4302874_001 05 |
| CHKD. 23.01.2018 | MENZELS | CHANGE NO. |
| STANDJ 23.01.2018 | PRODASTSCHUK | 1085481 |
| | | SCALE 1:10 |

- (M) - DRIVE SIDE OF SELECTOR
- (A) - ON-LOAD TAP-CHANGER CURRENT TAKE-OFF TERMINAL
- (B) - IS CONNECTED TO POTENTIAL OF (A)
- (D) - SHIELDING RINGS FOR UM OF 170 kV OR GREATER
- (G) - SUPPORTING FLANGE FOR THE BELL-TYPE TANK INSTALLATION:
WITH 72,5kV-300kV AVAILABLE
WITH 362kV OBLIGATORY
- (1) - BOTTOM-MOST LIVE PARTS, THESE ARE CONNECTED TO THE POTENTIAL OF THE ASSOCIATED AND/OR WIRED CONNECTION CONTACT
- (2) - SELECTOR BASE IS MADE OF INSULATING MATERIAL

- THE DETAILED CONNECTION DIAGRAM IS BINDING FOR THE DESIGNATION OF THE CONNECTION CONTACTS AND PHASES
- C-C REFER TO 10009030
- FOR INHERENT DRAWINGS REFER TO 10009731
- D-D - TYPE WITH CONNECTING LEAD 3W/3G REFER TO 10010019
- CONNECTING OF PARALLEL SELECTOR PLANES REFER TO 10009916

DIMENSION IN mm EXCEPT AS NOTED



ON-LOAD TAP-CHANGER OILTAP® R
 RI2002-72,5...362-RC/RD/RDE
 DIMENSION DRAWING

| | |
|-----------------|-------|
| SERIAL NUMBER | |
| MATERIAL NUMBER | SHEET |
| 100096722E | 1/2 |

OILTAP® R

| SELECTOR SIZE | | RC | | | | | |
|--------------------|---|------|------|-------|-------|-------|-------|
| Um [kV] | | 72,5 | 123 | 170 | 245 | 300 | 362 |
| DIMENSIONS [mm] | h | 2284 | 2414 | 2514 | 2614 | 2760 | 2890 |
| | b | 592 | 592 | 592 | 592 | 592 | 592 |
| | i | 1315 | 1445 | 1545 | 1645 | 1791 | 1921 |
| | s | - | - | 324 | 424 | 529 | 562 |
| | z | - | - | 191 | 191 | 191 | 228 |
| | x | - | - | ∅ 620 | ∅ 620 | ∅ 620 | ∅ 695 |
| | y | - | - | ∅ 56 | ∅ 56 | ∅ 56 | ∅ 100 |
| | k | 969 | | | | | |
| | n | 319 | | | | | |
| | o | 150 | | | | | |
| | t | 170 | | | | | |
| | r | 150 | | | | | |
| | q | 639 | | | | | |
| OIL VOLUME [dm³] | | 168 | 188 | 203 | 218 | 240 | 255 |
| DISPLACEMENT [dm³] | | 278 | 301 | 329 | 347 | 373 | 417 |
| MAX. WEIGHT [KG] | | 462 | 467 | 472 | 477 | 482 | 487 |

OILTAP® R

| SELECTOR SIZE | | RD / RDE | | | | | |
|--------------------|---|----------|------|-------|-------|-------|-------|
| Um [kV] | | 72,5 | 123 | 170 | 245 | 300 | 362 |
| DIMENSIONS [mm] | h | 2364 | 2494 | 2594 | 2694 | 2840 | 2970 |
| | b | 592 | 592 | 592 | 592 | 592 | 592 |
| | i | 1315 | 1445 | 1545 | 1645 | 1791 | 1921 |
| | s | - | - | 324 | 424 | 529 | 562 |
| | z | - | - | 191 | 191 | 191 | 228 |
| | x | - | - | ∅ 620 | ∅ 620 | ∅ 620 | ∅ 695 |
| | y | - | - | ∅ 56 | ∅ 56 | ∅ 56 | ∅ 100 |
| | k | 1049 | | | | | |
| | n | 359 | | | | | |
| | o | 150 | | | | | |
| | t | 210 | | | | | |
| | r | 150 | | | | | |
| | q | 719 | | | | | |
| OIL VOLUME [dm³] | | 168 | 188 | 203 | 218 | 240 | 255 |
| DISPLACEMENT [dm³] | | 280 | 303 | 331 | 349 | 375 | 419 |
| MAX. WEIGHT [KG] | | 467 | 472 | 477 | 482 | 487 | 492 |

| DATE | NAME | DOCUMENT NO. |
|-------------------|--------------|--------------------|
| DFTR. 15.01.2018 | RAEDLINGER | SED 4302874.001.05 |
| CHKD. 23.01.2018 | MENZELS | CHANGE NO. |
| STAND. 23.01.2018 | PRODASTSCHUK | 1085481 |
| | | SCALE 1:10 |

DIMENSION
IN mm
EXCEPT AS
NOTED

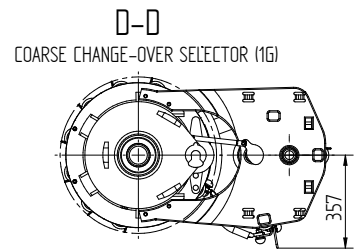
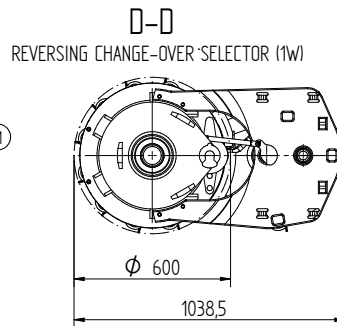
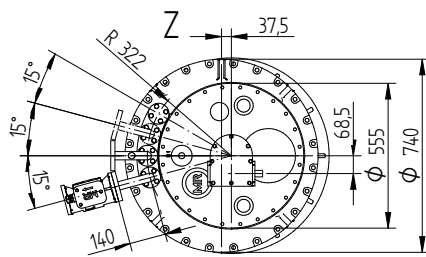
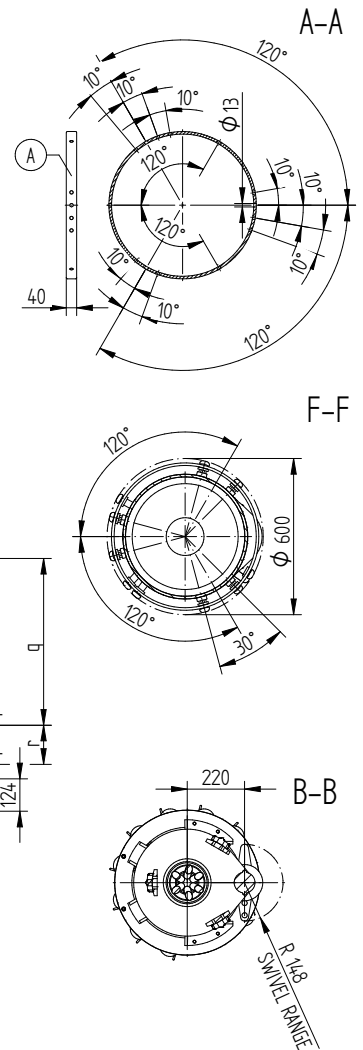
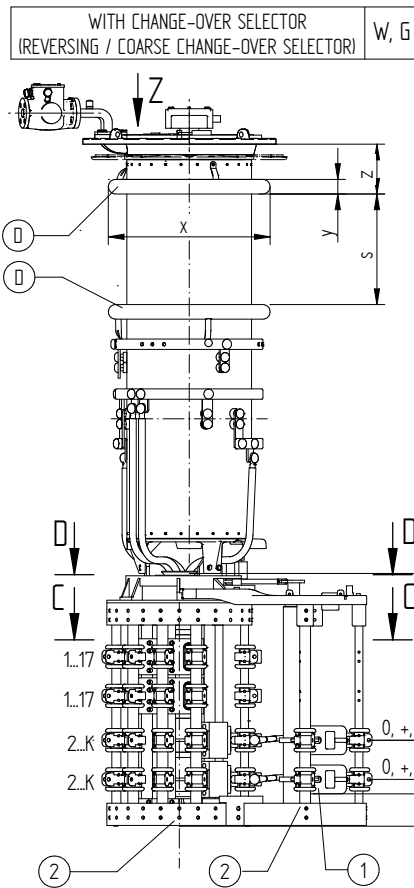
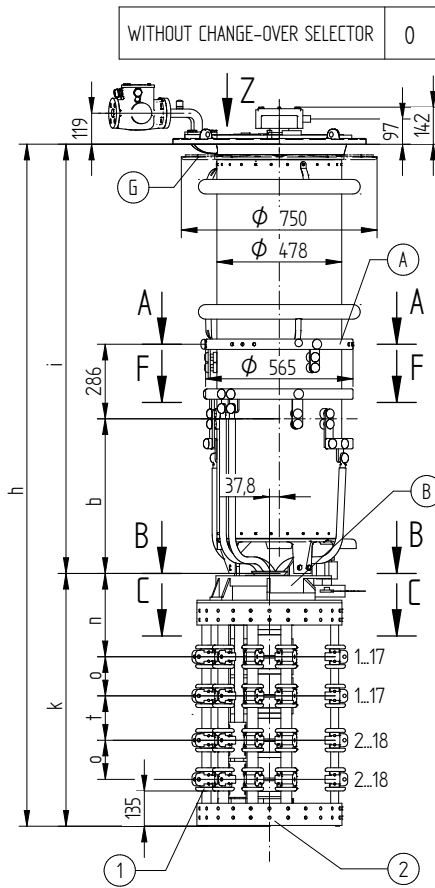


ON-LOAD TAP-CHANGER OILTAP® R
R12002-72,5...362-RC/RD/RDE
DIMENSION DRAWING

SERIAL NUMBER

| | |
|-----------------|-------|
| MATERIAL NUMBER | SHEET |
| 100096722E | 2/2 |

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FOR THE TYPE OF OLTC-HEAD REFER TO THE ORDER-SPECIFIC DRAWING OF THE OLTC-HEAD AND DRIVE SHAFTS

- (M) - DRIVE SIDE OF SELECTOR
- (A) - ON-LOAD TAP-CHANGER CURRENT TAKE-OFF TERMINAL
- (B) - IS CONNECTED TO POTENTIAL OF (A)
- (D) - SHIELDING RINGS FOR UM OF 170 kV OR GREATER
- (G) - SUPPORTING FLANGE FOR THE BELL-TYPE TANK INSTALLATION:
WITH 72,5kV-300kV AVAILABLE
WITH 362kV OBLIGATORY
- (1) - BOTTOM-MOST LIVE PARTS, THESE ARE CONNECTED TO THE POTENTIAL OF THE ASSOCIATED AND/OR WIRED CONNECTION CONTACT
- (2) - SELECTOR BASE IS MADE OF INSULATING MATERIAL

- THE DETAILED CONNECTION DIAGRAM IS BINDING FOR THE DESIGNATION OF THE CONNECTION CONTACTS AND PHASES
- C-C REFER TO 10009030
- FOR INHERENT DRAWINGS REFER TO 10009731
- D-D - TYPE WITH CONNECTING LEAD 3W/3G REFER TO 10010019
- CONNECTING OF PARALLEL SELECTOR PLANES REFER TO 10009916

| | | |
|-------------------|--------------|--------------------|
| DATE | NAME | DOCUMENT NO. |
| DFTR. 15.01.2018 | RAEDLINGER | SED 4305326 001 05 |
| CHKD. 23.01.2018 | MENZELS | CHANGE NO. |
| STANDJ 23.01.2018 | PRODASTSCHUK | 1085481 |
| | | SCALE 1:10 |

DIMENSION IN mm EXCEPT AS NOTED



ON-LOAD TAP-CHANGER OILTAP® R
 RI2003-72,5...362-RC/RD/RDE
 DIMENSION DRAWING

SERIAL NUMBER

MATERIAL NUMBER 100097062E SHEET 1/2

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OILTAP® R

| SELECTOR SIZE | | RC | | | | | |
|--------------------|-----|------|------|-------|-------|-------|-------|
| Um [kV] | | 72,5 | 123 | 170 | 245 | 300 | 362 |
| DIMENSIONS [mm] | h | 2284 | 2414 | 2514 | 2614 | 2760 | 2890 |
| | b | 592 | 592 | 592 | 592 | 592 | 592 |
| | i | 1315 | 1445 | 1545 | 1645 | 1791 | 1921 |
| | s | - | - | 324 | 424 | 529 | 562 |
| | z | - | - | 191 | 191 | 191 | 228 |
| | x | - | - | ∅ 620 | ∅ 620 | ∅ 620 | ∅ 695 |
| | y | - | - | ∅ 56 | ∅ 56 | ∅ 56 | ∅ 100 |
| | k | 969 | | | | | |
| | n | 319 | | | | | |
| | o | 150 | | | | | |
| | f | 170 | | | | | |
| | r | 150 | | | | | |
| q | 639 | | | | | | |
| OIL VOLUME [dm³] | | 168 | 188 | 203 | 218 | 240 | 255 |
| DISPLACEMENT [dm³] | | 278 | 301 | 329 | 347 | 373 | 417 |
| MAX. WEIGHT [KG] | | 462 | 467 | 472 | 477 | 482 | 487 |

OILTAP® R

| SELECTOR SIZE | | RD / RDE | | | | | |
|--------------------|-----|----------|------|-------|-------|-------|-------|
| Um [kV] | | 72,5 | 123 | 170 | 245 | 300 | 362 |
| DIMENSIONS [mm] | h | 2364 | 2494 | 2594 | 2694 | 2840 | 2970 |
| | b | 592 | 592 | 592 | 592 | 592 | 592 |
| | i | 1315 | 1445 | 1545 | 1645 | 1791 | 1921 |
| | s | - | - | 324 | 424 | 529 | 562 |
| | z | - | - | 191 | 191 | 191 | 228 |
| | x | - | - | ∅ 620 | ∅ 620 | ∅ 620 | ∅ 695 |
| | y | - | - | ∅ 56 | ∅ 56 | ∅ 56 | ∅ 100 |
| | k | 1049 | | | | | |
| | n | 359 | | | | | |
| | o | 150 | | | | | |
| | f | 210 | | | | | |
| | p | - | | | | | |
| r | 150 | | | | | | |
| q | 719 | | | | | | |
| OIL VOLUME [dm³] | | 168 | 188 | 203 | 218 | 240 | 255 |
| DISPLACEMENT [dm³] | | 280 | 303 | 331 | 349 | 375 | 419 |
| MAX. WEIGHT [KG] | | 467 | 472 | 477 | 482 | 487 | 492 |

| | | |
|------------|--------------|--------------------|
| DATE | NAME | DOCUMENT NO. |
| 15.01.2018 | RAEDLINGER | SED 4305326 001 05 |
| 23.01.2018 | MENZELS | CHANGE NO. |
| 23.01.2018 | PRODASTSCHUK | 1085481 |
| DFTR. | SCALE | 1:10 |
| CHKD. | | |
| STAND | | |

DIMENSION
IN mm
EXCEPT AS
NOTED

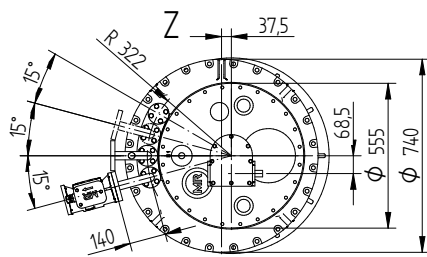
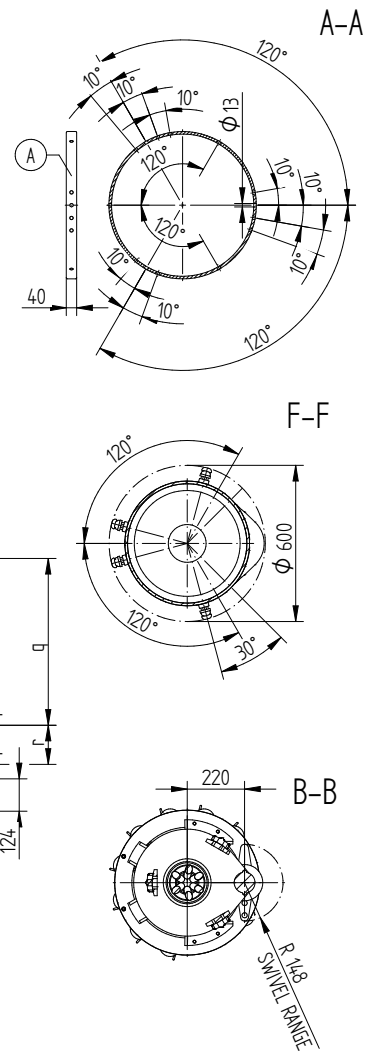
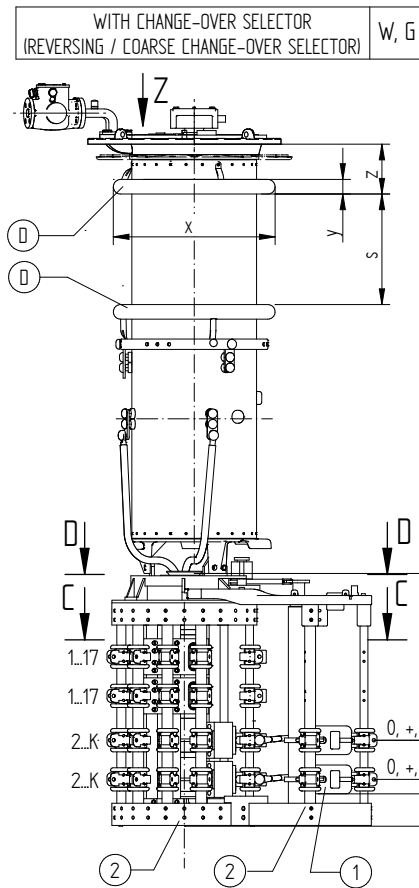
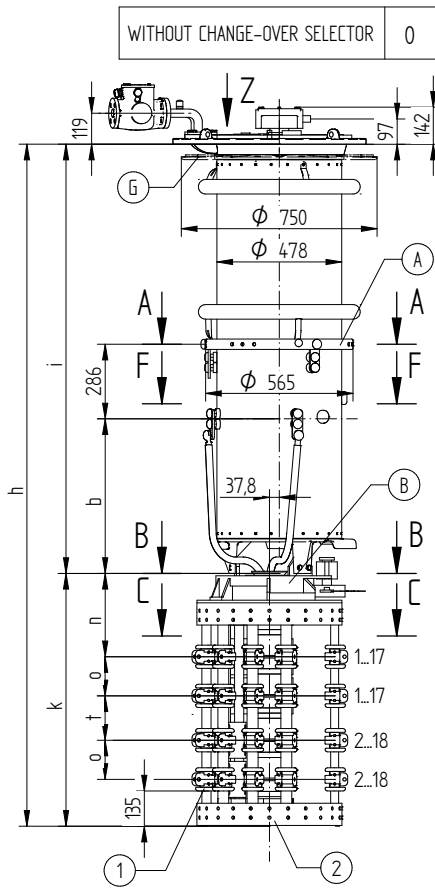


ON-LOAD TAP-CHANGER OILTAP® R
 RI2003-72,5...362-RC/RD/RDE
 DIMENSION DRAWING

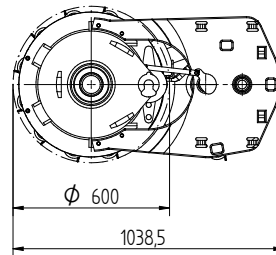
SERIAL NUMBER

| | |
|-----------------|-------|
| MATERIAL NUMBER | SHEET |
| 100097062E | 2/2 |

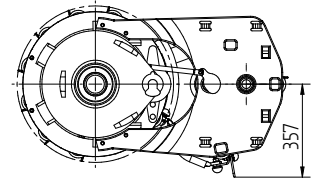
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D-D REVERSING CHANGE-OVER SELECTOR (1W)



D-D COARSE CHANGE-OVER SELECTOR (1G)



FOR THE TYPE OF OLTC-HEAD REFER TO THE ORDER-SPECIFIC DRAWING OF THE OLTC-HEAD AND DRIVE SHAFTS

- (M) - DRIVE SIDE OF SELECTOR
- (A) - ON-LOAD TAP-CHANGER CURRENT TAKE-OFF TERMINAL
- (B) - IS CONNECTED TO POTENTIAL OF (A)
- (D) - SHIELDING RINGS FOR UM OF 170 kV OR GREATER
- (G) - SUPPORTING FLANGE FOR THE BELL-TYPE TANK INSTALLATION:
 WITH 72,5kV-300kV AVAILABLE
 WITH 362kV OBLIGATORY
- (1) - BOTTOM-MOST LIVE PARTS, THESE ARE CONNECTED TO THE POTENTIAL OF THE ASSOCIATED AND/OR WIRED CONNECTION CONTACT
- (2) - SELECTOR BASE IS MADE OF INSULATING MATERIAL

- THE DETAILED CONNECTION DIAGRAM IS BINDING FOR THE DESIGNATION OF THE CONNECTION CONTACTS AND PHASES
- C-C REFER TO 10009030
- FOR INHERENT DRAWINGS REFER TO 10009731
- D-D - TYPE WITH CONNECTING LEAD 3W/3G REFER TO 10010019

| | | |
|-------------------|--------------|--------------------|
| DATE | NAME | DOCUMENT NO. |
| DFT. 15.01.2018 | RAEDLINGER | SED 4307672 001 05 |
| CHKD. 23.01.2018 | MENZELS | CHANGE NO. |
| STANDJ 23.01.2018 | PRODASTSCHUK | 1085481 |
| | | SCALE 1:10 |

DIMENSION IN mm EXCEPT AS NOTED



ON-LOAD TAP-CHANGER OILTAP® R
 RI2402-72,5...362-RC/RD/RDE - WITH FORCED CURRENT SPLITTING
 DIMENSION DRAWING

SERIAL NUMBER

| | |
|-----------------|-------|
| MATERIAL NUMBER | SHEET |
| 100097972E | 1/2 |

OILTAP® R

| SELECTOR SIZE | | RC | | | | | |
|--------------------|-----|------|------|-------|-------|-------|-------|
| Um [kV] | | 72,5 | 123 | 170 | 245 | 300 | 362 |
| DIMENSIONS [mm] | h | 2284 | 2414 | 2514 | 2614 | 2760 | 2890 |
| | b | 592 | 592 | 592 | 592 | 592 | 592 |
| | i | 1315 | 1445 | 1545 | 1645 | 1791 | 1921 |
| | s | - | - | 324 | 424 | 529 | 562 |
| | z | - | - | 191 | 191 | 191 | 228 |
| | x | - | - | ∅ 620 | ∅ 620 | ∅ 620 | ∅ 695 |
| | y | - | - | ∅ 56 | ∅ 56 | ∅ 56 | ∅ 100 |
| | k | 969 | | | | | |
| | n | 319 | | | | | |
| | o | 150 | | | | | |
| | t | 170 | | | | | |
| | r | 150 | | | | | |
| q | 639 | | | | | | |
| OIL VOLUME [dm³] | | 168 | 188 | 203 | 218 | 240 | 255 |
| DISPLACEMENT [dm³] | | 278 | 301 | 329 | 347 | 373 | 417 |
| MAX. WEIGHT [KG] | | 462 | 467 | 472 | 477 | 482 | 487 |

OILTAP® R

| SELECTOR SIZE | | RD / RDE | | | | | |
|--------------------|-----|----------|------|-------|-------|-------|-------|
| Um [kV] | | 72,5 | 123 | 170 | 245 | 300 | 362 |
| DIMENSIONS [mm] | h | 2364 | 2494 | 2594 | 2694 | 2840 | 2970 |
| | b | 592 | 592 | 592 | 592 | 592 | 592 |
| | i | 1315 | 1445 | 1545 | 1645 | 1791 | 1921 |
| | s | - | - | 324 | 424 | 529 | 562 |
| | z | - | - | 191 | 191 | 191 | 228 |
| | x | - | - | ∅ 620 | ∅ 620 | ∅ 620 | ∅ 695 |
| | y | - | - | ∅ 56 | ∅ 56 | ∅ 56 | ∅ 100 |
| | k | 1049 | | | | | |
| | n | 359 | | | | | |
| | o | 150 | | | | | |
| | t | 210 | | | | | |
| | r | 150 | | | | | |
| q | 719 | | | | | | |
| OIL VOLUME [dm³] | | 168 | 188 | 203 | 218 | 240 | 255 |
| DISPLACEMENT [dm³] | | 280 | 303 | 331 | 349 | 375 | 419 |
| MAX. WEIGHT [KG] | | 467 | 472 | 477 | 482 | 487 | 492 |

| DATE | NAME | DOCUMENT NO. |
|-------------------|--------------|--------------------|
| DFTR. 15.01.2018 | RAEDLINGER | SED 4307672_001 05 |
| CHKD. 23.01.2018 | MENZELS | CHANGE NO. |
| STANDJ 23.01.2018 | PRODASTSCHUK | 1085481 |
| | | SCALE 1:10 |

DIMENSION IN mm EXCEPT AS NOTED

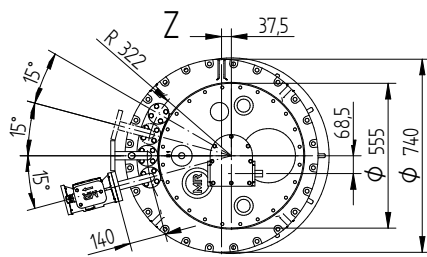
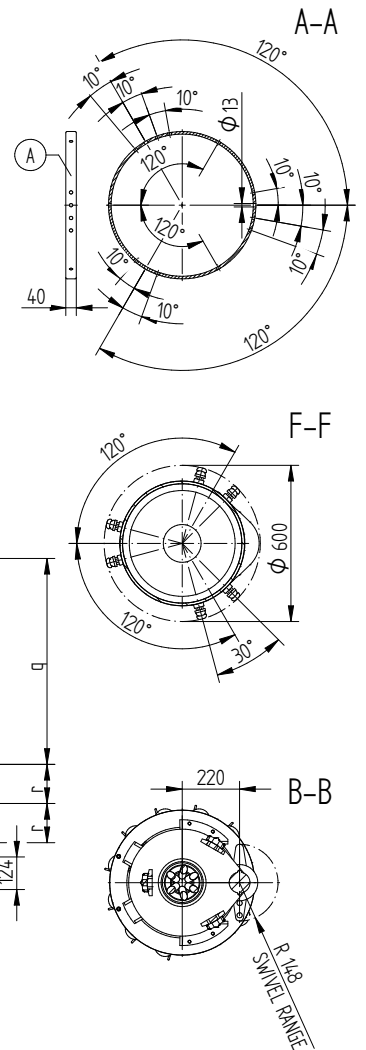
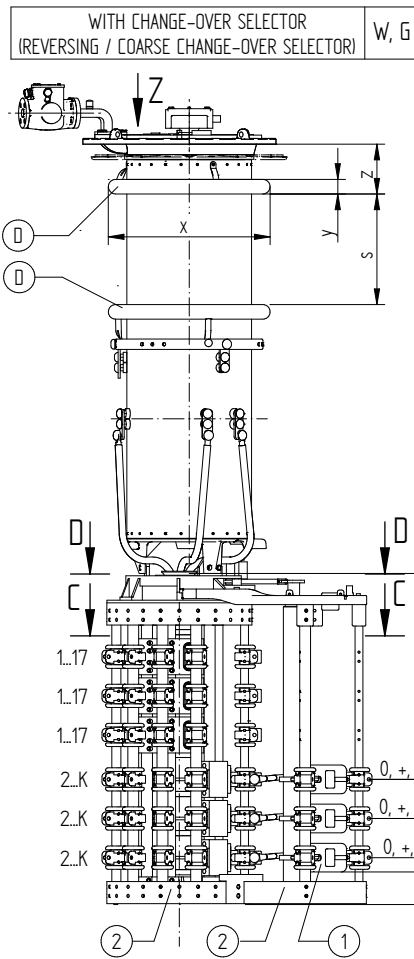
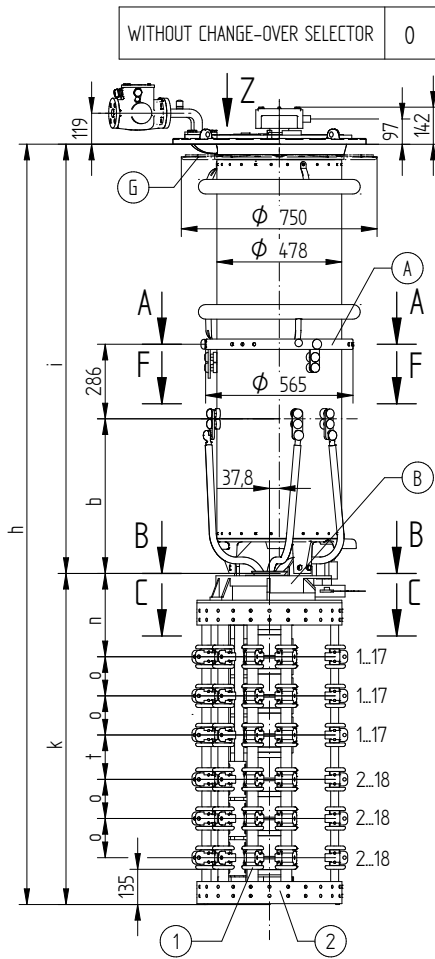


ON-LOAD TAP-CHANGER OILTAP® R
 RI2402-72,5...362-RC/RD/RDE - WITH FORCED CURRENT SPLITTING
 DIMENSION DRAWING

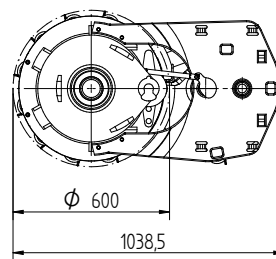
SERIAL NUMBER

| | |
|-----------------|-------|
| MATERIAL NUMBER | SHEET |
| 100097972E | 2/2 |

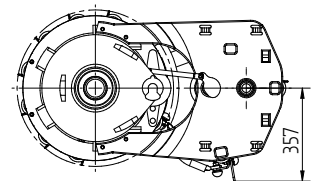
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D-D REVERSING CHANGE-OVER SELECTOR (1W)



D-D COARSE CHANGE-OVER SELECTOR (1G)



FOR THE TYPE OF OLTC-HEAD REFER TO THE ORDER-SPECIFIC DRAWING OF THE OLTC-HEAD AND DRIVE SHAFTS

| | | |
|-------------------|--------------|--------------------|
| DATE | NAME | DOCUMENT NO. |
| DFTR. 15.01.2018 | RAEDLINGER | SED 4299267 001 05 |
| CHKD. 23.01.2018 | MENZELS | CHANGE NO. |
| STANDJ 23.01.2018 | PRODASTSCHUK | 1085481 |
| | | SCALE 1:10 |

DIMENSION IN mm EXCEPT AS NOTED



ON-LOAD TAP-CHANGER OILTAP® R
 R13003-72,5...362-RC/RD/RDE
 DIMENSION DRAWING

SERIAL NUMBER

| | |
|-----------------|-------|
| MATERIAL NUMBER | SHEET |
| 100090342E | 1/2 |

- (M) - DRIVE SIDE OF SELECTOR
- (A) - ON-LOAD TAP-CHANGER CURRENT TAKE-OFF TERMINAL
- (B) - IS CONNECTED TO POTENTIAL OF (A)
- (D) - SHIELDING RINGS FOR UM OF 170 kV OR GREATER
- (G) - SUPPORTING FLANGE FOR THE BELL-TYPE TANK INSTALLATION:
 WITH 72,5kV-300kV AVAILABLE
 WITH 362kV OBLIGATORY
- (1) - BOTTOM-MOST LIVE PARTS, THESE ARE CONNECTED TO THE POTENTIAL OF THE ASSOCIATED AND/OR WIRED CONNECTION CONTACT
- (2) - SELECTOR BASE IS MADE OF INSULATING MATERIAL

- THE DETAILED CONNECTION DIAGRAM IS BINDING FOR THE DESIGNATION OF THE CONNECTION CONTACTS AND PHASES
- C-C REFER TO 10009030
- FOR INHERENT DRAWINGS REFER TO 10009731
- D-D - TYPE WITH CONNECTING LEAD 3W/3G REFER TO 10010019
- CONNECTING OF PARALLEL SELECTOR PLANES REFER TO 10009916

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OILTAP® R

| SELCATOR SIZE | | RC | | | | | |
|--------------------|---|------|------|-------|-------|-------|-------|
| Um [kV] | | 72,5 | 123 | 170 | 245 | 300 | 362 |
| DIMENSIONS [mm] | h | 2584 | 2714 | 2814 | 2914 | 3060 | 3190 |
| | b | 592 | 592 | 592 | 592 | 592 | 592 |
| | i | 1315 | 1445 | 1545 | 1645 | 1791 | 1921 |
| | s | - | - | 324 | 424 | 529 | 562 |
| | Z | - | - | 191 | 191 | 191 | 228 |
| | x | - | - | φ 620 | φ 620 | φ 620 | φ 695 |
| | y | - | - | φ 56 | φ 56 | φ 56 | φ 100 |
| | k | 1269 | | | | | |
| | n | 319 | | | | | |
| | o | 150 | | | | | |
| | t | 170 | | | | | |
| | r | 150 | | | | | |
| | q | 789 | | | | | |
| OIL VOLUME [dm³] | | 168 | 188 | 203 | 218 | 240 | 255 |
| DISPLACEMENT [dm³] | | 309 | 332 | 360 | 378 | 404 | 448 |
| MAX. WEIGHT [KG] | | 528 | 533 | 538 | 543 | 548 | 553 |

OILTAP® R

| SELCATOR SIZE | | RD / RDE | | | | | |
|--------------------|---|----------|------|-------|-------|-------|-------|
| Um [kV] | | 72,5 | 123 | 170 | 245 | 300 | 362 |
| DIMENSIONS [mm] | h | 2664 | 2794 | 2894 | 2994 | 3140 | 3270 |
| | b | 592 | 592 | 592 | 592 | 592 | 592 |
| | i | 1315 | 1445 | 1545 | 1645 | 1791 | 1921 |
| | s | - | - | 324 | 424 | 529 | 562 |
| | Z | - | - | 191 | 191 | 191 | 228 |
| | x | - | - | φ 620 | φ 620 | φ 620 | φ 695 |
| | y | - | - | φ 56 | φ 56 | φ 56 | φ 100 |
| | k | 1349 | | | | | |
| | n | 359 | | | | | |
| | o | 150 | | | | | |
| | t | 210 | | | | | |
| | r | 150 | | | | | |
| | q | 869 | | | | | |
| OIL VOLUME [dm³] | | 168 | 188 | 203 | 218 | 240 | 255 |
| DISPLACEMENT [dm³] | | 311 | 334 | 362 | 380 | 406 | 450 |
| MAX. WEIGHT [KG] | | 534 | 539 | 544 | 549 | 554 | 559 |

| DATE | NAME | DOCUMENT NO. |
|-------------------|--------------|--------------------|
| DFTR. 15.01.2018 | RAEDLINGER | SED 4299267 001 05 |
| CHKD. 23.01.2018 | MENZELS | CHANGE NO. |
| STAND. 23.01.2018 | PRODASTSCHUK | 1085481 |
| | | SCALE 1:10 |

DIMENSION
IN mm
EXCEPT AS
NOTED

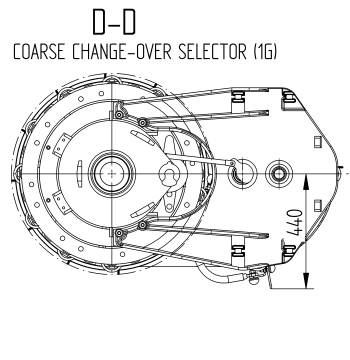
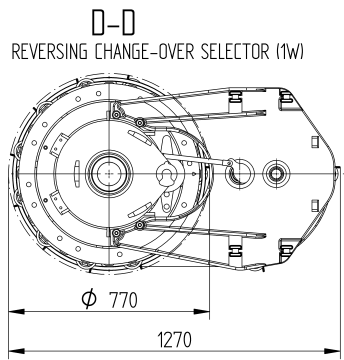
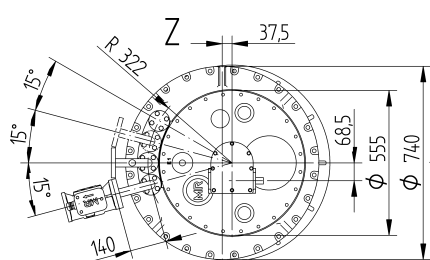
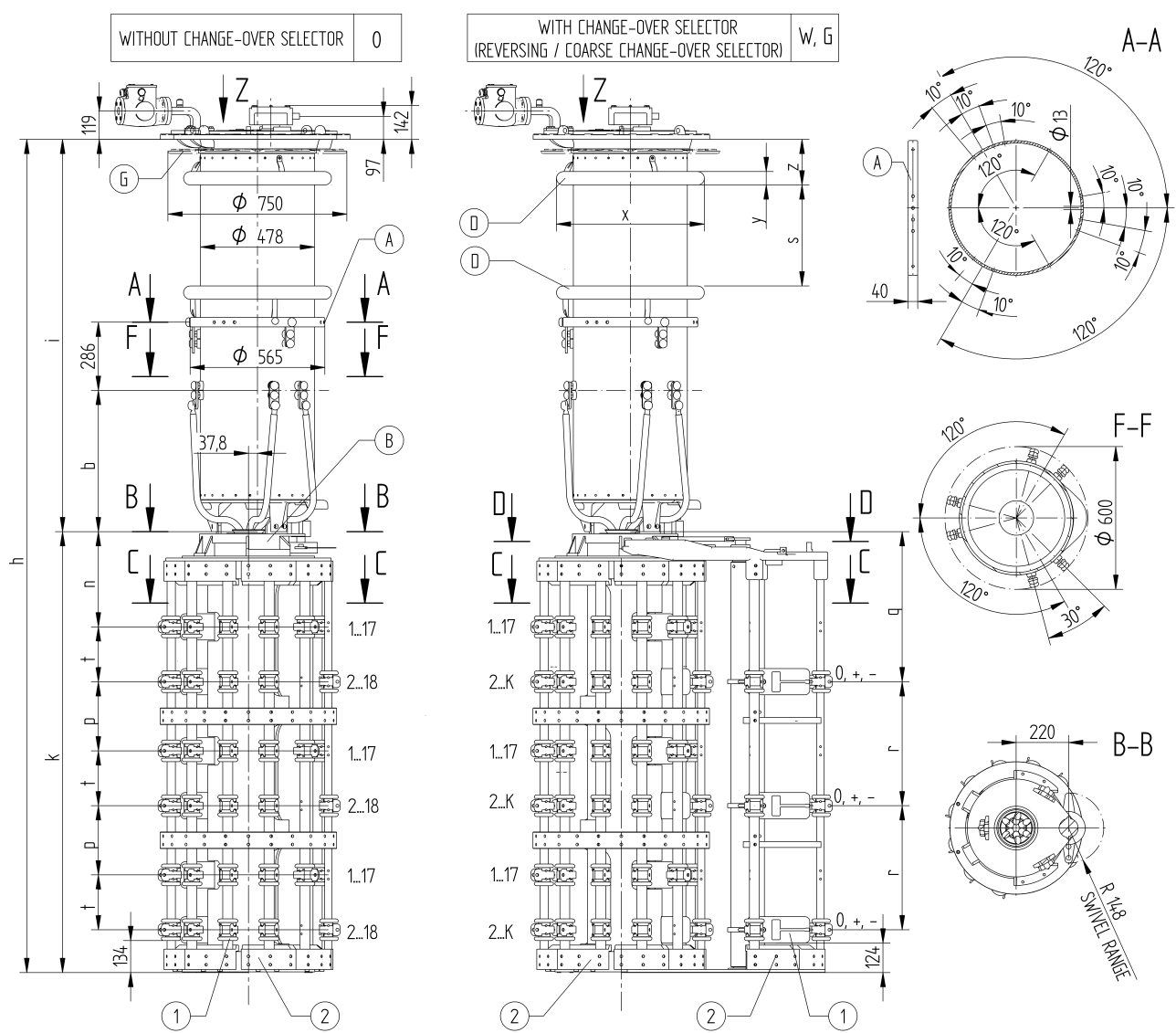


ON-LOAD TAP-CHANGER OILTAP® R
R13003-72,5...362-RC/RD/RDE
DIMENSION DRAWING

SERIAL NUMBER

| | |
|-----------------|-------|
| MATERIAL NUMBER | SHEET |
| 100090342E | 2/2 |

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FOR THE TYPE OF OLTC-HEAD REFER TO THE ORDER-SPECIFIC DRAWING OF THE OLTC-HEAD AND DRIVE SHAFTS

- (M) - DRIVE SIDE OF SELECTOR
 - (A) - ON-LOAD TAP-CHANGER CURRENT TAKE-OFF TERMINAL
 - (B) - IS CONNECTED TO POTENTIAL OF (A)
 - (D) - SHIELDING RINGS FOR UM OF 170 kV OR GREATER
 - (G) - SUPPORTING FLANGE FOR BELL-TYPE TANK INSTALLATION
 WITH 72,5kV-300kV AVAILABLE
 WITH 362kV OBLIGATORY
 - (1) - BOTTOM-MOST LIVE PARTS, THESE ARE CONNECTED TO THE POTENTIAL OF THE ASSOCIATED AND/OR WIRED CONNECTION CONTACT
 - (2) - SELECTOR BASE IS MADE OF INSULATING MATERIAL
- THE DETAILED CONNECTION DIAGRAM IS BINDING FOR THE DESIGNATION OF THE CONNECTION CONTACTS AND PHASES
 - C-C REFER TO 10016570
 - FOR INHERENT DRAWINGS REFER TO 10009731
 - D-D - TYPE WITH CONNECTING LEAD 3W/3G REFER TO 10017264

| | | | |
|--------|------------|--------------|--------------------|
| DATE | 19.10.2016 | DOCUMENT NO. | SED 5103387 001 02 |
| DFTR. | 20.10.2016 | NAME | CTETPRAKTIK2 |
| CHKD. | 20.10.2016 | HILFNER | 1077337 |
| STAND. | 20.10.2016 | PRODASTSCHUK | 1:10 |

DIMENSION IN mm EXCEPT AS NOTED



ON-LOAD TAP-CHANGER OILTAP® R
 RIII1200Y-72,5...362-RE/RF
 DIMENSION DRAWING

| | |
|-----------------|-------|
| SERIAL NUMBER | |
| MATERIAL NUMBER | SHEET |
| 100174770E | 1/2 |

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OILTAP® R

| SELECTOR SIZE | | RE | | | | | |
|--------------------|---|------|------|-------|-------|-------|-------|
| Um [kV] | | 72,5 | 123 | 170 | 245 | 300 | 362 |
| DIMENSIONS [mm] | h | 3165 | 3295 | 3395 | 3495 | 3641 | 3771 |
| | b | 592 | 592 | 592 | 592 | 592 | 592 |
| | i | 1315 | 1445 | 1545 | 1645 | 1791 | 1921 |
| | s | - | - | 324 | 424 | 529 | 600 |
| | z | - | - | 191 | 191 | 191 | 228 |
| | x | - | - | Ø 620 | Ø 620 | Ø 620 | Ø 695 |
| | y | - | - | Ø 56 | Ø 56 | Ø 56 | Ø 100 |
| | k | 1850 | | | | | |
| | n | 400 | | | | | |
| | o | - | | | | | |
| | t | 230 | | | | | |
| | p | 290 | | | | | |
| | r | 520 | | | | | |
| | q | 630 | | | | | |
| OIL VOLUME [dm³] | | 168 | 188 | 203 | 218 | 240 | 255 |
| DISPLACEMENT [dm³] | | 331 | 354 | 382 | 400 | 426 | 470 |
| MAX. WEIGHT [kg] | | 624 | 629 | 634 | 639 | 644 | 644 |

OILTAP® R

| SELECTOR SIZE | | RF | | | | | |
|--------------------|---|------|------|-------|-------|-------|-------|
| Um [kV] | | 72,5 | 123 | 170 | 245 | 300 | 362 |
| DIMENSIONS [mm] | h | 3325 | 3455 | 3555 | 3655 | 3801 | 3931 |
| | b | 592 | 592 | 592 | 592 | 592 | 592 |
| | i | 1315 | 1445 | 1545 | 1645 | 1791 | 1921 |
| | s | - | - | 324 | 424 | 529 | 600 |
| | z | - | - | 191 | 191 | 191 | 228 |
| | x | - | - | Ø 620 | Ø 620 | Ø 620 | Ø 695 |
| | y | - | - | Ø 56 | Ø 56 | Ø 56 | Ø 100 |
| | k | 2010 | | | | | |
| | n | 400 | | | | | |
| | o | - | | | | | |
| | t | 230 | | | | | |
| | p | 370 | | | | | |
| | r | 600 | | | | | |
| | q | 630 | | | | | |
| OIL VOLUME [dm³] | | 168 | 188 | 203 | 218 | 240 | 255 |
| DISPLACEMENT [dm³] | | 336 | 359 | 387 | 405 | 431 | 475 |
| MAX. WEIGHT [kg] | | 638 | 643 | 648 | 653 | 658 | 658 |

| DATE | NAME | DOCUMENT NO. |
|-------------------|--------------|--------------------|
| DFTR. 19.10.2016 | CTETPRAKTIK2 | SED 5103387 001 02 |
| CHKD. 20.10.2016 | HILTNER | CHANGE NO. |
| STAND. 20.10.2016 | PRODASTSCHUK | 1077337 |
| | | SCALE |
| | | 1:10 |

DIMENSION
IN mm
EXCEPT AS
NOTED



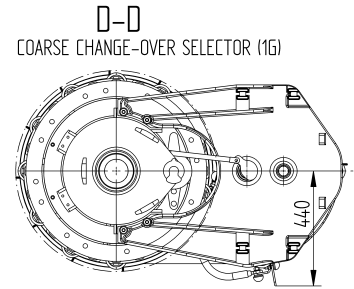
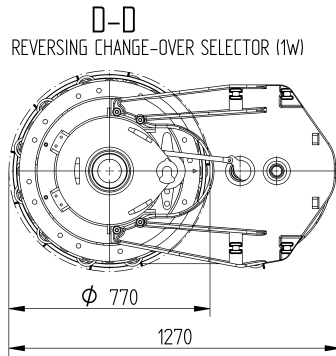
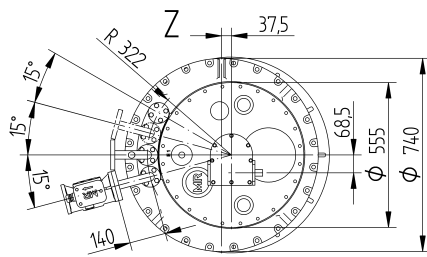
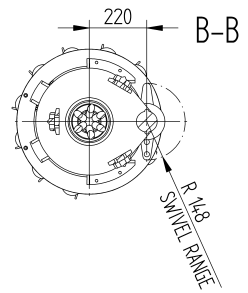
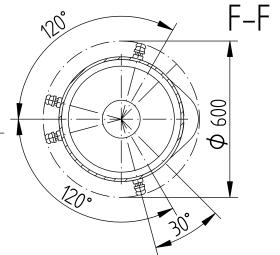
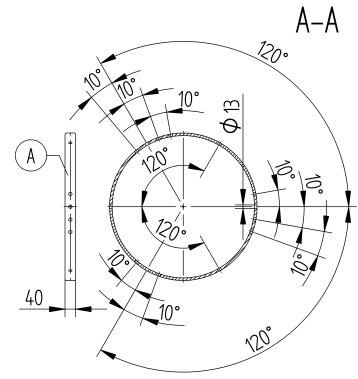
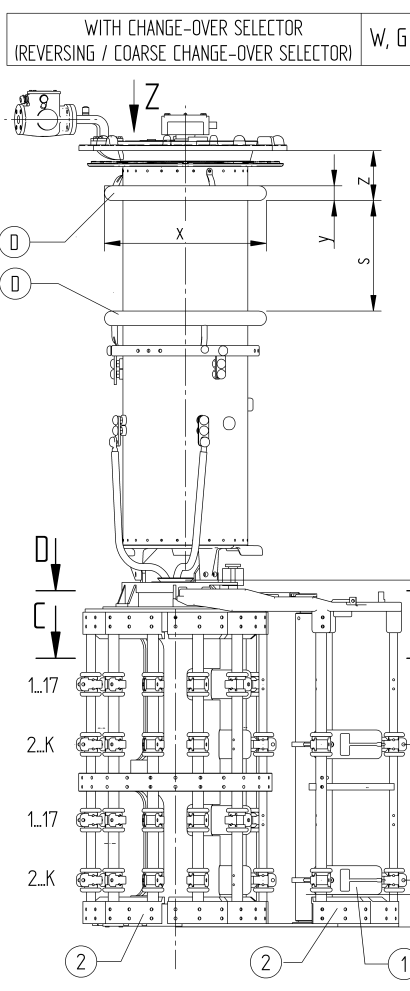
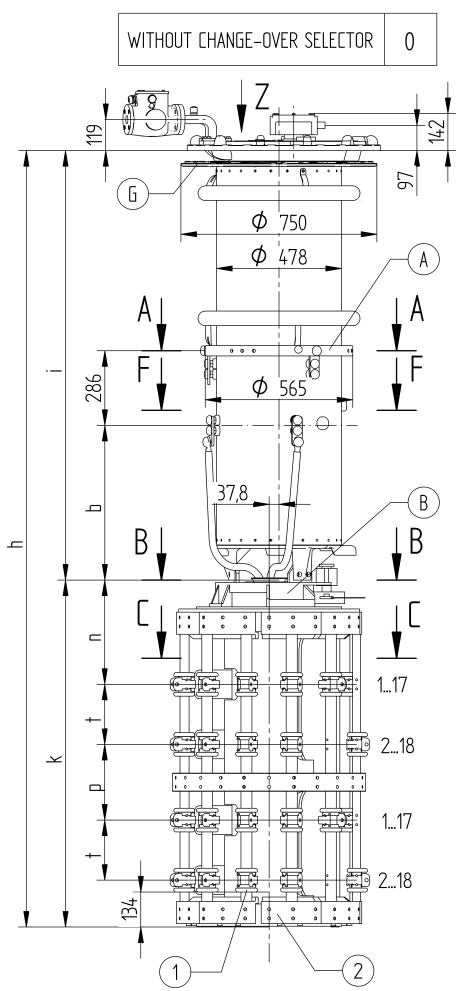
ON-LOAD TAP-CHANGER OILTAP® R
R111200Y-72,5...362-RE/RF
DIMENSION DRAWING

SERIAL NUMBER

MATERIAL NUMBER
100174770E

SHEET
2/2

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FOR THE TYPE OF OLTC-HEAD REFER TO THE ORDER-SPECIFIC DRAWING OF THE OLTC-HEAD AND DRIVE SHAFTS

- (M) - DRIVE SIDE OF SELECTOR
- (A) - ON-LOAD TAP-CHANGER CURRENT TAKE-OFF TERMINAL
- (B) - IS CONNECTED TO POTENTIAL OF (A)
- (D) - SHIELDING RINGS FOR UM OF 170 kV OR GREATER
- (G) - SUPPORTING FLANGE FOR BELL-TYPE TANK INSTALLATION
 WITH 72.5kV-300kV AVAILABLE
 WITH 362kV OBLIGATORY
- (1) - BOTTOM-MOST LIVE PARTS, THESE ARE CONNECTED TO THE POTENTIAL OF THE ASSOCIATED AND/OR WIRED CONNECTION CONTACT
- (2) - SELECTOR BASE IS MADE OF INSULATING MATERIAL

- THE DETAILED CONNECTION DIAGRAM IS BINDING FOR THE DESIGNATION OF THE CONNECTION CONTACTS AND PHASES
- C-C REFER TO 10016570
- FOR INHERENT DRAWINGS REFER TO 10009731
- D-D - TYPE WITH CONNECTING LEAD 3W/3G REFER TO 10017264

| | | | | | |
|--------|------------|--------------|--------------|--------------|--------------------|
| DATE | 19.10.2016 | NAME | CTETPRAKTIK2 | DOCUMENT NO. | SED 5101385 001 02 |
| DFTR. | 20.10.2016 | CHKD. | HILTNER | CHANGE NO. | 1077337 |
| STAND. | 20.10.2016 | PRODASTSCHUK | | SCALE | 1:10 |

DIMENSION IN mm EXCEPT AS NOTED



ON-LOAD TAP-CHANGER OILTAP® R
 RII1202-72,5...362-RE/RF
 DIMENSION DRAWING

SERIAL NUMBER

MATERIAL NUMBER 100174480E SHEET 1/2

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OILTAP® R

| SELECTOR SIZE | | RE | | | | | |
|--------------------|-----|------|------|-------|-------|-------|-------|
| Um [kV] | | 72,5 | 123 | 170 | 245 | 300 | 362 |
| DIMENSIONS [mm] | h | 2645 | 2775 | 2875 | 2975 | 3121 | 3251 |
| | b | 592 | 592 | 592 | 592 | 592 | 592 |
| | i | 1315 | 1445 | 1545 | 1645 | 1791 | 1921 |
| | s | - | - | 324 | 424 | 529 | 600 |
| | z | - | - | 191 | 191 | 191 | 228 |
| | x | - | - | ∅ 620 | ∅ 620 | ∅ 620 | ∅ 695 |
| | y | - | - | ∅ 56 | ∅ 56 | ∅ 56 | ∅ 100 |
| | k | 1330 | | | | | |
| | n | 400 | | | | | |
| | o | - | | | | | |
| | t | 230 | | | | | |
| | p | 290 | | | | | |
| | r | 520 | | | | | |
| q | 630 | | | | | | |
| OIL VOLUME [dm³] | | 168 | 188 | 203 | 218 | 240 | 255 |
| DISPLACEMENT [dm³] | | 301 | 324 | 352 | 370 | 396 | 440 |
| MAX. WEIGHT [kg] | | 537 | 542 | 547 | 552 | 557 | 562 |

OILTAP® R

| SELECTOR SIZE | | RF | | | | | |
|--------------------|-----|------|------|-------|-------|-------|-------|
| Um [kV] | | 72,5 | 123 | 170 | 245 | 300 | 362 |
| DIMENSIONS [mm] | h | 2725 | 2855 | 2955 | 3055 | 3201 | 3331 |
| | b | 592 | 592 | 592 | 592 | 592 | 592 |
| | i | 1315 | 1445 | 1545 | 1645 | 1791 | 1921 |
| | s | - | - | 324 | 424 | 529 | 600 |
| | z | - | - | 191 | 191 | 191 | 228 |
| | x | - | - | ∅ 620 | ∅ 620 | ∅ 620 | ∅ 695 |
| | y | - | - | ∅ 56 | ∅ 56 | ∅ 56 | ∅ 100 |
| | k | 1410 | | | | | |
| | n | 400 | | | | | |
| | o | - | | | | | |
| | t | 230 | | | | | |
| | p | 370 | | | | | |
| | r | 600 | | | | | |
| q | 630 | | | | | | |
| OIL VOLUME [dm³] | | 168 | 188 | 203 | 218 | 240 | 255 |
| DISPLACEMENT [dm³] | | 304 | 327 | 355 | 373 | 399 | 443 |
| MAX. WEIGHT [kg] | | 544 | 549 | 554 | 559 | 564 | 569 |

| DATE | NAME | DOCUMENT NO. |
|------------|--------------|--------------------|
| 19.10.2016 | CTETPRAKTIK2 | SED 5101385 001 02 |
| 20.10.2016 | HILTNER | CHANGE NO. |
| 20.10.2016 | PRODASTSCHUK | 1077337 |
| DFTR. | | SCALE |
| CHKD. | | 1:10 |
| STAND. | | |

DIMENSION
IN mm
EXCEPT AS
NOTED



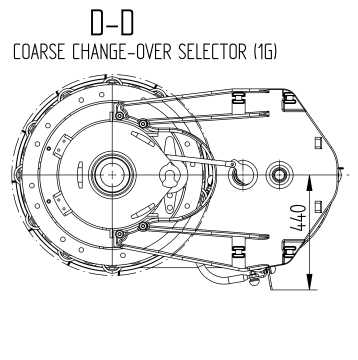
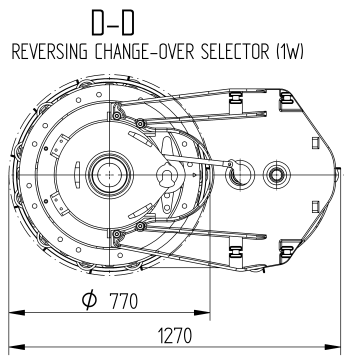
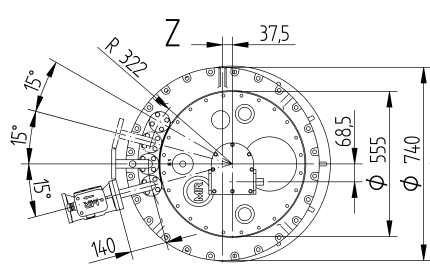
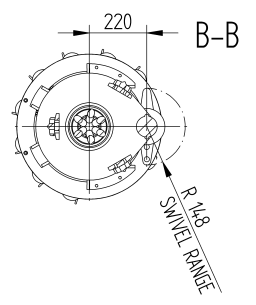
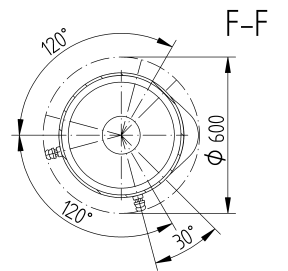
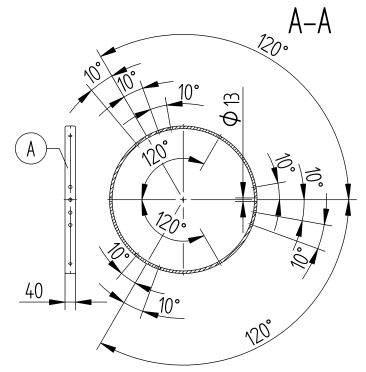
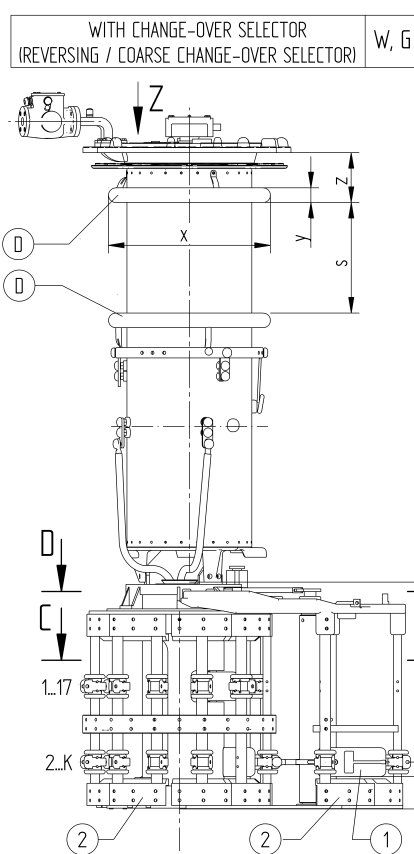
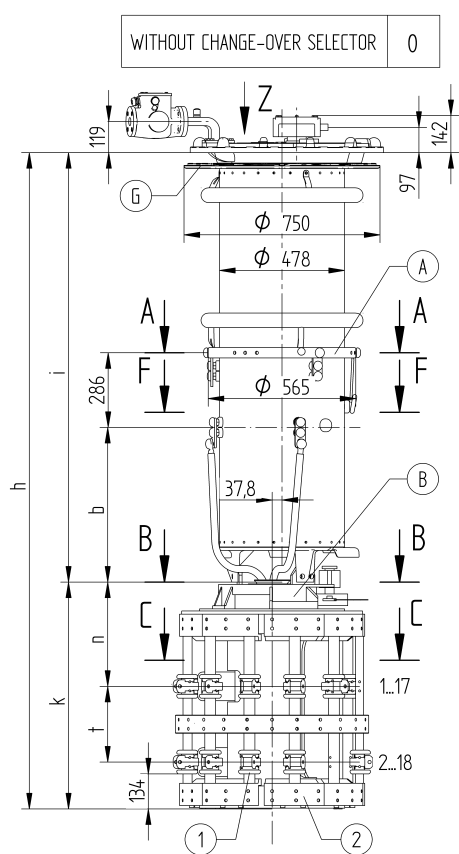
ON-LOAD TAP-CHANGER OILTAP® R
R11202-72,5...362-RE/RF
DIMENSION DRAWING

SERIAL NUMBER

MATERIAL NUMBER
100174480E

SHEET
2/2

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FOR THE TYPE OF OLTC-HEAD REFER TO THE ORDER-SPECIFIC DRAWING OF THE OLTC-HEAD AND DRIVE SHAFTS

- (M) - DRIVE SIDE OF SELECTOR
- (A) - ON-LOAD TAP-CHANGER CURRENT TAKE-OFF TERMINAL
- (B) - IS CONNECTED TO POTENTIAL OF (A)
- (D) - SHIELDING RINGS FOR UM OF 170 kV OR GREATER
- (G) - SUPPORTING FLANGE FOR BELL-TYPE TANK INSTALLATION
 WITH 72.5kV-300kV AVAILABLE
 WITH 362kV OBLIGATORY
- (1) - BOTTOM-MOST LIVE PARTS, THESE ARE CONNECTED TO THE POTENTIAL OF THE ASSOCIATED AND/OR WIRED CONNECTION CONTACT
- (2) - SELECTOR BASE IS MADE OF INSULATING MATERIAL

- THE DETAILED CONNECTION DIAGRAM IS BINDING FOR THE DESIGNATION OF THE CONNECTION CONTACTS AND PHASES
- C-C REFER TO 10016570
- FOR INHERENT DRAWINGS REFER TO 10009731
- D-D - TYPE WITH CONNECTING LEAD 3W/3G REFER TO 10017264

| | |
|--------------|--------------------|
| DOCUMENT NO. | SED 5095203 001 02 |
| NAME | CTETPRAKTIK2 |
| DATE | 19.10.2016 |
| CHKD. | 20.10.2016 |
| SCALE | 1:10 |
| CHANG. NO. | 1077337 |
| STAND. | 20.10.2016 |
| | PRODASTSCHUK |

DIMENSION IN mm EXCEPT AS NOTED



ON-LOAD TAP-CHANGER OILTAP® R
 R1201-72,5...362-RE
 DIMENSION DRAWING

| | |
|-----------------|-------|
| SERIAL NUMBER | |
| MATERIAL NUMBER | SHEET |
| 100173930E | 1/2 |

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OILTAP® R

| SELECTOR SIZE | | RE | | | | | |
|--------------------|---|------|------|-------|-------|-------|-------|
| Um [kV] | | 72,5 | 123 | 170 | 245 | 300 | 362 |
| DIMENSIONS [mm] | h | 2185 | 2315 | 2415 | 2515 | 2661 | 2791 |
| | b | 592 | 592 | 592 | 592 | 592 | 592 |
| | i | 1315 | 1445 | 1545 | 1645 | 1791 | 1921 |
| | s | - | - | 324 | 424 | 529 | 600 |
| | z | - | - | 191 | 191 | 191 | 228 |
| | x | - | - | ∅ 620 | ∅ 620 | ∅ 620 | ∅ 695 |
| | y | - | - | ∅ 56 | ∅ 56 | ∅ 56 | ∅ 100 |
| | k | 870 | | | | | |
| | n | 400 | | | | | |
| | o | - | | | | | |
| | t | 290 | | | | | |
| | p | - | | | | | |
| | r | - | | | | | |
| | q | 690 | | | | | |
| OIL VOLUME [dm³] | | 168 | 188 | 203 | 218 | 240 | 255 |
| DISPLACEMENT [dm³] | | 278 | 301 | 329 | 347 | 373 | 417 |
| MAX. WEIGHT [kg] | | 465 | 470 | 475 | 480 | 485 | 490 |

| | | |
|-------------------|--------------|--------------------|
| DATE | NAME | DOCUMENT NO. |
| 19.10.2016 | CTETPRAKTIK2 | SED 5095203 001 02 |
| CHKD. 20.10.2016 | HILTNER | CHANGE NO. |
| STAND. 20.10.2016 | PRODASTSCHUK | 1077337 |
| | | SCALE |
| | | 1:10 |

DIMENSION
 IN mm
 EXCEPT AS
 NOTED



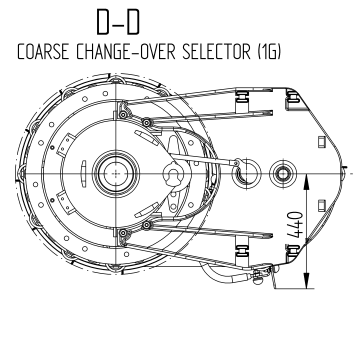
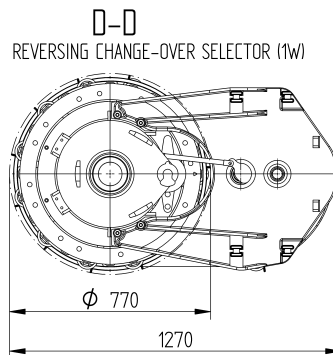
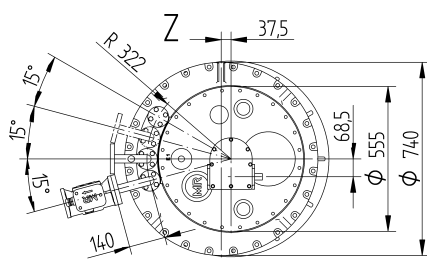
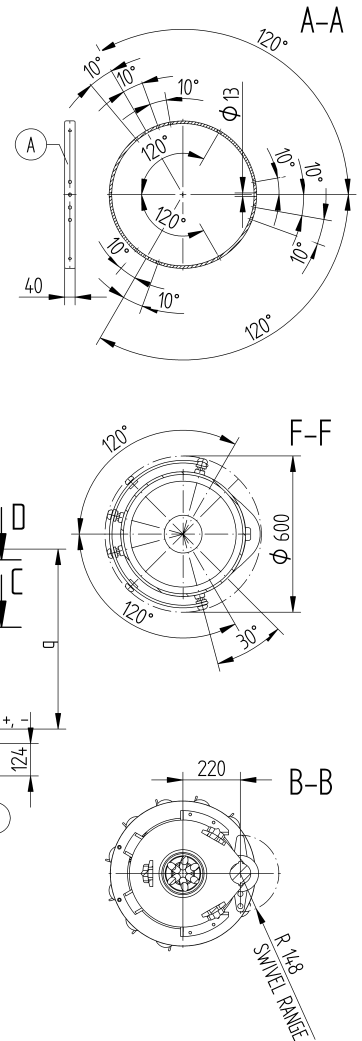
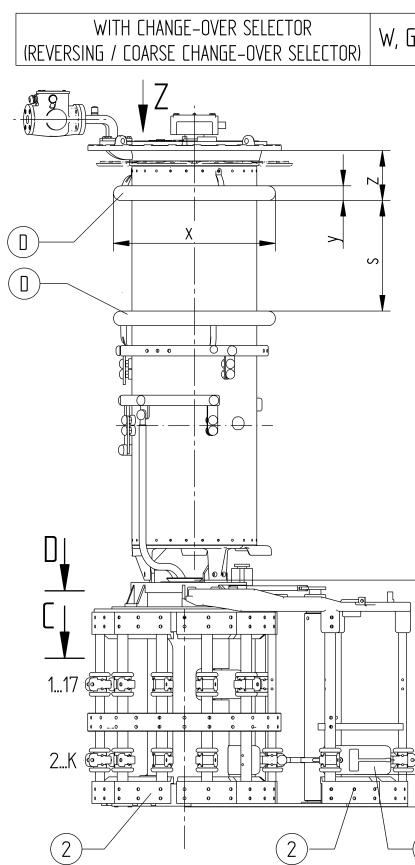
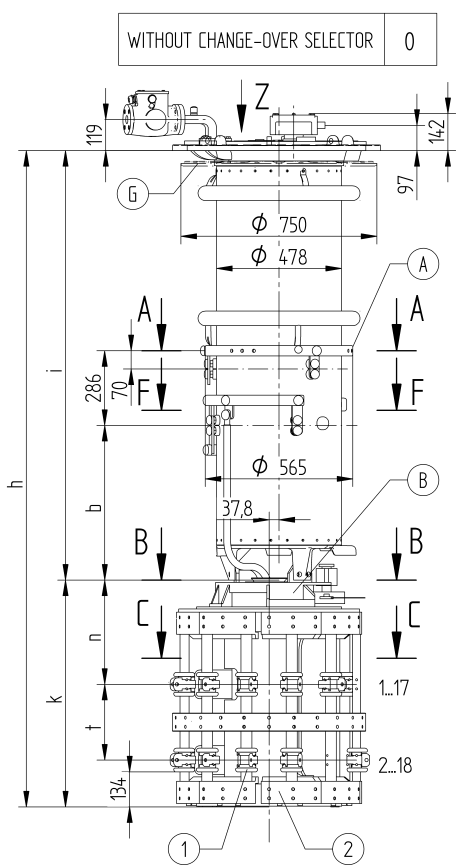
ON-LOAD TAP-CHANGER OILTAP® R
 R11201-72,5...362-RE
 DIMENSION DRAWING

SERIAL NUMBER

MATERIAL NUMBER
 100173930E

SHEET
 2/2

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FOR THE TYPE OF OLTC-HEAD REFER TO THE ORDER-SPECIFIC DRAWING OF THE OLTC-HEAD AND DRIVE SHAFTS

- (M) - DRIVE SIDE OF SELECTOR
- (A) - ON-LOAD TAP-CHANGER CURRENT TAKE-OFF TERMINAL
- (B) - IS CONNECTED TO POTENTIAL OF (A)
- (D) - SHIELDING RINGS FOR UM OF 170 kV OR GREATER
- (G) - SUPPORTING FLANGE FOR BELL-TYPE TANK INSTALLATION
 WITH 72.5kV-300kV AVAILABLE
 WITH 362kV OBLIGATORY
- (1) - BOTTOM-MOST LIVE PARTS; THESE ARE CONNECTED TO THE POTENTIAL OF THE ASSOCIATED AND/OR WIRED CONNECTION CONTACT
- (2) - SELECTOR BASE IS MADE OF INSULATING MATERIAL

- THE DETAILED CONNECTION DIAGRAM IS BINDING FOR THE DESIGNATION OF THE CONNECTION CONTACTS AND PHASES
- C-C REFER TO 10016570
- FOR INHERENT DRAWINGS REFER TO 10009731
- D-D - TYPE WITH CONNECTING LEAD 3W/3G REFER TO 10017264

| | |
|--------------|--------------------|
| DOCUMENT NO. | SED 5103577 001 02 |
| NAME | CTETPRAKTIK2 |
| DATE | 19.10.2016 |
| CHKD. | 20.10.2016 |
| SCALE | 1:10 |
| CHANGE NO. | 1077337 |
| STAND. | 20.10.2016 |
| | PRODASTSCHUK |

DIMENSION IN mm EXCEPT AS NOTED



ON-LOAD TAP-CHANGER OILTAP® R
 R11202-72.5...362-RE
 DIMENSION DRAWING

SERIAL NUMBER

MATERIAL NUMBER 100175100E SHEET 1/2

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OILTAP® R

| SELECTOR SIZE | | RE | | | | | |
|--------------------|---|------|------|-------|-------|-------|-------|
| Um [kV] | | 72,5 | 123 | 170 | 245 | 300 | 362 |
| DIMENSIONS [mm] | h | 2185 | 2315 | 2415 | 2515 | 2661 | 2791 |
| | b | 592 | 592 | 592 | 592 | 592 | 592 |
| | i | 1315 | 1445 | 1545 | 1645 | 1791 | 1921 |
| | s | - | - | 324 | 424 | 529 | 600 |
| | z | - | - | 191 | 191 | 191 | 228 |
| | x | - | - | ∅ 620 | ∅ 620 | ∅ 620 | ∅ 695 |
| | y | - | - | ∅ 56 | ∅ 56 | ∅ 56 | ∅ 100 |
| | k | 870 | | | | | |
| | n | 400 | | | | | |
| | o | - | | | | | |
| | t | 290 | | | | | |
| | p | - | | | | | |
| | r | - | | | | | |
| | q | 690 | | | | | |
| OIL VOLUME [dm³] | | 168 | 188 | 203 | 218 | 240 | 255 |
| DISPLACEMENT [dm³] | | 278 | 301 | 329 | 347 | 373 | 417 |
| MAX. WEIGHT [kg] | | 465 | 470 | 475 | 480 | 485 | 490 |

| DATE | NAME | DOCUMENT NO. |
|-------------------|--------------|--------------------|
| DFTR. 19.10.2016 | CTETPRAKTIK2 | SED 5103577 001 02 |
| CHKD. 20.10.2016 | HILTNER | CHANGE NO. |
| STAND. 20.10.2016 | PRODASTSCHUK | 1077337 |
| | | SCALE |
| | | 1:10 |

DIMENSION
IN mm
EXCEPT AS
NOTED



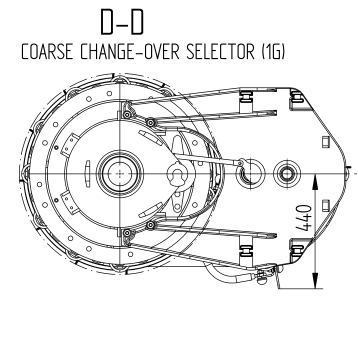
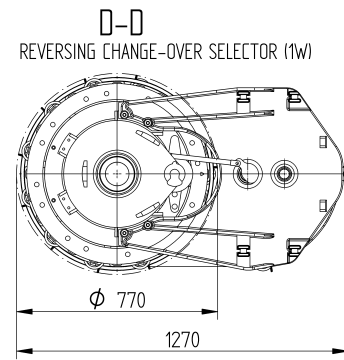
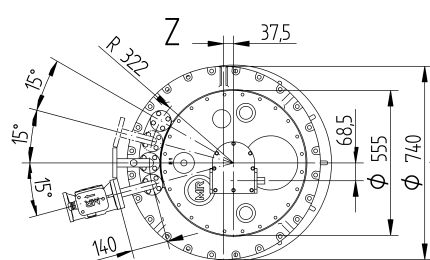
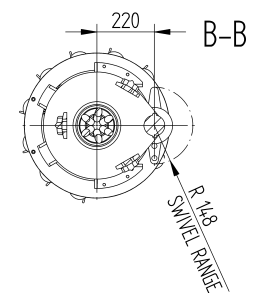
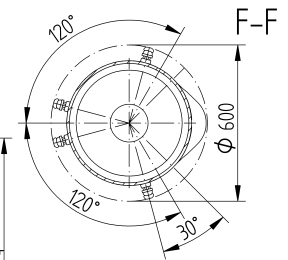
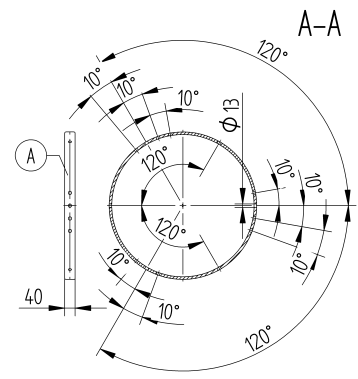
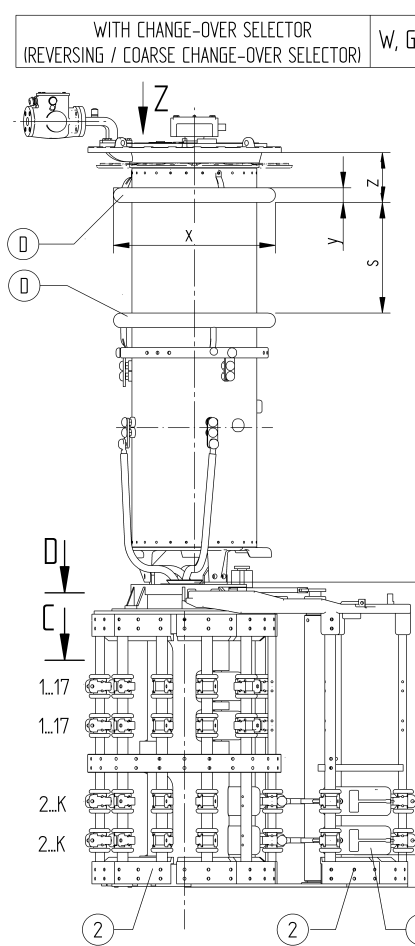
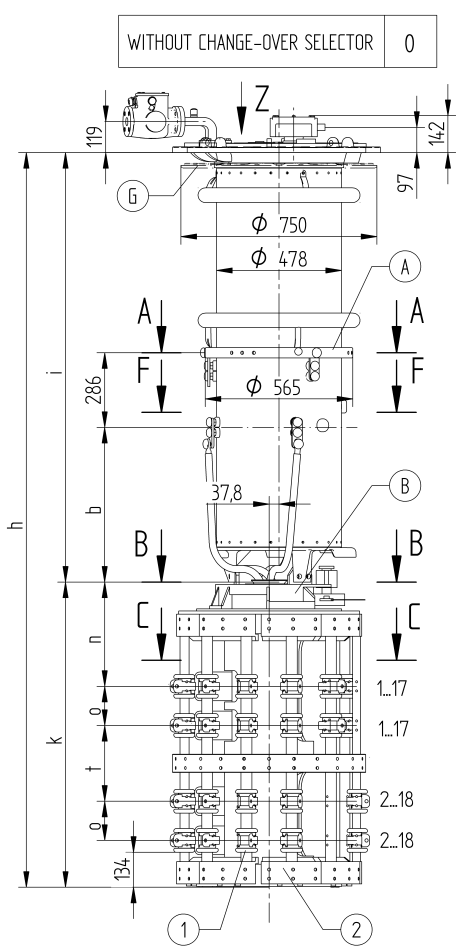
ON-LOAD TAP-CHANGER OILTAP® R
R11202-72,5...362-RE
DIMENSION DRAWING

SERIAL NUMBER

MATERIAL NUMBER
100175100E

SHEET
2/2

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FOR THE TYPE OF OLTC-HEAD REFER TO THE ORDER-SPECIFIC DRAWING OF THE OLTC-HEAD AND DRIVE SHAFTS

- (M) - DRIVE SIDE OF SELECTOR
- (A) - ON-LOAD TAP-CHANGER CURRENT TAKE-OFF TERMINAL
- (B) - IS CONNECTED TO POTENTIAL OF (A)
- (D) - SHIELDING RINGS FOR UM OF 170 kV OR GREATER
- (G) - SUPPORTING FLANGE FOR BELL-TYPE TANK INSTALLATION
 WITH 72.5kV-300kV AVAILABLE
 WITH 362kV OBLIGATORY
- (1) - BOTTOM-MOST LIVE PARTS, THESE ARE CONNECTED TO THE POTENTIAL OF THE ASSOCIATED AND/OR WIRED CONNECTION CONTACT
- (2) - SELECTOR BASE IS MADE OF INSULATING MATERIAL

- THE DETAILED CONNECTION DIAGRAM IS BINDING FOR THE DESIGNATION OF THE CONNECTION CONTACTS AND PHASES
- C-C REFER TO 10016570
- FOR INHERENT DRAWINGS REFER TO 10009731
- D-D - TYPE WITH CONNECTING LEAD 3W/3G REFER TO 10017264

| | | | | | |
|--------|------------|--------------|--------------|--------------|--------------------|
| DATE | 19.10.2016 | NAME | CTETPRAKTIK2 | DOCUMENT NO. | SED 5103934-001 02 |
| DFTR. | 20.10.2016 | CHKD. | HILTNER | CHANGE NO. | 1077337 |
| STAND. | 20.10.2016 | PRODASTSCHUK | | SCALE | 1:10 |

DIMENSION IN mm EXCEPT AS NOTED



ON-LOAD TAP-CHANGER OILTAP® R
 RI2402-72,5...362-RE - WITH FORCED CURRENT SPLITTING
 DIMENSION DRAWING

| | |
|-----------------|-------|
| SERIAL NUMBER | |
| MATERIAL NUMBER | SHEET |
| 100175080E | 1/2 |

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OILTAP® R

| SELECTOR SIZE | | RE | | | | | |
|---------------------------------|---|------|------|-------|-------|-------|-------|
| Um [kV] | | 72,5 | 123 | 170 | 245 | 300 | 362 |
| DIMENSIONS [mm] | h | 2485 | 2615 | 2715 | 2815 | 2961 | 3091 |
| | b | 592 | 592 | 592 | 592 | 592 | 592 |
| | i | 1315 | 1445 | 1545 | 1645 | 1791 | 1921 |
| | s | - | - | 324 | 424 | 529 | 600 |
| | z | - | - | 191 | 191 | 191 | 228 |
| | x | - | - | ∅ 620 | ∅ 620 | ∅ 620 | ∅ 695 |
| | y | - | - | ∅ 56 | ∅ 56 | ∅ 56 | ∅ 100 |
| | k | 1170 | | | | | |
| | n | 400 | | | | | |
| | o | 150 | | | | | |
| | t | 290 | | | | | |
| | p | - | | | | | |
| | r | 150 | | | | | |
| | q | 840 | | | | | |
| OIL VOLUME [dm ³] | | 168 | 188 | 203 | 218 | 240 | 255 |
| DISPLACEMENT [dm ³] | | 297 | 320 | 348 | 366 | 392 | 436 |
| MAX. WEIGHT [kg] | | 536 | 541 | 546 | 551 | 556 | 561 |

| | | |
|-------------------|--------------|--------------------|
| DATE | NAME | DOCUMENT NO. |
| DFTR. 19.10.2016 | CTETPRAKTIK2 | SED 5103934-001 02 |
| CHKD. 20.10.2016 | HILTNER | CHANGE NO. |
| STAND. 20.10.2016 | PRODASTSCHUK | 1077337 |
| | | SCALE |
| | | 1:10 |

DIMENSION
IN mm
EXCEPT AS
NOTED



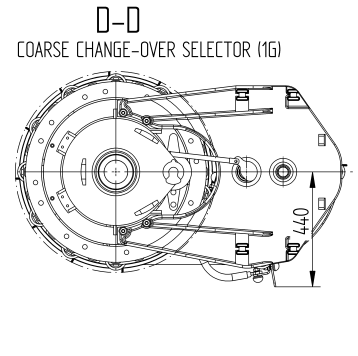
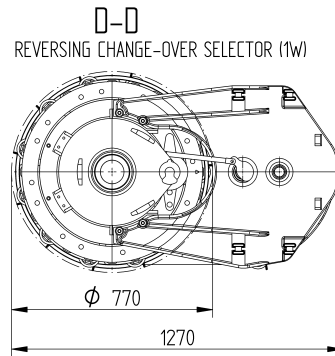
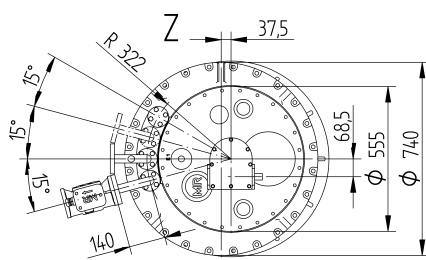
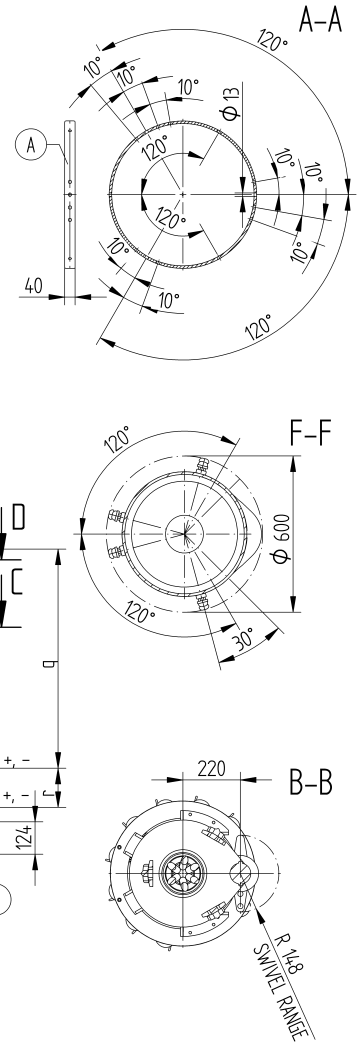
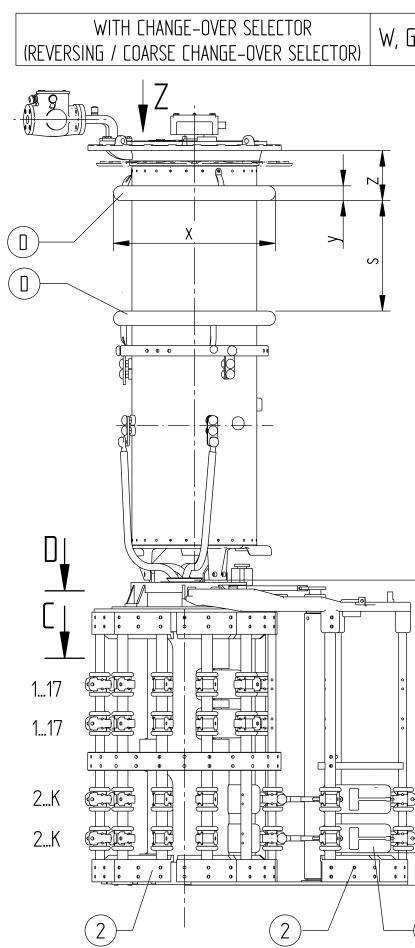
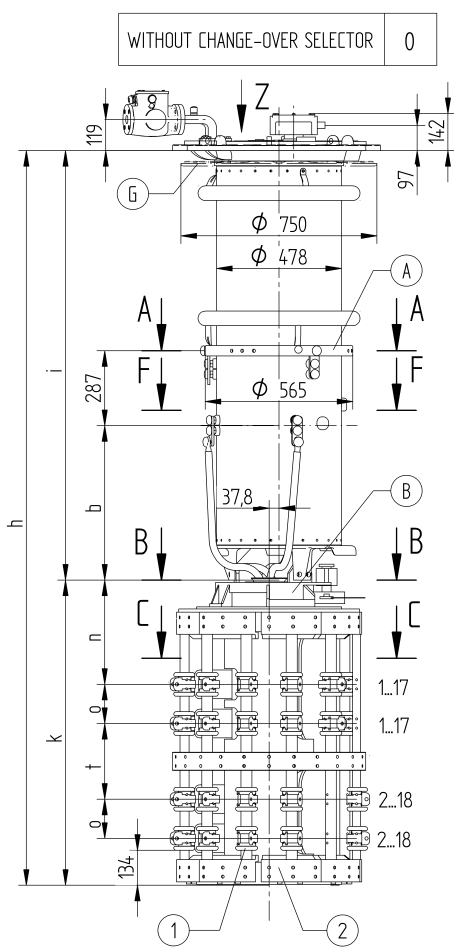
ON-LOAD TAP-CHANGER OILTAP® R
 RI2402-72,5...362-RE - WITH FORCED CURRENT SPLITTING
 DIMENSION DRAWING

SERIAL NUMBER

MATERIAL NUMBER
100175080E

SHEET
2/2

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FOR THE TYPE OF OLTC-HEAD REFER TO THE ORDER-SPECIFIC DRAWING OF THE OLTC-HEAD AND DRIVE SHAFTS

- (M) - DRIVE SIDE OF SELECTOR
- (A) - ON-LOAD TAP-CHANGER CURRENT TAKE-OFF TERMINAL
- (B) - IS CONNECTED TO POTENTIAL OF (A)
- (D) - SHIELDING RINGS FOR UM OF 170 kV OR GREATER
- (G) - SUPPORTING FLANGE FOR BELL-TYPE TANK INSTALLATION
WITH 72.5kV-300kV AVAILABLE
WITH 362kV OBLIGATORY
- (1) - BOTTOM-MOST LIVE PARTS, THESE ARE CONNECTED TO THE POTENTIAL OF THE ASSOCIATED AND/OR WIRED CONNECTION CONTACT
- (2) - SELECTOR BASE IS MADE OF INSULATING MATERIAL

- THE DETAILED CONNECTION DIAGRAM IS BINDING FOR THE DESIGNATION OF THE CONNECTION CONTACTS AND PHASES
- C-C REFER TO 10016570
- FOR INHERENT DRAWINGS REFER TO 10009731
- D-D - TYPE WITH CONNECTING LEAD 3W/3G REFER TO 10017264

| | |
|--------------|--------------------|
| DOCUMENT NO. | SED 5101823 001 02 |
| NAME | CTETPRAKTIK2 |
| DATE | 19.10.2016 |
| CHKD. | 20.10.2016 |
| SCALE | 1:10 |
| CHANGE NO. | 1077337 |
| STAND. | 20.10.2016 |
| | PRODASTSCHUK |

DIMENSION IN mm EXCEPT AS NOTED



ON-LOAD TAP-CHANGER OILTAP® R
 R12002-72.5...362-RE
 DIMENSION DRAWING

SERIAL NUMBER

| | |
|-----------------|-------|
| MATERIAL NUMBER | SHEET |
| 100174780E | 1/2 |

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OILTAP® R

| SELECTOR SIZE | | RE | | | | | |
|--------------------|---|------|------|-------|-------|-------|-------|
| Um [kV] | | 72,5 | 123 | 170 | 245 | 300 | 362 |
| DIMENSIONS [mm] | h | 2485 | 2615 | 2715 | 2815 | 2961 | 3091 |
| | b | 592 | 592 | 592 | 592 | 592 | 592 |
| | i | 1315 | 1445 | 1545 | 1645 | 1791 | 1921 |
| | s | - | - | 324 | 424 | 529 | 600 |
| | z | - | - | 191 | 191 | 191 | 228 |
| | x | - | - | ∅ 620 | ∅ 620 | ∅ 620 | ∅ 695 |
| | y | - | - | ∅ 56 | ∅ 56 | ∅ 56 | ∅ 100 |
| | k | 1170 | | | | | |
| | n | 400 | | | | | |
| | o | 150 | | | | | |
| | t | 290 | | | | | |
| | p | - | | | | | |
| | r | 150 | | | | | |
| | q | 840 | | | | | |
| OIL VOLUME [dm³] | | 168 | 188 | 203 | 218 | 240 | 255 |
| DISPLACEMENT [dm³] | | 297 | 320 | 348 | 366 | 392 | 436 |
| MAX. WEIGHT [kg] | | 536 | 541 | 546 | 551 | 556 | 561 |

| | | | |
|--------|------------|--------------|--------------------|
| DFTR. | DATE | NAME | DOCUMENT NO. |
| CHKD. | 19.10.2016 | CTETPRAKTIK2 | SED 5101823 001 02 |
| STAND. | 20.10.2016 | HILTNER | CHANGE NO. |
| | 20.10.2016 | PRODASTSCHUK | 1077337 |
| | | | SCALE |
| | | | 1:10 |

DIMENSION
 IN mm
 EXCEPT AS
 NOTED



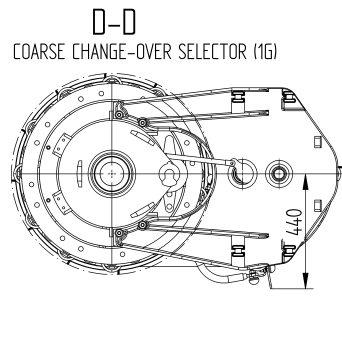
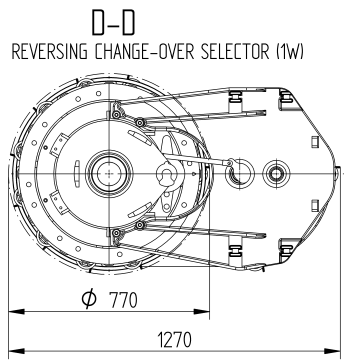
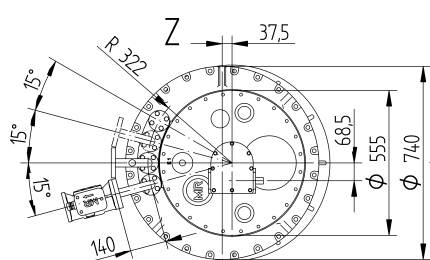
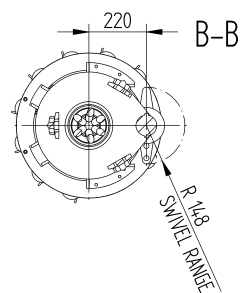
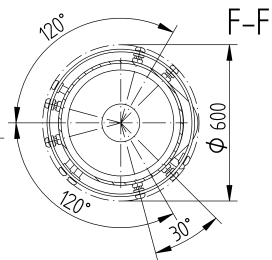
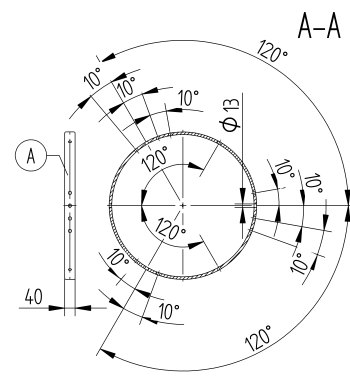
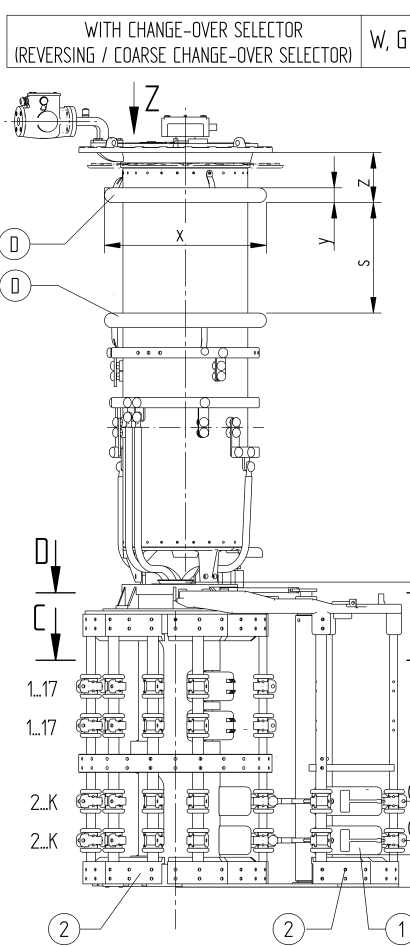
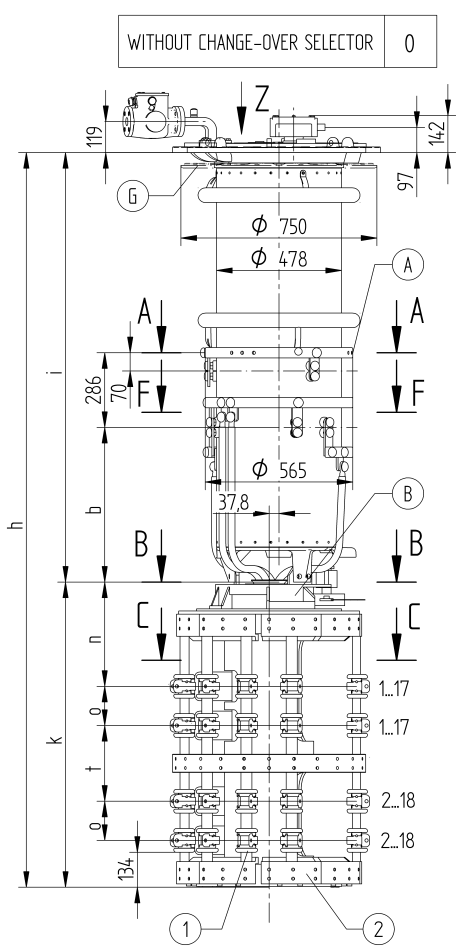
ON-LOAD TAP-CHANGER OILTAP® R
 R12002-72,5...362-RE
 DIMENSION DRAWING

SERIAL NUMBER

MATERIAL NUMBER
 100174780E

SHEET
 2/2

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FOR THE TYPE OF OLTC-HEAD REFER TO THE ORDER-SPECIFIC DRAWING OF THE OLTC-HEAD AND DRIVE SHAFTS

- (M) - DRIVE SIDE OF SELECTOR
- (A) - ON-LOAD TAP-CHANGER CURRENT TAKE-OFF TERMINAL
- (B) - IS CONNECTED TO POTENTIAL OF (A)
- (D) - SHIELDING RINGS FOR UM OF 170 kV OR GREATER
- (G) - SUPPORTING FLANGE FOR BELL-TYPE TANK INSTALLATION
 WITH 72.5kV-300kV AVAILABLE
 WITH 362kV OBLIGATORY
- (1) - BOTTOM-MOST LIVE PARTS, THESE ARE CONNECTED TO THE POTENTIAL OF THE ASSOCIATED AND/OR WIRED CONNECTION CONTACT
- (2) - SELECTOR BASE IS MADE OF INSULATING MATERIAL

- THE DETAILED CONNECTION DIAGRAM IS BINDING FOR THE DESIGNATION OF THE CONNECTION CONTACTS AND PHASES
- C-C REFER TO 10016570
- FOR INHERENT DRAWINGS REFER TO 10009731
- D-D - TYPE WITH CONNECTING LEAD 3W/3G REFER TO 10017264

| | | | |
|--------|------------|--------------|--------------------|
| DATE | 19.10.2016 | DOCUMENT NO. | SED 5103845 001 02 |
| DFTR. | 19.10.2016 | NAME | CTETPRAKTIK2 |
| CHKD. | 20.10.2016 | HILFNER | 1077337 |
| STAND. | 20.10.2016 | PRODASTSCHUK | 1:10 |

DIMENSION IN mm EXCEPT AS NOTED



ON-LOAD TAP-CHANGER OILTAP® R
 R12003-72.5...362-RE
 DIMENSION DRAWING

| | |
|-----------------|-------|
| SERIAL NUMBER | |
| MATERIAL NUMBER | SHEET |
| 100175090E | 1/2 |

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OILTAP® R

| SELECTOR SIZE | | RE | | | | | |
|--------------------|---|------|------|-------|-------|-------|-------|
| Um [kV] | | 72,5 | 123 | 170 | 245 | 300 | 362 |
| DIMENSIONS [mm] | h | 2485 | 2615 | 2715 | 2815 | 2961 | 3091 |
| | b | 592 | 592 | 592 | 592 | 592 | 592 |
| | i | 1315 | 1445 | 1545 | 1645 | 1791 | 1921 |
| | s | - | - | 324 | 424 | 529 | 600 |
| | z | - | - | 191 | 191 | 191 | 228 |
| | x | - | - | ∅ 620 | ∅ 620 | ∅ 620 | ∅ 695 |
| | y | - | - | ∅ 56 | ∅ 56 | ∅ 56 | ∅ 100 |
| | k | 1170 | | | | | |
| | n | 400 | | | | | |
| | o | 150 | | | | | |
| | t | 290 | | | | | |
| | p | - | | | | | |
| | r | 150 | | | | | |
| | q | 840 | | | | | |
| OIL VOLUME [dm³] | | 168 | 188 | 203 | 218 | 240 | 255 |
| DISPLACEMENT [dm³] | | 297 | 320 | 348 | 366 | 392 | 436 |
| MAX. WEIGHT [kg] | | 536 | 541 | 546 | 551 | 556 | 561 |

| | | | |
|--------|------------|--------------|--------------------|
| DFTR. | 19.10.2016 | NAME | DOCUMENT NO. |
| CHKD. | 20.10.2016 | CTETPRAKTIK2 | SED 5103845 001 02 |
| STAND. | 20.10.2016 | HILTNER | CHANGE NO. |
| | | PRODASTSCHUK | 1077337 |
| | | | SCALE |
| | | | 1:10 |

DIMENSION
IN mm
EXCEPT AS
NOTED



ON-LOAD TAP-CHANGER OILTAP® R
 RI2003-72,5...362-RE
 DIMENSION DRAWING

SERIAL NUMBER

MATERIAL NUMBER
100175090E

SHEET
2/2

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OILTAP® R

| SELECTOR SIZE | | RE | | | | | |
|---------------------------------|---|------|------|-------|-------|-------|-------|
| Um [kV] | | 72,5 | 123 | 170 | 245 | 300 | 362 |
| DIMENSIONS [mm] | h | 2785 | 2915 | 3015 | 3115 | 3261 | 3391 |
| | b | 592 | 592 | 592 | 592 | 592 | 592 |
| | i | 1315 | 1445 | 1545 | 1645 | 1791 | 1921 |
| | s | - | - | 324 | 424 | 529 | 600 |
| | z | - | - | 191 | 191 | 191 | 228 |
| | x | - | - | ∅ 620 | ∅ 620 | ∅ 620 | ∅ 695 |
| | y | - | - | ∅ 56 | ∅ 56 | ∅ 56 | ∅ 100 |
| | k | 1470 | | | | | |
| | n | 400 | | | | | |
| | o | 150 | | | | | |
| | t | 290 | | | | | |
| | p | - | | | | | |
| | r | 150 | | | | | |
| | q | 990 | | | | | |
| OIL VOLUME [dm ³] | | 168 | 188 | 203 | 218 | 240 | 255 |
| DISPLACEMENT [dm ³] | | 314 | 337 | 355 | 383 | 409 | 453 |
| MAX. WEIGHT [kg] | | 606 | 611 | 616 | 621 | 626 | 631 |

| | | |
|-------------------|--------------|--------------------|
| DATE | NAME | DOCUMENT NO. |
| 19.10.2016 | CTETPRAKTIK2 | SED 5103305 001 02 |
| CHKD. 20.10.2016 | HILTNER | CHANGE NO. |
| STAND. 20.10.2016 | PRODASTSCHUK | 1077337 |
| | | SCALE |
| | | 1:10 |

DIMENSION
 IN mm
 EXCEPT AS
 NOTED



ON-LOAD TAP-CHANGER OILTAP® R
 R13003-72,5...362-RE
 DIMENSION DRAWING

SERIAL NUMBER

MATERIAL NUMBER
 100174790E

SHEET
 2/2



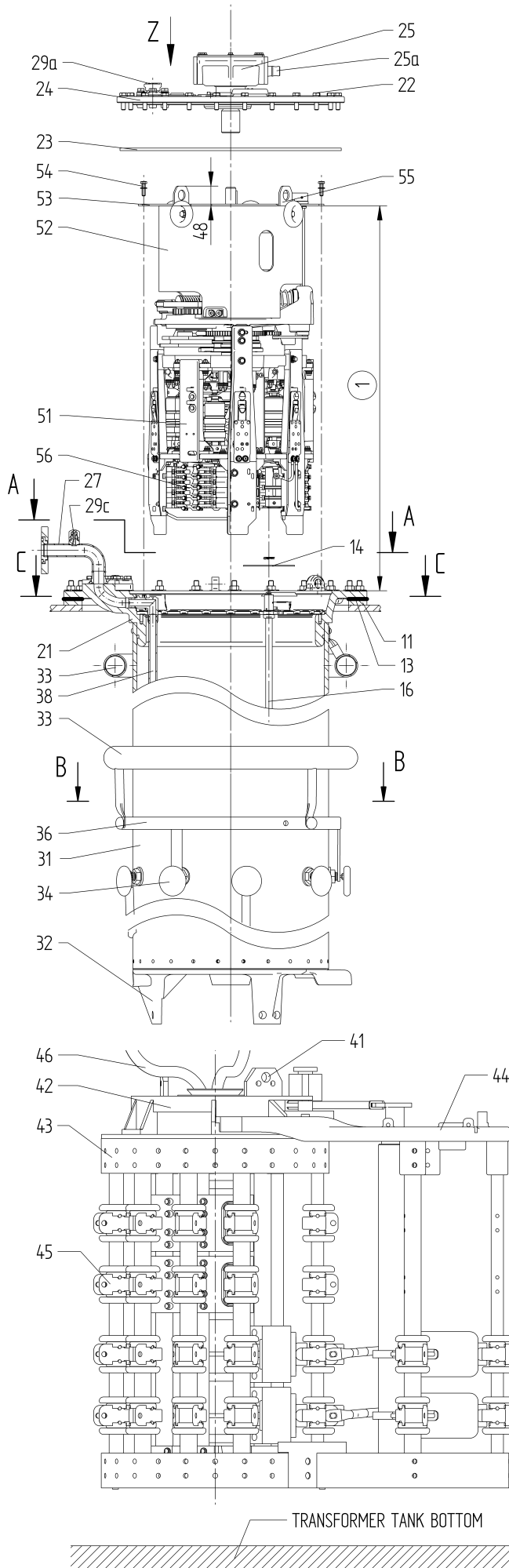
5.5 Planos de montaje VACUTAP® VM®, OILTAP® M y OILTAP® R

5.5 Planos de montaje VACUTAP® VM®, OILTAP® M y OILTAP® R

5.5 Planos de montaje VACUTAP® VM®, OILTAP® M y OILTAP® R



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- 11 MOUNTING FLANGE ON TRANSFORMER COVER
- 12 FIXING SCREW M12
- 13 ON-LOAD TAP-CHANGER HEAD GASKET
- 14 TAP POSITION INDICATOR
- 15 INSPECTION WINDOW
- 16 DRIVE SHAFT FOR TAP POSITION INDICATOR
- 17 THROUGH-HOLES $\phi 15$ MM

- 21 ON-LOAD TAP-CHANGER HEAD
- 22 SCREW FOR ON-LOAD TAP-CHANGER HEAD COVER
- 23 GASKET FOR ON-LOAD TAP-CHANGER HEAD COVER
- 24 ON-LOAD TAP-CHANGER HEAD COVER
- 25 CENTRIC GEAR UNIT WITH DRIVE SHAFT 25a
- 26a PIPE CONNECTION R FOR PROTECTIVE RELAY
- 26b PIPE CONNECTION S FOR SUCTION PIPE
- 26c PIPE CONNECTION Q FOR OIL RETURN (WITH OIL FILTER ONLY)
- 27a AIR-VENT VALVE OF ON-LOAD TAP-CHANGER HEAD COVER
- 27b BLEEDING FACILITY FOR TRANSFORMER OIL COMPARTMENT
- 27c VENT SCREW FOR SUCTION PIPE

- 31 OIL COMPARTMENT
- 32 OIL COMPARTMENT BASE
- 33 SCREENING RING (WITH $U_m = 170\text{KV TO } 300\text{KV ONLY}$)
- 34 OIL COMPARTMENT CONTACT
- 36 ON-LOAD TAP-CHANGER CURRENT TAKE-OFF TERMINAL
- 37 CONNECTION LEAD
- 38 SUCTION PIPE

- 41 SELECTOR SUSPENSION
- 42 SELECTOR GEAR
- 43 TAP SELECTOR
- 44 CHANGE-OVER SELECTOR
- 45 SELECTOR CONNECTION CONTACTS (REFER TO 10009917)
- 46 SELECTOR TAKE-OFF LEAD

- 51 DIVERTER SWITCH INSERT
- 52 SUPPORTING CYLINDER
- 53 BASE PLATE
- 54 FIXING SCREW
- 55 EYEBOLT THROUGH-HOLES $\phi 25$
- 56 TRANSITION RESISTORS

| | |
|---------------------|----------------------------|
| ① | MAXIMUM WITHDRAWAL HEIGHT: |
| | 72,5 kV ---- 863 MM |
| | 123 kV ---- 993 MM |
| | 170 kV ---- 1123 MM |
| | 245 kV ---- 1223 MM |
| 300 kV ---- 1375 MM | |

Ⓜ DRIVE SIDE OF SELECTOR

| | | |
|------------------|--------------|--------------------|
| DATE | NAME | DOCUMENT NO. |
| 18.10.2016 | CTETPRAKTIK2 | SED 4320533 001 01 |
| CHKD. 19.10.2016 | HILTNER | CHANGE NO. |
| 20.10.2016 | PRODASTSCHUK | 1077666 |
| SCALE | | 1:5 |

DIMENSION
 IN mm
 EXCEPT AS
 NOTED

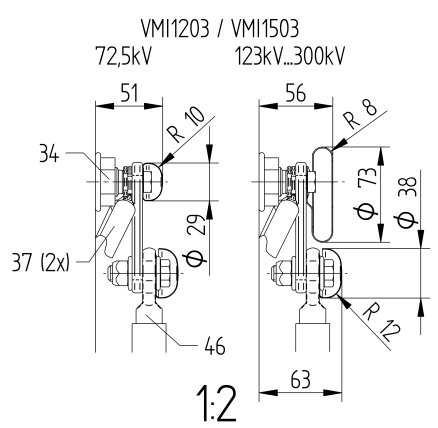
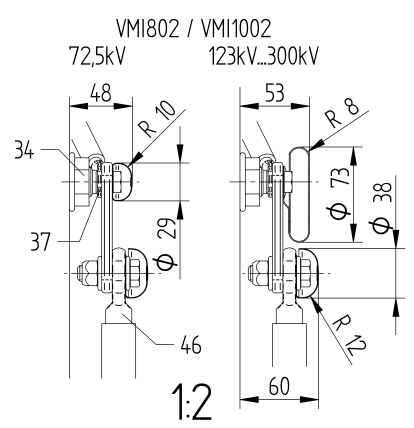
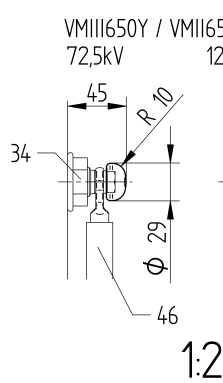
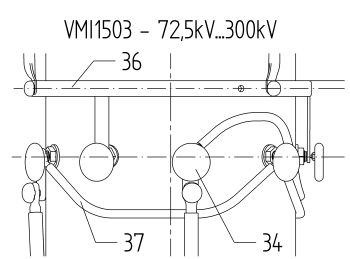
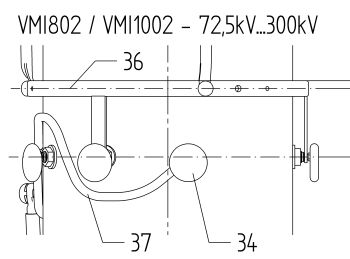
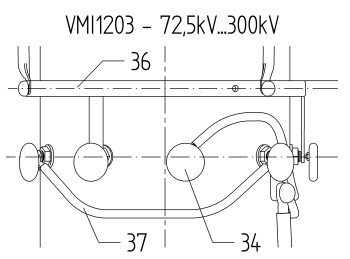
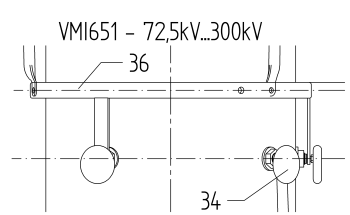
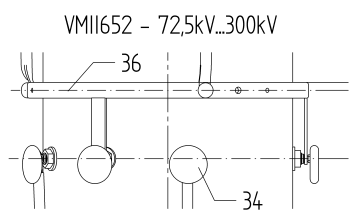
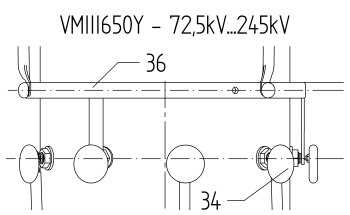
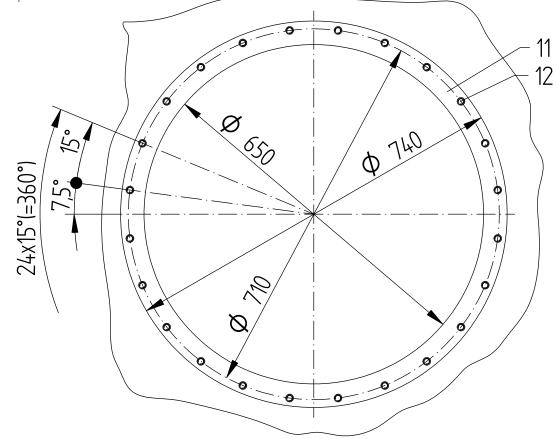
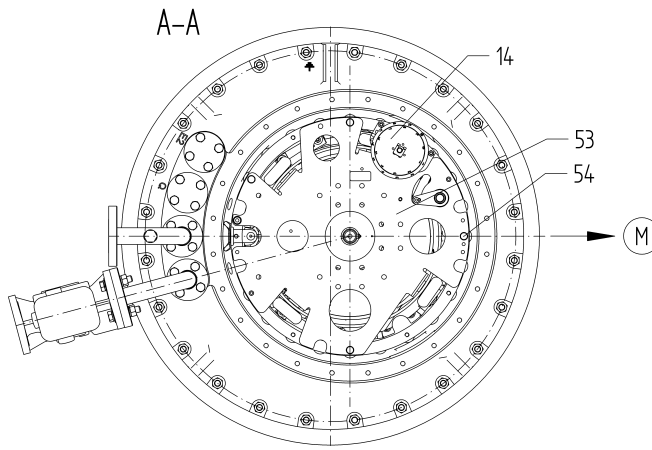
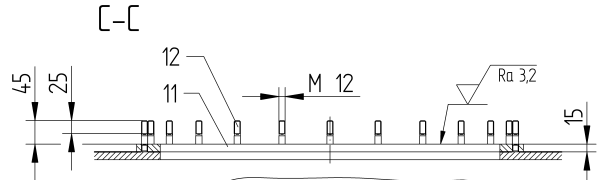
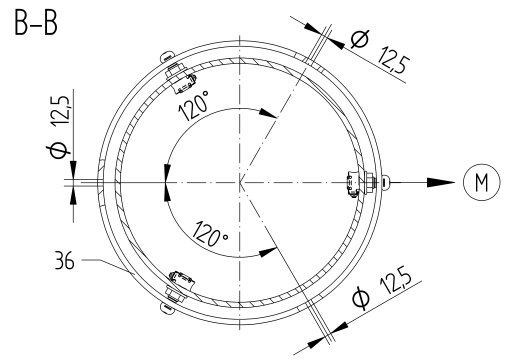
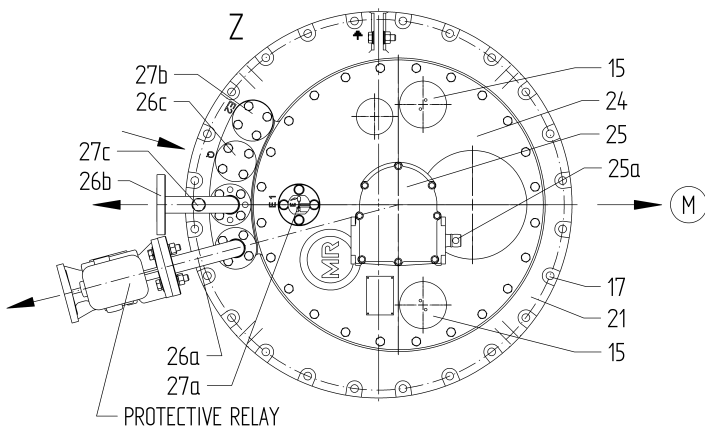


SELECTOR SIZE VACUTAP® VM
 SELECTOR SIZE RC/RD/RDE
 INSTALLATION DRAWING

SERIAL NUMBER

| | |
|-----------------|-------|
| MATERIAL NUMBER | SHEET |
| 100099500E | 1/2 |

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|------------|--------------|--------------------|
| DATE | NAME | DOCUMENT NO. |
| 18.10.2016 | CTETPRAKTIK2 | SED 4320533 001 01 |
| CHKD. | HILTNER | CHANGE NO. |
| 19.10.2016 | | 1077666 |
| STAND. | PRODASTSCHUK | SCALE |
| 20.10.2016 | | 1:5 |

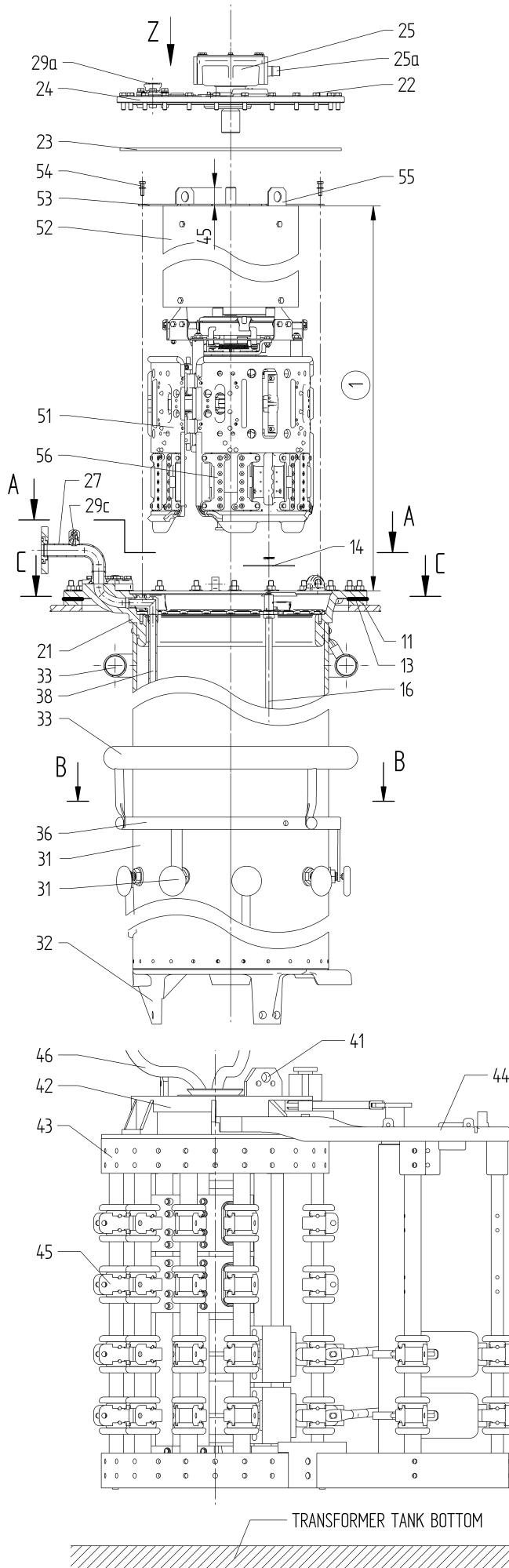
DIMENSION
IN mm
EXCEPT AS
NOTED



SELECTOR SIZE VACUTAP® VM
 SELECTOR SIZE RC/RD/RDE
 INSTALLATION DRAWING

| | |
|-----------------|-------|
| SERIAL NUMBER | |
| MATERIAL NUMBER | SHEET |
| 100099500E | 2/2 |

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- 11 MOUNTING FLANGE ON TRANSFORMER COVER
- 12 FIXING SCREW M12
- 13 ON-LOAD TAP-CHANGER HEAD GASKET
- 14 TAP POSITION INDICATOR
- 15 INSPECTION WINDOW
- 16 DRIVE SHAFT FOR TAP POSITION INDICATOR
- 17 THROUGH-HOLES $\phi 15$ MM
- 21 ON-LOAD TAP-CHANGER HEAD
- 22 SCREW FOR ON-LOAD TAP-CHANGER HEAD COVER
- 23 GASKET FOR ON-LOAD TAP-CHANGER HEAD COVER
- 24 ON-LOAD TAP-CHANGER HEAD COVER
- 25 CENTRIC GEAR UNIT WITH DRIVE SHAFT 25a
- 26a PIPE CONNECTION R FOR PROTECTIVE RELAY
- 26b PIPE CONNECTION S FOR SUCTION PIPE
- 26c PIPE CONNECTION Q FOR OIL RETURN (WITH OIL FILTER ONLY)
- 27a AIR-VENT VALVE OF ON-LOAD TAP-CHANGER HEAD COVER
- 27b BLEEDING FACILITY FOR TRANSFORMER OIL COMPARTMENT
- 27c VENT SCREW FOR SUCTION PIPE
- 31 OIL COMPARTMENT
- 32 OIL COMPARTMENT BASE
- 33 SCREENING RING (WITH $U_m = 170kV$ TO $300kV$ ONLY)
- 34 OIL COMPARTMENT CONTACT
- 36 ON-LOAD TAP-CHANGER CURRENT TAKE-OFF TERMINAL
- 37 CONNECTION LEAD
- 38 SUCTION PIPE
- 41 SELECTOR SUSPENSION
- 42 SELECTOR GEAR
- 43 TAP SELECTOR
- 44 CHANGE-OVER SELECTOR
- 45 SELECTOR CONNECTION CONTACTS (REFER TO 10009917)
- 46 SELECTOR TAKE-OFF LEAD
- 51 DIVERTER SWITCH INSERT
- 52 SUPPORTING CYLINDER
- 53 BASE PLATE
- 54 FIXING SCREW
- 55 EYEBOLT THROUGH-HOLES $\phi 25$
- 56 TRANSITION RESISTORS

| | |
|---------------------|----------------------------|
| ① | MAXIMUM WITHDRAWAL HEIGHT: |
| | 72,5 kV ---- 863 MM |
| | 123 kV ---- 993 MM |
| | 170 kV ---- 1123 MM |
| | 245 kV ---- 1223 MM |
| 300 kV ---- 1375 MM | |

Ⓜ DRIVE SIDE OF SELECTOR

| | | |
|------------|------------|--------------------|
| DATE | NAME | DOCUMENT NO. |
| 17.03.2015 | DOBLER | SED 4323/40 001 00 |
| 17.03.2015 | SCHUSTERT | SCALE |
| 18.03.2015 | KLEYN | 15 |
| CHKD. | CHANGE NO. | 1063412 |
| STAND. | | |

DIMENSION
 IN mm
 EXCEPT AS
 NOTED

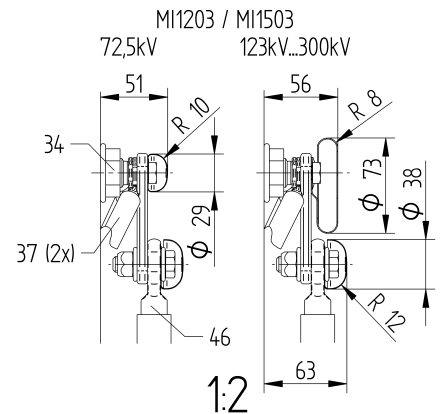
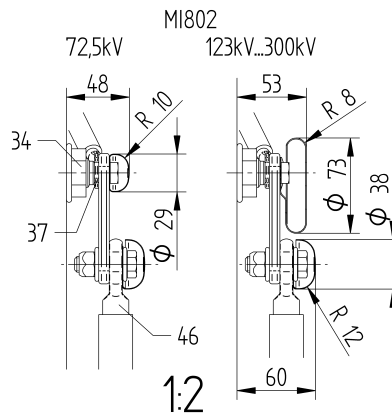
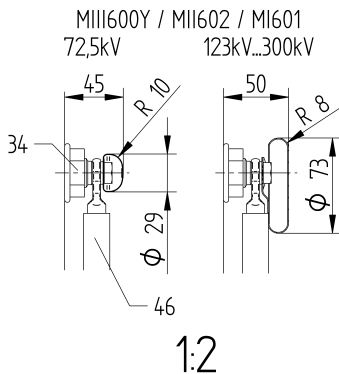
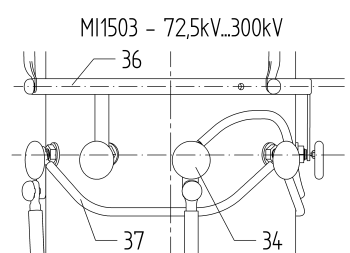
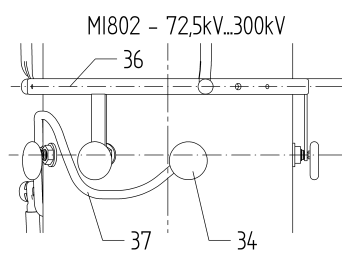
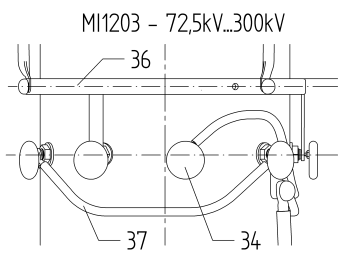
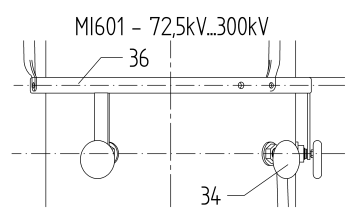
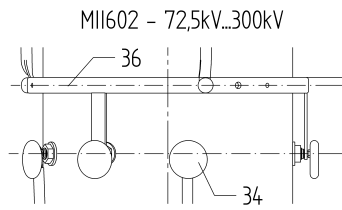
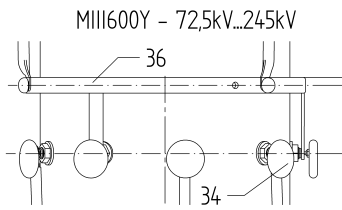
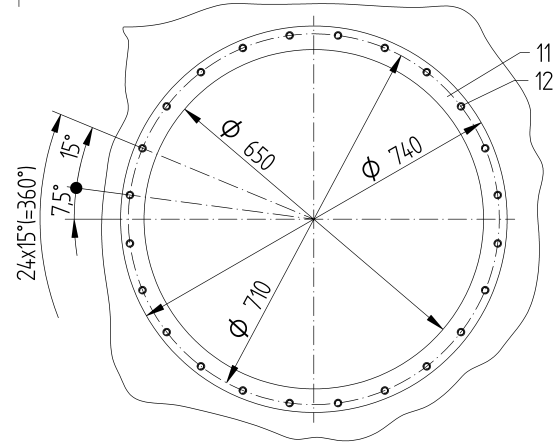
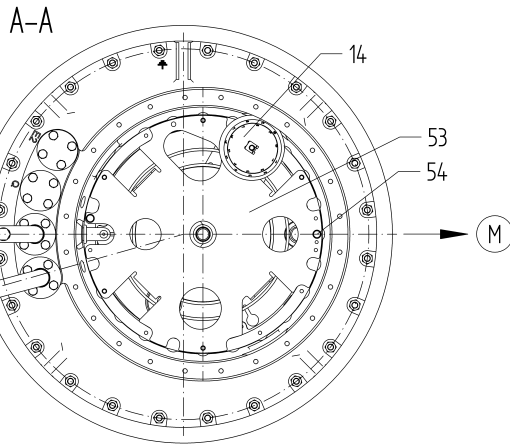
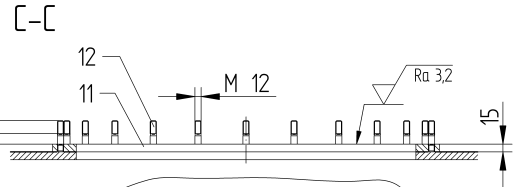
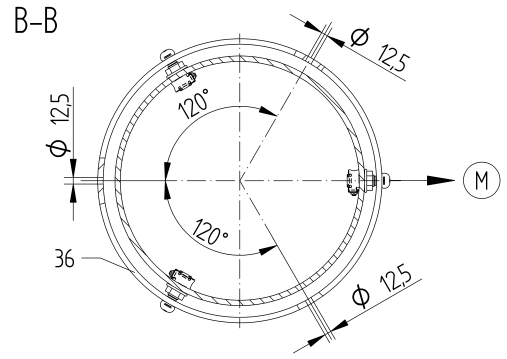
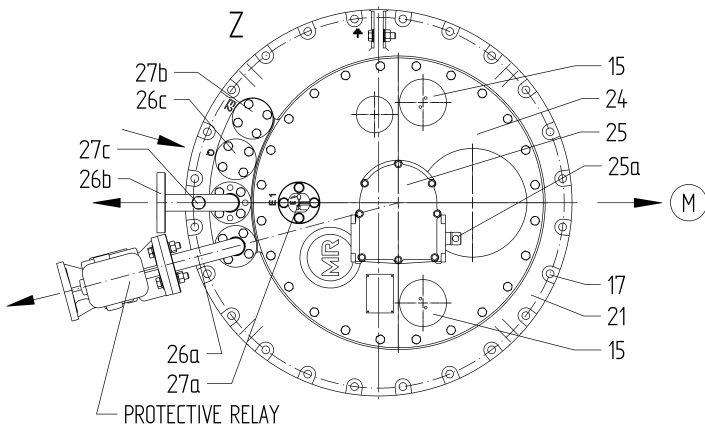


ON-LOAD TAP-CHANGER OILTAP® M
 SELECTOR SIZE RC/RD/RDE
 INSTALLATION DRAWING

SERIAL NUMBER

| | |
|-----------------|-------|
| MATERIAL NUMBER | SHEET |
| 100099510E | 1/2 |

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| | | |
|------------|-----------|--------------------|
| DATE | NAME | DOCUMENT NO. |
| 17.03.2015 | DOBLER | SED 4323140 001 00 |
| 17.03.2015 | SCHUSTERT | CHANGE NO. |
| 18.03.2015 | KLEYN | 1063412 |
| STAND. | | SCALE |
| | | 1:5 |

DIMENSION
IN mm
EXCEPT AS
NOTED



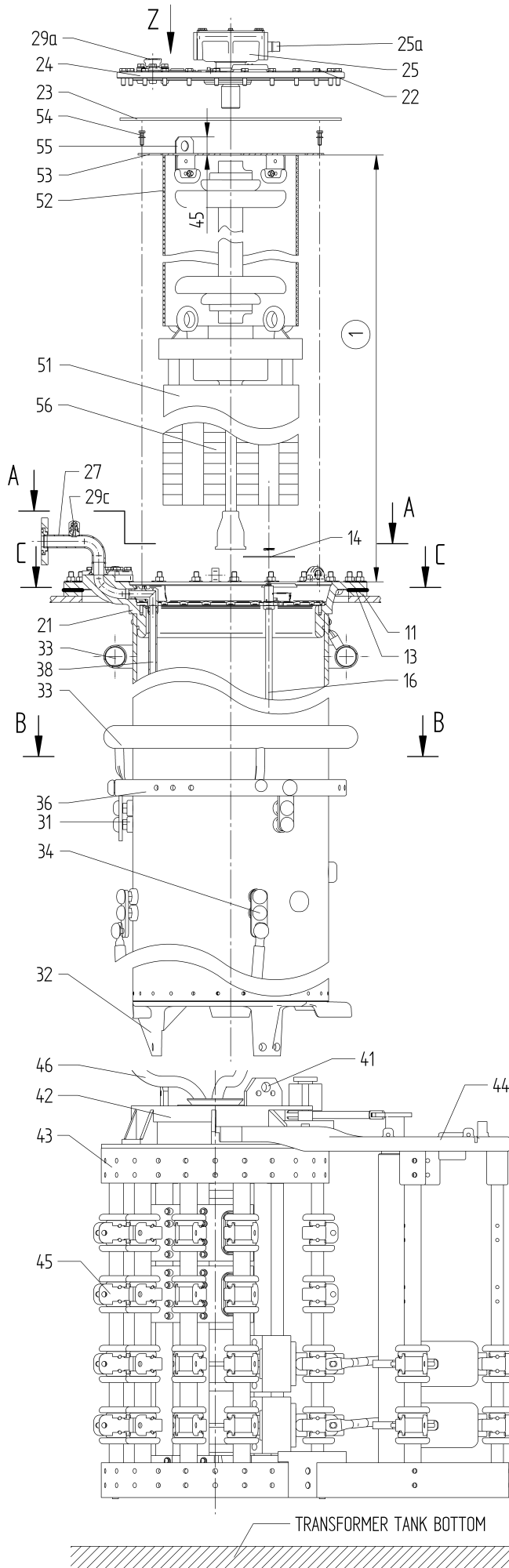
ON-LOAD TAP-CHANGER OILTAP® M
 SELECTOR SIZE RC/RD/RDE
 INSTALLATION DRAWING

SERIAL NUMBER

MATERIAL NUMBER
100099510E

SHEET
2/2

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- 11 MOUNTING FLANGE ON TRANSFORMER COVER
- 12 FIXING SCREW M12
- 13 ON-LOAD TAP-CHANGER HEAD GASKET
- 14 TAP POSITION INDICATOR
- 15 INSPECTION WINDOW
- 16 DRIVE SHAFT FOR TAP POSITION INDICATOR
- 17 THROUGH-HOLES $\phi 15$ MM

- 21 ON-LOAD TAP-CHANGER HEAD
- 22 SCREW FOR ON-LOAD TAP-CHANGER HEAD COVER
- 23 GASKET FOR ON-LOAD TAP-CHANGER HEAD COVER
- 24 ON-LOAD TAP-CHANGER HEAD COVER
- 25 CENTRIC GEAR UNIT WITH DRIVE SHAFT 25a
- 26a PIPE CONNECTION R FOR PROTECTIVE RELAY
- 26b PIPE CONNECTION S FOR SUCTION PIPE
- 26c PIPE CONNECTION Q FOR OIL RETURN (WITH OIL FILTER ONLY)
- 27a AIR-VENT VALVE OF ON-LOAD TAP-CHANGER HEAD COVER
- 27b BLEEDING FACILITY FOR TRANSFORMER OIL COMPARTMENT
- 27c VENT SCREW FOR SUCTION PIPE

- 31 OIL COMPARTMENT
- 32 OIL COMPARTMENT BASE
- 33 SCREENING RING (WITH $U_m = 170kV$ TO $362kV$ ONLY)
- 34 OIL COMPARTMENT CONTACT
- 36 ON-LOAD TAP-CHANGER CURRENT TAKE-OFF TERMINAL
- 37 CONNECTION LEAD
- 38 SUCTION PIPE

- 41 SELECTOR SUSPENSION
- 42 SELECTOR GEAR
- 43 TAP SELECTOR
- 44 CHANGE-OVER SELECTOR
- 45 SELECTOR CONNECTION CONTACTS (REFER TO 10009917)
- 46 SELECTOR TAKE-OFF LEAD

- 51 DIVERTER SWITCH INSERT
- 52 SUPPORTING CYLINDER
- 53 BASE PLATE
- 54 FIXING SCREW
- 55 EYEBOLT THROUGH-HOLES $\phi 25$
- 56 TRANSITION RESISTORS

| | |
|---------------------|----------------------------|
| ① | MAXIMUM WITHDRAWAL HEIGHT: |
| | 72,5 kV ---- 1350 MM |
| | 123 kV ---- 1480 MM |
| | 170 kV ---- 1580 MM |
| | 245 kV ---- 1680 MM |
| | 300 kV ---- 1826 MM |
| 362 kV ---- 1956 MM | |

② DRIVE SIDE OF SELECTOR

| | | |
|------------|------------|--------------------|
| DATE | NAME | DOCUMENT NO. |
| 17.03.2015 | DOBLER | SED 4324819 001 00 |
| 17.03.2015 | SCHUSTERT | SCALE |
| 18.03.2015 | KLEYN | 1:5 |
| CHKD. | CHANGE NO. | 1063412 |
| STAND. | | |

DIMENSION
 IN mm
 EXCEPT AS
 NOTED

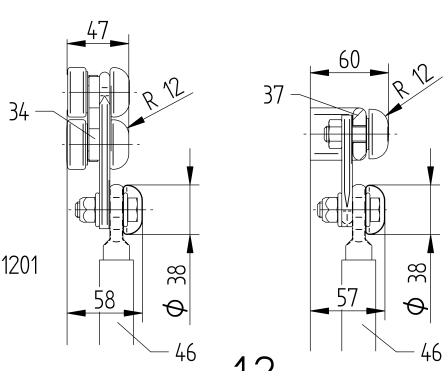
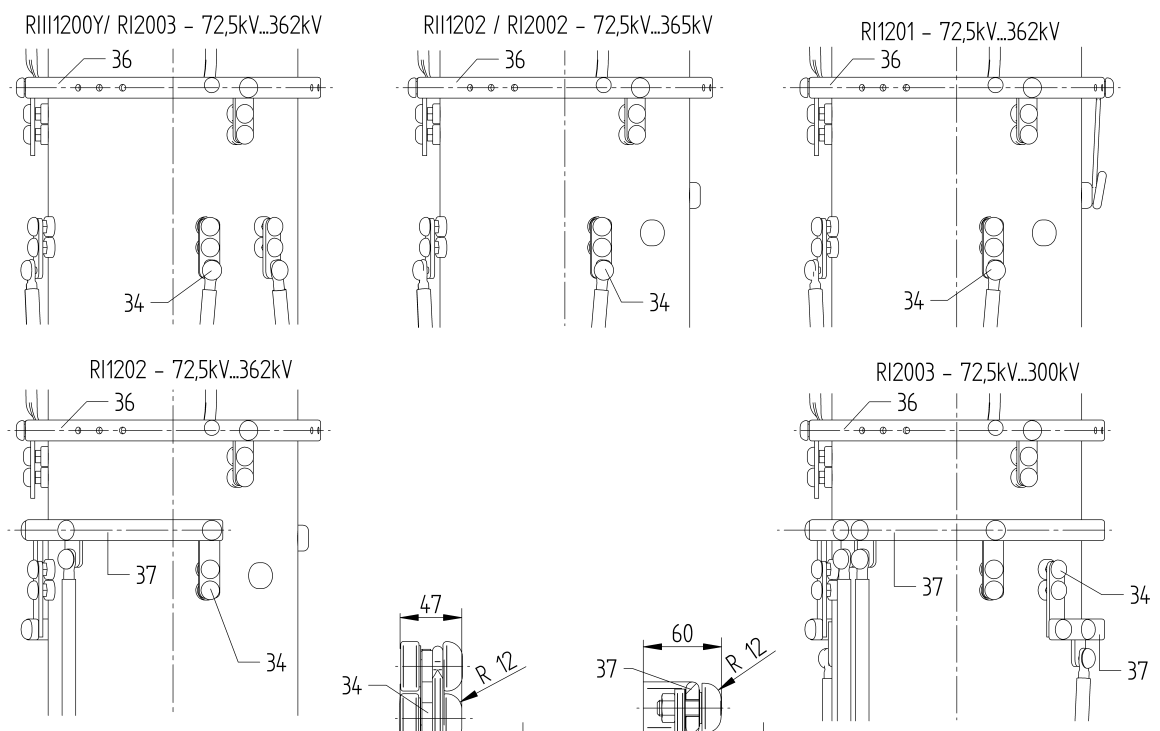
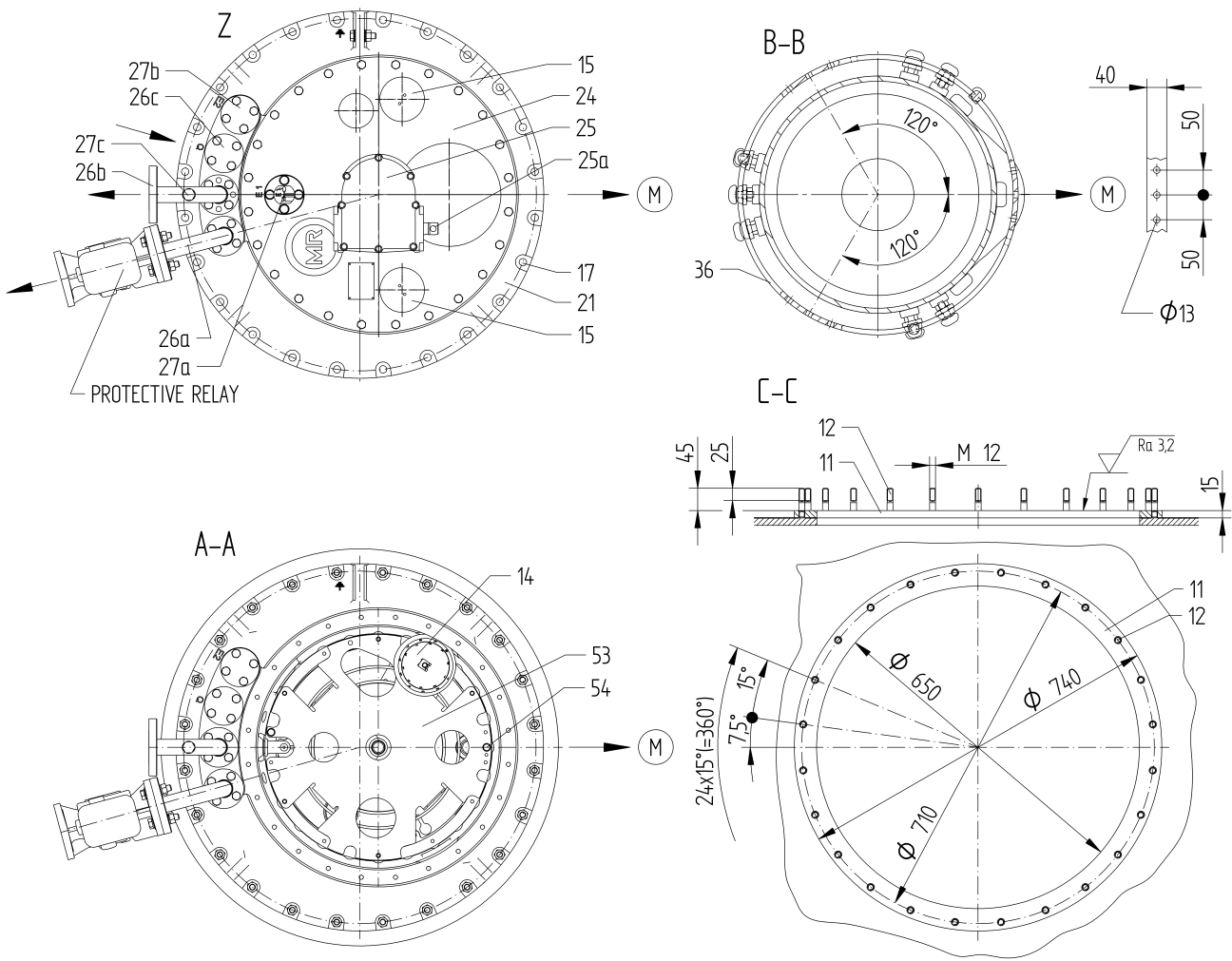


ON-LOAD TAP-CHANGER OILTAP® R
 SELECTOR SIZE RC/RD/RDE
 INSTALLATION DRAWING

SERIAL NUMBER

| | |
|-----------------|-------|
| MATERIAL NUMBER | SHEET |
| 100099520E | 1/2 |

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1:2

ON-LOAD TAP-CHANGER OILTAP® R
 SELECTOR SIZE RC/RD/RDE
 INSTALLATION DRAWING

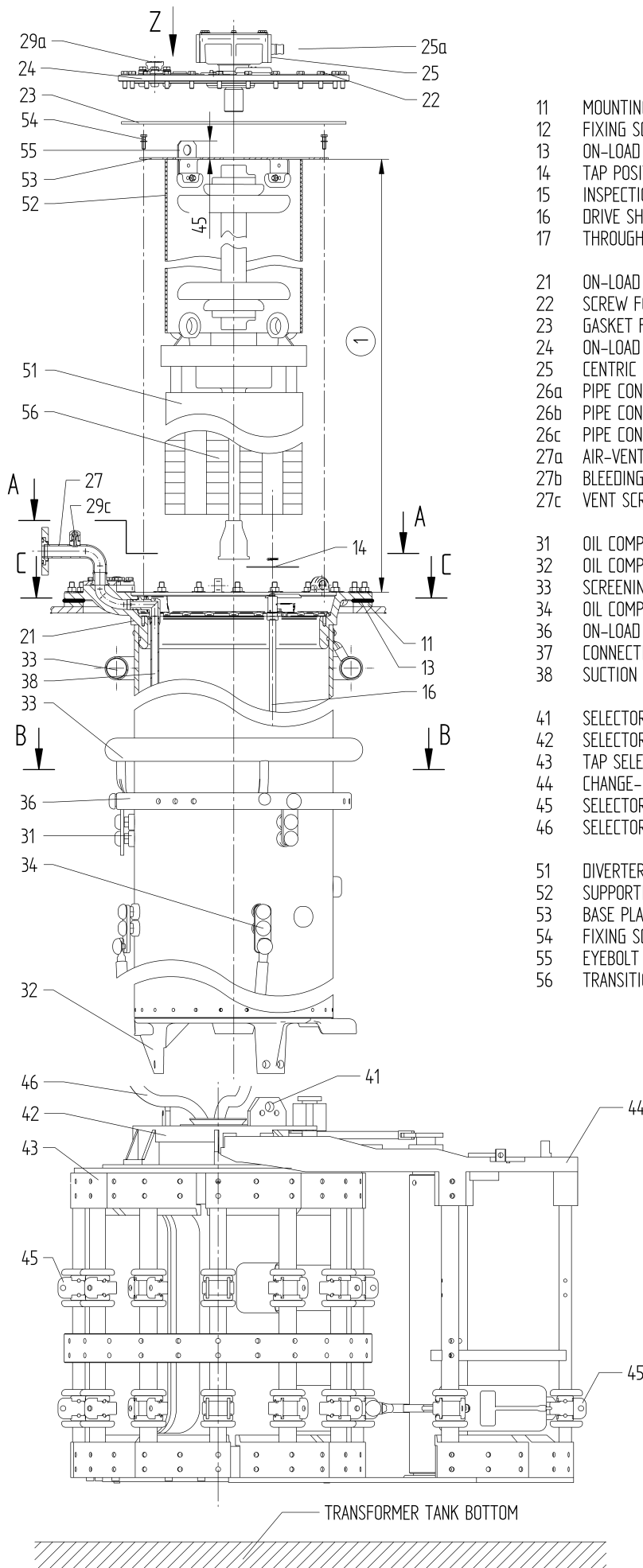
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| DATE | NAME | DOCUMENT NO. |
| 17.03.2015 | DOBLER | SED 4324819 001 00 |
| 17.03.2015 | SCHUSTERT | CHANGE NO. |
| 18.03.2015 | KLEYN | 1063412 |
| DFTR. | SCALE | 15 |

DIMENSION
 IN mm
 EXCEPT AS
 NOTED



| | |
|-----------------|-------|
| SERIAL NUMBER | |
| MATERIAL NUMBER | SHEET |
| 100099520E | 2/2 |

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- 11 MOUNTING FLANGE ON TRANSFORMER COVER
- 12 FIXING SCREW M12
- 13 ON-LOAD TAP-CHANGER HEAD GASKET
- 14 TAP POSITION INDICATOR
- 15 INSPECTION WINDOW
- 16 DRIVE SHAFT FOR TAP POSITION INDICATOR
- 17 THROUGH-HOLES $\phi 15$ MM

- 21 ON-LOAD TAP-CHANGER HEAD
- 22 SCREW FOR ON-LOAD TAP-CHANGER HEAD COVER
- 23 GASKET FOR ON-LOAD TAP-CHANGER HEAD COVER
- 24 ON-LOAD TAP-CHANGER HEAD COVER
- 25 CENTRIC GEAR UNIT WITH DRIVE SHAFT 25a
- 26a PIPE CONNECTION R FOR PROTECTIVE RELAY
- 26b PIPE CONNECTION S FOR SUCTION PIPE
- 26c PIPE CONNECTION Q FOR OIL RETURN (WITH OIL FILTER ONLY)
- 27a AIR-VENT VALVE OF ON-LOAD TAP-CHANGER HEAD COVER
- 27b BLEEDING FACILITY FOR TRANSFORMER OIL COMPARTMENT
- 27c VENT SCREW FOR SUCTION PIPE

- 31 OIL COMPARTMENT
- 32 OIL COMPARTMENT BASE
- 33 SCREENING RING (WITH $U_m = 170kV$ TO $362kV$ ONLY)
- 34 OIL COMPARTMENT CONTACT
- 36 ON-LOAD TAP-CHANGER CURRENT TAKE-OFF TERMINAL
- 37 CONNECTION LEAD
- 38 SUCTION PIPE

- 41 SELECTOR SUSPENSION
- 42 SELECTOR GEAR
- 43 TAP SELECTOR
- 44 CHANGE-OVER SELECTOR
- 45 SELECTOR CONNECTION CONTACTS (REFER TO 10009917)
- 46 SELECTOR TAKE-OFF LEAD

- 51 DIVERTER SWITCH INSERT
- 52 SUPPORTING CYLINDER
- 53 BASE PLATE
- 54 FIXING SCREW
- 55 EYEBOLT THROUGH-HOLES $\phi 25$
- 56 TRANSITION RESISTORS

| | |
|---------------------|----------------------------|
| ① | MAXIMUM WITHDRAWAL HEIGHT: |
| | 72,5 kV ---- 1350 MM |
| | 123 kV ---- 1480 MM |
| | 170 kV ---- 1580 MM |
| | 245 kV ---- 1680 MM |
| | 300 kV ---- 1826 MM |
| 362 kV ---- 1956 MM | |

② DRIVE SIDE OF SELECTOR

| | | |
|------------|--------------|--------------------|
| DATE | NAME | DOCUMENT NO. |
| 26.07.2016 | DOBLER | SED 5025034-001 00 |
| 26.07.2016 | RAITH | CHANGE NO. |
| 27.07.2016 | PRODASTSCHUK | 1075795 |
| DFTR. | SCALE | 1:5 |
| CHKD. | | |
| STAND. | | |

DIMENSION
 IN mm
 EXCEPT AS
 NOTED

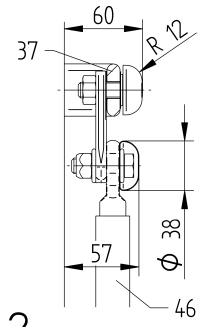
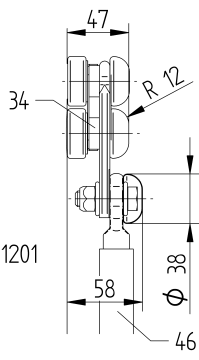
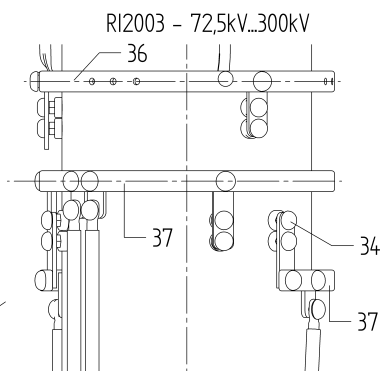
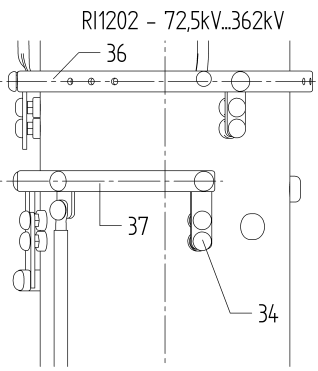
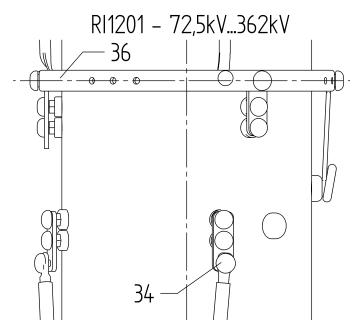
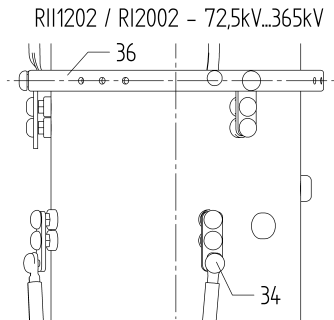
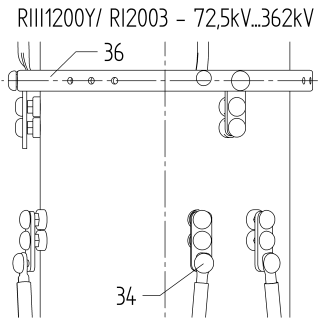
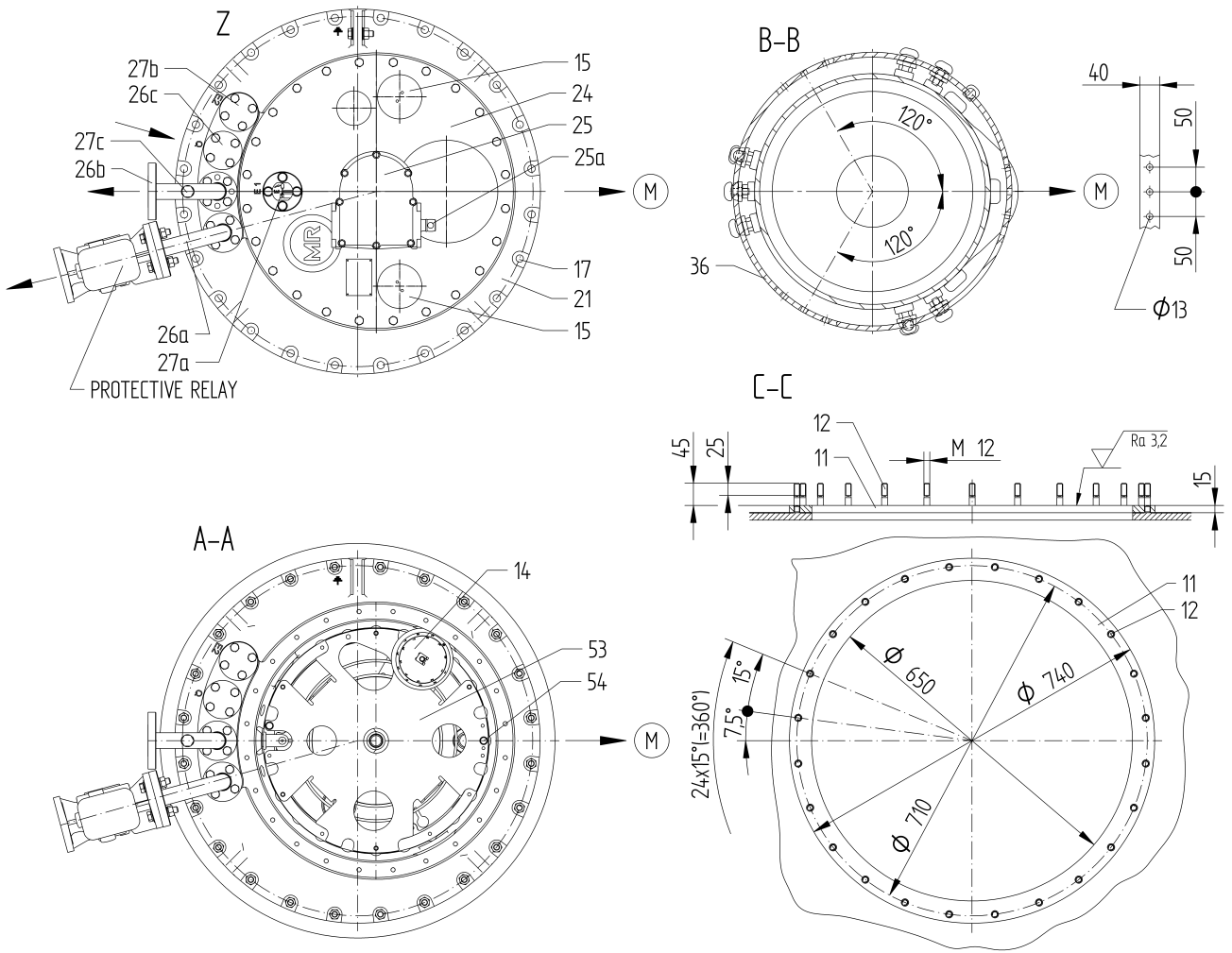


ON-LOAD TAP-CHANGER OILTAP® R
 SELECTOR SIZE RE/RF
 INSTALLATION DRAWING

SERIAL NUMBER

| | |
|-----------------|-------|
| MATERIAL NUMBER | SHEET |
| 100165550E | 1/2 |

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RII1200Y / RI2003,
RII1202 / RI2002 / RI1201

RI1202 / RI2003

1:2

| | | |
|------------|--------------|--------------------|
| DATE | NAME | DOCUMENT NO. |
| 26.07.2016 | DOBLER | SED 5025034-001 00 |
| 26.07.2016 | RAITH | CHANGE NO. |
| 27.07.2016 | PRODASTSCHUK | 1075795 |
| CHKD. | SCALE | 1:5 |

DIMENSION
IN mm
EXCEPT AS
NOTED



ON-LOAD TAP-CHANGER OILTAP® R
SELECTOR SIZE RE/RF
INSTALLATION DRAWING

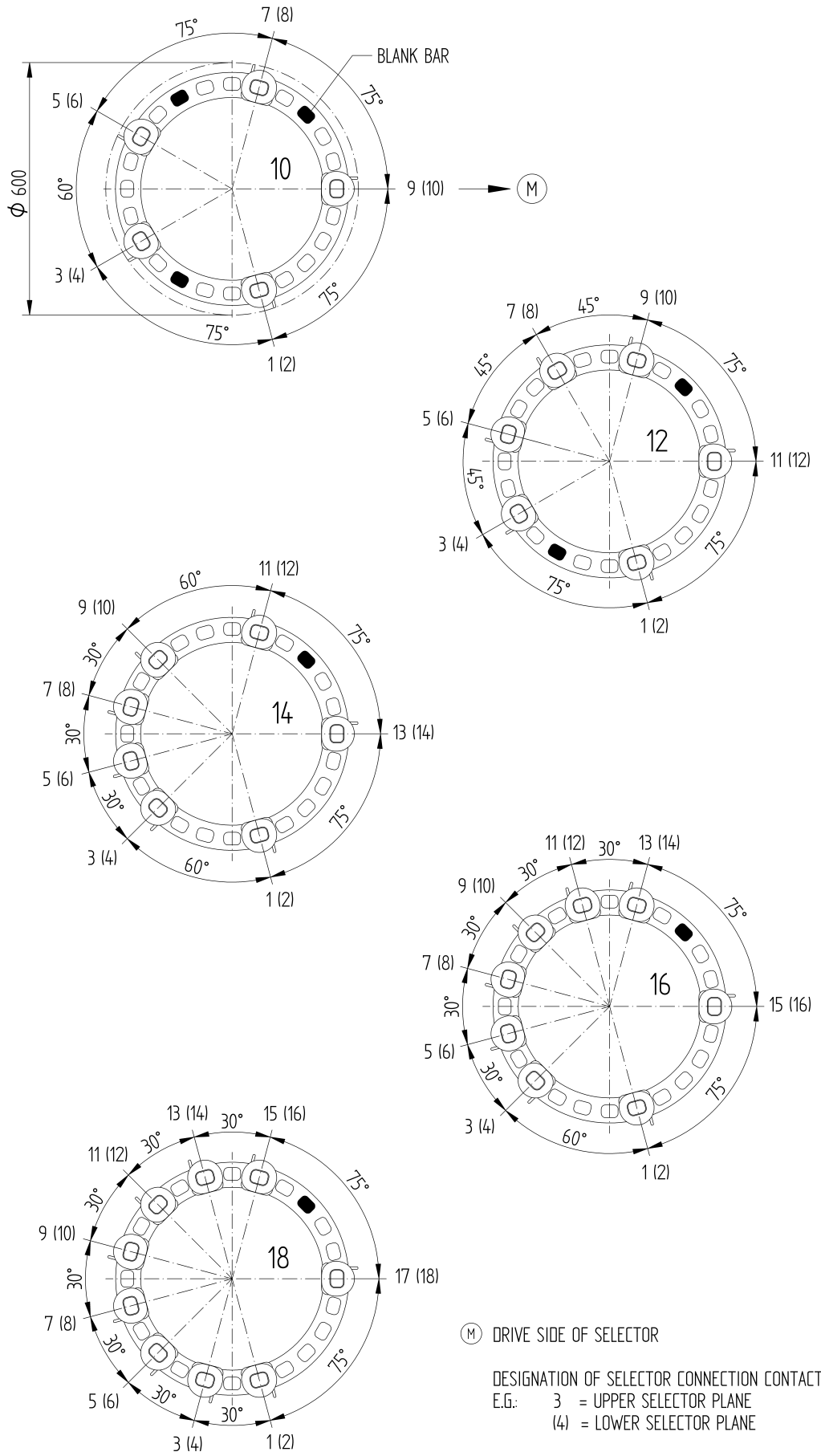
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|-----------------|-------|
| SERIAL NUMBER | |
| MATERIAL NUMBER | SHEET |
| 100165550E | 2/2 |



5.6 Modelos del selector RC, RD, RDE, RE y RF

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CONTACT ARRANGEMENT - WITHOUT CHANGE-OVER SELECTOR



| | | |
|------------|--------------|--------------------|
| DATE | NAME | DOCUMENT NO. |
| 18.10.2016 | CTETPRAKTIK2 | SED 4245760 001 01 |
| 19.10.2016 | HILTNER | CHANGE NO. |
| 20.10.2016 | PRODASTSCHUK | 1077666 |
| DFTR. | SCALE | 15 |
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| STAND. | | |

DIMENSION
 IN mm
 EXCEPT AS
 NOTED

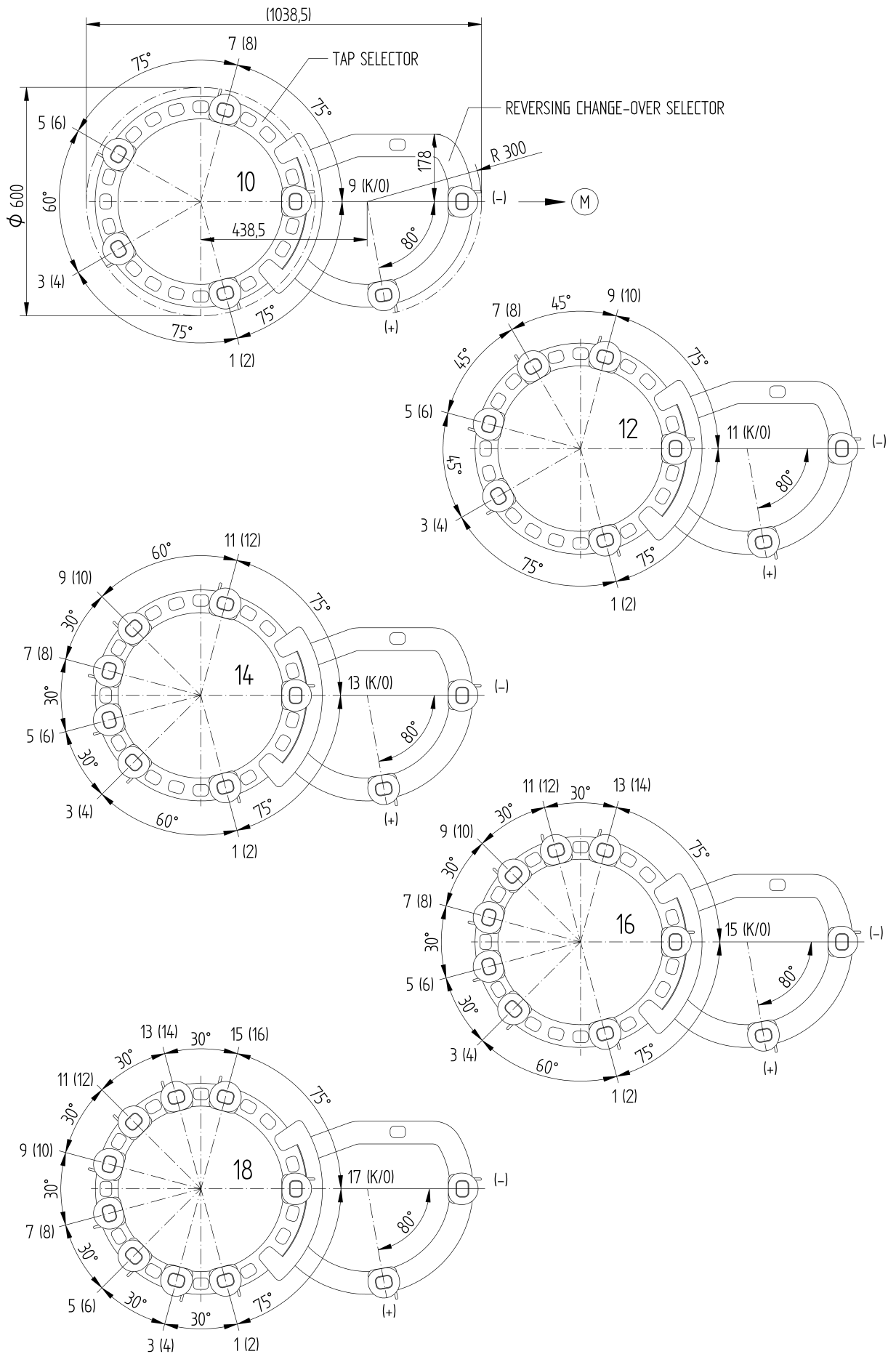


SELECTOR SIZE RC/RD/RDE
 CONTACT ARRANGEMENT
 DIMENSION DRAWING

SERIAL NUMBER

| | |
|-------------------------------|--------------|
| MATERIAL NUMBER 100090300E | SHEET 1/3 |
|-------------------------------|--------------|

CONTACT ARRANGEMENT - REVERSING CHANGE-OVER SELECTOR



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| | | |
|------------|--------------|--------------------|
| DATE | NAME | DOCUMENT NO. |
| 18.10.2016 | CTETPRAKTIK2 | SED 4245760 001 01 |
| 19.10.2016 | HILTNER | CHANGE NO. |
| 20.10.2016 | PRODASTSCHUK | 1077666 |
| DFTR. | SCALE | 15 |
| CHKD. | | |
| STAND. | | |

DIMENSION
IN mm
EXCEPT AS
NOTED



SELECTOR SIZE RC/RD/RDE
 CONTACT ARRANGEMENT
 DIMENSION DRAWING

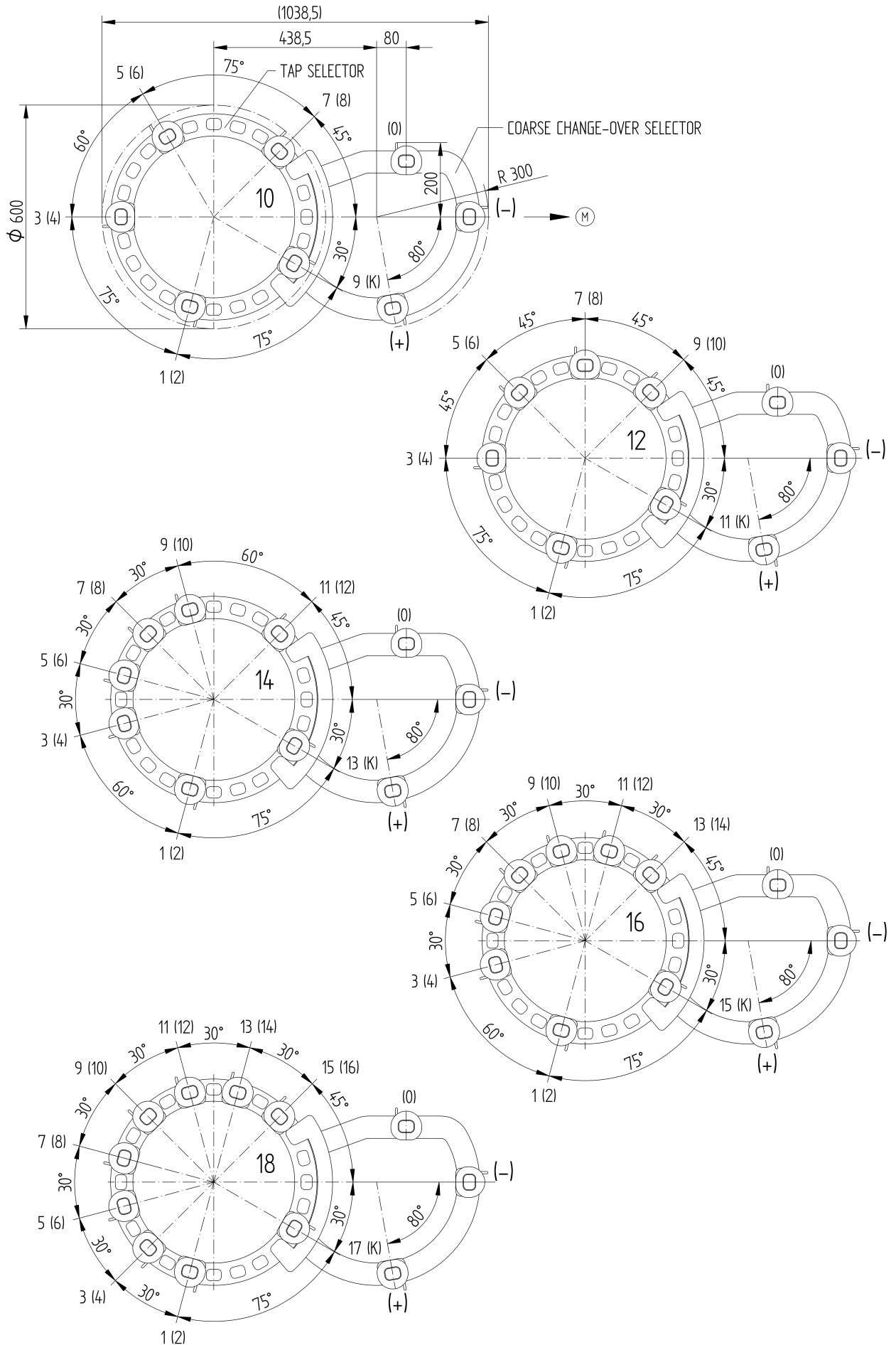
SERIAL NUMBER

MATERIAL NUMBER
100090300E

SHEET
2/3

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CONTACT ARRANGEMENT - COARSE CHANGE-OVER SELECTOR



| | | |
|------------|--------------|--------------------|
| DATE | NAME | DOCUMENT NO. |
| 18.10.2016 | CTETPRAKTIK2 | SED 4245760 001 01 |
| 19.10.2016 | HILTNER | SCALE |
| 20.10.2016 | PRODASTSCHUK | CHANGE NO. |
| | | 1077666 |
| | | 15 |

DIMENSION
IN mm
EXCEPT AS
NOTED



SELECTOR SIZE RC/RD/RDE
 CONTACT ARRANGEMENT
 DIMENSION DRAWING

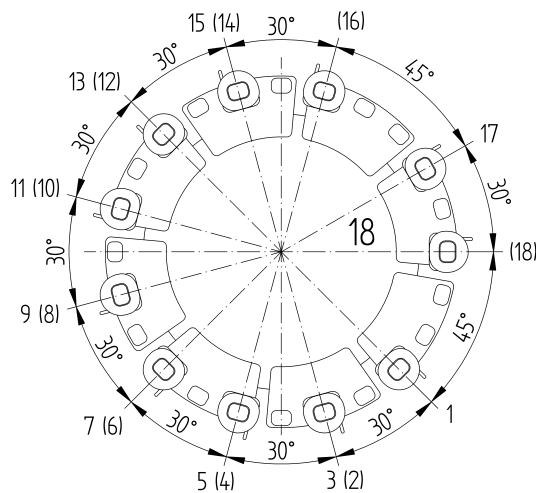
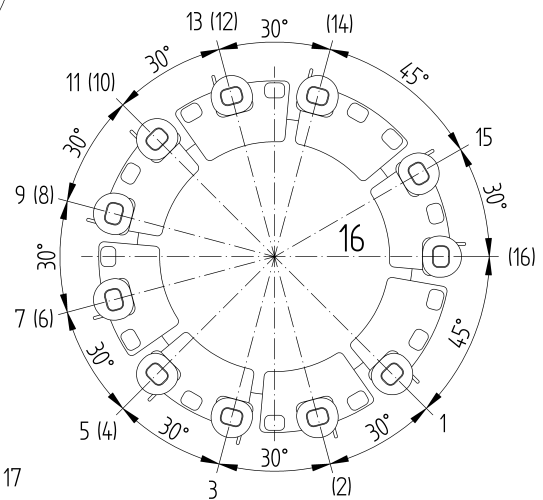
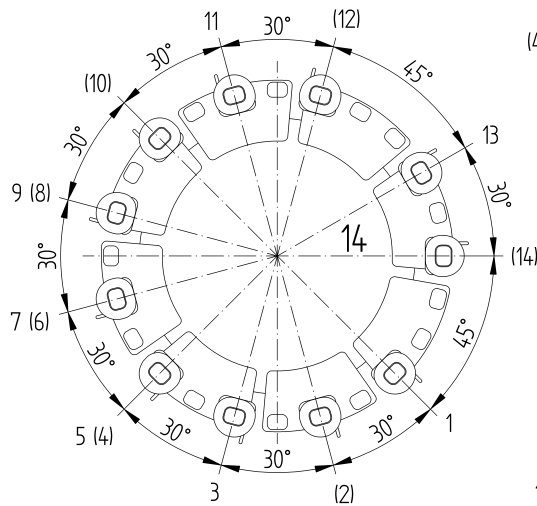
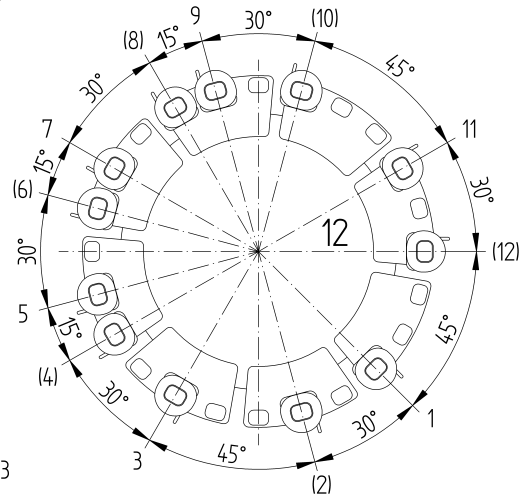
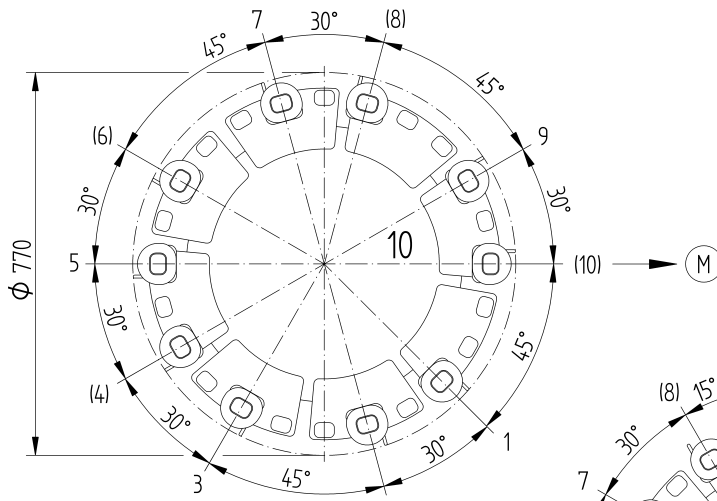
SERIAL NUMBER

MATERIAL NUMBER
100090300E

SHEET
3/3

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CONTACT ARRANGEMENT - WITHOUT CHANGE-OVER SELECTOR



(M) DRIVE SIDE OF SELECTOR

DESIGNATION OF SELECTOR CONNECTION CONTACT
 E.G.: 3 = UPPER SELECTOR PLANE
 (4) = LOWER SELECTOR PLANE

THE DETAILED CONNECTION DIAGRAM IS BINDING FOR THE DESIGNATION OF THE CONNECTION CONTACTS AND PHASES

| DATE | NAME | DOCUMENT NO. |
|------------|--------------|--------------------|
| 18.10.2016 | CTETPRAKTIK2 | SED 5026318 001 01 |
| 19.10.2016 | HILTNER | CHANGE NO. |
| 20.10.2016 | PRODASTSCHUK | 1077666 |
| | | SCALE |
| | | 1:5 |

DIMENSION
 IN mm
 EXCEPT AS
 NOTED



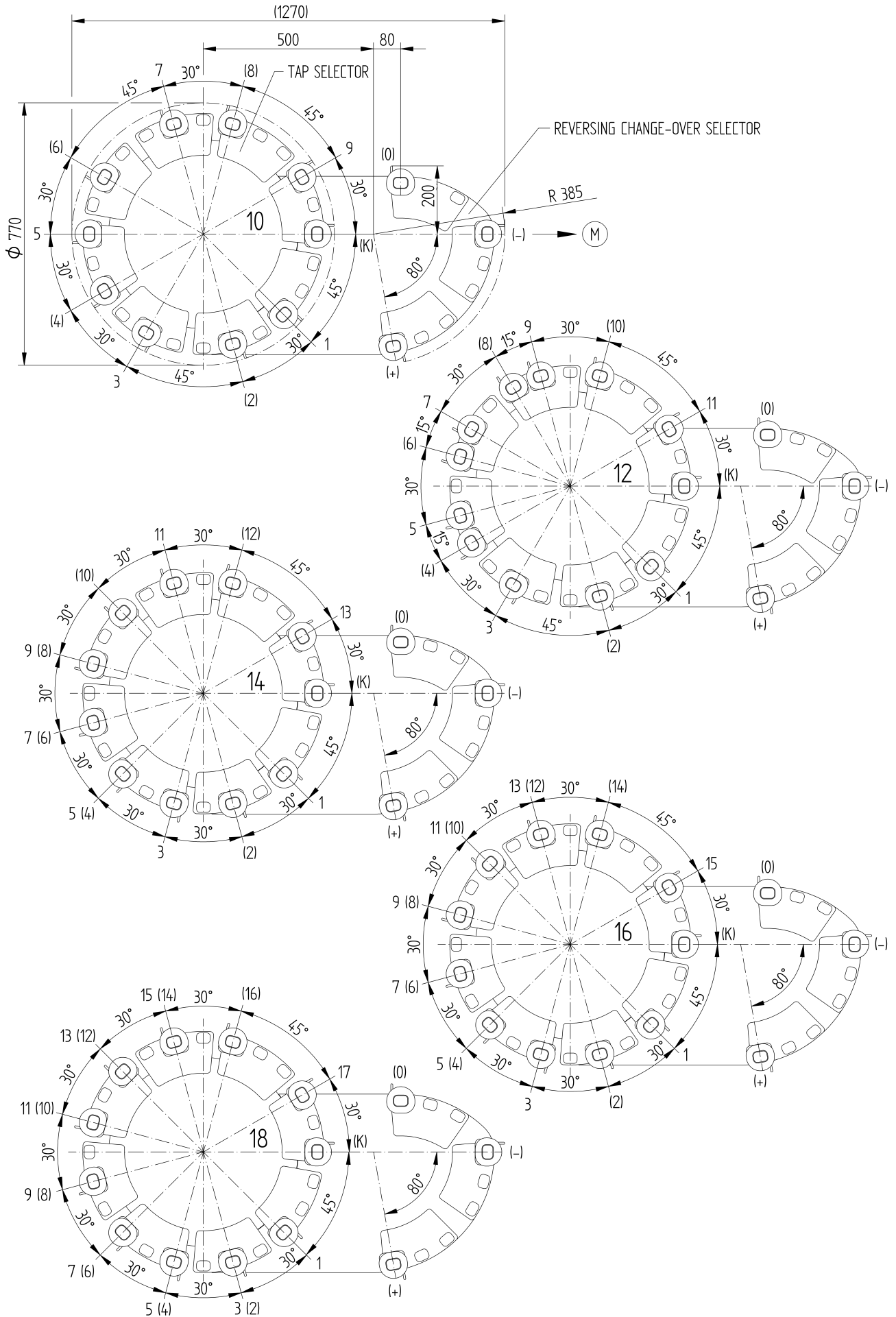
SELECTOR SIZE RE/RF
 CONTACT ARRANGEMENT
 DIMENSION DRAWING

SERIAL NUMBER

MATERIAL NUMBER
 100165700E

SHEET
 1/3

CONTACT ARRANGEMENT - REVERSING CHANGE-OVER SELECTOR



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| DATE | NAME | DOCUMENT NO. |
| 18.10.2016 | CTETPRAKTIK2 | SED 5026318 001 01 |
| 19.10.2016 | HILTNER | CHANGE NO. |
| 20.10.2016 | PRODASTSCHUK | 1077666 |
| DFTR. | SCALE | 15 |
| CHKD. | | |
| STAND. | | |

DIMENSION
IN mm
EXCEPT AS
NOTED



SELECTOR SIZE RE/RF
CONTACT ARRANGEMENT
DIMENSION DRAWING

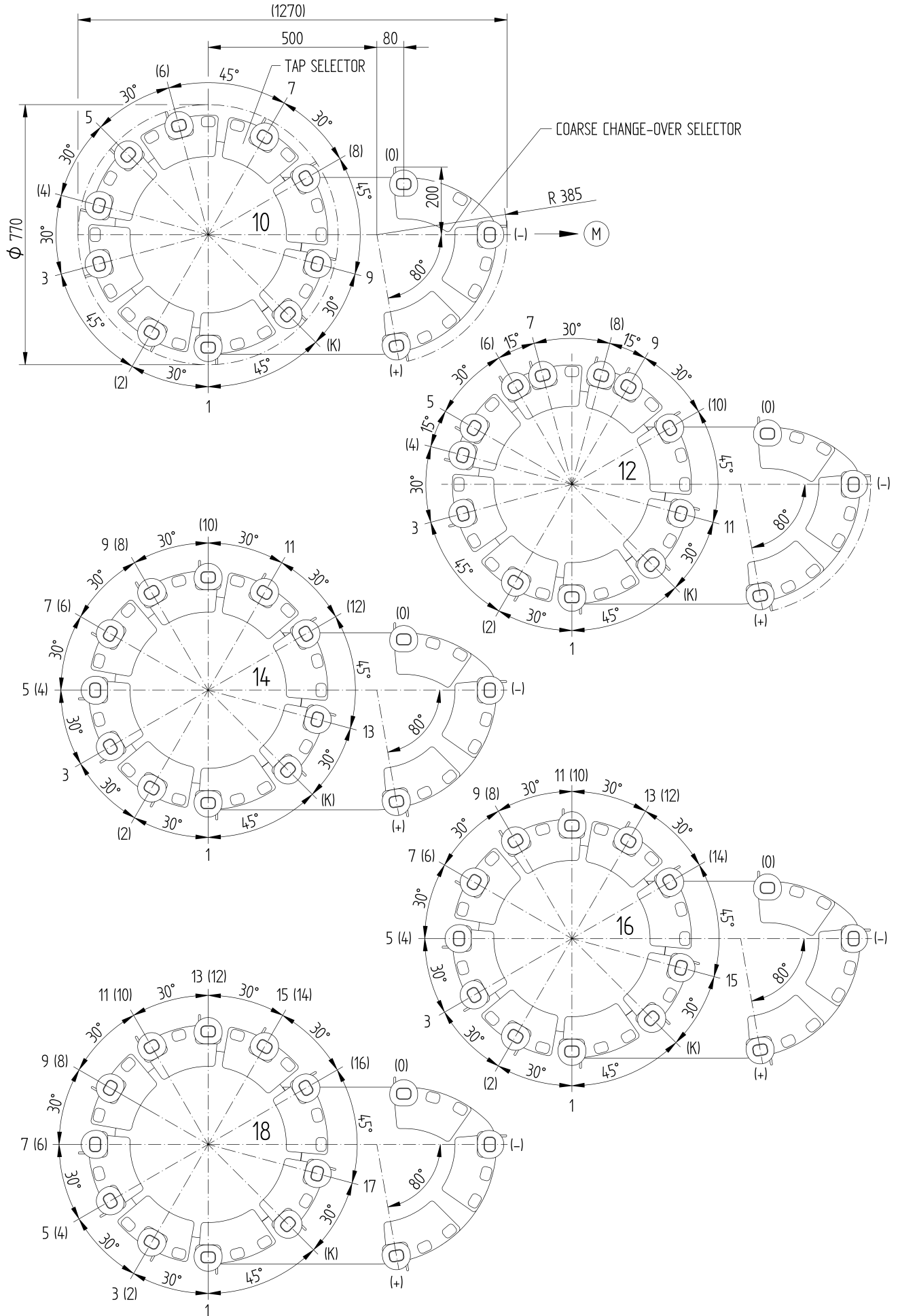
SERIAL NUMBER

MATERIAL NUMBER
100165700E

SHEET
2/3

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CONTACT ARRANGEMENT - COARSE CHANGE-OVER SELECTOR



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| DATE | NAME | DOCUMENT NO. |
| 18.10.2016 | CTETPRAKTIK2 | SED 5026318 001 01 |
| 19.10.2016 | HILTNER | CHANGE NO. |
| 20.10.2016 | PRODASTSCHUK | 1077666 |
| SCALE | | 15 |

DIMENSION
 IN mm
 EXCEPT AS
 NOTED



SELECTOR SIZE RE/RF
 CONTACT ARRANGEMENT
 DIMENSION DRAWING

SERIAL NUMBER

MATERIAL NUMBER
 100165700E

SHEET
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| DATE | NAME | DOCUMENT NO. |
| DFTR. 06.10.2016 | LIPINSKI | SED 4322131 001 01 |
| CHKD. 19.10.2016 | HILTNER | CHANGE NO. |
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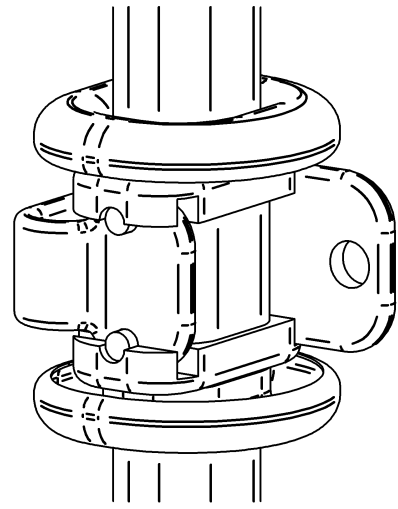
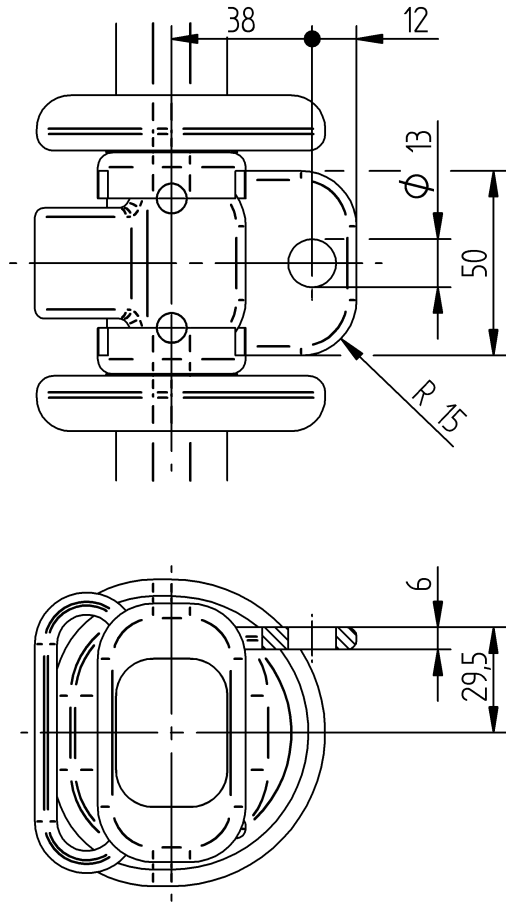


SELECTOR SIZE RC/RD/RDE/RE/RF
 SELECTOR CONNECTION CONTACT
 DIMENSION DRAWING

SERIAL NUMBER

MATERIAL NUMBER
 100099170E

SHEET
 1/1



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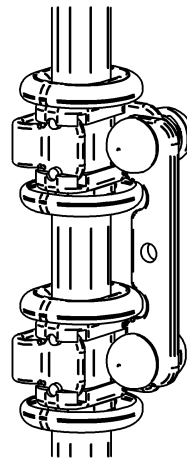
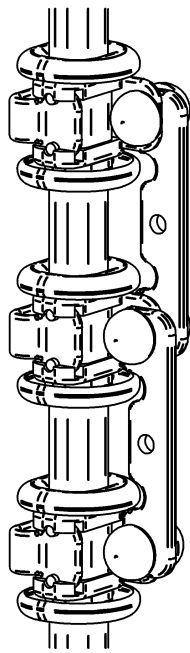
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| 19.10.2016 | HILTNER | CHANGE NO. |
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DIMENSION
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 EXCEPT AS
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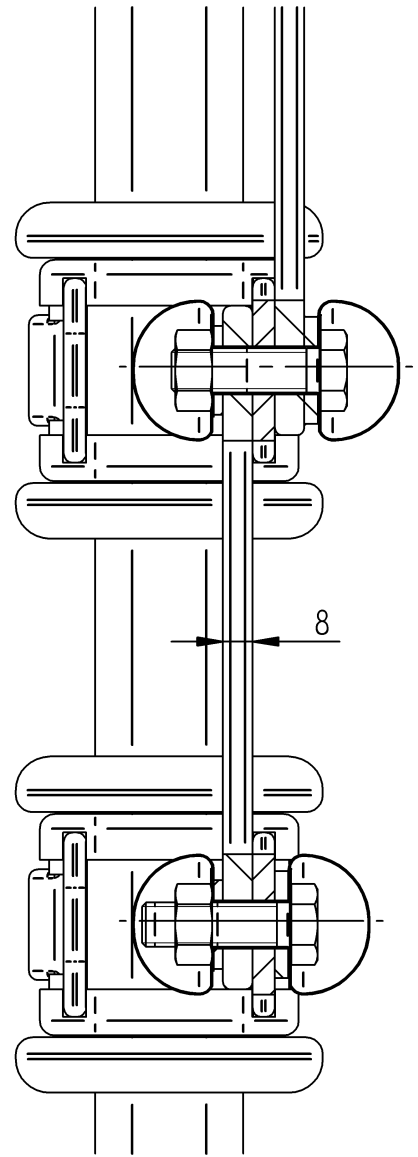
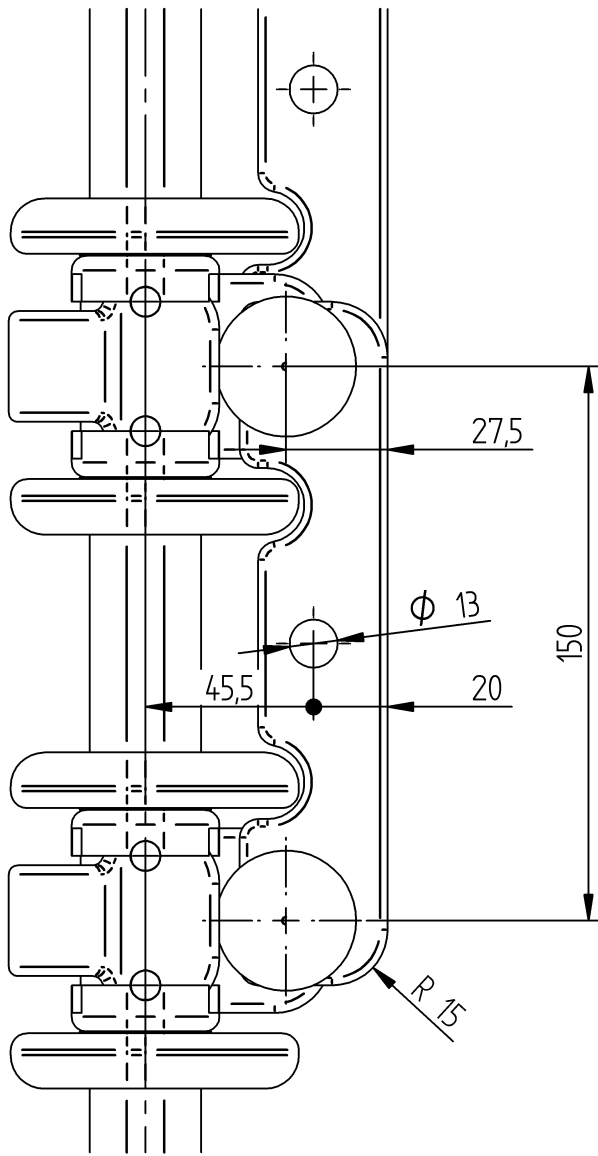


SELECTOR SIZE RC/RD/RDE/RE/RF
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 DIMENSION DRAWING

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| SERIAL NUMBER | |
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| MATERIAL NUMBER | SHEET |
| 100099160E | 1/1 |

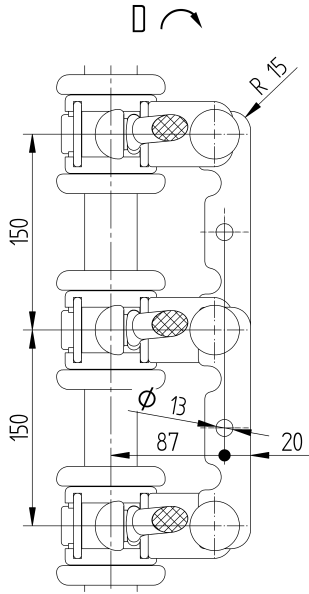
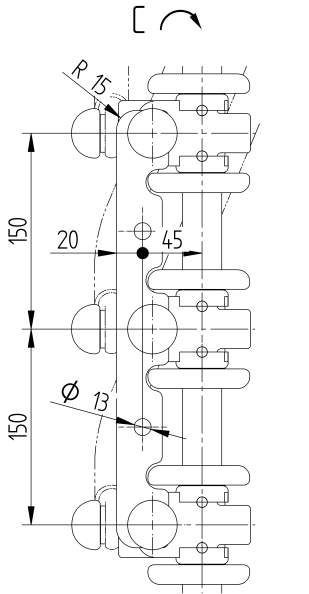
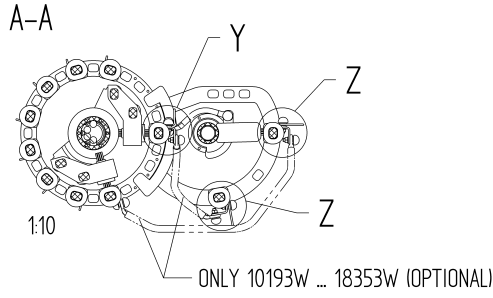
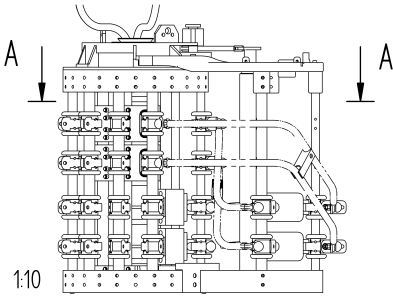


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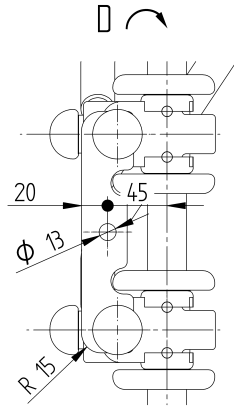
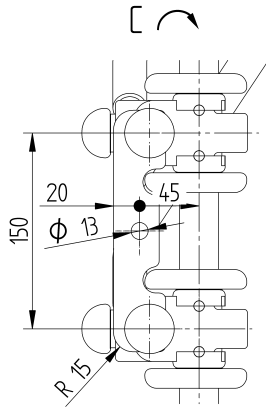


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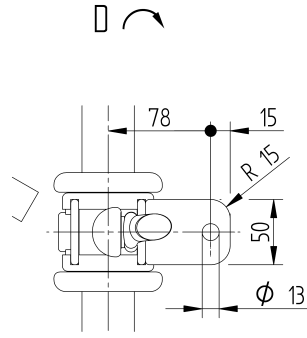
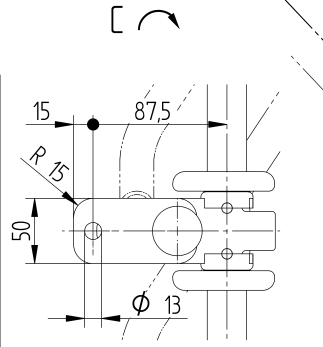
REVERSING CHANGE-OVER SELECTOR



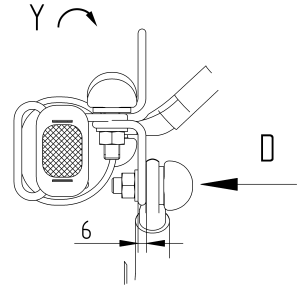
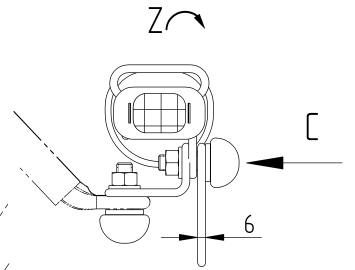
3 SELECTOR PLANES WITH PARALLEL BRIDGE



2 SELECTOR PLANES WITH PARALLEL BRIDGE



WITHOUT PARALLEL BRIDGE



| | | |
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| DATE | NAME | DOCUMENT NO. |
| 07.10.2016 | CTETPRAKTIK2 | SED 4334433 001 01 |
| CHKD. | HILTNER | CHANGE NO. |
| 19.10.2016 | | 1077262 |
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| 20.10.2016 | | |

DIMENSION IN mm EXCEPT AS NOTED

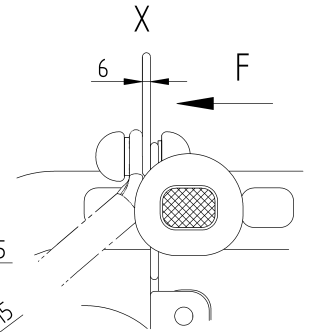
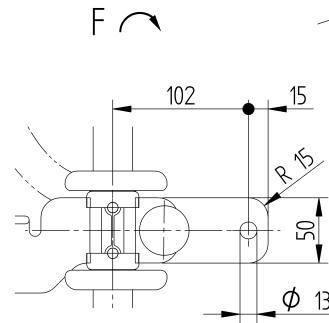
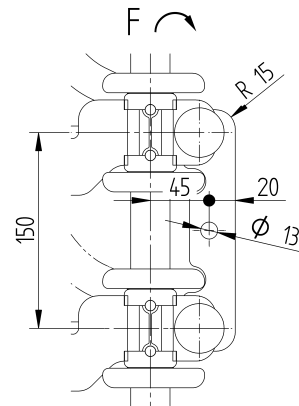
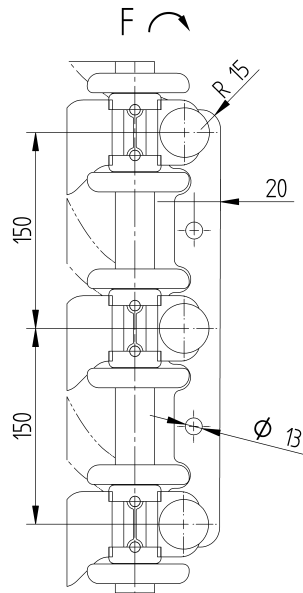
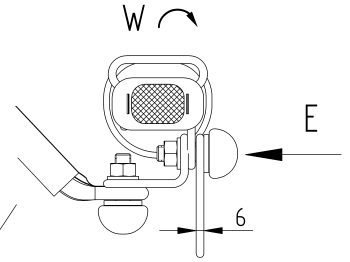
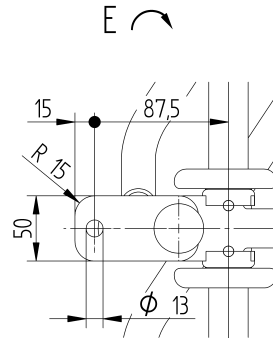
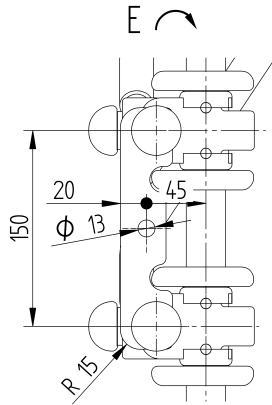
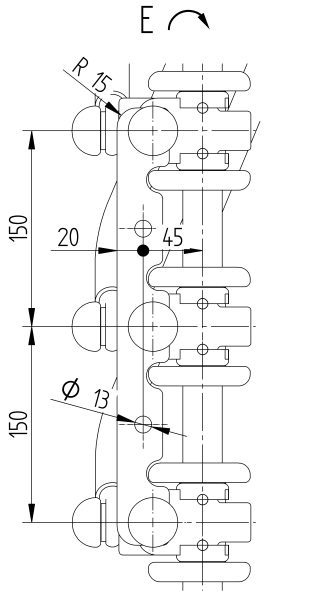
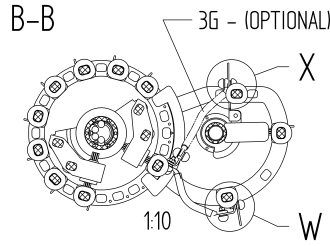
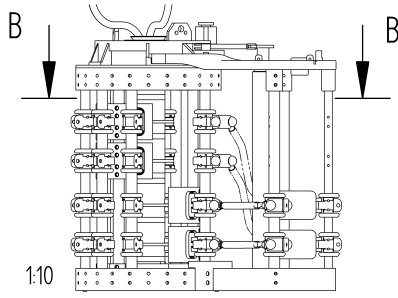


SELECTOR SIZE RC/RD/RDE
 PARALLEL BRIDGE/CONNECTING LUG
 DIMENSION DRAWING

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| SERIAL NUMBER | |
| - | |
| MATERIAL NUMBER | SHEET |
| 100100870E | 1/2 |

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COARSE CHANGE-OVER SELECTOR



3 SELECTOR PLANES WITH
PARALLEL BRIDGE

2 SELECTOR PLANES WITH
PARALLEL BRIDGE

WITHOUT PARALLEL BRIDGE

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|------------|--------------|--------------------|
| DATE | NAME | DOCUMENT NO. |
| 07.10.2016 | CTETPRAKTIK2 | SED 4334433 001 01 |
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| 19.10.2016 | | 1:2 |
| STAND. | PRODASTSCHUK | CHANGE NO. |
| 20.10.2016 | | 1077262 |

DIMENSION
IN mm
EXCEPT AS
NOTED



SELECTOR SIZE RC/RD/RDE
PARALLEL BRIDGE/CONNECTING LUG
DIMENSION DRAWING

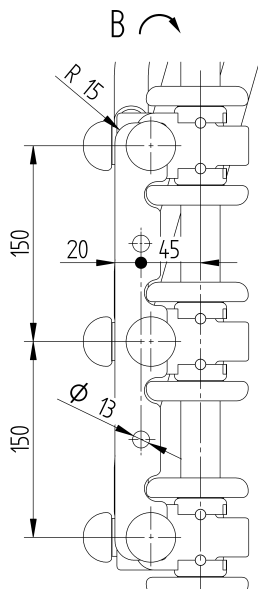
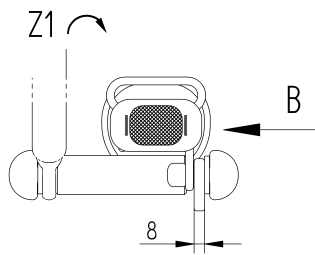
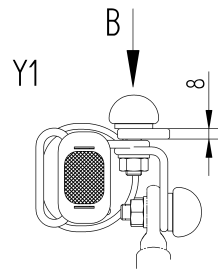
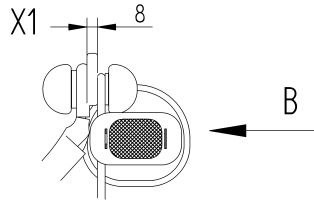
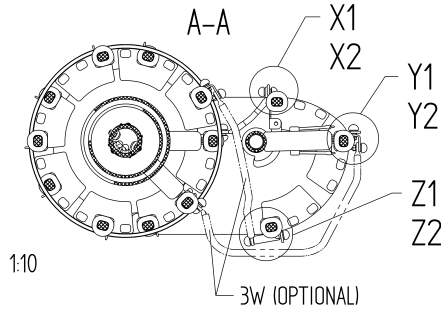
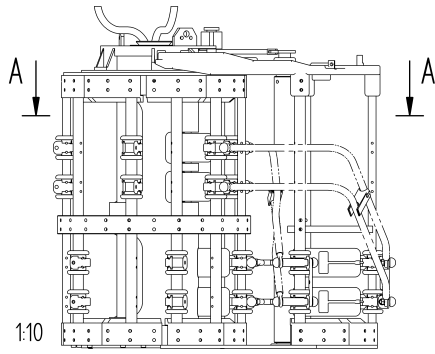
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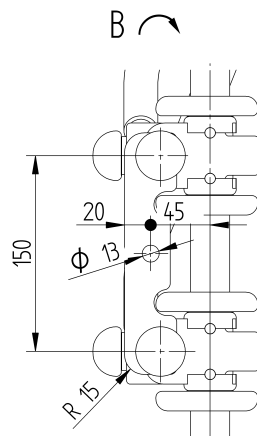
SHEET
2/2

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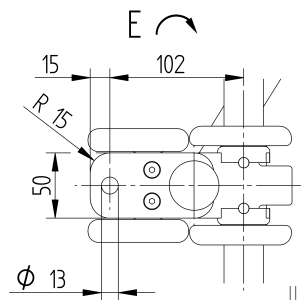
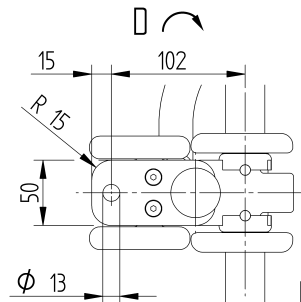
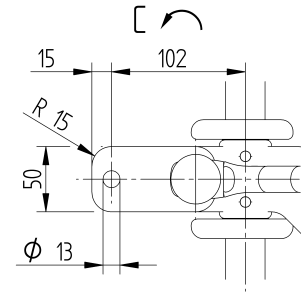
REVERSING CHANGE-OVER SELECTOR



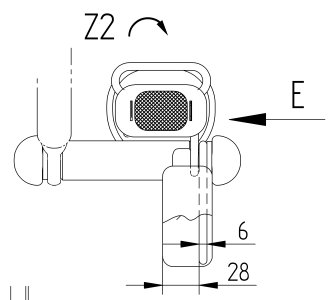
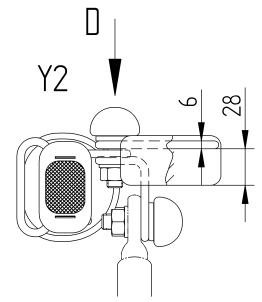
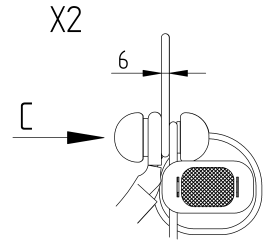
3 SELECTOR PLANES WITH PARALLEL BRIDGE



2 SELECTOR PLANES WITH PARALLEL BRIDGE



WITHOUT PARALLEL BRIDGE



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| DATE | NAME | DOCUMENT NO. |
| 07.10.2016 | CTETPRAKTIK2 | SED 5032528 001 01 |
| CHKD. | HILTNER | CHANGE NO. |
| 19.10.2016 | GRIMM | 1077262 |
| SCALE | | |
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DIMENSION IN mm EXCEPT AS NOTED



SELECTOR SIZE RE/RF
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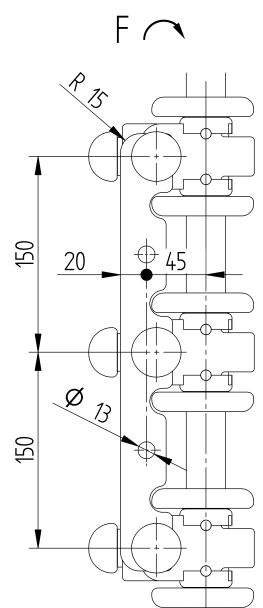
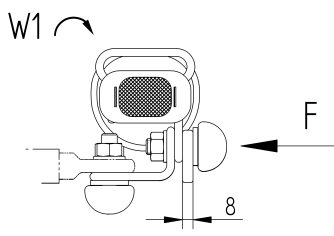
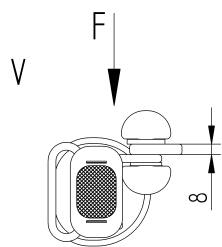
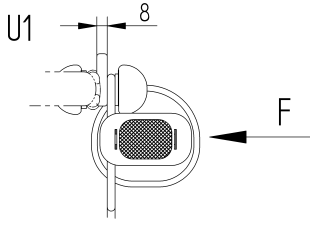
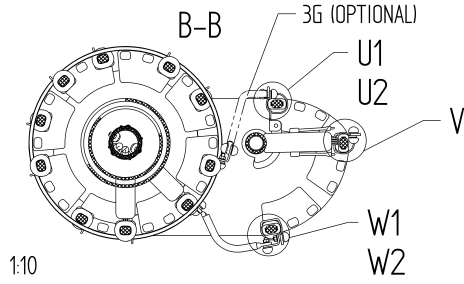
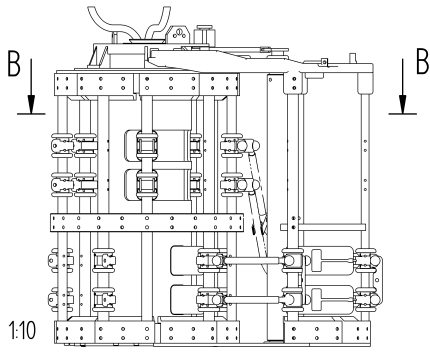
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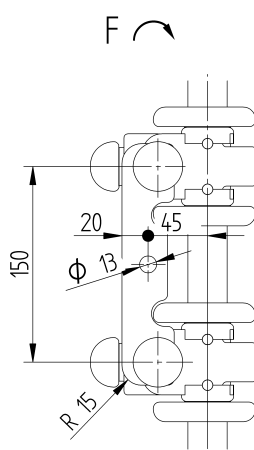
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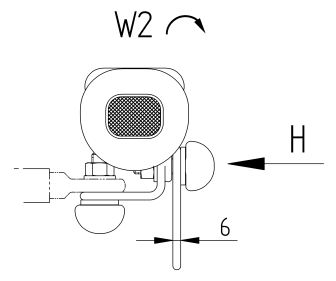
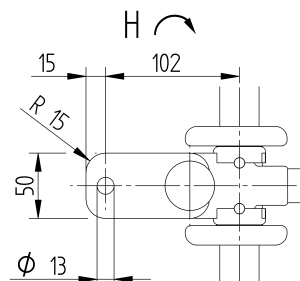
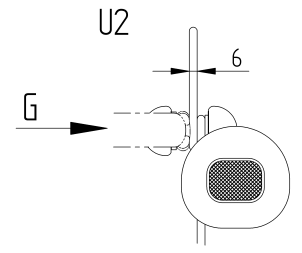
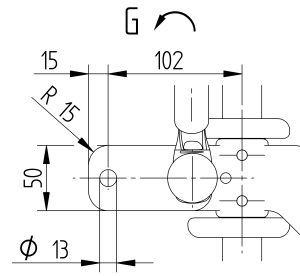
COARSE CHANGE-OVER SELECTOR



3 SELECTOR PLANES WITH PARALLEL BRIDGE



2 SELECTOR PLANES WITH PARALLEL BRIDGE



WITHOUT PARALLEL BRIDGE

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| DATE | NAME | DOCUMENT NO. |
| 07.10.2016 | CTETPRAKTIK2 | SED 5032528 001 01 |
| CHKD. | HILTNER | CHANGE NO. |
| 19.10.2016 | GRIMM | 1077262 |
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DIMENSION IN mm EXCEPT AS NOTED



SELECTOR SIZE RE/RF
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 DIMENSION DRAWING

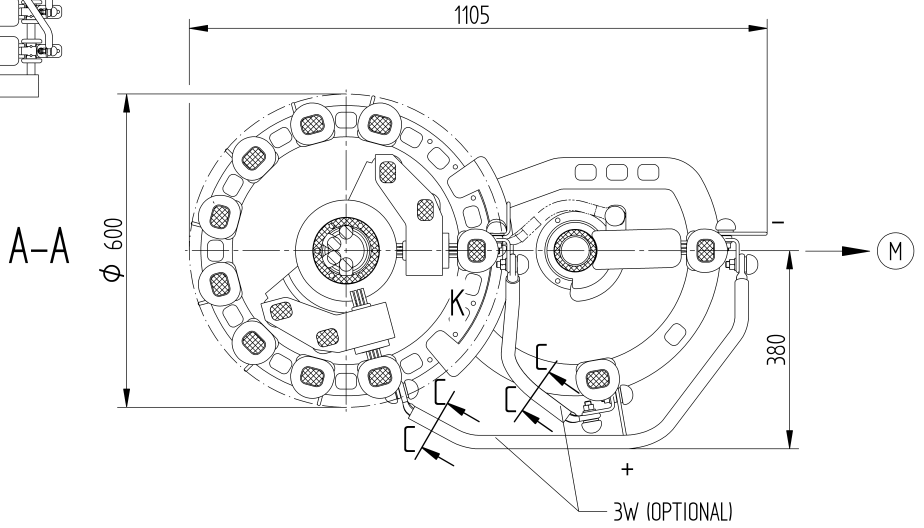
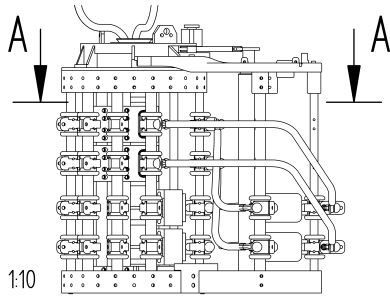
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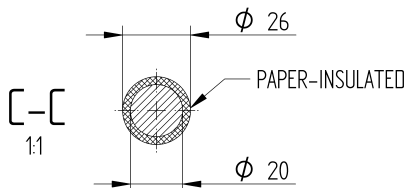
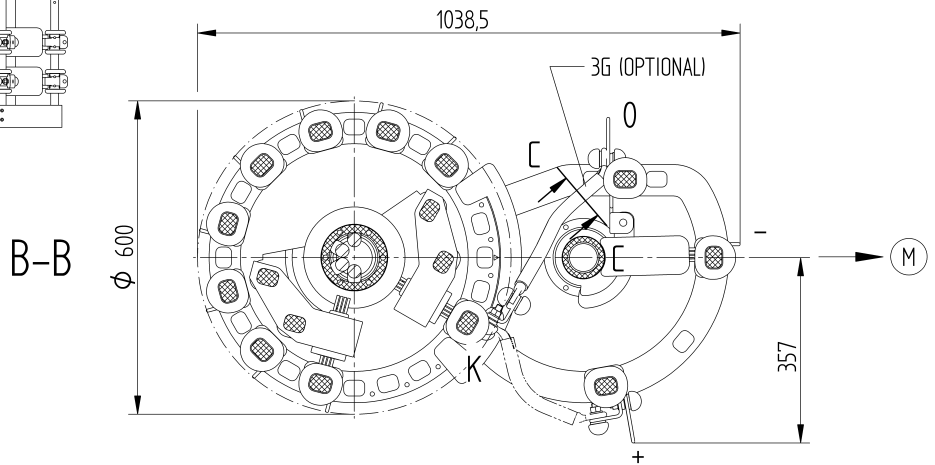
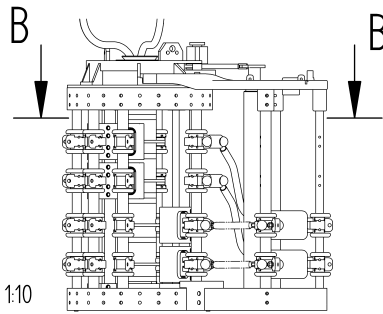
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REVERSING CHANGE-OVER SELECTOR



COARSE CHANGE-OVER SELECTOR



(M) DRIVE SIDE OF SELECTOR

THE DETAILED CONNECTION DIAGRAM IS BINDING FOR THE DESIGNATION OF THE CONNECTION CONTACTS AND PHASES

| | | |
|------------------|--------------|--------------------|
| DATE | NAME | DOCUMENT NO. |
| 18.10.2016 | CTETPRAKTIK2 | SED 4335433 001 02 |
| CHKD. 19.10.2016 | HILTNER | CHANGE NO. |
| 20.10.2016 | PRODASTSCHUK | 1077666 |
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DIMENSION
IN mm
EXCEPT AS
NOTED



SELECTOR SIZE RC/RD/RDE
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DIMENSION DRAWING

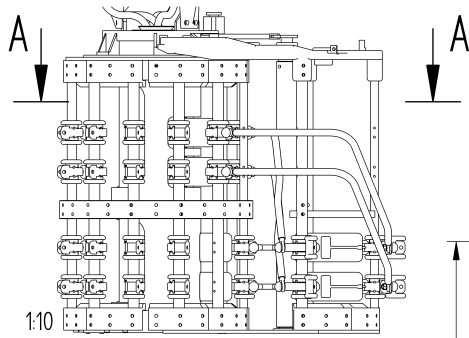
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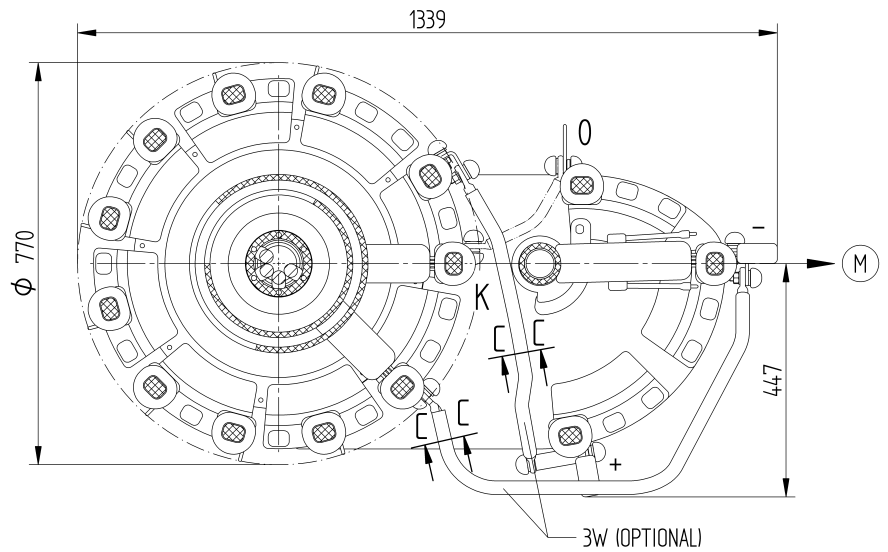
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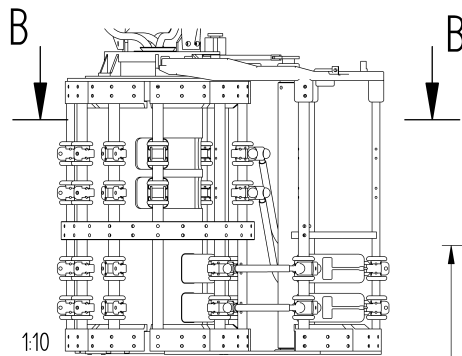
REVERSING CHANGE-OVER SELECTOR



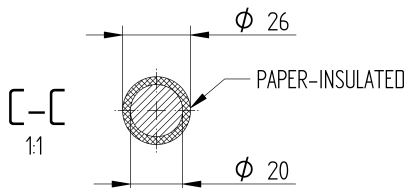
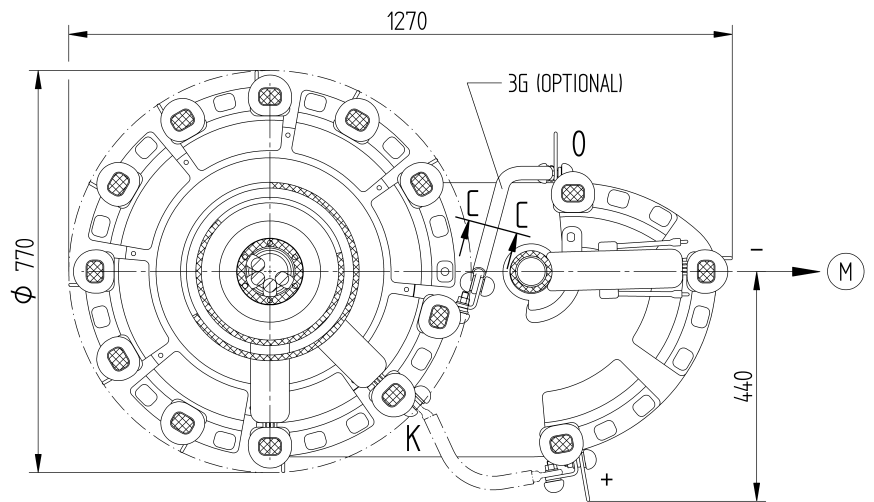
A-A



COARSE CHANGE-OVER SELECTOR



B-B



(M) DRIVE SIDE OF SELECTOR

THE DETAILED CONNECTION DIAGRAM IS BINDING FOR THE DESIGNATION OF THE CONNECTION CONTACTS AND PHASES

| | | | |
|--------|------------|--------------|--------------------|
| DATE | 19.10.2016 | DOCUMENT NO. | SED 5089626 001 02 |
| DFTR. | 20.10.2016 | NAME | CTETPRAKTIK2 |
| CHKD. | 20.10.2016 | HILFNER | 1077337 |
| STAND. | 20.10.2016 | PRODASTSCHUK | 15 |
| | | CHANGE NO. | |
| | | SCALE | |

DIMENSION
IN mm
EXCEPT AS
NOTED



SELECTOR SIZE RE/RF
CONNECTING LEAD 3W/3G
DIMENSION DRAWING

SERIAL NUMBER

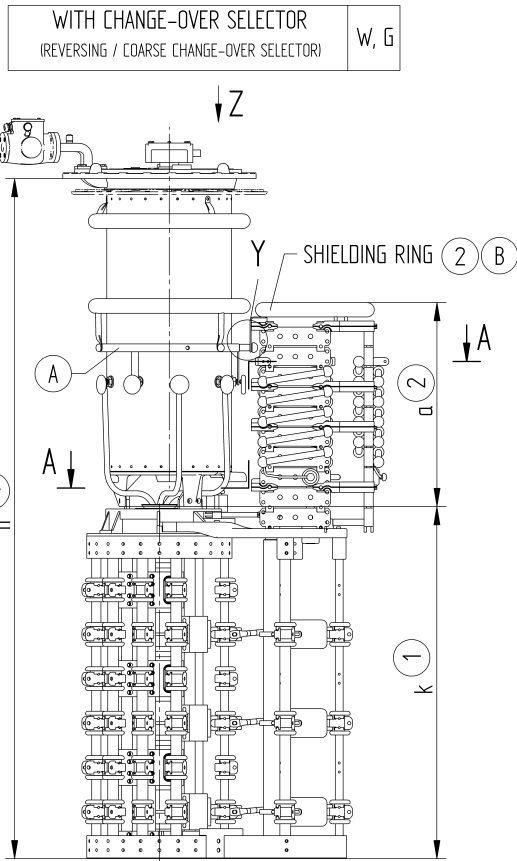
MATERIAL NUMBER
100172640E

SHEET
1/1

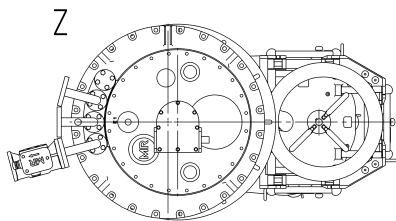


5.7 Guía del potencial VACUTAP® VM® y OILTAP® M

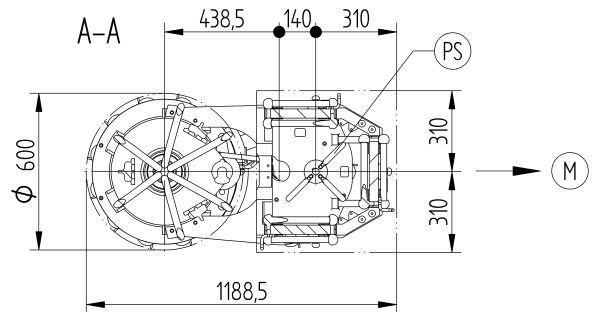
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VMIII650Y VARIANT DISPLAYED



| PRODUKT RANGE POTENTIAL CONNECTION UNIT WITH TIE-IN SWITCH WP/GP | | | | | |
|--|---------------|-------------------|--------------|--|-----------------------|
| ON-LOAD TAP-CHANGER | NUMBER PHASES | CIRCUIT RESISTORS | Um [kV] | POTENTIAL NUMBER OF RESISTORS PER PHASES | MAX DIMENSIONS a [mm] |
| OILTAP® M | I | SERIES | 72,5 ... 300 | 3 ... 22 | 590 |
| | | PARALLEL | 72,5 .. 245 | 2x3 ... 2x11 | 782 |
| | | | 300 | 2x3 ... 2x14 | 782 |
| | II | 3-FOLD PARALLEL | 72,5 ... 245 | 3x3 ... 3x8 | 590 |
| | | | 300 | 3x3 ... 3x10 | 782 |
| | | SERIES | 72,5 ... 245 | 3 ... 10 | 590 |
| III | PARALLEL | 72,5 ... 245 | 3 ... 12 | 782 | |
| | | 300 | 2x3 ... 2x4 | 590 | |
| | 300 | 2x3 ... 2x5 | 782 | | |
| VACUTAP® VM | I | SERIES | 72,5 ... 300 | 3 ... 22 | 590 |
| | | PARALLEL | 72,5 ... 123 | 2x3 ... 2x11 | |
| | | | 170 ... 300 | 2x3 ... 2x14 | |
| | II | 3-FOLD PARALLEL | 72,5 ... 123 | 3x3 ... 3x8 | 590 |
| | | | 170 ... 300 | 3x3 ... 3x10 | 782 |
| | | SERIES | 72,5 ... 123 | 3 ... 10 | 590 |
| | III | PARALLEL | 170 ... 300 | 3 ... 12 | 782 |
| | | | 72,5 ... 123 | 2x3 ... 2x4 | 590 |
| | | 170 ... 300 | 2x3 ... 2x5 | 782 | |
| | III | SERIES | 72,5 ... 123 | 3 ... 8 | 590 |
| | | | 170 ... 245 | 3 ... 10 | 782 |
| | | PARALLEL | 72,5 ... 123 | 2x3 | 590 |
| 170 ... 245 | 2x3 ... 2x4 | 782 | | | |

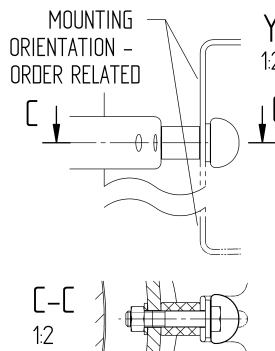
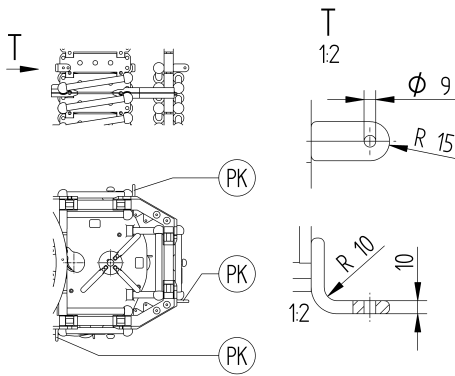


NUMBER AND POSITION OF CONNECTION CONTACT (2)

SCREW CONNECTION BETWEEN POTENTIAL CONNECTION UNIT AND TAKE-OFF RING (2)

THE SCREW CONNECTION (IF AVAILABLE) IS MADE BY THE TRANSFORMER MANUFACTURER.

- (M) - DRIVE SIDE OF SELECTOR
 - (A) - ON-LOAD TAP-CHANGER CURRENT TAKE-OFF TERMINAL
 - (B) - IS CONNECTED TO POTENTIAL OF (A)
 - (PK) - CONNECTION CONTACT
 - (PS) - TIE-IN SWITCH
 - (1) - REFER TO DIMENSION DRAWING
 - (2) - IS ORDER RELATED, REFER TO ORDER RELATED DIMENSION DRAWING
- THE DETAILED CONNECTION DIAGRAM IS BINDING FOR THE DESIGNATION OF THE CONNECTION CONTACTS AND PHASES



| DATE | NAME | DOCUMENT NO. |
|------------|--------------|--------------------|
| 19.10.2016 | CTETPRAKTIK2 | SED 5'15874-001 00 |
| 20.10.2016 | HILTNER | CHANGE NO. |
| 20.10.2016 | PRODASTSCHUK | 1077501 |
| DFTR. | SCALE | 1:1 |
| CHKD. | | |
| STAND. | | |

DIMENSION IN mm EXCEPT AS NOTED

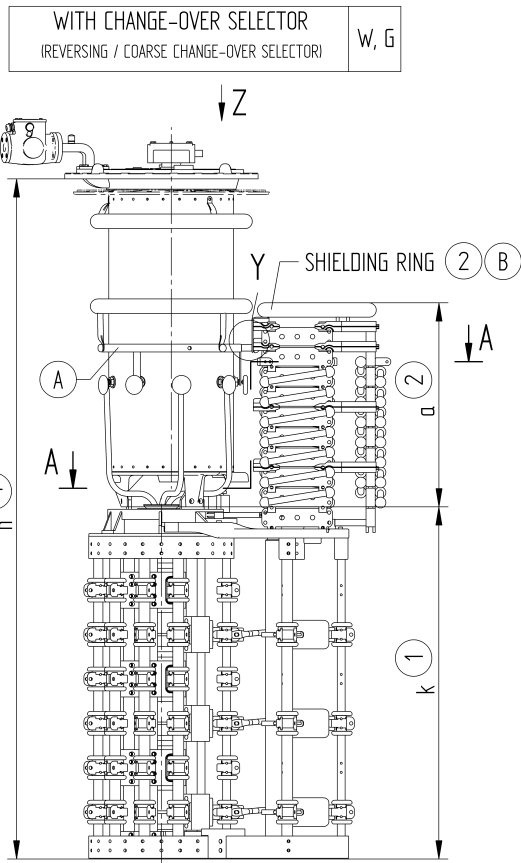


ON-LOAD TAP-CHANGER OILTAP® M, VACUTAP® VM
 POTENTIAL CONNECTION UNIT WP/GP-SELECTOR SIZE RC/RD/RDE
 DIMENSION DRAWING

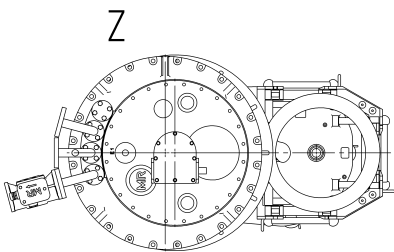
SERIAL NUMBER

MATERIAL NUMBER 100179500E SHEET 1/1

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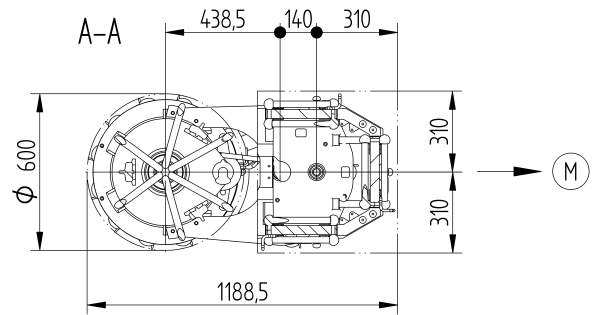


VMIII650Y VARIANT DISPLAYED



NUMBER AND POSITION OF CONNECTION CONTACT (2)

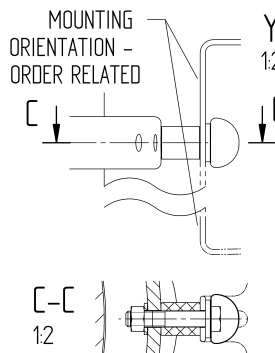
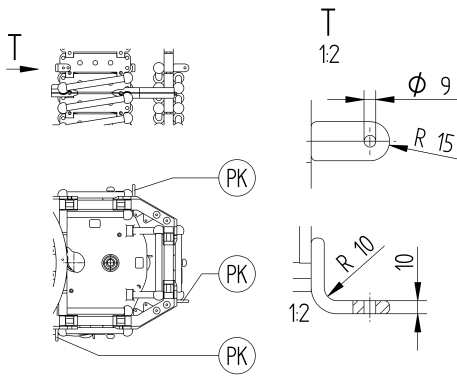
| PRODUKT RANGE POTENTIAL CONNECTION UNIT WITHOUT TIE-IN SWITCH WR/GR | | | | | |
|---|---------------|-------------------|--------------|--|-----------------------|
| ON-LOAD TAP-CHANGER | NUMBER PHASES | CIRCUIT RESISTORS | Um [kV] | POTENTIAL NUMBER OF RESISTORS PER PHASES | MAX DIMENSIONS a [mm] |
| OILTAP® M | I | SERIES | 72,5 ... 300 | 3 ... 22 | 496 |
| | | PARALLEL | 72,5 ... 245 | 2x3 ... 2x16 | 590 |
| | | | 300 | 2x3 ... 2x19 | 782 |
| | II | 3-FOLD PARALLEL | 72,5 ... 245 | 3x3 ... 3x12 | 590 |
| | | PARALLEL | 300 | 3x3 ... 3x14 | 782 |
| | | | SERIES | 72,5 ... 245 | 3 ... 14 |
| VACUTAP® VM | I | SERIES | 72,5 ... 300 | 3 ... 22 | 496 |
| | | PARALLEL | 72,5 ... 123 | 2x3 ... 2x16 | 590 |
| | | | 170 ... 300 | 2x3 ... 2x19 | 782 |
| | II | 3-FOLD PARALLEL | 72,5 ... 123 | 3x3 ... 3x12 | 590 |
| | | PARALLEL | 170 ... 300 | 3x3 ... 3x14 | 782 |
| | | | SERIES | 72,5 ... 123 | 3 ... 14 |
| III | I | SERIES | 72,5 ... 300 | 3 ... 22 | 496 |
| | | PARALLEL | 72,5 ... 123 | 2x3 ... 2x16 | 590 |
| | | | 170 ... 300 | 2x3 ... 2x19 | 782 |
| | II | 3-FOLD PARALLEL | 72,5 ... 123 | 3x3 ... 3x12 | 590 |
| | | PARALLEL | 170 ... 300 | 3x3 ... 3x14 | 782 |
| | | | SERIES | 72,5 ... 123 | 3 ... 14 |
| III | PARALLEL | 72,5 ... 123 | 2x3 ... 2x7 | 590 | |
| | | 170 ... 300 | 2x3 ... 2x8 | 782 | |
| | SERIES | 72,5 ... 123 | 3 ... 12 | 590 | |
| III | PARALLEL | 72,5 ... 123 | 2x3 ... 2x5 | 590 | |
| | | 170 ... 245 | 3 ... 14 | 782 | |
| | SERIES | 72,5 ... 123 | 2x3 ... 2x5 | 590 | |
| III | PARALLEL | 72,5 ... 123 | 2x3 ... 2x6 | 782 | |
| | | 170 ... 245 | 2x3 ... 2x6 | 782 | |



SCREW CONNECTION BETWEEN POTENTIAL CONNECTION UNIT AND TAKE-OFF RING (2)

THE SCREW CONNECTION (IF AVAILABLE) IS MADE BY THE TRANSFORMER MANUFACTURER.

- (M) - DRIVE SIDE OF SELECTOR
 - (A) - ON-LOAD TAP-CHANGER CURRENT TAKE-OFF TERMINAL
 - (B) - IS CONNECTED TO POTENTIAL OF (A)
 - (PK) - CONNECTION CONTACT
 - (1) - REFER TO DIMENSION DRAWING
 - (2) - IS ORDER RELATED, REFER TO ORDER RELATED DIMENSION DRAWING
- THE DETAILED CONNECTION DIAGRAM IS BINDING FOR THE DESIGNATION OF THE CONNECTION CONTACTS AND PHASES



| | | | |
|--------|------------|--------------|---------------------|
| DATE | 19.10.2016 | DOCUMENT NO. | SED 5'155760 001 00 |
| DFTR. | 20.10.2016 | NAME | CTETPRAKTIK2 |
| CHKD. | 20.10.2016 | SCALE | 1:1 |
| STAND. | 20.10.2016 | CHANGE NO. | 1077501 |
| | | PRODASTSCHUK | |

DIMENSION IN mm EXCEPT AS NOTED



ON-LOAD TAP-CHANGER OILTAP® M, VACUTAP® VM
 POTENTIAL CONNECTION UNIT WR/GR-SELECTOR SIZE RC/RD/RDE
 DIMENSION DRAWING

SERIAL NUMBER

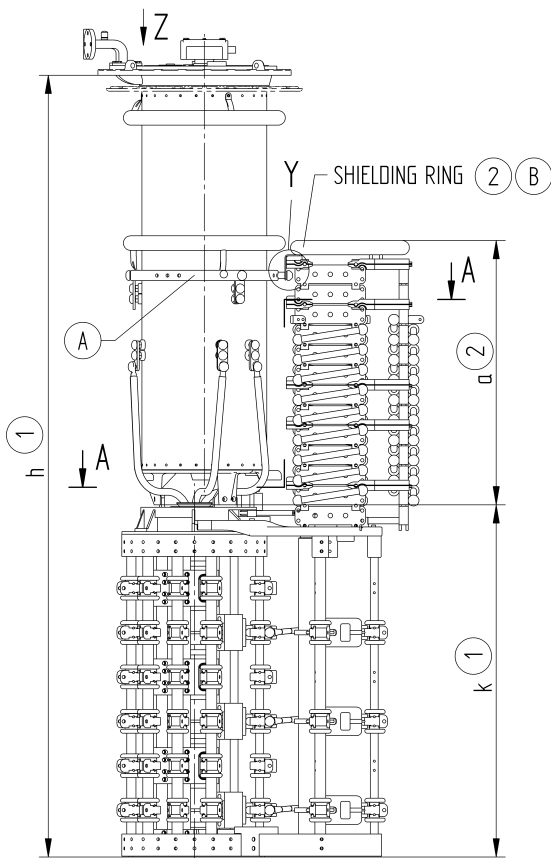
MATERIAL NUMBER 100179520E SHEET 1/1



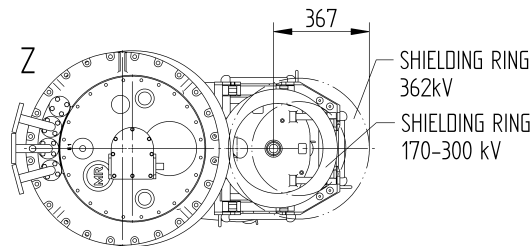
5.8 Guía del potencial OILTAP® R

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WITH CHANGE-OVER SELECTOR
 (REVERSING / COARSE CHANGE-OVER SELECTOR) W, G

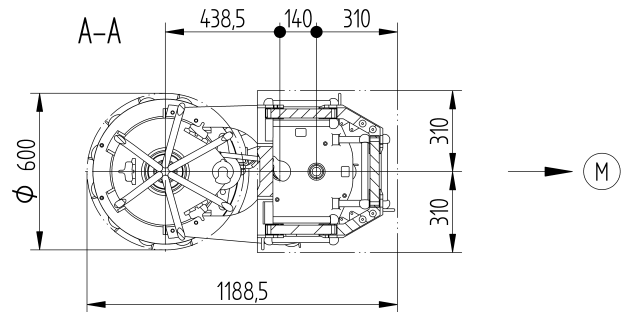


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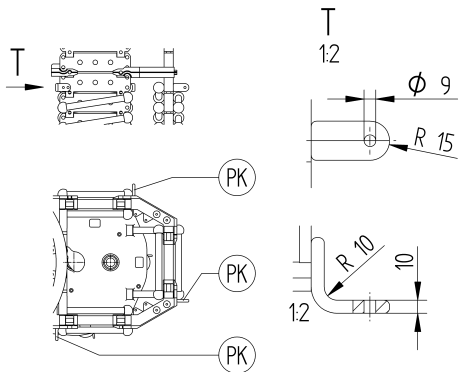


PRODUCT RANGE POTENTIAL CONNECTION UNIT WITHOUT TIE-IN SWITCH WR/GR

| ON-LOAD TAP-CHANGER OILTAP® | NUMBER PHASES | CIRCUIT RESISTORS | Um [kV] | POTENTIAL NUMBER OF RESISTORS PER PHASES | MAX. DIMENSIONS a [mm] |
|-----------------------------|---------------|-------------------|--------------|--|------------------------|
| R | I | SERIES | 72,5 ... 362 | 3 ... 22 | 496 |
| | | PARALLEL | 72,5 ... 362 | 2x3 ... 2x22 | 894 |
| R (2001) | I | 3-FOLD PARALLEL | 72,5 ... 123 | 3x3 ... 3x18 | 821 |
| | | | 170 ... 362 | 3x3 ... 3x20 | 1048 |
| R | II | SERIES | 72,5 ... 362 | 3 ... 22 | 1048 |
| | | PARALLEL | 72,5 ... 123 | 2x3 ... 2x11 | 821 |
| R (2001) | II | 3-FOLD PARALLEL | 170 ... 362 | 2x3 ... 2x13 | 1048 |
| | | | 72,5 ... 362 | 3x3 ... 3x10 | 496 |
| R | III | SERIES | 72,5 ... 123 | 3 ... 18 | 821 |
| | | PARALLEL | 72,5 ... 362 | 3 ... 20 | 1048 |
| R (2001) | III | 3-FOLD PARALLEL | 170 ... 362 | 3 ... 20 | 1048 |
| | | | 72,5 ... 123 | 2x3 ... 2x8 | 821 |
| R | IV | SERIES | 72,5 ... 123 | 3 ... 18 | 821 |
| | | PARALLEL | 72,5 ... 362 | 2x3 ... 2x9 | 1048 |

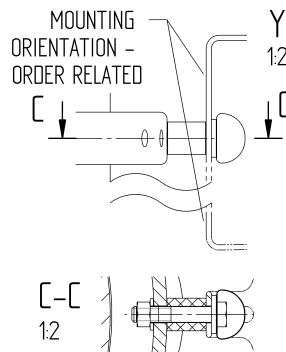


NUMBER AND POSITION OF CONNECTION CONTACT (2)



SCREW CONNECTION BETWEEN POTENTIAL CONNECTION UNIT AND TAKE-OFF RING (2)

THE SCREW CONNECTION (IF AVAILABLE) IS MADE BY THE TRANSFORMER MANUFACTURER.



- (M) - DRIVE SIDE OF SELECTOR
 - (A) - ON-LOAD TAP-CHANGER CURRENT TAKE-OFF TERMINAL
 - (B) - IS CONNECTED TO POTENTIAL OF (A)
 - (PK) - CONNECTION CONTACT
 - (1) - REFER TO DIMENSION DRAWING
 - (2) - IS ORDER RELATED, REFER TO ORDER RELATED DIMENSION DRAWING
- THE DETAILED CONNECTION DIAGRAM IS BINDING FOR THE DESIGNATION OF THE CONNECTION CONTACTS AND PHASES

| | | | |
|--------|------------|--------------|--------------------|
| DATE | 19.10.2016 | DOCUMENT NO. | SED 5129f33 001 01 |
| DFTR. | 19.10.2016 | NAME | CTETPRAKTIK2 |
| CHKD. | 20.10.2016 | CHANGE NO. | HILTNER |
| STAND. | 20.10.2016 | SCALE | 1:10 |
| | | PRODASTSCHUK | 1077642 |

DIMENSION IN mm EXCEPT AS NOTED



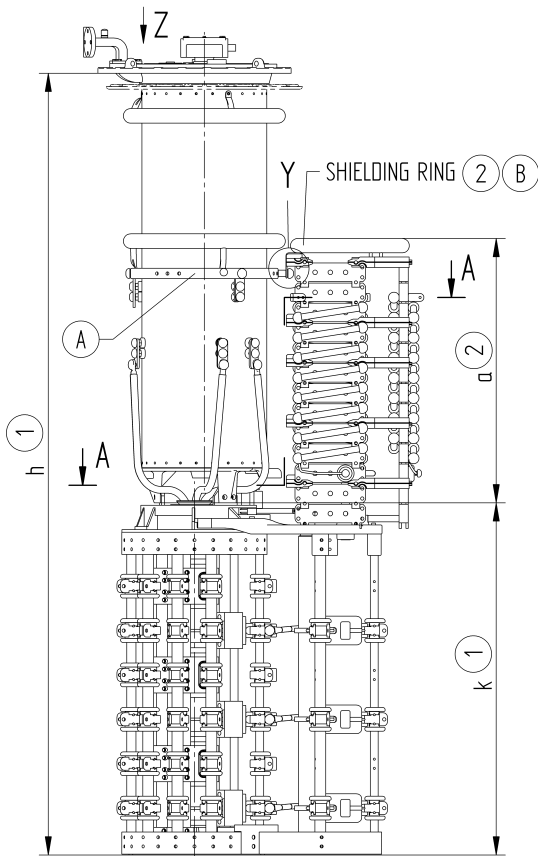
ON-LOAD TAP-CHANGER OILTAP® R
 POTENTIAL CONNECTION UNIT WR/GR-SELECTOR SIZE RC/RD/RDE
 DIMENSION DRAWING

SERIAL NUMBER

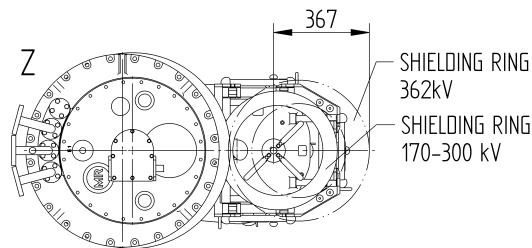
MATERIAL NUMBER 100177270E SHEET 1/1

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WITH CHANGE-OVER SELECTOR
 (REVERSING / COARSE CHANGE-OVER SELECTOR) W, G

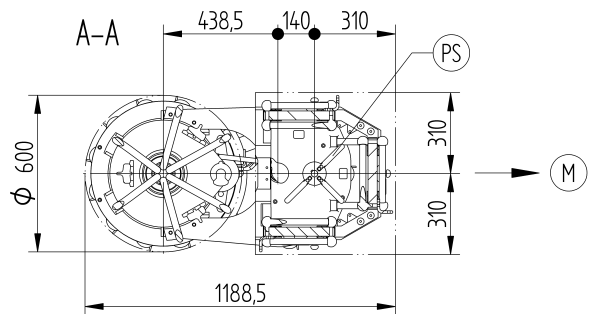


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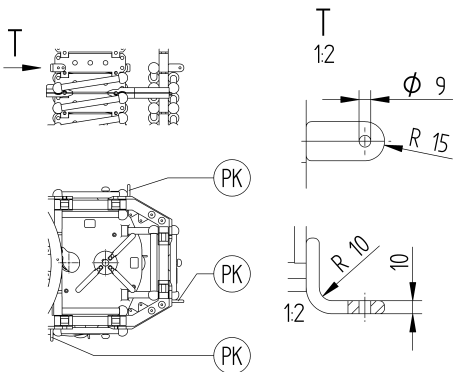


PRODUCT RANGE POTENTIAL CONNECTION UNIT WITH TIE-IN SWITCH WP/GP

| ON-LOAD TAP-CHANGER OILTAP® | NUMBER PHASES | CIRCUIT RESISTORS | Um [kV] | POTENTIAL NUMBER OF RESISTORS PER PHASES | MAX. DIMENSIONS a [mm] |
|-----------------------------|---------------|-----------------------------|-----------------------------|--|------------------------|
| R R (1201) | I | SERIES | 72,5 ... 362 | 3 ... 22 | 894 |
| | | | | 3 ... 18 | 496 |
| R R (1201) | I | PARALLEL | 72,5 ... 123 170 ... 362 | 2x3 ... 2x20 | 821 |
| | | | | 2x3 ... 2x22 | 1048 |
| | | | | 2x3 ... 2x8 | 496 |
| R R (1201) | I | 3-FOLD PARALLEL | 72,5 ... 123 170 ... 362 | 3x3 ... 3x14 | 821 |
| | | | | 3x3 ... 3x16 | 1048 |
| | | | | 3x3 ... 3x6 | 496 |
| R R (1201) | II | SERIES | 72,5 ... 123 170 ... 362 | 3 ... 18 | 821 |
| | | | | 3 ... 22 | 1048 |
| | II | PARALLEL | 72,5 ... 123 170 ... 362 | 2x3 ... 2x8 | 821 |
| | | | | 2x3 ... 2x10 | 1048 |
| | III | SERIES | 72,5 ... 123 170 ... 362 | 3 ... 14 | 821 |
| | | | | 3 ... 16 | 1048 |
| III | PARALLEL | 72,5 ... 123 170 ... 362 | 2x3 ... 2x6 | 821 | |
| | | | 2x3 ... 2x7 | 1048 | |

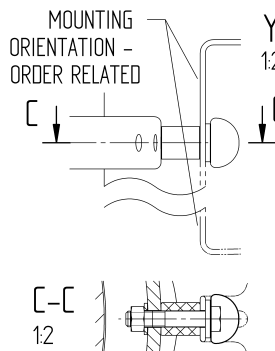


NUMBER AND POSITION OF CONNECTION CONTACT (2)



SCREW CONNECTION BETWEEN POTENTIAL CONNECTION UNIT AND TAKE-OFF RING (2)

THE SCREW CONNECTION (IF AVAILABLE) IS MADE BY THE TRANSFORMER MANUFACTURER.



- (M) - DRIVE SIDE OF SELECTOR
- (A) - ON-LOAD TAP-CHANGER CURRENT TAKE-OFF TERMINAL
- (B) - IS CONNECTED TO POTENTIAL OF (A)
- (PK) - CONNECTION CONTACT
- (PS) - TIE-IN SWITCH
- (1) - REFER TO DIMENSION DRAWING
- (2) - IS ORDER RELATED, REFER TO ORDER RELATED DIMENSION DRAWING
- THE DETAILED CONNECTION DIAGRAM IS BINDING FOR THE DESIGNATION OF THE CONNECTION CONTACTS AND PHASES

| | | | |
|--------|------------|--------------|--------------------|
| DATE | 19.10.2016 | DOCUMENT NO. | SED 5129227 001 01 |
| DFTR. | 19.10.2016 | NAME | CTETPRAKTIK2 |
| CHKD. | 20.10.2016 | CHANGE NO. | HILTNER |
| STAND. | 20.10.2016 | SCALE | 1:10 |
| | | PRODASTSCHUK | 1077642 |

DIMENSION IN mm EXCEPT AS NOTED



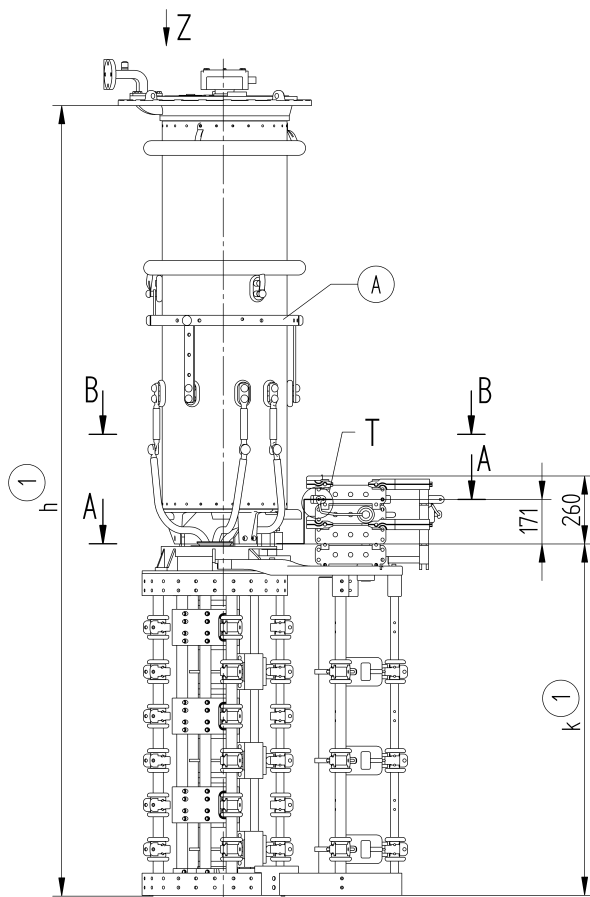
ON-LOAD TAP-CHANGER OILTAP® R
 POTENTIAL CONNECTION UNIT WP/GP-SELECTOR SIZE RC/RD/RDE
 DIMENSION DRAWING

SERIAL NUMBER

| | |
|-----------------|-------|
| MATERIAL NUMBER | SHEET |
| 100177260E | 1/1 |

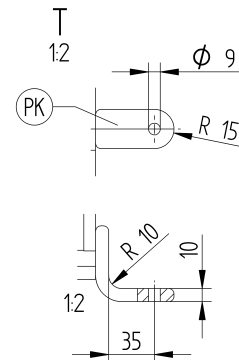
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WITH CHANGE-OVER SELECTOR
(REVERSING / COARSE CHANGE-OVER SELECTOR) W, G

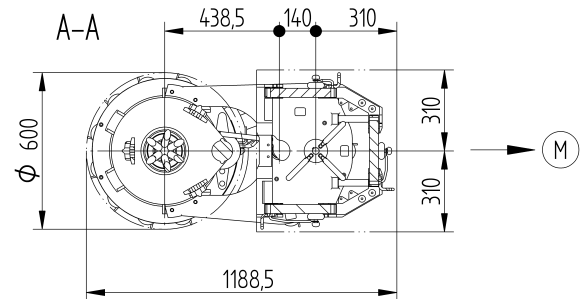
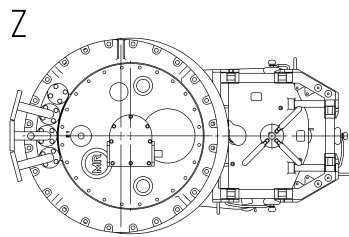


- (M) - DRIVE SIDE OF SELECTOR
 - (A) - ON-LOAD TAP-CHANGER CURRENT TAKE-OFF TERMINAL
 - (PK) - CONNECTION CONTACT
 - (PS) - TIE-IN SWITCH
 - (1) - REFER TO DIMENSION DRAWING
- THE DETAILED CONNECTION DIAGRAM IS BINDING FOR THE DESIGNATION OF THE CONNECTION CONTACTS AND PHASES

POSITION OF CONNECTION CONTACT - ORDER RELATED

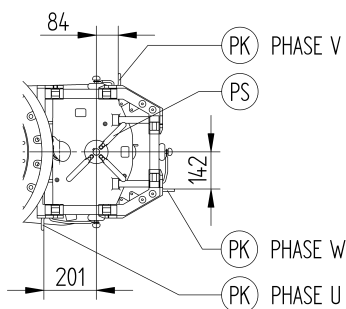


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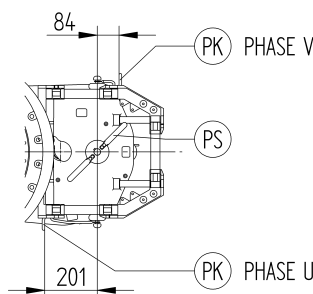


B-B

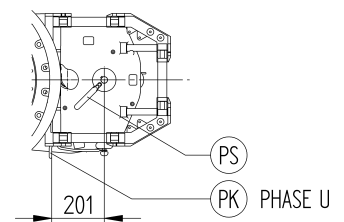
3-PHASE DESIGN



2-PHASE DESIGN



1-PHASE DESIGN



| | |
|--------------|--------------------|
| DOCUMENT NO. | SED 5128451 001 01 |
| NAME | CTETPRAKTIK2 |
| DATE | 18.10.2016 |
| CHKD. | 19.10.2016 |
| SCALE | 1:10 |
| STAND. | 20.10.2016 |
| CHANGE NO. | 1077548 |
| PRODASTSCHUK | |

DIMENSION IN mm EXCEPT AS NOTED



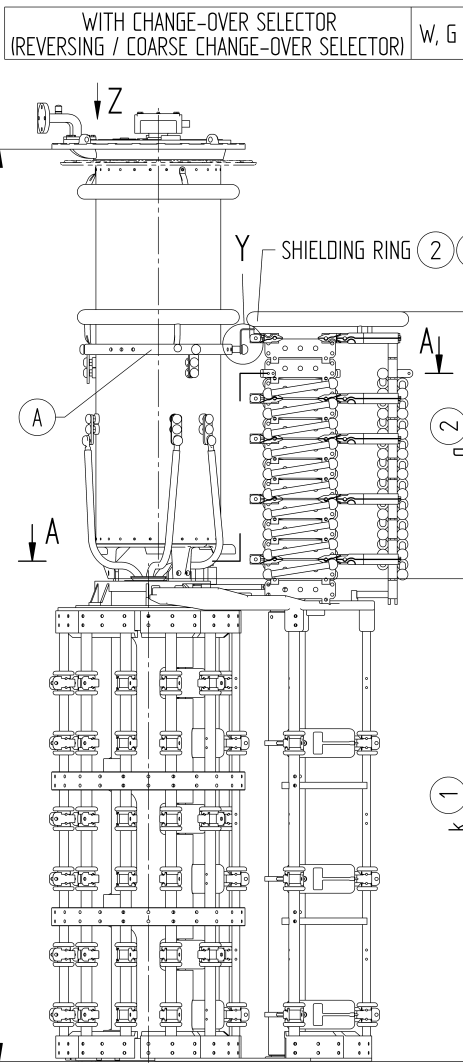
SELECTOR SIZE RC/RD/RDE
TIE-IN SWITCH WS/GS
DIMENSION DRAWING

SERIAL NUMBER

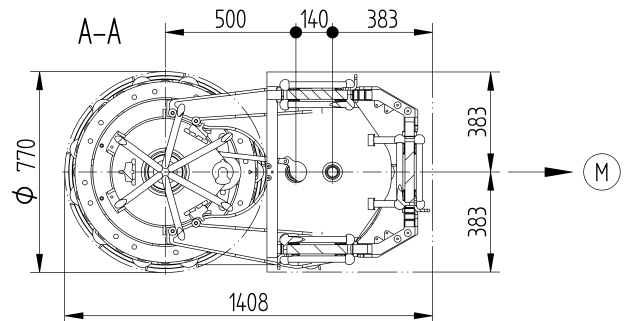
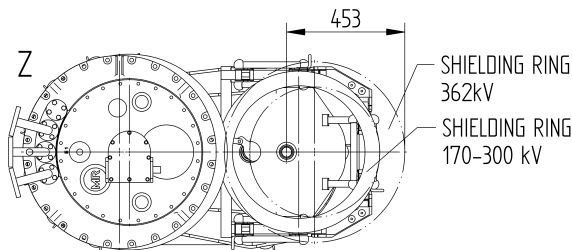
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SHEET
1/1

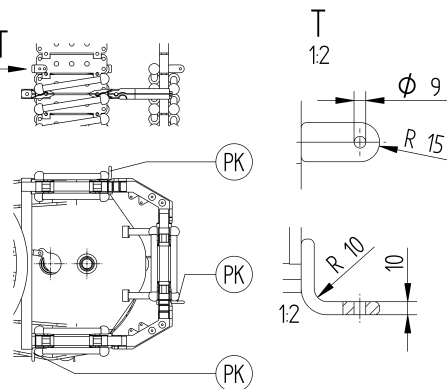
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R111200Y VARIANT DISPLAYED

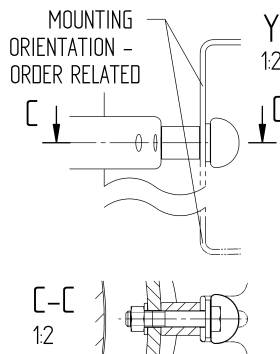


NUMBER AND POSITION OF CONNECTION CONTACT ②



SCREW CONNECTION BETWEEN POTENTIAL CONNECTION UNIT AND TAKE-OFF RING ②

THE SCREW CONNECTION (IF AVAILABLE) IS MADE BY THE TRANSFORMER MANUFACTURER.



- Ⓜ - DRIVE SIDE OF SELECTOR
- Ⓐ - ON-LOAD TAP-CHANGER CURRENT TAKE-OFF TERMINAL
- Ⓑ - IS CONNECTED TO POTENTIAL OF Ⓐ
- ⓀⓀ - CONNECTION CONTACT
- ① - REFER TO DIMENSION DRAWING
- ② - IS ORDER RELATED, REFER TO ORDER RELATED DIMENSION DRAWING
- THE DETAILED CONNECTION DIAGRAM IS BINDING FOR THE DESIGNATION OF THE CONNECTION CONTACTS AND PHASES

| ON-LOAD TAP-CHANGER OILTAP® | NUMBER PHASES | CIRCUIT RESISTORS | Um [kV] | POTENTIAL NUMBER OF RESISTORS PER PHASES | MAX. DIMENSIONS a [mm] | SEPARATE TRANSPORT POTENTIAL CONNECTION UNIT | |
|-----------------------------|---------------|-------------------|--------------|--|------------------------|--|-----|
| R | I | SERIES | 72,5 ... 362 | 3 ... 22 | 496 | NO | |
| R (1201) | | PARALLEL | 72,5 ... 362 | 2x3 ... 2x22 | 1063 | | |
| | | | 72,5 ... 362 | 2x3 ... 2x12 | 496 | | |
| R | | 3-FOLD PARALLEL | SERIES | 72,5 ... 123 | 3x3 ... 3x18 | | 821 |
| R (1201) | PARALLEL | | 72,5 ... 362 | 3x3 ... 3x20 | 1063 | | |
| | | 72,5 ... 362 | 3x3 ... 3x10 | 496 | | | |
| R | II | SERIES | 72,5 ... 362 | 3 ... 22 | 1063 | | YES |
| | | PARALLEL | 72,5 ... 123 | 2x3 ... 2x11 | 821 | | |
| | | | 170 ... 362 | 2x3 ... 2x13 | 1063 | | |
| | | SERIES | 72,5 ... 123 | 3 ... 10 | 496 | | |
| | 11 ... 18 | | 821 | | | | |
| | 3 ... 10 | | 496 | | | | |
| | 11 ... 20 | | 1063 | | | | |
| | PARALLEL | | 72,5 ... 123 | 2x3 / 2x4 | 496 | | |
| | | | 2x5 ... 2x8 | 821 | | | |
| | | | 170 ... 362 | 2x3 / 2x4 | 496 | | |
| | | | 2x5 ... 2x9 | 1063 | | | |

| | | | |
|--------|------------|--------------|--------------------|
| DATE | 19.10.2016 | DOCUMENT NO. | SED 5127293 001 01 |
| DFTR. | 20.10.2016 | NAME | CTETPRAKTIK2 |
| CHKD. | 20.10.2016 | HILFNER | 1077642 |
| STAND. | 20.10.2016 | PRODASTSCHUK | 1:10 |

DIMENSION IN mm EXCEPT AS NOTED

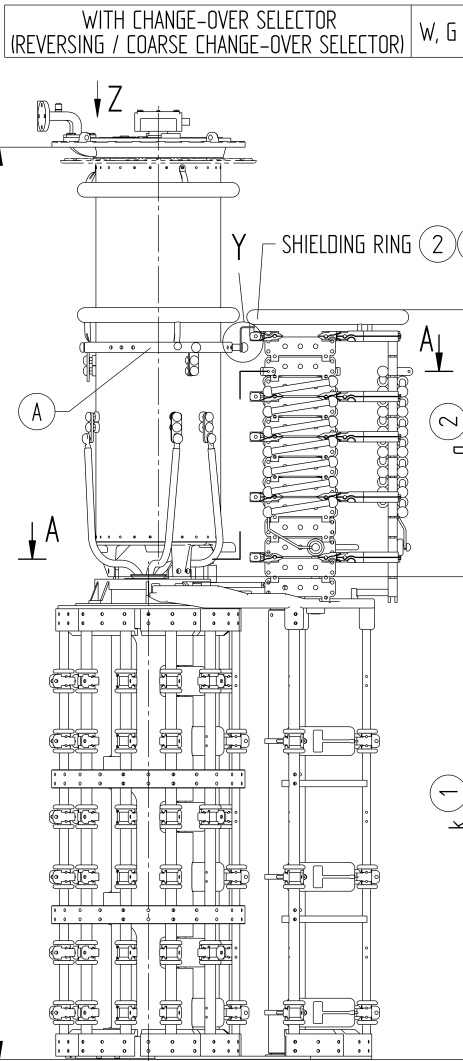


ON-LOAD TAP-CHANGER OILTAP® R
 POTENTIAL CONNECTION UNIT WR/GR - SELECTOR SIZE RE/RF
 DIMENSION DRAWING

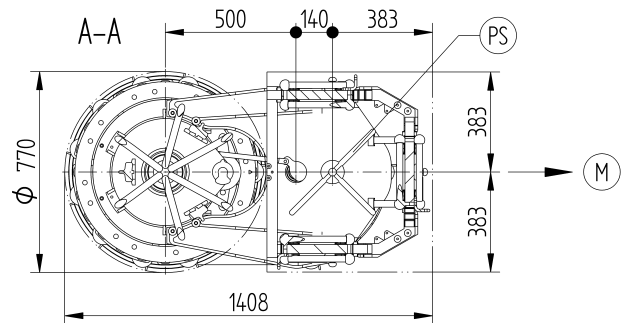
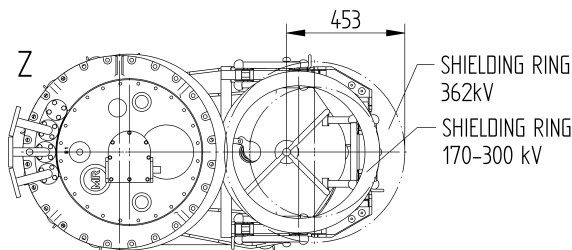
SERIAL NUMBER

MATERIAL NUMBER 100175360E SHEET 1/1

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R111200Y VARIANT DISPLAYED

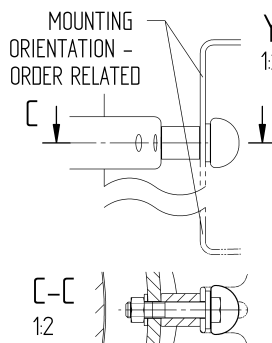
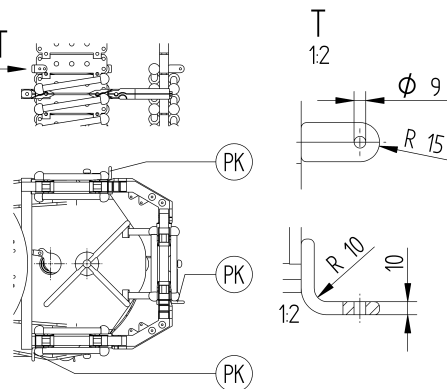


| PRODUCT RANGE POTENTIAL CONNECTION UNIT WITH TIE-IN SWITCH WP/GP | | | | | | | | |
|--|---------------|-------------------|--------------|--|------------------------|--|------|-----|
| ON-LOAD TAP-CHANGER OILTAP® | NUMBER PHASES | CIRCUIT RESISTORS | Um [kV] | POTENTIAL NUMBER OF RESISTORS PER PHASES | MAX. DIMENSIONS a [mm] | SEPARATE TRANSPORT POTENTIAL CONNECTION UNIT | | |
| R | R (1201) | SERIES | 72,5 ... 362 | 3 ... 22 | 909 | NO | | |
| | | | | 3 ... 12 | 496 | | | |
| R | R (1201) | PARALLEL | 72,5 ... 123 | 2x3 ... 2x16 | 821 | | | |
| | | | | 170 ... 362 | 2x3 ... 2x20 | | 1063 | |
| | | | | 72,5 ... 362 | 2x3 / 2x4 | | 496 | |
| R | R (1201) | 3-FOLD PARALLEL | 72,5 ... 123 | 3x3 ... 3x12 | 821 | | | |
| | | | | 170 ... 362 | 3x3 ... 3x14 | | 1063 | |
| | | | | 72,5 ... 362 | 2x3 / 2x4 | | 496 | |
| R | R | SERIES | 72,5 ... 123 | 3 ... 16 | 821 | | YES | |
| | | | | 3 ... 18 | 1063 | | | |
| | | | | 3 ... 4 | 496 | | | |
| | | PARALLEL | | 170 ... 362 | 3 ... 4 | | | 496 |
| | | | | | 5 ... 14 | 1063 | | |
| | | | | | 5 ... 14 | 1063 | | |
| PARALLEL | R | PARALLEL | 72,5 ... 123 | 2x3 ... 2x5 | 821 | YES | | |
| | | | | 170 ... 362 | 2x3 ... 2x6 | | 1063 | |

NUMBER AND POSITION OF CONNECTION CONTACT (2)

SCREW CONNECTION BETWEEN POTENTIAL CONNECTION UNIT AND TAKE-OFF RING (2)

THE SCREW CONNECTION (IF AVAILABLE) IS MADE BY THE TRANSFORMER MANUFACTURER.



- (M) - DRIVE SIDE OF SELECTOR
- (A) - ON-LOAD TAP-CHANGER CURRENT TAKE-OFF TERMINAL
- (B) - IS CONNECTED TO POTENTIAL OF (A)
- (PK) - CONNECTION CONTACT
- (PS) - TIE-IN SWITCH
- (1) - REFER TO DIMENSION DRAWING
- (2) - IS ORDER RELATED, REFER TO ORDER RELATED DIMENSION DRAWING
- THE DETAILED CONNECTION DIAGRAM IS BINDING FOR THE DESIGNATION OF THE CONNECTION CONTACTS AND PHASES

| DATE | NAME | DOCUMENT NO. |
|------------|--------------|---------------------|
| 19.10.2016 | CTETPRAKTIK2 | SED 5114-220 001 01 |
| 20.10.2016 | HILTNER | CHANGE NO. |
| 20.10.2016 | PRODASTSCHUK | 1077642 |
| DFTR. | SCALE | 1:10 |
| CHKD. | | |
| STAND. | | |

DIMENSION IN mm EXCEPT AS NOTED



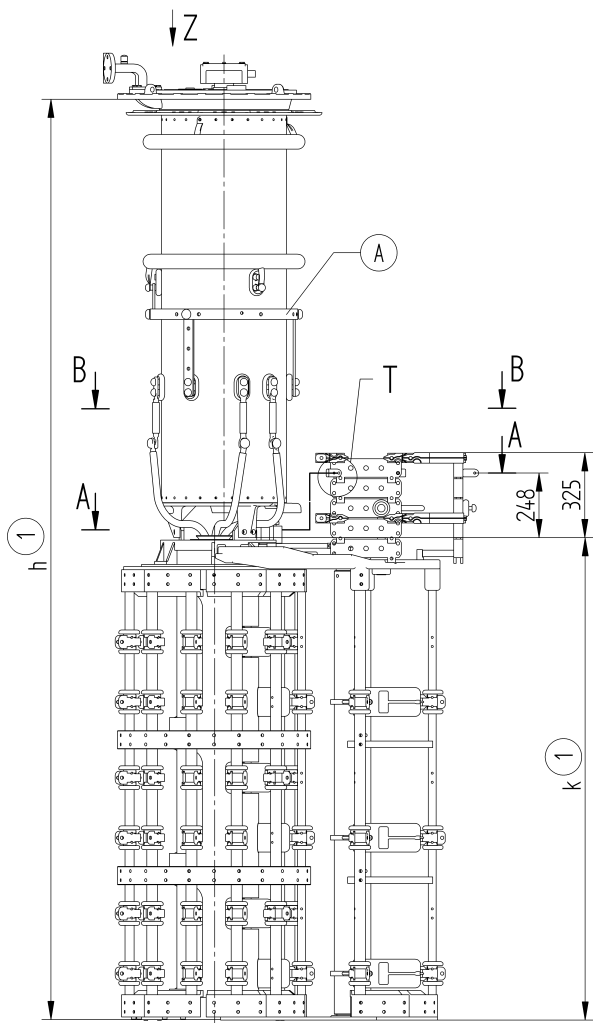
ON-LOAD TAP-CHANGER OILTAP® R
 POTENTIAL CONNECTION UNIT WP/GP - SELECTOR SIZE RE/RF
 DIMENSION DRAWING

SERIAL NUMBER

MATERIAL NUMBER 100175340E SHEET 1/1

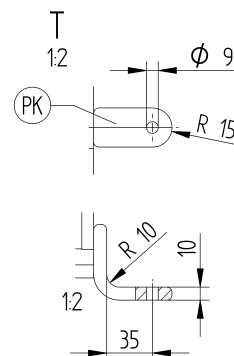
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WITH CHANGE-OVER SELECTOR
 (REVERSING / COARSE CHANGE-OVER SELECTOR) W, G

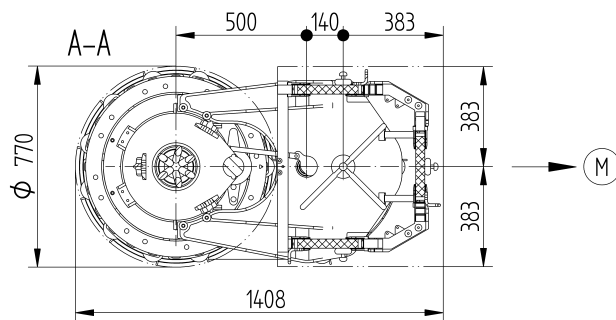
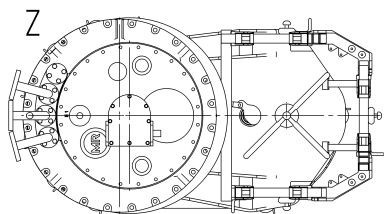


- (M) - DRIVE SIDE OF SELECTOR
 - (A) - ON-LOAD TAP-CHANGER CURRENT TAKE-OFF TERMINAL
 - (PK) - CONNECTION CONTACT
 - (PS) - TIE-IN SWITCH
 - (1) - REFER TO DIMENSION DRAWING
- THE DETAILED CONNECTION DIAGRAM IS BINDING FOR THE DESIGNATION OF THE CONNECTION CONTACTS AND PHASES

POSITION OF CONNECTION CONTACT - ORDER RELATED

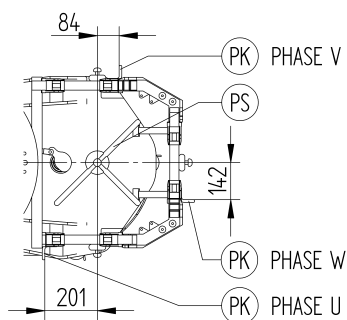


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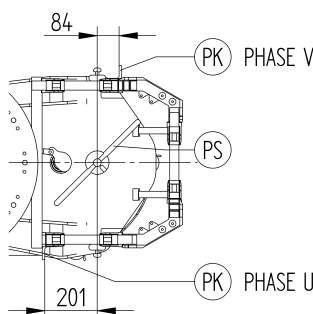


B-B

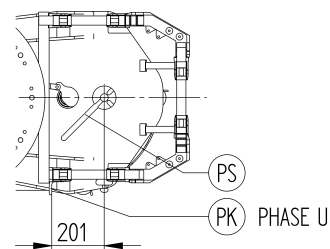
3-PHASE DESIGN



2-PHASE DESIGN



1-PHASE DESIGN



DIMENSION
 IN mm
 EXCEPT AS
 NOTED



SELECTOR SIZE RE/RF/RES
 TIE-IN SWITCH WS/GS
 DIMENSION DRAWING

SERIAL NUMBER

MATERIAL NUMBER
 100175331E

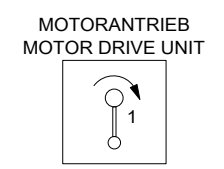
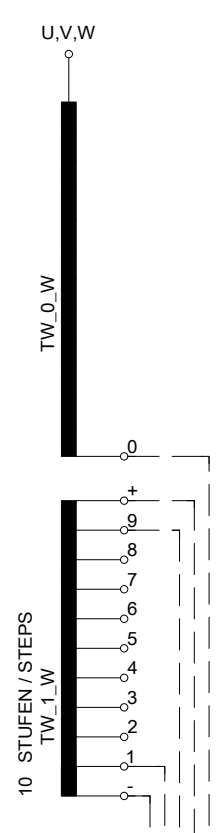
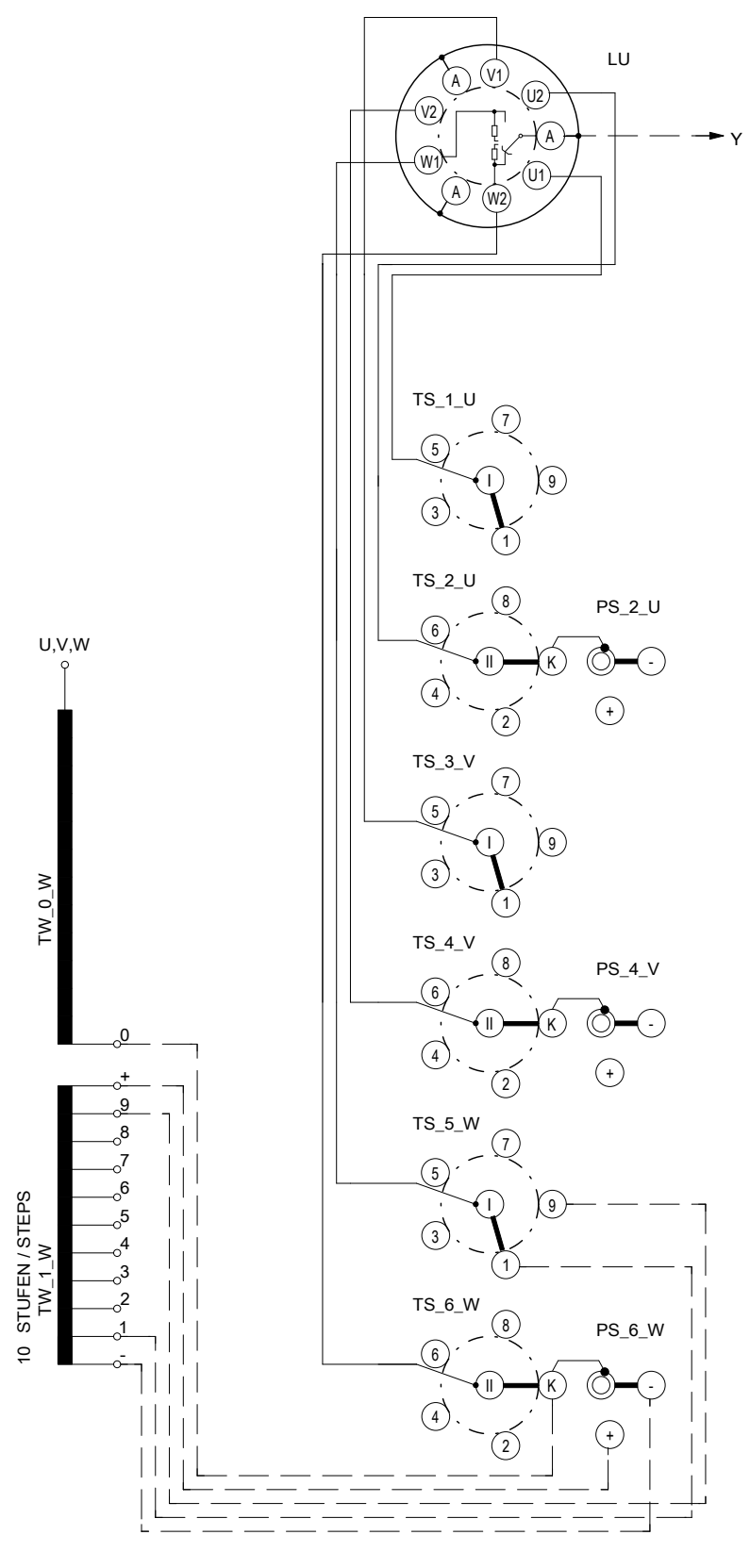
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| DOCUMENT NO. | SED 5160555 001 00 |
| NAME | CTETPRAKTIK2 |
| DATE | 18.10.2016 |
| CHKD. | 19.10.2016 |
| STAND. | 20.10.2016 |
| CHANGE NO. | 1077548 |
| SCALE | 1:10 |
| PRODASTSCHUK | |



5.9 Ejemplos de esquemas de conexiones VACUTAP® VM®

- MR VERBINDUNGEN
MR CONNECTIONS
- - - KUNDEN VERBINDUNGEN
CUSTOMER CONNECTIONS
- TS_1_U WÄHLEREBENE_U
TAP SELECTOR PLANE_U
- TS_2_U WÄHLEREBENE_U
TAP SELECTOR PLANE_U
- TS_3_V WÄHLEREBENE_V
TAP SELECTOR PLANE_V
- TS_4_V WÄHLEREBENE_V
TAP SELECTOR PLANE_V
- TS_5_W WÄHLEREBENE_W
TAP SELECTOR PLANE_W
- TS_6_W WÄHLEREBENE_W
TAP SELECTOR PLANE_W
- PS_2_U WENDER_U
REVERSING CHANGE-OVER SELECTOR_U
- PS_4_V WENDER_V
REVERSING CHANGE-OVER SELECTOR_V
- PS_6_W WENDER_W
REVERSING CHANGE-OVER SELECTOR_W
- TW_0_W TRAFOWICKLUNG_W
TRANSFORMER WINDING_W
- TW_1_W STUFENWICKLUNG_W
TAP WINDING_W
- LU LASTUMSCHALTER
DIVERTER SWITCH
- Y STERNPUNKT
STAR POINT



| | | |
|----|---|----|
| 19 | 9 | 19 |
| 18 | 8 | 18 |
| 17 | 7 | 17 |
| 16 | 6 | 16 |
| 15 | 5 | 15 |
| 14 | 4 | 14 |
| 13 | 3 | 13 |
| 12 | 2 | 12 |
| 11 | 1 | 11 |
| 10 | K | 10 |
| 9 | 9 | 9 |
| 8 | 8 | 8 |
| 7 | 7 | 7 |
| 6 | 6 | 6 |
| 5 | 5 | 5 |
| 4 | 4 | 4 |
| 3 | 3 | 3 |
| 2 | 2 | 2 |
| 1 | 1 | 1 |

→ (M)
ANTRIEBSSEITE
DRIVE SIDE

| |
|--|
| STELLUNG DES WENDERS POSITION OF REVERSING CHANGE-OVER SELECTOR |
| BETRIEBSSTELLUNG SERVICE POSITION |
| BEZEICHNUNG DER WÄHLERKONTAKTE DESIGNATION OF TAP SELECTOR CONTACTS |
| BEZEICHNUNG DER STELLUNGEN DESIGNATION OF POSITIONS |
| REGELBEREICH (kV) REGULATION RANGE (kV) |

| | |
|---|----|
| BETRIEBSSTELLUNGEN SERVICE POSITIONS | 19 |
| VERSCHIEDENE SPANNUNGEN DIFFERENT VOLTAGES | 19 |
| JUSTIERSTELLUNG ADJUSTMENT POSITION | 10 |

LASTSTUFENSCHALTER VACUTAP® VM III 650Y-170/RC-10 19 1W
ON-LOAD TAP-CHANGER

| | | | |
|-----|--------------|------|------|
| NO. | MODIFICATION | DATE | NAME |
| | | | |
| | | | |
| | | | |

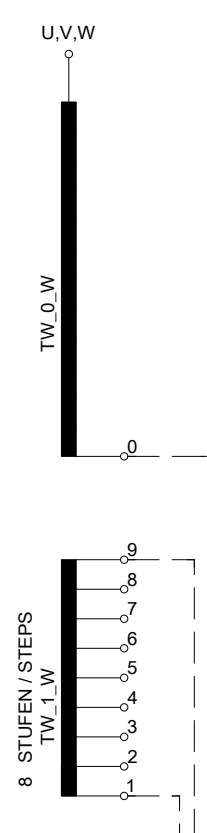
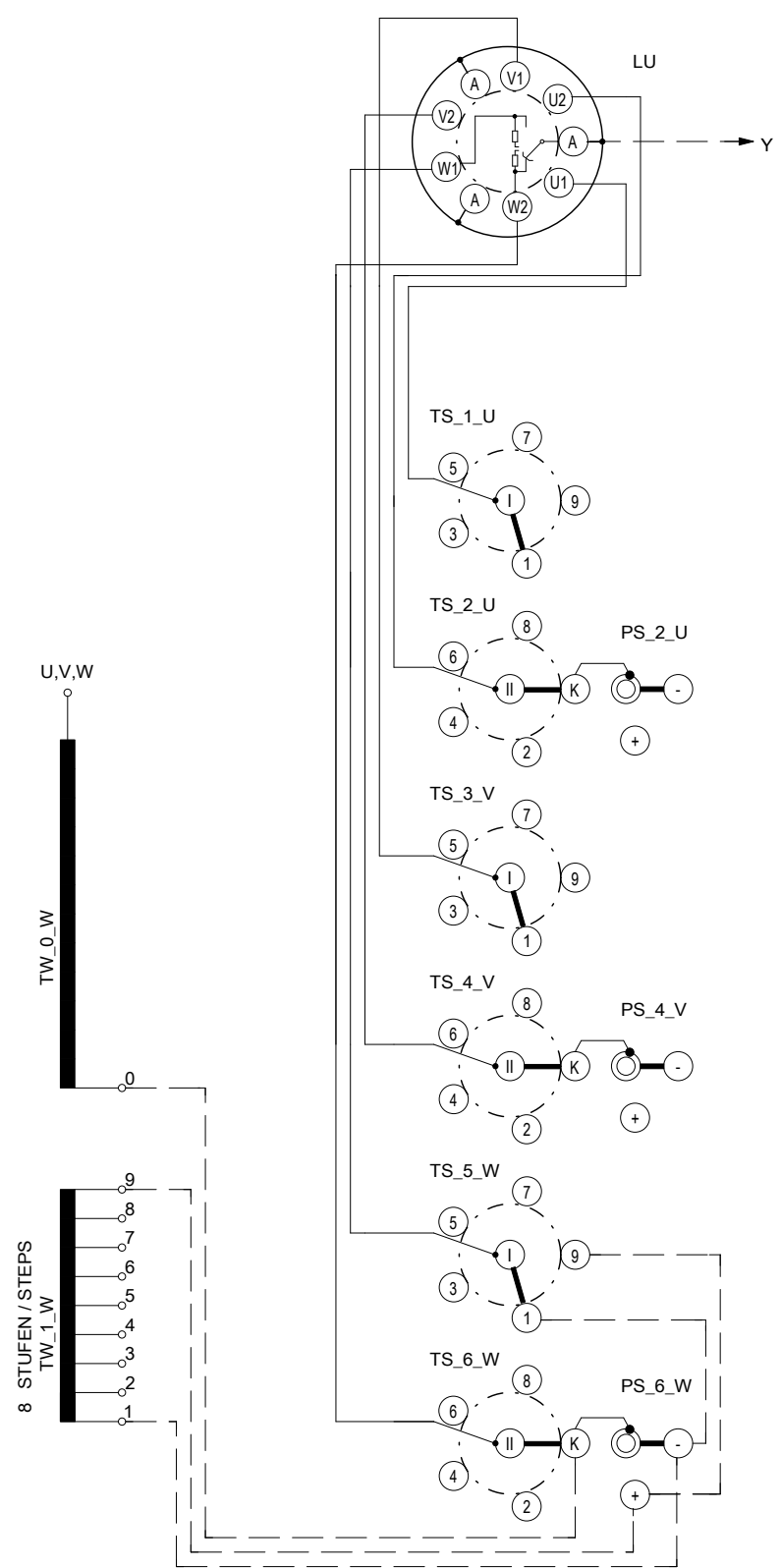
| | |
|----------|------------|
| DATE | 25.02.2015 |
| ERIC | KONFIG |
| VERIFIED | CSO |
| STANDARD | |

SCHALTBILD
CONNECTION DIAGRAM

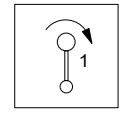
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|-----------|------------|
| LANGUAGE: | DE |
| EN | |
| PROJECT: | 4324685_00 |

DRAWING BY CAD - DO NOT MODIFY MANUALLY
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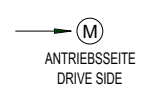
- MR VERBINDUNGEN
MR CONNECTIONS
- - - KUNDEN VERBINDUNGEN
CUSTOMER CONNECTIONS
- TS_1_U WÄHLEREbene_U
TAP SELECTOR PLANE_U
- TS_2_U WÄHLEREbene_U
TAP SELECTOR PLANE_U
- TS_3_V WÄHLEREbene_V
TAP SELECTOR PLANE_V
- TS_4_V WÄHLEREbene_V
TAP SELECTOR PLANE_V
- TS_5_W WÄHLEREbene_W
TAP SELECTOR PLANE_W
- TS_6_W WÄHLEREbene_W
TAP SELECTOR PLANE_W
- PS_2_U WENDER_U
REVERSING CHANGE-OVER SELECTOR_U
- PS_4_V WENDER_V
REVERSING CHANGE-OVER SELECTOR_V
- PS_6_W WENDER_W
REVERSING CHANGE-OVER SELECTOR_W
- TW_0_W TRAFOWICKLUNG_W
TRANSFORMER WINDING_W
- TW_1_W STUFENWICKLUNG_W
TAP WINDING_W
- LU LASTUMSCHALTER
DIVERTER SWITCH
- Y STERNPUNKT
STAR POINT



MOTORANTRIEB
MOTOR DRIVE UNIT



| | | | |
|----|---|----|--|
| 19 | 9 | 17 | |
| 18 | 8 | 16 | |
| 17 | 7 | 15 | |
| 16 | 6 | 14 | |
| 15 | 5 | 13 | |
| 14 | 4 | 12 | |
| 13 | 3 | 11 | |
| 12 | 2 | 10 | |
| 11 | 1 | 9C | |
| 10 | K | 9B | |
| 9 | 9 | 9A | |
| 8 | 8 | 8 | |
| 7 | 7 | 7 | |
| 6 | 6 | 6 | |
| 5 | 5 | 5 | |
| 4 | 4 | 4 | |
| 3 | 3 | 3 | |
| 2 | 2 | 2 | |
| 1 | 1 | 1 | |



| | |
|--|----|
| STELLUNG DES WENDERS POSITION OF REVERSING CHANGE-OVER SELECTOR | 19 |
| BETRIEBSSTELLUNG SERVICE POSITION | 17 |
| BEZEICHNUNG DER WÄHLERKONTAKTE DESIGNATION OF TAP SELECTOR CONTACTS | 9B |
| BEZEICHNUNG DER STELLUNGEN DESIGNATION OF POSITIONS | |
| REGELBEREICH (kV) REGULATION RANGE (kV) | |

| | |
|---|----|
| BETRIEBSSTELLUNGEN SERVICE POSITIONS | 19 |
| VERSCHIEDENE SPANNUNGEN DIFFERENT VOLTAGES | 17 |
| JUSTIERSTELLUNG ADJUSTMENT POSITION | 9B |

LASTSTUFENSCHALTER VACUTAP® VM III 650Y-170/RC-10 19 3W
ON-LOAD TAP-CHANGER

| | | | |
|-----|---------------------|------------|------|
| 01 | 8 Stufen, vers. Spg | 25.11.2015 | EFR |
| NO. | MODIFICATION | DATE | NAME |

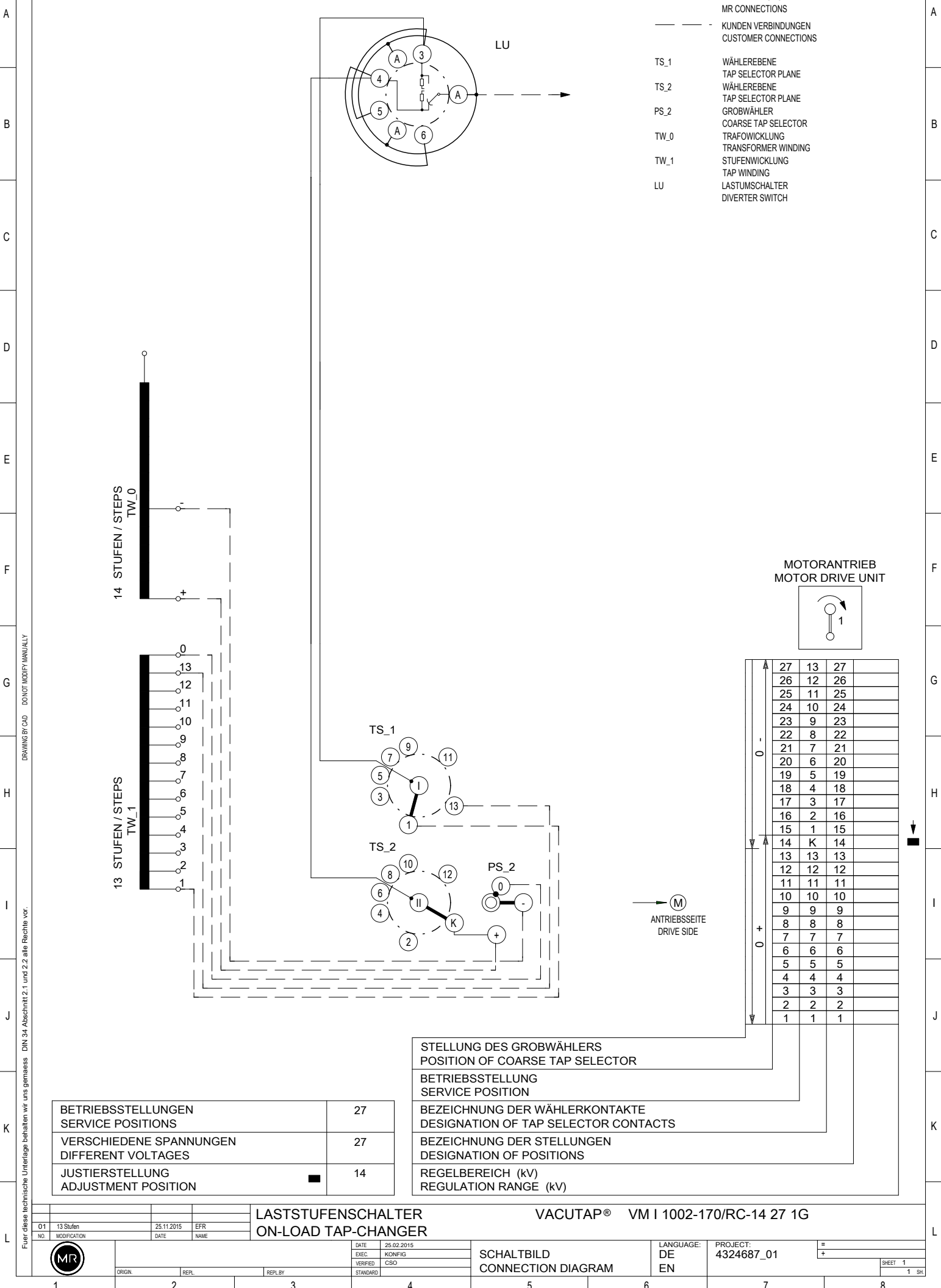


| | |
|----------|------------|
| DATE | 25.02.2015 |
| ERIC | KONFIG |
| VERIFIED | CSO |
| STANDARD | |

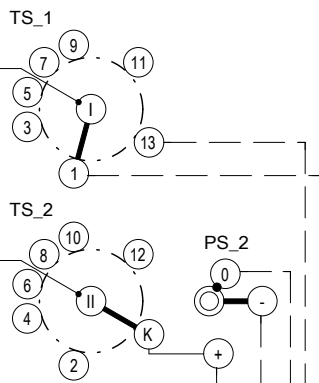
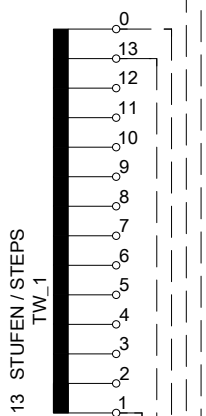
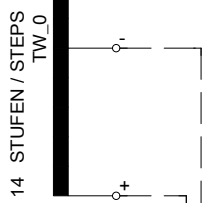
SCHALTBILD
CONNECTION DIAGRAM

| | |
|-----------|------------|
| LANGUAGE: | DE |
| EN | |
| PROJECT: | 4324686_01 |

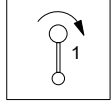
FÜR DIESE TECHNISCHE UNTERLAGE BEHALTEN WIR UNS GEMÄSS DIN 34 ABSCHNITT 2.1 UND 2.2 ALLE RECHTE VOR.
DRAWING BY CAD DO NOT MODIFY MANUALLY



- MR VERBINDUNGEN
MR CONNECTIONS
- - - KUNDEN VERBINDUNGEN
CUSTOMER CONNECTIONS
- TS_1 WÄHLEREBENE
TAP SELECTOR PLANE
- TS_2 WÄHLEREBENE
TAP SELECTOR PLANE
- PS_2 GROBWÄHLER
COARSE TAP SELECTOR
- TW_0 TRAFOWICKLUNG
TRANSFORMER WINDING
- TW_1 STUFENWICKLUNG
TAP WINDING
- LU LASTUMSCHALTER
DIVERTER SWITCH



MOTORANTRIEB
MOTOR DRIVE UNIT



| | | | |
|----|----|----|--|
| 27 | 13 | 27 | |
| 26 | 12 | 26 | |
| 25 | 11 | 25 | |
| 24 | 10 | 24 | |
| 23 | 9 | 23 | |
| 22 | 8 | 22 | |
| 21 | 7 | 21 | |
| 20 | 6 | 20 | |
| 19 | 5 | 19 | |
| 18 | 4 | 18 | |
| 17 | 3 | 17 | |
| 16 | 2 | 16 | |
| 15 | 1 | 15 | |
| 14 | K | 14 | |
| 13 | 13 | 13 | |
| 12 | 12 | 12 | |
| 11 | 11 | 11 | |
| 10 | 10 | 10 | |
| 9 | 9 | 9 | |
| 8 | 8 | 8 | |
| 7 | 7 | 7 | |
| 6 | 6 | 6 | |
| 5 | 5 | 5 | |
| 4 | 4 | 4 | |
| 3 | 3 | 3 | |
| 2 | 2 | 2 | |
| 1 | 1 | 1 | |

→ (M)
ANTRIEBSSEITE
DRIVE SIDE

| |
|--|
| STELLUNG DES GROBWÄHLERS POSITION OF COARSE TAP SELECTOR |
| BETRIEBSSTELLUNG SERVICE POSITION |
| BEZEICHNUNG DER WÄHLERKONTAKTE DESIGNATION OF TAP SELECTOR CONTACTS |
| BEZEICHNUNG DER STELLUNGEN DESIGNATION OF POSITIONS |
| REGELBEREICH (kV) REGULATION RANGE (kV) |

| | |
|---|----|
| BETRIEBSSTELLUNGEN SERVICE POSITIONS | 27 |
| VERSCHIEDENE SPANNUNGEN DIFFERENT VOLTAGES | 27 |
| JUSTIERSTELLUNG ADJUSTMENT POSITION | 14 |

LASTSTUFENSCHALTER VACUTAP® VM I 1002-170/RC-14 27 1G
ON-LOAD TAP-CHANGER

| | | | |
|-----|--------------|------------|------|
| 01 | 13 Stufen | 25.11.2015 | EFR |
| NO. | MODIFICATION | DATE | NAME |

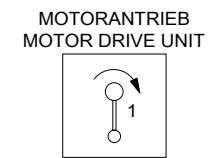
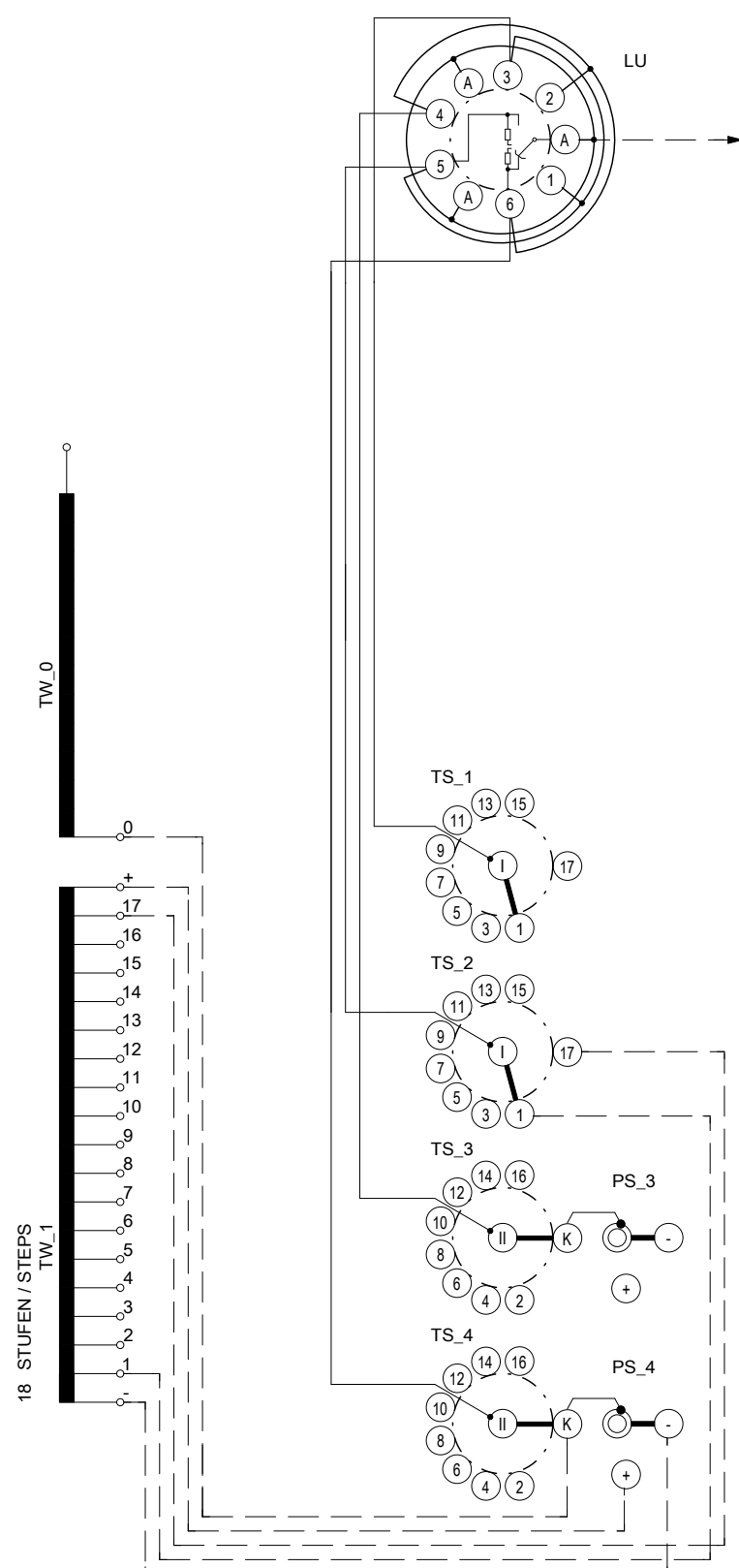
| | |
|----------|------------|
| DATE | 25.02.2015 |
| ERIC | KONFIG |
| VERIFIED | CSO |
| STANDARD | |

SCHALTBILD
CONNECTION DIAGRAM

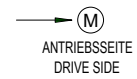
LANGUAGE:
DE PROJECT: 4324687_01
EN

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- MR VERBINDUNGEN
MR CONNECTIONS
- - - KUNDEN VERBINDUNGEN
CUSTOMER CONNECTIONS
- TS_1 WÄHLEREBENE
TAP SELECTOR PLANE
- TS_2 WÄHLEREBENE
TAP SELECTOR PLANE
- TS_3 WÄHLEREBENE
TAP SELECTOR PLANE
- TS_4 WÄHLEREBENE
TAP SELECTOR PLANE
- PS_3 WENDER
REVERSING CHANGE-OVER SELECTOR
- PS_4 WENDER
REVERSING CHANGE-OVER SELECTOR
- TW_0 TRAFOWICKLUNG
TRANSFORMER WINDING
- TW_1 STUFENWICKLUNG
TAP WINDING
- LU LASTUMSCHALTER
DIVERTER SWITCH



| | | |
|----|----|----|
| 35 | 17 | 35 |
| 34 | 16 | 34 |
| 33 | 15 | 33 |
| 32 | 14 | 32 |
| 31 | 13 | 31 |
| 30 | 12 | 30 |
| 29 | 11 | 29 |
| 28 | 10 | 28 |
| 27 | 9 | 27 |
| 26 | 8 | 26 |
| 25 | 7 | 25 |
| 24 | 6 | 24 |
| 23 | 5 | 23 |
| 22 | 4 | 22 |
| 21 | 3 | 21 |
| 20 | 2 | 20 |
| 19 | 1 | 19 |
| 18 | K | 18 |
| 17 | 17 | 17 |
| 16 | 16 | 16 |
| 15 | 15 | 15 |
| 14 | 14 | 14 |
| 13 | 13 | 13 |
| 12 | 12 | 12 |
| 11 | 11 | 11 |
| 10 | 10 | 10 |
| 9 | 9 | 9 |
| 8 | 8 | 8 |
| 7 | 7 | 7 |
| 6 | 6 | 6 |
| 5 | 5 | 5 |
| 4 | 4 | 4 |
| 3 | 3 | 3 |
| 2 | 2 | 2 |
| 1 | 1 | 1 |



STELLUNG DES WENDERS
POSITION OF REVERSING CHANGE-OVER SELECTOR

BETRIEBSSTELLUNG
SERVICE POSITION

BEZEICHNUNG DER WÄHLERKONTAKTE
DESIGNATION OF TAP SELECTOR CONTACTS

BEZEICHNUNG DER STELLUNGEN
DESIGNATION OF POSITIONS

REGELBEREICH (kV)
REGULATION RANGE (kV)

| | |
|---|----|
| BETRIEBSSTELLUNGEN SERVICE POSITIONS | 35 |
| VERSCHIEDENE SPANNUNGEN DIFFERENT VOLTAGES | 35 |
| JUSTIERSTELLUNG ADJUSTMENT POSITION | 18 |

LASTSTUFENSCHALTER VACUTAP® VM I 1503-170/RC-18 35 1W
ON-LOAD TAP-CHANGER

| | | | |
|-----|--------------|------|------|
| NO. | MODIFICATION | DATE | NAME |
| | | | |

| | |
|----------|------------|
| DATE | 25.02.2015 |
| ERIC | KONFIG |
| VERIFIED | CSO |
| STANDARD | |

SCHALTBILD
CONNECTION DIAGRAM

| | |
|-----------|------------|
| LANGUAGE: | DE |
| EN | |
| PROJECT: | 4324689_00 |

| | |
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| = | |
| + | |
| SHEET | 1 |
| 1 | SH |

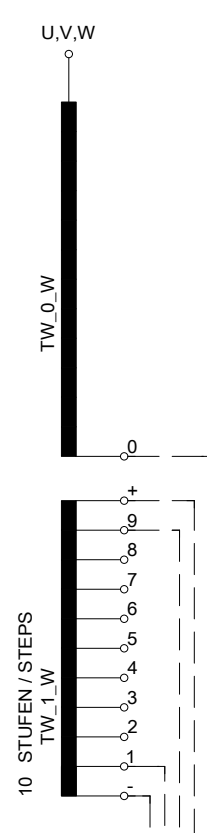
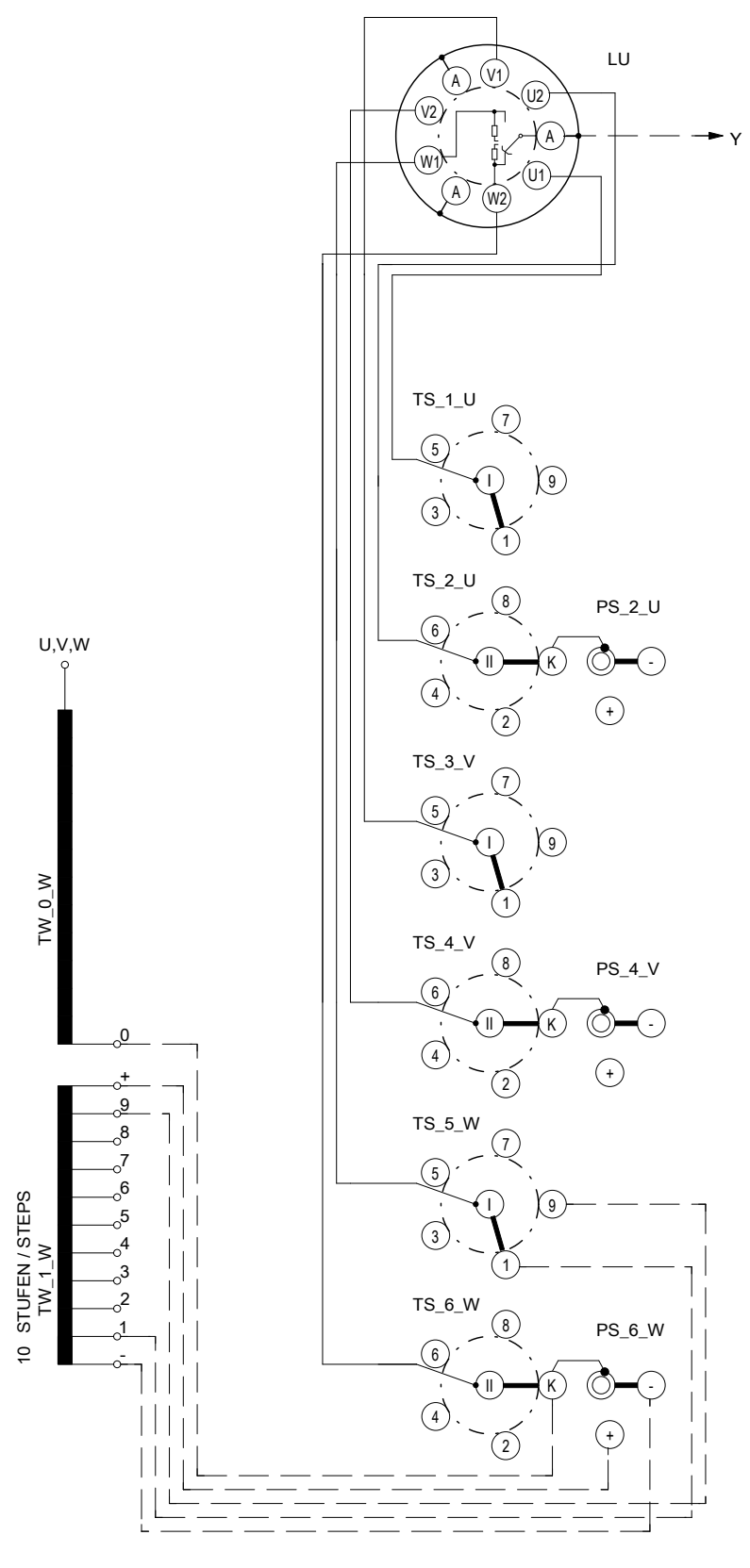
DRAWING BY CAD - DONOT MODIFY MANUALLY

Für diese technische Unterlage behalten wir uns gemäss DIN 34 Abschnitt 2.1 und 2.2 alle Rechte vor.

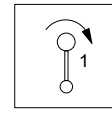


5.10 Ejemplos de esquemas de conexiones OILTAP® M

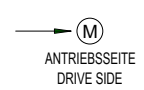
- MR VERBINDUNGEN
MR CONNECTIONS
- - - KUNDEN VERBINDUNGEN
CUSTOMER CONNECTIONS
- TS_1_U WÄHLEREBENE_U
TAP SELECTOR PLANE_U
- TS_2_U WÄHLEREBENE_U
TAP SELECTOR PLANE_U
- TS_3_V WÄHLEREBENE_V
TAP SELECTOR PLANE_V
- TS_4_V WÄHLEREBENE_V
TAP SELECTOR PLANE_V
- TS_5_W WÄHLEREBENE_W
TAP SELECTOR PLANE_W
- TS_6_W WÄHLEREBENE_W
TAP SELECTOR PLANE_W
- PS_2_U WENDER_U
REVERSING CHANGE-OVER SELECTOR_U
- PS_4_V WENDER_V
REVERSING CHANGE-OVER SELECTOR_V
- PS_6_W WENDER_W
REVERSING CHANGE-OVER SELECTOR_W
- TW_0_W TRAFOWICKLUNG_W
TRANSFORMER WINDING_W
- TW_1_W STUFENWICKLUNG_W
TAP WINDING_W
- LU LASTUMSCHALTER
DIVERTER SWITCH
- Y STERNPUNKT
STAR POINT



MOTORANTRIEB
MOTOR DRIVE UNIT



| | | | |
|----|---|----|--|
| 19 | 9 | 19 | |
| 18 | 8 | 18 | |
| 17 | 7 | 17 | |
| 16 | 6 | 16 | |
| 15 | 5 | 15 | |
| 14 | 4 | 14 | |
| 13 | 3 | 13 | |
| 12 | 2 | 12 | |
| 11 | 1 | 11 | |
| 10 | K | 10 | |
| 9 | 9 | 9 | |
| 8 | 8 | 8 | |
| 7 | 7 | 7 | |
| 6 | 6 | 6 | |
| 5 | 5 | 5 | |
| 4 | 4 | 4 | |
| 3 | 3 | 3 | |
| 2 | 2 | 2 | |
| 1 | 1 | 1 | |



STELLUNG DES WENDERS
POSITION OF REVERSING CHANGE-OVER SELECTOR

BETRIEBSSTELLUNG
SERVICE POSITION

BEZEICHNUNG DER WÄHLERKONTAKTE
DESIGNATION OF TAP SELECTOR CONTACTS

BEZEICHNUNG DER STELLUNGEN
DESIGNATION OF POSITIONS

REGELBEREICH (kV)
REGULATION RANGE (kV)

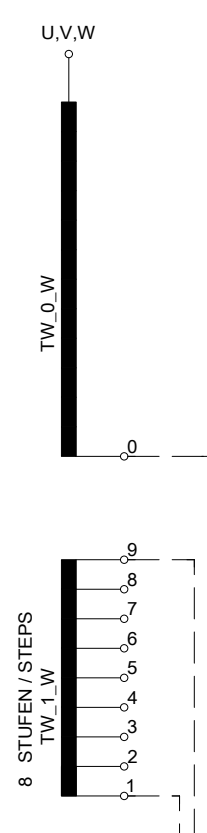
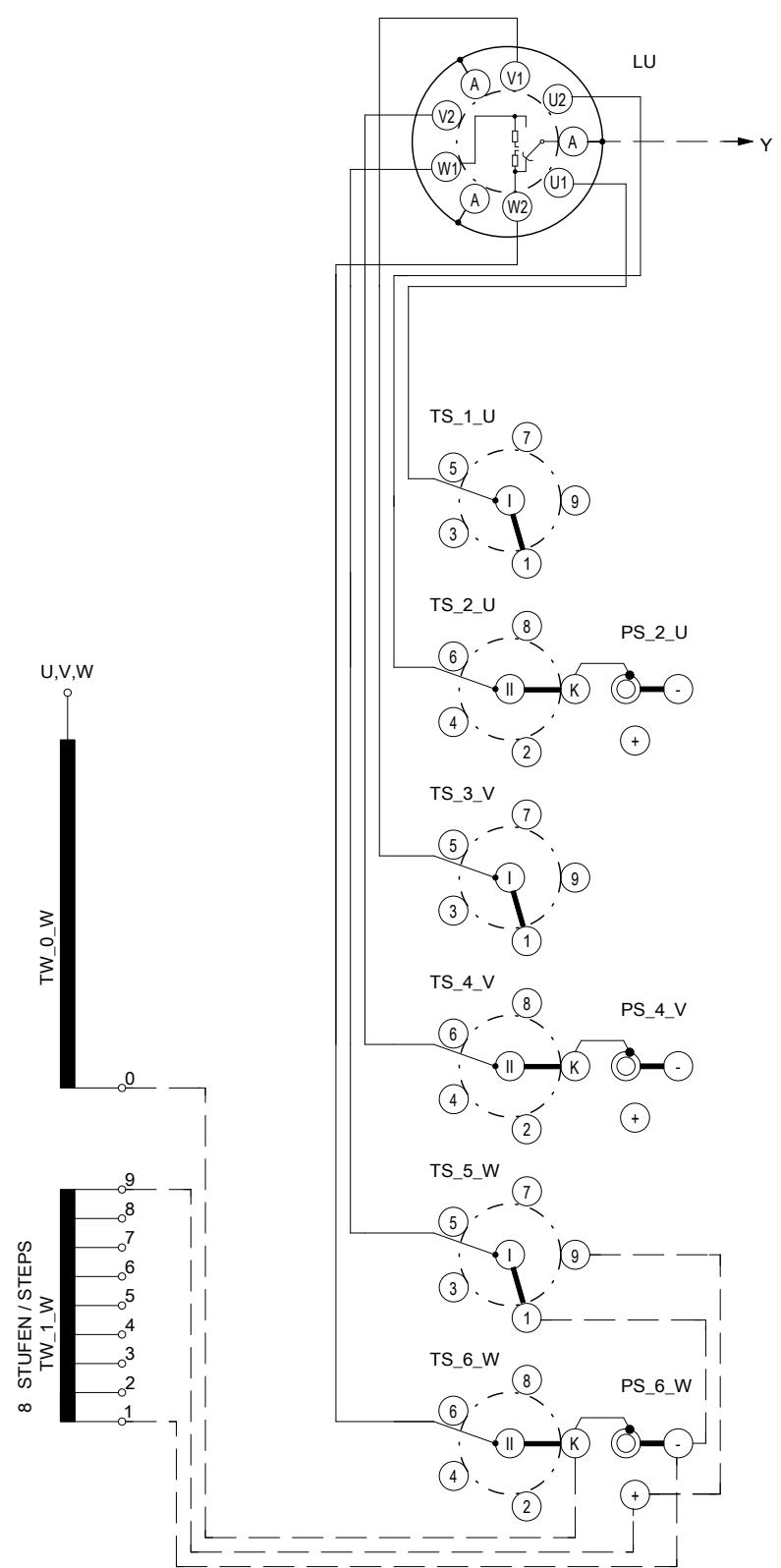
| | |
|---|----|
| BETRIEBSSTELLUNGEN SERVICE POSITIONS | 19 |
| VERSCHIEDENE SPANNUNGEN DIFFERENT VOLTAGES | 19 |
| JUSTIERSTELLUNG ADJUSTMENT POSITION | 10 |

LASTSTUFENSCHALTER
ON-LOAD TAP-CHANGER

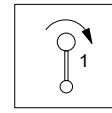
OILTAP® M III 600Y-170/RC-10 19 1W

FÜR DIESE TECHNISCHE UNTERLAGE BEHALTEN WIR UNS GEMÄSS DIN 34 ABSCHNITT 2.1 UND 2.2 ALLE RECHTE VOR.
 DRAWING BY CAD DO NOT MODIFY MANUALLY

- MR VERBINDUNGEN
MR CONNECTIONS
- - - KUNDEN VERBINDUNGEN
CUSTOMER CONNECTIONS
- TS_1_U WÄHLEREBENE_U
TAP SELECTOR PLANE_U
- TS_2_U WÄHLEREBENE_U
TAP SELECTOR PLANE_U
- TS_3_V WÄHLEREBENE_V
TAP SELECTOR PLANE_V
- TS_4_V WÄHLEREBENE_V
TAP SELECTOR PLANE_V
- TS_5_W WÄHLEREBENE_W
TAP SELECTOR PLANE_W
- TS_6_W WÄHLEREBENE_W
TAP SELECTOR PLANE_W
- PS_2_U WENDER_U
REVERSING CHANGE-OVER SELECTOR_U
- PS_4_V WENDER_V
REVERSING CHANGE-OVER SELECTOR_V
- PS_6_W WENDER_W
REVERSING CHANGE-OVER SELECTOR_W
- TW_0_W TRAFOWICKLUNG_W
TRANSFORMER WINDING_W
- TW_1_W STUFENWICKLUNG_W
TAP WINDING_W
- LU LASTUMSCHALTER
DIVERTER SWITCH
- Y STERNPUNKT
STAR POINT



**MOTORANTRIEB
MOTOR DRIVE UNIT**



→ (M)
ANTRIEBSSEITE
DRIVE SIDE

| | | | |
|----|---|----|--|
| 19 | 9 | 17 | |
| 18 | 8 | 16 | |
| 17 | 7 | 15 | |
| 16 | 6 | 14 | |
| 15 | 5 | 13 | |
| 14 | 4 | 12 | |
| 13 | 3 | 11 | |
| 12 | 2 | 10 | |
| 11 | 1 | 9C | |
| 10 | K | 9B | |
| 9 | 9 | 9A | |
| 8 | 8 | 8 | |
| 7 | 7 | 7 | |
| 6 | 6 | 6 | |
| 5 | 5 | 5 | |
| 4 | 4 | 4 | |
| 3 | 3 | 3 | |
| 2 | 2 | 2 | |
| 1 | 1 | 1 | |

STELLUNG DES WENDERS
POSITION OF REVERSING CHANGE-OVER SELECTOR

BETRIEBSSTELLUNG
SERVICE POSITION

BEZEICHNUNG DER WÄHLERKONTAKTE
DESIGNATION OF TAP SELECTOR CONTACTS

BEZEICHNUNG DER STELLUNGEN
DESIGNATION OF POSITIONS

REGELBEREICH (kV)
REGULATION RANGE (kV)

| | |
|---|----|
| BETRIEBSSTELLUNGEN SERVICE POSITIONS | 19 |
| VERSCHIEDENE SPANNUNGEN DIFFERENT VOLTAGES | 17 |
| JUSTIERSTELLUNG ADJUSTMENT POSITION | 9B |

LASTSTUFENSCHALTER ON-LOAD TAP-CHANGER OILTAP® M III 600Y-170/RC-10 19 3W

| | | | |
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| 01 | 8 Stufen, vers. Spg | 26.11.2015 | EFR |
| NO. | MODIFICATION | DATE | NAME |



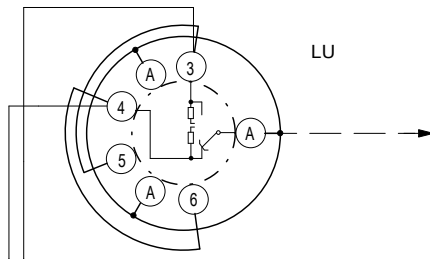
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|----------|------------|
| DATE | 27.02.2015 |
| ERIC | KONFIG |
| VERIFIED | CSO |
| STANDARD | |

SCHALTBILD
CONNECTION DIAGRAM

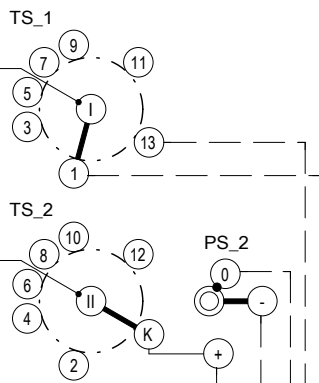
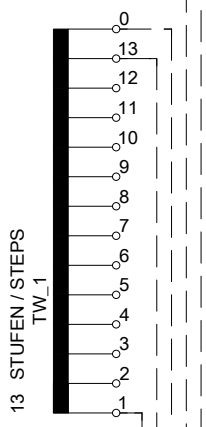
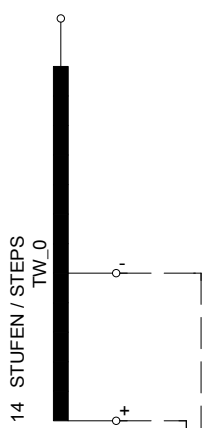
LANGUAGE:
DE PROJECT: 4327935_01
EN

Für diese technische Unterlage behalten wir uns gemäss DIN 34 Abschnitt 2.1 und 2.2 alle Rechte vor. DRAWING BY CAD DO NOT MODIFY MANUALLY

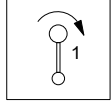
Für diese technische Unterlage behalten wir uns gemäss DIN 34 Abschnitt 2.1 und 2.2 alle Rechte vor. DRAWING BY CAD DO NOT MODIFY MANUALLY



- MR VERBINDUNGEN
MR CONNECTIONS
- - - KUNDEN VERBINDUNGEN
CUSTOMER CONNECTIONS
- TS_1 WÄHLEREBENE
TAP SELECTOR PLANE
- TS_2 WÄHLEREBENE
TAP SELECTOR PLANE
- PS_2 GROBWÄHLER
COARSE TAP SELECTOR
- TW_0 TRAFOWICKLUNG
TRANSFORMER WINDING
- TW_1 STUFENWICKLUNG
TAP WINDING
- LU LASTUMSCHALTER
DIVERTER SWITCH



MOTORANTRIEB
MOTOR DRIVE UNIT



| | | | |
|----|----|----|--|
| 27 | 13 | 27 | |
| 26 | 12 | 26 | |
| 25 | 11 | 25 | |
| 24 | 10 | 24 | |
| 23 | 9 | 23 | |
| 22 | 8 | 22 | |
| 21 | 7 | 21 | |
| 20 | 6 | 20 | |
| 19 | 5 | 19 | |
| 18 | 4 | 18 | |
| 17 | 3 | 17 | |
| 16 | 2 | 16 | |
| 15 | 1 | 15 | |
| 14 | K | 14 | |
| 13 | 13 | 13 | |
| 12 | 12 | 12 | |
| 11 | 11 | 11 | |
| 10 | 10 | 10 | |
| 9 | 9 | 9 | |
| 8 | 8 | 8 | |
| 7 | 7 | 7 | |
| 6 | 6 | 6 | |
| 5 | 5 | 5 | |
| 4 | 4 | 4 | |
| 3 | 3 | 3 | |
| 2 | 2 | 2 | |
| 1 | 1 | 1 | |

→ (M)
ANTRIEBSSEITE
DRIVE SIDE

STELLUNG DES GROBWÄHLERS
POSITION OF COARSE TAP SELECTOR

BETRIEBSSTELLUNG
SERVICE POSITION

BEZEICHNUNG DER WÄHLERKONTAKTE
DESIGNATION OF TAP SELECTOR CONTACTS

BEZEICHNUNG DER STELLUNGEN
DESIGNATION OF POSITIONS

REGELBEREICH (kV)
REGULATION RANGE (kV)

| | |
|---|----|
| BETRIEBSSTELLUNGEN SERVICE POSITIONS | 27 |
| VERSCHIEDENE SPANNUNGEN DIFFERENT VOLTAGES | 27 |
| JUSTIERSTELLUNG ADJUSTMENT POSITION | 14 |

LASTSTUFENSCHALTER ON-LOAD TAP-CHANGER OILTAP® M I 802-170/RC-14 27 1G

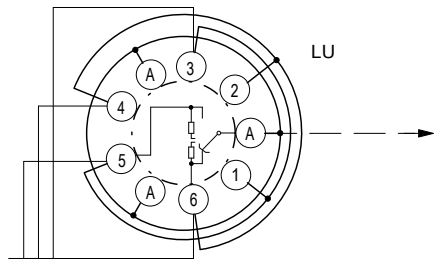
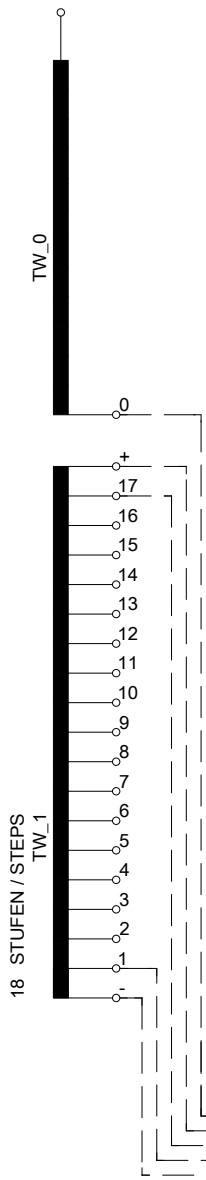
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|-----|--------------|------------|------|
| 01 | 13 Stufen | 25.11.2015 | EFR |
| NO. | MODIFICATION | DATE | NAME |

| | |
|----------|------------|
| DATE | 27.02.2015 |
| EXEC. | KONFIG |
| VERIFIED | CSO |
| STANDARD | |

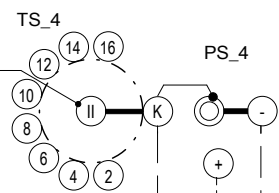
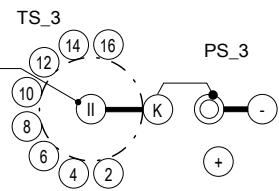
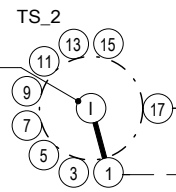
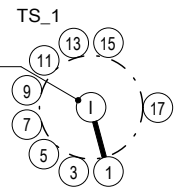
SCHALTBILD
CONNECTION DIAGRAM

LANGUAGE: DE EN
PROJECT: 4327936_01

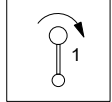
FÜR DIESE TECHNISCHE UNTERLAGE BEHALTEN WIR UNS GEMÄSS DIN 34 ABSCHNITT 2.1 UND 2.2 ALLE RECHTE VOR.
 DRAWING BY CAD DO NOT MODIFY MANUALLY



- MR VERBINDUNGEN
MR CONNECTIONS
- - - KUNDEN VERBINDUNGEN
CUSTOMER CONNECTIONS
- TS_1 WÄHLEREBENE
TAP SELECTOR PLANE
- TS_2 WÄHLEREBENE
TAP SELECTOR PLANE
- TS_3 WÄHLEREBENE
TAP SELECTOR PLANE
- TS_4 WÄHLEREBENE
TAP SELECTOR PLANE
- PS_3 WENDER
REVERSING CHANGE-OVER SELECTOR
- PS_4 WENDER
REVERSING CHANGE-OVER SELECTOR
- TW_0 TRAFOWICKLUNG
TRANSFORMER WINDING
- TW_1 STUFENWICKLUNG
TAP WINDING
- LU LASTUMSCHALTER
DIVERTER SWITCH



MOTORANTRIEB
MOTOR DRIVE UNIT



| | | |
|----|----|----|
| 35 | 17 | 35 |
| 34 | 16 | 34 |
| 33 | 15 | 33 |
| 32 | 14 | 32 |
| 31 | 13 | 31 |
| 30 | 12 | 30 |
| 29 | 11 | 29 |
| 28 | 10 | 28 |
| 27 | 9 | 27 |
| 26 | 8 | 26 |
| 25 | 7 | 25 |
| 24 | 6 | 24 |
| 23 | 5 | 23 |
| 22 | 4 | 22 |
| 21 | 3 | 21 |
| 20 | 2 | 20 |
| 19 | 1 | 19 |
| 18 | K | 18 |
| 17 | 17 | 17 |
| 16 | 16 | 16 |
| 15 | 15 | 15 |
| 14 | 14 | 14 |
| 13 | 13 | 13 |
| 12 | 12 | 12 |
| 11 | 11 | 11 |
| 10 | 10 | 10 |
| 9 | 9 | 9 |
| 8 | 8 | 8 |
| 7 | 7 | 7 |
| 6 | 6 | 6 |
| 5 | 5 | 5 |
| 4 | 4 | 4 |
| 3 | 3 | 3 |
| 2 | 2 | 2 |
| 1 | 1 | 1 |

ANTRIEBSSEITE
DRIVE SIDE

| | |
|---|----|
| BETRIEBSSTELLUNGEN SERVICE POSITIONS | 35 |
| VERSCHIEDENE SPANNUNGEN DIFFERENT VOLTAGES | 35 |
| JUSTIERSTELLUNG ADJUSTMENT POSITION | 18 |

| | |
|--|--|
| STELLUNG DES WENDERS POSITION OF REVERSING CHANGE-OVER SELECTOR | |
| BETRIEBSSTELLUNG SERVICE POSITION | |
| BEZEICHNUNG DER WÄHLERKONTAKTE DESIGNATION OF TAP SELECTOR CONTACTS | |
| BEZEICHNUNG DER STELLUNGEN DESIGNATION OF POSITIONS | |
| REGELBEREICH (kV) REGULATION RANGE (kV) | |

LASTSTUFENSCHALTER ON-LOAD TAP-CHANGER OILTAP® M I 1503-170/RC-18 35 1W

| NO. | MODIFICATION | DATE | NAME |
|-----|--------------|------|------|
| | | | |



| | |
|----------|------------|
| DATE | 27.02.2015 |
| ERIC | KONFIG |
| VERIFIED | CSO |
| STANDARD | |

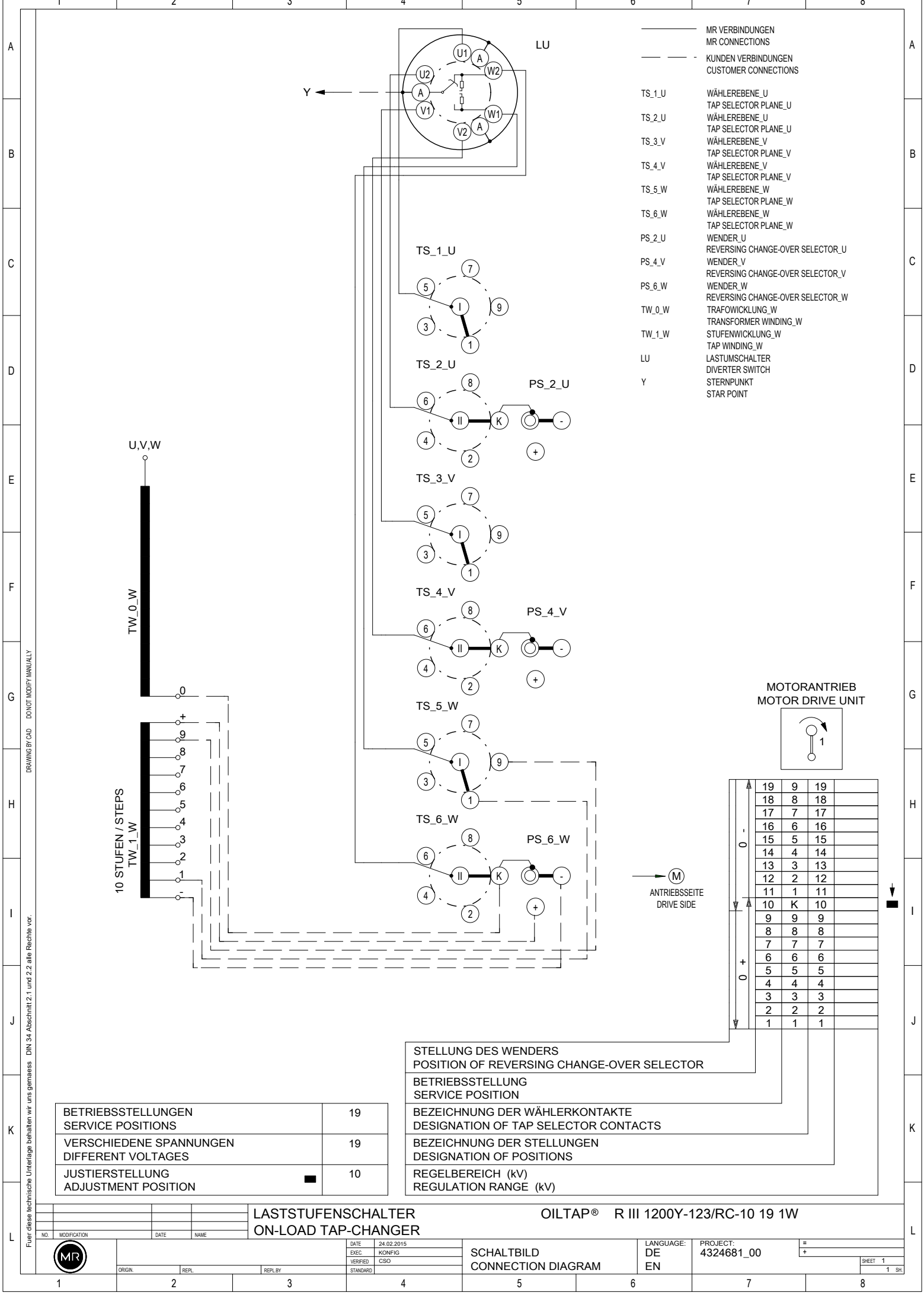
SCHALTBILD
CONNECTION DIAGRAM

LANGUAGE:
DE
EN

PROJECT:
4327937_00

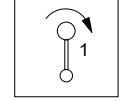


5.11 Ejemplos de esquemas de conexiones OILTAP® R



- MR VERBINDUNGEN
MR CONNECTIONS
- - - KUNDEN VERBINDUNGEN
CUSTOMER CONNECTIONS
- TS_1_U WÄHLEREBENE_U
TAP SELECTOR PLANE_U
- TS_2_U WÄHLEREBENE_U
TAP SELECTOR PLANE_U
- TS_3_V WÄHLEREBENE_V
TAP SELECTOR PLANE_V
- TS_4_V WÄHLEREBENE_V
TAP SELECTOR PLANE_V
- TS_5_W WÄHLEREBENE_W
TAP SELECTOR PLANE_W
- TS_6_W WÄHLEREBENE_W
TAP SELECTOR PLANE_W
- PS_2_U WENDER_U
REVERSING CHANGE-OVER SELECTOR_U
- PS_4_V WENDER_V
REVERSING CHANGE-OVER SELECTOR_V
- PS_6_W WENDER_W
REVERSING CHANGE-OVER SELECTOR_W
- TW_0_W TRAFOWICKLUNG_W
TRANSFORMER WINDING_W
- TW_1_W STUFENWICKLUNG_W
TAP WINDING_W
- LU LASTUMSCHALTER
DIVERTER SWITCH
- Y STERNPUNKT
STAR POINT

**MOTORANTRIEB
MOTOR DRIVE UNIT**



| | | | |
|----|---|----|--|
| 19 | 9 | 19 | |
| 18 | 8 | 18 | |
| 17 | 7 | 17 | |
| 16 | 6 | 16 | |
| 15 | 5 | 15 | |
| 14 | 4 | 14 | |
| 13 | 3 | 13 | |
| 12 | 2 | 12 | |
| 11 | 1 | 11 | |
| 10 | K | 10 | |
| 9 | 9 | 9 | |
| 8 | 8 | 8 | |
| 7 | 7 | 7 | |
| 6 | 6 | 6 | |
| 5 | 5 | 5 | |
| 4 | 4 | 4 | |
| 3 | 3 | 3 | |
| 2 | 2 | 2 | |
| 1 | 1 | 1 | |

(M)
ANTRIEBSSEITE
DRIVE SIDE

STELLUNG DES WENDERS
POSITION OF REVERSING CHANGE-OVER SELECTOR

BETRIEBSSTELLUNG
SERVICE POSITION

BEZEICHNUNG DER WÄHLERKONTAKTE
DESIGNATION OF TAP SELECTOR CONTACTS

BEZEICHNUNG DER STELLUNGEN
DESIGNATION OF POSITIONS

REGELBEREICH (kV)
REGULATION RANGE (kV)

| | |
|---|----|
| BETRIEBSSTELLUNGEN SERVICE POSITIONS | 19 |
| VERSCHIEDENE SPANNUNGEN DIFFERENT VOLTAGES | 19 |
| JUSTIERSTELLUNG ADJUSTMENT POSITION | 10 |

LASTSTUFENSCHALTER ON-LOAD TAP-CHANGER OILTAP® R III 1200Y-123/RC-10 19 1W

| | | | |
|-----|--------------|------|------|
| NO. | MODIFICATION | DATE | NAME |
| | | | |



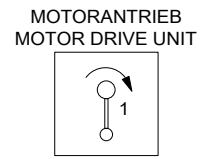
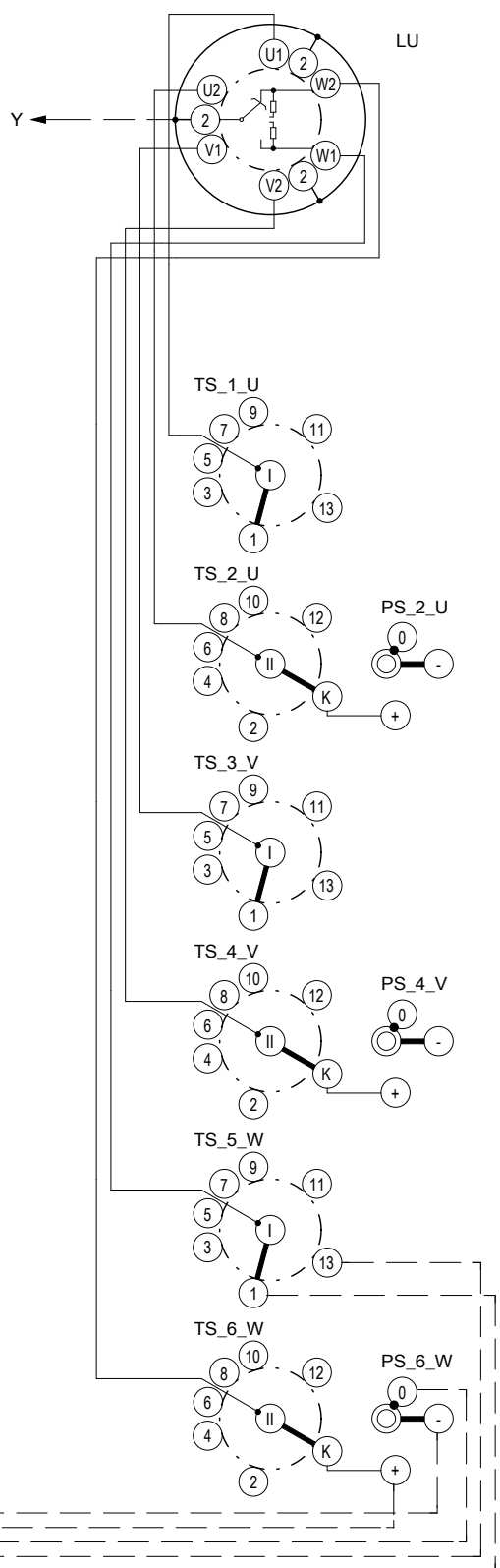
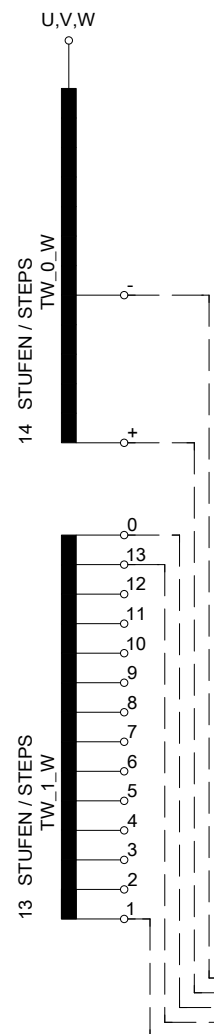
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| DATE | 24.02.2015 |
| ERIC | KONFIG |
| VERIFIED | CSO |
| STANDARD | |

SCHALTBILD
CONNECTION DIAGRAM

LANGUAGE:
DE PROJECT: 4324681_00
EN

Für diese technische Unterlage behalten wir uns gemäss DIN 34 Abschnitt 2.1 und 2.2 alle Rechte vor. DRAWING BY CAD DO NOT MODIFY MANUALLY

- MR VERBINDUNGEN
MR CONNECTIONS
- - - KUNDEN VERBINDUNGEN
CUSTOMER CONNECTIONS
- TS_1_U WÄHLEREBENE_U
TAP SELECTOR PLANE_U
- TS_2_U WÄHLEREBENE_U
TAP SELECTOR PLANE_U
- TS_3_V WÄHLEREBENE_V
TAP SELECTOR PLANE_V
- TS_4_V WÄHLEREBENE_V
TAP SELECTOR PLANE_V
- TS_5_W WÄHLEREBENE_W
TAP SELECTOR PLANE_W
- TS_6_W WÄHLEREBENE_W
TAP SELECTOR PLANE_W
- PS_2_U GROBWÄHLER_U
COARSE TAP SELECTOR_U
- PS_4_V GROBWÄHLER_V
COARSE TAP SELECTOR_V
- PS_6_W GROBWÄHLER_W
COARSE TAP SELECTOR_W
- TW_0_W TRAFOWICKLUNG_W
TRANSFORMER WINDING_W
- TW_1_W STUFENWICKLUNG_W
TAP WINDING_W
- LU LASTUMSCHALTER
DIVERTER SWITCH
- Y STERNPUNKT
STAR POINT



| | | | |
|----|----|----|--|
| 27 | 13 | 27 | |
| 26 | 12 | 26 | |
| 25 | 11 | 25 | |
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| STELLUNG DES GROBWÄHLERS POSITION OF COARSE TAP SELECTOR |
| BETRIEBSSTELLUNG SERVICE POSITION |
| BEZEICHNUNG DER WÄHLERKONTAKTE DESIGNATION OF TAP SELECTOR CONTACTS |
| BEZEICHNUNG DER STELLUNGEN DESIGNATION OF POSITIONS |
| REGELBEREICH (kV) REGULATION RANGE (kV) |

| | |
|---|----|
| BETRIEBSSTELLUNGEN SERVICE POSITIONS | 27 |
| VERSCHIEDENE SPANNUNGEN DIFFERENT VOLTAGES | 27 |
| JUSTIERSTELLUNG ADJUSTMENT POSITION | 14 |

LASTSTUFENSCHALTER ON-LOAD TAP-CHANGER OILTAP® R III 1200Y-123/RC-14 27 1G

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| NO. | MODIFICATION | DATE | NAME |
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|----------|------------|
| DATE | 25.02.2015 |
| ERIC | KONFIG |
| VERIFIED | CSO |
| STANDARD | |

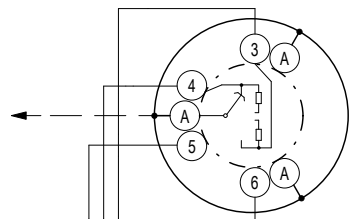
SCHALTBILD
CONNECTION DIAGRAM

| | |
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| LANGUAGE: | DE |
| EN | |
| PROJECT: | 4324682_00 |

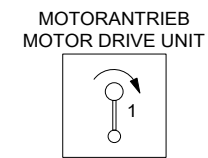
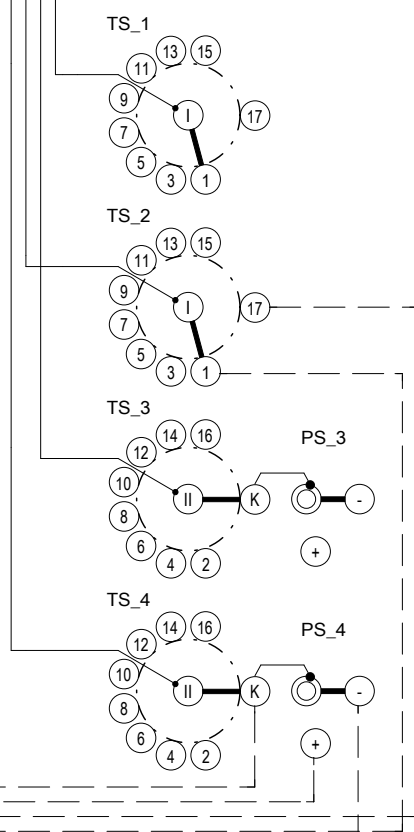
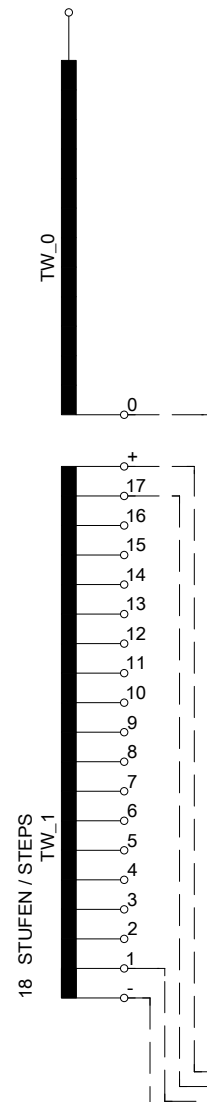
FÜR DIESE TECHNISCHE UNTERLAGE BEHALTEN WIR UNS GEMÄSS DIN 34 ABSCHNITT 2.1 UND 2.2 ALLE RECHTE VOR.
DRAWING BY CAD DO NOT MODIFY MANUALLY

ACHTUNG
 PARALLELBRÜCKEN VON MR NICHT ANGEBAUT
 VON TS_1 NACH TS_2
 VON TS_3 (PS_3) NACH TS_4 (PS_4)

ATTENTION !
 PARALLEL BRIDGES ARE NOT INSTALLED BY MR
 FROM TS_1 TO TS_2
 FROM TS_3 (PS_3) TO TS_4 (PS_4)



- MR VERBINDUNGEN
MR CONNECTIONS
- KUNDEN VERBINDUNGEN
CUSTOMER CONNECTIONS
- TS_1 WÄHLEREBENE
TAP SELECTOR PLANE
- TS_2 WÄHLEREBENE
TAP SELECTOR PLANE
- TS_3 WÄHLEREBENE
TAP SELECTOR PLANE
- TS_4 WÄHLEREBENE
TAP SELECTOR PLANE
- PS_3 WENDER
REVERSING CHANGE-OVER SELECTOR
- PS_4 WENDER
REVERSING CHANGE-OVER SELECTOR
- TW_0 TRAFOWICKLUNG
TRANSFORMER WINDING
- TW_1 STUFENWICKLUNG
TAP WINDING
- LU LASTUMSCHALTER
DIVERTER SWITCH



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| 35 | 17 | 35 |
| 34 | 16 | 34 |
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| 19 | 1 | 19 |
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| 3 | 3 | 3 |
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| 1 | 1 | 1 |

➔ (M)
ANTRIEBSSEITE
DRIVE SIDE

STELLUNG DES WENDERS
POSITION OF REVERSING CHANGE-OVER SELECTOR

BETRIEBSSTELLUNG
SERVICE POSITION

BEZEICHNUNG DER WÄHLERKONTAKTE
DESIGNATION OF TAP SELECTOR CONTACTS

BEZEICHNUNG DER STELLUNGEN
DESIGNATION OF POSITIONS

REGELBEREICH (kV)
REGULATION RANGE (kV)

| | |
|---|----|
| BETRIEBSSTELLUNGEN SERVICE POSITIONS | 35 |
| VERSCHIEDENE SPANNUNGEN DIFFERENT VOLTAGES | 35 |
| JUSTIERSTELLUNG ADJUSTMENT POSITION | 18 |

LASTSTUFENSCHALTER ON-LOAD TAP-CHANGER OILTAP® R I 2002-170/RC-18 35 1W

| | | | |
|-----|--------------|------|------|
| NO. | MODIFICATION | DATE | NAME |
| | | | |



| | |
|----------|------------|
| DATE | 24.02.2015 |
| ERIC | KONFIG |
| VERIFIED | CSO |
| STANDARD | |

SCHALTBILD
CONNECTION DIAGRAM

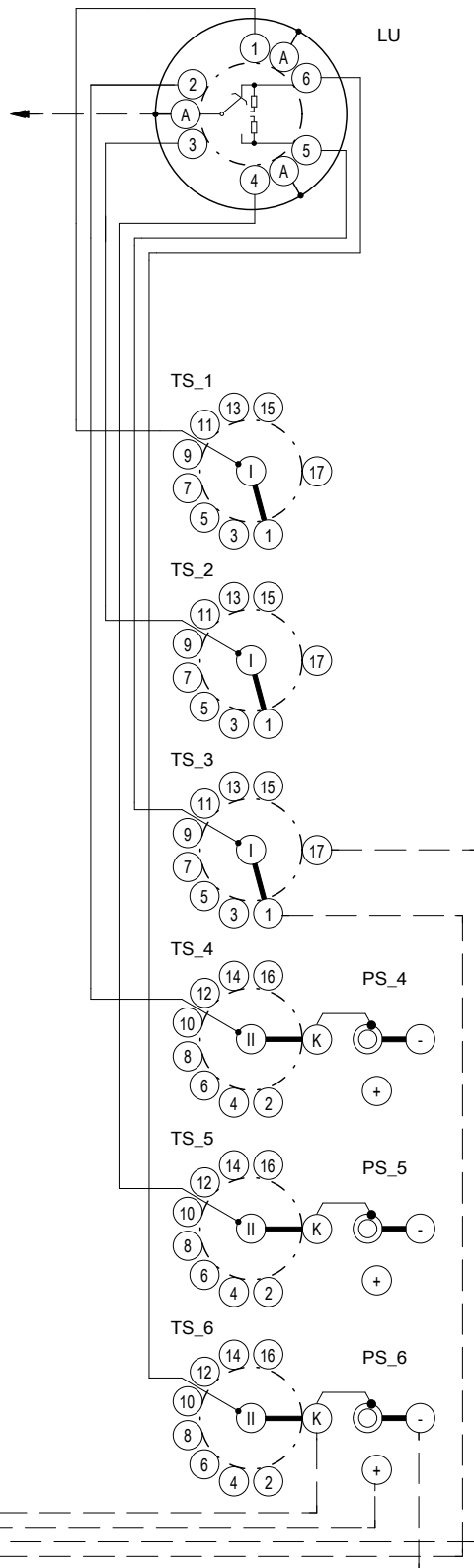
LANGUAGE:
DE
EN

PROJECT:
4324683_00

Für diese technische Unterlage behalten wir uns gemäss DIN 34 Abschnitt 2.1 und 2.2 alle Rechte vor. DRAWING BY CAD DO NOT MODIFY MANUALLY

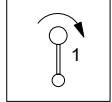
ACHTUNG
 PARALLELBRÜCKEN VON MR ANGEBAUT
 VON TS_1 NACH TS_2 NACH TS_3
 VON TS_4 (PS_4) NACH TS_5 (PS_5) NACH TS_6 (PS_6)

ATTENTION !
 PARALLEL BRIDGES ARE INSTALLED BY MR
 FROM TS_1 TO TS_2 TO TS_3
 FROM TS_4 (PS_4) TO TS_5 (PS_5) TO TS_6 (PS_6)

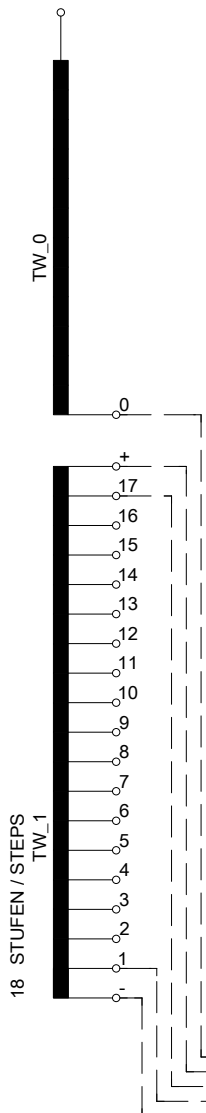


- MR VERBINDUNGEN
MR CONNECTIONS
- KUNDEN VERBINDUNGEN
CUSTOMER CONNECTIONS
- TS_1 WÄHLEREBENE
TAP SELECTOR PLANE
- TS_2 WÄHLEREBENE
TAP SELECTOR PLANE
- TS_3 WÄHLEREBENE
TAP SELECTOR PLANE
- TS_4 WÄHLEREBENE
TAP SELECTOR PLANE
- TS_5 WÄHLEREBENE
TAP SELECTOR PLANE
- TS_6 WÄHLEREBENE
TAP SELECTOR PLANE
- PS_4 WENDER
REVERSING CHANGE-OVER SELECTOR
- PS_5 WENDER
REVERSING CHANGE-OVER SELECTOR
- PS_6 WENDER
REVERSING CHANGE-OVER SELECTOR
- TW_0 TRAFOWICKLUNG
TRANSFORMER WINDING
- TW_1 STUFENWICKLUNG
TAP WINDING
- LU LASTUMSCHALTER
DIVERTER SWITCH

MOTORANTRIEB
MOTOR DRIVE UNIT



| | | |
|----|----|----|
| 35 | 17 | 35 |
| 34 | 16 | 34 |
| 33 | 15 | 33 |
| 32 | 14 | 32 |
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| 21 | 3 | 21 |
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| 18 | K | 18 |
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| 16 | 16 | 16 |
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STELLUNG DES WENDERS
 POSITION OF REVERSING CHANGE-OVER SELECTOR

BETRIEBSSTELLUNG
 SERVICE POSITION

BEZEICHNUNG DER WÄHLERKONTAKTE
 DESIGNATION OF TAP SELECTOR CONTACTS

BEZEICHNUNG DER STELLUNGEN
 DESIGNATION OF POSITIONS

REGELBEREICH (kV)
 REGULATION RANGE (kV)

| | |
|---|----|
| BETRIEBSSTELLUNGEN SERVICE POSITIONS | 35 |
| VERSCHIEDENE SPANNUNGEN DIFFERENT VOLTAGES | 35 |
| JUSTIERSTELLUNG ADJUSTMENT POSITION | 18 |

LASTSTUFENSCHALTER
ON-LOAD TAP-CHANGER

OILTAP® R I 3003-170/RC-18 35 1W

FÜR DIESE TECHNISCHE UNTERLAGE BEHALTEN WIR UNS GEMÄSS DIN 34 ABSCHNITT 2.1 UND 2.2 ALLE RECHTE VOR.
 DRAWING BY CAD DO NOT MODIFY MANUALLY

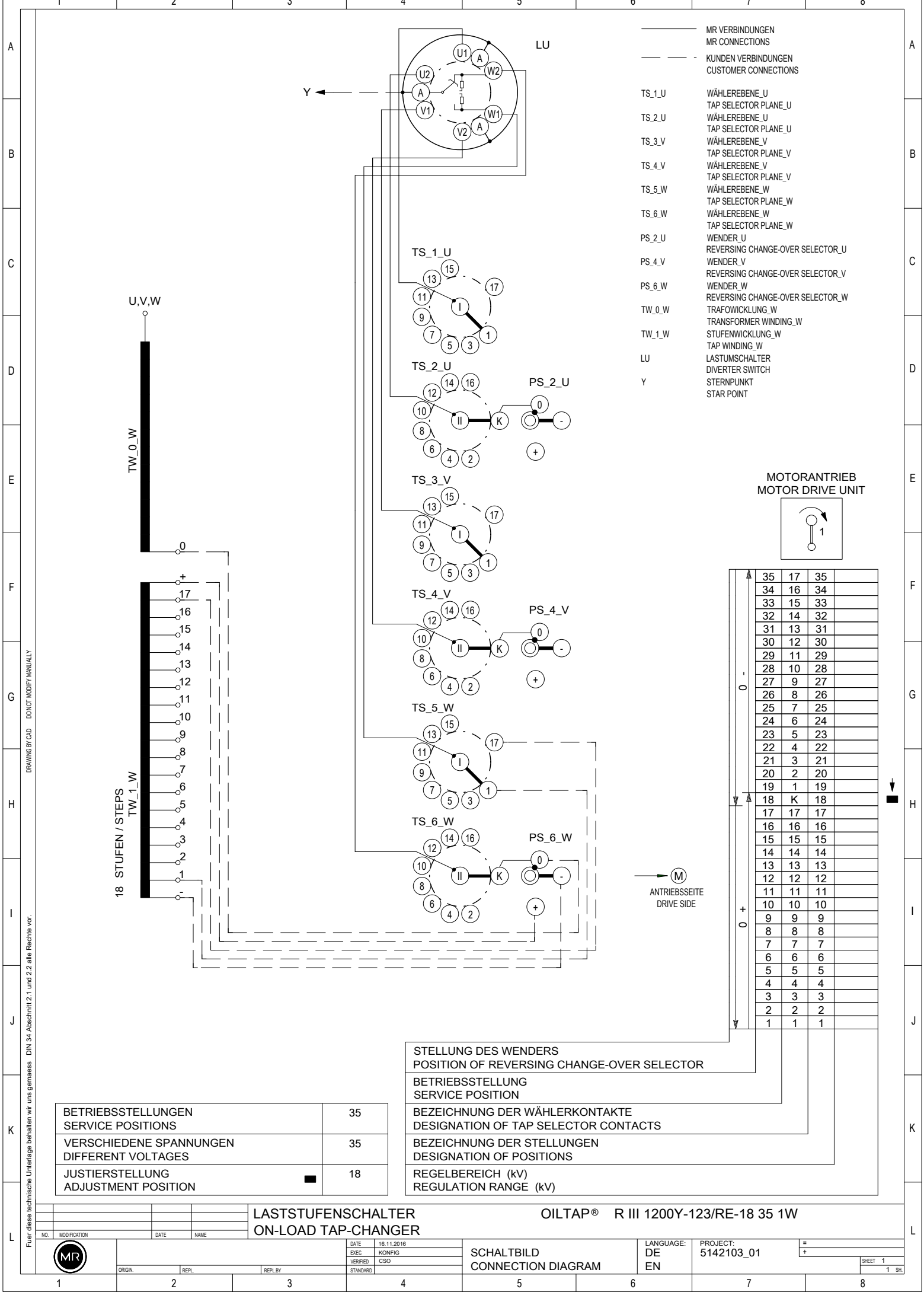
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| NO. | MODIFICATION | DATE | NAME |
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| DATE | 25.02.2015 |
| ERIC | KONFIG |
| VERIFIED | CSO |
| STANDARD | |

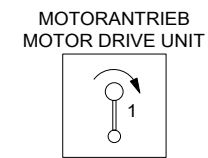
SCHALTBILD
 CONNECTION DIAGRAM

| | |
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| LANGUAGE: | DE |
| EN | |
| PROJECT: | 4324684_00 |

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| SH | 1 |



- MR VERBINDUNGEN
MR CONNECTIONS
- KUNDEN VERBINDUNGEN
CUSTOMER CONNECTIONS
- TS_1_U WÄHLEREBENE_U
TAP SELECTOR PLANE_U
- TS_2_U WÄHLEREBENE_U
TAP SELECTOR PLANE_U
- TS_3_V WÄHLEREBENE_V
TAP SELECTOR PLANE_V
- TS_4_V WÄHLEREBENE_V
TAP SELECTOR PLANE_V
- TS_5_W WÄHLEREBENE_W
TAP SELECTOR PLANE_W
- TS_6_W WÄHLEREBENE_W
TAP SELECTOR PLANE_W
- PS_2_U WENDER_U
REVERSING CHANGE-OVER SELECTOR_U
- PS_4_V WENDER_V
REVERSING CHANGE-OVER SELECTOR_V
- PS_6_W WENDER_W
REVERSING CHANGE-OVER SELECTOR_W
- TW_0_W TRAFOWICKLUNG_W
TRANSFORMER WINDING_W
- TW_1_W STUFENWICKLUNG_W
TAP WINDING_W
- LU LASTUMSCHALTER
DIVERter SWITCH
- Y STERNPUNKT
STAR POINT



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| 35 | 17 | 35 |
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➔ (M)
ANTRIEBSSEITE
DRIVE SIDE

STELLUNG DES WENDERS
POSITION OF REVERSING CHANGE-OVER SELECTOR

BETRIEBSSTELLUNG
SERVICE POSITION

BEZEICHNUNG DER WÄHLERKONTAKTE
DESIGNATION OF TAP SELECTOR CONTACTS

BEZEICHNUNG DER STELLUNGEN
DESIGNATION OF POSITIONS

REGELBEREICH (kV)
REGULATION RANGE (kV)

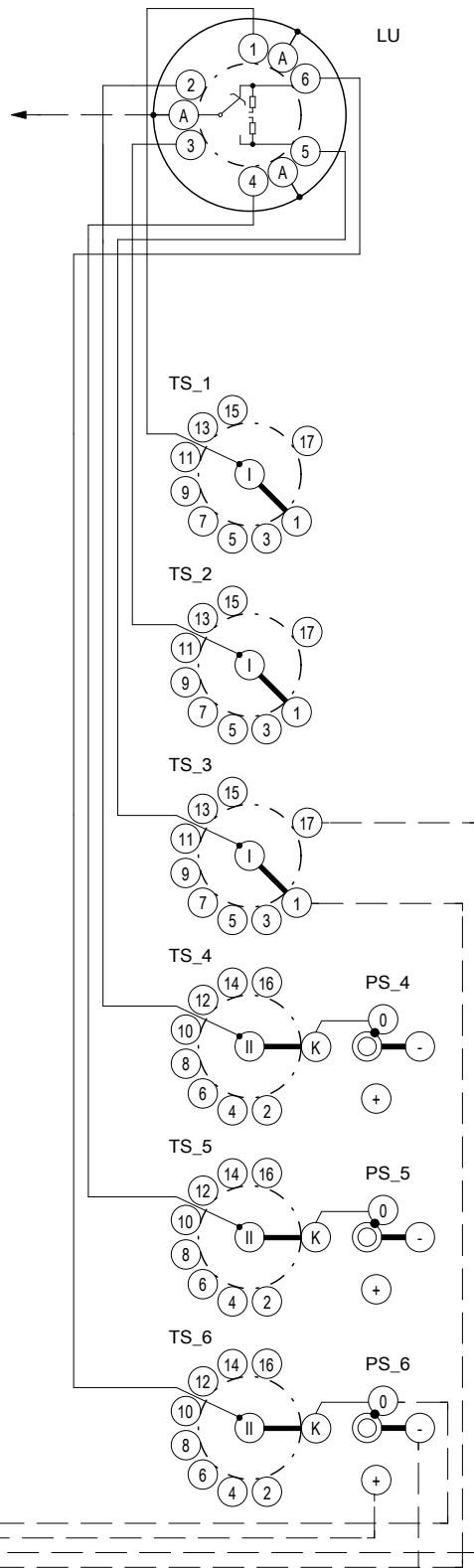
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|---|----|
| BETRIEBSSTELLUNGEN SERVICE POSITIONS | 35 |
| VERSCHIEDENE SPANNUNGEN DIFFERENT VOLTAGES | 35 |
| JUSTIERSTELLUNG ADJUSTMENT POSITION | 18 |

LASTSTUFENSCHALTER ON-LOAD TAP-CHANGER OILTAP® R III 1200Y-123/RE-18 35 1W

FÜR DIESE TECHNISCHE UNTERLAGE BEHALTEN WIR UNS GEMÄSS DIN 34 ABSCHNITT 2.1 UND 2.2 ALLE RECHTE VOR.
 DRAWING BY CAD DO NOT MODIFY MANUALLY

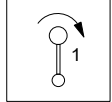
ACHTUNG
 PARALLELBRÜCKEN VON MR NICHT ANGEBAUT
 VON TS_1 NACH TS_2 NACH TS_3
 VON TS_4 (PS_4) NACH TS_5 (PS_5) NACH TS_6 (PS_6)

ATTENTION !
 PARALLEL BRIDGES ARE NOT INSTALLED BY MR
 FROM TS_1 TO TS_2 TO TS_3
 FROM TS_4 (PS_4) TO TS_5 (PS_5) TO TS_6 (PS_6)

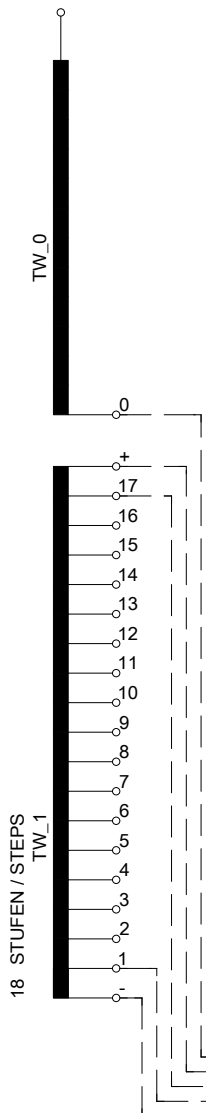


- MR VERBINDUNGEN
MR CONNECTIONS
- KUNDEN VERBINDUNGEN
CUSTOMER CONNECTIONS
- TS_1 WÄHLEREBENE
TAP SELECTOR PLANE
- TS_2 WÄHLEREBENE
TAP SELECTOR PLANE
- TS_3 WÄHLEREBENE
TAP SELECTOR PLANE
- TS_4 WÄHLEREBENE
TAP SELECTOR PLANE
- TS_5 WÄHLEREBENE
TAP SELECTOR PLANE
- TS_6 WÄHLEREBENE
TAP SELECTOR PLANE
- PS_4 WENDER
REVERSING CHANGE-OVER SELECTOR
- PS_5 WENDER
REVERSING CHANGE-OVER SELECTOR
- PS_6 WENDER
REVERSING CHANGE-OVER SELECTOR
- TW_0 TRAFOWICKLUNG
TRANSFORMER WINDING
- TW_1 STUFENWICKLUNG
TAP WINDING
- LU LASTUMSCHALTER
DIVERTER SWITCH

MOTORANTRIEB
MOTOR DRIVE UNIT



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STELLUNG DES WENDERS
 POSITION OF REVERSING CHANGE-OVER SELECTOR

BETRIEBSSTELLUNG
 SERVICE POSITION

BEZEICHNUNG DER WÄHLERKONTAKTE
 DESIGNATION OF TAP SELECTOR CONTACTS

BEZEICHNUNG DER STELLUNGEN
 DESIGNATION OF POSITIONS

REGELBEREICH (kV)
 REGULATION RANGE (kV)

| | |
|---|----|
| BETRIEBSSTELLUNGEN SERVICE POSITIONS | 35 |
| VERSCHIEDENE SPANNUNGEN DIFFERENT VOLTAGES | 35 |
| JUSTIERSTELLUNG ADJUSTMENT POSITION | 18 |

LASTSTUFENSCHALTER
ON-LOAD TAP-CHANGER

OILTAP® R I 3003-123/RE-18 35 1W

FÜR DIESE TECHNISCHE UNTERLAGE BEHALTEN WIR UNS GEMÄSS DIN 34 ABSCHNITT 2.1 UND 2.2 ALLE RECHTE VOR.
 DRAWING BY CAD DO NOT MODIFY MANUALLY

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| NO. | MODIFICATION | DATE | NAME |
| | | | |

| | |
|----------|------------|
| DATE | 16.11.2016 |
| ERIC | KONFIG |
| VERIFIED | CSO |
| STANDARD | |

SCHALTBILD
 CONNECTION DIAGRAM

| | |
|-----------|------------|
| LANGUAGE: | DE |
| EN | |
| PROJECT: | 5142105_01 |

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E-Mail: mr_rap@my.reinhausen.com

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新上海国际大厦 4 楼 E 座
邮编: 200120
电话: +86 21 61634588
传真: +86 21 61634582
邮箱: mr-sales@cn.reinhausen.com
mr-service@cn.reinhausen.com

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15, Bld. 2 ("Tupolev Plaza")
105005 Moscow
Phone: +7 495 980 89 67
Fax: +7 495 980 89 67
E-Mail: mrr@reinhausen.ru

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No. 15, Third Street, Booyens Reserve
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E-Mail: support@za.reinhausen.com

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21st floor, Standard Chartered Bank Bldg.,
47, Chongro, Chongro-gu,
Seoul 110-702
Phone: +82 2 767 4909
Fax: +82 2 736 0049
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Fax: +1 731 784 7682
E-Mail: sales@reinhausen.com

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Phone: +971 4 2368 451
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