

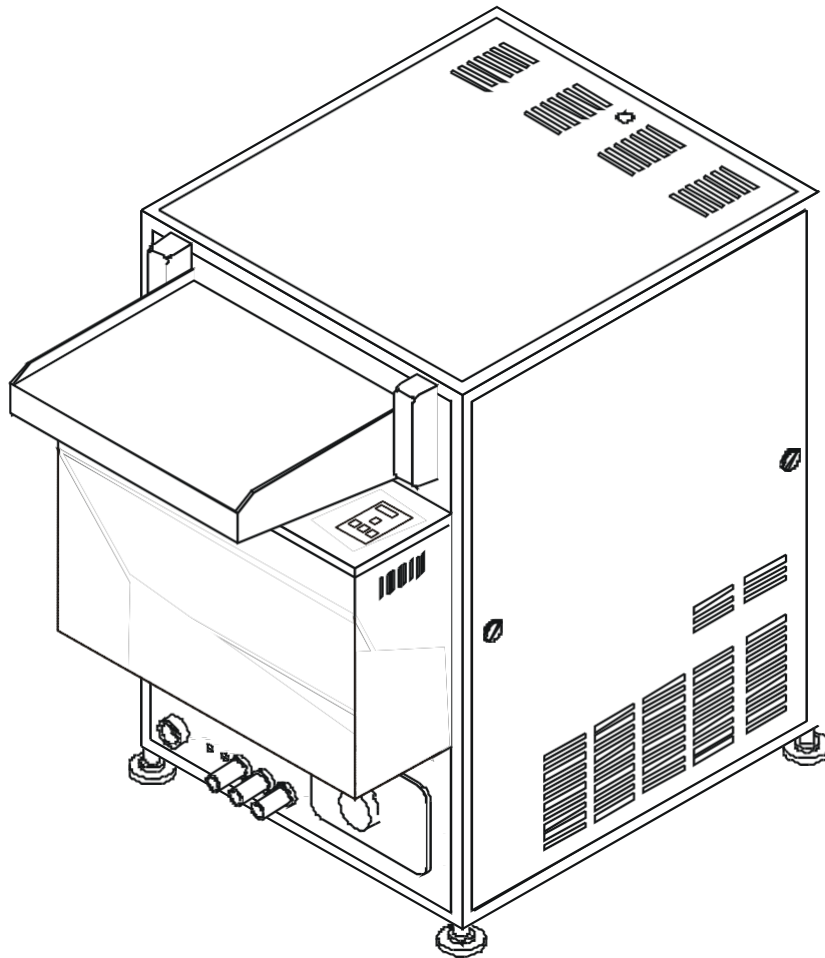
Order No.: BD-0015252

## Structurix NDT-U

Type 8196 / 300

Type 8196 / 350

EN 1st edition



GE imagination at work

**Structurix NDT-U**  
**Type 8196 / 300**  
**Structurix NDT-U**  
**Type 8196 / 350**

The following parts of the documentation can be ordered separately:

| Revision | Order number | Contents   |
|----------|--------------|--|
| 07.18    | BD_0015237   | Section 1:<br><i>Installation Preparations</i>     |
| 11.18    | BD_0015238   | Section 8:<br><i>Spare parts list, 1st edition</i> |

## **Section 1**

### **List of Contents**

- 1**    ***Installation Preparations, Unpacking Instructions, Installation, Machine Specifications***
- 2**    ***Operating Instructions***
- 3**    ***Maintenance, Maintenance Checklist***
- 4**    ***Accessories***
- 5**    ***Field Notifications***
- 6**    ***Troubleshooting, Repair***
- 7**    ***Reference diagrams, Circuit diagrams***
- 8**    ***Spare Parts List***

**Structurix NDT-U**  
**Type 8196 / 300**  
**Structurix NDT-U**  
**Type 8196 / 350**

**Installation Preparations**  
**Unpacking Instructions**  
**Installation**  
**Machine Specifications**

### **Section 1**

*Includes all the important routines to be carried out prior to the installation start.*

- *Transport check, checking the safety indicators on the machine box, and inspection for any damages due to transport*
- *Checking the scope of supply and comparison with the packing list*
- *Unpacking, removal of transport safeguards*
- *Checking the installation site accessibility for repair and maintenance, as well as comparison of the work executed with the installation planning*
- *Installation of the machine*
- *Technical specifications*
- *Safety regulations, test certificates*

*Read this section carefully and check prior to the installation start that all routines and preparations have been carried out completely and according to the regulations.*

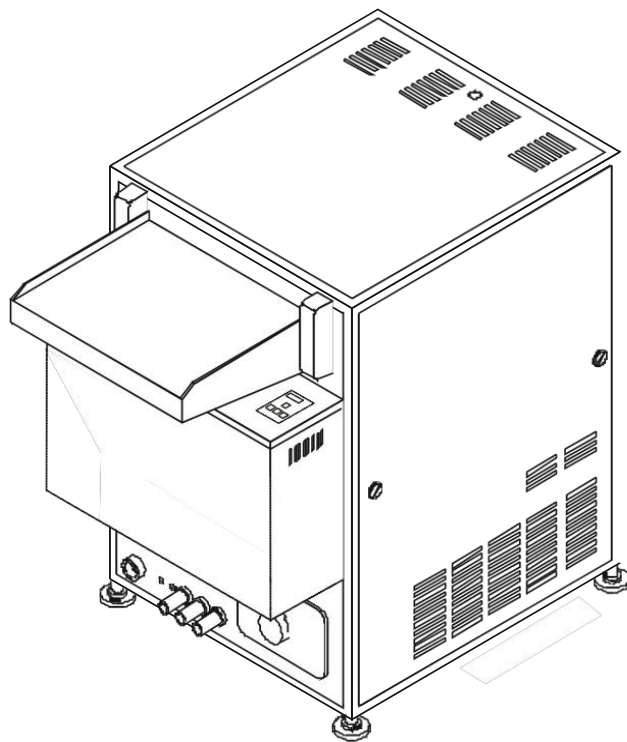


Order No.: BD-0015237

**Structurix NDT-U**  
**Type 8196 / 300**  
**Structurix NDT-U**  
**Type 8196 / 350**

**Installation Preparations, Unpacking Instructions  
and Machine Specifications**

EN – 1st edition



**NOTE:** *Connections and repairs related to the electrical equipment may only be carried out by BHGE trained and certified engineer.*

*Connections and repairs related to the mechanical equipment may only be carried out by BHGE trained and certified engineer*

*Subject to changes of data and properties required by technological progress.*

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## Section 1

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## 1 Safety

*The machine has been designed for the processing and handling of X-ray films and should only be used for this purpose.*

*The machine must only be operated by persons who have been instructed in the operation of the machine.*

*Make sure that the machine can be constantly monitored in order to exclude inappropriate handling, especially by children.*

*Repairs must only be made by BHGE trained and certified service personnel. Changes to the machine may only be made by personnel authorized by the manufacturer.*

*The machine must not be started or used at all if the machine casing shows any 'visible' damages. If the machines are connected to other devices, components, or assemblies, and if it cannot be determined on the basis of the technical data whether the combination of these devices, components, or assemblies is associated with any hazards, the manufacturers concerned or an expert must be consulted to ensure that the safety of the operating personnel and of the environment is not impaired by the intended combination.*

*Do not override or disconnect the integrated safety devices.*

*Switch off the machine before carrying out any maintenance. Isolate the machine from the supply before carrying out any maintenance work during which electrical contacts may be exposed and touched accidentally.*

*Like all technical equipment, this machine must also be operated properly and subjected to regular professional service and maintenance.*

*If the machine is not operated appropriately or if its proper maintenance is neglected by the owner, the manufacturer is not liable for any resulting disturbances, damages, or injuries.*

*If you notice any abnormal smoke or noise, disconnect the machine immediately.*

*Special instructions for processors and for the handling of chemicals*

*When handling chemicals, observe the currently applicable safety and environmental regulations, as well as the operating instructions and warnings included in the supply of the chemicals.*

*Chemicals and waste water must be disposed of in compliance with the local regulations concerning waste water and environmental protection.*

*Wear stipulated protective clothing and safety goggles.*

*If chemicals get into your eyes, immediately rinse your eyes with cold water and then consult a physician.*

*Do not inhale chemical fumes. Make sure that there is sufficient ventilation at the installation site, i.e. an air exchange at least ten times the space volume per hour.*

*Always comply with the installation instructions.*

*Regularly check that all connections of the machine are tight and that there are no leaks.*

*If liquid gets inside the machine due to carelessness (spilling), the machine must be disconnected from the supply and thoroughly cleaned by the technical service.*

## 2 Installation planning

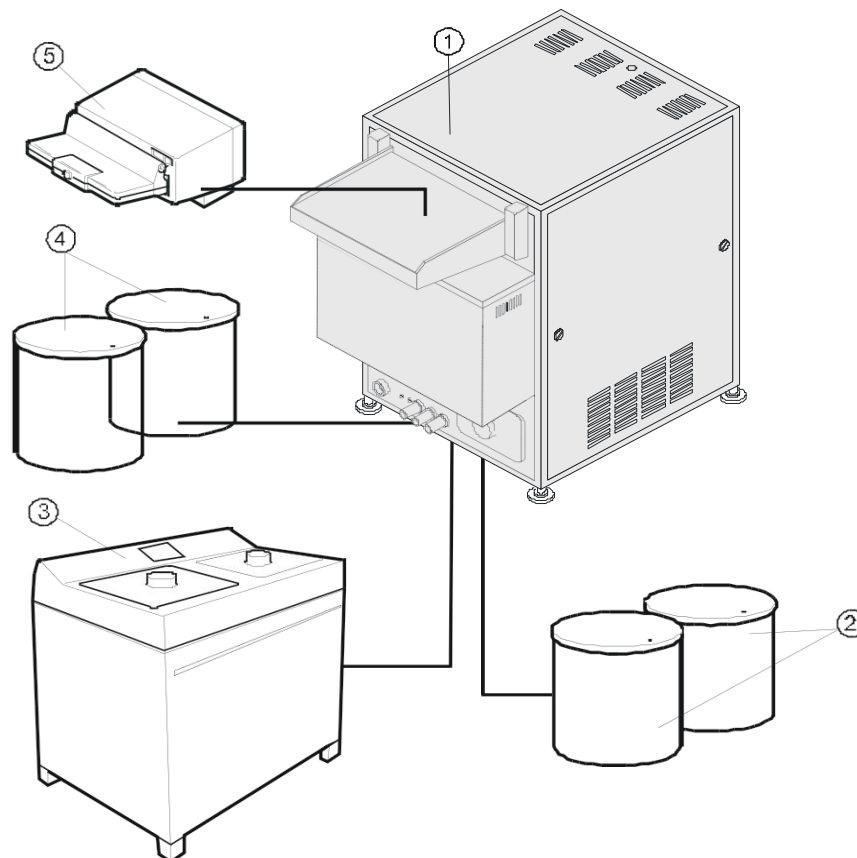
### 2.1 System overview

The system requires the following components which must be considered during planning:

- **Film processor (1)**
- **Chemical mixer (3) or replenisher tanks (4) for the developer and fixer**
- **Water connection via water filter**
- **Disposal tanks (2) or connection to the centralized disposal system**

Depending on the customer's requirements, the film processor can be combined with the following additional equipment.

The corresponding planning documentation (e.g. mixer) must be considered for the required configuration.



1 **Film processor**

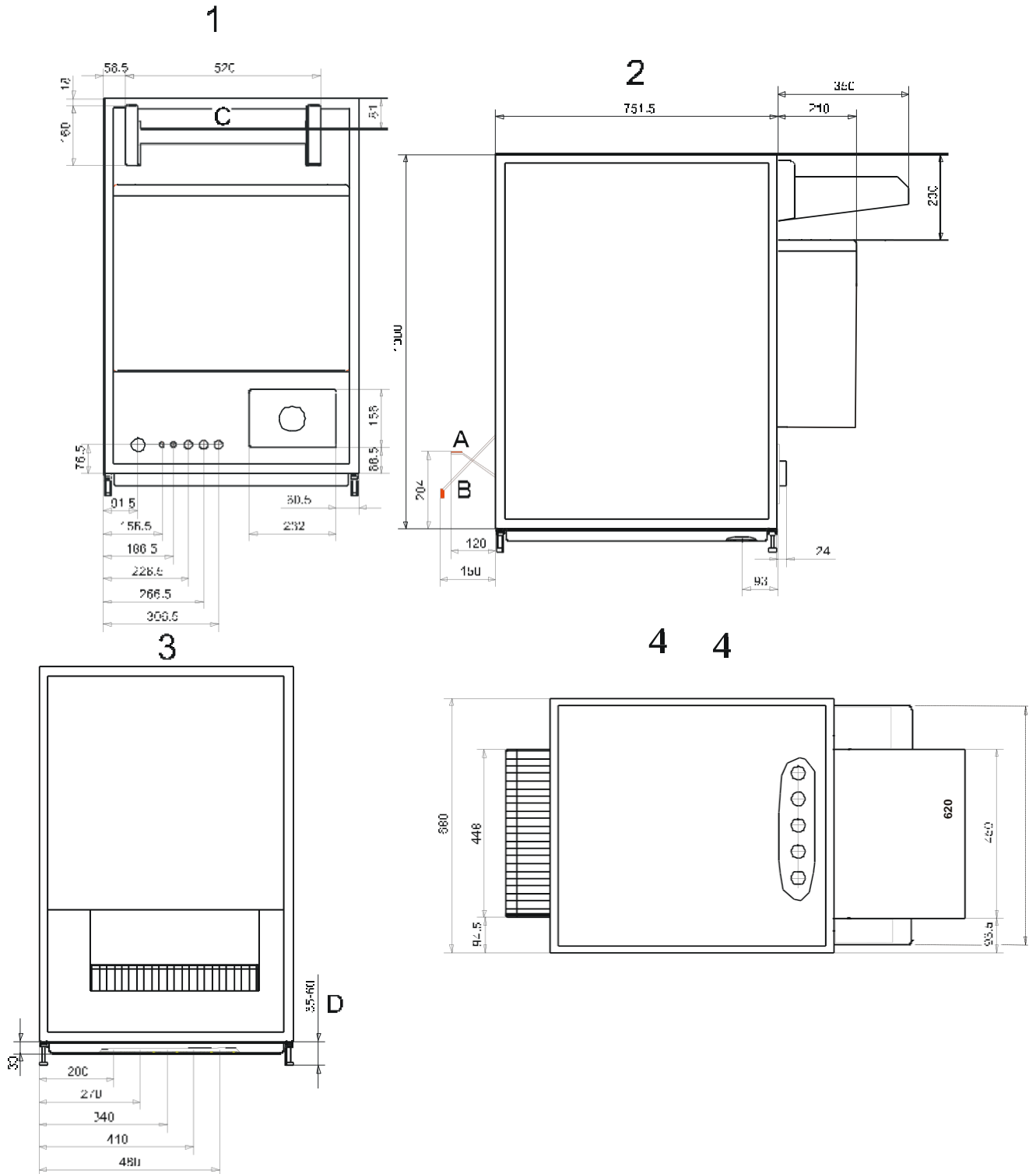
3 **Mixer**

2 **Disposal tanks or connection to the centralized disposal system**

4 **Replenisher tanks**

5 **Automatic film feeder**

2.2 Machine dimensions



(Dimensions in mm)

The figures are shown in the following order:

1. Front view (film feed side)
2. Side view (left machine side)
3. Top view

### 2.3 Transport path

*It must be possible to transport the film processor through all hallways and doors up to the installation site.*

*The smallest door width must be at least 68 cm (for machine without packing material).  
(For machines including packing material, it must be at least 80 cm.)*

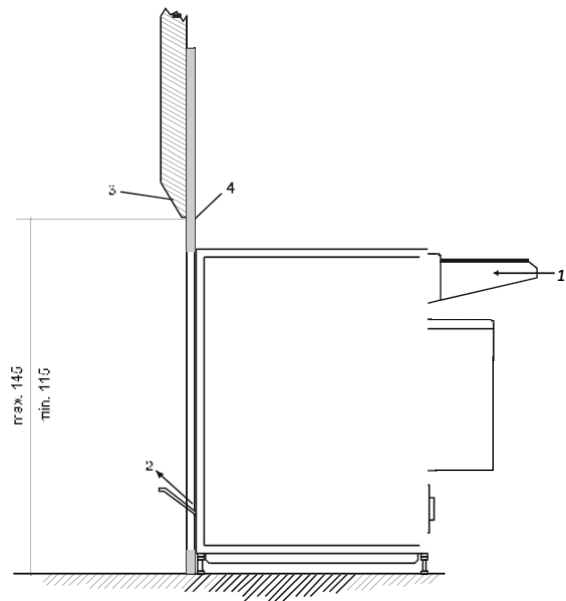
## 3 Installation versions

*There are three alternatives for the installation of the film processor:*

- 1. Film processor (wet section) in the darkroom, film exit in the daylight.*
- 2. Film processor in the daylight, film feed in the darkroom.  
Light-tight separating wall on request!*
- 3. Film processor completely in the darkroom.*

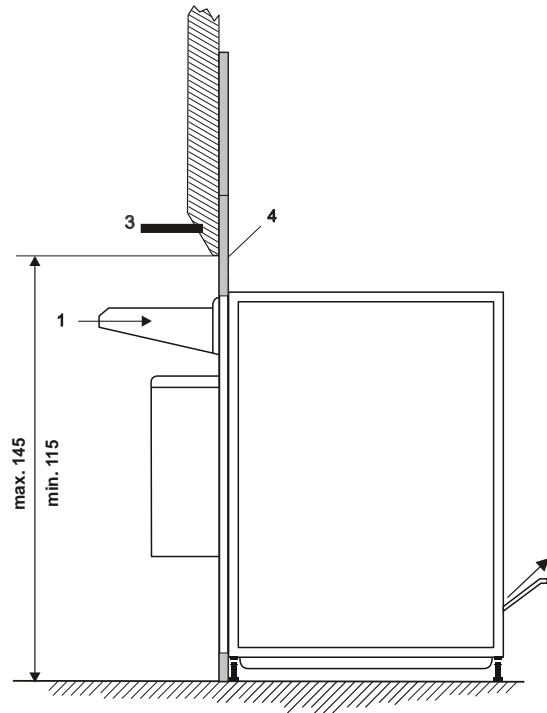
### 3.1 Machine in darkroom, film exit in daylight

- 1** Film feed
- 2** Film exit
- 3** Wall
- 4** Light-tight separating wall



### 3.2 Machine in daylight, film feed table in the darkroom

- 1 Film feed
- 2 Film exit
- 3 Wall
- 4 Light-tight separating wall



### 3.3 Wall opening

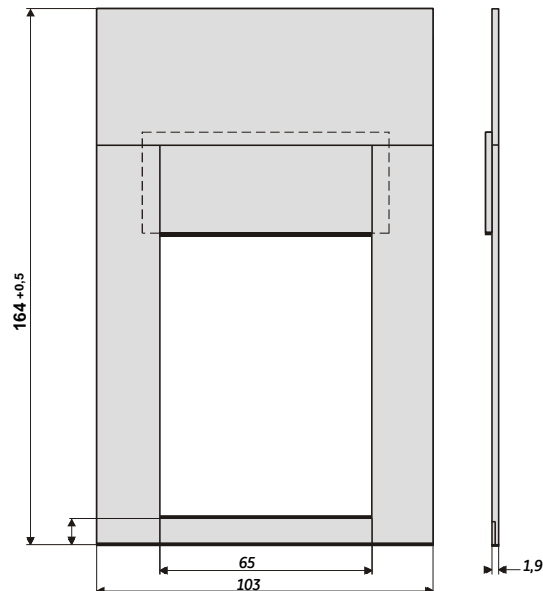
For the dimensions of the light-tight separating wall, refer to the figure below:



The installation of the light-tight separating wall is only possible with wall openings having a maximum height of 145 cm and a maximum width of 74 cm.

The light-tight separating wall can be ordered as an accessory:

Type 8196/170  
ABC - Code:39X91

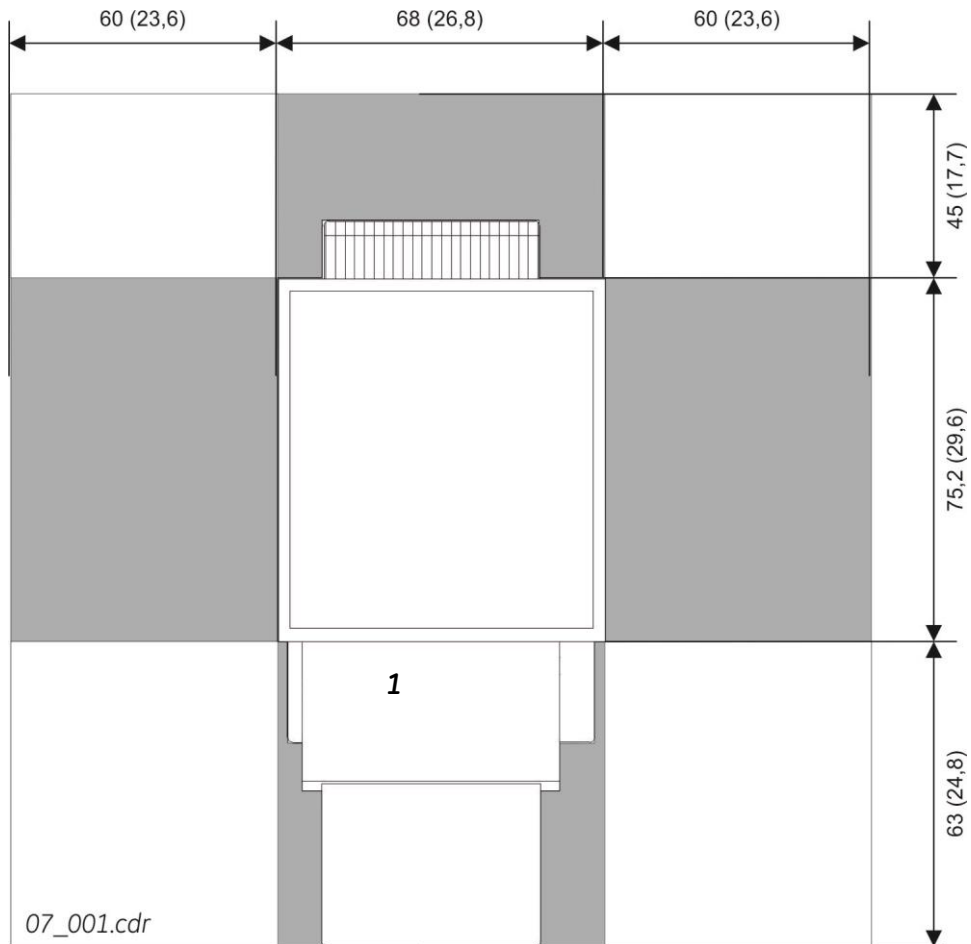


**NOTE:** In the case of the installation versions 3.1 and 3.2 (darkroom/daylight), a (light-tight) ventilation grid must be installed in the darkroom wall to compensate for possible pressure differences between the darkroom and daylight room.

### 3.4 Access for repair and maintenance

*Free space as shown in the drawing must be reserved for repair and maintenance.*

*The minimum dimension marked in the drawing must not be fallen below. If this is not observed, the result may be extended repair times.*



**Dimensions in cm (inches)**

**1 Film feeder (feed Table)**

## 4 Ambient conditions

|                                     |   |
|-------------------------------------|---|
| <b>Room temperature</b>             | <i>min. 10 °C (50°F), max. 4K below the nominal developer temperature.</i>  |
| <b>Relative humidity</b>            | <i>min. 30%, max. 80% at a room temperature of 15 °C (59°F)</i>   |
| <b>Light tightness</b>              | <i>maximum 2500 Lux</i>   |
| <b>Noise level</b>                  | <i>Approx. 50 dBA</i>   |
| <b>Radiation effects</b>            | <i>The film processor itself has not been designed for installation in the X-ray room, i.e. there is no internal screening against scattered radiation; if necessary, a screening must be provided.</i>   |
| <b>Floor conditions</b>             | <i>Waterproof chemical-resistant floor cover (pH value 4 to 11)</i>   |
| <b>Ventilation</b>                  | <i>Provide for sufficient air circulation in order to keep the concentration of chemical fumes low. The air exchange should be 10 times the room volume per hour. If you have any questions on this, please contact your local BHGE representative.</i> |
| <b>Cleaning sink</b>                | <i>A cleaning sink with water tap and hose shower should be provided for maintenance purposes.</i><br><br><i>Minimum inside dimensions of the sink:<br/>width 70 cm x depth 40 cm x height 20 cm</i>  |
| <b>Transport/storage conditions</b> | <i>max. -25°C during 72 hours (IEC 68-2-1 (Ab))<br/>max. 55°C during 96 hours (IEC 68-2-2 (Bb))</i>   |

## 5 Specifications

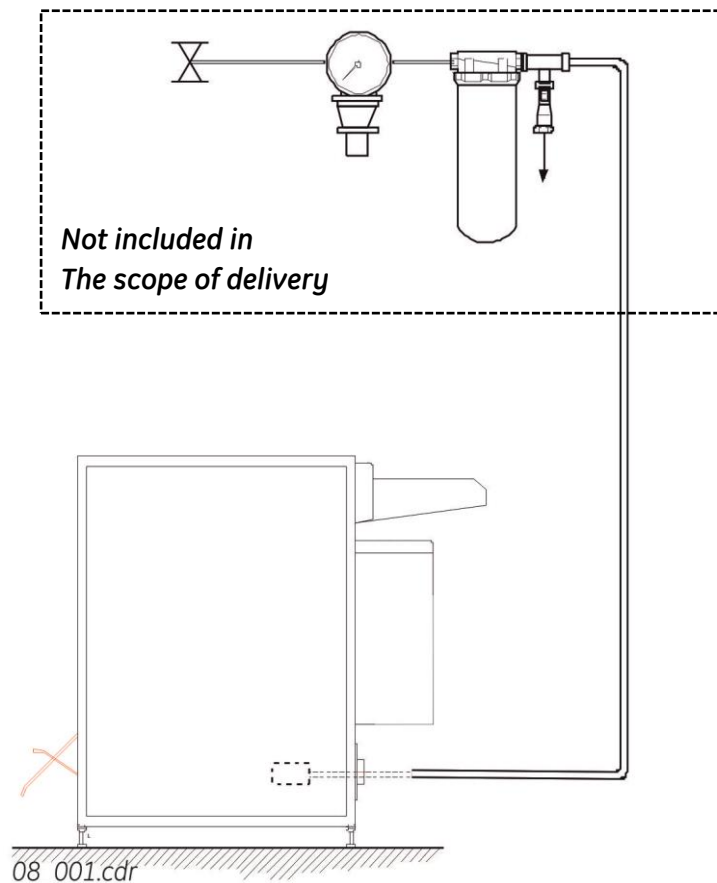
### 5.1 Water connection

There are two alternatives for the water connection:

- a. A rigid pipe connection from the pressure reducer installed in the floor all the way to the connection in the film processor.
- or
- b. With a safety high-pressure hose, installed openly from the pressure reducer / manometer up to the connection in the film processor.

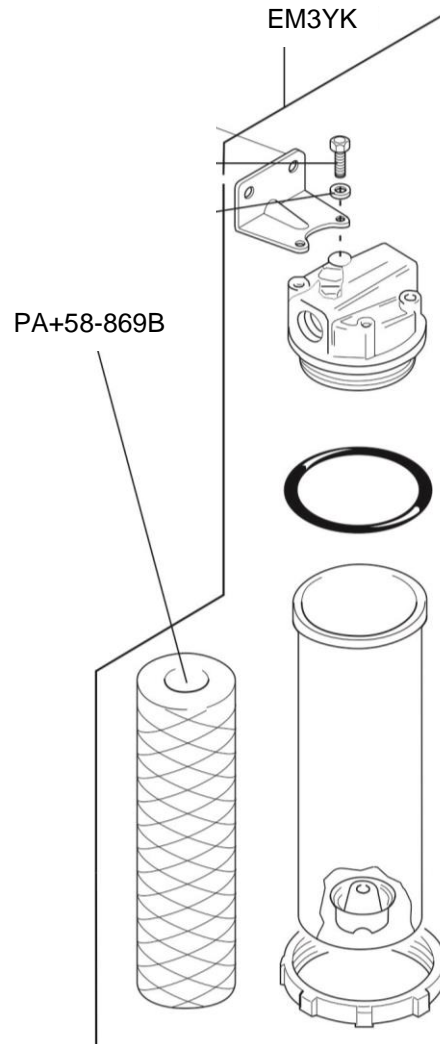
As safety measure, we recommend to provide a floor drain close to the machine.

|             |   |
|-------------|---|
| Regulations | The free water supply of the machine is in compliance with the regulations according to EN 1717 |
|-------------|---|





5.2 Accessory: water filter (EM3YK)



|                          |  |                 |
|--------------------------|--|-----------------|
| <i>Water pressure</i>    | <i>min. (bar)</i>                            | <b>1</b>        |
|                          | <i>max. (bar)</i>                            | <b>6</b>        |
| <i>Water temperature</i> | <i>min. (°C)</i>                             | <b>5</b>        |
|                          | <i>below nom. dev. temperature max. (°C)</i> | <b>4</b>        |
| <i>pH value of water</i> |  | <b>6.5 to 8</b> |



*In case of water pressure > 3 bar, a pressure reducer must be installed.*

### 5.3 Electrical connection

|   |   |
|---|---|
| <b>Installation regulations</b>                         | <p>VDE Electrical installations in the installation room must be in compliance with: IEC 364, VDE 0100, and VDE 0107.</p> <p>UL Electrical installations in the installation room must be in compliance with: "National Electrical Code" (NEC)</p>  |
| <b>Mains connection</b>                                 | 1N ~ 200, 208, 230 to 240 V / 50, 60 Hz   |
| <b>Power cord</b>                                       | <p>VDE Power cord in the accessories pack</p> <p>UL Power cord in the accessories pack</p>  |
| <b>Residual Current operated Circuit-Breaker (RCCB)</b> | A Residual Current operated Circuit-Breaker must be used according to the local safety regulations.   |
| <b>Main switch</b>                                      | <p>Upon machine installation, it must be ensured that either the machine power switch or an all-pole disconnecting device is available in the house installation and easily accessible close to the machine.</p> <p>A facility to disconnect the machine from the power supply in case of emergency must be provided both in the darkroom and in the daylight room!</p> |

### 5.3 Replenisher supply

The maximum suction height of the replenisher pump of the film processor is 2 m, the maximum intake length is 5 m.

This must be considered if a mixer or an individual tank is used.

We recommend transparent connection hoses

Developer, red (10x3 mm fabric-reinforced) CM+0.0000.64.082

Fixer, blue (10x3 mm fabric-reinforced) CM+0.0000.64.083

Specify the required length (m) in your order.

### 5.4 Replenisher level monitoring

The connection of level detectors of individual replenisher tanks is NOT possible!

### 5.5 Disposal of chemicals

The disposal of chemicals and wash water must be in compliance with the regulations of the corresponding sewage legislation of the local authorities!

If it is allowed to drain the exhausted solutions into the sewer, then the drain pipe must be a polyethylene pipe up to the main pipe (vertical drain pipe).

The installation of the disposal lines to the disposal tanks must be carried out professionally and properly by skilled technicians.

*In Germany, this must be in compliance with section 19 of the German water resources act (WHG), EN 1717.*

*In other countries, the corresponding national laws must be observed.*

*Sufficient slope (approx. 1 cm / m) up to the collecting tanks is recommended.*

## 6 Scope of delivery and accessories

### 6.1 Scope of delivery

| Qty. | Accessories pack 1: Parts | Application           | Order number      |
|------|---------------------------|-----------------------|-------------------|
| 4    | Plate                     | Machine feet          | CM+7.8185.1001.1  |
| 1    | Chute assembly            | Film take-up chute    | CM+8.8196.3420.1  |
| 1    | Water supply hose (2m)    | Water connection      | CM+7.0362.6016.0  |
| 3    | Hose clamps - TYP29       | Spare                 | CM+7.0371.9530.1  |
| 1    | VDE cable                 | Electrical connection | CM+7.0477.1053.0  |
| 1    | US cable                  | Electrical connection | CM+89.0001.0012.0 |
| 1    | Plug                      | Spare                 | CM+02.0004.0015.0 |
| 3    | Clamp SNP 16              | Drain connections     | CM+7.0371.7026.0  |
| 3    | Clamp SNP 19              | Drain connections     | CM+7.0372.0022.0  |
| 3    | Hose clamps - 23          | Drain connections     | CM+7.0372.0040.0  |
| 3    | Hose grommet              | Drain connections     | CM+7.0342.0063.0  |
| 3    | Hose angle                | Drain connections     | CM+7.0342.0064.0  |
| 3    | Hose mounted              | Drain connections     | CM+8.5203.8810.0  |

| Accessories pack 2: Documentation | Order number |
|-----------------------------------|--------------|
| Operating instructions            | BD_0015239   |
| Spare parts list                  | BD_0015238   |
| Installation planning             | BD_0015237   |

## 6.2 Accessories

| Accessories   | ABC Code     | Type / Index; No.  |
|---|--------------|--------------------|
| <i>Light-tight separating wall</i>  | <b>39X91</b> | <b>8196 / 170</b>  |
| <i>Light-tight cover</i>  | <b>38KTB</b> | <b>8196 / 160</b>  |
| <i>Water filter with filter cartridge</i>   | <b>EM3YK</b> | <b>8188 / 500</b>  |
| <i>Replenisher tank without level detection (2 X 30l) Hose 10<br/>Hose 10x 3 mm / fabric-reinforced, red<br/>(developer replenisher supply)</i> | <b>3779N</b> | <b>8186 / 701</b>  |
| <i>Hose 10 x 3 mm / fabric-reinforced, blue<br/>(fixer replenisher supply)</i>  |              | * CM+0.0000.64.082 |
| <i>Hose 19 x 4 mm / transparent, fabric-reinforced<br/>(W disposal)</i>   |              | * CM+0.0000.64.083 |
| <i>Hose 19 x 4 mm / red, fabric-reinforced</i>  |              | * CM+0.0000.07.620 |

\* Specify the required length in "meters" in your order!

| Peripheral equipment           | ABC Code     | Type / Index; No. |
|--------------------------------|--------------|-------------------|
| <i>Structurix NDT Mixer</i>    | <b>3U66F</b> | <b>5280 / 200</b> |
| <i>Feeder for the NDT U</i>    | <b>3677A</b> | <b>5204 / 340</b> |
| <i>Feeder Fliptop Magazine</i> | <b>3679E</b> | <b>5204 / 431</b> |

## 7 Installation preparations

### 7.1 Machine transport and reception by the customer

The carrier transports the machine to its final installation site. The responsible technician should be present when the machine is received.

### 7.2 Checking the shipment

Compare the labels on the boxes with the customer's order list and the bill of lading.

### 7.3 Transport check

Check the boxes for any visible transport damages:

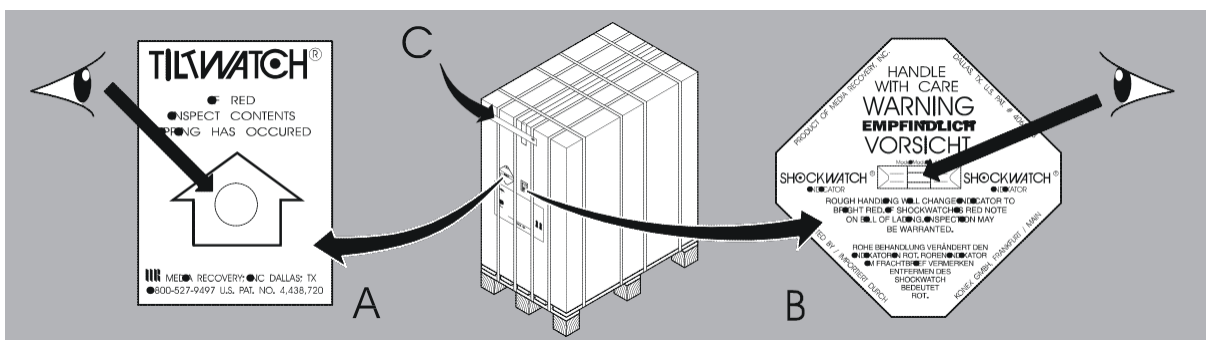
- dented edges
- damaged boxes
- torn fixing elements (metal straps, screws)

### 7.4 Checking the safety indicators on the machine box

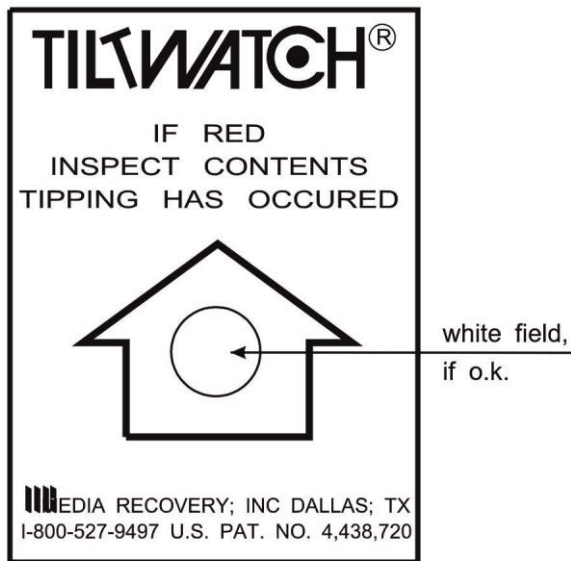
The machine is delivered on a pallet. Indicators for:

- "TILTWATCH" (A) and
  - "SHOCKWATCH" (B),
  - as well as a packing seal (C)
- are attached to the box.

These indicators are attached to the outside of the box and tell if the machine was tilted, turned over, or subjected to shocks and vibration during the transport, or if the box had been opened.

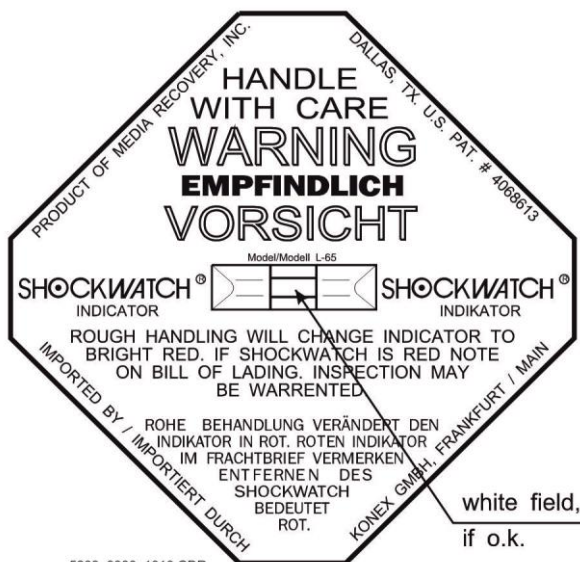


top



5203\_0300\_1009.CDR

*If the machine was tilted, the circle in the arrow head of the TILTWATCH changes from white to red*



5203\_0300\_1010.CDR

*If the machine was subjected to shocks the square field in the middle of the "SHOCKWATCH" changes from white to red.*

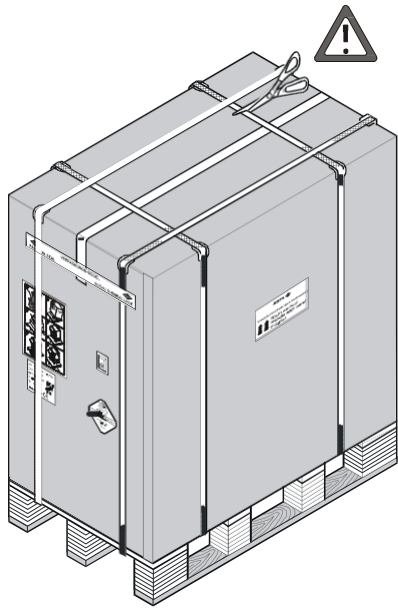
**Note down any possible damage in the installation report!**



**In case of a damaged machine, always keep the packing material for proof (transport insurance)!**

**Damage reports must be sent to the insurance company.**

## 7.5 Unpacking instructions

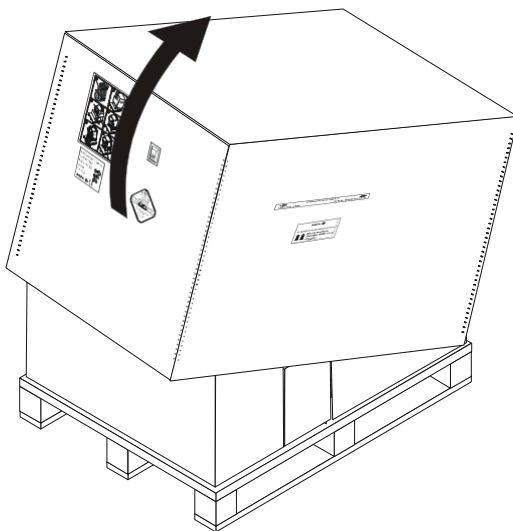


- **Cut the fixing straps.**



**Risk of injuries**

**The fixing straps are  
Tensioned**

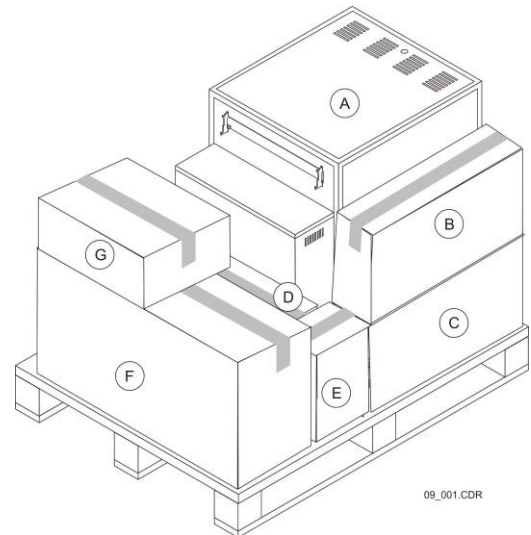


- **Lift the box off and remove it**

## 7.6 Contend of the box

### Overview of packed parts

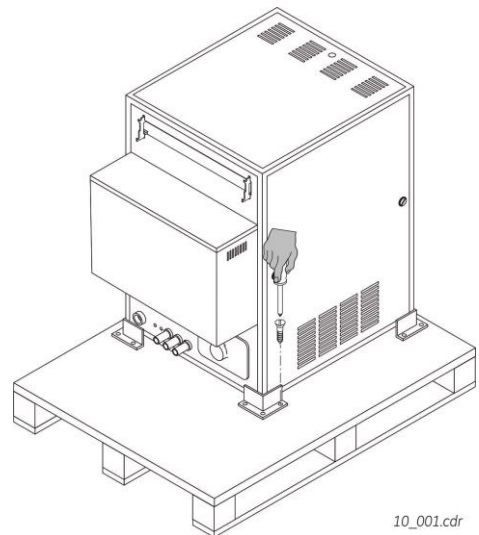
- (A) Machine
- (B) Upper section
- (C) Water rack
- (D) Fixer rack
- (E) Accessory pack "parts + documents"  
(e.g. water supply hose, clamps, etc.)
- (F) Developer rack
- (G) Feed table



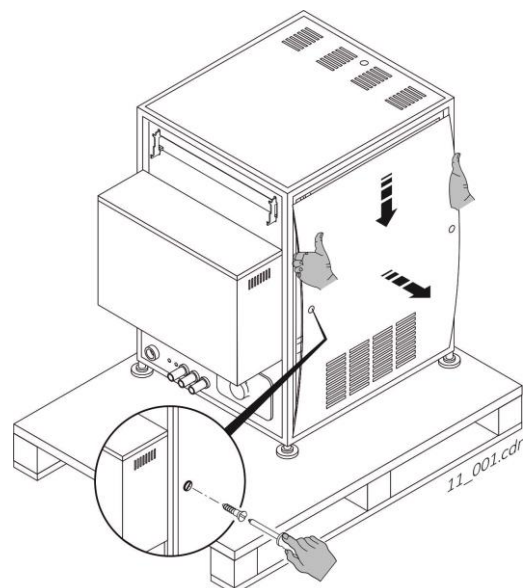
## 7.7 Lifting the film processor off the pallet

**If possible, position the machine and the pallet in such a way that the machine must only be lifted off the pallet.**

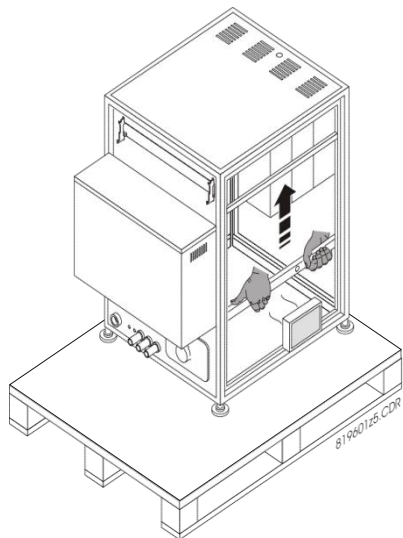
- **Remove the transport screws**



- **Remove the side panels**





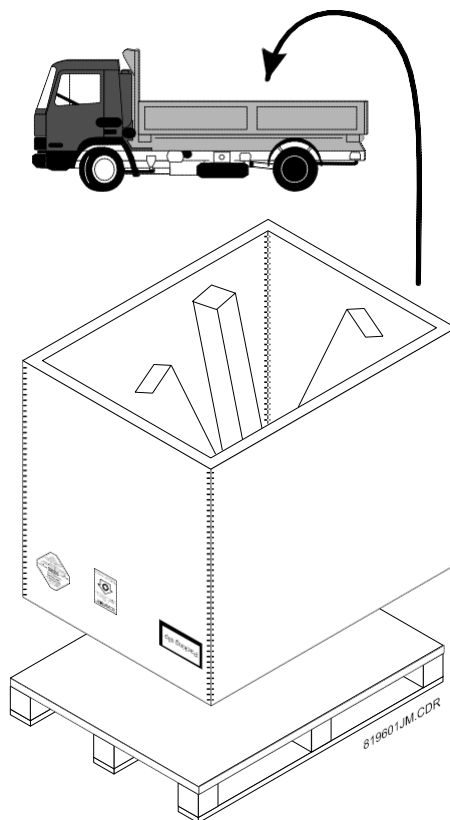


**Lift the machine off the pallet by taking hold of the frame, as shown.**



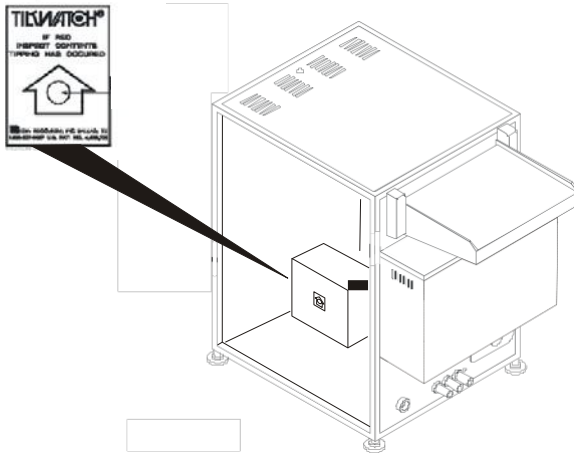
**Use gloves to avoid injuries caused by the frame; or use belts, if available, to lift the machine**

**Consider the uneven weight distribution and observe the height level of the center of gravity of the machine.**



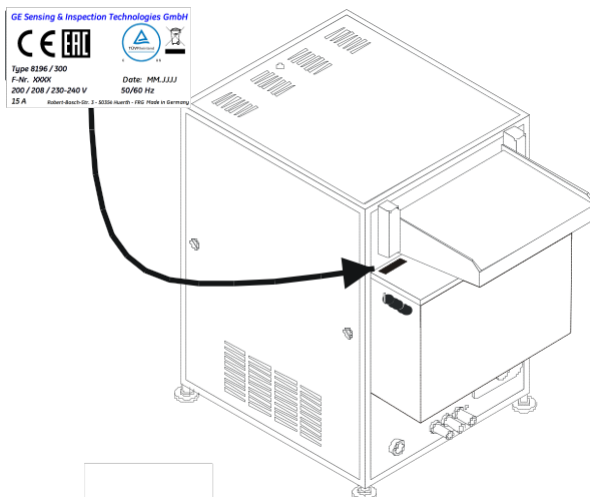
**Packing material shall be disposed of in compliance with the local regulations**

## 7.8 Checking the safety indicators in the machine





- Check the Tiltwatch indicator in the machine on the machine tank, on the right side in the film running direction.
- If the machine was tilted, the circle in the arrow head of the TILTWATCH changes from white to red.

## 7.9 Checking the type label



- Check the serial number (e.g.)
- GE Sensing & Inspection Technologies GmbH

**CE EAC**  

Type 8196 / 300  
F-Nr. XXXX  
200 / 208 / 230-240 V  
15 A

Date: MM.JJJJ  
50/60 Hz

Robert-Bosch-Str. 3 - 50354 Huerth - FRG Made in Germany

F-Nr. = consecutive serial number

Date = production date (month/year)

- Check the machine for any visible damages
- Compare the type number on the bill of lading with that on the type label.



If the machine is installed for a "TEST INSTALLATION", keep the packing material. The machine may only be transported in its original packing to avoid any damages due to transport and risks with reference to the insurance coverage (i.e. all shipping braces or transport blocks must be reinstalled and the TILTWATCH indicator must not be red).

## 8 Instructions for the "Installation and Startup" routines

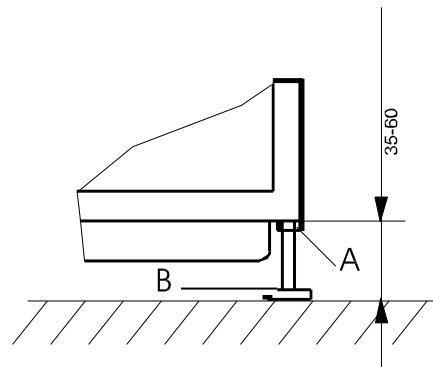
The sequence of the installation procedure listed here depends on the following parameters:

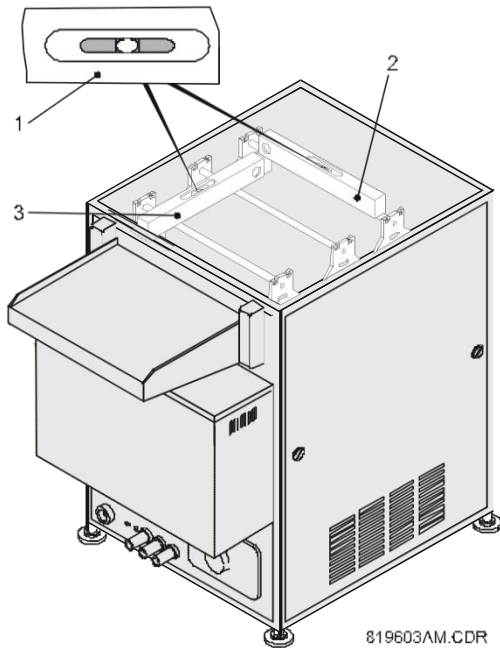
- Size of the installation room.
- Person carrying out the installation.

Please check these facts and arrange the routines in the required sequence for the installation.

## 9 Positioning and adjustment

- Position the machine, without the panels, at the final installation site.
- Insert the developer, fixer, and water racks into the machine.
- Tilt the processor to the left and to the right respectively, and insert sufficiently high wedges under the processor.
- Loosen the hexagon nut (A)
- Turn the adjustable foot (B) out until it has reached the distance shown in the drawing. Do not tighten the hexagon nut (A) before the installation is finished.





**The fine height adjustment should only be made after a complete processor installation.**

- **Measure in film transport direction by means of a spirit level (3).**
- **Place the spirit level (3) on the upper tie rods, on the left-/right-hand rack side.**
- **Adjust the height of the rear and front feet to ensure that the machine is level in transport direction (1).**
- **Measure crosswise to the film transport direction by means of a spirit level (2).**
- **Place the spirit level (2) on the upper tie rod of the developer and the water racks, and adjust the height of the feet on the left or on the right.**
- **Check the adjustment in vertical/horizontal direction and, if necessary, readjust.**
- **Tighten the hexagon lock nuts.**

## 10 Installation

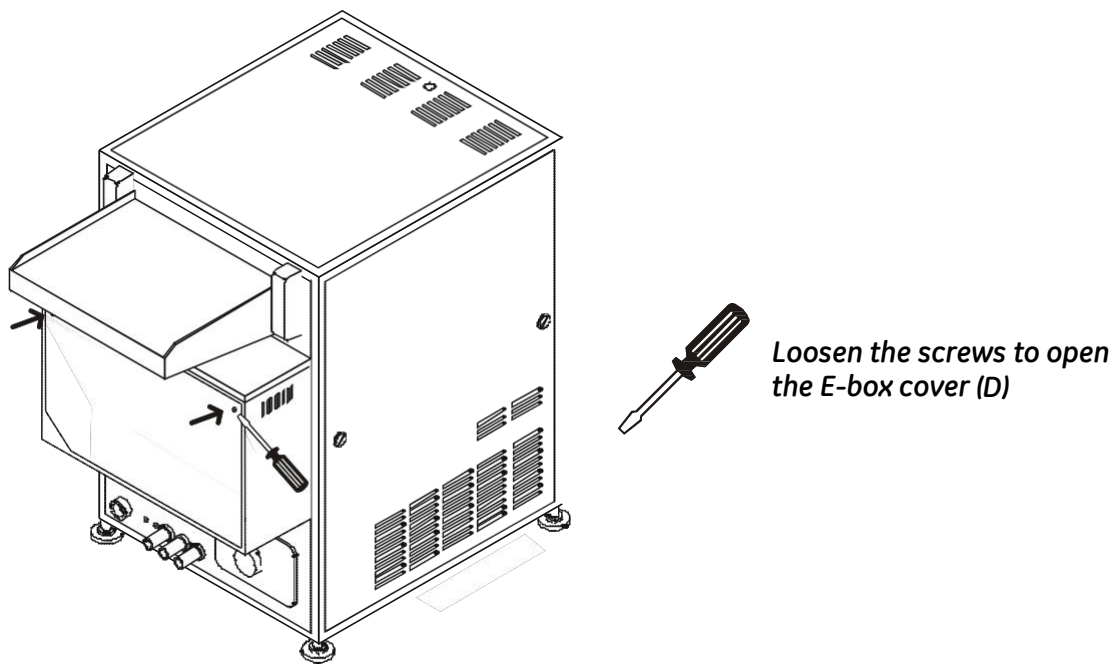
### 10.1 Mains connection



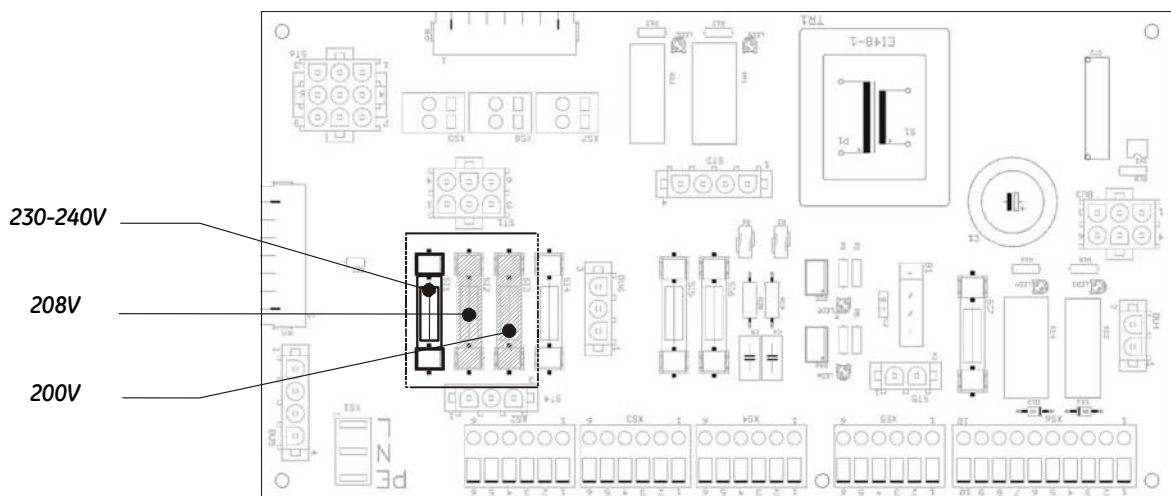
The voltage setting of the machine must correspond to the local mains supply.



On delivery, the machine is set to a mains voltage of 230V to 240V.



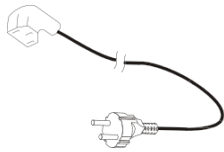
#### 10.1.1 Voltage setting



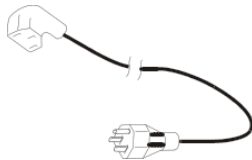
### 10.1.2 Mains connection



The parts required for the mains connection are included in the accessory pack.



Or



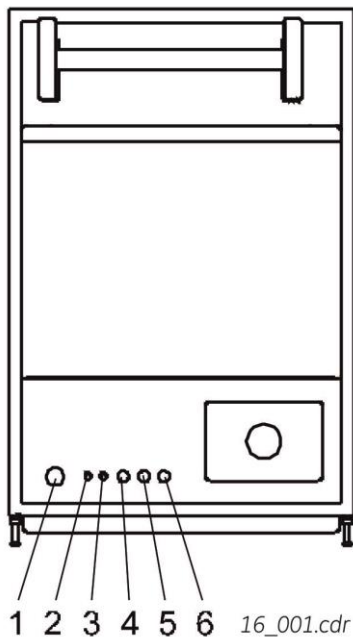
- Choose the mains cable from the accessory pack according to the plug connector system typically used in your country.
- Plug the mains cable into the mains plug (2)
- Plug the mains cable into the in-house voltage network

### 10.2 Connections in the front, through the lower front panel

Make sure that hoses are installed in such a way that they are not bent anywhere.

Use red/blue/transparent fabric-reinforced hoses.

#### 10.2.1 Holes provided in the lower front panel



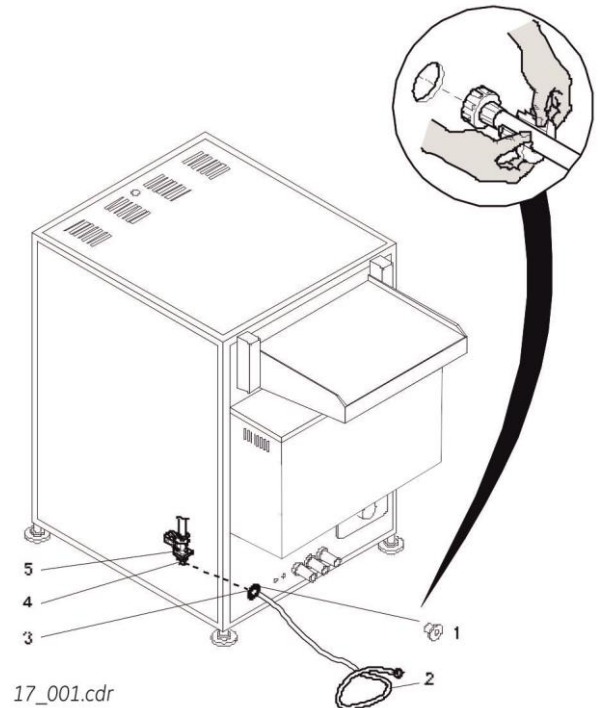
- 1 Water supply to the double solenoid valve.  
High-pressure water supply hose (3/4" to 3/4" union nuts)
- 2 Developer replenisher supply to the replenisher pump.  
Developer hose 10 x 3 mm / fabric-reinforced, red
- 3 Fixer replenisher supply to the replenisher pump.  
Fixer hose 10 x 3 mm / fabric-reinforced, blue
- 4 Developer disposal hose 19 x 4 mm / fabric-reinforced, transparent / red
- 5 Fixer disposal hose 19 x 4 mm / fabric-reinforced, transparent / blue
- 6 Water disposal hose 19 x 4 mm / fabric-reinforced, transparent

### 10.2.2 Installation of the water supply (with a high-pressure safety hose)

Use accessory pack 1

High-pressure safety hose: length = 2 m; connection = 3/4"

- Screw the union nut of high-pressure safety hose (1) to 4.MG1 (2) and tighten it with a pipe wrench.



### 10.2.3 Supply connections

Use accessory pack 1

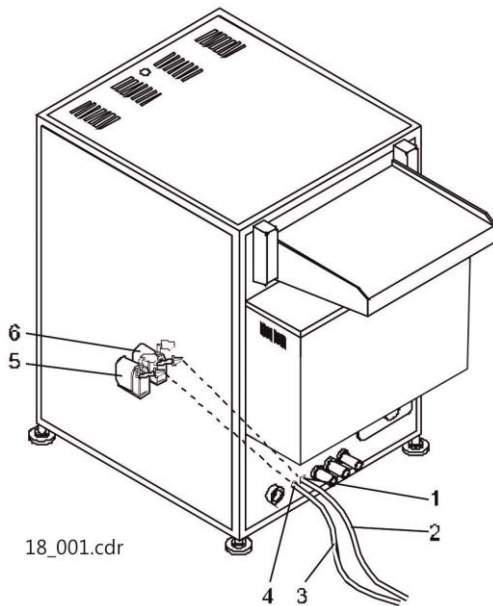
Hose clamps

The replenisher hoses (PVC, fabric-reinforced, dia. 10 x 3 mm), coming from the mixer or from individual tanks, can be connected to the nozzles in the front panel.



The replenisher hoses leading from the nozzles to the replenisher pumps are already installed.

The maximum suction height of the replenisher pumps (developer or fixer replenisher pump) of the film processor is 2 m, the maximum suction length is 5 m.



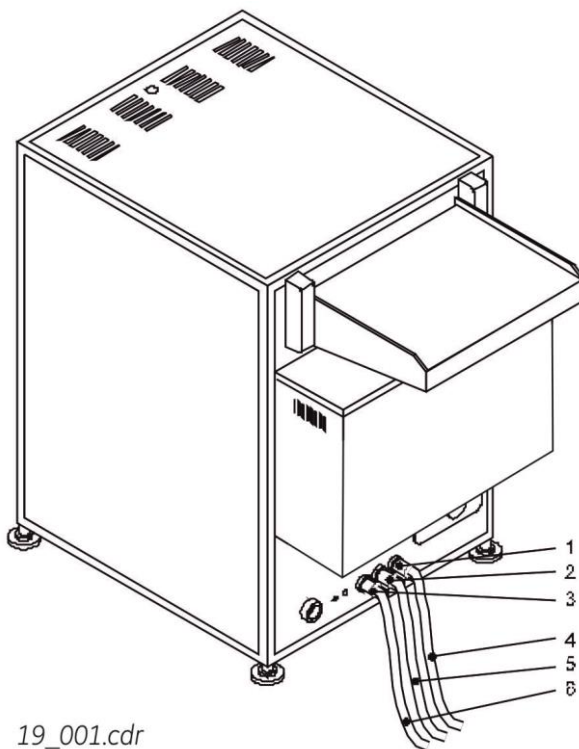
- 1 Fixer supply connector
- 2 Fixer replenisher hose
- 3 Developer replenisher hose
- 4 Developer supply connector
- 5 Developer replenisher pump
- 6 Fixer replenisher pump

Connect the replenisher hoses (fabric-reinforced, red/blue, dia. 10 x 3 mm), coming from the mixer or from individual tanks, to the nozzles in the front panel.

**Hoses:**

Developer, red (10x3 mm, fabric-reinforced)  
 Fixer, blue (10x3 mm, fabric-reinforced)  
 Please specify the required hose length (m) in your order!

**10.2.4 Disposal connections**



Use accessory pack 1

Hose clamps SNP22  
 PVC pipe (dia. 20x2.3, l = 35 mm)  
 3 disposal hoses, soft PVC (1 x red, 1 x blue, 1 x transparent), are installed in the machine via 3-way taps.  
 The corresponding connectors, dia. 20, are located in the front panel.

- 1 Water disposal connector in the front panel, thread
- 2 Fixer disposal connector in the front panel, thread
- 3 Developer disposal connector in the front panel, thread
- 4 Water drain hose
- 5 Fixer drain hose
- 6 Developer drain hose

Please specify the required hose length (m) in your order!



## 11 Startup of the machine

### 11.1 Filling with chemicals

- **Rinsing of tanks/racks**
  - Rinse all the machine tanks thoroughly with the hose shower.
  - Wash the rack and dryer crossover rollers with soap water and rinse off using plenty of clear water
  
- **Filling of the developer and fixer tanks**
  - Close the shut-off valves of the tanks.
  - Mix the chemicals as specified in a separate tank or by means of a mixer.
  - Fill the tanks up to the level mark.

**Tank capacities (with inserted racks):**

**Developer 24 l**

**Fixer 20 l**

**Wash water 20 l**

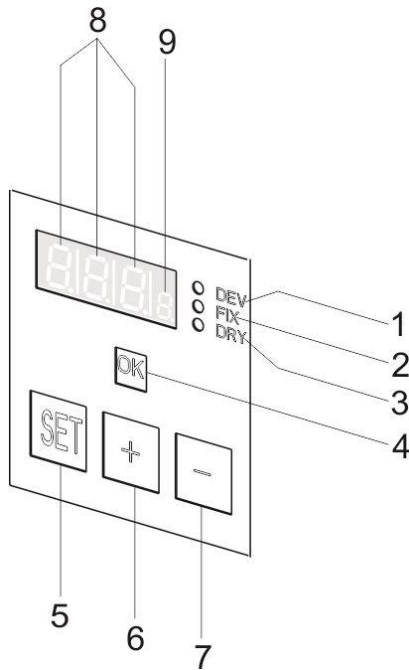
**Tank levels:** The developer and fixer tanks have white level marks inside the tank, on the right-hand side.

## 11.2 Process control

### 11.2.1 Scanning of process data



All functions and parameters of the Structurix NDT-U are set and scanned via the display at the feed table.



Display indicators for:

- 1 Developer temperature
- 2 Fixer temperature
- 3 Dryer step
- 4 OK signal
- 5 **SET** key
- 6 **+** key
- 7 **-** key
- 8 Value display
- 9 Status display / menu level

The following parameters can be scanned via the display (factory default settings):

|        |  |  |
|--------|--|--|
| Menu 1 | Developer temperature (°C)                     |  |
| Menu 2 | Fixer temperature (°C) Menu                    |  |
| Menu 3 | Dryer step                                     |  |
| Menu 4 | Process setting                                |  |
| Menu 5 | Developer replenishment (x10 ml/m²)            |  |
| Menu 6 | Fixer replenishment (x10 ml/m²) !Only display! |  |
| Menu 7 | Water supply (l/m²)                            |  |

By pressing the **+** or the **-** key, the different parameters can be displayed in ascending or descending order.

### 11.2.2 Changing the process data (parameters) on the display



On delivery, the Structurix U is adjusted to the default process setup 8.0, which corresponds to an immersion time of 100 seconds in developer and fixer at a developer temperature of  $T^{\circ} = 28^{\circ}\text{C}$ .

The process parameters of the Structurix U can be changed via the control display at the feed table.

Call the required parameters using the **+** or the **-** key to change the parameter values.

After pressing **SET**, the dot to the right appears in the display.



After this, the **+** or the **-** key can be used to change the parameter value.

The changed value is saved after 5 seconds.

Or by pressing the **SET** key again. The control display returns to the display function DEV-temperature.

By proceeding like this, all process parameters stored in the Structurix U can be changed.

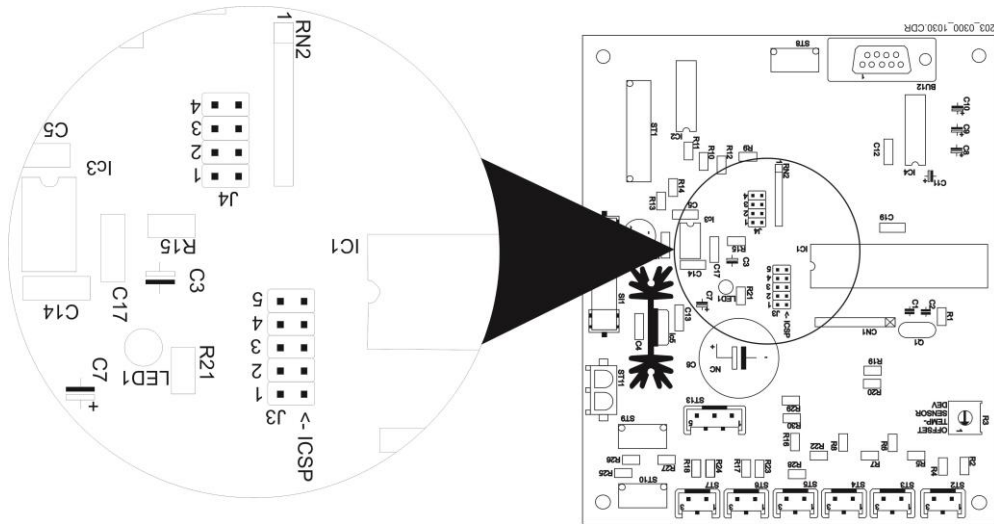
### 11.2.3 Adjustment range of process data (parameters)

|                         | Default settings       | Adjustment range              |
|-------------------------|------------------------|-------------------------------|
| Developer temperature   | 28 °C                  | 22 to 37 °C                   |
| Fixer temperature       | 28 °C                  | 22 to 37 °C                   |
| Dryer step              | 2                      | 4 steps                       |
| Process setting         | 8'                     | 1,5' to 12'                   |
| Developer replenishment | 900 ml/m <sup>2</sup>  | 200 to 950 ml/m <sup>2</sup>  |
| Fixer replenishment     | 1250 ml/m <sup>2</sup> | 290 to 1320 ml/m <sup>2</sup> |
| Water replenishment     | 13 l/m <sup>2</sup>    | 0 to 15 l/m <sup>2</sup>      |

### 11.2.4 Changing of process data (parameters) on the PCB CPU (12GS1)

The following settings can be changed on the PCB CPU (12GS1) by plugging the jumpers into another socket:

- **Setting of replenishment times 50Hz / 60Hz**
- **Temperature display °C / °F**
- **External /internal recooling**



Factory setup:



|               | <i>plugged<br/>(closed)</i> | <i>unplugged<br/>(open)</i> |                                     |
|---------------|-----------------------------|-----------------------------|-------------------------------------|
| <i>J4 / 1</i> | <i>X</i>                    |                             | <i>Replenishment time for 50Hz</i>  |
|               |                             | <i>X</i>                    | <i>Replenishment time for 60Hz</i>  |
| <i>J4 / 2</i> | <i>X</i>                    |                             | <i>Temperature display in °F</i>    |
|               |                             | <i>X</i>                    | <i>Temperature display in °C</i>    |
| <i>J4 / 3</i> | <i>X</i>                    |                             | <i>External recooling connected</i> |
|               |                             | <i>X</i>                    | <i>Internal recooling</i>           |
| <i>J4 / 4</i> | <i>X</i>                    |                             | <i>No function</i>                  |
|               |                             |                             |                                     |

All J3 jumpers must be plugged for the customer operation.

### 11.2.5 Dryer capacity / dryer trigger

| NDT-U 8196/300 |            |            |       |       |       |       |       |       |       |       |       |
|----------------|------------|------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Dryer step     | RS1 (LED1) | RS2 (LED2) | IR1 V | IR1 A | IR1 W | IR2 V | IR2 A | IR2 W | IR3 V | IR3 A | IR3 W |
| 1              | Off        | Off        | 70    | 2,0   | 140   | 70    | 2,0   | 140   | 70    | 2,0   | 140   |
| 2              | On         | Off        | 90    | 2,2   | 200   | 90    | 2,2   | 200   | 90    | 2,2   | 200   |
| 3              | On         | On         | 110   | 2,5   | 275   | 110   | 2,5   | 275   | 110   | 2,5   | 275   |
| 4              | Off        | On         | 120   | 2,6   | 320   | 120   | 2,6   | 320   | 120   | 2,6   | 320   |

| NDT-U OS 8196/350 |            |            |       |       |       |       |       |       |       |       |       |
|-------------------|------------|------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Dryer step        | RS1 (LED1) | RS2 (LED2) | IR1 V | IR1 A | IR1 W | IR2 V | IR2 A | IR2 W | IR3 V | IR3 A | IR3 W |
| 1                 | Off        | Off        | 120   | 2,6   | 320   | 120   | 2,6   | 320   | 120   | 2,6   | 320   |
| 2                 | On         | Off        | 130   | 2,7   | 350   | 130   | 2,7   | 350   | 130   | 2,7   | 350   |
| 3                 | On         | On         | 140   | 2,8   | 390   | 140   | 2,8   | 390   | 140   | 2,8   | 390   |
| 4                 | Off        | On         | 150   | 3,0   | 450   | 150   | 3,0   | 450   | 150   | 3,0   | 450   |

### 11.3 Making the machine ready for use

- Close the cover of E-box.
- Close the machine cover.
- Open the water supply connection
- Switch the machine on.
- The developer/fixer pumps start running immediately for 1 minute.
- The water pump starts running after 3 minutes, water inflow stops after 5 minutes.



The machine cover must be fitted in order to close the cover switch and to be able to put the machine into service.

### 11.4 Parameters and setup values

#### 11.4.1 Process times

Setup value options:

Factory setup:

| Process times |                      |                    |              |
|---------------|----------------------|--------------------|--------------|
| Step          | „Process name“ [min] | Feed rate [cm/min] | OK delay [s] |
| 1             | 1.5                  | 127.9              | 6            |
| 2             | 2.0                  | 73.7               | 10           |
| 3             | 3.0                  | 61.4               | 12           |
| 4             | 4.0                  | 46.1               | 16           |
| 5             | 5.0                  | 36.9               | 20           |
| 6             | 6.0                  | 30.7               | 24           |
| 7             | 7.0                  | 26.3               | 28           |
| 8             | 8.0                  | 23.0               | 32           |
| 9             | 9.0                  | 20.5               | 36           |
| 10            | 10.0                 | 18.4               | 40           |
| 11            | 11.0                 | 16.8               | 44           |
| 12            | 12.0                 | 15.4               | 48           |

## **12 Handing the machine over to the customer**

- *Instruct the customer in the operation.*
- *Hand the machine and the operating instructions over to the customer.*
- *Send the installation report to the Service Organization.*

## 13 Performance data

### 13.1 Type overview

| Film processor      | Type       | Mains connection                        |
|---------------------|------------|---|
| Structurix NDT U    | 8196 / 300 | 1N ~ 200, 208, 230 to 240 V / 50, 60 Hz |
| Structurix NDT U OS | 8196 / 350 | 1N ~ 200, 208, 230 to 240 V / 50, 60 Hz |

### 13.2 Functional data

| Film processor   | 300                      | 350                      |
|--|--------------------------|--------------------------|
| Process time (minutes)   | 1.5 to 12.0              | 1.5 to 12.0              |
| Processing speed (cm / minute)<br>(Standard: 8-minute process time)          | 15 to 128<br>(23)        | 15 to 128<br>(23)        |
| Filling capacities (l):  |                          |                          |
| Developer  | 24                       | 19                       |
| Fixer  | 20                       | 20                       |
| Water  | 20                       | 20                       |
| Warm-up times (min)  |                          |                          |
| Developer  | 75 s / K                 | 75 s / K                 |
| Fixer  | 75 s / K                 | 75 s / K                 |
| Film format min. (cm)  | 6 x 12                   | 6 x 12                   |
| Film length<br>min (cm)  | 12                       | 12                       |
| Film width<br>min (cm)   | 3.5                      | 3.5                      |
| max. (cm)  | 43                       | 43                       |
| Standard developer bath<br>temperature (°C)                                  | 28 (G135)<br>27 (ecoDEV) | 28 (G135)<br>27 (ecoDEV) |
| Standard fixer bath temperature<br>(°C)                                      | 28                       | 28                       |
| Dryer steps (adjustable)   | 4                        | 4                        |
| Film surface per replenishment   | 0.25                     | 0.25                     |
| Replenisher pump, standard<br>(ml/min) (± 10%): Developer (50 Hz /<br>60 Hz) | 400<br>550               | 400<br>550               |
| Replenisher rate (ml/m <sup>2</sup> ):                                       |                          |                          |
| Developer (G135 / ecoDEV)  | 900                      | 900                      |
| Fixer (G335 / ecoFIX)  | 1200                     | 1200                     |
| Water supply (l/min):<br>in filling phase                                    | 6                        | 6                        |
| Water consumption during film<br>cycle.                                      | 13                       | 13                       |
| Water pressure min. / max. (bar)   | 1 / 3                    | 1 / 3                    |



|   |  |  |
|---|--|--|
| <b>Water temperature:</b><br>min. °C<br>max. °C | 5<br>4 °C below developer<br>temperature | 5<br>4 °C below developer<br>temperature |
| <b>pH value of the water</b>                    | 6.5 to 8                                 | 6.5 to 8                                 |

### 13.3 Electrical data

| <b>Film processor</b>                                  |                | <b>Tolerance</b> |
|--|----------------|------------------|
| <b>Type</b>  | 8196 / 300/350 |                  |
| <b>Frequency (Hz)</b>                                  | 50 / 60        | ±3 / ±4          |
| <b>Nominal voltage (~V)</b>                            | 200 to 240     | +6% / -10%       |
| <b>Power consumption (watt)</b><br>Maximum*<br>Standby | 3300<br>1155   |                  |
| <b>Current consumption (A)</b>                         | max. 16        |                  |

\* Power with max. consumption of all active consumers according to the status of the film processor (software).

### 13.4 Climatic data

#### Ventilation and exhaust

The required air exchange ratio is 10 times the room volume per hour. If you have any questions on this, please contact your nearest GE office.

#### Heat emission

|                                   |          |
|-----------------------------------|----------|
| <b>Film processor</b>             |          |
| <b>Standby mode:</b><br>total (W) | max 150  |
| <b>Film cycle:</b><br>total (W)   | max 1100 |

**Rel. humidity of air** min. 30%, max. 80% (at a room temperature of 20 °C)  
**Room temperature** min. 10 °C, max. 30 °C

### 13.5 Dimensions and weights

For film processor dimensions, refer to the dimensioned drawings.




#### Packing dimensions

|                       |      |
|-----------------------|------|
| <i>Film processor</i> |      |
| <i>Length (cm)</i>    | 143  |
| <i>Width (cm)</i>     | 98.5 |
| <i>Height (cm)</i>    | 136  |

#### Weights

|   |     |
|---|-----|
| <i>Film processor</i>                       |     |
| <i>Without packing material, empty (kg)</i> | 160 |
| <i>With packing material, empty (kg)</i>    | 210 |
| <i>With full tanks (kg)</i>                 | 250 |

## 14 Safety regulations – other certificates or labels

|   |  |
|---|--|
| <i>The system has been tested according to the following regulations:</i> | <p>EN 60950<br/>EN 1717<br/>EN 61326</p>   |
| <i>Certificates / labels</i>  |    |

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# 2

**Structurix NDT-U**  
**Type 8196 / 300**  
**Structurix NDT-U**  
**Type 8196 / 350**

## **Operating Instructions**

**Section 2**

***Describes the operation and the function of the machine.***



# 3

**Structurix NDT-U**  
**Type 8196 / 300**  
**Structurix NDT-U**  
**Type 8196 / 350**

**Maintenance**  
**Maintenance Checklist**

**Section 3**

*Describes the maintenance routines of the machine.*

- *Cleaning of the machine*
- *Daily maintenance*
- *Weekly maintenance*
- *Monthly maintenance*
- *Maintenance checklist*



## Section 3

### List of Contents

- 1 Maintenance**
- 1.1 Maintenance work and maintenance intervals**
- 1.2 Checklist for extensive maintenance**
- 2 Cleaning instructions**
- 2.1 Draining of the machine tanks**
- 2.2 Cleaning of the transport racks**
- 2.3 Cleaning products**
- 2.5 Algae protection**
- 2.4 Draining of cleaning products**
- 2.6 Cleaning of the feed table**
- 3 Useful information**
- 4 Application instructions for DEVCLEAN and FIXCLEAN**

## **1 Maintenance**

*Film processing systems like the Structurix NDT U are, as all user systems, subjected to the most different types of dirt accumulation and contamination.*

*Only a processor which is cleaned at regular intervals provides you with a faultless film.*

*Maintenance intervals and detailed cleaning instructions are listed below.*

*The Structurix NDT-U will only provide you with the required film results if you carry out maintenance and cleaning routines regularly.*

### *Film volume*

*Customers with a low daily consumption of film (< 5 m<sup>2</sup>) should do the cleaning more often.*

*5 m<sup>2</sup> = 33 films in the format 35 x 43 cm (14" x 17")*

*= 100 films in the format 10 x 48 cm (3.9" x 18.9")*

### *Stop periods*

*1. After a relatively short stop period (1/2 hour up to a few hours), all you have to do is to feed some cleaning films to clean the rollers of the processor.*

*2. After a stop period of a few days up to one week, the processor must be cleaned completely. Let the machine dry after cleaning.*

*If necessary, ask an authorized GE Inspection Technologies Service technician about this.*

## 1.1 Maintenance work and maintenance intervals

| <b>Interval</b>            | <b>Maintenance</b>  |
|----------------------------|---|
| <b>Daily</b>               | <p><i>Prior to work start</i></p> <ol style="list-style-type: none"> <li>1. <i>Clean the feed table with a damp sponge and wipe it dry afterwards</i></li> <li>2. <i>Shower cross-over – leave "rack" in the liquid</i></li> <li>3. <i>Check the tank levels, if needed fill-up</i></li> <li>4. <i>Switch ON and Wait until the OK lamp lights up</i></li> <li>5. <i>Run 3 cleaning films (14"x17") through the processor (cleaning film = undeveloped film)</i></li> </ol> |
| <b>After work end</b>      | <ol style="list-style-type: none"> <li>6. <i>Switch the Structurix NDT U off</i></li> <li>7. <i>Leave the machine cover open</i></li> </ol>   |
| <b>Weekly</b>              | <p><i>In addition to the daily maintenance</i></p> <ol style="list-style-type: none"> <li>8. <i>Check the function of the film surface scanning, roller by roller</i></li> </ol>  |
| <b>Every 2 to 6 months</b> | <ol style="list-style-type: none"> <li>9. <i>Extensive maintenance need to be carried out by a BHGE certified engineer</i></li> </ol>   |



## 1.2 Checklist for extensive maintenance

|  |  |
|--|--|
| <b>Cleaning</b>  |  |
| <b>Tanks and racks</b>   | <i>Drain the tanks and rinse with water. Rinse the racks likewise with water. If necessary, clean the tanks and racks with chemical cleaning agents. Clean the rollers and guide plates.</i> |
| <b>Dryer / distributor</b>   | <i>Remove dust from the reflectors of the IR heaters. Clean the rollers with a damp</i>  |
| <b>Filters</b>   | <i>Remove dust from the reflectors of the IR heaters. Clean the rollers with a damp</i>  |
| <b>Others</b>  | <i>Clean the covers of the machine, replenisher tank, or mixer.</i>  |
| <b>Inspection</b>  |  |
| <b>Transport unit</b>  |  |
| <b>Film surface scanning</b>   | <i>Rollers must turn freely. Test with display.<br/>Check that plug contacts are tight and that there is no cable break.</i>   |
| <b>Rack / crossover / dryer</b>  | <i>Check torque and wear of bearings, gears, rollers, and guide plates.</i>  |
| <b>Drive shafts (horizontal/vertical)</b>                                    | <i>Check for any play between the worms, gear wheels, bearings, and couplings. Grease, if necessary.</i>   |
| <b>Feed table</b>  | <i>Check for any damages and check the position.</i>   |
| <b>Paneling</b>  | <i>Check for any damages.</i>  |
| <b>Dryer</b>   |  |
| <b>Blower</b>  | <i>Check the function and noises of the blower.</i>  |
| <b>IR heaters</b>  | <i>Check heaters, fuses, and reflectors.</i>   |
| <b>Tank and hose system</b>  |  |
| <b>Tank / hoses / connections</b>  | <i>Check for any leaks, cracks, and cloggings.</i>   |
| <b>Circulating and replenisher</b>   | <i>Check for any noises, cloggings, and leaks.</i>   |
| <b>Electronics</b>   |  |
| <b>General</b>   | <i>Check the contacts of the keyboard, display block, switches, and plugs.<br/>Check the covers and safety switches.</i>   |
| <b>Functionality</b>   |  |
| <b>Functionality check of:</b><br><br><i>(possibly with service program)</i> | <i>Circulating and replenisher pumps</i>   |
|  | <i>Drive motor, drive shafts (horizontal/vertical)</i>   |
|  | <i>Fans and blowers</i>  |
|  | <i>Bath heating, level sensor, and temperature sensor</i>  |
|  | <i>Dryer function and dryer steps</i>  |
|  | <i>Film surface scanning, solenoid valves, OK signal</i>   |
|  | <i>Mixer, accessories</i>  |
| <b>Adjustments</b>   |  |
| <b>Developer bath temperature: °C</b>  | <b>Fixer bath temperature: °C</b>  |
| <b>Developer replenisher pump: ml / min</b>                                  | <b>Fixer replenisher pump: ml / min</b>  |
| <b>Main water: l / min</b>   | <b>Intermediate water: l / min</b>   |
| <b>PMC values</b>  | <b>Archiveability: years</b>   |
| <b>Final test of maintenance</b>   |  |
| <b>Processor test with customer production films, large and small</b>        |  |

## 2 Cleaning instructions

*The Structurix NDT U is specially designed in such a way that it enables a simple and fast cleaning.*

*This means in practical operation:*

*Drain cocks for the separate drain of process chemicals, rinsing water, and cleaning products.*

*To make the cleaning easier, a cleaning sink with a shower is required close to the Structurix NDT U (recommended dimensions: 100 x 60 x 15 cm).*

**IMPORTANT:**



*Do not use the shower for cleaning the tanks of the Structurix NDT U. If any liquid flows down on the outside of the tanks, there is a risk of electric shock*



*Do not use any hot water for cleaning the machine tanks (this may cause triggering of the protection against overtemperature.) The maximum permissible temperature is 40 °C!*

**IMPORTANT:**



*Always observe the safety and environmental protection regulations when handling chemicals. Remember also to always wear the specified protective clothing.*

### 2.1 Draining of the machine tanks

*When draining the machine tanks, you must take the type of products (pH value) into consideration, especially during cleaning. Drain the machine tanks into the collecting tank provided for this purpose.*

*Refer to chapter 4: Application instructions for DEVCLEAN and FIXCLEAN*

### 2.2 Cleaning of the transport racks

*Switch the Structurix NDT U off.  
Remove the machine cover.  
Lift the transport racks carefully out of the tanks.*

*Clean the racks carefully by means of a soft sponge and running water. (In this way, the silver layer on the rollers of the developer rack is not removed.)*

*If the racks are badly coated with dirt, you can use special cleaning agents. You should only use the recommended cleaning agents, i.e. AGFA NDT DEVCLEAN for the developer zone and AGFA NDT FIXCLEAN for the fixer and wash water zones.*

*Insert the racks carefully back into the corresponding tanks  
(observe the color marking).*

**IMPORTANT:**

Check that the colors match the racks and tanks:



Developer = red  
Fixer F = blue  
Water = white

**IMPORTANT:**



Special regulations regarding the drainage into the sewerage system apply to the cleaning agents, as well as to the photo chemicals. In this regard, you **MUST** observe the local regulations.



It is recommended to fill the tanks before inserting the racks back there again.

### 2.3 Cleaning products

The following cleaning products are offered by GE Inspection Technologies, ensuring adequate cleaning results:

|                |               |       |
|----------------|---------------|-------|
| Developer zone | AGFA DEVCLEAN | EBMBU |
| Fixer zone     | AGFA FIXCLEAN | 37S2J |
| Water zone     | AGFA FIXCLEAN | 37S2J |

### 2.4 Draining of cleaning products

|                  |                           |
|------------------|---------------------------|
| Cleaning product | Must be drained into      |
| AGFA DEVCLEAN    | Fixer collecting tank     |
| AGFA FIXCLEAN    | Developer collecting tank |

**IMPORTANT:**



After cleaning with DEVCLEAN / FIXCLEAN, the racks and tanks must be thoroughly rinsed with water.

If you use other cleaning products, we recommend that you contact your nearest GE Inspection Technologies representative to decide which collecting tank is the right one for the cleaning products.

## 2.5 Algae protection

*The Structurix NDT U is provided with an algae protection valve. As a means of protection against algae, the water tank is automatically drained after use, when the processor is switched off.*



**IMPORTANT:**

*If the contamination with algae is heavy, an algaecide can be added.*

*We recommend to contact your BHGE Service technician to discuss the installation of an anti-algae system.*

## 2.6 Cleaning of the feed table

*(To avoid dirt accumulation or scratches on the film)*

*Clean the feed table by means of a damp sponge or a lint-free cloth. Wipe the feed table dry.*

*Check the film scanning:*

- Are the scanning rollers clean?*
- All magnetic rollers must run smoothly and evenly so that a correct replenisher volume is ensured (the rollers may get be locked if liquid is dripping on them).*
- In order to check the surface scanning function, use an approx. 35 mm broad film strip. Move the film to and fro below one of the 5 scanning rollers to activate this roller. The OK lamp for the film feed goes off. Repeat this procedure for every surface scanning roller.  
These checks are also carried out during regular maintenance operations by BHGE Service technician.*

### 3 Useful information

#### *Preparing the replenisher (diluting concentrates):*



*The correction dilution method is indicated on the corresponding package. If these instructions are not observed, e.g. by adding products in the wrong order or by not stirring sufficiently in the meantime, the product may deposit on the bottom and not dissolve any further, possibly leading to problems in the filters and in the racks of the machine.*



*Remove the residues of chemicals ready for use from the tanks before you prepare new chemicals because they may lead to a similar deposit. The preparation of chemicals is made easier by using a Structurix MIXER.*



*Incorrectly diluted chemicals must be destroyed. To achieve this, pour them into the corresponding collecting tanks for used chemicals. Cleaning agents can likewise be drained into the corresponding collecting tanks.*

#### 4 Application instructions for DEVCLEAN and FIXCLEAN

| <p><b>Structurix DEVCLEAN</b></p> <p><i>DEVCLEAN is a very effective two-component cleaning product for the thorough cleaning of the developer section of processors and tanks of manual developers. Silver deposits and contaminations are removed completely and quickly.</i></p>  | <p><b>Structurix FIXCLEAN</b></p> <p><i>FIXCLEAN is a single-component cleaning product for the fixer bath, intermediate wash, and drain sections of processors. It can also be used for cleaning the fixing agent tanks of mixers and manual film processing systems.</i></p>  |
|--|---|
| <p><b>Instruction for use: DEVCLEAN</b></p> <p>1. Drain the developer solution from the tank of the processor.</p> <p>2. Fill the tank half full with water (temperature around 35°C), add components A and B, stir continuously, and fill up with water until the tank overflows.<br/>For processors with a developer tank capacity of more than 20 liters:<br/>(NDT-1, NDT-3, NDT-E, NDT-RF, NDT-OS, NDT-U, NDT-S, NDT-S eco, and NDT-S i)</p> <ul style="list-style-type: none"> <li>- Fill the tank with approx. 5 liters of water (temperature around 35°C).</li> <li>- Add 5 liters of component A and 5 liters of component B by stirring continuously.</li> <li>- Fill up with water until the tank overflows.<br/>For processors with a developer tank capacity of 6.5 liters: (NDT-M)</li> <li>- Fill the tank with approx. 3 liters of water (temperature around 35°C).</li> <li>- Add 1 liter of component A and 1 liter of component B by stirring continuously.</li> <li>- Fill up with water until the tank overflows.</li> </ul> <p>3. Cleaning time (= reaction time) with the recirculating pump switched on:</p> <ul style="list-style-type: none"> <li>• 45 minutes at a bath temperature ≤ 30°C</li> <li>• 30 minutes at a bath temperature &gt; 30°C</li> </ul> <p>4. Drain the tank completely. Collect the used DEVCLEAN solution together with the fixer bath refuse. Used DEVCLEAN is acid and contains silver ions (dissolved silver).</p> <p>5. Rinse the tank with water and the rack with tap water before refilling the tank. Collect the water together with the fixer bath refuse.</p> <p>6. Fill the tank with fresh tap water (temperature around 15°C), switch on the recirculating pumps, and let the water circulate for 10 minutes.</p> <p>7. Drain the tank and collect the water together with the fixer bath refuse.</p> <p>Fill the tank with fresh tap water (temperature around 15°C), switch on the circulating pumps, and let the water circulate for 5 minutes.</p> <p>8. Drain the tank into the sewerage system.</p> <p>9. This completes the cleaning procedure. After closing the drain valve, the developer tank can be filled again.</p> | <p><b>Instruction for use: FIXCLEAN</b></p> <p>1. Drain the tank and rinse the tank, rack, and recirculating system thoroughly with clean water to remove all residues of fixing agent.</p> <p>2. Do not dismount the racks.</p> <p>3. Fill all tanks with water up to approx. 80 % of their capacity.</p> <p>4. Add FIXCLEAN (2.5 liters for 25 liters of solution ready for use) slowly by avoiding any splashes and by stirring continuously.</p> <p>Absorb any spilled or splashed solution immediately by means of absorbing material and plenty of water.</p> <p>5. An empty FIXCLEAN bottle can be rinsed with water and added to the solution in the tank.</p> <p>6. Add water up to 100 % of the tank capacity by stirring continuously.</p> <p>7. Cleaning time (=reaction time) with the recirculating pump switched on:<br/>45 minutes at a bath temperature ≤ 30°C<br/>30 minutes at a bath temperature &gt; 30°C<br/>If the contamination with algae is very heavy in the (intermediate) wash water section, the concentration of FIXCLEAN can be increased. If necessary, FIXCLEAN can also be used as a pure concentrate.</p> <p>Always observe the instructions and comply with all safety measures, especially when using a pure concentrate.</p> <p>8. Allow FIXCLEAN to react for at least 15 minutes when cleaning other fixing agent tanks. In these cases, a stronger concentration can be used depending on the degree of contamination.</p> <p>9. Drain all tanks completely. Collect the used FIXCLEAN solution together with the developer bath refuse.</p> <p>10. Rinse the tank with fresh tap water (temperature around 15°C) and the rack with running tap water before refilling the tanks. Collect the water together with the developer bath refuse.</p> <p>11. Fill all tanks with fresh tap water (temperature around 15°C), switch on the circulating pump, and let the water circulate for 15 minutes.</p> <p>12. Drain all tanks into the sewerage system. If necessary, repeat the cleaning and rinsing procedure until everything is clean.</p> <p>13. This completes the cleaning procedure. After closing the drain valves, the fixer bath and the wash water tank can be refilled with fresh fixer solution or tap water.</p> |

# 4

**Structurix NDT-U**

**Type 8196 / 300**

**Structurix NDT-U**

**Type 8196 / 350**

**Accessories**

**Section 4**

*Gives an overview of the accessory program for the machine.*



## **Section 3**

### **List of Contents**

- 1 Types and accessories**



## 1 Types and accessories

### List of Types

|                         |                 |              |
|-------------------------|-----------------|--------------|
| <b>Structurix NDT-U</b> | <b>8196/300</b> | <b>38P6N</b> |
| <b>Structurix NDT-U</b> | <b>8196/350</b> | <b>38P7P</b> |

### Accessories

|                                    |                 |              |
|------------------------------------|-----------------|--------------|
| <b>Structurix MIXER</b>            | <b>5280/200</b> | <b>3U66F</b> |
| <b>Replenisher tanks 2X30L</b>     | <b>8186/701</b> | <b>3779N</b> |
| <b>Water filter</b>                | <b>8188/500</b> | <b>EM3YK</b> |
| <b>Light-tight cover</b>           | <b>8196/160</b> | <b>38KTB</b> |
| <b>Structurix Feeder</b>           | <b>5204/340</b> | <b>3677A</b> |
| <b>Fliptop Magazine</b>            | <b>5204/431</b> | <b>3679E</b> |
| <b>Light-tight separating wall</b> | <b>8196/170</b> | <b>39X91</b> |

# 5

**Structurix NDT-U**

**Type 8196 / 300**

**Structurix NDT-U**

**Type 8196 / 350**

**Field Notifications**

**Section 5**

- *Gives an overview of the technical modifications since the introduction of the machine*
- *Includes a collection of Field Notifications*



# 6

**Structurix NDT-U**

**Type 8196 / 300**

**Structurix NDT-U**

**Type 8196 / 350**

**Troubleshooting  
Repair**

## Section 6

*Gives detailed instructions for troubleshooting and repair of the machine.*

- *Safety regulations / general repair instructions*
- *Tools and auxiliary equipment (if necessary, also software tools)*
- *Error codes*
- *Troubleshooting list*
- *Fuse table*
- *Settings*



## Section 6

### List of Contents

- 1 Safety tests**
  - 1.1 Visual check**
  - 1.2 Tightness check**
  - 1.3 Electrical check**
- 2 Safety regulations**
  - 2.1 Light tightness of the machine**
  - 2.2 Cover switch**
  - 2.3 Checking the power cord for strain relief**
  - 2.4 Repairs on printed circuit boards**
  - 2.5 Repairs on PCB**
- 3 Quality category of the test equipment**
  - 3.1 Tools and auxiliary equipment**
    - 3.1.1 Recommended tools and test equipment**
- 4 Error Codes**
- 5 Fuse table**
  - 5.1 Fuse on PCB distributor (11.GS1)**
  - 5.2 Fuse on PCB-CPU (12.GS1)**
- 6 Settings**

## 1 Safety tests

Upon completion of every repair job, the technician must carry out the following routine safety tests.

Country-specific regulations must be observed.

### 1.1 Visual check

No obstacles, protruding parts, defective housing, and sharp edges in the work area around the machine.

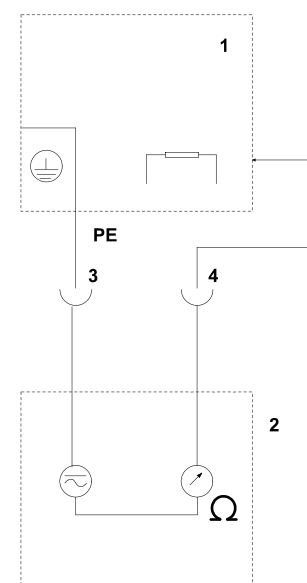
### 1.2 Tightness check

- Check the hoses and tanks for any leaks inside and outside the machine on all supply and drain hoses.
- Remove all water and chemical residues (observe the disposal regulations for chemicals).

### 1.3 Electrical check

- The power cord and the cables inside the machine show no damages.
- The line fuses have the required values.
- Air filter and cooling are working.
- No visible scorch marks or incorrect cable connections.
- Check all ground connections on the metal parts of panels/housings.
- Should any repairs regarding the mains voltage be required, the protective earth conductor must be checked (VDE standard). The protective earth resistance with grounding-type plug is  $\leq 0.3$  ohms, with a fixed connection  $\leq 0.2$  ohms (according to VDE 0702, VBG4 edition 1997)

1. Internal circuit of the machine to be tested
2. Measuring equipment for testing the protective earth resistance
3. Connection between meter and protective earth
4. Connection between meter and conductive parts of the machine to be tested which may be touched accidentally



## 2 Safety regulations

### 2.1 Light tightness of the machine

- *The processor must not be installed in an area with direct sunlight (max. 2500 Lux).*
- *The machine must not be opened during the operation. It is only light tight if all panels are properly mounted.*

### 2.2 Cover switch

- *The safety switch may only be operated for service purposes, i.e. in order to run a test cycle when the cover is open.*

### 2.3 Checking the power cord for strain relief

- *Condition of the isolation of power plug / power cord*
- *Efficiency of the strain relief on the power cord*
- *Efficiency of the protective earth on metallic panel parts (protective earth connected or spring contacts in perfect condition)*

### 2.4 Replacement of PCB

- *You must wear a grounding wrist strap (Order No. 9.9999 0830.0) for the discharge of electrostatic charges.*
- *Emergency solution:  
If no grounding strap is available, possible electrostatic charges can be discharged by touching metal cover parts or the protective earth beforehand.*

### 2.5 Repairs on PCB

- *Repairing a PCB is NOT allowed.*
- *Component change is limited to the PCB level.*
- *NO PCB components are changed, replaced, repaired.*

### 3 Quality category of the test equipment

Test equipment to be used: Multimeter (V/A/OHM) with an accuracy of 1 %.

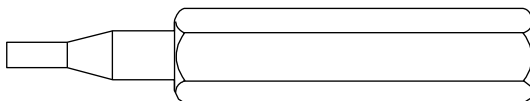
#### 3.1 Tools and auxiliary equipment

##### 3.1.1 Recommended tools and test equipment

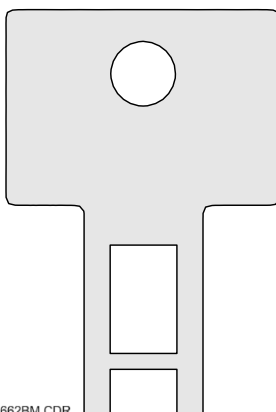
In addition to the general tools that every service technician has in his tool box, the following auxiliary equipment is required for the service:

| Auxiliary Equipment | Spare Part Number | Application  |
|---------------------|-------------------|--|
| Grounding strap     | CM+9.9999.0830.0  | Replacement of PCBs / EPROMs                           |
| Isoflex Topas NB52  | CM+9.9999.9247.0  | Lubrication  |
| Ballistol           | CM+9.9999.9136.0  | Lubrication / Cleaning                                 |
| AMP extraction tool | CM+9.9999.1005.0  | Replacement of pins and sockets in plugs and couplings |
| Service key         | CM+9.8196.9002.0  | Overriding of the cover switch                         |

##### AMP extraction tool



##### Service key



819662BM.CDR

4 Error Codes

| Display of error code    | Description  | Remedial measures   |
|--------------------------|--|---|
| 01E<br>03E<br>08E<br>09E | The nominal value of developer temperature was not reached before inserting the film.<br>The developer is warmed up too slowly.<br>Developer temperature is more than 10 °C above the nominal value of temperature.<br>Developer temperature is below 0 °C or above 60 °C  | 09E Before inserting the film, wait until the OK lamp lights up.<br>Reset protection against overtemperature. Otherwise, call a technician.<br>Check the room temperature.<br>If the room temperature is 10 °C above the nominal value of developer temperature, use a cooler or install an air conditioner.<br>Otherwise, call a technician.<br>Room temperature is too low or too high for the operation; or developer temperature sensor is defective. Call a technician.  |
| 11E<br>13E<br>18E<br>19E | Nominal value of fixer temperature was not yet reached before inserting film.<br>The fixer is warmed up too slowly.<br>The alarm sounds.<br>Fixer temperature is more than 10 °C above the nominal value of temperature.<br>Fixer temperature is below 0 °C or above 60 °C | Before inserting the film, wait until the OK lamp lights up. Reset protection against overtemperature.<br>Press "SET" to reset the alarm until the normal film cycle starts.<br>Otherwise, call a technician.<br>Check the room temperature.<br>If the room temperature is 10 °C above the nominal value of fixer temperature, use a cooler or install an air conditioner. Otherwise, call a technician.<br>Room temperature is too low or too high for the operation; or fixer temperature sensor is defective. Call a technician. |
| 21E<br>22E<br>23E        | The actual speed deviates from the processing speed setting (Menu 4).<br>Cover switch is not closed.<br>No film transport  | Call a technician<br>Attach the cover<br>Call a technician  |



## 5 Fuse table

### 5.1 Fuse on PCB distributor (11.GS1)

|            |      |  |
|------------|------|--|
| SI1        |      | Mains voltage selection 230 to 240V                              |
| SI2        | T12A | Mains voltage selection 208V                                     |
| SI3        |      | Mains voltage selection 200V                                     |
| SI1 to SI3 |      | Fusing of the complete NDT-U without developer and fixer heating |
| SI4        | T10A | Heating of developer + fixer                                     |
| SI5        | T1A  | Not used   |
| SI 6       | T1A  | Replenisher pump of developer + fixer                            |
| SI 7       | T5A  | Solenoid valve of water + diver motor                            |

### 5.2 Fuse on PCB-CPU (12.GS1)

|     |       |                                |
|-----|-------|--------------------------------|
| SI1 | 1.25A | Fuse for +5V MC and +12V relay |
|-----|-------|--------------------------------|

## 6 Settings

|                         | Default settings       | Setup range                   |
|-------------------------|------------------------|-------------------------------|
| Developer temperature   | 28 °C                  | 22 to 37 °C                   |
| Fixer temperature       | 28 °C                  | 22 to 37 °C                   |
| Dryer step              | 2                      | 1 to 4 Step                   |
| Process setup           | 8'                     | 1.5' to 12'                   |
| Developer replenishment | 900 ml/m <sup>2</sup>  | 200 to 950 ml/m <sup>2</sup>  |
| Fixer replenishment     | 1250 ml/m <sup>2</sup> | 500 to 1250 ml/m <sup>2</sup> |
| Water replenishment     | 13 l/m <sup>2</sup>    | 0 to 15 l/m <sup>2</sup>      |

# 7

**Structurix NDT-U**

**Type 8196 / 300**

**Structurix NDT-U**

**Type 8196 / 350**

**Reference Diagrams**

**Circuit Diagrams**

## **Section 7**

### **Includes:**

- ***Alphanumeric reference lists***
- ***Reference diagrams for the identification and localization of assemblies in the machine***
- ***Block diagrams and overall circuit diagrams***
- ***Circuit diagrams of PCBs, if applicable.***

## Section 7

### List of Contents

- 1 Short codes**
- 2 Reference diagrams**
  - 2.1 Side view, left-hand side**
  - 2.2 Side view, right-hand side**
  - 2.3 Front view**
  - 2.4 Top view**
  - 2.5 E-box**
- 3 Printed circuit boards**
  - 3.1 PCB distributor (11.GS1) CM+9.8196.8880.X**
  - 3.2 PCB CPU (12.GS1) CM+9.8196.8860.X**
  - 3.3 PCB for Reed switch (1.GS1) CM+9.7070.2130.X**
  - 3.4 PCB for solid-state relay (14.GS1) CM+9.7070.2140.X**
  - 3.6 PCB for Display (21.GS1) CM+9.7070.2200.X**
- 4 Circuit diagrams**
  - 4.1 Overall circuit diagram**
  - 4.2 Circuit diagram for surface scanning PCB**
  - 4.3 Circuit diagram for CPU PCB**
  - 4.4 Circuit diagram for Distribution PCB**
  - 4.5 Circuit diagram for Solid-State-Relais PCB**
  - 4.6 Circuit diagram for display PCB**

1 Short codes

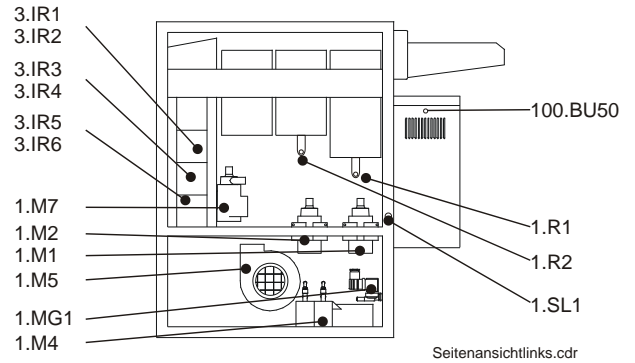
| Short code | Refer to    | Designation                                |
|------------|-------------|--|
| 1.M1       | 2.1         | Developer pump                             |
| 1.M2       | 2.1         | Fixer pump                                 |
| 1.M3       | 2.2         | Drive motor                                |
| 1.M4       | 2.1 2.3     | Replenisher pump                           |
| 1.M5       | 2.1         | Dryer blower                               |
| 1.M6       | 2.2         | Dryer blower                               |
| 1.M7       | 2.1         | Water pump                                 |
| 1.HZ1      | 2.4         | Developer heating                          |
| 1.HZ2      | 2.4         | Fixer heating                              |
| 1.R1       | 2.1         | Developer temperature sensor               |
| 1.R2       | 2.1         | Fixer temperature sensor                   |
| 1.S4       | 2.4         | Machine cover switch                       |
| 1.MG1      | 2.1 2.3     | Water supply solenoid valve                |
| 1.MG2      | 2.2         | Algae protection solenoid valve NO         |
| 1.MG3      | 2.2         | Recooling solenoid valve NO                |
| 1.MG4      | 2.2         | Recooling solenoid valve NC                |
| 1.GS1      | 2.4         | PCB for Reed switch (surface scanning)     |
| 1.SL1      | 2.1         | PE for frame                               |
| 2.S1       | 2.3 2.5     | Mains switch                               |
| 2.ST1      | 2.3 2.5     | Mains connection for machine plug          |
| 2.BE1      | 2.3 2.4 2.5 | Protection against overtemp. Dev. heating  |
| 2.BE2      | 2.3 2.4 2.5 | Protection against overtemp. Fixer heating |
| 2.MC1      | 2.5         | Interference suppressor filter             |
| 2.SL       | 2.5         | PE for mounting plate                      |
| 2.SL1      | 2.1 2.5     | PE distributor                             |
| 2.SL2      | 2.5         | PE for mains connection grounding pad      |
| 2.SL3      | 2.5         | PE for E-box cover                         |
| 2.R1       | 2.5         | Switch-on current limiter for IR1 IR2      |
| 2.R2       | 2.5         | Switch-on current limiter for IR3 IR4      |
| 2.R3       | 2.5         | Switch-on current limiter for IR5 IR6      |
| 3.IR1      | 2.1         | IR heater, top                             |
| 3.IR2      | 2.1         | IR heater, top                             |
| 3.IR3      | 2.1         | IR heater, middle                          |
| 3.IR4      | 2.1         | IR heater, middle                          |
| 3.IR5      | 2.1         | IR heater, bottom                          |
| 3.IR6      | 2.1         | IR heater, bottom                          |
| 11.GS1     | 2.5         | PCB-CPU                                    |
| 11.SI1     | 2.5         | Fuse for mains voltage 230 to 240V         |
| 11.SI2     | 2.5         | Fuse for mains voltage 208V                |
| 11.SI3     | 2.5         | Fuse for mains voltage 200V                |
| 11.SI4     | 2.5         | Fuse for developer + fixer heating         |
| 11.SI5     | 2.5         | Fuse for replenisher option                |
| 11.SI6     | 2.5         | Fuse for replenisher pump                  |
| 11.LED1    | 2.5         | Dryer step                                 |
| 11.LED2    | 2.5         | Dryer step                                 |

|          |         |  |
|----------|---------|--|
| 11.LED3  | 2.5     | Water supply                           |
| 11.LED4  | 2.5     | Recooling                              |
| 11.LED5  | 2.5     | Replenisher                            |
| 11.LED6  | 2.5     | Replenisher option                     |
| 12.GS1   | 2.5     | PCB-CPU                                |
| 12.SI1   | 2.5     | Fuse for 12 Vdc + 5Vdc                 |
| 12.SI2   | 2.5     | Fuse for 5Vdc Display                  |
| 12.LED1  | 2.5     | Power supply 5Vdc                      |
| 12.LED2  | 2.5     | Power supply 5Vdc Display              |
| 12.JP3   | 2.5     | ICSP programming plug                  |
| 12.JP4   | 2.5     | Coding plug for NDT-U functions        |
| 12.MP1   | 2.5     | Measuring points                       |
| 12.R3    | 2.5     | Developer temperature compensation     |
| 12.BU12  | 2.5     | Female connector for serial interface  |
| 13.TR1   | 2.5     | Dryer transformer                      |
| 13.TR2   | 2.5     | Transformer 19Vac                      |
| 13.SL2   | 2.5     | PE for transformer bracket             |
| 13.BU3-1 | 2.5     | Female connector for dryer of NDT-U    |
| 13.BU3-2 | 2.5     | Female connector for dryer of NDT-U OS |
| 14.GS1   | 2.5     | PCB-Solid-State relay for tank         |
| 14.LED1  | 2.5     | Developer heating                      |
| 14.LED2  | 2.5     | Fixer heating                          |
| 14.LED3  | 2.5     | Developer + fixer pump                 |
| 14.LED4  | 2.5     | Water pump                             |
| 15.GS1   | 2.5     | PCB-Solid-State relay for dryer        |
| 15.LED1  | 2.5     | IR1, IR2                               |
| 15.LED2  | 2.5     | IR3, IR4                               |
| 15.LED3  | 2.5     | IR5, IR6                               |
| 15.LED4  | 2.5     | Dryer blower                           |
| 21.GS1   | 2.5     | PCB for display                        |
| 22.BE1   | 2.4 2.5 | Membrane keyboard                      |
| 100.BU50 | 2.1 2.5 | Feeder control signals                 |

## 2 Reference diagrams

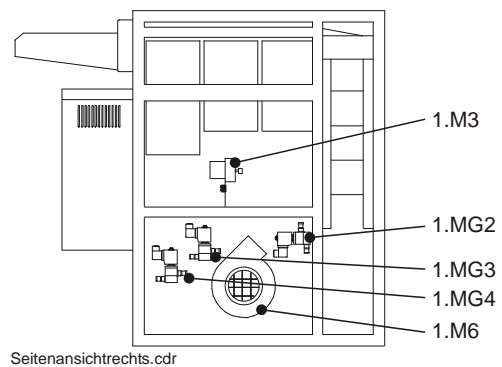
### 2.1 Side view, left-hand side

|                 |  |
|-----------------|--|
| <b>3.IR1-2</b>  | <b>IR heater, top</b>                      |
| <b>3.IR3-4</b>  | <b>IR heater, middle</b>                   |
| <b>3.IR5-6</b>  | <b>IR heater, bottom</b>                   |
| <b>100.BU50</b> | <b>Feeder control signals</b>              |
| <b>1.M7</b>     | <b>Pump, water tank</b>                    |
| <b>1.M1</b>     | <b>Pump, developer tank</b>                |
| <b>1.M2</b>     | <b>Pump, fixer tank</b>                    |
| <b>1.M5</b>     | <b>Dryer blower</b>                        |
| <b>1.MG1</b>    | <b>Solenoid valve, water supply</b>        |
| <b>1.M4</b>     | <b>Replenisher pump, developer + fixer</b> |
| <b>1.R1</b>     | <b>Temp. sensor, developer tank</b>        |
| <b>1.R2</b>     | <b>Temp. sensor, fixer tank</b>            |
| <b>1.SL1</b>    | <b>PE conductor, frame</b>                 |



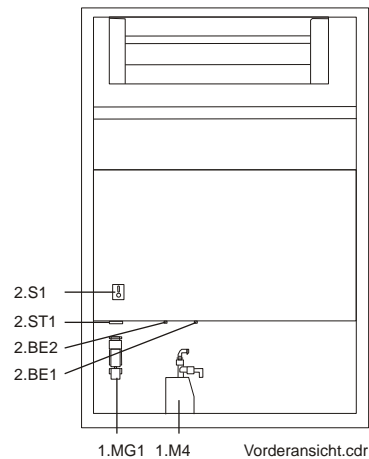
### 2.2 Side view, right-hand side

|              |   |
|--------------|---|
| <b>1.M3</b>  | <b>Drive motor</b>                      |
| <b>1.MG2</b> | <b>Solenoid valve, algae protection</b> |
| <b>1.MG3</b> | <b>Solenoid valve, recooling</b>        |
| <b>1.MG4</b> | <b>Solenoid valve, recooling</b>        |
| <b>1.M6</b>  | <b>Dryer blower</b>                     |



### 2.3 Front view

|              |  |
|--------------|--|
| <b>1.MG1</b> | <b>Solenoid valve, water supply</b>                          |
| <b>1.M4</b>  | <b>Replenisher pump, developer + fixer</b>                   |
| <b>2.S1</b>  | <b>Mains switch</b>  |
| <b>2.ST1</b> | <b>Machine plug, mains connection</b>                        |
| <b>2.BE1</b> | <b>Protection against overtemperature, developer heating</b> |
| <b>2.BE2</b> | <b>Protection against overtemperature, fixer heating</b>     |



## 2.4 Top view

**1.HZ2** Developer heating

**1.HZ1** Fixer heating

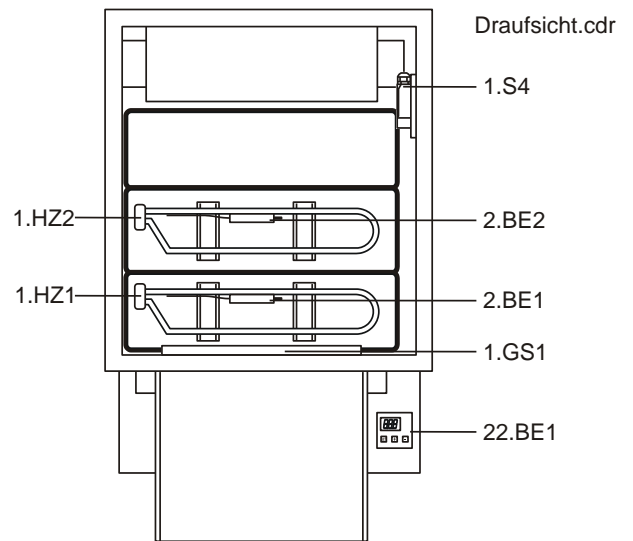
**1.S4** Machine cover switch

**2.BE2** Protection against  
overtemperature, fixer heating

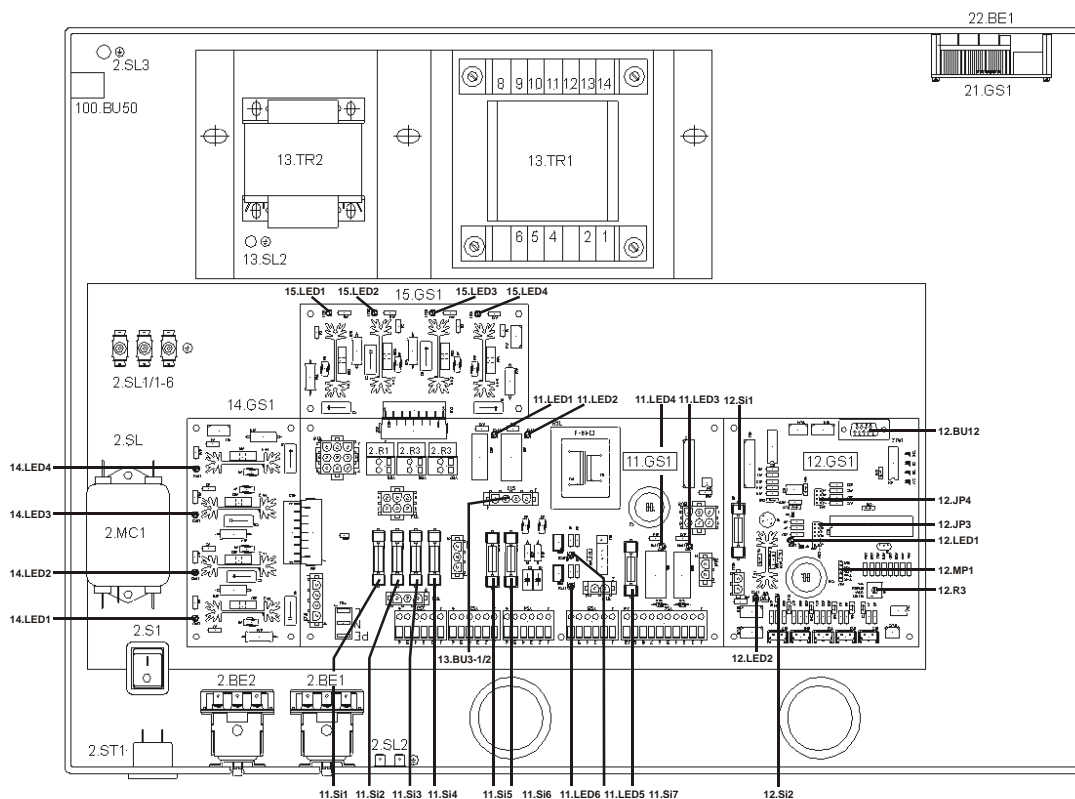
**2.BE1** Protection against  
overtemperature, dev. heating

**1.GS1** PCB-Reed switch  
(surface scanning)

**22.BE1** Membrane keyboard, operation



## 2.5 E-box



|               |  |                |  |
|---------------|--|----------------|--|
| <b>2.S1</b>   | <b>Mains switch</b>  | <b>11.LED1</b> | <b>Dryer capacity</b>                      |
| <b>2.MC1</b>  | <b>Interference suppressor filter</b>                        | <b>11.LED2</b> | <b>Dryer capacity</b>                      |
| <b>2.ST1</b>  | <b>Machine plug</b>  | <b>11.LED3</b> | <b>Water supply</b>                        |
| <b>2.SL</b>   | <b>PE conductor, mounting plate</b>                          | <b>11.LED4</b> | <b>Recooling</b>                           |
| <b>2.SL1</b>  | <b>PE conductor distributor</b>                              | <b>11.LED5</b> | <b>Replenisher</b>                         |
| <b>2.SL2</b>  | <b>PE conductor grounding pad, mains connection</b>          | <b>11.LED6</b> | <b>Replenisher option</b>                  |
| <b>2.SL3</b>  | <b>PE conductor, E-box cover</b>                             | <b>12.GS1</b>  | <b>PCB CPU</b>                             |
| <b>2.BE1</b>  | <b>Protection against overtemperature, developer heating</b> | <b>12.SI1</b>  | <b>Fuse for 12Vdc + 5Vdc</b>               |
| <b>2.BE2</b>  | <b>Protection against overtemperature, fixer heating</b>     | <b>12.SI2</b>  | <b>Fuse for 5Vdc display</b>               |
| <b>2.R1</b>   | <b>Switch-on current limiter, IR1 IR2</b>                    | <b>12.LED1</b> | <b>Power supply 5Vdc</b>                   |
| <b>2.R2</b>   | <b>Switch-on current limiter, IR3 IR4</b>                    | <b>12.LED2</b> | <b>Power supply 5Vdc display</b>           |
| <b>2.R3</b>   | <b>Switch-on current limiter, IR5 IR6</b>                    | <b>12.JP3</b>  | <b>ICSP programming plug</b>               |
| <b>11.GS1</b> | <b>PCB distributor NDT-U</b>                                 | <b>12.JP4</b>  | <b>Coding plug, NDT-U functions</b>        |
| <b>11.SI1</b> | <b>Fuse for line voltage 230 to 240V</b>                     | <b>12.MP1</b>  | <b>Measuring points</b>                    |
| <b>11.SI2</b> | <b>Fuse for line voltage 208V</b>                            | <b>12.R3</b>   | <b>Developer temperature, compensation</b> |
| <b>11.SI3</b> | <b>Fuse for line voltage 200V</b>                            | <b>12.BU12</b> | <b>Female connector, serial Interface</b>  |
| <b>11.SI4</b> | <b>Fuse for developer + fixer heating</b>                    |                |  |
| <b>11.SI5</b> | <b>Fuse for replenisher option</b>                           |                |  |
| <b>11.SI6</b> | <b>Fuse for replenisher pump</b>                             |                |  |
| <b>11.SI7</b> | <b>Fuse for 24Vdc</b>  |                |  |

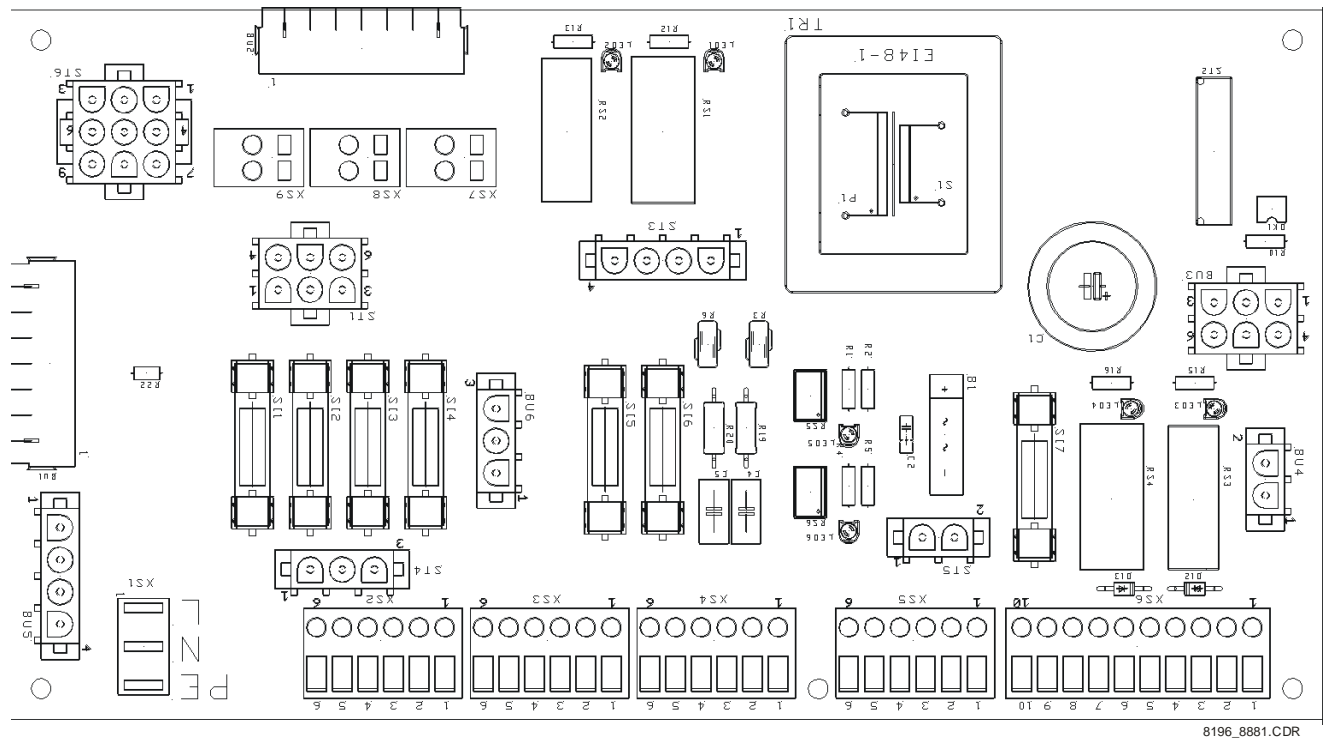


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|                 |  |                 |                                     |
|-----------------|--|-----------------|-------------------------------------|
| <b>13.TR1</b>   | <b>Dryer transformer</b>                     | <b>15.GS1</b>   | <b>PCB-Solid-State relay, dryer</b> |
| <b>13.TR2</b>   | <b>Transformer 19Vac</b>                     | <b>15.LED1</b>  | <b>IR1, IR2</b>                     |
| <b>13.SL2</b>   | <b>PE conductor, transformer<br/>bracket</b> | <b>15.LED2</b>  | <b>IR3, IR4</b>                     |
| <b>13.BU3-1</b> | <b>Female connector, NDT-U<br/>dryer</b>     | <b>15.LED3</b>  | <b>IR5, IR6</b>                     |
| <b>13.BU3-2</b> | <b>Female connector, NDT-U<br/>OS dryer</b>  | <b>15.LED4</b>  | <b>Dryer blower</b>                 |
| <b>14.GS1</b>   | <b>PCB-Solid-State relay, tank</b>           | <b>21.GS1</b>   | <b>PCB, display</b>                 |
| <b>14.LED1</b>  | <b>Developer heating</b>                     | <b>22.BE1</b>   | <b>Membrane keyboard</b>            |
| <b>14.LED2</b>  | <b>Fixer heating</b>                         | <b>100.BU50</b> | <b>Feeder control signals</b>       |
| <b>14.LED3</b>  | <b>Developer + fixer pump</b>                |                 |                                     |
| <b>14.LED4</b>  | <b>Water pump</b>                            |                 |                                     |

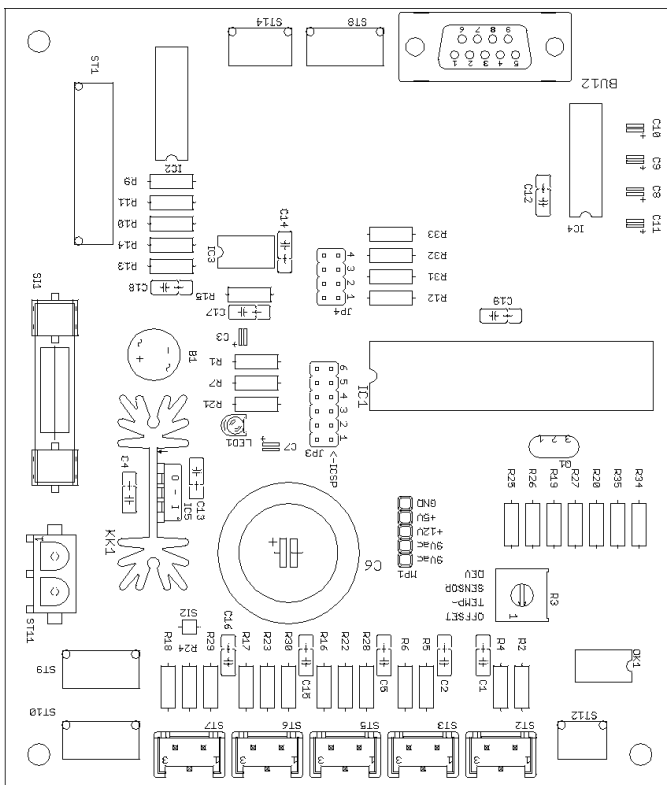
### 3 Printed circuit boards

#### 3.1 PCB distributor (11.GS1) CM+9.8196.8880.X



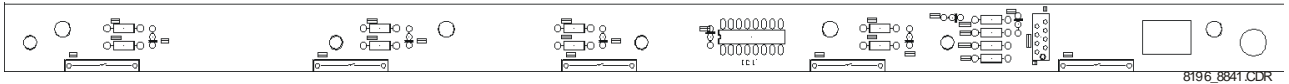
|                 |   |            |                         |
|-----------------|---|------------|-------------------------|
| <b>LED1/RS1</b> | <b>Dryer step</b>                         |            |                         |
| <b>LED2/RS2</b> | <b>Dryer step</b>                         |            |                         |
| <b>LED3/RS3</b> | <b>Water supply</b>                       |            |                         |
| <b>LED4/RS4</b> | <b>Recooling</b>                          |            |                         |
| <b>LED5/RS5</b> | <b>Replenisher pump</b>                   |            |                         |
| <b>LED6/RS6</b> | <b>Replenisher pump (option)</b>          |            |                         |
| <b>SI1</b>      | <b>Fuse for line voltage 230 to 240V</b>  | <b>12A</b> | <b>CM+9.0452.3011.0</b> |
| <b>SI2</b>      | <b>Fuse for line voltage 208V</b>         | <b>12A</b> | <b>CM+9.0452.3011.0</b> |
| <b>SI3</b>      | <b>Fuse for line voltage 200V</b>         | <b>12A</b> | <b>CM+9.0452.3011.0</b> |
| <b>SI4</b>      | <b>Fuse for developer+fixer heating</b>   | <b>10A</b> | <b>CM+9.0452.3047.0</b> |
| <b>SI5</b>      | <b>Fuse for replenisher pump (option)</b> | <b>1A</b>  | <b>CM+9.0452.3008.0</b> |
| <b>SI6</b>      | <b>Fuse for replenisher pump</b>          | <b>1A</b>  | <b>CM+9.0452.3008.0</b> |
| <b>SI7</b>      | <b>Fuse for 24V DC</b>                    | <b>5A</b>  | <b>CM+9.0452.3162.0</b> |

### 3.2 PCB CPU (12.GS1) CM+9.8196.8860.X



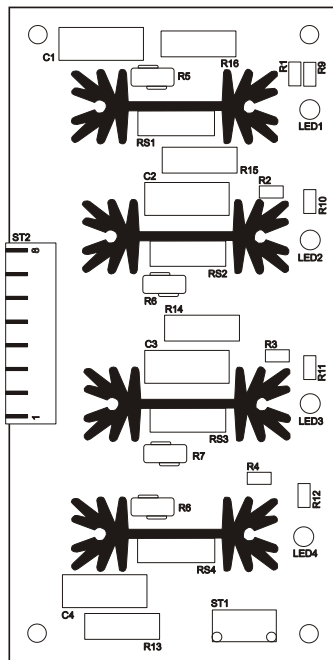
- ST1**            **Connection for 11.GS1**
- ST2**            **Developer temperature sensor**
- ST3**            **Fixer temperature sensor**
- ST5**            **Developer level switch (jumper)**
- ST6**            **Fixer level switch (jumper)**
- ST7**            **Water level switch (jumper)**
- ST8**            **Connection for 14.GS1**
- ST9**            **Spare I<sup>2</sup>C bus**
- ST10**           **I<sup>2</sup>C bus for the display**
- ST11**           **Power supply 9V AC**
- ST12**           **Feeder speed adapter BU12 RS232 for service**
- ST14**           **Connection for 15.GS1**
- SI1**           **Fuse for +5V MC and +12V relay      1.25A    CM+9.0451.9727.0**
- R3**            **Offset temp. sensor**
- J1**            **N.C. drive motor**
- J2**            **N.O. drive motor**
- J3/1-J3/5**     **N.C. [CSP = ]IN [CIRCUIT SERIAL PROGRAM**
- J4/1**           **closed = 50Hz    open = 60Hz**
- J4/2**           **closed = °F      open = °C**
- J4/3**           **closed= external chiller      open = internal chiller**
- J4/4**           **free**

### 3.3 PCB for Reed switch (1.GS1) CM+9.7070.2130.X



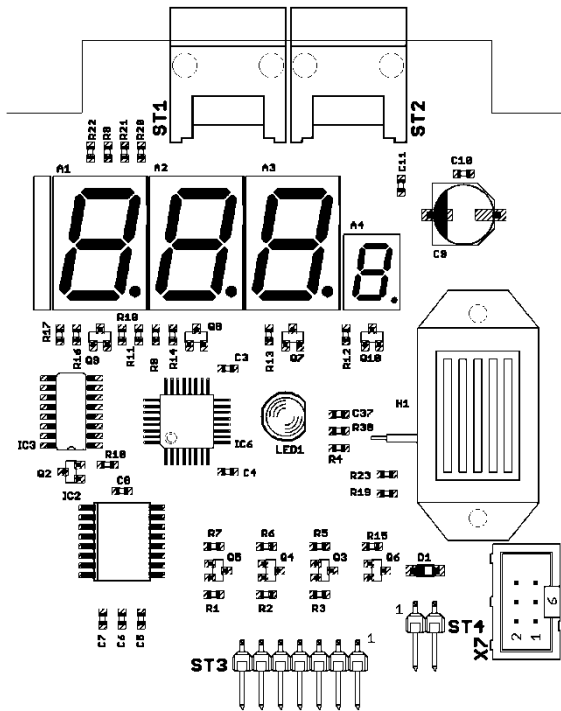
- S1 Reed switch
- S2 Reed switch
- S3 Reed switch
- S4 Reed switch
- S5 Reed switch

### 3.4 PCB for solid-state relay (14.GS1) CM+9.7070.2140.X



- LED1/RS1 Developer heating
- LED2/RS2 Fixer heating
- LED3/RS3 Developer, fixer recirculation pump
- LED4/RS4 Water pump

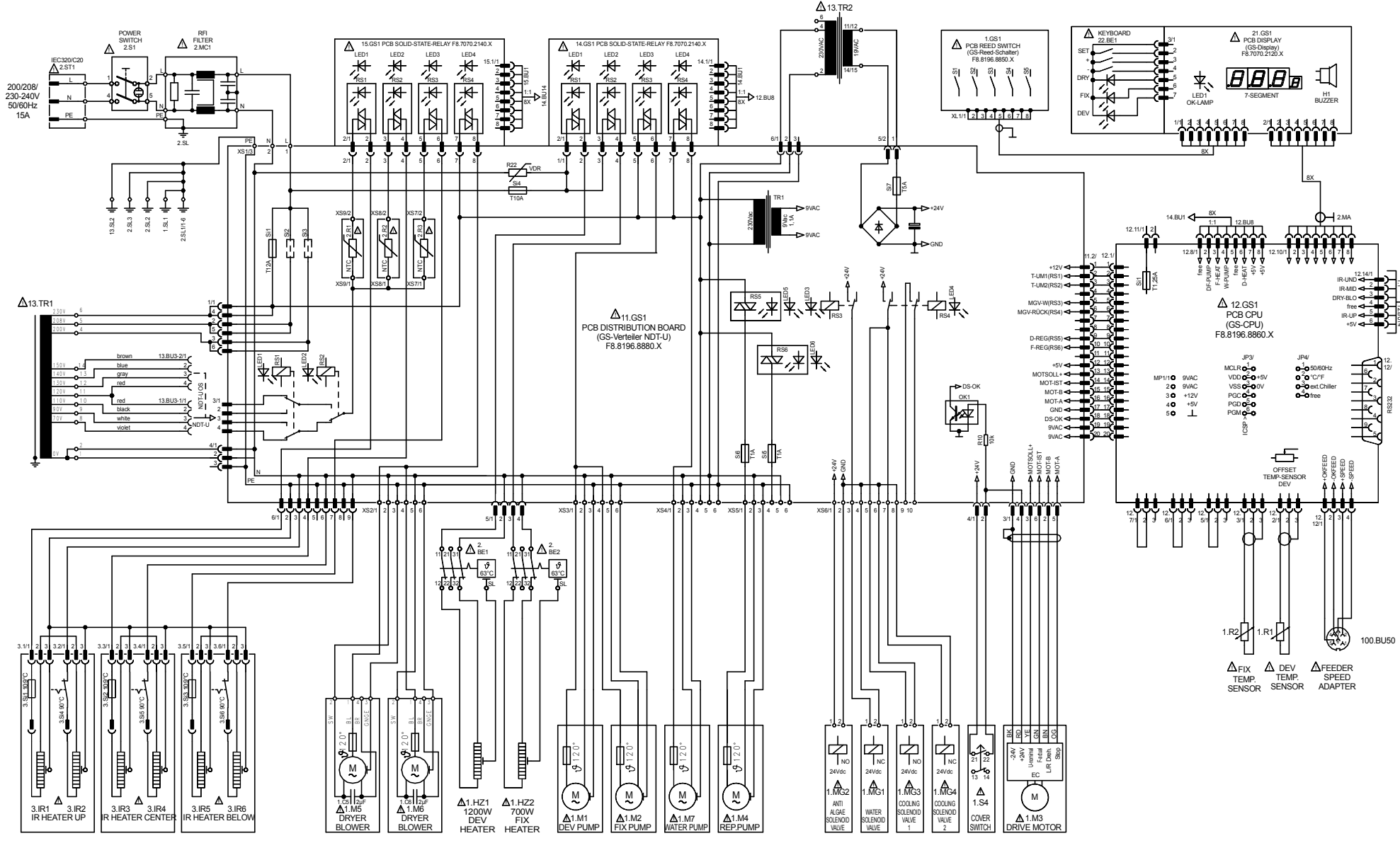
3.6 PCB for Display (21.GS1) CM+9.7070.2200.X



- ST1** Connector for I<sup>2</sup>C bus
- ST2** Connector for I<sup>2</sup>C bus
- ST3** Connector for keyboard membrane
- H1** Buzzer

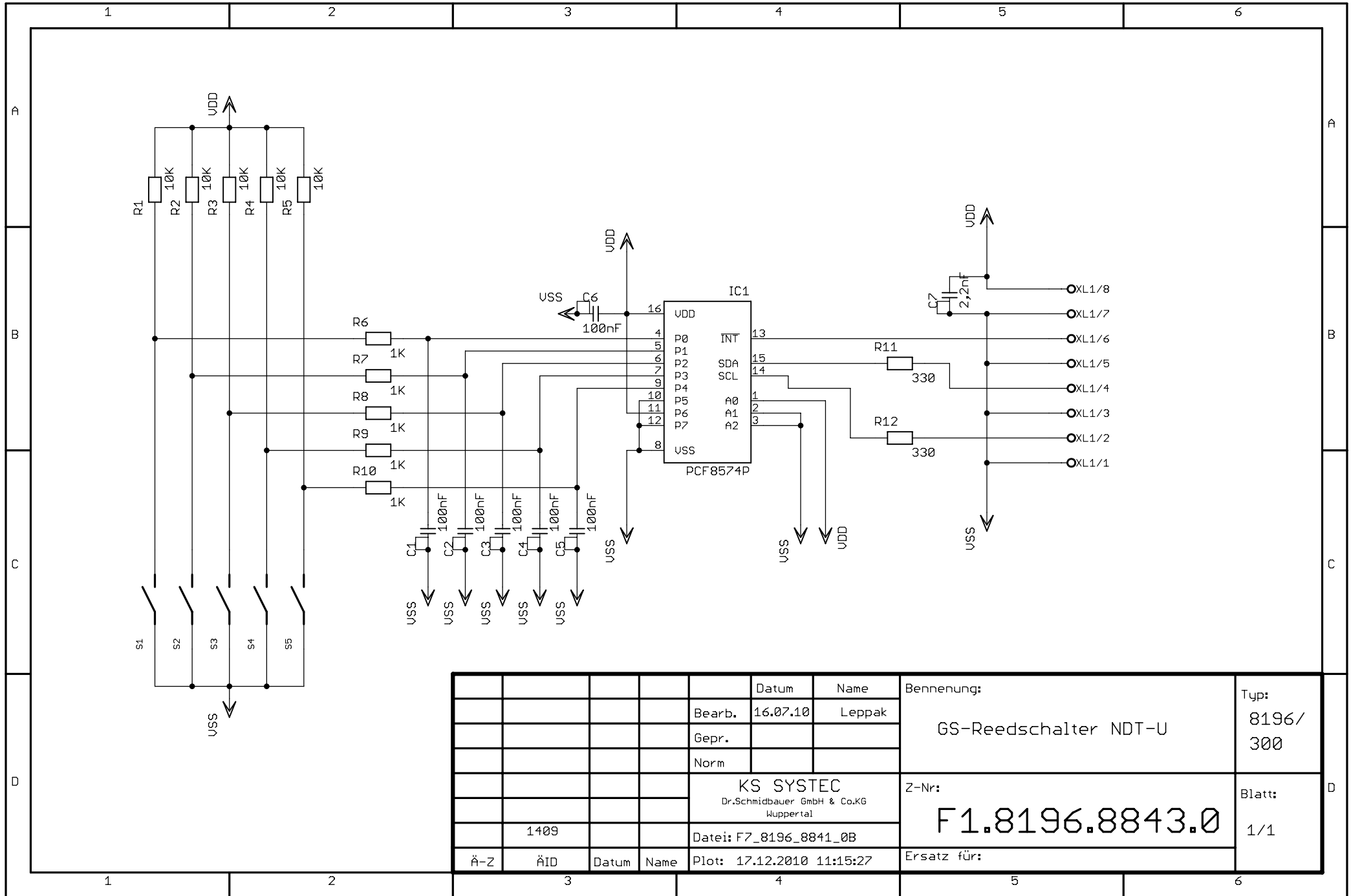
|            |   |                      |
|------------|---|----------------------|
| <b>4</b>   | <b>Circuit diagrams</b>                           |                      |
| <b>4.1</b> | <b>Overall circuit diagram</b>                    |                      |
|            | <i>Overall circuit diagram</i>                    | <i>F1.8196.8653.</i> |
| <b>4.2</b> | <b>Circuit diagram for surface scanning PCB</b>   |                      |
|            | <i>Circuit diagram for surface scanning PCB</i>   | <i>F1.8196.8843.</i> |
| <b>4.3</b> | <b>Circuit diagram for CPU PCB</b>                |                      |
|            | <i>Circuit diagram for CPU PCB</i>                | <i>F1.8196.8863.</i> |
| <b>4.4</b> | <b>Circuit diagram for Distribution PCB</b>       |                      |
|            | <i>Circuit diagram for Distribution PCB</i>       | <i>F1.8196.8883.</i> |
| <b>4.5</b> | <b>Circuit diagram for Solid-State-Relais PCB</b> |                      |
|            | <i>Circuit diagram for Solid-State-Relais PCB</i> | <i>F1.7070.2143.</i> |
| <b>4.6</b> | <b>Circuit diagram for display PCB</b>            |                      |
|            | <i>Circuit diagram for display PCB</i>            | <i>F1.7070.2203.</i> |

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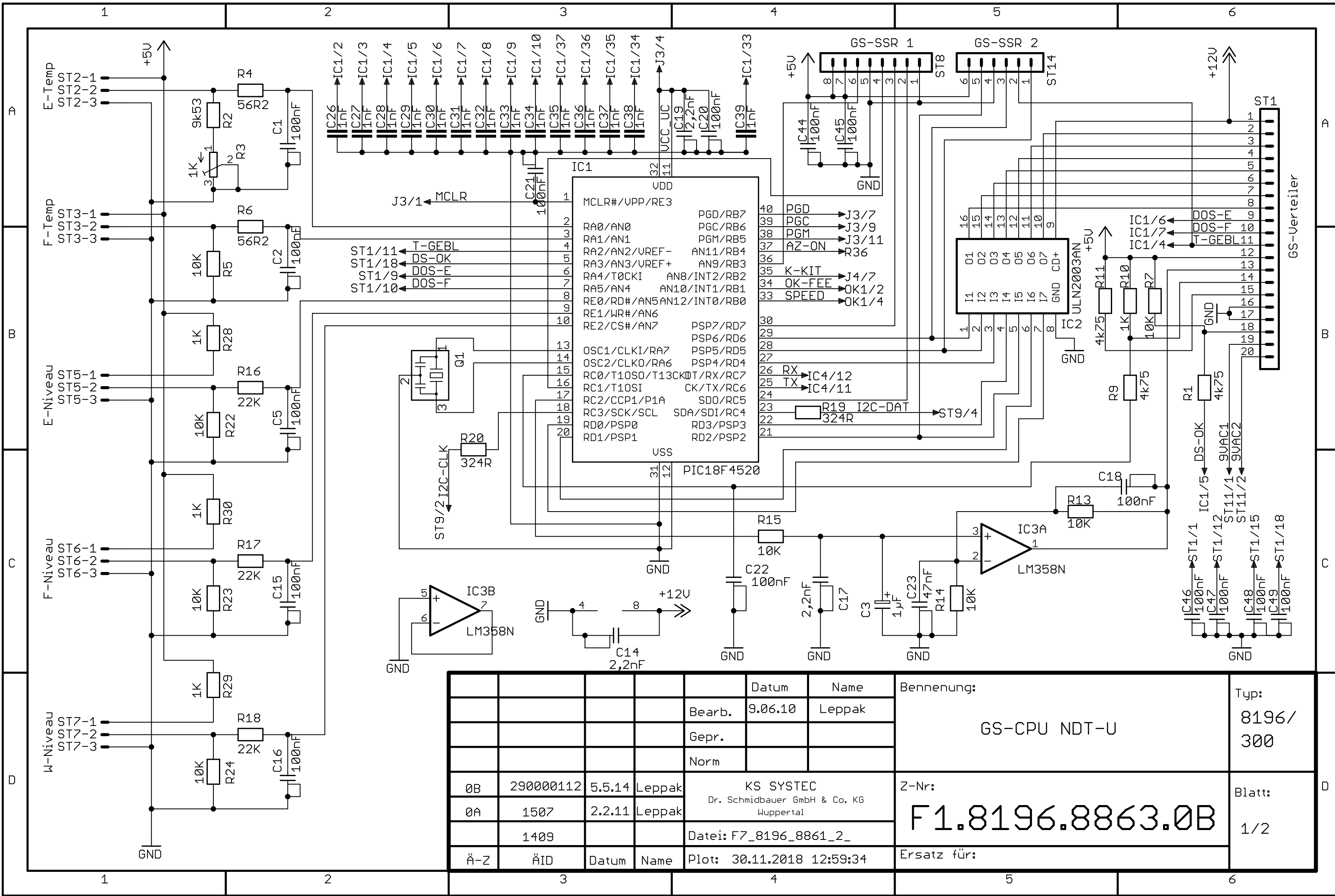
▲ Safety critical components  
Exchange only by  
original spare parts

| Item | Q'ty      | Part No. | Name   | Benennung               | Typ-Nr       |
|------|-----------|----------|--|-------------------------|--------------|
|      |           |          |  |                         |              |
|      |           |          |  |                         |              |
|      |           |          |  |                         |              |
|      |           |          |  |                         |              |
|      |           |          |  |                         |              |
| 0A   | 290001118 | 1409     | KS SYSTEMC<br>D. Kerschbaum Gmbh.<br>Wuppertal | 27th<br>F1.8196.8653.0A | 8196<br>/300 |
| Anz  |           |          |  |                         |              |
| Einl |           |          |  |                         |              |

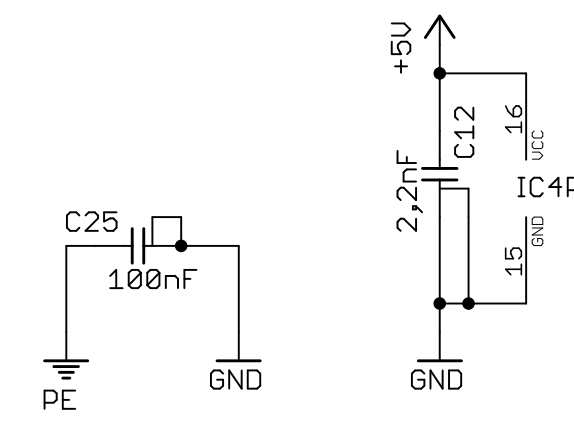
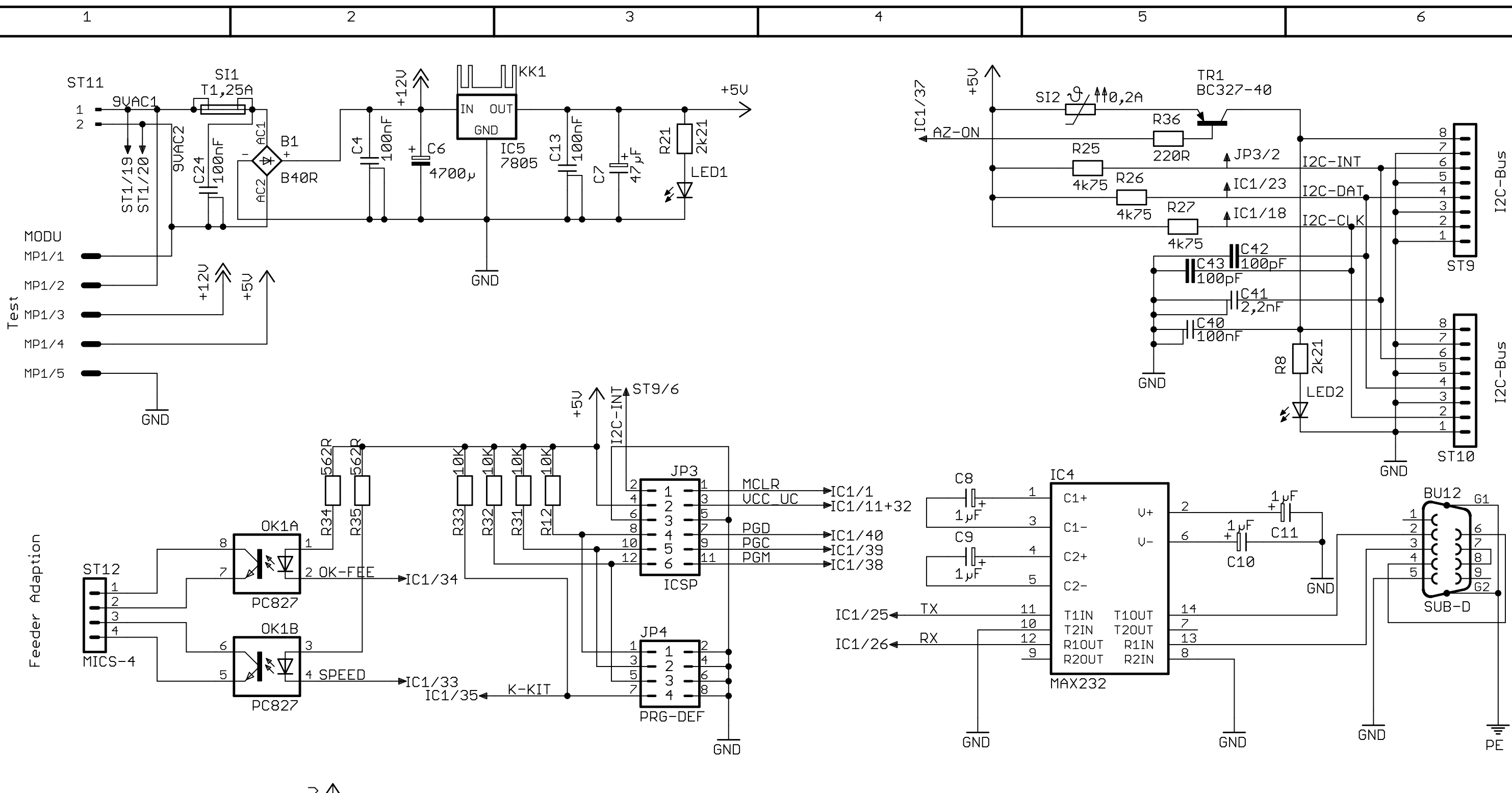


|     |      |       |        |   |        |                |        |                       |              |
|-----|------|-------|--------|---|--------|----------------|--------|-----------------------|--------------|
|     |      |       |        | Datum   | Name   | Benennung:     | Typ:   |                       |              |
|     |      |       | Bearb. | 16.07.10  | Leppak |                |        | GS-Reedschalter NDT-U | 8196/<br>300 |
|     |      |       | Gepr.  |   |        |                |        |                       |              |
|     |      |       | Norm   |   |        | Z-Nr:          | Blatt: |                       |              |
|     |      |       |        | KS SYSTEC<br>Dr.Schmidbauer GmbH & Co.KG<br>Wuppertal |        | F1.8196.8843.0 | 1/1    |                       |              |
|     | 1409 |       | Datei: | F7_8196_8841_0B                                       |        |                |        |                       |              |
| Ä-Z | ÄID  | Datum | Name   | Plot: 17.12.2010 11:15:27                             |        | Ersatz für:    |        |                       |              |

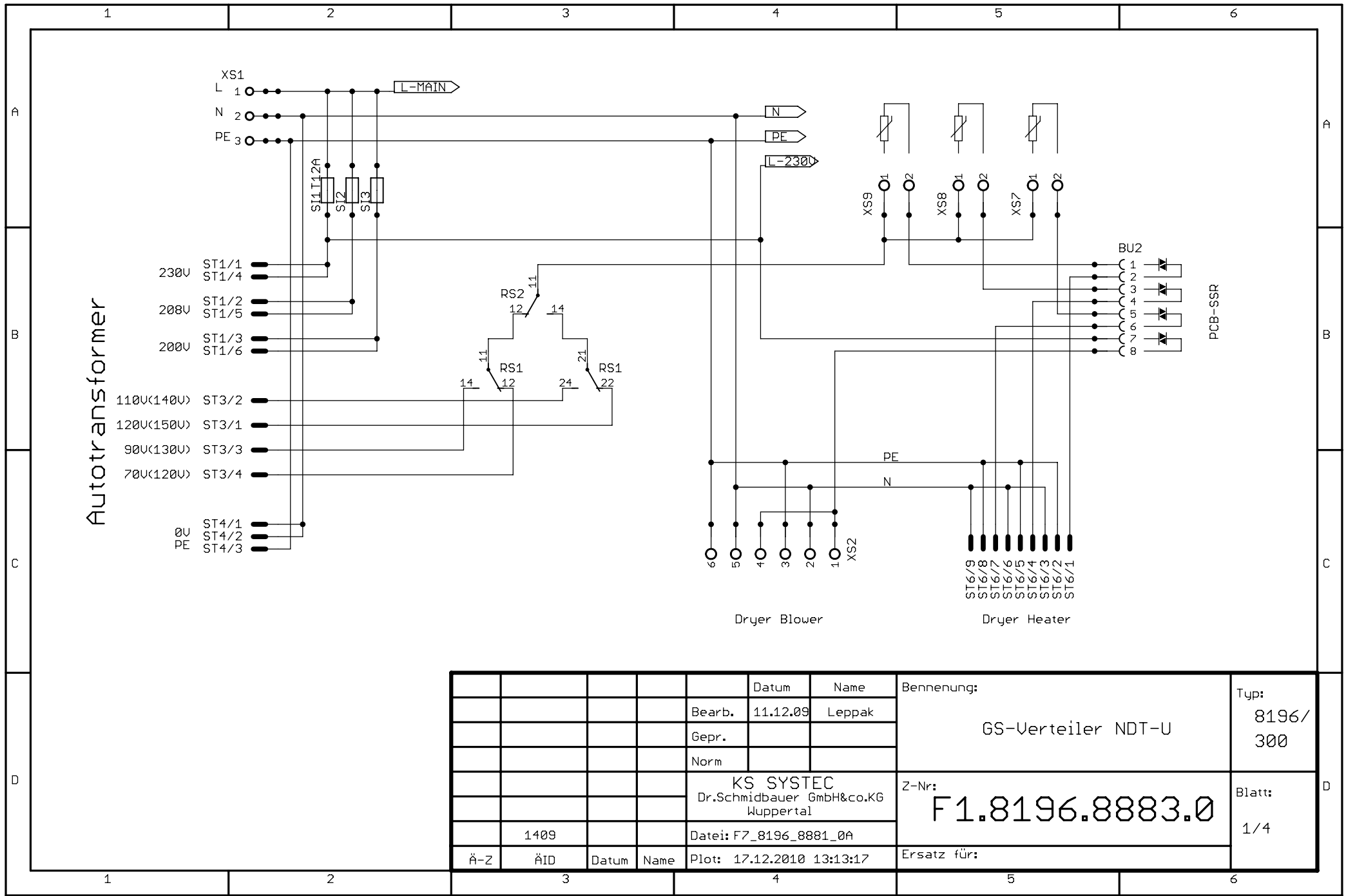




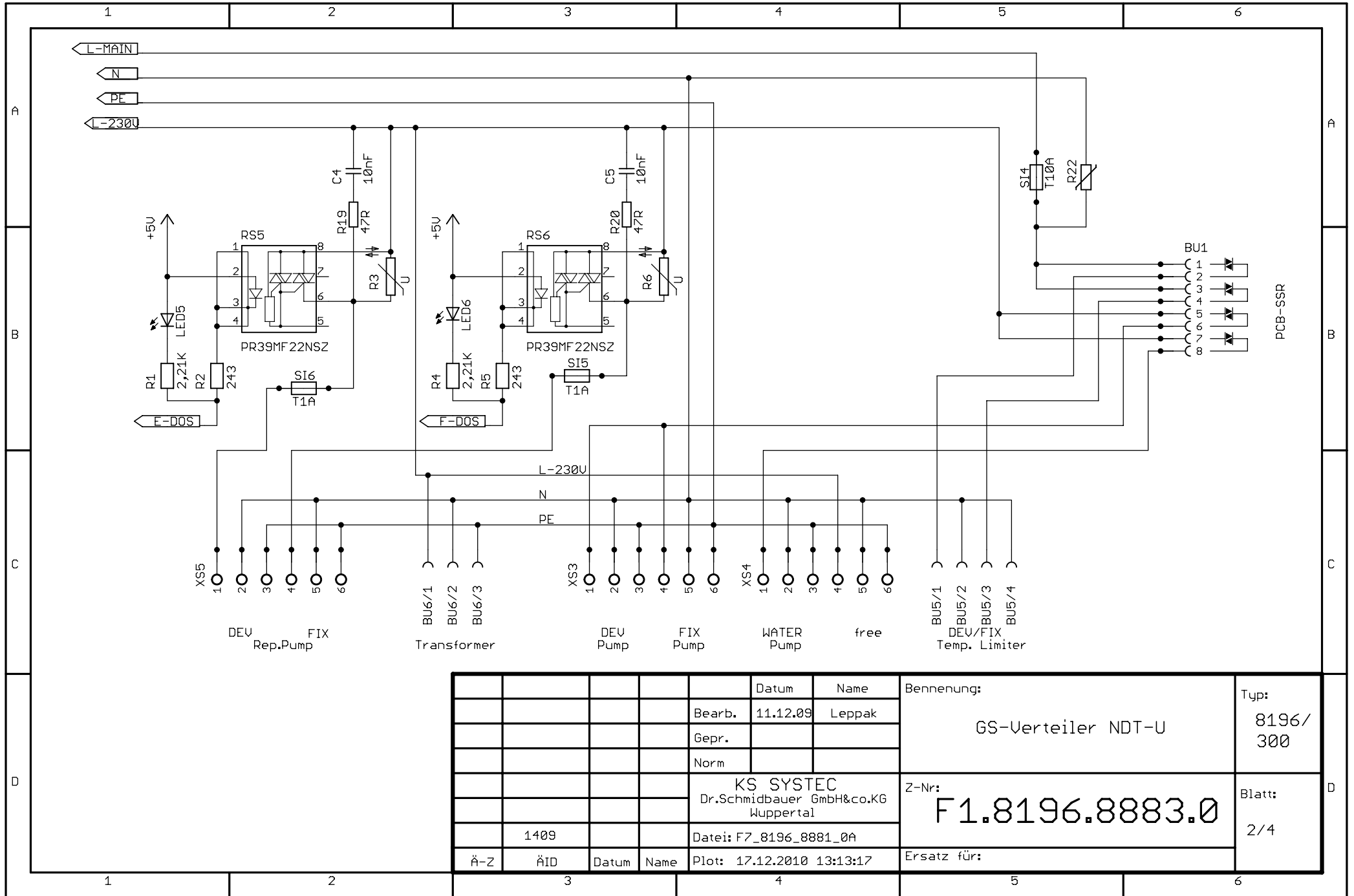
|     |           |        |        |   |        |                                |                      |
|-----|-----------|--------|--------|---|--------|--------------------------------|----------------------|
|     |           |        |        | Datum   | Name   | Benennung:<br><br>GS-CPU NDT-U | Typ:<br>8196/<br>300 |
|     |           |        | Bearb. | 9.06.10   | Leppak |                                |                      |
|     |           |        | Gepr.  |   |        |                                |                      |
|     |           |        |        | Norm  |        | Z-Nr:<br><br>F1.8196.8863.0B   | Blatt:<br>1/2        |
| 0B  | 290000112 | 5.5.14 | Leppak | KS SYSTEC<br>Dr. Schmidbauer GmbH & Co. KG<br>Wuppertal |        |                                |                      |
| 0A  | 1507      | 2.2.11 | Leppak | Datei: F7_8196_8861_2_                                  |        |                                |                      |
|     | 1409      |        |        | Datei: F7_8196_8861_2_                                  |        | Ersatz für:                    |                      |
| Ä-Z | ÄID       | Datum  | Name   | Plot: 30.11.2018 12:59:34                               |        |                                |                      |



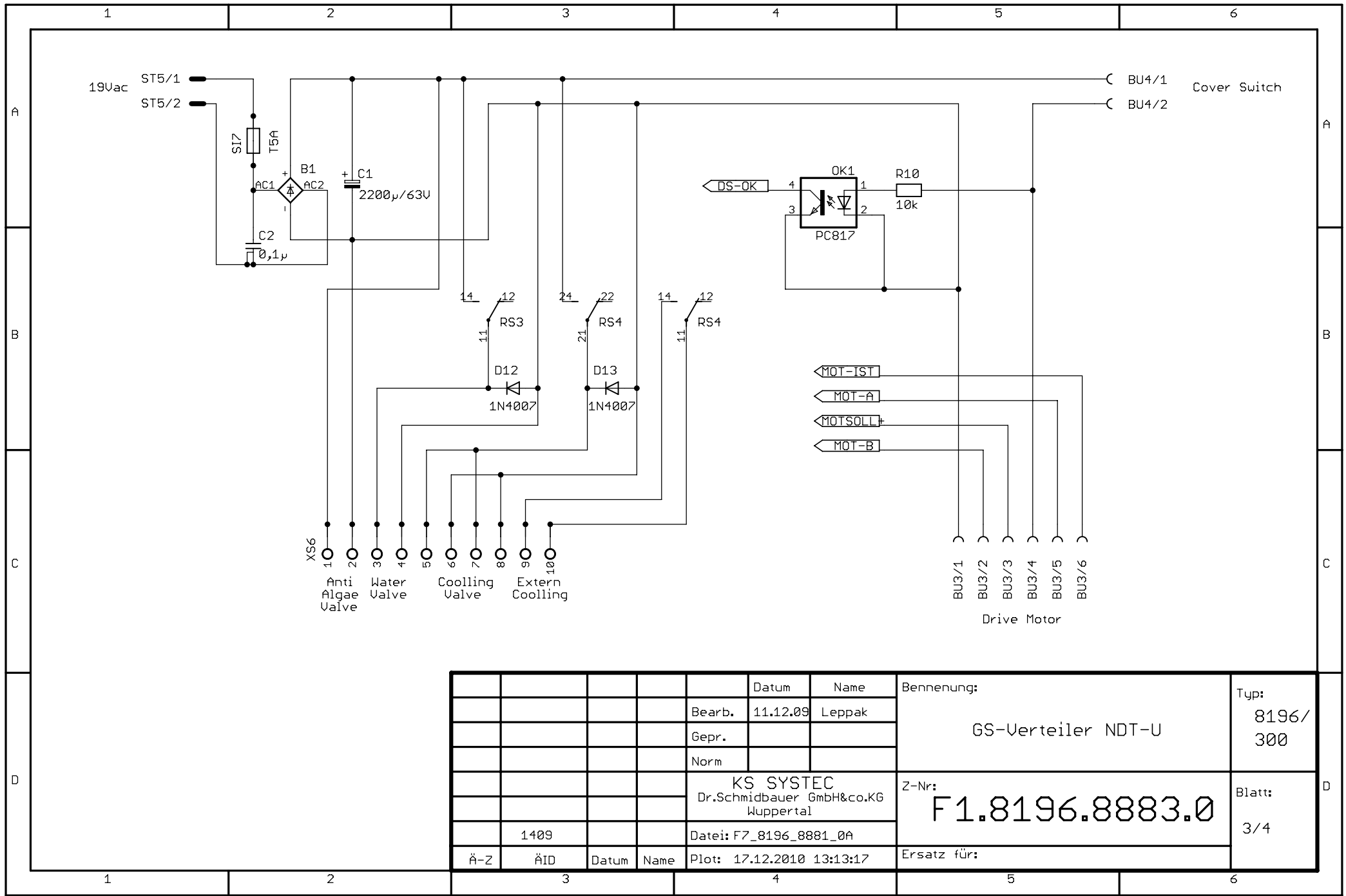
|     |           |        |        |   |        |              |                                 |               |
|-----|-----------|--------|--------|---|--------|--------------|---------------------------------|---------------|
|     |           |        |        | Datum   | Name   | Benennung:   | Typ:                            |               |
|     |           |        | Bearb. | 9.06.10   | Leppak | GS-CPU NDT-U | 8196/<br>300                    |               |
|     |           |        | Gepr.  |   |        |              | Z-Nr:<br><b>F1.8196.8863.0B</b> | Blatt:<br>2/2 |
|     |           |        | Norm   |   |        |              |                                 |               |
| 0B  | 290000112 | 5.5.14 | Leppak | KS SYSTEC<br>Dr. Schmidbauer GmbH & Co. KG<br>Wuppertal |        | Ersatz für:  |                                 |               |
| 0A  | 1507      | 2.2.11 | Leppak | Datei: F7_8196_8861_2_                                  |        |              |                                 |               |
|     | 1409      |        |        | Plot: 30.11.2018 12:59:34                               |        |              |                                 |               |
| Ä-Z | ÄID       | Datum  | Name   |   |        |              |                                 |               |



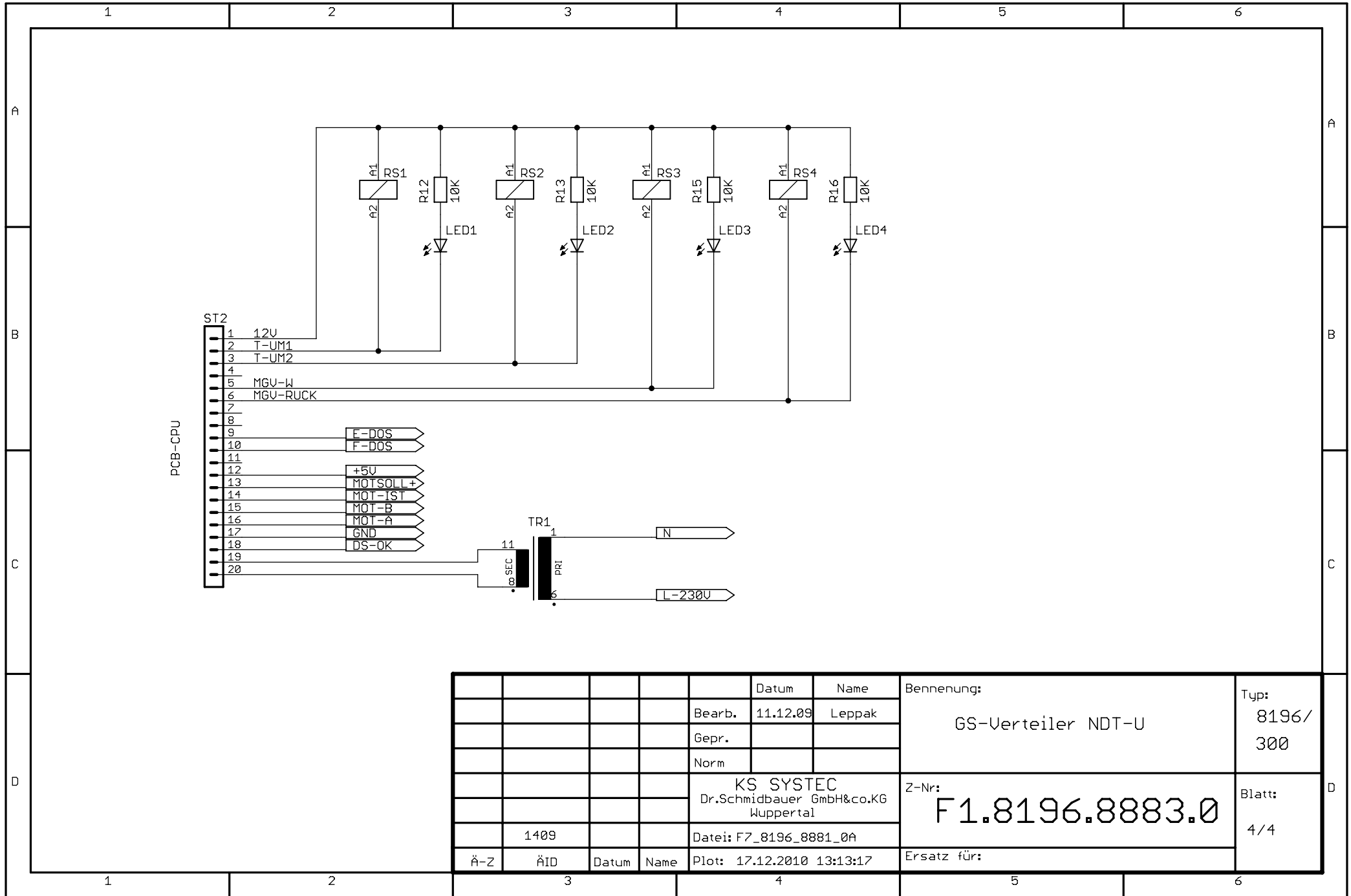
|     |      |       |      |   |                 |                                      |                      |
|-----|------|-------|------|---|-----------------|--------------------------------------|----------------------|
|     |      |       |      | Datum   | Name            | Benennung:<br><br>GS-Verteiler NDT-U | Typ:<br>8196/<br>300 |
|     |      |       |      | Bearb.  | 11.12.09 Leppak |                                      |                      |
|     |      |       |      | Gepr.   |                 |                                      |                      |
|     |      |       |      | Norm  |                 | Z-Nr:<br><b>F1.8196.8883.0</b>       | Blatt:<br>1/4        |
|     |      |       |      | KS SYSTEC<br>Dr.Schmidbauer GmbH&co.KG<br>Wuppertal |                 |                                      |                      |
|     |      |       |      | Datei: F7_8196_8881_0A                              |                 |                                      |                      |
|     | 1409 |       |      | Datei: F7_8196_8881_0A                              |                 | Ersatz für:                          |                      |
| Ä-Z | ÄID  | Datum | Name | Plot: 17.12.2010 13:13:17                           |                 |                                      |                      |



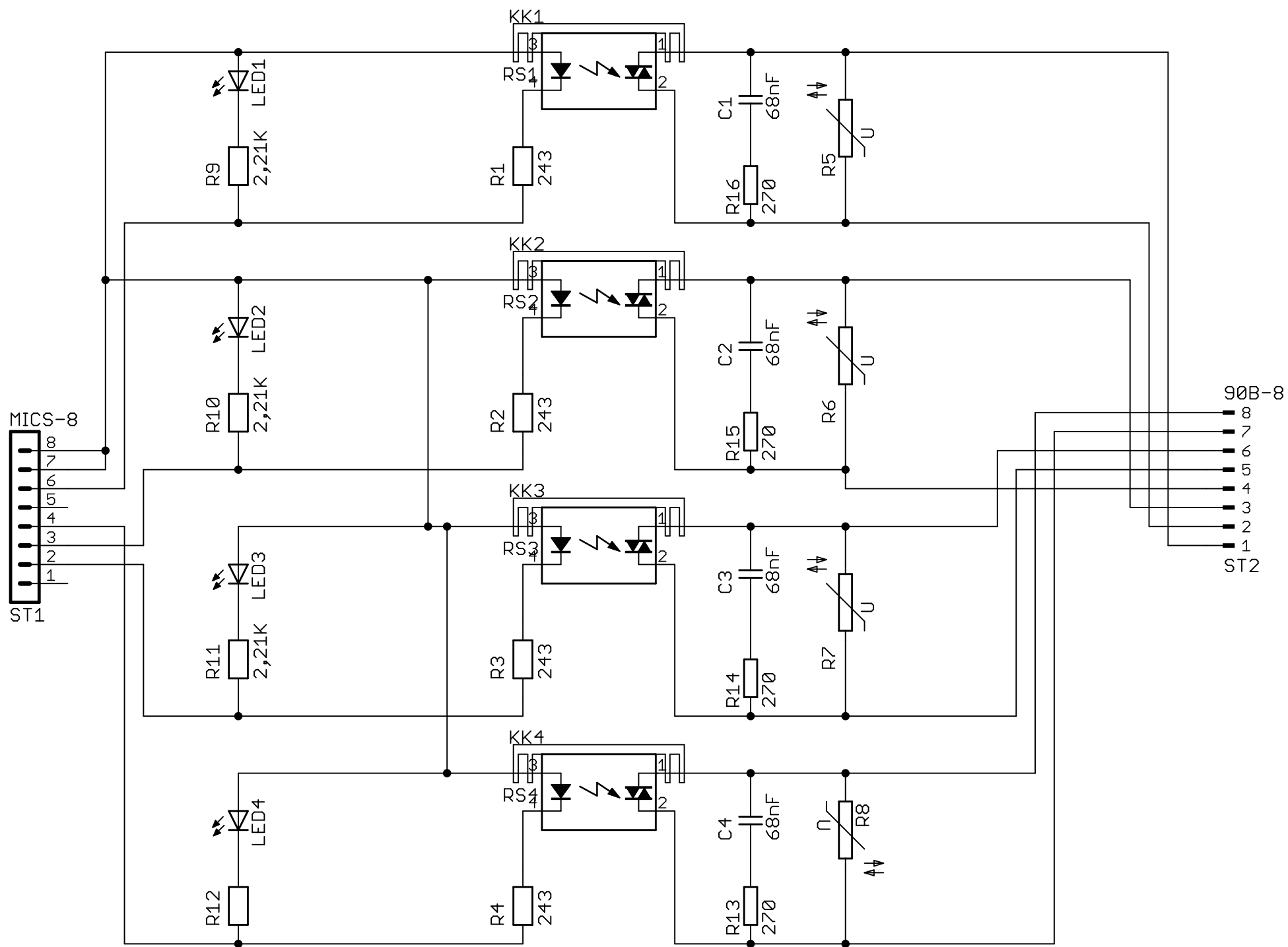
|     |      |       |   |                           |             |                                      |                      |
|-----|------|-------|---|---------------------------|-------------|--------------------------------------|----------------------|
|     |      |       |   | Datum                     | Name        | Benennung:<br><br>GS-Verteiler NDT-U | Typ:<br>8196/<br>300 |
|     |      |       | Bearb.  | 11.12.09                  | Leppak      |                                      |                      |
|     |      |       | Gepr.   |                           |             |                                      |                      |
|     |      |       |   | Norm                      |             | Z-Nr:<br><b>F1.8196.8883.0</b>       | Blatt:<br>2/4        |
|     |      |       | KS SYSTEC<br>Dr.Schmidbauer GmbH&co.KG<br>Wuppertal |                           |             |                                      |                      |
|     | 1409 |       | Datei: F7_8196_8881_0A                              |                           |             |                                      |                      |
| Ä-Z | ÄID  | Datum | Name  | Plot: 17.12.2010 13:13:17 | Ersatz für: |                                      |                      |



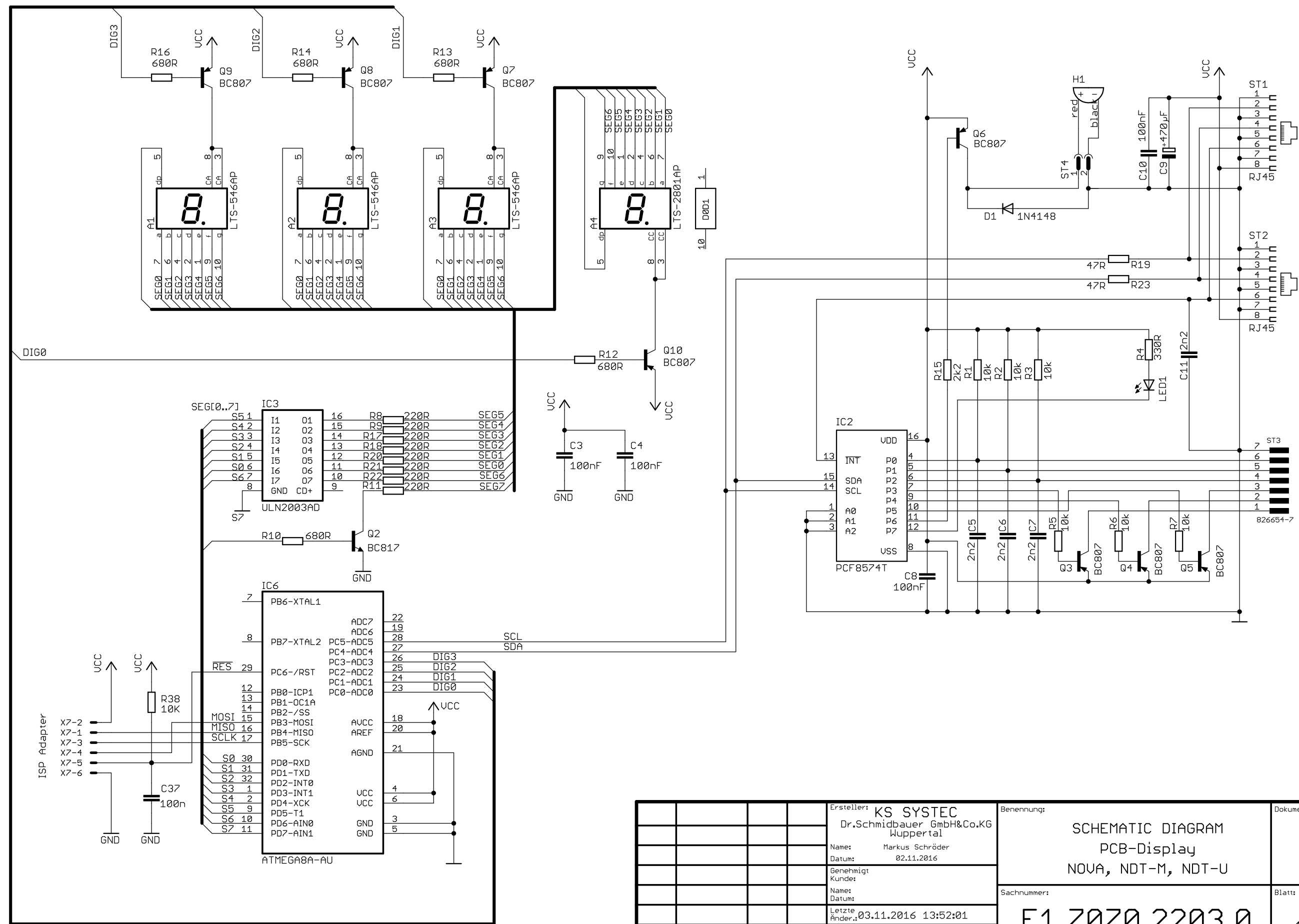
|     |      |       |   |                           |        |                                      |                      |
|-----|------|-------|---|---------------------------|--------|--------------------------------------|----------------------|
|     |      |       |   | Datum                     | Name   | Benennung:<br><br>GS-Verteiler NDT-U | Typ:<br>8196/<br>300 |
|     |      |       | Bearb.  | 11.12.09                  | Leppak |                                      |                      |
|     |      |       | Gepr.   |                           |        |                                      |                      |
|     |      |       |   | Norm                      |        | Z-Nr:<br><b>F1.8196.8883.0</b>       | Blatt:<br>3/4        |
|     |      |       | KS SYSTEC<br>Dr.Schmidbauer GmbH&co.KG<br>Wuppertal |                           |        |                                      |                      |
|     | 1409 |       | Datei: F7_8196_8881_0A                              |                           |        |                                      |                      |
| Ä-Z | ÄID  | Datum | Name  | Plot: 17.12.2010 13:13:17 |        | Ersatz für:                          |                      |



|     |      |       |      |   |          |                                  |                      |        |
|-----|------|-------|------|---|----------|----------------------------------|----------------------|--------|
|     |      |       |      | Datum   | Name     | Benennung:<br>GS-Verteiler NDT-U | Typ:<br>8196/<br>300 |        |
|     |      |       |      | Bearb.  | 11.12.09 |                                  |                      | Leppak |
|     |      |       |      | Gepr.   |          |                                  |                      |        |
|     |      |       |      | Norm  |          |                                  |                      |        |
|     |      |       |      | KS SYSTEC<br>Dr.Schmidbauer GmbH&co.KG<br>Wuppertal |          | Z-Nr:<br>F1.8196.8883.0          | Blatt:<br>4/4        |        |
|     | 1409 |       |      | Datei: F7_8196_8881_0A                              |          |                                  |                      |        |
| Ä-Z | ÄID  | Datum | Name | Plot: 17.12.2010 13:13:17                           |          | Ersatz für:                      |                      |        |



|     |          |       |        |                             |             |   |                      |
|-----|----------|-------|--------|-----------------------------|-------------|---|----------------------|
|     |          |       |        | Datum                       | Name        | Benennung:<br>GS_Solid_State_Relay NOVA | Typ:<br>7070/<br>100 |
|     |          |       | Bearb. | 05.07.04                    | Lehmann     |   |                      |
|     |          |       | Gepr.  |                             |             |   |                      |
|     |          |       | Norm   |                             |             | Z-Nr:<br><b>F1.7070.2143.0A</b>         | Blatt:<br>1/1        |
| 0A  | 37049/12 | 12.05 | Lepp   | KS FOTOTECHNIK<br>WUPPERTAL |             |   |                      |
|     | 35654    |       |        | Datei: 7_7070_2141_1_       |             |   |                      |
| Ä-Z | ÄID      | Datum | Name   | Plot: 30.11.2018 13:01:09   | Ersatz für: |   |                      |



|  |         |   |                                      |
|--|---------|---|--------------------------------------|
| Ersteller: KS SYSTEC<br>Dr.Schmidbauer GmbH&Co.KG<br>Wuppertal |         | Benennung:<br><b>SCHEMATIC DIAGRAM<br/>PCB-Display<br/>NOVA, NDT-M, NDT-U</b> | Dokumentenart:<br><b>SP</b>          |
| Name: Markus Schröder<br>Datum: 02.11.2016                     |         |   | Sachnummer:<br><b>F1.7070.2203.0</b> |
| Genehmigt<br>Kunde:  |         | Datei: F7_7070_2201_0   |                                      |
| Name:<br>Datum:  |         | Ersatz für:   |                                      |
| XXXX   | 11.2016 | MSCH  | Plot: 03.11.2016 13:52:09            |
| Ä-Z  | ÄID     | Datum   | Name                                 |



# 8

**Structurix NDT-U**

**Type 8196 / 300**

**Structurix NDT-U**

**Type 8196 / 350**

**Spare Parts List**

**Section 8**

*Contains exploded views for the identification of spare parts in the machine, including information about order numbers.*



Order No.: BD\_0015238

## Structurix NDT-U

Type 8196 / 300

Type 8196 / 350

Ersatzteilliste

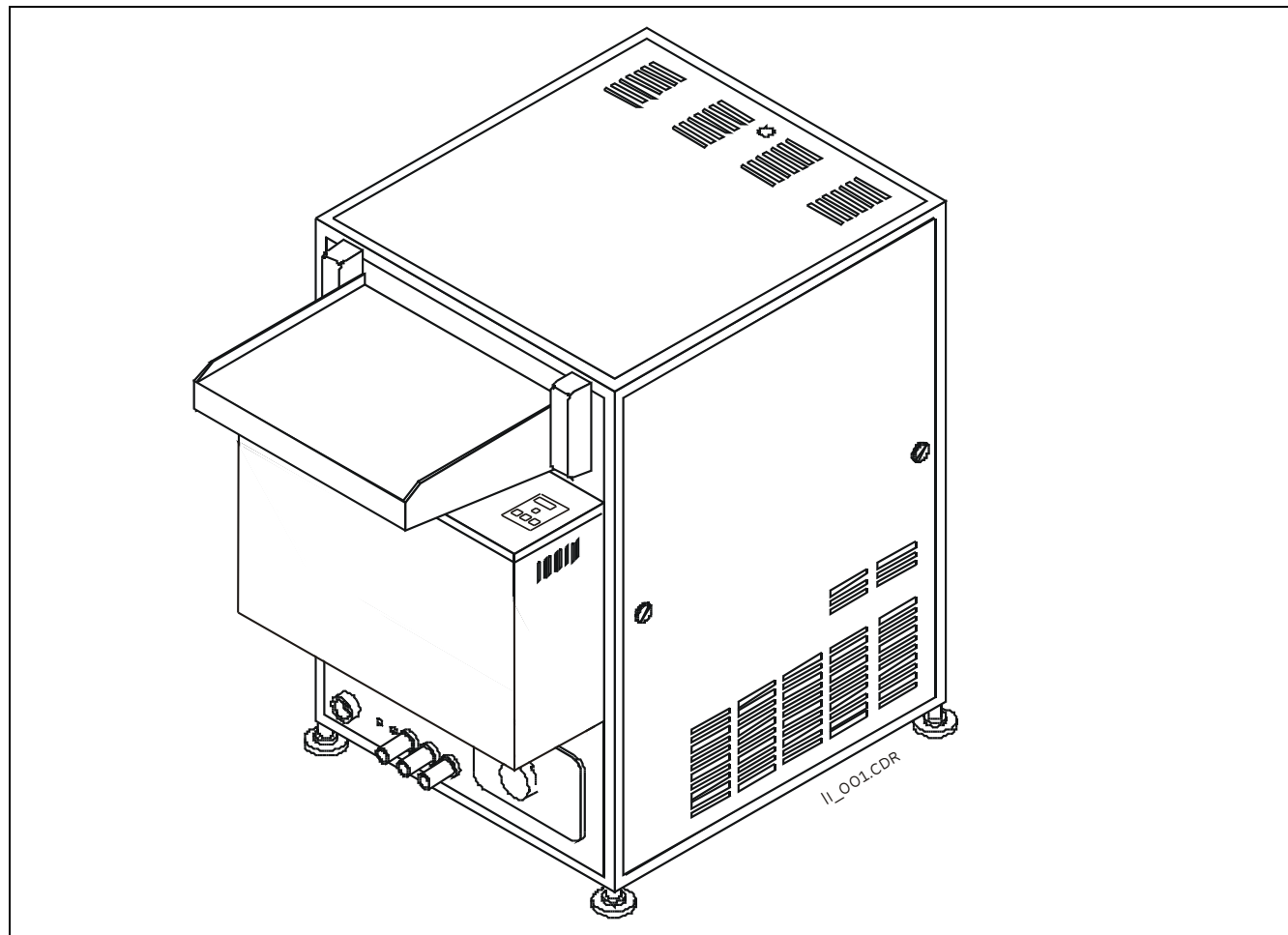
Spare Parts List

Liste des Pièces de Rechange

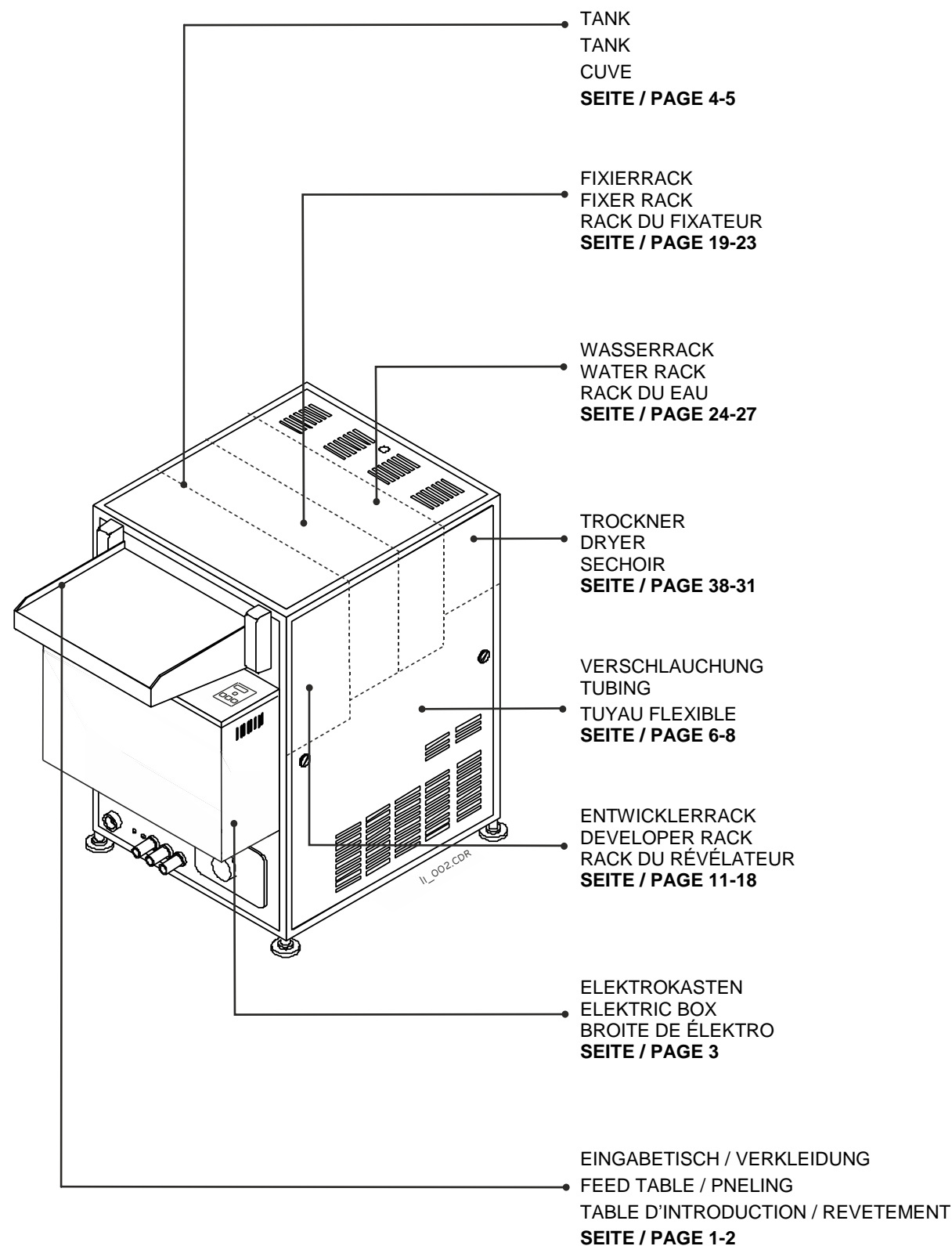
1. Ausgabe

1. Edition

1. édition



**Inhaltsverzeichnis**  
**Contents**  
**Table de matières**



**Hinweise**  
**Notes**  
**Remarques**

**Hinweise**

Anschlüsse und Reparaturen elektrischer Art dürfen nur von einer Elektrofachkraft durchgeführt werden!  
 Anschlüsse und Reparaturen mechanischer Art dürfen nur von einer Fachkraft durchgeführt werden!

- D = Normteil. Die Bestellnummer ist der separaten Normteilleiste "DD+DIS011.93M" zu entnehmen.
- ☐ = Baugruppe.
- \* = Ersatzteil, nicht ab Lager lieferbar. Bei Bestellung verlängerte Lieferzeit.

**Änderungen von Daten und Eigenschaften, die dem technischen Fortschritt dienen, vorbehalten.**

**Notes**

Electrical connections and repairs must only be made by authorised electricians.  
 Mechanical connections and repairs must only be made by authorised technicians

- D = Standardised part. For order please refer to the separate spare parts list for standardised parts "DD+DIS011.93M".
- ☐ = Assembly
- \* = Spare part not available from stock. Expect extended delivery times.

**We reserve the right to change data and characteristics in the light of technical progress.**

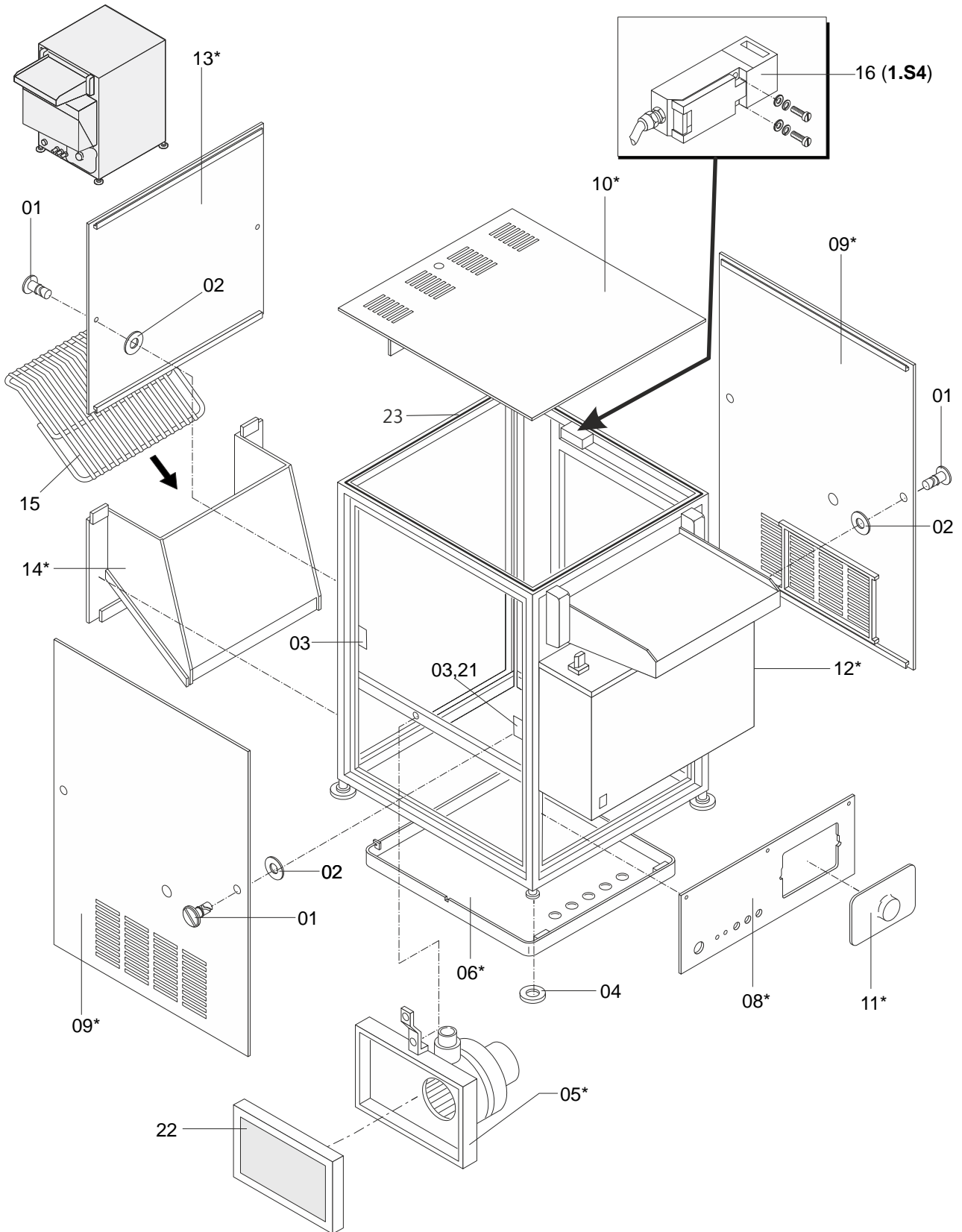
**Remarques**

Seul un spécialiste est autorisé à réaliser les branchements et réparations électriques.  
 Seule une personne qualifiée est autorisée à réaliser les raccords et réparations mécaniques.

- D = Pièce normalisée. Vous trouvez leur référence dans la liste, à part, des pieces normalisees "DD+DIS011.93M"
- ☐ = Modul
- \* = Piece detachee n'est pas disponible depart stock. Délai prolongé en cas de commande.

**Sous réserve de modifications de données et de caractéristiques pouvant servir au progrès technique.**

# SPARE PARTS LIST



8196\_0148\_8001.CDR

VERKLEIDUNG, GESTELL  
PANELING, FRAME  
REVETEMENT. CHASSIS

| Pos. Nr.<br>Item no.<br>Pos. no. | Teile-Nr.<br>Part No.<br>Nr. de Ref. | Benennung<br>Description<br>Denomination                         |
|----------------------------------|--------------------------------------|--|
| 01                               | CM+9.0362.7180.0                     | VERSCHLUSSZAPFEN / STUD / PIVOT DE VERROUILLAGE                  |
| 02                               | CM+9.0362.7190.0                     | SICHERUNGSRING / RETAINING RING / BAGUE DE SECURITE              |
| 03                               | CM+9.0362.7200.0                     | HALTERUNG / HOLDER / FIXATION                                    |
| 04                               | CM+9.8185.1001.1                     | PLATTE / PLATE / PLAQUE  |
| 05*                              | CM+9.8196.1370.0*                    | FILTERGEHAEUSE / FILTER HOUSING / BOITIER A FILTRE               |
| 06*                              | CM+9.8196.1390.0*                    | BODENWANNE / BOTTOM TRAY / CUVETTE                               |
| 08*                              | CM+9.8196.2850.1*                    | VORDERWAND UNTEN / FRONT WALL, BOTTOM / PAROI FRONTALE, EN BAS   |
| 09*                              | CM+9.8196.3230.0*                    | SEITENVERKLEIDUNG / SIDE PANEL/PANELING / REVETEMENT             |
| 10*                              | CM+9.8196.3260.1*                    | DECKEL / COVER / COUVERCLE                                       |
| 11*                              | CM+9.8196.3270.0*                    | DECKEL / COVER / COUVERCLE                                       |
| 12*                              | CM+9.8196.2630.1*                    | HAUBE / HOOD / CAPOT   |
| 13*                              | CM+9.8196.3300.0*                    | RUECKWAND OBEN / REAR PANEL, TOP / PANNEAU ARRIERE, -EN HAUT     |
| 14*                              | CM+9.8196.3410.0*                    | RUECKWAND UNTEN / REAR PANEL, BOTTOM / PANNEAU ARRIERE, EN BAS   |
| 15                               | CM+9.8196.3420.0                     | DRAHTSCHUTE / WIRE CHUTE / RECEPTACLE                            |
| 16                               | CM+9.8196.8360.0                     | DECKELSCHALTER (1.S4) / COVER SWITCH / INTERRUPTEUR DE COUVERCLE |
| 21                               | CM+9.8155.1048.1                     | PLATTE / PLATE / PLAQUE  |
| 22                               | CM+9.8196.1365.0                     | FILTER / FILTER / FILTRE   |
| 23                               | CM+9.8196.1019.0                     | DICHTUNGSPROFIL 1000mm / PROFILED JOINT / PROFIL DE JOINT        |
| 24                               | CM+9.8196.1773.0                     | KLAMMER / BRACKET / FIXATION                                     |

☐=Baugruppe / Assembly / Modul

D=Normteil. Die Bestellnummer ist der separaten Normteilleiste "DD+DIS011.93M" zu entnehmen.

D=Standardised part. For order please refer to the separate spare parts list for standardised parts "DD+DIS011.93M"

D=Piece normalisée. Vous trouvez leur référence dans la liste, à part, des pieces normalisées "DD+DIS011.93M"

\*=Ersatzteil, nicht ab Lager lieferbar. Bei Bestellung verlängerte Lieferzeit.

\*=Spare part, not available from stock. Expect extended delivery times.

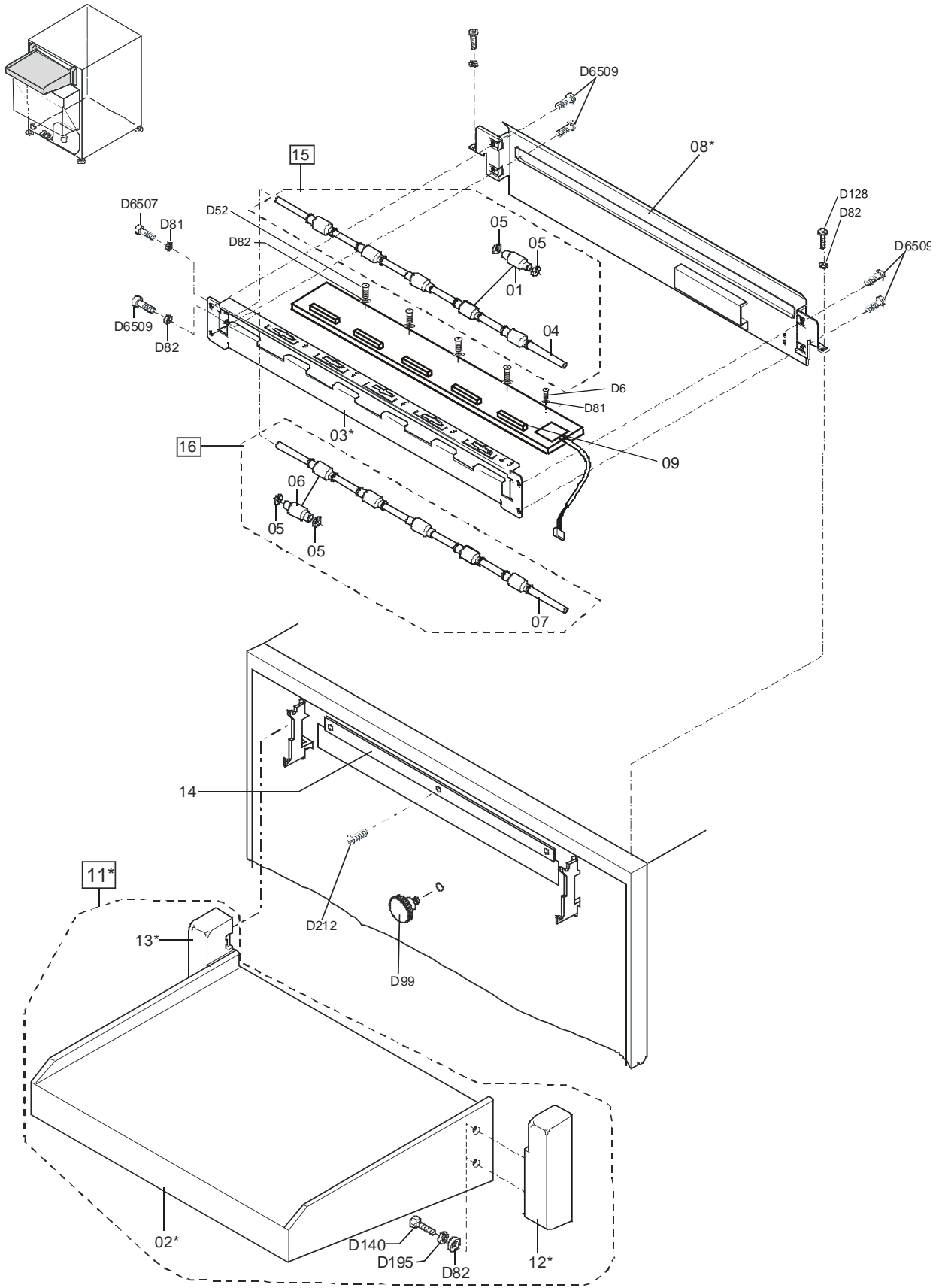
\*=Piece detachée n'est pas disponible départ stock. Délai prolongé en cas de commande.

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VERKLEIDUNG, GESTELL  
PANELING, FRAME  
REJETEMENT. CHASSIS

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# SPARE PARTS LIST



8196\_0148\_8004.CDR

EINGABETISCH UND FILMABTASTUNG (Typ 8196-300/350)  
 FEED TABLE AND FILM SCANNING (Type 8196-300/350)  
 TABLE D'INTRODUCTION BAYALAGE FILMS (Type 8196-300/350)

| Pos. Nr.  | Teile-Nr.         | Benennung   |
|-----------|-------------------|---|
| Item no.  | Part No.          | Description   |
| Pos. no.  | Nr. de Ref.       | Denomination  |
| 01        | CM+9.5220.1680.1  | ABTASTROLLE / SCANNING ROLLER / ROULEAU DE DETECTION  |
| 02        | CM+9.5221.2001.0* | EINLEGETISCH / INSERT TABLE / TABLE D'INSERTION   |
| 03        | CM+9.8196.2613.0* | HALTERUNG / HOLDER / FIXATION   |
| 04        | CM+9.5203.1526.0  | STANGE / ROD / BARRE  |
| 05        | CM+9.9432.3025.0  | SICHERUNGSSCHEIBE / RETAINER RING / RONDELLE D'ARRET  |
| 06        | CM+9.5203.1532.0  | ROLLE / ROLLER / ROULEAU  |
| 07        | CM+9.5203.1525.0  | STANGE / ROD / BARRE  |
| 08        | CM+9.8196.2608.0* | HALTERUNG / HOLDER / FIXATION   |
| 09        | CM+9.8196.8850.0  | PCB-REEDSCHALTER / PCB REEDSWITCH / PCB   |
| <b>11</b> | CM+9.5203:1650.0  | EINLEGETISCH VOLLST./ INSERT TABLE ASSY / TABLE D'INSERTION COMPL.                          |
| 12        | CM+9.5203.1690.0* | ABDECKUNG RECHTS / COVER, RHS / RECOUVREMENT, A DROITE                                      |
| 13        | CM+9.5203.1680.0* | ABDECKUNG LINKS / COVER, LHS / RECOUVREMENT, A GAUCHE                                       |
| 14        | CM+9.8196.1328.0  | WINKEL / BRACKET / EQUERRE  |
| <b>15</b> | CM+9.5203.9070.0  | STANGE ABTASTROLLE VOLLST. / ROD SCANNING ROLLER ASSY / BARRE<br>ROLEAU DE DETECTION COMPL. |
| <b>16</b> | CM+9.5203.9080.0  | STANGE ROLLE VOLLST. / ROD ROLLER ASSY / BARRE ROLEAU COMPL.                                |

**□**=Baugruppe / Assembly / Modul

D=Normteil. Die Bestellnummer ist der separaten Normteilleiste "DD+DIS011.93M" zu entnehmen.

D=Standardised part. For order please refer to the separate spare parts list for standardised parts "DD+DIS011.93M"

D=Piece normalisée. Vous trouvez leur référence dans la liste, à part, des pieces normalisées "DD+DIS011.93M"

\*=Ersatzteil, nicht ab Lager lieferbar. Bei Bestellung verlängerte Lieferzeit.

\*=Spare part, not available from stock. Expect extended delivery times.

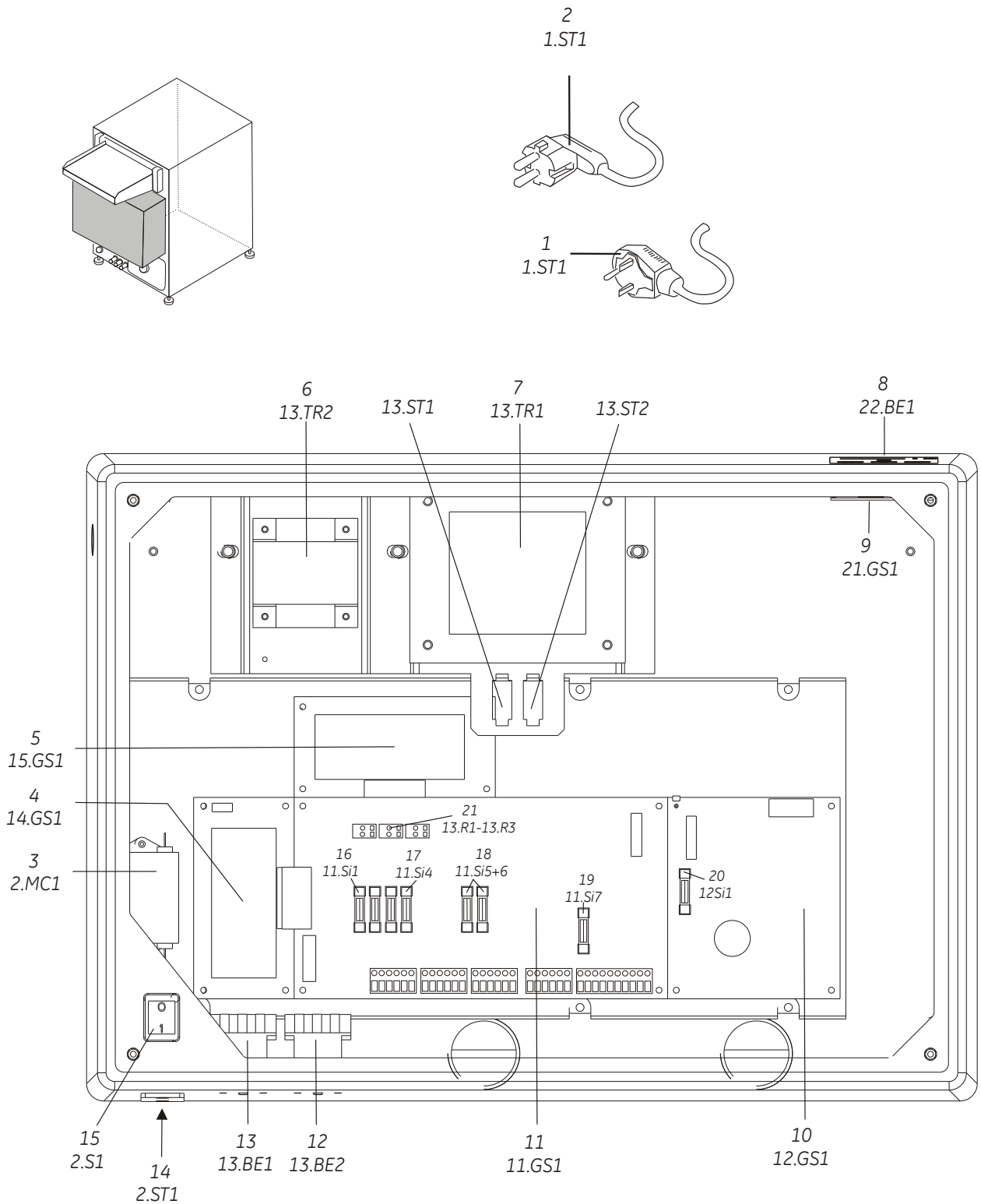
\*=Piece detachee n'est pas disponible depart stock. Délai prolongé en cas de commande.

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EINGABETISCH UND FILMABTASTUNG (Typ 8196-300/350)  
 FEED TABLE AND FILM SCANNING (Type 8196-300/350)  
 TABLE D'INTRODUCTION BAYALAGE FILMS (Type 8196-300/350)

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# SPARE PARTS LIST



E-KASTEN (Typ 8196-300/350)  
 ELECTRIC BOX (Type 8196-300/350)  
 BROÏTE DE RÉGÉNÉRATION (Type 8196-300/350)



| Pos. Nr.<br>Item no.<br>Pos. no. | Teile-Nr.<br>Part No.<br>Nr. de Ref. | Benennung<br>Description<br>Denomination   |
|----------------------------------|--------------------------------------|--|
| 01                               | CM+9.8196.9908.0                     | NETZANSCHLUSSLEITUNG USA / MAINS CONNECTION LINE US / LIGNE BRANCHEMENT SECTEUR      |
| 02                               | CM+9.0477.1053.0                     | NETZANSCHLUSSLEITUNG EUROPA/ MAINS CONNECTION LINE EUROP / LIGNE BRANCHEMENT SECTEUR |
| 03                               | CM+9.9450.9927.0                     | NEZTLEISTUNGSFILTER 250 V/16 A / EMC FILTERS   |
| 04                               | CM+9.7070.2140.1                     | GS- SSR- NOVA / PCB- SOLID-STATE-DELAY NOVA  |
| 05                               | CM+9.7070.2140.1                     | GS- SSR- NOVA / PCB- SOLID-STATE-DELAY NOVA  |
| 06                               | CM+9.0433.7162.0                     | TRAFO EF 19V/4,6A / TRANSFORMER/ TRANSFORMATEUR                                      |
| 07                               | CM+9.0433.7163.0                     | AUTOTRAFO DEX 70/.../150 V 9,6 A /AUTOTRANSFORMER / TRANSFORMATEUR                   |
| 08                               | CM+9.7070.2129.0                     | FOLIEN-TASTATUR / KEYBOARD / CLAVIER TACTILE   |
| 09                               | CM+9.7070.2120.1                     | GS-DISPLAY / PCB-DISPLAY   |
| 10                               | CM+9.8196.8860.0                     | GS-CPU NDT-U / PCB-CPU   |
| 11                               | CM+9.8196.8880.0                     | GS-VERTEILER NDT-U / PCB-DISTRIBUTION BOARD  |
| 12                               | CM+9.0426.6452.0                     | TEMPERATURBEGRENZER 63°C / TEMPERATURE LIMITER / LIMITEUR DE TEMPERATURE             |
| 13                               | CM+9.0426.6452.0                     | TEMPERATURBEGRENZER 63°C / TEMPERATURE LIMITER / LIMITEUR DE TEMPERATURE             |
| 14                               | CM+9.0471.8951.0                     | GERÄTESTECKER IEC 60320/C20 / APPLIANCE INLET IEC 60320/C20                          |
| 15                               | CM+9.0426.6138.0                     | NETZSCHALTER / POWER SWITCH  |
| 16                               | CM+9.0452.3152.0                     | SICHERUNG T12A / FUSE / FUSIBLE  |
| 17                               | CM+9.0452.3035.0                     | SICHERUNG T10A / FUSE / FUSIBLE  |
| 18                               | CM+9.0451.9716.0                     | SICHERUNG T1A / FUSE / FUSIBLE   |
| 19                               | CM+9.0452.3162.0                     | SICHERUNG T5A / FUSE / FUSIBLE   |
| 20                               | CM+9.0451.9727.0                     | SICHERUNG T1,25A / FUSE / FUSIBLE  |
| 21                               | CM+9.0443.8015.0                     | VARISTOR / VARISTOR / VARISTOR   |

□=Baugruppe / Assembly / Modul

D=Normteil. Die Bestellnummer ist der separaten Normteilleiste "DD+DIS011.93M" zu entnehmen.

D=Standardised part. For order please refer to the separate spare parts list for standardised parts "DD+DIS011.93M"

D=Piece normalisée. Vous trouvez leur référence dans la liste, à part, des pieces normalisées "DD+DIS011.93M"

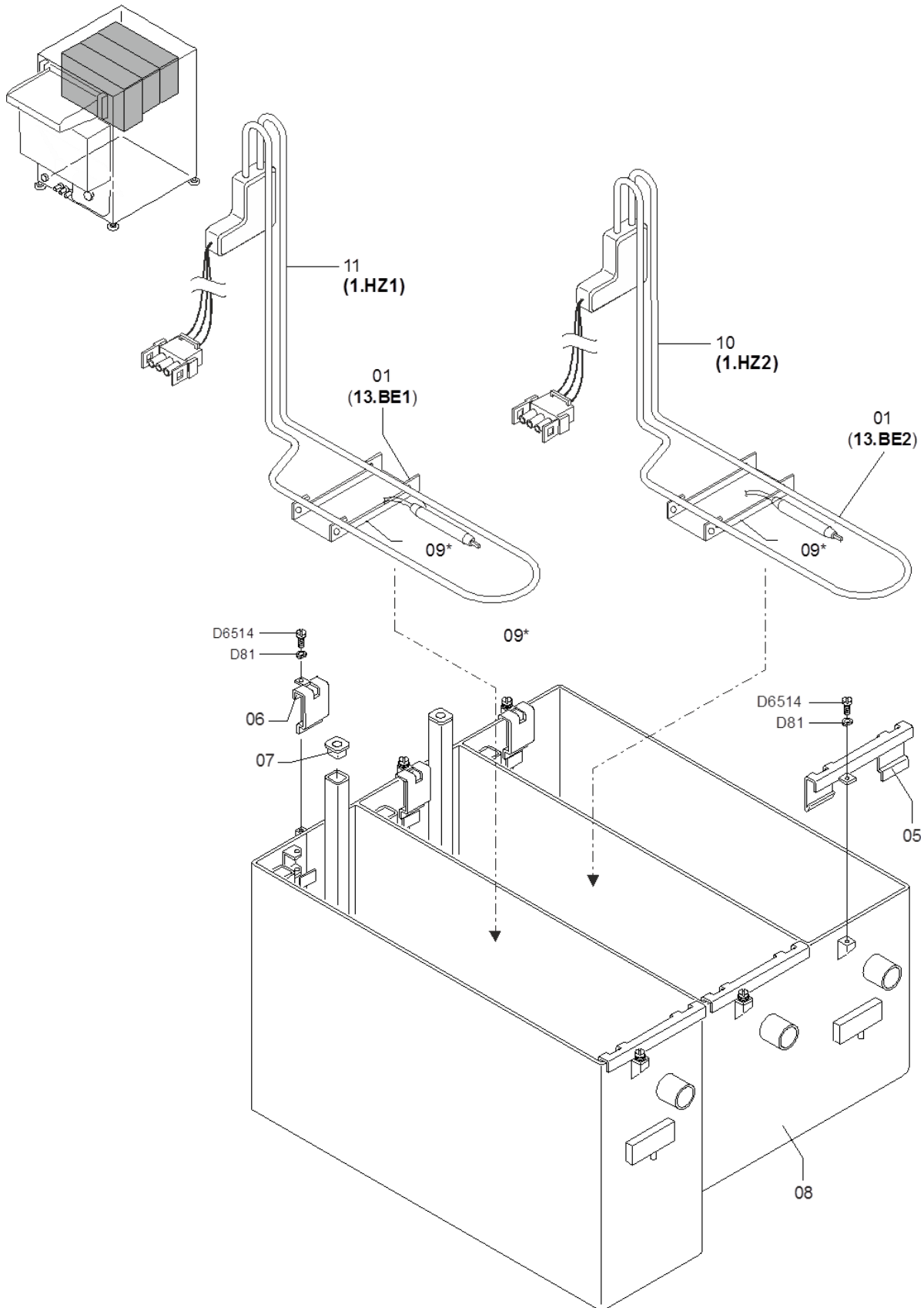
\*=Ersatzteil, nicht ab Lager lieferbar. Bei Bestellung verlängerte Lieferzeit.

\*=Spare part, not available from stock. Expect extended delivery times.

\*=Piece detachée n'est pas disponible départ stock. Délai prolongé en cas de commande.

E-KASTEN (Typ 8196-300/350)  
ELECTRIC BOX (Type 8196-300/350)  
BROÛTE DE RÉGÉNÉRATION (Type 8196-300/350)

# SPARE PARTS LIST



8196\_0148\_8010.CDR

4427 →

TANKS (Typ 8196-300/350)  
TANKS (Type 8196-300/350)  
CUVES (Type 8196-300/350)

| Pos. Nr. | Teile-Nr.         | Benennung  |
|----------|-------------------|--|
| Item no. | Part No.          | Description  |
| Pos. no. | Nr. de Ref.       | Denomination   |
| 01       | CM+9.0426.6374.0  | TEMPERATURBEGRENZER 63°C (13.BE1, 13.BE2) / TEMPERATURE LIMITER /<br>LIMITATEUR DE TEMPERATURE |
| 05       | CM+9.8185.5011.0  | WINKEL / BRACKET / EQUERRE   |
| 06       | CM+9.8185.5012.0  | WINKEL / BRACKET / EQUERRE   |
| 07       | CM+9.8187.8009.0  | STOPFEN / STOPPER / BOUCHON  |
| 08*      | CM+9.8196.5150.0  | TANK VORM. (EINTEILIG) / TANK (ONE UNIT) / CUVE (UN PIECE)                                     |
| 09       | CM+9.8196.5242.0* | HALTER / HOLDER / FIXATION   |
| 10       | CM+9.8196.8706.0  | F-HEIZUNG (800W) VERDR. / HEATER / CHAUFFAGE   |
| 11       | CM+9.8196.8708.0  | E-HEIZUNG (1200W) VERDR. / HEATER / CHAUFFAGE  |

☐=Baugruppe / Assembly / Modul

D=Normteil. Die Bestellnummer ist der separaten Normteileliste "DD+DIS011.93M" zu entnehmen.

D=Standardised part. For order please refer to the separate spare parts list for standardised parts "DD+DIS011.93M"

D=Piece normalisée. Vous trouvez leur référence dans la liste, à part, des pieces normalisées "DD+DIS011.93M"

\*=Ersatzteil, nicht ab Lager lieferbar. Bei Bestellung verlängerte Lieferzeit.

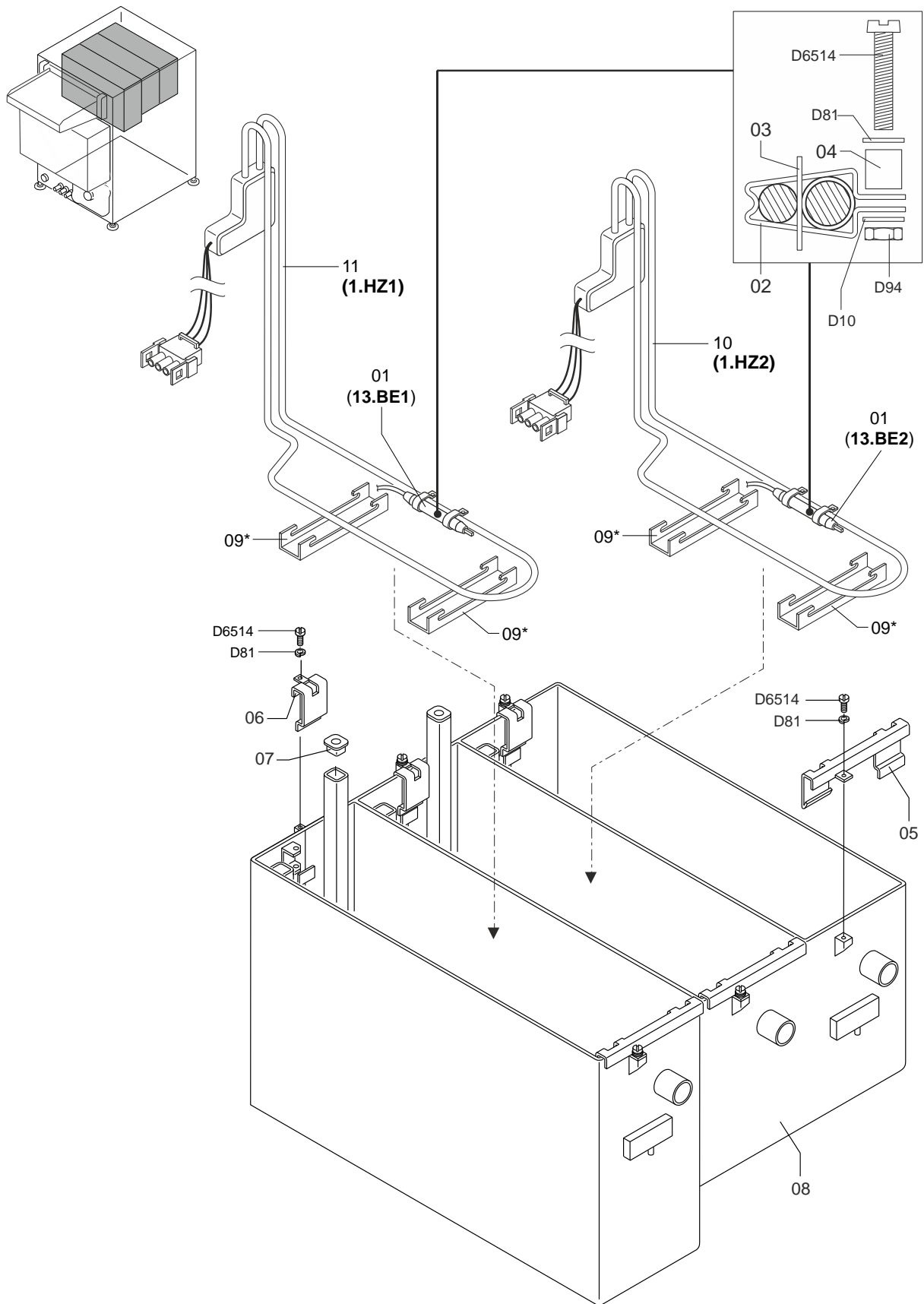
\*=Spare part, not available from stock. Expect extended delivery times.

\*=Piece detachée n'est pas disponible départ stock. Délai prolongé en cas de commande.

TANKS (Typ 8196-300/350)  
TANKS (Type 8196-300/350)  
CUVES (Type 8196-300/350)

4427 →

**SPARE PARTS LIST**



8196\_0148\_8010.CDR

→ 4426

TANKS (Typ 8196-300/350)  
 TANKS (Type 8196-300/350)  
 CUVES (Type 8196-300/350)

| Pos. Nr. | Teile-Nr.         | Benennung   |
|----------|-------------------|---|
| Item no. | Part No.          | Description   |
| Pos. no. | Nr. de Ref.       | Denomination  |
| 01       | CM+9.0426.6374.0  | TEMPERATURBEGRENZER 63°C (13.BE1, 13.BE2) / TEMPERATURE LIMITER / LIMITEUR DE TEMPERATURE |
| 02       | CM+9.5210.2211.1  | KLEMMSCHELLE / CLAMPING CLIP / COLLIER DE SERRAGE   |
| 03       | CM+9.5210.2212.1  | PLATTE / PLATE / PLAQUE   |
| 04       | CM+9. 8184.4005.0 | BUCHSE / BUSHING / DOUILLE  |
| 05       | CM+9.8185.5011.0  | WINKEL / BRACKET / EQUERRE  |
| 06       | CM+9.8185.5012.0  | WINKEL / BRACKET / EQUERRE  |
| 07       | CM+9.8187.8009.0  | STOPFEN / STOPPER / BOUCHON   |
| 08       | CM+9.8196.5150.0  | TANK VORM. (EINTEILIG) / TANK (ONE UNIT) / CUVE (UN PIECE)                                |
| 09       | CM+9.8196.5242.0* | HALTER / HOLDER / FIXATION  |
| 10       | CM+9.8196.8706.0  | F-HEIZUNG (800W) VERDR. / HEATER / CHAUFFAGE  |
| 11       | CM+9.8196.8708.0  | E-HEIZUNG (1200W) VERDR. / HEATER / CHAUFFAGE   |

☐=Baugruppe / Assembly / Modul

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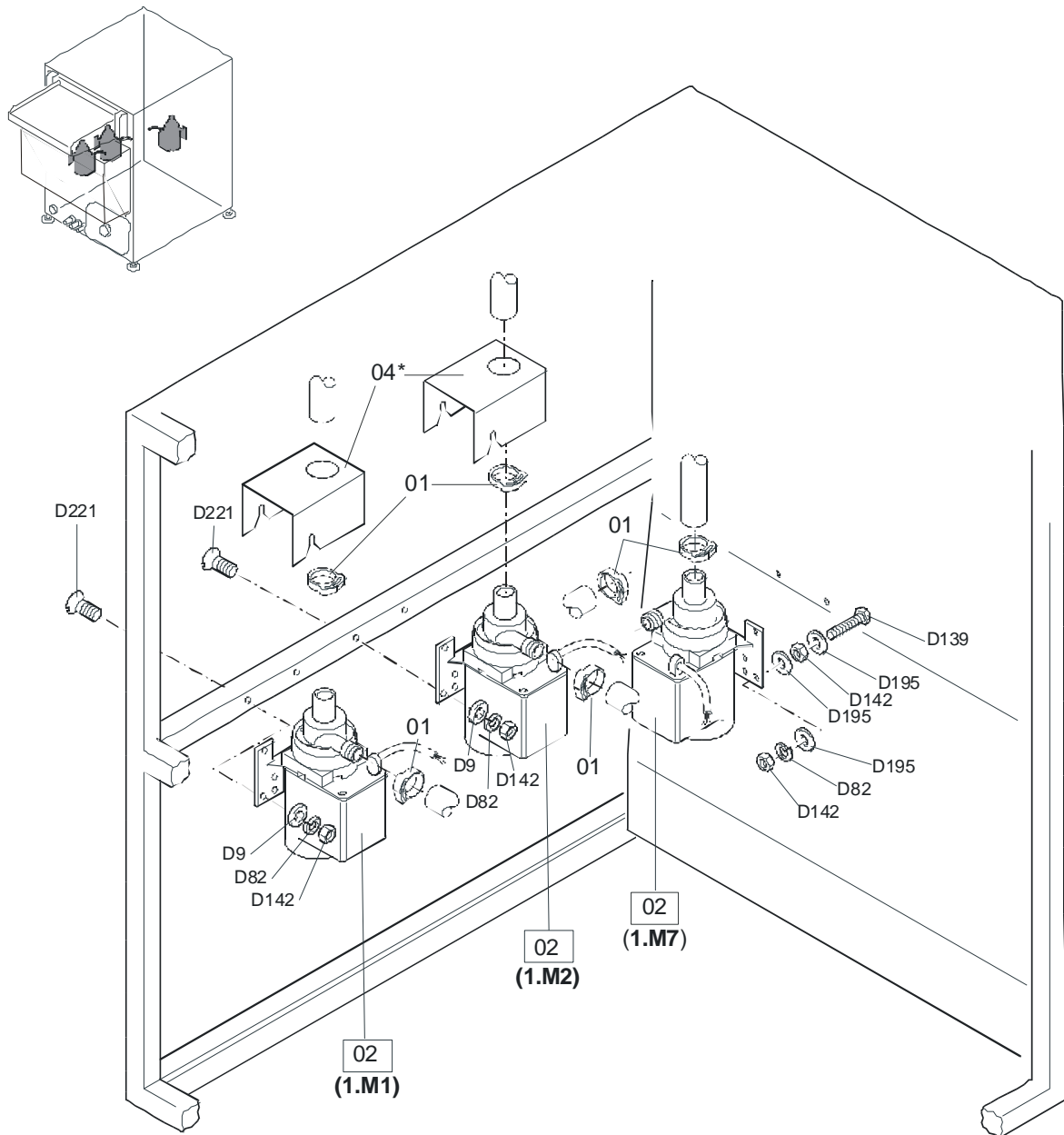
\*=Ersatzteil, nicht ab Lager lieferbar. Bei Bestellung verlängerte Lieferzeit.

\*=Spare part, not available from stock. Expect extended delivery times.

\*=Piece detachée n'est pas disponible départ stock. Délai prolongé en cas de commande.

TANKS (Typ 8196-300/350)  
TANKS (Type 8196-300/350)  
CUVES (Type 8196-300/350)

→ 4426



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UMWÄLZPUMPEN (Typ 8196-300/350)  
 CIRCULATION PUMPS (Type 8196-300/350)  
 POMES DE CIRCULATION (Type 8196-300/350)

| Pos. Nr.   | Teile-Nr.         | Benennung  |
|--|-------------------|--|
| Item no.   | Part No.          | Description  |
| Pos. no.   | Nr. de Ref.       | Denomination   |
| 01   | CM+9.0371.7021.0  | SCHLAUCHSCHELLE SNP-24 / HOSE CLAMP / COLLIER DE GAINÉ           |
| <span style="border: 1px solid black; padding: 0 2px;">02</span> | CM+9.8196.8182.1  | PUMPE 23L/MIN 220-240V 50/60HZ (1.M1, 1.M2, 1.M7) / PUMP / POMPE |
| 04   | CM+9.8196.1316.0* | ABDECKUNG / COVER / RECOUVREMENT                                 |

 =Baugruppe / Assembly / Modul

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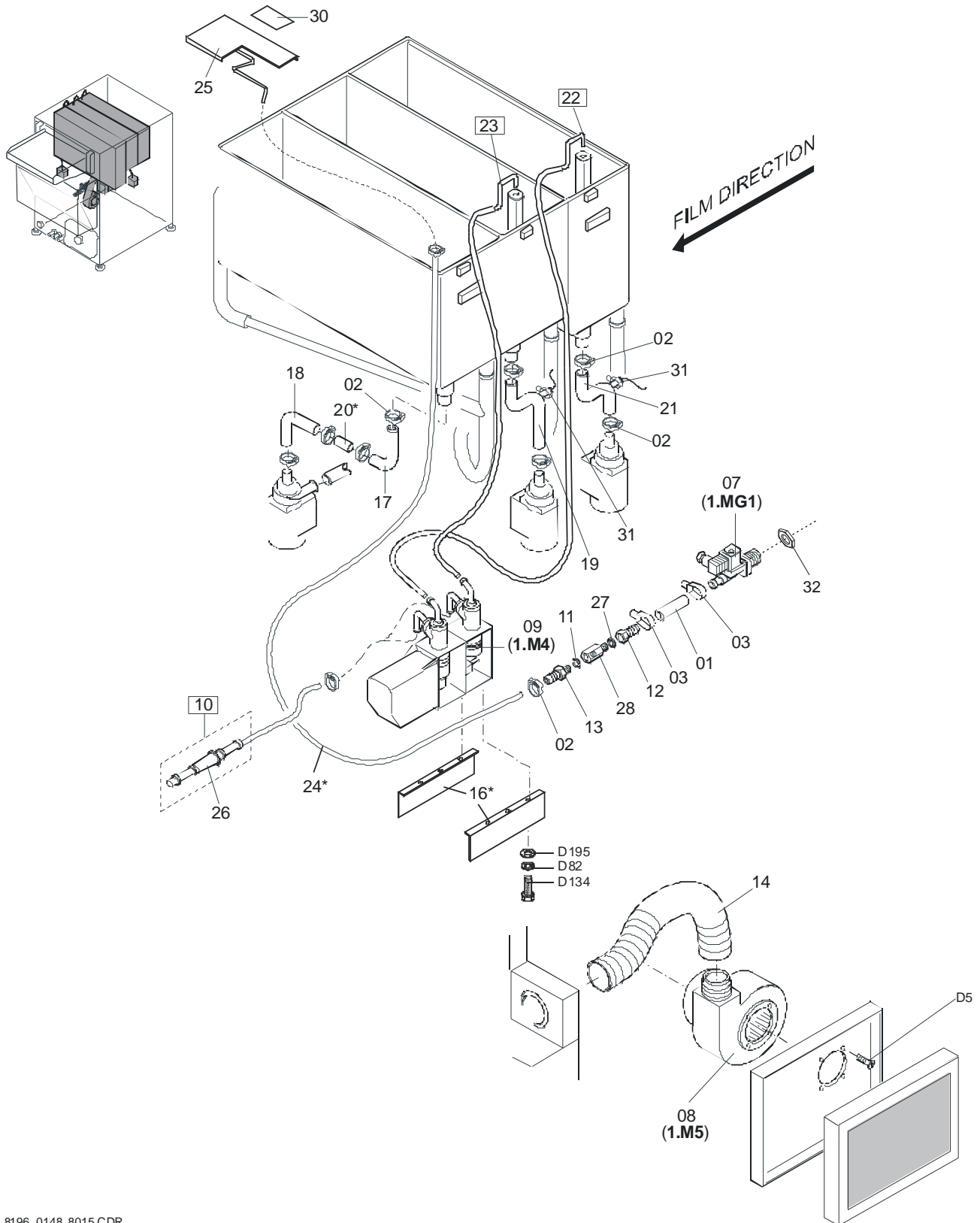
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UMWÄLZPUMPEN (Typ 8196-300/350)  
 CIRCULATION PUMPS (Type 8196-300/350)  
 POMPES DE CIRCULATION (Type 8196-300/350)

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**SPARE PARTS LIST**



8196\_0148\_8015.CDR

VERSCHLAUCHUNG LINKS (Typ 8196-300/350)  
 HOSING LHS (Type 8196-300/350)  
 TUYAUTERIE A GAUCHE (Type 8196-300/350)



| Pos. Nr.<br>Item no.<br>Pos. no. | Teile-Nr.<br>Part No.<br>Nr. de Ref. | Benennung<br>Description<br>Denomination  |
|----------------------------------|--------------------------------------|---|
| 01                               | CM+0.0000.64.055                     | PVC-SCHLAUCH 15X3 TRANSPARENT GEWEBE (7.8196.7471.0, L=100MM) / HOSE / TUYAU FLEXIBLE |
| 02                               | CM+9.0371.7021.0                     | SCHLAUCHSCHELLE SNP-24 / HOSE CLAMP / COLLIER DE GAINÉ                                |
| 03                               | CM+9.0371.9510.1                     | SCHLAUCHSCHELLE / HOSE CLAMP / COLLIER DE GAINÉ                                       |
| 07                               | CM+7.0424.2163.0                     | MAGNETVENTIL 24V/DC ( <b>1.MG1</b> ) / SOLENOID VALVE / SOUPAPE MAGNETIQUE            |
| 08                               | CM+9.8196.1640.0                     | AC-GEBLÄSE 230V/60HZ ( <b>1.M5</b> ) / AC BLOWER / VENTILATEUR CA                     |
| 09                               | CM+9.0431.7181.0                     | DOSIERPUMPE 230V 50/60HZ ( <b>1.M4</b> ) / METERING PUMP / POMPE DE DOSAGE            |
| <u>10</u>                        | CM+9.5210.7270.1                     | FILTER / FILTER / FILTRE  |
| 11                               | CM+9.5230.8312.0                     | DICHTSCHEIBE / SEALING DISK / BANDE D'ETANCHEITE                                      |
| 12                               | CM+9.5230.8313.0                     | SCHLAUCHTUELLE / HOSE SLEEVE / DOUILLE POUR TUYAUX                                    |
| 13                               | CM+9.8156.1011.0                     | SCHLAUCHTÜLLE / HOSE SLEEVE / DOUILLE POUR TUYAUX                                     |
| 14                               | CM+9.8189.1011.0                     | SPIRALSCHLAUCH / SPIRAL HOSE / TUYAU SOUPLE SPIRALE                                   |
| 16                               | CM+9.8196.7302.0*                    | WINKEL / BRACKET / EQUERRE  |
| 17                               | CM+9.8196.7404.0                     | GUMMIKNIE / RUBBER ELBOW / COUDE CAOUTCHOUC   |
| 18                               | CM+9.8196.7405.0                     | GUMMIKNIE / RUBBER ELBOW / COUDE CAOUTCHOUC   |
| 19                               | CM+9.8196.7417.0                     | GUMMIKNIE / RUBBER ELBOW / COUDE CAOUTCHOUC   |
| 20                               | CM+9.8196.7421.0                     | ROHR / PIPE / TUBE  |
| 21                               | CM+9.8196.7428.0                     | GUMMIKNIE / RUBBER ELBOW / COUDE CAOUTCHOUC   |
| <u>22</u>                        | CM+9.8196.7670.0                     | ROHRKRUEMMER VOLLST. / PIPE BEND ASSY / TUYAU COUDE COMPL.                            |
| <u>23</u>                        | CM+9.8196.7680.0                     | ROHRKRUEMMER VOLLST. / PIPE BEND ASSY / TUYAU COUDE COMPL.                            |
| 24                               | CM+9.8196.7531.0*                    | SCHLAUCH PVC 1200 LG / HOSE / TUYAU FLEXIBLE  |
| 25                               | CM+9.8196.7660.1                     | WASSERZULAUF VORM. / WATER SUPPLY / ARRIVEE D'EAU                                     |
| 26                               | CM+9.8904.1227.0                     | FILTER / FILTER / FILTRE  |
| 27                               | CM+9.9520.2858.0                     | DICHTSCHEIBE / SEALING DISK / BANDE D'ETANCHEITE                                      |
| 28                               | CM+9.9520.2859.0                     | KUGELHAHN / BALL COCK / ROBINET A BOISSEAU SPHERIQUE                                  |
| 30                               | CM+9.8196.7532.0*                    | KLEBESCHILD / LABEL / ETIQUETTE   |
| 31                               | CM+9.0371.7073.0                     | SCHLAUCHSCHELLE / HOSE CLAMP / COLLIER DE GAINÉ                                       |
| 32                               | CM+9.5203.8344.0                     | SECHSKANT-MUTTER  |

=Baugruppe / Assembly / Modul

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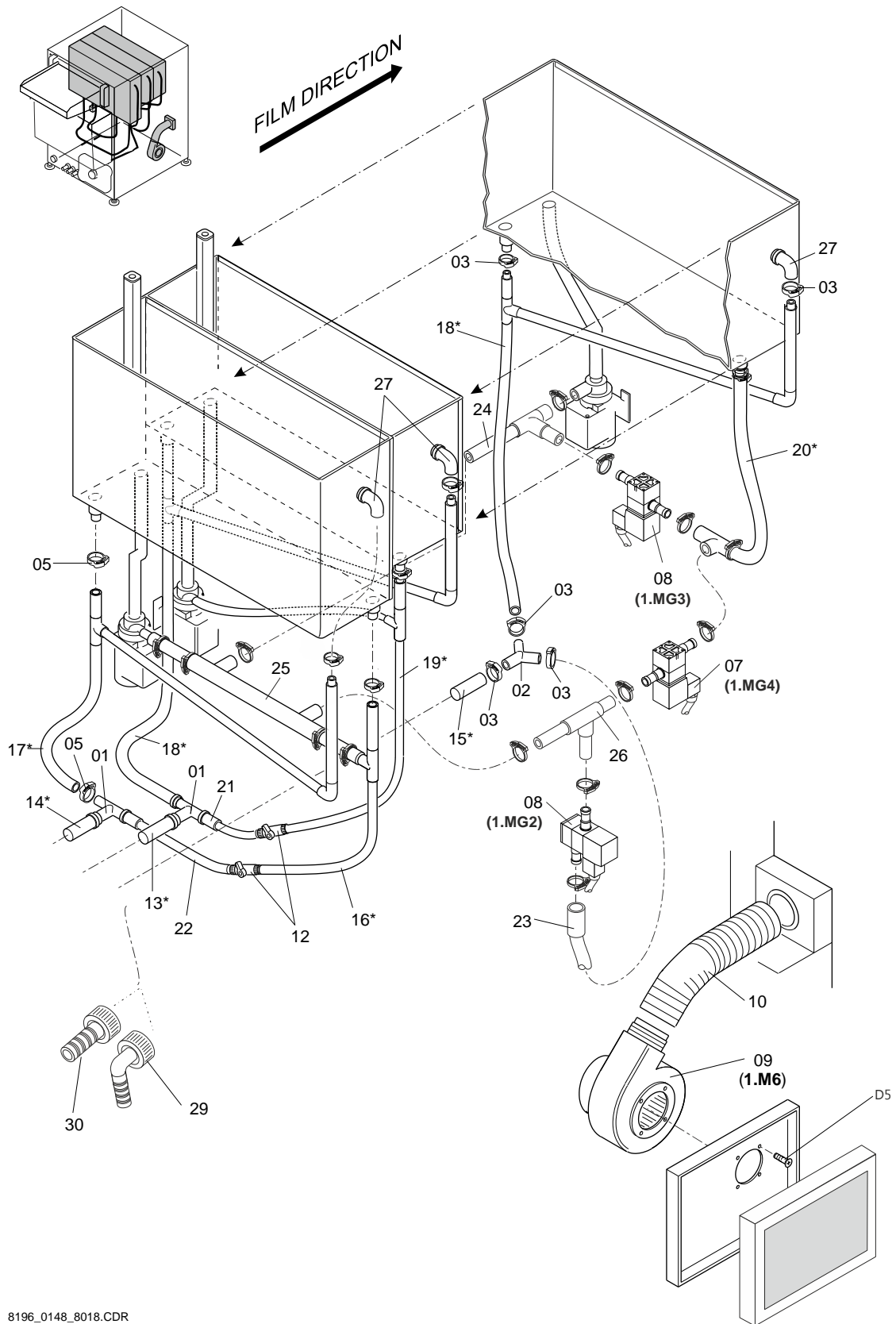
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VERSCHLAUCHUNG LINKS (Typ 8196-300/350)

HOSING LHS (Type 8196-300/350)

TUYAUTERIE A GAUCHE (Type 8196-300/350)



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VERSCHLAUCHUNG RECHTS (Typ 8196-300/350)  
 HOSING RHS (Type 8196-300/350)  
 TUYAUTERIE A DROITE (Type 8196-300/350)

| Pos. Nr.<br>Item no.<br>Pos. no. | Teile-Nr.<br>Part No.<br>Nr. de Ref. | Benennung<br>Description<br>Denomination   |
|----------------------------------|--------------------------------------|--|
| 01                               | CM+9.0342.0040.0                     | T-STÜCK / TEE CONNECTOR / CONNECTEUR EN T  |
| 02                               | CM+9.0342.1160.0                     | Y-VERBINDUNG / Y CONNECTING / CONNEXION Y  |
| 03                               | CM+9.0371.7021.0                     | SCHLAUCHSCHELLE SNP-24 / HOSE CLAMP / COLLIER DE GAINÉ                             |
| 04                               | CM+9.0372.0020.0                     | SCHLAUCHSCHELLE / HOSE CLAMP / COLLIER DE GAINÉ                                    |
| 05                               | CM+9.0372.0022.0                     | SCHLAUCHSCHELLE / HOSE CLAMP / COLLIER DE GAINÉ                                    |
| 06                               | CM+9.0372.0040.0                     | SCHLAUCHSCHELLE / HOSE CLAMP / COLLIER DE GAINÉ                                    |
| 07                               | CM+9.0424.2167.0                     | 2/2 WEGEVENTIL, NC 24V (1.MG4) / TWO-WAY VALVE / SOUPAPE BI-DIRECTIONNELLE         |
| 08                               | CM+9.0395.0188.0                     | 2/2 WEGEVENTIL, NO 24V (1.MG2, 1.MG3,) / TWO-WAY VALVE / SOUPAPE BI-DIRECTIONNELLE |
| 09                               | CM+9.8196.1640.0                     | AC-GEBLÄSE 230V/60HZ (1.M6) / AC BLOWER / VENTILATEUR CA                           |
| 10                               | CM+9.8189.1012.0                     | SPIRALSCHLAUCH / SPIRAL HOSE / TUYAU SOUPLE SPIRALE                                |
| 12                               | CM+9.8196.7401.0                     | ABSPERRHAN / SHUT-OFF COCK / ROBINET D'ARRET                                       |
| 13*                              | CM+9.8196.7408.0*                    | PVC-SCHLAUCH 19X2,5 TRANSPARENT (, L=90MM) / HOSE / TUYAU FLEXIBLE                 |
| 14*                              | CM+9.8196.7407.0*                    | PVC-SCHLAUCH 19X2,5 TRANSPARENT (, L=130MM) / HOSE / TUYAU FLEXIBLE                |
| 15*                              | CM+9.8196.7409.0*                    | PVC-SCHLAUCH 19X2,5 TRANSPARENT (, L=180MM) / HOSE / TUYAU FLEXIBLE                |
| 16*                              | CM+9.8196.7410.1*                    | ROHR VORM./ PIPE / TUBE  |
| 17*                              | CM+9.8196.7420.1*                    | ROHR KRÜMMER VOLLST. / PIPE BEND / TUYAU COUDE                                     |
| 18*                              | CM+9.8196.7430.1*                    | ROHR VORM./ PIPE / TUBE  |
| 19*                              | CM+9.8196.7440.0*                    | ROHR / PIPE / TUBE   |
| 20*                              | CM+9.8196.7610.0*                    | ROHR VORM./ PIPE / TUBE  |
| 21                               | CM+9.8196.7460.1                     | SCHLAUCH VORM. / HOSE / TUYAU FLEXIBLE   |
| 22                               | CM+9.8196.7480.0                     | SCHLAUCH VORM. / HOSE / TUYAU FLEXIBLE   |
| 23                               | CM+9.8196.7490.1                     | SCHLAUCH VORM. / HOSE / TUYAU FLEXIBLE   |
| 24                               | CM+9.8196.7550.0                     | ROHR VORM. / PIPE / TUBE   |
| 25                               | CM+9.8196.7569.0                     | KÜHLSCHLAUCH / COOLING HOSE / TUYAU DE REFROIDISSEMENT                             |
| 26                               | CM+9.8196.7620.0                     | ROHR VORM. / PIPE / TUBE   |
| 27                               | CM+9.8896.2952.1                     | KNIE / ELBOW / COUDE   |
| 28                               | CM+9.8196.7568.0                     | ROHR / PIPE / TUBE   |
| 29                               | CM+9.0342.0064.0                     | SCHLAUCHANSCHLUSS 90° / HOSE CONNECTION 90° / RACCORD TUYAU 90                     |
| 30                               | CM+9.0342.0063.0                     | SCHLAUCHANSCHLUSS / HOSE CONNECTION / RACCORD TUYAU                                |

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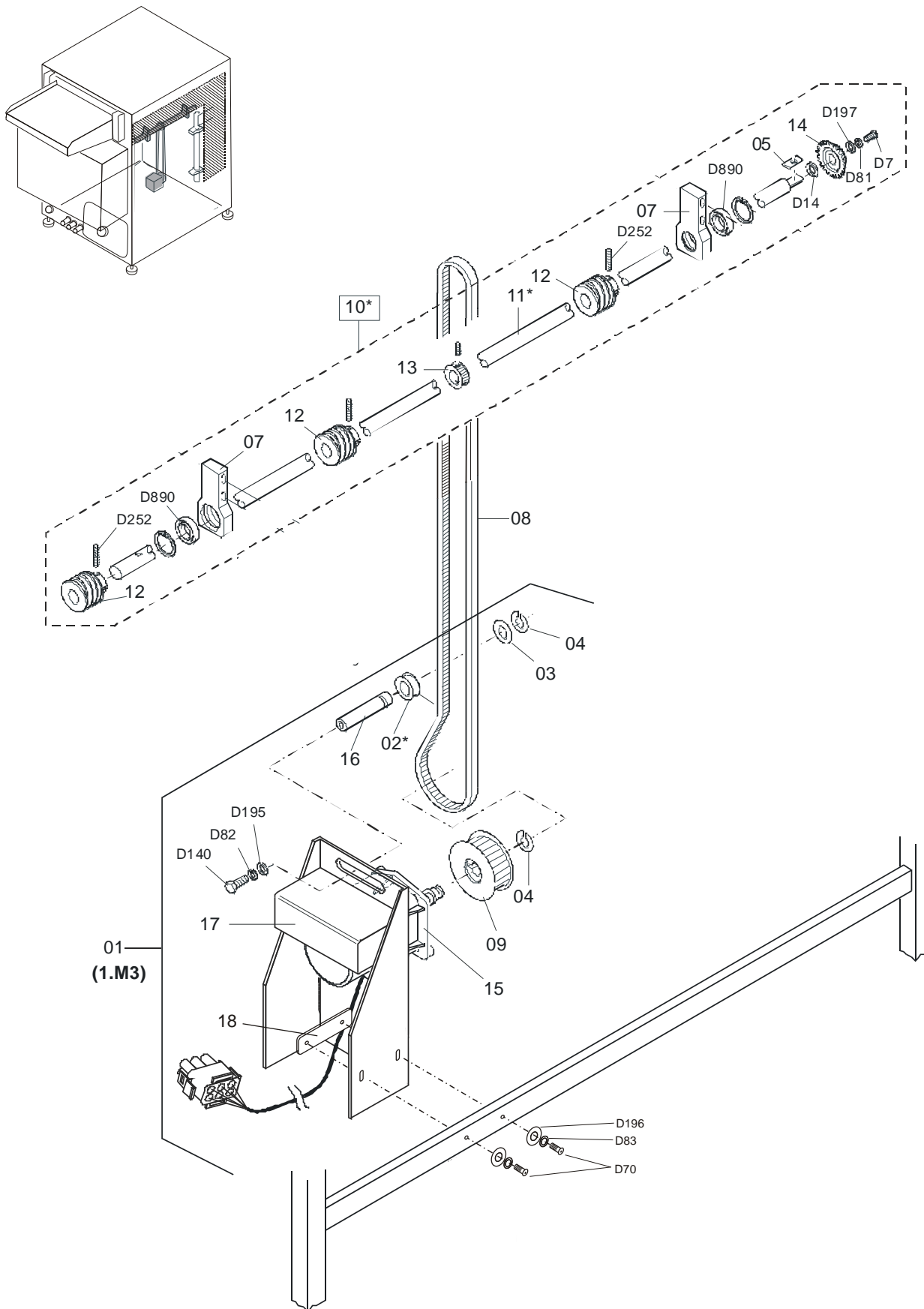
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VERSCHLAUCHUNG RECHTS (Typ 8196-300/350)

HOSING RHS (Type 8196-300/350)

TUYAUTERIE A DROITE (Type 8196-300/350)



ANTRIEBSWELLE (NASSTEIL) UND ANTRIEBSMOTOR  
 DRIVE SHAFT (WET SECTION) AND DRIVE MOTOR  
 ARBRE D'ENTRAINEMENT (PARTIE HUMIDE) ET MOTEUR D'ENTRAINEMENT

| Pos. Nr.<br>Item no.<br>Pos. no. | Teile-Nr.<br>Part No.<br>Nr. de Ref. | Benennung<br>Description<br>Denomination  |
|----------------------------------|--------------------------------------|---|
| 01                               | CM+9. 8196.2050.0                    | GETRIEBEMOTOR VOLLST. (1.M3) / GEAR MOTOR / MOTEUR D'ENGRENAGE                              |
| 02                               | CM+9.8156.5002.0*                    | ROLLE / ROLLER / ROULEAU  |
| 03                               | CM+9.8157.6225.0                     | SCHEIBE / WASHER / RONDELLE   |
| 04                               | CM+9.8157.6229.0                     | SCHEIBE / WASHER / RONDELLE   |
| 05                               | CM+9.8184.6032.1                     | PLATTE / PLATE / PLAQUE   |
| 07                               | CM+9.8185.1152.2                     | LAGERBOCK / BEARING BRACKET / SUPPORT   |
| 08                               | CM+9.8189.1015.0                     | ZAHNRIEMEN 10T5/840 / TOOTHED BELT / COURROIE CRANTEE                                       |
| 09                               | CM+9.8196.1323.1                     | ZAHNRIEMENRAD / TOOTHED BELT WHEEL / POULIE A COURROIE CRANTEE                              |
| 10                               | CM+9.8196.1330.0*                    | ANTRIEBSWELLE (NASSTEIL) / DRIVE SHAFT (WET SECTION) / ARBRE D'ENTRAINEMENT (PARTIE HUMIDE) |
| 11                               | CM+9.8196.1331.0*                    | WELLE / SHAFT / ARBRE   |
| 12                               | CM+9.8196.1332.0                     | SCHNECKE / WORM GEAR / VIS SANS FIN   |
| 13                               | CM+9.8196.1333.0                     | ZAHNRIEMENRAD, Z=15 / TOOTHED BELT WHEEL / POULIE A COURROIE CRANTEE                        |
| 14                               | CM+9.8196.1721.0                     | KEGELRAD / BEVEL GEAR / ROUE DENTEE   |
| 15                               | CM+9.0430.8329.0                     | EC-MOTOR (6pol) / EC MOTOR / EC-MOTEUR  |
| 16                               | CM+9.8196.1322.0                     | BOLZEN / BOLT / BOULON  |
| 17                               | CM+9.8196.1327.1                     | ABDECKUNG / COVER / RECOUVREMENT  |
| 18                               | CM+9.8196.2609.0                     | PLATTE / PLATE / PLAQUE   |

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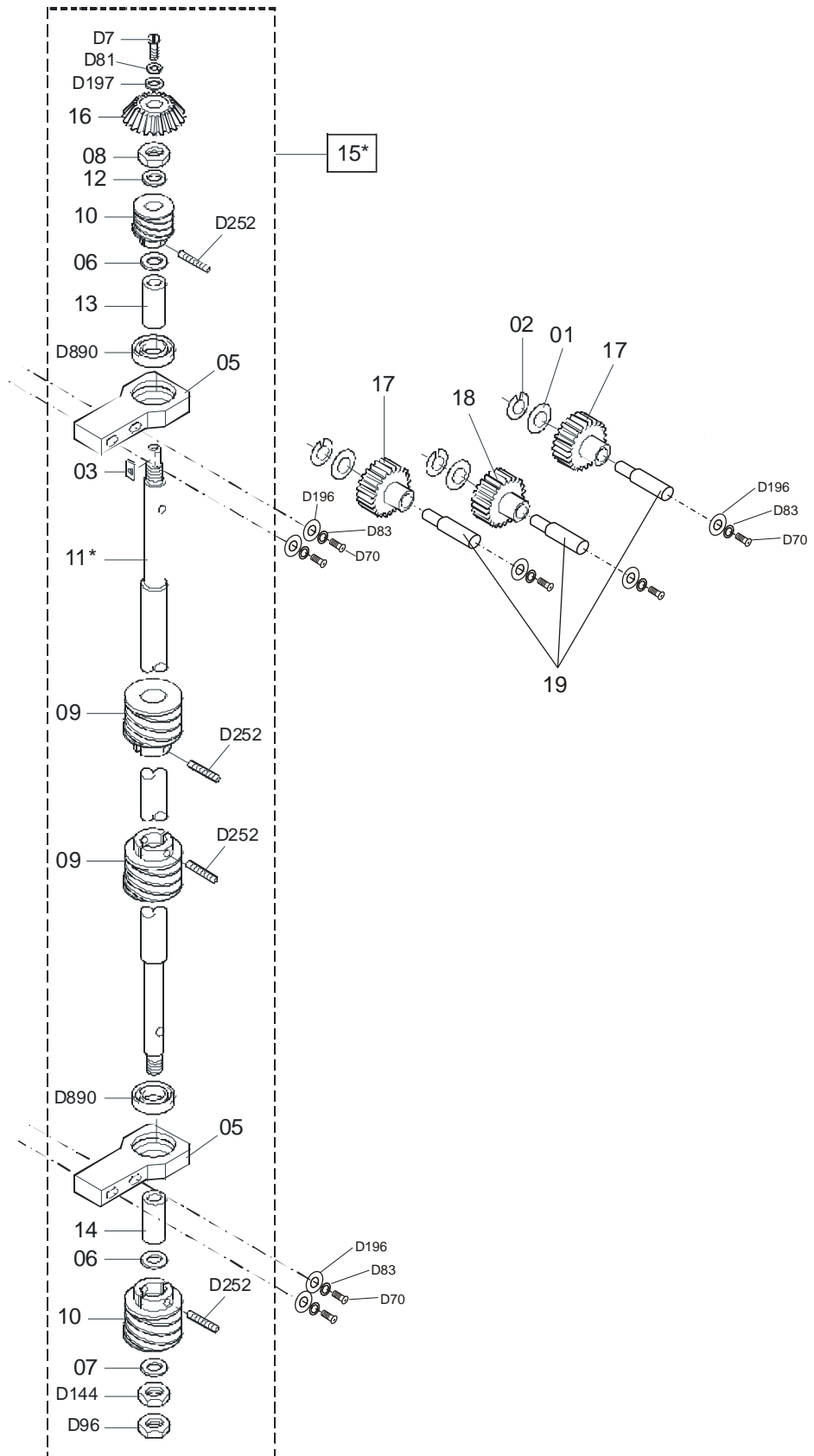
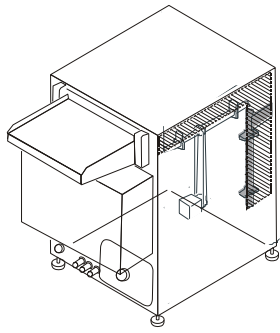
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ANTRIEBSWELLE (NASSTEIL) UND ANTRIEBSMOTOR  
DRIVE SHAFT (WET SECTION) AND DRIVE MOTOR  
ARBRE D'ENTRAINEMENT (PARTIE HUMIDE) ET MOTEUR D'ENTRAINEMENT

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ANTRIEBSWELLE (TROCKNER)  
 DRIVE SHAFT (DRYER SECTION)  
 ARBRE D'ENTRAINEMENT (SECHOIR)

| Pos. Nr. | Teile-Nr.         | Benennung   |
|----------|-------------------|---|
| Item no. | Part No.          | Description   |
| Pos. no. | Nr. de Ref.       | Denomination  |
| 01       | CM+9.8157.6225.0  | SCHEIBE / WASHER / RONDELLE   |
| 02       | CM+9.8157.6229.0  | SCHEIBE / WASHER / RONDELLE   |
| 03       | CM+9.8184.6032.1  | PLATTE / PLATE / PLAQUE   |
| 05       | CM+9.8185.1152.2  | LAGERBOCK / BEARING BRACKET / SUPPORT   |
| 06       | CM+9.8185.1161.0  | DISTANZRING / SPACER RING / BAQUE D'ECARTEMENT  |
| 07       | CM+9.8185.1162.0  | DISTANZRING / SPACER RING / BAQUE D'ECARTEMENT  |
| 08       | CM+9.8185.1165.0  | 6KTMUTTER M10 / HEXAGON NUT / ECROU HEXAGONALE  |
| 09       | CM+9.8185.1182.0  | SCHNECKE / WORM GEAR / VIS SANS FIN   |
| 10       | CM+9.8185.1183.0  | SCHNECKE / WORM GEAR / VIS SANS FIN   |
| 11       | CM+9.8189.1181.0* | WELLE / SHAFT / ARBRE   |
| 12       | CM+9.8189.1182.0  | DISTANZRING / SPACER RING / BAQUE D'ECARTEMENT  |
| 13       | CM+9.8189.1183.0  | BUCHSE / BUSHING / DOUILLE  |
| 14       | CM+7.8189.1184.0  | BUCHSE / BUSHING / DOUILLE  |
| 15       | CM+9.8196.1730.0* | ANTRIEBSWELLE (TROCKNER) / DRIVE SHAFT (DRYER SECTION) / ARBRE D'ENTRAINEMENT (SECHOIR) |
| 16       | CM+9.8196.1731.0  | KEGELRAD / BEVEL GEAR / ROUE DENTEE   |
| 17       | CM+9.8196.2607.0  | SCHRAEGSTIRNRAD / HELICAL SPUR GEAR / ROUE HELICOIDALE                                  |
| 18       | CM+9.8196.2606.0  | SCHRAEGSTIRNRAD / HELICAL SPUR GEAR / ROUE HELICOIDALE                                  |
| 19       | CM+9.8196.2605.0  | BOLZEN / BOLT / BOULON  |

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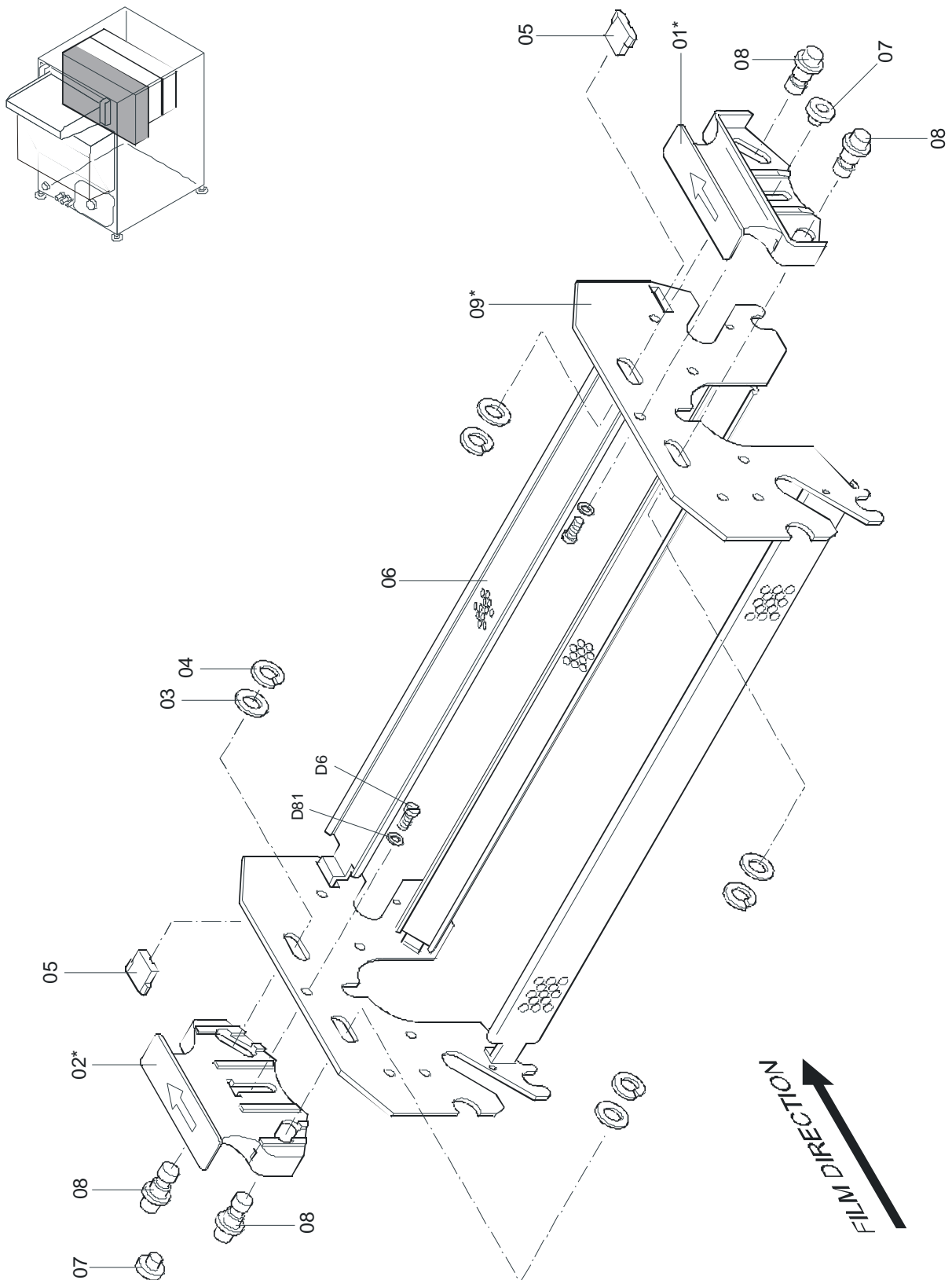
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ANTRIEBSWELLE (TROCKNER)  
DRIVE SHAFT (DRYER SECTION)  
ARBRE D'ENTRAINEMENT (SECHOIR)

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# SPARE PARTS LIST



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ENTWICKLERRACK - OBERTEIL CM+9.8196.6070.1  
DEVELOPER RACK - TOP PART CM+9.8196.6070.1  
RACK REVELATEUR - PARTIE SUPERIEURE CM+9.8196.6070.1



| Pos. Nr. | Teile-Nr.         | Benennung  |
|----------|-------------------|--|
| Item no. | Part No.          | Description  |
| Pos. no. | Nr. de Ref.       | Denomination   |
| 01*      | CM+9.5320.5260.0* | GRIFF RECHTS E / HANDLE, RHS E / POIGNEE, A DROITE E                               |
| 02*      | CM+9.5320.5270.0* | GRIFF LINKS E / HANDLE, LHS E / POIGNEE, A GAUCHE E                                |
| 03       | CM+9.8157.6225.0  | SCHEIBE / WASHER / RONDELLE  |
| 04       | CM+9.9402.1129.0  | SICHERUNGSSCHEIBE / RETAINER RING / RONDELLE D'ARRET                               |
| 05       | CM+9.8185.6023.2  | HALTESTOPFEN / STOPPER / BOUCHON DE RETENUE  |
| 06       | CM+9.8185.6028.0  | LEITBLECH / GUIDE PLATE / PLAQUE DE GUIDAGE  |
| 07       | CM+9.8185.6117.0  | BOLZEN / BOLT / BOULON   |
| 08       | CM+9.8185.6118.1  | BOLZEN / BOLT / BOULON   |
| 09*      | CM+9.8185.6140.1* | E-F RACK OBERTEIL / DEVELOPER RACK TOP PART / RACK REVELATEUR<br>PARTIE SUPERIEURE |

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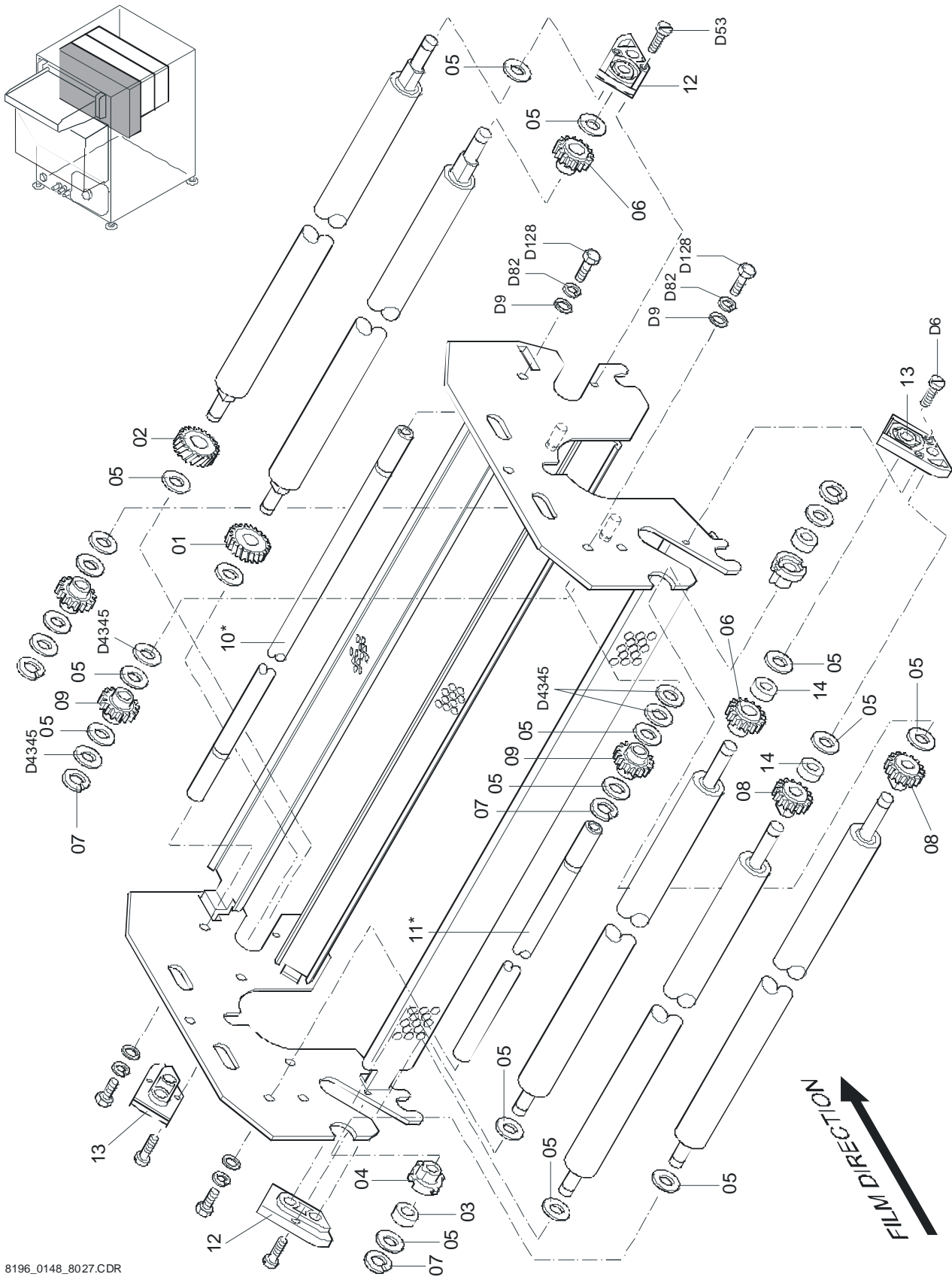
ENTWICKLERRACK - OBERTEIL CM+9.8196.6070.1

DEVELOPER RACK - TOP PART CM+9.8196.6070.1

RACK REVELATEUR - PARTIE SUPERIEURE CM+9.8196.6070.1

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**SPARE PARTS LIST**



8196\_0148\_8027.CDR

ENTWICKLERRACK - OBERTEIL CM+9.8196.6070.1  
 DEVELOPER RACK - TOP PART CM+9.8196.6070.1  
 RACK REVELATEUR - PARTIE SUPERIEURE CM+9.8196.6070.1

| Pos. Nr. | Teile-Nr.         | Benennung  |
|----------|-------------------|--|
| Item no. | Part No.          | Description  |
| Pos. no. | Nr. de Ref.       | Denomination   |
| 01       | CM+9.8155.5301.0  | SCHRAEGSTIRNRAD / HELICAL SPUR GEAR / ROUE HELICOIDALE |
| 02       | CM+9.8155.5302.0  | SCHRAEGSTIRNRAD / HELICAL SPUR GEAR / ROUE HELICOIDALE |
| 03       | CM+9.8156.6301.0  | BUCHSE / BUSHING / DOUILLE                             |
| 04       | CM+9.8157.6215.2  | BUCHSE / BUSHING / DOUILLE                             |
| 05       | CM+9.8157.6225.0  | SCHEIBE / WASHER / RONDELLE                            |
| 06       | CM+9.8157.6227.0  | GERADSTIRNRAD / SPUR GEAR / ROUE DENTEE                |
| 07       | CM+9.8157.6229.0  | SCHEIBE / WASHER / RONDELLE                            |
| 08       | CM+9.8157.6253.0  | GERADSTIRNRAD / SPUR GEAR / ROUE DENTEE                |
| 09       | CM+9.8157.6645.0  | GERADSTIRNRAD / SPUR GEAR / ROUE DENTEE                |
| 10*      | CM+9.8185.6112.1* | ABSTANDSSTANGE / SPACER ROD / BARRE D'ESPACEMENT       |
| 11*      | CM+9.8185.6113.0* | ABSTANDSSTANGE / SPACER ROD / BARRE D'ESPACEMENT       |
| 12       | CM+9.8185.6320.2  | LAGER / BEARING / PALIER                               |
| 13       | CM+9.8185.6330.2  | LAGER / BEARING / PALIER                               |
| 14       | CM+9.8187.6111.0  | BUCHSE / BUSHING / DOUILLE                             |

☐=Baugruppe / Assembly / Modul

D=Normteil. Die Bestellnummer ist der separaten Normteileliste "DD+DIS011.93M" zu entnehmen.

D=Standardised part. For order please refer to the separate spare parts list for standardised parts "DD+DIS011.93M"

D=Piece normalisée. Vous trouvez leur référence dans la liste, à part, des pieces normalisées "DD+DIS011.93M"

\*=Ersatzteil, nicht ab Lager lieferbar. Bei Bestellung verlängerte Lieferzeit.

\*=Spare part, not available from stock. Expect extended delivery times.

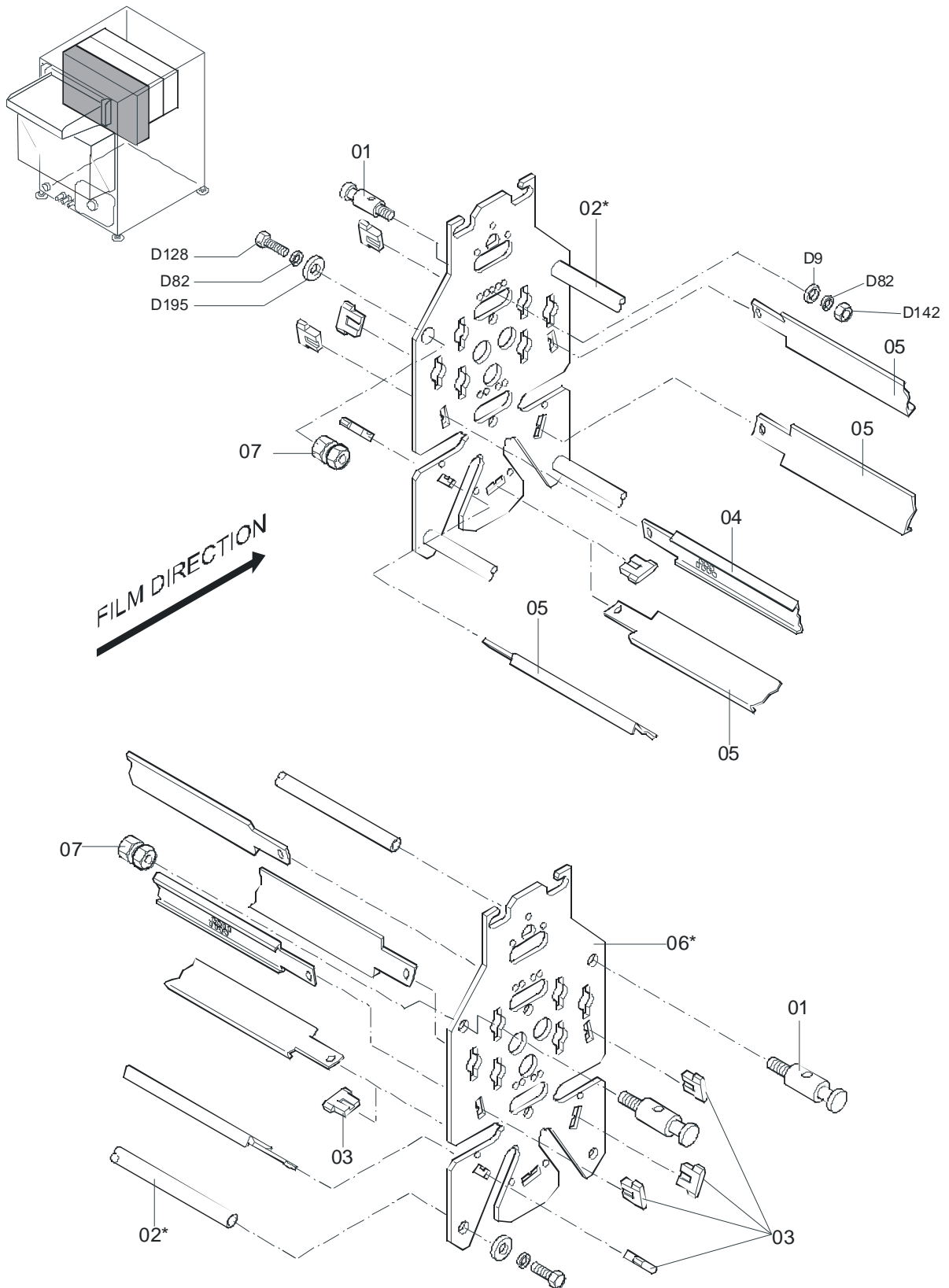
\*=Piece detachée n'est pas disponible départ stock. Délai prolongé en cas de commande.

ENTWICKLERRACK - OBERTEIL CM+9.8196.6070.1

DEVELOPER RACK - TOP PART CM+9.8196.6070.1

RACK REVELATEUR - PARTIE SUPERIEURE CM+9.8196.6070.1

# SPARE PARTS LIST



8196\_0148\_8031.CDR

E-RACK UNTEN (STANDARD) CM+9.8187.6040.1  
DEVELOPER RACK BOTTOM (STANDARD) CM+9.8187.6040.1  
RACK REVELATEUR - PARTIE SUPERIEURE CM+9.8187.6040.1

| Pos. Nr. | Teile-Nr.         | Benennung  |
|----------|-------------------|--|
| Item no. | Part No.          | Description  |
| Pos. no. | Nr. de Ref.       | Denomination   |
| 01       | CM+9.8184.6018.0  | BOLZEN / BOLT / BOULON   |
| 02*      | CM+9.8185.6018.0* | ABSTANDSSTANGE / SPACER ROD / BARRE D'ESPACEMENT                         |
| 03       | CM+9.8185.6023.2  | HALTESTOPFEN / STOPPER / BOUCHON DE RETENUE                              |
| 04       | CM+9.8185.6024.0  | LEITBLECH / GUIDE PLATE / PLAQUE DE GUIDAGE                              |
| 05       | CM+9.8185.6026.0  | LEITBLECH / GUIDE PLATE / PLAQUE DE GUIDAGE                              |
| 06*      | CM+9.8187.6061.0* | PLATINE U (ALTERNIEREND) / PLATE U (ALTERNATING) / PLAQUE U (ALTERNANCE) |
| 07       | CM+9.8196.6028.0  | BOLZEN / BOLT / BOULON   |

☐=Baugruppe / Assembly / Modul

D=Normteil. Die Bestellnummer ist der separaten Normteilleiste "DD+DIS011.93M" zu entnehmen.

D=Standardised part. For order please refer to the separate spare parts list for standardised parts "DD+DIS011.93M"

D=Piece normalisée. Vous trouvez leur référence dans la liste, à part, des pieces normalisées "DD+DIS011.93M"

\*=Ersatzteil, nicht ab Lager lieferbar. Bei Bestellung verlängerte Lieferzeit.

\*=Spare part, not available from stock. Expect extended delivery times.

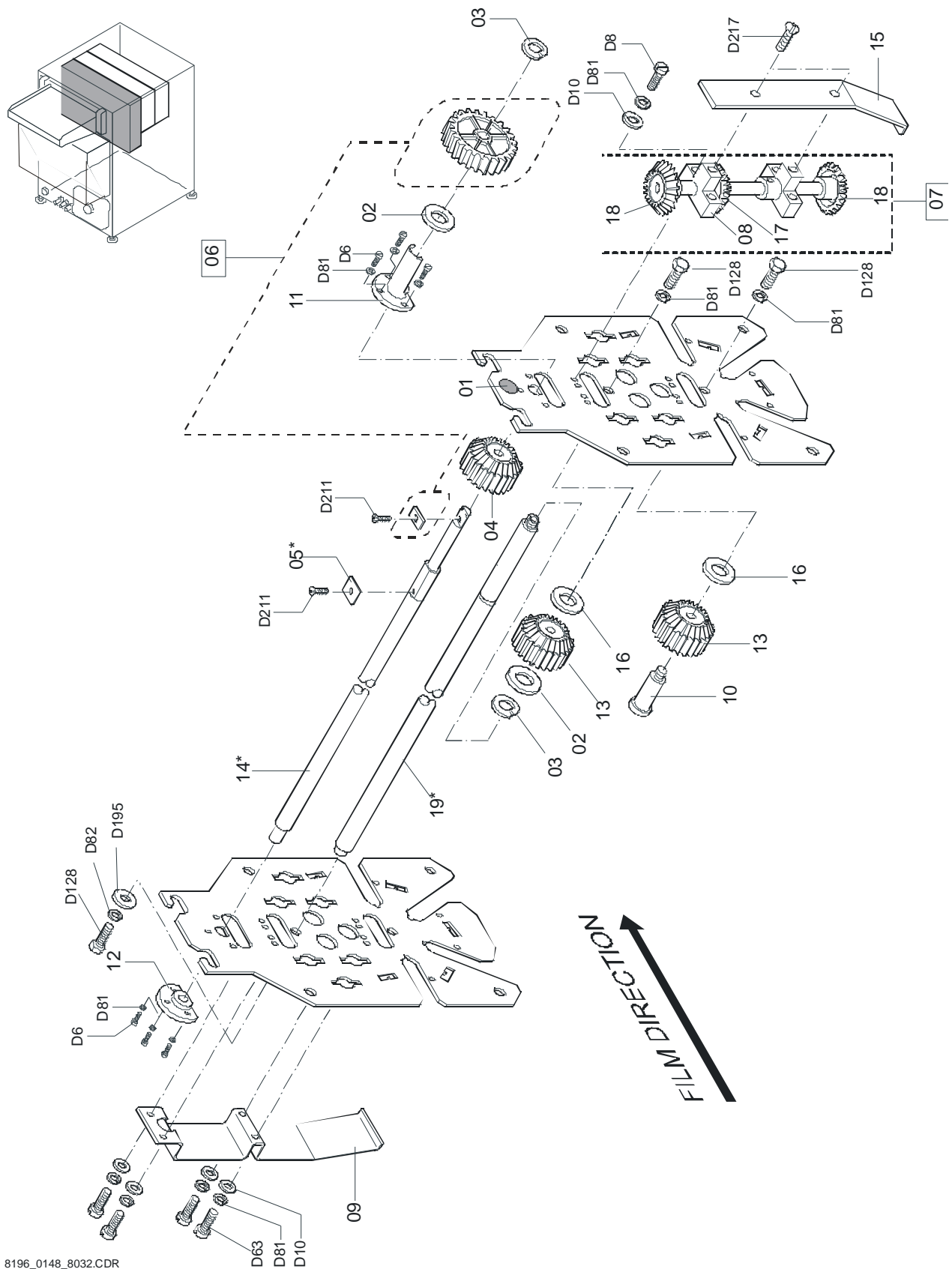
\*=Piece detachee n'est pas disponible depart stock. Délai prolongé en cas de commande.

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E-RACK UNTEN (STANDARD) CM+9.8187.6040.1  
 DEVELOPER RACK BOTTOM (STANDARD) CM+9.8187.6040.1  
 RACK REVELATEUR - PARTIE SUPERIEURE CM+9.8187.6040.1

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**SPARE PARTS LIST**



8196\_0148\_8032.CDR

E-RACK UNTEN (STANDARD) CM+9.8187.6040.1  
 DEVELOPER RACK BOTTOM (STANDARD) CM+9.8187.6040.1  
 RACK REVELATEUR - PARTIE SUPERIEURE CM+9.8187.6040.1

| Pos. Nr.<br>Item no.<br>Pos. no. | Teile-Nr.<br>Part No.<br>Nr. de Ref. | Benennung<br>Description<br>Denomination  |
|----------------------------------|--------------------------------------|---|
| 01                               | CM+9.0374.7298.0                     | KLEBESCHILD 17 Ø ROT / LABEL, RED / ETIQUETTE, ROUGE  |
| 02                               | CM+9.8157.6225.0                     | SCHEIBE / WASHER / RONDELLE   |
| 03                               | CM+9.8157.6229.0                     | SICHERUNGSRING / RETAINING RING / BAGUE DE SECURITE   |
| 04                               | CM+9.8184.6021.0                     | KOMBIRAD / COMBINATION WHEEL / ROUE COMBINEE  |
| 05*                              | CM+9.8184.6022.0*                    | PLATTE / PLATE / PLAQUE   |
| 06                               | CM+9.8184.6030.0                     | ZAHNRAD MIT GEBOHRTER PLATTE / GEAR WITH PLATE WITH BORING /<br>ROUE DENTEE AVEC PLAQUE AVEC TROU |
| 07                               | CM+9.8184.6040.1                     | ANTRIEBSWELLE / DRIVE SHAFT / ARBRE D'ENTRAINEMENT  |
| 08                               | CM+9.8184.6050.1                     | LAGER / BEARING / PALIER  |
| 09                               | CM+9.8184.6071.1                     | WINKEL / BRACKET / EQUERRE  |
| 10                               | CM+9.8185.6013.0                     | BOLZEN / BOLT / BOULON  |
| 11                               | CM+9.8185.6014.0                     | LAGER / BEARING / PALIER  |
| 12                               | CM+9.8185.6015.0                     | LAGER / BEARING / PALIER  |
| 13                               | CM+9.8185.6017.0                     | KOMBIRAD / COMBINATION WHEEL / ROUE COMBINEE  |
| 14*                              | CM+9.8185.6019.1*                    | ACHSE / SHAFT / ARBRE   |
| 15                               | CM+9.8185.6035.1                     | BUEGEL / BRACKET / ETRIER   |
| 16                               | CM+9.8185.6037.0                     | SCHEIBE / WASHER / RONDELLE   |
| 17                               | CM+9.8185.6042.0                     | KEGELRAD / BEVEL GEAR / ROUE DENTEE   |
| 18                               | CM+9.8902.1401.0                     | KEGELRAD / BEVEL GEAR / ROUE DENTEE   |
| 19*                              | CM+9.8196.6029.0*                    | ZUGANKER / TIE ROD / TIRANT   |

☐=Baugruppe / Assembly / Modul

D=Normteil. Die Bestellnummer ist der separaten Normteilleiste "DD+DIS011.93M" zu entnehmen.

D=Standardised part. For order please refer to the separate spare parts list for standardised parts "DD+DIS011.93M"

D=Piece normalisée. Vous trouvez leur référence dans la liste, à part, des pieces normalisées "DD+DIS011.93M"

\*=Ersatzteil, nicht ab Lager lieferbar. Bei Bestellung verlängerte Lieferzeit.

\*=Spare part, not available from stock. Expect extended delivery times.

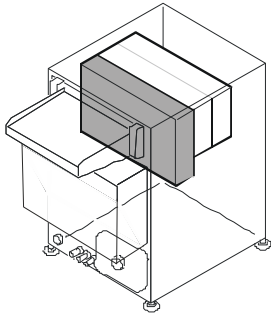
\*=Piece detachée n'est pas disponible départ stock. Délai prolongé en cas de commande.

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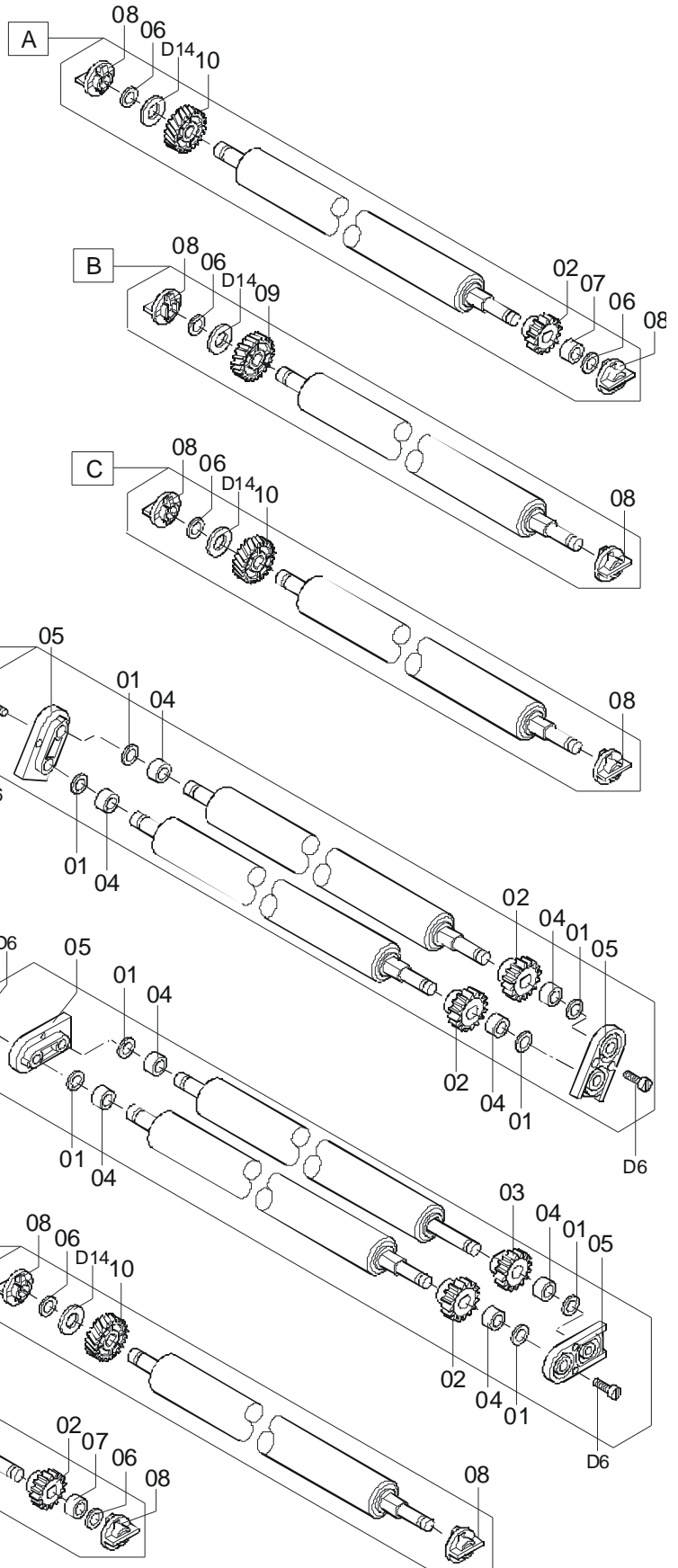
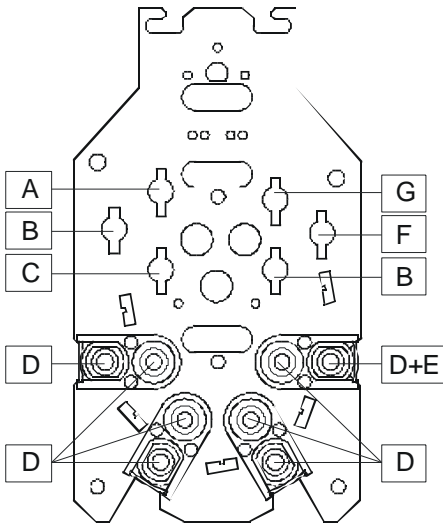
E-RACK UNTEN (STANDARD) CM+9.8187.6040.1  
DEVELOPER RACK BOTTOM (STANDARD) CM+9.8187.6040.1  
RACK REVELATEUR - PARTIE SUPERIEURE CM+9.8187.6040.1

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**SPARE PARTS LIST**



FILM DIRECTION



8196\_0148\_8033.CDR

E-RACK UNTEN (STANDARD) CM+9.8187.6040.1  
 DEVELOPER RACK BOTTOM (STANDARD) CM+9.8187.6040.1  
 RACK REVELATEUR - PARTIE SUPERIEURE CM+9.8187.6040.1



| Pos. Nr. | Teile-Nr.        | Benennung  |
|----------|------------------|--|
| Item no. | Part No.         | Description  |
| Pos. no. | Nr. de Ref.      | Denomination   |
| 01       | CM+9.8157.6225.0 | SCHEIBE / WASHER / RONDELLE  |
| 02       | CM+9.8157.6227.0 | GERADSTIRNRAD / SPUR GEAR / ROUE DENTEE                                  |
| 03       | CM+9.8157.6253.0 | GERADSTIRNRAD / SPUR GEAR / ROUE DENTEE                                  |
| 04       | CM+9.8185.6025.0 | BUCHSE / BUSHING / DOUILLE   |
| 05       | CM+9.8187.5060.1 | LAGER / BEARING / PALIER   |
| 06       | CM+9.8187.6625.0 | SCHEIBE / WASHER / RONDELLE  |
| 07       | CM+9.8195.5306.0 | BUCHSE / BUSHING / DOUILLE   |
| 08       | CM+9.8195.5309.0 | LAGER / BEARING / PALIER   |
| 09       | CM+9.8195.5313.0 | SCHRÄGSTIRNRAD, Z=26; M=1; RE. / HELICAL SPUR GEAR / ROUE<br>HELICOIDALE |
| 10       | CM+9.8195.5314.0 | SCHRÄGSTIRNRAD, Z=26; M=1; LI. / HELICAL SPUR GEAR / ROUE<br>HELICOIDALE |

☐=Baugruppe / Assembly / Modul

D=Normteil. Die Bestellnummer ist der separaten Normteilleiste "DD+DIS011.93M" zu entnehmen.

D=Standardised part. For order please refer to the separate spare parts list for standardised parts "DD+DIS011.93M"

D=Piece normalisée. Vous trouvez leur référence dans la liste, à part, des pieces normalisées "DD+DIS011.93M"

\*=Ersatzteil, nicht ab Lager lieferbar. Bei Bestellung verlängerte Lieferzeit.

\*=Spare part, not available from stock. Expect extended delivery times.

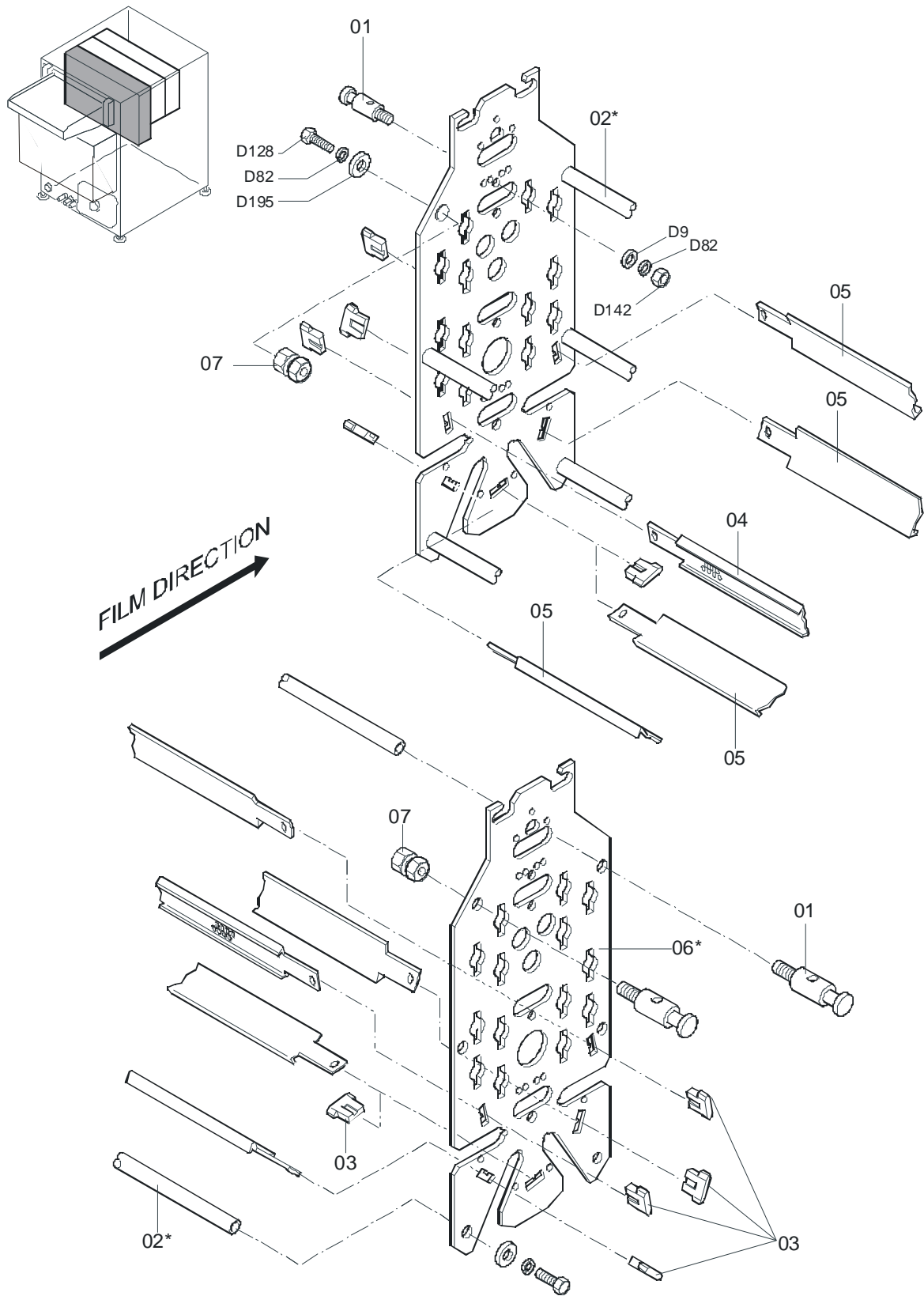
\*=Piece detachée n'est pas disponible départ stock. Délai prolongé en cas de commande.

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E-RACK UNTEN (STANDARD) CM+9.8187.6040.1  
 DEVELOPER RACK BOTTOM (STANDARD) CM+9.8187.6040.1  
 RACK REVELATEUR - PARTIE SUPERIEURE CM+9.8187.6040.1

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**SPARE PARTS LIST**



8196\_0148\_8037.CDR

E-RACK UNTEN OS CM+9.8196.6220.1  
 DEVELOPER RACK BOTTOM OS CM+9.8196.6220.1  
 RACK REVELATEUR EN BAS OS CM+9.8196.6220.1

| Pos. Nr. | Teile-Nr.         | Benennung  |
|----------|-------------------|--|
| Item no. | Part No.          | Description  |
| Pos. no. | Nr. de Ref.       | Denomination                                       |
| 01       | CM+9.8184.6018.0  | BOLZEN / BOLT / BOULON                             |
| 02*      | CM+9.8185.6018.0* | ABSTANDSSTANGE / SPACER ROD / BARRE D'ESPACEMENT   |
| 03       | CM+9.8185.6023.2  | HALTESTOPFEN / STOPPER / BOUCHON DE RETENUE        |
| 04       | CM+9.8185.6024.0  | LEITBLECH / GUIDE PLATE / PLAQUE DE GUIDAGE        |
| 05       | CM+9.8185.6026.0  | LEITBLECH / GUIDE PLATE / PLAQUE DE GUIDAGE        |
| 06*      | CM+9.8196.6221.0* | PLATINE E UNTEN / PLATE E BOTTOM / PLAQUE E EN BAS |
| 07       | CM+9.8196.6028.0  | BOLZEN / BOLT / BOULON                             |

☐=Baugruppe / Assembly / Modul

D=Normteil. Die Bestellnummer ist der separaten Normteileliste "DD+DIS011.93M" zu entnehmen.

D=Standardised part. For order please refer to the separate spare parts list for standardised parts "DD+DIS011.93M"

D=Piece normalisée. Vous trouvez leur référence dans la liste, à part, des pieces normalisées "DD+DIS011.93M"

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\*=Spare part, not available from stock. Expect extended delivery times.

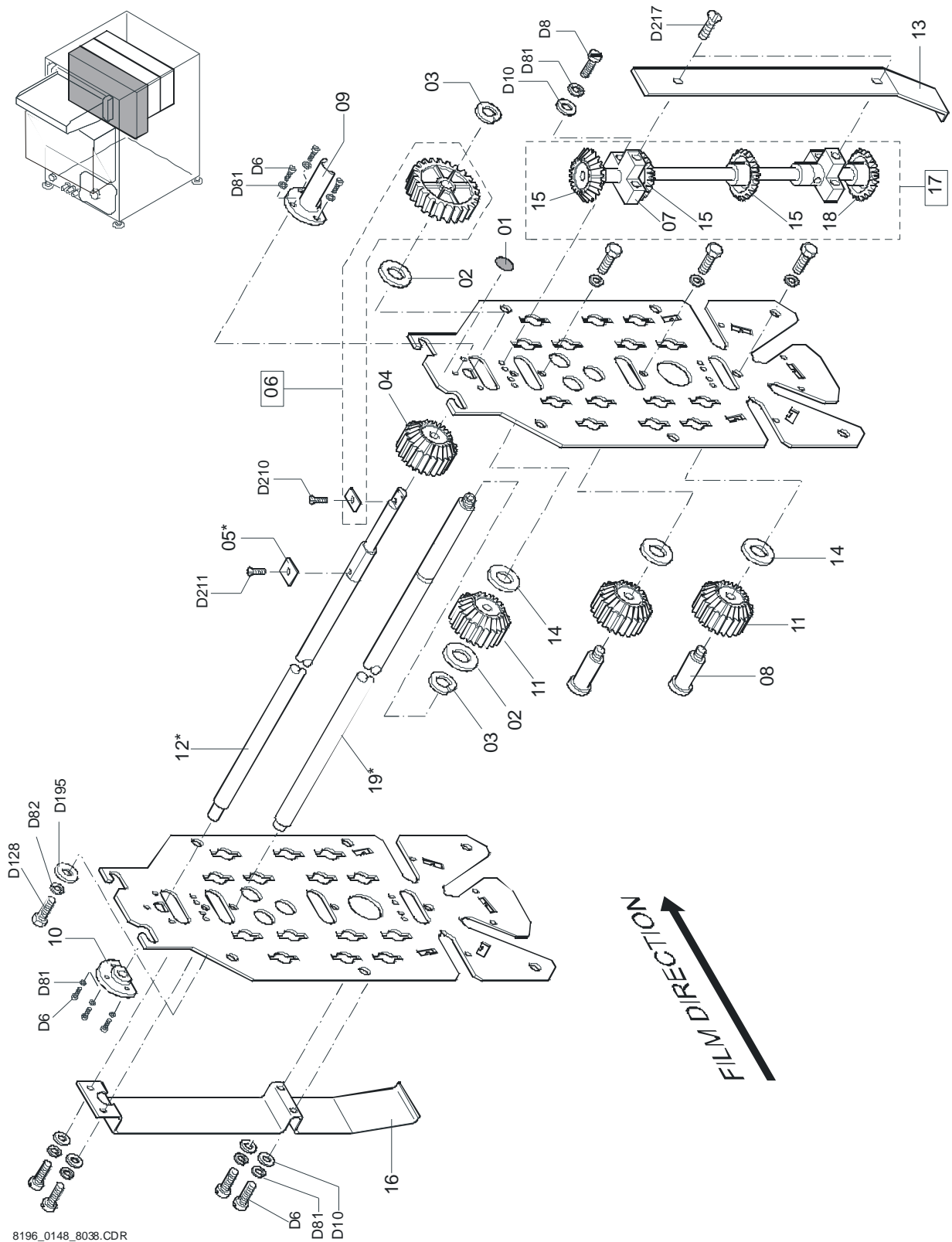
\*=Piece detachée n'est pas disponible départ stock. Délai prolongé en cas de commande.

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E-RACK UNTEN OS CM+9.8196.6220.1  
 DEVELOPER RACK BOTTOM OS CM+9.8196.6220.1  
 RACK REVELATEUR EN BAS OS CM+9.8196.6220.1

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**SPARE PARTS LIST**



8196\_0148\_8038.CDR

E-RACK UNTEN (OS) CM+9.8196.6220.1  
 DEVELOPER RACK BOTTOM (OS) CM+9.8196.6220.1  
 RACK REVELATEUR EN BAS (OS) CM+9.8196.6220.1

| Pos. Nr.<br>Item no.<br>Pos. no. | Teile-Nr.<br>Part No.<br>Nr. de Ref. | Benennung<br>Description<br>Denomination  |
|----------------------------------|--------------------------------------|---|
| 01                               | CM+9.0374.7298.0                     | KLEBESCHILD 17 Ø ROT / LABEL, RED / ETIQUETTE, ROUGE  |
| 02                               | CM+9.8157.6225.0                     | SCHEIBE / WASHER / RONDELLE   |
| 03                               | CM+9.8157.6229.0                     | SICHERUNGSRING / RETAINING RING / BAGUE DE SECURITE   |
| 04                               | CM+9.8184.6021.0                     | KOMBIRAD / COMBINATION WHEEL / ROUE COMBINEE  |
| 05*                              | CM+9.8184.6022.0*                    | PLATTE / PLATE / PLAQUE   |
| 06                               | CM+9.8184.6030.0                     | ZAHNRAD MIT GEBOHRTER PLATTE / GEAR WITH PLATE WITH BORING /<br>ROUE DENTEE AVEC PLAQUE AVEC TROU |
| 07                               | CM+9.8184.6050.1                     | LAGER / BEARING / PALIER  |
| 08                               | CM+9.8185.6013.0                     | BOLZEN / BOLT / BOULON  |
| 09                               | CM+9.8185.6014.0                     | LAGER / BEARING / PALIER  |
| 10                               | CM+9.8185.6015.0                     | LAGER / BEARING / PALIER  |
| 11                               | CM+9.8185.6017.0                     | KOMBIRAD / COMBINATION WHEEL / ROUE COMBINEE  |
| 12*                              | CM+9.8185.6019.1*                    | ACHSE / SHAFT / ARBRE   |
| 13                               | CM+9.8185.6034.1                     | BUEGEL / BRACKET / ETRIER   |
| 14                               | CM+9.8185.6037.0                     | SCHEIBE / WASHER / RONDELLE   |
| 15                               | CM+9.8185.6042.0                     | KEGELRAD / BEVEL GEAR / ROUE DENTEE   |
| 16                               | CM+9.8185.6091.1                     | WINKEL / BRACKET / EQUERRE  |
| 17                               | CM+9.8189.6030.1                     | ANTRIEBSWELLE / DRIVE SHAFT / ARBRE D'ENTRAINEMENT  |
| 18                               | CM+9.8902.1401.0                     | KEGELRAD / BEVEL GEAR / ROUE DENTEE   |
| 19*                              | CM+9.8196.6029.0*                    | ZUGANKER / TIE ROD / TIRANT   |

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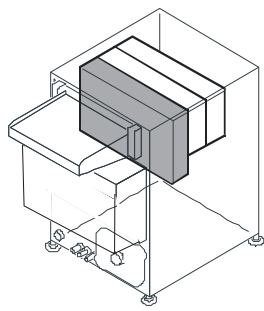
\*=Spare part, not available from stock. Expect extended delivery times.

\*=Piece detachée n'est pas disponible départ stock. Délai prolongé en cas de commande.

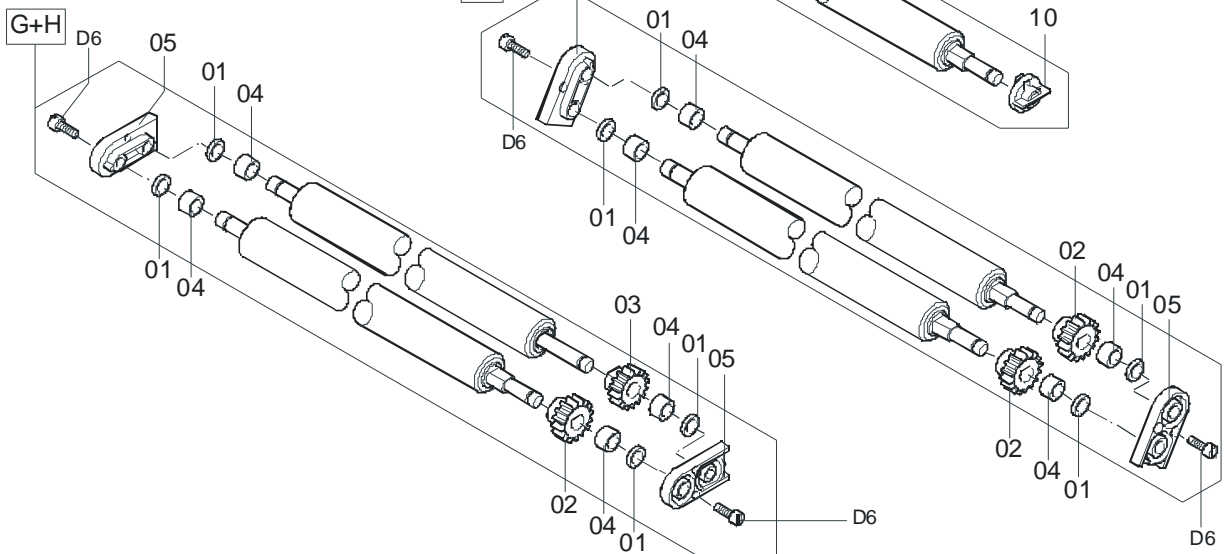
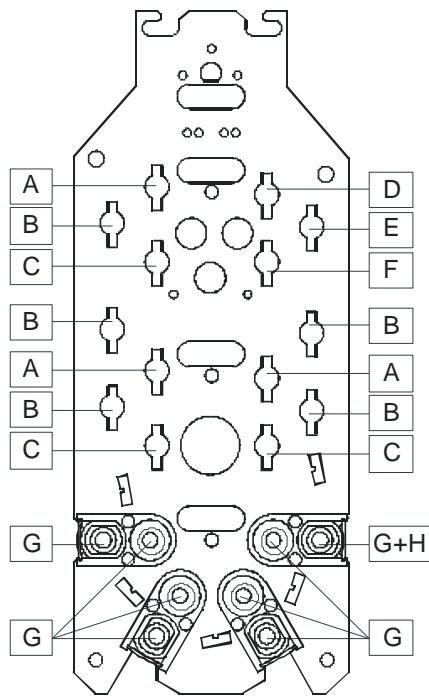
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E-RACK UNTEN (OS) CM+9.8196.6220.1  
DEVELOPER RACK BOTTOM (OS) CM+9.8196.6220.1  
RACK REVELATEUR EN BAS (OS) CM+9.8196.6220.1

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FILM DIRECTION



8196\_0148\_8039.CDR

E-RACK UNTEN (OS) CM+9.8196.6220.1  
 DEVELOPER RACK BOTTOM (OS) CM+9.8196.6220.1  
 RACK REVELATEUR EN BAS (OS) CM+9.8196.6220.1

| Pos. Nr. | Teile-Nr.        | Benennung   |
|----------|------------------|---|
| Item no. | Part No.         | Description   |
| Pos. no. | Nr. de Ref.      | Denomination  |
| 01       | CM+9.8157.6225.0 | SCHEIBE / WASHER / RONDELLE   |
| 02       | CM+9.8157.6227.0 | GERADSTIRNRAD / SPUR GEAR / ROUE DENTEE   |
| 03       | CM+9.8157.6253.0 | GERADSTIRNRAD / SPUR GEAR / ROUE DENTEE   |
| 04       | CM+9.8185.6025.0 | BUCHSE / BUSHING / DOUILLE  |
| 05       | CM+9.8187.5060.1 | LAGER / BEARING / PALIER  |
| 06       | CM+9.8187.6625.0 | SCHEIBE / WASHER / RONDELLE   |
| 07       | CM+9.8195.5306.0 | BUCHSE / BUSHING / DOUILLE  |
| 08       | CM+9.8195.5307.0 | SCHRAEGSTIRNRAD RECHTS / HELICAL SPUR GEAR, RHS / ROUE<br>HELICOIDALE           |
| 09       | CM+9.8195.5308.0 | SCHRAEGSTIRNRAD LINKS / HELICAL SPUR GEAR, LHS / ROUE HELICOIDALE               |
| 10       | CM+9.8195.5309.0 | LAGER / BEARING / PALIER  |
| 11       | CM+9.8195.5313.0 | SCHRÄGSTIRNRAD, Z=26; M=1; RE. / HELICAL SPUR GEAR, RHS / 12ROUE<br>HELICOIDALE |
| 12       | CM+9.8195.5314.0 | SCHRÄGSTIRNRAD, Z=26; M=1; LI. / HELICAL SPUR GEAR, LHS / ROUE<br>HELICOIDALE   |

□=Baugruppe / Assembly / Modul

D=Normteil. Die Bestellnummer ist der separaten Normteilleiste "DD+DIS011.93M" zu entnehmen.

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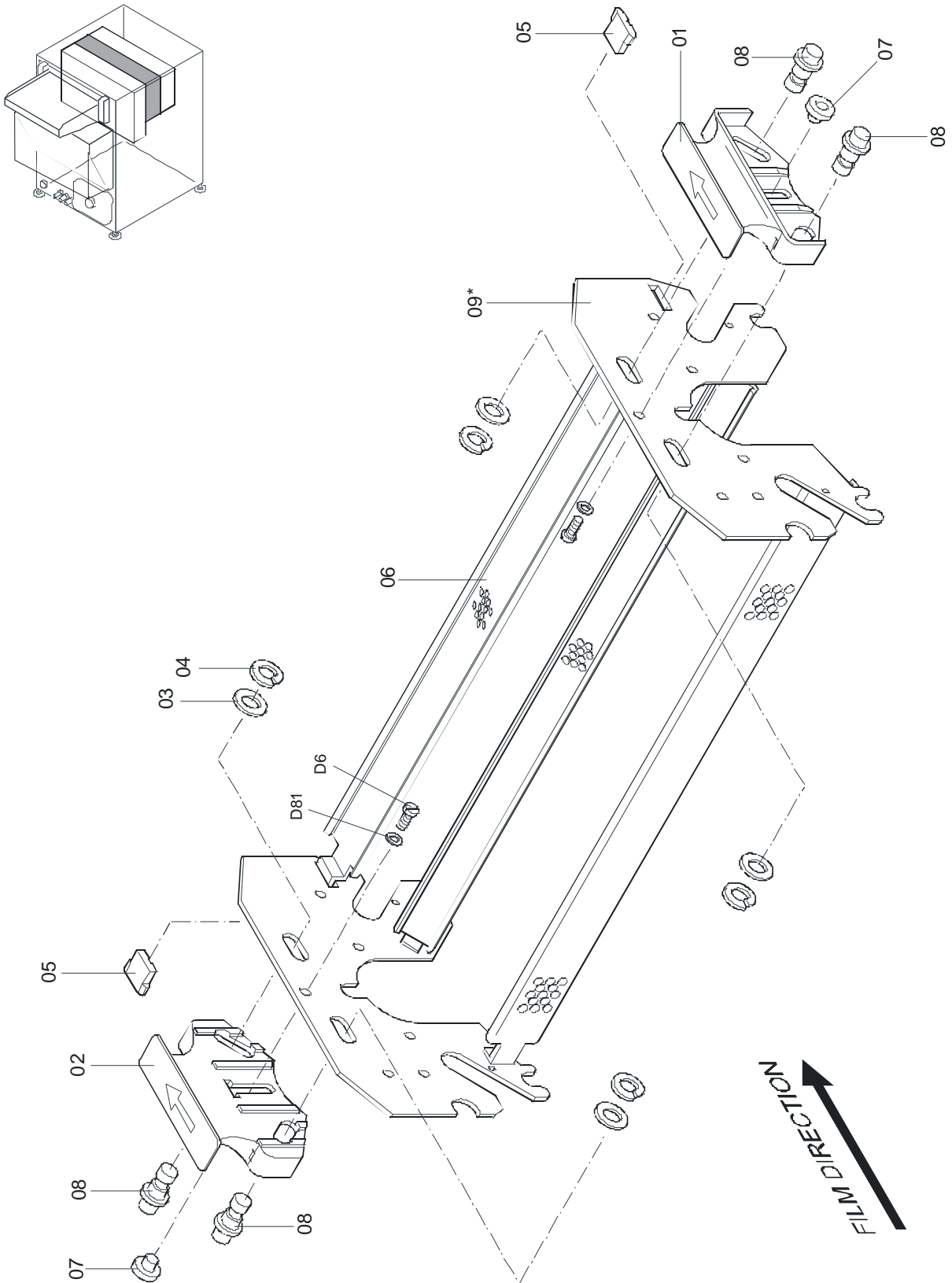
\*=Piece detachée n'est pas disponible départ stock. Délai prolongé en cas de commande.

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E-RACK UNTEN (OS) CM+9.8196.6220.1  
 DEVELOPER RACK BOTTOM (OS) CM+9.8196.6220.1  
 RACK REVELATEUR EN BAS (OS) CM+9.8196.6220.1

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SPARE PARTS LIST



8196\_0148\_8040.CDR

F-RACK - OBERTEIL CM+9.8196.5510.0  
FIXING RACK - TOP PART CM+9.8196.5510.0  
RACK DE FIXAGE - PARTIE SUPERIEURE CM+9.8196.5510.0



| Pos. Nr. | Teile-Nr.         | Benennung  |
|----------|-------------------|--|
| Item no. | Part No.          | Description  |
| Pos. no. | Nr. de Ref.       | Denomination   |
| 01       | CM+9.5320.5660.0* | GRIFF RECHTS F / HANDLE, RHS F / POIGNEE, A DROITE F               |
| 02       | CM+9.5320.5670.0* | GRIFF LINKS F / HANDLE, LHS F / POIGNEE, A GAUCHE F                |
| 03       | CM+9.8157.6225.0  | SCHEIBE / WASHER / RONDELLE  |
| 04       | CM+9.8157.6229.0  | SCHEIBE / WASHER / RONDELLE  |
| 05       | CM+9.8185.6023.2  | HALTESTOPFEN / STOPPER / BOUCHON DE RETENUE                        |
| 06       | CM+9.8185.6028.0  | LEITBLECH / GUIDE PLATE / PLAQUE DE GUIDAGE                        |
| 07       | CM+9.8185.6117.0  | BOLZEN / BOLT / BOULON   |
| 08       | CM+9.8185.6118.0  | BOLZEN / BOLT / BOULON   |
| 09       | CM+9.8185.6140.1* | E-F RACK OBERTEIL / D-F RACK TOP PART / R-F RACK PARTIE SUPERIEURE |

☐=Baugruppe / Assembly / Modul

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D=Piece normalisée. Vous trouvez leur référence dans la liste, à part, des pieces normalisées "DD+DIS011.93M"

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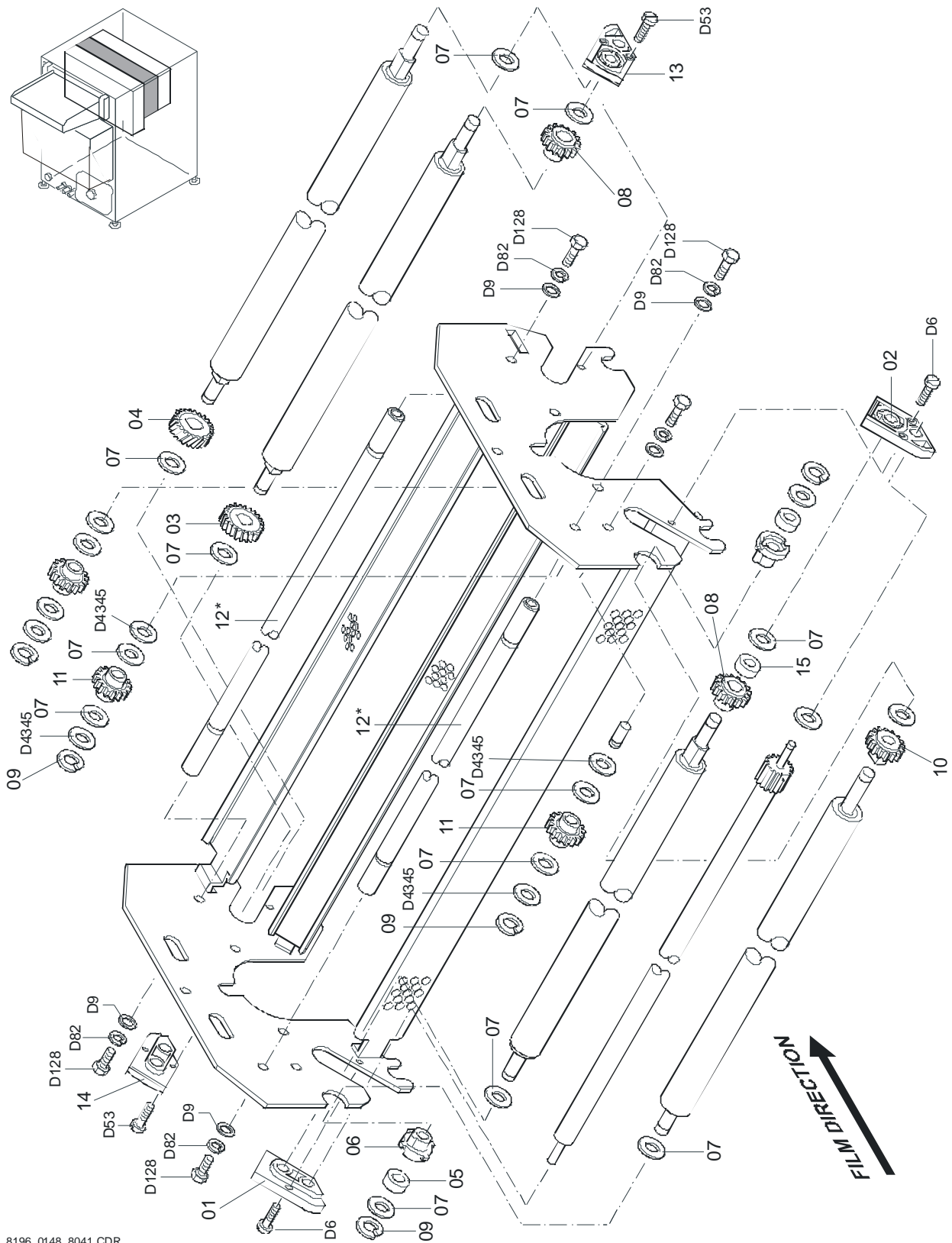
\*=Piece detachée n'est pas disponible départ stock. Délai prolongé en cas de commande.

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F-RACK - OBERTEIL CM+9.8196.5510.0  
 FIXING RACK - TOP PART CM+9.8196.5510.0  
 RACK DE FIXAGE - PARTIE SUPERIEURE CM+9.8196.5510.0

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SPARE PARTS LIST



8196\_0148\_8041.CDR

F-RACK - OBERTEIL CM+9.8196.5510.0  
 FIXING RACK - TOP PART CM+9.8196.5510.0  
 RACK DE FIXAGE - PARTIE SUPERIEURE CM+9.8196.5510.0

| Pos. Nr.<br>Item no.<br>Pos. no. | Teile-Nr.<br>Part No.<br>Nr. de Ref. | Benennung<br>Description<br>Denomination               |
|----------------------------------|--------------------------------------|--|
| 01                               | CM+9.8148.5230.3                     | LAGER LINKS / BEARING, LHS / PALIER A GAUCHE           |
| 02                               | CM+9.8148.5250.3                     | LAGER RECHTS / BEARING, RHS / PALIER A DROITE          |
| 03                               | CM+9.8155.5301.0                     | SCHRAEGSTIRNRAD / HELICAL SPUR GEAR / ROUE HELICOIDALE |
| 04                               | CM+9.8155.5302.0                     | SCHRAEGSTIRNRAD / HELICAL SPUR GEAR / ROUE HELICOIDALE |
| 05                               | CM+9.8156.6301.0                     | BUCHSE / BUSHING / DOUILLE                             |
| 06                               | CM+9.8157.6215.2                     | BUCHSE / BUSHING / DOUILLE                             |
| 07                               | CM+9.8157.6225.0                     | SCHEIBE / WASHER / RONDELLE                            |
| 08                               | CM+9.8157.6227.0                     | GERADSTIRNRAD / SPUR GEAR / ROUE DENTEE                |
| 09                               | CM+9.8157.6229.0                     | SCHEIBE / WASHER / RONDELLE                            |
| 10                               | CM+9.8157.6253.0                     | GERADSTIRNRAD / SPUR GEAR / ROUE DENTEE                |
| 11                               | CM+9.8157.6645.0                     | GERADSTIRNRAD / SPUR GEAR / ROUE DENTEE                |
| 12*                              | CM+9.8185.6112.1*                    | ABSTANDSSTANGE / SPACER ROD / BARRE D'ESPACEMENT       |
| 13                               | CM+9.8185.6320.2                     | LAGER / BEARING / PALIER                               |
| 14                               | CM+9.8185.6330.2                     | LAGER / BEARING / PALIER                               |
| 15                               | CM+9.8187.6111.0                     | BUCHSE / BUSHING / DOUILLE                             |

☐=Baugruppe / Assembly / Modul

D=Normteil. Die Bestellnummer ist der separaten Normteilleiste "DD+DIS011.93M" zu entnehmen.

D=Standardised part. For order please refer to the separate spare parts list for standardised parts "DD+DIS011.93M"

D=Piece normalisée. Vous trouvez leur référence dans la liste, à part, des pieces normalisées "DD+DIS011.93M"

\*=Ersatzteil, nicht ab Lager lieferbar. Bei Bestellung verlängerte Lieferzeit.

\*=Spare part, not available from stock. Expect extended delivery times.

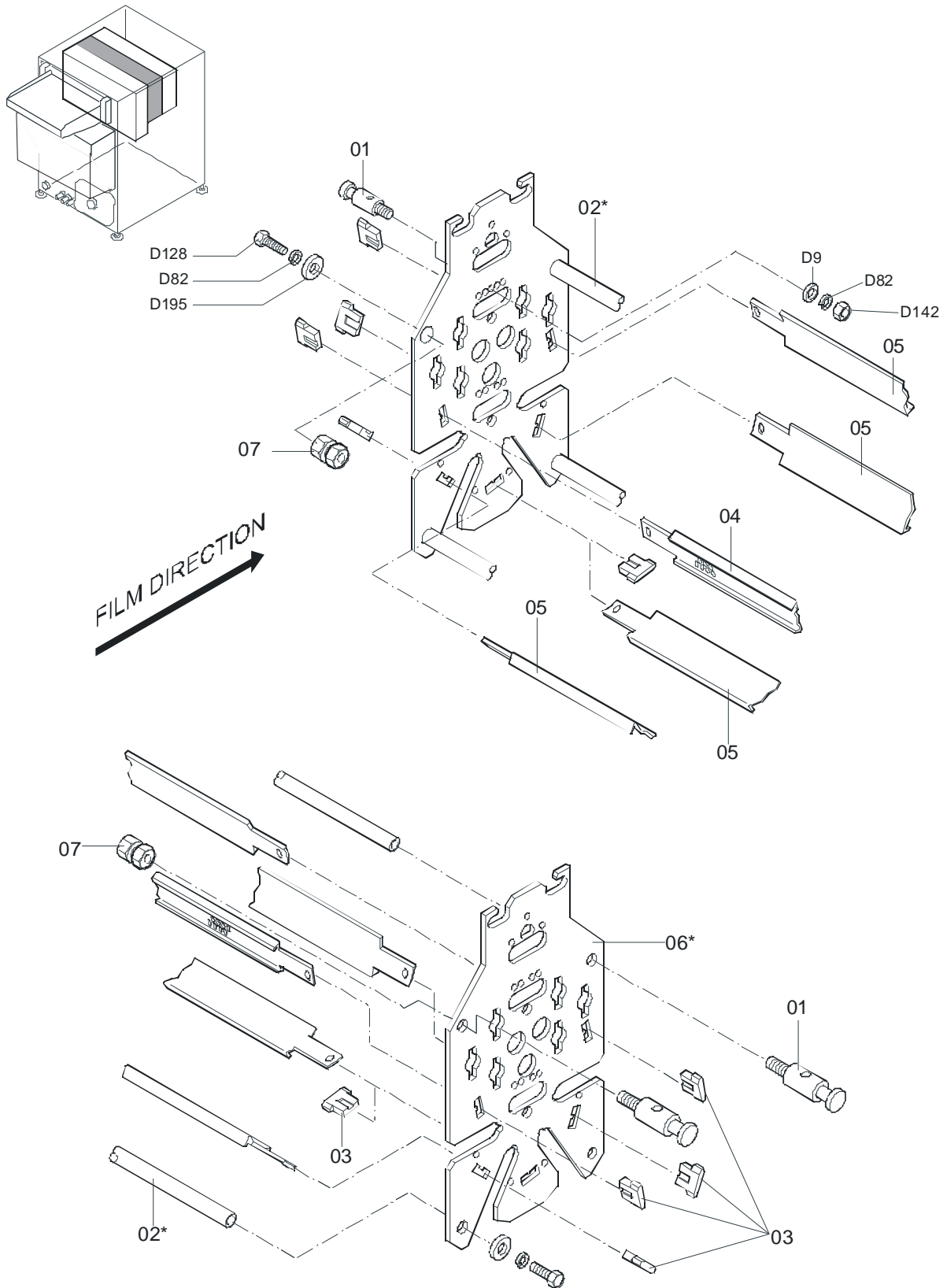
\*=Piece detachee n'est pas disponible depart stock. Délai prolongé en cas de commande.

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F-RACK - OBERTEIL CM+9.8196.5510.0  
 FIXING RACK - TOP PART CM+9.8196.5510.0  
 RACK DE FIXAGE - PARTIE SUPERIEURE CM+9.8196.5510.0

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**SPARE PARTS LIST**



8196\_0148\_8045.CDR

RACK UNTEN - FIXIER CM+9.8187.6060.1  
 RACK BOTTOM - FIXER CM+9.8187.6060.1  
 RACK EN BAS - FIXATEUR CM+9.8187.6060.1

| Pos. Nr.<br>Item no.<br>Pos. no. | Teile-Nr.<br>Part No.<br>Nr. de Ref. | Benennung<br>Description<br>Denomination                                   |
|----------------------------------|--------------------------------------|--|
| 01                               | CM+9.8184.6018.0                     | BOLZEN / BOLT / BOULON   |
| 02*                              | CM+9.8185.6018.0*                    | ABSTANDSSTANGE / SPACER ROD / BARRE D'ESPACEMENT                           |
| 03                               | CM+9.8185.6023.2                     | HALTESTOPFEN / STOPPER / BOUCHON DE RETENUE                                |
| 04                               | CM+9.8185.6024.0                     | LEITBLECH / GUIDE PLATE / PLAQUE DE GUIDAGE                                |
| 05                               | CM+9.8185.6026.0                     | LEITBLECH / GUIDE PLATE / PLAQUE DE GUIDAGE                                |
| 06*                              | CM+9.8187.6061.0*                    | PLATINE U (ALTERNIEREND) ) / PLATE U (ALTERNATING) / PLAQUE U (ALTERNANCE) |
| 07                               | CM+9.8196.6028.0                     | BOLZEN / BOLT / BOULON   |

☐=Baugruppe / Assembly / Modul

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D=Standardised part. For order please refer to the separate spare parts list for standardised parts "DD+DIS011.93M"

D=Piece normalisée. Vous trouvez leur référence dans la liste, à part, des pieces normalisées "DD+DIS011.93M"

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\*=Spare part, not available from stock. Expect extended delivery times.

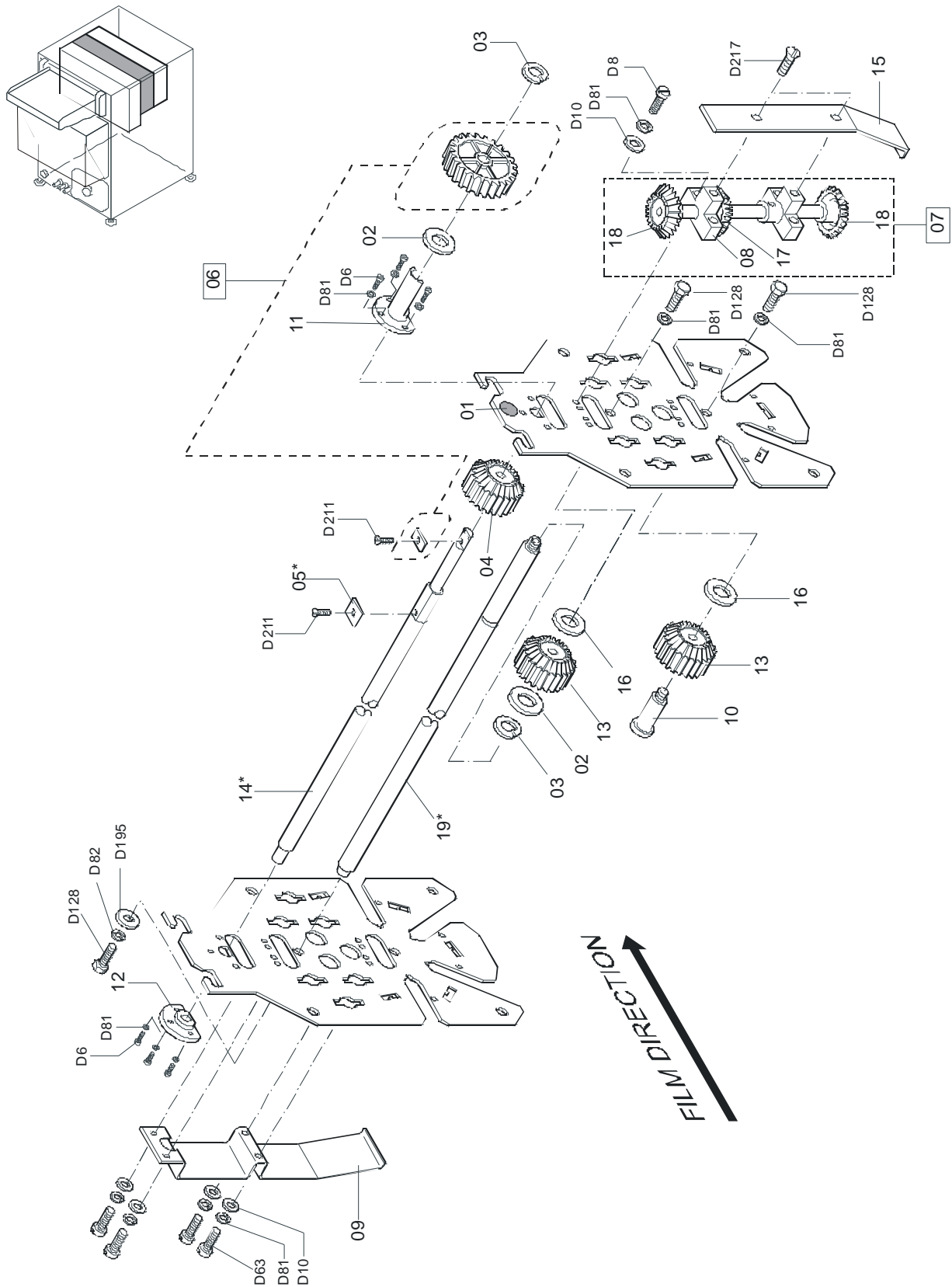
\*=Piece detachee n'est pas disponible depart stock. Délai prolongé en cas de commande.

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RACK UNTEN - FIXIER CM+9.8187.6060.1  
RACK BOTTOM - FIXER CM+9.8187.6060.1  
RACK EN BAS - FIXATEUR CM+9.8187.6060.1

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**SPARE PARTS LIST**



8196\_0148\_8046.CDR

RACK UNTEN - FIXIER CM+9.8187.6060.1  
 RACK BOTTOM - FIXER CM+9.8187.6060.1  
 RACK EN BAS - FIXATEUR CM+9.8187.6060.1

| Pos. Nr.<br>Item no.<br>Pos. no. | Teile-Nr.<br>Part No.<br>Nr. de Ref. | Benennung<br>Description<br>Denomination  |
|----------------------------------|--------------------------------------|---|
| 01                               | CM+9.0374.7295.0                     | KLEBESCHILD 17 Ø BLAU / LABEL, BLUE / ETIQUETTE, BLEU   |
| 02                               | CM+9.8157.6225.0                     | SCHEIBE / WASHER / RONDELLE   |
| 03                               | CM+9.8157.6229.0                     | SICHERUNGSRING / RETAINING RING / BAGUE DE SECURITE   |
| 04                               | CM+9.8184.6021.0                     | KOMBIRAD / COMBINATION WHEEL / ROUE COMBINEE  |
| 05*                              | CM+9.8184.6022.0*                    | PLATTE / PLATE / PLAQUE   |
| 06                               | CM+9.8184.6030.0                     | ZAHNRAD MIT GEBOHRTER PLATTE / GEAR WITH PLATE WITH BORING /<br>ROUE DENTEE AVEC PLAQUE AVEC TROU |
| 07                               | CM+9.8184.6040.1                     | ANTRIEBSWELLE / DRIVE SHAFT / ARBRE D'ENTRAINEMENT  |
| 08                               | CM+9.8184.6050.1                     | LAGER / BEARING / PALIER  |
| 09                               | CM+9.8184.6071.1                     | WINKEL / BRACKET / EQUERRE  |
| 10                               | CM+9.8185.6013.0                     | BOLZEN / BOLT / BOULON  |
| 11                               | CM+9.8185.6014.0                     | LAGER / BEARING / PALIER  |
| 12                               | CM+9.8185.6015.0                     | LAGER / BEARING / PALIER  |
| 13                               | CM+9.8185.6017.0                     | KOMBIRAD / COMBINATION WHEEL / ROUE COMBINEE  |
| 14*                              | CM+9.8185.6019.1*                    | ACHSE / SHAFT / ARBRE   |
| 15                               | CM+9.8185.6035.1                     | BUEGEL / BRACKET / ETRIER   |
| 16                               | CM+9.8185.6037.0                     | SCHEIBE / WASHER / RONDELLE   |
| 17                               | CM+9.8185.6042.0                     | KEGELRAD / BEVEL GEAR / ROUE DENTEE   |
| 18                               | CM+9.8902.1401.0                     | KEGELRAD / BEVEL GEAR / ROUE DENTEE   |
| 19*                              | CM+9.8196.6029.0*                    | ZUGANKER / TIE ROD / TIRANT   |

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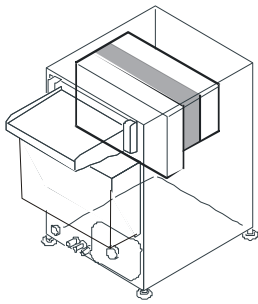
\*=Ersatzteil, nicht ab Lager lieferbar. Bei Bestellung verlängerte Lieferzeit.

\*=Spare part, not available from stock. Expect extended delivery times.

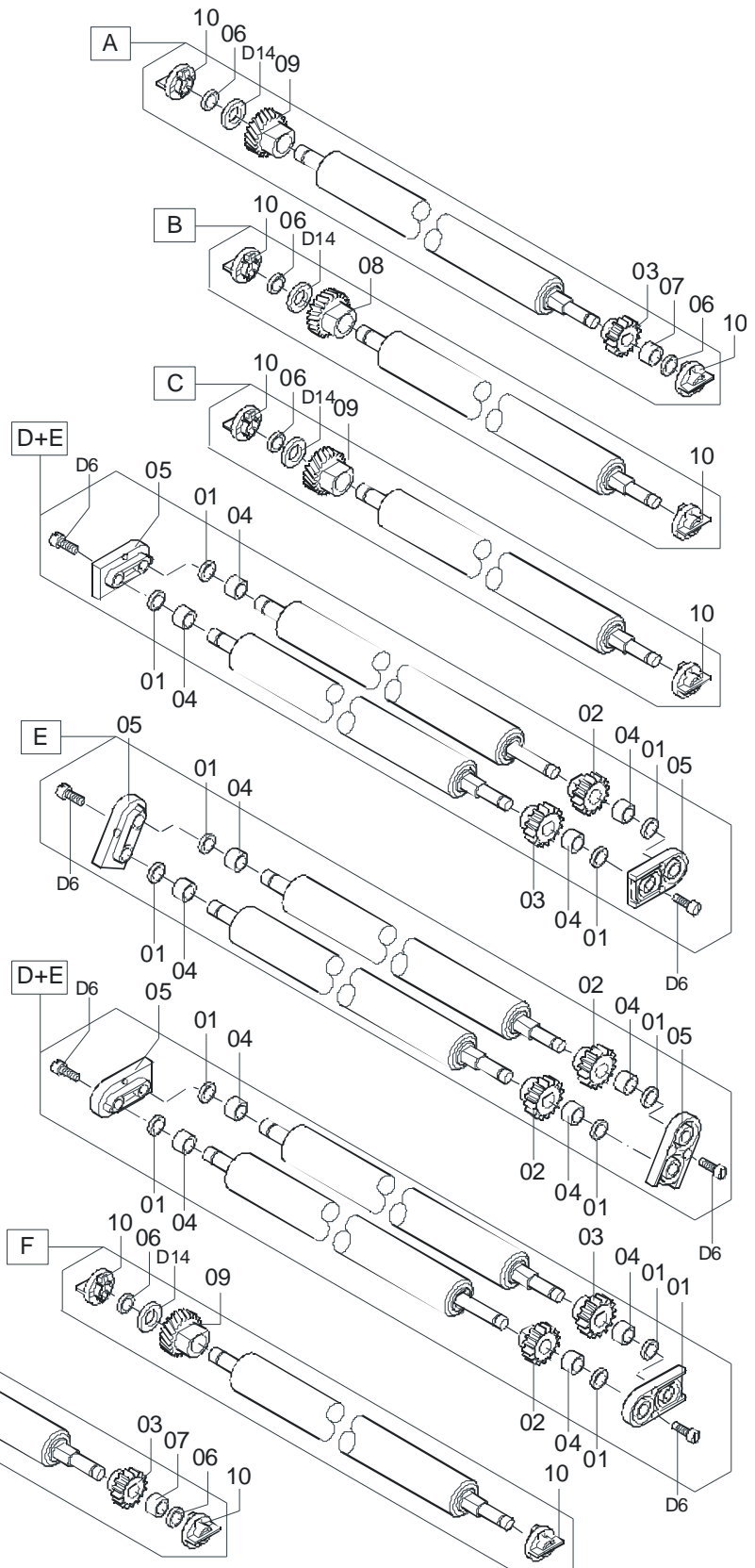
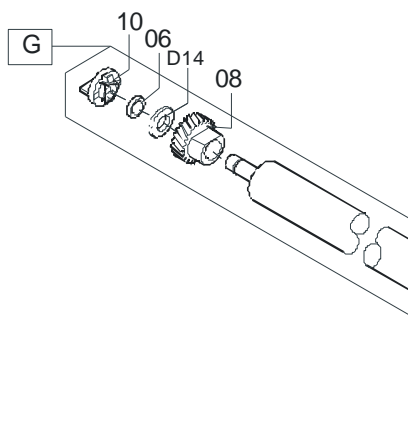
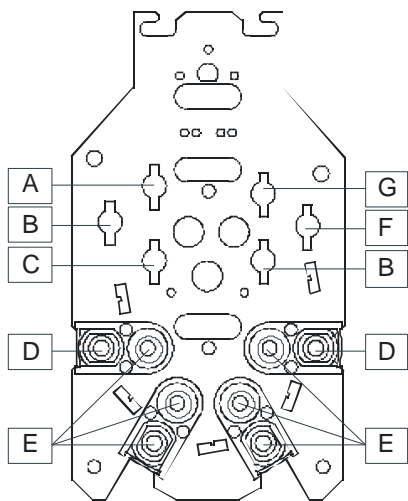
\*=Piece detachée n'est pas disponible départ stock. Délai prolongé en cas de commande.

RACK UNTEN - FIXIER CM+9.8187.6060.1  
RACK BOTTOM - FIXER CM+9.8187.6060.1  
RACK EN BAS - FIXATEUR CM+9.8187.6060.1

**SPARE PARTS LIST**



FILM DIRECTION



8196\_0148\_8047.CDR

RACK UNTEN - FIXIER CM+9.8187.6060.1  
 RACK BOTTOM - FIXER CM+9.8187.6060.1  
 RACK EN BAS - FIXATEUR CM+9.8187.6060.1



| POS. NR. | TEILE-NR.        | BENENNUNG  |
|----------|------------------|--|
| ITEM NO. | PART NO.         | DESCRIPTION  |
| POS. NO. | NR. DE REF.      | DENOMINATION   |
| 01       | CM+9.8157.6225.0 | SCHEIBE / WASHER / RONDELLE  |
| 02       | CM+9.8157.6227.0 | GERADSTIRNRAD / SPUR GEAR / ROUE DENTEE  |
| 03       | CM+9.8157.6253.0 | GERADSTIRNRAD / SPUR GEAR / ROUE DENTEE  |
| 04       | CM+9.8185.6025.0 | BUCHSE / BUSHING / DOUILLE   |
| 05       | CM+9.8187.5060.1 | LAGER / BEARING / PALIER   |
| 06       | CM+9.8187.6625.0 | SCHEIBE / WASHER / RONDELLE  |
| 07       | CM+9.8195.5306.0 | BUCHSE / BUSHING / DOUILLE   |
| 08       | CM+9.8195.5307.0 | SCHRAEGSTIRNRAD RECHTS / HELICAL SPUR GEAR, rhs / ROUE<br>HELICOIDALE A DROITE |
| 09       | CM+9.8195.5308.0 | SCHRAEGSTIRNRAD LINKS / HELICAL SPUR GEAR, lhs / ROUE HELICOIDALE A<br>GAUCHE  |
| 10       | CM+9.8195.5309.0 | LAGER / BEARING / PALIER   |

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D=Piece normalisée. Vous trouvez leur référence dans la liste, à part, des pieces normalisées "DD+DIS011.93M"

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\*=Spare part, not available from stock. Expect extended delivery times.

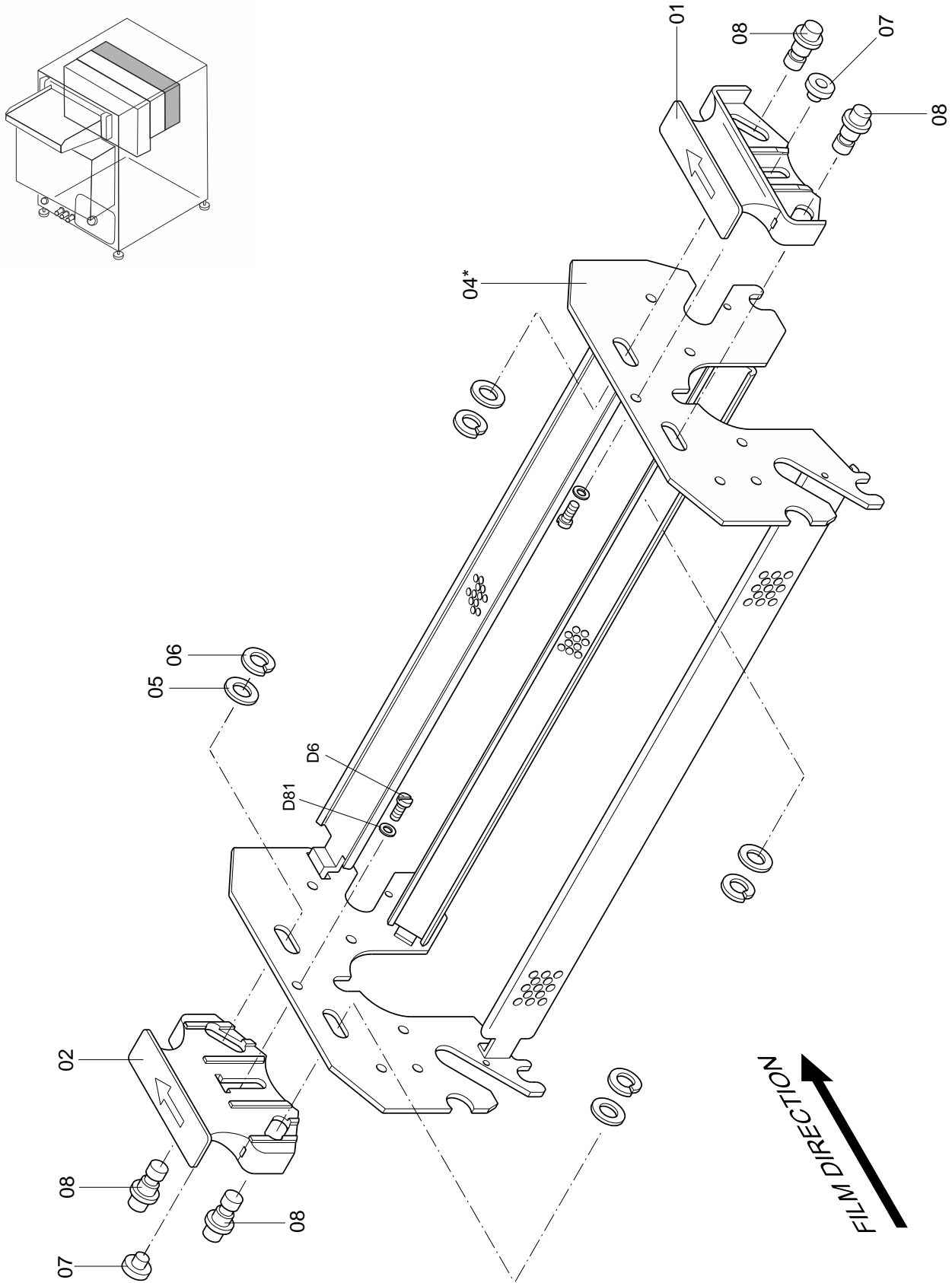
\*=Piece detachée n'est pas disponible départ stock. Délai prolongé en cas de commande.

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RACK UNTEN - FIXIER CM+9.8187.6060.1  
RACK BOTTOM - FIXER CM+9.8187.6060.1  
RACK EN BAS - FIXATEUR CM+9.8187.6060.1

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**SPARE PARTS LIST**



8196\_0148\_8048.CDR

W-RACK OBERTEIL CM+9.8196.5400.0  
 WATER RACK, TOP PART CM+9.8196.5400.0  
 RACK EAU PARTIE SUPERIEURE, PARTIE SUPERIEURE CM+9.8196.5400.0

| Pos. Nr. | Teile-Nr.         | Benennung  |
|----------|-------------------|--|
| Item no. | Part No.          | Description  |
| Pos. no. | Nr. de Ref.       | Denomination   |
| 01       | CM+9.5320.5860.0  | GRIFF RECHTS W / HANDLE, RHS / POIGNEE , A DROITE                                      |
| 02       | CM+9.5320.5870.0  | GRIFF LINKS W / HANDLE, LHS / POIGNEE A GAUCHE   |
| 04*      | CM+9.8148.5420.0* | W-RACK OBERTEIL / WATER RACK, TOP PART / RACK EAU PARTIE SUPERIEURE, PARTIE SUPERIEURE |
| 05       | CM+9.8157.6225.0  | SCHEIBE / WASHER / RONDELLE  |
| 06       | CM+9.8157.6229.0  | SCHEIBE / WASHER / RONDELLE  |
| 07       | CM+9.8185.6117.0  | BOLZEN / BOLT / BOULON   |
| 08       | CM+9.8148.5406.0  | BOLZEN / BOLT / BOULON   |

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D=Piece normalisée. Vous trouvez leur référence dans la liste, à part, des pieces normalisées "DD+DIS011.93M"

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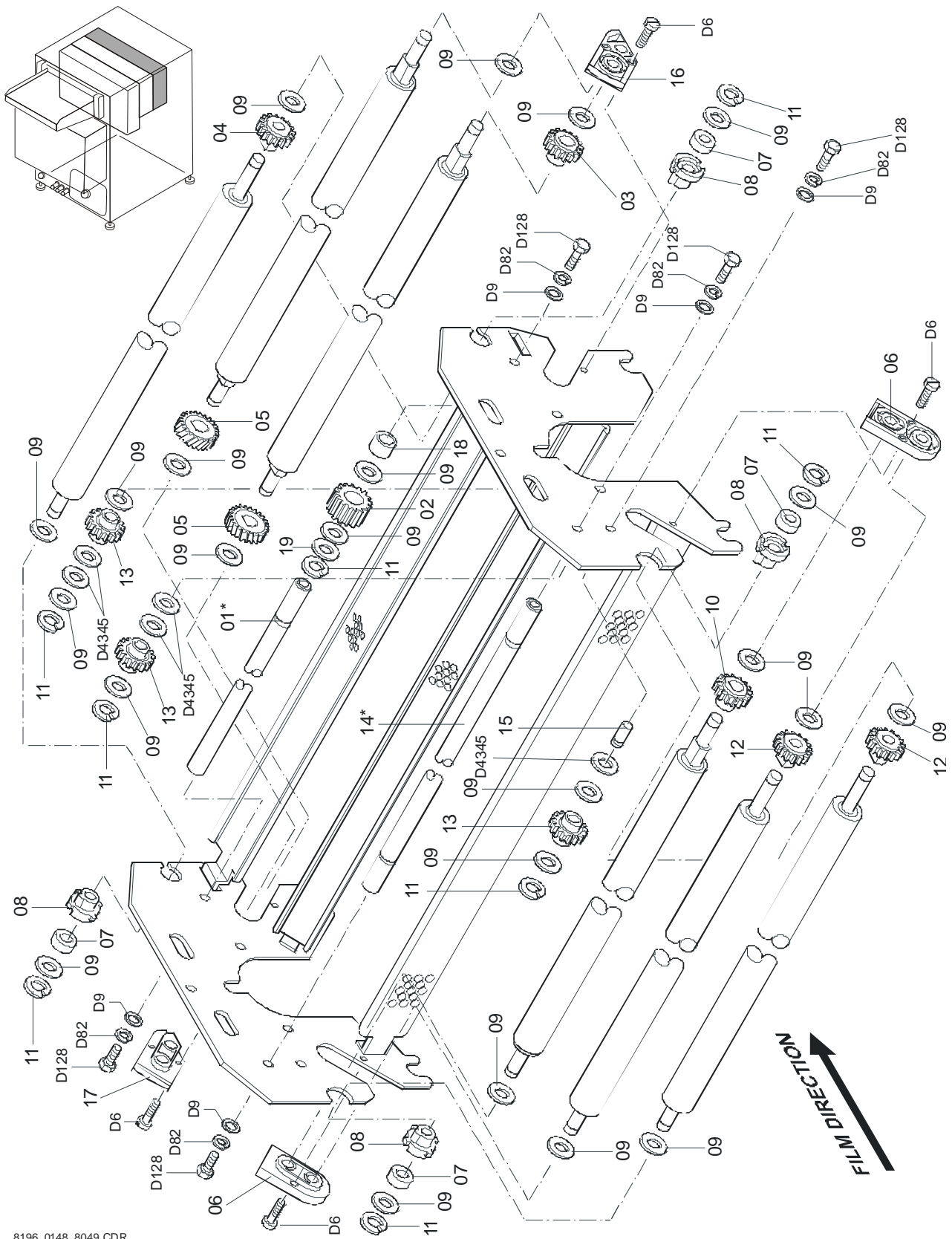
\*=Piece detachee n'est pas disponible depart stock. Délai prolongé en cas de commande.

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W-RACK OBERTEIL CM+9.8196.5400.0  
WATER RACK, TOP PART CM+9.8196.5400.0  
RACK EAU PARTIE SUPERIEURE, PARTIE SUPERIEURE CM+9.8196.5400.0

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**SPARE PARTS LIST**



8196\_0148\_8049.CDR

W-RACK OBERTEIL CM+9.8196.5400.0  
 WATER RACK, TOP PART CM+9.8196.5400.0  
 RACK EAU PARTIE SUPERIEURE, PARTIE SUPERIEURE CM+9.8196.5400.0

| Pos. Nr.<br>Item no.<br>Pos. no. | Teile-Nr.<br>Part No.<br>Nr. de Ref. | Benennung<br>Description<br>Denomination               |
|----------------------------------|--------------------------------------|--|
| 01*                              | CM+9.8148.5401.0*                    | ABSTANDSSTANGE / SPACER ROD / BARRE D'ESPACEMENT       |
| 02                               | CM+9.8148.5402.0                     | GERADSTIRNRAD / SPUR GEAR / ROUE DENTEE                |
| 03                               | CM+9.8148.5403.0                     | GERADSTIRNRAD / SPUR GEAR / ROUE DENTEE                |
| 04                               | CM+9.8148.5404.0                     | GERADSTIRNRAD / SPUR GEAR / ROUE DENTEE                |
| 05                               | CM+9.8155.5301.0                     | SCHRAEGSTIRNRAD / HELICAL SPUR GEAR / ROUE HELICOIDALE |
| 06                               | CM+9.8156.5060.3                     | LAGER / BEARING / PALIER                               |
| 07                               | CM+9.8156.6301.0                     | BUCHSE / BUSHING / DOUILLE                             |
| 08                               | CM+9.8157.6215.2                     | BUCHSE / BUSHING / DOUILLE                             |
| 09                               | CM+9.8157.6225.0                     | SCHEIBE / WASHER / RONDELLE                            |
| 10                               | CM+9.8157.6227.0                     | GERADSTIRNRAD / SPUR GEAR / ROUE DENTEE                |
| 11                               | CM+9.8157.6229.0                     | SCHEIBE / WASHER / RONDELLE                            |
| 12                               | CM+9.8157.6253.0                     | GERADSTIRNRAD / SPUR GEAR / ROUE DENTEE                |
| 13                               | CM+9.8157.6645.0                     | GERADSTIRNRAD / SPUR GEAR / ROUE DENTEE                |
| 14*                              | CM+9.8185.6112.1*                    | ABSTANDSSTANGE / SPACER ROD / BARRE D'ESPACEMENT       |
| 15                               | CM+9.8185.6143.0                     | BOLZEN / BOLT / BOULON                                 |
| 16                               | CM+9.8185.6320.2                     | LAGER / BEARING / PALIER                               |
| 17                               | CM+9.8185.6330.2                     | LAGER / BEARING / PALIER                               |
| 18                               | CM+9.8187.6111.0                     | BUCHSE / BUSHING / DOUILLE                             |
| 19                               | CM+9.8196.5401.0                     | SCHEIBE / WASCHER / RONDELLE                           |

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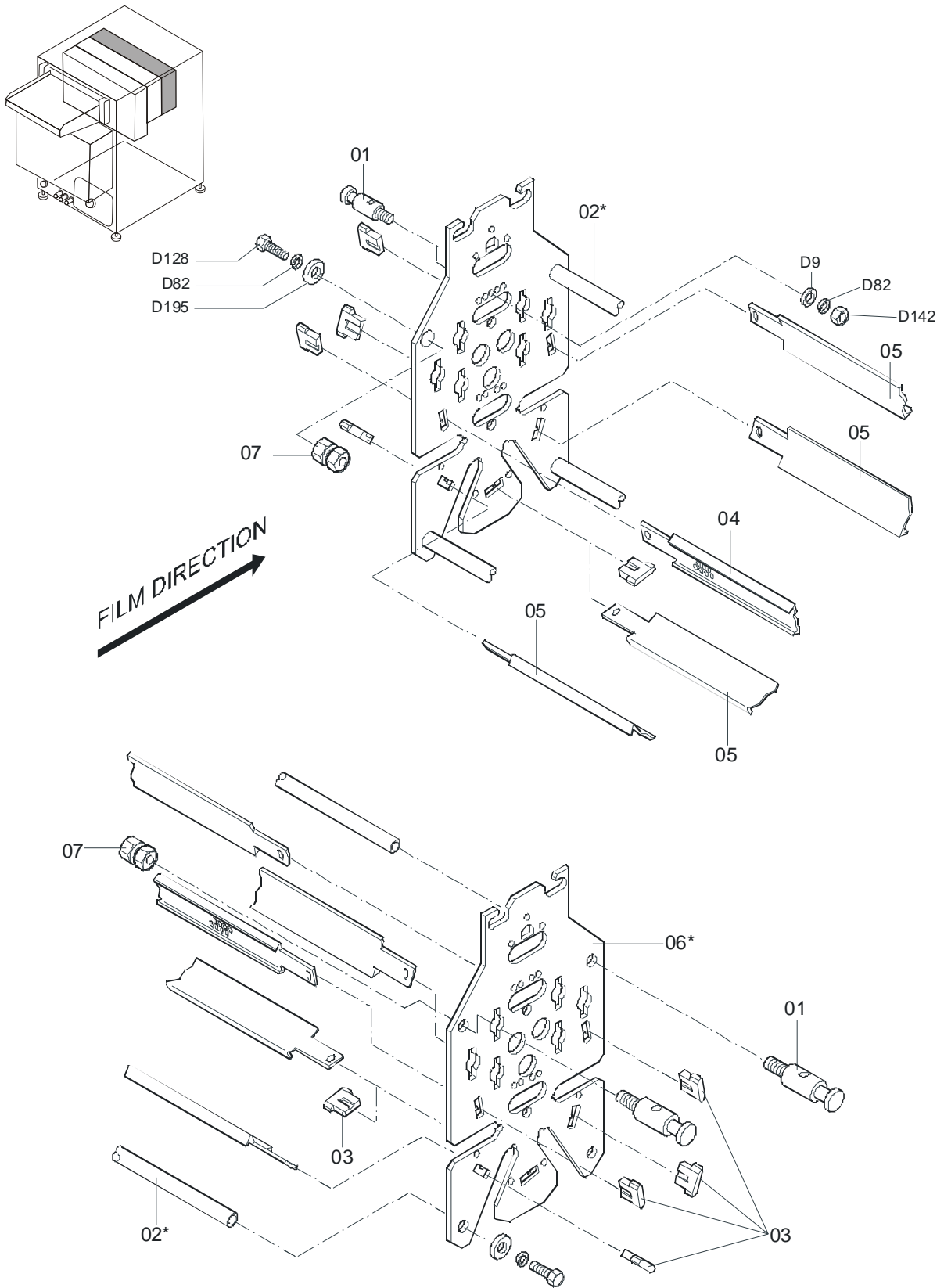
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W-RACK OBERTEIL CM+9.8196.5400.0

WATER RACK, TOP PART CM+9.8196.5400.0

RACK EAU PARTIE SUPERIEURE, PARTIE SUPERIEURE CM+9.8196.5400.0

**SPARE PARTS LIST**



8196\_0148\_8053.CDR

RACK UNTEN - WASSER CM+9.8187.6060.1  
 RACK BOTTOM - WATER CM+9.8187.6060.1  
 RACK EN BAS - EAU CM+9.8187.6060.1

| Pos. Nr.<br>Item no.<br>Pos. no. | Teile-Nr.<br>Part No.<br>Nr. de Ref. | Benennung<br>Description<br>Denomination                                   |
|----------------------------------|--------------------------------------|--|
| 01                               | CM+9.8184.6018.0                     | BOLZEN / BOLT / BOULON   |
| 02*                              | CM+9.8185.6018.0*                    | ABSTANDSSTANGE / SPACER ROD / BARRE D'ESPACEMENT                           |
| 03                               | CM+9.8185.6023.2                     | HALTESTOPFEN / STOPPER / BOUCHON DE RETENUE                                |
| 04                               | CM+9.8185.6024.0                     | LEITBLECH / GUIDE PLATE / PLAQUE DE GUIDAGE                                |
| 05                               | CM+9.8185.6026.0                     | LEITBLECH / GUIDE PLATE / PLAQUE DE GUIDAGE                                |
| 06*                              | CM+9.8187.6061.0*                    | PLATINE U (ALTERNIEREND) ) / PLATE U (ALTERNATING) / PLAQUE U (ALTERNANCE) |
| 07                               | CM+9.8196.6028.0                     | BOLZEN / BOLT / BOULON   |

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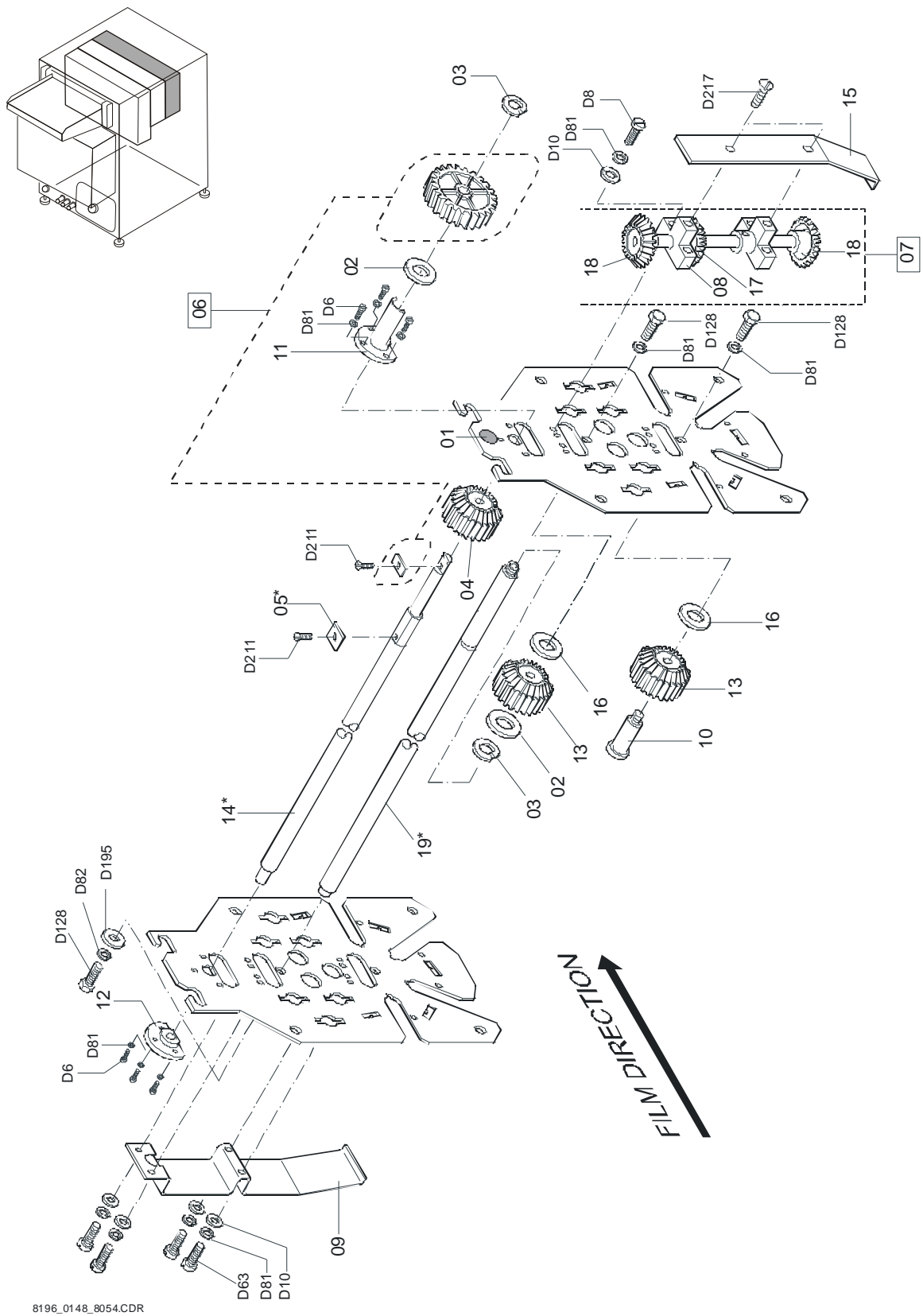
RACK UNTEN - WASSER CM+9.8187.6060.1

RACK BOTTOM - WATER CM+9.8187.6060.1

RACK EN BAS - EAU CM+9.8187.6060.1

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**SPARE PARTS LIST**



8196\_0148\_8054.CDR

RACK UNTEN - WASSER CM+9.8187.6060.1  
 RACK BOTTOM - WATER CM+9.8187.6060.1  
 RACK EN BAS - EAU CM+9.8187.6060.1



| Pos. Nr.<br>Item no.<br>Pos. no. | Teile-Nr.<br>Part No.<br>Nr. de Ref. | Benennung<br>Description<br>Denomination   |
|----------------------------------|--------------------------------------|--|
| 01                               | CM+9.0374.7297.0                     | KLEBESCHILD 17 Ø WEISS / LABEL, WHITE / ETIQUETTE, BLANC                                       |
| 02                               | CM+9.8157.6225.0                     | SCHEIBE / WASHER / RONDELLE  |
| 03                               | CM+9.8157.6229.0                     | SICHERUNGSRING / RETAINING RING / BAGUE DE SECURITE  |
| 04                               | CM+9.8184.6021.0                     | KOMBIRAD / COMBINATION WHEEL / ROUE COMBINEE   |
| 05*                              | CM+9.8184.6022.0*                    | PLATTE / PLATE / PLAQUE  |
| 06                               | CM+9.8184.6030.0                     | ZAHNRAD MIT GEBOHRTER PLATTE / GEAR WITH PLATE WITH BORING / ROUE DENTEE AVEC PLAQUE AVEC TROU |
| 07                               | CM+9.8184.6040.1                     | ANTRIEBSWELLE / DRIVE SHAFT / ARBRE D'ENTRAINEMENT   |
| 08                               | CM+9.8184.6050.1                     | LAGER / BEARING / PALIER   |
| 09                               | CM+9.8184.6071.1                     | WINKEL / BRACKET / EQUERRE   |
| 10                               | CM+9.8185.6013.0                     | BOLZEN / BOLT / BOULON   |
| 11                               | CM+9.8185.6014.0                     | LAGER / BEARING / PALIER   |
| 12                               | CM+9.8185.6015.0                     | LAGER / BEARING / PALIER   |
| 13                               | CM+9.8185.6017.0                     | KOMBIRAD / COMBINATION WHEEL / ROUE COMBINEE   |
| 14*                              | CM+9.8185.6019.1*                    | ACHSE / SHAFT / ARBRE  |
| 15                               | CM+9.8185.6035.1                     | BUEGEL / BRACKET / ETRIER  |
| 16                               | CM+9.8185.6037.0                     | SCHEIBE / WASHER / RONDELLE  |
| 17                               | CM+9.8185.6042.0                     | KEGELRAD / BEVEL GEAR / ROUE DENTEE  |
| 18                               | CM+9.8902.1401.0                     | KEGELRAD / BEVEL GEAR / ROUE DENTEE  |
| 19*                              | CM+9.8196.6029.0*                    | ZUGANKER / TIE ROD / TIRANT  |

☐=Baugruppe / Assembly / Modul

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\*=Spare part, not available from stock. Expect extended delivery times.

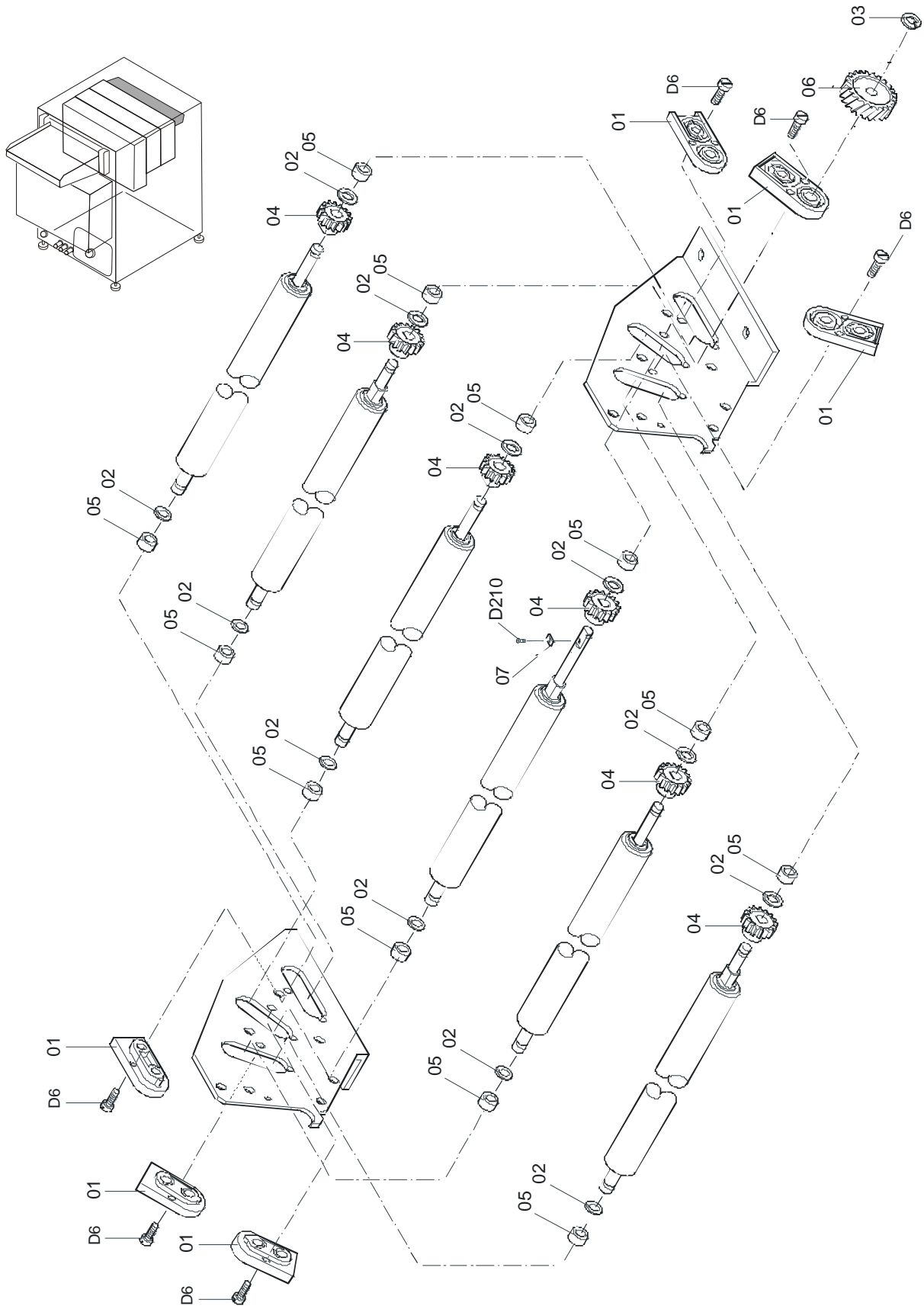
\*=Piece detachee n'est pas disponible depart stock. Délai prolongé en cas de commande.

RACK UNTEN - WASSER CM+9.8187.6060.1

RACK BOTTOM - WATER CM+9.8187.6060.1

RACK EN BAS - EAU CM+9.8187.6060.1

**SPARE PARTS LIST**



8196 0148 8058.CDR

TROCKNER, UMLENKUNG CM+9.8196.5910.0\*  
 DRYER, CROSSOVER CM+9.8196.5910.0\*  
 SECHOIR, ZONE DE RENVOI CM+9.8196.5910.0\*

| Pos. Nr. | Teile-Nr.        | Benennung  |
|----------|------------------|--|
| Item no. | Part No.         | Description  |
| Pos. no. | Nr. de Ref.      | Denomination   |
| 01       | CM+9.8156.5060.3 | QUETSCHLAGER / CRIMP TYPE BEARING / PALIER DE SERRAGE  |
| 02       | CM+9.8157.6225.0 | SCHEIBE / WASHER / RONDELLE                            |
| 03       | CM+9.8157.6229.0 | SICHERUNGSRING / RETAINING RING / BAGUE DE SECURITE    |
| 04       | CM+9.8157.6253.0 | GERADSTIRNRAD / SPUR GEAR / ROUE DENTEE                |
| 05       | CM+9.8189.6704.0 | BUCHSE / BUSHING / DOUILLE                             |
| 06       | CM+9.8196.6931.0 | SCHRAEGSTIRNRAD / HELICAL SPUR GEAR / ROUE HELICOIDALE |
| 07       | CM+9.8184.6032.1 | PLATTE / PLATE / PLAQUE                                |

☐=Baugruppe / Assembly / Modul

D=Normteil. Die Bestellnummer ist der separaten Normteilleiste "DD+DIS011.93M" zu entnehmen.

D=Standardised part. For order please refer to the separate spare parts list for standardised parts "DD+DIS011.93M"

D=Piece normalisée. Vous trouvez leur référence dans la liste, à part, des pieces normalisées "DD+DIS011.93M"

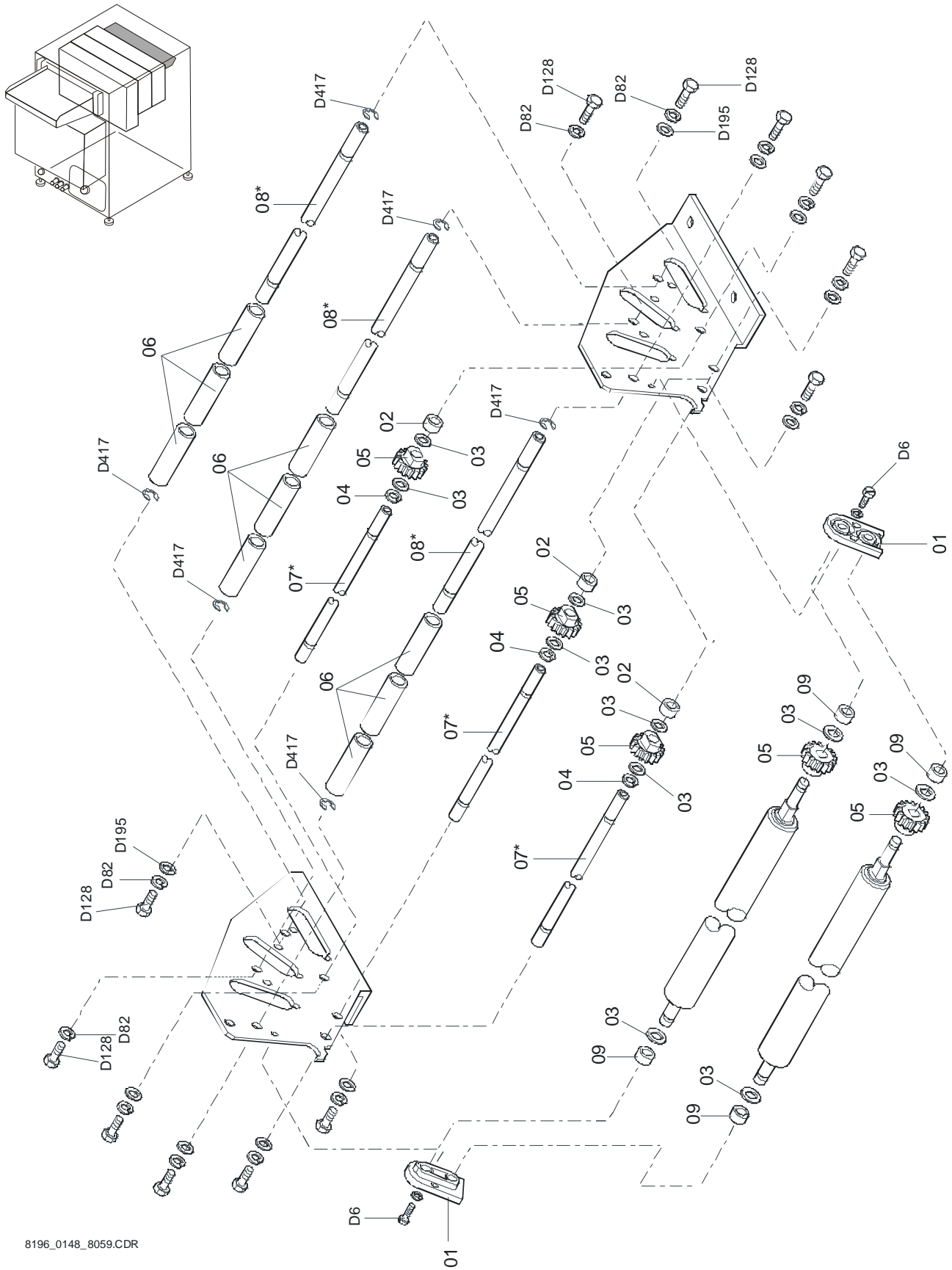
\*=Ersatzteil, nicht ab Lager lieferbar. Bei Bestellung verlängerte Lieferzeit.

\*=Spare part, not available from stock. Expect extended delivery times.

\*=Piece detachée n'est pas disponible départ stock. Délai prolongé en cas de commande.

TROCKNER, UMLENKUNG CM+9.8196.5910.0\*  
 DRYER, CROSSOVER CM+9.8196.5910.0\*  
 SECHOIR, ZONE DE RENVOI CM+9.8196.5910.0\*

**SPARE PARTS LIST**



8196\_0148\_8059.CDR

TROCKNER, UMLENKUNG CM+9.8196.5910.0\*  
 DRYER, CROSSOVER CM+9.8196.5910.0\*  
 SECHOIR, ZONE DE RENVOI CM+9.8196.5910.0\*

| Pos. Nr. | Teile-Nr.         | Benennung   |
|----------|-------------------|---|
| Item no. | Part No.          | Description   |
| Pos. no. | Nr. de Ref.       | Denomination  |
| 01       | CM+9.8156.5060.3  | QUETSCHLAGER / CRIMP TYPE BEARING / PALIER DE SERRAGE |
| 02       | CM+9.8157.6214.0  | BUCHSE / BUSHING / DOUILLE                            |
| 03       | CM+9.8157.6225.0  | SCHEIBE / WASHER / RONDELLE                           |
| 04       | CM+9.8157.6229.0  | SICHERUNGSRING / RETAINING RING / BAGUE DE SECURITE   |
| 05       | CM+9.8157.6253.0  | GERADSTIRNRAD / SPUR GEAR / ROUE DENTEE               |
| 06       | CM+9.8157.6702.0  | BUCHSE / BUSHING / DOUILLE                            |
| 07*      | CM+9.8189.6004.0* | ABSTANDSSTANGE / SPACER ROD / BARRE D'ESPACEMENT      |
| 08*      | CM+9.8189.6703.0* | ABSTANDSSTANGE / SPACER ROD / BARRE D'ESPACEMENT      |
| 09       | CM+9.8189.6704.0  | BUCHSE / BUSHING / DOUILLE                            |

☐=Baugruppe / Assembly / Modul

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D=Piece normalisée. Vous trouvez leur référence dans la liste, à part, des pieces normalisées "DD+DIS011.93M"

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\*=Spare part, not available from stock. Expect extended delivery times.

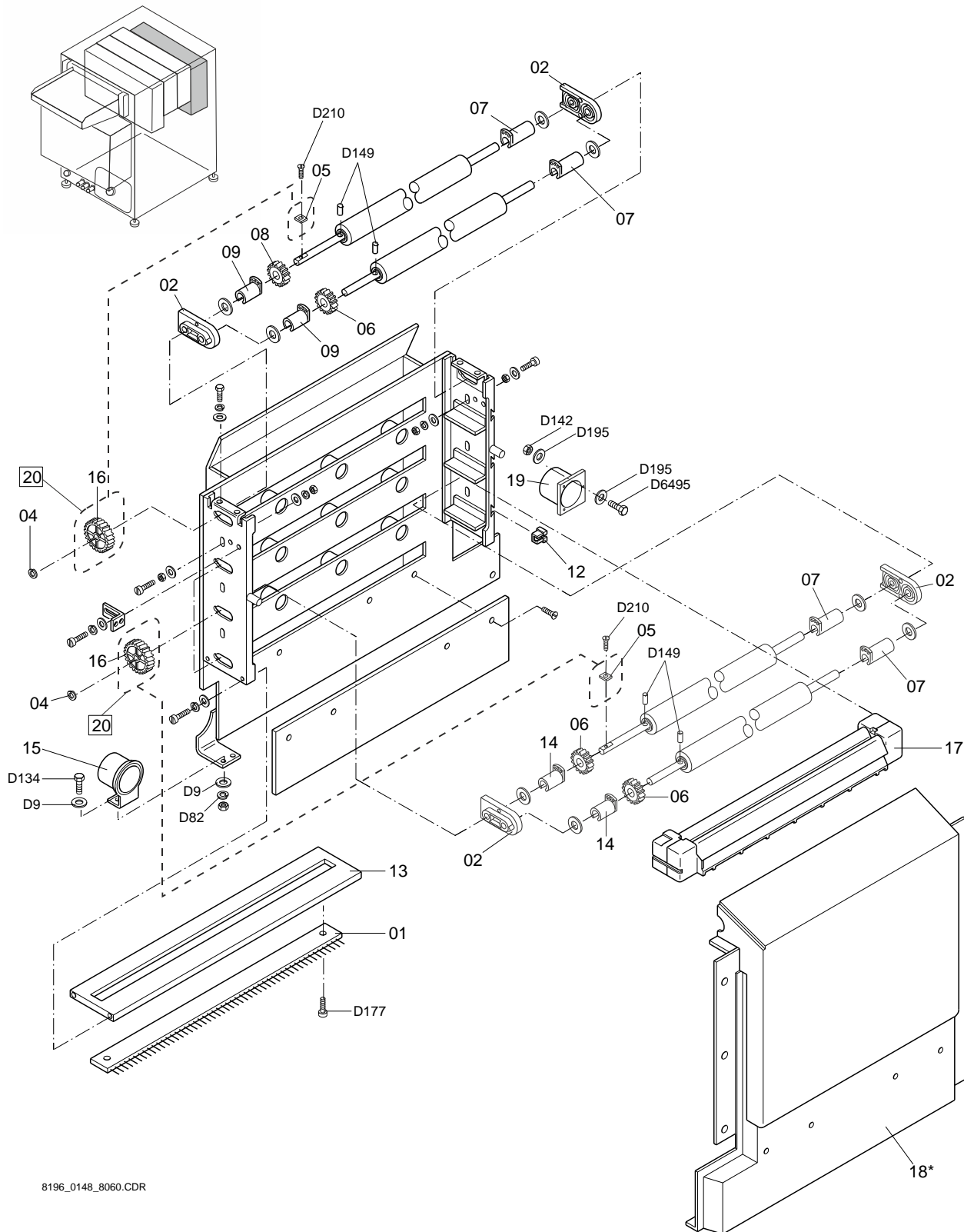
\*=Piece detachee n'est pas disponible depart stock. Délai prolongé en cas de commande.

TROCKNER, UMLENKUNG CM+9.8196.5910.0\*

DRYER, CROSSOVER CM+9.8196.5910.0\*

SECHOIR, ZONE DE RENVOI CM+9.8196.5910.0\*

# SPARE PARTS LIST



8196\_0148\_8060.CDR

## TROCKNER DRYER SECHOIR

| Pos. Nr.<br>Item no.<br>Pos. no. | Teile-Nr.<br>Part No.<br>Nr. de Ref. | Benennung<br>Description<br>Denomination               |
|----------------------------------|--------------------------------------|--|
| 01                               | CM+9.0362.6036.0                     | BÜRSTE / BRUSH / BROSSE                                |
| 02                               | CM+9.8156.5060.3                     | LAGER / BEARING / PALIER                               |
| 04                               | CM+9.8157.6229.0                     | SCHEIBE / WASHER / RONDELLE                            |
| 05                               | CM+9.8184.6032.1                     | PLATTE / PLATE / PLAQUE                                |
| 06                               | CM+9.8185.6032.0                     | GERADSTIRNRAD / SPUR GEAR / ROUE DENTEE                |
| 07                               | CM+9.8185.6617.1                     | KLEMMBUCHSE / CLAMPING BUSH / DOUILLE D'ECARTEMENT     |
| 08                               | CM+9.8189.6001.0                     | GERADSTIRNRAD / SPUR GEAR / ROUE DENTEE                |
| 09                               | CM+9.8189.6805.0                     | KLEMMBUCHSE / CLAMPING BUSH / DOUILLE D'ECARTEMENT     |
| 12                               | CM+9.8189.6933.0                     | STOPFEN / STOPPER / BOUCHON                            |
| 13                               | CM+9.8196.5990.0                     | PLATTE / PLATE / PLAQUE                                |
| 14                               | CM+9.8196.6806.0                     | KLEMMBUCHSE / CLAMPING BUSH / DOUILLE D'ECARTEMENT     |
| 15                               | CM+9.8196.6910.0                     | FLANSCH / FLANGED / BRIDE                              |
| 16                               | CM+9.8196.6931.0                     | SCHRAEGSTIRNRAD / HELICAL SPUR GEAR / ROUE HELICOIDALE |
| 17                               | CM+9.8196.6960.3                     | IR-EINHEIT / IR UNIT / UNITE IR                        |
| 18*                              | CM+9.8196.6990.0*                    | HAUBE HINTEN GEKLEBT / HOOD BACK / CAPOT ARRIERE       |
| 19                               | CM+9.8196.5922.0                     | FLANSCH / FLANGED / BRIDE                              |

☐=Baugruppe / Assembly / Modul

D=Normteil. Die Bestellnummer ist der separaten Normteilleiste "DD+DIS011.93M" zu entnehmen.

D=Standardised part. For order please refer to the separate spare parts list for standardised parts "DD+DIS011.93M"

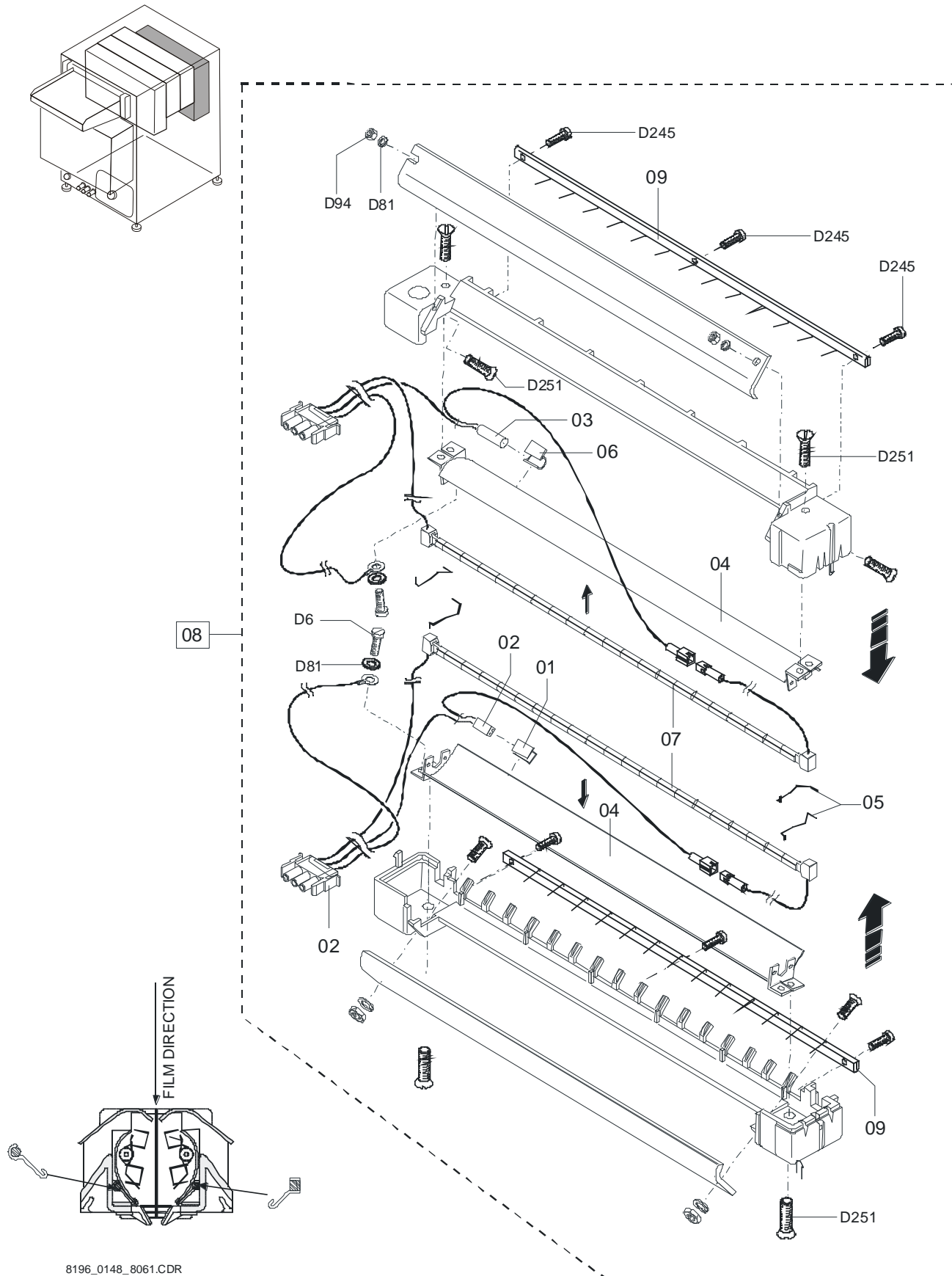
D=Piece normalisée. Vous trouvez leur référence dans la liste, à part, des pieces normalisées "DD+DIS011.93M"

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TROCKNER  
DRYER  
SECHOIR



8196\_0148\_8061.CDR

TROCKNER, IR-EINHEIT  
 DRYER, IR UNIT  
 SECHOIR, UNITE IR



| Pos. Nr.<br>Item no.<br>Pos. no.                               | Teile-Nr.<br>Part No.<br>Nr. de Ref. | Benennung<br>Description<br>Denomination                                    |
|--|--------------------------------------|---|
| 01   | CM+9.8149.6801.0                     | HALTEFEDER / SPRING BOW / RESSORT DE RETENUE                                |
| 02   | CM+9.8149.6830.0                     | UEBERHITZUNGSSCHUTZ 90°C / OVERHEAT PROTECTION / PROTECTION DE SURCHAUFFE   |
| 03   | CM+9.8149.6910.2                     | UEBERHITZUNGSSCHUTZ 110°C. / OVERHEAT PROTECTION / PROTECTION DE SURCHAUFFE |
| 04   | CM+9.8187.6914.0                     | REFLEKTOR / REFLECTOR / REFLECTEUR  |
| 05   | CM+9.8187.6916.0                     | HALTEFEDER / SPRING BOW / RESSORT DE RETENUE                                |
| 06   | CM+9.8187.6917.0                     | HALTEFEDER / SPRING BOW / RESSORT DE RETENUE                                |
| 07   | CM+9.8187.6921.2                     | STRAHLER 110 V / 400 W / RADIATOR / LAMPE                                   |
| <span style="border: 1px solid black; padding: 2px;">08</span> | CM+9.8196.6960.4                     | IR-EINHEIT / IR UNIT / UNITE IR   |
| 09   | CM+9.8205.2720.0                     | DRAHTSCHUTZ / WIRE PROTECTION / FIL DE PROTECTION                           |

□=Baugruppe / Assembly / Modul

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D=Piece normalisée. Vous trouvez leur référence dans la liste, à part, des pieces normalisées "DD+DIS011.93M"

\*=Ersatzteil, nicht ab Lager lieferbar. Bei Bestellung verlängerte Lieferzeit.

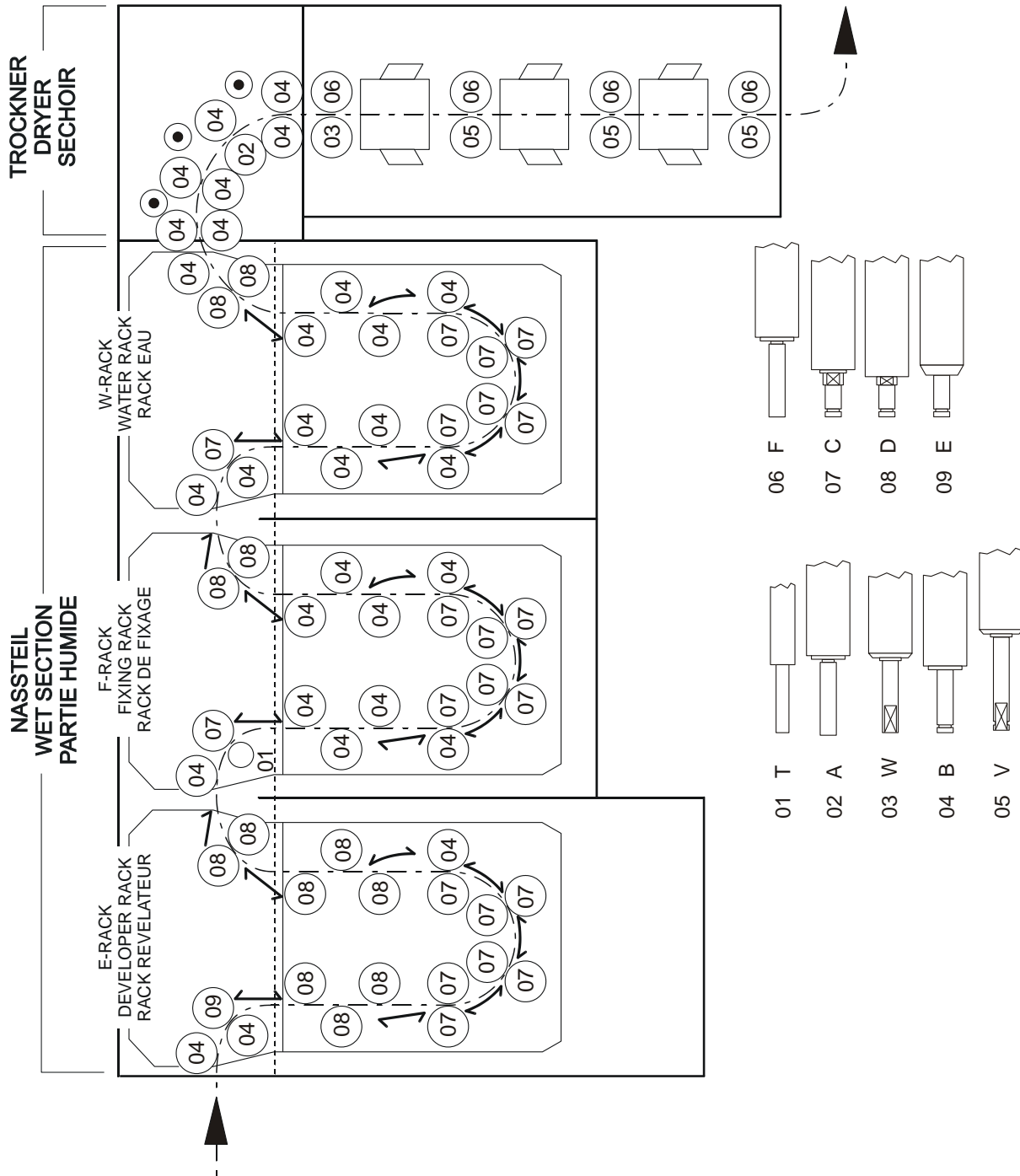
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TROCKNER, IR-EINHEIT  
DRYER, IR UNIT  
SECHOIR, UNITE IR

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8196\_0148\_8066.CDR

WALZENSCHEMA NDT-U STANDARD, TYP 8196-300  
 ROLLER POSITIONING PLAN - NDT-U STANDARD, TYPE 8196-300  
 SCHEMA DES ROLEAUX - NDT-U STANDARD, TYPE 8196-300

| Pos. Nr. | Teile-Nr.        | Benennung  |
|----------|------------------|--|
| Item no. | Part No.         | Description  |
| Pos. no. | Nr. de Ref.      | Denomination   |
| 01       | CM+9.8148.5240.0 | STAHLWALZE ( <b>T</b> Ø 13,5MM) / STEEL ROLLER / ROULEAU EN ACIER                        |
| 02       | CM+9.8196.5914.0 | WALZE (PUR) ( <b>A</b> Ø 24MM) / ROLLER / ROULEAU  |
| 03       | CM+9.8148.6719.0 | WALZE (PUR) ( <b>W</b> Ø 24MM) / ROLLER / ROULEAU  |
| 04       | CM+9.8196.6110.0 | PUR-WALZE ( <b>B</b> Ø 24MM) / PUR ROLLER / ROULEAU                                      |
| 05       | CM+9.8189.6750.1 | GUMMIWALZE GRAU ( <b>V</b> Ø 24MM) / RUBBER ROLLER, GREY / ROULEAU EN CAOUTCHOUC, GRIS   |
| 06       | CM+9.8189.6780.1 | GUMMIWALZE GRAU ( <b>F</b> Ø 24MM) / RUBBER ROLLER, GREY / ROULEAU EN CAOUTCHOUC, GRIS   |
| 07       | CM+9.8195.5350.2 | GUMMIWALZE GRAU ( <b>C</b> Ø 24MM) / RUBBER ROLLER, GREY / ROULEAU EN CAOUTCHOUC, GRIS   |
| 08       | CM+9.8195.5450.2 | GUMMIWALZE GRAU ( <b>D</b> Ø 24MM) / RUBBER ROLLER, GREY / ROULEAU EN CAOUTCHOUC, GRIS   |
| 09       | CM+9.8196.6152.1 | GUMMIWALZE GRAU ( <b>E</b> Ø 23,9MM) / RUBBER ROLLER, GREY / ROULEAU EN CAOUTCHOUC, GRIS |

☐=Baugruppe / Assembly / Modul

D=Normteil. Die Bestellnummer ist der separaten Normteilleiste "DD+DIS011.93M" zu entnehmen.

D=Standardised part. For order please refer to the separate spare parts list for standardised parts "DD+DIS011.93M"

D=Piece normalisée. Vous trouvez leur référence dans la liste, à part, des pieces normalisées "DD+DIS011.93M"

\*=Ersatzteil, nicht ab Lager lieferbar. Bei Bestellung verlängerte Lieferzeit.

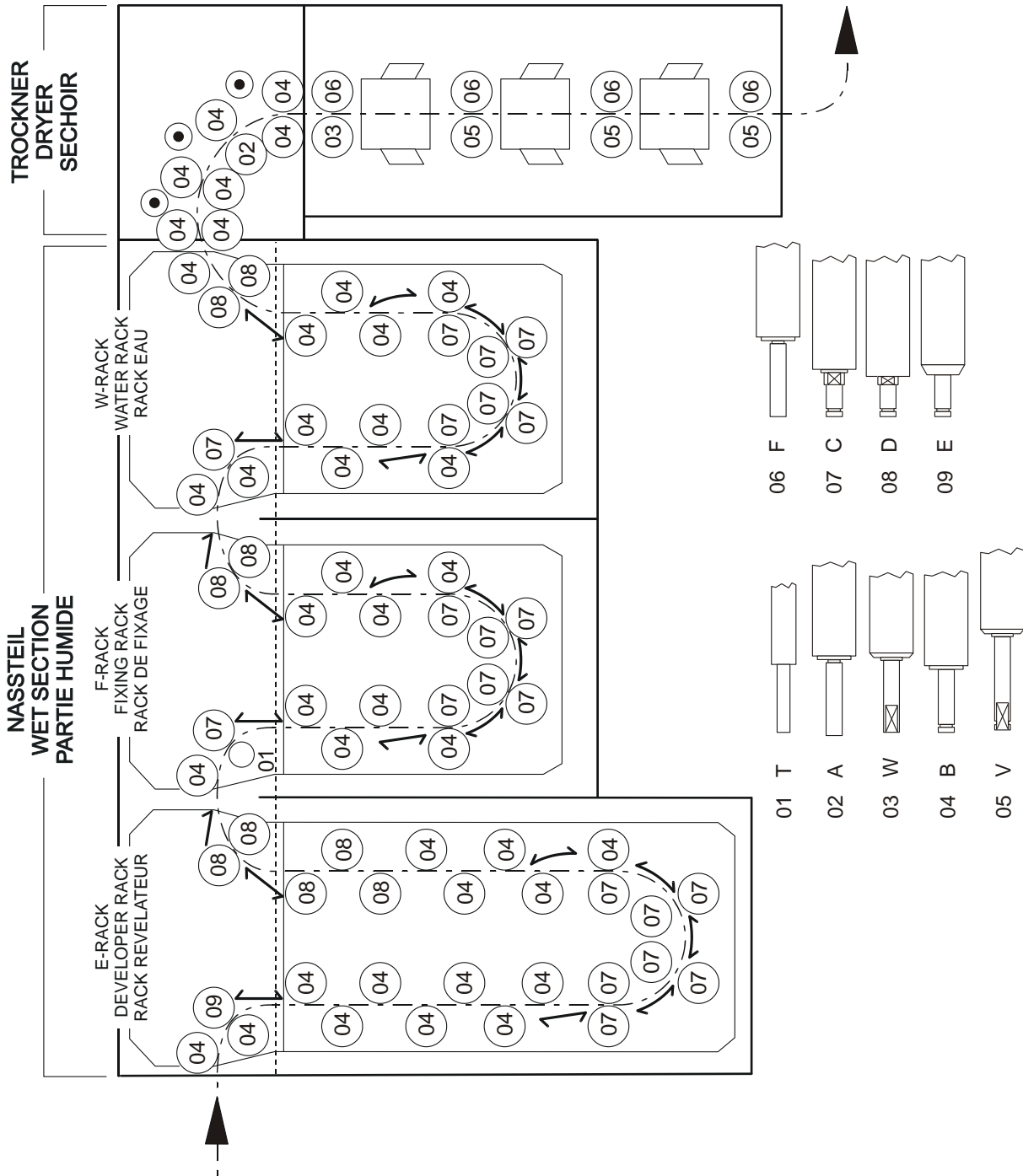
\*=Spare part, not available from stock. Expect extended delivery times.

\*=Piece detachée n'est pas disponible départ stock. Délai prolongé en cas de commande.

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WALZENSCHHEMA NDT-U STANDARD, TYP 8196-300  
 ROLLER POSITIONING PLAN - NDT-U STANDARD, TYPE 8196-300  
 SCHEMA DES ROLEAUX - NDT-U STANDARD, TYPE 8196-300

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8196\_0148\_8067.CDR

WALZENSCHAMA NDT-U (OS), TYP 8196-350  
 ROLLER POSITIONING PLAN - NDT-U (OS), TYPE 8196-350  
 SCHEMA DES ROLEAUX - NDT-U (OS), TYPE 8196-350

| Pos. Nr. | Teile-Nr.        | Benennung  |
|----------|------------------|--|
| Item no. | Part No.         | Description  |
| Pos. no. | Nr. de Ref.      | Denomination   |
| 01       | CM+9.8148.5240.0 | STAHLWALZE ( <b>T</b> Ø 13,5MM) / STEEL ROLLER / ROULEAU EN ACIER                        |
| 02       | CM+9.8196.5914.0 | WALZE (PUR) ( <b>A</b> Ø 24MM) / ROLLER / ROULEAU  |
| 03       | CM+9.8148.6719.0 | WALZE (PUR) ( <b>W</b> Ø 24MM) / PUR ROLLER / ROULEAU                                    |
| 04       | CM+9.8196.6110.0 | PUR-WALZE ( <b>B</b> Ø 24MM) / PUR ROLLER / ROULEAU                                      |
| 05       | CM+9.8189.6750.1 | GUMMIWALZE GRAU ( <b>V</b> Ø 24MM) / RUBBER ROLLER, GREY / ROULEAU EN CAOUTCHOUC, GRIS   |
| 06       | CM+9.8189.6780.1 | GUMMIWALZE GRAU ( <b>F</b> Ø 24MM) / RUBBER ROLLER, GREY / ROULEAU EN CAOUTCHOUC, GRIS   |
| 07       | CM+9.8195.5350.2 | GUMMIWALZE GRAU ( <b>C</b> Ø 24MM) / RUBBER ROLLER, GREY / ROULEAU EN CAOUTCHOUC, GRIS   |
| 08       | CM+9.8195.5450.2 | GUMMIWALZE GRAU ( <b>D</b> Ø 24MM) / RUBBER ROLLER, GREY / ROULEAU EN CAOUTCHOUC, GRIS   |
| 09       | CM+9.8196.6152.1 | GUMMIWALZE GRAU ( <b>E</b> Ø 23,9MM) / RUBBER ROLLER, GREY / ROULEAU EN CAOUTCHOUC, GRIS |

☐=Baugruppe / Assembly / Modul

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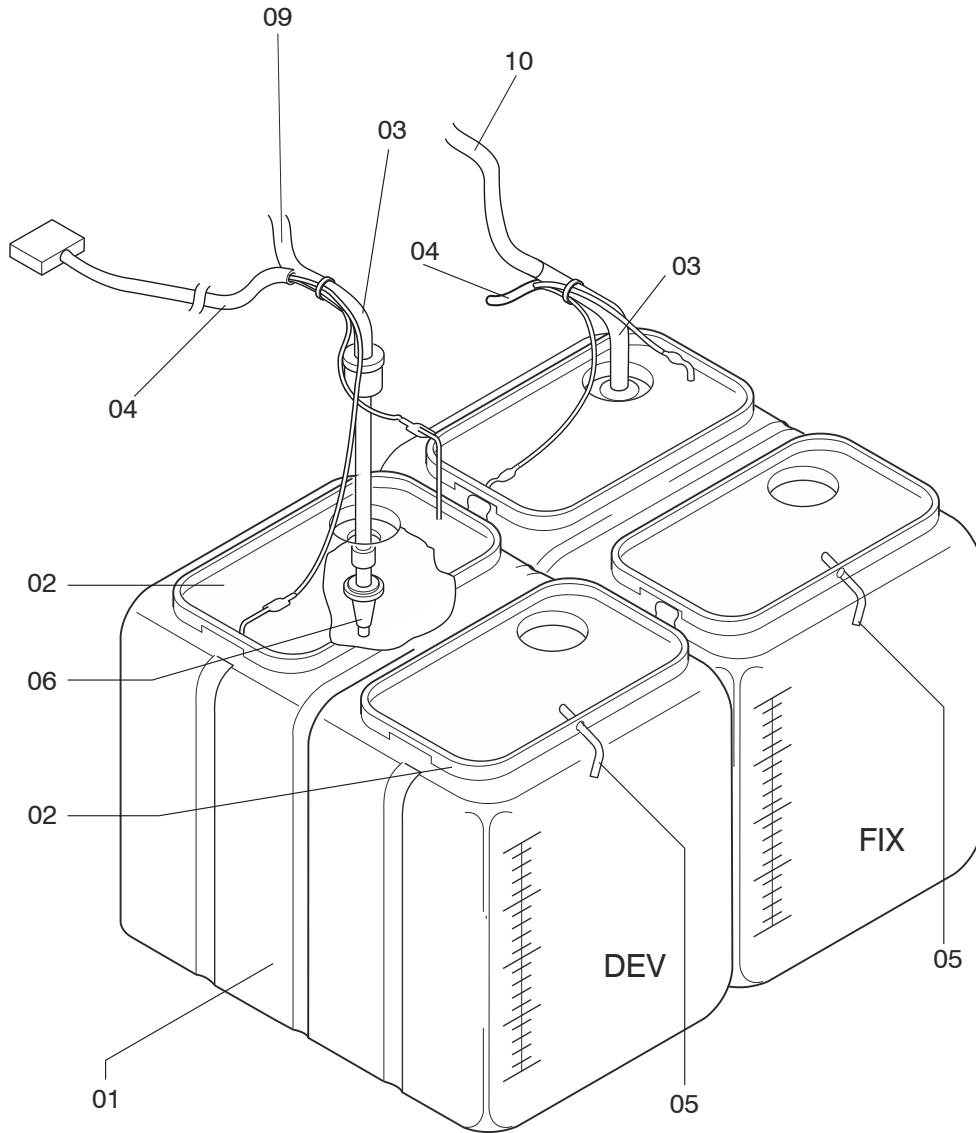
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WALZENSHEMA NDT-U (OS), TYP 8196-350  
 ROLLER POSITIONING PLAN - NDT-U (OS), TYPE 8196-350  
 SCHEMA DES ROLEAUX - NDT-U (OS), TYPE 8196-350

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# SPARE PARTS LIST

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8196\_0148\_8068.CDR

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ZUBEHÖR: REGENERATORTANKS 2X30L / TYP 8196 /300 /350  
ACCESSORIES: REPLENISHER TANKS 2X30L / TYPE 8196 /300 /350  
ACCESSOIRES: CUVERS DE RÉGÉNÉRATION 2X30L / TYPE 8196 /300 /350

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| Pos. Nr. | Teile-Nr.         | Benennung   |
|----------|-------------------|---|
| Item no. | Part No.          | Description   |
| Pos. no. | Nr. de Ref.       | Denomination  |
| 01       | CM+9.8186.1610.0  | BEHAELTER E/F / CONTAINER / RECIPIENT                           |
| 02       | CM+9.8186.1612.0  | DECKEL / COVER / COUVERCLE                                      |
| 03       | CM+9. 8186.1620.0 | ROHRKRUEMMER / PIPE BEND / TUYAU COUDE                          |
| 04       | CM+9. 8186.7100.1 | ELEKTRODE M. KABEL / ELECTRODE WITH WIRE / ELECTRODE AVEC CABLE |
| 05       | CM+9.9424.2013.0  | STANGE / ROD / BARRE  |
| 06       | CM+9.8147.1012.0  | FILTER / FILTER / FILTRE  |
| 09       | CM+9.8186.7001.0  | DEV / ACOCORD SCHLAUCH 9X3/RT 6M / HOSE / TUYAU FLEXIBLE        |
| 10       | CM+9.8186.7002.0  | FIX / ACOCORD SCHLAUCH 9X3/BL 6M / HOSE / TUYAU FLEXIBLE        |

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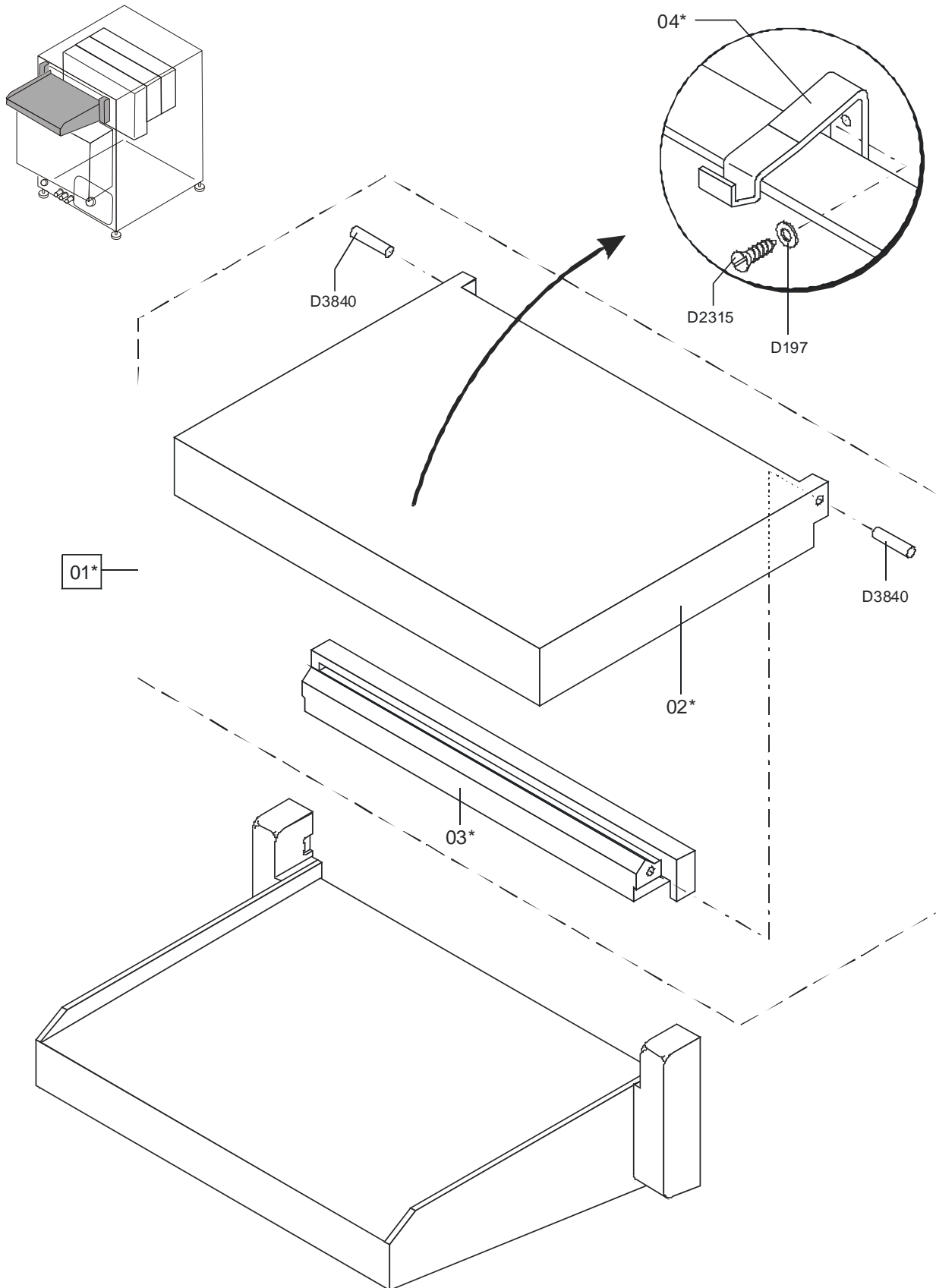
\*=Piece detachée n'est pas disponible départ stock. Délai prolongé en cas de commande.

ZUBEHÖR: REGENERATORTANKS 2X30L / TYP 8196 /300 /350

ACCESSORIES: REPLENISHER TANKS 2X30L / TYPE 8196 /300 /350

ACCESSOIRES: CUVERS DE RÉGÉNÉRATION 2X30L / TYPE 8196 /300 /350

# SPARE PARTS LIST



8196\_0148\_8070.CDR

ZUBEHÖR: LICHTSCHUTZDECKEL TYP 8196 /300 /350  
ACCESSORY: LIGHT COVER TYPE 8196 /300 /350  
ACCESSOIRE: PROTECTION ANTI-LUMIERE TYPE 8196 /300 /350



| Pos. Nr. | Teile-Nr.         | Benennung   |
|----------|-------------------|---|
| Item no. | Part No.          | Description   |
| Pos. no. | Nr. de Ref.       | Denomination  |
| 01       | TYP 8196/160      | LICHTSCHUTZDECKEL VOLLST. / LIGHT COVER ASSY / PROTECTION ANTI-LUMIERE COMPL. |
| 02*      | CM+9.8196.3920.0* | LICHTSCHUTZDECKEL / LIGHT COVER / PROTECTION ANTI-LUMIERE                     |
| 03*      | CM+9.8196.3961.0* | LEISTE / BAR / REGLETTE   |
| 04*      | CM+9.8196.4932.0* | RASTE / LATCH / CRAN D'ARRET  |

☐=Baugruppe / Assembly / Modul

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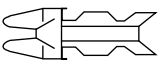
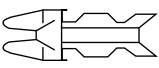
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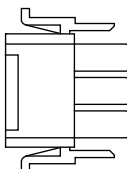
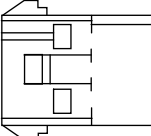
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ZUBEHÖR: LICHTSCHUTZDECKEL TYP 8196 /300 /350  
ACCESSORY: LIGHT COVER TYPE 8196 /300 /350  
ACCESSOIRE: PROTECTION ANTI-LUMIERE TYPE 8196 /300 /350

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## SPARE PARTS LIST

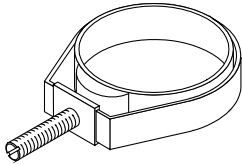
|  |  |                  |
|--|--|------------------|
| FEDERKONTAKT (VERGOLDET)<br>SPRING CONTACT (GOLD-PLATED)<br>CONTACT À RESSORT (DORÉ) | <br>Ø 0,10 - 0,25 | CM+7.0471.1804.0 |
| FEDERKONTAKT (VERGOLDET)<br>SPRING CONTACT (GOLD-PLATED)<br>CONTACT À RESSORT (DORÉ) | <br>Ø 0.30 - 0,60 | CM+7.0471.1383.0 |

| POLZAHL<br>NO.OF POLES<br>NOMBRE DE PÔLES | STECKERGEHÄUSE<br>PLUG ENCLOSURE<br>BOÎTIER DE FICHES                             | AUFNAHMEGEHÄUSE<br>(KUPPLUNG)<br>HOUSING (CLUTCH)<br>BOÎTIER-LOGEMENT<br>(EMBRAYAGE) |
|---|---|--|
|   |  |     |
| <b>2POL.</b>                              | CM+9.0471.1708.0  | CM+7.0471.1709.0   |
| <b>3POL.</b>                              | CM+9.0471.1327.0  | CM+7.0471.1326.0   |
| <b>4POL.</b>                              | CM+9.0471.1336.0  | CM+7.0471.1335.0   |
| <b>6POL.</b>                              | CM+7.0471.1325.0  |  |
| <b>9POL.</b>                              |   | CM+7.0471.1308.0   |
| <b>12POL</b>                              | CM+7.0471.1703.0  | CM+7.0471.1704.0   |
| <b>15POL</b>                              | CM+7.0471.1306.0  |  |

|                           |   |                    |
|---------------------------|---|--------------------|
| STIFT<br>PIN<br>BROCHE    |  | CM10+9.0471.1701.0 |
| BUCHSE<br>JACK<br>DOUILLE |  | CM+7.0471.1702.0   |

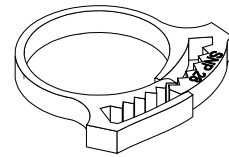
STECKVERBINDUNGEN  
CONNECTORS  
CONNECTEURS

**SCHLAUCHKLEMME  
HOSE CLAMP  
AGRAFE TUYAU**



CM+9.0371.9510.1      Ø 16,00 - 21,00 MM  
CM+9.0371.9530.1      Ø 24,00 - 29,00 MM

**SCHLAUCHSCHELLE  
HOSE CLAMP  
COLLIER DE GAINE**



|                  |                    |          |
|------------------|--------------------|----------|
| CM+9.0372.0020.0 | Ø 11,50 - 13,90 MM | SNP - 7  |
| CM+9.0372.0021.0 | Ø 13,00 - 14,90 MM | SNP - 8  |
| CM+9.0372.0022.0 | Ø 21,80 - 25,10 MM | SNP - 19 |
| CM+9.0372.0023.0 | Ø 14,50 - 16,50 MM | SNP - 10 |
| CM+9.0371.7009.0 | Ø 11,40 - 13,00 MM | SNP - 6  |
| CM+9.0371.7011.0 | Ø 19,80 - 22,80 MM | SNP - 18 |
| CM+9.0371.7026.0 | Ø 19,00 - 21,50 MM | SNP - 16 |
| CM+9.0371.7027.0 | Ø 28,50 - 32,90 MM | SNP - 28 |
| CM+9.0371.7028.0 | Ø 25,00 - 28,80 MM | SNP - 24 |
| CM+9.0372.0019.0 | Ø 15,70 - 18,00 MM | SNP - 12 |
| CM+9.0372.0030.0 | Ø 17,80 - 20,40 MM | SNP - 14 |
| CM+9.0372.0040.0 | Ø 23,60 - 27,20 MM | SNP - 22 |

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**SCELLEN  
CLAMPS  
COLLIERS**

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service hotline: 800-915-9966

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  - Germany: +49 2233 601 333
  - India: +1 800 301 62632
  - Singapore: +65 6622 1623
  - U.A.E: +971 2 699 7119
  - UK: +44 845601 5771
  - USA: +1 866 243 2638

Additional country-specific Technical Support telephone numbers can be found at our website:  
[www.gemeasurement.com/services](http://www.gemeasurement.com/services)

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