




















① Fitted depending on features




|   |                  |  |                 |                                      |
|---|------------------|--|-----------------|--------------------------------------|
| Designation<br><b>Connection Diagram</b><br>GV640 II. Gen | LCS<br><b>EN</b> | Document No.<br><b>5600 0001074481</b> | Rev<br><b>B</b> | Sheet-No.<br><b>1</b><br>of <b>1</b> |
|   |                  | Material No. 9000505353                |                 |                                      |

| Function                       | Actuation | Display                     |             |             |         | Remarks   |   |   |                     |
|--------------------------------|-----------|-----------------------------|-------------|-------------|---------|---|---|---|---------------------|
| Error class<br>(failure group) |           | In Customer Service program |             | At Customer |         | Appliance behaviour in error case   | Results of internal appliance check                                   | Measures  |                     |
|                                |           | LED's                       | Display     | LED         | Display |   |   |   |                     |
|                                |           | Act. Clean Sani<br>End      |             |             |         |   |   |   |                     |
|                                |           | ○ ○ ○                       | <b>E:00</b> |             |         |   | No error  |   |                     |
| <b>Interface</b>               |           |                             |             |             |         | Blinking LED's at end of Flash process<br><br>Stop in current position, no function | Communication issue within electronics                                | Power cord of the appliance has to be disconnected (to activate on/off from main switch is not enough!)<br><br>> Verify D-Bus - connectors (3-pole) for electrical connection failure;<br>> Disconnected power cord (plug out and then again plug in);<br>> Repeat flash process;<br>> Change Modul |                     |
| <b>Power module</b>            |           | ○ ○                         | <b>E:01</b> |             |         | <b>E:01</b>   | → End of program  | Pump triggering or pump switching is defect   | Change power module |
|                                |           |                             | <b>E:02</b> |             |         | <b>E:02</b>   | Running w/o heating   | Working relay of heating is defect  |                     |
|                                |           |                             | <b>E:03</b> |             |         | <b>E:03</b>   | Running w/o additional drying system.                                 | Working relay of additional drying system is defect.  |                     |
|                                |           |                             | <b>E:04</b> |             |         | <b>E:04</b>   | Running w/o heating   | Safety relay of heating is defect   |                     |
|                                |           |                             | <b>E:05</b> |             |         | <b>E:05</b>   | Water switch is running permanently<br>Cancelation of program (Drain) | Impulses w/o activation<br>Water switch triac defect  |                     |



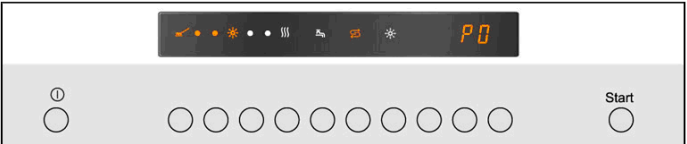
| Function                       | Actuation | Display   | Remarks     |   |   |  |  |   |
|--------------------------------|-----------|---|-------------|---|---|--|--|---|
| Error class<br>(failure group) |           | In Customer Service program   |             | At Customer   |   | Appliance behaviour in error case      | Results of internal appliance check  | Measures  |
|                                |           | LED's   | Display     | LED   | Display   |  |  |   |
|                                |           | Act. Clean Sani<br>End  |             |  |  |  |  |   |
| <b>Door</b>                    |           |  | <b>E:06</b> |   | <b>E:06</b>   | Stop in current position, no function  | Hall-sensor defect, wire disconnected or power module defect   | Power module is functional ok, if plug is disconnected and Hall-sensor is feed with supply voltage. Otherwise change Hall-sensor.   |
| <b>Heating</b>                 |           |  | <b>E:07</b> |   | <b>E:07</b>   | Function w/o additional drying-system. | Fan defect/blocked<br>Fanelectronic defect   | Check component / connection / Measure resistance<br><br>=> only dishwashers with additional drying system  |
|                                |           |   | <b>E:08</b> |   |   | Function w/o heating.                  | Heat pump detects too low water level in sump.<br><br>Low voltage  | >heat exchanger drain valve is leaky<br>>Overturned bowls / pots in appliance?<br><br>No device error!  |
|                                |           |   | <b>E:09</b> |   | <b>E:09</b>   |  | Heating-circuit is intermittent (resistance, wire harness, safety relais pins on power module)   | Measure heating resistance, check wires   |
|                                |           |   | <b>E:10</b> |   |   | Function w/o additional drying-system. | Heating-circuit additional drying system is intermittent (resistance/wire harness)<br><br>Fanelectronic defect<br>Failure in wire to fan | Check water hardness; if necessary decalcify and clean. On repeat change heat pump.<br><br>Check component Connection?<br><br>=> only dishwashers with additional drying system |
|                                |           |   | <b>E:11</b> |   | <b>E:11</b>   | Function w/o heating.                  | NTC-failure<br>Failure in wire to NTC's  | Measure NTC's, check wires.   |
|                                |           |   | <b>E:12</b> |   |   |  |  | Reserved  |



| Function                       | Actuation | Display                     |             |   |   | Remarks                           |                                     |   |
|--------------------------------|-----------|-----------------------------|-------------|---|---|-----------------------------------|-------------------------------------|---|
| Error class<br>(failure group) |           | In Customer Service program |             | At Customer   |   | Appliance behaviour in error case | Results of internal appliance check | Measures  |
|                                |           | LED's                       | Display     | LED   | Display   |                                   |                                     |   |
|                                |           | Act. Clean Sani<br>End      |             |  |  |                                   |                                     |   |
|                                |           |                             | <b>E:13</b> |   |   |                                   | Water temperature too high (> 75°C) | Safety measure - no failure!<br>Check water inlet temperature . |





| Function                       | Actuation | Display   | Remarks   |   |         |  |   |  |
|--------------------------------|-----------|---|---|---|---------|--|---|--|
| Error class<br>(failure group) |           | In Customer Service program   |   | At Customer   |         | Appliance behaviour in<br>error case                       | Results of internal appliance<br>check  | Measures   |
|                                |           | LED's   | Display   | LED   | Display |  |   |  |
|                                |           | Act. Clean Sani<br>End  |  |    |         |  |   |  |
| Filling                        |           |       | E:14  |    | E:14    | Program abort with<br>draining                             | Flow sensor detects no<br>impulses, even though<br>circulation pump detects<br>water. | Check wires, check flow<br>sensor (Reed-switch)  |
|                                |           |   | E:15  |    | E:15    | Program abort with<br>interval pumping                     | Safety switch base<br>carrier active. Appliance<br>can't be turned off.               | Look / Search for cause of<br>water in base carrier  |
|                                |           |   | E:16  |   | E:16    |  | Water inlet (impulses<br>from flow sensor) w/o<br>activation of filling valve.        | Check filling valve.<br>Check triggering of filling<br>valve.  |
|                                |           |   | E:17  |   | E:17    | Program abort with<br>draining                             | Water inlet amount<br>according flow sensor<br>too high                               | Check flow control in filling<br>valve   |
|                                |           |   | E:18  |    |         | Waiting for water inlet.<br>Program abort with<br>draining | Water inlet amount<br>according flow sensor<br>too low or no water<br>intake.         | Check water inlet  |
| Circulation pump               |           |       | E:19  |   |         |  | Reserved  |  |
|                                |           |   | E:20  |   | E:20    | → End of program   | Wrong resistance value<br>of circulation pump   | Check wires,<br>measure coil.  |
|                                |           |   | E:21  |   | E:21    | → End of program   | Circulation pump blocked  | Check for foreign objects, if<br>necessary renew   |
| Drainpump                      |           |   | E:22  |   | E:22    | → End of program   | Water in pump sump,<br>because of dirt filters.                                       | Clean filters.   |
|                                |           |   | E:23  |   | E:23    | → End of program   | Wrong resistance value<br>of drain pump   | Check wires,<br>measure coil   |
|                                |           |   | E:24  |  | E:24    | → End of program   | Draining not possible.<br>Pump cover missing?   | Check water draining (hose<br>kinked / blocked, pressure<br>head, pump cover).<br>Install pump cover.<br><br>Inspect check valve |
|                                |           |   | E:25  |  | E:25    | → End of program   | Drain pump blocked;<br>possibly pump cover is<br>missing                              | Check for foreign objects.<br>Install pump cover   |







| Function                       | Actuation | Display   | Remarks   |   |         |   |   |   |
|--------------------------------|-----------|---|---|---|---------|---|---|---|
| Error class<br>(failure group) |           | In Customer Service program   |   | At Customer   |         | Appliance behaviour in<br>error case                            | Results of internal appliance<br>check                          | Measures  |
|                                |           | LED's   | Display   | LED   | Display |   |   |   |
|                                |           | Act. Clean Sani<br>End  |  |  |         |   |   |   |
| <b>Waterswitch</b>             |           |  | <b>E:26</b>   |   |         | Permanent activation<br>of water switch                         | Impulses from water<br>switch are missing<br>despite triggering | Check wires.<br>Measure supply voltage on<br>motor. Check switch of<br>water switch       |
|                                |           |   | <b>E:27</b>   |   |         |   | Reserved  |   |
| <b>Aquasensor</b>              |           |   | <b>E:28</b>   |   |         | Function w/o<br>aquasensor                                      | Calibration of<br>aquasensor not<br>successful                  | Check wires.<br>Dirt on aquasensor. Is<br>appliance serially equipped<br>with aquasensor? |
| <b>General</b>                 |           |   | <b>E:29</b>   |   |         | No correct functions /<br>Bad washing/drying<br>result possible | Lowvoltage (<190V)  | No device error!  |
|                                |           |   | <b>E:30</b>   |   |         | Dishwasher switches<br>off themself                             | Overvoltage (>290V)   | No device error!  |
|                                |           |   | <b>E:31</b>   |   |         |   | Reserved  |   |
|                                |           |   | <b>E:32</b>   |   |         |   | Reserved  |   |

| Function | Actuation | Display | Remark |
|----------|-----------|---------|--------|
|----------|-----------|---------|--------|

|                          |  |  |   |
|--------------------------|--|--|---|
| <b>Operating diagram</b> |  |  | Button name<br><br>Panels are by way of example, different designs are possible |
|                          |  |  |   |
|                          |  |  |   |

|  |  |      |                                    |
|--|--|------|------------------------------------|
| <b>Reset *</b><br><br>* Before selecting the special programmes, perform a reset |  |      | Appliance is switched on           |
|  |  | 0:01 | Press "Start" button for 3 seconds |

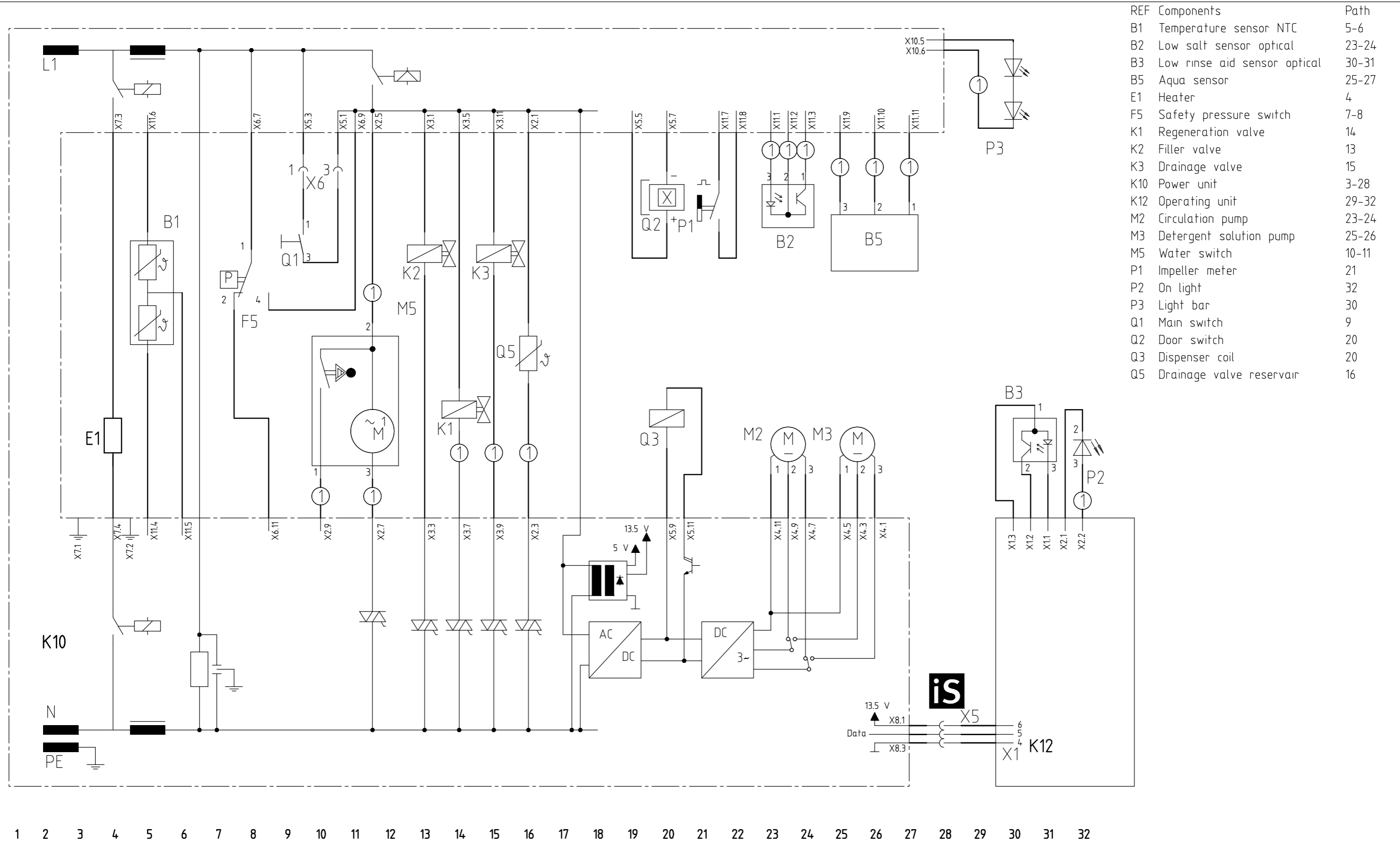
|                                  |  |    |                                       |
|----------------------------------|--|----|---------------------------------------|
| <b>Select special programmes</b> |   |    | Switch off the appliance              |
|                                  |  |    | Press and hold down buttons "B" + "C" |
|                                  |  |    | Press the main switch                 |
|                                  |  | P0 | Release buttons when P0 is displayed  |

| Function                               | Actuation  | Display                                      | Remark   |
|--|--|--|--|
| <b>Select special Selection</b>        |    | P0...P7                                      | Press button "B" until required programme is selected  |
|  |  | P0<br>P1<br>P2<br>P3<br>P4<br>P5<br>P6<br>P7 | Error memory<br>Customer service test programme<br>Not relevant to customer service<br>Not relevant to customer service<br>Not relevant to customer service<br>Not relevant to customer service<br>Not relevant to customer service<br>Demonstration programme |
| <b>Read out fault memory</b>           |    | P0   | Activate: Press button "C"   |
|  |    | C:00...C:07<br>E:00...E:32                   | Storage space number: Hold down button "C"<br>Storage space contents (fault code):<br>Release button "C"   |
| <b>Customer service test programme</b> |    | P1   | Press button "B" until P1 is displayed   |
|  |   | S:00...S:xy                                  | Activate: Press button "C"   |
| <b>Skip test step</b>                  |  | S:00...S:xy                                  | Press button "B"<br>Not all test steps can be skipped<br>(see customer service test programme)   |



| Function  | Actuation                           | Display         | Remark   |
|---|-------------------------------------|-----------------|--|
| <b>End special programmes</b><br>In the error memory (P0) | ①                      A B C<br>↑   | Start<br>○      | Switch off main switch   |
| In the customer service test programme (P1)               | ①                      A B C        | Start<br>○<br>↑ | 0:01      Press "Start" button for 3 seconds (Reset)   |
|   | ①                      A B C<br>↑   | Start<br>○      | Switch off main switch   |
| <b>Select demonstration programme</b>                     | ①                      A B C<br>↑   | Start<br>○      | P7      Press button "B" until P7 is displayed   |
|   | ①                      A B C<br>↑   | Start<br>○      | 1:23      Activate: Press button "C"   |
|   | Door                                |                 | If operation from front:<br>Open and close door again<br><br>If operation from above:<br>Close and open door and close again |
| <b>End demonstration programme</b>                        | Door                                |                 | Only if operation from above:<br>When programme is running, open door  |
|   | ①                      A B C        | Start<br>○<br>↑ | 0:01      Press "Start" button for 3 seconds (Reset)   |
|   | ①                      A B C<br>↑ ↑ | Start<br>○      | Hold down buttons "B" + "C"  |
|   | ①                      A B C<br>↑   | Start<br>○      | Switch off main switch   |

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| REF | Components                   | Path  |
|-----|------------------------------|-------|
| B1  | Temperature sensor NTC       | 5-6   |
| B2  | Low salt sensor optical      | 23-24 |
| B3  | Low rinse aid sensor optical | 30-31 |
| B5  | Aqua sensor                  | 25-27 |
| E1  | Heater                       | 4     |
| F5  | Safety pressure switch       | 7-8   |
| K1  | Regeneration valve           | 14    |
| K2  | Filler valve                 | 13    |
| K3  | Drainage valve               | 15    |
| K10 | Power unit                   | 3-28  |
| K12 | Operating unit               | 29-32 |
| M2  | Circulation pump             | 23-24 |
| M3  | Detergent solution pump      | 25-26 |
| M5  | Water switch                 | 10-11 |
| P1  | Impeller meter               | 21    |
| P2  | On light                     | 32    |
| P3  | Light bar                    | 30    |
| Q1  | Main switch                  | 9     |
| Q2  | Door switch                  | 20    |
| Q3  | Dispenser coil               | 20    |
| Q5  | Drainage valve reservoir     | 16    |

① Fitted depending on features

|   |                  |  |                 |                       |
|---|------------------|--|-----------------|-----------------------|
| Designation<br><b>Circuit Diagram</b><br>GV 640 II Generation | LCS<br><b>EN</b> | Document No.<br><b>5600 0001073685</b> | Rev<br><b>B</b> | Sheet-No.<br><b>1</b> |
|   |                  | Material No. 9000505352                |                 | of <b>1</b>           |