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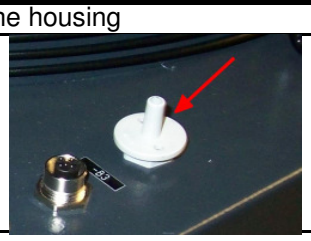
# Troubleshooting H.I.B chiller at error and warning messages

U = warning → only information, the chiller is still running
E = error → shut down the chiller

| Warning messages | |
|---|---|
| U01 | Water level too low |
| U02 | Filter mat is dirty |
| U03 | Filter mat is missing |
| U04 | Flow warning |
| U05 | Reserved / not in use |
| U06 | Other warning 1 |
| U06 | Other warning - Input 3 |
| U07 | Other warning 2 |
| U07 | Other warning - Input 4 |
| U08 | Other warning 3 |
| U08 | Other warning - Input 8 |
| U09 | Other warning 4 |
| U09 | Other warning - Input 9 |
| U10 | Temp. Min. KK1 |
| U11 | Temp. Max. KK1 |
| U20 | Temp. Min. KK2 |
| U21 | Temp. Max. KK2 |
| U22 | Temp. Min. KK3 |
| U23 | Temp. Max. KK3 |
| U30 | Pressure Min. |
| U30 | Temp. Min. KK3 |
| U31 | Pressure Max. |
| U31 | Temp. Max KK3 |
| U32 | Conductance too high |
| U33 | Automatic venting process |
| U34 | Temp. Min. KK1 |
| U35 | Temp. Max. KK1 |
| U40 | Low-Pressure refrigerant system |
| U41 | High-Pressure refrigerant system |
| U42 | Motor protection switch compr. |
| U43 | Tmax compressor network |
| U80 | SD-card-module |
| U84 | Pressure-Transmitter defect |
| U85 | Pressure-Transmitter defect |
| U86 | Flow Sensor Vortex defect |
| U87 | Flow Sensor Vortex defect |
| U88 | Temperature Sensor Vortex defect |
| U89 | Temperature Sensor Vortex defect |
| U96 | Conductance sensor defect |
| U97 | Conductance sensor defect |
| UFO | Flow error |

| Alarm messages | | | |
|---|---|---|---|
| E01 | Flow error | E56 | High-Pressure refrigerant reset |
| E02 | Motor protection switch pump | E76 | Sensor F1 short circuit |
| E02 | Other alarm - Input E9 | E77 | Sensor F1 break |
| E03 | Water level dry running | E78 | Sensor F2 short circuit |
| E04 | Side wall is open | E79 | Sensor F2 break |
| E05 | Flow error | E80 | Sensor F3 short circuit |
| E06 | Other alarm 1 | E80 | Sensor F5 short circuit |
| E06 | Other alarm - Input E3 or E8 | E81 | Sensor F3 break |
| E07 | Other alarm 2 | E81 | Sensor F5 break |
| E07 | Other alarm - Input E4 | E82 | Sensor F4 short circuit |
| E08 | Other alarm 3 | E82 | Sensor F6 short circuit |
| E08 | Other alarm - Input E8 | E83 | Sensor F4 break |
| E09 | Other alarm 4 | E83 | Sensor F6 break |
| E10 | Temp. Min. KK1 | E84 | Sensor F5 short circuit |
| E11 | Temp. Max. KK1 | E85 | Sensor F5 break |
| E20 | Temp. Min KK2 | E86 | Sensor F6 short circuit |
| E21 | Temp. Max KK2 | E87 | Sensor F6 break |
| E22 | Temp. Min KK3 | E88 | Sensor F7 short circuit |
| E23 | Temp. Max KK3 | E89 | Sensor F7 break |
| E30 | Pressure Min. | E90 | Temp. sensor F1 short circuit |
| E30 | Temp. Min KK3 | E91 | Temp. sensor F1 break |
| E31 | Pressure Max. | E92 | Temp. sensor F2 short circuit |
| E31 | Temp. Max KK3 | E93 | Temp. sensor F2 break |
| E32 | Conductance too high | E94 | Temp. sensor F3 short circuit |
| E41 | Flow error | E95 | Temp. sensor F3 break |
| E44 | Incorrect input phases | E96 | Temp. sensor F4 short circuit |
| E50 | Motor protection switch KK1 | E96 | Conductance sensor defect |
| E51 | Motor protection switch KK2 | E97 | Temperature sensor F4 break |
| E52 | Motor protection switch KK3 | E97 | Conductance sensor defect |
| E53 | Motor protection switch fan | E97 | System error |
| E54 | Motor protection switch Digiscroll | E98 | Communication error |
| E55 | Motor protection switch compressor | E98 | System error |
| | | E99 | System error (Flash) |
| | | Err | Communication error |

| Display | Fault | Possible causes | Action |
|---|---|---|---|
| E01 | No flow or flow insufficient (flow switch or turbine) | Water filter is dirty | Change the filter element |
| | | Air in the water system | Releas the air of the water system |
| | | Pump is not running | Check the fuse or motor protection circuit breaker |
| | | Flow sensor has no function | Visual check of the flow sensor |
| | | | Check the electrical connection of the flow sensor |
| | | | Check smoothness function of switch or turbine |
| | | Hose snapped off (intern or extern) | Check the hoses and the laying of the hoses |
| | | Temperature controller is defect | Check the function of the temperature controller |
| E02 | Motor protection switch pump | Current consumption of the pump is too high | Measure the current consumption of the pump |
| | | | Visual check of the pump for visible damages |
| | | | Check the smooth running of the pump |
| | | | Check the electrical connection of the pump |
| | | | Check the setting of the motor protection switch |
| | | Motor protection switch is defect | Check the function of the motor protection switch |
| E02 | Other alarm Input E9 | See in the documentation | Control the components, see in the wiring diagram |
| E03 | Water level dry running | Water level too low | Check the water level and fill up the tank |
| | | Leakage | Check the chiller of possible leakage |
| | | Water level sensor is defect | Check the function |
| | | Temperature controller is defect | Check the function of the temperature controller |
| E04 | Side wall is open | side wall / housing is open | Mount the side wall / Close the housing |
| | | Measurement point of the atmospheric pressure is influenced | Check the measurement point and protect it from external influences (fan)  |
| | | Wrong settings | Readjustment |
| | | Atmospheric pressure switch is defect | Check the function |

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| Display | Fault | Possible causes | Action |
|---|---|---|---|
| E05 | No flow or flow insufficient (Vortex) | Water filter is dirty | Change the filter element |
| | | Air in the water system | Bleed out the air of the water system |
| | | Pump is not running | Check the fuse or motor protection switch |
| | | Flow sensor has no function | Visual check of the flow sensor |
| | | | Check the electrical connection of the flow sensor |
| | | | Check smoothness function of switch or turbine |
| | | Hose snapped off (intern or extern) | Check the hoses and the laying of the hoses |
| E06 | Other Alarm 1 | See in the documentation | Control the components, see in the wiring diagram |
| E06 | Other alarm Input E3 or E8 | See in the documentation | Control the components, see in the wiring diagram |
| E07 | Other alarm 2 | See in the documentation | Control the components, see in the wiring diagram |
| E07 | Other alarm Input E4 | See in the documentation | Control the components, see in the wiring diagram |
| E08 | Other alarm 3 | See in the documentation | Control the components, see in the wiring diagram |
| E08 | Other alarm Input E8 | See in the documentation | Control the components, see in the wiring diagram |
| E09 | Other alarm 4 | See in the documentation | Control the components, see in the wiring diagram |
| E10 | Minimum temperature alarm water circuit 1 | Regulation valve water circuit 1 defect | Check the function of the valve |
| | | Compressor is always in operation | Contactor is defect (always close) |
| | | Temperature controller is defect | Check the electrical function of the temperature controller |
| E11 | Maximum temperature alarm water circuit 1 | Regulation valve water circuit 1 defect | Check the function of the valve |
| | | Compressor without function | Check the electrical connection of the compressor |
| | | | Measure the current consumption |
| | | Temperature of the compressor is too high Clickson triggers (thermo switch) | Ambient temperature is too high? |
| | | | Clean the filter mat / metal filter |
| | | | Compressor is defect |
| | | Flow in the external water circuit is insufficient | Check the flow |
| | | Fan is defect / rpm to slow | Replace the fan |
| | | Refrigerant shortage | Check the refrigerant system |
| E20 | Minimum temperature alarm water circuit 2 | Regulation valve water circuit 2 defect | Check the function of the valve |
| | | Compressor is always in operation | Contactor is defect (always close) |
| | | Temperature controller is defect | Check the electrical function of the temperature controller |
| E21 | Maximum temperature alarm water circuit 2 | Regulation valve water circuit 2 defect | Check the function of the valve |
| | | Compressor without function | Check the electrical connection of the compressor |
| | | | Measure the current consumption |
| | | Temperature of the compressor is too high Clickson triggers (thermo switch) | Ambient temperature is too high? |
| | | | Clean the filter mat / metal filter |
| | | | Compressor is defect |
| | | Fan is defect / too slow | Replace the fan |
| | | Refrigerant shortage | Check the refrigerant system |
| E22 | Minimum temperature alarm water circuit 3 | Regulation valve water circuit 2 defect | Check the function of the valve |
| | | Compressor is always in operation | Contactor is defect (always close) |
| | | Temperature controller is defect | Check the electrical function of the temperature controller |
| E23 | Maximum temperature alarm water circuit 3 | Regulation valve water circuit 3 defect | Check the function of the valve |
| | | Compressor without function | Check the electrical connection of the compressor |
| | | | Measure the current consumption |
| | | Temperature of the compressor is too high Clickson triggers (thermo switch) | Ambient temperature is too high? |
| | | | Clean the filter mat / metal filter |
| | | | Compressor is defect |
| | | Fan is defect / rpm to slow | Replace the fan |
| | | Refrigerant shortage | Check the refrigerant system |
| E30 | Pressure sensor / Transmitter Lower pressure limit alarm | Pressure in the system is faulty | Check the pressure in the system |
| E30 | Minimum temperature alarm water circuit 3 | Regulation valve water circuit 2 defect | Check the function of the valve |
| | | Compressor is always in operation | Contactor is defect (always close) |
| | | Temperature controller is defect | Check the electrical function of the temperature controller |
| E31 | Pressure sensor / Transmitter Upper pressure limit alarm | Pressure in the system is faulty | Check the pressure in the system |
| E31 | Maximum temperature alarm water circuit 3 | Regulation valve water circuit 3 defect | Check the function of the valve |
| | | Compressor without function | Check the electrical connection of the compressor |
| | | | Measure the current consumption |
| | | Temperature of the compressor is too high Clickson triggers (thermo switch) | Ambient temperature is too high? |
| | | | Clean the filter mat / metal filter |
| | | | Compressor is defect |
| | | Fan is defect / rpm to slow | Replace the fan |
| | | Refrigerant shortage | Check the refrigerant system |
| E32 | Conductance is too high | No use of DI water | Drain the tank and fill up with DI water |
| | | DI filter / DI cartridge consumed | Replace the DI filter / DI cartridge |
| | | Valve for the conductivity regulation is defect | Check the function of the valve |

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| Display | Fault | Possible causes | Action |
|---|---|---|---|
| E41 | No flow or flow insufficient | Water filter is dirty | Change the filter element |
| | | Air in the water system | Releas the air of the water system |
| | | Pump is not running | Check the fuse or motor protection switch |
| | | Flow sensor has no function | Visual check of the flow sensor |
| | | | Check the electrical connection of the flow sensor |
| | | | Check smoothness function of switch or turbine |
| | | Hose snapped off (intern or extern) | Check the hoses and the laying of the hoses |
| E44 | Incorrect phase sequence | Incorrect phase sequence | Check the phase sequence L1-L2-L3 = rotation field Right |
| | | Relay for phase sequence is defect | Check the function of the phase sequence relay |
| | | Temperature controller is defect | Check the electrical function of the temperature controller |
| E50 | Motor protection switch pump water circuit 1 | Current consumption of the pump is too high | Measure the current consumption of the pump |
| | | | Visual check of the pump for visible damages |
| | | | Check the smooth running of the pump |
| | | | Check the electrical connection of the pump |
| | | | Check the setting of the motor protection switch |
| | | Motor protection switch is defect | Check the function of the motor protection switch |
| E51 | Motor protection switch pump water circuit 2 | Current consumption of the pump is too high | Measure the current consumption of the pump |
| | | | Visual check of the pump for visible damages |
| | | | Check the smooth running of the pump |
| | | | Check the electrical connection of the pump |
| | | | Check the setting of the motor protection switch |
| | | Motor protection switch is defect | Check the function of the motor protection switch |
| E52 | Motor protection switch pump water circuit 3 | Current consumption of the pump is too high | Measure the current consumption of the pump |
| | | | Visual check of the pump for visible damages |
| | | | Check the smooth running of the pump |
| | | | Check the electrical connection of the pump |
| | | | Check the setting of the motor protection switch |
| | | Motor protection switch is defect | Check the function of the motor protection switch |
| E53 | Motor protection switch fan | Current consumption of the fan is too high | Measure the current consumption of the fan |
| | | | Visual check of the fan for visible damages |
| | | | Check the smooth running of the fan |
| | | | Check the electrical connection of the fan |
| | | | Check the setting of the motor protection switch |
| | | Motor protection switch is defect | Check the function of the motor protection switch |
| E54 | Motor protection switch compresssor Digiscroll | Current consumption of the compresssor is too high | Measure the current consumption of the compresssor |
| | | | Visual check of the compresssor for visible damages |
| | | | Check the smooth running of the compresssor |
| | | | Check the electrical connection of the compresssor |
| | | | Check the setting of the motor protection switch |
| | | Motor protection switch is defect | Check the function of the motor protection switch |
| E55 | Motor protection switch compresssor | Current consumption of the compresssor is too high | Measure the current consumption of the compresssor |
| | | | Visual check of the compresssor for visible damages |
| | | | Check the smooth running of the compresssor |
| | | | Check the electrical connection of the compresssor |
| | | | Check the setting of the motor protection switch |
| | | Motor protection switch is defect | Check the function of the motor protection switch |
| E56 | High pressure reset | Repeated occurrence of a high pressure error | Check the cause, see U41 |
| | | | Reset at the display is required |
| | | Temperature controller is defect | Check the electrical function of the temperature controller |
| E76 | Sensor F1 short circuit | Sensor is defect | Check the sensor and replace it |
| | | Temperature controller is defect | Check the electrical function of the temperature controller |
| E77 | Sensor F1 (break) | Sensor is defect | Check the sensor and replace it |
| | | Temperature controller is defect | Check the electrical function of the temperature controller |
| E78 | Sensor F2 short circuit | Sensor is defect | Check the sensor and replace it |
| | | Temperature controller is defect | Check the electrical function of the temperature controller |
| E79 | Sensor F2 (break) | Sensor is defect | Check the sensor and replace it |
| | | Temperature controller is defect | Check the electrical function of the temperature controller |
| E80 | Sensor F3 short circuit | Sensor is defect | Check the sensor and replace it |
| | | Temperature controller is defect | Check the electrical function of the temperature controller |
| E80 | Sensor F5 short circuit KK2 / NTC10kΩ | Sensor is defect | Check the sensor and replace it |
| | | Temperature controller is defect | Check the electrical function of the temperature controller |
| E81 | Sensor F3 (break) | Sensor is defect | Check the sensor and replace it |
| | | Temperature controller is defect | Check the electrical function of the temperature controller |
| E81 | Sensor F5 (break) KK2 / NTC10kΩ | Sensor is defect | Check the sensor and replace it |
| | | Temperature controller is defect | Check the electrical function of the temperature controller |
| E82 | Sensor F4 short circuit | Sensor is defect | Check the sensor and replace it |
| | | Temperature controller is defect | Check the electrical function of the temperature controller |
| E82 | Sensor F6 short circuit KK3 / NTC10kΩ | Sensor is defect | Check the sensor and replace it |
| | | Temperature controller is defect | Check the electrical function of the temperature controller |
| E83 | Sensor F4 (break) | Sensor is defect | Check the sensor and replace it |
| | | Temperature controller is defect | Check the electrical function of the temperature controller |
| E83 | Sensor F6 (break) KK3 / NTC10kΩ | Sensor is defect | Check the sensor and replace it |
| | | Temperature controller is defect | Check the electrical function of the temperature controller |
| E84 | Sensor F5 short circuit | Sensor is defect | Check the sensor and replace it |
| | | Temperature controller is defect | Check the electrical function of the temperature controller |
| E85 | Sensor F5 (break) | Sensor is defect | Check the sensor and replace it |
| | | Temperature controller is defect | Check the electrical function of the temperature controller |

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| Display | Fault | Possible causes | Action |
|---|---|---|---|
| E86 | Sensor F6 short circuit | Sensor is defect | Check the sensor and replace it |
| | | Temperature controller is defect | Check the electrical function of the temperature controller |
| E87 | Sensor F6 (break) | Sensor is defect | Check the sensor and replace it |
| | | Temperature controller is defect | Check the electrical function of the temperature controller |
| E88 | Sensor F7 short circuit | Sensor is defect | Check the sensor and replace it |
| | | Temperature controller is defect | Check the electrical function of the temperature controller |
| E89 | Sensor F7 (break) | Sensor is defect | Check the sensor and replace it |
| | | Temperature controller is defect | Check the electrical function of the temperature controller |
| E90 | Temperature sensor F1 short circuit | Temperature sensor is defect | Check the temperature sensor |
| | | Temperature controller is defect | Check the electrical function of the temperature controller |
| E91 | Temperature sensor F1 (break) | Temperature sensor is defect | Check the temperature sensor |
| | | Temperature controller is defect | Check the electrical function of the temperature controller |
| E92 | Temperature sensor F2 short circuit | Temperature sensor is defect | Check the temperature sensor |
| | | Temperature controller is defect | Check the electrical function of the temperature controller |
| E93 | Temperature sensor F2 (break) | Temperature sensor is defect | Check the temperature sensor |
| | | Temperature controller is defect | Check the electrical function of the temperature controller |
| E94 | Temperature sensor F3 short circuit | Temperature sensor is defect | Check the temperature sensor |
| | | Temperature controller is defect | Check the electrical function of the temperature controller |
| E95 | Temperature sensor F3 (break) | Temperature sensor is defect | Check the temperature sensor |
| | | Temperature controller is defect | Check the electrical function of the temperature controller |
| E96 | Temperature sensor F4 short circuit | Temperature sensor is defect | Check the temperature sensor |
| | | Temperature controller is defect | Check the electrical function of the temperature controller |
| E96 | Conductance sensor defect (0,1….10V) Voltage measurement <0,1V | Conductance sensor is defect | Measure the voltage from the conductance sensor |
| | | Temperature controller is defect | Check the electrical function of the temperature controller |
| E97 | Temperature sensor F4 (break) | Temperature sensor is defect | Check the temperature sensor |
| | | Temperature controller is defect | Check the electrical function of the temperature controller |
| E97 | System Error | EEprom parameter is destroyed | Replace the temperature controller |
| E97 | Conductance sensor defect (0,1….10V) Voltage measurement >10,5V | Conductance sensor is defect | Measure the voltage from the conductance sensor |
| | | Temperature controller is defect | Check the electrical function of the temperature controller |
| E98 | Communication error to display | Connecting cable is defect | Check the connecting cable from the tempertaure controller to the display |
| | | Display defect | Replace the display |
| | | Temperature controller is defect | Replace the temperature controller |
| | | Faulty parameter | Check the parameters / contact H.I.B Service |
| E98 | System Error | Flash is destroyed | Replace the temperature controller |
| E99 | Loss of data in the parameter memory or system error | EMC / Electromagnetic Compatibility | Retrofit a RC-Component |
| | | Temperature controller is defect | Replace the temperature controller |
| Err | Communication error to display | Connecting cable is defect | Check the connecting cable from the tempertaure controller to the display |
| | | Display defect | Replace the display |
| | | Temperature controller is defect | Replace the temperature controller |
| U01 | Water level too low | Water level too low | Check the water level and fill up the tank |
| | | Leakage | Check the chiller of possible leakage |
| | | Water level switch is defect | Check the function |
| | | Evaporation | Seal the tank and other parts |
| | | Temperature controller is defect | Check the function of the temperature controller |
| U02 | Filter mat is dirty | Filter mat / metal filter is dirty | Clean or replace the filter mat / metal filter |
| | | Pressure switch adjustment is false | Check the pressure switch adjustment |
| | | Pressure switch is defect | Check the pressure switch and replace it |
| | | Temperature controller is defect | Check the function of the temperature controller |
| U03 | Filter mat is missing | Filter mat / metal filter is missing | Insert the filter mat / metal filter |
| | | Filter mat / metal filter switch is defect | Replace the switch |
| | | Temperature controller is defect | Check the function of the temperature controller |
| U04 | Flow warning | Water filter is dirty | Change the filter element |
| | | Flow sensor has no function | Visual check of the flow sensor |
| | | | Check the electrical connection of the flow sensor |
| | | | Check smoothness function of switch or turbine |
| | | Hose snapped off (intern or extern) | Check the hoses and the laying of the hoses |
| U05 | Reserved / not in use | Contact HIB Service | Contact HIB Service |
| U06 | Other warning 1 | See in the documentation | Control the components, see in the wiring diagram |
| U06 | Other warning - Input E3 | See in the documentation | Control the components, see in the wiring diagram |
| U07 | Other warning 2 | See in the documentation | Control the components, see in the wiring diagram |
| U07 | Other warning - Input E4 | See in the documentation | Control the components, see in the wiring diagram |
| U08 | Other warning 3 | See in the documentation | Control the components, see in the wiring diagram |
| U08 | Other warning - Input E8 | See in the documentation | Control the components, see in the wiring diagram |
| U09 | Other warning 4 | See in the documentation | Control the components, see in the wiring diagram |
| U09 | Other warning - Input E9 | See in the documentation | Control the components, see in the wiring diagram |
| U10 | Minimum temperature warning water circuit 1 | Regulation valve water circuit 1 defect | Check the function of the valve |
| | | Compressor is always in operation | Contactor is defect (always close) |
| | | Temperature controller is defect | Check the electrical function of the temperature controller |

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| Display | Fault | Possible causes | Action |
|---|---|---|---|
| U11 | Maximum temperature warning water circuit 1 | Regulation valve water circuit 1 defect | Check the function of the valve |
| | | Compressor without function | Check the electrical connection of the compressor |
| | | | Measure the current consumption |
| | | Temperature of the compressor is too high Clickson triggers (thermo switch) | Ambient temperature is too high? |
| | | | Clean the filter mat / metal filter |
| | | | Compressor is defect |
| | | Fan is defect / too slow | Replace the fan |
| | | Refrigerant shortage | Check the refrigerant system |
| U20 | Minimum temperature warning water circuit 2 | Regulation valve water circuit 2 defect | Check the function of the valve |
| | | Compressor is always in operation | Contactor is defect (always close) |
| | | Temperature controller is defect | Check the electrical function of the temperature controller |
| U21 | Maximum temperature warning water circuit 2 | Regulation valve water circuit 2 defect | Check the function of the valve |
| | | Compressor without function | Check the electrical connection of the compressor |
| | | | Measure the current consumption |
| | | Temperature of the compressor is too high Clickson triggers (thermo switch) | Ambient temperature is too high? |
| | | | Clean the filter mat / metal filter |
| | | | Compressor is defect |
| | | Fan is defect / too slow | Replace the fan |
| | | Refrigerant shortage | Check the refrigerant system |
| U22 | Minimum temperature warning water circuit 3 | Regulation valve water circuit 3 defect | Check the function of the valve |
| | | Compressor is always in operation | Contactor is defect (always close) |
| | | Temperature controller is defect | Check the electrical function of the temperature controller |
| U23 | Maximum temperature warning water circuit 3 | Regulation valve water circuit 3 defect | Check the function of the valve |
| | | Compressor without function | Check the electrical connection of the compressor |
| | | | Measure the current consumption |
| | | Temperature of the compressor is too high Clickson triggers (thermo switch) | Ambient temperature is too high? |
| | | | Clean the filter mat / metal filter |
| | | | Compressor is defect |
| | | Fan is defect / too slow | Replace the fan |
| | | Refrigerant shortage | Check the refrigerant system |
| U30 | Pressure sensor / Transmitter Lower pressure limit warning | Pressure in the system is faulty | Check the pressure system |
| U30 | Minimum temperature warning water circuit 3 | Regulation valve water circuit 3 defect | Check the function of the valve |
| | | Compressor is always in operation | Contactor is defect (always close) |
| | | Temperature controller is defect | Check the electrical function of the temperature controller |
| U31 | Pressure sensor / Transmitter Upper pressure limit warning | Pressure in the system is faulty | Check the pressure system |
| U31 | Maximum temperature warning water circuit 3 | Regulation valve water circuit 3 defect | Check the function of the valve |
| | | Compressor without function | Check the electrical connection of the compressor |
| | | | Measure the current consumption |
| | | Temperature of the compressor is too high Clickson triggers (thermo switch) | Ambient temperature is too high? |
| | | | Clean the filter mat / metal filter |
| | | | Compressor is defect |
| | | Fan is defect / too slow | Replace the fan |
| | | Refrigerant shortage | Check the refrigerant system |
| U32 | Conductance is to high | No use of DI water | Drain the tank and fill up with DI water |
| | | DI filter / DI cartridge consumed | Replace the DI filter / DI cartridge |
| | | Valve for the conductivity regulation is defect | Check the function of the valve |
| U33 | Automatic venting process (Time delayed, automatic restart of the system) | Normal process after restart. Duration depends on parameter P33 | It's not necessary |
| U34 | Minimum temperature warning water circuit 1 | Regulation valve water circuit 1 defect | Check the function of the valve |
| | | Compressor is always in operation | Contactor is defect (always close) |
| | | Temperature controller is defect | Check the electrical function of the temperature controller |
| U35 | Maximum temperature warning water circuit 1 | Regulation valve water circuit 1 defect | Check the function of the valve |
| | | Compressor without function | Check the electrical connection of the compressor |
| | | | Measure the current consumption |
| | | Temperature of the compressor is too high Clickson triggers (thermo switch) | Ambient temperature is too high? |
| | | | Clean the filter mat / metal filter |
| | | | Compressor is defect |
| | | Fan is defect / too slow | Replace the fan |
| | | Refrigerant shortage | Check the refrigerant system |
| U40 | Low-Pressure refrigerant system | Refrigerant shortage | Check the refrigerant system |
| | | Refrigeration components defective | Check the function of the refrigeration components |
| | | No flow in the internal water circuit | Check the flow |

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| Display | Fault | Possible causes | Action |
|---|---|---|---|
| U41 | High-Pressure refrigerant system | Filter mat / metal filter is dirty | Clean or replace the filter mat / metal filter |
| | | Blocked airflow | Ckeck the airflow |
| | | Fan is defect / too slow | Replace the fan |
| | | Dirty slats of the condenser | Clean the slats of the condenser;<br>Be careful! Don't damage the slats when cleaning |
| | | The fan can not freely blow out the heat | Check the area of the fan |
| | | No flow in the external water circuit | Raise the flow |
| | | | Clean the external water filter or replace it |
| | | | Clean the water filter |
| | | Temperature of the external water circuit is too high | Reduce the water temperature |
| | | Side walls / side panels are open | Close the side walls / side panels |
| | | Ambient temperature is too high | Reduce the ambient temperature;<br>If the chiller has operated within the specification? |
| U42 | Motor protection switch compresssor | Current consumption of the compresssor is too high | Measure the current consumption of the compresssor |
| | | | Visual check of the compresssor for visible damages |
| | | | Check the smooth running of the compresssor |
| | | | Check the electrical connection of the compresssor |
| | | | Check the setting of the motor protection switch |
| | | Motor protection switch is defect | Check the function of the motor protection switch |
| U43 | Tmax compressor network | Contact HIB Service | Contact HIB Service |
| U80 | SD card is missing or<br>SD card module defect | SD card is missing | Insert the SD card |
| | | SD card is defect | Replace the SD card |
| | | SD card module is not connected | Check the electrical connection of the SD card module |
| | | SD card module is defect | Replace the SD card module |
| | | Temperature controller is defect | Check the electrical function of the temperature controller |
| U84 | Pressure Transmitter defect (4….20mA)<br>Strommessung <3,5mA | Pressure Transmitter defect | Measure the current consumption at the transmitter |
| | | Temperature controller is defect | Check the electrical function of the temperature controller |
| U85 | Pressure Transmitter defect (4….20mA)<br>Strommessung >20,5mA | Pressure Transmitter defect | Measure the current consumption at the transmitter |
| | | Temperature controller is defect | Check the electrical function of the temperature controller |
| U86 | Flow sensor Vortex defect<br>Flow signal (0,5….3,5V)<br>Voltage measurement <0,5V | Flow sensor defect | Measure the voltage of the flow sensor |
| | | Faulty electrical connection | Check the electrical connection |
| | | Temperature controller is defect | Check the electrical function of the temperature controller |
| U87 | Flow sensor Vortex defect<br>Flow signal (0,5….3,5V)<br>Voltage measurement >3,5V | Flow sensor defect | Measure the voltage of the flow sensor |
| | | Faulty electrical connection | Check the electrical connection |
| | | Temperature controller is defect | Check the electrical function of the temperature controller |
| U88 | Flow sensor Vortex defect<br>Temp. signal (0,35….3,5V)<br>Voltage measurement <0,5V | Flow sensor defect | Measure the voltage of the flow sensor |
| | | Faulty electrical connection | Check the electrical connection |
| | | Temperature controller is defect | Check the electrical function of the temperature controller |
| U89 | Flow sensor Vortex defect<br>Temp. signal (0,35….3,5V)<br>Voltage measurement >3,5V | Flow sensor defect | Measure the voltage of the flow sensor |
| | | Faulty electrical connection | Check the electrical connection |
| | | Temperature controller is defect | Check the electrical function of the temperature controller |
| U96 | Conductance sensor defect (0,1….10V)<br>Voltage measurement <0,1V | Conductivity sensor defect | Measure the voltage of the conductivity sensor |
| | | Faulty electrical connection | Check the electrical connection |
| | | Temperature controller is defect | Check the electrical function of the temperature controller |
| U97 | Conductance sensor defect (0,1….10V)<br>Voltage measurement >10,5V | Conductivity sensor defect | Measure the voltage of the conductivity sensor |
| | | Faulty electrical connection | Check the electrical connection |
| | | Temperature controller is defect | Check the electrical function of the temperature controller |
| UFO | No flow or flow insufficient<br>(flow switch or turbine) | Water filter is dirty | Change the filter element |
| | | Air in the water system | Bleed out the air of the water system |
| | | Pump is not run | Check the fuse or motor protection switch |
| | | Flow sensor has no function | Visual check of the flow sensor |
| | | | Check the electrical connection of the flow sensor |
| | | | Check smoothness function of switch or turbine |
| | | Hose snapped off (intern or extern) | Check the hoses and the laying of the hoses |
| | | Temperature controller is defect | Check the function of the temperature controller |

**General maintenance instructions:**

The chiller unit must be disconnected before servicing.
At regular intervals the status of the primary medium must be checked and possibly refill medium. It is advisable to regularly check for leaks, the fittings of the primary circuit. This is especially true if is often missing primary medium.

The metal air filter should be checked periodically for contamination.
Cleaning with compressed air is sufficient for normal soiling.
The slats of the condenser also must be cleaned at regular intervals.
Carefully sweep away or cleaning with compressed air is sufficient for normal soiling.
Caution: When cleaning the slats of the condenser not to damage.
The maintenance interval depends on the ambient conditions at the installation site.

**General maintenance plan:**

Check weekly - water level
Check Monthly - slats from the condenser
Check Monthly - air filter, water filter, DI-filter cartridge
Check Yearly - Electrical, Security
Replace Customized - Air filter

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# Troubleshooting H.I.B chiller

| Fault description | Possible causes | Action |
|---|---|---|
| Flow problems | Water input and water output reversed | Check the hoses for water input and water output |
| | Wrong rotation field | Check the rotation field = right |
| | Pump is not run | Check the fuse and the motor protection switch |
| | | Measure the current consumption of the pump |
| | | Check the pump for possible soilling |
| | | Check the smooth running of the pump |
| | | Check the setting of the motor protection switch |
| | | Check the power supply of the pump |
| | | Visual check of the pump for visible damages |
| | | Check the function of the motor protection switch |
| | Flow sensor has no function | Visual check of the flow sensor |
| | | Check the electrical connection of the flow sensor |
| | | Check smoothness function of switch or turbine |
| | Water level too low | Fill up the water |
| | Leakage in the water circuit | Check the water circuit of possible leaks |
| | Filter inlet is dirty | Change the filter element |
| | Air in the water system | Bleed out the air of the water system |
| | Hose kinked (intern or extern) | Check the hoses and the laying of the hoses |
| | Minimum flow alarm setting is wrong | Check the settings |
| | Temperature controller is defect | Check the function of the temperature controller |
| Low temperature | Regulation valve is defect | Check the function of the valve |
| | Compressor is always in operation | Contactor is defect (always close) |
| | Temperature controller is defect | Check the function of the temperature controller |
| | Temperature sensor is defect | Check the function of the temperature sensor |
| Over temperature | Side wall / housing is open | Mount the side wall / Close the housing |
| | Filter mat / metal filter is dirty | Clean or replace the filter mat / metal filter |
| | Blocked airflow | Ckeck the airflow |
| | Regulation valve is defect | Check the function of the valve |
| | Compressor without function | Check the electrical connection |
| | | Measure the current consumption of the compressor |
| | | Check the fuse and the motor protection switch |
| | Temperature of the compressor is too high Clickson triggers (thermo switch) | Replace the compressor |
| | Defective start capacitor of the compressor | Replace start capacitor |
| | Fan is defect / too slow | Replace the fan |
| | The fan can not freely blow off the heat to outside | Check the freely blow off to the outside |
| | Refrigerant shortage | Check the refrigerant system |
| | | No bubbles in the inspection glass at full load? |
| | | Air outlet temperature >30°C = OK |
| | Ambient temperature is too high | Reduce the ambient temperature |
| | Refrigeration components defective | Check the function of the refrigeration components |
| | No flow in the external water circuit | Raise the flow |
| | | Clean the water filter |