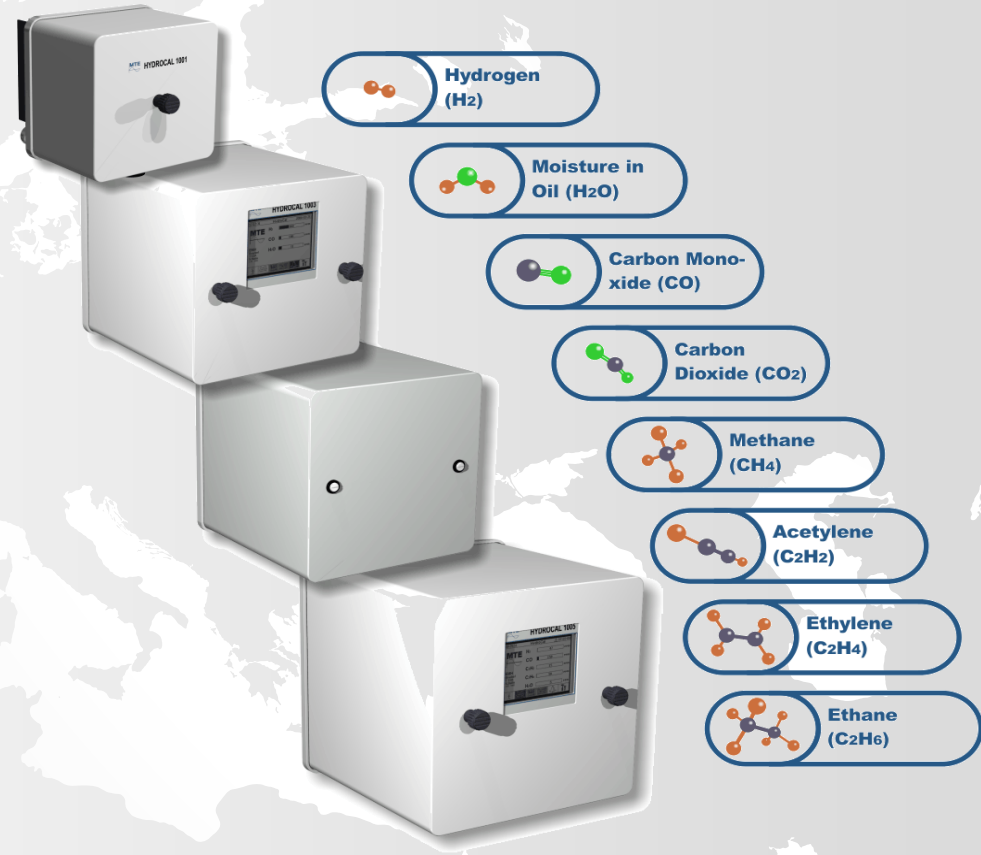


Service procedure

Topics

- Service department
- Required information
- Service tool



After sales service department HYDORCAL



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Required information

Main information

- Hydrocal type
- Serial number
- Detailed failure description
- Service data file

Additional information

- Company name
- End user (operator)
- Installation conditions (Environment)

HYDROCAL, SERVICETOOL, DATAFILE

SERVICETOOL, V2.1.2.0

HYDROCAL, SECTION, CONNECT

CONNECT, DATE, 2017-05-23

CONNECT, TIME, 12:11:35

CONNECT, VIA, TCP 10.21.54.13:49152 (172.30.70.25)

HYDROCAL, SECTION, DEVINFO

DEVINFO, DEVICE, HC1005

DEVINFO, SERNO, 54711

DEVINFO, VERBLD, V1.38-0001

HYDROCAL, SECTION, DGAINFO

DGAINFO, DATE, ---

DGAINFO, H2, ---

DGAINFO, C2H2, ---

DGAINFO, C2H4, ---

DGAINFO, CO, ---

DGAINFO, C2H6, ---

DGAINFO, CH4, ---

DGAINFO, CO2, ---

DGAINFO, O2, ---

DGAINFO, TEMP, ---

DGAINFO, HUM, ---

HYDROCAL, SECTION, SENSORS

SNSR1=H2, 12, 1200, 7, 0, 2000, 0, 2000

SNSR2=C2H2, 12, 1200, 7, 0, 2000, 0, 2000

SNSR3=C2H4, 12, 1200, 7, 0, 2000, 0, 2000

SNSR4=CO, 12, 1200, 7, 0, 5000, 0, 5000

SNSR5=T1, 12, 1200, 1, -20, 100, -20, 100

SNSR6=T2, 10, 1200, 1, -20, 100, -20, 100

SNSR7=H2O, 12, 1200, 7, 0, 100, 0, 100

SNSR8=H2O%, 12, 1200, 9, 0, 100, 0, 100

SNSR9=H2-Day-Trend, 12, 1200, 22, -2000, 2000, -2000, 2000

SNSR10=C2H2-Day-Trend, 12, 1200, 22, -2000, 2000, -2000, 2000

Verry important

The first step in all service cases has to be:

- Do not switch off the device before you readout the service file!
- Please also instruct your customer / operator to act like the same
- If the device was turned off before you made the readout, the necessary information will be erased and this makes a detailed fault finding impossible!

Content

- Portfolio
- Produkt key data
- Work principle and Technology
- **HydroCal-ServiceTool**
- Installation & Comissioning

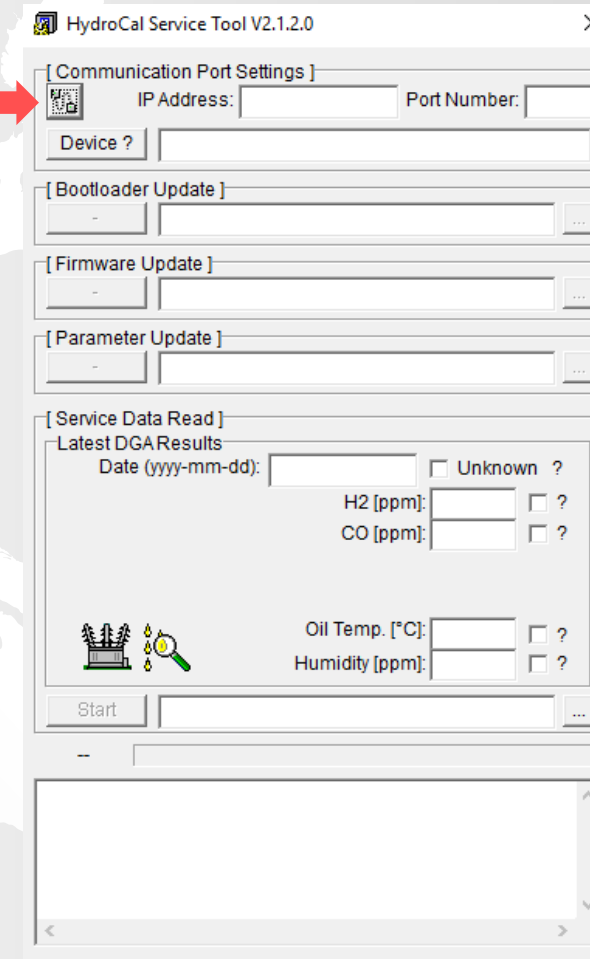


HydroCal Service Tool

- Readout of Service Data
- Bootloader update
- Firmware update
- Parameterization
- DGA Result saving

Step 1.

- Choose the interface



HydroCal Service Tool V2.1.2.0

[Communication Port Settings]

IP Address: Port Number:

Device ?

[Bootloader Update]

[Firmware Update]

[Parameter Update]


[Service Data Read]

Latest DGA Results

Date (yyyy-mm-dd): ☐ Unknown ?

H2 [ppm]: ☐ ?

CO [ppm]: ☐ ?

 Oil Temp. [°C]: ☐ ?

Humidity [ppm]: ☐ ?

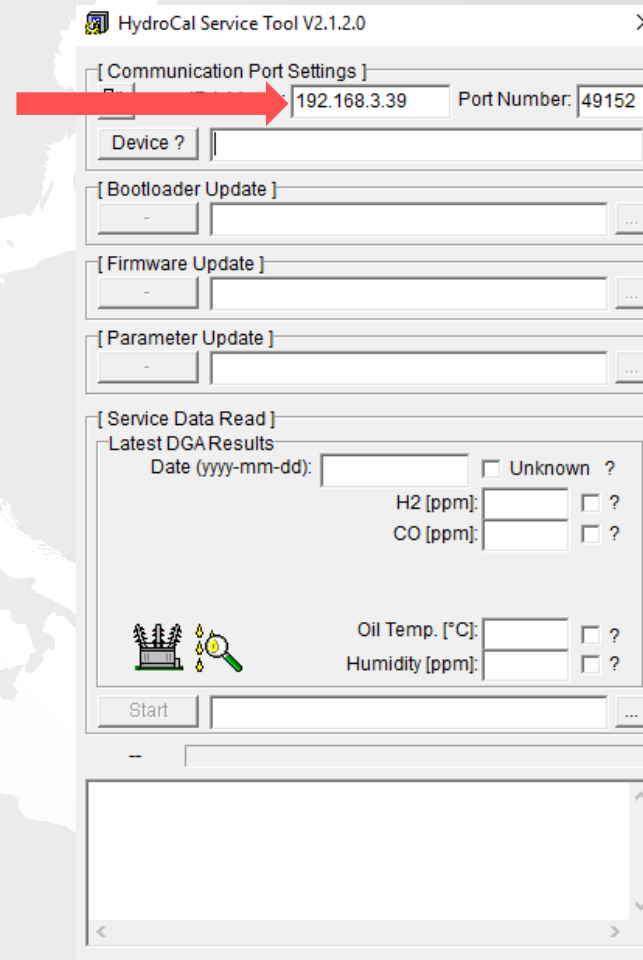
Start

HydroCal Service Tool

- Readout of Service Data
- Bootloader update
- Firmware update
- Parameterization
- DGA Result saving

Step 2.

- Enter the IP address
- Enter the Port Number



HydroCal Service Tool V2.1.2.0

[Communication Port Settings]

IP: 192.168.3.39 Port Number: 49152

Device ?

[Bootloader Update]

[Firmware Update]

[Parameter Update]

[Service Data Read]

Latest DGA Results

Date (yyyy-mm-dd): ☐ Unknown ?

H2 [ppm]: ☐ ?

CO [ppm]: ☐ ?

Oil Temp. [°C]: ☐ ?

Humidity [ppm]: ☐ ?

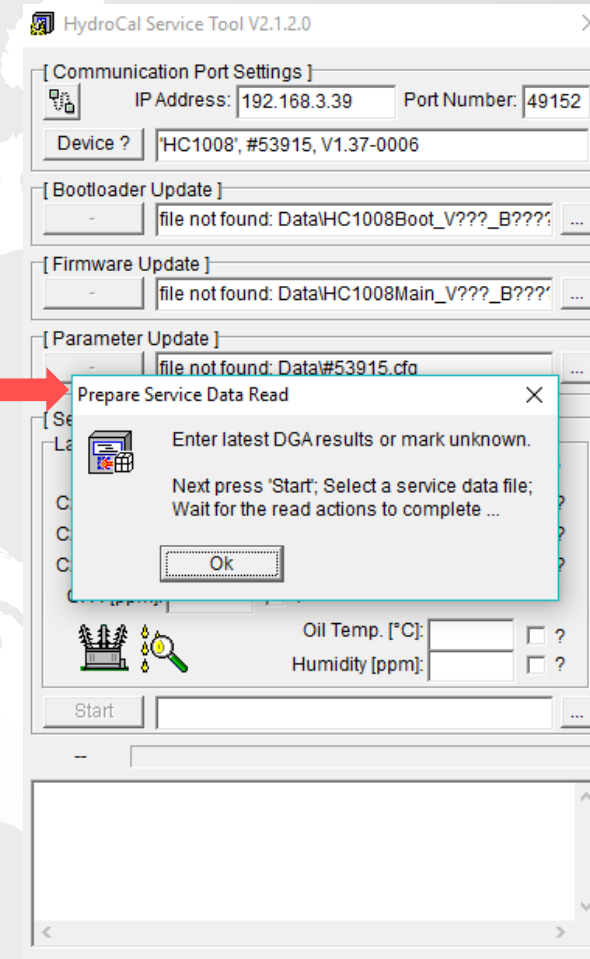
Start

HydroCal Service Tool

- Readout of Service Data
- Bootloader update
- Firmware update
- Parameterization
- DGA Result saving

Step 3.

- Press on “Device?” to connect
- Press ok on the appearing window



HydroCal Service Tool

- Readout of Service Data
- Bootloader update
- Firmware update
- Parameterization
- DGA Result saving

Step 4.

- Enter DGA Results when available
- If not mark them as unknown

HydroCal Service Tool V2.1.2.0

[Communication Port Settings]

IP Address: 192.168.3.39 Port Number: 49152

Device ? 'HC1008', #53915, V1.37-0006

[Bootloader Update]

file not found: Data\HC1008Boot_V???_B???.*

[Firmware Update]

file not found: Data\HC1008Main_V???_B???.*

[Parameter Update]

file not found: Data\#53915.cfg

[Service Data Read]

Latest DGA Results

Date (yyyy-mm-dd): ☐ Unknown ?

C2H2 [ppm]: ☐ ? H2 [ppm]: ☐ ?

C2H4 [ppm]: ☐ ? CO [ppm]: ☐ ?

C2H6 [ppm]: ☐ ? CO2 [ppm]: ☐ ?

CH4 [ppm]: ☐ ?

Oil Temp. [°C]: ☐ ?

Humidity [ppm]: ☐ ?

Start

HydroCal Service Tool

- Readout of Service Data
- Bootloader update
- Firmware update
- Parameterization
- DGA Result saving

Step 4.

- Enter DGA Results when available
- If not mark them as unknown

HydroCal Service Tool V2.1.2.0

[Communication Port Settings]

IP Address: 192.168.3.39 Port Number: 49152

Device ? 'HC1008', #53915, V1.37-0006

[Bootloader Update]

file not found: Data\HC1008Boot_V???_B???.*

[Firmware Update]

file not found: Data\HC1008Main_V???_B???.*

[Parameter Update]


file not found: Data\#53915.cfg

[Service Data Read]

Latest DGA Results

Date (yyyy-mm-dd): -- -- -- ☒ Unknown ?

C2H2 [ppm]: --	<input checked="" type="checkbox"/> ?	H2 [ppm]: --	<input checked="" type="checkbox"/> ?
C2H4 [ppm]: --	<input checked="" type="checkbox"/> ?	CO [ppm]: --	<input checked="" type="checkbox"/> ?
C2H6 [ppm]: --	<input checked="" type="checkbox"/> ?	CO2 [ppm]: --	<input checked="" type="checkbox"/> ?
CH4 [ppm]: --	<input checked="" type="checkbox"/> ?		

 Oil Temp. [°C]: -- ☒ ?

Humidity [ppm]: -- ☒ ?

Start

Hydrocal Service Tool

- Readout of Service Data
- Bootloader update
- Firmware update
- Parameterization
- DGA Result saving

Step 5.

- Press “Start”
- Choose a destination on the PC
- Press “Saving” to start the readout

HydroCal Service Tool V2.1.2.0

[Communication Port Settings]

IP Address: 192.168.3.39 Port Number: 49152

Device ? 'HC1008', #53915, V1.37-0006

[Bootloader Update]

file not found: Data\HC1008Boot_V???_B???.*

[Firmware Update]

file not found: Data\HC1008Main_V???_B???.*

[Parameter Update]

file not found: Data\#53915.cfg

[Service Data Read]

Latest DGA Results

Date (yyyy-mm-dd): -- -- -- ☒ Unknown ?

C2H2 [ppm]: --	<input checked="" type="checkbox"/> ?	H2 [ppm]: --	<input checked="" type="checkbox"/> ?
C2H4 [ppm]: --	<input checked="" type="checkbox"/> ?	CO [ppm]: --	<input checked="" type="checkbox"/> ?
C2H6 [ppm]: --	<input checked="" type="checkbox"/> ?	CO2 [ppm]: --	<input checked="" type="checkbox"/> ?
CH4 [ppm]: --	<input checked="" type="checkbox"/> ?		

Oil Temp. [°C]: -- ☒ ?

Humidity [ppm]: -- ☒ ?

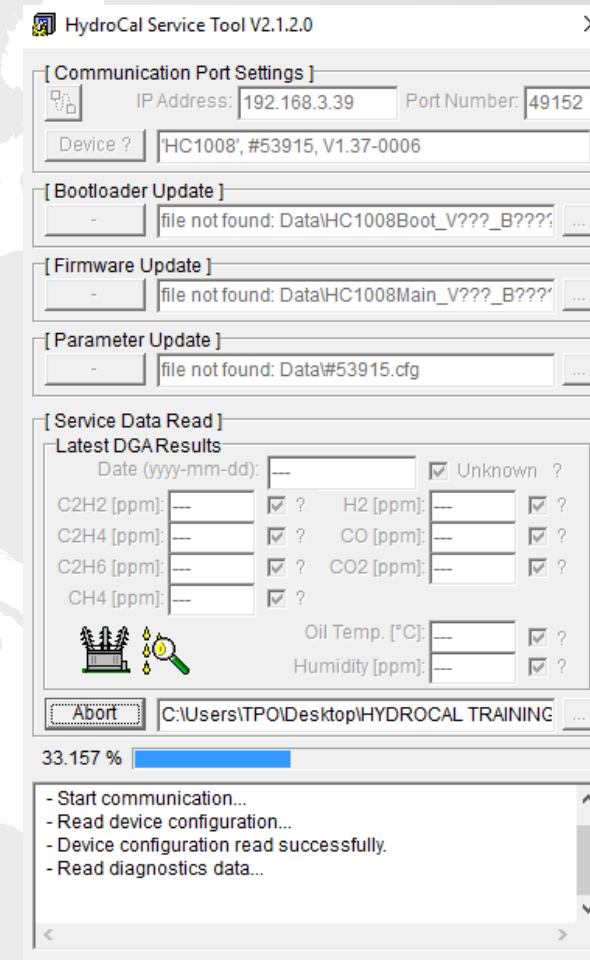
Start

Hydrocal Service Tool

- Readout of Service Data
- Bootloader update
- Firmware update
- Parameterization
- DGA Result saving

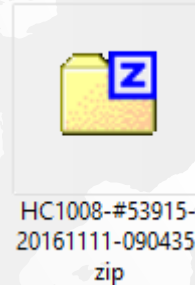
Step 6.

- The software downloads the data



Hydrocal Service Tool

- Readout of Service Data
- Bootloader update
- Firmware update
- Parameterization
- DGA Result saving



Step 7.

- The screen turns green when the readout were successful
- A zip file is on the given destination

