### Hei-PROCESS

#### По вопросам продаж и поддержки обращайтесь:

Алматы (7273)495-231 Ангарск (3955)60-70-56 Архангельск (8182)63-90-72 Астрахань (8512)99-46-04 Барнаул (3852)73-04-60 Белгород (4722)40-23-64 Благовещенск (4162)22-76-07 Брянск (4832)59-03-52 Владивосток (423)249-28-31 Владикавказ (8672)28-90-48 Владимир (4922)49-43-18 Волгоград (844)278-03-48 Вологда (8172)26-41-59 Воронеж (473)204-51-73 Екатеринбург (343)384-55-89 Иваново (4932)77-34-06 Ижевск (3412)26-03-58 Иркутск (395)279-98-46 Казань (843)206-01-48

Россия +7(495)268-04-70

Калининград (4012)72-03-81 Калуга (4842)92-23-67 Кемерово (3842)65-04-62 Киров (8332)68-02-04 Коломна (4966)23-41-49 Кострома (4942)77-07-48 Краснодар (861)203-40-90 Красноярск (391)204-63-61 Курск (4712)77-13-04 Курган (3522)50-90-47 Липецк (4742)52-20-81 Магнитогорск (3519)55-03-13 Москва (495)268-04-70 Мурманск (8152)59-64-93 Набережные Челны (8552)20-53-41 Нижний Новгород (831)429-08-12 Новокузнецк (3843)20-46-81 Ноябрьск (3496)41-32-12 Новосибирск (383)227-86-73

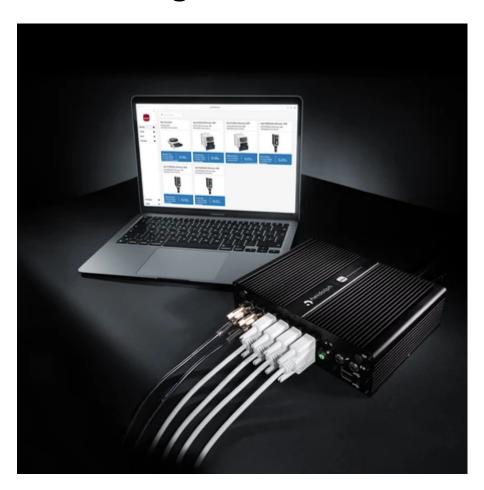
Киргизия +996(312)-96-26-47

Омск (3812)21-46-40 Орел (4862)44-53-42 Оренбург (3532)37-68-04 Пенза (8412)22-31-16 Петрозаводск (8142)55-98-37 Псков (8112)59-10-37 Пермь (342)205-81-47 Ростов-на-Дону (863)308-18-15 Рязань (4912)46-61-64 Самара (846)206-03-16 Саранск (8342)22-96-24 Санкт-Петербург (812)309-46-40 Саратов (845)249-38-78 Севастополь (8692)22-31-93 Симферополь (3652)67-13-56 Смоленск (4812)29-41-54 Сочи (862)225-72-31 Ставрополь (8652)20-65-13 Сургут (3462)77-98-35

{азахстан +7(7172)727-132

Сыктывкар (8212)25-95-17 Тамбов (4752)50-40-97 Тверь (4822)63-31-35 Тольятти (8482)63-91-07 Томск (3822)98-41-53 Тула (4872)33-79-87 Тюмень (3452)66-21-18 Ульяновск (8422)24-23-59 Улан-Удэ (3012)59-97-51 Уфа (347)229-48-12 Хабаровск (4212)92-98-04 Чебоксары (8352)28-53-07 Челябинск (351)202-03-61 Череповец (8202)49-02<u>-64</u> Чита (3022)38-34-83 Ярославль (4852)69-52-93

# **Processing Solutions**



### **Hei-PROCESS**

### **Processing Solutions**

Why waiting for standards when you can define your own? We adapt to your process – not vice versa.

### Digitalization, standardization, process control

Are you also facing the challenge of making your laboratory ready for the future? Then you have certainly dealt with the above topics and discovered that establishing a networked and automated laboratory environment is anything but easy. A smooth transfer of individual manual workflows into a fully automated process often fails because different devices and software are not compatible with each other. Siloed solutions always require manual intervention and prevent an efficient workflow.

We have recognized these problems and want to support you. From the simple integration and remote control of individual laboratory devices to the complete automation of complex processes: With the Hei-PROCESS variants, we will find the right solution for your requirements.

#### Your advantages at a glance:

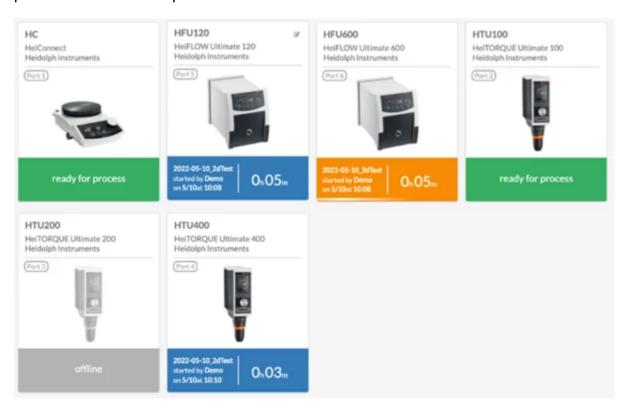
- ✓ Control all processes in a scalable way from research and development to production.
- ✓ Manage processes with a single user interface regardless of scope and complexity.
- ✓ Easily integrate new and existing devices also from other manufacturers.

Thanks to the control of your devices via our powerful web application, our processing automation solutions cover all complexities: from individual laboratory equipment for simple processes to fully integrated customer-specific solutions. So, starting from already existing Heidolph devices with RS 232 interfaces to application-specific developed devices from our partner OSPIN, you can control all processes in the same cloud solution.

# You can get started easily - without a complex server solution or software installation on each individual device:

- Connect your already existing Heidolph devices to the OSPIN Gateway via RS 232
- Control and monitor your devices and processes from any browser
- No loss of time when transferring and combining data from the various devices
- · Easy reproduction of your results
- Programmed process execution instead of manual status changes on the device
- Time savings through automatic documentation of all process information

Connect your Heidolph devices within a process chain to create new functionalities – for example a pH controller from a pH sensor coupled with a pump – and thus control your processes via several parameters.



#### Many devices, one interface

Monitor and control your entire network of devices from one dashboard, whether at home or in the office.

#### Optimization of process technology

The easy-to-use, powerful interface allows you to fully focus on your research. The OSPIN Web App takes care of the rest and saves the entire team countless hours of working time.

The perfect introduction to process automation – powerful enough to handle even the most complex applications. No complicated setup or installation – only a browser is required.

#### Connect to your devices anywhere, anytime!

#### Control processes of any complexity:

Processes consist of individual phases, as in a cooking recipe, so that each sub-step can be easily automated (phase-based programming).

- In each phase, the setpoint of the various device parameters (e.B. speed, temperature,...) can be changed
- Repeating phases can be grouped into loops, which are then executed for a defined number of cycles
- Ad-hoc process changes are possible at any time and are automatically tracked
- Full data logging
- GMP certification possible
- Easy user rights and device management

#### Three different levels of complexity, depending on prior knowledge and requirements:

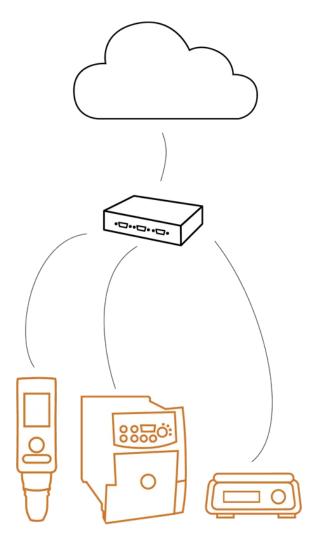
Hei-PROCESS Core	Hei-PROCESS Expert	Hei-PROCESS Ultimate
Control individual Heidolph devices via any browser and let the OSPIN Web App automatically document every part of your process.	The OSPIN Web App controls the processes of interconnected Heidolph devices, allowing new functionalities to be created and more process parameters to be controlled.	Freely combine Heidolph and 3rd party devices via plugand-play to meet your changing requirements.

Function	Core	Expert	Ultimate
Recipe-based process control	X	x	x
Automatic data logging	X	x	x
Remote control of individual devices	X	x	x
Collaboration of multiple devices in a predefined combination	n	x	x
Active control of parameters		x	x
Integration of 3rd party devices		0	x
Free configuration of the device network by the user			x

x = Included in solution, o = Possible on request

## **Hei-PROCESS Core**

### **Processing Solutions**



### **Hei-PROCESS Core**

Time-based control according to recipe:

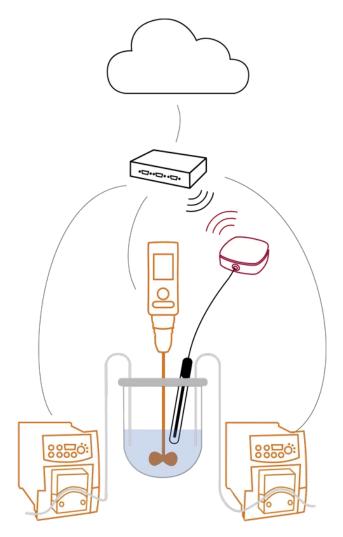
Processes consist of individual phases, as in a cooking recipe, so that each sub-step can be easily automated (phase-based programming).

Cloud-based, time-dependent control of up to six individual Heidolph devices with separate process control for each device.

- Uniform process control enables control of more complex systems according to the same operating concept in the future
- User can define and execute processes (recipes executed by one device)
- One process per Heidolph device (devices are independent of each other)
- One OSPIN box can serve up to six independent device processes simultaneously

# **Hei-PROCESS Expert**

### **Processing Solutions**



# **Hei-PROCESS Expert**

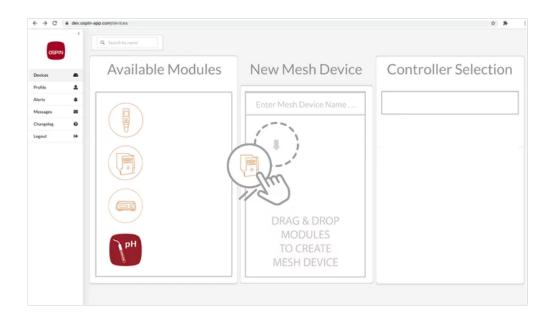
#### Parameter-dependent control:

Allow individual phases in the processes to be triggered parameter-wise, for example by a predefined pH value. By integrating different measuring instruments, follow-up actions of parameter changes can be triggered automatically (parameter-based programming).

- Cloud-based and parameter-dependent control of a predefined configuration on Heidolph devices and sensors
- Devices in a fixed configuration
- With common representation of data recording/data recording per process configuration
- Integration of various measuring instruments or third-party devices on request
- Separate devices are combined to one single process assembly
- Users can create individual applications from fixed combinations
- Connected devices can only be synchronized with one process

## **Hei-PROCESS Ultimate**

### **Processing Solutions**



### **Hei-PROCESS Ultimate**

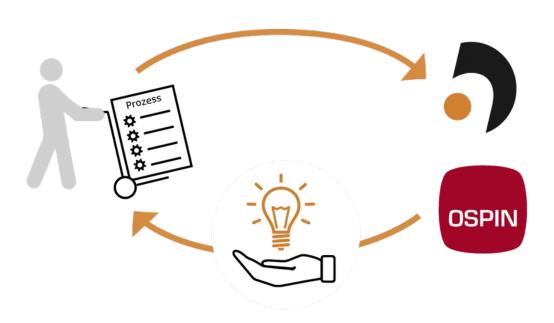
#### Plug-and-play principle:

Heidolph devices, sensors and third-party devices from a growing portfolio can be freely combined with each other and individually work on simple to complex processes.

- Cloud-based control of Heidolph devices, sensors and third-party devices, connected to a gateway
- Freely combine devices from the portfolio and let them interact
- Map processes on the dashboard individually
- Continuous expansion of the portfolio of compatible devices
- · Support of process design by OSPIN
- Expandable: New devices can be added to the platform
- Connected devices can work asynchronously in multiple processes

## **Hei-PROCESS Customized**

### **Processing Solutions**



### **Hei-PROCESS Customized**

Let us configure an individual solution for your process:

- Personalized and fully integrated solutions completely tailored to the requirements
- Automation of highly complex processes that cannot be carried out by combining several devices alone. Here, individual devices are developed for the customer, for example in the field of cell therapy
- Analysis of your processes and development of a tailor-made roadmap for automation

#### По вопросам продаж и поддержки обращайтесь:

Алматы (7273)495-231 Ангарск (3955)60-70-56 Архангельск (8182)63-90-72 Астрахань (8512)99-46-04 Барнаул (3852)73-04-60 Белгород (4722)40-23-64 Благовещенск (4162)22-76-07 Брянск (4832)59-03-52 Владивосток (423)249-28-31 Владикавказ (8672)28-90-48 Владимир (4922)49-43-18 Волгоград (844)278-03-48 Вологда (8172)26-41-59 Воронеж (473)204-51-73 Екатеринбург (343)384-55-89 Иваново (4932)77-34-06 Ижевск (3412)26-03-58 Иркутск (395)279-98-46 Казань (843)206-01-48

Россия +7(495)268-04-70

Калининград (4012)72-03-81 Калуга (4842)92-23-67 Кемерово (3842)65-04-62 Киров (8332)68-02-04 Коломна (4966)23-41-49 Кострома (4942)77-07-48 Краснодар (861)203-40-90 Красноярск (391)204-63-61 Курск (4712)77-13-04 Курган (3522)50-90-47 Липецк (4742)52-20-81 Магнитогорск (3519)55-03-13 Москва (495)268-04-70 Мурманск (8152)59-64-93 Набережные Челны (8552)20-53-41 Нижний Новгород (831)429-08-12 Новокузнецк (3843)20-46-81 Ноябрьск (3496)41-32-12 Новосибирск (383)227-86-73

Киргизия +996(312)-96-26-47

Омск (3812)21-46-40 Орел (4862)44-53-42 Оренбург (3532)37-68-04 Пенза (8412)22-31-16 Петрозаводск (8142)55-98-37 Псков (8112)59-10-37 Пермь (342)205-81-47 Ростов-на-Дону (863)308-18-15 Рязань (4912)46-61-64 Самара (846)206-03-16 Саранск (8342)22-96-24 Санкт-Петербург (812)309-46-40 Саратов (845)249-38-78 Севастополь (8692)22-31-93 Симферополь (3652)67-13-56 Смоленск (4812)29-41-54 Сочи (862)225-72-31 Ставрополь (8652)20-65-13 Сургут (3462)77-98-35

Сыктывкар (8212)25-95-17 Тамбов (4752)<u>50-40-</u><u>97</u> Тверь (4822)63-31-35 Тольятти (8482)63-91-07 Томск (3822)98-41-53 Тула (4872)33-79-87 Тюмень (3452)66-21-18 Ульяновск (8422)24-23-59 Улан-Удэ (3012)59-97-51 Уфа (347)229-48-12 Хабаровск (4212)92-98-04 Чебоксары (8352)28-53-07 Челябинск (351)202-03-61 Череповец (8202)49-02-64 Чита (3022)38-34-83 Якутск (4112)23-90-97 Ярославль (4852)69-52-93