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## **BASIC INFORMATION ON THE MPC SYSTEM**

#### System Description

The System is designed for cooperation with specialized controllers manufactured by MIKSTER, which record and control manufacturing processes, among others in smokingbrewing chambers, heat boilers, drying chambers, vacuum mass devices. The MPC System delivers documentation in compliance with the HACCP requirements. Current version supports the following controllers:

_	<b>INDU WRC 2000</b>	– DAT 120

- MCC 100 MCC 026
- MCC 2100 MCC 050
- MCC 106 MCC 051

### **Functional Properties**

- equipment status monitoring, allowing to check the following:
  - which processes are activated in controllers,
  - values of preset and read out parameters,
  - which devices are switched on by the controller,
- collected data readout from controllers,
- review of collected data coming from controllers either in form of tables or graphs,
- collected data printouts (tables and graphs)

### System Requirements

Minimum hardware requirements: computer with Pentium processor, 64MB RAM (recommended 128 MB RAM), 1 free RS232 port, required disk space for installation - approximately 30MB. Recommended minimum 100MB of free disk space for operation. The TCPIP data transfer protocol is also required.

In case if the computer is connected to the network (network interface card), this protocol has already been installed, otherwise it needs to be installed.

For WindowsNT/2000/XP systems it is sufficient to install the *Microsoft diagnostic loopback* card, while for Windows 9x systems it is required to define the connection in Dial-Up networking, and assign to the computer any IP number.

In order to ensure correct screen font display in the MPC application, the screen settings should be as follows:

If your screen resolution makes scree comfortably, you can increase the D font sizes only, click Cancel and go t	Pl to compensate. To change
DPI setting:	
Normal size (96 DPI)	~
Normal size (96 dpi)	

DPI settings: normal size (96 DPI)

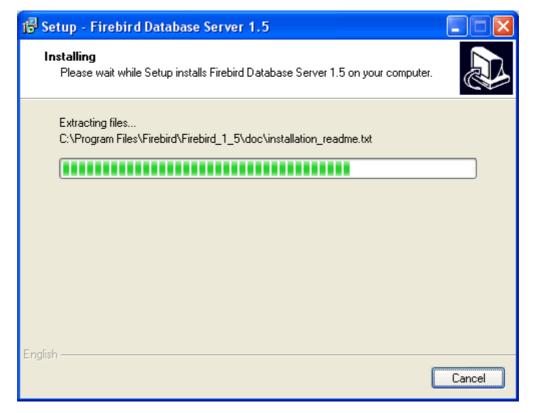
## **Program Installation**

ATTENTION! In order to install the program on computers with the Windows NT, Windows 2000 or Windows XP, you must log in as user with administrator rights. The MPC is designed to work in Windows environment. You will receive it on a CD-ROM. As soon as you insert the CD in your CD-ROM drive, the program will start automatically. Otherwise, run the instalator.exe program provided on the CD-ROM in the main directory, and then select the language version.

As soon as the software has been installed, the installation program will activate the Firebird database automatic setup.

### Database Setup





If the message shown below is displayed:



it means that the Firebird server has been previously installed. In that case, press OK and when the screen appears, select "Cancel", and then in the dialog box - "Exit setup".

When the installation process is complete, the program will be automatically activated. Moreover, the activating icon will be installed in the desktop (name: MPC) and in the menu programs (Start->Programs->Mikster->MPC).

#### Main Screen

	d MPC System 4.42	
E	Efe Controllers Settings	
	Processes Download 11:59:05	<i>MIC75</i> 84.
Q.	Controller 10       Program 6       Product Program 1       Set     Actual       00%     Trep 2     00%       00%     Step 0     0%       00%     Step 0     0%	
	Administrator	

## The MPC Program Main Menu

The following items are available in the MPC application main menu:

- Login/Logout
- Service
- Close the program

ogout rocesses		12	:00:55	5		
ervice 🕨	Dictionaries •	Identification		entifier types		 
lose	Verify data integrity Users	Operator grou Programs grou		entifier groups		
Product	Events report	Product P	rogram 1			
Set	Security backup	Set		Actual		
0,0 °C	Database optimization	0,0 °C	Temp 1	:010 °C		
0,0 *C	Automatic archive settings	0	Temp 2	0,0 °C		
0 %	Configuration	0%	Humidity	- 0%		
00:00	Erase buffer (MCC controllers)	00:00	cycle time	00:00		
Cycle I	Diagnostic data	Cycle 0	Step			
CA.	Configuration tools	R.	0			
			~			

Menu group Service consists of:

- Dictionaries
- Verify data integrity
- Users' list
- Events report
- Security backup
- Database optimization
- Automatic archive settings

Subgroup Dictionaries consists of:

- Identification of processes
- Operator groups
- Programs groups

Identification of processes consists of:

- Identifier types
- Identifier groups

## Verify data integrity

Recordings are downloaded from controllers as temporary files (LOG type). These files provide basis to restore processes taking place in the program, this is possible through the "Collected data verification" function – available for program administrator. Select item *File / Service* in upper menu, and then *Collected data verification*. Window *"The MPC collected data verification"* will appear.

When you set time range and select the controller, press push-button *Execute* – box with request to confirm execution will appear – as soon as you select *Yes*, the collected data verification process will begin.

#### Comments

If a whole process is missing in the program – it will be added. If process end is missing – it will be found and completed. Missing process samples shall not be added if they are newer than those already entered ones, that is if there is a process with missing initial measurements then it is necessary to remove the whole process – and then use the collected data verification.

Select verification range from.... to...., check the controller, which you wish to put through the verification process, and then press push-button **Execute**.

Verify data integrity	×
Select range	× Close
From 2005-10-09	
To 2005-10-11 💌 00:00:00	
Controller	
Start	



Verify data integrity	×
Summary	× Close
Start verify: 2005-10-18 13:23	
 Select range: 2005-10-17 - 2005-10-19 < All >	
End: 2005-10-18 13:23	

## Users' List

This function allows to add and edit users in the MPC system.

Click icon to add new user.

Users			×
			× Close
٩			
Username	Name	Access level:	-
Adm	Administrator	administrator	
mpc	MPC	OPERATOR	
			-

Enter name for that user and fill in other fields, confirm correct entry with the



🖏 Users list		-OX
		🗸 ок
User:	трс	🗙 Cancel
Name	Smith	
Password	*****	
Reenter new password:	****	
Access level:	OPERATOR 💌	

## List of Events

Select this icon in order to preview the list of events in the program.

Icon definitions:



- all events
- program settings
- equipment settings
- e-mail notification messages

Event log			Llose
<b>e</b> Date	Description	User:	•
2005-10-18 13:23	Verify data integrity	Administrator	
2005-10-18 13:09	Change data and Time: Indu WRC 2000	Administrator	
2005-10-18 13:09	Configuration -> Controllers list	Administrator	
2005-10-18 13:03	Configuration -> Controllers list	Administrator	
2005-10-18 12:54	Configuration -> Controllers list	Administrator	
2005-10-18 12:48	Configuration -> Controllers list	Administrator	
2005-10-18 12:48	Login	Administrator	
2005-10-17 09:45	Header and footer	Administrator	
2005-10-17 09:43	Login	Administrator	
2005-10-17 09:43	Error logging	Administrator	
2005-10-17 09:42	-> Users	Administrator	
2005-10-17 09:42	Login	Administrator	
2005-10-10 12:10	Login	Administrator	
2005-10-10 12:09	Configuration -> Controllers list	Administrator	
2005-10-10 12:06	Configuration -> Controllers list	Administrator	
2005-10-10 09:58	Login	Administrator	
2005-10-10 09:32	Configuration -> Controllers list	Administrator	
2005-10-10 09:18	Configuration -> Controllers list	Administrator	

### Security Backup Settings

The MPC program is equipped with a built-in tool to make security backups. Set frequency for copy-making (everyday, every week, every month), enter hour, and determine the directory, in which security backups will be saved. Then confirm settings with push-button OK.

Security backup	x
Frequency Every day	OK Cancel
Time	
Destination path D:\	

## Database Optimization

The MPC program possesses built-in mechanisms for database optimization. The optimization process is executed on the server. The MPC suggests optimization process execution once a day. Should the MPC be activated at night (between 3:00 and 7:00 a.m.), the optimization will be executed automatically (the MPC closes, activates the optimization program, and restarts as soon as the optimization is complete.

It is also possible to execute the database optimization process manually, by selecting application "Database Repair" from menu:



While the database optimization process is in progress, it is possible to use the MPC application on a regular basis at any workstation, which is not a server.

MIKSTER - optimalization v1.7	
Check the base	Check whether the base contains errors. If errors are found proceed to Repair the base
Repair the base	Repair of the base. If that process is suspended for a long time restart the computer and proceed to ' Advanced repair
Copy the base	Create the copy of the current base (lastcopy.gbk)
Recover the base from the copy	Base recovery from the copy. (NOTEl Prior to the selection of this option all connections with the base must be closed)
Advanced repair	Advanced repair in the case when the simple repair will not be successful
Copying	

### Automatic Archive Settings

The automatic archiving function is available in **Service / Automatic Archive Settings** menu. It is possible to enter setting allowing the program to make automatic data archiving, in order to do that check option **Create automatic archive**, enter the path to the directory, in which copies are to be saved, set the frequency in months for making the archive, e.g. every month, enter the day of month, in which the archiving will be carried out, e.g. on 3<sup>rd</sup> day of the month.

We recommend to check function **Delete data from original database after creating an archive** - this has advantageous effect on database functioning.

۵.	rchive	×
	Make archive	
	Select directory	
	C: \Program Files \Mikster \MPC3_ENG \data 🔗	
	Make archive every (months)	
	Archive day 3	
	Remove recordings moved to the archive	
	Delete data older than (months) 3	
	Save Close	

Select Directory	×
Directory <u>N</u> ame: C:\Program Files\Mikster\MPC3_ENG\data	
Directories:	<u>F</u> iles: (*.*)
C:\ Program Files Mikster MPC3_ENG data	
	Drives:
	Cancel

In case if the option **Delete data from original database after creating an archive** is checked, the program will automatically create a directory containing data, according to the pattern: currentyear\_currentmonth

e.g. if current year is 2005 and current month is May, then the program will create directory **2005\_5** in specified directory: C:\Program Files\Mikster\MPC4\TEMPARCH, and transfer there all data older than 3 months, in order to relieve the database.

Access to these data is always possible; in order to check older data enter the directory containing archived data and run the mpc.exe application, stored in the archive directory.

#### Dictionaries

Vocabulary data, which include the *operator groups* and *program groups*.

## **Operator Groups**

Controller operators may be assigned to specific devices.

Operator gr	pups		×
No	Name		
	1 Indu WRC 2000 operators		
	Operators		
No	Name		<u> </u>
1	John Golle		
2	Mike Sanders		
3	Martin Footloker		
			-
I			
		Select	Close

In order to assign operators to devices, select icon from the Operators group. As soon as operators are entered, it is possible to download entries in the menu **Controllers settings / Controllers list**.

5 M	PC System	
File	Controllers	Settings
	Controller	rs list
Pro	DAT-120	+

Controllers list						×
						🗙 Close
C						
Name	Туре	Port C	Add.RS	Code	Authorize	
DAT-120		0	1			
Indu WRC 2000		2	16			
MCC-100		0	4			
						•

Click twice the device INDU WRC 2000 in order to shift to edition of entries. Going to the overlap **Operators**, it is possible to download previously entered operators. Click icon

\* Take from the group to download operators from the group.

Controller set	tings	×
Name	No	ок
Indu WRC 2	2000 00	
Type: WR ✓ Active	C 2000	Cancel
Setup Alar	ms Alarm names Process names Operators 🚺 🕨	
👬 Take	from the group	
Operators	 .]	
No	Name	
1	John Golle	
2	Mike Sanders	
3	Martin Footloker	
	_	

## Program Groups

Program groups allow to define names for programs (manufacturing processes) set in the controller.

🖏 Program	s groups		_ 🗆 🗡
No	Name		
	1 Programs for MCC-100		
	Programs		
No	Name		
1	polish sausage		
	salami		
3	german wurst		
			-
		<b></b>	
		Select	Close

## **Identifier Types**

An identifier determines feature described by value entered by an operator in a controller.

Identifier types		×
No Name		
1 Product		
	Select	Close

#### **Identifier Groups**

This function allows to attribute name and type for a specific identifier.

Identifier gro	ups			×
No	Name			<b>▲</b>
	1 for MCC-100			
	2 MCC-100			
				-
	2	Identifier		_
Identifier	Туре	Name		<u> </u>
	Product	polish sausage		
0000002	Product	german wurst		
•				
			Select	Close

				×
<b>@</b>				
	No	1		
	Name	for MCC-100		
ID1:	Product		-	
ID2:			•	
ID3:			•	
ID4:			•	
ID5:			•	
ID6:			•	
ID7:			•	
ID8:			•	
ID9:			•	
ID10:			•	
ID11:			•	
ID12:			-	

Edit	×
Identifier 0000001	
Name polish sausage	
Type Product	
Save Cancel	

## Identification Setting

Example: The controller possesses an 8-character identifier. The first identifier digit indicates cart quantity, next 4 - product code, and another 3 characters - no meaning.

Group shall be defined in the first place. In order to do that, log in as administrator and go to:

Menu File / Service / Dictionaries / Process Identification / Identifier Groups

ogout rocesses		12:0	00:55			
ervice 🕨 🕨	Dictionaries 🕨 🕨	Identification	Iden	ifier types		
ose	Verify data integrity Users	Operator group Programs group		ifier groups		
Product	Events report	Product Pro	gram 1			
Set	Security backup	Set		Actual		
0,0 °C	Database optimization	0,0 °C	Temp 1	0,0*C		
0,0 *C	Automatic archive settings	0	Temp 2	0,0 °C		
0 %	Configuration	0%	Humidity	0%		
00:00	Erase buffer (MCC controllers)	00:00	cycle time	.00:00		
Cycle (	Diagnostic data	2	Step			
nh -	Configuration tools	1	Q	OM		

Add a new group by pressing icon

Identifier gro	ups			×
	. 😰 🖨			
No	Name			
	1 for MCC-100			
	2 MCC-100			
				-
	2	Identifier		
Identifier	Туре	Name		<u> </u>
0000001	Product	polish sausage		
0000002	Product	german wurst		
			Select	Close

Then enter the name, e.g. MCC-100 identification, and attribute **ID1** name, e.g. cart quantity.

6			
	No	0	
	Name	for MCC-100	
	ID1: Product		•
	ID2:		•
	ID3:		•
	ID4:		-
	ID5:		-
	ID6:		-
	ID7:		<u> </u>
	ID8:		- -
	ID9:		
	ID10:		<u> </u>
	ID11:		긕
	ID12:		-
	en click icon	and add 4-character identifier for a pro	
	Edit		×
	Identifier	0000001	
	Name	polish sausage	
	Туре	Product 💌	
		Save Cancel	

Then enter controllers settings by selecting this function from menu Controllers settings / Controllers list.

Controllers list						×
						× Close
٩						
Name	Туре	Port C	Add.RS	Code	Authorize	
DAT-120		0	1			
Indu WRC 2000	WRC 2000	1	1			
MCC-100		0	4			
						•

Click twice selected device, e.g. mcc-100, and then go to overlap **Identifiers** and download settings from group **Identifiers** [Select from Group].

Controller se	ttings			×
Name			No	ок
Indu WRC	2000		00	
Type: WF	XC 2000			Cancel
Alarm name	es   Process names   C	)perators Identification		
👬 Take	from the group 🛛 🗖 L	ike older controllers		
Defined ide	entifiers   Kinds accordi ▲	ng to identifier's number		
Identifier	Туре	Name		
0000001	Product	polish sausage		
0000002	Product	german wurst		

When going to overlap "Product Identifier", specify identifier division. Mark selection field Product identifier division

For group 1 – one character

For group 2 – four characters

For group 3 – three characters

etc. ....

Controller settings			×
Name		No	ок
Indu WRC 2000		00	
Type: WRC 2000			Cancel
Active			
Process names Operators Ide	entification ID Article	- <b>- - -</b>	
Division of the product ide	ntifier		
The way of division			
Successive groups	Number of character	s	
Group 1	1		
Group 2	4		
Group 3	3		
Group 4	0		
Group 5	0		
Group 6	0		
Group 7	0		
Group 8	0		

The result of this operation is recognition of an identifier entered in a controller.

# 2 0001 000

as 2 carts with the "Krakowska" sausage

Inc	du WRC 2000		N	×
		Program 1 Product		
		Set	Re	aded
		95,0 °C	Temp. Chamber	24,6°C
		0,0 °C	Temp. Core	25,1°C
		0 %	Humidity	99%
		04:00	cycle time	03:59
	WRC 2000 2005-10-18 13:13	Cycle	2 Step	
Identification			-Outputs condition	
Туре	Name		1 2 3 4 5	6 7 8
				** <b>*</b> 🗳 👘
			9 10 11 12 13	14 15 16
			17 18 19 20 21	22 23 24
				R6 <sup>9</sup> R7 <sup>9</sup> R8 <sup>9</sup>
				30 31 32
•		]	R9 R10 R11 R12 R13	R14] [R15] [R16]

## First Activation of the Program

After activation the program inquires about USER. By default, after installation there are two users: administrator - marked with code **Adm**, and operator with code **mpc** 

(in previous versions - Oper), both users have access without password.

When the program is activated for the first time, enter user's code: **Adm**, do not enter password and press OK button. If wrong data is entered, message: "Wrong operator's code or password" will appear - then press OK button, and try again to enter user's code and password, watch if entered letters have right size.

Login	×
User:	
Adm	
Password	
OK	Cancel

#### Typical operations at first activation:

- 1. Entering controllers list (equipment list) supported by the program
- 2. Entering users' list, and attributing passwords to them
- 3. Entering program parameters
- 4. Setting of proper parameters for graphs, and printout parameters

5. Entering names of products and matching them identifiers (Id), or entering names and numbers of programs

## Adding and Modifying Controllers Supported by the Program

Access to the controllers list is possible after logging in the program with administrator rights. Select item *Controllers settings* in upper menu, and then select *Controllers list*. Window *"Controllers list"* will appear. This window contains all entered controllers. This is where we may add a new controller or change settings for already entered controller.



Click with mouse in order to add new controller. Window **CONTROLLER SETTINGS** will appear, fill in all fields and press push-button **OK**.

#### **Controller Settings**

After opening window "Controller settings" from menu "Controllers list", we go to controller settings; below you will find definitions of fields in CONTROLLER SETTINGS window:

Active device - Controller activity selection field

Device name - usually here we enter the name of a device supported by the controller e.g. CHAMBER 01

#### Attention !

If you enter "CHAMBER 1", then "CHAMBER 1" and "CHAMBER 10" will be displayed next to each other - both begin from the same digit - only if entered devices have numbers with preceding zeros, e.g. "01", they will be displayed in right order.

Device number - determined device number

#### **Overlap "Transmission"**

Controller settings	×
Name No	ок
Indu WRC 2000 00	
Type: WRC 2000	Cancel
I Active	
Transmission Controller date&time Setup Alarms Alarm	
Port COM COM 1	
Address RS-485 1	
Baud rate 9600 💌	
Test	

Communication port - select the port, to which converter RS485 has been connected.

<u>RS 485 address</u> - each device on the RS485 line possesses its unique address, enter appropriate address for a particular controller.

<u>Transmission rate</u> - typical 9600 b/s value, selected value has to be consistent with the value set in a certain controller. It is recommended that all devices work at the same rate.

<u>Controller code</u> - it is not being entered by user directly from keyboard; as soon as you press push-button AUTHORIZE it will be received from controller; it shall be saved after entering correct authorization code.

<u>Authorization</u> - after having received controller code (see before), controller manufacturer provides so-called authorization code.

#### Overlap "Date and Time"

Controller settings	×
Name No	ок
Indu WRC 2000 00	
Type: WRC 2000	Cancel
Transmission Controller date&time Setup Alarms Alarm	
PC date&time	
2005-10-18 13:09:42	
Send	
Controller date&time	
2005-10-18 13:09:40	

Send date and time to the controller, when it differs from computer date and time.

#### Overlap "Setup"

Contro	oller settings					×
Nam	e				No	ок
Indu	I WRC 2000				00	
Тур	e: WRC 20	100				Cancel
🔽 A	ctive					
Trans	smission   C	ontroller date&tim	e Setup Ala	rms Alarm		
ľ	🖹 Edit	🔁 Open	🐼 Read			
	引 Save	🔓 Compare	🕒 Send			
	Name			Value		
F01	Address RS	-485		1		
F02	Baud rate			0		
F03	Central proc	essor address		1		
F04	Central proc	essor V trans		1		
F05	Com. proce:	ssor address		2		
F06	Com. proce:	ssor V trans		1		
F07	Temperatur	e unit		0		
F08	Smoke temp	perature		380		
F09	Plate tempe	rature		250		
F10	Delta status			0		
F11	Sample rate	e (min):		1		
F12	TIME FOR R	ESTART		40		
F13	CHAMBER N	MAX. PRESET TEMI	P.	200		
F14	BAR MAX, PI	RESET TEMP.		200		

This overlap allows to check controller setup, enter modifications, compare the setup, and send new settings to the controller.

#### Overlap "Alarms"

Controller s	ettings			×			
Name	Name No						
Indu WR	C 2000		00				
Type: ₩ ✓ Active	/RC 2000			Cancel			
Controller	date&time Setup Alarms Ala	arm names   Proce	∈ ◀ ▶				
+ -	e						
Level	Name	Delay					
1	Operator	3					
2	head operator	5					
3	factory owner	15					
I							

This overlap allows to set alarm occurring with preset delay.

In this case operator will be informed about alarm occurrence after 3 minutes, operator's superior will be informed after 5 minutes, and the last person to be informed is the company manager.

Alarm delay may be declared freely.

#### Controller settings × Name No 0K 00 Indu WRC 2000 Cancel Type: WRC 2000 Active Setup Alarms Alarm names Process names Operators Read Program Step No Name No Name ٠ ۰ 1 KRAKOWSKA!!!!! 1 2 SALCESON 2 3 3 SLASKA SZYNKA GOTOW.1 4 4 5 5 SZYNKA GOTOW.2 6 FRANKFUTERKI 6 -WASHING 7 SLASKA No Name 8 ٠ 1 9 2 10 9999999999999999 3 11 [-----4 12 -[-----5 13 --[-----6 14 ---[------• 10 7 г

#### Overlap "Names of programs"

In this overlap it is possible to attribute own names to program numbers. Moreover, user can take them from program group defined earlier.

#### Overlap "Identifiers"

Controller set	tings			×
Name			No	ок
Indu WRC 2	2000		00	
Type: WR	C 2000			Cancel
Active				
Alarm names	s   Process names   C	perators Identification	▫◢▸ן	
👫 Take fi	rom the group 🔽 L	ike older controllers		
Defined ider	ntifiers Kinds accordi	ng to identifier's number		
+ - 4				
Identifier	Туре	Name	<b>_</b> _	
0000001	Product	polish sausage		
0000002	Product	german wurst		

Identifiers allow for more accurate manufacturing process description, we may thus determine not only product name, but its properties as well.

#### **Overlap "Product Identifier"**

Controller settings						×
Name				No	ок	
Indu WRC 2000				00		
Type: WRC 2000					Cancel	
Active						
Process names Op	perators Ident	ification	ID Article	<ul> <li>▲ ▶</li> </ul>		
Division of the		fier				
The way of divisio		Jumbor	of character			
Group		1		5		
Group 2	2	4				
Group	3	3				
Group 4	4	0				
Group 9	5	0				
Group 6	6	0				
Group	7	0				
Group 8	8	0				

Overlap "Product Identifier" allows to define identifier division; in this case group one has one character, group two has two characters, whereas the last third defined group has five characters. Identifier will be as follows:

## 2 03 01030

## Authorized Program Users' List

Access to users' list is possible after logging in the program with administrator rights. Select item *File* in upper menu, then select *Users' List*. Window *"Users' List"* will appear. It contains users, who have access to the program. Here, we can add new user or change settings for already existing user.

**a**),

Press with mouse

to add a new user.

When all fields are filled in, press **OK** or **ENTER** key on keyboard to save data.

📸 Users list		
		🗸 ок
User:	трс	🗙 Cancel
Name	MPC	
Password	******	
Reenter new password:	*****	
Access level:	OPERATOR 🔽	

#### Definitions f fields in USERS' LIST window:

#### User

Enter user's code, which will be used by the user while activating the program.

#### Surname, name

User's surname and name.

#### **Access rights**

Three authorization levels are available to choose: only review, operator, administrator. First two allow for access to basic program functions. The *administrator* level allows to modify controllers, and change program parameters.

#### Attention:

The program has the following authorization levels for users: OPERATOR - basic functions available

ADMINISTRATOR - service functions for administrator

Window "User Login" appears immediately after program activation. Enter "User's code" assigned by the administrator in the window *user* line, and then your password.

Login	×
User:	
MPC	
Password	
ОК	Cancel

#### Default users' codes, after program installation:

User mpc Adm Password (no password) (no password) Authorization level operator administrator

<u>Attention:</u> Previous MPC versions did not have User: **mpc**. **Oper** was available instead of it.

## SYSTEM ADJUSTMENT TO USERS' NEEDS

#### Header and footer

#### **Description**

Each printed process consists of header, and then of recorded samples and footer. User may adjust printout header and footer appearance. First header line may contain information including e.g.: company name, address, department.

Header and footer	×
Header Meat Factory 00-000 City Street	OK Cancel
Print footer End	
Char footer	
End	
Show channel: • Humidity • Bar temperature	

) 		₩ . →	H		<b>8 8</b>		se				
		MeatFacto	ry								
		00-000 City Street	ľ								
				ess: 1							
					lu WRC 2000 35-10-18 13:1:						
			Pro	End 200 gram 1	05-10-18-13:43	3					
			110	grann i							
		D <i>a</i> te & time		Cycle	cycle time	Temperature [ °C]	Humidity [%]	Set C.Time	Set T.Cha. [°C]	Set Hum. [%]	
		2005-10-18 13		2	00.00			04:00	95	0	
		2005-10-18 13 2005-10-18 13		2 2	00:01 00:02			04 D0 04 D0	95 95	0 0	
		2005-10-18 13	:16	2	00.03			04:00	95	0	
		2005-10-18 13 2005-10-18 13		2	00 D4 00 D5			04 10 04 10	95 95	0 0	
		2005-10-18 13		2	00.06			04:00	95	õ	
		2005-10-18 13 2005-10-18 13		2	00 07 00 08			04:00	95 95	0	
		2005-10-18 13		2 2	00108			04 D0 04 D0	95 95	0 0	
		2005-10-18 13	23	2	00:10			04:00	95	D	
		2005-10-18 13 2005-10-18 13		2	00:11 00:12			04 D0 04 D0	95 95	0 0	
		2005-10-18 13		2	00:12			0400	95	0	
		2005-10-18 13		2	00:14			04:00	95	0	
		2005-10-18 13 2005-10-18 13		2 2	00:15 00:16			04 00 04 00	95 95	0 0	
		2005-10-18 13		2	00:17			04:00	95	Ď	
		2005-10-18 13		2	00:18			04:00	95	0	
		2005-10-18 13 2005-10-18 13		2 2	00:19 00:20			04 D0 04 D0	95 95	0 0	
		2005-10-18 13	34	2	00/21			04 00	95	D	
		2005-10-18 13 2005-10-18 13		2 2	00 22 00 23			04 D0 04 D0	95 95	0 0	
		2005-10-18 13		2	0023			0400	95	0	
		2005-10-18 13	38	2	00.25			04:00	95	D	
		2005-10-18 13 2005-10-18 13		2 2	00.26 00.27			04 D0 04 D0	95 95	0 0	
		2005-10-18 13		2	00.28			04.00	95	0	
		2005-10-18 13		2	00.29			04:00	95	0	
		2005-10-18 13 End	:43	2	00:30			04:00	95	0	
		2.10									
l	Page 1 o										

## ADMINISTERING THE MPC SYSTEM

Administrative operations shall be carried out with care. Improper modifications introduced by user with administrator rights may result in data loss and faulty system operation. Usual, everyday work with the system should be carried out after logging in with operator rights.

### Process Removal from the Program

Administrator is able to remove a process from the program. Open window *"Processes List"*, and then press on keyboard function key F10 - push-button *"Remove Process"* will appear. After pressing it, box with request to confirm indicated process removal will appear. The process will be removed after confirmation. Push-button *"Remove process"* will be hidden after pressing key **F10** again.

# **OPERATOR'S WORK IN THE MPC PROGRAM**

### **Program Activation**

In order to activate the program press push-button "Start" on taskbar - then "Programs" - group "Mikster" - abbreviation "mpc". Window "User's Login" will appear - enter your own user's code and password, and press push-button OK.

<u>Attention</u>: if there are no modifications introduced by administrator, default operator's code is **mpc** (in older program versions - **Oper**), do not fill in field *password*.

Program main window will appear, which contains the following push-buttons:

ä N	MPC System 4.42					
Eile	Controllers	Settings				
		<b>6</b>				
	Processes	Download				

- PROCESSES -
- DOWNLOAD -

Opens list of processes read out from controllers Allows for "manual" collected data readout from selected controllers

### Device (Chamber) Operation Monitoring

Program main window is showing active controllers, later referred to as "Device Status Monitor". The window contains preview of devices (controllers). The following basic information will be displayed:

- device name,
- active program (or STOP message)
- cycle number
- information on current product

A MPC System 4.42		
<u>File Controllers Settings</u>		
Processes Download	12:05:10	MikSter
Controller 10		
Program 0 Product Program 1		
Set A	tual	
0,0 °C Temp 1	0,0 °C	
0,0 °C Temp 2	0,0 °C	
0 % Humidity	AAA	
00:00 cycle time	00:00	
Cycle 0. Step		
Administrator		

Point out selected controller with mouse indicator and click on it with left mouse key in order to obtain detailed information on the device status.

Window containing detailed information will appear. Available information depends on controller type. Windows for MCC-100 and e.g. INDU WRC 2000 controllers will look different.

Displayed information:

- device name,
- controller date and clock time
- controller program version
- active program (or STOP message)
- cycle number (cycle name)
- information on current product
- preset process parameters
- currently measured parameters
- status of device activation by the controller

Indu WRC 2000		N	×
	Program 1 Product		
	Set	Re	eaded
	95,0 °C	Temp. Chamber	24,6°C
	0,0 °C	Temp. Core	25,1°C
	0%	Humidity	99%
	04:00	cycle time	03:59
WRC 2000 2005-10-18 13:13	Cycle	2 Step	
Identification		-Outputs condition	
Type Name		1 2 3 4 5	6 7 8
		AI AI MI MI MI	
			14 15 16
		17 18 19 20 21	22 23 24
			R6 R7 R8
		25 26 27 28 29	30 31 32
		R9 R10 R11 R12 R13	R14 R15 R16

The illustration above applies to the INDU WRC-2000 controller

### **Receiving Collected Data from Controllers**

There are two ways for receiving collected data (recordings) from controllers. The first one is automatic collected data receiving, carried out 1 minute after initiating the MPC program, and the second one – manual collected data reception.

#### Manual collected data reception

For all controllers, it is always possible to receive collected data by pressing push-button **TRANSMISSION** 



in program main window. Window "Collected data readout" will appear.



Transmision	×
Controller	
mcc - 100	
Progress bar	
66%	

Select any (or all) controller, from which collected data are to be received, and press pushbutton **TRANSMISSION**.

Received collected data (recordings) is saved in database. As soon as the operation is completed, window "Collected data readout" will close.

### Manufacturing Processes Preview

You can activate the processes preview function from program FILE -> PROCESSES. Window *"Processes List"* will appear, containing the list of processes, which have been registered in the program.

Process list				
🖂 🖪 🔓 🖨				× Close
K < ► ► C				
No Start of process	Controller	Product	End	
1 2005-10-18 13:13	Indu WRC 2000		2005-10-18 13:43	
•				•
Identification				
Туре	Name			

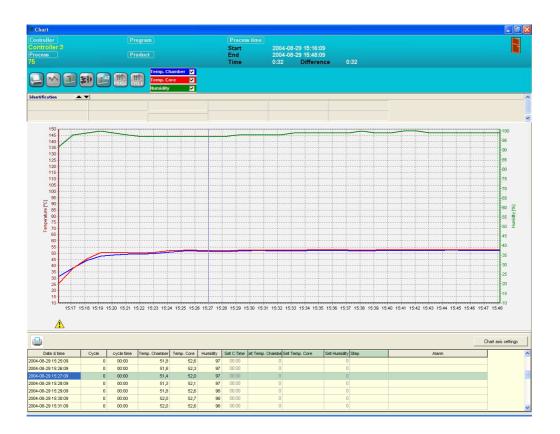
The field **Controller** contains list of controllers available to choose. Preset default value "All" makes processes from all controllers visible. If you choose for example "CHAMBER 01" - only processes from "CHAMBER 01" will be displayed.

### Push-button definitions:



## GRAPH

Opens window "*Process Graph*", in which selected process graph will be drawn. User may alter graph appearance, and may instruct the program to show on the graph measurement points, indicator; our innovation is graph shown in three-dimensional form.





It is possible to switch on and off particular channel on graph

e.g. in this case user has switched off displaying of the following items on the graph: Core Temperature Smoke Temperature Plate Temperature K7 K8 K9 K10

If necessary, modify printout settings



axis ranges for temperature and humidity and time

Chart settings		×
Chart axis settings	Colours	
Temperature axis (	eft)	
	Min values 10	
	Max values 150	
grid visible		
Humidity axis (right	)	
	Min values 10	
	Max values 101	
🔲 grid visible		
Date, time		
grid visible		
	OK Cancel	

Set colors for phase lines, cycle lines, phase names, and graph background.

Chart settings	×
Chart axis settings Colours	
Phase line color:	
Cycle	
Phase	
Chart background:	
OK Cancel	



Using filter, it is possible to narrow the list of displayed processes. In order to do that, press push-button **FILTER**. Window "**Filter processes list**" will appear, which allows us to specify time range, the program and product id. As soon as push-button "Filter" is pressed, processes meeting entered criteria will be displayed.

Filter	×
✓ Select range	
From	
2005-10-16 🔟 00:00:00 🗧	Cancel
То	
2005-10-19 🗾 00:00:00 🗧	
CONTROLLER	
< All >	
Advanced	

### SHOW RECORDED SAMPLES

As soon as this function is pressed, a window will open allowing to view recorded samples.

Cor	Start 2	ndu WRC 005-10-18 005-10-18	13:13								L D Close	
	<u>ر</u>						1					
Date & time	Cycle	cycle time	Temperature	Temp. Core	Humidity	Set C.Time		Set T.Core	Set Hum.	Step		*
2005-10-18 13:13	2	00:00				04:00	95	0	0		Start of process	
2005-10-18 13:14	2	00:01				04:00	95	0	0			
2005-10-18 13:15	2	00:02				04:00	95	0	0			
2005-10-18 13:16	2	00:03				04:00	95	0	0			
2005-10-18 13:17	2	00:04				04:00	95	0	0			
2005-10-18 13:18	2	00:05				04:00	95	0	0			
2005-10-18 13:19	2	00:06				04:00	95	0	0			
2005-10-18 13:20	2	00:07				04:00	95	0	0			
2005-10-18 13:21	2	00:08				04:00	95	0	0			
2005-10-18 13:22	2	00:09				04:00	95	0	0			
2005-10-18 13:23	2	00:10				04:00	95	0	0			
2005-10-18 13:24	2	00:11				04:00	95	0	0			



Allows to print out selected fragment or the entire process as a table.

<sup>77</sup> 3 M	PC									- D ×
		н н н н	5	a 🖪	🗃 🗌 Clos	e				
			1							
										<b>–</b>
		Meat Factory								
		00-000 City								
		Street								
										-
			ess: 1 roller led	u WRC 2000						
				15-10-18-13:13						
				5-10-18-13:43						
		Prog	gram 1							
										-
		Date & time	Cycle	cycle time	Temperature		Set C.Time	Set T.Cha.	Set Hum.	
					[ °C]	[%]		["C]	[%]	-
		2005-10-18 13:13 2005-10-18 13:14	2 2	0010 0011			04:00 04:00	95 95	0 0	
		2005-10-18 13:14	2	0002			04:00	95	0	
		2005-10-18 13:16	2	0003			04:00	95	0	
		2005-10-18 13:17	2	0004			04:00	95	Ď	
		2005-10-18 13:18	2	0005			04:00	95	õ	
		2005-10-18 13:19	2	0016			04:00	95	D	
		2005-10-18 13:20	2	0007			04:00	95	0	
		2005-10-18 13:21	2	0008			04:00	95	0	
		2005-10-18 13:22	2	00109			04:00	95	0	
		2005-10-18 13:23	2	00:10			04:00	95	0	
		2005-10-18 13:24	2	00:11			04:00	95	0	
		2005-10-18 13 25	2	00:12			04:00	95	0	
		2005-10-18 13 26	2	00:13			04:00	95	0	
		2005-10-18 13:27	2	00:14			04:00	95	0	
		2005-10-18 13 28	2	00:15			04:00	95	0	
		2005-10-18 13 29	2	00:16			04:00	95	0	
		2005-10-18 13:30	2	00:17			04:00	95	0	
		2005-10-18 13:31	2	00:18			04:00	95	0	<b>_</b>
		2005.10.18 13:32	2	00-10			04-00	05	0	
	Page 1 o	f1								11.



As soon as this is pressed, a window will open allowing to enter your comments regarding the process.

Remark	<u>×</u>
No <b>1</b> Start of process <b>2005-10-18 13:13</b> Controller <b>Indu WRC 2000</b> Program <b>1</b> Product	OK Cancel

### **PROGRAM SETTINGS**

### Activate Audio Alarm

This option activates / deactivates sound alarm.

Settings	
Sound on/off	
Print settings	
Email properties	
Alarms	•

### E-mail Settings

- Set notification by e-mail
- Enter SMTP server name
- Port (usually 25)
- Sender e-mail address
- User's name
- Password
- Check option Send notification message on system status

Send alarm <del>s v</del> ia E-Mail	×
I Send alarms via E-Mail	
SMTP server:	OK
SMTP server:	Cancel
mail.server.com	
Port	
25	
E-mail address:	
address@server.com	
User name	
user	
Password	
******	
From 23 🔪 every 24 🍡 hour	

# Alarm Notification Levels

This option allows to notify about alarms according to time delay.

List of a	larm levels		LID) X Close	×
Level	Name	Delay	E-Mail address	-
1	Operator	3	operator@server.com	
2	head operator	5	headoperator@server.com	
3	factory owner	15	owner@server.com	
				•