Hornung GmbH
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& Co. KG
Energie- und Bigelanlagen
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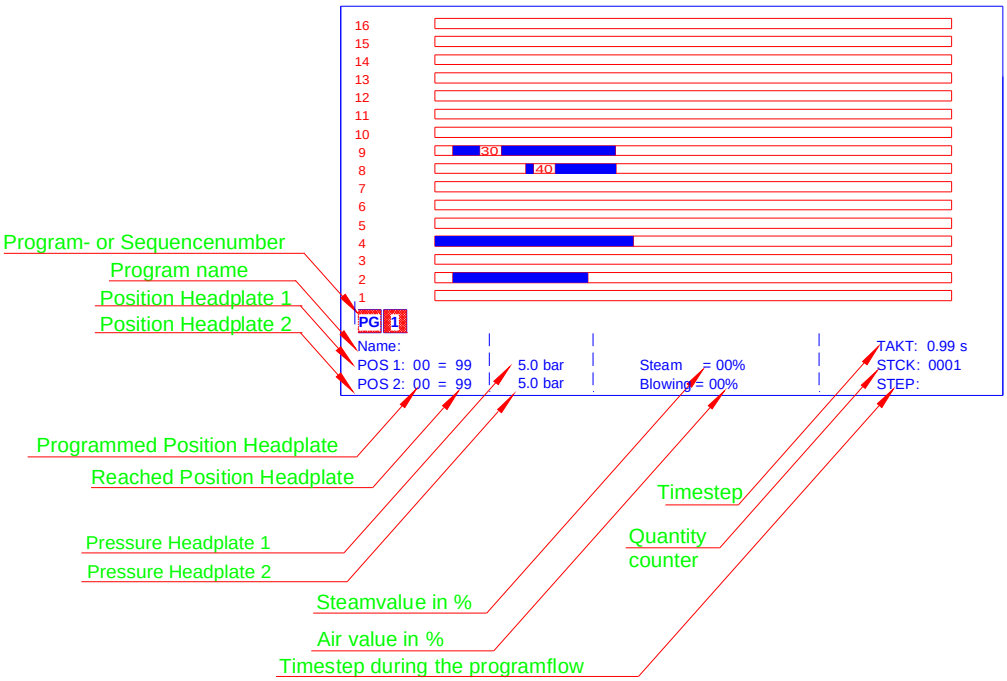
OPERATION MANUAL

Indumat 95 – Microprocessor Control

for Indupress Industrial-Pressingmachines

Operation Manual for the control Indumat 95

Description of the Display



The new control **Indumat 95** is based on the latest stage of technique. It has an easy, menu-guided operation which you can learn very easily.

Should you have questions regarding the operation or programming of the control or should there arise problems with the flow process of the machine, please contact our service department.

To help you quickly it would be of advantage if you inform us immediately of the corresponding machine data and the program version that belongs to it.

1. Determination of machine data of the program version:

If you ever have any problems with the machine which you can not fix, and if it is necessary to call INDUPRESS to get help, you should know all the important information we need to identify the machine.

The following will explain to you, how to get the important information before you call the INDUPRESS-Service Office.

a).The machine data can be read on the type plate which is on the side or at the back of the machine.

b).The software version can be read on the right top of the control display.

CRC = XXXX ➔ this number designates the Machine EEPROM
XXXX ➔ this number designates the Text EEPROM

To get these information, please switch OFF the control with the Emergency-stop.

Now, press one of the number keys on the right keyboard (0-9) **and keep this key pressed, during you switch on the control with the green Release-button.**

Only if the below shown display is complete, you can release the number key (approx. 5 seconds after switching on).

This message remains now on the display. Now you can read the software version comfortably.

INDU 11 . V10 . REV . 005 04 / 97	**CRC = XXXX**
	XXXX
- W A R T E A U F R E S E T -	
INDUPRESS GmbH	Tel. (0049) 6021 - 62370

If you want to leave this display, press **key - P**.

You will then get to the 1st menu level. Please, refer to the picture of the menu system on page 19.

If you like to return to the normal operating mode (display of the program), operate **key - P** again.

2. Unlocking of the control (absolutely necessary to change an input):

When a machine is supplied by us the control is in a locked condition.
This precautionary measure protects the control against manipulation, unauthorised use and program loss.

Before each changing of the program or use of the control, the control has to be unlocked first. Please consider, after each changing of the program or use, the control has to be locked again. All data is then protected against manipulation and unauthorised changing.

To unlock the control, you have to insert the Memory Card into the Memory-Card-Slot with the loaded Unlocking-Code.(The arrow on the top of the memory card has to point to the front of the control).

Cards with the loaded Unlocking-code are marked with a label : “Entsperr Code” loaded at DD.MM.YY).

After you switch on the machine, you change into the menu system by operating **key - P**.

In the menu system, move the cursor with the **arrow key** ↓ to the menu point **ADDITIONAL PROGRAMS**.

By operating the **arrow key** ➔ you change to the 2nd menu level.

From the menu point **SERVICE CODE** you change with the **arrow key** ➔ to this menu function.

The following will be shown on the display:

SERVICE KOD EINGABE : * * * * *

EINGABE MIT „ P „ BESTÄTIGEN

Please, **operate key - P** and the control will read the code from the Memory-card.

The control changes now automatically to the normal operation mode and is now released for programming works.

3. Locking of the control (absolutely necessary to protect the data):

Attention !

After you have finished your programming works you have to lock the control again.

Only in the locked condition the control (and all data) is protected against unauthorised use and against manipulation.

To lock the control, you have to take the Memory Card out of the Memory Card slot.

After the machine has been switched on, you change to the menu by pushing key **- P.**

In the menu, you choose the menu point **ADDITIONAL PROGRAMS** with the **arrow key** ⬇.

By operating the **arrow key** ➔ you change to the 2nd menu level.

From the menu point **SERVICE CODE** you change with the **arrow key** ➔ to this menu function.

Now this appears on the display :

SERVICE KOD EINGABE : * * * * *
EINGABE MIT „ P „ BESTÄTIGEN

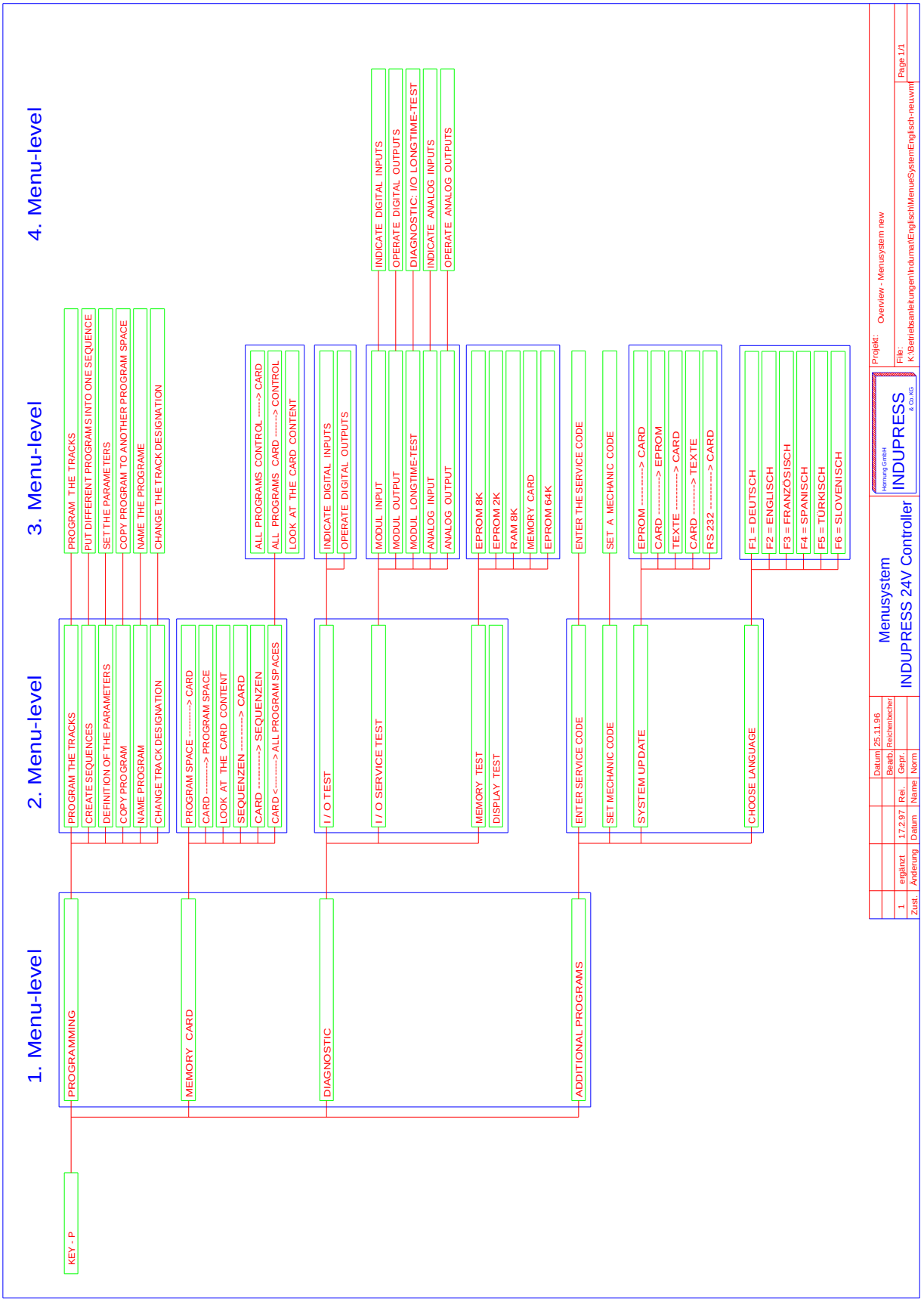
Now you put in any (max. 5 digits) number. (e.g. 12345)

Afterwards you confirm the input with key - P.

The control will read the wrong code from your manual input.

The control is now switched to the locked condition again.

4. Moving in the menu system:



From the normal operation mode you always enter the menu by using the **key - P**.

You could also use the key-P, to leave the menu from each menu function.

Now you can move within the different menu levels by means of the arrow keys (cursor keys).

If you couldn´t find the desired function, you want to use, please use the map on page 21 to find your way through the menu levels.

If you did select a function wrong and you want to get out of this operation, use the **key – P** to interupt the operation. If you press the key – P again, you will enter the menu at the last menu level you had been before.

- **Each current point of the menu is inverted.**
- By means of the **arrow keys ↑ and ↓** you get to the top or to the bottom in one menu level.
- By means of the **arrow keys ← and →** you get to the previous or subsequent menu level.
- If you push the **arrow key ←** in the first menu level, the normal operating mode will appear again.
- If you are at the end of one menu level and push the **arrow key →,** this menu function will be called. It appears an individual display which enables you an easy changing of the existing values.

If you want to return from a menu function or any other place in the menu to the normal operating mode, you can always do this by using key - P.

If you now push **key – P,** again you return to the menu level which had been left.

If you switch on the control with the green Release-button, you will always enter the 1st menu level after you have pressed **P**,

Alternative you have the possibility to select menu functions by using the F-keys. To select a menu function by the f-keys, you have to press the f-key with the number which is written left beside the functions name in the menu. If you are in menu level 1and you press F1, the computer will directly jump into the 2nd menu level of this function.

5. Function keys :

The function keys can be used in different operation conditions.

By means of pushing the corresponding function key the corresponding function can be switched ON or OFF.

The function keys are occupied with following functions:

5a.) In the normal operating mode:

How to use the function keys F1 - F8

F1 → Machine specific submenue

F2 → Not occupied !

F3 → Not occupied !

F4 → You can change the master side to the left pressing unit ! Program changes now first on the left device.

F5 → You can change the master side to the right pressing unit ! Program changes now first on the right device.

F6 → Not occupied !

F7 → Not occupied !

F8 → Covering
By repeated pushing of function key F8 the program flow will be processed step by step until the head plate touches the bottom plate.

ATTENTION !! Some machines carry out a ROTATING MOVEMENT or a DRIVING MOVEMENT during this operation.

From now, the head plate will move up and down by pressing key-F8. You leave the covering mode by pushing any other key.

F1 - Opens and closes a machine specific submenu.

F8 - Is a helping function if the machine should be re-covered.

ATTENTION !!!

Some machines carry out a rotating or driving movement first if you start this function. Certain safety functions are not active in the course of this!

By pushing of the **function key - F8** a program will be started, which closes the shapes which should be re-covered. This program works step by step until the shapes are closed. If you want to enter the re-covering mode, press F8 again.
Now you can only lift and lower the headplate by pushing **function key - F8**.
By pushing any other key you could leave this mode.

5b.) In the programming mode (when programming a track program):

- F5 – Activates the Function –DELETE –

- This Function offers the possibility to make ready made programs shorter.
- If you move the cursor to any timestep and you press F5, the following timestep will be deleted. If you keep it pressed, the control will erase as long as you keep it pressed.

- F6 - Activates the Function –INSERT –

- This Function offers the possiblity to make ready made programs longer.
- If you move the cursor to any timestep and you press F6, the actual timestep will be duplicated and alll the following timesteps will be pushed to the right.

- F7 - Enables the input of individual values in the program tracks designated for it.

This Function offers the possibility to put individual parameters into the designated tracks of your program. E. g.:

- Put different Pressures values into the track 3 – Pressure
- Put different Distance values into the track 2 – Distance
- Put different values into the track 8 – Bottomplate Vacuum
- Put different values into the track 6 – Headsteam
- Put different values into the track 5 – Headplate Blowing

In chapter 2 on page 37 this functions are discriped in details.

c.) If the machine specific submenu is opened:

Machine-specific Submenue

F1		With pressing of Function-Key F1, you can leave this Submenue, back to the normal Operating Mode.
F2		Blowing/Bottomplate via Ironrest.
F3		Final Vacuum/Bottomplate.
F3		Waistband Clamp ON/OFF.
F4		Bottomplate/Vacuum during turning.
F4		Vacuum/Bottomplate via Ironrest.
F5		Unloading unit ON/OFF.
F5		Pre-Steaming before PRG-Start.
F6		Reset - Capacity counter -> 0000.
F7		Power-adjustment for Fix-Vacuum.
F8		Single or Double Fix-Vacuum for Lapel Finish-Pressingmachines.

By means of pushing the corresponding function key the corresponding function can be switched ON or OFF.

A function which is switched on is underlayed black.

- F1 Closes the machine specific submenu and stores the settings.

- F2 Starts the special function **" Blowing via steam iron rest "**
(A iron is not available at all machine types)

While lifting of the steam iron from the iron rest, the bottomplate begins automatically to blow. If you put the iron back on the iron rest, the blowing on the bottomplate stops.

- F3 Starts the special function „**Limit position vacuum"**.

At the end of the program the bottom vacuum starts at the bottom plates which are in the working station. This bottom vacuums ends only then when the bottom plates are moved out of the working station and reach the loading position.

Hinweis **If the last part on a carousel pressing machine (which had been programmed with switched on limit position vacuum) is pressed ready, you have to switch off this machine.** The switched on limit position vacuum would otherwise severely cool down the buckplates in the pressing device.

- F3 Starts the special function **" Waistband stretcher switch off "**
(A stretching device for the waistband is not available at all machine types)

The waistband stretcher is the stretcher for the waistband, and therefore only at the corresponding machines. If however in some working cycles while waistband ironing no stretcher is needed, you should switch him off with this function because you will be hindered by this ,while you put the trousers on the shape. After you switch off the waistband stretcher he moves into the lower position with leaving the F1 submenu and stays there until you reactivate him in the submenu with pushing F3.

- F4 - Starts the special function **„Rotating vacuum".**

At carousel pressing machines on which no fix vacuum has to be switched on before the start of the rotating movement (only upon special request of the customer) the parts to be pressed are not held in position during the rotating movement.
Here you can switch on the rotating vacuum for single programs where a rotating vacuum is required. Then the parts to be pressed will stay exactly in position in the working station during the rotating movement.

- F4 Starts the special function **"Vacuum via steam iron rest "**
(A iron is not available at all machine types)

While lifting of the steam iron from the iron rest, the bottomplate begins automatically to blow. If you put the iron back on the iron rest, the blowing on the bottomplate stops.

- F5 Starts the special function **" Unloading unit ON/OFF"**
(A unloading unit is not available at all machine types)

If you have a machine type with unloading unit , you have the possibillity to activate and deactivate the unloader. After you have turned on the unloader, the arm of the unloader takes the jacket from the machine according to every pressing cycle. For stopping this function, you must deactivate it in the submenu by pressing F3 again.

- F5 Starts the special function **" Pre-steaming ON/OFF"**
(A unloading unit is not available at all machine types)

If it is necessary to prepare the fabric for the main pressing operation with pre-steam, this function has to be ON. With this the machine is closing as normal after activating the first step on the start pedal, but with reaching the scissors limit switch (machine has approached the fabric to 1 cm clearance) the headplate steam will be ON as long as you keep this condition.

- F6 - Starts the function **"Reset of quantity counter"**

The quantity counter counts how many pressing operations were made. It is useful to set it back to 0000 before you start working. So you can check after work, how many pieces you have pressed. **F6** is the reset button for this counting unit.

- F7 - Starts the function **"fix-vacuum power pre-selection"**

When you start pressing, you start to put the fabric on the bottom shapes. The next step will be, to switch on the vacuum on the bottom shape. With the **F7** button you have the chance to preselect the intensity of this vacuum. Each time you press **F7** you modify the vacuum value about + 25%. In this way it is possible to use all 4 vacuum steps for fixing the fabric on the shape before you start the program.

- F8 – Starts the function **„Selction of the fix-vacuum mode.**

With some machines (e.g. IPN-LKV) it is necessary to activate two fix-vacuum valves before the machine start is enabled. With activating this function, you can activate both vacuum valves with only one step on the vacuum pedal → time-saving.

6. Adjusting of the national languages:

There's the possibility to show the texts in the display in various national languages.

If you want to adjust another national language you can change into the menu system by means of pushing **key - P**.

In the menu, you move to the menu point **ADDITIONAL PROGRAMS** with the **arrow key** ↓. By operating the **arrow key** → you change into the second menu level.

In the second menu level you move to the menu point **LANGUAGE** with the **key** ↓.

From the menu point **LANGUAGE,** you change to this function by using **key** →.

Now the following display will appear:

F1 :	DEUTSCH
F2 :	ENGLISCH
F3 :	FRANZÖSISCH
F4 :	SPANISCH
F5 :	TÜRKISCH
F6 :	SLOWENISCH

or

F1 :	DEUTSCH
F2 :	ENGLISCH
F3 :	FRANZÖSISCH
F4 :	RUSSISCH
F5 :	SLOWENISCH
F6 :	RUMÄNISCH

or

F1 :	DEUTSCH
F2 :	ENGLISCH
F3 :	RUSSISCH
F4 :	BULGARISCH
F5 :	RUMÄNISCH
F6 :	FRANZÖSISCH

or

F1 :	DEUTSCH
F2 :	ENGLISCH
F3 :	TSCHECHISCH
F4 :	RUSSISCH
F5 .:	SLOWENISCH
F6 :	POLNISCH

By pushing of the corresponding **function key (F1 - F6)** you can adjust the requested national language. The control jumps now automatically to the normal operating mode and all texts on the display will be shown in the selected national language.

Attention !
The texts for track label in the programming mode can be put in manual. Due to this the texts for the occupation of tracks do **not** change if you adjust another national language. The texts for the occupation of tracks in the requested national language have to put in manual.

7. How to change the texts for the track labels

If you want to put in another text for the track labels, you can change into the menu system by means of pushing **key -P**.

In the menu system the menu point **PROGRAMMING** includes this function.

By operating the **arrow key ➔** you change into the 2nd menu level.

In the 2nd menu level, you move to the menu point **TRACKS LABELS** with the **arrow key ⬇**.

You enter this function with the **arrow key ➔**.

In the display it will now appear:

All X stay for certain text abbreviations

```
16
15
14
13
12
11
10 XXXXXX :
09  XXXXXX :
08  XXXXXX :
07  XXXXXX :
06  XXXXXX :
05  XXXXXX :
04  XXXXXX :
03  XXXXXX :
02  XXXXXX :
01  XXXXXX :
```

Now you can put in the track labels manual. If you keep one of the coloured keys (function keys F1-F2 - F3)pressed, while you press the corresponding letter key (right block of number keys), you can program the text abbreviations. (**6 characters at maximum).**

If you like to finish the programming of the texts for the track labels, push **key - P** and the normal operating mode will be shown.

8. General Notes:

a. Beside the pressing program you will find further different information in the program display which might be of use for the user. For this please read the sheet **„Explanation of signs of the program display“ (Page 17).**

b. Prerequisites for a functional pressing program are :
Always a **the tracks and the parameters** have to be programmed.

c. If a program cannot be started, the message **„Not switched on“** appears on the display while you are giving the start command. Please check in the program display, if the program number is inverted. If the program number is not inverted, please operate the **key - ENT** and the program number will be shown inverted at once.
Now you can start the program.

d. If there are only single programs on a machine, only the program number will be shown in the program display :

PG 1 (PG 1 = Program number 1).

If however, sequences are programmed, the sequence number will be shown on the first position of the program display and afterwards the single program numbers which are part of this this sequence will be shown.

01 02 01 05

(01 = Sequence number 1 02, 01, 05 = Program number)

e.) At maximum 30 pressing programs and 30 sequences can be established.

f.) At this machine the vacum-pedal works in dependence to the vacuum pre-selection which you can find in the submenue of the machine (open submenue with the **F1-key**). If you select a vacuum power in this menue of 25%, 50% or 75% with the **F7 key**, the first step on the vacuum pedal activates this vacuum power. This is an advantage to place the jacket right on the shape. When you press the pedal a second time, the vacuum power will increase always to 99%, to keep the jacket in position during the turning.
If you select 99% vacuum power from the beginning, you need to press the pedal only one time, because the vacuum is already on 99%. Consequently you can start the machine after one step on the vacuum-pedal.

Occupation of tracks

Typ : General sample.

Track 16	
Track 15	
Track 14	
Track 13	
Track 12	
Track 11	
Track 10	Bottomplate Steam
Track 9	Bottomplate Blowing
Track 8	Bottomplate Vacuum (programmable in 4 steps: 25, 50, 75 an 99%)
Track 7	Exterior steam suction (Regulation with ball valve)
Track 6	Headplate Steam (programmable in 3 steps: 1=40%steam, 2=60%steam, 3=99%steam)
Track 5	Headplate Blowing (stepless programmable from 10 – 99%)
Track 4	Headplate Vacuum
Track 3	Headplate Pressurevalues (stepless programmable from 0.1 – 6.0 bar)
Track 2	Headplate Distance positions (stepless programmable from 01 – 99)
Track 1	Up and down movement (depending on parameter 04-07 in PARAMETERS menu)

How to create a pressing program

Hinweis

1.) Before each program amendment, the control has to be unlocked.
(please refer to unlocking of the control on page 17).

2.) Prerequisites for a functioning pressing program are:
Tracks and the parameters have to be programmed always.

3.) After you have finished the programming, you should switch the control to the locked condition again.
Only in the locked condition the control (and all data) is protected against unauthorised amendments (please refer to locking of the control on page 18).

1. Programming of a track program:

From the normal operating mode you enter the menu by pressing of **key - P.**

In the first menu level you choose **PROGRAMMING** and operate the **arrow key ➔**.

In the second menu level you choose **TRACKS** and operate the **arrow key ➔**.

Now the following display will appear:

```
16              :.....................................................
15              :.....................................................
14              :.....................................................
13              :.....................................................
12              :.....................................................
11              :.....................................................
10              :.....................................................
09              :.....................................................
08 Druck        :.....................................................
07 Blasen       :.....................................................
06 O-Vaku       :.....................................................
05 U-Damp       :.....................................................
04 Abstan       :.....................................................
03 Vakuum       :.....................................................
02 O-Damp       :.....................................................
01 Wippen       :.....................................................
```

(This display of the occupation of tracks depends on the type of machine.)

Now you can program or change the program tracks:

How to **switch on** functions/tracks :

⇒ With the **arrow keys ↑ and ↓,** you can move the cursor to the desired track.

⇒ By using the **arrow keys ← and →** you can move the cursor to the requested time step in the program.

⇒ With moving the cursor in one track by these keys, you can move to the starting and finishing position in this track and to the place where parameters should change.

⇒ If the cursor is placed on the starting position of a function in a track, you can switch it on by pushing the key **ENT.** As long as you stay in this track , this function also stays **ON**.

⇒ **With the cursor keys←** and **→** you could decide how long this function should take. If the input is complete, you should leave this track with the arrow keys **↑** or **↓**. Now you could move around to the next desired track/function.

How to **switch off** programmed functions :

⇒ With the **arrow keys ↑ and ↓,** you can move the cursor to the desired track.

⇒ By using the **arrow keys ← and →** you can move the cursor to the requested time step in this track where a function is already switched ON.

⇒ If you press the **ENT key** next, this switched on timestep becomes **switched OFF**.

⇒ All the tracks could be programmed from left to right and reverse.

How to **erase the whole program field** :

Go to timestep 01 and press the **M/C- key** (M- key).

This also works from any other timestep. In this case the program parts left of the cursor line will remain.

If you like to finish programming, push the **P- key** and the normal operating mode will be shown.

2. How to use the function keys in the programming mode :

F5 – Executes the function – DELETE –

⇒ This function offers a easy way to reduce the durance of a readymade pressing program or several program functions

⇒ **DELETE** effects at all 16 tracks. ATTENTION! → It is possible to delete values of programmed parameters while you cut the length of the tracks. Except of that, this function effects only to the durance which is controlled by the horizontal time axis.

⇒ If the vertical timeline from the cursor-cross is placed on a timestep e.g. 05 while you press F5, the timestep 05 will be deleted in all tracks and timestep 06 slips one step to the left. The old timestep05 will be replaced from timestep 06 now.

⇒ If there was a parameter entry in one of the tracks at timestep 05, it is consequently deleted. Therefore please select only timesteps without parameter entry to delete by this function.

⇒ All the timesteps right beside the vertical timeline would slip with every time you push F5 one step to the left.

F6 – Executes the function – INSERT –

⇒ This function is the opposite of the above descriped function. By using the **INSERT** function you could extend the durance of a readymade pressing programm and/or several program functions.

⇒ **INSERT** effects also at all 16 tracks. It is not possible to delete values of programmed parameters. Except of that, this function effects only to the durance which is controlled by the horizontal time axis.

⇒ If the vertical timeline from the cursor-cross is placed on a timestep e.g. 05 while you press F6, the timestep 05 will be copied to timestep 06 and all timesteps right beside the vertical timeline including the old 06 will be pushed one step to the right.

⇒ If a track is ON in timestep 05, the inserted timestep is also **ON**.

⇒ If a track is OFF in timestep 05, the inserted timestep is also **OFF**.

F7 – Executes the function – INPUT OF PARAMETER –

The control enables the input of individual values for tracks which are determined for this e.g. :

- The input of different distances into the track 2 – "DISTANCE"
- The input of different pressures into the track 3 – "PRESSURE"
- The input of different values into the track 5 – "HEADPLATE BLOWING"
- The input of different values into the track 6 – "HEADPLATE VARIOSTEAM"
- The input of different values into the track 8 – "BOTTOMPLATE VACUUM"

To program this parameters in the different tracks you go on as follows :

⇒ With the **arrow keys ↑ and ↓,** you can move the cursor to the desired track. Only in the above named tracks it is possible to put parameters in.

⇒ By using the **arrow keys ← and →** you can move the cursor to the requested time step in the program where the parameter is needed.

⇒ If you press **F7** now, the input mode will be activated and the input of a **two-digit value** is possible. It´s only possible to select a value in the range of the machine supply. E.g. if you supply the machine with 6,0 bar compressed air, it is not possible to press your fabric with 7,0 bar. Consequently the input of a parameter value >6,0 bar makes no sense.

⇒ The actual parameter value will be shown in the middle of track 15, as long as the cursor stays in one of the above named tracks. If you place the cursor in one of this tracks, but the actual timestep is not switched ON, the shown value in track 15 will be 00. To show a value the track has to be programmed (has to be switched ON by ENT).

⇒ If you switch a track/function ON by pushing the ENT button, and you put a parameter value in by using **F7,** this value will be shown until you interrupt this function by pressing **ENT** again. Now the value 00 will be shown. If you switch the track/function ON again, the last parameter value you put in will be shown again, because there is no other value input between the changeover.

⇒ If another value has to be put in you have to press **F7** again to put another two-digit value in.

⇒ The second or third input of parameters in the same track could be higher or lower than the value before. If the machine has the full functionality every value in the range of the machine supply will be executed.

⇒ In every track of the above named ones it is possible to put **5 different values** in **at maximum.**

How to delete a programmed parameter value :

⇒ If you like to delete a programmed value, the cursor has to be positioned in this track. In the first time step in which the value is announced on the display, you can activate the input with the press button **F7**.

⇒ While moving the cursor in the desired track left and right, you could recognize the input position of the parameter very easy. You could also recognize if the value is changing during this movement.

⇒ Now you can switch on the input possibility with **F7.**

⇒ Now the programmed value should appear inverted on the display. The input of the **value 00** deletes the old parameter and the value will disappear from the display.

If the cursors is positioned in a wrong track which is not parametrizable, the error message „Not in this step“ will be shown on the display **while you push the function key - F7**.

If you like to finish the programming of the values in the program tracks , push **key - P -**and the normal operating mode will be shown.

3. How to program parameters:

From the normal operating mode you change to the menu system by pushing of **key - P -**.
In the first menu level you choose **PROGRAMMING** and operate the **arrow key ➔**.
In the second menu level you choose **PARAMETER** and operate the **arrow key ➔**.
Now following display will appear:

01: TIME STEP	=	.00	sec
02:			
03:			
04: SEESAW - BOTTOM POSITION	=	00	inc
05: SEESAW - STROKE DISTANCE	=	00	inc
06: SEESAW - PRESSURE DOWN	=	00	bar
07: SEESAW - PRESSURE UP	=	00	bar
08:			
09: STACKER ROTATE	=	0.0	sec
10:	=		

The meaning of the individually parameters is:

01 : TIME STEP : This values always have to be programmed (e.g. 50).

The programmed value(10 - 99) indicates how fast a program will work. The value indicates how long **1 time cycle** lasts. (1 time cycle = 10 % of 1 sec - 99 % of 1 sec).

04 : SEESAW - BOTTOM POSITION : Is the track Nr. 01 (seesaw – which means a up and down movement) programmed, you have to set this parameter (e.g. : 30).

This value determines how much headplate and bottomplate might approach during the up-and-down movements. So smaller the value is, so closer the headplate comes down.
Is the parameter value to small, the headplate might touch the bottomplate.

05 : SEESAW STROKE DISTANCE : Is the track Nr. 01 (seesaw – which means a up and down movement) programmed, you have to set this parameter (e.g. : 10).

The stroke distance is the distance, the headplate moves, during this up and down movement. If you increase this value, the stroke of the headplate goes bigger. With a bigger stroke, the up and down movement takes a longer time, so the movement becomes slower.

06 : SEESAW - PRESSURE DOWN : Is the track Nr. 01 (seesaw – which means a up and down movement) programmed, you have to set this parameter (e.g. : 0.5).

The Value indicates, how fast the down-movement of the headplate is while „seesaw“.
Consequently this value also determines how close the head and the bottomplate comes.

07 : SEESAW - PRESSURE UP : Is the track Nr. 01 (seesaw – which means a up and down movement) programmed, you have to set this parameter (e.g. : 1.5).

The Value indicates, how fast the up-movement of the headplate is while „seesaw“.
Consequently this value also determines how far away the headplate moves from the bottomplate.

09 : STACKER ROTATE : You should set this value, if you have a pressing machine of Typ IPN-SGV-23-17A with unloading unit.

The value indicates how long the stacking device waits in the front position until the lever arm takes the jacket. After this time has elapsed, the stacking machine goes back again.

The parameter 02 and 03 are not in use at this machine, because we have no manuell presing operation.

Now the programming pressing program is complete and you can start the machine.

If you like to finish the programming of the parameters, push **P** and the normal operating mode will be shown.

Now you should check how the result of the currently made program will be. Put the fabric on the shapes, switch on the fix-vacuum and press the start pedal of your machine.

Good success !

4. How to denote a pressing program:

You can enter a program identification in a pressing program, too. This makes it easier to differentiate between the individual pressing programs (e.g. according to purpose of application, quality of fabric, colour etc.).

⇒ From the normal operating mode you change to the menu system by pushing of **key - P**.

⇒ In the first menu level you select **PROGRAMMING** and confirm the **arrow key ➔**.

⇒ In the second menu level you select **MEMORY NAME** and confirm the **arrow key ➔**.

⇒ Now following display will appear:

MEMORY NAME: >>> <<<

CONFIRM INPUT WITH " P "

If you keep one of the coloured keys (function keys F1 - F2 - F3) pushed, you can press the corresponding letter key on the right number keyboard. The coloured letter below the number will appear on the display (**10 characters at maximum).**

If you like to finish the programming of this identification, push **key - P** and the normal operating mode will be shown.

5. How to copy pressing programs on a new program place:

With this function you can copy a pressing program to a new program place. This is comfortable if you need a similar program which little amendments like e.g. less steam.

In this case you don´t need to program the whole data new. Use the copy and cut the steam track or the steam intensity. That´s all. But don´t forget to rename the new program.

Attention!

Check before you copy the program, if the target program place is still free. If there is already a pressing program on the selected program space, the computer will deny the transmission – display message : "Program space not empty !".

⇒ Select the program which you would like to copy.

⇒ Change from the normal operating mode to the menu system by pushing **P**.

⇒ In the 2 menu level you select **PROGRAMMING** and push the **cursor key ➔**.

⇒ In the second menu level you select **COPY PROGRAM** by pushing the **cursor key ➔**.

⇒ Now following display will appear:

PUT IN NEW MEMORY NUMBER: 00

⇒ Now you can put in the target program number.

⇒ The control jumps now automatically in the normal operating mode and the copying process will be finished.

⇒ The source program will appear on the display again.

6. How to create sequences:

You can arrange several pressing programs in a serial order, that one pressing program after the other can be started.
The arranging of this order is called sequence. This is **only necessary at waistband presses**.

⇒ Select the number of program which should be used as sequence number.

⇒ Change from the normal operating mode to the menu system by pushing of **key - P.**

⇒ In the first menu level you select **PROGRAMMING** and operate **key ➔**.

⇒ In the second menu level you select **CREATE SEQUENCES** and operate **key ➔**.

⇒ Now following display will appear:

SEQUENCE LABEL : >>> <<<

PG 01

CONFIRM INPUT WITH "P"

⇒ Push **key - M/C (M)** and the first shown pressing programming will be deleted.

⇒ At the same time in the display PG disappears.

⇒ On this place the sequence 01 number will now be shown.

⇒ Now following display will be shown:

SEQUENCE LABEL : >>>

01

CONFIRM INPUT WITH "P"

Operate **key - ENT** to switch on the input possibility. The input position (with the value 00) is now inverted and a program number can be entered.

Now following display will appear:

SEQUENCE LABEL : >>> <<<

01 00

CONFIRM INPUT WITH P

If you now enter a number, this will happen in the new input position. If it is shown it will not be inverted anymore.

In the display appears :

SEQUENCE LABEL : >>> <<<

01 XX

CONFIRM INPUT WITH P

("XX„ are variables for the program number selected by you)

If you now push the ➔**-key ,** this program is stored and on a position further right there appears a new framed input position.

In the display will appears :

SEQUENCE LABEL : >>> <<<

XX

01

CONFIRM INPUT WITH P

(„XX" are variables for the program number selected by you)

Now in the display will appear :

SEQUENCE LABEL : >>> <<<

01 xx 00

CONFIRM INPUT WITH P

⇒ If you operate the ENT button now, the input position will be shown inverted.

⇒ Now a further program number can be entered.

⇒ You can repeat this procedure until 12 programs are programmed in one sequence.

If you like to finish the programming of the sequences, push **key - P** and the normal operating mode will be shown.

7. How to change or delete Sequences:

You can change the order of the individual programs in a sequence.
You can also delete a individual (or all) programs.

⇒ Select the sequence number where you want to change something.

⇒ Then change from the normal operating mode to the menu system by pushing of **key - P**.

⇒ In the first menu level you select **PROGRAMMING** and operate **key ➔**.

⇒ In the second menu level you select **SEQUENCES** and operate **key ➔**.

⇒ Now following will appear in the display : (e.g.)

```
SEQUENCE NAME: >>>                    <<<

 01     05          01   03   01

CONFIRM INPUT WITH  P
```

You can now select with the **arrow keys ← and ➔** the single programs which are arranged in the sequence. The frame around the program number jumps to the next position.

⇒ Only the framed program number can be changed.

⇒ By operating of the **key - M/C (M)** you can delete the framed program number.

⇒ All program numbers which are further right will then move one position to the left and the program number which stood right before appears now as framed program number.

⇒ If you have choosen the program number which is very on the right, an empty frame appears if you push the M/C button. You could move this frame onto another program number you want to delete by using the **arrow keys ← and ➔**

Now following display will appear :

```
SEQUENCE LABEL : >>>                    <<<

 01      01    03    01

CONFIRM INPUT WITH  P
```

⇒ If you like to put in a new program number, press **key - ENT** first to switch on the input possibility.

⇒ The framed program number will then move one position further to the right and a new inverted input position with the value 00 appears.

⇒ Now it will appear in the display :

```
SEQUENCE LABEL : >>>                    <<<

 01      00   01    03    01

CONFIRM INPUT WITH  P
```

⇒ Now you can put in the new program number.

⇒ If you now program a new place number for the program, this will be entered in the input position and will not be shown inverted anymore.

⇒ Now in the display appears :

```
SEQUENCE LABEL : >>>                    <<<

 01      08          01    03    01

CONFIRM INPUT WITH  P
```

If you like to finish the programming of the sequences then push **key - P** and the normal operating mode will be shown.

8. How to denote sequences :

It is possible to name a sequence in a similar way like the pressing programs.
That makes it easier to differentiate between the individual sequences.
(e.g. according to application purpose, quality of fabric, colour etc.).

⇒ From the normal operating mode you change into the menu by pushing of **key - P.**

⇒ In the first menu level you select PROGRAMMING and confirm the **arrow key ➔**.

⇒ In the second menu level you select **SEQUENCES** and confirm the **arrow key ➔**.

⇒ Now in the display will appear :

```
SEQUENCE LABEL : >>>                    <<<
 01     08
                    01    03    01

CONFIRM INPUT WITH  P
```

⇒ Please operate the **arrow key ↑** .

⇒ All put in program numbers disappear and the cursor flashes in the line „SEQUENCE LABEL”.

⇒ Now in the display will appear :

```
SEQUENCE NAME : >>>□                    <<<


CONFIRM INPUT WITH  P
```

If you keep one of the coloured keys (functions keys F1, F2, F3) pressed, then you push the corresponding letter key (right block of number keys).

You can program a short name **with10 characters at maximum.**

If you push only one of the number keys, only the number will appear on the display.

Now in the display appears : (e. g.)

SEQUENCE NAME: >>> TROUSER WAISTBAND <<<
01 08
01 03 01

CONFIRM INPUT WITH P

If you like to finish the naming of the sequences then push **key - P** and the normal operating mode will be shown.

Data transmission with Memory - Card

You can transfer pressing programs or sequences with the Memory - Card to other controls. However, the programs can only be transferred at machines which correspond to the same type of machines and which also have the same software version. This way a comfortable programming of several controls is possible.

It is also reasonable to keep the established pressing programs and sequences stored on the Memory - Card. In case of malfunction of the control the pressing programs and sequences can't go lost. You can put the data new in after the control was repaired.

Please consider :

The battery in the Memory-Card can store the data for minimum 3 years.
If the battery lose the power after this time, these data will be lost.
After the period of 3 years a new battery should be inserted into Memory-Card.

Important :

It is absolutely necessary, to put the Memory-Card into the card slot on the front of the control to change the battery. The main switch has to be switched on, and the control has to be released. In this case the display shows you the tracks of the selected program.

The control voltage stores the data on the card during the change of the battery !

The recommended battery type is : Panasonic; 3V; BR2325 or CR2325

Don´t forget to write the date of changing on the Memory-Card. So you will know the time for the next change.

To make sure, that your perfectly working programs are in secure, it is recommended to write down these programs and sequences.

How to transfer pressing programs :

With the pressing programs the belonging parameters and name will be automatically transferred.

If you like to transfer the programs to the Memory-Card or transfer programs into the control, there are two possibilities:

1. Transfer of **individual** programs.

2. Transfer of **all** programs (all variables).

If you don't know exactly after a longer period of time, whether you had transferred single programs or all variables onto the Memory-Card you can check this very easily.

Hinweis

There is a menu point "LOOK AT CARD CONTENT" which exists two times in the menu.

1. You find the menu point "LOOK AT CARD CONTENT" in the menu block in the second menu level. You can also transfer single programs there. In this menu point the programs are shown, which had been transferred individual onto the Memory-Card.

2. You find the menu point "LOOK AT CARD CONTENT" in the menu block in the third menu level. You can also transfer all program spaces there. In this menu point the programs are shown, which had been transferred completely onto the Memory-Card.

1.a) Transfer of INDIVIDUAL programs onto the Memory - Card :

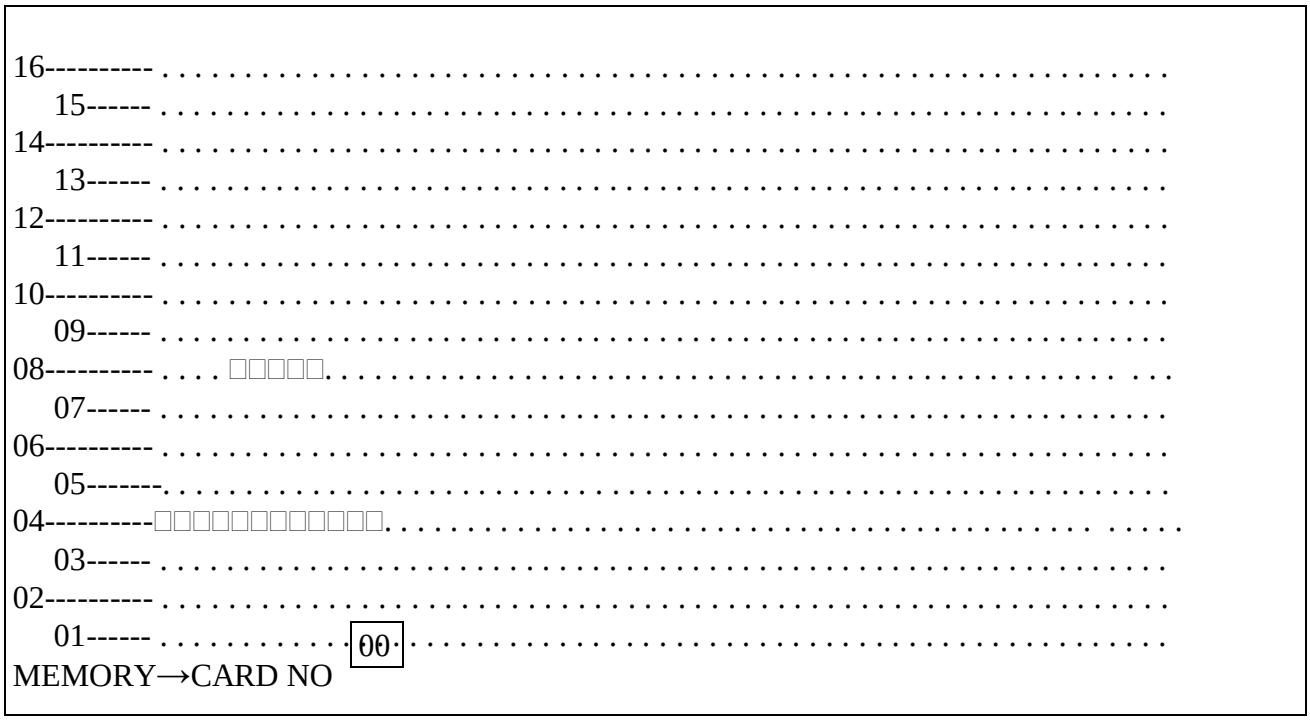
⇒ First select a program that should be transferred onto the Memory-Card.

⇒ From the normal operating mode you enter the menu system by pushing **key - P.**

⇒ In the first menu level you select **MEMORY CARD** and operate the arrow **key ➔**.

⇒ In the second menu level you select **MEMORY→CARD** and operate the arrow **key ➔**.

⇒ Now in the display appears : (e. g.)



⇒ Now you have to put in the number on which program place the pressing program shall be stored on the Memory - Card.

⇒ The control jumps automatically to the normal operating mode and this transfer procedure can be started again with the next program.

⇒ This operation could be repeated with all program

1.b) Transfer of INDIVIDUAL programs into the control :

⇒ Select a free program place. This will be the target place, where the control will transfer to.

⇒ From the normal operating mode you enter the menu system by pushing of **key - P.**

⇒ In the first menu level you select **MEMORY CARD** and operate the arrow **key ➔**.

⇒ In the second menu level you select **CARD→PRG PLACE** then operate the **key ➔**.

⇒ Now in the display will appear :

MEMORY ——→ CARD NO : 00

⇒ Now you should put in the number of the source program place on the card.

⇒ If the transfer is completed, the control will automatically jump to the normal operating mode.

⇒ Now you can repeat this transfer procedure with the next pressing program.

2.a) Transfer of ALL VARIABLES to the Memory-Card :

⇒ From the normal operating mode you enter the menu system by pushing of **key – P.**

⇒ In the first menu level you select **MEMORY CARD** and operate the arrow **key ➔**.

⇒ In the second menu level, choose **CARD→ ALL PROGRAMS** and operate the **key➔**.

⇒ In the third menu level, choose **ALL PROGRAMS → CARD** and operate **key ➔.**

⇒ Now in the display appears :

```
ALL VARIABLES  →  COPY CARD

*****************************************************
*  ARE YOU SURE  ?  ( THEN "ENT" )  *
*****************************************************
```

⇒ Now you have to operate **key - ENT** .

⇒ The control transfers all programs, the belonging parameters and the designations of the tracks to the Memory-Card.

⇒ Now in the display appears :

```
ALL VARIABLES  →  COPY CARD

O.K.  TRANSFER SUCCESSFUL  !

*****************************************************
*   GO ON  WITH  KEY  "ENT"  *
*****************************************************
```

To go on, operate **key - ENT**.

Then the control will jump to the normal operating mode and this transfer procedure is completed.

2.b) Transfer of ALL VARIABLES to the control :

⇒ From the normal operating mode you enter the menu system by pushing **key - P.**

⇒ In the first menu level you select **MEMORY CARD** and operate **key ➔**.

⇒ In the second menu level, choose **CARD → ALL PROGRAMS** and operate **key ➔**.

⇒ In the third menu level you select **CARD ➔ ALL PROGRAMS** and operate **key ➔**.

⇒ Now in the display appears :

```
FETCH ALL  VARIABLES  FROM THE CARD

******************************************************
*   ARE YOU SURE   ?    ( THEN "ENT" )   *
******************************************************
```

⇒ Now you have to operate **key - ENT.**

⇒ The control will transfers all programs and the belonging parameters to the program memory.

⇒ Now in the display appears :

```
FETCH ALL VARIABLES  FROM THE CARD

O.K.   TRANSFER SUCCESSFUL  !

******************************************************
*     GO ON WITH KEY    "ENT"    *
******************************************************
```

To go on, operate **key - ENT**.

Then the control jumps to the normal operating mode and this transfer is completed.

3. Transfer of sequences :

If you want to transfer sequences to the Memory Card, there is only one possibility :

Transfer all sequences.

The sequences will always be transferred completely to the Memory-Card with the function : SEQUENCES → CARD. The sequences will also be transferred completely into a control with the function : CARD → SEQUENCES.

3.a) Transfer of sequences to the Memory Card :

⇒ From the normal operating mode you enter the menu system by pushing of **key - P.**

⇒ In the first menu level you select **MEMORY CARD** by operating the **key ➔**.

⇒ In the second menu level you select **SEQUENCES → CARD** by operating **key ➔.**

⇒ Now in the display appears :

```
ALL SEQUENCES  →  COPY CARD

*******************************************************
*  ARE YOU SURE  ?  ( THEN "ENT" )  *
*******************************************************
```

⇒ After you have operated **key – ENT**, the control transfers all sequences to the Memory-card.

⇒ Now in the display appears :

```
ALL SEQUENCES  →  COPY CARD

O.K.  TRANSFER SUCCESSFUL  !

*******************************************************
*   GO ON   WITH        KEY  "ENT"   *
*******************************************************
```

To go on, operate **key - ENT.**

The control jumps to the normal operating mode and this transfer procedure is completed.

3.b) Transfer of sequences to the control :

⇒ From the normal operating mode you enter the menu system by pushing of **key - P .**

⇒ In the first menu level you select **MEMORY CARD** by operating **key ➔**.

⇒ In the second menu level you select **CARD → SEQUENCES** by operating **key ➔.**

⇒ Now in the display appears :

```
FETCH ALL  SEQUENCES  FROM THE CARD

******************************************************
*  ARE YOU SURE  ?  ( THEN "ENT" )  *
******************************************************
```

⇒ Now you have to operate **key - ENT.** All sequences will be transferred to the control.

⇒ In the display appears :

```
FETCH ALL  SEQUENCES FROM THE CARD

O.K.  TRANSFER SUCCESSFUL  !

******************************************************
*    GO ON WITH    KEY   "ENT"   *
******************************************************
```

To go on, operate **key - ENT**. The control jumps to the normal operating mode and the transfer procedure is completed.

Diagnostic

The Indumat 11-control has a diagnostic function, to check all electrical components of the machine. In case of a malfunction you can ascertain the error very quickly with help of the diagnostic.

You can check all **incoming signals (Input)** of the control. These are e.g. pedals, limit switches, solenoid switches, two-hand switches etc.

You can also check all **output signals (Output)** of the control. These are e.g. valves, relays, motors etc.

Hinweis

For the checking of the incoming signals (Input) and the output signals (Output) it is necessary, to **use the electric and the pneumatic diagram**.

There are all Input and Output mentioned.

There are shown code designations, to find the corresponding electrical components on the machine easier (S5, Y10 ..).

In the electric diagram you will also find a short explanation of the corresponding function.

Except of this :

The **inputs and abbreviations of the switches are not identical**, that means switch S1 is not input 1.The reason is the switch denotation S1 to S9 were used for the safety contact (emergency stop, safety frame etc.).
However, these contacts are in the incoming line of the mains voltage for control.
Consequently it is impossible to show them on the display with other inputs.

The result is, that the first possible contact denotation for input 1, is switch S10.

The **outputs and abbreviations of the switches are identical**, that means output 1 is valve Y1 etc.

Testing of analogous inputs/outputs is not possible here! In that case help yourself with a test program!

1. INPUT - TEST :

From the normal operating mode you change to the menu system by pushing of **key - P.**

In the first menu level you select **DIAGNOSTIC** and operate **key ➔.**

In the second menu level you select **I / O TEST** and operate **key ➔.**

Now following display will appear : (e. g.)

```
INP :   01  02  03  04  05   06 07  08  09  10
        11  12  13  14  15  16  17  18  19  20
        21  22  23  24  25  26  27  28  29  30
        31  32  33  34  35  36  37  38  39  40
        41  42  43  44  45  46  47  48  49  50
        51  52  53  54  55  56  57  58  59  60

OUT :  ❋01  02  03  04  05  06  07  08  09  10
        11  12  13  14  15  16  17  18  19  20
        21  22  23  24  25  26  27  28  29  30
        31  32  33  34  35  36  37  38  39  40
        41  42  43  44  45  46  47  48  49  50
        51  52  53  54  55  56  57  58  59  60
```

The upper area (INP) shows all INPUT - possibilities from 1 - 60.

Hinweis

Inverted INPUTS are confirmed. All others INPUTS aren't confirmed.

You can gather from the electric diagram how many INPUTS in your machine are used.

- If you want to check a certain electrical component (e. g. limit switch, foot pedal etc.), operate this component and you can see on the display if the **INPUT** will be signalled.
- It must be inverted, while operating.
- In the electric diagram you can check, which **INPUT** number is related to this component.

2. OUTPUT - TEST :

Attention !!!

DANGER !

In the diagnostic the operator can switch all OUTPUTS ON or OFF.

Certain control internal safety functions are not active while doing this.

There could be a driving or rotating motion activated, so the machine can be damaged. In the worst case, the operator maybe hurt by the machine motions.

Only instructed and trained persons are allowed to carry out a check of the machine with help of the diagnostic mode.

⇒ From the normal operating mode you enter the menu system by pushing of **key - P.**

⇒ In the first menu level you select DIAGNOSTIC and operate **key ➔.**

⇒ In the second menu level you select I / O TEST and operate the arrow **key ➔**.

Now in the display will appear : (e. g.)

```
INP :   01  02  03  04  05  06  07  08  09  10
        11  12  13  14  15  16  17  18  19  20
        21  22  23  24  25  26  27  28  29  30
        31  32  33  34  35  36  37  38  39  40
        41  42  43  44  45  46  47  48  49  50
        51  52  53  54  55  56  57  58  59  60

OUT :   01  02  03  04  05  06  07  08  09      10
        11  12  13  14  15  16  17  18  19  20
        21  22  23  24  25  26  27  28  29  30
        31  32  33  34  35  36  37  38  39  40
        41  42  43  44  45  46  47  48  49  50
        51  52  53  54  55  56  57  58  59  60
```

The lower area (OUT) shows all OUTPUT - possibilities from 1 - 60.

Inverted OUTPUTS are switched on. All other OUTPUTS are switched off.

You can gather from the electric diagram how many OUTPUTS in your machine are used.

If you want to check a certain electrical component (e. g. valves, relays etc.) then look up in the electric diagram, which OUTPUT is related to this electric component.

Use **the black arrow (>),** which is positioned left beside the OUTPUT No.1 to select the desired OUTPUT. With the **arrow keys ↑, ↓, ← and →** you could control this cursor.

If the cursor **(>)** is positioned right beside the OUTPUT number, push **key - ENT** and this OUTPUT (this electric component) will be switched on.

This OUTPUT will be shown inverted.

If you push the **key - ENT** again, this OUTPUT will be switched OFF, and the OUTPUT no. will be shown normally.

In order to facilitate settings on the machine the diagnosis function is equipped with a continuous function test.

That means: If you hold the press key pressed for 3 seconds, the respective OUTPUT is turned on all 2 seconds for 1 second. This correspond the time step of 1Hz.

You can switch on more than one OUTPUT and you can also keep them switched on.

This is very helpful if you would like go a function of the pressing program manually. For this purpose , program tracks are also the assignement of the OUTPUTS in the electric diagram to the OUTPUT denotation and the function descriptions to the respective ones.

An example for lable is : OUTPUT 5 = Changeover vertical movement – track 2/3

Often, it is also necessary that several OUTPUTS for carrying of a program track must activated.

In this diagnostic mode ,is a test of the analogous INPUTS and OUTPUTS not possible.
To test these components ,please use testing programs in which the respective program track accesses analogous component ,e.g. Pressure or Distance.

With the programming " Track Distance " you can also test the sensor B1 and B3 that the way measurement of the machine represent. All measured reference and actual values are to be read off in the display.

3. Machine Adjustment

The functions in the **Adjustment mode** are the most important features to guarantee a permanently good and regular function of the machine.

From the normal operation mode you enter the menu by pushing the **P** button.

In the first menu level you select **DIAGNOSTICS**, then you press the **arrow key ➔.**

Now you select **ADJUSTING MACHINE** in this second menu level, then you push the **arrow key ➔.**

In the third menu level you have to make your choice between :

F1 - HEADPLATE BASIC POSITION;
This function initiates the true basic position of the headplate. The basic position is the position of the headplate which rests with its weight on the bottomplate. This position with wear of the cover material.

F2 - HEADPLATE BASIC PRESSURE;
This pressure neutralizes the weight of the headplate and is important for a precise distance movement which will be programmed in track 2.

F3 - STEP BY STEP MODE,
This mode gives you the chance to run a pressing program with a manual control of the timeflow.

3.a) Headplate basic position :

By pushing F1 you start a reference measurement which is needed if the machine was covered new or as part of a regular weekly check because of the abrasion of the cover material. With the time especially the cover of the bottomplate becomes thinner. Consequently the deepest position of the headplate changes. So with the time the target distance which is programmed is not precise anymore if you miss to use this Basic Position setting.

If you have pushed F1, 5 seconds later the reference value is acquired. The both values shown on the display should be similar ±1. This value should be between 10 and 20. You can correct this values by adjusting the analogous sensor B1 and/or B3. To safe and close this operation, please push the ENT-key.

Please notice : At carousel pressing machines you have to start this operation for each bottomshape !

3.b) Headplate basic pressure

If you push the **F2- key** for the **BASIC PRESSURE SETTING** the indication of a air pressure appears in the middle of the display. You could change this value with the **arrow keys ← and →.** The indicated pressure is admitted in the pneumatic activators of the vertical movement which has been placed directly above the headplate. Indupress adjusted this pressure in that way, that the weight of the headplate has been neutralized.

This value will not change with the time, because the weight of the headplate will always be the same.

Therefor : Please don´t change this value !

By using this function it is possible to touch the sensitive fabrics without the pressure of the headplate and also without admitted pressure in the activators.

At this Machine type the Basic position settings and the Basic pressure settings are activated in the pressing device, where the bottomplate is in.
If you want to change the site, please activate the pressing program with the start pedal or the covering mode to do this.

3.c) Step by step mode

With pressing the **F3- key** you start the **STEP BY STEP MODE**. This offers you the possibility to control the flow of a pressing program by the **arrow keys ← and →.**
In this mode the value for the timestep, programmed in the parameters is not activated.

After you pressed **F3** the following will appear on the display :

```
  START STEP BY STEP MODE

*******************************************************
*   ARE YOU SURE   ?    ( THEN "ENT" )          *
*******************************************************
```

⇒ If you would not select this function, please press the **P- key** to leave this mode.

⇒ If you press the **ENT- key** now, you start the Step by step mode.

⇒ At next the regular operation mode will appear on the display except of this :

⇒ **The indication of the timestep is replaced with the word -MANUAL-.**

⇒ If you press the start pedal, the machine will turn or close as usual and executes the first timestep which is programmed.

⇒ You can use the **arrow keys ← and →** to move the cursor to the next timesteps as desired. You could move forwards and backwards.

⇒ With the ENT- key you could interrupt the started program

⇒ When you finished the program, or it was interrupted, press again the ENT- key to leave this mode. You will enter the normal operating mode with the actual timestep indication**..**