AUTOMATIC BAR FEEDER

ATTACHMENTS LIST
MANUAL FOR USE AND MAINTENANCE
KEYBOARD INSTRUCTION MANUAL
SPARE PARTS BOOK
SCHEMATICS
EC CONFORMITY DECLARATION FOR MACHINE

KID 80 - IV Pupa

EN **KEYBOARD INSTRUCTION MANUAL**

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S/N

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PRODUCT	**AUTOMATIC BAR FEEDER**
MODEL	**KID 80 - IV Pupa**

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Iemca reserves the right to make changes to the products described herein at any time.
Thus, this document may not not exactly match the product.
The data contained herein relate to a product range and are not specific to the serial number appearing on the cover.

1.1 CONTROL DESCRIPTION

INFORMATION:

From the hand-held keyboard it is possible to automatically start the bar feeder, even when the Lathe 'MAN/AUT' signal is in Manual mode.

INFORMATION:

When the bar feeder is in Automatic mode, the bar feeding is possible only when the Lathe "MAN/AUT" signal is in Automatic mode.

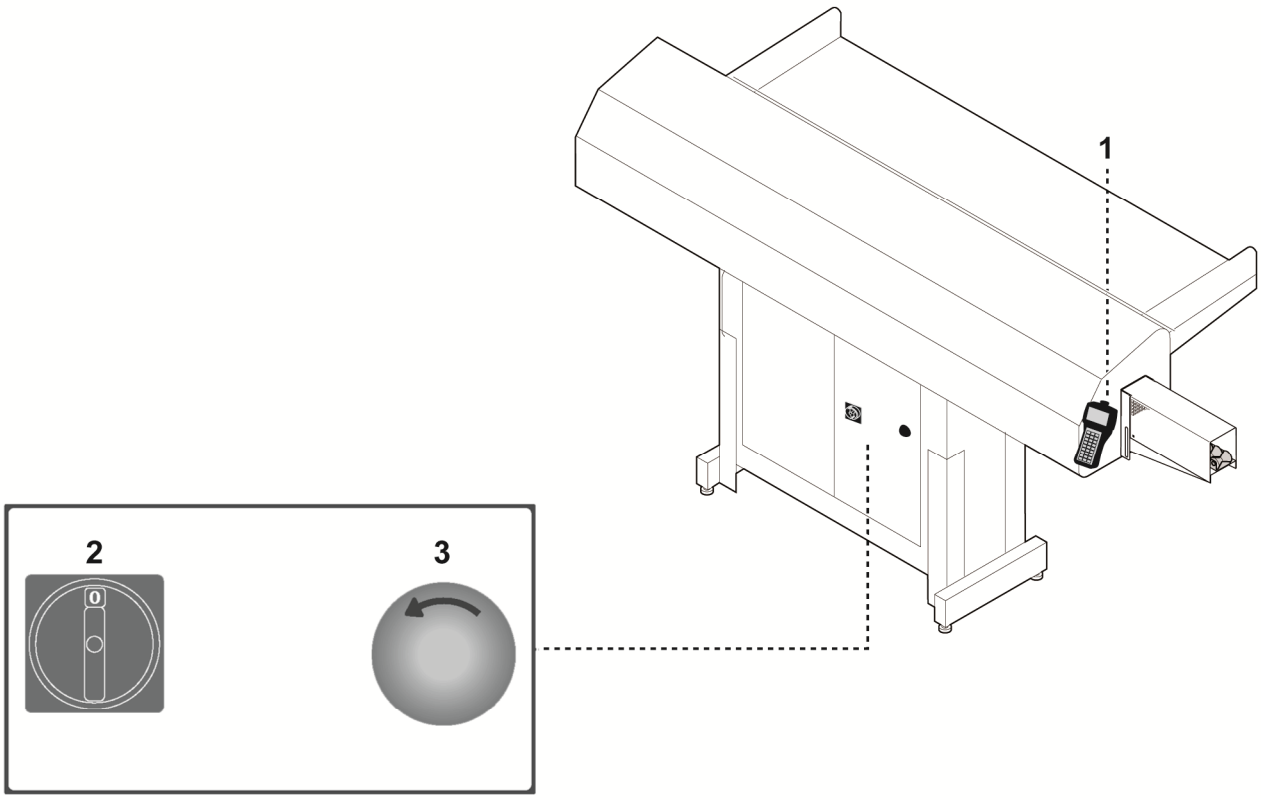
INFORMATION:

By pressing the Manual mode button on the handheld keyboard it is possible to prevent the bar feeder Automatic start by the lathe.

INFORMATION:

Manual control by keyboard is displayed on the screen. if the control is not correct, in the keyboard screen a message describing the correct procedure is displayed.

The figure indicates the positions of both the electrical and handheld keyboard "1" controls.

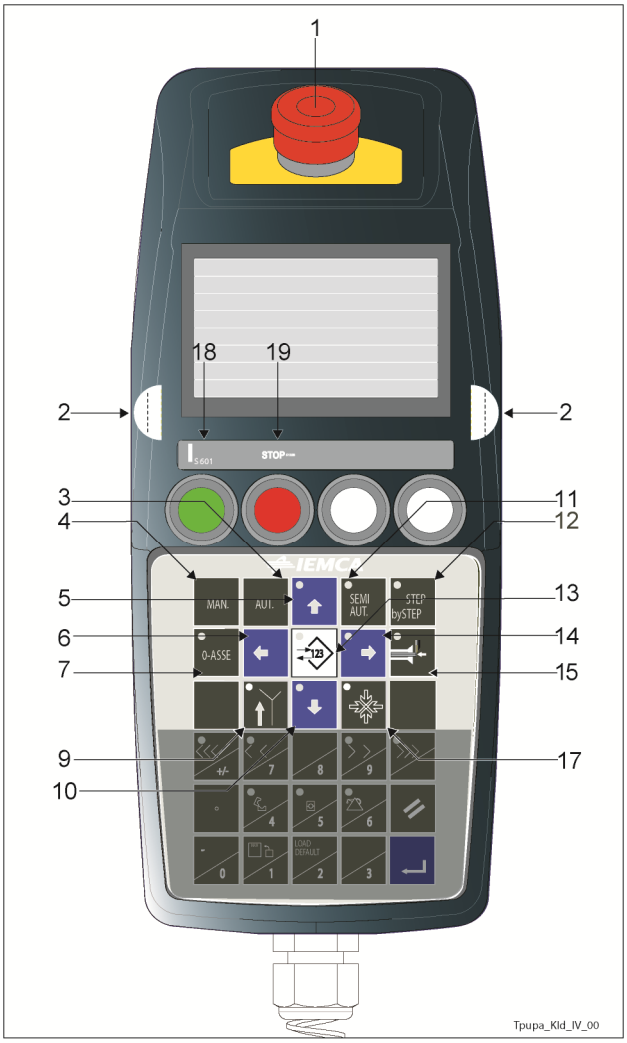


A44K80IVG_01_000_00

2 MAIN SWITCH: turns the power supply on and off.
- Position 0 (OFF) the machine is not powered.
- Position I (ON) the machine is powered.

3 EMERGENCY STOP PUSH-BUTTON: stops the bar feeder in case of emergency. For restart release the push-button manually.

1.2 KEYBOARD CONTROL DESCRIPTION



1 Stops the bar feeder: manually release the push-button in order to restart.
2 Start buttons: opposite buttons enabling the keys for some functions. Press both buttons and simultaneously the button corresponding to the desired function.
3 Selects the automatic mode.
4 Selects the manual mode.
5 Multifunction
- Allows scrolling the page upwards.
- Moves the selection cursor upwards.
- Increases by one the value set in the date and time programming mode.

6 Multifunction
- Selects the previous parameter.
- Moves the selection cursor leftwards.

7 It resets the "BAR FEEDER ZERO SETTING" of the carriage.
Hold down both start buttons and then the key; release both buttons and the key when the carriage starts moving towards the "BAR FEEDER ZERO SETTING" position.

WARNING - CAUTION:

List of causes that require to carry out the 0-Axis in manual mode.

Carrying out the manual 0-Axis periodically is recommended.

If the bar pusher axis is moved by means of the crank with the bar feeder powered off (no power supply).

If the feeding belt is tightened (by means of the mechanical belt tightener, see Operation and Maintenance Manual, "Feeding belt - Adjustment").

9 Selects the guide channel lifting function:
- Push both opposite start buttons and then press the key; the procedure starts no matter what phase the bar feeder is in and ends with the guide channel in high position.

10 Multifunction
- Allows scrolling the page downwards.
- Moves the selection cursor downwards.
- Decreases by one the value set in the date and time programming mode.

11 Selects the semiautomatic mode.
Press the button to select a mode and press again to deselect it.

12 Activates the "step by step" operating cycle: every time the button is pressed, one step is performed.

13 Selects the keyboard modes:
- with LED off [pupa_kid_barra_vert-dx]; selects the "message display" mode.
- with LED on [pupa_kid_barra_oriz-sx]; selects the "parameter display" mode.

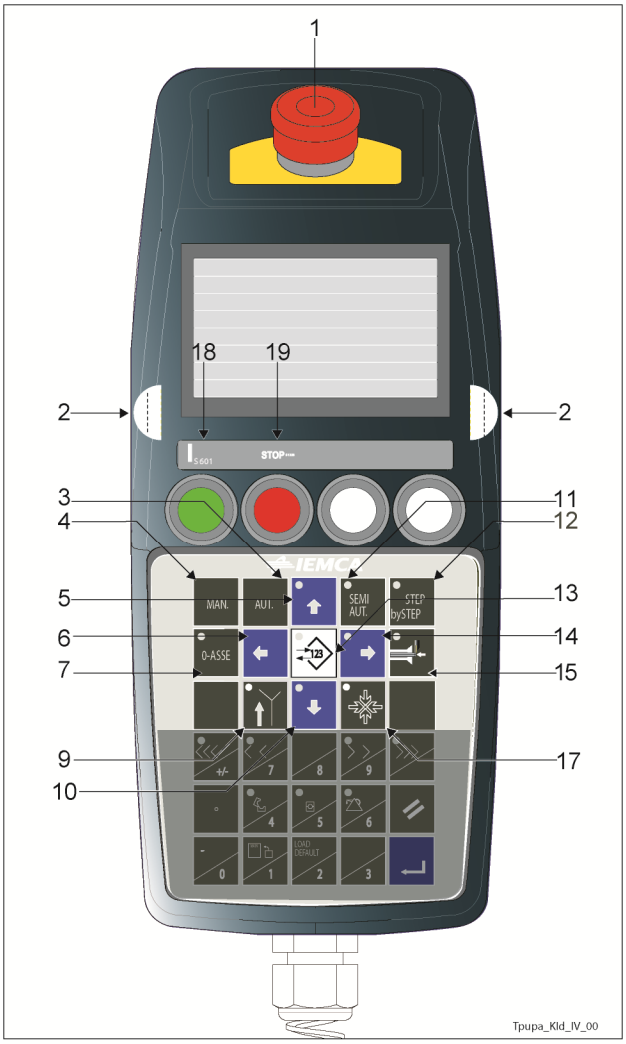
14 Multifunction
- Selects the next parameter
- Moves the selection cursor rightwards.

15 Selects the feeding of a new bar until the facing position is reached.
- Press both opposite start buttons; you can release the keys from the beginning of the feeding. The procedure will continue until the facing position is reached.

17 Selects the reset function after a new tooling:
- Press both opposite start buttons and then the key; press and hold the keys until the procedure is completed.

18 "Errors" reset button.

19 Bar feeder stop button (red); press this button to stop the bar feeder.
- In "Manual" mode, when the bar feeder is in the required position, the half-bushes will close when this button is pressed. If pressed again, the half-bushes will open.
- In "Automatic" mode, if pressed, the half-bushes will open and close, according to the preset sequence. If pressed again, the half-bushes will remain open during the entire operating cycle.



22 Multifunction
- Sets the numerical value.
- Moves the bar pusher at a low speed.

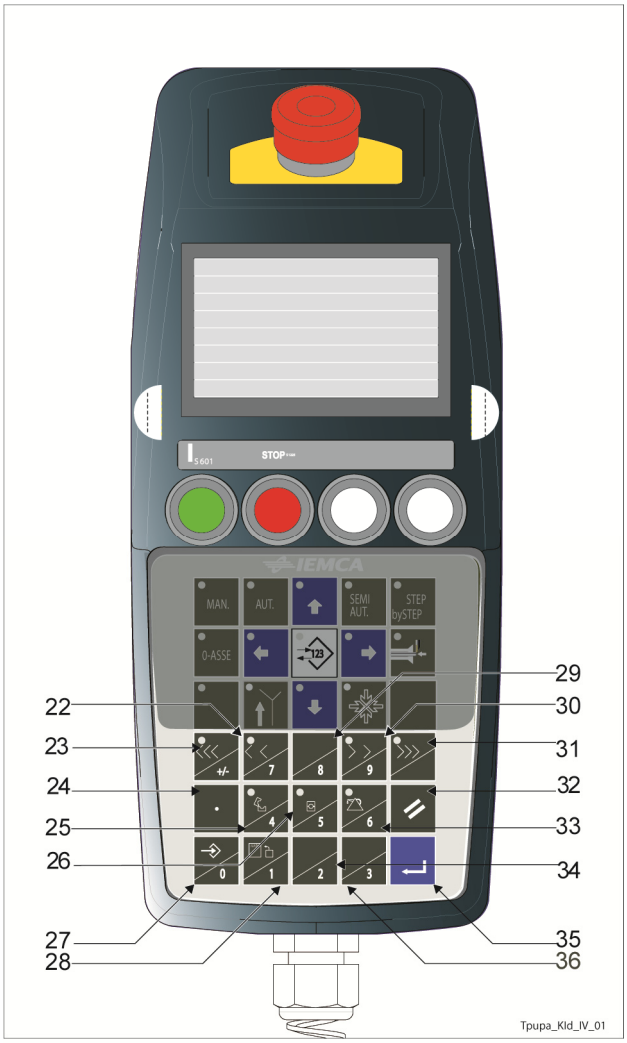
23 Multifunction
- Sets the font.
- Moves the bar pusher at a high speed.

24 Sets the comma.

25 Multifunction
- Sets the numerical value.
- Opens the guide channels.
- Push both start buttons and then the key; release both buttons and the key only when the movement is finished.

26 Multifunction
- Sets the numerical value.
- Closes the guide channels.
  Push both start buttons and then the key; release both buttons and the key only when the movement is finished.

27 Multifunction
- Sets the numerical value.
- Recalls the selection cursor.



28 Multifunction
- Sets the numerical value.
- Recalls the main menu (MAIN MENU).

29 Sets the numerical value.

30 Multifunction
- Sets the numerical value.
- Moves the bar pusher at a low speed.

31 It moves the bar pusher at high speed.

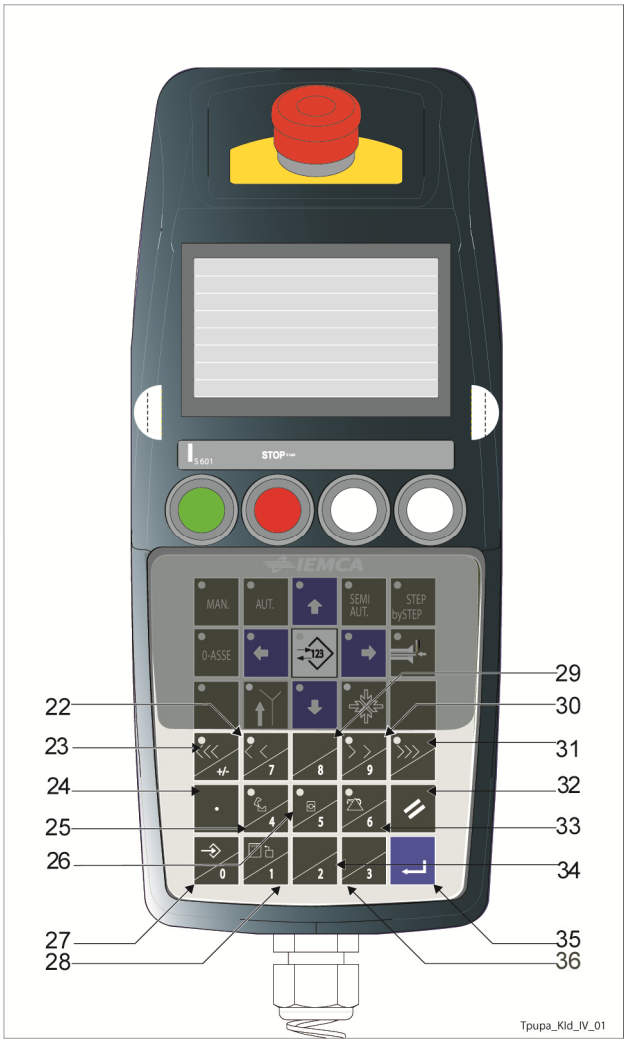
32 Multifunction
- Stops the selection function.
- Restores the value prior to the non-confirmed modification.

33 Multifunction
- Sets the font.
- Turns on/off the oil pump.
  Press to turn on the pump and press again to turn it off.

34 Sets the numerical value.

35 Confirms the entered data.

36 Sets the numerical value.



1.3 MAIN SCREENS: DESCRIPTION

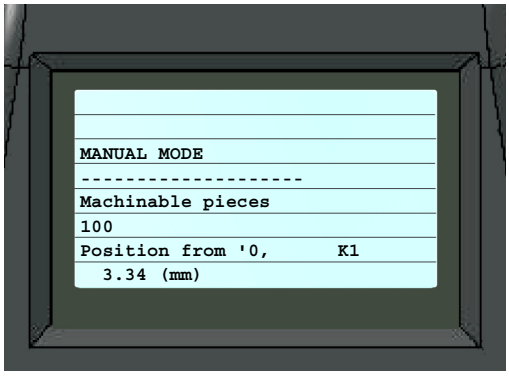
These are the main screens:
- operation
- setup

The working screen shows the bar feeder working conditions.
The Setup screen shows the setting functions.

1.3.1 Working screen

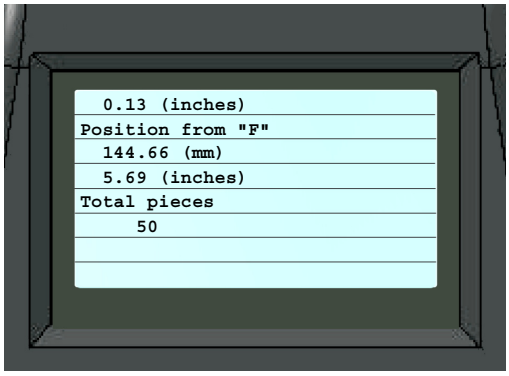
1. When the bar feeder is on, the following screen is displayed:

   Bar feeder operating mode: MANUAL MODE.
   Quantity of machinable pieces of the bar being machined.
   Carriage position: Position from '0'.
   "K1" is displayed when the bar feeder is at the bar end. In all the other operating conditions it is not displayed.



2. To continue with the screen display, repeatedly press:  the display shows:

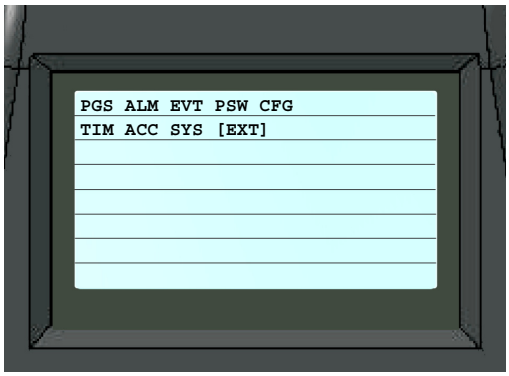
   Carriage position: Position from "F"
   Quantity of machined pieces (for zero setting mode see section 1.4): Total pieces



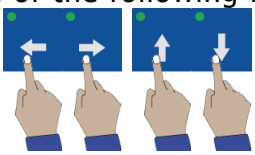
3. To return to the main screen repeatedly press: 

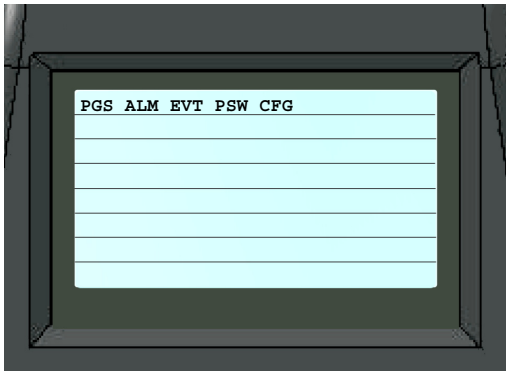
1.3.2 Setup screen

1. To return to the Setup screen, press for a few seconds:  the display shows:



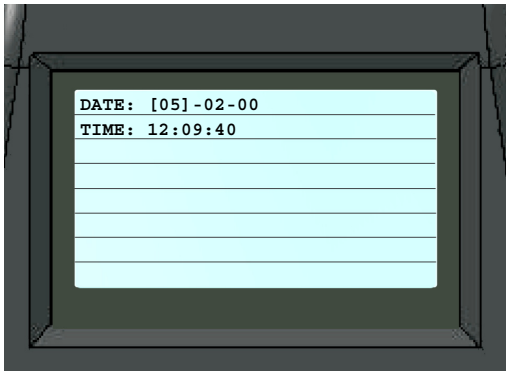
Function identifying abbreviations: PGS ALM EVT PSW CFG TIM ACC SYS [EXT]

2. Press one of the following keys to select a function:  the display shows, or example:



Selected function: PGS ALM EVT PSW CFG [TIM] ACC SYS EXT

3. To enter the function:  the display shows:

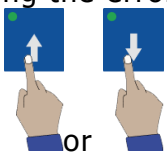


4. To exit the function: 

Values related to the selected function: DATE: [05]-02-00

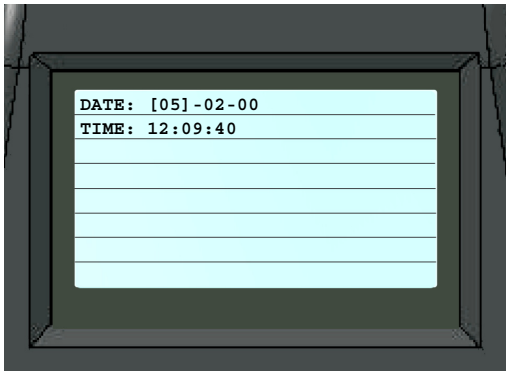
The PGS, ALM, CFG and ACC functions are not accessible. The EVT, PSW, TIM, SYS and EXT functions, described below, are accessible.

EVT (EVENTS) FUNCTION
This function allows displaying the error messages that appeared on the display.

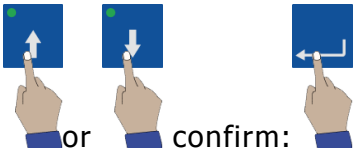
1. To display in sequence:  or

PSW (PASSWORD) FUNCTION
This function is used to enter the password, which allows access to the protected modes. This function is described in the following sections.

TIM (TIME) FUNCTION
This function is used to set the date and time; the display shows:



To set date and time

1. Set the day:  or confirm:
2. Set the month:  or confirm:
3. Set the year:  or confirm:
4. Set the hour:  or confirm:
5. Set the minutes:  or confirm:
6. Set the seconds:  or confirm:

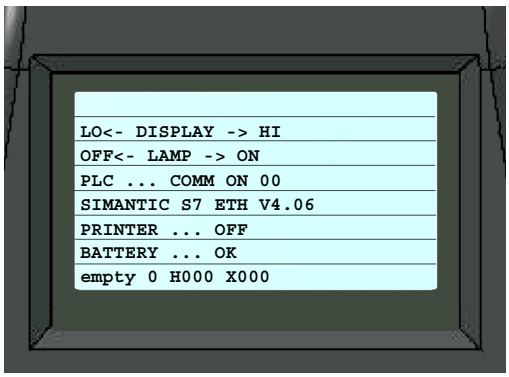
To set only one digit

1. If, for instance, you need to set the time only, move the selection cursor on the time and repeatedly press: 

   set the time:  or  .

SYS (SYSTEM) FUNCTION

This function displays the keyboard setup parameters; the display shows:



To adjust the display brightness: LO<- DISPLAY -> HI
To reset the button LEDs: OFF<- LAMP -> ON
Shows ON-OFF between the keyboard and the PLC: PLC ... COMM ON 00
SIMANTIC S7 ETH V4.06
Shows the connection between the keyboard and the printer: PRINTER ... OFF
Shows the keyboard battery conditions: BATTERY ... OK

1. To exit:  or select "EXIT"  confirm: 
2. To adjust the brightness of the display, select "DISPLAY":  or 
   To increase or decrease the brightness:  or 
3. To test the button LEDs, select "LAMP":  or 
   to test the operation of the LEDs:  or 

EXT (EXIT) FUNCTION

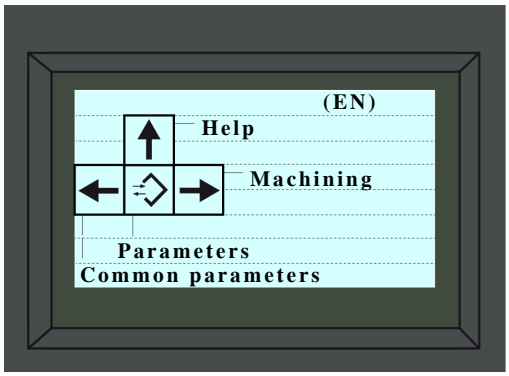
This function is used to exit from the Setup screen.

1. To exit: 

1.4 PIECE COUNTER RESET MODE

1. Enter the "parameter display" mode: [pupa_kid_barra_oriz-sx]
2. the display shows:

   to access "Common Parameters":



3. Press and scroll the parameters up to "Total pieces"
4. Select the residual value: the display shows:

5. Eliminate the residual value: confirm:

   The selected residual value: Total pieces 50

   if you wish to stop the selection during the zero setting mode

   At this stage the value is no longer blinking. If the reset has not been confirmed, the previous residual value will reappear.

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2.1 AUTOMATIC CYCLE START

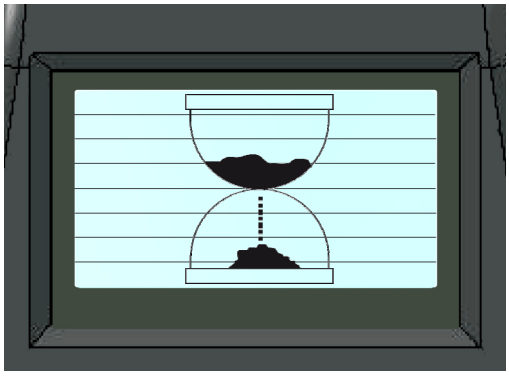
1. Power on the lathe.

2. Power on the bar feeder by turning the main switch to position I (ON)  .

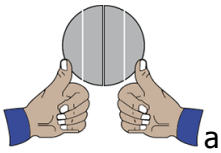
The hourglass appearing on the display shows the synchronization of data among electronic components.

DANGER - WARNING:

it is absolutely forbidden to move the bar pusher before the above-mentioned procedure has been completed. The bar pusher can be moved only after pressing the start button (see point 3 Starting the bar feeder). For example: when starting the bar feeder, the +Z -Z axis of the lathe headstock is moved with the collet closed. This manoeuvre can cause serious damages to the bar feeder and the lathe.



3. Select the manual mode: 

4. Select the "BAR FEEDER ZERO SETTING" of the carriage:  and 

   If the top guide channels are not in a low position, the carriage will not move; to lower the guide channels, follow the operational messages which will appear on the screen.
   Follow instructions given above and reset the carriage to "BAR FEEDER ZERO SETTING":

5. Bring the bar fore end close to the cutting tool: 

6 Start the closing of the lathe collet and start working by selecting the automatic mode: 

2.2 0-AXIS PROCEDURE (MANUAL MODE)

List of causes requiring the 0-Axis in manual mode:

- carrying out the manual 0-Axis periodically is recommended;
- if the bar pusher axis is moved by means of the crank or the lathe headstock is moved with the bar feeder powered off (no power supply).
- if the feeding belt is tightened (by means of the mechanical chain tightener, see Operation and Maintenance Manual, "Feeding chain - Adjustment").

2.3 CYCLE PERFORMING MODE IN THE STEP-BY-STEP FUNCTION

Foreword

This mode may be used for many reasons, as for instance:

- to lift the guide channels;
- to check a complete bar change cycle;
- to check the bar feeder mechanics;
- to load a single bar so as to check the facing;
- to remove the spindle liner;
- etc.

Procedure

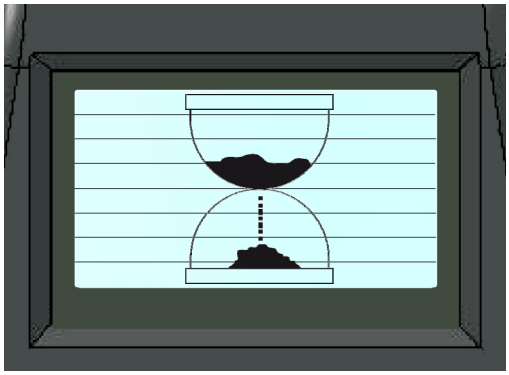
1. Power on the lathe.

2. Power on the bar feeder by turning the main switch to position I (ON)  .

The hourglass appearing on the display shows the synchronization of data among electronic components.

DANGER - WARNING:

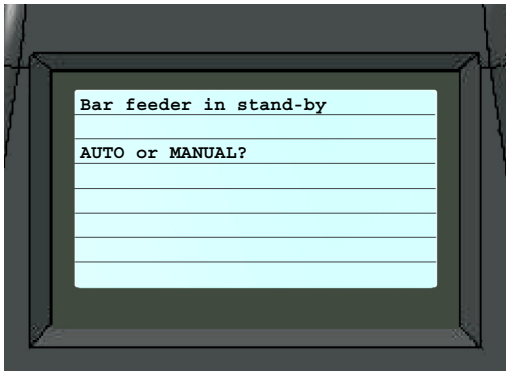
it is absolutely forbidden to move the bar pusher before the above-mentioned procedure has been completed. The bar pusher can be moved only after pressing the start button (see point 3 Starting the bar feeder). For example: when starting the bar feeder, the +Z -Z axis of the lathe headstock is moved with the collet closed. This manoeuvre can cause serious damages to the bar feeder and the lathe.



- check that the guide channels of the bar feeder are closed. If not, close the guide channels in manual mode.

1. press SEMI AUT. and then AUT. to select the semiautomatic function;

2. press STEP by STEP, the bar feeder performs the first step (bar pusher return);

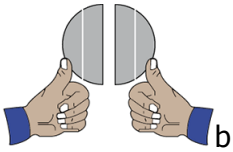


3. press 

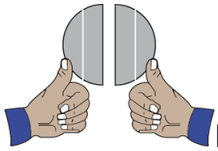
, the bar feeder performs the second step, and so on.

2.3.1 BAR LOADING CYCLE - FACING PROCEDURE

The following procedure describes the feeding of a new bar until the facing position is reached:

Press the  buttons with the  key for 6 seconds.

The bar feeder starts the bar loading cycle, which stops when the new bar is positioned. The loading cycle of the new bar takes into account parameter 3 (facing mode) and parameter 2 (facing position).

If the operator releases the  buttons or the  key, the cycle goes on until it is completed.

INFORMATION:

Without the open collet signal from lathe, the bar feeder carries out the above mentioned procedure, but the bar stops before entering the lathe collet (waiting for the open collet signal). With the open collet signal from lathe, the bar is loaded and positioned past the lathe collet according to parameters 2 and 3.

WARNING - CAUTION:

Check that the bar to be loaded in the magazine is present.

2.4 BAR FEEDER STOP

Bar feeder stop in emergency.

1. Press the emergency button to stop the bar feeder.

WARNING - CAUTION

If the emergency stop is activated whilst the lathe is working, before restarting the working cycle, check that no dangerous conditions have been created due to the sudden stop. For example: if the tool was removing chips, move the tool away from the work piece before restarting the lathe.

Stopping the bar feeder at the end of the machining cycle.

WARNING - CAUTION

When stopping the machine normally, do not use the emergency buttons.

1. Complete the operations of your working schedule.
2. Stop the bar feeder: 

3. Stop the lathe.
4. Turn off the electrical supply of the bar feeder by turning the main switch to the 0 (OFF) position.

2.5 OPERATOR PARAMETERS: OPERATION MODE

These parameters are needed for the bar feeder automatic cycle programming and should be set according to the working requirements as well as to the lathe type that is connected to the bar feeder. Some parameters concern the working phase, while others are used for the bar change phase.

WARNING - CAUTION

The parameters are set to a default value (preset value): the bar feeder performs the automatic cycle according to these values. Some parameters may not be appropriate for the lathe type or the type of machining requested.

The main operation modes are listed hereunder:

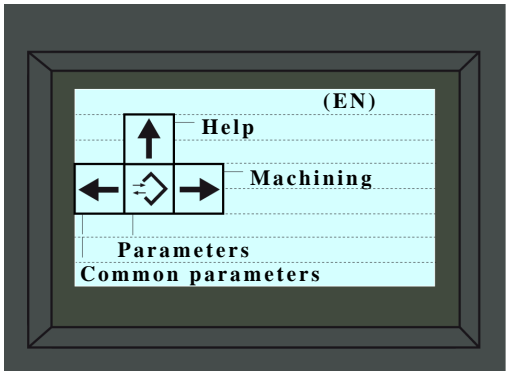
- Accessing the parameters
- Parameter display
- Parameter modification
- Subparameter display
- Subparameter modification
- Exiting the parameters

2.6 PARAMETER ACCESSING AND DISPLAY

2.6.1 Access to and display of common parameters

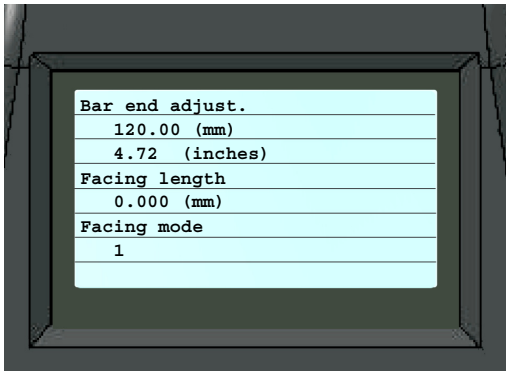
1. Enter the "parameter display" mode: [pupa_kid_barra_oriz-sx]
2. the display shows:

   to access "Common Parameters":



3. the display shows in sequence:

- Bar end adjust.
- Facing length
- Facing mode
- Piece length
- Short feeding safety
- Long feeding safety
- Corr. max. feed. pos.
- Total pieces

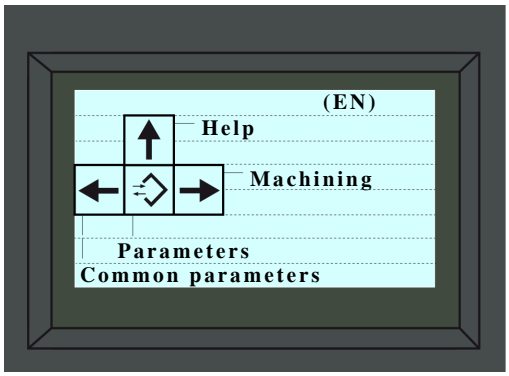


4. Short menu parameters may also be displayed on the extended menu.

- It is possible to change the parameter values both in the short and extended menu.

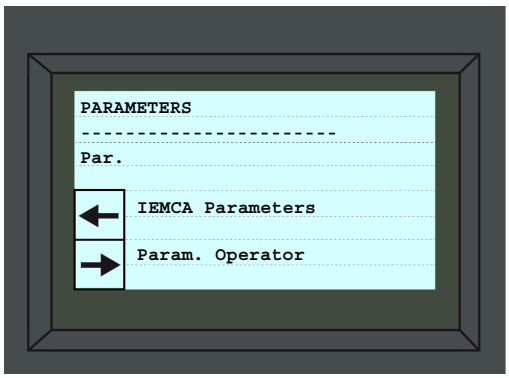
2.6.2 HOW TO ACCESS AND DISPLAY IEMCA PARAMETERS

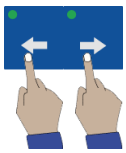
1. Enter the "parameter display" mode: [pupa_kid_barra_oriz-sx]
2. The display shows

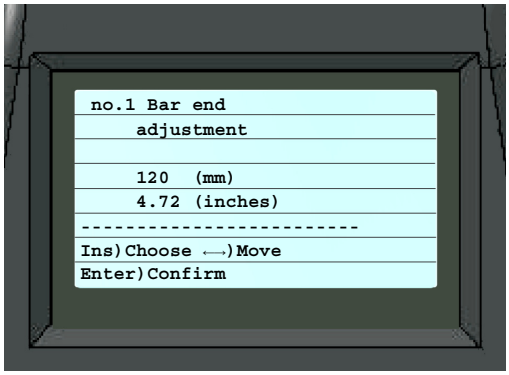


3 Press  to access "Parameters":

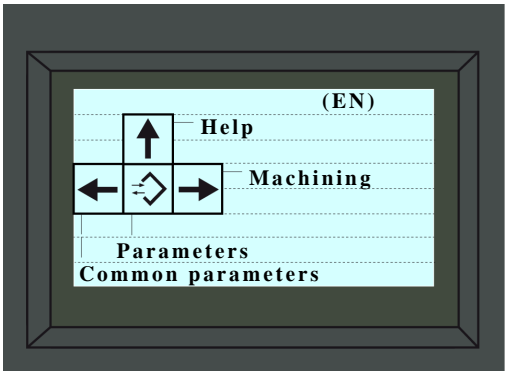
4. Recall the arrow  to access "IEMCA Parameters"



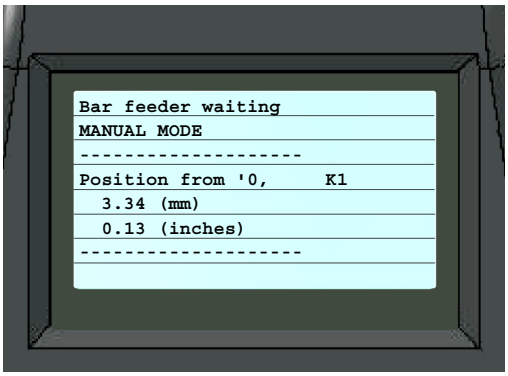
5. Display the parameters: 
all the other parameter will appear in sequence



6. Recall the "Main Menu":  the display shows



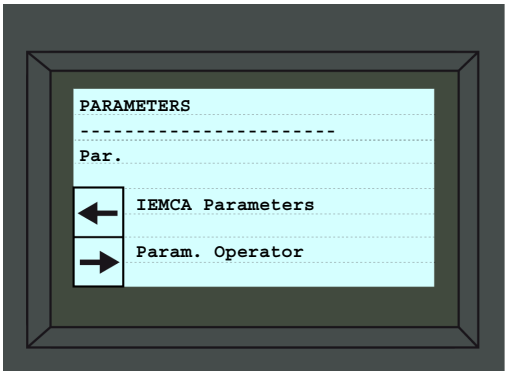
7. To return to the short menu press [pupa_kid_barra_vert-dx] and proceed as described in section 2.6.1.



8. To directly access the parameters return to screen 4. and proceed as follows:

9. Recall the selection cursor  . The Par.0 value starts blinking.

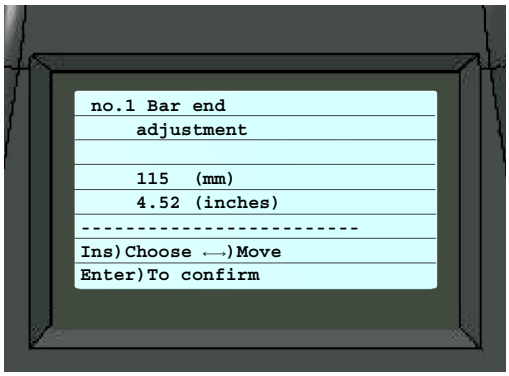
10. Enter the parameter number, for example "1"; the parameter value changes from 0 to 1 and  starts blinking; confirm: parameter 1 is now displayed



2.7 PARAMETER MODIFICATION

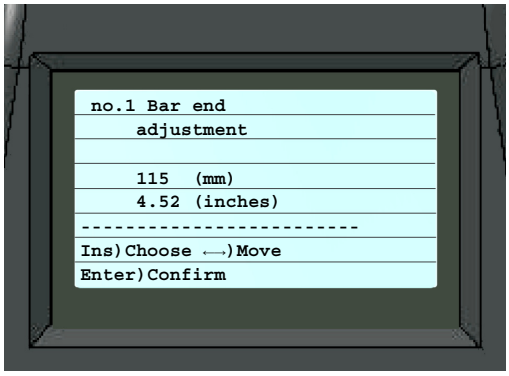
1. The desired parameter should be displayed:

   "Parameter screen example"

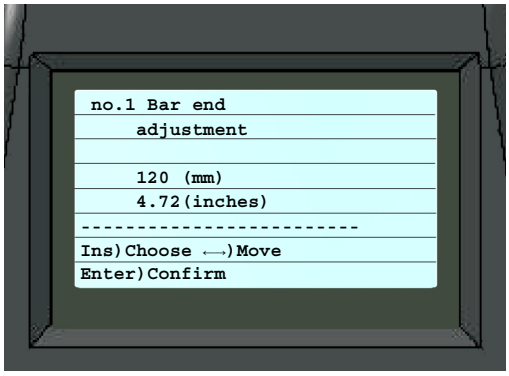


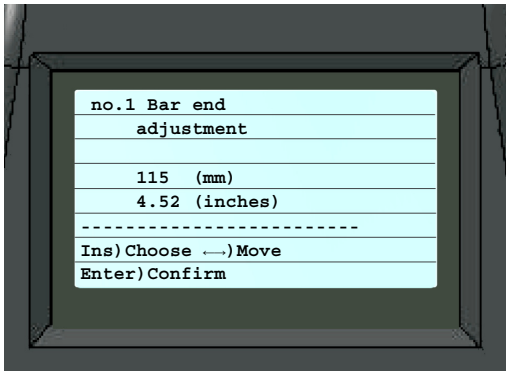
2. Select the parameter value:  the display shows:

   Selected value: 115 (mm)



3. Enter the desired value, for example "120": the value changes from 115 to 120 and starts blinking, confirm: 





The value will stop blinking and the same value expressed in inches will automatically appear, or if a value in inches is selected and entered, the corresponding value in millimetres (mm) will automatically appear:

If during the modification mode you want to stop the selection: 

At this stage the value is no longer blinking. If the value is not confirmed when entered, the last value will reappear.

2.8 SUBPARAMETERS DISPLAY

Some parameters have subparameters.

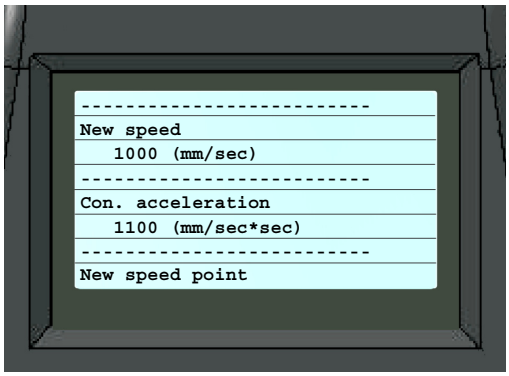
1. To display them, scroll down the parameter screen by pressing repeatedly: 

2. To return to the parameter screen, scroll the screen upwards by repeatedly pressing: 

2.9 SUBPARAMETER MODIFICATION

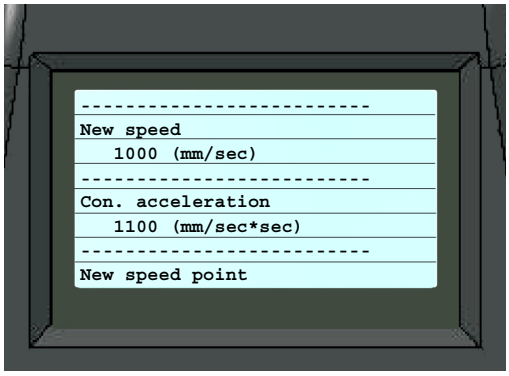
1. Display the desired subparameter:

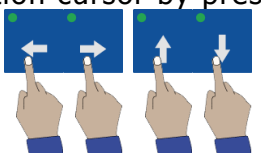
   "Example of the subparameter screen"



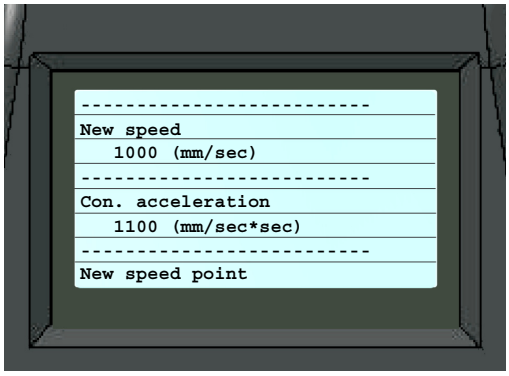
2. Recall the selection cursor:  the display shows:

   Selected value: 1000 (mm/sec)

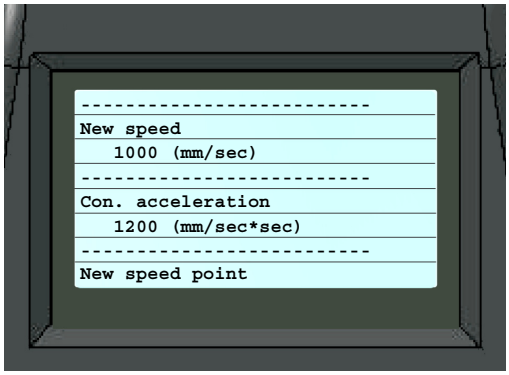


3. Move the selection cursor by pressing one of the following keys:  the display shows:

   Selected value: 1100 (mm/sec*sec)



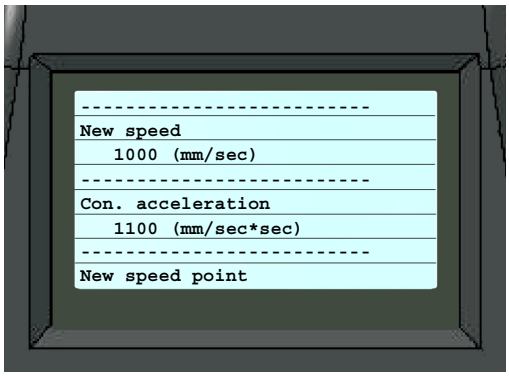
4. Enter the desired value, for example "1200": the value changes from 1100 to 1200 and starts blinking, confirm: 



The value stops blinking:

If during the modification mode you want to stop the selection: 

At this stage the value is no longer blinking. If the value is not confirmed when entered, the last value will reappear.



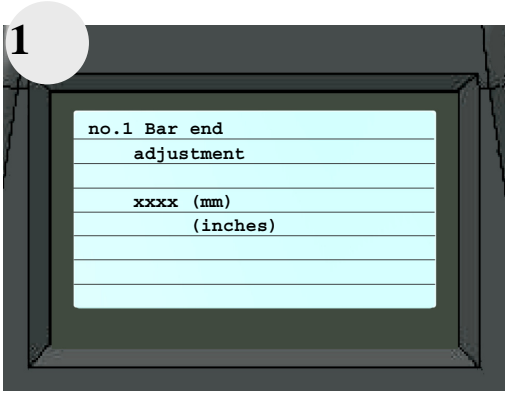
2.10 EXITING THE PARAMETERS

1. Exit the "parameter display" mode: [pupa_kid_barra_vert-dx]

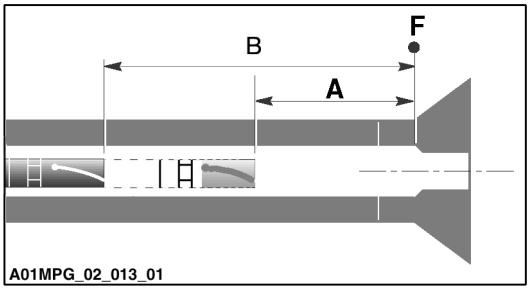
2.11 OPERATOR PARAMETERS: DESCRIPTION

no. 1 Bar end adjustment

Defines the position where the bar feeder should send the "bar end" signal to the lathe.
This value is referred to point (F) (maximum bar pusher feeding point), and corresponds to the piece length plus the cutting tool thickness.



A - Parameter 1
B - Subparameter 1



DEFAULT VALUE	PROGRAMMABLE VALUE
KID	KID
1	0

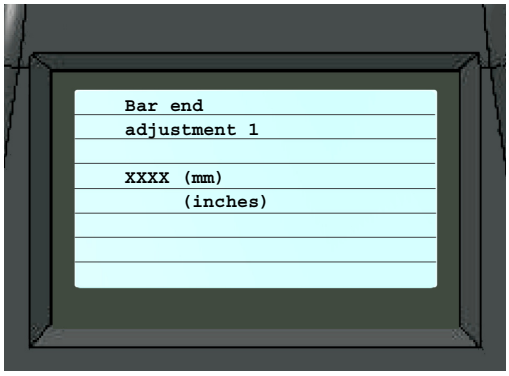
The "Bar End 1 Adjustment" subparameter can be used for two separate functions.
1) the subparameter sends an interface signal to the bar feeder-lathe (2nd Bar end);
2) the subparameter allows opening the additional bush;
3) The subparameter sends an interface signal to the bar feeder-lathe (prevents the headstock from completing the return stroke).

INFORMATION:

Using the "Bar End 1 Adjustment" subparameter rules out the possibility for one of the the above mentioned functions of being used simultaneously with the other

1) the subparameter sends an interface signal to the bar feeder-lathe

Defines the position where the bar feeder should send the Bar End Signal 1 to the lathe.
This value refers to point (F) (maximum bar pusher feeding point), and is a higher length than value (A).
The lathe enters a subprogram corresponding to a new machining cycle, where the length of the piece to be machined is shorter than the one of the main program.



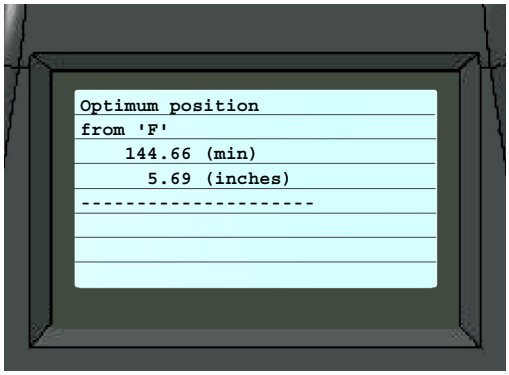
INFORMATION:

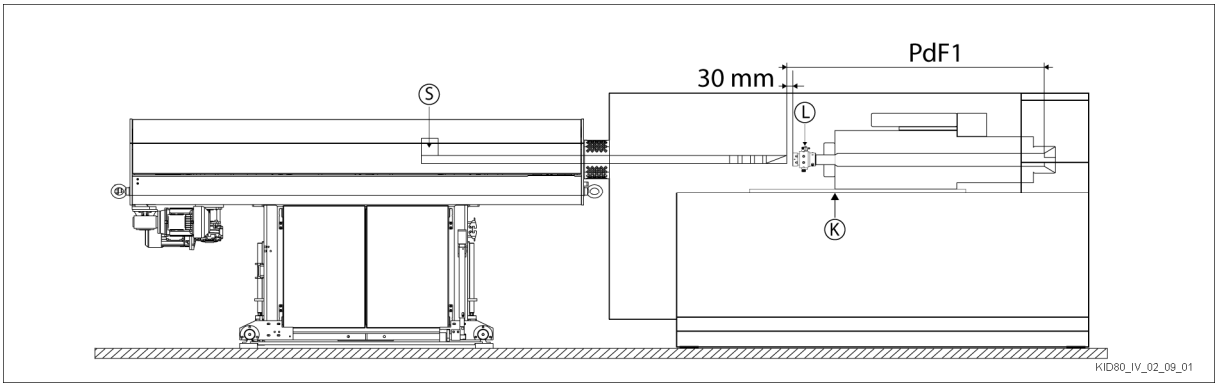
If the Bar End Adjustment subparameter 1 is used, the bar end adjustment value should be set according to the length of the piece in the 2nd working cycle.

1) the subparameter allows opening the additional bush
Procedure for setting the "Bar End 1 Adjustment" subparameter for the additional bush opening

a) Additional bush opening synchronized with the length of the machined piece

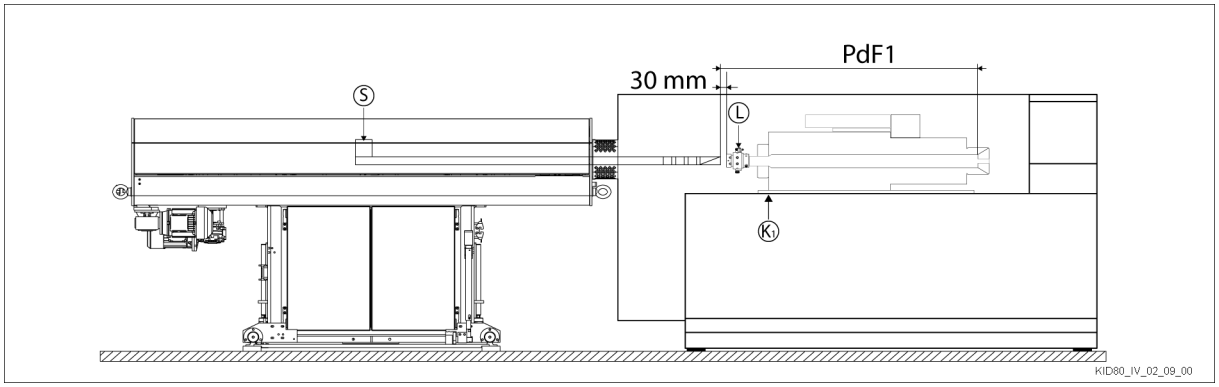
- Move the lathe headstock "K" in its completely forwards limit stop position;
- move the bar pusher "S" forwards without the bar inside the guide channel positioning the front part at about 30 mm from the additional bush "L";
- Check the value relative to the position "F" on the display (which by definition is called "PdF1")
- the measured value shall be added to the value set in the "Bar End Adjustment" parameter and inserted in "Bar End 1 Adjustment" parameter





b) Additional bush opening at a fixed value

- Move the lathe headstock "K1" in its completely back limit stop position;
- move the bar pusher "S" forwards without the bar inside the guide channel positioning the front part at about 30 mm from the additional bush "L";
- Check the value relative to the position "F" on the display (which by definition is called "PdF1")
- the measured value shall be added to the value set in the "Bar End 1 Adjustment" subparameter



INFORMATION:

The additional bush accessory on the lathe is installed if applicable from the lathe-bar feeder mechanical interface or upon customer's request.

3) The subparameter sends an interface signal to the bar feeder-lathe (prevents the headstock from completing the return stroke).

There is a condition in which the length of the loaded bar plus the length of the bar pusher added to the max headstock stroke is greater than the distance between the 0-axis sensor and the lathe collet. If the headstock moves back with closed collet, the bar and the bar pusher may exceed the maximum stroke allowed (causing a mechanical collision or a bar deformation).
If a value greater than or equal to 1500 mm (value is referred to point F) is set in the subparameter (B), its function becomes that of "headstock overrun safety".

INFORMATION:

warning: with a value lower than 1500mm, subparameter "B" remains available for functions 1) and 2).

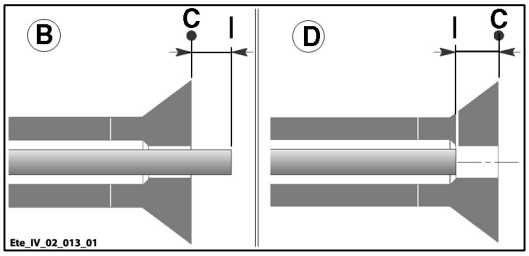
INFORMATION:

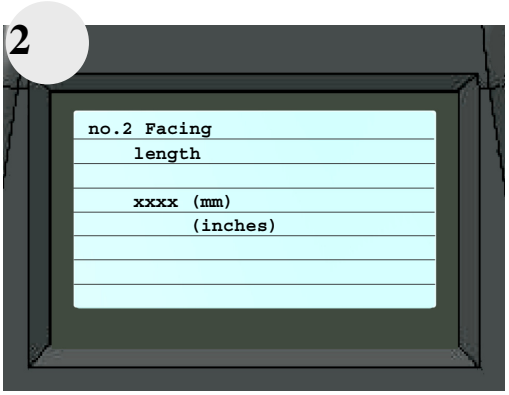
Warning: during the bar change cycle, the signal is disabled.

no. 2 Facing length

Defines the movement of the bar fore end according to point (C) (facing point).
Both positive and negative values.

B - (positive value)
D - (negative value)





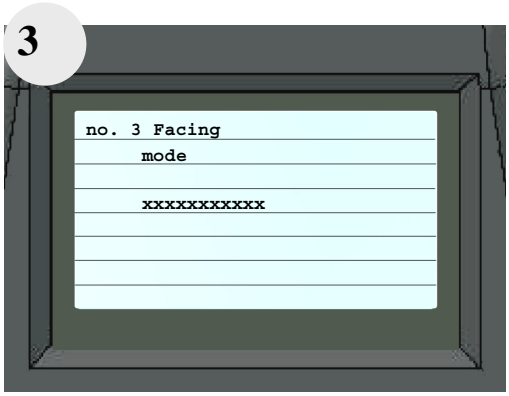
DEFAULT VALUE	PROGRAMMABLE VALUE
KID	KID
1	0

no. 3 Facing mode

Defines the facing operation.
0 - (UNTIL BAR STOP); once the bar has exceeded the value defined in parameter 2, it proceeds until bar limit stop or until it reaches the tool.
1 - (IN POSITION); the bar is positioned in the point defined in parameter 2.

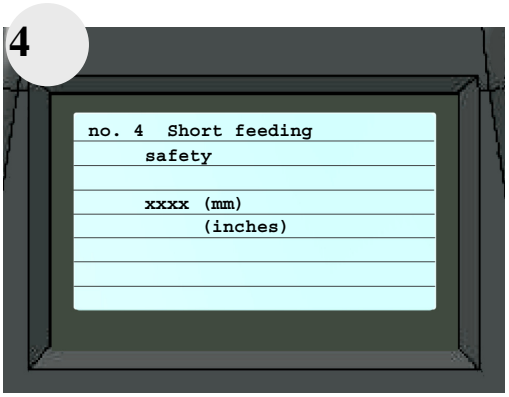
Subparameters:

B - Overrun admitted after I
C - Facing to limit stop (%Vmax)
D - Facing to limit stop (%Cmax)



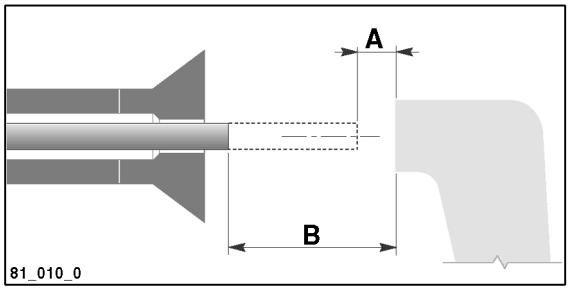
	DEFAULT VALUE	PROGRAMMABLE VALUE
	KID	KID
A	1	0/1
B	0	/
C	1	/
D	50	/

no. 4 Short feeding safety



During every feeding stage, it checks that the bar does not go further than the value set in parameter 6 and keeps the tolerance level set in parameter 4. Should this not occur for any reason, when the lathe cuts the "FEEDING" signal, the bar feeder goes into "ALARM".
If parameter 6 is set to 0, this parameter is not active.
A - Parameter 4
B - Parameter 6

DEFAULT VALUE	PROGRAMMABLE VALUE
KID	KID
0	0



0 - (Not enabled for first piece); the parameter is active for all feeding operations except for the first piece.
1 - (Enabled for first piece): the parameter is active for every feeding operation (the facing phase excepted).

INFORMATION

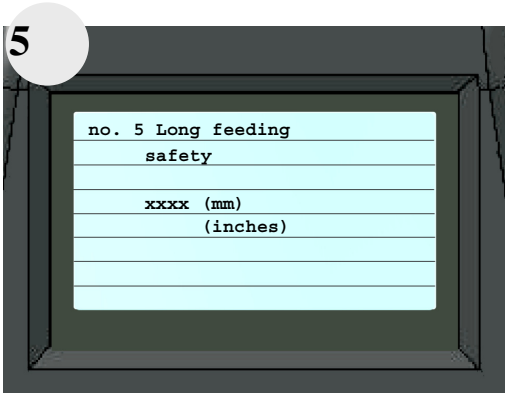
The short piece control cannot be performed in sliding headstock lathes (bar feeding is carried out by the headstock).

INFORMATION:

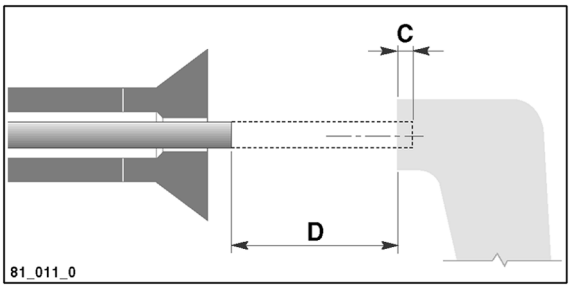
Setting the subparameter to 1 (Enabled for first piece), the "short piece" (parameter 4) checks are activated straight after the first piece.

no. 5 Long feeding safety

During every feeding stage, it checks that the bar does not go further than the value set in parameter 6 added to the value set in parameter 5. Should this not occur for any reason, the bar feeder goes into "ALARM".
If parameter 6 is set to 0, this parameter is not active.



C - Parameter 5
D - Parameter 6



DEFAULT VALUE	PROGRAMMABLE VALUE
KID	KID
0	0

0 - (Not enabled for first piece); the parameter is active for all feeding operations except for the first piece.
1 - (Enabled for first piece): the parameter is active for every feeding operation (the facing phase excepted).

INFORMATION

In the sliding headstock lathe, you can use this parameter to check for any tool breakages; enter a value of a few millimetres (maximum 5 mm).

INFORMATION:

Setting the subparameter to 1 (Enabled for first piece), the "short piece" (parameter 4) checks are activated straight after the first piece.

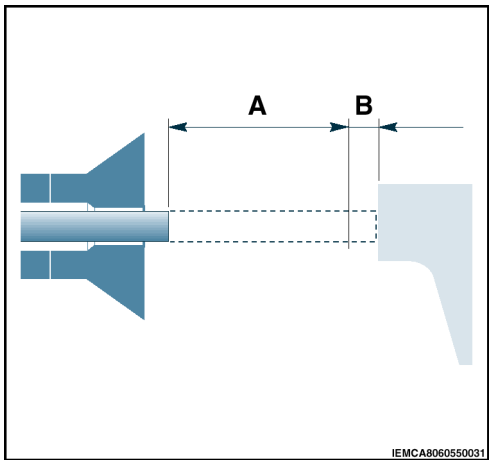
no.6 Piece length

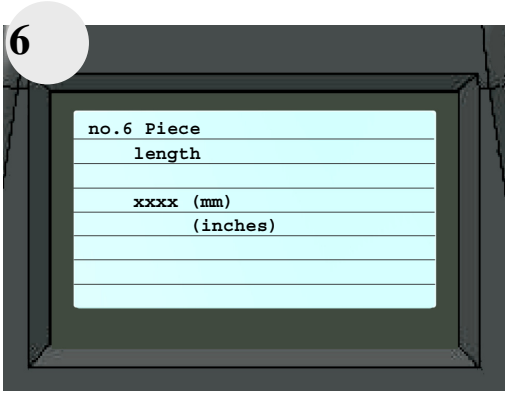
Defines the feeding value at each collet opening.

This parameter is active only if parameter 35 is set to "1" or "2".

When parameter 35 is set to "0", this parameter is not active.

A parameter 6
B about 4 mm

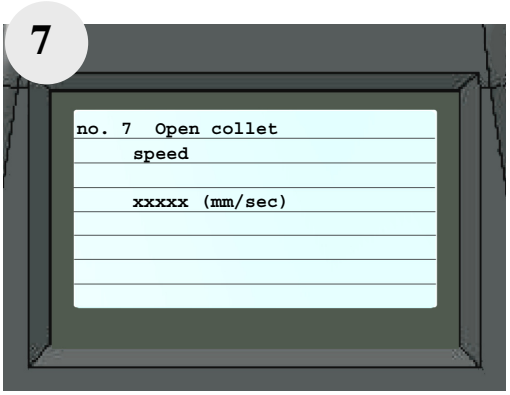




DEFAULT VALUE	PROGRAMMABLE VALUE
KID	KID
0	0

no. 7 Open collet speed

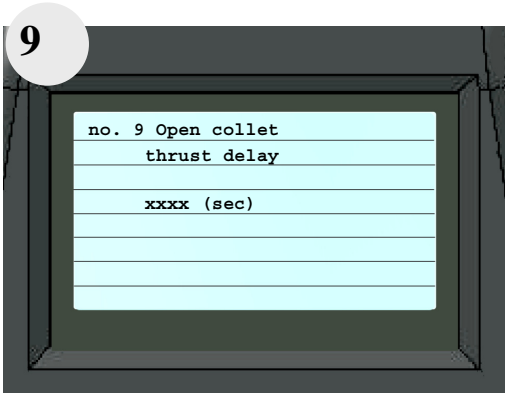
Defines the "FEEDING" speed value.



DEFAULT VALUE	PROGRAMMABLE VALUE
KID	KID
300	0[diviso]1905

no. 9 Open collet thrust delay

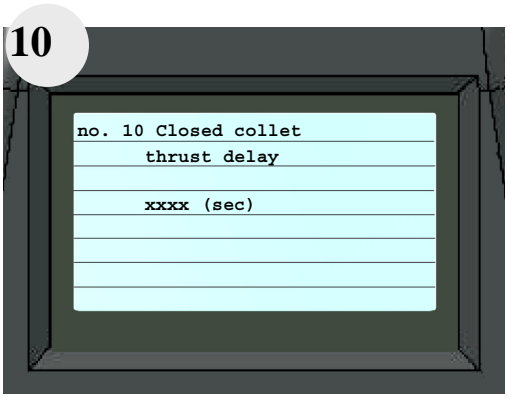
At the "FEEDING" signal from the lathe, the bar pusher delays the feeding in accordance to the set time.
Application example: it should be used when the mechanical movement of the collet opening is slow (double-cone collet).



DEFAULT VALUE	PROGRAMMABLE VALUE
KID	**KID**
0	**/**

no. 10 Closed collet thrust delay

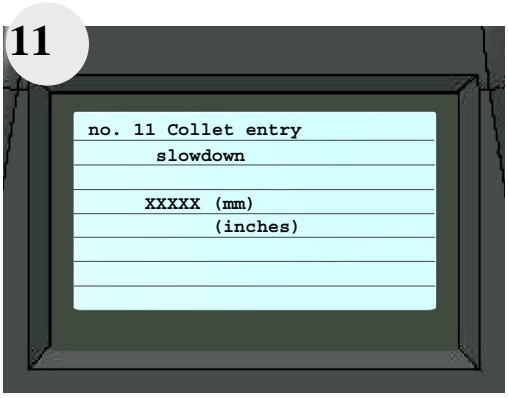
At the "closed collet" signal from the lathe, the bar pusher continues pushing in accordance to the set time.
Application example: it should be used when the mechanical movement of the collet closing is slow (double-cone collet).



DEFAULT VALUE	PROGRAMMABLE VALUE
KID	**KID**
0	**/**

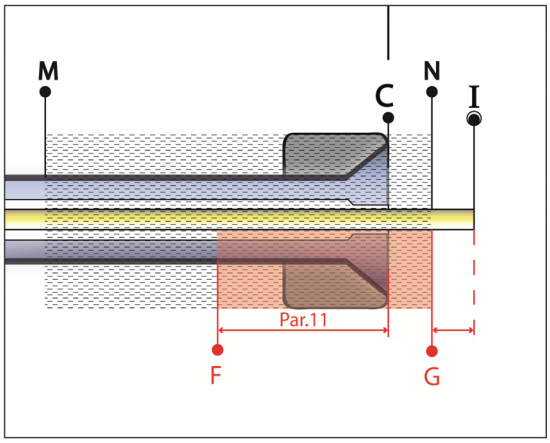
no. 11 Collet entry slowdown

Defines the length of the slowdown section from (F) to (G). Along this section the bar moves at the collet entry speed (see parameter 12).



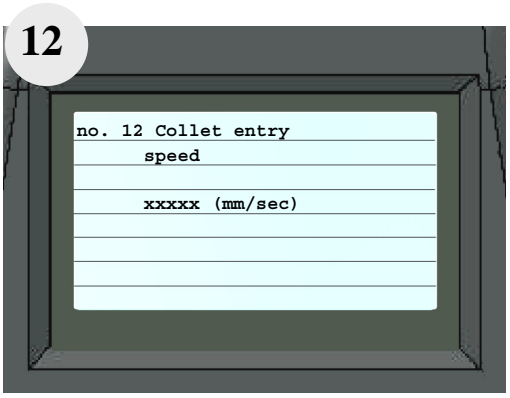
DEFAULT VALUE	PROGRAMMABLE VALUE
KID	**KID**
200	**/**

F = collet entry slowdown start referred to (C);
G = see subparameter (N) of Parameter 14;
C = Collet outer alignment Parameter 64;
I = Facing (Parameter 64 + Parameter 2), in the example in the picture the hypothetical value entered in Parameter 2 = 100 mm. The value can be either positive or negative, for further information see Parameter 2.



no. 12 Collet entry speed

Defines the value by which the speed is reduced in the slowdown section (see parameter 11 "A").

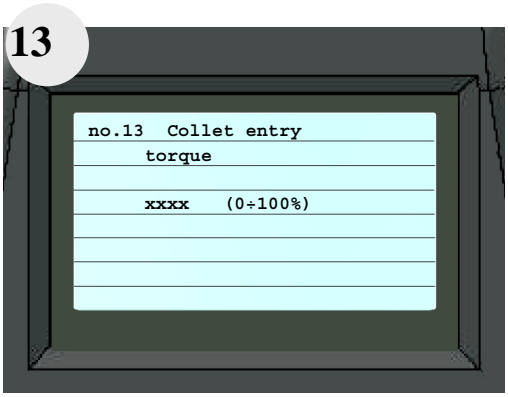


DEFAULT VALUE	PROGRAMMABLE VALUE
KID	KID
6	/

no. 13 Collet entry torque

Defines the thrust value that the bar receives during its feeding in the lathe collet.

It is active in the slowdown section (see parameter 11).

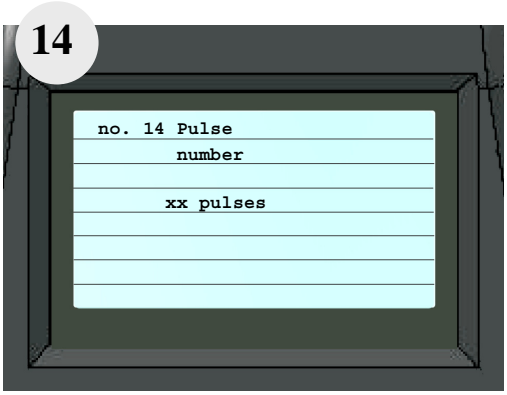


DEFAULT VALUE	PROGRAMMABLE VALUE
KID	**KID**
40	**0 ÷ 100**

PROGRAMMABLE VALUE 0-100%	**KID**
	VALUE IN N 1 kg=9.81N
10%	40
20%	180
30%	280
40%	360
50%	490
60%	580
70%	680
80%	790
90%	880
100%	990

no. 14 Pulse number

Defines the number of pulses that the bar receives so as to simplify its feeding into the lathe collet.
It is active in any point inside the "pulse window".
Description of the phase order:
- the bar enters the pulse phase;
- the bar meets the obstacle (the collet); the pulses start;
- the bar exits the pulse phase.

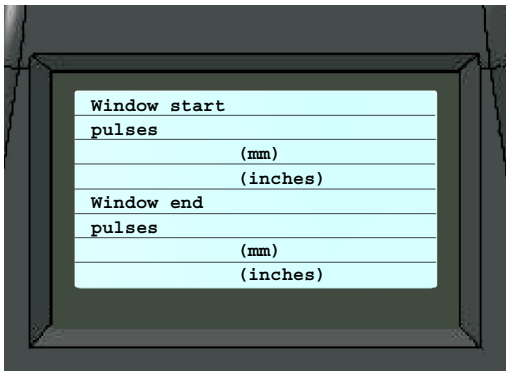


Subparameters for setting the pulse window:
M - Pulse phase window start referred to (C);
N - Pulse phase window end referred to (I), the "collet entry slowdown" (G) simultaneously ends.

	DEFAULT VALUE	PROGRAMMABLE VALUE
	KID	KID
A	20	/
M	400	/
N	20	/

INFORMATION

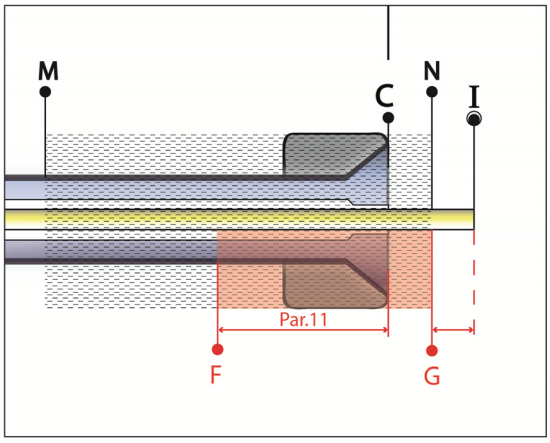
To prevent unnecessary machine stops, it is recommended to enter a high value in the subparameter (M).



INFORMATION

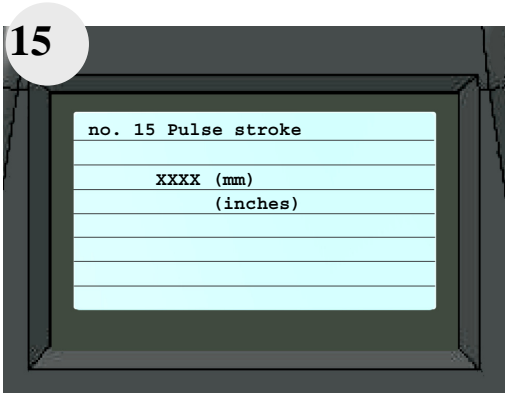
If the bar meets an obstacle before entering the pulse window section, the bar feeder goes into "ALARM" (15 Stationary position before pulses).

C = Collet outer alignment Parameter 64;
I = Facing (Parameter 64 + Parameter 2), in the example in the picture the hypothetical value entered in Parameter 2 = 100 mm. The value can be either positive or negative, for further information see Parameter 2.



no. 15 Pulse stroke

Defines the length of the forward and backward stroke of the pulses (see parameter 14).

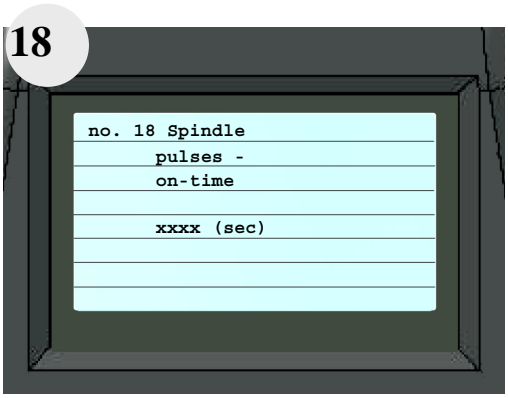


DEFAULT VALUE	PROGRAMMABLE VALUE
KID	**KID**
0.15	**/**

no. 18 Spindle pulses - on-time

Defines the duration of the ON pulse that the lathe receives to make the spindle turn.
This is necessary to simplify the entry of the shaped bars into the collet.
Description of the phase order:

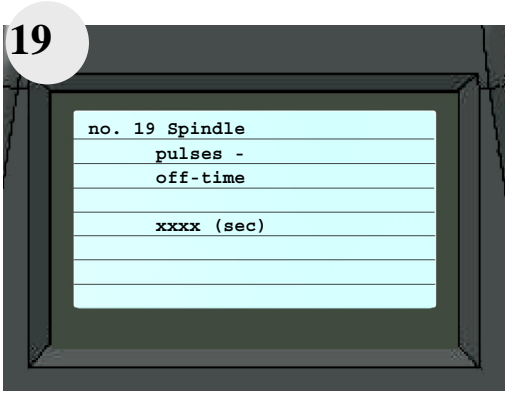
- the bar moves into the slowdown section (see parameter 11);
- the bar meets the obstacle (the collet) and the lathe receives the pulses to start turning the spindle for the set time;
- the spindle slows down and then stops (for the time defined in parameter 19);
- the bar receives the feeding pulse;
- if the bar is fed into the collet, the cycle goes on;
- if the bar does not enter into the collet, the previous phases will be repeated.



DEFAULT VALUE	PROGRAMMABLE VALUE
KID	**KID**
1	**0/1/2/3**

no. 19 Spindle pulses - off-time

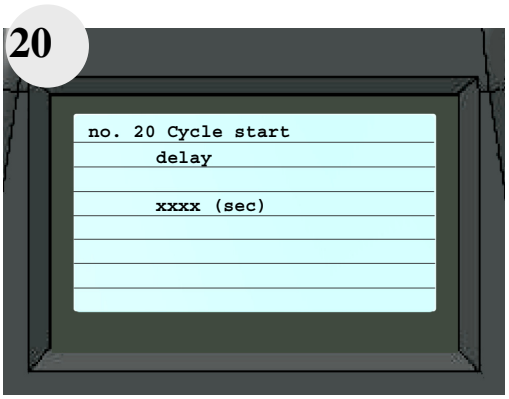
Defines the duration of the OFF pulse given to the lathe to slow down and stop the spindle, prior to the following rotation pulse (see phase description in parameter 18).



DEFAULT VALUE	PROGRAMMABLE VALUE
KID	KID
1	0/1/2/3

no. 20 Cycle start delay

When the bar is in the facing position (see parameter 2), the "cycle start" signal of the lathe can be delayed for a preset value (K15).
Application example: it is necessary to have the “cycle start” signal delay when the spindle needs a certain time to reach the operating rotation speed.



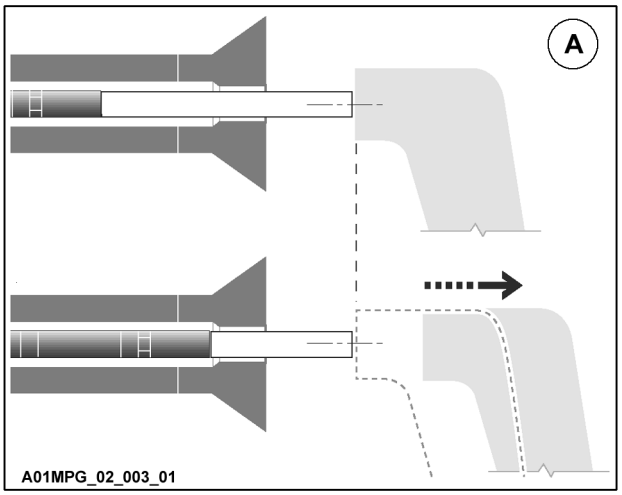
DEFAULT VALUE	PROGRAMMABLE VALUE
KID	KID
1	0/1/2/3

no. 21 Remnant handling

1 - (Ejection)
2 - (Bar change advance no first feeding)
3 - (Bar change advance no facing)

Mode 1 - (Ejection) or 2 - (Bar change advance)
Foreword
To enable one of the two modes, the lathe should have a subprogramming function.
The subprogram should control the bar stop removal at the bar end signal.
The bar stop removal allows the ejection of the remnant from side (A) of the lathe.

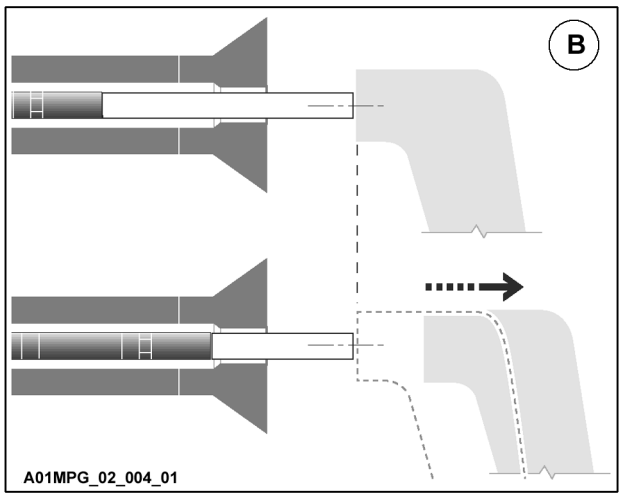
DEFAULT VALUE	PROGRAMMABLE VALUE
KID	KID
0	0/1/2/3



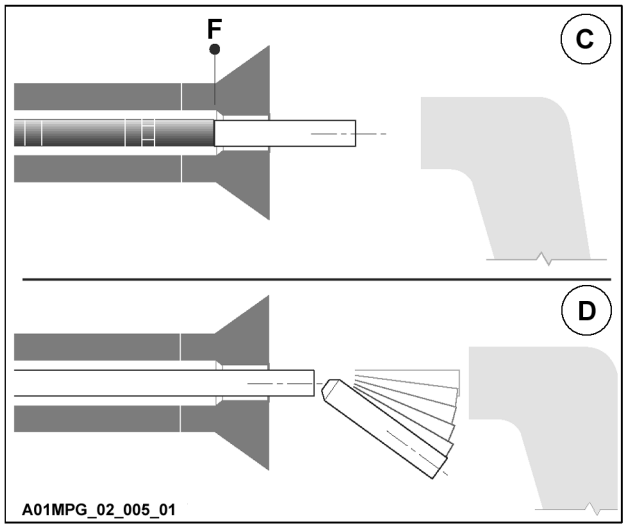
1 - (Ejection)
It is possible to choose among the two following solutions:
a) Ejection with the new bar.
b) Ejection with the bar pusher.

a) Ejection with the new bar.
Description of the phase order:

(B) - The lathe receives the "BAR END" signal from the bar feeder, finishes the machining of the last piece, then goes in the subprogram (bar stop removal) and sends the "FEEDING" and the "BAR CHANGE" signals;

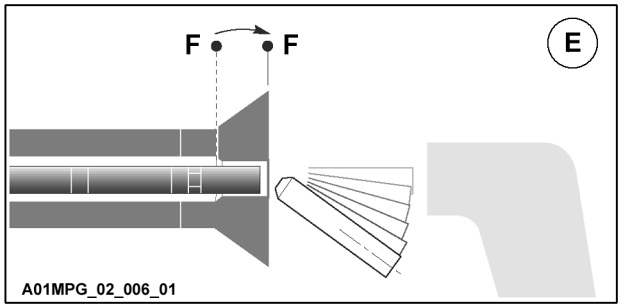


(C) - The bar pusher moves up to point F (maximum feeding point of the bar pusher) and the bar feeder carries out the bar change;
(D) – Through the feeding, the new bar ejects the remnant and moves into the facing position.



b) Ejection with the bar pusher.

Move point F (maximum bar pusher feeding point, see parameter 29) to the collet alignment.
Description of the phase order:
PHASE 1 - the lathe receives the "BAR END" signal from the bar feeder, finishes the machining of the last piece, then goes in the subprogram (bar stop removal) and sends the "FEEDING" and the "BAR CHANGE" signals;
PHASE 2B - the bar pusher moves up to point F, ejects the remnant and the bar feeder carries out the bar change.



2 - (Bar change advance no first feeding)
Allows the bar feeder to carry out the bar change while the lathe has started machining the last piece. Thus, the bar change starts in advance, i.e. before the last piece machining ends and the bar pusher attains point F. The remnant is ejected only with the new bar.

Necessary conditions.
- Set the interface signal 85 "LOADING CYCLE", in position 1 (=NC) and set parameter 21, "REMNANT HANDLING", in mode 2.
- Use the "LOADING CYCLE" lathe signal (applicable only to lathes which have this function).

Description of the phase order:

- the lathe receives the "BAR END" signal, with the above mentioned conditions;
- the bar feeder carries out the return of the bar pusher and loads a new bar in the guide channels whilst awaiting the "FEEDING" and "BAR CHANGE" signals;
- as soon as the last piece has been machined, the lathe enters the subprogram (bar stop removal) and sends both the "BAR FEEDING" and "BAR CHANGE" signals;
- the new bar starts the first feeding phase and the following phases until it reaches the facing position, thus ejecting the remnant.

3 - (Bar change advance no facing)
Allows the bar feeder to carry out the bar change while the lathe has started machining the last piece. Thus, the bar change starts in advance, i.e. before the last piece machining ends and the bar pusher attains point F. The remnant is ejected only with the new bar.

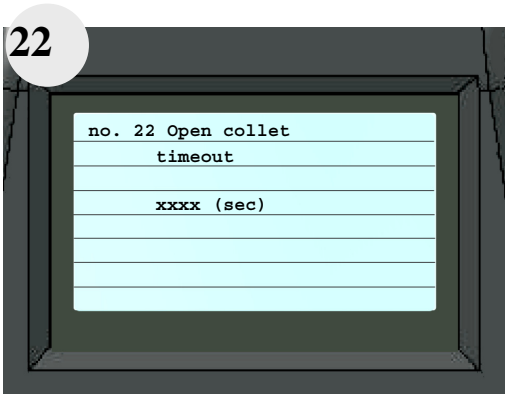
Necessary conditions.
- Set the interface signal 85 "LOADING CYCLE", in position 1 (=NC) and set parameter 21, "REMNANT HANDLING", in mode 3.
- Use the "LOADING CYCLE" lathe signal (applicable only to lathes which have this function).

Description of the phase order:

- the lathe receives the "BAR END" signal, with the above mentioned conditions;
- the bar feeder carries out the bar pusher return, loads a new bar in the guide channels, carried out first feeding and bar loading in the bar feeder collet and then awaits the "FEEDING" and "BAR CHANGE" signals;
- as soon as the last piece has been machined, the lathe enters the subprogram (bar stop removal) and sends both the "BAR FEEDING" and "BAR CHANGE" signals;
- the new bar begins the facing phase until it reaches the position indicated in parameter 2, the bar feeder sends the cycle start signal to the lathe.

no. 22 Open collet timeout

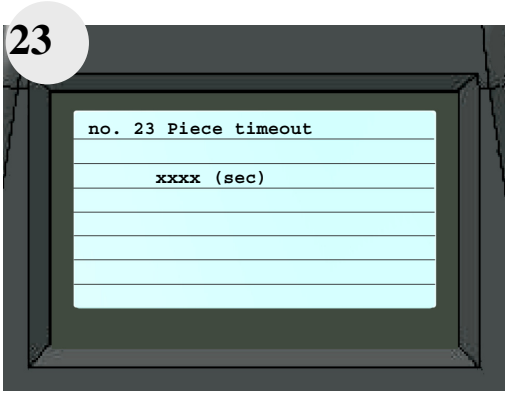
This is the maximum duration time of the FEEDING phase ("OPEN COLLET").
If for any reason the bar feeder remains with the feeding enabling signal ("FEEDING" signal from lathe) for a longer time than the set one, it goes in "ALARM".



DEFAULT VALUE	PROGRAMMABLE VALUE
KID	KID
0	0

no. 23 Piece timeout

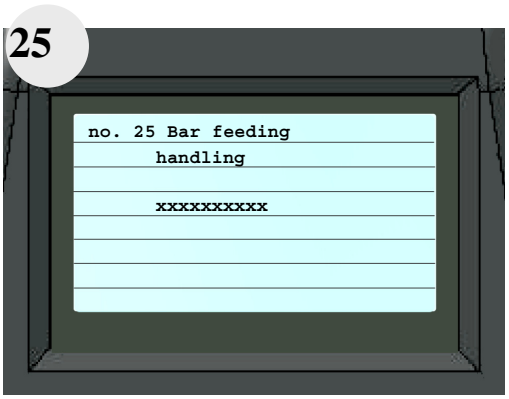
This is the maximum duration of the piece machining.
If for any reason the period for machining of a piece exceeds the set time, the bar feeder will activate the "ALARM".



DEFAULT VALUE	PROGRAMMABLE VALUE
KID	KID
0	0

no. 25 Bar feeding handling

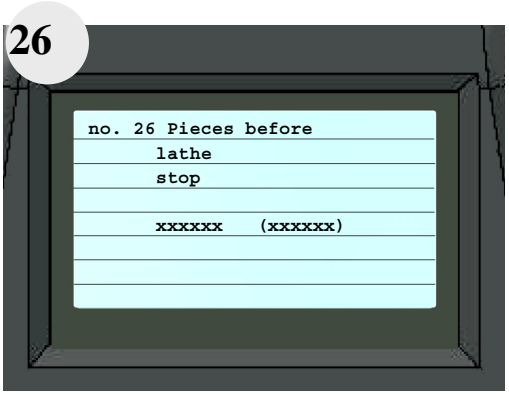
0 - (FEEDING END WITH BAR CHANGE): the bar feeder will stop feeding when the BAR CHANGE signal is received.
1 - (FEEDING END WITH K1): in the presence of the BAR END (K1) signal, the bar feeder stops the feeding.



DEFAULT VALUE	PROGRAMMABLE VALUE
KID	KID
0	0

no. 26 Pieces before the lathe stop

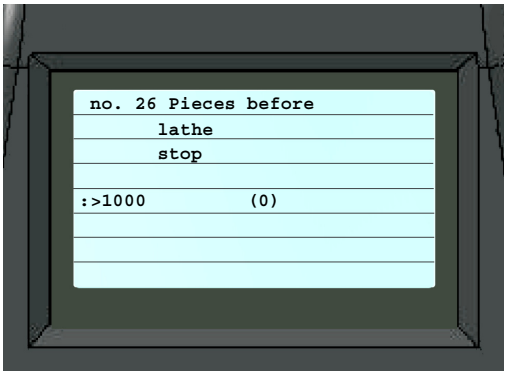
VALUE 0 - The parameter function is disabled.
VALUE >0 - When the set value of pieces machined is reached, the bar feeder calls the stop of the lathe whilst "FEEDING".



DEFAULT VALUE	PROGRAMMABLE VALUE
KID	KID
0	0

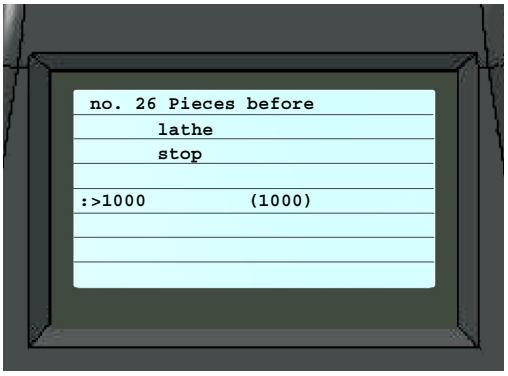
VALUE >0 - Application example.
1.Set value at 1000:

the display shows:



2.Start machining.
After finishing 1,000 pieces, the bar feeder will command the lathe stop.

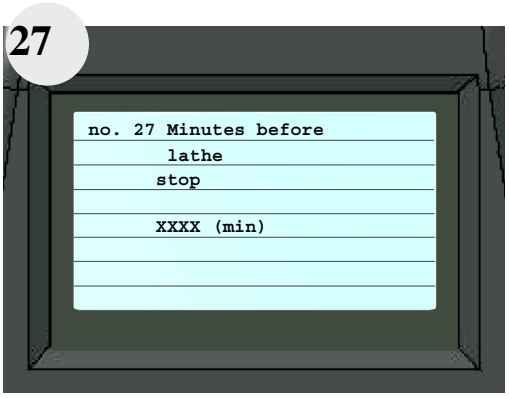
the display shows:



To restart machining, the value in brackets should be reset.

no. 27 Minutes before the lathe stop

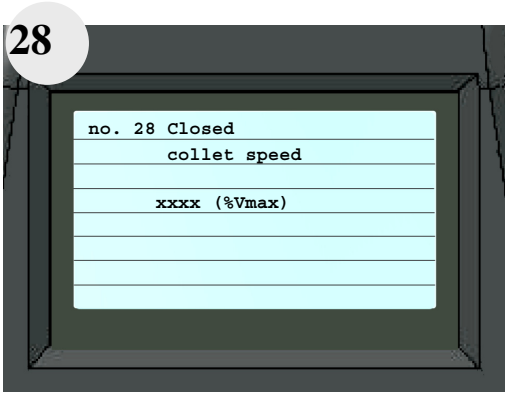
VALUE 0 - The parameter function is disabled.
VALUE >0 - When the minutes set have passed, the bar feeder signals the lathe to stop "FEEDING".



DEFAULT VALUE	PROGRAMMABLE VALUE
KID	KID
0	0

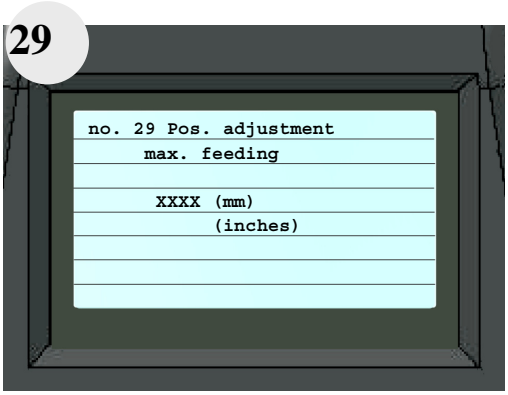
no. 28 Closed collet speed

Defines the "CLOSED collet" speed value.



DEFAULT VALUE	PROGRAMMABLE VALUE
KID	KID
20	0

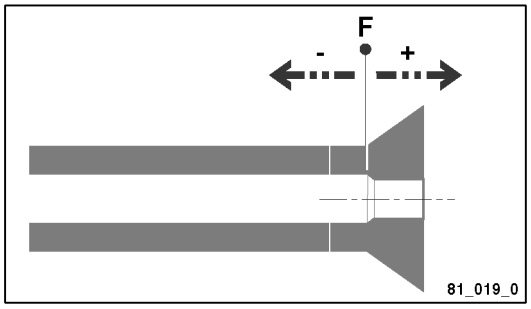
no. 29 Max. feeding pos. adjustment



Defines the adjustments (+ or -) of point F (maximum bar pusher feeding point).

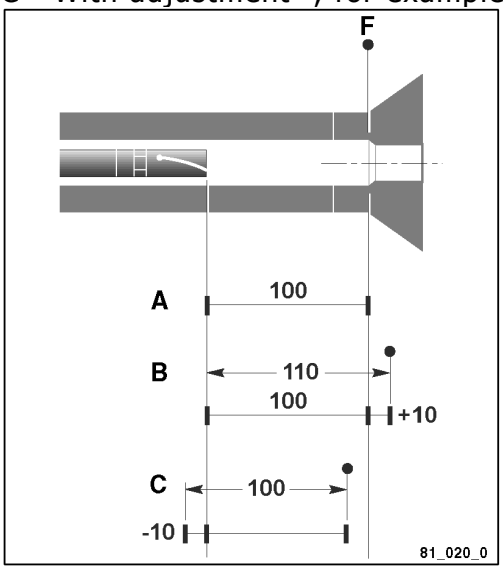
Application examples:
- necessary when working with the bar pusher ejection (see parameter 21, point b);
- necessary when the lathe collet is replaced with one of different dimension.

DEFAULT VALUE	PROGRAMMABLE VALUE
KID	KID
0	0



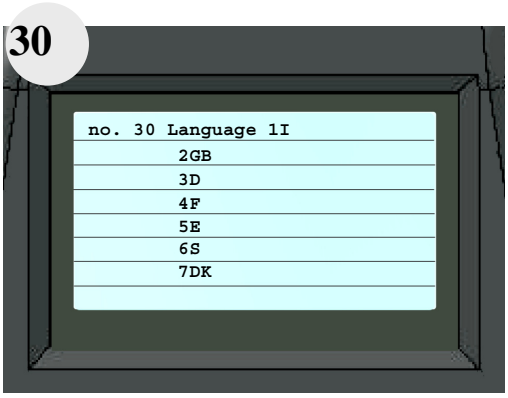
When the adjustments of point F are performed, parameter 1 is modified as shown in the figure.

A - No adjustment
B - With adjustment +, for example + 10
C - With adjustment -, for example - 10



no. 30 Language 1I

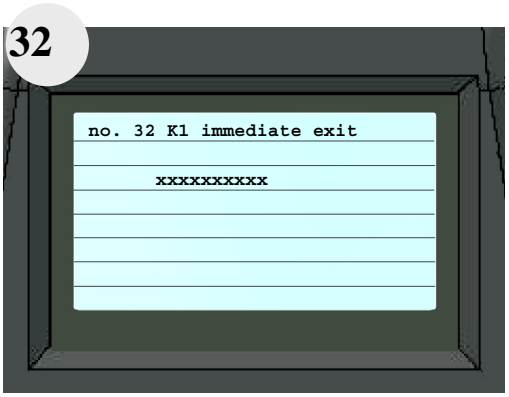
Defines the language of the information that appear on the display:
1 - ITALIAN
2 - ENGLISH
3 - DEUTSCH
4 - FRANÇAIS
5 - ESPAÑOL
6 - SVENSKA
7 - DANSK
8 - PORTUGUÊS
9 - NEDERLANDS
10 - SUOMI
11 - CZECH
12 - RUSSIAN
13 - POLISH



DEFAULT VALUE	PROGRAMMABLE VALUE
KID	**KID**
1	**1/2/3/4/5/6/7/8/9/10/11/12/13**

no. 32 K1 immediate exit

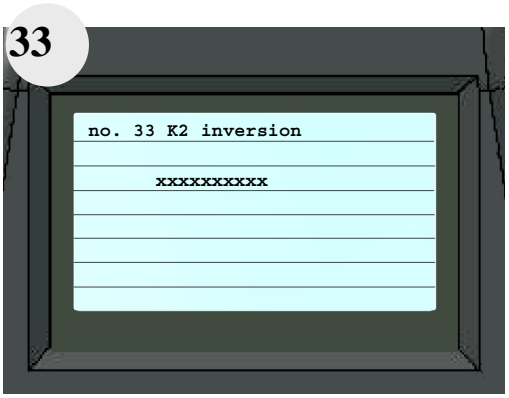
0 - (with open collet K1 is not activated). When detected, the bar end signal K1 is sent to the lathe at the "COLLET CLOSING".
1 - (with open collet K1 is activated). When detected, the bar end signal K1 is immediately sent to the lathe during the "FEEDING" signal.



DEFAULT VALUE	PROGRAMMABLE VALUE
KID	KID
0	0

no. 33 K2 inversion

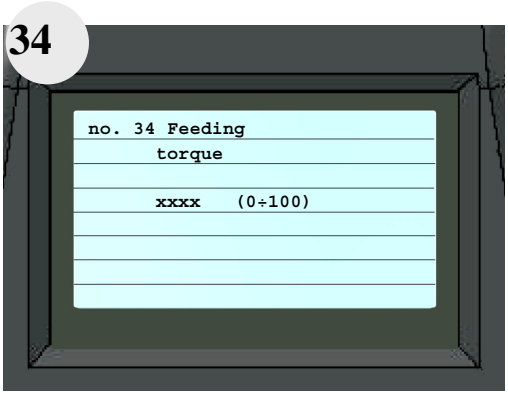
0 - (K2 is on 1 at limit stop). During the feeding signal, the K2 relay remains off during the bar feeding; it is activated when the bar arrives at the bar limit stop (encoder stop).
1 - (K2 is on 0 at limit stop). The K2 relay is active during the bar feeding and off when the bar reaches the bar limit stop (encoder stop).



DEFAULT VALUE	PROGRAMMABLE VALUE
KID	KID
0	0

no. 34 Feeding torque

Defines the thrust value received by the bar at each "FEEDING".



DEFAULT VALUE	PROGRAMMABLE VALUE
KID	**KID**
40	**40**

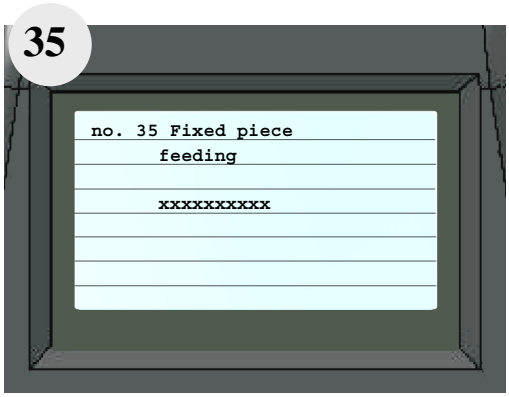
PROGRAMMABLE VALUE 0-100%	**KID**
	VALUE IN N 1 kg=9.81N
10%	40
20%	180
30%	280
40%	360
50%	490
60%	580
70%	680
80%	790
90%	880
100%	990

no. 35 Fixed-piece feeding

0 - (AT THE LIMIT STOP). Carries out the feeding to the bar limit stop.
1 - (AT FIXED VALUES). Carries out the piece feeding, in accordance to the value set in parameter 6.
2 - (AT FIXED VALUES AND THRUST TO THE LIMIT STOP). Carries out the piece feeding according to the value set in parameter 6, stops at few millimetres from the bar limit stop, and then carries out another feeding up to the bar limit stop, until the FEEDING signal is active.

Parameter:
A - Fixed piece feeding

Subparameters:
B - Position
C - Speed
D - Acceleration
E - Deceleration



	DEFAULT VALUE	PROGRAMMABLE VALUE
	KID	KID
A	0	/
B	/	/
C	76200	/
D	100	/
E	100	/

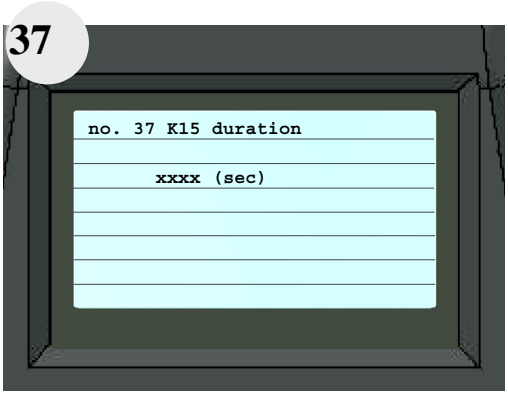
no. 36 K15 disabling

0 - (K15 ENABLED). Enables the warning at every use of parameter 35 in position 1.
1 - (K 15 DISABLED). Disables the warning at every use of parameter 35 position 1.

DEFAULT VALUE	PROGRAMMABLE VALUE
KID	KID
1	1

no. 37 K15 duration

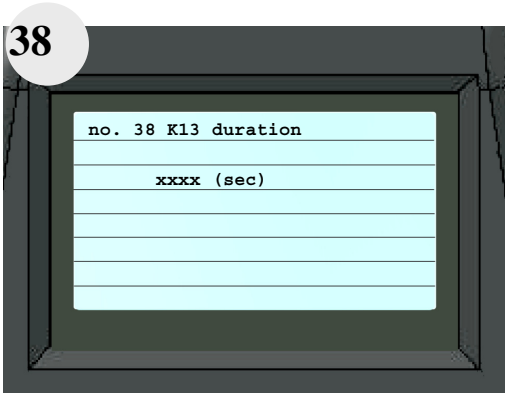
Defines the CYCLE START signal duration.



DEFAULT VALUE	PROGRAMMABLE VALUE
KID	KID
1.5	1.5

no. 38 K13 duration

Defines the CYCLE STOP signal duration.



DEFAULT VALUE	PROGRAMMABLE VALUE
KID	KID
2	2

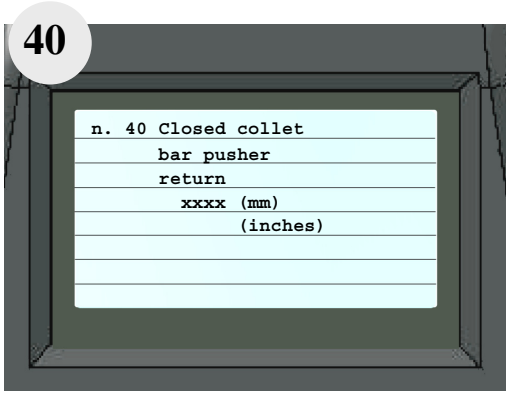
no. 39 Spindle stop

When the bar change is carried out the signal stops the spindle.
0 - (RELAY DISABLED WITH BAR CHANGE). The relay is disabled with the bar change.
1 - (RELAY ALWAYS ENABLED). The relay is always enabled.

DEFAULT VALUE	PROGRAMMABLE VALUE
KID	KID
0	0

no. 40 Bar pusher return at collet closing

Defines the bar pusher backward displacement at each "COLLET CLOSING". This displacement prevents the bar pusher coming into contact with the bar.



Parameter:

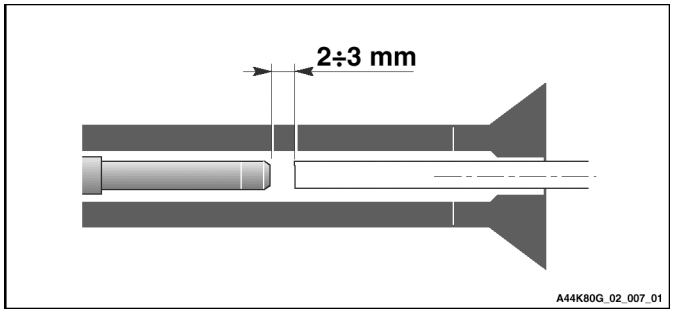
A - Position

	DEFAULT VALUE	PROGRAMMABLE VALUE
	KID	KID
A	10	/
B	0	/
C	0	/
D	/	/

The subparameters define the speed and acceleration/deceleration during the closed collet bar pusher movement.

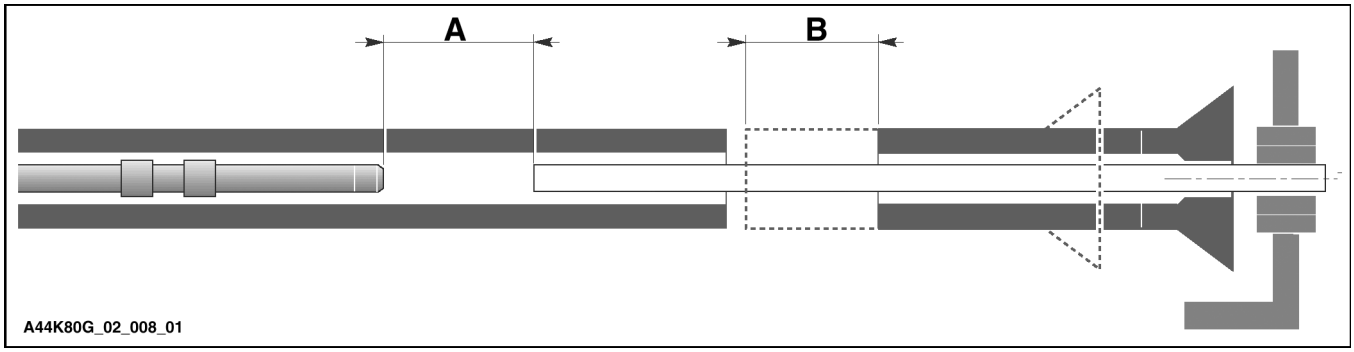
B - Speed
C - Acceleration
D - Deceleration

For fixed headstock or sliding rest lathes; set a displacement of some millimetres.



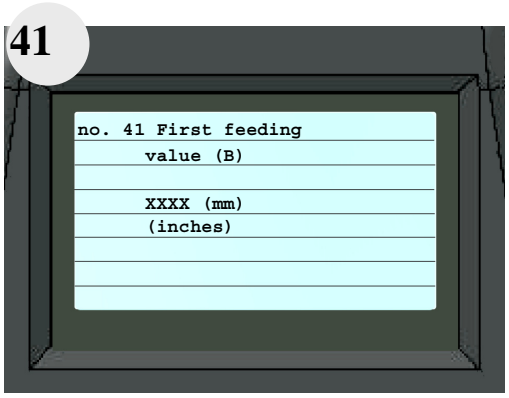
For sliding headstock lathes; set the value of the headstock stroke plus some millimetres.

A Headstock stroke +2÷3 mm
B Headstock stroke



no. 41 First feeding value (B)

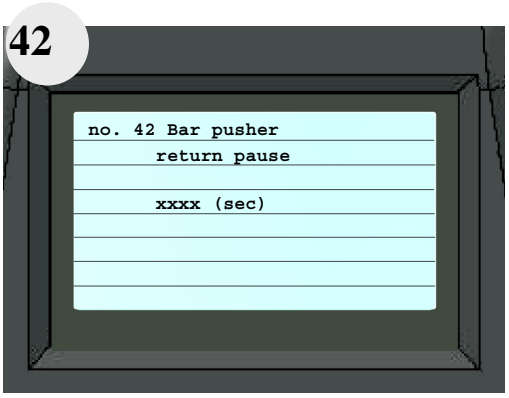
During the FIRST FEEDING phase, the carriage stops as soon as it reaches the value set in the parameter.



DEFAULT VALUE	PROGRAMMABLE VALUE
KID	KID
1720	N=1075 L=1405 LL=1735

no. 42 Bar pusher return pause

"BAR PUSHER RETURN" signal timing.



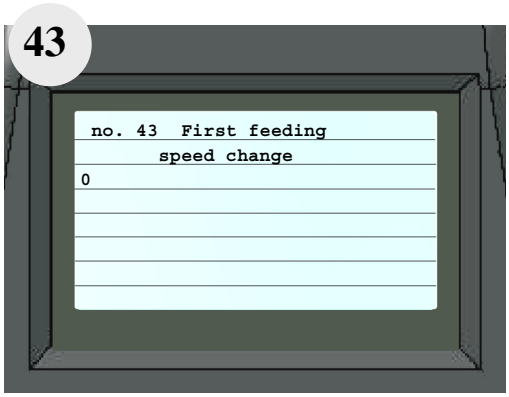
DEFAULT VALUE	PROGRAMMABLE VALUE
KID	KID
0.2	0.2

no. 43 First feeding speed change

Allows changing the "FIRST FEEDING SPEED".

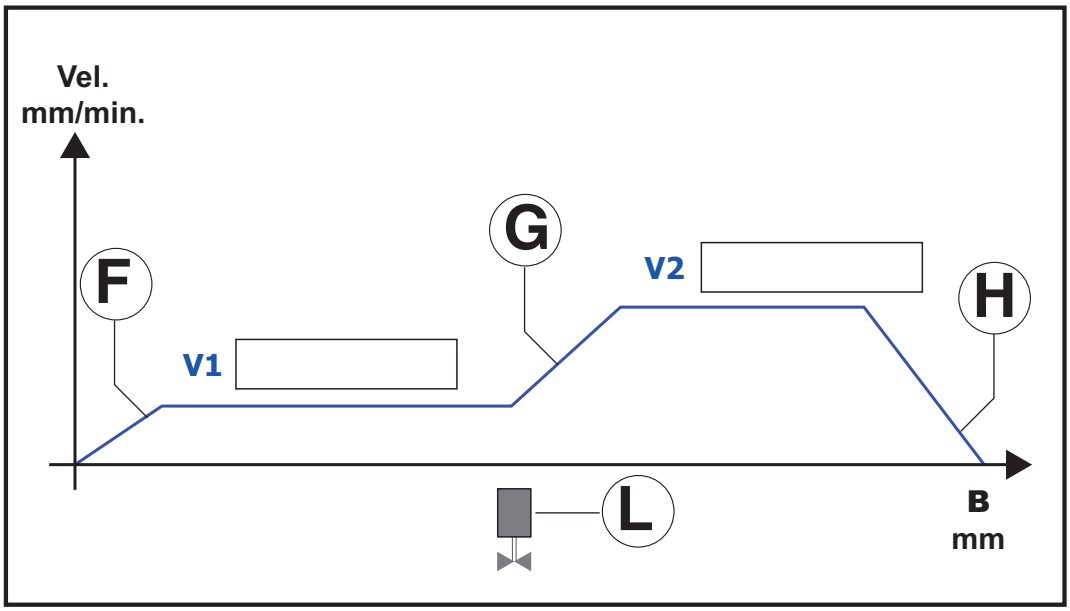
Parameter:
A - Speed type
0 - Slow
1 - Fast

Subparameters:
B - Speed 1
C - Speed 2
D - Acceleration
E - Deceleration



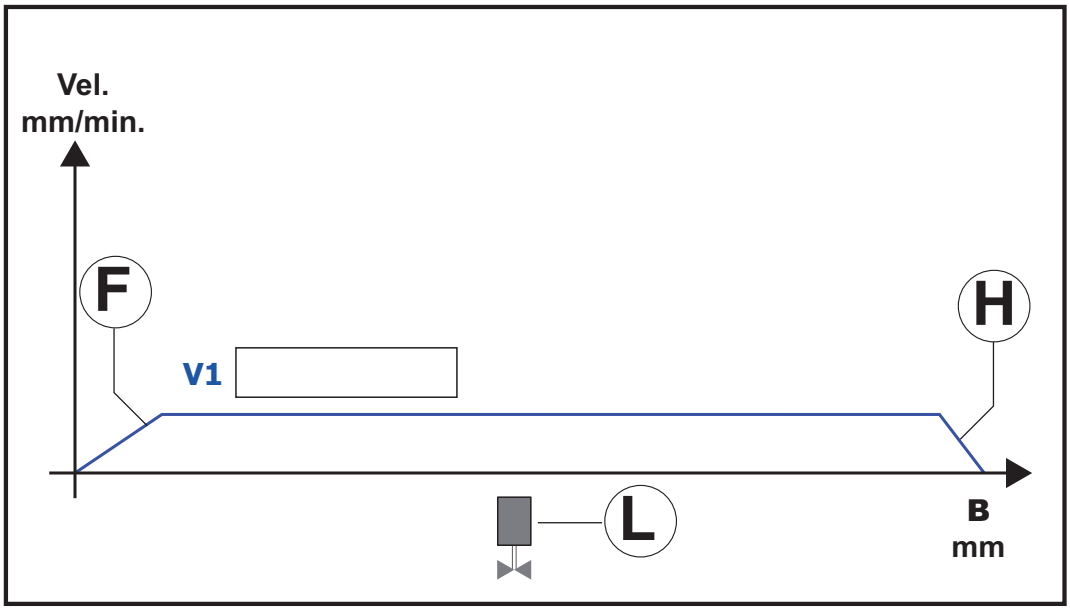
	DEFAULT VALUE	PROGRAMMABLE VALUE
	KID	KID
A	1	/
B	9144	/
C	48000	/
D	100	/
E	10	/

Parameter "Speed change in first feeding" 1 = Fast

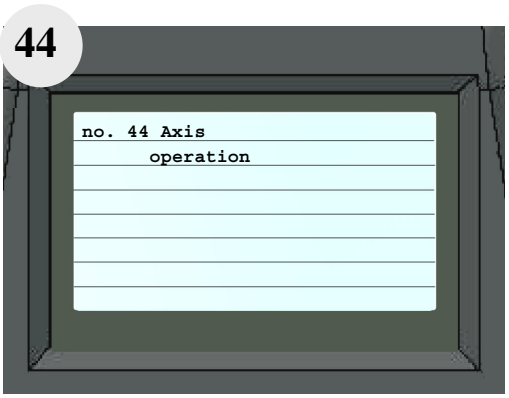


Speed - Speed mm/minute
B - Space covered mm
V1 - Speed set in slow section
V2 - Speed set in fast section
F - V1 ramp acceleration
G - V2 ramp acceleration
H - Deceleration
L - Facing flag

Parameter "Speed change in first feeding" 0 = Slow



no. 44 Axis operation



Subparameters:
A - Bar pusher stop with closed collet
B - Axis stop engagement delay
C - Closed collet torque
The subparameters of this parameter control some functions of the bar pusher movement.

Bar pusher stop with closed collet - Axis stop engagement delay
These two subparameters enable the feeding motor stop (axis stop) with CLOSED COLLET, so as to avoid that the bar slides off from the bar pusher collet, due to the machining vibrations.

	DEFAULT VALUE	PROGRAMMABLE VALUE
	KID	KID
A	0	0/1
B	0	/
C	25	0÷100

INFORMATION

The function of these two subparameters is applicable with parameter 24 in modes 0 and 5. It is not applicable with modes 1, 2, 3 and 4.

Bar pusher stop with closed collet
0 - the bar pusher stop is off
1 - the bar pusher stop is on

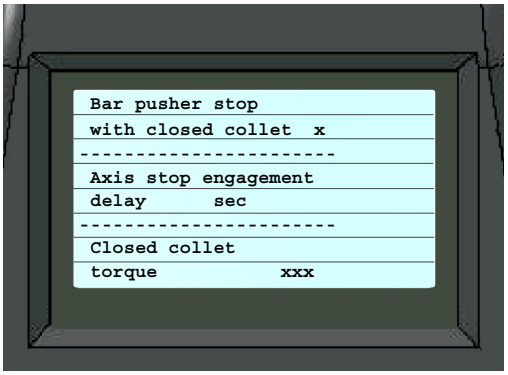
Axis stop engagement delay
This subparameter allows setting a delay time for the axis stop engagement at every CLOSED COLLET. This period of time allows you to "release" the bar feeder transmission devices, so as to avoid useless tensions.

Closed collet torque
This subparameter allows adjusting the thrust value with which the bar pusher moves the bar during the "CLOSED COLLET" signal.

PROGRAMMABLE VALUE 0-100%	KID
	Value in N 1 kg=9.81N
10%	40
20%	180
30%	280
40%	360
50%	490
60%	580
70%	680
80%	790
90%	880
100%	990

INFORMATION:

When working with Par.24 =1 (sliding headstock with no synchronization device) the "Closed collet torque" adjusts the thrust value with which the bar pusher moves the bar during the "CLOSED COLLET" signal.



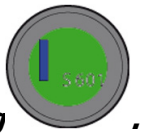
2.12 ERRORS - CAUSES - SOLUTIONS

During the bar feeder setup or the piece machining, the display may highlight errors or messages.
Such errors or warnings may be caused by an incorrect programming, an incorrect manoeuvre, or a mechanical or electrical fault.

When the errors are detected the bar feeder stops; to restore the automatic cycle carry out the following procedure:

- restore the manual cycle;
- eliminate the cause of the error;
- restore the automatic cycle.

INFORMATION

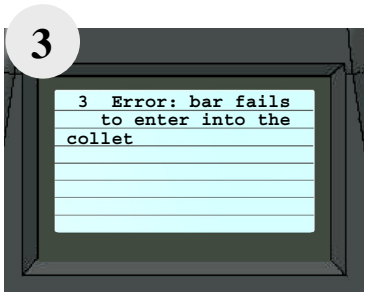
All messages with "Error" must be reset by pressing  ***.***

When a warning is displayed the bar feeder does not stop and it is not necessary to reset the machine.
The warnings appear when attempting to perform a manoeuvre which is not allowed by the program and provide information for the operator during the machining.
The error/warning messages, the possible causes and their solutions are shown below.

3 - ERROR: THE BAR FAILS TO ENTER INTO THE COLLET

The bar has met the first obstacle in the pulse window as defined in parameter 14 (pulse window start - pulse window end) and has exceeded the entry attempts as defined in the same parameter (pulse number).

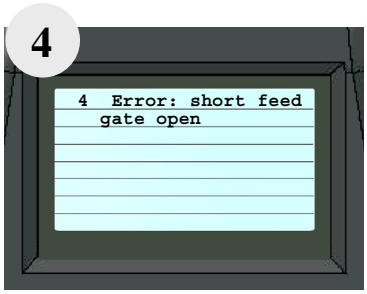
CAUSE	SOLUTION
The bar does not enter into the collet or into the lathe bush.	Check the diameter of the bush.
	If it is a shaped bar, check if the bar entry kirving is correct on the rear part of the collet.
	If it is a shaped bar, check the spindle rotation and if the pulse sequence is correct.
The feeding speed and/or torque are not suitable.	Check the speed (see parameter 12) and/or the torque (see parameter 13).



4 - ERROR: GATE OPEN (S1008 Off)

Error: AT THE FIRST FEEDING STROKE START, THE SHORT FEED GATE IS OPEN.

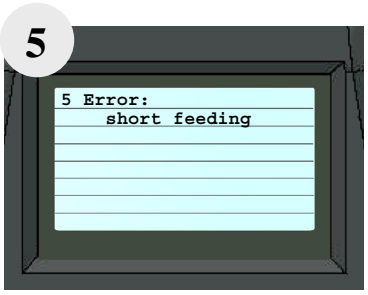
CAUSE	SOLUTION
The short feed gate is jammed and cannot be closed.	Make sure that there are no foreign bodies (chips, remnants, fragments) in the short feed gate movement area; carry out the movement manually to find any possible obstacles.
Operation failure of the solenoid valve of the short feed gate closing.	Check the electromechanical operation of the device.
Operation failure of the sensor, which detects the short feed gate closing.	Make sure that to the short feed gate movement corresponds to the sensor state change.

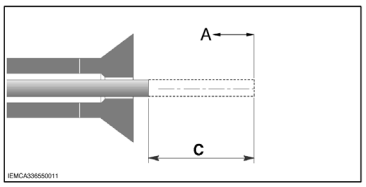


5 - ERROR: SHORT FEEDING

Error: A BAR PUSHER SHORT FEEDING MOVEMENT HAS BEEN DETECTED IN ACCORDANCE WITH THE SETTINGS OF PARAMETERS 5 and 6.

CAUSE	SOLUTION
The tolerance values of parameters 5 and 6 are too low.	Check the tolerance values with regards to the length of the piece to be machined.
The lathe collet does not open correctly.	Check the correct opening of the collet (at least 0.5 mm).
Encoder operation failure.	Check the value relative to the position of the bar pusher carriage on the display and check the effective variation of the value with regards to the real displacement of the carriage.
The thrust received by the bar is too low.	Check the values of parameters 7 and 34.
The bar slides out of the collet during the headstock stroke.	Check the bar pusher collet state.



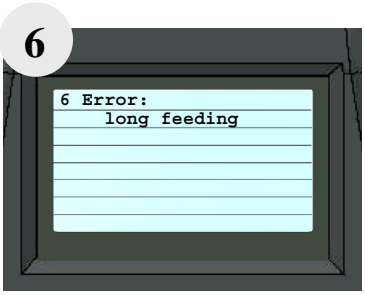


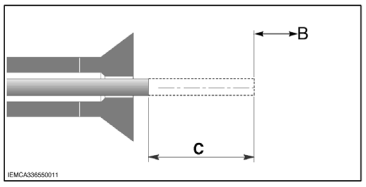
"A" - Short piece safety tolerance (subparameter Par.5), Short feeding safety (subparameter Par.6).
"C" - Headstock stroke (Parameter Par.5). Feeding (Parameter Par.6).

6 - LONG FEED

Warning: A BAR PUSHER LONG FEEDING MOVEMENT HAS BEEN DETECTED IN ACCORDANCE WITH THE SETTINGS OF PARAMETERS 5 and 6.

CAUSE	SOLUTION
The tolerance values of parameters 5 and 6 are too low.	Check the tolerance values with regards to the length of the piece to be machined.
The lathe bar limit stop is not in the correct position.	Check the position of the bar stop on the lathe.
Encoder operation failure.	Check the value relative to the position of the bar pusher carriage on the display and check the effective variation of the value with regards to the real displacement of the carriage.
Possible breakage of the cutting tool.	Check the condition of the cutting tool.
The bar slides out of the collet during the headstock stroke.	Check the bar pusher collet state.



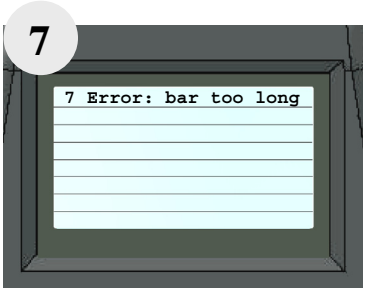


"B" - Long piece safety tolerance (subparameter Par. 5) or Long feeding (subparameter Par. 6).
"C" - Headstock stroke (Parameter "C" Par.5).
Piece feeding (Parameter "C" Par. 6).

7 - ERROR: BAR TOO LONG

Error: DURING THE FIRST FEEDING STROKE OR DURING THE BAR DETECTION STROKE IN THE "START-UP" PROCEDURE A BAR OF LONGER LENGTH THAN THAT SET IN PARAMETER 67 "MAXIMUM BAR LENGTH" IS MEASURED.

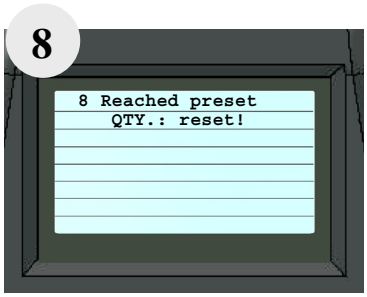
CAUSE	SOLUTION
The bar loaded is longer than the maximum value set in parameter 67.	Reduce the length of the bar loaded.
	Check the value set in parameter 67.



8 - PRESET QTY. REACHED, RESET - P26

Warning: THE BAR FEEDER HAS STOPPED AUTOMATICALLY DURING THE MACHINING PHASE.

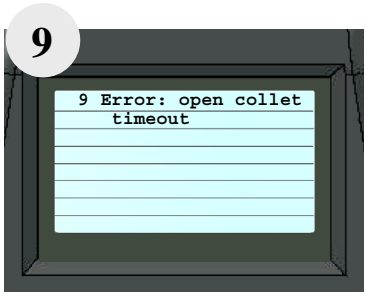
CAUSE	SOLUTION
The set quantity of pieces has been reached.	Reset the number of pieces and restart.



9 - OPEN COLLET TIMEOUT

Warning: THE BAR FEEDER HAS STOPPED WITH THE ACTIVE FEEDING SIGNAL SINCE THE OPEN COLLET "TIMEOUT" HAS ELAPSED.

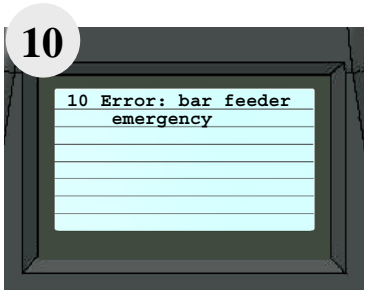
CAUSE	SOLUTION
In the AUTOMATIC mode the lathe collet remained open for a longer period than the one set in parameter 22.	Check the value of parameter 22, with regards to the real "FEEDING" time.



10 - BAR FEEDER EMERGENCY

Warning: THE GENERAL CONTROLS OF THE BAR FEEDER ARE NOT INSERTED.

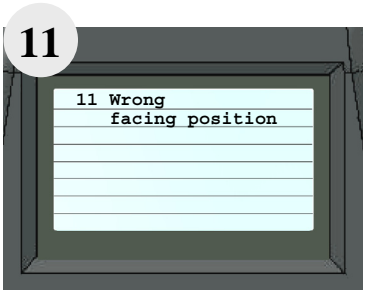
CAUSE	SOLUTION
An emergency button has been pressed.	Check the state of the emergency button.
There is an emergency signal from the lathe.	Check whether the signal sequence arriving from the lathe is continuous: the signals must be all on or all off.
There is an open guard in the lathe or in the bar feeder.	Check if the guards are closed.



11 - WRONG FACING POSITION

In automatic mode, the facing position has been reached and the overrrun position, as defined in subparameter 3, has been exceeded.

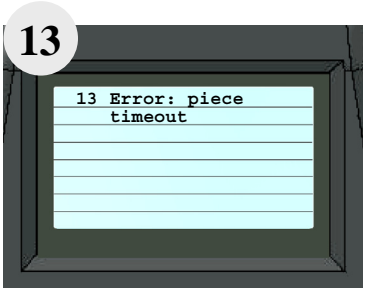
CAUSE	SOLUTION
When the bar does not stop in the facing position (parameter 65), but exceeds this point by a value higher than or equal to the set value in the "Overrun admitted after I" subparameter. This check is performed only when the "FACING IN POSITION" mode is active and if the set value in the "Overrun admitted after I" subparameter is > 0.	Make sure that the chain is correctly tensioned.
	The values for "Facing and overrun admitted after I" set by the operator are wrong.



13 - PIECE TIMEOUT

Warning: THE WORKING CYCLE FOR MACHINING A PIECE HAS TAKEN LONGER THAN THE TIME SET IN PARAMETER 23.

CAUSE	SOLUTION
The working cycle for machining a piece has taken longer than the time set in parameter 23.	Check the setting in parameter 23 with regards to the working cycle.
The working cycle for machining a piece has undergone an interruption or a slowdown.	Make sure that the actual duration of the working cycle does not face slowdowns or interruptions.



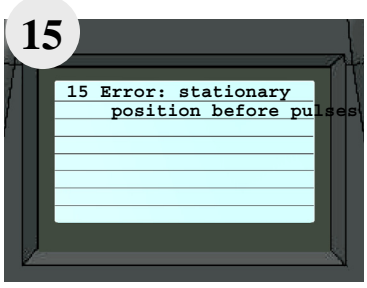
INFORMATION:

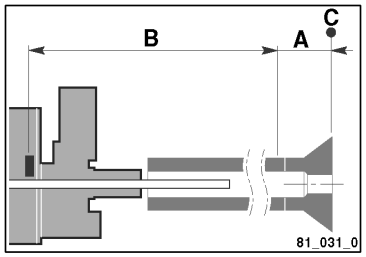
The alarm described above also appears when the following conditions are met: in automatic mode with the open collet signal for 1 hour; in automatic mode with the closed collet signal and parameter 24 Synchronization to 1 for 1 hour.

15 - STATIONARY POSITION BEFORE PULSES

In automatic mode, during the facing jog, if the flag has been knocked down and the bar pusher has stooped within the pulse window as defined in parameter 14.

CAUSE	SOLUTION
There is an obstacle inside the spindle	Make sure that there are no obstacles or diameter differences which could interfere with the bar feeding.

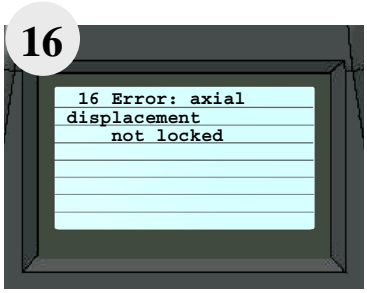


The pulse window defined in parameter 14 has not been set correctly.	Check the value set in parameter 14.	 A - Parameter 11 B - Area with error 27
An inappropriate torque value has been set	Check the set torque value.	

16 - AXIAL DISPLACEMENT NOT LOCKED (S1221 Off)

Warning: THE AXIAL DISPLACEMENT SENSOR IS NOT ACTIVE.

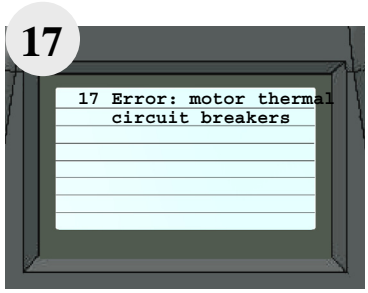
CAUSE	SOLUTION
The axial displacement device is not locked.	Lock the axial displacement device.
The sensor is faulty.	Replace the sensor.
Incorrect reading of the sensor.	Check the distance between the sensor and the relevant cam.



17 - MOTOR THERMAL CIRCUIT BREAKERS (E11.7)

A MOTOR THERMAL CIRCUIT BREAKER HAS TRIPPED.

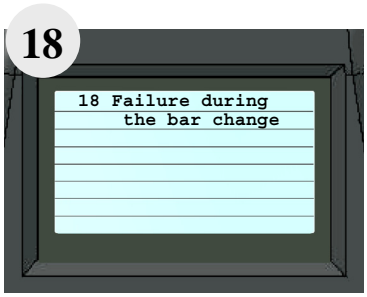
CAUSE	SOLUTION
The oil pump overheating has occurred.	Make sure that the involved motor can run freely and check the correct thermal calibration (according to the amperage).
	Check the motor input voltage.



18 - FAILURE DURING THE BAR CHANGE

Warning: THE BAR CHANGE WAS NOT COMPLETED IN THE PRESET TIME.

CAUSE	SOLUTION
When an unforeseen mechanical or electrical error occurs, a safety time stops the machine if the bar change cycle does not occur in the preset time.	Check the exact cause of the fault and reset the working cycle.



19 - NO BAR

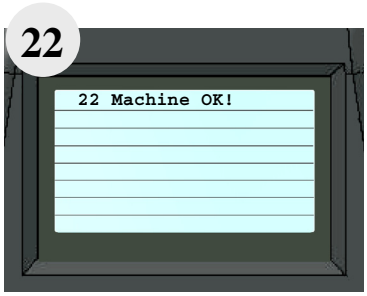
IN AUTOMATIC MODE, THE MECHANICAL FEEDING IS ACTIVATED BUT ITS PROCEDURE HAS NOT BEEN COMPLETED AND THE COMPLETELY CLOSED CLAMP SENSOR IS ON.

CAUSE	SOLUTION
The phase detector is not working properly.	Make sure that the phase detector on the mechanical cam works properly
There is a mechanical obstacle	

22 - MACHINE OK!

THIS IS A MESSAGE AND DOES NOT NEED A RESET. IT IS USED ONLY TO SEND AN SMS OR AN EMAIL INFORMING ON THE AUTOMATIC RESET AFTER AN ALARM.

CAUSE	SOLUTION
This message appears for a few seconds when the bar feeder is in automatic mode and the error has been eliminated.	Example: after resetting the emergency mushroom-head button.



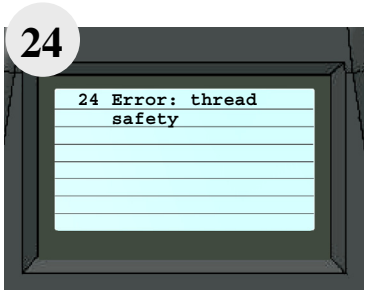
INFORMATION:

This message is used to send an sms or an email informing on the automatic reset after an alarm. It can only be used by customers with IT infrastructures that allow the connection of IEMCA bar feeder to the corporate network.

24 - THREAD SAFETY

Warning: THE LATHE HAS NOT CARRIED OUT THE THREADING OPERATION ON THE PIECE TO BE MACHINED.

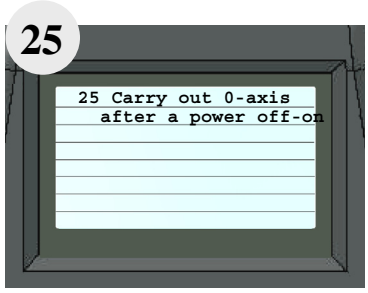
CAUSE	SOLUTION
Threading device failure.	Check the effective functioning of the lathe device.
Threading controlling device failure.	Check the microswitch placed on the cam box of the thread safety.
The bar did not move to the last "COLLET OPENING".	Make sure that the lathe collet opens correctly and check the bar feeder thrust (parameter 34).



25 - CARRY OUT THE 0-AXIS AFTER A POWER OFF-ON

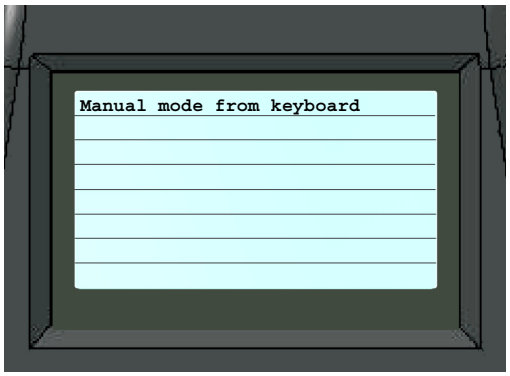
THE ENCODER VALUE PRESET OPERATION WAS NOT CARRIED OUT CORRECTLY IN THE PRESET TIME.

CAUSE	SOLUTION
The PLC and drive connection cable is broken.	Contact Iemca service department.
The drive is faulty.	



2.12.1 OPERATOR PANEL MESSAGE LIST

Allows the bar feeder to switch from manual to automatic mode only if the AUT. key is pressed on the bar feeder keyboard.
The manual signal from the keyboard is activated when the manual/automatic signal from the lathe is activated. In order to proceed in automatic mode, press the AUT. key on the bar feeder keyboard.



Message number	Message description	Message type
1	1 - MANUAL FROM KEYBOARD	SIGNAL

When a warning is displayed the bar feeder does not stop and it is not necessary to reset the machine.

The warnings appear to indicate a machine status or when attempting to perform a manoeuvre which is not allowed by the program and provide information for the operator during the machining.

Explanation of messages:

Signal Type	Action to be explained
SIGNAL	This message disappears as soon as the cause is removed

2.12.2 CONDITIONS THAT MAY CAUSE A GENERIC ALARM ON THE LATHE

An alarm signal is present in the electric interface. This alarm signal is generated by relay K37 and is sent from the bar feeder to the lathe.
This alarm is usually displayed on the lathe with the message "Failure on the bar feeder".

The cause of this alarm can be one of the following conditions:

With the bar feeder in manual mode:
- The guide channels (loading side) are open
- The bar loading device is up

With the bar feeder in automatic mode or during the bar change phase:
- The lathe and the bar feeder have entered the bar change phase in automatic mode, but the guard giving access to the bar magazine is open

WARNING - CAUTION:
if the lathe does not restart at the end of the bar change, check if these signals are working correctly.

2.13 PROGRAM IDENTIFICATION DATA: DISPLAY MODE

The following four programs have been installed in the bar feeder:

- Push-button panel firmware;
- Push-button panel software;
- PLC/NC Software.

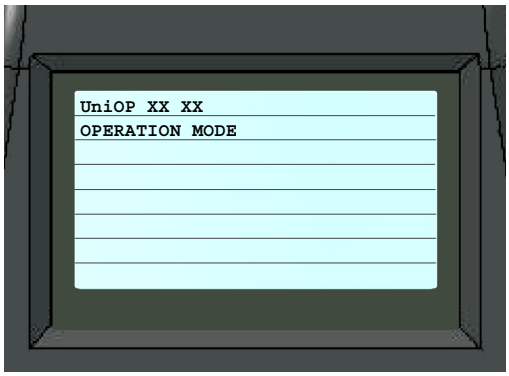
For many reasons (for example the request of assistance) it could be useful to display and understand the program identification data of these programs using the following procedure.

To display the programme identification data of the "Push-button panel Firmware"

1. Turn off the electrical supply.

2. Turning the electrical supply on again, the following screen will appear on the display for a few seconds:

   identification data of the push-button panel firmware: UniOP XX XX



To display the identification data of the "Push-button panel software" of the "PLC/NC Software".

1. Enter the data entering mode: [pupa_kid_barra_oriz-sx]

2. Display the screen:  the display shows:

   identification data of the push-button panel software: [barra] SwOP:xxxxx [barra]
   PLC/NC software identification data: [barra] SwCNC:xxxxx [barra]

INDEX

3.1 PROTECTED PARAMETERS: DISPLAY

These parameters refer to the bar feeder configuration and the bar feeder-lathe interfacing. The modification procedure is mainly necessary during the installation of the bar feeder by an authorized technician.
Data entering or modifying in these parameters is possible only by using the special data entering mode.
To access this mode, it is necessary to follow the procedure given in Section 4.2. The pages of this section are only supplied to the technician authorized by the manufacturer.

WARNING - CAUTION

The parameters are set to a default value (preset value): the bar feeder performs the automatic cycle according to these values.

The main display modes are the following:

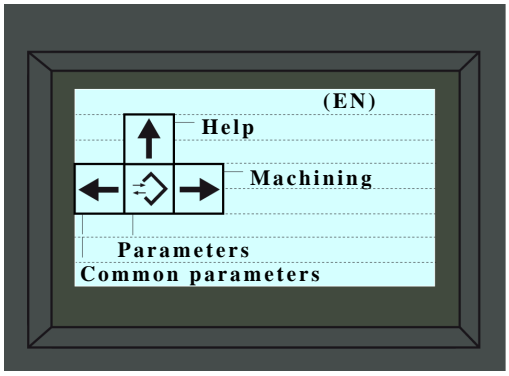
- Access the protected parameters
- Display the protected parameters
- Display the protected subparameters
- Exit the protected parameters

3.2 HOW TO ACCESS AND DISPLAY THE PROTECTED PARAMETERS

The following modes indicate how to access and display the protected parameters according to different procedures.

1. Enter the "parameter display" mode:

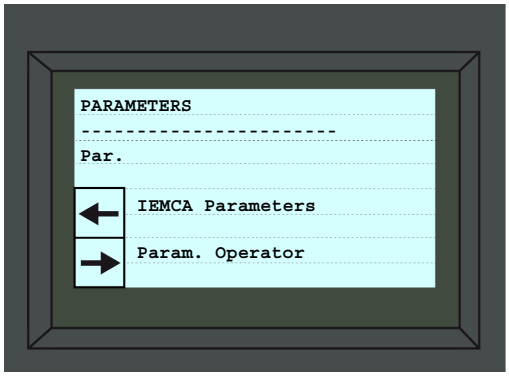
   [pupa_kid_barra_oriz-sx] and then 



2. Recall the selection cursor  , the display shows:
   Selected "parameter number": (Par.0)

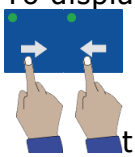
3. Enter the parameter number, for example 54, the value changes from 0 to 54 and starts blinking,

   confirm  .



4. parameter 54 is displayed

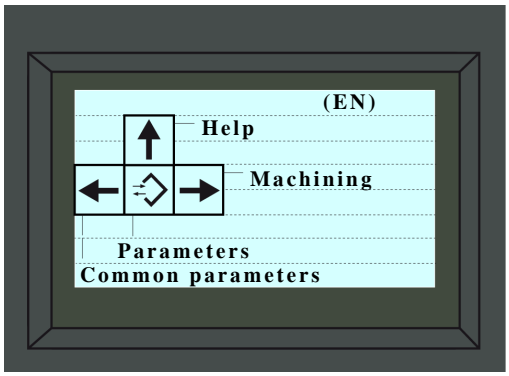
5. To display the protected parameters press:



the display shows, for example:

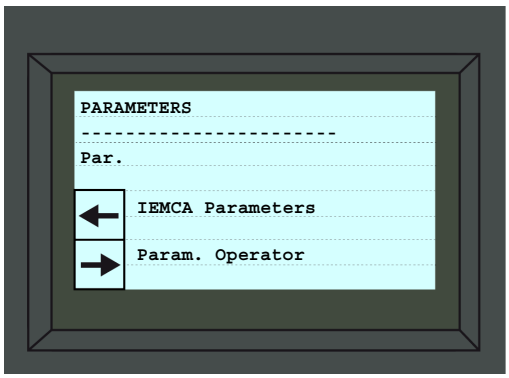
3.2.1 HOW TO ACCESS AND DISPLAY PARAMETERS

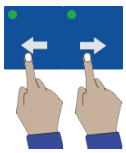
1. Enter the "parameter display" mode: [pupa_kid_barra_oriz-sx]
2. The display shows

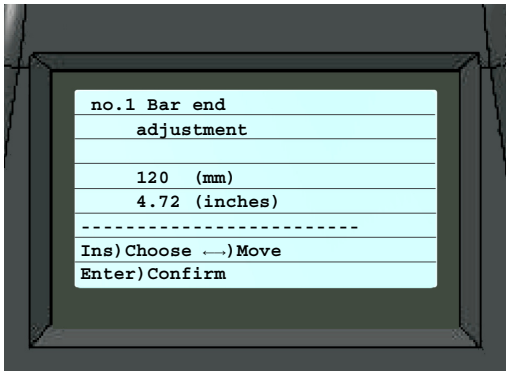


3 Press  to access "Parameters":

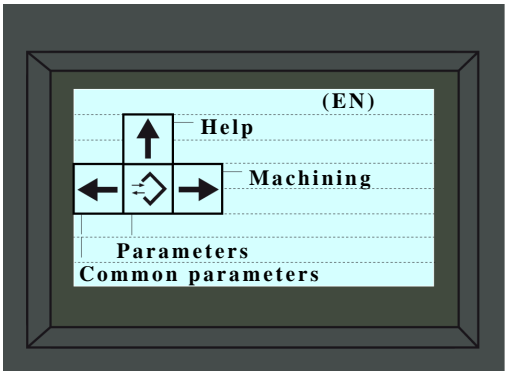
4. Recall the arrow  to access "OPERATOR Parameters"



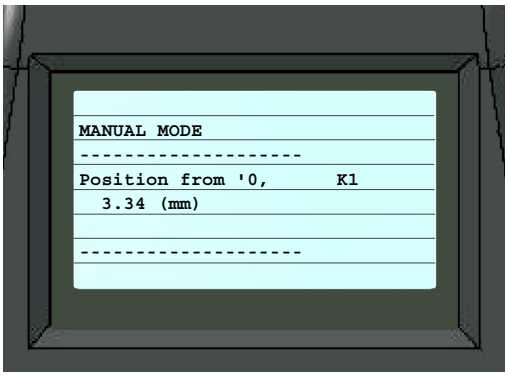
5. Display the parameters: 
all the other parameter will appear in sequence



6. Recall the "Main Menu":  the display shows



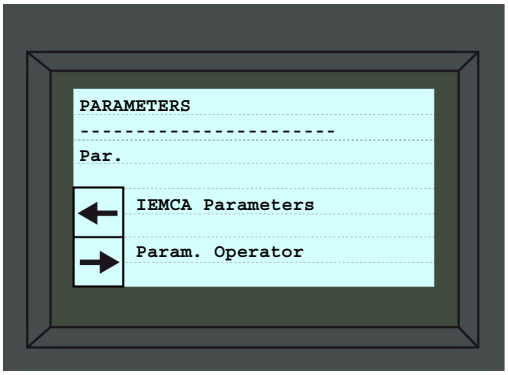
7. To return to the short menu press [pupa_kid_barra_vert-dx] and proceed as described in section 2.6.1.



8. To directly access the parameters return to screen 4. and proceed as follows:

9. Recall the selection cursor  . The Par.0 value starts blinking.

10. Enter the parameter number, for example "1"; the parameter value changes from 0 to 1 and starts blinking; confirm:  parameter 1 is now displayed



3.3 SUBPARAMETERS DISPLAY

Some protected parameters have subparameters.

1. To display them, scroll down the parameter screen by pressing repeatedly: 

2. To return to the parameter screen, scroll the screen upwards by pressing repeatedly: 

3.4 HOW TO EXIT THE PROTECTED PARAMETERS

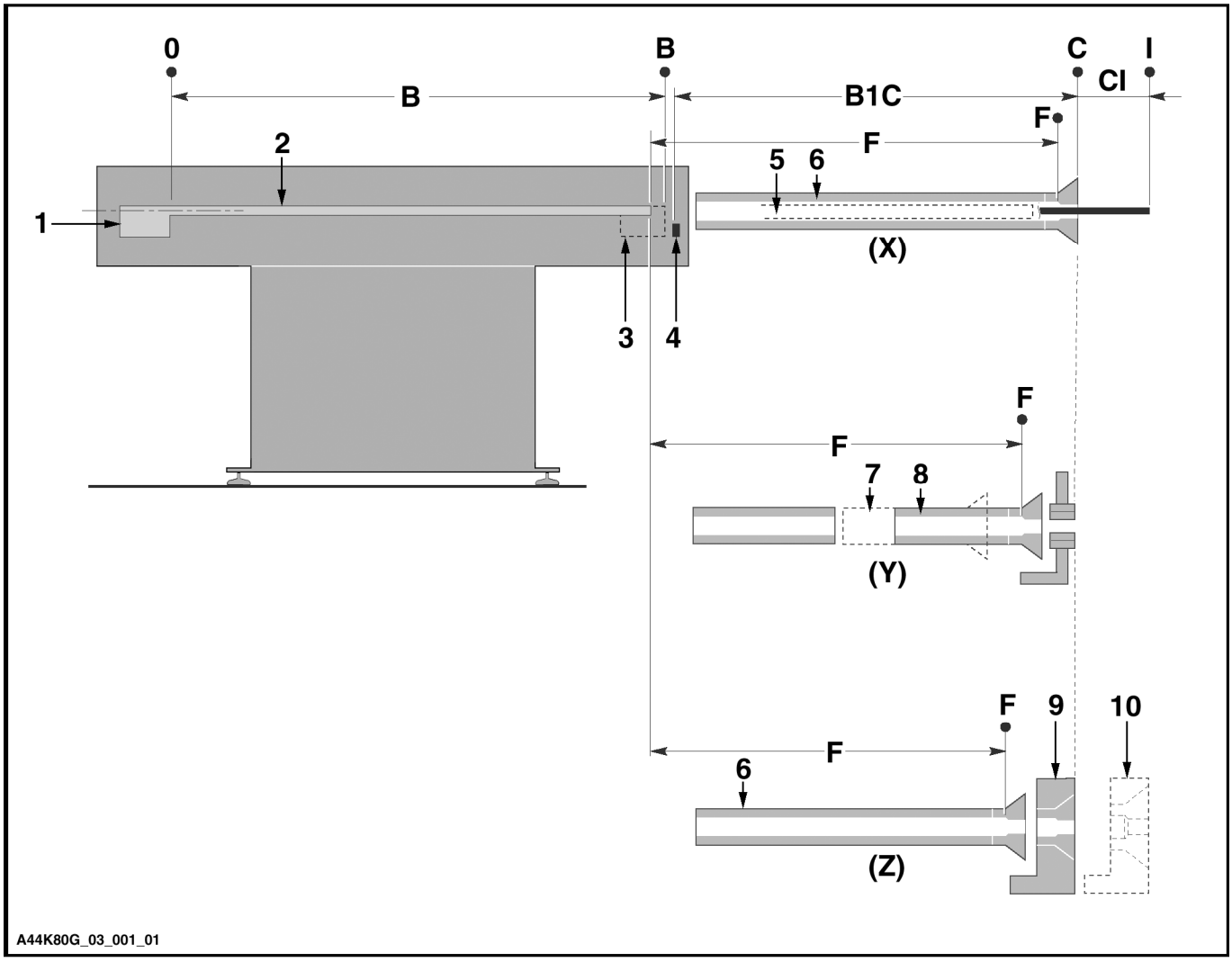
1. Exit the "parameter display" mode: [pupa_kid_barra_vert-dx]

3.5 PROTECTED PARAMETERS: DESCRIPTION

Protected parameters are divided into the following sections:

- Parameters for the reference values (§ 3.6)
- Parameters for the axis functions (§ 3.7)
- Interface parameters (§ 3.8)
- General parameters (§ 3.9)

3.6 PARAMETERS FOR REFERENCE VALUES: DESCRIPTION

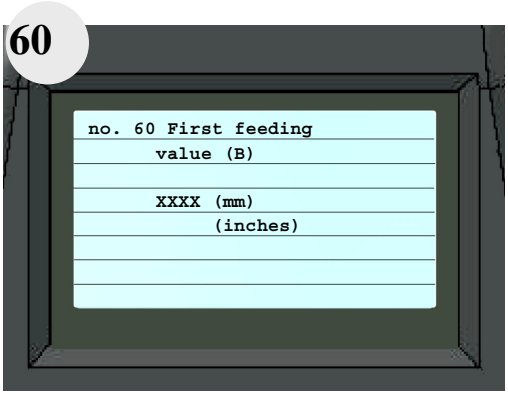


0) BAR FEEDER ZERO SETTING
1) Carriage in its "completely backwards position"
2) Bar pusher in its "completely backwards position"
3) Carriage in "completely forwards position"
4) Short feed gate (flag)
5) Bar pusher in its "completely forwards position"
6) Spindle
7) Headstock in its "completely backwards position"
8) Headstock in its "completely forwards position"
9) Rest in its "completely backwards position"
10) Rest in its "completely forwards position"

(X) Fixed headstock lathe
(Y) Sliding headstock lathe
(Z) Sliding rest lathe

no. 60 First feeding value (B)

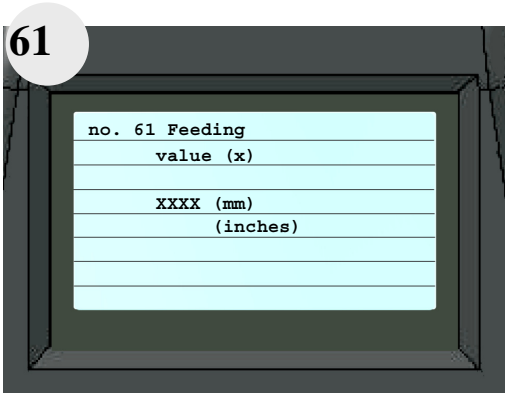
This parameter value should be entered. This is the value of the first feeding stroke, that is the distance between the front edges of the first feeding carriage in "After removal movement" and "first feeding limit switch" position (point B).



DEFAULT VALUE	PROGRAMMABLE VALUE
KID	**KID**
1720	**2070**

no. 61 Feeding value (x)

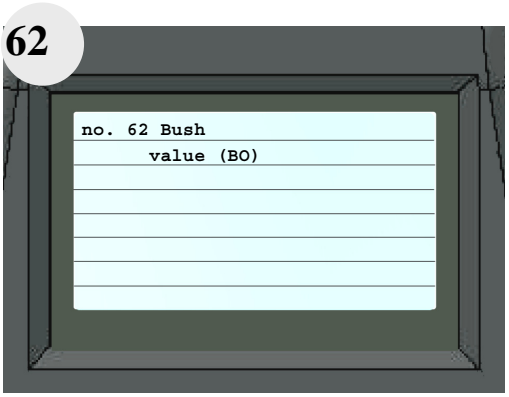
This is the stroke value for the bar loading into the bar pusher collet.



DEFAULT VALUE	PROGRAMMABLE VALUE
KID	**KID**
0	**2070**

no. 62 Bush value (BO)

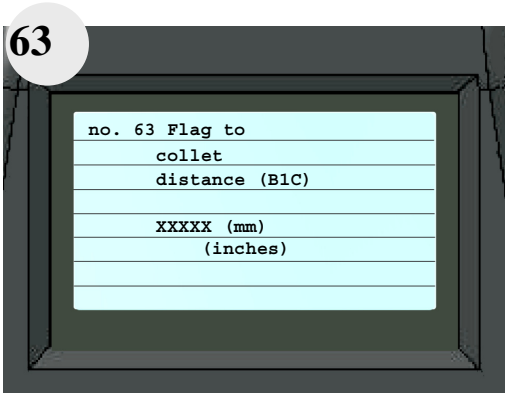
This parameter value should be entered.
This is the position of the bar pusher carriage where the half-bushes are opened; it can be modified with parameter 16.



DEFAULT VALUE	PROGRAMMABLE VALUE
KID	**KID**
2070	**32 N=2390 L=2060 LL=1730**
	37 N=2930 L=2600 LL=2270
	44 N=3590 L=3260 LL=2930

no. 63 Flag-collet distance (B1C)

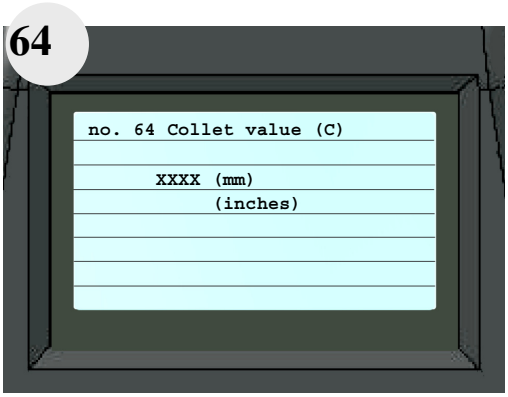
This parameter value should be entered.
This is the value of point C (facing point), that is the distance from the short feed gate 12 (of the bar feeder) and the front edge of the lathe collet.



DEFAULT VALUE	PROGRAMMABLE VALUE
KID	**KID**
1400	**2590**

no. 64 Collet value (C)

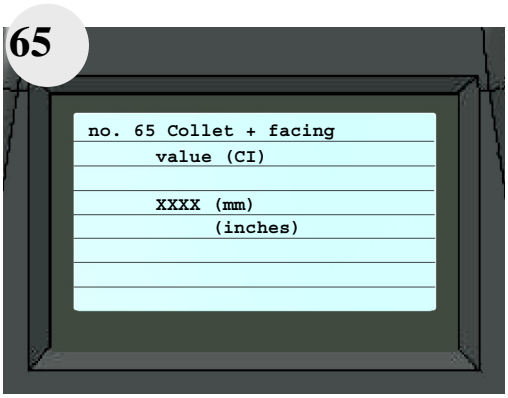
The value of this parameter is predefined by the program.
Distance (mm) that the bar pusher has to travel to reach point C after the bar first feeding.



DEFAULT VALUE	PROGRAMMABLE VALUE
KID	**KID**
/	**2590**

no. 65 Collet + facing value (C1)

The value of this parameter is predefined by the program.
The number is given by the value of point C in addition to the value of parameter 2.

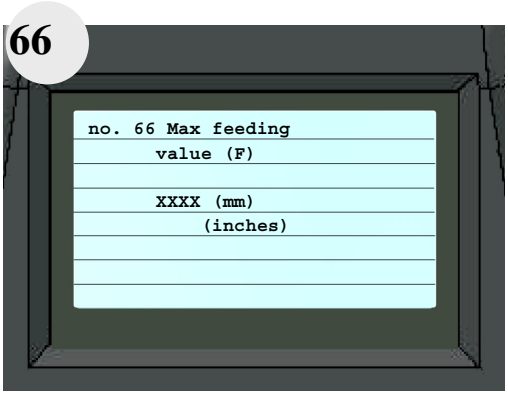


DEFAULT VALUE	PROGRAMMABLE VALUE
KID	**KID**
/	**2590**

no. 66 Maximum feeding value (F)

The F point is the maximum bar pusher feeding point: this value corresponds to the bar pusher stroke from its completely backwards position to point F.

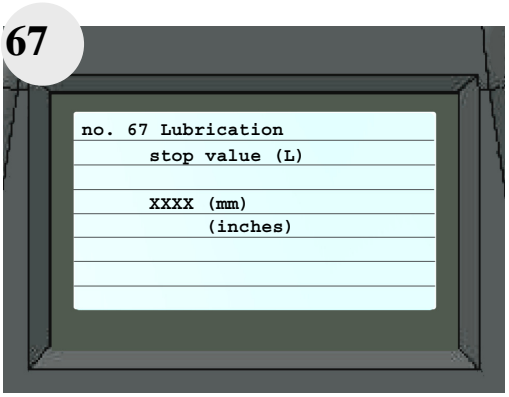
This value changes according to the different applications and should be entered by the Installation Technician (see default value on the side).



DEFAULT VALUE	PROGRAMMABLE VALUE
KID	**KID**
3740	**2590**

no. 67 Lubrication stop value (L)

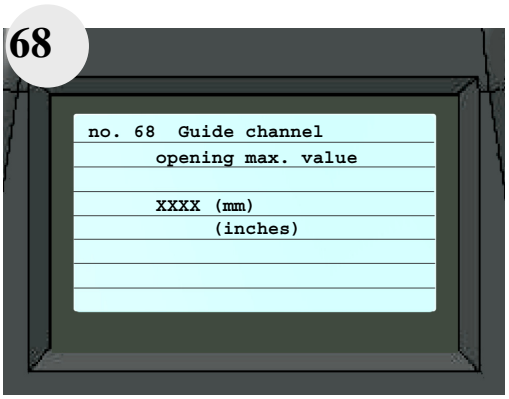
This parameter value should be entered.
Value where the oil pump motor for the lubrication of the guide channels stops.



DEFAULT VALUE	PROGRAMMABLE VALUE
KID	**KID**
2590	**32 N=2710 L=2380 LL=2050**
	37 N=3250 L=2920 LL=2590
	44 N=3910 L=3580 LL=3250

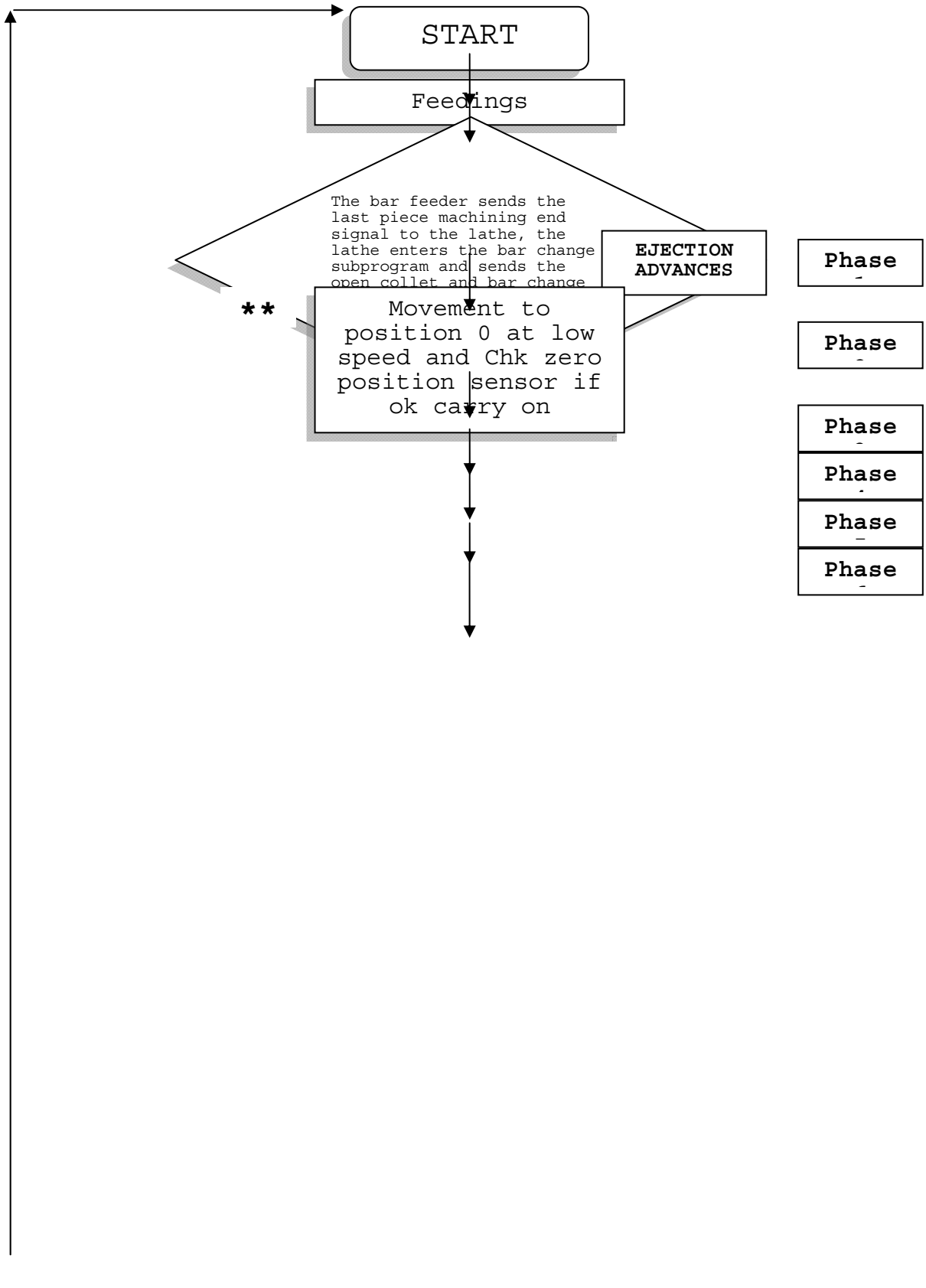
no. 68 Guide channel opening max. value

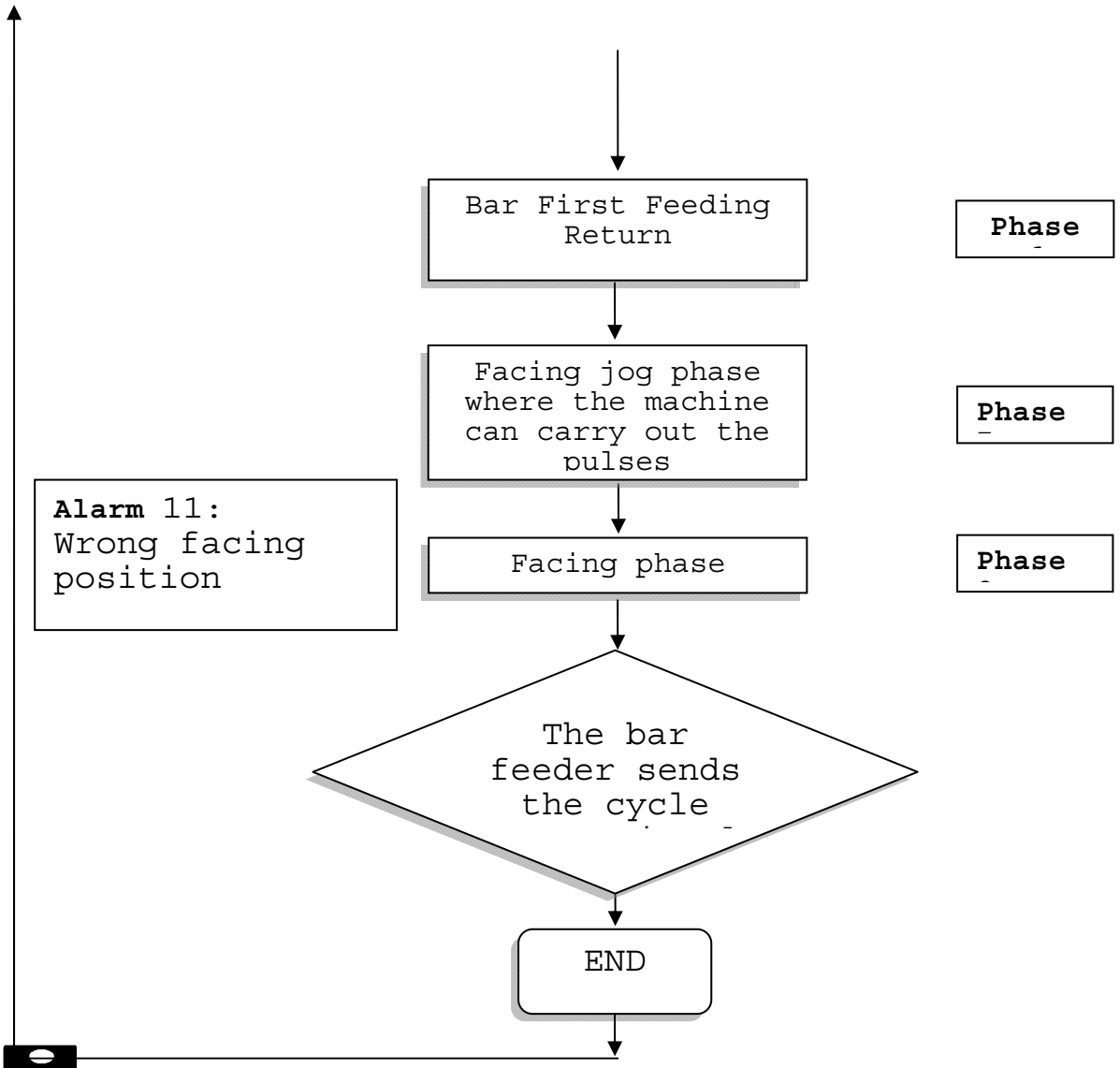
The value of this parameter is predefined by the program.
Position of the feeding carriage when the guide channels open.



DEFAULT VALUE	PROGRAMMABLE VALUE
KID	**KID**
/	**0**

OPERATING CYCLE - DESCRIPTION





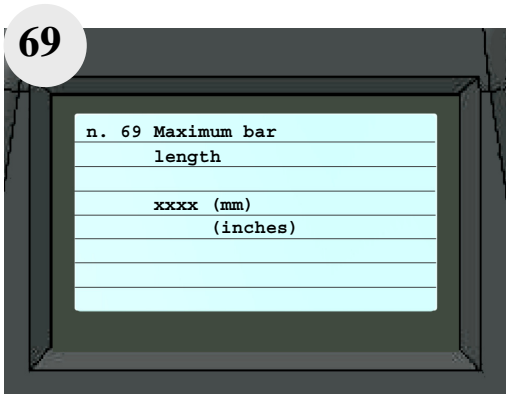
INFORMATION:

*****after powering the machine on or off, the first bar change cycle involves PHASE 3, consisting in a slow movement to "0 position" in order to check that the "0 position" coincides with the 0-Axis sensor (S1235) activation.***

3.7 PARAMETERS FOR REFERENCE VALUES: DESCRIPTION

no. 69 Maximum bar length

This parameter value should be entered. Set the max. length of bars that are to be loaded.

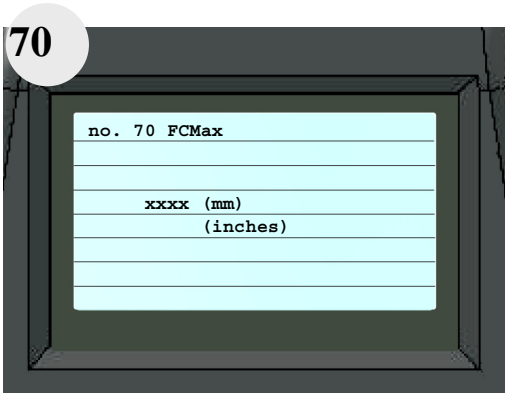


DEFAULT VALUE	PROGRAMMABLE VALUE
KID	**KID**
1200	**max 1615**

3.8 AXIS FUNCTION PARAMETERS: DESCRIPTION

no. 70 FCMax

Defines the moving axis parameterization.



DEFAULT VALUE	PROGRAMMABLE VALUE
KID	KID
0	0

INFORMATION

Once the values for parameter 70 have been set, turn off the power supply and then turn it on again, if you want the preset values to be self-learned. We recommend not to modify these parameters. However, if a modification is necessary, contact IEMCA service department.

INFORMATION:

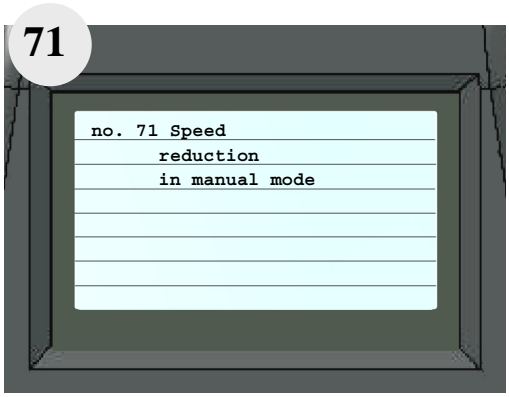
The "FCMax" subparameter is the maximum value the bar pusher can reach during feeding. Therefore, these values have to be considered in all the parameters where a speed value may be set.

no.17 Speed reduction in manual mode

Defines the speed value by which the bar pusher moves in manual mode. This value is expressed as a percentage of the maximum speed.

Parameters:
A - Speed reduction in manual mode

Subparameters:
B - Forwards slowly
C - Forwards fast
D - Backwards slowly
E - Backwards fast

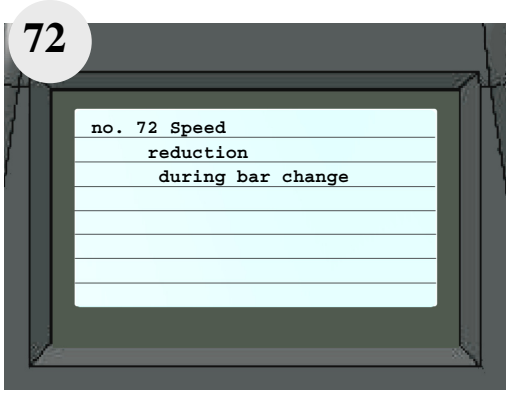


	DEFAULT VALUE	PROGRAMMABLE VALUE
	KID	KID
A	/	0÷100
B	15.0	0÷100
C	50.0	0÷100
D	20.0	0÷100
E	50.0	0÷100

no. 72 Speed reduction during bar change

Defines the speed value by which the bar pusher moves during the bar change cycle in the phases described by B, C, D, E subparameters. This value is expressed as a percentage of the maximum speed.
Parameters:
A - Speed reduction during bar change

Subparameters:
B - From collet entry slowdown to pulse window end
C - Pulse backwards
D - Facing to limit stop
E - Facing jog

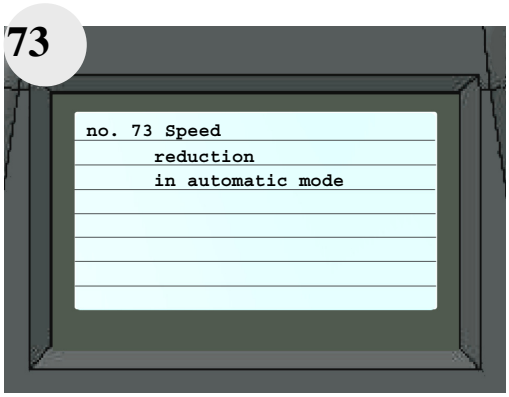


	DEFAULT VALUE	PROGRAMMABLE VALUE
	KID	KID
A	/	0÷100
B	6.0	0÷100
C	20.0	0÷100
D	10.0	0÷100
E	28.0	0÷100

no. 73 Speed reduction in automatic mode

Defines the speed value by which the bar pusher moves in automatic mode. This value is expressed as a percentage of the maximum speed.
Parameters:
A - Speed reduction in automatic mode

Subparameters:
B - Collet closed
C - Collet open

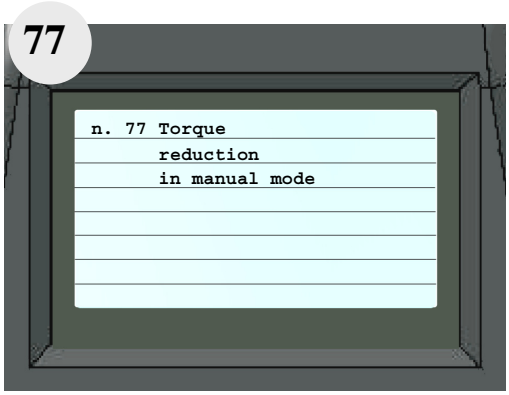


	DEFAULT VALUE	PROGRAMMABLE VALUE
	KID	KID
A	/	0÷100
B	20	0÷100
C	30	0÷100

no.77 Torque reduction in manual mode

Defines the torque value by which the bar pusher moves in manual mode. This value is expressed as a percentage of the maximum torque.
Parameters:
A - Torque reduction in manual mode

Subparameters:
B - Forwards slowly
C - Forwards fast
D - Backwards slowly
E - Backwards fast



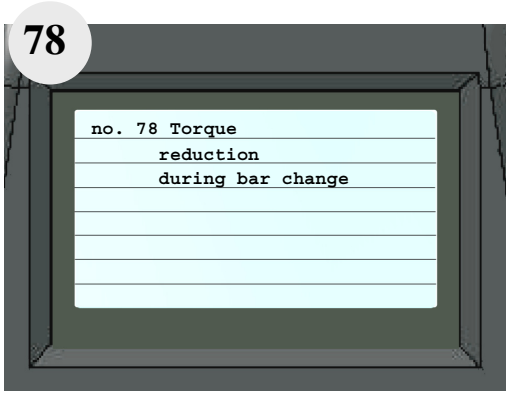
	DEFAULT VALUE	PROGRAMMABLE VALUE
	KID	KID
A	/	0÷100
B	40	0÷100
C	70	0÷100
D	70	0÷100
E	70	0÷100

no. 78 Toque reduction during bar change

Defines the torque value by which the bar pusher moves during the bar change cycle in the phases described by B, C, D, E subparameters. This value is expressed as a percentage of the maximum torque.

Parameter:
A - Torque reduction during bar change

Subparameters:
B - From collet entry slowdown to pulse window end
C - Pulse backwards
D - Facing to limit stop
E - Facing jog



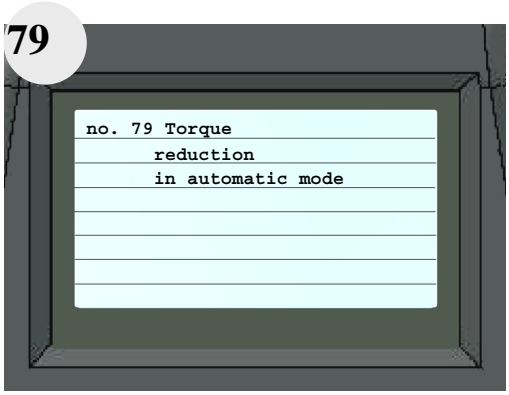
	DEFAULT VALUE	PROGRAMMABLE VALUE
	KID	KID
A	/	0÷100
B	40	0÷100
C	100	0÷100
D	35	0÷100
E	50	0÷100

no. 79 Torque reduction in automatic mode

Defines the torque value of the bar pusher in automatic mode. This value is expressed as a percentage of the maximum torque.

Parameters:
A - Speed reduction in automatic mode

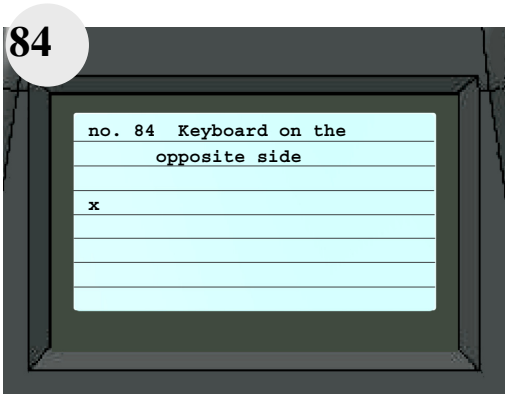
Subparameters:
B - Collet closed
C - Collet open



	DEFAULT VALUE	PROGRAMMABLE VALUE
	KID	KID
A	/	0÷100
B	10	0÷100
C	40	0÷100

no. 84 Keyboard on the opposite side

Allows setting the direction of the controls for the bar pusher movements. The setting of this parameter should be done with regards to the position of the keyboard i.e.: if it is on one side or on the opposite side.
0 - Defines the movements, forwards and backwards, in both directions.
1 - Defines the movements, forwards and backwards, of the opposite directions with regards to 0.

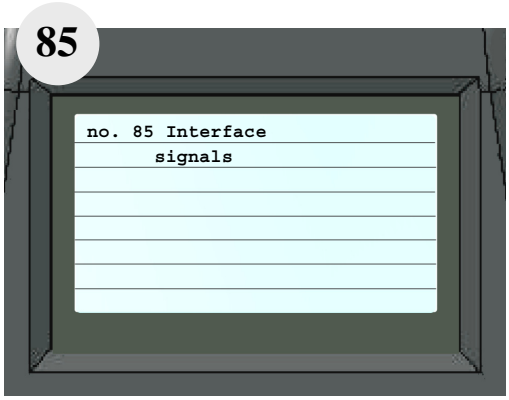


DEFAULT VALUE	PROGRAMMABLE VALUE
KID	KID
1	0/1

3.9 INTERFACE PARAMETERS: DESCRIPTION

no. 85 Interface signals

Defines how to manage the interface signals from the lathe to the bar feeder.



Subparameters:

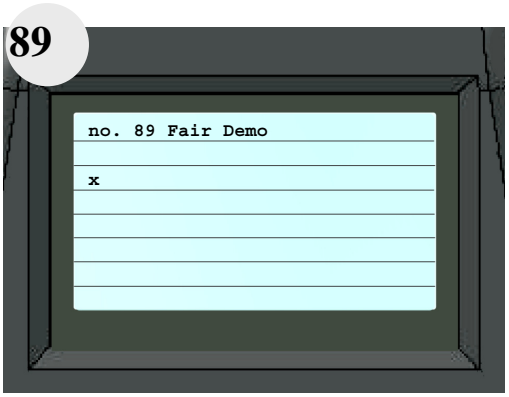
A - Bar change (0=NO/1=NC)
B - Feeding (0=NO/1=NC)
C - Manual feeding (0=NO/1=NC)
D - Manual return (0=NO/1=NC)
E - Man/Aut from lathe (0=NO/1=NC)
F - Loading cycle (0=NO/1=NC)
G - Feeding stop (0=NO/1=NC)
H - Door safety (0=NO/1=NC)
I - Thread safety (0=NO/1=NC)
L - Start from lathe (0=NO/1=NC)
M - Safeties from lathe (0=NO/1=NC)
N - Start-up (0=NO/1=NC)
O - Working mode (0=NO/1=NC)

	DEFAULT VALUE	PROGRAMMABLE VALUE
	KID	KID
A	0	0/1
B	0	0/1
C	0	0/1
D	0	0/1
E	0	0/1
F	0	0/1
G	0(0)	0/1
H	1	0/1
I	0	0/1
L	0	0/1
M	1	0/1
N	0	0/1
O	0	0/1

3.10 GENERAL PARAMETERS: DESCRIPTION

no. 89 Fair demo

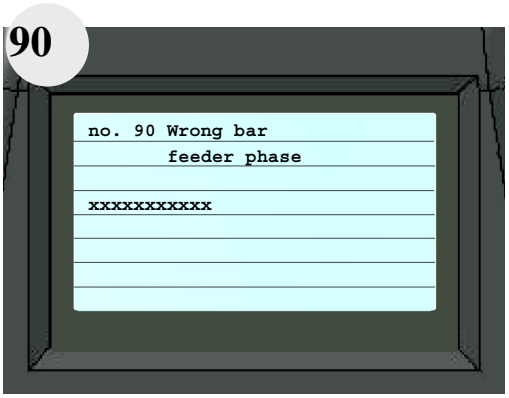
0 - inactive
1 - active.
To activate this mode, it is necessary to set parameter 35 at 1, parameter 6 (for example) at 200 mm, and parameter 85 "Bar Change" at 1.



DEFAULT VALUE	PROGRAMMABLE VALUE
KID	KID
0	0/1

no. 90 Wrong bar feeder phase

0 - (K37 active with closed guide channels in manual mode).
During the "MANUAL" cycle, the bar feeder goes into "ALARM" when performing movements (for example "guide channel opening"). The bar feeder "WORKING" phase is lost and must be re-established; the "BAR FEEDER WAITING" message will be displayed.



1 - (Bar feeder in manual mode and lathe in automatic mode).
At the first bar feeding signal, the bar feeder goes into "ALARM" mode if it is in manual mode.

DEFAULT VALUE	PROGRAMMABLE VALUE
KID	KID
0	0/1

WARNING - CAUTION

After the "MANUAL/AUTOMATIC" lathe signal is given, this safety is not activated if the bar feeder is working in "MANUAL" mode from the lathe.

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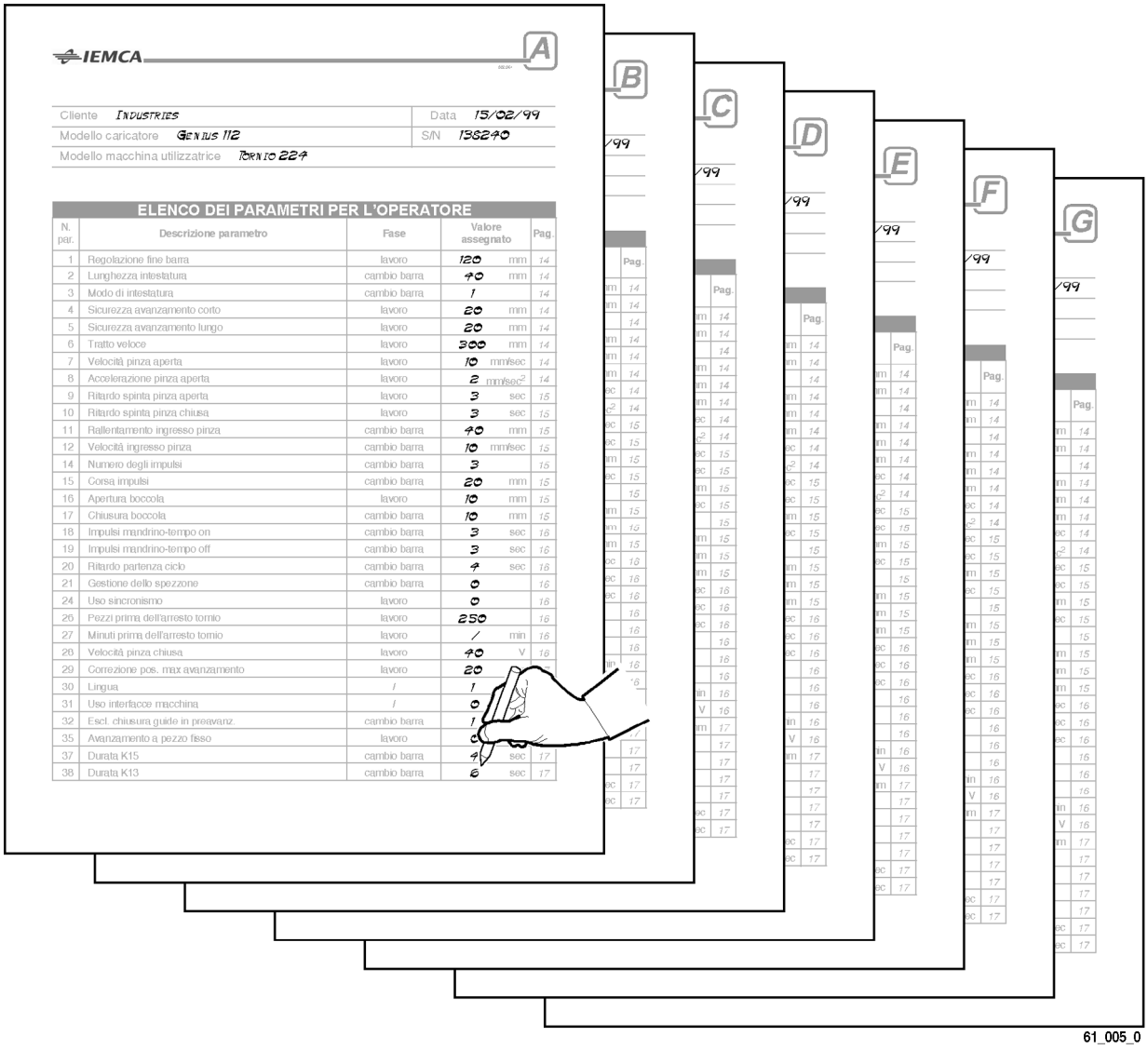
5.1 ASSISTANCE REQUEST

For assistance request, send the list of parameters with the assigned values (attachments B, C, D, E, F, G) to IEMCA service department.
In addition, it is necessary to transmit the identification data of the HARDWARE installed in the bar feeder (attachment A).

EXAMPLE OF FILLING IN



A HARDWARE AND PROGRAM IDENTIFICATION DATA

Customer	Date
Bar feeder model	Y/N
Machine tool model	

HARDWARE IDENTIFICATION DATA	
"CPU" CARD	Model:
	Serial number
ENABLING CARD (motor drive)	Model:
	Serial number

Above data can be found in the "CPU" and "motor enabling" cards, which are located in electric board.

PROGRAM IDENTIFICATION DATA	
PUSH-BUTTON PANEL FIRMWARE	Number:
PUSH-BUTTON PANEL SOFTWARE	Number:
PLC/CN SOFTWARE	Number:
PLC/CN FIRMWARE	Number:

To trace these data, see section 2.12

B PARAMETER LIST FOR THE OPERATOR

Customer	Date
Bar feeder model	S/N
Using machine model	

OPERATOR PARAMETER LIST				
Par.No.	Parameter description	Default value KID IV	Allocated value	Unit of measurement
1	**Bar end adjustment**			mm-inches
	Bar end adjustment	100		mm-inches
	Bar end adjustment 1	300		mm-inches
2	**Facing length**	0		mm-inches
3	**Facing mode** 0= at limit stop 1= in position	1		
	Overrun admitted after "I"	0		mm-inches
	Facing to the limit stop	10		%Vmax
	Facing to the limit stop	35		%Cmax
4	**Short feeding safety**	0		mm-inches
5	**Long feeding safety**	0		mm-inches
6	**Piece length**	0		mm-inches
7	**Open collet speed**	30		%Vmax
9	**Open collet thrust delay**	0		Sec
10	**Closed collet thrust delay**	0		Sec
11	**Collet entry slowdown**	200		mm-inches
12	**Collet entry speed**	6		%Vmax
13	**Collet entry torque**	40		%Cmax
14	**Pulse number**	20		
	Pulse window start	400		mm-inches
	Pulse window end	20		mm-inches
15	**Pulse stroke**	0.15		Sec

Customer	Date
Bar feeder model	S/N
Using machine model	

OPERATOR PARAMETER LIST				
Par.No.	Parameter description	Default value KID IV	Allocated value	Unit of measurement
18	**Spindle pulses – on time**	0,5	0,5	Sec
19	**Spindle pulses – off time**	0,5	0,5	Sec
20	**Cycle start delay**	0	0	Sec
21	**Remnant handling** 0= safety 1= ejection 2= bar change advance (no first feeding) 3= bar change advance (no facing)	0	0	
22	**Open collet timeout**	0	0	Sec
23	**Piece timeout**	0	0	Sec
25	**Bar feeding handling** 0=end of feeding with bar change 1=end of feeding with K1	1	1	
26	**Pieces before lathe stop**	0	0	(0)
27	**Minutes before lathe stop**	0	0	Min.

Customer	Date
Bar feeder model	S/N
Using machine model	

OPERATOR PARAMETER LIST				
Par.No.	Parameter description	Default value KID IV	Allocated value	Unit of measurement
28	**Closed collet speed**			%Vmax
29	**Max feeding pos. adjustment**	0		mm-inches
30	**Language 1I-2GB–3D–4F–5E–6S–7DK-8P-9NL-10FIN-11CS-12RU**	1		
32	**K1 immediate exit** 0=with open collet K1 not activated 1=with open collet K1 activated	0		
33	**K2 Inversion** 0=K2 is on 1 at limit stop 1=K2 is on 0 at limit stop	0		
34	**Feeding torque**	40		%Cmax
35	**Fixed-piece feeding** 0=at the limit stop 1=at fixed values 2=fixed values + thr. at limit stop	0		
	Position	/		
	Speed	76200		
	Acceleration	100		
	Deceleration	100		
36	**K15 disabling** 0= K15 included 1=K15 excluded	1		
37	**K15 duration**	2		sec.
38	**K13 duration**	2		sec.
39	**Spindle stop** 0=relay disabled during bar change 1=relay always enabled	0		
40	**Closed collet bar pusher return**	10		mm-inches
41	**First feeding value (B)**	1720		mm-inches
42	**Bar pusher return pause**	0.2		sec.

Customer	Date
Bar feeder model	S/N
Using machine model	

OPERATOR PARAMETER LIST				
Par.No.	**Parameter description**	**Default value**	**Allocated value**	**Unit of measurement**
		KID IV		
43	**Speed change in first feeding** 0=slow 1=fast	1		
	Speed 1	9144		Mm/m
	Speed 2	48000		
	Acceleration	100		
	Deceleration	10		
44	**Axis operation**			
	Bar pusher stop with closed collet 0=the bar pusher stop is off 1=the bar pusher stop is on	0		
	Axis stop engagement delay	1		sec.
	Closed collet torque	10		%Cmax

D PARAMETER LIST FOR THE REFERENCE VALUES

Customer	Date
Bar feeder model	S/N
Using machine model	

PARAMETER LIST FOR THE REFERENCE VALUES				
Par. No.	Parameter description	Default value	Allocated value	Unit of measurement
		KID IV		
60	**First feeding value (B)**	1720		mm-inches
61	**Feeding value (x)**	/		mm-inches
62	**Bush value (BO)**	2270		mm-inches
63	**Flag-collet distance (B1C)**	1400		mm-inches
64	**Collet value (C)**	##		mm-inches
65	**Collet + facing value (CI)**	##		mm-inches
66	**Maximum feeding value (F)**	3740		mm-inches
67	**Lubrication stop value (L)**	2590		mm-inches
68	**Guide channel opening max. value**	##		mm-inches
69	**Maximum bar length**	##		mm-inches

E PARAMETER LIST FOR THE AXIS FUNCTIONS

Customer	Date
Bar feeder model	S/N
Using machine model	

PARAMETER LIST FOR THE AXIS FUNCTIONS				
Par. No.	Parameter description	Default value	Allocated value	Unit of measurement
		KID IV		
70	**FCMax**	0		
71	**Speed reduction in manual mode**			
	Forwards slowly	15,0		%Vmax
	Forwards fast	50,0		%Vmax
	Backwards slowly	20,0		%Vmax
	Backwards fast	50,0		%Vmax
72	**Speed reduction during bar change**			
	From "collet entry slowdown" to "pulse window end"	6,0		%Vmax
	Pulse backwards	20,0		%Vmax
	Facing to the limit stop	10,0		%Vmax
	Facing jog	28,0		%Vmax
73	**Speed reduction in automatic mode**			
	Clamp closed	20		%Vmax
	Open collet	30		%Vmax
77	**Torque reduction in manual mode**	##		%Cmax
	Forwards slowly	40		%Cmax
	Forwards fast	70		%Cmax
	Backwards slowly	70		%Cmax
	Backwards fast	70		%Cmax
78	**Torque reduction during bar change**	##		%Cmax
	From "collet entry slowdown" to "pulse window end"	40		%Cmax
	Pulse backwards	100		%Cmax
	Facing to the limit stop	35		%Cmax
	Facing jog	50		%Cmax
79	**Torque reduction in automatic mode**	##		%Cmax
	Clamp closed	10		%Cmax
	Open collet	40		%Cmax

PARAMETER LIST FOR THE AXIS FUNCTIONS				
Par. No.	Parameter description	Default value	Allocated value	Unit of measurement
		KID IV		
84	**Keyboard on the opposite side**	0		

F PARAMETER LIST FOR THE INTERFACE

Customer	Date
Bar feeder model	S/N
Using machine model	

PARAMETER LIST FOR THE INTERFACE				
Par.No.	**Parameter description**	**Default value**	**Allocated value**	**Unit of measurement**
		KID IV		
85	**Interface signals**			
	Bar change (0=NO/1=NC)	0		
	Feeding (0=NO/1=NC)	0		
	Man. feeding (0=NO/1=NC)	0		
	Man. return (0=NO/1=NC)	0		
	Man/aut from lathe (0=NO/1=NC)	0		
	Feeding cycle (0=NO/1=NC)	0		
	Feeding stop (0=NO/1=NC)	0 (0)		
	Door safety devices (0=NO/1=NC)	1		
	Threading safety device (0=NO/1=NC)	0		
	Start from lathe (0=NO/1=NC)	0		
	Safety devices from lathe (0=NO/1=NC)	1		
	Sturtup (0=NO/1=NC)	0		
	Working mode (0=NO/1=NC)	0		

G GENERAL PARAMETER LIST

Customer	Date
Bar feeder model	S/N
Using machine model	

GENERAL PARAMETER LIST				
Par.No.	**Parameter description**	**Default value**	**Allocated value**	**Unit of measure ment**
		KID IV		
89	**Fair Demo** 0= turned off 1= turned on	0		
90	**Wrong bar feeder phase** 0= K37 active with closed guide channels in manual mode 1= Bar feeder in manual mode and lathe in automatic mode	0		
98	**Indicators (only on touch)**	/		
99	**SMS service (only on touch)**	/		
100	**E-MAIL service (only on touch)**	/		