

YJKP - Operation screen in WebVisu

Description of how to use the operation screen to start a pressing program

YJKP

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1 Components/Software

Type/Name	Version Software/Firmware	Date of manufacture
Servo press kit YJKP	general	--
Application software YJKP (GSAY-A4-F0-Z4-1.3.5)	V1.3.5	--
Firmware controller (CECC-X)	V3.4.6	--
Firmware motor controller (CMMP-AS)	V4.0.1501.2.4	--

Table 1.1: 1 Components/Software used

2 Operation

To start any pressing process, you have to select the program you created before.

In operation-tab you can select the program, show the recorded curves and see some information about the process.

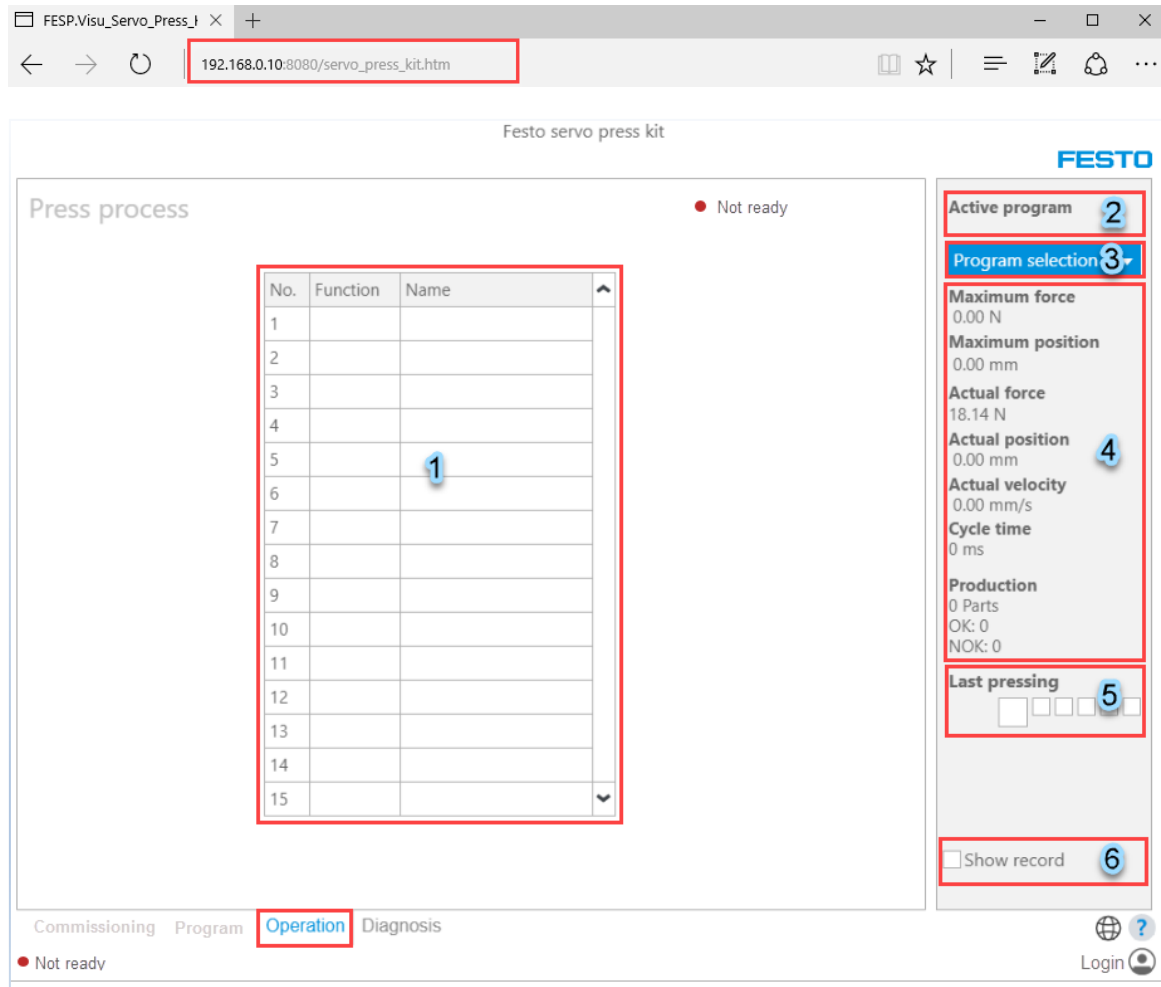
Operation screen:

Open a browser and start the WebVisu of the YJKP.

In Browser: <IP of the CECC-X>:8080/servo_press_kit.htm

The visualization of the servo-press kit is opened with 4 tabs :

- Commissioning / Program : Not active
- Operation / Diagnosis: Active



This screen consists of the following parts:

1. Displays all sequencer steps of the selected program.
2. Selected and active program
3. Search for available programs and load one.

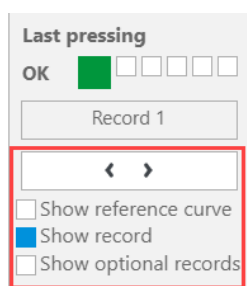
Information about the last pressing process:

- Maximum Force: maximum force value reached in the last operation.
- Maximum position: maximum position reached in the last operation.
- Actual force : current force value.
- Actual position: current position value
- Actual velocity: current velocity value.
- Cycle time : time it took to complete the last pressing process.
- Production: Number of the all pressing operations.
Ok: Number of the successful operations
NOK: Number of the failed operations.

4. Last Pressing: These squares indicate the status of the last pressing processes.
- Green Light: A successful operation.
 - Red light: A failed operation.
 - Big square: last operation.
 - Small squares: previous operations.
5. Show record: Check this option to show the recorded curves at the end of the operation.

If this option is selected, the curves will be displayed in addition to other options:

- Arrows: navigate between the recorded curves.
- Show reference curve: display the reference curve.
- Show optional records
 - Show last 4 record: display the last 4 recorded curves.
 - Custom selection: display curves stored in USB or SD Card memory.



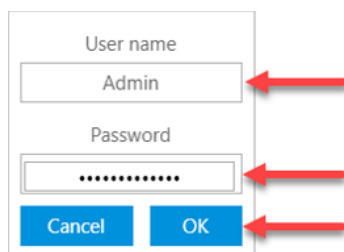
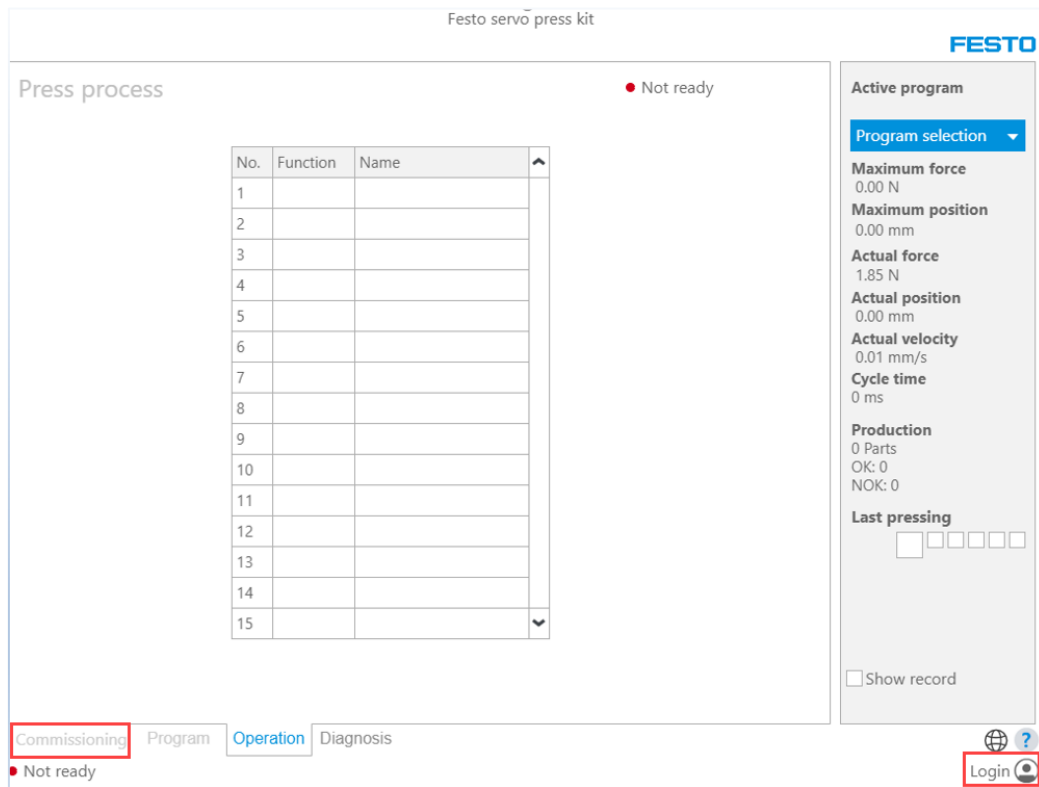
3 Example

In this example you will see how to start an operation including all prerequisites with the WebVisu.

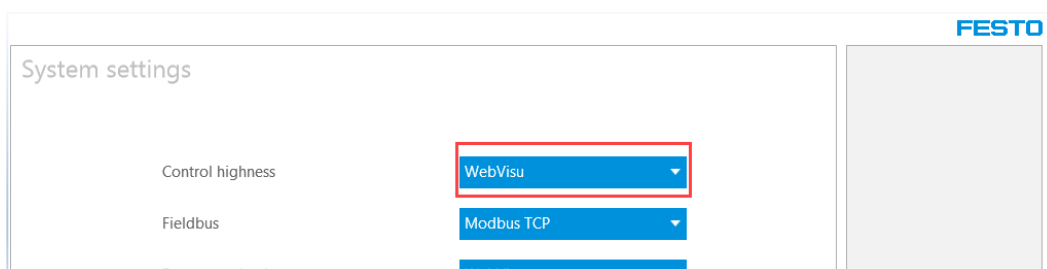
3.1 Commissioning

1. Click on **Login** to activate the commissioning and program tabs. A new pop-up window appears to enter user and password, as shown in the figures below.

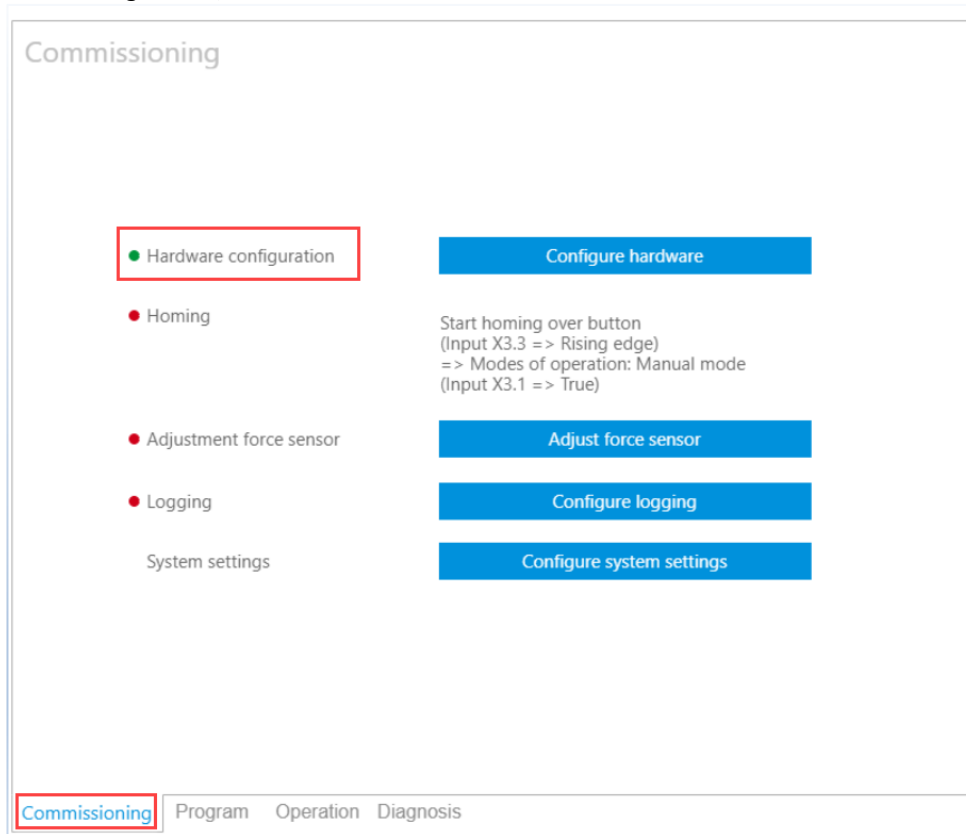
Default password: User name: Admin
Password: ServoPressKit



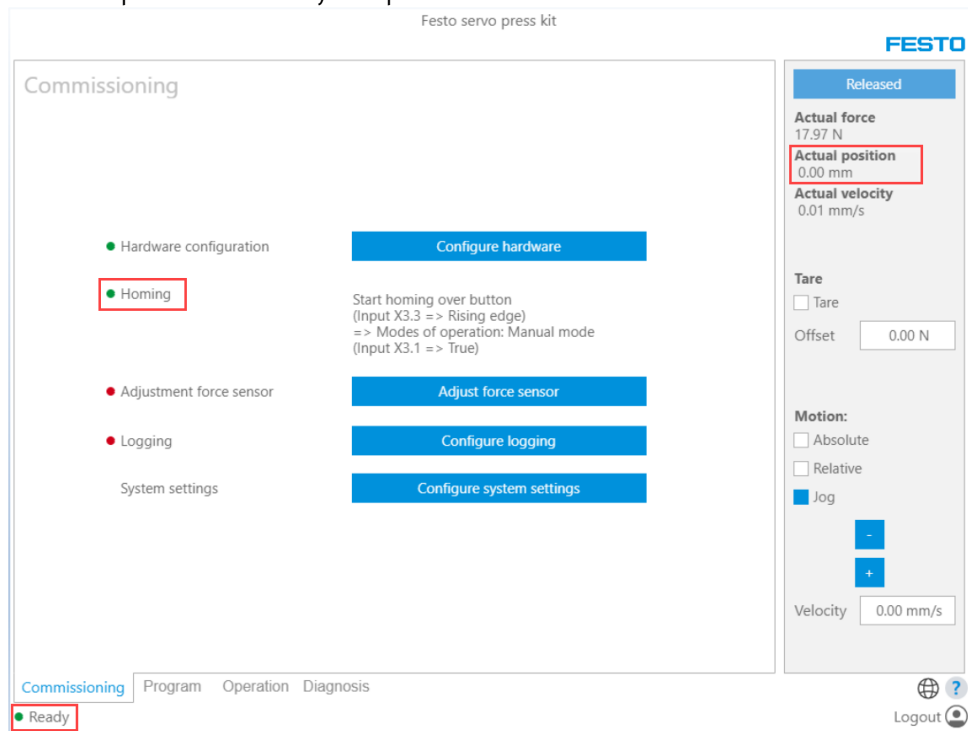
2. Go to **commissioning** -> **System settings** tab
The control highness in the system settings is set to **WebVisu**.



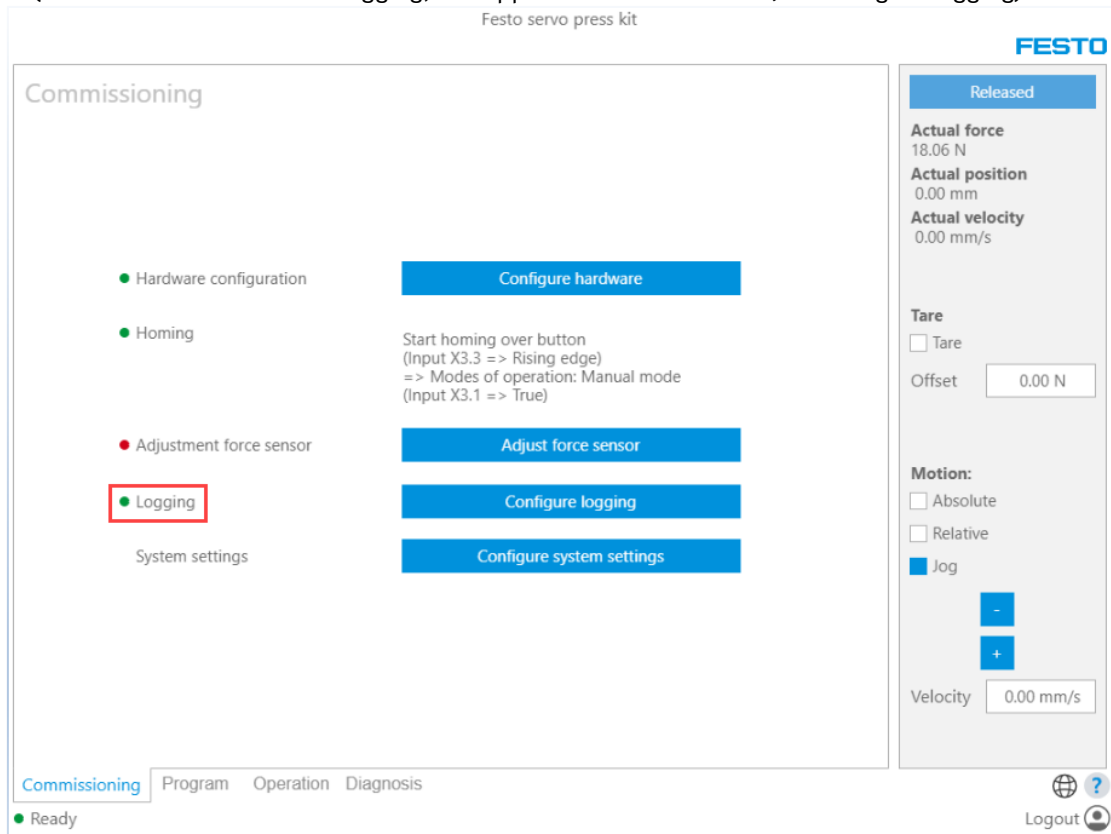
3. In the commissioning tab, check if the hardware is configured successfully (Green).
(Further information about hardware configuration, please read AppNote Servo Press Kit YJKP_ Hardware Configuration).



4. Check if the system is already homed. Otherwise start homing over the button **Input X3.3**.
If it's done, the homing status indicates that it is valid (Green) and the status of the servo press turns to "Ready".
The servo press is now ready for operation.



- Optional: If you like to log your press processes or you want to load optional records later on, please configure the logging.
(Further information about Logging, see AppNote Servo Press Kit YJKP-Configure logging).



3.2 Program

Open the **program tab** and start configuring the press program:

- Create a new program and name it (here: Test).
Insert all your necessary steps.
In this example it consists of the following steps:
 - Position Mode (First move)
 - Tare (Tare)
 - Force control (FORCE_CONTROL)
 - Position mode (Return)



Note:

- Further information about creating a sequencer program, please read AppNote Servo Press Kit YJKP- Configure sequencer.

- Record a reference curve



Note:

- Further information about recording a reference curve, please read AppNote Servo Press Kit YJKP-Record_Load reference curve.

- Add evaluation methods



Note:

- Further information about configuring evaluation methods, please read AppNote Servo Press Kit YJKP- Configure monitoring.

4. Save the program.

Festo servo press kit

FESTO

Edit program

Step 1/4: Configure sequencer

No.	Function	Name
1	PM	First Move
2	TARE	TARE
3	FC	FORCE_CONTROL
4	PM	Return
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		

Insert step

Delete step

Copy step

Insert copied step

Configure failure reaction

Cancel

Save

Next

Commissioning **Program** Operation Diagnosis
 ● Ready

Logout

Released

Actual force
20.10 N

Actual position
0.00 mm

Actual velocity
0.00 mm/s

Tare
☐ Tare
 Offset

Motion:
☐ Absolute
☐ Relative
☒ Jog

-

+

Velocity

3.3 Operation

Open the **operation** tab:

- Click on **program selection**, and select the created program (**Test**).
The name of the selected program (Test) will appear under **Active program**.

The sequencer functions will appear in the list.

Festo servo press kit

FESTO

Press process

● Ready for operation

No.	Function	Name
1	PM	First Move
2	TARE	TARE
3	FC	FORCE_CONTROL
4	PM	Return
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		

Commissioning Program **Operation** Diagnosis

Logout

Active program

Test

Program selection ▼

Maximum force
0.00 N

Maximum position
0.00 mm

Actual force
18.70 N

Actual position
0.00 mm

Actual velocity
0.01 mm/s

Cycle time
0 ms

Production
 0 Parts
 OK: 0
 NOK: 0

Last pressing
☐ ☐ ☐ ☐ ☐

☐ Show record

- Set the system mode to automatic (Input X3.1 low, Input X3.2 high).

Terminate press process (x3.5) and servo press activation (X17.4.2) must be true.

Festo servo press kit

Diagnosis

Process diagnosis Device diagnosis **Interface diagnosis**

Digital inputs

- ☐ X2.0 Step enabling condition input 1
- ☐ X2.1 Step enabling condition input 2
- ☐ X2.2 Step enabling condition input 3
- ☐ X2.3 Step enabling condition input 4
- ☐ X2.4 Step enabling condition input 5
- ☐ X2.5 Step enabling condition input 6
- ☐ X2.6 Step enabling condition input 7
- ☐ X2.7 Step enabling condition input 8
- ☐ X3.0 Start press process
- ☐ X3.1 "Manual" operating mode
- ☒ X3.2 "Automatic" operating mode
- ☐ X3.3 Start homing
- ☐ X3.4 Acknowledge the error
- ☒ X3.5 Terminate press process
- ☐ X17.0.2 Program selection Bit 0
- ☐ X17.1.2 Program selection Bit 1
- ☐ X17.2.2 Program selection Bit 2
- ☐ X17.3.2 Program selection Bit 3
- ☒ X17.4.2 Servo press activation
- ☐ X17.5.2 Activation of step operation

Variables

1	2	3	4	5
0.00	0.00	0.00	0.00	0.00

Digital outputs

- ☐ X4.0 Step enabling condition output 1
- ☐ X4.1 Step enabling condition output 2
- ☐ X4.2 Step enabling condition output 3
- ☐ X4.3 Step enabling condition output 4
- ☐ X20.0.1 Faults
- ☐ X20.1.1 Servo press ready for operation
- ☐ X20.2.1 Homing requirement
- ☐ X20.3.1 Press result OK
- ☐ X20.4.1 Press result not OK
- ☒ X20.5.1 Servo press activated
- ☐ X20.6.1 Program step done

Analog inputs

X19.0.2 12.18 mA

CAN

- ☐ CANopen manager
- ☒ Node ID 1
- ☐ Node ID 2
- ☐ Node ID 3
- ☐ Node ID 4

Host

Selected field bus

TCP/IP

Log (10s) Save

	In	Out
1	0x0	0x0
2	0x0	0x0
3	0x0	0x0
4	0x0	0x0
5	0x0	0x0
6	0x0	0x0
7	0x0	0x0
8	0x0	0x0
9	0x0	0x0
10	0x0	0x0

Commissioning Program Operation **Diagnosis**

● Ready

Logout

- Start pressing with rising edge on input X3.0.

After several operations , the status panel will indicate the number of the successful/failed operations.

As you see in this example :

- 5 parts (Number of the pressed parts)
- OK: 3 (successful operations)
- NOK: 2 (failed operations)

Press process

● Ready for operation

No.	Function	Name
1	PM	First Move
2	TARE	TARE
3	FC	FORCE_CONTROL
4	PM	Return
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		

Active program

Test

Program selection

Maximum force

372.99 N

Maximum position

28.01 mm

Actual force

18.04 N

Actual position

3.00 mm

Actual velocity

0.00 mm/s

Cycle time

15419 ms

Production

5 Parts

OK: 3

NOK: 2

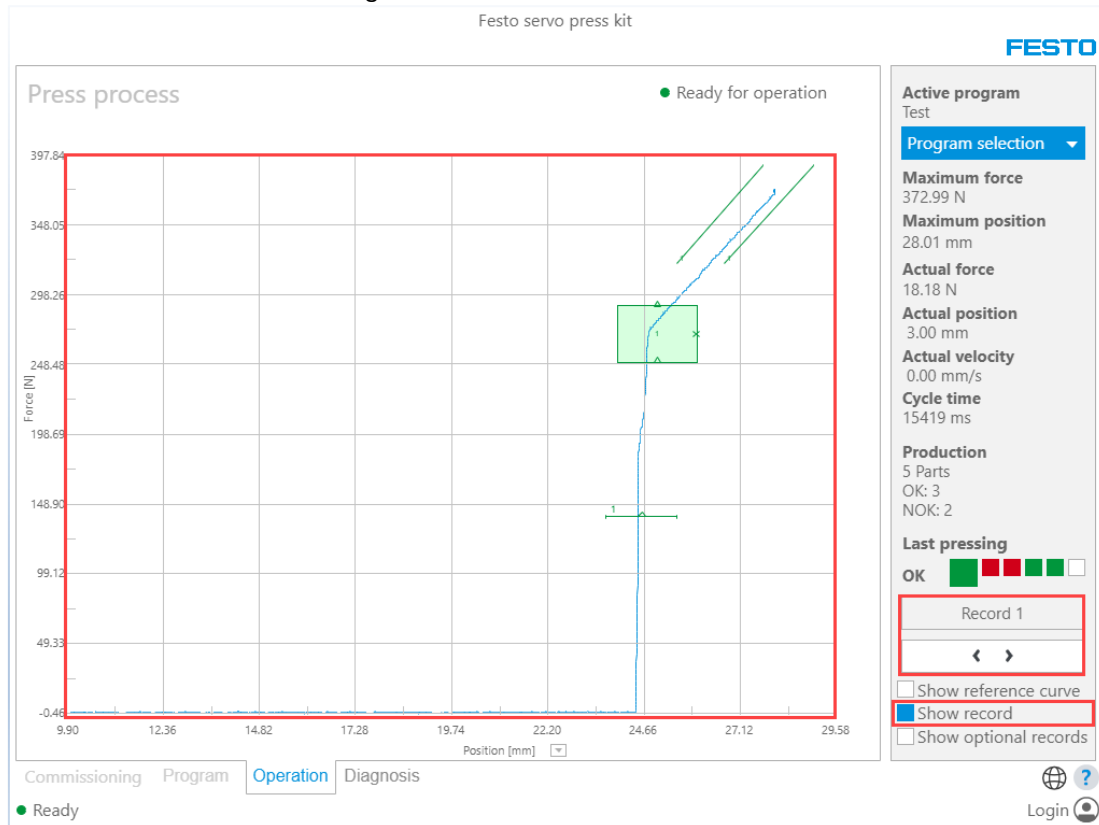
Last pressing

OK ■ ■ ■ ■ ■ ■

☐ Show record

Commissioning Program **Operation** Diagnosis

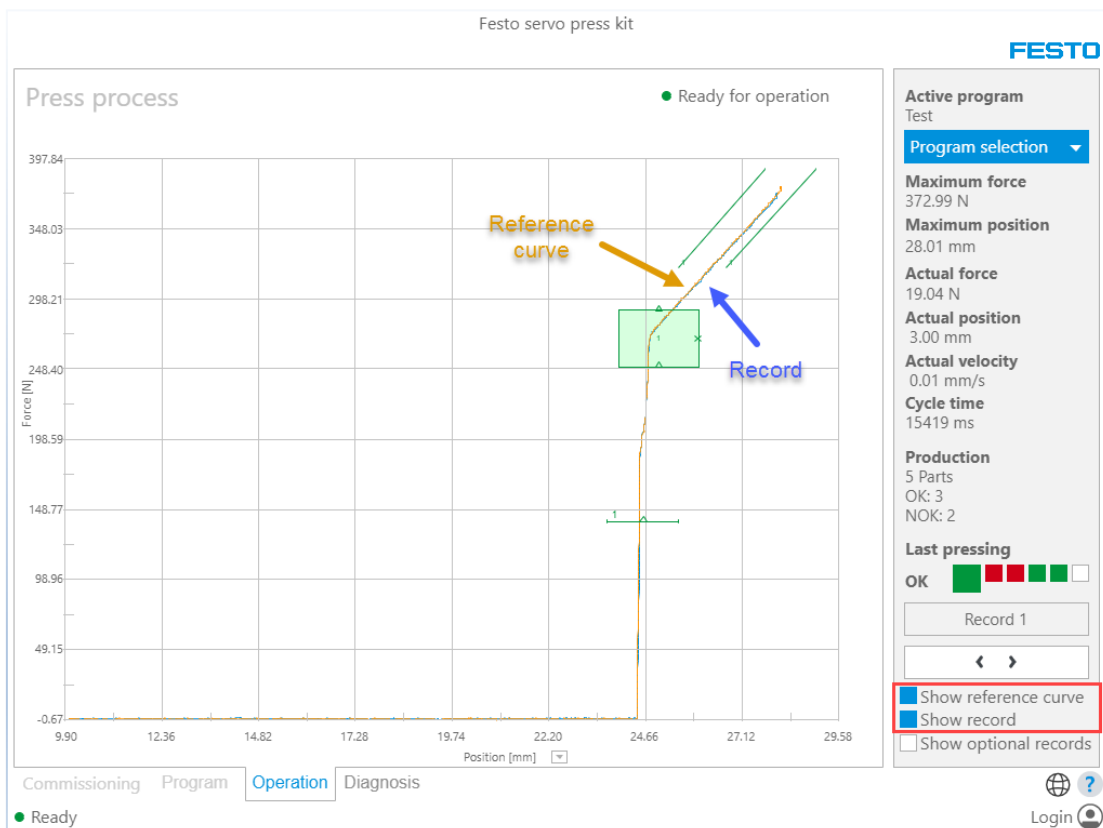
4. Activate “show record” on the right side to show the recorded curve.



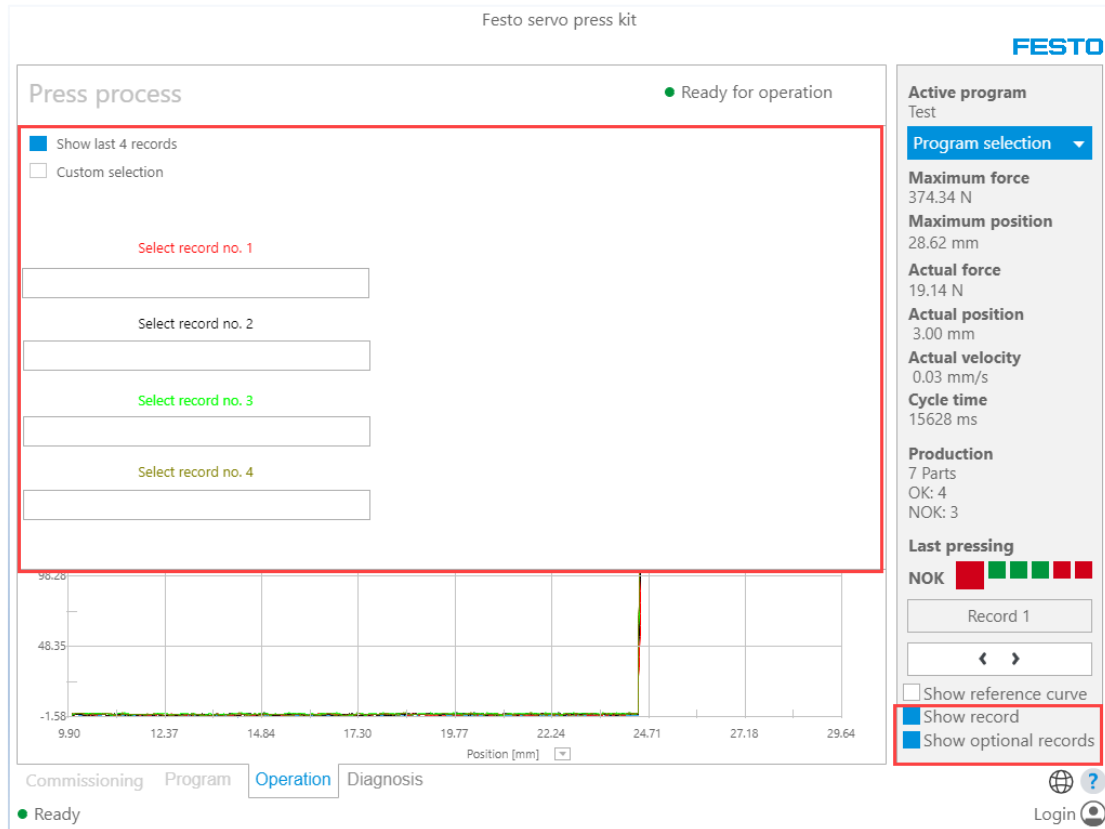
Note:

- To go back to the previous screen (sequencer list), please deactivate “show record”.

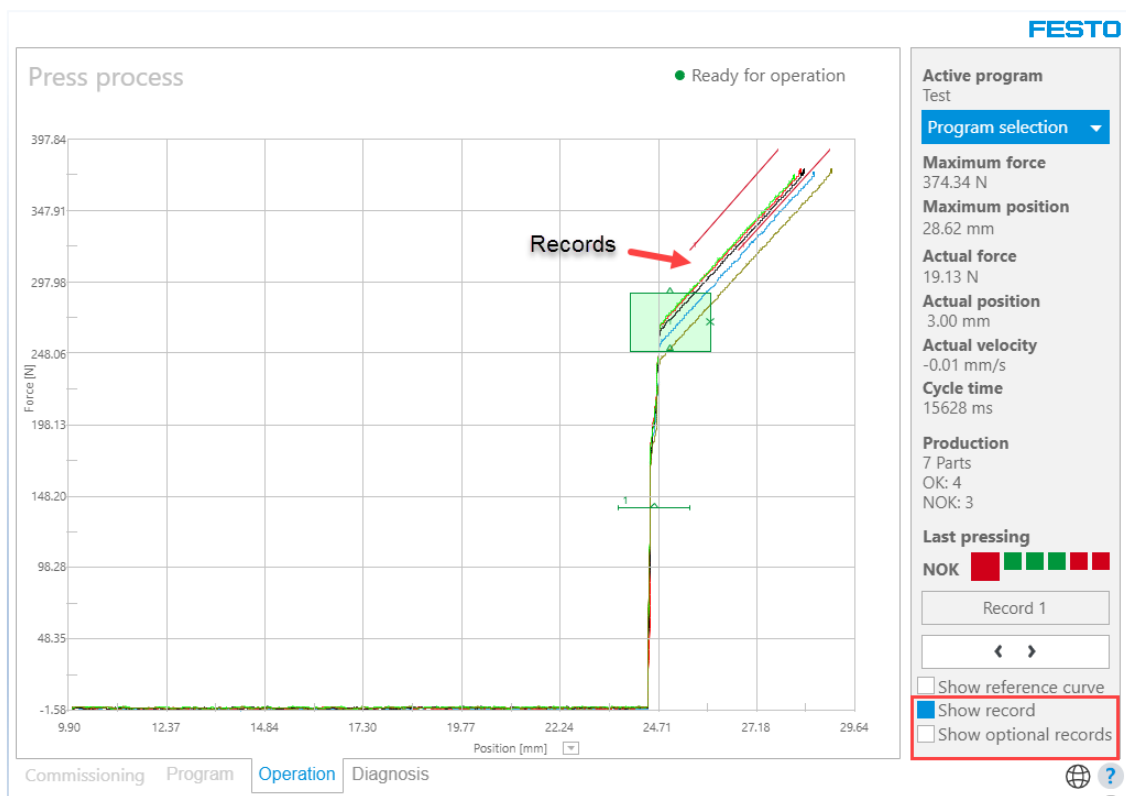
5. Activate “show reference curve” to show the recorded reference curve.



6. Activate **“show optional records”** to show the last 4 recorded curves or curves stored in USB/SD Card memories.



- Show last 4 records:
 select **“Show last 4 records”**, then deactivate **“Show optional records”**.
 The last recorded curves will display as shown:



- Custom selection :

select the “custom selection” option, then determine the curves according to the following steps:

1. Choose the memory you want to load the graphs from (here SD-card).
2. Click on the folder icon in **Select record no 1** to open the files stored on the card.
3. Select the desired curve.
4. Click on **confirm file selection**.
5. Repeat the previous steps if you want to display further curves (Select record no 2 , select record no 3 ...).
6. Click on **load selected files**.

Press process ● Ready for operation

☐ Show last 4 records

☒ Custom selection

☐ USB

☒ SD - Card **1**

Select record no. 1 **2**

Select record no. 2

Select record no. 3

Select record no. 4

Load selected files 5

Confirm file selection 4

	File Name	
1	test_00_0E_F0_4A_93_19_2018-10-30-12_14_3_NOK.log	DT#2
2	test_00_0E_F0_4A_93_19_2018-10-30-12_17_32_NOK.log	DT#2
3	test_00_0E_F0_4A_93_19_2018-10-30-12_17_41_NOK.log	DT#2
4	test_00_0E_F0_4A_93_19_2018-10-30-12_18_12_NOK.log	DT#2
5	test_00_0E_F0_4A_93_19_2018-10-30-12_20_13_NOK.log	DT#2
6	test_00_0E_F0_4A_93_19_2018-10-30-12_21_12_NOK.log	DT#2
7	test_00_0E_F0_4A_93_19_2018-10-30-12_21_44_NOK.log	DT#2
8	test_00_0E_F0_4A_93_19_2018-10-30-12_23_14_NOK.log	DT#2
9	test_00_0E_F0_4A_93_19_2018-10-30-12_24_21_NOK.log	DT#2
10	test_00_0E_F0_4A_93_19_2018-10-30-12_25_01_NOK.log	DT#2
11	test_00_0E_F0_4A_93_19_2018-10-30-12_25_14_NOK.log	DT#2
12	test_00_0E_F0_4A_93_19_2018-10-30-12_26_49_OK.log	DT#2
13	test_00_0E_F0_4A_93_19_2018-10-30-12_27_13_OK.log	DT#2
14	test_00_0E_F0_4A_93_19_2018-10-30-12_27_40_OK.log	DT#2
15	test_00_0E_F0_4A_93_19_2018-10-30-12_33_55_OK.log	DT#2
16	test_00_0E_F0_4A_93_19_2018-10-30-14_14_32_OK.log	DT#2
17	test_00_0E_F0_4A_93_19_2018-10-30-14_23_43_OK.log	DT#2
18	test_00_0E_F0_4A_93_19_2018-10-30-14_24_21_NOK.log	DT#2
19	test_00_0E_F0_4A_93_19_2018-10-30-14_25_26_NOK.log	DT#2

96.96
49.15
-0.67

9.90 12.36 14.82 17.28 19.74 22.20 24.66 27.12 29.58

Position [mm]

Commissioning Program **Operation** Diagnosis

FESTO

Active program
Test

Program selection

Maximum force
372.99 N

Maximum position
28.01 mm

Actual force
17.82 N

Actual position
3.00 mm

Actual velocity
0.03 mm/s

Cycle time
15419 ms

Production
5 Parts
OK: 3
NOK: 2

Last pressing
OK

Record 1

Show reference curve
Show record
Show optional records

After finishing loading the curves, please deactivate “show optional records” to see the curves.

Press process ● Ready for operation

386.06
337.67
289.29
240.90
192.52
144.13
95.75
47.36
-1.02

9.90 12.37 14.84 17.30 19.77 22.24 24.71 27.18 29.64

Position [mm]

Commissioning Program **Operation** Diagnosis

● Ready

FESTO

Active program
Test

Program selection

Maximum force
378.45 N

Maximum position
29.06 mm

Actual force
18.60 N

Actual position
3.00 mm

Actual velocity
-0.01 mm/s

Cycle time
15814 ms

Production
3 Parts
OK: 2
NOK: 1

Last pressing
NOK

Record 1

Show reference curve
Show record
☒ Show optional records

Logout

**Note:**

- If you use a host controller to control the press process, the following function blocks are required

I. FB_Connect

Required inputs:

- xEnable := true;
- enTargetComMode := 1;

Required outputs:

- xActive := true;
- enActualComMode := 1;
- xConnected := true;

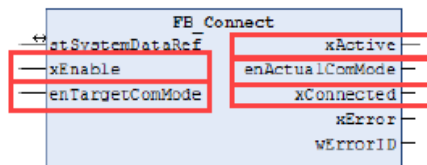


Figure 3-7: FB_Connect

II. FB_PressControl

Required inputs:

- xEnable := true;
- xEnableSystem := True;
- uiSelectedProgramNumber:= 1 ; (number of the program)
- xLoadProgram :=True;
- xStartPressProcess := True;
- xAbort:=True ;

Required outputs:

- xActive := true;
- xSystemEnabled := True;
- xSystemIsHomed :=True;
- xProgramLoaded:=True;
- uiLoadedProgramNumber:=1 (number of your program)
- xSystemError:=False;
- xError:=False;

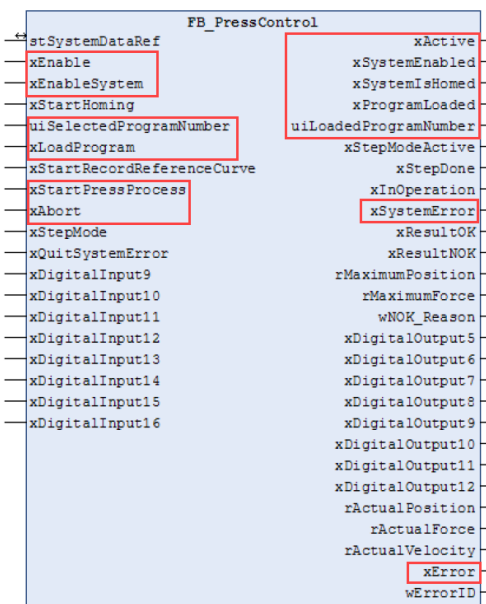


Figure 3-10: FB_PressControl