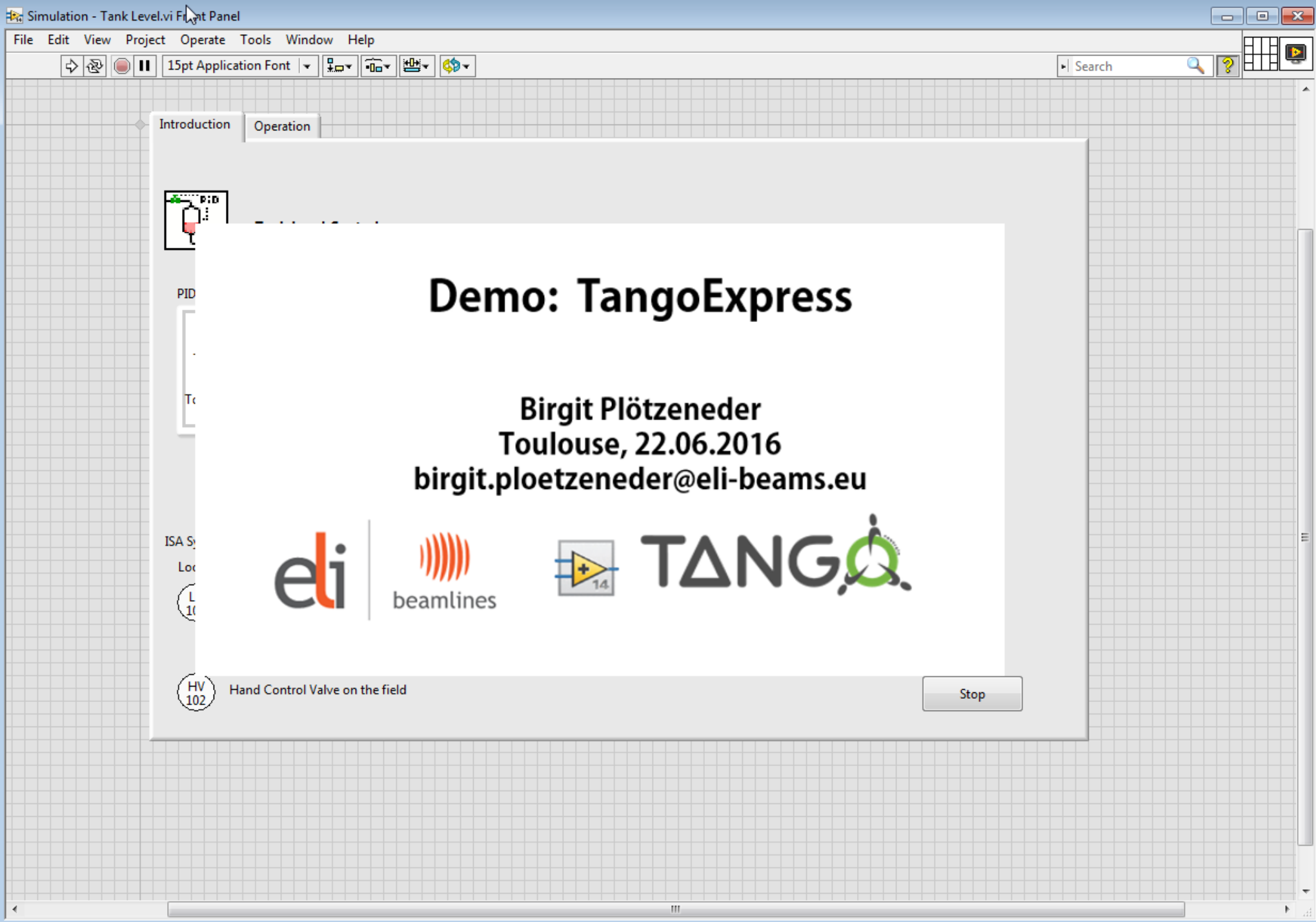




Simulation - Tank Level.vi Front Panel

File Edit View Project Operate Tools Window Help

15pt Application Font

Search

Introduction

Operation



Tank Level Control

PID parameters (LIC 101)

Kc

10

Ti (min)

0,05

Td (min)

0

ISA Symbology: The diagram uses the ISA Symbology used for control

Loop 101

LT
101

Level Transmitter on the field

LIC
101

Level Controller at the control room

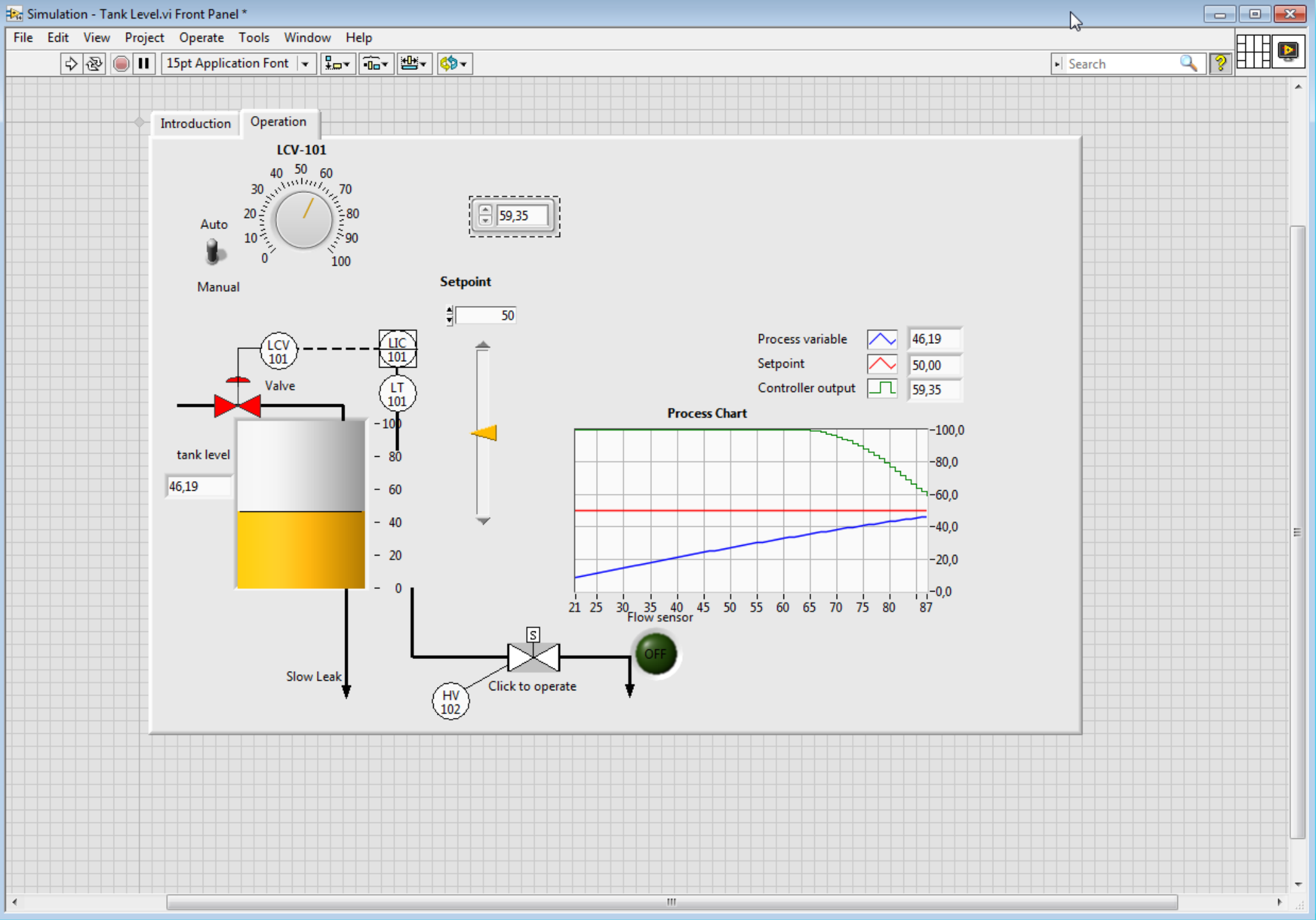
LCV
101

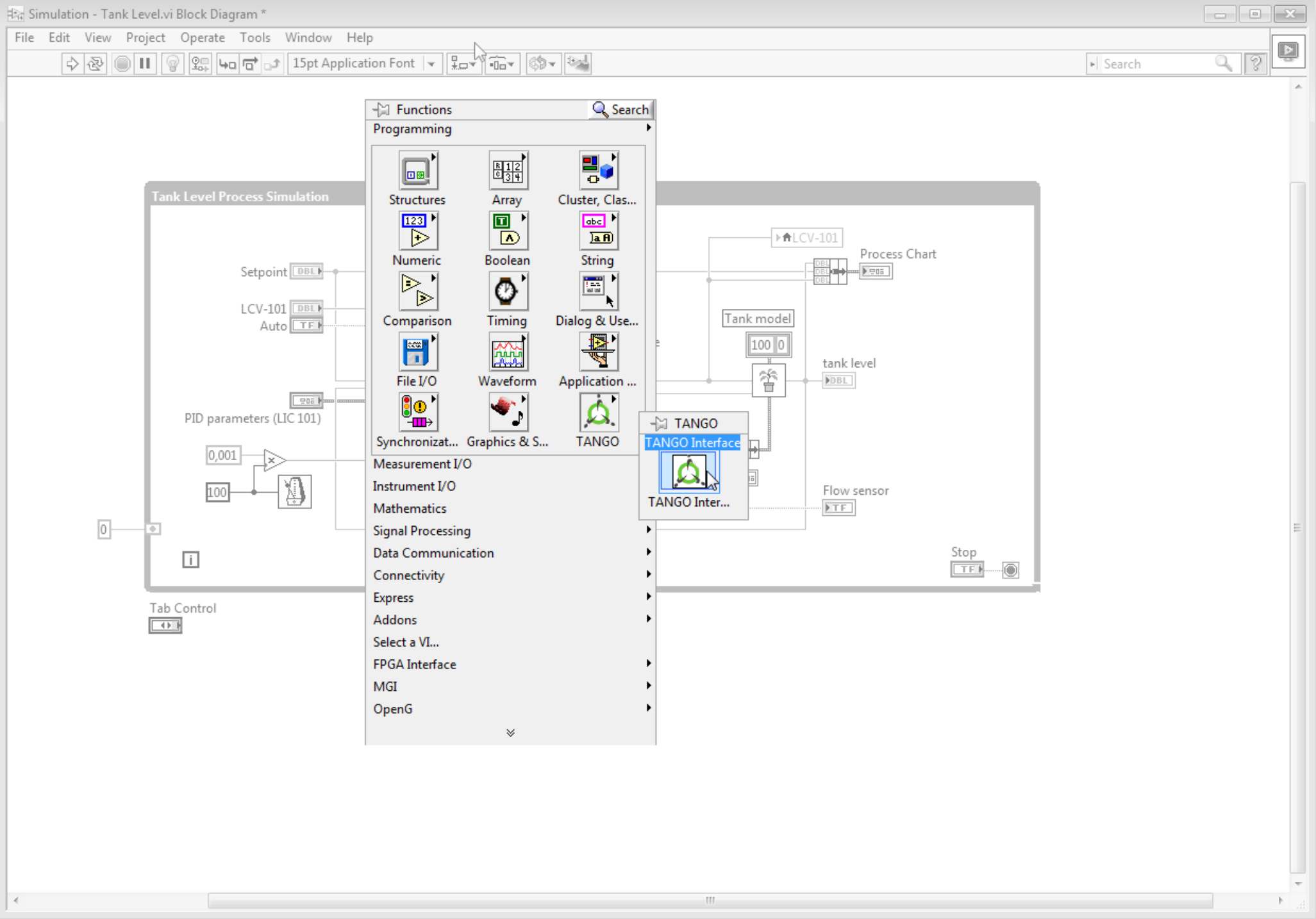
Level Control Valve on the field

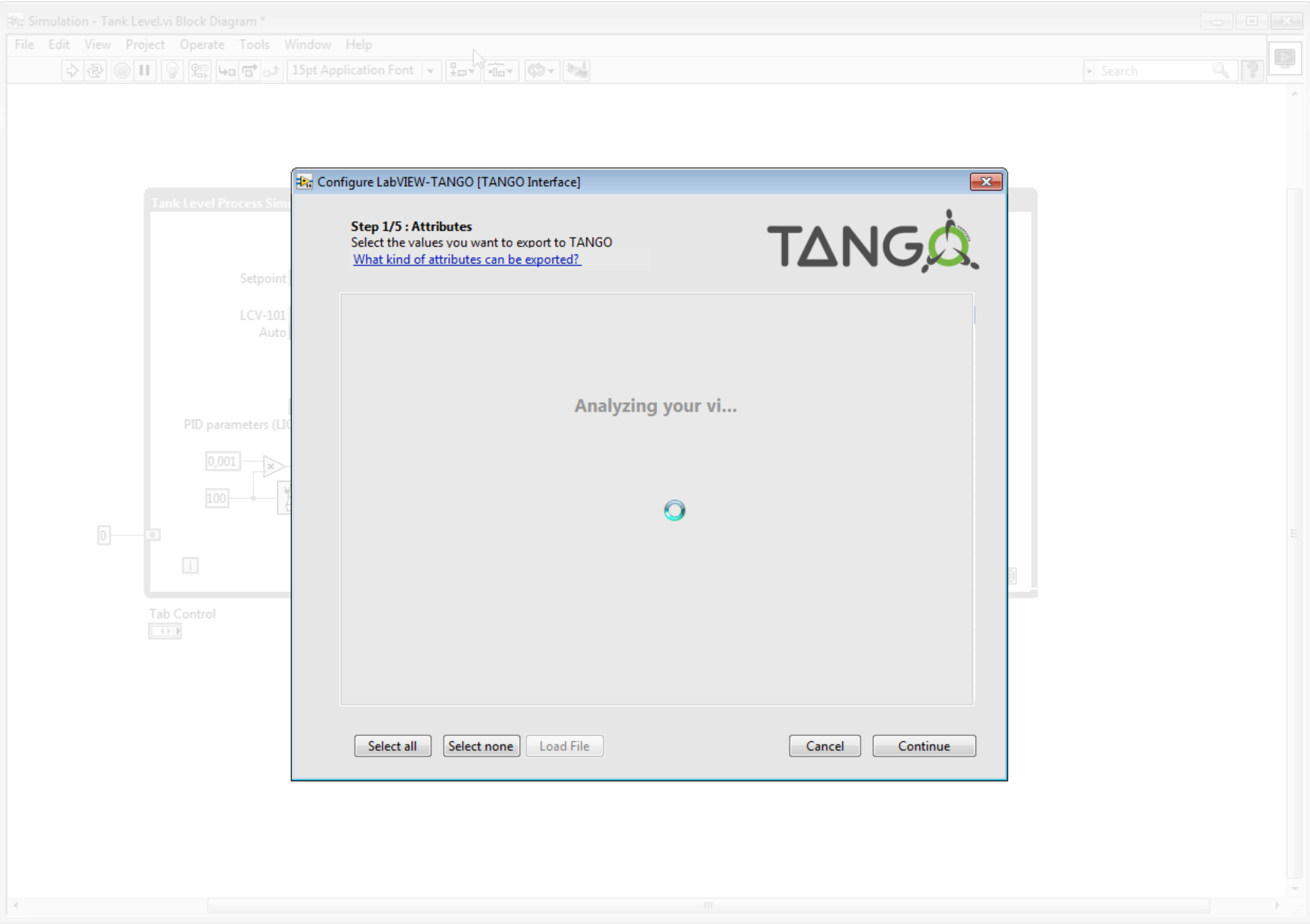
HV
102

Hand Control Valve on the field

Stop







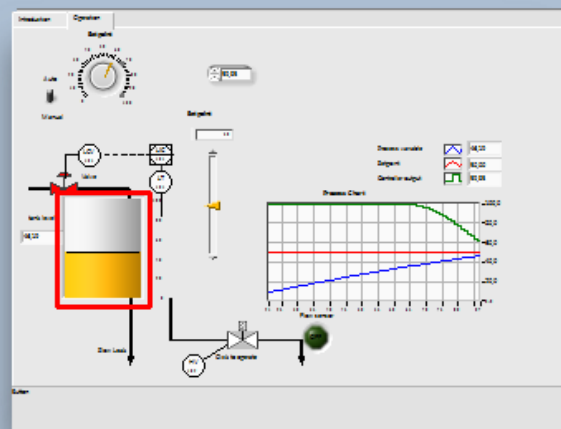
Configure LabVIEW-TANGO [TANGO Interface]

Step 1/5 : Attributes

Select the values you want to export to TANGO

[What kind of attributes can be exported?](#)

Variable: tank level
Type: DBL
Frontpanel-Type: Ind: Slide



- ☐ Button
- ☐ Stop
- ☐ Td (min)
- ☐ Ti (min)
- ☐ Kc
- ☐ Flow sensor
- ☐ HV-101
- ☒ tank level
- ☐ Valve
- ☐ Auto
- ☐ Process Chart
- ☐ Setpoint
- ☐ Setpoint



Try clicking
on the GUI
elements!

Select all

Select none

Load File

Cancel

Continue

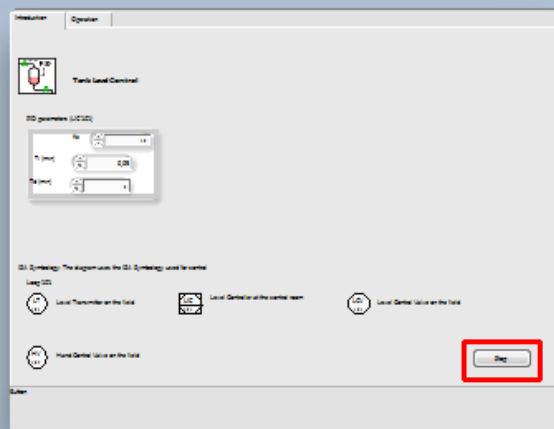
Configure LabVIEW-TANGO [TANGO Interface]

Step 1/5 : Attributes

Select the values you want to export to TANGO

[What kind of attributes can be exported?](#)

Variable: Stop
Type: BOOL
Frontpanel-Type: Ctrl: Boolean



- ☐ Button
- ☒ Stop
- ☐ Td (min)
- ☐ Ti (min)
- ☐ Kc
- ☒ Flow sensor
- ☐ HV-101
- ☒ tank level
- ☐ Valve
- ☒ Auto
- ☐ Process Chart
- ☐ Setpoint
- ☐ Setpoint

Select all

Select none

Load File

Cancel

Continue

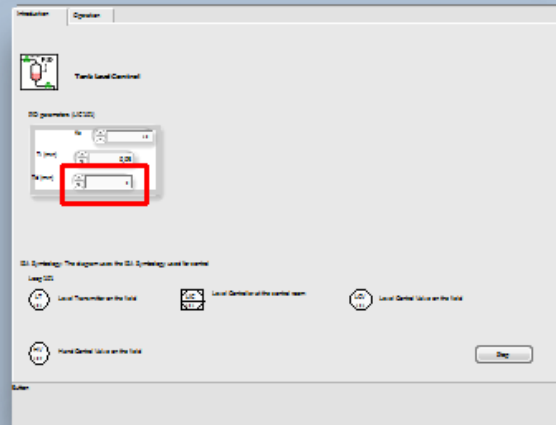
Configure LabVIEW-TANGO [TANGO Interface]

Step 1/5 : Attributes

Select the values you want to export to TANGO

[What kind of attributes can be exported?](#)

Variable: Td (min)
Type: DBL
Frontpanel-Type: Ctrl: Digital



- ☐ Button
- ☐ Stop
- ☒ Td (min)
- ☐ Ti (min)
- ☐ Kc
- ☒ Flow sensor
- ☐ HV-101
- ☒ tank level
- ☐ Valve
- ☒ Auto
- ☐ Process Chart
- ☐ Setpoint
- ☐ Setpoint

Select all

Select none

Load File

Cancel

Continue

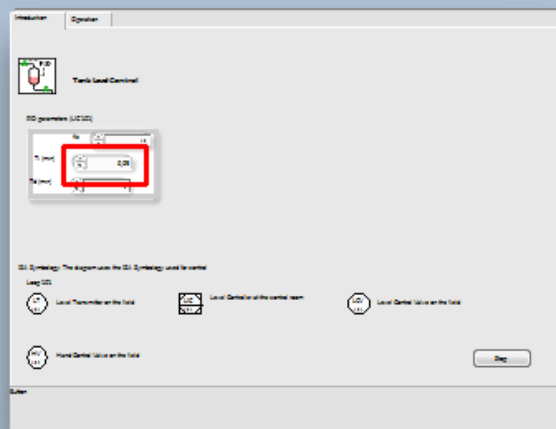
Configure LabVIEW-TANGO [TANGO Interface]

Step 1/5 : Attributes

Select the values you want to export to TANGO

[What kind of attributes can be exported?](#)

Variable: Ti (min)
Type: DBL
Frontpanel-Type: Ctrl: Digital



- ☐ Button
- ☐ Stop
- ☐ Td (min)
- ☐ Ti (min)
- ☐ Kc
- ☒ Flow sensor
- ☐ HV-101
- ☒ tank level
- ☐ Valve
- ☒ Auto
- ☐ Process Chart
- ☐ Setpoint
- ☐ Setpoint

Select all

Select none

Load File

Cancel

Continue

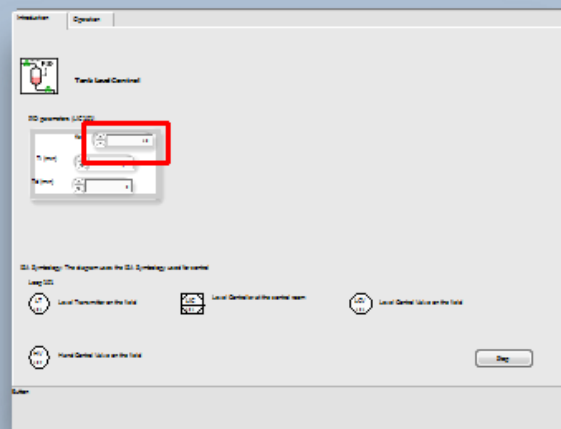
Configure LabVIEW-TANGO [TANGO Interface]

Step 1/5 : Attributes

Select the values you want to export to TANGO

[What kind of attributes can be exported?](#)

Variable: Kc
Type: DBL
Frontpanel-Type: Ctrl: Digital



- ☐ Button
- ☐ Stop
- ☐ Td (min)
- ☐ Ti (min)
- ☐ Kc
- ☒ Flow sensor
- ☐ HV-101
- ☒ tank level
- ☐ Valve
- ☒ Auto
- ☐ Process Chart
- ☐ Setpoint
- ☐ Setpoint

Select all

Select none

Load File

Cancel

Continue

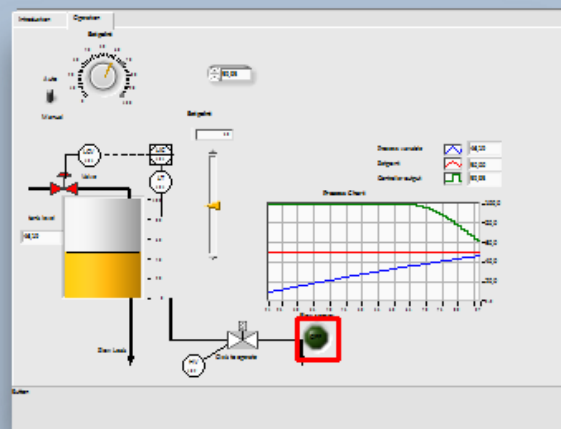
Configure LabVIEW-TANGO [TANGO Interface]

Step 1/5 : Attributes

Select the values you want to export to TANGO

[What kind of attributes can be exported?](#)

Variable: Flow sensor
Type: BOOL
Frontpanel-Type: Ind: Boolean



- ☐ Button
- ☐ Stop
- ☐ Td (min)
- ☐ Ti (min)
- ☐ Kc
- ☒ Flow sensor
- ☐ HV-101
- ☒ tank level
- ☐ Valve
- ☒ Auto
- ☐ Process Chart
- ☐ Setpoint
- ☐ Setpoint

Select all

Select none

Load File

Cancel

Continue

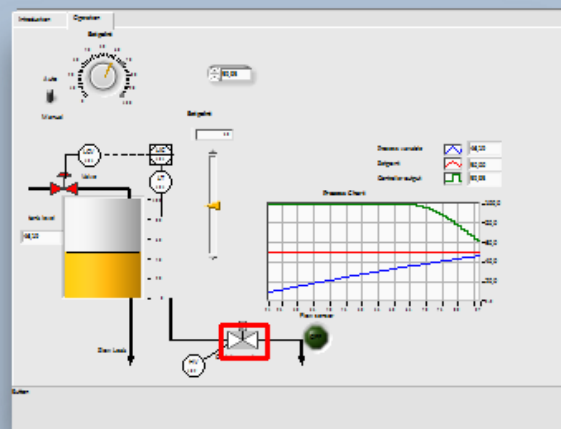
Configure LabVIEW-TANGO [TANGO Interface]

Step 1/5 : Attributes

Select the values you want to export to TANGO

[What kind of attributes can be exported?](#)

Variable: HV-101
Type: BOOL
Frontpanel-Type: Ctrl: Boolean



- ☐ Button
- ☐ Stop
- ☐ Td (min)
- ☐ Ti (min)
- ☐ Kc
- ☒ Flow sensor
- ☒ HV-101
- ☒ tank level
- ☐ Valve
- ☒ Auto
- ☐ Process Chart
- ☐ Setpoint
- ☐ Setpoint

Select all

Select none

Load File

Cancel

Continue

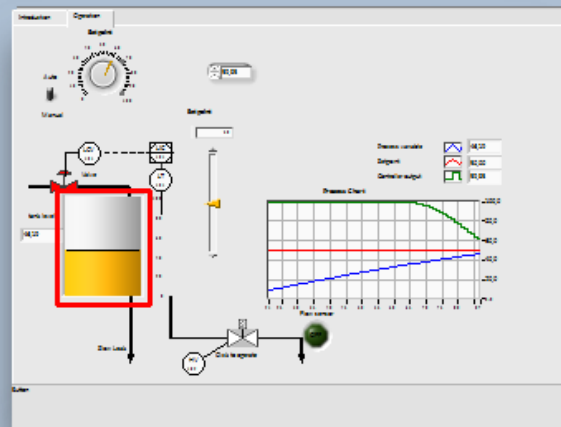
Configure LabVIEW-TANGO [TANGO Interface]

Step 1/5 : Attributes

Select the values you want to export to TANGO

[What kind of attributes can be exported?](#)

Variable: tank level
Type: DBL
Frontpanel-Type: Ind: Slide



- ☐ Button
- ☐ Stop
- ☐ Td (min)
- ☐ Ti (min)
- ☐ Kc
- ☒ Flow sensor
- ☐ HV-101
- ☒ tank level
- ☐ Valve
- ☒ Auto
- ☐ Process Chart
- ☐ Setpoint
- ☐ Setpoint

Select all

Select none

Load File

Cancel

Continue

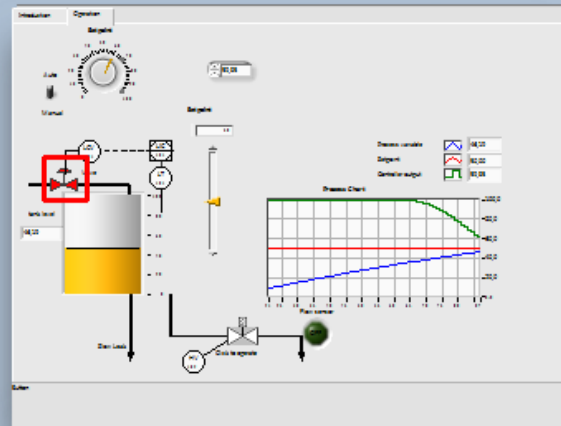
Configure LabVIEW-TANGO [TANGO Interface]

Step 1/5 : Attributes

Select the values you want to export to TANGO

[What kind of attributes can be exported?](#)

Variable: Valve
Type: BOOL
Frontpanel-Type: Ind: Boolean



- ☐ Button
- ☐ Stop
- ☐ Td (min)
- ☐ Ti (min)
- ☐ Kc
- ☒ Flow sensor
- ☐ HV-101
- ☒ tank level
- ☐ Valve
- ☒ Auto
- ☐ Process Chart
- ☐ Setpoint
- ☐ Setpoint

Select all

Select none

Load File

Cancel

Continue

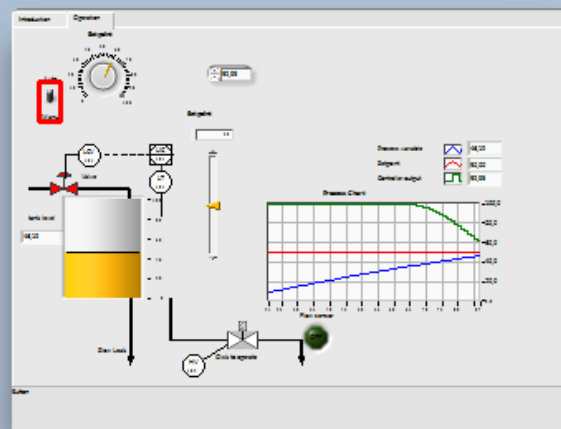
Configure LabVIEW-TANGO [TANGO Interface]

Step 1/5 : Attributes

Select the values you want to export to TANGO

[What kind of attributes can be exported?](#)

Variable: Auto
Type: BOOL
Frontpanel-Type: Ctrl: Boolean



- ☐ Button
- ☐ Stop
- ☐ Td (min)
- ☐ Ti (min)
- ☐ Kc
- ☒ Flow sensor
- ☐ HV-101
- ☒ tank level
- ☐ Valve
- ☒ Auto
- ☐ Process Chart
- ☐ Setpoint
- ☐ Setpoint

Select all

Select none

Load File

Cancel

Continue

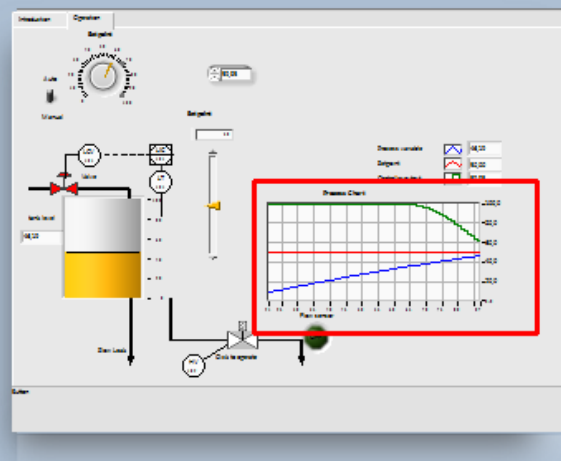
Configure LabVIEW-TANGO [TANGO Interface]

Step 1/5 : Attributes

Select the values you want to export to TANGO

[What kind of attributes can be exported?](#)

Variable: Process Chart
Type: WaveformChart
Frontpanel-Type: Ind: WaveformChart



- ☐ Button
- ☐ Stop
- ☐ Td (min)
- ☐ Ti (min)
- ☐ Kc
- ☒ Flow sensor
- ☐ HV-101
- ☒ tank level
- ☐ Valve
- ☒ Auto
- ☐ Process Chart
- ☐ Setpoint
- ☐ Setpoint

Select all

Select none

Load File

Cancel

Continue

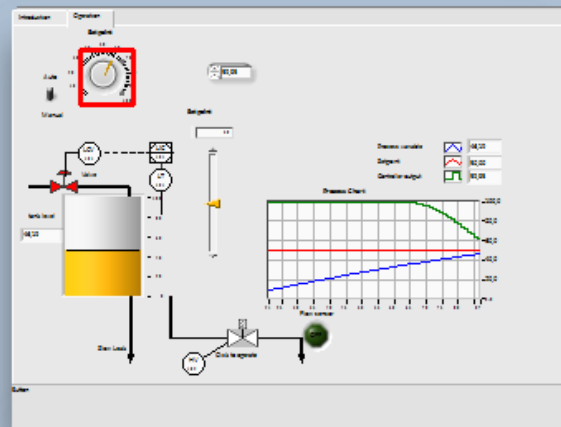
Configure LabVIEW-TANGO [TANGO Interface]

Step 1/5 : Attributes

Select the values you want to export to TANGO

[What kind of attributes can be exported?](#)

Variable: Setpoint
Type: DBL
Frontpanel-Type: Ctrl: Knob



- ☐ Button
- ☐ Stop
- ☐ Td (min)
- ☐ Ti (min)
- ☐ Kc
- ☒ Flow sensor
- ☐ HV-101
- ☒ tank level
- ☐ Valve
- ☒ Auto
- ☐ Process Chart
- ☐ Setpoint
- ☐ Setpoint

Select all

Select none

Load File

Cancel

Continue

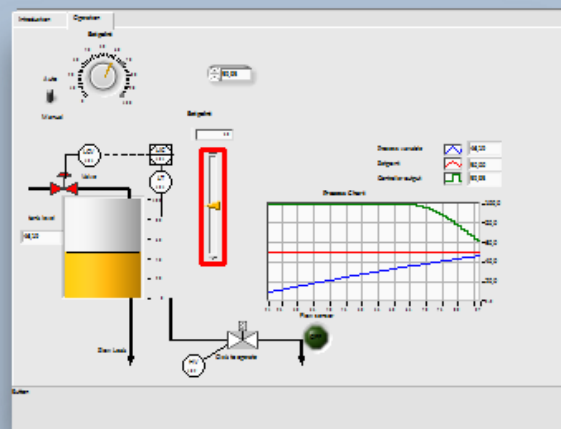
Configure LabVIEW-TANGO [TANGO Interface]

Step 1/5 : Attributes

Select the values you want to export to TANGO

[What kind of attributes can be exported?](#)

Variable: Setpoint
Type: DBL
Frontpanel-Type: Ctrl: Slide



- ☐ Button
- ☐ Stop
- ☐ Td (min)
- ☐ Ti (min)
- ☐ Kc
- ☒ Flow sensor
- ☐ HV-101
- ☒ tank level
- ☐ Valve
- ☒ Auto
- ☐ Process Chart
- ☐ Setpoint
- ☐ Setpoint

Select all

Select none

Load File

Cancel

Continue

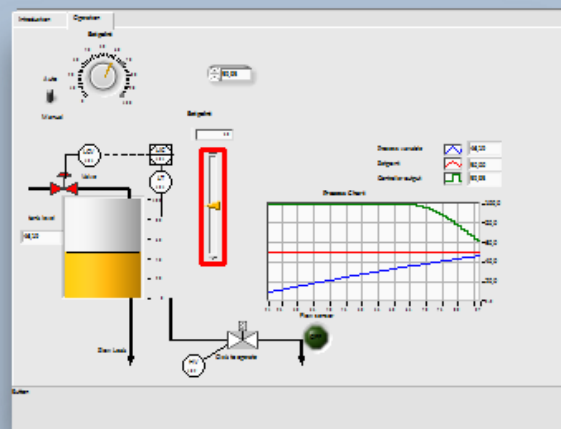
Configure LabVIEW-TANGO [TANGO Interface]

Step 1/5 : Attributes

Select the values you want to export to TANGO

[What kind of attributes can be exported?](#)

Variable: Setpoint
Type: DBL
Frontpanel-Type: Ctrl: Slide



- ☐ Button
- ☐ Stop
- ☐ Td (min)
- ☐ Ti (min)
- ☐ Kc
- ☐ Flow sensor
- ☐ HV-101
- ☐ tank level
- ☐ Valve
- ☐ Auto
- ☐ Process Chart
- ☐ Setpoint
- ☐ Setpoint

Select all

Select none

Load File

Cancel

Continue

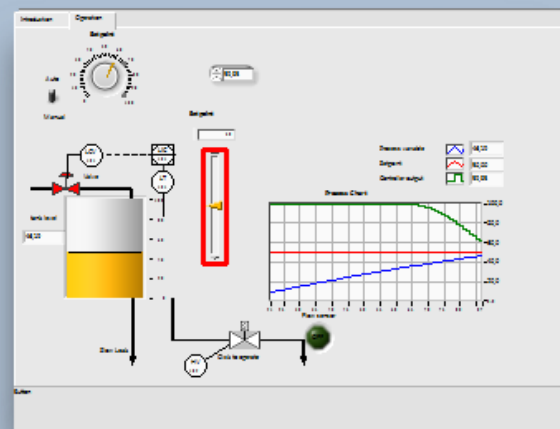
Configure LabVIEW-TANGO [TANGO Interface]

Step 1/5 : Attributes

Select the values you want to export to TANGO

[What kind of attributes can be exported?](#)

Variable: Setpoint
Type: DBL
Frontpanel-Type: Ctrl: Slide



- ☒ Button
- ☒ Stop
- ☒ Td (min)
- ☒ Ti (min)
- ☒ Kc
- ☒ Flow sensor
- ☒ HV-101
- ☒ tank level
- ☒ Valve
- ☒ Auto
- ☒ Process Chart
- ☒ Setpoint
- ☒ Setpoint

Select all

Select none

Load File

Cancel

Continue

[illegible]

Continue

Configure LabVIEW-TANGO [TANGO Interface]

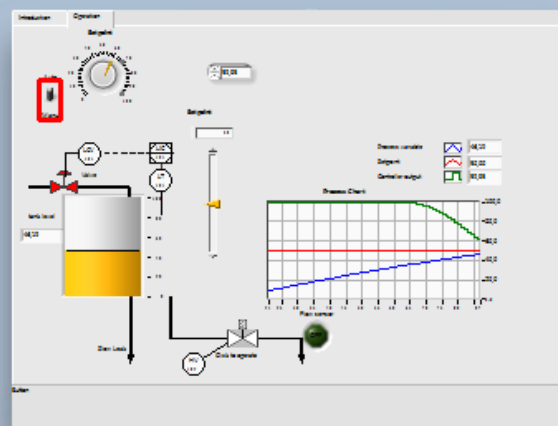
Step 3/5 : Commands

Use drag-and-drop to select the commands you want to export to TANGO

[What kind of commands can be exported?](#)

Command: Auto

- ☐ Stop
- ☐ HV-101
- ☒ Auto



Select all

Select none

Cancel

Back

Continue

Configure LabVIEW-TANGO [TANGO Interface]

Step 4/5 : Configure and test TANGO

Read the tutorial to learn how to setup TANGO



TangoInstance

1

ConfigFile?



Configuring the TANGO-Instance is important if you want to use this interface in an environment with multiple LabVIEW-based-devices (like a facility). If you are not sure, talk to the person responsible for administrating TANGO or choose the Config-File-Option.

TangoExecutable

LabviewSingleDeviceDServer

Expert-only configuration value

State Machine?



This option creates the option for you to change the TANGO state machine. If you uncheck it, the server will just have the default state 'ON'

Test Connection to TANGO



If TANGO is configured / installed on your PC, you can test if you have a connection here.

Cancel

Back

Continue

Configure LabVIEW-TANGO [TANGO Interface]

Step 5/5 : Generate XMI and create server



Server Name

MyServer

Generate XMI

Generate Jive TDB file

The XMI File is also saved in the /tango/ directory that the Express-VI will generate.
Instructions on how to register the server in TANGO can be found in the manual

Clicking on "Finish" will turn your vi into a TANGO-Server. You have to
1) Register it using the XMI / TDB files
2) Restart LabVIEW to start it.

Cancel

Back

Finish

