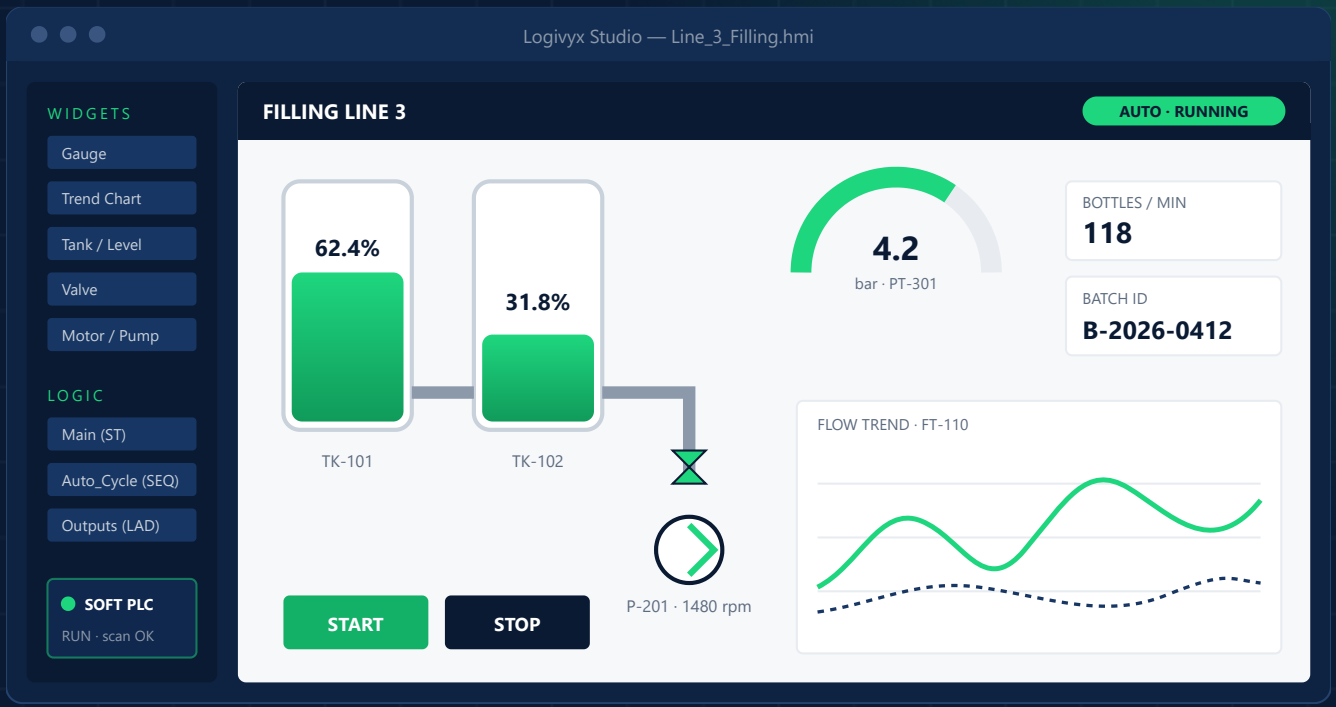
Logivyx

PRODUCT CATALOG · 2026

HMI + SOFT PLC · ONE PLATFORM

The HMI that is the controller.

Design operator screens and write IEC 61131-3 control logic in one engineering tool — then run both on a single industrial PC. No separate PLC required.



HMI / SCADA
Visualisation

Soft PLC
IEC 61131-3 logic

Connectivity
Multi-vendor drivers

VISUAL LOGIC.
ZERO CODE.

TOOL OVERVIEW

One engineering tool. One runtime. No separate PLC.

Logivyx combines a full-featured HMI/SCADA designer with an embedded Soft PLC. The same project file holds your screens, alarms, recipes and reports *and* the control logic that drives the machine — deployed together to a single Windows or Linux industrial PC.

THE CONVENTIONAL WAY

HMI panel + separate PLC



- ✕ Two hardware purchases, two cabinets of space
- ✕ Two engineering tools, two licences, two skill sets
- ✕ Tags duplicated and kept in sync by hand
- ✕ Diagnosis split across two systems

THE LOGIVYX WAY

HMI + Soft PLC on one PC



- ✓ Eliminates the PLC CPU from the bill of materials
- ✓ Screens and logic share one tag database
- ✓ Single tool from design to commissioning
- ✓ Live logic and I/O diagnosis beside the HMI

2-in-1
HMI designer and Soft PLC

3
Logic languages: ST, Ladder, Sequence

30+
Ready-made HMI widgets

8+
Industrial protocol drivers

Built for machine builders and system integrators who want to cut hardware cost, shorten commissioning and hand their customers a single, unified system — without giving up the option to talk to an existing PLC when a project calls for it.

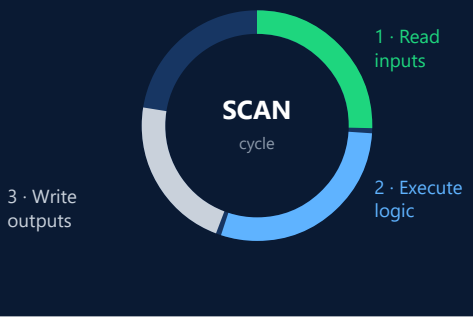
KEY FEATURES

Everything a machine needs, in one project file.

From the first screen sketch to the last commissioning tweak, Logivyx keeps visualisation, control and data in a single environment.

Embedded Soft PLC — the core USP

A deterministic, cyclic logic engine runs inside the HMI runtime. It reads inputs, executes your Main routine and writes outputs every scan, with scan-time and overrun monitoring, retentive variables and dedicated STARTUP / SHUTDOWN routines — just like a hardware PLC, without the hardware.



Drag-and-drop HMI

Zone-grid canvas, Master Template overlay, popups and 30+ widgets — Display, Controls, Process and P&ID.

No-code programming

Graphical Ladder and Sequence designers, form-based wizards and auto-generators — Structured Text only when you want it.

Multi-vendor drivers

Allen-Bradley, Siemens S7, Mitsubishi, Modbus TCP/RTU, OPC UA, EtherNet/IP and more.

Online diagnosis

Live ladder, live sequence steps, logic and IO diagnosis with watch window and forcing.

Data, recipes, reports

SQLite data logging, multi-profile recipes, tag-triggered PDF reports and SQL Server access.

Security built in

User groups, hashed passwords, and per-screen, per-dialog and per-widget authorisation.

Web & mobile viewer

Read-only live mirror of HMI screens in any browser or Android device on the network.

Open export path

Export logic to Studio 5000 (L5X) and TIA Portal (SCL); import existing L5X projects.

AI-assisted engineering

Built-in assistant helps draft logic and screens; auto-generators for I/O mapping, scaling and settings.

NO-CODE ENGINEERING

Program by configuring, not by coding.

Logivyx puts UI-based, no-code tools at every step of the project. Engineers configure forms, draw diagrams and import spreadsheets — the tool writes the program. The result: faster engineering, fewer errors and projects any team member can maintain.

Drag & Drop Screens

Build operator screens from a widget palette; bind tags by picking from the browser.

Graphical Ladder Designer

Draw rungs with contacts, coils, timers and counters — ST is generated automatically.

Graphical Sequence Designer

Lay out machine steps, transitions, times and alarm branches as a flow chart.

Excel Tag & IO Import

Import tags, IO lists and sequences from Excel, L5X or PLC tag exports in one click.

Form-based Data Services

Logging, recipes, reports, SQL and alarms are set up through dialogs — no scripting.

Point-and-click Behaviour

Data Transfers, popups, navigation, visibility and security rules configured per widget.

Automation Included — Auto Generation of Programs

Built-in generators turn a configuration into ready-to-run logic, tags and screens.

AL — Auto Alarms
Define alarm conditions in a table; the alarm routine and alarm IDs are generated.

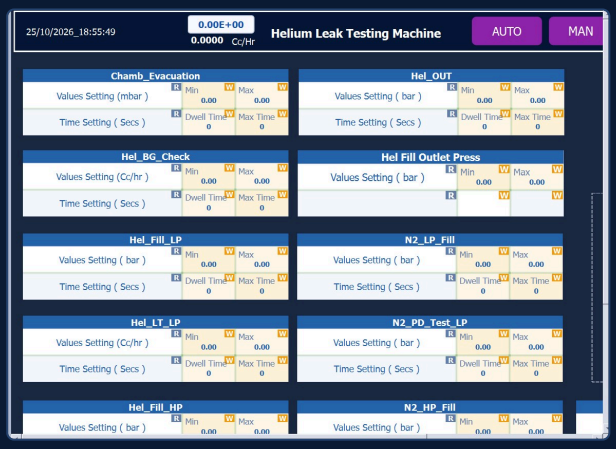
SS — Auto Settings Screens
One click creates a complete settings screen per sequence — with tags and optional recipe.

LD — Auto Ladder Generator
Generates the output ladder program from your sequence steps and output / manual-command tags.

AN — Auto Analog Scaling
Raw-to-engineering-unit scaling program for every analog channel.

DL — Auto Data Logging & Recipes
Logging and recipe profiles generated straight from the sequence.

● LIVE PROJECT · AUTO-GENERATED



Auto Settings Screen generated for the Auto_Cycle sequence of a Helium Leak Testing Machine — one settings grid per step, Min / Max / Dwell / Max-Time tags created automatically.

Tag list (Excel · L5X · PLC export) → **Sequence** (drawn graphically) → **Auto Gen** (alarms · screens · ladder) → **Ready to run** (on the Soft PLC)

04 · CORE MODULES · PART A

HMI & Visualisation

A desktop-class designer for operator screens, with the data, security and reporting functions an industrial HMI is expected to have — ready out of the box.

Screen Designer

Multi-screen canvas with shared zone grid, auto display sizing, Master Template overlay, Z-order, alignment and copy/paste.

Master Template · Zone Grid · Edit / Run

Widget Library

Gauges, trends, dual-axis and X-Y charts, grid views, switches, sliders, multi-state lamps — every widget tag-bound with visibility and authorisation rules.

Display · Controls · Charts

Process & P&ID Graphics

Animated tanks, valves, motors/pumps, pipes with flow, conveyors and pistons, plus connectable P&ID symbols.

Tank · Valve · Pump · Pipe Connect

Alarm Management

Alarm banner on every screen, alarm list dialog, and an auto-alarm generator that builds alarm handling from the tag list.

Banner · History · Auto-generate

Data Logging & Recipes

Trigger-based logging to SQLite with unique batch keys and CSV export; multiple recipe profiles with load/save/edit and operator recipe widget.

SQLite · Batch ID · CSV

Reports

Print-ready page layouts designed on the main canvas; auto-export to PDF on a trigger tag, one file per batch, browsable from the Report List widget.

A4 / Letter · PDF · Tag-triggered

Security & Users

User groups and users with hashed passwords, login-gated Run mode, and System.CurrentUser tags for audit-friendly logging.

Role-based · Per-widget

Vision, Twin & Remote View

USB camera widget with vision processing, Digital Twin visualisation, and a browser / Android web viewer that mirrors live screens.

Camera · Digital Twin · Web Viewer

Also included

Dialogs — modal-free popups opened by button or tag condition · **Data Transfers** — tag-to-tag copy, one-way or bidirectional · **Custom Colours** — project-wide palette · **Tag Browser & Cross-Reference** — find every use of a tag · **On-screen keypads** for touch panels.

Logic & Embedded Soft PLC

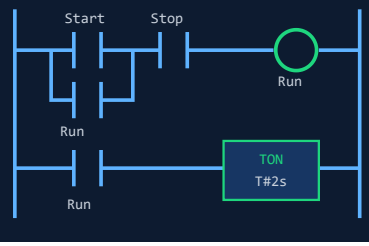
The control layer that replaces a separate PLC. Program the machine in the IEC 61131-3 style your engineers already know, and run it in the same runtime as the HMI.

Structured Text — ST

```
(* Fill control *)
fillTmr(IN := Start, PT := T#5s);
IF Level < SP AND NOT Fault THEN
  Valve_Open := TRUE;
ELSE
  Valve_Open := FALSE;
END_IF;
Out := SCALE(Raw, 0, 27648);
```

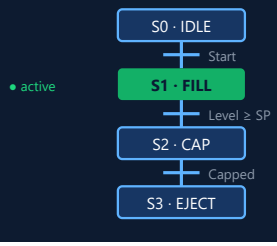
Full text editor with function palette, user UDTs and user Function Blocks.

Ladder Diagram — LAD



Graphical rung editor with contacts, coils and function-block boxes; generates ST.

Sequence Designer — SEQ



Step / transition flow for machine cycles, with live step highlighting and Excel import.

Soft PLC Runtime Engine

Cyclic scan with input refresh, execution and output write-back; scan-time and overrun monitoring; fault isolation per scan; retentive variables persisted across restarts.

Cyclic scan · Retentive · STARTUP / SHUTDOWN

Standard Function Library

Timers (TON, TOF, TP), counters (CTU, CTD), edge triggers, PID, SCALE/LIMIT, maths, trigonometry, string handling and type conversions.

TON/TOF/TP · PID · Strings

Motion Control

PLCopen-style motion blocks for CiA 402 drives: MC_Power, MC_Home, MC_MoveAbsolute, MC_MoveRelative, MC_MoveVelocity, MC_Stop, MC_Reset.

DS402 · PLCopen-style

Diagnosis & Cross-Reference

Online Logic Diagnosis and IO Diagnosis views, variable bindings to tags, and project-wide tag cross-reference for fast commissioning.

Online values · IO view

Code Generators

Generate I/O mapping, analog scaling, alarm logic, recipes and settings screens automatically from tag lists and Excel sheets.

Excel → Logic · Auto alarms

PLC Interoperability

Export routines to Rockwell Studio 5000 (L5X) and Siemens TIA Portal (SCL); import existing Logix L5X projects — your logic is never locked in.

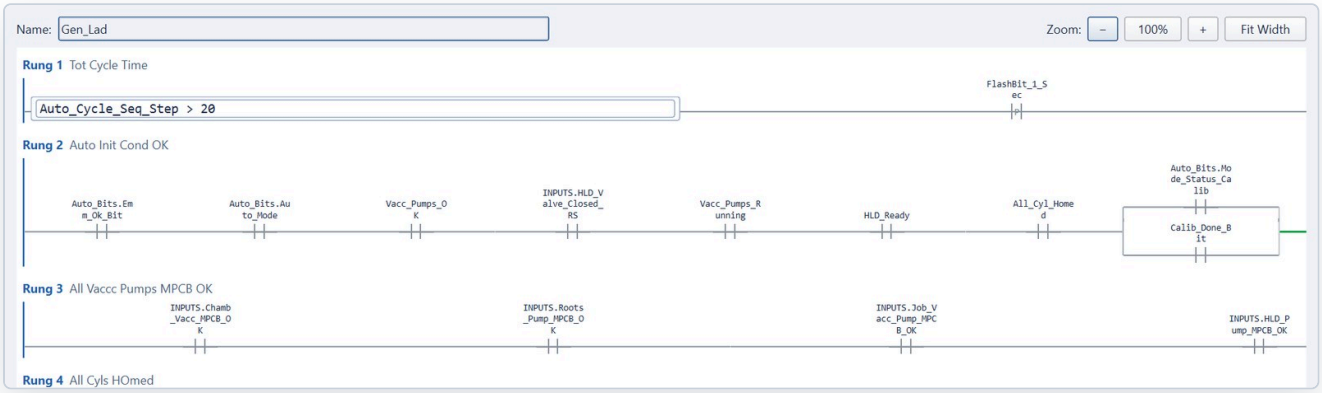
Studio 5000 · TIA Portal

ONLINE DIAGNOSIS TOOLS

See the machine think. Troubleshoot in minutes.

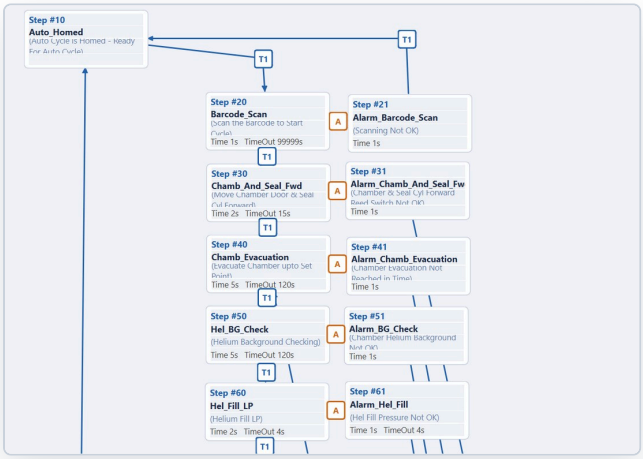
Because HMI and controller live in one runtime, every signal, step and rung can be watched online from the same tool — no second laptop, no second software, no guessing.

LIVE VIEW · LADDER



Live Ladder View — rungs of a real leak-test project; energised contacts and coils highlight green while the machine runs.

LIVE VIEW · SEQUENCE



Live Sequence View — the active step lights green and blinks red when its timeout is exceeded.

Logic Diagnosis

Live variable table for every routine, last scan time and runtime errors at a glance — jump straight to the sequence, routine or ladder.

IO Diagnosis & Watch Window

Filter every tag live, drag signals into a watch window, force values, flag stale data and export to CSV — also available on the deployed Runtime panel.

Tag Cross-Reference

Find every screen, widget, routine and rung that uses a tag and jump to it online.

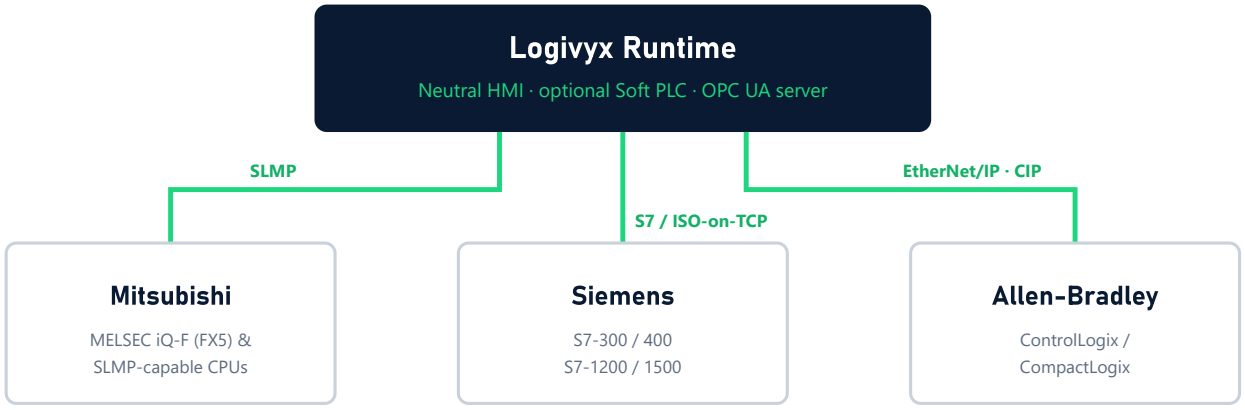
One window for the whole machine. Engineers trace a fault from the operator screen, through the sequence step, down to the ladder rung and the physical I/O — all live, all in Logivyx, all without switching between HMI and PLC software.

Live ladder	Live sequence	Watch & force	On the panel
Energised elements in green.	Active step & timeout alarms.	Any tag, online.	IO Diagnosis in the Runtime.

USE CASE

A neutral HMI for Mitsubishi, Siemens & Allen-Bradley.

Already have a PLC installed? Use Logivyx as a vendor-neutral HMI / SCADA on top of it. One HMI standard across a mixed plant — and the freedom to move control into the embedded Soft PLC whenever you are ready.



Mitsubishi

SLMP over Ethernet

TAG IMPORT
GX Works3 Global Label XML export, or CSV

ADDRESSING
Device addresses (D, M, X, Y …)

Siemens

S7 communication

TAG IMPORT
CSV tag table (re-saved from TIA Portal)

ADDRESSING
Data blocks, e.g. DB1.0.REAL, DB2.4.BOOL.3

Allen-Bradley

EtherNet/IP · CIP

TAG IMPORT
Studio 5000 .L5X project or Excel tag list, incl. UDTs

ADDRESSING
Symbolic Logix tag names

Hybrid mode: run the embedded Soft PLC *and* talk to existing PLCs in the same project — exchange data between devices with point-and-click Data Transfers, and publish selected tags to SCADA / MES through the built-in OPC UA server.

One HMI standard

Same screens, alarms and reports regardless of PLC brand.

No vendor lock-in

No brand-specific HMI hardware or licence required.

Fast tag setup

Import PLC tags directly instead of typing them.

Upgrade path

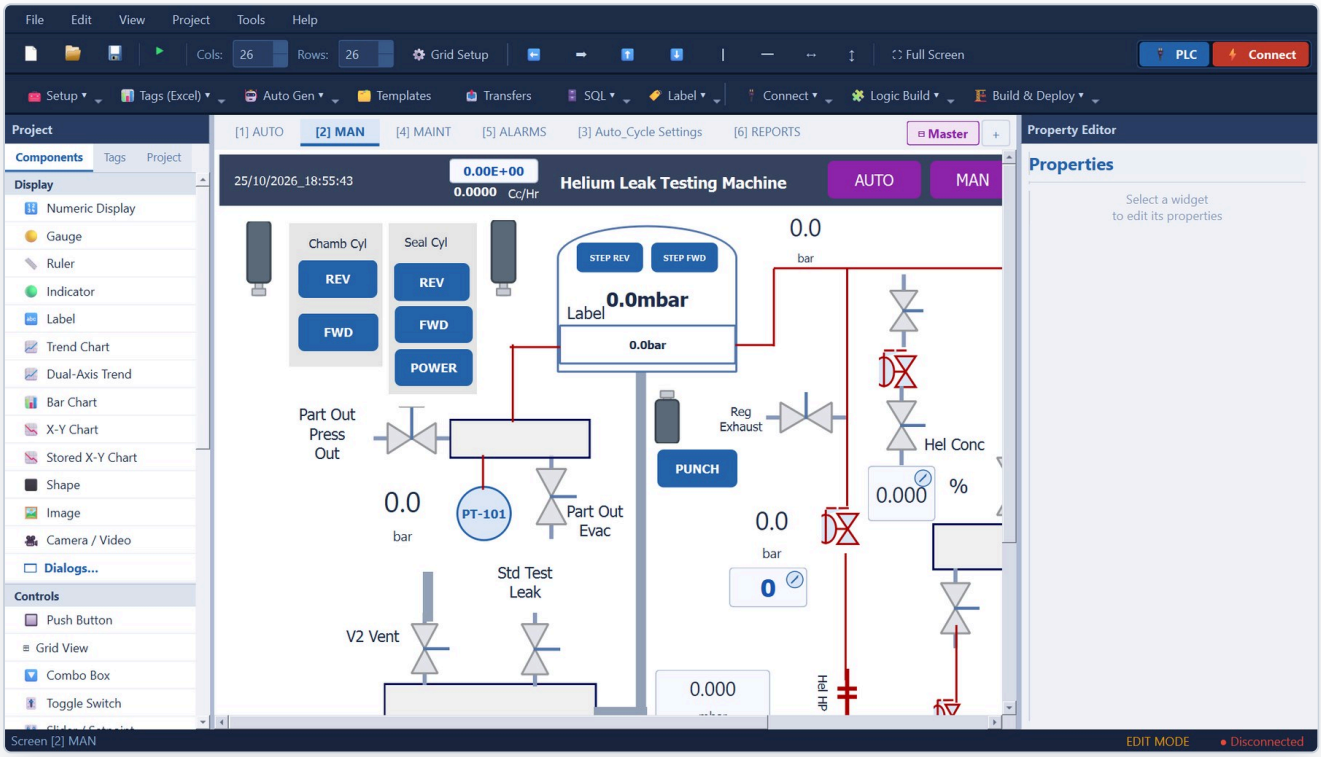
Move logic into the Soft PLC later and drop the PLC.

LIVE PROJECT SHOWCASE

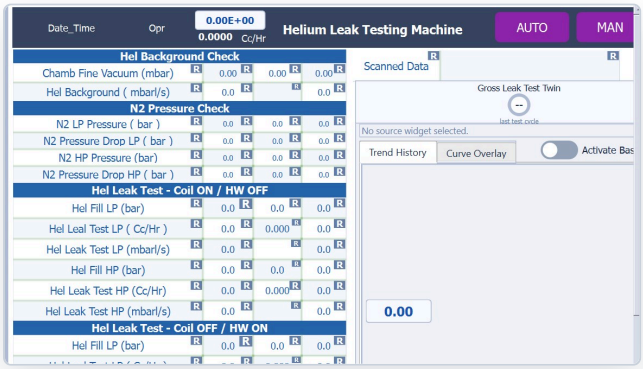
Helium Leak Testing Machine — HMI and Soft PLC in one project.

A production leak-test machine engineered entirely in Logivyx: operator screens, P&ID process view, sequence-driven auto cycle, generated alarms and settings, and batch reports — running on a single industrial panel PC.

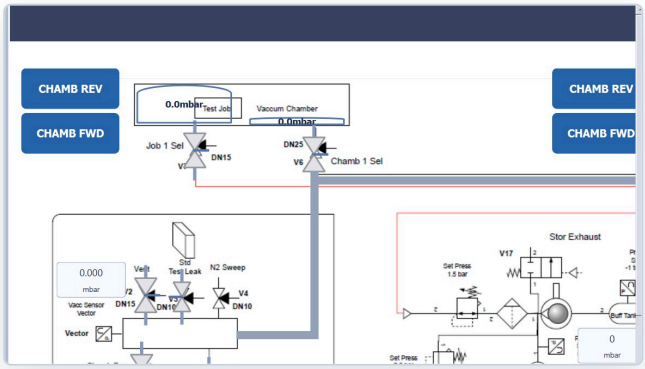
LOGIVYX STUDIO · REAL PROJECT



Logivyx Studio — the MAN (manual) screen of the Helium Leak Testing Machine with widget palette, screen tabs and property editor.



AUTO screen — background, N_2 pressure and helium leak-test results per stage.



Process P&ID screen — valves, vacuum chamber and gas lines of a standard HLT variant.

6	2	2	0
Operator screens	Graphical sequences	Ladder routines	Separate PLCs

TECHNICAL SPECIFICATIONS

Specifications

Platform & Deployment	SYSTEM
Products	Logivyx Studio (engineering Dev Tool) · Logivyx Runtime (deployed operator station)
Engineering OS	Windows 10 / 11, 64-bit
Runtime targets	Windows industrial PCs and panel PCs; Linux ARM64 panels (e.g. Raspberry Pi CM4-based HMIs)
Deployment	Standalone compiled runtime, installer, and network device deploy from the Dev Tool
Project format	Single `.hmi` file — screens, tags, logic, alarms, recipes, reports; version-checked on load
Licensing	Per-device licence activation

Soft PLC	LOGIC
Languages	Structured Text (IEC 61131-3 style), Ladder Diagram, Sequence (step / transition)
Execution model	Cyclic scan: input refresh → Main routine → output write-back; scan-time & overrun counters
Program organisation	Main + called routines, STARTUP / SHUTDOWN routines, user UDTs, user Function Blocks
Data types	BOOL, SINT, INT, DINT, REAL, STRING, TIME, arrays, UDTs
Function library	TON, TOF, TP, CTU, CTD, R_TRIG, F_TRIG, PID, SCALE, LIMIT, MIN/MAX, maths & trig, string & conversion functions, SQL_READ / SQL_WRITE
Motion	CiA 402 (DS402) drives — MC_Power, MC_Home, MC_MoveAbsolute / Relative / Velocity, MC_Stop, MC_Reset
Retention	Retentive variables and internal tags persisted across power cycles
Interoperability	Export: Studio 5000 L5X, TIA Portal SCL · Import: Logix L5X, Excel tag & sequence sheets

HMI & Data	VISUALISATION
Widgets	30+ — display, controls, charts (trend, dual-axis, bar, X-Y), process graphics, P&ID symbols, camera
Data services	SQLite data logging & recipes, tag-triggered PDF reports, Microsoft SQL Server read / write
Security	User groups, hashed passwords, screen / dialog / widget-level authorisation
Remote access	Browser & Android web viewer (live read-only mirror); OPC UA server

Connectivity	DRIVERS
PLC drivers	Allen-Bradley Logix (EtherNet/IP) · Siemens S7 · Mitsubishi MELSEC (SLMP)
Open protocols	Modbus TCP · Modbus RTU (serial) · OPC UA client & server · EtherNet/IP (EDS-based I/O)
Generic / devices	ASCII over TCP, raw TCP, raw serial (scanners, barcode readers, instruments); built-in simulator

Specifications subject to change without notice.

WHY LOGIVYX

Fewer boxes in the cabinet. More machine for the money.

With the Soft PLC embedded in the HMI runtime, one industrial PC does the work of two devices — and one engineer builds the whole system in one tool.

01
Design
Draw screens and write ST, Ladder or Sequence logic in Logivyx Studio.

02
Simulate
Test screens and logic together on the built-in simulator before any hardware arrives.

03
Deploy
Build the runtime and deploy to a Windows or Linux panel PC — HMI and controller in one.

IDEAL INDUSTRIAL APPLICATIONS

Leak Testing Machines
Helium, vacuum-decay and pressure-decay testers.

Assembly SPMs
Special-purpose assembly and press-fit stations.

EOL & Test Benches
Function testing with logged results and PDF certificates.

Filling & Packaging
Sequenced cycles with product recipes and batch reports.

Process Skids
Tanks, valves, pumps and PID loops on one controller.

Water & Wastewater
Pumping stations, dosing and level control.

Gas & Vacuum Systems
Gas handling, evacuation and pressure regulation.

Material Handling
Conveyors, transfer lines and pick-and-place.

Vision & Traceability
Barcode scanning, camera inspection, SQL traceability.

Motion Axes
CiA 402 servo positioning, homing and jogging.

Automotive Components
Valve, cylinder and sub-assembly testing lines.

Retrofits & Upgrades
Modernise legacy machines or front an existing PLC.

Request a live demo
and see HMI + Soft PLC on one PC.

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