



Hello | 你好

Front-end Semiconductor Equipment from the Heart of Europe

SVCS Process Innovation

We are a manufacturer of Front-end Semiconductor equipment
from the Heart of Europe

Our experience is based on a long history and tradition of the semiconductor industry in former Czechoslovakia,
in a place called the Czech Silicon Valley.

For over 20 years we have been striving towards development of the tomorrow's tools and tomorrow's process innovations.
To do this successfully, we cooperate with leading R&D laboratories, universities and scientific institutes.

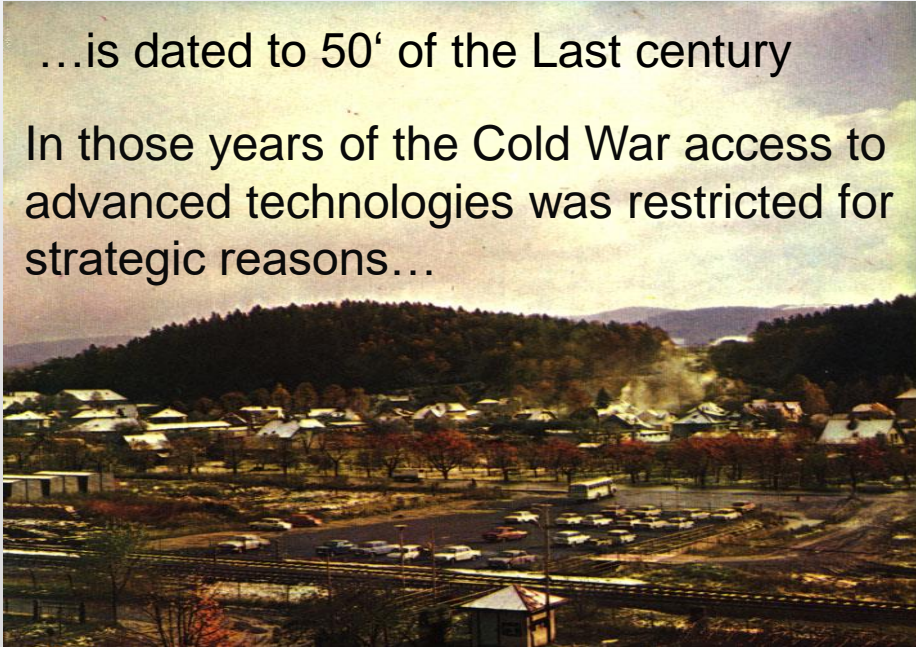


Silicon Valley CzechoSlovakia

History of the Czech Silicon Valley...

...is dated to 50' of the Last century

In those years of the Cold War access to advanced technologies was restricted for strategic reasons...



Silicon Valley CzechoSlovakia

Tesla Rožnov Industrial park



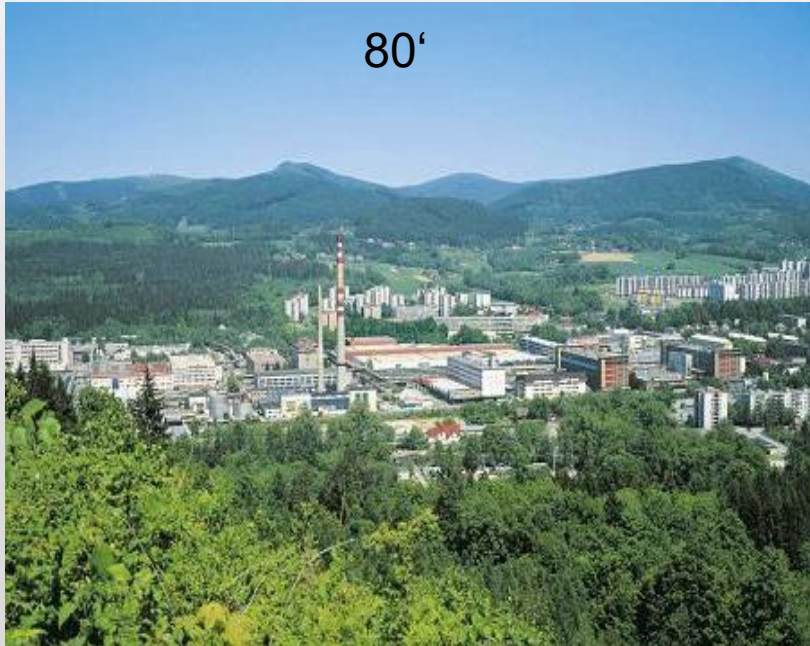
...essential independent development took place, starting with production equipment, components, measuring instruments, ...

...and resulting in establishing School for semiconductor specialists

Before the fall of the Iron Curtain the Tesla Rožnov Industrial park employed over 10,000 people

Silicon Valley CzechoSlovakia

History and tradition of the Czech Silicon Valley continues



80'

| After November 1989 – New economic situation

| Radical turning point was break-up of Tesla Rožnov and the take-over of the left-over local plants, by the US based company Motorola

| Production of wafers and chips continue, now under the new conditions of the global economy

| This made it possible to form several new companies in the Czech Silicon Valley, manufacturing e.g. Thermocouples, Humidity sensors, Solar panels

Silicon Valley CzechoSlovakia

Wafer production: The Old times



The Modern times



Our Production plant



- | SVCS New modern building
- | Manufacture, desing, development
- | Assembly of Gas systems, Orbital weldings, all is performed in our Cleanroom

Our Production plant



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What we do - Main Products

| **SV-Fur**

Atmospheric/LPCVD/PECVD Reactors (for Semiconductor Industry and R&D)

| **SV-Fluid**

UHP media delivery, Automatic Gas Cabinets, VMBs, Bulk systems

| **SV-Con** Equipment Control System

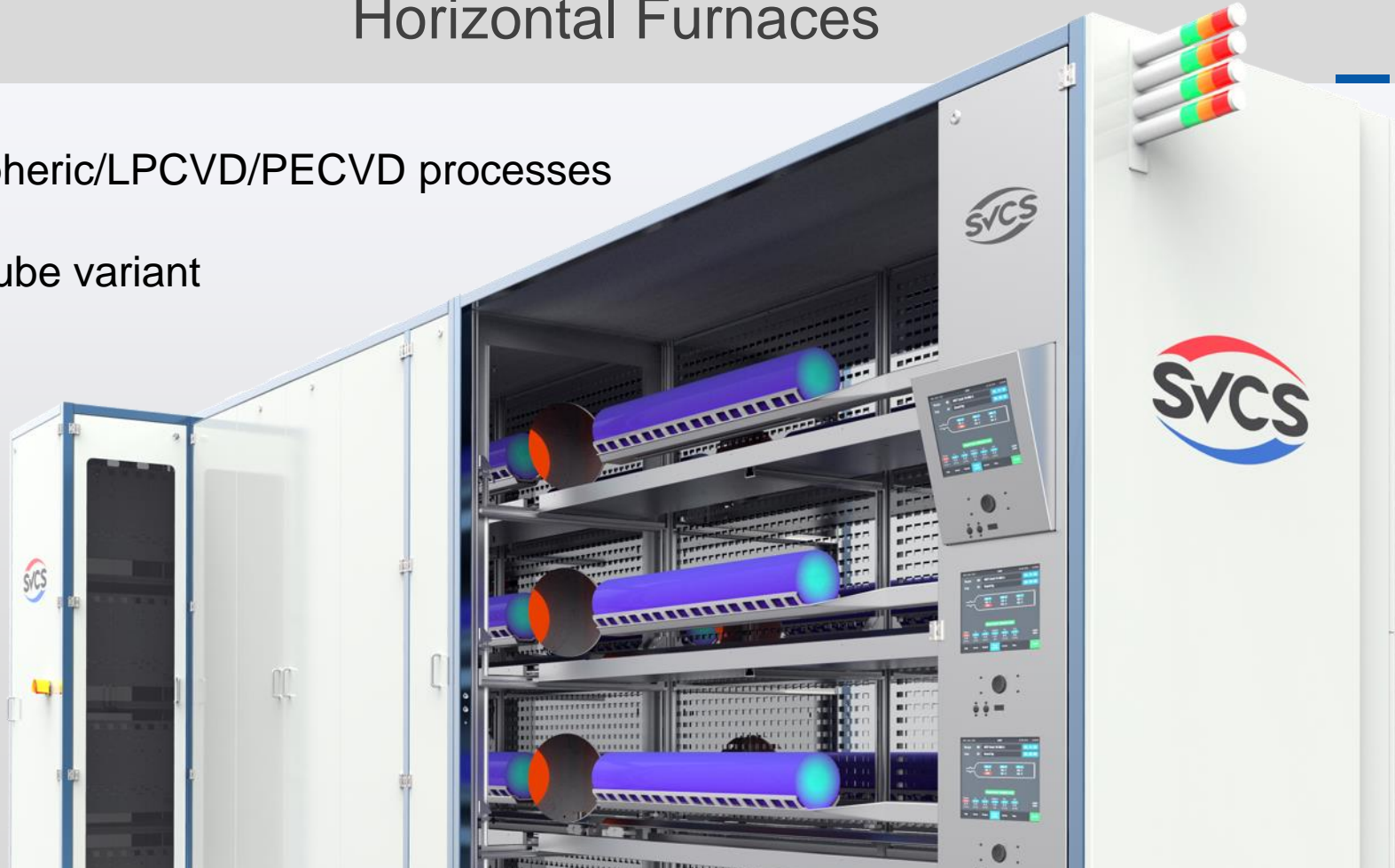
| **Other tool delivery systems**

Gas, Vapor & Liquid Media batch processing and installation (“hook-up”)

Horizontal Furnaces

| Atmospheric/LPCVD/PECVD processes

| 1 to 4 tube variant



Horizontal Furnaces



SVCS Automation

| Boat Transporter for
Horizontal Furnaces

| For 6" and 8" wafers

Horizontal Furnaces



| Proven Slim design

| Easy operation



Horizontal Furnaces

Boat Transporter in a new 8" Furnace: On Semiconductor Czech Republic

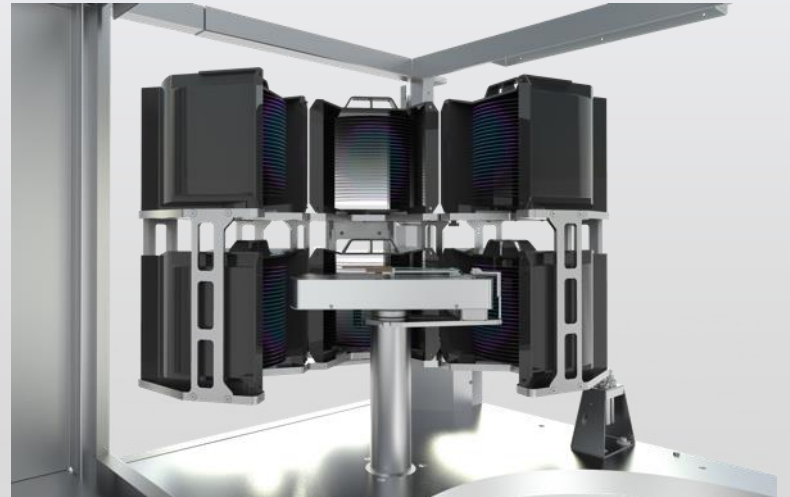


Vertical Furnaces



| Save a lot of space

| Scalable for Production or R&D Applications



Vertical Furnaces

| Automatic loading

| Two-boat rotating system: One boat loading/unloading, second boat in the process tube



Compact Tabletop Furnaces

Unique Compact Design

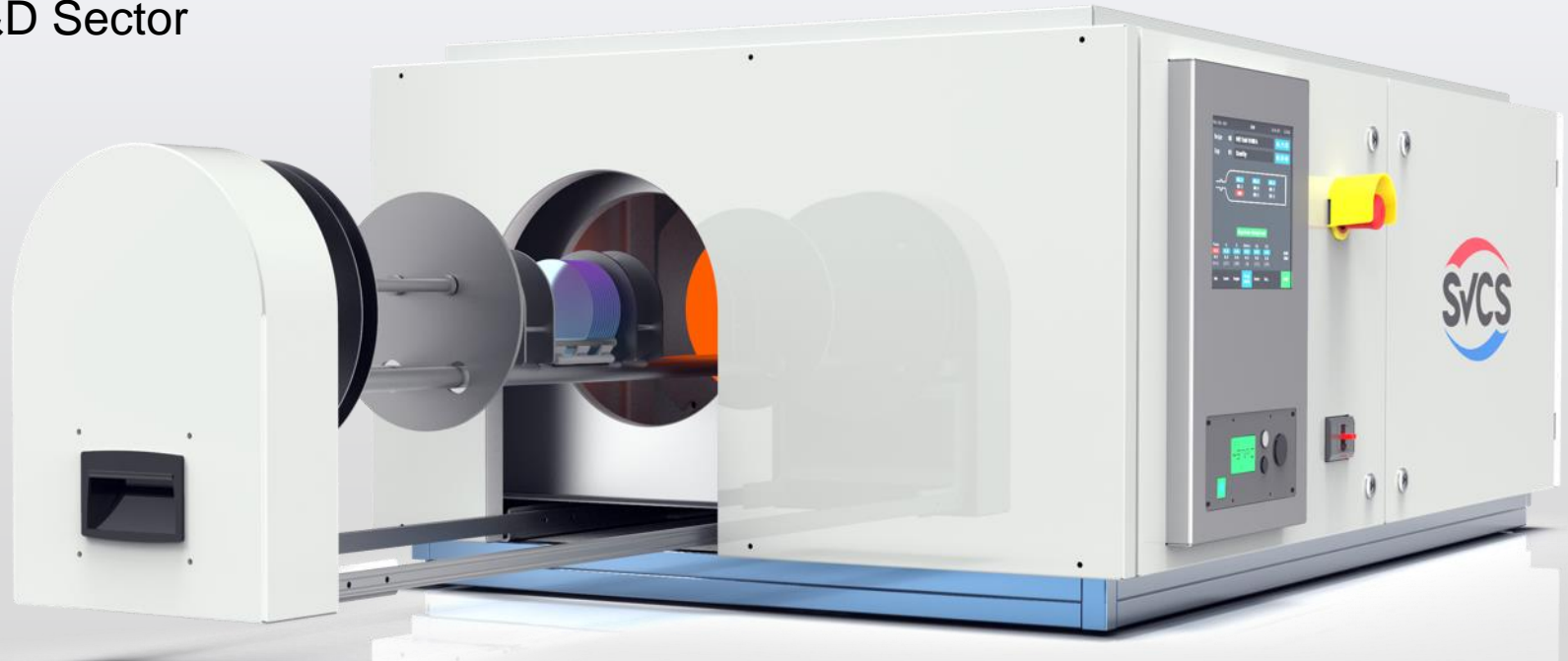


All features of the
Grown-up Furnace

Compact Tabletop Furnaces

| Atmospheric/LPCVD/PECVD processes

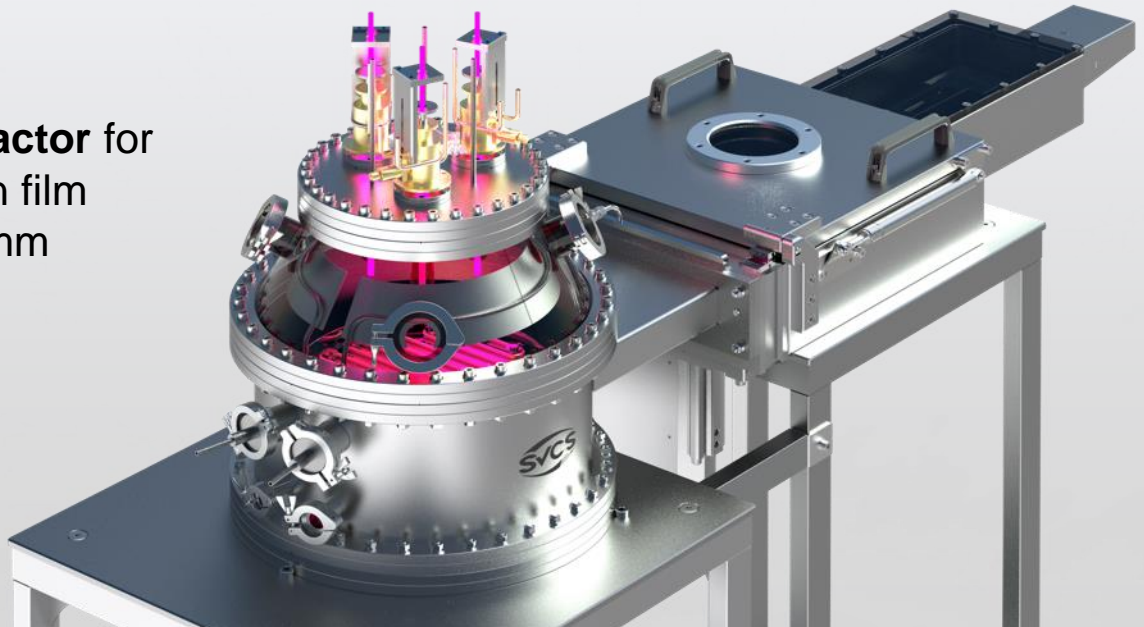
| R&D Sector



Single Wafer Reactors for R&D

| **ALD Reactor** with combined MW surfatrons and ECWR plasma sources for thin film depositions on substrates up to 300mm

| High-temperature **MOCVD Reactor** for metal oxide and metal nitride thin film coating on substrates up to 150mm

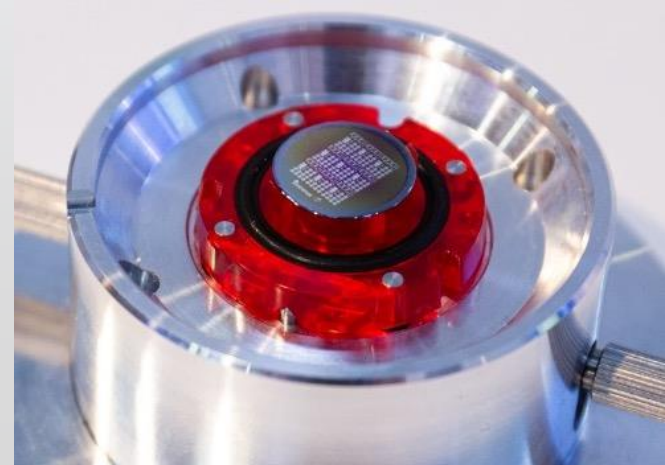


Ongoing project: ALD Reactor for Minimal Fab



CzechJapan R&D Project

- | ALD Reactor for Thin Film Depositions on **12.5mm Wafers**
- | Unified Minimal Frame Design
- | No need for a Clean-room
- | Very Low Power Consumption



UHP Gas Delivery Systems

Automatic Gas Cabinets

- | 1-cylinder
- | 2-cylinder
- | 3-cylinder

Valve Manifold Boxes

- 2 typical modifications:
- | 2-4 independent outputs
 - | 5-8 independent outputs

Gas Panels



UHP Gas Pipelines/hook-ups - Installation sites

| Our team of experienced welders travel around the World



UHP Pipelines/hook-ups - Installation sites

Lithuania, Kaunas



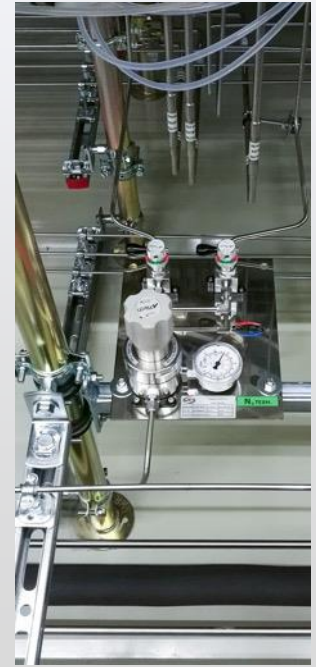
UHP Pipelines/hook-ups - Installation sites

Poland, Krakow



UHP Pipelines/hook-ups - Installation sites

Russia, Moscow



UHP Pipelines/hook-ups - Installation sites

France, Paris



SV-Con Control System

| We have a SW division which develops our own Control system

| Can be used not only in semiconductor industry

| Fully modular



SV-Con Control System

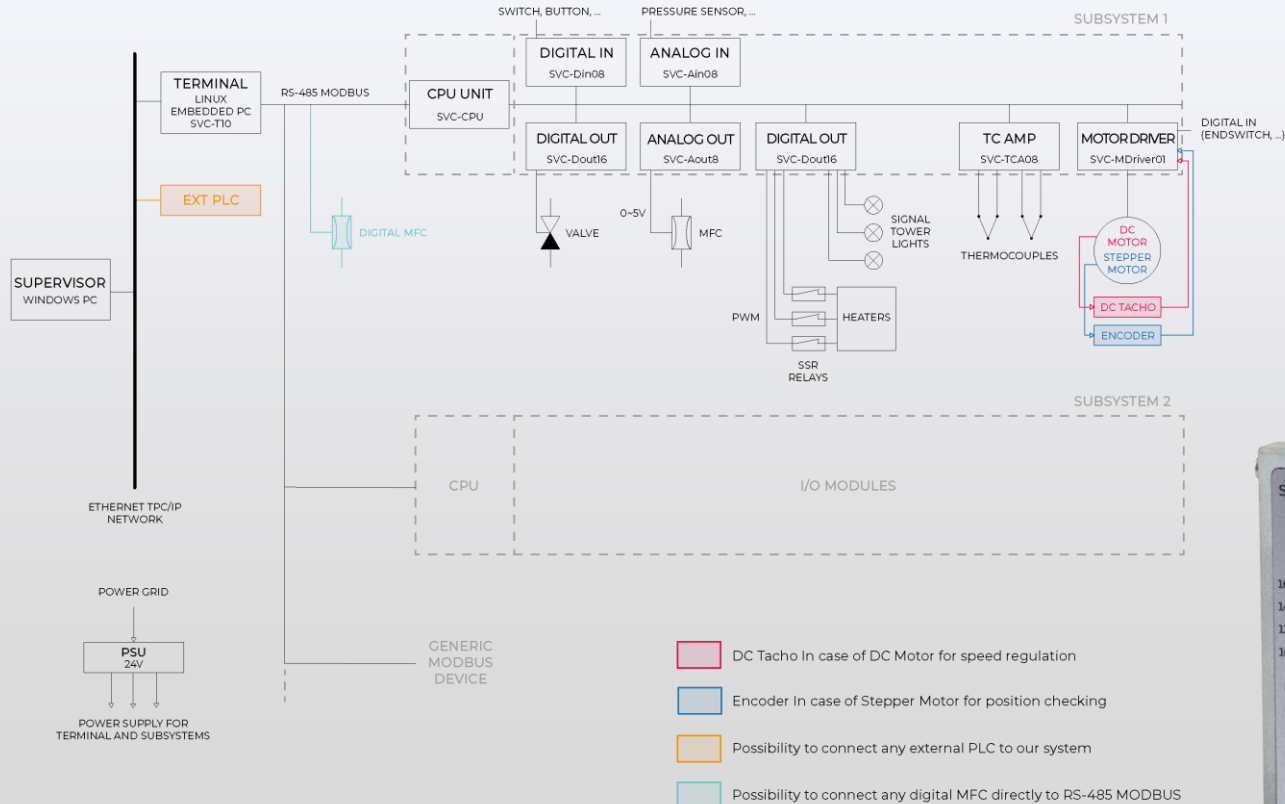
- | 10,4" touchscreen LCD for operator interface
- | Robust and reliable Linux OS for control apps
- | Fully modular
- | Powerful CPU unit
- | TCP/IP based network
- | Remote access

SW Features

- | Windows based SW for operating personnel
- | Real-time monitoring
- | Process recipe management
- | Event log, graphs
- | Intelligent cascade temp. regulator

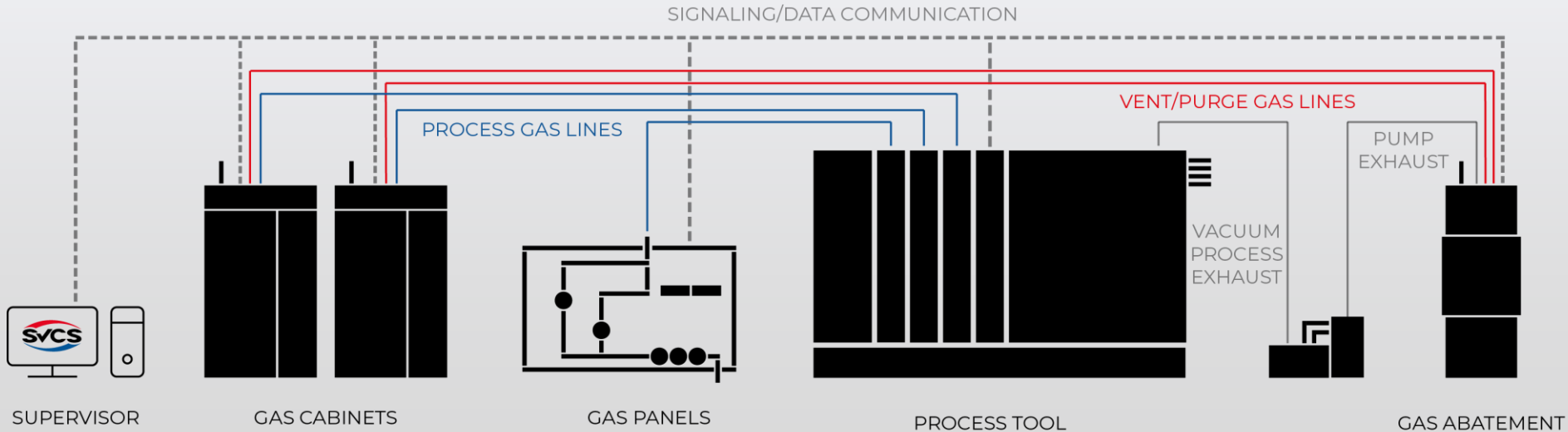


SV-Con Control System



SVCS Turn-Key System Solutions

Summary: We can provide not only Furnaces, but also gas source systems and gas abatement systems and hook-ups





Thank you | 謝謝