



INSTRUMENT  
TRANSFORMERS<sup>Ltd.</sup>

*BESPOKE ENGINEERING. SCOTTISH INNOVATION.*

## Manufacturing LV & MV CTs and VTs since 1973

At ITL, *every project* starts with a conversation. We work closely with our customers to really understand their projects, then *design and build* tailor-made *low voltage and medium voltage* transformers *to their exact specifications*. Our engineers are highly respected in the industry for their experience and knowledge which we are more than willing to share with our customers.

# Good design is good Business

ITL is a *global leader* in the design and manufacture of *low voltage and medium voltage* current & voltage instrument transformers.

*Specialists* in the supply of bespoke products, we build instrument transformers to support every kind of application, *no matter how technically complex*.

We also stock and offer a wide range of quality off-the-shelf products at competitive prices through our online e-store.



## Fully customised to meet your application

Our Current and Voltage Transformers are suitable for low voltage (LV), medium voltage (MV) or high voltage (HV) applications and are custom designed to meet your exact specifications.

### Environments

ITL transformers perform in the most extreme environments and will withstand arctic winters, desert heat and the humidity of the tropics.

### Industries

Whether it be Power Generation, Transmission & Distribution, Renewables, Measurement, Protection or Control, we have a transformer solution for you.



# The ITL Solution

## Product Range

- LV, MV, & HV Transformers
- Protection Transformers
- Measurement Transformers
- Bus-bar fabrication Equipment
- Control Transformers
- Voltage & Current Transformers
- Protection Relay Testing

## Transformer for your project

Our engineers are highly regarded within the industry for their experience and knowledge. Some of our staff are with us for more than 30 years so there is someone to guide the young, enthusiastic engineers we are taking on board.

The bottom line is: we are **confident we can find the solution** for your project and offer a unit that will fit the desired purpose.

## Capabilities

Over the years we have come across a lot of unique scenarios. Good examples are: *very limited space for the unit, installation on live systems, non standard ratios, class F thermal class, difficult environments*, or our engineers' favourite, *2 or more of the above on the same project*.

Our focus is on the customer experience if there is something we can't help with there is a good chance we know someone who can. And will point you in that direction even if it is our competition.

## Working with ITL

- A collaborative, helpful working approach
- Honest advice and guidance at every stage of the process
- Dedicated customer service for our local and global clients
- Customised design and cost effective methods
- Prompt and efficient delivery
- The latest technology and innovation through research and development



# Standards & Certification

## Product Standards

Supporting our ever growing customer base we manufacture to a wide range of industry standards for current and voltage transformers.

IEC is the preferred standard for UK & majority of international customers with regional variations ANSI/IEEE for North America and influenced markets, while AS for Australia & New Zealand is a popular choice for this region.

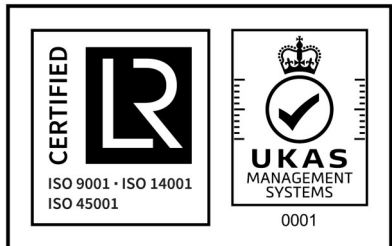
**Whatever standard you need, just ask.**

## Certification

A formalised management system covering Quality, Environmental and Health & Safety is also a key benchmark, and we are [ISO 9001](#), [ISO 14001](#) & [ISO 45001](#) approved.

For our Russian markets, we have a range of products that are [EAC](#) approved

In addition we have a range of products that are [UL recognised](#).



# Low Voltage CTs & VTs

## Current Transformers

- **Primary:** up to 30,000A
- **Secondary:** 5A/1A or custom
- **Metering and Protection units**
  - **Metering accuracy class:** 1, 0.5, 0.5s, 0.2, 0.2s
  - **Protection accuracy class:** 5P, 10P, PX, PS, TP
- **Burden:** Per customer requirement
- **Dimensions:** Per customer requirement
- **Types:** Ring Type, Rectangular, Split-core, Plastic Case
- **Finishes:** Taped, Resin Cast, Resin Filled, Metal Enclosures, Plastic Case\*
- **Standards:** IEC 61869-1 & 2 (other international standards are available on request), UL

\* Range of plastic case models held in stock for next day delivery!



## Voltage (Potential) Transformers

- **Voltages:** all standard voltages between 55-480 Volts primary, 63.5-240 Volts secondary
- Single (1PH) and Three (3PH) phase units
- **Metering and Protection units**
  - **Metering accuracy class:** 0.5, 1, 3
  - **Protection accuracy class:** 3P1.2, 3P1.5, 3P1.9
- **Burden:** Per customer requirement
- **Dimensions:** 3 standard frame sizes for both 1PH and 3PH units
- **Finishes:** Open, Resin Cast, Resin Filled, Metal Enclosures
- **Standards:** IEC 61869-1 & 3 (other international standards available on request), UL

# UL Approved LV Range

## Range Technical Specifications

Suitable for both Metering and Protection applications

### Primary Ratio

- Single Ratio CTs: Up to **2500A**
- VTs: 480V

### Secondary Ratio

- 5A | 1A | Custom (CTs)
- 120V | 110V | 100V | Custom (VTs)

### Accuracy Class & Burden

- Meets **IEEE C57.13**
- Accuracy classes as per model datasheets\*
- IEC 61869 burden as per model datasheets\*
- **Datasheets are available per e-mail request ([sales@itl-uk.com](mailto:sales@itl-uk.com))**

### Available Finishes

- Resin Cast (CTs & VTs)
- Taped (CTs)
- Plastic Case (CTs)

### Applications

- Switchgear
- Controlgear
- Generator panels



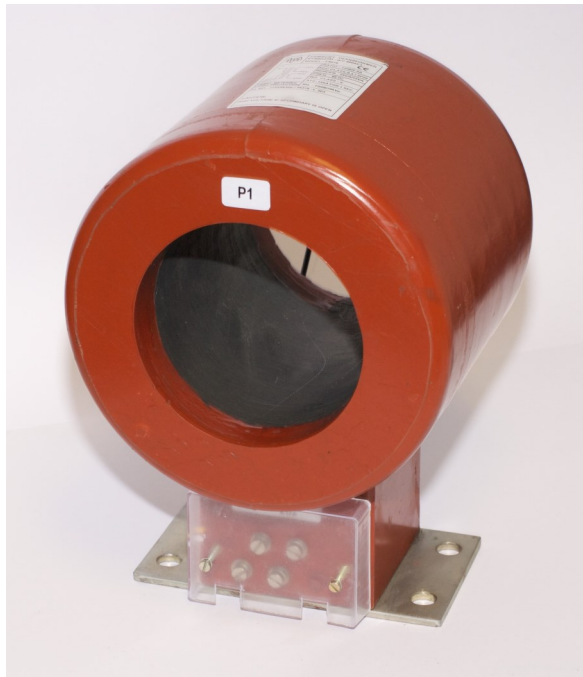
*Image: Plastic Case CT example*

**CRV<sup>®</sup> US**

# Medium Voltage CTs & VTs

## Current Transformers

- **Highest System Voltage:** up to 36kV
- **Primary:** up to 20,000A
- **Secondary:** 5A/1A/0.577A (or any relay feed current value) or custom
- **Metering and Protection units**
  - **Metering accuracy class:** up to 0.1 (IEC 61869, IEEE C57.13)
  - **Protection accuracy class:** up to 10P, 15P (IEC 61869) and up to C800 (IEEE C 57.13)
  - **Special accuracy class:** class PX (IEC 61869) with specific values of  $V_k$  and  $I_{mag.}$ , PR Class, TPS, TPX, TPY and TPZ
- **Burden:** up to 50VA (IEC 61869) or more
- Multicore CTs up to **5 cores** or more
- **Available Types:** Indoor Resin Cast, Outdoor Resin Cast, Outdoor Oil Insulated Type
- **Standards:** IEC 61869-1 & 2, IEEE (other international standards are available on request)



## Voltage (Potential) Transformers

- **Highest System Voltage:** up to 36kV
- **Primary Voltage:** up to 37.5kV
- **Secondary Voltage:** 100V, 110V, 120V or custom
- Multi winding VTs up to 3 windings available, Open Delta winding available
- **Burden:** up to 200VA (IEC 61869) or more
- **Thermal Burden:** 3kVA
- **Accuracy Class**
  - **Metering:** up to 0.1 (IEC 61869, IEEE C57.13)
  - **Protection:** up to 10P, 15P (IEC 61869) and Class W, X, M, Z (IEEE C57.13)
- **Type:** Indoor Resin Cast, Metal Clad, Outdoor Resin Cast, Outdoor Oil Insulated

# Medium Voltage CTs & VTs

## Vacuum Casting Plant

Our computer controlled vacuum casting plant is capable of injecting 540Kg of material in a single process cycle. The vacuum plant automatically prepares and casts a 2-part epoxy resin system designed specifically for medium voltage transformers, ensuring high productivity and excellent electrical & mechanical performance.



## ITL Standardised MV Ranges

- Shorter lead times
- Flexible pricing
- Same high quality

So stay tuned to ITL news on our [itl-uk.com](http://itl-uk.com) website.

**Got questions? Get in touch.**

[marketing@itl-uk.com](mailto:marketing@itl-uk.com)





# Substation(SSVT)/Power Voltage Transformers

## What is a Substation (SSVT)/Power Voltage Transformer?

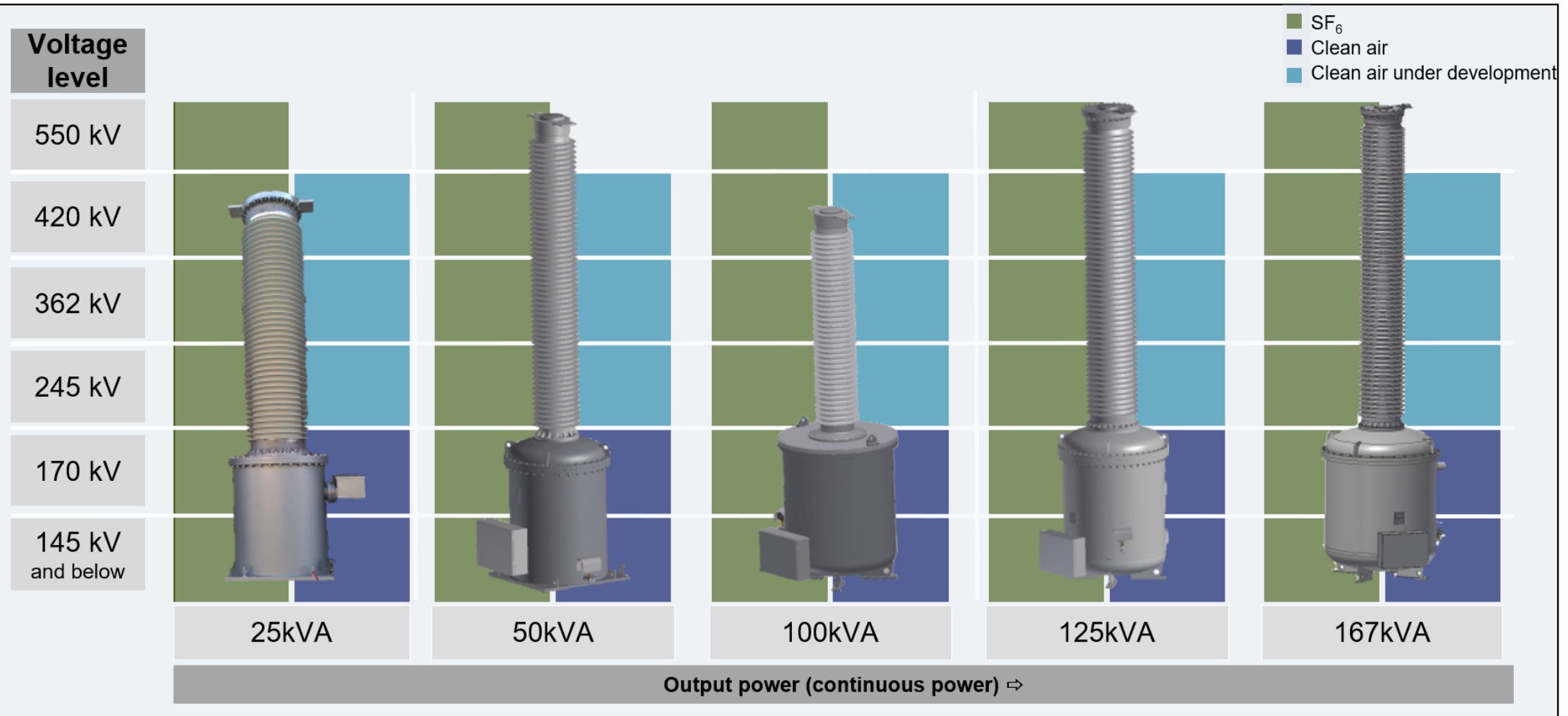
- Single phase device (interconnection in three-phase is possible)
- All advantages and functions of inductive voltage transformer available
- Provides higher power output than standard instrument transformer
- Connected to any HV line up to 550 kV, enable power supply up to 167 kVA (single phase) or 500 kVA (three-phase)
- Reliable power supply wherever other source are not available or more expensive
- Sec. Voltages 120V – 690V (default values 120V/230V/240V)

## ITL Portfolio

- Insulation Medium: SF6 or oil
  - **Clean Air** Insulation available up to **170kV** (higher system voltages are in development)
- Maximum Output Power
  - Single Phase: **167kVA**
  - Three Phase: **500kVA**
- Secondary Voltages
  - Standard: **120V** and **240V**
  - Different voltages available on request
- Available according to **IEC and IEEE Standards** and specific customer requirements



# Substation(SSVT)/Power Voltage Transformers



# Talk to us today

For more information call: +44 (0) 1355 236 057 and talk to one of our engineers about your unique power measurement and protection transformer requirements.

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[www.itl-uk.com](http://www.itl-uk.com)