

RONT

The controllable local plant transformer
with GRIDCON® iTAP®



RONT – the controllable local plant transformer



Partners in Power



Controllable local plant transformers

RONT transformers with GRIDCON® iTAP® – the solution for controllable local network stations.

Controllable local plant transformers ensure voltage stability in the distribution network by compensating for the voltage variation induced by local suppliers. In the same manner, they compensate the voltage drop caused by additional loads such as electric car or heat pumps. Installation of additional cables or setting up additional local network stations is not necessary.

RONT transformers provide the complete functionality required for autonomous voltage control within distribution networks.

- three-phase oil transformer
- 250 to 800 kVA
- 24 kV series
- 3 phases
- does not exceed the dimensions of uncontrolled transformers in terms of width and depth
- maintenance-free over the entire service life (up to 700,000 switching operations)
- max. 9 operating positions, alternatively 5 or 7
- freely selectable load-switchable control range, e.g. $\pm 4 \times 2.5$ percent (max. step voltage: 600 V)

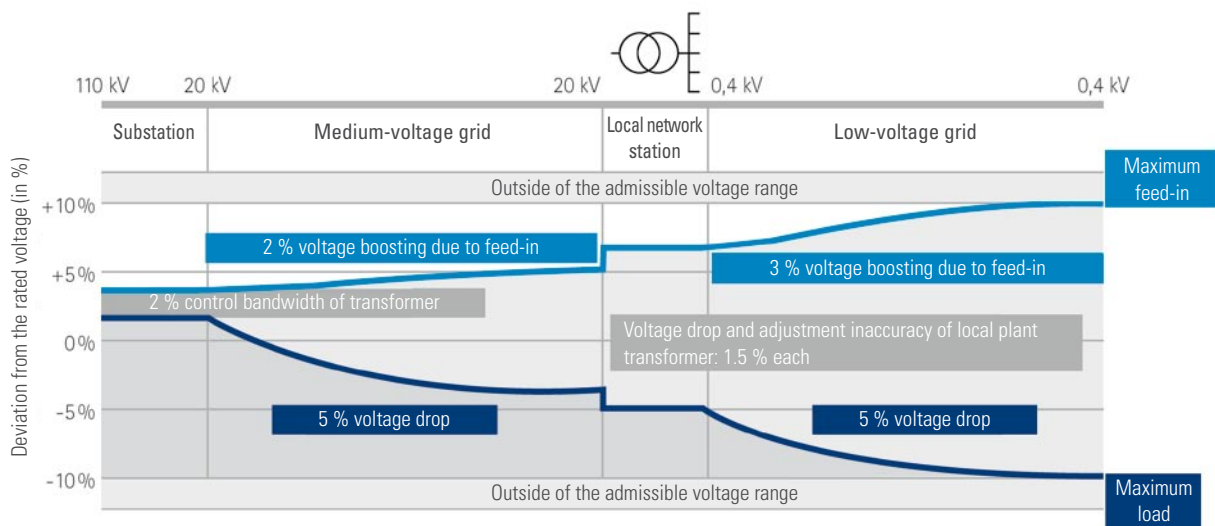


Controllable local plant transformers – the economically efficient alternative to grid extension.

In connection with decentralized energy generation, energy supply companies are increasingly facing a new challenge: they have to ensure stability of voltage supply in the low-voltage grid while integrating power fluctuations caused by renewable energies.

Within the voltage range of ± 10 percent of the rated voltage admissible in accordance with DIN EN 50160, renewable energies are allowed to cause a maximal voltage variation of 3%. The remainder is reserved for medium voltage, voltage drops and adjustment inaccuracies. Due to the rapidly increasing volumes supplied, there is a growing risk of the admissible voltage range being exceeded.

Thus, grid operators feel impelled to invest in costly network extension measures although the equipment capacities within the grid are far from exhausted.

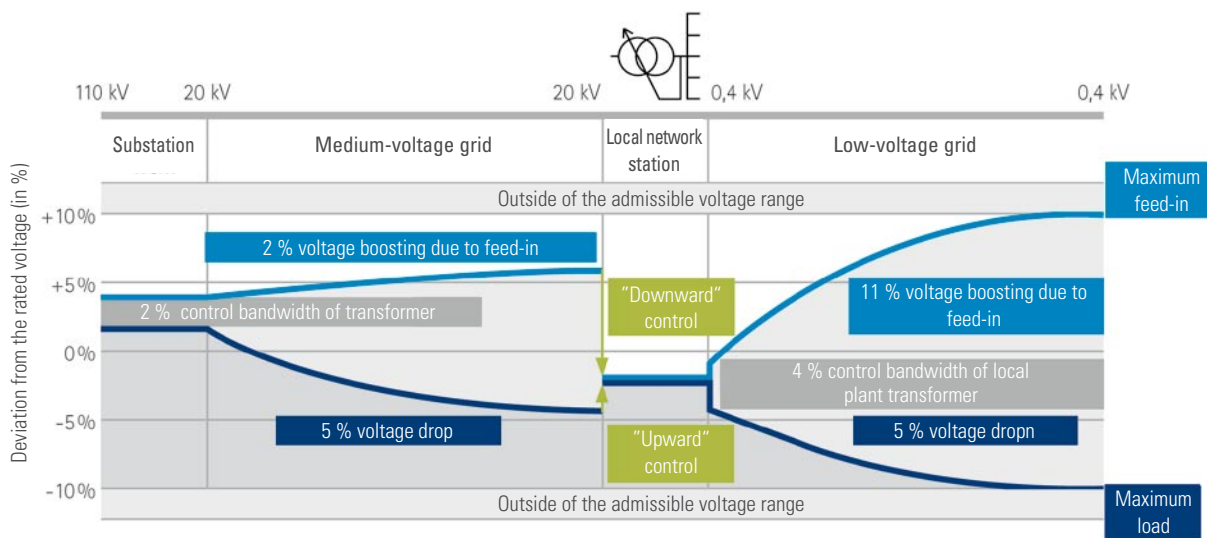




Optimum utilization of the grid capacity thanks to controllable local plant transformers.

A controllable local plant transformer addresses the problem at its root, i.e. the necessity to maintain voltage within the admissible range – by dynamically adjusting the voltage: it decouples the voltage of the low-voltage grid from that of the medium-voltage grid.

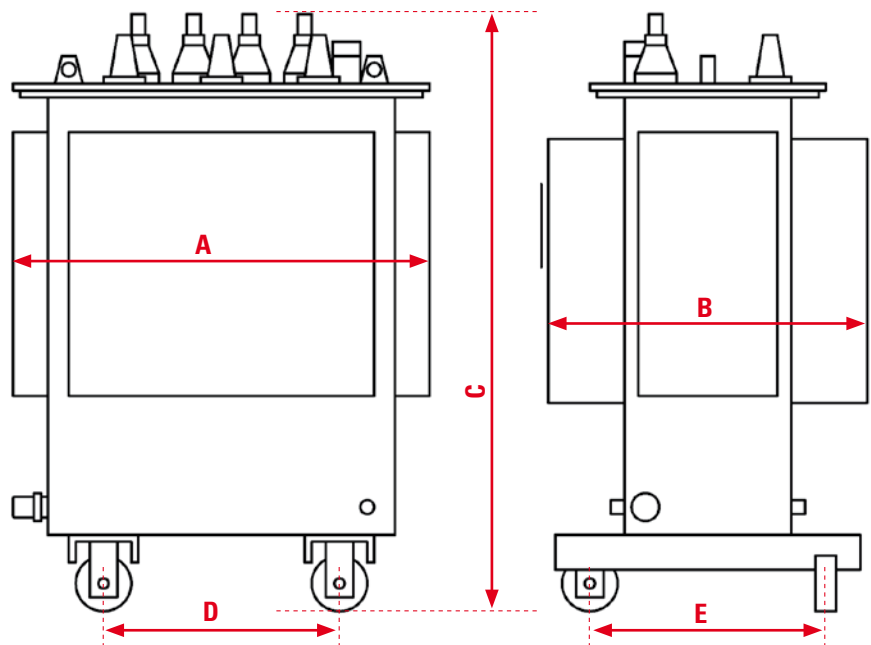
As a result, the local grid now provides 11 instead of 3 percent voltage variation available for feeding-in renewable energies. In most cases, expensive network extension can thus be avoided completely; in the few exceptions, grid operators gain time. Above all, local plant transformers enable them to utilize their grid capacities to a higher degree and thus with enhanced economic efficiency.



Transformer power and dimension data

Transformer power and dimension data

Power	250 kVA	400 kVA	630 kVA	800 kVA
u_k	4%	4%	4%	4%
High Voltage	10/20 kV	10/20 kV	10/20 kV	10/20 kV
Loss class	B_k / A_0	B_k / A_0	B_k / A_0	B_k / A_0
Losses P_0	300 W	430 W	600 W	650 W
Losses P_k	2.750 W	3.850 W	5.400 W	7.000 W
Item	Dimensions in mm	Dimensions in mm	Dimensions in mm	Dimensions in mm
A	1.190	1.190	1.250	on request
B	760	830	860	on request
C	1.570	1.690	1.855	on request
D	520	670	670	on request
E	520	670	670	on request



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