

# PSK

## Tank Type Transformers 30 - 1000 kV

### APPLICATION

Conventional AC test transformers are especially designed for testing objects of medium capacitance in the factory, indoor or outdoor. These systems are particularly suited for tests requiring stable voltage even if the load changes under voltage (heavy corona, wet & pollution tests) or when the load is of inductive kind (inductive voltage transformers). The system duty cycle can be freely chosen and is insured by adding radiators or forced oil-cooling to the transformers. These systems are also suited for continuous duty, long duration tests.

### HIGH-VOLTAGE WINDING & BUSHING

The neutral end of the high-voltage winding is brought out insulated. The high-voltage end is brought out through the transformer bushing. Either an oil-air or oil-SF6 bushing can be used depending of the application. The bushing is chosen according to the ambient conditions and is capacitively graded for the upper voltages. Upon request, the bushing can be fitted with a measurement tap. An aluminium top electrode is placed on the bushing to allow a PD free operation up the rated voltage. An angle with a multi-contact plug allows to connect mechanically and electrically a high voltage connection.



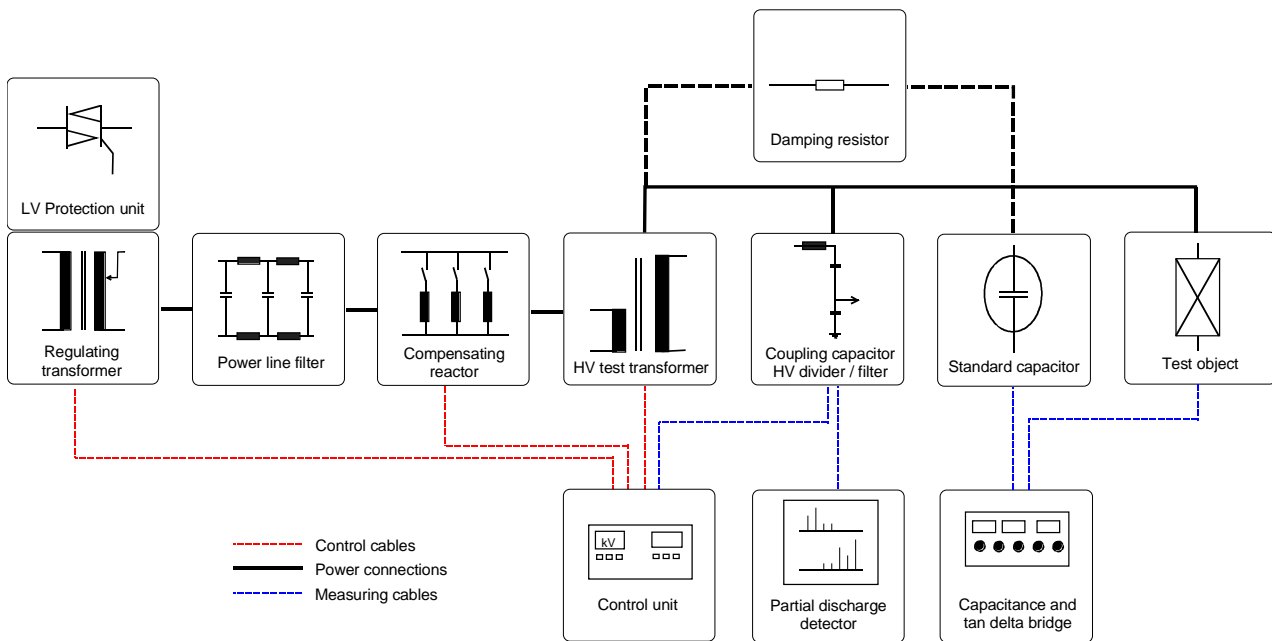
700kV Transformer with Oil to air bushing

Transformer specifically designed for all outdoor weather conditions are available.

### BENEFITS

- Indoor or outdoor designs with adapted bushings, suitable also for pollution tests
- Large range of application
- Low acoustic noise level (approx. 65 dBA)
- Sophisticated protection features for optimal test object & personnel protection
- Possibility to use an external oil expansion vessel with Buchholz or DGPT 2 relay

**BLOCK-DIAGRAM OF A TYPICAL TRANSFORMER TEST SYSTEM (OPTIONS ALSO SHOWN)**



**SYSTEM CONFIGURATION**

The test system includes following main components:

- Regulating transformer
- Power line filter
- Compensating reactor
- Test transformer
- Coupling capacitor
- Control system OT 248
- HV and grounding connections between HV elements.
- Connection to test object usually not included.

**AVAILABLE OPTIONS**

- HV filter inductance for coupling capacitor
- Damping resistance
- Low voltage protection unit
- Standard capacitor
- Control system OT 257 instead of the OT 248
- Additional HV connections
- Partial Discharge detectors
- Capacitance and power loss factor measuring bridges
- Other devices upon request.

AC test system Type PSK	Test transformer Type PK	Regulating transformer Type STL or STO	Compensating reactor Type KDL	Coupling capacitor Type TK or KKF
kV - kVA	kV - kVA	kVA for cont. duty	kVA for cont. duty	kV - nF
PSK 30-30	PK 30-30	STL 50	---	KK 50-1
PSK 70-70	PK 70-70	STL 75	---	KK 100-1
PSK 90-150	PK 90-150	STL 150	---	KK 100-1
PSK 100-600	PK 100-600	STL 200	KDL 800	KK 100-1
PSK 210-300	PK 210-300	STL 100	KDL 400	KK 300-1
PSK 400-1600	PK 400-1600	STL 500	KDL 2100	KK 400-1
PSK 700-1400	PK 700-1400	STL 400	KDL 2000	KK 700-1
PSK 900-900	PK 900-900	STL 300	KDL 1200	KK 900-1

Usual system duty cycle is 1 Hour ON, 1 Hours OFF, 2 times per day.

#### Dimensions and weights (some examples only)

Transformer type PK	Voltage $U_n$	Power $P_n$	Dimensions L x W x H	Weight of oil approx.	Total weight net, approx.
kV - kVA	kV	kVA	m	kg	kg
PK 30-30	30	30	0.8 x 0.8 x 1.2	170	600
PK 70-70	70	70	1.0 x 1.0 x 1.7	300	1300
PK 90-150	90	150	1.5 x 1.3 x 2.5	390	2500
PK 100-600	100	600	1.9 x 1.7 x 2.8	1'600	6'000
PK 150-75	150	75	1.1 x 1.4 x 2.9	600	1'600
PK 210-300	210	300	1.8 x 1.6 x 3.9	1'600	4'100
PK 250-50	250	50	1.8 x 1.2 x 3.3	800	2'400
PK 600-1'260	600	1'260	9.5 x 2.4 x 4.5	15'000	28'000
PK 900-900	900	900	12.0 x 2.4 x 6.0	19'000	35'000

Other voltages, current or duty cycles are possible upon request.

Dimensions are given with HV bushing installed.

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