Cast Resin Transformers

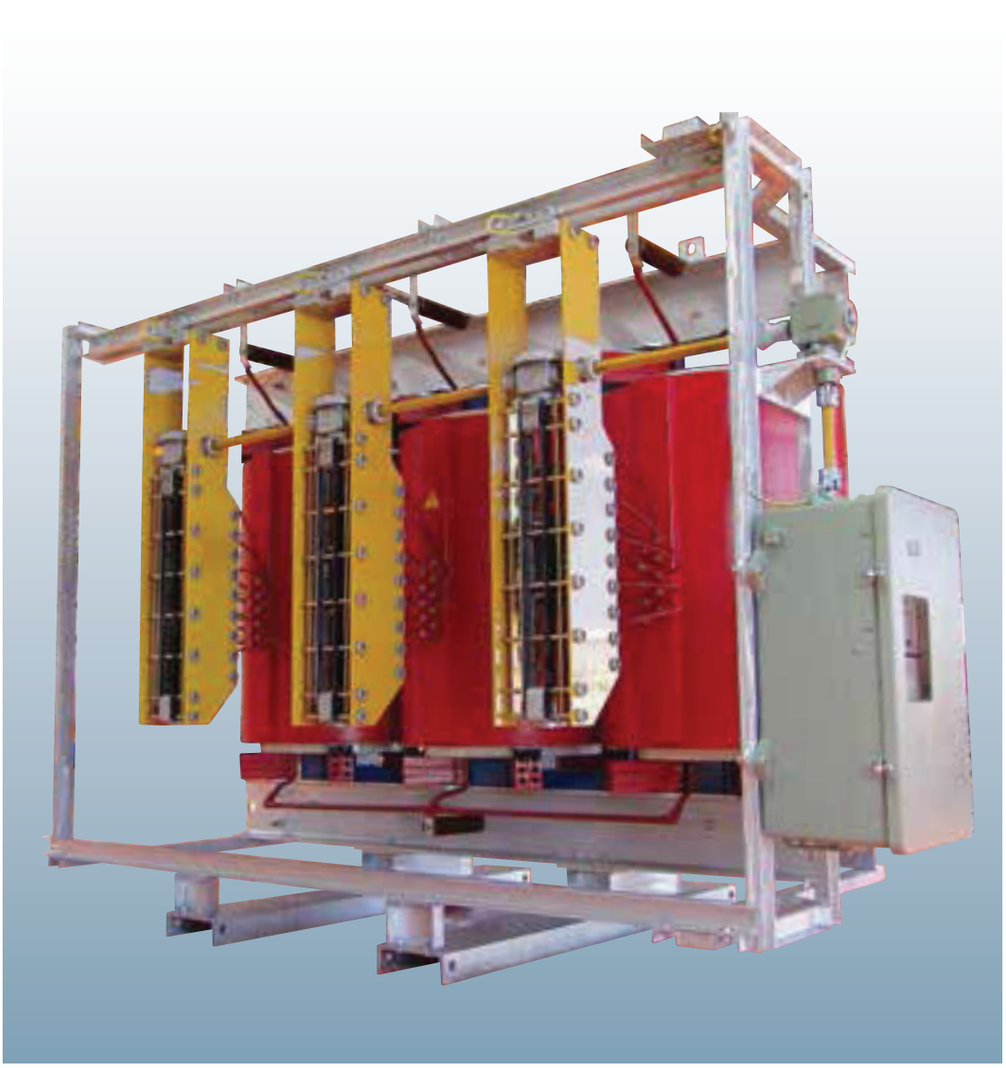
ELTAŞ A.Ş manufactures cast resin transformers upto **20000** kVA with maximum voltage rating of 36 kV; 170 kV impulse level.

Some of the areas that cast resin transformers are used;

- Indoor and outdoor transformer centers
- Industrial and Oil Refineries
- Oil Platforms
- Power Plants
- Schools
- Hospitals
- Airports
- Shopping Malls
- Wind Mill Turbines

Advantages of cast resin transformers;

- Installation to near people
- Non-flammable and self extinguishing
- Less area than oil immersed transformers for the same rating.
- Maintenance free
- Excellent resistant to polluted and on moistured ambient.
- No need for drying for re-operation after deactivation for a long period
- Coils can be changed on-site for any kind of reason
- Minimization of cable losses when placed directly to customer's center
- Nominal power can be increased %50 by cooling fans.
- Environmental friendly as it is not containing toxic chemicals inside
- Resistance to high impulse voltage
- Excellent resistant to short-circuit



Cast Resin Transformers
Production Types

1- Distribution Transformers (100-3150 kVA)

2- Monophase Transformers

3- Earthing Transformers

4- Power Transformers (4000-20000 kVA)

5- Transformers with On Load Tap Changer

6- Auto Transformers

7- Generator Transformers

8- Rectifier Transformers (with 3 or 4 windings)

9- Transformers with Air Force - Water Force Cooling (for Ship application)

10- Motor Start up Transformers

Cast Resin Transformers
Technical Properties

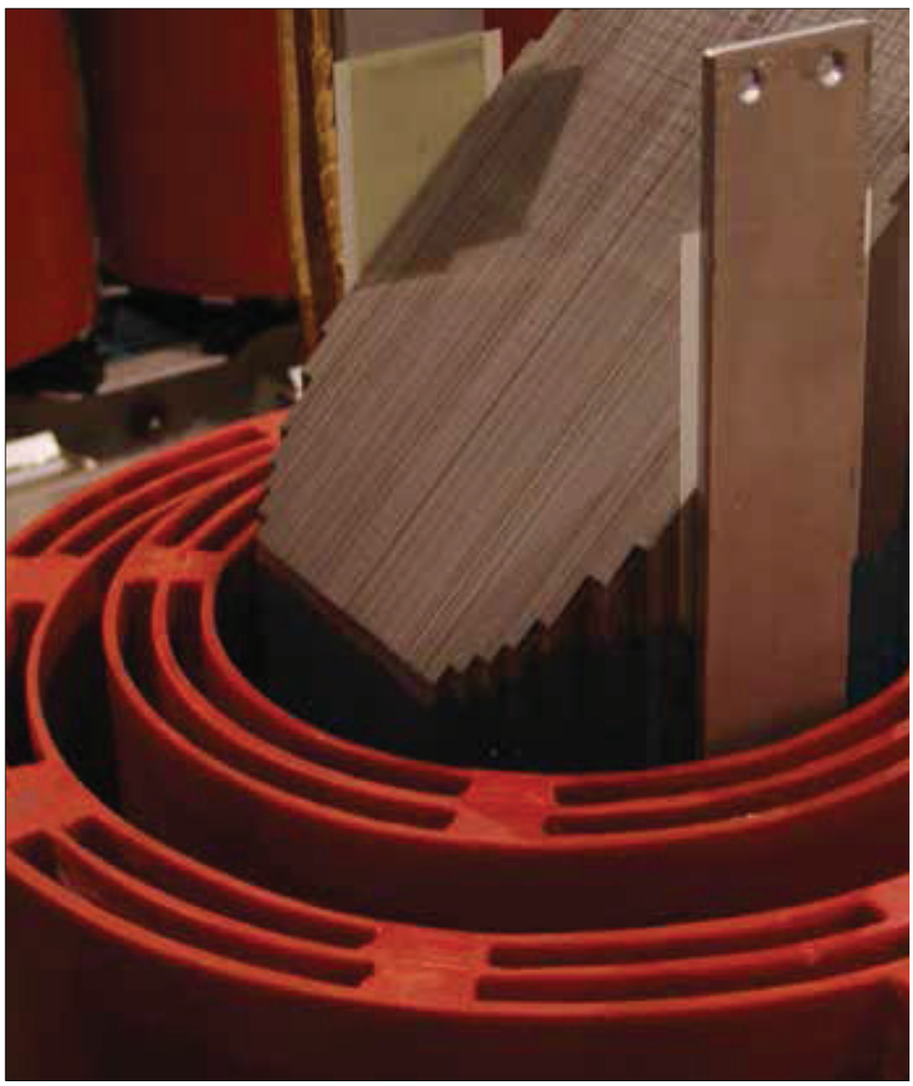
Windings

The Low Voltage Windings

The foil winding technology is used for Low Voltage (LV) winding because of its technical advantages. LV winding is made of aluminum or copper foils according to customer request. This technique reduces axial forces under short circuit and F or H (depends on customers request) class prepreg insulation materials are used in order to control radial short circuit forces. The coils are cured after winding to have dielectric strength against industrial and atmospheres conditions. The LV windings are also manufactured conditions. The LV windings are also manufactured as casted under vacuum depends on customer request.

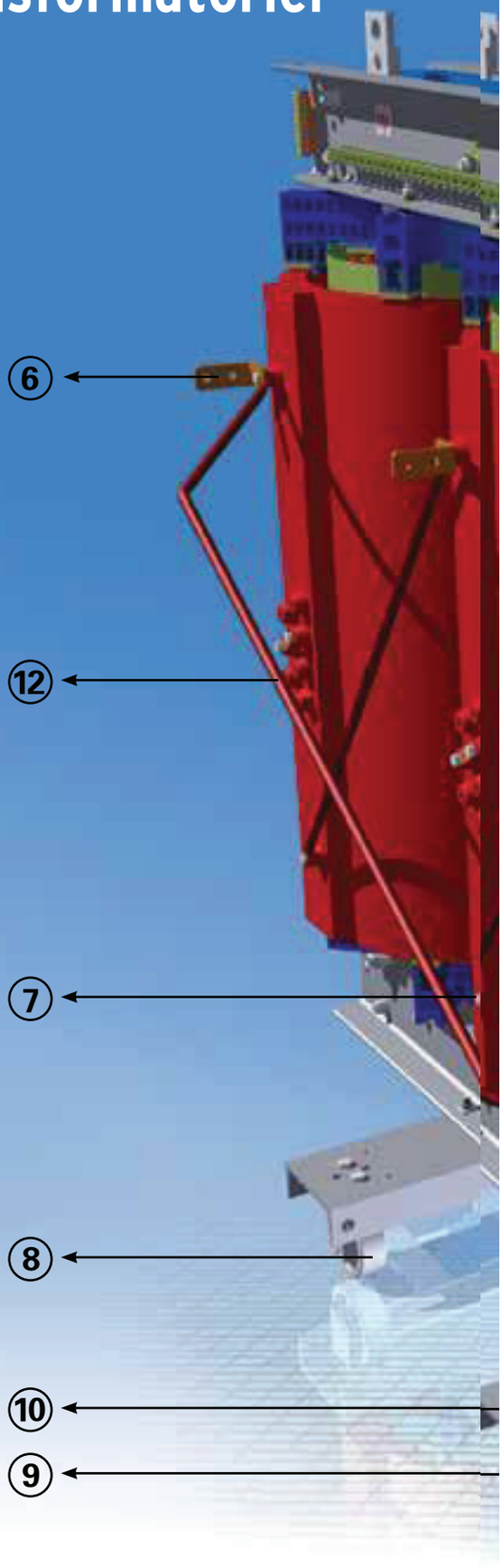
The High Voltage Windings

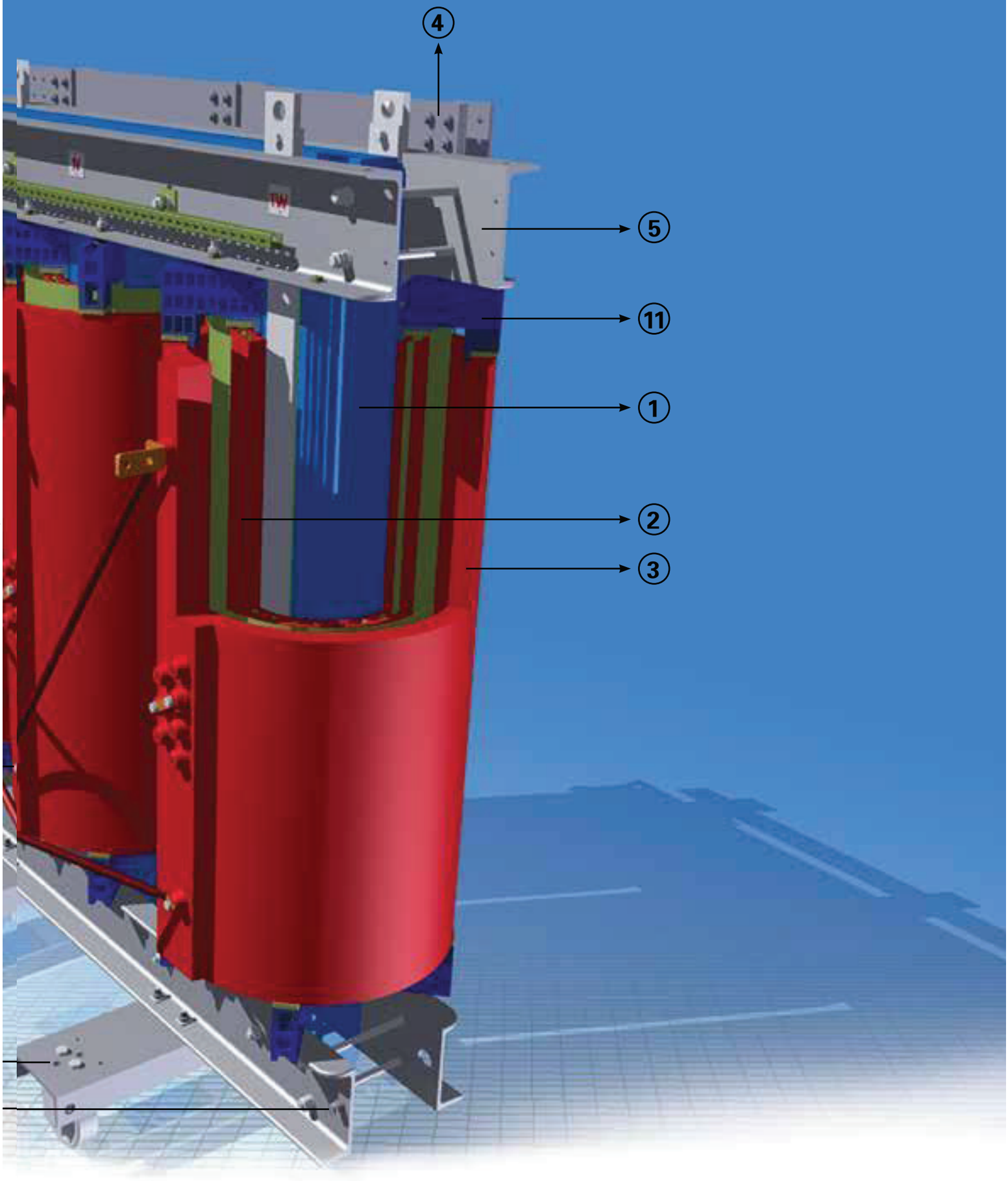
The High Voltage windings (HV) are made of rectangular or round aluminum or copper wire with F or H Class insulation material. The selection of insulation and type of conductor are depended on the customer request. The HV windings are casted under vacuum to obtain voidless structure and cured slowly to have crackless coils. Due to ELTAŞ Cast Resin Transformers have very low partial discharge, they have very long life time.



Dökme Reçineli Kuru Tip Transformatörler
Cast Resin Transformers

1. Nüve (Core)
2. Alçak Gerilim Bobini (Low Voltage Coil)
3. Yüksek Gerilim Bobini (High Voltage Coil)
4. Alçak Gerilim Bağlantı Terminalleri
   (Low Voltage Connecting Terminals)
5. Sıkıştırma Demirleri (Yoke Clamping)
6. Yüksek Gerilim Bağlantı Terminali
   (High Voltage Connecting Terminals)
7. Ayar Değiştirme Terminalleri (Tapping Links)
8. Tekerlek (Roller)
9. Topraklama Terminalleri (Earthing Link)
10. Tekerlek Taşıyıcısı (Wheel Base)
11. Sıkıştırma Takozları (Wedges)
12. Üçgen Bağlantı Çubukları
    (Delta Connection Rods)

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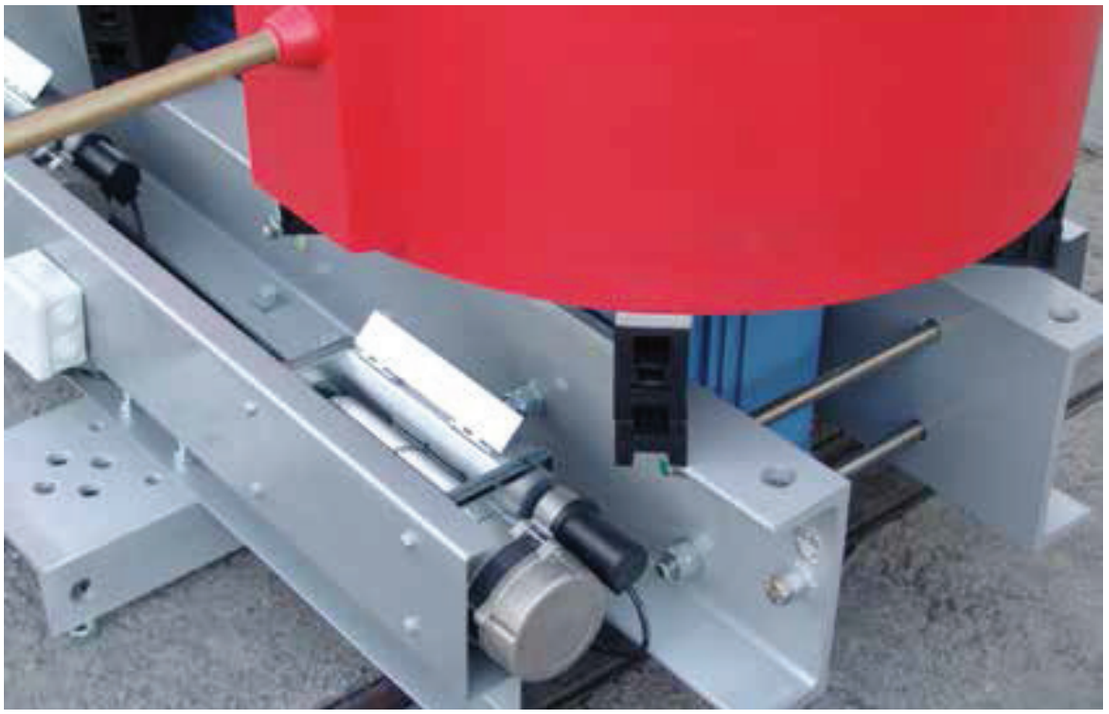

Core

The core is made of highest quality, cold rolled, grain oriented silicon steel and cut on the best quality Georg machine. The cores are stacked with step lap technology and designed with low magnetic induction to obtain lower no-load losses, noise level and exciting current. The cores are protected against corrosion by resin coating and painted. They are grounded in accordance with required standards.

Assembly

The frames are used for coil assembly in ELTAŞ Cast Resin Transformers. They hold the core and coils together. The coils are supported by wedges made of plastic with reinforced by glass fibre against short circuit and vibration. The wheels enable the transformer to be moved either length wise or side wise. All steel parts are coated with epoxy and painted against corrosion. The painting method is selected according to ambient condition of transformer.

Cast Resin Transformers

Technical Properties

ACCESSORIES

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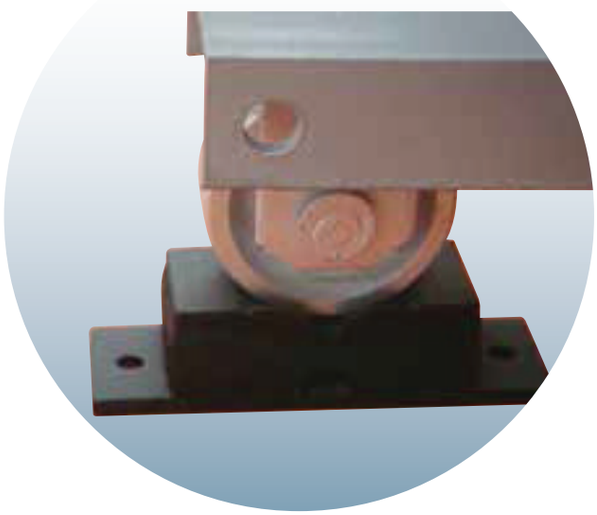

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1. Temperature Control System (Standard)
Temperature control system is used to measure and control the over temperature which is not allowed due to higher ambient temperature and overloading. The temperature sensors (PT 100 or PTC) are placed to hottest area in the LV winding. The sensors must be connected to temperature relay which is given with transformer. The relay has alarm, trip and fan on/off contacts. The temperature reachs the set values for all functions, it is possible to have alarm, trip and fan on/off signal from relay.

2.Forced Ventilation System (Optional)
ELTAŞ Cast Resin Transformer's capacity can be increased 50% by adding fans which are selected with special design. The fans are switched on and off automatically via sensors in the LV winding.

3.Anti-Vibration Pad (Optional)
It is recommended to use anti vibration pat to insulate the transformer body against noise transmission in building, shopping center etc. application.

4. Enclosures (Optional)
ELTAŞ Cast Resin Transformers are manufactured IPOO (without enclosure) as Standard. The enclosures against solid materials, water and dust are manufactured according to customer request as per IEC 60529. The Standard types enclosures are:
IP 20 Indoor
IP 23 Indoor and Outdoor
IP 33 Indoor and Outdoor
The enclosures with higher protection degree are also available as per request.

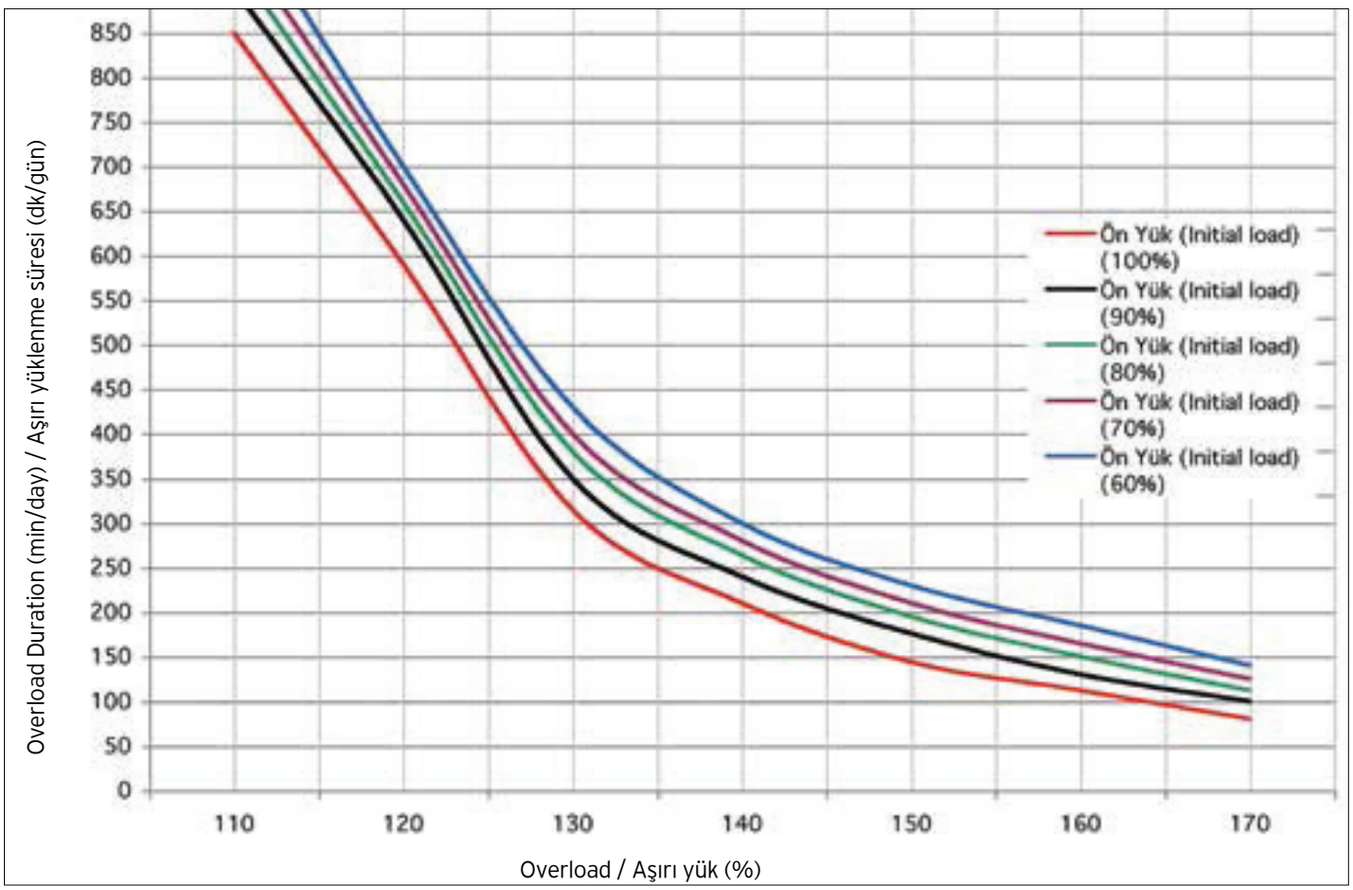
Cast Resin Transformers

Technical Properties

OVERLOADING

ELTAŞ Cast Resin Transformers have advantages for short time overloading because of long time constant. The overloading capacity depends on ambient condition, overload duration and thermal time constant. The overloading curve for each transformer can be submitted as per request.

The overload curves for 1000 and 1600 kVA 34.5/0.4 kV transformers are as follows:



1600 kVA 34.5 / 0.4 kV Transformatörün Aşırı Yüklenme Eğrisi
Overload Curve of 1600 kVA 34.5 / 0.4 kV

Cast Resin Transformers

International Standards

ELTAŞ Cast Resin Transformers can be manufactured according to following standards;

- IEC 60076-11
- ANSI C 57.12
- NEMA ST 20
- VDE0532/DIN42523
- BS 7806
- TS 267
- CSA

Moreover, it is certified by international laboratories that ELTAŞ Cast Resin Transformers provide the terms of E2, C2 and F1 (environment, climate, fire) that are defined in IEC Standard.

Test

Following tests are applied to Cast Resin Transformers according to IEC 60076-11 standard.

Routine tests are process of production, applied to every transformer and given to customers as a test report.

- Measurement of winding resistance
- Measurement of connection group and turn ratio
- Measurement of short circuit impedance
- Measurement of on load losses
- Measurement of off load losses
- Measurement of partial discharge
- Applied voltage test
- Inducted voltage test

Type Tests: (Optional)

- Lightning impulse test
- Temperature rise test

Special Tests:

- Measurement of noise level (Optional)
- Short-circuit withstand test (performed at international independent laboratories and test reports are submitted.)
- Environment test (ELTAŞ Cast Resin Transformers are certified by KEMA with E2 class which is an accord with atmospheric conditions that has excessive air pollution and condensation) Report No: 07/1474
- Thermal Shock Test (ELTAŞ Cast Resin Transformers are certified by KEMA with C2 class which is in accord with operation, carriage and storage terms under -25ºC weather conditions.) Report No: 07/1474
- Fire Behavior Test (ELTAŞ Cast Resin Transformers are certified by CESI with F1 class which is in accord with expected behaviors from transformer that is exposed to fire.) Report No: A800 3390

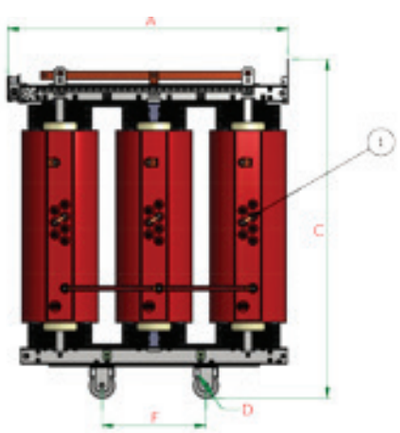
Technical data of 100-250 KVA LV/HV Aluminum Wound 50 Hz Cast Resin Dry Type Dist. Transformers acc. to the standard losses referenced by IEC 60076-11

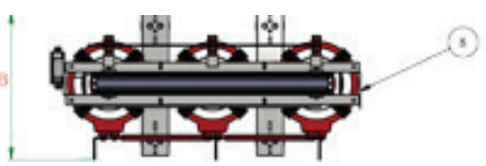
Type	Rated Power	Max. voltage	Impedance voltage (at 75°C)	No-load losses	Load losses (at 75°C)	Load losses (at 120°C)	Sound-level	Dimensions (mm)						Weight (kg)
IEC 60076-11	Sn	Um	Uk	Po	Pk	Pk	Lpa/Lwa							
Standart Losses	kVA	kV	(%)	W	W	W	dB	A	B	C	D	E	F	
ELT-K 100-12-6	100	12	6	480	1800	2000	46/59	1240	680	1180	125	40	520	610
ELT-K 100-24-6		24	6	600	1800	2000	46/59	1400	830	1240	125	40	520	740
ELT-K 100-36-6		36	6	800	2400	2600	46/61	1520	840	1580	125	40	520	880
ELT-K 160-12-6	160	12	6	600	2400	2700	46/62	1310	700	1210	125	40	520	750
ELT-K 160-24-6		24	6	750	2400	2800	46/62	1490	850	1310	125	40	520	960
ELT-K 160-36-6		36	6	1000	3200	3600	46/64	1600	850	1690	125	40	520	1140
ELT-K 250-12-6	250	12	6	820	3600	4000	48/65	1350	710	1180	125	40	670	930
ELT-K 250-24-6		24	6	950	4000	4500	48/65	1490	850	1330	125	40	670	1110
ELT-K 250-36-6		36	6	1300	3500	4000	48/67	1690	870	1690	125	40	670	1480

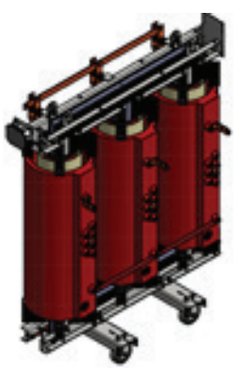
Technical data of 100-250 KVA LV/HV Aluminum Wound 50 Hz Cast Resin Dry Type Dist. Transformers acc. to the reduced losses referenced by IEC 60076-11

Type	Rated Power	Max. voltage	Impedance voltage (at 75°C)	No-load losses	Load losses (at 75°C)	Load losses (at 120°C)	Sound-level	Dimensions (mm)						Weight (kg)
IEC 60076-11	Sn	Um	Uk	Po	Pk	Pk	Lpa/Lwa							
Reduced Losses	kVA	kV	(%)	W	W	W	dB	A	B	C	D	E	F	
ELT-K 100-12-6R	100	12	6	400	1800	2000	46/59	1240	680	1190	125	40	520	610
ELT-K 100-24-6R		24	6	500	1800	2000	46/59	1370	820	1480	125	40	520	820
ELT-K 100-36-6R		36	6	700	2400	2600	46/61	1520	840	1630	125	40	520	900
ELT-K 160-12-6R	160	12	6	500	2400	2700	46/62	1310	700	1210	125	40	520	750
ELT-K 160-24-6R		24	6	650	2400	2800	46/62	1400	830	1520	125	40	520	950
ELT-K 160-36-6R		36	6	850	3200	3600	46/64	1600	850	1700	125	40	520	1150
ELT-K 250-12-6R	250	12	6	700	3600	4000	48/65	1340	700	1260	125	40	670	930
ELT-K 250-24-6R		24	6	750	4000	4500	48/65	1430	840	1540	125	40	670	1110
ELT-K 250-36-6R		36	6	1100	3500	4000	48/67	1720	870	1690	125	40	670	1530

Standard vector group is Dyn11. Alternatively other connection groups are available upon request.
Dimensions and weights are subject to change without notice.







1) Y.G. Ayar Değiştirme / H.V. Tapping Link
2) A.G. İzolatörü / L.V. Insulator
3) A.G. Faz Terminalleri / L.V. Phase Terminals
4) A.G. Nötr Terminali / L.V. Neutral Terminal
5) Sıcaklık Kontrol Sistemi Klemens Kutusu / Terminal Box For Temperature Control System
6) Y.G. Bağlantılı Terminalleri / H.V. Connection Terminals
7) Tekerlekler / Whells
8) İsim Plakası / Name Plate

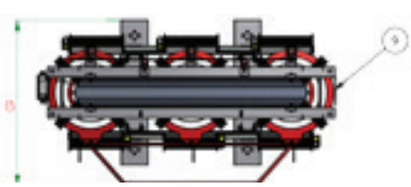
Technical data of 400-630 KVA LV/HV Aluminum Wound 50 Hz Cast Resin Dry Type Dist. Transformers acc. to the standard losses referenced by IEC 60076-11

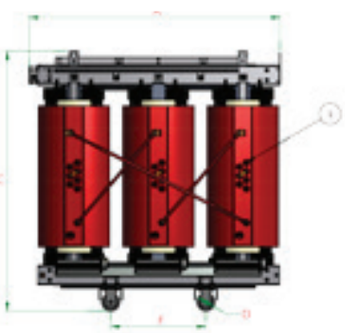
Type	Rated Power	Max. voltage	Impedance voltage (at 75°C)	No-load losses	Load losses (at 75°C)	Load losses (at 120°C)	Sound-level	Dimensions (mm)						Weight (kg)
IEC 60076-11	Sn	Um	Uk	Po	Pk	Pk	Lpa/Lwa							
Standart Losses	kVA	kV	(%)	W	W	W	dB	A	B	C	D	E	F	
ELT-K 400-12-6	400	12	6	1150	5200	5600	52/68	1340	800	1590	125	40	670	1240
ELT-K 400-24-6		24	6	1100	5500	6000	50/68	1460	920	1570	125	40	670	1340
ELT-K 400-36-6		36	6	1700	4900	5800	50/70	1820	970	1720	125	40	670	1960
ELT-K 400-36-8		36	8	1500	4900	5800	50/70	1770	970	1830	125	40	670	1790
ELT-K 500-12-6	500	12	6	1350	5500	6200	52/69	1430	800	1510	125	40	670	1440
ELT-K 500-24-6		24	6	1400	6500	7000	52/69	1490	920	1750	125	40	670	1600
ELT-K 500-36-6		36	6	1850	6100	6500	52/71	1790	960	1880	125	40	670	2170
ELT-K 500-36-8		36	8	1700	6100	6900	52/71	1740	960	1860	125	40	670	2040
ELT-K 630-12-6	630	12	6	1500	7000	8000	53/70	1480	800	1600	125	40	670	1670
ELT-K 630-24-6		24	6	1600	8000	8500	52/70	1540	930	1810	125	40	670	1820
ELT-K 630-36-6		36	6	2150	7800	8800	52/72	1820	970	1980	125	40	670	2450
ELT-K 630-36-8		36	8	2000	8000	8800	52/72	1840	970	1880	125	40	670	2260

Technical data of 400-630 KVA LV/HV Aluminum Wound 50 Hz Cast Resin Dry Type Dist. Transformers acc. to the reduced losses referenced by IEC 60076-11

Type	Rated Power	Max. voltage	Impedance voltage (at 75°C)	No-load losses	Load losses (at 75°C)	Load losses (at 120°C)	Sound-level	Dimensions (mm)						Weight (kg)
IEC 60076-11	Sn	Um	Uk	Po	Pk	Pk	Lpa/Lwa							
Reduced Losses	kVA	kV	(%)	W	W	W	dB	A	B	C	D	E	F	
ELT-K 400-12-6R	400	12	6	950	5200	5600	52/68	1340	800	1590	125	40	670	1240
ELT-K 400-24-6R		24	6	930	5500	6000	50/68	1460	920	1580	125	40	670	1340
ELT-K 400-36-6R		36	6	1450	4900	5800	50/70	1820	970	1730	125	40	670	1960
ELT-K 400-36-8R		36	8	1250	4900	5800	50/70	1770	970	1830	125	40	670	1790
ELT-K 500-12-6R	500	12	6	1150	5500	6200	52/69	1430	800	1510	125	40	670	1440
ELT-K 500-24-6R		24	6	1200	6500	7000	52/69	1490	920	1750	125	40	670	1600
ELT-K 500-36-6R		36	6	1600	6100	6500	52/71	1790	960	1880	125	40	670	2170
ELT-K 500-36-8R		36	8	1450	6100	6900	52/71	1820	970	1880	125	40	670	2040
ELT-K 630-12-6R	630	12	6	1250	7000	8000	53/70	1510	800	1570	125	40	670	1740
ELT-K 630-24-6R		24	6	1350	8000	8500	52/70	1540	930	1810	125	40	670	1820
ELT-K 630-36-6R		36	6	2150	7800	8800	52/72	1930	980	1960	125	40	670	2750
ELT-K 630-36-8R		36	8	2000	8000	8800	52/72	1800	970	1900	125	40	670	2350

Standard vector group is Dyn11. Alternatively other connection groups are available upon request.
Dimensions and weights are subject to change without notice.





1) Y.G. Ayar Değiştirme / H.V. Tapping Link
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4) A.G. Nötr Terminali / L.V. Neutral Terminal
5) Sıcaklık Kontrol Sistemi Klemens Kutusu / Terminal Box For Temperature Control System
6) Y.G. Bağlantılı Terminalleri / H.V. Connection Terminals
7) Soğutucu Fanlar / Cooling Fans
8) Tekerlekler / Whells
9) İsim Plakası / Name Plate

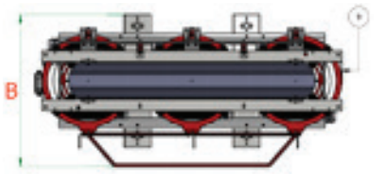
Technical data of 800-1250 KVA LV/HV Aluminum Wound 50 Hz. Cast Resin Dry Type Dist. Transformers acc. to the standard losses referenced by IEC 60076-11

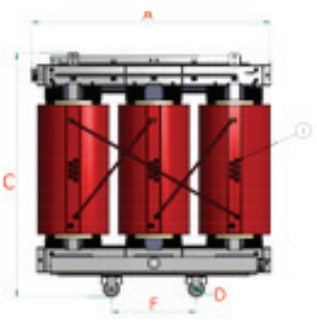
Type	Rated Power	Max. voltage	Impedance voltage (at 75°C)	No-load losses	Load losses (at 75°C)	Load losses (at 120°C)	Sound-level	Dimensions (mm)						Weight (kg)
IEC 60076-11	Sn	Um	Uk	Po	Pk	Pk	Lpa/Lwa							
Standart Losses	kVA	kV	(%)	W	W	W	dB	A	B	C	D	E	F	
ELT-K 800-12-6	800	12	6	1700	8500	9400	54/72	1670	990	1590	125	40	820	2070
ELT-K 800-24-6		24	6	2000	8500	9400	54/72	1760	1060	1830	125	40	820	2420
ELT-K 800-36-6		36	6	2750	8500	9400	54/74	2050	1100	1980	125	40	820	3190
ELT-K 800-36-8		36	8	2500	9500	10400	54/74	2020	1080	1920	125	40	820	2800
ELT-K 1000-12-6	1000	12	6	2150	9200	10300	54/73	1670	990	1730	160	50	820	2490
ELT-K 1000-24-6		24	6	2400	10000	11000	54/73	1900	1080	1790	160	50	820	2850
ELT-K 1000-36-6		36	6	2900	10500	11500	54/75	2020	1090	2230	160	50	820	3500
ELT-K 1000-36-8		36	8	2600	12000	13000	54/75	1980	1090	2190	160	50	820	3010
ELT-K 1250-12-6	1250	12	6	2600	11500	13000	56/75	1760	990	1830	160	50	820	2860
ELT-K 1250-24-6		24	6	2950	12000	13000	56/75	1960	1090	1850	160	50	820	3330
ELT-K 1250-36-6		36	6	3500	11000	12000	56/77	2120	1120	2290	160	50	820	4230
ELT-K 1250-36-8		36	8	3100	12000	13500	56/77	2060	1090	2210	160	50	820	3760

Technical data of 800-1250 KVA LV/HV Aluminum Wound 50 Hz. Cast Resin Dry Type Dist. Transformers acc. to the reduced losses referenced by IEC 60076-11

Type	Rated Power	Max. voltage	Impedance voltage (at 75°C)	No-load losses	Load losses (at 75°C)	Load losses (at 120°C)	Sound-level	Dimensions (mm)						Weight (kg)
IEC 60076-11	Sn	Um	Uk	Po	Pk	Pk	Lpa/Lwa							
Reduced Losses	kVA	kV	(%)	W	W	W	dB	A	B	C	D	E	F	
ELT-K 800-12-6R	800	12	6	1450	8500	9400	54/72	1670	990	1590	125	40	820	2070
ELT-K 800-24-6R		24	6	1700	8500	9400	54/72	1760	1060	1830	125	40	820	2420
ELT-K 800-36-6R		36	6	2350	8500	9400	54/74	2050	1100	1980	125	40	820	3190
ELT-K 800-36-8R		36	8	2100	9500	10400	54/74	2020	1080	1920	125	40	820	2800
ELT-K 1000-12-6R	1000	12	6	2150	9200	10300	54/73	1670	990	1730	160	50	820	2490
ELT-K 1000-24-6R		24	6	2400	10000	11000	54/73	1900	1080	1790	160	50	820	2850
ELT-K 1000-36-6R		36	6	2450	10500	11500	54/75	2020	1090	2230	160	50	820	3500
ELT-K 1000-36-8R		36	8	2600	12000	13000	54/75	1980	1090	2190	160	50	820	3010
ELT-K 1250-12-6R	1250	12	6	2200	11500	13000	56/75	1760	990	1830	160	50	820	2860
ELT-K 1250-24-6R		24	6	2500	12000	13000	56/75	1960	1090	1850	160	50	820	3330
ELT-K 1250-36-6R		36	6	2950	11000	12000	56/77	2120	1120	2290	160	50	820	4230
ELT-K 1250-36-8R		36	8	2650	12000	13500	56/77	2060	1090	2210	160	50	820	3760

Standard vector group is Dyn11. Alternatively other connection groups are available upon request.
Dimensions and weights are subject to change without notice.





1) Y.G. Ayar Değiştirme / H.V. Tapping Link
2) A.G. İzolatörü / L.V. Insulator
3) A.G. Faz Terminalleri / L.V. Phase Terminals
4) A.G. Nötr Terminali / L.V. Neutral Terminal
5) Sıcaklık Kontrol Sistemi Klemens Kutusu / Terminal Box For Temperature Control System
6) Y.G. Bağlantılı Terminalleri / H.V. Connection Terminals
7) Sogutucu Fanlar / Cooling Fans
8) Tekerlekler / Whells
9) İsim Plakası / Name Plate

Technical data of 1600-3150 KVA LV/HV Aluminum Wound 50 Hz. Cast Resin Dry Type Dist. Transformers acc. to the standard losses referenced by IEC 60076-11

Type	Rated Power	Max. voltage	Impedance voltage (at 75°C)	No-load losses	Load losses (at 75°C)	Load losses (at 120°C)	Sound-level	Dimensions (mm)						Weight (kg)
IEC 60076-11	Sn	Um	Uk	Po	Pk	Pk	Lpa/Lwa							
Standart Losses	kVA	kV	(%)	W	W	W	dB	A	B	C	D	E	F	
ELT-K 1600-12-6	1600	12	6	2800	14000	15500	57/76	1710	990	2150	160	50	820	3380
ELT-K 1600-24-6		24	6	3000	13500	15000	56/76	1900	1080	2210	160	50	820	3760
ELT-K 1600-36-6		36	6	4000	13500	15000	56/78	2180	1120	2350	160	50	820	4780
ELT-K 1600-36-8		36	8	3700	15400	16600	56/78	2150	1120	2270	160	50	820	4200
ELT-K 2000-12-6	2000	12	6	3500	17500	19500	56/77	1930	1280	2250	200	70	1070	4150
ELT-K 2000-24-6		24	6	3900	17500	19000	56/77	2060	1280	2300	200	70	1070	4580
ELT-K 2000-36-6		36	6	5100	17500	18000	56/79	2280	1140	2360	200	70	1070	5650
ELT-K 2000-36-8		36	8	4200	18000	19000	56/79	2170	1280	2380	200	70	1070	4860
ELT-K 2500-12-6	2500	12	6	4500	19500	21000	61/77	2010	1280	2290	200	70	1070	5100
ELT-K 2500-24-6		24	6	5000	20000	21200	61/77	2200	1280	2340	200	70	1070	5590
ELT-K 2500-36-6		36	6	6100	19500	20500	61/77	2480	1320	2530	200	70	1070	6820
ELT-K 2500-36-8		36	8	5300	21800	22500	61/77	2380	1300	2480	200	70	1070	6150
ELT-K 3150-12-7	3150	12	7	5000	26500	28500	61/77	2300	1280	2330	200	70	1070	5860
ELT-K 3150-24-7		24	7	5200	27000	29500	61/77	2390	1310	2380	200	70	1070	6030
ELT-K 3150-36-8		36	8	7000	23500	25500	61/77	2760	1370	2500	200	70	1070	8260

Technical data of 1600-3150 KVA LV/HV Aluminum Wound 50 Hz. Cast Resin Dry Type Dist. Transformers acc. to the reduced losses referenced by IEC 60076-11

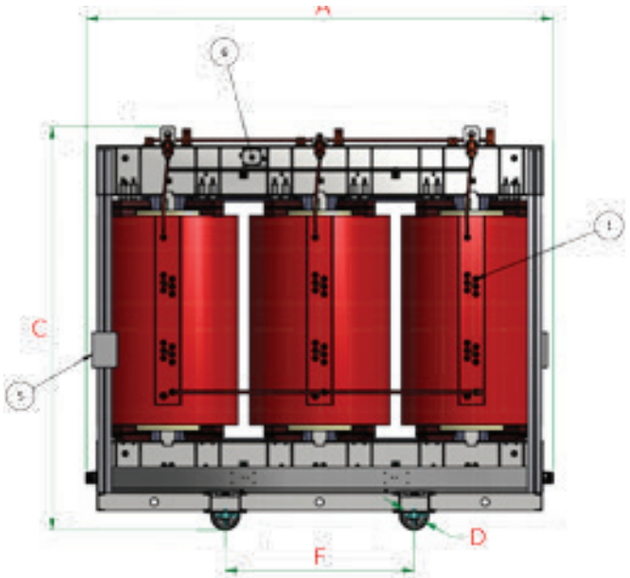
Type	Rated Power	Max. voltage	Impedance voltage (at 75°C)	No-load losses	Load losses (at 75°C)	Load losses (at 120°C)	Sound-level	Dimensions (mm)						Weight (kg)
IEC 60076-11	Sn	Um	Uk	Po	Pk	Pk	Lpa/Lwa							
Reduced Losses	kVA	kV	(%)	W	W	W	dB	A	B	C	D	E	F	
ELT-K 1600-12-6	1600	12	6	2800	14000	15500	57/76	1710	990	2150	160	50	820	3380
ELT-K 1600-24-6		24	6	3000	13500	15000	56/76	1900	1080	2210	160	50	820	3760
ELT-K 1600-36-6		36	6	4000	13500	15000	56/78	2180	1120	2350	160	50	820	4780
ELT-K 1600-36-8		36	8	3700	15400	16600	56/78	2150	1120	2270	160	50	820	4200
ELT-K 2000-12-6	2000	12	6	3500	17500	19500	56/77	1930	1280	2250	200	70	1070	4150
ELT-K 2000-24-6		24	6	3900	17500	19000	56/77	2060	1280	2300	200	70	1070	4580
ELT-K 2000-36-6		36	6	5100	17500	18000	56/79	2280	1140	2360	200	70	1070	5650
ELT-K 2000-36-8		36	8	4200	18000	19000	56/79	2170	1280	2380	200	70	1070	4860
ELT-K 2500-12-6	2500	12	6	4500	19500	21000	61/77	2010	1280	2290	200	70	1070	5100
ELT-K 2500-24-6		24	6	5000	20000	21200	61/77	2200	1280	2340	200	70	1070	5590
ELT-K 2500-36-6		36	6	6100	19500	20500	61/77	2480	1320	2530	200	70	1070	6820
ELT-K 2500-36-8		36	8	5300	21800	22500	61/77	2380	1300	2480	200	70	1070	6150
ELT-K 3150-12-7	3150	12	7	5000	26500	28500	61/77	2300	1280	2330	200	70	1070	5860
ELT-K 3150-24-7		24	7	5200	27000	29500	61/77	2390	1310	2380	200	70	1070	6030
ELT-K 3150-36-8		36	8	7000	23500	25500	61/77	2760	1370	2500	200	70	1070	8260

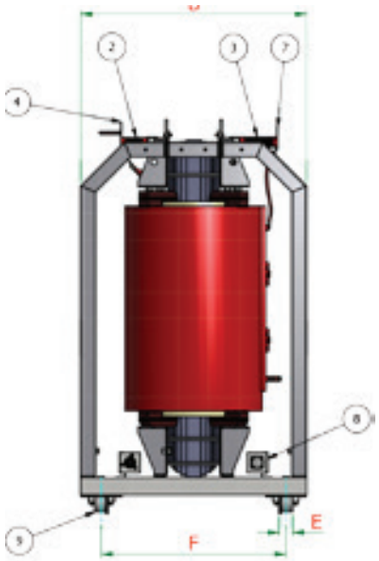
Standard vector group is Dyn11. Alternatively other connection groups are available upon request.
Dimensions and weights are subject to change without notice.

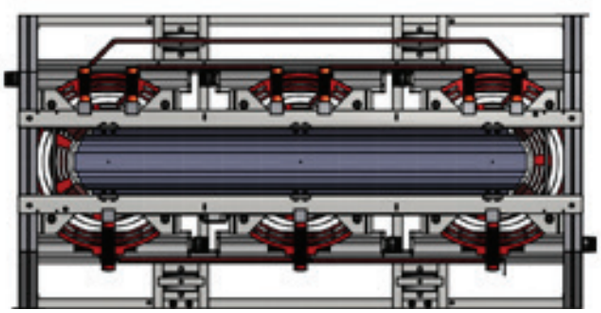
Technical data of 4000-8000 KVA LV/HV Aluminum Wound 50 Hz. Cast Resin Dry Type Dist. Transformers acc. to the standard losses referenced by IEC 60076-11

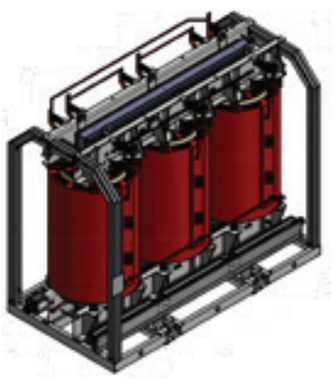
Type	Rated Power	Vector Group	Rated Voltage	Impedance voltage (at 75°C)	No-load losses	Load losses (at 75°C)	Load losses (at 120°C)	Sound-level	Dimensions (mm)						Weight (kg)
IEC 60076-11	Sn			Uk	Po	Pk	Pk	Lpa/Lwa							
Power Transformers	kVA		kV	(%)	W	W	W	dB	A	B	C	D	E	F	
ELT-K 4000-24-7	4000	Dyn11	20 / 0,4	7	6700	30000	32000	61/77	2560	1840	2460	200	110	1505	7720
ELT-K 4000-36-8		Dyn11	34,5 / 0,4	8	8500	29000	31000	61/77	2920	1840	2590	200	110	1505	9570
ELT-K 5000-24-7	5000	Dyn11	20 / 6,3	7	7700	33000	37000	64/81	2720	1840	2910	200	110	1505	10140
ELT-K 5000-36-8		Dyn11	34,5 / 6,3	8	8700	34000	38000	64/81	2980	1840	2900	200	110	1505	10730
ELT-K 6300-24-7	6300	Dyn11	20 / 6,3	7	9700	35000	38000	64/81	2890	1840	2830	200	110	1505	11970
ELT-K 6300-36-8		Dyn11	34,5 / 6,3	8	11200	36000	39000	64/81	3140	1840	2890	200	110	1505	13220
ELT-K 8000-24-7	8000	YNd5	10,5/20	7	13000	45000	50000	66/85	3310	1840	3020	200	110	1505	16110
ELT-K 8000-36-10		YNd5	10,5/34,5	10	14000	46000	52000	66/85	3550	1840	3210	200	110	1505	18000

Standard vector group is Dyn11. Alternatively other connection groups are available upon request.
Dimensions and weights are subject to change without notice.









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Quality Management

ELTAS AS using philosophy of Total Quality Management. Starting from the top management, it is ensured that all employees involved in the process with the goal of continuous improvement of products and processes are constantly under scrutiny and responsibility and decision making are given to all employees.

From the purchase of raw materials to product delivery and service, all processes and procedures defined in quality management system is subjected to the control.

Quality is not limited only on the product also the aim is to prevent damage as much as possible to the environment. Less carbon emissions, more efficient use of resources are some of the factors be considered.

Our motto is " The Power Created By Quality" strongly defines where Eltas is.

Our Quality Certificates :

- Quality Management System Certificate TS ISO 9001:2008
- Environmental Management System Certificate TS ISO 14001:2004
- Occupational Health and Safety Management System Certificates TS ISO 18001:2008
- International Accreditation Certificates TS EN ISO IEC 17025

DRY TYPE TRANSFORMER

CLIENT REFERENCE

PTT WANGNOI TRAINING CENTER

SP CONTRACTING CO., LTD. PROJECT : CENJURY

JETION SOLAR (THAILAND) CO., LTD.

DRY TYPE TRANSFORMER

CLIENT REFERENCE : BY ELTAS TURKEY

IEO TRANSFORMERS (NETHERLAND)

GAMA POWER SYSTEM (IRAQ)

SAHIN CONSTRUCTION (TERKMENISTAN)

SG ELECTRIC EQUIPMENT (RUSSIA)