

EXCELLENCE IN ELECTRIC

# TRANSFORMERS

## THREE PHASE DRY TYPE TRANSFORMERS

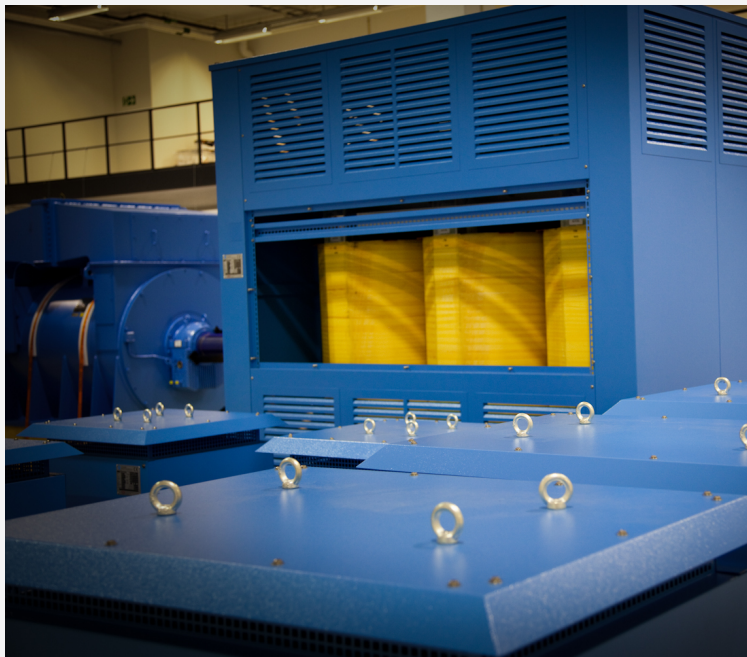


EXCELLENCE IN ELECTRIC



norwegian  
electric systems

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## TRANSFORMERS

### APPLICATION

Norwegian Electric Systems offers a complete range of low and medium voltage transformers for Marine. The transformers are designed to offer not only the best possible reliability but also the best technical solution and quality for any marine system.

- Marine distribution transformers
- Step-down transformers
- Auto transformers
- Phase Shift transformers
- Reactors
- Multi winding
- Transformers

### FEATURES:

- Norwegian Electric transformers are designed with a strong focus on reliability and electrical stability.
- Installation requirements are ever more demanding with an emphasis on reduced noise and vibration levels, limited space and a high degree of security to avoid human risks. Norwegian Electric Transformers meet all these demands.
- Our transformers for marine distribution application are designed according to IEC60076-1 with manufacturing approved by DNV, ABS, Lloyd's, Bureau Veritas, RINA etc.
- Norwegian Electric Transformers are impregnated with high-grade resin using a VPI process.
- Active parts are designed by utilizing the latest technologies and the best materials available, guaranteeing high efficiency values.





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## ELECTRICAL FEATURES

### POWER RANGE:

50 – 6000kVA at low and medium voltage.

### FREQUENCY:

50 or 60Hz as standard. Other frequencies on request.

### INSULATION AND TEMPERATURE RISE CLASS:

Class F insulation system as standard

Class F Temp rise as standard

### WINDINGS AND IMPREGNATION:

All windings are vacuum pressure impregnated (VPI) with high grade resin in order to withstand all expected mechanical & electrical shocks and vibrations.

### PROTECTION DEGREE:

Norwegian Electric Transformers are supplied with protection degree IP 23 air cooled (AN) with internal connections. As an option the transformer can be supplied with connections in an external terminal box. The transformers are equipped with removable bottom plates for easy cable access.

### VECTOR GROUP:

Dyn11 as standard, Dyn5Ynd5 or others can be supplied as option.

### STANDARDS:

Designed acc. to: IEC 60726, LVD73/23/EEC and DNV, ABS, LR, RINA and more.

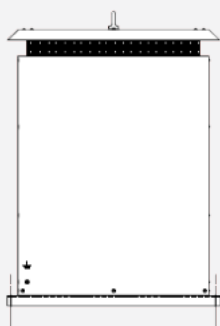
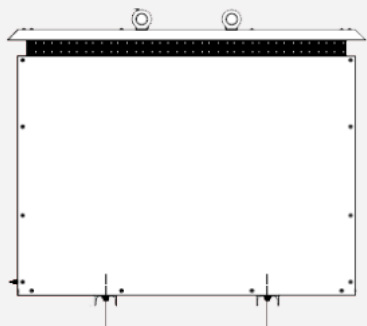
### OPTIONS:

- Anti-condensation heaters.
- PT 100 sensors to monitor the winding temperature.
- Vibration dampers
- External connection box.

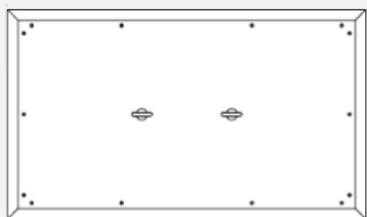
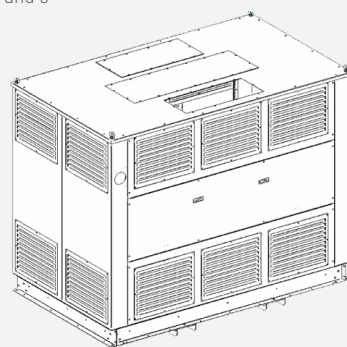
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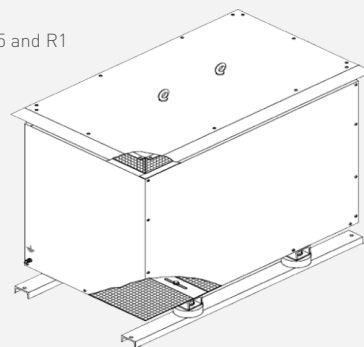




Box Type 3,4 and 5



Box Type R0,5 and R1



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Typical dimensions: 3-PHASE TRANSFORMERS IP23

Power [kVA]	Box type	Length [mm]	Width [mm]	Height [mm]	Weight [kg]
10	Type 3	740	650	800	140
30	Type 3	740	650	800	260
40	Type 3	740	650	800	260
50	Type 4	860	750	950	301
63	Type 4	860	750	950	331
80	Type 4	860	750	950	382
100	Type 4	860	750	950	440
120	Type 5	1100	850	1150	500
125	Type 5	1100	850	1150	540
130	Type 5	1100	850	1150	600
160	Type 5	1100	850	1150	650
200	Type 5	1100	850	1150	750
250	Type 5	1100	850	1150	750
315	Type 5	1100	950	1150	880
320	Type 6	1600	950	1500	950
400	Type 6	1600	950	1500	1090
450	Type 6	1600	950	1500	1200
500	Type 6	1600	950	1500	1290
600	Type 6	1600	950	1500	1410
630	Type 6	1600	950	1500	1511
800	Type R 0,5	1700	1000	1600	1830
1000	Type R 0,5	1700	1000	1600	2170
1250	Type R 0,5	1700	1000	1600	2620
1600	Type R 0,5	1700	1000	1600	2970
1800	Type R 1	1950	1250	2200	3420
2000	Type R 1	1950	1250	2200	3670
2500	Type R 2	2500	1250	2200	3900
3000	Type R 2	2500	1400	2600	5000

All data are indicative and is subject to change without notice.