

TOSHIBA

TRANSFORMERS



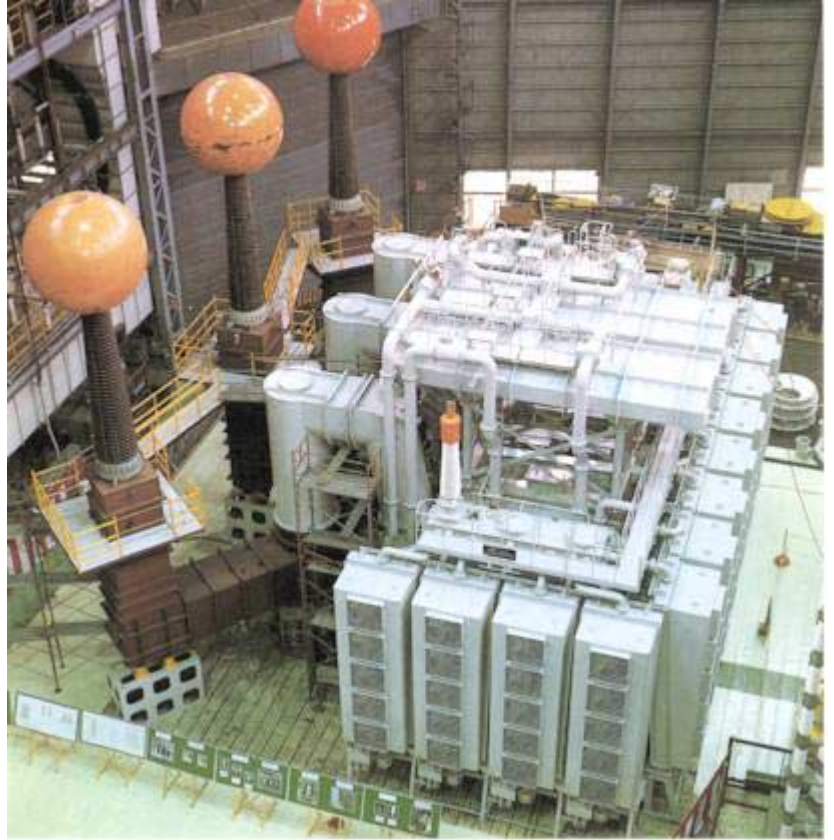
1 1,200MVA TRANSFORMERS

Three-phase, Forced-oil forced-air cooled, 50Hz, 18.525kV-550/537.5/525/512.5kV

For Fukushima Nuclear Power Station of Tokyo Electric Power Co., Inc.

The transformer is the biggest one in Japan.

High voltage terminals are connected with oil-filled cables.



Under shop testing



Under transportation



In operation at site

2 680MVA 9-SUBDIVIDED ON-LOAD TAP-CHANGING TRANSFORMERS

**Three-phase, Forced-oil forced-water cooled,
60Hz, 11kV-550~468.75kV (27 taps)**

For Okuyoshino Pumped Storage Power Station
of Kansai Electric Co., Inc.



3 1,000/3MVA ON-LOAD TAP-CHANGING AUTO-TRANSFORMERS

**Single-phase, Forced-oil forced-air cooled,
50Hz, 527.7~500~477.7/√3kV (23 taps)
-275/√3kV-63kV
500kV, 1,000MVA Transformer-bank**

For Shin-Koga Substation of Tokyo Electric Power
Co., Inc.

The transformers are the first 500kV one in Japan.



**Single-phase, Forced-oil forced-air cooled,
50Hz, 527.7~500~477.7/ $\sqrt{3}$ kV
(23 taps)-_275/ $\sqrt{3}$ kV-63kV
500kV, 1,500MVA Transformer-bank**

For Shin-Tokorozawa Substation of Tokyo Electric Power Co., Inc.

The transformers are the biggest one in Japan



Under transportation by rail

5 750/3MVA ON-LOAD TAP-CHANGING TRANSFORMERS

**Single-phase, Forced-oil forced-air cooled,
60Hz, 525~500~443.8/ $\sqrt{3}$ kV(27 taps)-
154/ $\sqrt{3}$ kV-22kV
with noise enclosure made of steel housing**

For Inagawa Substation of Kansai Electric
Power Co., Inc.



6 150MVA ON-LOAD TAP-CHANGING TRANSFORMERS

**Three-phase, Forced-oil forced-air cooled,
60Hz, 168~140kV (13 taps)-77kV
with noise enclosure made of concrete
panel housing**

For Hokuse Substation of Chubu Electric
Power Co., Inc.



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805.5/3MVA UHV TRANSFORMERS

Single-phase, Forced-oil forced-air cooled,
60Hz,
 $18\text{kV} \frac{822.4/803.3/784/765/745.9}{\sqrt{3}} \text{ kV}$

For Guri Power Station of C.V.G.
Electrificacion del Caroni C.A. (EDELCA),
Venezuela



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390MVA ON-LOAD TAP-CHANGING TRANSFORMERS

Three-phase, Forced-oil forced-air cooled,
50Hz, 23kV-583~450.5kV (21 taps)

For Eraring Power Station of The Electricity
Commission of New South Wales, Australia



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240/320/400MVA AUTO-TRANSFORMERS

Three-phase, Oil-immersed self-cooled/
Forced-air cooled/Forced-oil forced-air
cooled,
60Hz, 537.5/525/512.5/500/487.5kV-
230kV-13.38kV (80/107/133MVA)

For Mesquita Substation of Cantrais Ele'ctricas
de Minas Gerais, Brazil



10 448MVA ON-LOAD TAP-CHANGING AUTO-TRANSFORMERS

Single-phase, Forced-oil forced-air cooled,
60Hz, $525 \pm 25/\sqrt{3}$ kV (17 taps)-
 $241.5/\sqrt{3}$ kV-34.5kV (25MVA)

For Covington Substation of Bonneville
Power Administration, U.S.A.



11 222/333MVA ON-LOAD TAP-CHANGING AUTO-TRANSFORMERS

Single-phase, Oil-immersed self-cooled/
Forced-oil forced-air cooled,
50Hz, 525~425/ $\sqrt{3}$ kV (17 taps)-
220/ $\sqrt{3}$ kV-22kV (1MVA)

For Moorabool Terminal Substation of State
Electricity Commission of Victoria, Australia



12 200MVA 3-SUBDIVIDED ON-LOAD TAP-CHANGING TRANSFORMERS

Three-phase, Forced-oil forced-air cooled,
60Hz, 161/154/147+11.55kV-69kV-
11kV (40MVA)

For Taiwan Power Company, Taiwan



13 50/75MVA ON-LOAD TAP-CHANGING AUTO-TRANSFORMERS

Single-phase, Oil-immersed Self-cooled/
Forced-oil forced-air cooled,
60Hz, 362.25~310.5kV (7 taps)-253~
207kV (17 taps)-13.8kV (16.67/25MVA)

For Taquaril Substation of Centrais Ele'ctricas de
Minas Gerais, Brazil



14 80MVAr SHUNT REACTORS

Three-phase, Forced-oil forced-air cooled,
50Hz, 380kV

For Carsamba Substation, Republic of Turkey



15 50MVAr SHUNT REACTOR BANKS

Single-phase, Oil-immersed self-cooled,
50Hz, 500kV,

For San Javier of Salto Grande Project, Uruguay



16 45MVAr CURRENT LIMITING REACTORS

Three-phase, Forced-oil self cooled,
60Hz, 154kV, 14%, 1,200A
Current Limiting Reactor

For Nishi-Nagoya Substation of Chubu Electric
Power Co., Inc.



17 75MVA FURNACE TRANSFORMERS

Three-phase, Forced-oil forced-water cooled,
60Hz, 154kV/940V

For Kobe Steel, Ltd.



18 35.9MVA RECTIFIER TRANSFORMERS

Three-phase, Oil-immersed forced-air cooled,
50Hz, 33kV/686V

For P.T. Asahan Aluminium, Indonesia



19 700MVA ON-LOAD TAP-CHANGING TRANSFORMERS

**Three-phase, Forced-oil forced-air cooled,
50Hz, 20kV-420±31.5kV (13 taps)**

For Matla Thermal Power Station of Electricity
Supply Commission, S.A.



20 480/800MVA ON-LOAD TAP-CHANGING AUTO-TRANSFORMERS

**Three-phase, Oil-immersed self-cooled/
Forced-oil forced-air cooled,
50Hz, 400~340kV (13 taps)-275kV-22kV (40MVA)**

For Glochner Substation of Electricity Supply
Commission, S.A.



TOSHIBA

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