



TRUST. WELL EARNED.

## 2-Pole Air Cooled Generators

BRUSH is a premier OEM of generators with more than 100 years of industry leading design innovation and technology development.



### Introduction

BRUSH Generators are built upon years of knowledge and experience. Our position as the largest interdependent generator manufacturer allows us to deliver bespoke highly customised solutions specific to your needs.

The 2-pole air cooled generator range driven by steam or gas turbine outputs from 10 MVA – 350 MVA.

With over 3,500 active installations, the time-proven DAX range built in European ISO accredited sites are specified by leading industrialists, EPCs and facility operators.

### Key Features

- High efficiency up to 98.6%
- Quick installation times Rotor is typically installed in unit during transportation
- Modular generator architecture Reduces lead time, and proven designs for customised projects
- Flexible heat exchanger options Open Air Vent CACA / TEAAC CACW / TEWAC
- "Service 24" Provides one number to call for worldwide support. Gives clear understanding of who to call in case of need. Reduced turnaround time on maintenance issues

### Technical Specifications

#### Voltage

Up to 20 kV

#### Excitation

Brushless or Static

#### Insulation

Class F

#### Frequency

50 or 60 Hz

#### Output

10 to 350 MVA

#### Drive

Single or Double End Drive

#### Driver

Aeroderivative Gas turbine / Heavy frame Gas Turbine / Steam turbine

#### Design Standards

IEC & IEEE Compliant  
Can be designed to meet local regulations



## Options

- Low temperature operation
- Low noise
- Lightweight
- Hazardous area operation
- Multiple heat exchanger options
- Double end drive
- High inertia
- Low inertia
- Harsh environment
- Capable of synchronous compensator operation

## Generator Design

Our depth of knowledge allows us to provide optimised product selections for standard applications, and customised solutions to meet the demands of extreme climatic conditions, hazardous atmospheres and regulated urban locations.

## Stator

The stator frame is designed to withstand mechanical stresses under fault conditions. The windings are insulated with a resin rich mica glass tape, which provides excellent insulation performance at temperatures up to class F.



## Rotor

The rotor is fabricated from a one-piece forging of de-gassed nickel chromium molybdenum, which provides excellent tensile properties.

The rotor winding conductor material is high conductivity copper/ silver alloy strip with each turn being insulated with Class F insulation.

The end-windings are held in place by retaining rings manufactured from austenitic non-magnetic 18-18 manganese chromium steel.



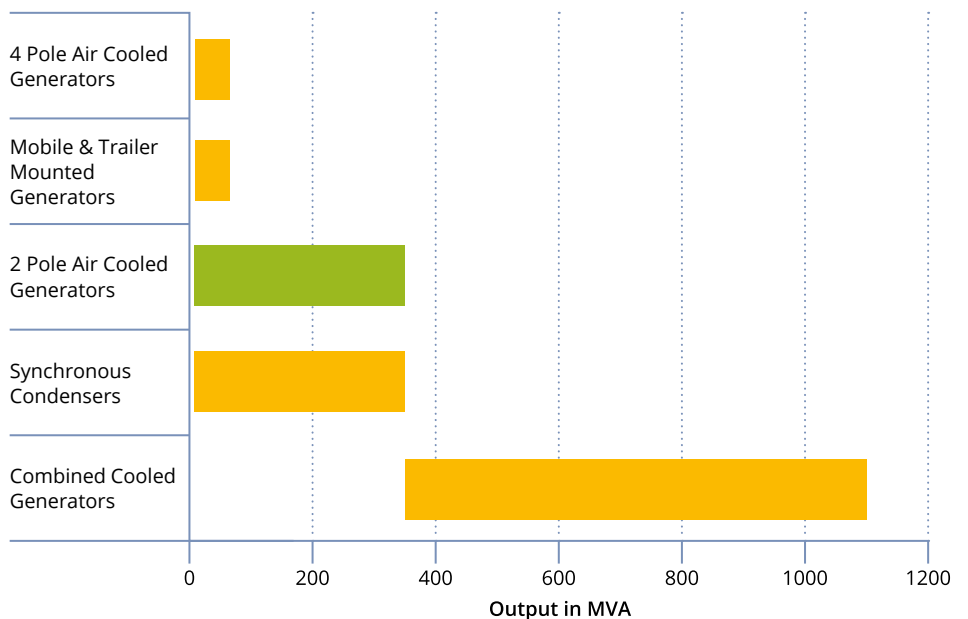
## Excitation

Brushless excitation consists of three-phase, rotating armature, alternating current generator, with a shaft-mounted fused rotating rectifier.

An alternative to brushless excitation is static excitation which is accomplished by routing power from the generator through transformers through a controlled rectifier to the main field through slip rings.



## Output Range



## BRUSH

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