

# Increase reliability and service life of large motors

SKF Static Motor Analyzer Power Packs boost voltage test ranges of SKF static motor analyzers

## Benefits

- Boost test voltage ranges of SKF static motor analyzers
- Accurately test large motors and motor components
- Extend motor service life
- Minimize unexpected motor failures
- Optimize productivity
- Improve worker safety
- Easy transport to testing areas

## Features

- Test voltages from 5–40 kV
- Up to 2 600 Amps of available current
- Complete range of tests
- Multiple safety features
- Large wheels for mobility
- AC outlet and storage area for leads



High-voltage motors drive most of the critical machinery in industrial plants and organizations. When these large motors fail, productivity and profitability suffer. That's why it is essential that maintenance personnel and motor manufacturers be able to predict if or when they may fail. However, testing larger motors requires equipment that can perform tests at voltages as high as 40 kV.

SKF Static Motor Analyzer power packs (the Baker PP24, Baker PP30, Baker PP40 and Baker PP85) provide this capability by boosting the test voltage ranges of SKF's world-renowned static motor analyzers (the Baker DX and Baker AWA-IV series) up to 40 kV. This extension of test voltage range makes these power pack/analyzer combinations ideal for assessing the strength of insulation on form-wound coils, high-voltage AC motors and large DC motors.

**Minimize failures and extend the service life of large motors and motor components with SKF Static Motor Analyzer power packs; Baker PP24, Baker PP30, Baker PP40 and Baker PP85**

## Accurately assess high voltage windings with a complete range of tests

Effective testing of high voltage coil insulation requires a number of different tests to validate and locate insulation weaknesses and defects. SKF power packs used with SKF static motor analyzers thoroughly test the ground wall insulation between a motor stator's core and windings with multiple methods, including:

- Megohm test
- Step (ramp) test
- High-potential (hipot) test
- Polarization index (PI) and dielectric adsorption (DA) tests

The strength of winding (turn-to-turn) and phase-to-phase insulation is assessed with:

- Surge test
- Pulse-to-pulse error-area ratio (PP-EAR) analysis

Coil resistance, inductance and capacitance measurements are made to assure proper winding construction and materials have been used in the coils, and that the assembly of the coils into the motor was performed correctly.

## Improve worker safety

To minimize the risks of working with high-voltage motor test equipment, SKF power packs and analyzers feature:

- Test lead that exceeds power pack maximum test voltages (60 kV rated)
- Highly visible, easy-to-reach emergency stop (e-stop) buttons
- Available remote e-stop switches and safety lights (for power packs only)

To further increase safety, all power packs require deliberate, multiple actions to initiate a given test (e.g. combined use of a foot switch and a front panel button). Also, tests can't begin unless the test voltage is set to zero volts (can be overridden), or if an open (AC power) ground lead is detected. Finally, external contacts for light curtains or other third-party safety devices are available.

## Choose the model that meets your needs

- Baker PP24 provides up to 24 kV of test voltage, has a single test lead and is packaged in a 19 in. rack without wheels
- Baker PP30: Provides up to 30 kV of test voltage and has three switchable test leads for simple connections to three-phase motors
- Baker PP40: Single-lead tester that performs at test voltages up to 40 kV
- Baker PP85: Features an internal armature test circuit for testing large DC motors and components. When in armature mode, the test voltage is limited to 2 100 V; however, the available current is extended to 7 000 Amps

Baker PP30, Baker PP40 and Baker PP85 models are designed within a cabinet featuring large 8 in. (203,2 mm) wheels for easy transport to testing areas, an AC outlet for the host static motor analyzer and a storage area for power pack leads.

	Baker PP24	Baker PP30	Baker PP40	Baker PP85
<b>Surge test</b>				
Maximum output voltage	24 000 V	30 000 V	40 000 V	30 000 V
Maximum output current with leads shorted together	1 000 A	1 400 A	2 600 A	1 400 A
Maximum impulse energy	20 J	45 J	120 J	45 J
Accuracy	12%	12%	12%	12%
<b>DC high potential test</b>				
Maximum output voltage	24 000 V	30 000 V	40 000 V	30 000 V
Voltage accuracy	3%	3%	3%	3%
Maximum output current	1 000 µA	1 000 µA	1 000 µA	1 000 µA
Current accuracy	5%	5%	5%	5%
Overcurrent trip	10/100/1 000 µA	10/100/1 000 µA	10/100/1 000 µA	10/100/1 000 µA
Current resolution	1/10/100 µA	1/10/100 µA	1/10/100 µA	1/10/100 µA
<b>Armature bar-to-bar test (Baker 85 only)</b>				
Maximum voltage	–	–	–	(no load) 2 100 V
Maximum current	–	–	–	7 000 A
Maximum pulse energy	–	–	–	45 J
Maximum test inductance	–	–	–	20 µH
Minimum test inductance	–	–	–	0.4 µH
<b>Physical characteristics</b>				
Weight	130 lbs (58.9 kg)	250 lbs (113,4 kg)	305 lbs (138,3 kg)	270 lbs (122,5 kg)
Dimensions	25 x 17 x 20 in (625 x 432 x 508)	24 x 51 x 26 in (610 x 1 295 x 660 mm)	24 x 51 x 26 in (610 x 1 295 x 660 mm)	24 x 51 x 26 in (610 x 1 295 x 660 mm)
Power requirements	110 V, 15 A, 50/60 Hz 220 V, 8 A, 50/60 Hz	110/220 V, 50/60 Hz, 1 000 W	110/220 V, 50/60 Hz, 1 000 W	110 V, 60 Hz, 1 000 W 220 V, 50 Hz, 1 000 W
Test leads	1	3	1	3+1 (armature)
<b>Operates with</b>	Baker AWA, DX	Baker AWA, DX	Baker DX	Baker AWA, DX
<b>Options: Transport lift strap kit, zero-start override, safety lights and foot switch</b>				
NOTE: All models are compliant with IEEE522-2004 and IEC 34-15.				