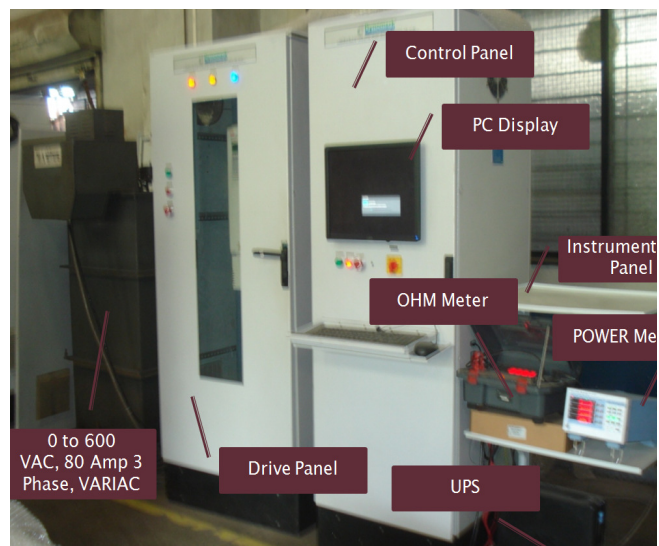
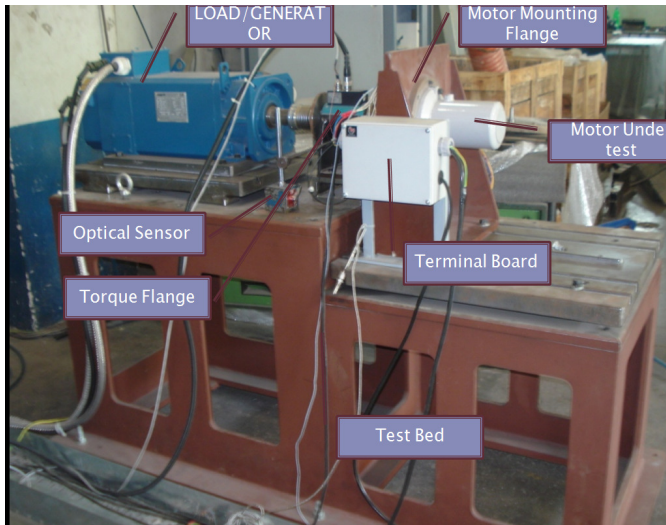


AC Induction Motor Test Bench



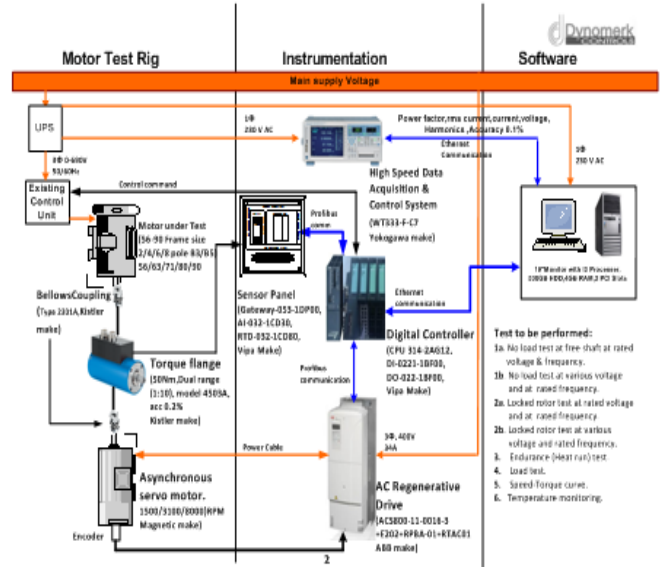
APPLICABLE STANDARDS -

- IEEE112
- CSA standard-C 390



Specifications

Motor Type:	Induction Motor (slip-ring/ squirrel ca)
Phases:	3 Phase / 1 Phase
Voltage Range:	0 to 690 V Ac
Frequency:	50 / 60Hz
Frame Size:	56 to 132 Frames (Foot /Face Mounting)



TEST MOTOR PERFORMANCE CALCULATIONS-

- ✓ Stator Winding Temperature Rise by resistance method
- ✓ Dynamometer Torque Correction
- ✓ Core Loss / Friction & Windage Loss/ Stray Loss
- ✓ Correlation Coefficient γ (Gama)
- ✓ Efficiency Calculations at different Load Points

OVERALL ACCURACY

0.2% for Following Measurements

- Voltage Measurement:	0 to 690 V AC
- Frequency Measurement:	0 to 100 Hz
- Current Measurement:	0 to 100 Amp
- Power Factor Measurement:	0.1 lag to 0.99 lag
- Torque Measurement:	0 to 5 Nm/ 0 to 50 Nm
- Speed Measurement:	0 to 3600 rpm
- Temp Measurement:	0 to 100 °C
- Resistance Measurement:	20 mΩ to 2000Ω

TESTS FOR INTERNATIONAL STANDARD MOTORS-

- ✓ Insulation Resistance
- ✓ High Voltage Test
- ✓ Cold Resistance (Ambient Temp, Winding Temp & average resistance)
- ✓ Cold Resistance-Heat Run / Endurance/Temp Rise @ rated voltage & rated load (till thermal equilibrium),
- ✓ Load Test @ Rated Voltage (150%, 125%, 100%, 75%, 50%, 25%,)
- ✓ No Load @ Rated voltage
- ✓ No load @ various voltage (125%,110% 100% 90% 80% 70% 60%, 50% 40% 30% 20%)
- ✓ Lock Rotor Test @ Rated Voltage
- ✓ Lock rotor test @ Various voltage
- ✓ Speed Torque Curve
- ✓ Low voltage run-up at $1/\sqrt{3}$ rated voltage in both directions (with no load)



Resistance Measurement

- Back-Emf Protection
- Heat Run Test
- 4 ½ digit Large & Clear display
- Accurate and Stable Readings
- PC Interface
- 4 Wire Measurement Method



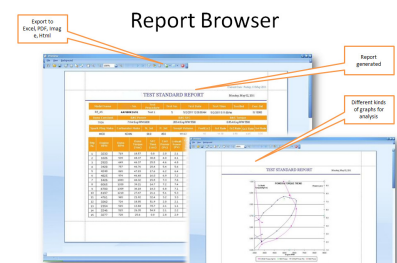
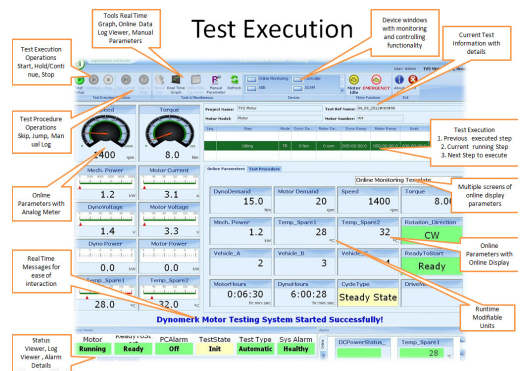
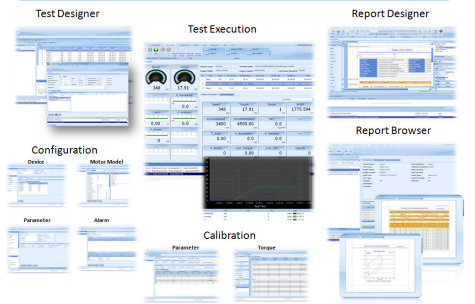
- Rated torque: 5 ... 20 000 N·m
- Ratio for second range: 1:10 or 1:5 of rated torque
- Speed ranges up to 12 000 1/min
- Accuracy class in standard range: 0,2 and in second range: 0,4
- Integral speed sensor with 60 pulses per revolution
- Bearingless, hence maintenance-free
- Flange and hub solution
- Digital non-contact signal transmission

ELECTRICAL MEASUREMENTS

- High Accuracy and Wide Frequency Range
Basic Power Accuracy (0.02% of reading + 0.04% of range)
Frequency Range DC, 0.1 Hz to 1 MHz
- Low Power Factor Error
Power factor influence when $\cos\phi=0$ 0.03% of S
S is reading value of apparent power ϕ is phase angle between voltage and current

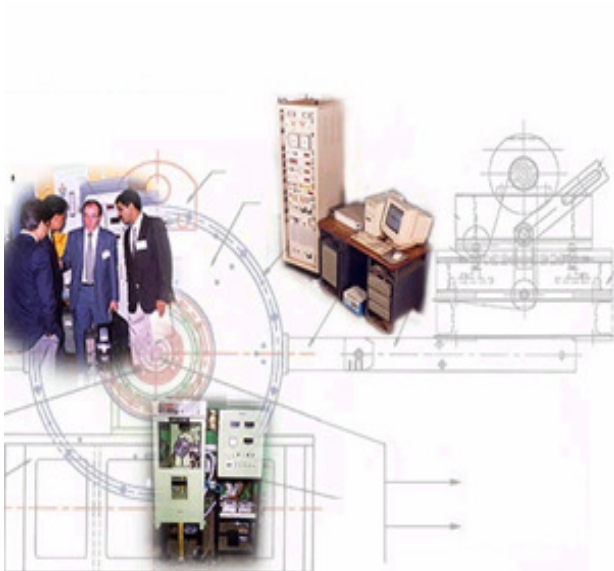
- Current Range
Direct Input 0.5/1/2/5/10/20/30 [A] *
5m/10m/20m/50m/100m/200m/500m/1/2 [A] *
External Input 50m/100m/200m/500m/1/2/5/10 [V] *
- Voltage Range 15/30/60/100/150/300/600/1000 [V] *
- * Voltage range and current range are for crest factor 3
- Continuous Maximum Common Mode
- Voltage (50/60 Hz)
- Data Update rate: 50 ms to 20 sec
- Effective input range: 1% to 130%
- Simultaneous measurement with 2 Units
- Standard PC Card Slot
- Storage Function (Approximately 30MB)
- internal memory

'Dynamerik Motor Testing v1.0'





DYNOMERK CONTROLS
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Email: dynomercontrol@vsnl.net, Web: www.dynomerk.co.in



Computing

Power

Since

1996

DynomerK Controls came into existence in April 1996 as a group of Engineers experienced in manufacturing automotive test equipments like Eddy Current Dynamometers, Transient Dynamometers, Re-generative Chassis Dynamometers, Brake Inertia Dynamometers for Engine and Vehicle Testing and Test Rigs for Automotive Components.

The present Instrumentation is fully equipped with entire modern techniques, well advanced in quality and technology.

DynomerK Controls, is the first in India to launch indigenous field-proven Regenerative Chassis Dynamometers for vehicle testing.

All our systems are equipped with Real Time Operating Systems and PC Controls and comply with all Legislations of National and International Standards