YASKAWA L1000A drive for Elevator- Lift application installed by National elevator at Pachiyappa silks at Kanchipuram with 16 passenger capacity.
National Elevators presently is one of the upcoming Lift manufacturing company, which uses the PMSM motor for its unique features.
Yaskawa provides the solution with L1000A Elevator drive, by achieving proper levelling and smooth change over speed, less failure rates and Superior efficiency control with PMSM (Permanent Magnet synchronous Motor) Gear less machine.

Challenges:

✓ Improper levelling at floor to floor operations.
✓ Over travel and levelling accuracy problem in the lift.
✓ Comfort ride in the elevators.
✓ Jerk at different stages of travel.
✓ Smooth and accurate performance.
✓ Vibration during travel.
Solution & Benefits:

YASKAWA L1000A drive is installed with programming features especially for lift applications and following result are found.

- Proper levelling with 0.3mm accuracy was achieved in each floor.
- Achieved smooth speed change over from high speed to low speed.
- Over travel of the cabin and relevelling was reduced.
- L1000A is incredibly efficient– Save even more energy by using the cooling fan ON/OFF control function when the cooling fan is not needed.
- Eliminating the need for extra peripherals for your application by having inbuilt safe disable functions which is compliance to SIL2.
- Cutting-edge drive technology allows L1000A to run With PMSM Gearless machine which operates smoothly, speed control, high starting torque, lesser space and also much energy saving for the end customer.

Results:

- Lift Passenger and End Customer found satisfied with smooth operation of the lift during travel form one floor to another floor.

- Smoother ride through operation without any of overshoot and under shoot during the starting and stopping.

- Even without a load sensor, high-performance torque compensation (Advanced Anti-Rollback*) and high-resolution absolute encoder eliminate shock when the brake is released.

- Auto-Tuning methods allow L1000 to continuously analyse changes in motor characteristics during run for highly precise speed control.

- Auto rescue device with single Phase backup supply was very useful for the end customer when there is power outage due to which customer can be easily rescued from trapping in elevator cabin.

- Performance life monitoring of the components and Monitoring status helps to notify the user for part wear and maintenance periods to prevent problems before they occur.