

**CASE STUDY** | **INOX Leisure Limited**



**I** NOX, a leader in India's Cinema exhibition industry, started a journey of energy conservation and carbon footprint reduction in its Laserplex theaters. Armstrong helped INOX replace four constant-speed pumps with three Design Envelope pumps, and changed the system to use primary-variable control.

**43%**

HVAC Savings as a result of the retrofit project were over \$7,900, which represented a 43% decrease in spending year-over-year. The payback period for the investment in energy efficiency was just 1.5 years.



**FACILITY TYPE**  
Entertainment



**LOCATION**  
Nariman Point,  
Mumbai



**SIZE**  
Seven star  
multiplex

**SITE CHALLENGES**

- Space constraints for retrofit equipment
- Minimal time window for installation and commissioning



**ANNUAL ENERGY COST**

BEFORE	AFTER
<b>\$18,215</b> USD	<b>\$10,308</b> USD
AVERAGE	AVERAGE

**ANNUAL COST SAVINGS**  
**\$7,907**  
USD



**CO<sub>2</sub> EMISSIONS**

BEFORE	AFTER
<b>52,677</b> kg CO <sub>2</sub>	<b>34,342</b> kg CO <sub>2</sub>
AVERAGE	AVERAGE

**ANNUAL CO<sub>2</sub> EMISSION REDUCTION**  
**18,335**  
kg CO<sub>2</sub>



**TO GET YOUR ENERGY UPGRADE PROJECT STARTED, CALL:**

# KEY OUTCOMES:

- ✓ 43% energy savings
- ✓ Better occupant comfort
- ✓ Reduced maintenance cost
- ✓ Easy access to pump operating data showing flow, head, power usage and rpm
- ✓ Constant data-logging and performance monitoring

ANNUAL  
ENERGY  
SAVINGS

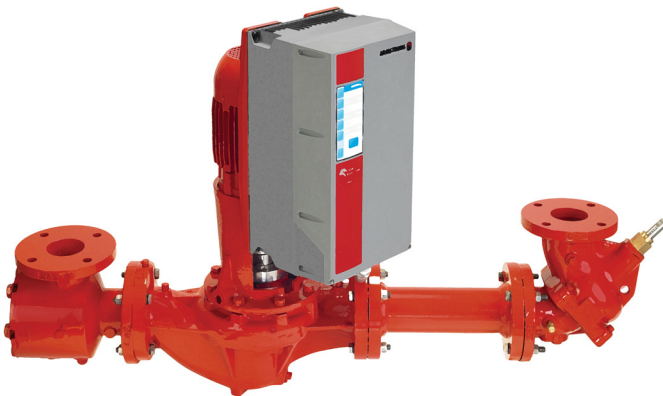


43%

- Equipment included**
- 3 × 120 Ton air cooled Chillers – two duty and one standby
  - 2 × Design Envelope Vertical In-Line pumps
  - 11Kw, 240 gpm @ 98 ft – one duty and one standby
  - Two-way modulating valves



Armstrong maps each individual pump's hydraulic, motor and inverter variations at the factory, to achieve exceptional accuracy throughout the flow range. With this calibration, Armstrong Design Envelope pumps also serve as flow meters, providing reliable system flow data (+/- 5%). The testing ensures optimal performance efficiency at start-up, and Armstrong's Pump Manager helps maintain and extend efficiency throughout the pump's operating life.



**DESIGN  
ENVELOPE**