Ahmed Sedky – Mitsubishi Electric Europe

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PROCESS CONTROL IN A WWTP

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PROCESS CONTROL IN A WWTP

Digester & CHP Plant

Automation
VSD

Condition
Monitoring

Control Room

DCS / SCADA

ICONICS

PMSXpro

MAPS

Automation

Data Analytics/
Cloud

Lifting Station

VSD

Cond.
Monitoring

Rain Spillway Basin

Real-time Monitoring
Alarm MGMT

EDGECROSS

ICONICS

MAPS

Electrification

MV / LV
Electrical
Distribution

Aeration

VSD / MCC

PLC
Telemetry

Pump Station

VSD

PLC

Telemetry

Cond.
Monitoring

Energy
Optimisation

AQUATORIA

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W/W TREATMENT: AERATION

AERZEN

AERZEN Performance³ Compressor Station

- Compressors and blowers need control and power units
- The performance of the VFD driving the machine is decisive for the overall system performance!

  Only 5% less energy efficiency of the inverter leads to approx. 1 Mio EUR financial loss over the complete life cycle!

- Advantage of a locally built control and power cabinet
  - ✓ Made in Egypt
  - ✓ Based on the original specification by Aerzen
  - ✓ Electronic equipment from a world leading, high-quality brand!

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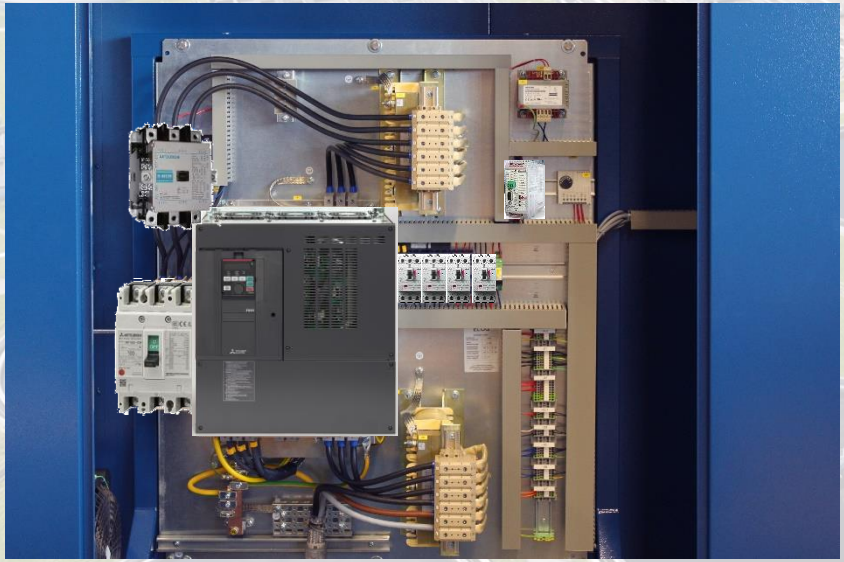
W/W TREATMENT: AERATION

AERZEN in cooperation with MITSUBISHI ELECTRIC Changes for the Better

Control and Power Cabinet 45-55kW for AERZEN Compressors and Blowers



- Original specification by Aerzen
- Major electronic components available from Mitsubishi Electric
- High quality – high reliability – high energy-efficiency
- Can be built by a local Egyptian cabinet builder
- Local support and service

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W/W TREATMENT: AERATION

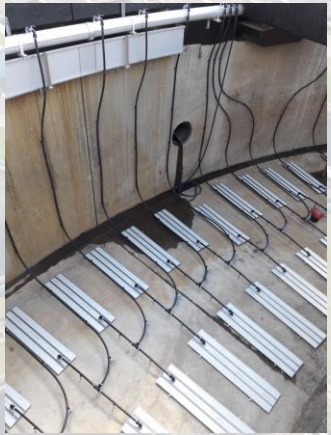
AERZEN

RMU

MITSUBISHI ELECTRIC
Changes for the Better

Compressor station

RMU aeration plates



Automation

➔ **A perfect match for your waste water treatment plant!**

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MORE EFFICIENCY IN WASTE WATER TREATMENT

BENEFITS

Smart Condition Monitoring

- Immediate detection of any deviation
- Prevents unplanned downtimes and expensive damages
- Planned maintenance
- Less cost of failure

Predictive Maintenance

- Data analytical tools to facilitate status
- Prediction of failures
- Extended life-time
- 3 – 9 times less cost than reactive maintenance

Optimizing Pumping Operation

- Reduced energy consumption
- Increased equipment life-time
- Reduced manual labour
- Predictability of the investment due to instrumentation audit

Edge Analytics / Operational Digital Twin

- Advanced Business Analytics
- Automated Decision Making
- Reduced Response Times
- Reduced Operating Cost
- Improved Regulatory Performance

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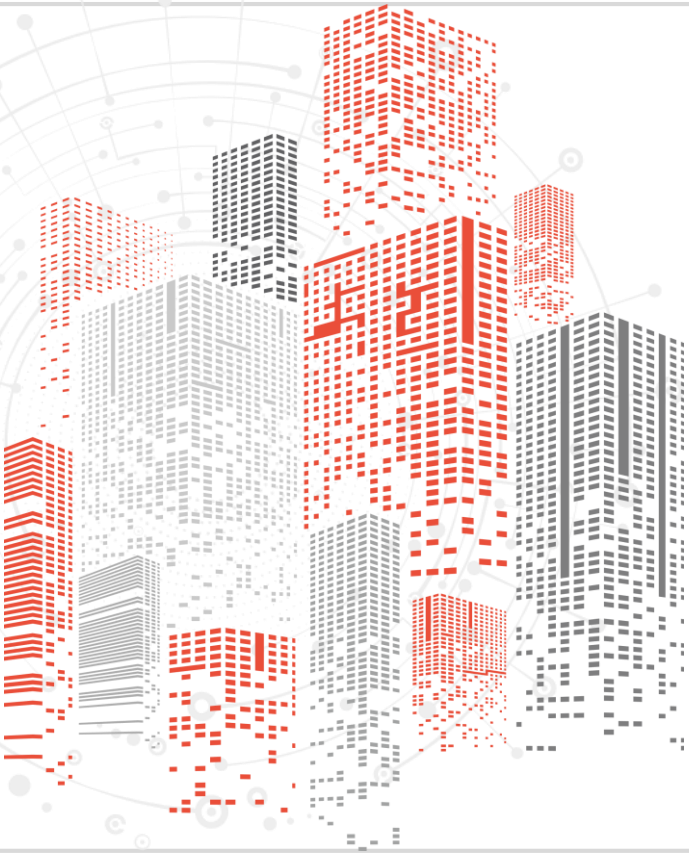
A COMPANY YOU CAN RELY ON

- Founded 1921
- Turnover 37.8 billion USD
- Over 145,000 employees
- 29 factories in Japan
- Active in more than 120 countries



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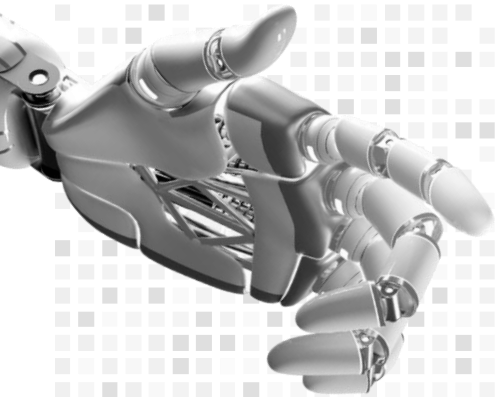
MITSUBISHI ELECTRIC FACTORY AUTOMATION



- One of the world leading brands of automation and electrical equipment
- Covering the entire portfolio of automation technology and offering a wide range of knowledge on how to optimize customer processes
- Extensive service networks around the globe
- Partner to the water industry for more than 50 years

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WE'RE THERE WHEN YOU NEED US!

MITSUBISHI ELECTRIC EUROPE B.V.
GERMAN BRANCH
Factory Automation EMEA

Mitsubishi-Electric-Platz 1
D-40882 Ratingen
Germany

Tel: +49 (0)2102 / 486 – 0
info@mitsubishi-automation.com
https://eu3a.mitsubishielectric.com

Authorized Distributor and Representative in Egypt:

Villa 5, El-Diplomaseen Area, 2nd District,
El Sheikh Zayed City, Giza, Egypt

Phone: +202 379 41068
Fax: +202 379 41069
E-Mail: info@technycon.com
Website: www.technycon.com

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