



AKEL Trading & Industrial Co.

PRODUCTS CATALOGUE

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WHAT WE DO



INTRODUCTION & CONTENTS



AKEL is a company that is driving progress and with our partners, building better communities through safe, smart, efficient solutions. Something we have been doing consistently since 1980

FOUNDERS

One day, In 1980, four entrepreneurs, young and close relatives gentlemen named:

Mohammed Suliman Al Yahya, Othman Abdulrahman Al Hosaini, Abdullah Suliman Al Yahya and Hamad Abdulrahman Al Hosaini met to discuss the possibilities of starting their own business. They dreamed to put their mark on the growth of their country.

Thinking was based on having a project which help in food security, where the Saudi government seeks to develop agriculture sector at that time. These entrepreneurs agreed to participate in the national agricultural development project. So, they decided to develop the first brick for this project by starting their farm project in Sajir city.

To realize the dream that was created in the imagination of each one of them, they faced the problem of choosing a unique name for this edifice. The name was chosen **AKEL** the old name of the city of Ashikar, the ancient city in the Al Washm area, located 200 km in the north-west of Riyadh city.

Since then, the glory of that city from which the name was chosen, the bricks continued to be built on top of each other, diversifying the business into a company that develops from the agricultural field to intervene in the field of construction sector such as low voltage panels, pumps and boosters.





Saad M. Al Yahya

Chairman

MESSAGE FROM CHAIRMAN



We initiated our journey in 1980 by establishing a company that is specialized and highly professional in producing electromechanical & irrigation systems to provide solutions to construction sector, agriculture sector and energy sector.

Our business ideology is mainly based on the four pillars of Adhere to principles, Knowledge transformation, Environmental care and Labor development.

We have gained the trust of our valued customers by making "Customer Focus" our top priority.

We are continuously upgrading and developing our services & employing highly skilled and qualified staff to meet the demand for superior services whether in manufacturing, assembling, marketing, selling, distributing and providing solutions.

We have developed a unique quality assurance system to ensure that the product you receive is most

Reliable, efficient and accompanied with high standards of after sales services.

We look to the years ahead we renew our pledge to remain committed to excellence, keep abreast of

changes and innovations. We continue to develop entrepreneurship to make AKEL self-sustained in

order to help boosting the overall economy of the Kingdom of Saudi Arabia.

I am confident that our company will see even greater growth, scale and even greater heights.

Saad m. Al yahya
Chairman



MESSAGE FROM CEO



It is my pleasure to welcome you to **AKEL**. We have put together as one team considerable efforts to provide you a comprehensive view of what we stand for, our vision, mission, values and how we consistently fulfilling our promise to our partners.

Whether you're a potential client with a challenging project ahead; an existing client checking up on our latest news; or a supplier or future employee looking for new opportunities, I trust you'll find what you're looking for here.

AKEL is a company that is driving progress and with our partners, building better communities through safe, smart, efficient solutions. Something we have been doing consistently since 1980. Our progressive thinking and creative approach is what makes us stand out from the crowd. It's why our products and services are preferred by owners, consultants and contractors and why so many of our clients keep coming back to us.

We have a clear vision of what we want to be; a clear mission of how to be there; and we guide our business using four core values. I am proud of the work we do and give you my personal commitment that we will deliver what we promise and do it safely and sustainably.

To make our products and services instantly accessible, we have nine showrooms operating from different prominent locations in the Kingdom of Saudi Arabia. Enjoy our company profile and feel free to contact your local **AKEL** office or visit our website at www.akel.com.sa for any additional information.

Najib A. Alnaim
Chief Executive Officer

ABOUT US

AKEL trading & industrial co. is a closed joint stock Co., established in 1980 to cover market demand in the sectors of energy, fluid management & agriculture.

Long since its establishment, AKEL formed strong partnerships with world renowned brands such as Schneider Electric, Grundfos, a sole agent for Socomec in KSA & number of others.

Through continuous improvement we managed to become one of the leading panel builders, boosters assemblers & center pivot irrigation system manufacturer in KSA.

In the present time, our factory resides on a 10,000 square meter land located in Riyadh's 2nd industrial area with state of the art facilities and equipment.

Our wide customer base varying from public to private organizations in various residential, industrial, and agricultural projects.



GRUNDFOS



Schneider Electric

D-RAIN

AQUASYSTEM

CAG
Electric Motors

WELL PUMPS

SOCOMEC
Innovative Power Solutions



OUR VISION

"A Strong Position In Manufacturing & Distribution Of Energy, Water Solutions And Irrigation Systems In MENA"

OUR MISSION

"Provide Markets With Quality Products & Services And Support Local Content Development & Know How Transfer"

OUR VALUES

Adhere To Principles:

- Customer Focus
- Transparency In Dealing
- Justice And Equality Of Staff
- Dealing With Credibility

Knowledge Transformation:

- Acquire Knowledge From Its Sources
- Encourage Our Employees To Acquire Knowledge
- Exchange Of Experiences
- Knowledge Documentation

Environmental Care:

- Create Effective Working Environment
- Advanced Status In A Competitive Environment
- Keeping The Surrounding Environment Green
- Create A Safe Working Environment

Labors Development:

- Employee Training
- Taking Care Of Staff
- Keeping Interest In Saudization
- Building Leaders

QUALITY ASSURANCE & QUALITY POLICY



QUALITY POLICY

In **AKEL** we have a dedicated quality team that employed a rigorous quality system to insure the maximum satisfaction of our customers.

Our quality system insures that all our products are assembled, built, and tested to the highest standards.

We are proud that **AKEL** is certified to meet ISO 9001:2015 standard..

QUALITY POLICY

It is the policy of **AKEL** to fulfill the requirements of customers through providing quality services and products.

We survive from the confidence of our clients.

It is client's right to demand quality and quality is our combined responsibility.

We always enjoy our work and brighten our working atmosphere.

Through the review of problems, customer feedback and regular meetings, **AKEL** always set areas where improvement is needed and identify these as quality objects.

We believe this policy can be achieved through the implementation of QMS of BS EN ISO 9001:2015

ACCREDITATIONS

Authorized Distributor of Schneider Electric

AKEL is an authorized distributor of Schneider Electric products (including Square-D safety switches) in the Kingdom of Saudi Arabia.



Certified Panel Builder by Schneider Electric

AKEL Electromechanical Products Factory is the certified panel builder in "Gold" category by Schneider electric the global specialist in energy management.



Authorized Distributor of Grundfos

AKEL is an authorized distributor of Grundfos products in the Kingdom of Saudi Arabia.



LOW VOLTAGE SOLUTIONS PRODUCTS RANGE



ELECTROMECHANICAL PRODUCTS FACTORY LOW VOLTAGE SOLUTIONS



AKEL - SWITCHGEAR (AKEL Electromechanical Products Factory) is aimed at being a serious contender in the distribution panel boards, automation & drives business of Saudi Arabia.

The corporation already represent & distributes for a number of top specialized companies in the field of LV switchgear, automation, drives solutions.

In addition, **AKEL - SWITCHGEAR** continuously monitors technical and business development in its line of business and strive to ensure that it offers the widest possible systems portfolio comprising the latest solutions available from around the world.

AKEL - SWITCHGEAR has successfully established strong technical enterprise. Its comprehensive engineering capabilities, backed by the extensive engineering expertise of our associates and the substantial financial and managerial resources, represent a unique & qualified source for innovative concepts, designs, engineering, installation management and operations support in our specialized area of engineering. Across the spectrum of program management and applied technology.

AKEL - SWITCHGEAR is serving public & private sector with following products range;

- LV Distribution Switchgear
- Motor Control Center
- Automation Panel Boards
- Lighting Panels
- PFC (Power Factor Correction) Panels
- MV Switchgear
- Energy Management Solutions



PRISMA-P LV SWITCH BOARD UP TO 3200A



Features

Prisma P: kit solutions for tested and IEC 61439-1&2 compliant low voltage electrical distribution switchboards Cubicles for electrical switchboards up to 3200A, Icw 100kA rms/1s.

Technical data

- Distribution system: horizontal and vertical busbars in a lateral compartment or at the rear of the cubicle.
- Metal enclosures: steel metal sheet with electrophoresis treatment plus hot-polymerized polyester epoxy powder.
- Color white RAL 9001.
- Degree of protection IP30 to IP55.
- Degree of protection against mechanical impacts IK07 and IK10.

Dimensions

- height: 2000 mm
- width: 800 mm (for functional units with vertical busbars), 650 mm (for functional units), 400 mm (for functional units or cable ducts), 300 mm (for cable ducts)
- Depth: 400 mm, 600 mm

Benefits

- Pooling our energies for building safety.
- Prisma P contributes to optimum safety of persons as well as to high reliability and continuity of service of the electrical installation.
- All components (switchgears, busbars, distribution blocks, prefabricated connections, etc.) are rated and coordinated for joint operation.
- All the most demanding switchboard configurations have been tested and are IEC standard compliant.

- Prisma P allows production of optimized, safe and simple switchboards to exactly meet your needs.
- Prisma P can be upgraded easily at any time without its original performance being affected, thanks to prefabricated and modular design.
- Prisma P is designed and manufactured in France, and available world-wide.

Applications

- Low voltage distribution and control switchboards for commercial and industrial buildings .
- Data and Telecom (data centers, server rooms, telecom networks) .
- Retail (multi users centers, chain and independent retailers) .
- Hospitality (hotels, collective residences)
- Industrial buildings (non-critical process, logistic, agricultural) .
- Health (hospitals, clinics, nursery houses) .
- Offices .
- Education .
- Sports .
- Leisure and culture .



PRISMA-G LV SWITCH BOARD UP TO 630A



Features

Prisma G: kit solutions for tested and IEC 61439-1&2 compliant low voltage electrical distribution switchboards Wall-mounted and floor-standing enclosures for electrical switchboards up to 630A, Icw 25kA rms/1s.

Technical data

- Metal enclosures: steel metal sheet with electrophoresis treatment + hot-polymerized polyester epoxy powder.
- Color white RAL 9001.
- Degree of protection IP30 to IP55.
- Degree of protection against mechanical impacts IK07 and IK10.

Benefits

- Pooling our energies for building safety.
- Prisma G contributes to optimum safety of persons as well as to high reliability and continuity of service of the electrical installation.
- All components (switchgears, busbars, distribution blocks, prefabricated connections, etc.) are rated and coordinated for joint operation.
- All the most demanding switchboard configurations have been tested and are IEC standard compliant.
- Prisma G allows production of optimised, safe and simple switchboards to exactly meet your needs.
- Prisma G can be upgraded easily at any time without its original performance being affected, thanks to prefabricated and modular design.
- Prisma G is designed and manufactured in France, and available world-wide.

Applications

- Low voltage distribution and control switchboards for commercial and industrial buildings .
- Data and Telecom (data centres, server rooms, telecom networks) .
- Retail (multi users centres, chain and independent retailers).
- Hospitality (hotels, collective residences) .
- Industrial buildings (non critical process, logistic, agricultural) .
- Health (hospitals, clinics, nursery houses) .
- Offices .
- Education .
- Sports .
- Leisure and culture .

DISBO-FINAL DISTRIBUTION BOARD UP TO 250A



Features

Distribution system by Schneider Electric.
Your formula of success to safe & affordable choice.

Technical data

- Flush or surface mounted.
- 3 Phases.
- From 12 to 54 ways.
- Current rating up to 250A.
- Wide choice of options & accessories.

Benefits

- Schneider UK design.
- ASTA British Certification.
- Schneider Electric KSA assembly & Saudi workforce.
- French protective device.
- Bureau Veritas French certificate.

Applications

- Residential projects.
- Commercial projects.
- Industrial projects.



AUTOMATIC TRANSFER SWITCH PANELS (ATS)



Features

AKEL-SWITCHGEAR designs and assembles ATS which is an electrical switch that switches a load between two sources.

Some transfer switches are manual, in that an operator effects the transfer by throwing a switch, while others are automatic and trigger when they sense one of the sources has lost or gained power.

An Automatic Transfer Switch (ATS) is often installed where a backup generator is located, so that the generator may provide temporary electrical power if the utility source fails.

Technical data

- Up to 5000A.
- Prisma-P Panels.
- Himel Universal Enclosures.

Dimensions

- Height: 2000mm
- Width: 600mm, 800mm, 1000mm
- Depth: 600mm, 800mm
- Customised design as per client's request.

Benefits

- Safe switching between more than one sources.

Applications

- Commercial & Industrial Projects.
- Hospitals.
- Municipalities
- Hotels



SYNCHRONIZATION PANEL



Features

AKEL-SWITCHGEAR designs and assembles Synchronization panel which aimed at matching the speed and frequency of a generator or other source to a running network.

An AC generator cannot deliver power to an electrical grid unless it is running at the same frequency as the network. If two segments of a grid are disconnected, they cannot exchange AC power again until they are brought back into exact synchronization.

Dimensions

- Height: 2000mm
- Width: 800mm, 600mm, 400mm, 300mm
- Customised design as per client needs.

Benefits

- Synchronizing between more than 2 generator sources.

Applications

- Commercial Projects
- Generator Manufacturing
- Industrial Projects
- Oil & Gas Projects



MCC INTELLIGENT POWER AND CONTROL CENTER



Features

iPMCC solutions are the keystone of the LV energy efficiency of your workshops. They ensure the power supply as well as the control and protection of your electric motors and loads.

They include a complete range of functions for;

- power circuit protection and control (intelligent Power Control Centre- iPCC).
- motor control and protection (intelligent Motor Control Centre - iMCC).
- LV electrical energy management (intelligent Power & Motor Control Centre - iPMCC).

They integrate perfectly into your site infrastructure through intelligent and communicating architectures which are open to all major industrial networks (Ethernet TCP/IP, PROFIBUS-DP, DeviceNet, Modbus, etc.).

The wide and complete range of the iPMCC solutions covers all continuous and critical process requirements.

We design with you the solution which meets your specific needs, ensuring the right functions as well as the right choice of operational modes and the optimal level of performance in terms of;

- protection
- measurements
- connectivity & communication architectures.

Benefits

- Optimising the energy efficiency of your assets.
- Maximised production time: up to 15% increase in productivity.
- High reliability and increased dependability of the installation up to 70% reduction in untimely shutdowns.
- Safety of personnel and assets, maintainability and upgradability up to 90% fewer motor burn-outs.
- Lead time management and cost reduction throughout the installation's entire lifecycle up to 50% reduction maintenance costs. Energy management for efficient consumption and usage up to 30% electrical energy consumption reduction and cost allocation.
- Simplified integration to the site infrastructure to any energy management & control system (EMCS, etc.) and to any process automation system (DCS, etc.).
- Whatever the communication protocol (Ethernet TCP/IP, PROFIBUS-DP, DeviceNet, Modbus, etc.)

Applications

- Mining, metals, minerals
- Water and wastewater treatment
- Food & beverage
- Pharmaceuticals
- Micro-electronics
- Airports
- Oil & Gas, petrochemicals

AUTOMATIC POWER FACTOR CORRECTION PANELS



Features

AKEL-SWITCHGEAR designs and assembles automatic power factor correction panels, in order to improve the energy efficiency, reduce the currents in the plant.

Reduce the overheating in the cables and electrical components, as well as reduce the harmonics.

AKEL-SWITCHGEAR uses microprocessor based controller with very advanced functions and protections.

Technical data

- From 50KVAR to 1000KVAR.
- Panels with or without detuned reactors.

Dimensions

- Height: 2000mm
- Width: 800mm, 600mm
- Depth: 600mm, 800mm

Benefits

- Increase power factor quality as per needs of client.

Applications

- Factories.
- Industrial Projects.
- Commercial Projects.
- SEC Projects.



LIGHTING PANELS



Features

Control street lighting & other lighting features consist of main breaker, contactors, timer and photocell with branches for load.

Technical data

- Specification as per standards of municipalities or customise as per client request.

Benefits

- Direct control of lighting poles for street lighting.
- Control of lighting at commercial projects.
- Minimize energy consumption.

Applications

- Street Lighting Control.
- Residential Projects.
- Commercial Projects.
- Industrial Projects.

SOCOMEK PRODUCTS

ENCLOSED TRANSFER SWITCH SOLUTIONS



ATyS Bypass "no-break" Solution ATSE*-Automatic Equipment from 40 to 3200A

Features

- Automatic transfer between two sources to ensure continuity of supply to critical loads such as sprinklers, fire lifts, water pumps.
- Guaranteed continuity of the power supply during maintenance and test operations.
- Complete isolation of the Automatic Transfer Switch ensuring maintenance safety.
- The association of an ATyS along with a remote interface D20, enables configuration, exploitation and visualisation of the data shown on the front of the equipment (timer settings, hysteresis, start/stop of the genset)

Technical data

- From 40 to 3200 A - 4 poles.
- 230/400 VAC $\pm$ 20%, 50/60 Hz, self-powered from incoming sources.
- Normal/Emergency logic control sequence.
- Voltage and frequency checking of networks I and II.
- Control of phase rotation.
- 1 configurable output relay for generator start/stop command.
- Position I, 0, II control by external dry contact.
- Manual emergency operation.
- Auxiliary contacts.
- MODBUS communication (supplied as standard).
- AUTO / MANU selector.
- Equipment protection degree: IP41 as standard Other IP upon request.

- Hinged door.
- Wall mounting brackets supplied up to 160 A.
- Floor standing feet from 250 to 3200 A.
- Easy extraction of ATyS from 160 A.
- Phase identification.
- Mimic panel (3 LEDs; source availability (1 and 2) and load; 16 LED mimic panel optional).
- Integral protection against direct contact on each functional unit.
- Steel enclosure.
- Colour: RAL 7035.

Confirmity to Standards

- IEC 61439-2
- IEC 60947-6-1
- IEC 60947-3
- BS 60947-6-1

Benefits

- No-break load transfer in Bypass mode
- Solution certified by a manufacturer
- Optional accessories available

Expert Services

- Study, definition, advice, implementation, maintenance and training...
- Our Expert Services team offers customised support to make your project a success.

Applications

- Data Centers
- Power Production
- Healthcare Buildings
- High-Rise Buildings
- Banking & Insurance
- Transportation



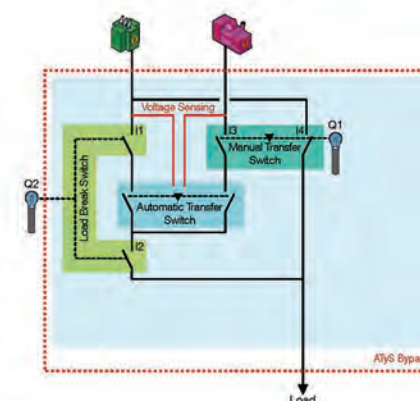
SOCOMEK PRODUCTS

ENCLOSED TRANSFER SWITCH SOLUTIONS



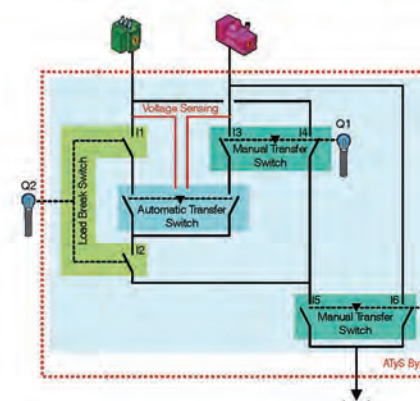
Two Versions ATyS Bypass Single Line

- It consists of 2 functions: an automatic transfer switch and a single Bypass line connected to the preferred supply source.



ATyS Bypass Double Line

- It consists of 3 functions: an automatic transfer switch, an ATyS Bypass and a facility for selecting between supply sources when in Bypass.



Use

Normal Position

- The load is supplied by the supply defined as the preferred source. In case of primary source failure, the ATyS automatically transfers the load to the alternate source when available.

Bypass Position

- Manually switch Q1 to bypass mode without interrupting supply to the load.
- Then open switch Q2 to completely isolate the ATyS for inspection.

Test Position

- From the Bypass position, switch Q2 can be closed to supply the ATyS and achieve operational checks, without jeopardizing the supply to the load. Transfer to the normal position can then be achieved.

References

Standard product - 230 VAC for ATyS p M

Rating (A)	No. of poles	Single Line Reference	Double Line Reference
40	4 P	1785 4004	1786 4004
63	4 P	1785 4006	1786 4006
80	4 P	1785 4008	1786 4008
100	4 P	1785 4010	1786 4010
125	4 P	1785 4012	1786 4012

Standard product- 230 VAC for ATyS p

Rating (A)	No. of poles	Single Line Reference	Double Line Reference
160	4 P	1785 4016	1786 4016
250	4 P	1785 4025	1786 4025
400	4 P	1785 4040	1786 4040
630	4 P	1785 4063	1786 4063
800	4 P	1785 4080	1786 4080
1000	4 P	1785 4100	1786 4100
1250	4 P	1785 4120	1786 4120
1800	4 P	1785 4160	1786 4160
2000	4 P	1785 4200	1786 4200
2500	4 P	1785 4250	1786 4250
3200	4 P	1785 4320	1786 4320

**FLUID MANAGEMENT
SOLUTIONS
PRODUCTS RANGE**



ELECTROMECHANICAL PRODUCTS FACTORY

FLUID MANAGEMENT SOLUTIONS



Reliable supply of water at static, high-lying taps. Fluctuating water consumption in different types of buildings, such as schools, hospitals, airports or hotels, requires flexible systems that meet individual demands. With **AKEL** pressure boosting systems, you can ensure that water will be supplied reliably.

Akel capitalizes on its extensive industrial exposure to offer a comprehensive range of pressure-boosting systems, gaining reputation as the manufacturer and supplier of world-class water pressure boosting pumps.

Akel has established its foothold as the manufacturer of some of the most sophisticated fire fighting systems. The specialized department of design and engineering houses some of the most talented professionals working on dedicated software to deliver reliable fire-fighting systems that meet international design and safety standards including the standards of SASO.

AKEL also known as a leading name in the distribution field of internationally renowned quality pumps. We offer you an extensive product line of pumps, that are consumer's first choice in the Industrial, Commercial, Municipal, Domestic, Fire, Flood Control, sewage, & HVAC markets. For over 4 decades, we have the unique distinction of being the prominent distributor and reseller of GRUNDFOS & WELL pumps.

Key features

- Available in standard and custom range.
- Consist of automatic pressure controlled pumps along with pre-charged water in a pressure tank.
- Custom-built systems available for higher water requirements.
- Easy to install, operate and require not much of maintenance.
- Useful for both domestic and industrial use.
- The value of water with more than pumping power!

FLUID MANAGEMENT SOLUTIONS



GRUNDFOS

WATER PRESSURE BOOSTERS

GRUNDFOS



Features

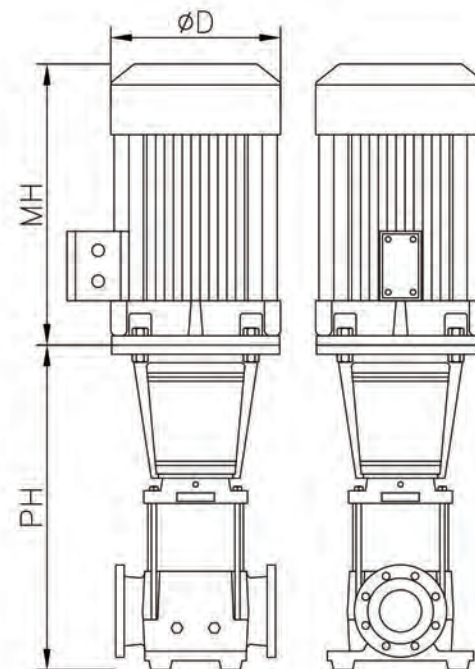
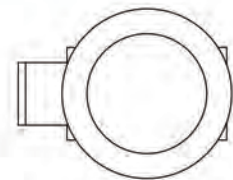
Water booster system which is used to increase the pressure of a fluid to attain the setting pressure and maintain constant pressure in the discharge line.

Benefits

- Saves Energy Costs: Most efficient cascade control, application optimized controls and pumps in the industry & Domestic applications
- Pressure management
- Power saving
- Drinking Water Approvals: Hygienic designed 316 SS manifolds
- Duty standby option

Applications

- Water Supply Boosting
- Multi-story and Commercial Buildings
- Water Utility and Municipal settings
- Industry and Plant boosting
- Irrigation



Dim[mm]	PH	MH	ØD
CR5	550	335	220
CR10	580	291	220
CR15	709	471	314
CR20	709	471	314
CR32	895	515	314
CR45	989	611	396
CR64	989	611	396
CR90	1133	747	497

FIRE FIGHTING PUMPS

GRUNDFOS



Features

Firefighting is the act of attempting to prevent the spread of and extinguish significant unwanted fires in buildings, vehicles, woodlands, etc. A firefighter suppresses fires to protect lives, property and the environment.

Technical data UL/FM

A fire pump is a part of a fire sprinkler system's water supply and powered by electric, diesel. A fire pump is tested and listed for its use specifically for fire service by a third-party testing and listing agency, such as UL or FM Global. The fire system is an NK end-suction pump integrated with a coupling and a driver, which may be an electric motor or a diesel engine, assembled on a base frame. Electric pump types can be ordered as a COMPACT model (inclusive of a controller integrated onto the base frame). Diesel-driven NK. A controller always forms a part of the system.

NON UL/FM

A fire pump is a part of a fire sprinkler system's water supply and powered by electric, diesel. Which is locally assembled and tested as per standard and The fire system is an NK end-suction pump integrated with a coupling and a driver, which may be an electric motor or a diesel engine, assembled on a base frame. Electric pump types can be ordered as a COMPACT model (inclusive of a controller integrated onto the base frame)

Benefits

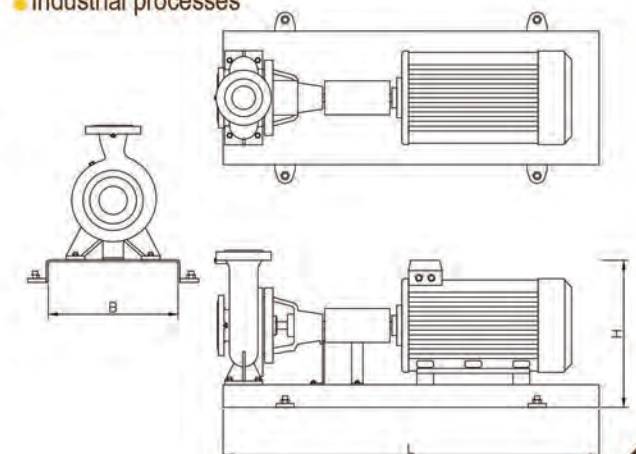
- Pumps are made according to EN12845 and PrEN12259-12
- Electric or diesel powered
- Designed for superior functionality and performance reliability
- Simple installation and easy maintenance
- Compact design
- Customized and reliable solutions
- Wide performance range

Applications

The Grundfos fire pump units are typically used in fire-fighting applications for supplying water to fire-hose reels, fire hydrants or sprinkler systems.

- Offices
- Hospitals
- Warehouses
- High rise buildings
- Museums
- Shopping centers
- Supermarkets
- Large commercial units
- Industrial premises
- Industrial processes

Dim[mm]	L	H	B
NK32	900	184	361
NK40	900	344	300
NK50	1000	400	340
NK65	1000	430	340
NK80	1250	699	430
NK100	1400	699	450
NK125	1600	735	550
NK150	1800	947	750



WATER TRANSFER PUMPS

GRUNDFOS



Features

The horizontal or vertical multistage pump has been created with compactness and modularity as two of its central features; a transfer pump can use to transfer any kind of liquid from one place to another, such as from a pipeline to a bulk tank. A transfer pump is useful when you need to move liquids.

Benefits

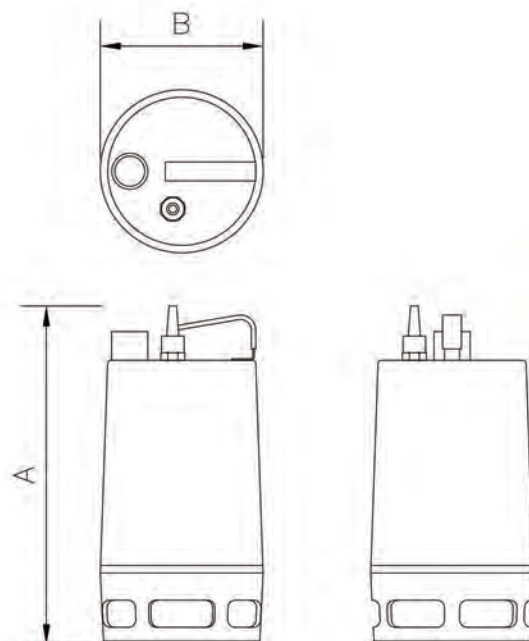
- Compact design
- Modular construction/customized solutions
- Worldwide usage
- High reliability
- Service-friendly
- Wide performance range
- Low noise level
- High-performance hydraulics
- Electro-coated cast-iron parts
- Customized solutions
- Grundfos motor
- E-solutions
- High efficiency

Applications

The CM or CR pump is a multipurpose pump for both industry and water boosting in general.

It is compact, noiseless, reliable and flexible, and this makes it an optimal solution for installation and interaction with other components in small and large systems or as a stand-alone pump.

Dim[mm]	A	B
AP12.40	346	216
AP12.50	357	241
AP35.40	410	216
AP50.50	436	241



WATER DRAINAGE PUMPS

GRUNDFOS



Features

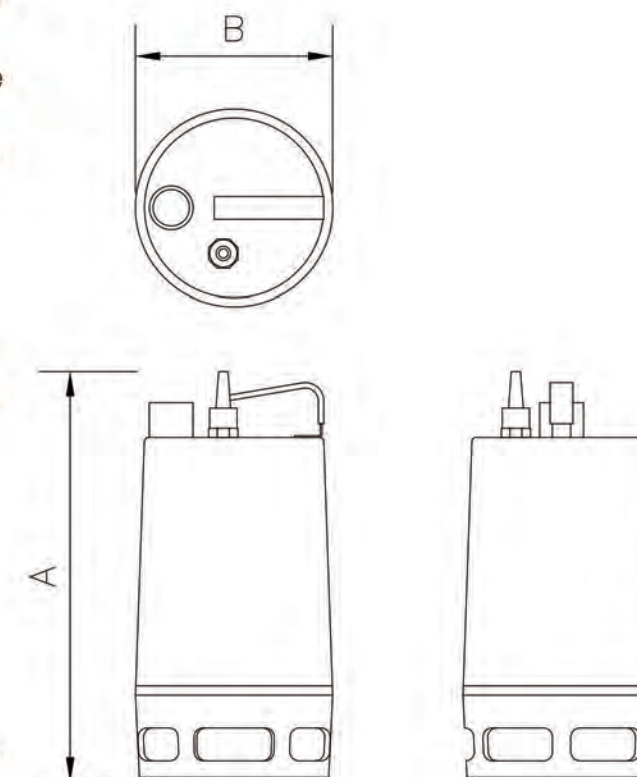
The Unilift AP and Unilift AP Basic are submersible drainage pumps designed for both temporary/portable installation and permanent free-standing installation. These single-stage pumps are made mostly of stainless steel. All types are available in either single phase or three phase versions and for 50 or 60 Hz power supply.

Benefits

Unilift AP is for permanent or temporary free-standing installations. Most components are made of stainless steel. Cable fitted by means of a plug. Available in both automatic and manual versions. Single-phase versions have an integrated thermal switch.

Applications

- Water and rainwater in horticulture
- Water from rivers and lakes
- Rainwater, drainage water and water from flooding
- Water for filling/emptying containers, ponds, tanks, etc.
- Effluents from showers, washing machines and sinks below sewer level
- Pool water
- Ditch drainage water
- Groundwater (lowering applications)
- Domestic effluents from septic and sludge-treating systems
- Liquids containing fibers from light industry, laundries, etc.
- Effluents from viaducts, underpasses, etc.
- Drainage water from garage sprinkler systems



Dim[mm]	A	B
AP12.40	346	216
AP12.50	357	241
AP35.40	410	216
AP50.50	436	241

SEWAGE PUMPS

GRUNDFOS



Features

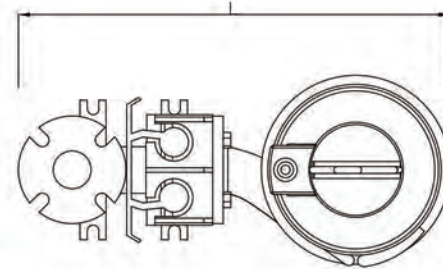
The high discharge pressure enables transfer of effluents and sewage over longer distances to the public sewer or sewage treatment plant.

Benefits

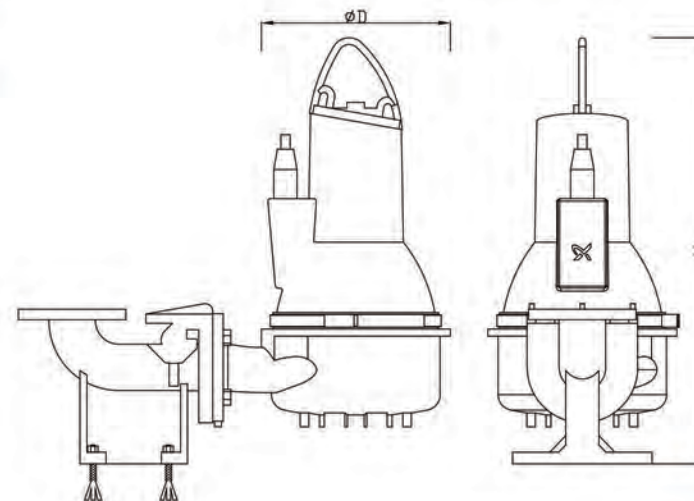
- High motor efficiency ensures substantial energy and cost savings
- Intelligent adaptive controls ensure reliable operation with low energy consumption
- Integrated analogue sensors offer complete monitoring of pump condition
- Lifting handle designed for optimum point-of-balance and correct lifting
- Smooth, easy to clean surface is extremely robust and impact-resistant
- One cable to the pump, simplifying pump installation, commissioning and maintenance

Applications

- Hospitals
- Warehouses
- High rise buildings
- Museums
- Shopping centers
- Supermarkets
- Large commercial units
- Industrial premises
- Industrial processes



Sewage Pump



Dim[mm]	L	H	ØD
SL1&SL V.50	523	807	270
SL1&SL V.80	693	948	300
SL1&SL V.100	803	1013	400

GRUNDFOS

SMART PUMPS



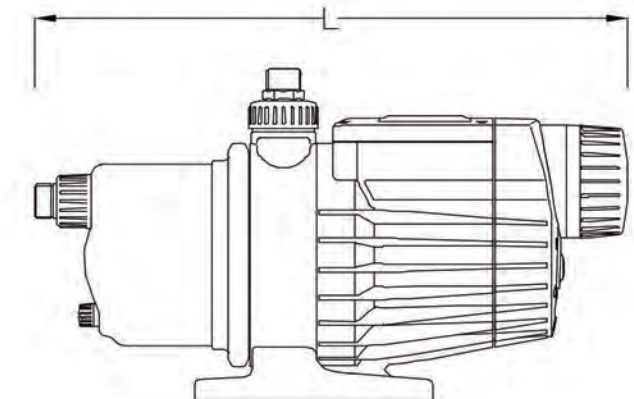
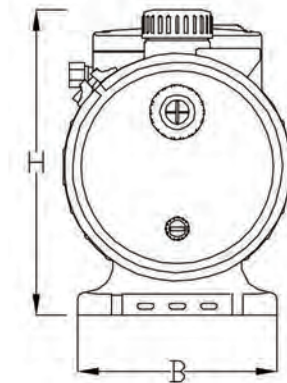
Features

Irrigation pumps are many and varied. Pumps used for irrigation can cover a range of applications including:

- Water Intake - Irrigation starts with water intake from either groundwater or surface water sources (river, dam, storage tank, streams etc.)
- Water Treatment - Once water for irrigation is sourced, the next step, if required, is water treatment. This may involve filtration or the addition of fertiliser or chemicals. Water treatment covers processes used to make water more acceptable for the desired end-use.
- Water Distribution - Delivering water to irrigate crop using various techniques including, pivots, sprinklers, drippers and micro spray units.

Applications

- All sort of agriculture fields
- Controlled environment agriculture sheds
- kitchen gardens



Dim[mm]	L	H	B
MQ 3	570	320	114

HOT WATER CIRCULATION PUMPS

GRUNDFOS



Features

These vertical in-line volute pumps are used in commercial buildings for air conditioning and heating applications.

The pumps are all single-stage, in-line centrifugal volute pumps with standard motors and mechanical shaft seals. The pumps are of the close-coupled type, i.e. pump and motor are separate units. Consequently, the pumps are less sensitive to impurities in the pumped liquid than similar pumps of the canned rotor type.

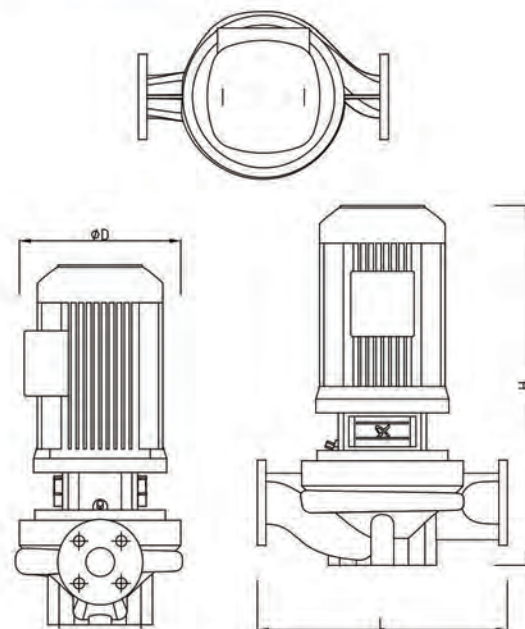
Benefits

- Optimized hydraulics for high efficiency
- Reduced power consumption
- High-efficiency motors
- TP pumps are fitted with high-efficiency motors
- High-efficiency motors provide reduced energy consumption
- 2-pole and 4-pole TP pumps from 0.75 kW to 375 kW have IE3 motors (By March 2012)
- Top-pull-out design
- Easy dismantling for service
- In-line design
- Unlike end-suction pumps, in-line pumps allow the use of straight pipework, which often results in reductions in installation cost and amount of space occupied
- Hydraulically and mechanically balanced impeller (Series 300 and 400)
- The impeller is hydraulically and mechanically balanced to increase the life of motor bearings and shaft seals
- Pump housing and pump head/motor stool are electro coated
- Improved corrosion resistance
- TPE, TPED – pumps with built-in frequency converter
- Reduced power consumption
- TPE and TPED motors are based on IE3 motors (except 18.5, 4-pole)

Applications

Circulation of hot water in

- Large heating systems
- District heating plants
- Local heating plants
- Domestic hot water systems
- Air conditioning systems



Dim[mm]	H	L	φD
TP32	575	340	200
TP40	490	320	220
TP50	588	340	250
TP65	641	360	250
TP80	866	440	350
TP100	928	550	350
TP125	914	800	350
TP150	917	800	350

GRUNDFOS

CHILLED WATER CIRCULATION PUMPS

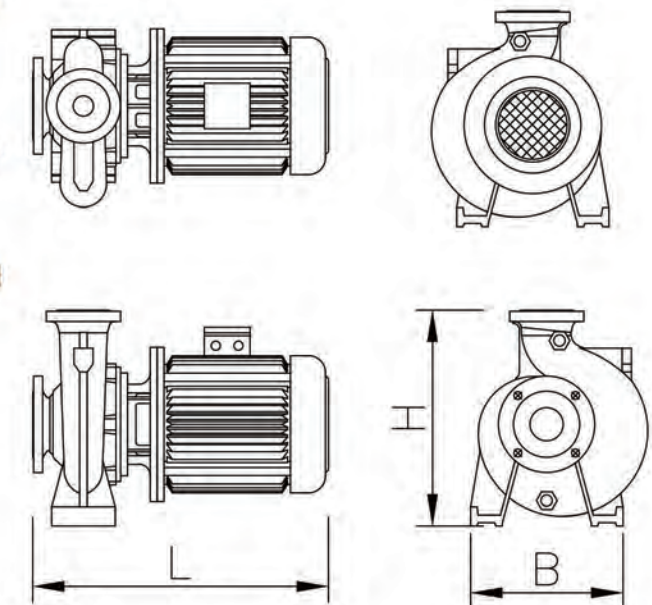


Features

In chilled water systems, Grundfos pumps reduce both the water and energy consumption while making absolutely no noise when in use.

Grundfos offers a holistic system approach with components that adapt to their surroundings. Our components deliver optimal performance, energy efficiency and reliability.

Our chilled water solutions include water pumps, drives, controls and protection, and measurement and communication units. All of these components are combined and customized in order to meet your system requirements, so that we cater to your demands with intelligent functionalities.



Dim[mm]	L	H	B
NB32	547	340	190
NB40	609	405	250
NB50	646	405	320
NB65	817	505	400
NB80	897	565	400
NB100	916	565	400
NB125	916	605	400
NB150	773	947	550

WATER PUMPS

GRUNDFOS X



Features

Water treatment is any process that improves the quality of water to make it more acceptable for a specific end-use. The end use may be drinking, industrial water supply, irrigation, river flow maintenance.

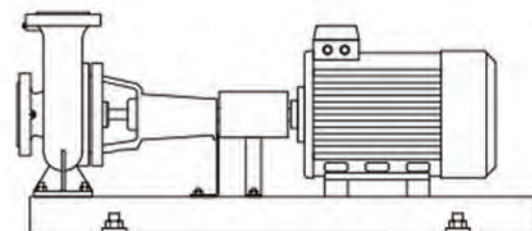
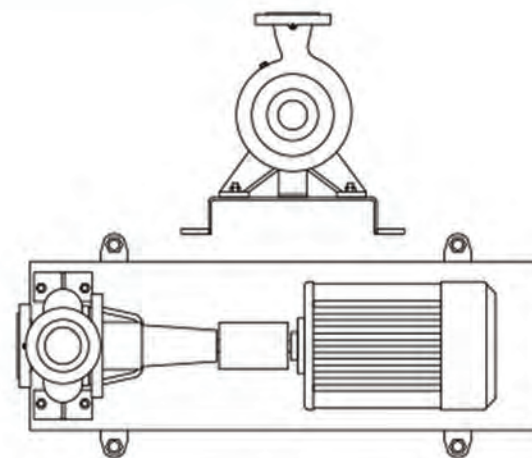
Benefits

- Optimized hydraulics in housing and impeller = unimpeded liquid flow
- O-ring seal between pump housing and cover = no risk of leakage
- Housing, impeller and wear ring in different materials = improved corrosion resistance, no sticking elements
- Back pull-out design for easy dismantling for service
- Pump is electro-coated to increase corrosion resistance
- Available with IE1, IE2 and IE3 motors
- PN 10/16 and 25 bar
- Temperatures up to 180 °C
- Available in a number of shaft seal and material variants

Applications

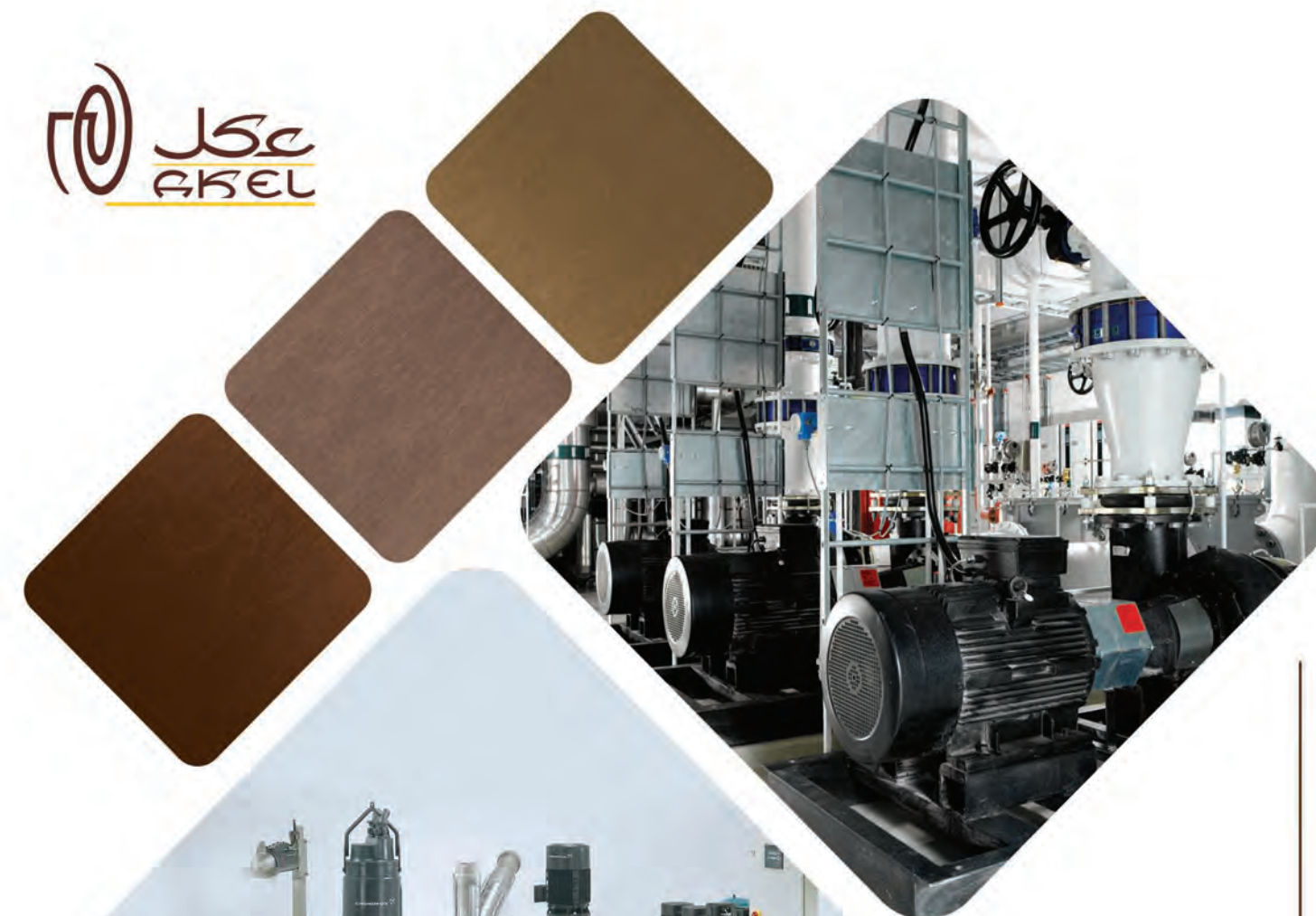
Grundfos offers a virtually limitless range of long-coupled (NK) end-suction pumps. Their sturdiness and reliability make them ideal for use in demanding environments such as the following:

- District heating plants
- Heating systems for blocks of flats
- Air-conditioning systems
- Cooling systems
- Wash down systems
- Other industrial systems.



Dim[mm]	L	H	B
NK32	900	184	361
NK40	900	344	300
NK50	1000	400	340
NK65	1000	430	340
NK80	1250	699	430
NK100	1400	699	450
NK125	1600	735	550
NK150	1800	947	750

JS
AKEL



**IRRIGATION
SYSTEMS
PRODUCTS
RANGE**



ELECTROMECHANICAL PRODUCTS FACTORY

IRRIGATION SYSTEMS



AKEL has emerged as a leading name in middle-east for agricultural and irrigation solutions. We resolve to boost the agriculture sector in the region with our know-how, partnerships and feasible farming solutions. We have provided ceaseless support at every stage of the irrigation or agricultural project with our superior quality equipment that have been manufactured in our state-of-the-art facility.

Our significantly valuable contributions over the last 40 years to the agricultural community stems from our core guiding principles of the division:

- Emphasis on the individual requirements of different irrigation systems.
- Rationalization of water consumption.
- Provide after-sales service for installation,
- on-site testing, commissioning and maintenance.

AKEL through its dedicated agricultural equipment manufacturing facility has made commendable progress in the area of design and manufacture of precision irrigation choices that match the needs of each of its customers. To answer to the high demand of center pivot irrigation systems in the Kingdom, we have set up a core team that is solely responsible for the manufacture and assembly of pivot irrigation systems, fertilizer injectors of all types including their spare parts.

Key Features

- Pivots & Towers galvanized for longevity and designed for specific needs to enhance the value.
- High efficiency irrigation of planted areas with immense saving of water and power.
- Available in different diameters and lengths of towers.
- Best choice for low pressure irrigation.
- Combination of superior technical skills and latest technologies.
- Our Fertilizer injector provides efficient control of the quality of fertilizers and insecticides.
- Increased production, Reduced costs with Intelligent Irrigation

IRRIGATION SYSTEMS



CENTER PIVOT IRRIGATION SYSTEM

DRAIN



Center Pivot Features

- The base of the accompanying device of steel and hot galvanized and supported vertically and horizontally in a way that makes it on all pressures
- Two legs of galvanized steel
- With horizontal supports on both sides of the base
- Ease of maintenance because of the pillars in the base
- There is a water pressure meter
- The gyro set rotates smoothly and any of them
- The base of the axle on a concrete base by four seasons fixed at the concrete base at each nail angle

Pivots

- The device has a regular structure of all the iron parts that make up the body of the device and all these parts are galvanized with hot galvanizing.
- The thickness of the pipe is 3 mm before galvanizing, and the thickness of the galvanization is about 100 microns
 - The armed parts of the tower are hot galvanized iron rods and are interconnected with angles to ensure full support of the tower and equal tensile strength on both ends of the tower
 - Rubber joints between the towers bear high pressure and allow freedom of movement and ease in all directions as well as prevent the leakage of water, and these links are connected with a link made of stainless steel stainless

DRAIN

CENTER PIVOT IRRIGATION SYSTEM, SPARE PARTS



Gear Box (OMNI)

- Available with Lip seals or Cartridge seals and exclusive debris excluder design.
- Large Input shaft bearings with greater capacity better absorb the reaction load of the gears when under pressure .
- Tests prove that the design of the Gear train exceeds others in the market .
- New gear materials used for higher torque and extended service life. Gearbox comes with lubrication
- Internal expansion chamber with two capacities (0.19 liters and 0.63 liters) and comes with an unused shaft protector



Gear Motor (OMNI)

- Carburized and honed Automotive Gearing for lower noise and higher running torque
- Motor has Aluminum extruded housing for better cooling
- Carburized and honed rotor shaft minimizes noise and increases service life.
- Clix-on type Thermal Protector protects motor from overloads
- Available in various output speeds and with different motor Hp levels
- Poppet valves protect motor can from condensation



Collector Ring

(MODEL HS8110 - 11RINGS 25A)

- Dynamic contact resistance: <10mΩ
- Dynamic resistance value change value: <5Ω/p-p
- Rated voltage: 480VAC/VDC
- Rated Current: 25A/circuit
- Speed: 0-250 RPM
- Contact material: Brass & Carbon brush
- Metal Base & Aluminum Cover
- Insulated resistance: >50mΩ/1000V/10S
- Cable Size: AWG 6mm
- Packing size: 47 x 27.5 x 27.5cm



Tower Box

- Sealed control box to ensure complete insulation against water and dust
- American manufacturing, 30 Amp
- Microswitch is a Mexican made of high quality



Cables

- Saudi cable 10 line
- Extender cable IEC60502-1
- The voltage can withstand 600 volts
- Connector size 14/12 AWG
- Completely insulated against natural factors



CENTER PIVOT IRRIGATION SYSTEM, SPARE PARTS

DRAIN



Control Panel

- All parts of the French Schneider
- Contains a stop / play key (front / reverse)
- Voltage measuring device
- Timing to calibrate the speed of rotation
- Triple insulation of coating against natural conditions



Fertilizer Injector

- Compatible with all irrigation systems
- Designed to control the amount of fertilizers and pesticides
- Fertility capacity is 160 gallons per hour
- High potency
- pump and feed fertilizers of stainless steel
- Designed to ensure longer life in operation
- Easy maintenance
- Operating keys are moisture resistant
- Plastic pipes are made in USA, 1.5-inch diameter
- High pressure hydraulic and chemical resistance

Tire

- 14.9 x 24 tires are made specifically for the irrigation system and resistant to chemicals and fertilizers in the working environment .
- 8 layers of infidelity .
- The tires are slip-resistant and high-float, and deep drips allow stability and non-slip .



Spray Body

- Higher production rate
- Higher water flow by reason of lesser friction
- Total elimination of the problems of the conventional sprinkles
- Easy install easy to dismantle
- Efficiency and consistency in water distribution
- ideal utilization of water
- Lesser operation time by reason of higher distribution rates and enhanced water flow utilization
- Economy in energy by saving diesel and power
- Best application and distribution of fertilizers and pesticides higher production



Rim

- Suitable for harsh conditions



DRAIN

OUR CAPABILITIES



Features

AKEL equipped with all necessary machines with latest technology to achieve all Kind of assembly and fabrication works up to International standards.

Beside the very qualified staff which is composed of operational and engineering personnel, all are well experienced in systems development, management and application of technology to industry.

All are strongly oriented toward problem solving. This practical orientation produces solutions that work in the real world environment and not just on engineering drawings. From hardware to software, the critical man-machine interface is our primary concern and we translate that into easy to use systems.

In addition to the capabilities of our own in-house staff AKEL has established close-working relationships with several very specialized and highly experienced manufacturing and industrial expert companies.

Engineering Capabilities

Our engineering group provides professional and technical services to government and industry in the areas of problem definition, system design and engineering, systems integration, management and maintenance of operational activities.

Our Methodology

The effective application of our capabilities to specific client requirements are not a casual exercise.

The years of experience and performance of our staff and associates have derived and validated an approach to our engineering and programs activities, which offers rational, economical, and effective solutions to project's needs.

Our Philosophy

The extraordinarily close and intense co-operation between the departments of Sales, Design, and Production are the keystone of our along with acceptable prices for our products, we guarantee.

- Unquestionable reliability and safety of our products and services.
- Flexibility, fast and ever punctual fulfilment of our commercial obligations.
- Permanent maintenance of our know-how, early identification and incorporation of new trends and methods in the manufacturing of products or systems.
- Close and interactive partnership with our direct customers to achieve their technical and commercial goals.



Design and Estimation Department :

The design process of the panel starts from studying carefully all the client requirements in order to be achieved in the schematic design.

The client requirements and specifications are the base from which the panel design will start, the long experience of our engineers as well as the advanced tools which are used for design give the designed panels high accuracy and standardization.

Design Facilities :

- Fault level calculations and Design capability of switchboards & MCCs up to Form-4 configuration.
- EPLAN Design /Drawings.
- Design of Power, Controls & Instrumentation panels.
- Software based harmonic filter For Capacitor bank design.

Manufacturing Department

The main manufacturing processes of the LV electrical panels are as follows;

Busbar Fabrication :

The bus bars fabrication process is very Important, and is done at AKEL Electromechanical Products Factory plant carefully.

AKEL Electromechanical Products Factory has adopted latest launched models in which the function focusing on user's convenience.

In 2017 with innovative cutting & punching system and attachment of "Angle Indicator" increased the work accuracy.

The machine's cutting capacity is upto T15mm x W150mm. Power & Control Wires Fabrication

For high end productivity and quality control, AKEL Electromechanical Products Factory has special arrangement for power and control wire manipulation, in which all the wiring works are completed before installations.

Testing Department

The testing procedure after the completion of manufacturing is very important part, in this process we do routine test and special test according to the standard as well as the client requirements.

Testing equipment is fully equipped testing bench comprising of;

- Secondary current injection set (AC/DC) for functional tests.
- H.V test equipment 2.5Kv/5Kv, 100mA for 30 min.
- Multimeter-600V, 2000MOHM.
- RCCB tester.
- Insulation Megger-5000V.
- Portable power quality analyzer for on-site testing of all power network parameters including measurement of harmonics.
- ACB test Kit 3 Phase loads for testing.

QC Department

QC department strives to achieve total customer satisfaction by offering equipment of highest quality and after sales service.

After Sale Service Department

After Sale Service Dept. strives to make sure our customers are satisfied with the products and services of AKEL. The requirements of the customers must be fulfilled to win their trust and earn their loyalty for a long term relationship.



Design & Estimation



Factory Floor



Factory Floor



Fabrication



Fabrication



Assembly



Assembly



Assembly



Testing



QC



Finished Products



Finished Products