GLOBAL PUMP SOLUTION DOOCH

60Hz

• XQ-DRIVE

• NSQ-DRIVE

• SQ2-DRIVE

• TM10.1

VARIABLE FREQUENCY DRIVE

ALL-IN-ONE INTELLIGENT PUMP CONTROLLER

dooch
두크펌프

MOTOR-INDEPENDENT, MICROPROCESSOR BASED ENERGY SAVING PUMP CONTROL SYSTEM.

XQ-Drive

NSQ-Drive

SQ2-Drive

	XQ-Drive	NSQ-Drive	SQ2-Drive
Single phase model	-	-	Available power : 1.1~2.2kW Input power : 1Phase, 200~230V Output power : 3Phase, 200~230V
Three phase model	Available power : 0.75~22kW Input power : 3Phase, 380~440V Output power : 3Phase, 380~440V	Available power : 0.75~22kW Input power : 3Phase, 380~440V Output power : 3Phase, 380~440V	-
Main frequency	50/60Hz	50/60Hz	50/60Hz
IP Class	IP55	IP55	IP55
Ambient temperature	-10~+40 C°	-10~+40 C°	-10~+40 C°
Connections	RS485 port	RS485 port (OPTION)	-
Pressure transmitter	4~20mA	4~20mA	4~20mA
Display	Graphic LCD type (3.5")	FND type (5 digits)	FND type (5 digits)
Built-in-devices	Built-in EMC filter (IEC61800-3) Built-in DC reactor	External (OPTION)	External (OPTION)

VARIABLE FREQUENCY DRIVE (V.F.D)

ALL-IN-ONE INTELLIGENT PUMP CONTROLLER

XQ-DRIVE

XQ-Drives are pump specific variable frequency drive that manage pump performance to match a wide range of system conditions and requirement.
Adjusting the pump speed is the most efficient means of controlling pump flow and reducing the energy consumption.
As the Drives are self-cooling and motor-independent structure, it can be mounted directly on the motor or on the wall.

Application

- Pressure boosting system
- Water treatment and processing
- HVAC applications
- Wash system
- Process water

Technical Specification

- Available power : 0.75~22kW
- Input power : 3Phase, 380~440V
- Output power : 3Phase, 380~440V
- Main frequency : 50/60Hz
- Maximum frequency : 60Hz
- IP Class : IP55
- Maximum distance of pressure transmitter from drive 10 meters
- Ambient temperature -10℃ to 40℃
- Humidity 50% at 40℃ and 90% at 20℃

Protections

- Dry running
- Low water level detection
- Minimum flow stop
- Over/under voltage
- Inverter over temperature
- Pressure setting
- Sensor failure
- Pump freezing
- Pump overload

Features

- New hardware design (LCD display type)
- Energy savings up to 70%
- Multipump control capability up to 6 pumps
- Control mode - pressure/differential pressure
- Hydraulic control functions included
- Electrical and hydraulic pump protections
- Automatic recovery after power failure
- Easy retrofitting on existing pump system
- Mounted directly on standard I.E.C. motors
- Flexible installation(motor, wall)
- Built-in EMC filter and DC reactor
  -Reduced noise and harmonic distortion

NSQ-DRIVE

NSQ-Drives are pump specific variable frequency drive that manages pump performance to match a wide range of system conditions and requirement.
Adjusting the pump speed is the most efficient means of controlling pump flow and reducing the energy consumption.
As the Drives are self-cooling and motor-independent structure, it can be mounted directly on the motor or on the wall.

Application

- Pressure boosting system
- Water treatment and processing
- HVAC applications
- Wash system
- Process water

Technical Specification

- Available power : 0.75~22kW
- Input power : 3Phase, 380~440V
- Output power : 3Phase, 380~440V
- Main frequency : 50/60Hz
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- IP Class : IP55
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Protections

- Dry running
- Low water level detection
- Minimum flow stop
- Over/under voltage
- Inverter over temperature
- Pressure setting
- Sensor failure
- Pump freezing
- Pump overload

Features

- Energy savings up to 70%
- Multipump control capability up to 6 pumps
- Control mode - pressure/differential pressure
- Hydraulic control functions included
- Electrical and hydraulic pump protections
- Automatic recovery after power failure
- Easy retrofitting on existing pump system
- Mounted directly on standard I.E.C. motors
- Flexible installation(motor, wall)
- FND display for easy status monitoring and programming

VARIABLE FREQUENCY DRIVE (V.F.D)

ALL-IN-ONE INTELLIGENT PUMP CONTROLLER

SQ2-DRIVE

SQ2-Drive is a single phase specific pump controller which adjusts the pump speed to maintain constant pressure, even when demand for water changes. Adjusting the pump speed is the most efficient means of controlling pump flow and saving the energy. As SQ2-Drive is motor-independent frequency inverter, it can be mounted directly on the motor or the wall.

Application

- Pressure boosting system
- Water treatment and processing
- Wash down
- Portable water supply
- Commercial water supply
- Boiler feed

Technical Specification

- Available power : 1.1~2.2kW
- Input power : 1Phase, 200~230V
- Output power : 3Phase, 200~230V
- Main frequency : 50/60Hz
- Maximum frequency : 60Hz
- IP Class : IP55
- Maximum distance of pressure transmitter from drive 10 meters
- Ambient temperature -10℃ to 40℃
- Humidity 50% at 40℃ and 90% at 20℃

Protections

- Dry running
- Low water level detection
- Minimum flow stop
- Over/under voltage
- Inverter over temperature
- Pressure setting
- Sensor failure
- Pump freezing
- Pump overload

Features

- Stand-alone inverter for a single pump
- Hydraulic control functions included
- Electrical and hydraulic pump protections
- Easy retrofitting on existing pump system
- Flexible installation (motor, wall)
- Small compact design and space saving
- FND display for easy status monitoring and programming

Features

- Full-color display
- User-friendly touch screen interface
- Easy to set pressure
- Icons include; History of run/alarm and other various information
- Languages include; Korean/English/Chinese
- Integral monitoring system; gather information of each drive via CAN communication
- Comfortable UX Interface/GUI; high-quality user recognition rate & operability
- Easy firmware upgrade with usb port

Configuration of LCD Monitor

Category	Screen layout
1	Pump status
2	Trend
3	Current date/time
4	Current pressure value
5	Run/Stop
6	Settings
7	Current operation ratio/ Total flow rate
8	Run history
9	Indicator
10	Current pressure

Functions

- Lcd touch screen – Large LCD screen; indicate various information graphically
- Language selection – Korean(Standard)/English/Chinese
- Digital I/O function – Run system by external digital input/control function; stop, alarm etc.
- Analog I/O function – Convert 4~20mA of external signal internally or internal signal externally
- Schedule run – Operatable in different pressure values by time/date/month
- Record & save run history – Record and save various run histories in SD card on a real-time basis
- Indicate & save alarm content – Indicate and save various alarm/breakdown content
- Remote monitoring system – Monitor running status & alarm remotely with integrated contact
- CAN communication – Connected with booster pump system
- RS-485 communication – Connected with external devices