DOOCH PUMP

V. F. D.

XQ / NSQ / SQ

ALL-IN-ONE INTELLIGENT PUMP CONTROLLER

PRESSURE BOOSTING SYSTEM

WATER TREATMENT AND PROCESSING

HVAC APPLICATION

WASHING SYSTEM

PROCESS WATER

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XQ/NSQ/SQ

VARIABLE FREQUENCY DRIVE (V.F.D.)

ALL-IN-ONE INTELLIGENT PUMP CONTROLLER

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

XQ-Drive

NSQ-Drive

SQ-Drive

	XQ-Drive	NSQ-Drive	SQ-Drive
Single phase model	-	Available power : 0.40~2.2kW Input power : 1Phase, 200~230V Output power : 3Phase, 200~230V	Available power : 0.75~1.1kW 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	-
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)

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

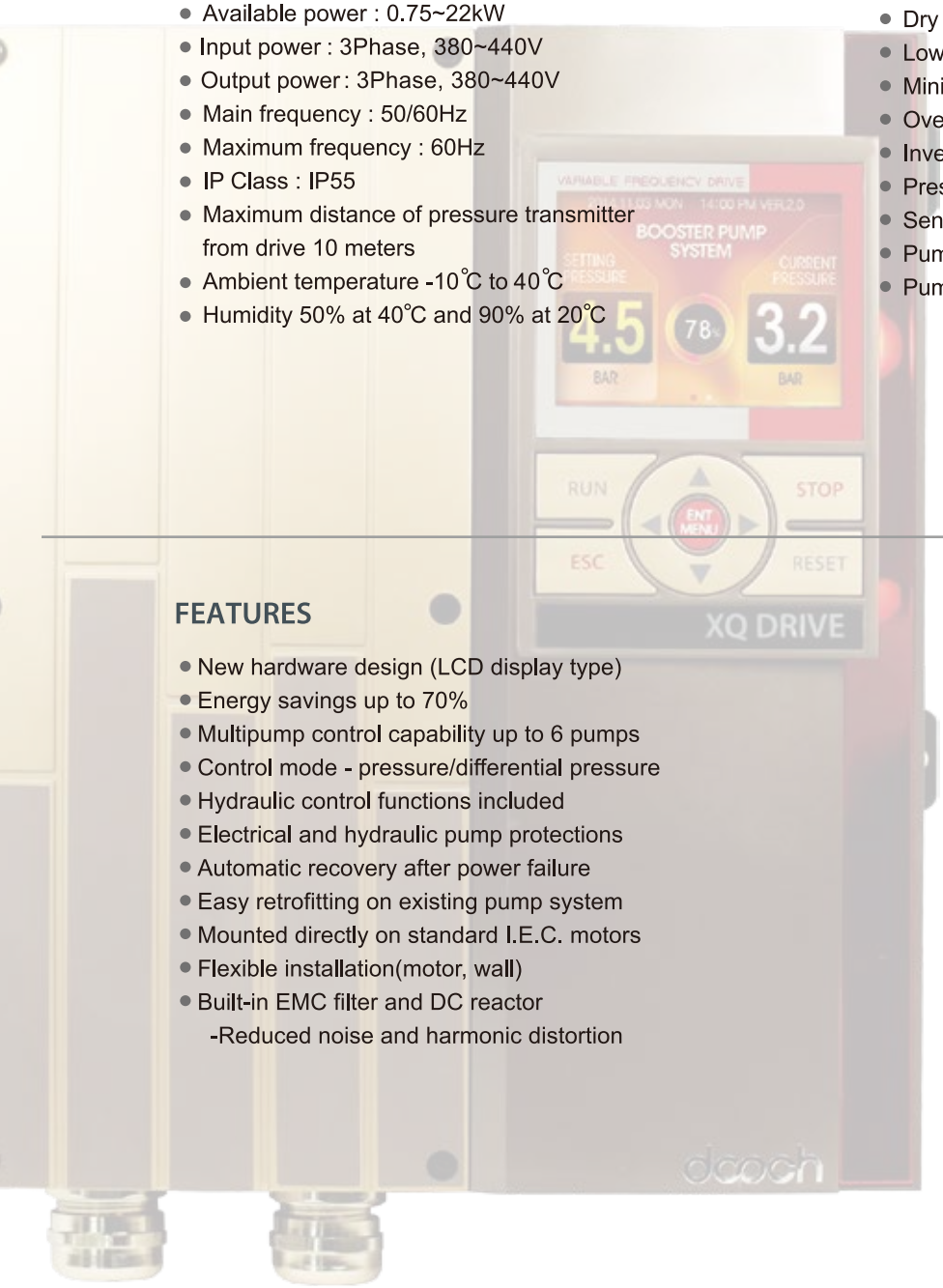
- Available power : 0.75~22kW
- Input power : 3Phase, 380~440V
- Output power : 3Phase, 380~440V
- Main frequency : 50/60Hz
- Maximum frequency : 60Hz
- IP Class : IP55
- Maximum distance of pressure transmitter from drive 10 meters
- Ambient temperature -10℃ to 40℃
- Humidity 50% at 40℃ and 90% at 20℃

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



XQ/NSQ/SQ

VARIABLE FREQUENCY DRIVE (V.F.D.)

ALL-IN-ONE INTELLIGENT PUMP CONTROLLER

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

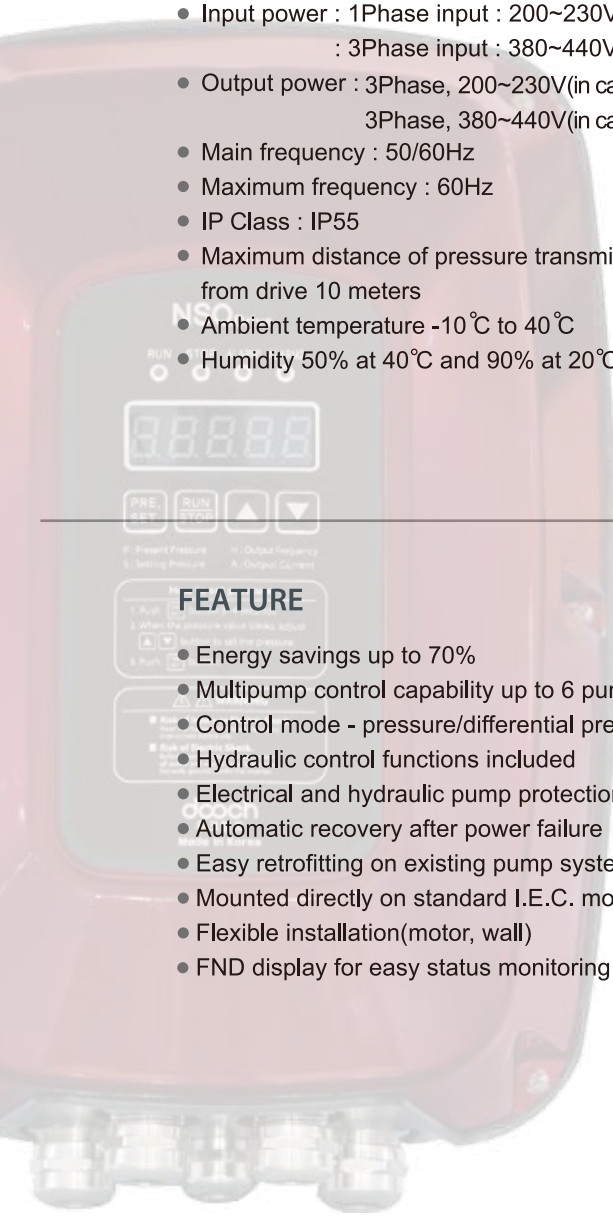
- Available power : 0.75~22kW
- Input power : 1Phase input : 200~230V (0.4~2.2kW)
  : 3Phase input : 380~440V (0.75~22kW)
- Output power : 3Phase, 200~230V(in case of 1 Phase input power)
  3Phase, 380~440V(in case of 3 Phase input power)
- Main frequency : 50/60Hz
- Maximum frequency : 60Hz
- IP Class : 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

FEATURE

- 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



SQ-DRIVE

SQ-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 SQ-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 : 0.75~1.1kW
- 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℃

PROTECTION FEATURES

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

FEATURE

- 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

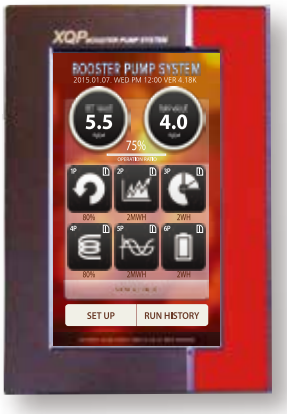
XQ/NSQ/SQ

VARIABLE FREQUENCY DRIVE (V.F.D.)

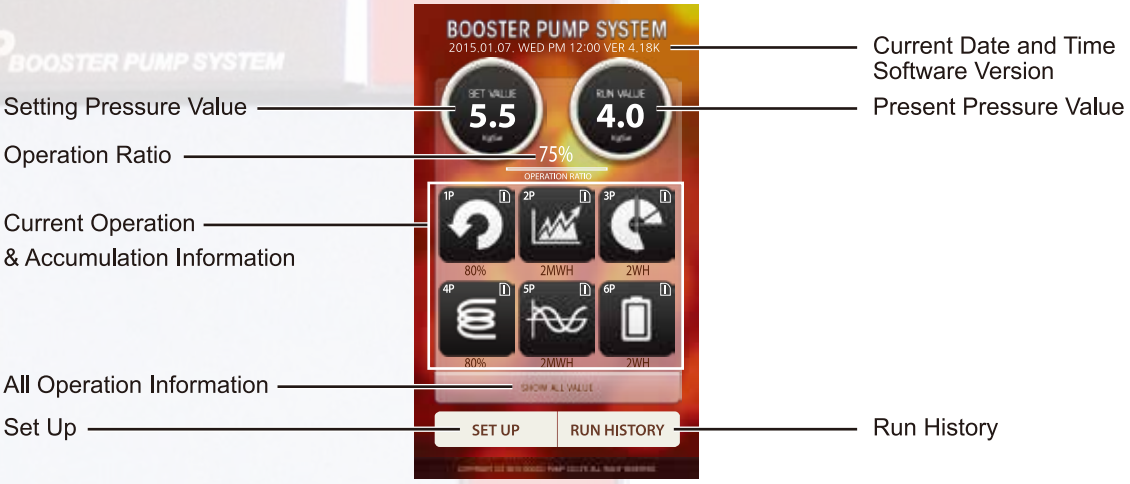
ALL-IN-ONE INTELLIGENT PUMP CONTROLLER

LCD MONITOR

LCD Monitor provides highly enhanced and comfortable user interface with 7"color LCD Touch screen.
It displays status of the Booster system, Alarm report, operating data and supports operation scheduling, data storage, etc.



CONFIGURATION OF LCD MONITOR



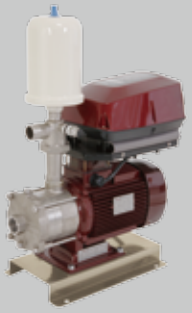
FUNCTIONS

- LCD Panel - Displays various information through large LCD
- Language - Korean / English / Chinese
- Schedule Operation - Different pressure setup is available (timely/weekly/monthly)
- Operation History - Records and displays the operation history
- Alarm - Records and displays the alarm history
- External contact - Monitoring the drive from external place is available
- CAN - Supports CAN comm.
- RS-485 - Supports RS-485 comm.

SQ-2DHM SERIES

Built-In VFD Horizontal Booster Pump

Max. Flow (Q) : 36m³/h
Max. Head (H) : 29m
Motor Power : 0.75~1.1kW (1~1.5HP)



NSQ-DHF(T) SERIES

Built-In VFD Multi-stage Horizontal Pump

Max. Flow (Q) : 29m³/h
Max. Head (H) : 68m
Motor Power : 0.55~5.5kW (0.75~7.5HP)

SQ-DHM SERIES

Built-In VFD Horizontal Unistage Pump

Max. Flow (Q) : 18m³/h
Max. Head (H) : 29m
Motor Power : 0.75~1.1kW (1~1.5HP)

NSQP-DHF(T) SERIES

Built-In VFD Horizontal Booster Pump System

Max. Flow (Q) : 58m³/h
Max. Head (H) : 68m
Motor Power : 0.55~5.5kW (0.75~7.5HP)

NDS SERIES

Submersible Drainage and Sewage Pump

Max. Flow (Q) : 31m³/h
Max. Head (H) : 20.7m
Motor Power : 0.4~1.5kW (0.5~2HP)

NSQ-XR(L) SERIES

Built-In Inverter Multi-stage Vertical Pump

Max. Flow (Q) : 130m³/h
Max. Head (H) : 245m
Motor Power : 0.75~22kW (1~30HP)

NSQ-DP SERIES

Built-In VFD In-line Circulation Pump

Max. Flow (Q) : 480m³/h
Max. Head (H) : 83m
Motor Power : 0.75~22kW
(1~30HP)

DP SERIES

In-Line Circulation Pump

Max. Flow (Q) : 750m³/h
Max. Head (H) : 85m
Motor Power : 1.1~132kW
(1.5~180HP)

VFD(E)-1712

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