조달우수제품 NEP 인증 성능인증제품 고효율기자재

www.doochpump.com.cn

Saving energy

Pump solutions for better future

50Hz

BOOSTER PUMP SYSTEM
VERTICAL MULTI-STAGE PUMP
HORIZONTAL MULTI-STAGE PUMP
IN-LINE CIRCULATION PUMP

dooch

Saving energy
Pump solutions for better future
50Hz
dooch

dooch Main Products

XQP SERIES

Individual VFD Booster Pump System

Max. Flow (Q) : 780m³/h
Max. Head (H) : 245m
Motor Power : 0.75~22kW (1~30HP)

HNSQ(P) SERIES

Individual VFD Booster Pump System

Max. Flow (Q) : 780m³/h
Max. Head (H) : 245m
Motor Power : 0.75~22kW (1~30HP)

MQ SERIES

Multi-Inverter Booster Pump System

Max. Flow (Q) : 780m³/h
Max. Head (H) : 245m
Motor Power : 0.75~22kW (1~30HP)

N747D SERIES

Inverter within Panel Booster Pump

Max. Flow (Q) : 780m³/h
Max. Head (H) : 330m
Motor Power : 0.75~110kW (1~150HP)

XQ-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)

XR(L) SERIES

Multi-Stage Vertical Pump

Max. Flow (Q) : 130m³/h
Max. Head (H) : 328m
Motor Power : 0.37~45kW
(0.5~60HP)

TOTAL PUMP SOLUTIONS

SQ-2DHM SERIES

Built-In VFD Horizontal Booster Pump

Max. Flow (Q) : 48m³/h
Max. Head (H) : 29m
Motor Power : 0.37~1.5kW (0.5~2HP)

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) : 24m³/h
Max. Head (H) : 29m
Motor Power : 0.37~1.5kW (0.5~2HP)

NSQP-DHF(T) SERIES

Built-In VFD Horizontal Booster Pump System

Max. Flow (Q) : 87m³/h
Max. Head (H) : 68m
Motor Power : 0.55~5.5kW (0.75~7.5HP)

JQ SERIES

Built-In VFD Horizontal Self-Priming Pump

Max. Flow (Q) : 3m³/h
Max. Head (H) : 42m
Motor Power : 0.55kW (0.75HP)

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) : 85m
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)

dooch

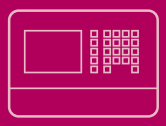
HISTORY OF COMPANY

Shanghai Sino-Korea Dooch Pump Manufacture Co., Ltd. prides ourselves as the pioneer in the manufacturing of 100% stainless steel water pumps and V.F.D., We focus on producing the top grade pumps with best quality and highest efficiency.

1980

1980.05 •Established DooSung Pump in Korea

1997.05 •Developed the multistage vertical pump in Korea



1999.12

•ISO9001 quality management systems certified in Korea

ISO 9001

2002.03

•Developed the 747D controllers for Booster Systems in Korea

2004.04

•Developed the Q-drives (V.F.D.) in Korea

2008

2008.02 •Establishment of Shanghai Sino-Korea Dooch Pump Manufacture Co., Ltd.

04 •Booster system rewarded as Shanghai Energy Saving Product

09 •Seminar on Dooch's advanced technology held by SPAT, broadcasted by STV

2009.09 •Dooch Korea awarded the General Service Administration Top Product Cert.

2010.03 •Dooch received China national CCC Mandatory product certification

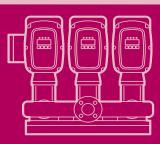
2011.12 •Dooch Rated as AAA Credit Enterprise by Chinese Government

2012

2012.05 •Sino-Korea Dooch Rated as Shanghai High-tech Enterprise

•Dooch DRL Booster System rated as Recommended Energy Saving Product for Green Building

09 •Dooch Booster System named as Shanghai's Famous Brand Product



2013.07 •Sino-Korea Dooch developed self-priming pump (JQ) in Korea

2014.01 •Dooch released the individual booster pump (HQ) in Korea

02 •Dooch developed stainless steel vertical multistage pump (XRL)

11 •Dooch developed the premium exclusive V.F.D. (XQ) in Korea

2016

2015.06 •A Chinese National R&D Center of Secondary Water Supplying co-established by and in Sino-Korea Dooch

09 •Obtained membership of WPC

2016 •VFD (XQ,NSQ,NQ Drives), Vertical & Horizontal Pumps CE certified

Shanghai Sino-Korea Dooch Pump Manufacture Co., Ltd is at the forefront of the global pump industry.We are able to provide our customers the best energy-efficient pumping solutions available in the world.

Shanghai Sino-Korea Dooch Pump Manufacture Co., Ltd. Oversea's Exhibitions


2017 ECO Expo-China


2018 MCE-Italy


2019 ISH-Germany


2019 CIIE-China

Company History

1980. 05 Established DooSung Pump in Korea

1997. 05 Developed multi-stage vertical pump in Korea

1999. 12 ISO9001 quality management systems certified in Korea

2002. 03 Developed 747D controllers for Booster Systems in Korea

2004. 04 Developed Q-drives (V.F.D.) in Korea

2005. 03 Established Shanghai Dooch Pump Co., Ltd.

2006. 03 Dooch Korea named as excellent company with advanced tech in Korea by KIBO

2008. 02 Establishment of Shanghai Sino-Korea Dooch Pump Manufacture Co., Ltd.

2008. 04 Constant pressure V.F.D controlled booster system was rewarded as Shanghai Energy Saving Product, the only maker awarded this honor in Shanghai pump industry

2008. 09 Feature seminar on Dooch's advanced energy saving and controlling technology jointly-held by Shanghai Association for Promotion of Technology (SAPT), Shanghai Electric Power Trade Association(SEPTA) and Shanghai Energy Conservation Association(SECA) broadcasted by Shanghai Television Station and tracking reported by Newspapers of Shanghai Evening Post and the Labor-Daily

2010.03 Sino-Korea Dooch ISO9001-2008 quality management systems certified

2011. 12 Sino-Korea Dooch awarded as Shanghai High-tech Enterprises

2012. 05 Sino-Korea Dooch DRL Series V.F.D. controlled booster system rated as Recommended Energy Conservation Product for Green Building, Dooch is the only company receiving this honor in water supplying industry

2014. 01 Sino-Korea Dooch released the individual booster pump (HQ) in Korea

2014. 02 Sino-Korea Dooch developed stainless steel multistage vertical pump Euro-version (XRL)

2014. 11 Sino-Korea Dooch Developed premium exclusive V.F.D. (XQ) in Korea

2015. 05 Acted as the only enterprise editor-in-chief compiled Technical Specification for Application of Digital Integrated Full Frequency Control Constant Pressure Water Supply Equipment, Now it's Chinese national standard

2015. 06 Chinese National R&D Center for Technology of Full Range Frequency Controlling in Secondary Water Supplying co-established by and in Shanghai Sino-Korea Dooch

2015. 09 Obtained membership of World Plumbing Council (WPC)

2016. 07 Drives, Pumps, Controllers CE certified

R&D Center

Dooch is one of the few pump manufacturers to own its own R&D center. Dooch Korea was the first corporation to obtained the NEP certification as the pioneer of manufacturing energy efficient booster systems.

In China, Sino-Korea Dooch's Constant pressure V.F.D controlled booster system was rewarded as Shanghai Energy Saving Product, the only booster system receiving this honor in Shanghai pump industry and China's National R&D Center for Technology of Full Range Frequency Controll in Secondary Water Supplying co-established by and inside Shanghai Sino-Korea Dooch Pump Co., LTD.

Primary Development Result

Korean language LCD– booster controller(747D)
Exclusive inverter for the pump. (Q-Drive) : 1HP ~ 30HP
Inverter connected pipe (EQ-Drive)
Pump system built-in individual inverter(IQP)
Multi-inverter for booster system (MQ-Drive)
Single phase inverter for smaller pumps(SQ-Drive)
Remote control system for booster pump (IM-2000)
Premium inverter for pumps (XQ-Drive)
Exclusive inverter for pumps(NSQ-Drive)
Touch LCD Monitor (TM 7.0)

Certification

New Excellent Product
Procurement Quality Product
High Efficiency Material
CE and KS certification

Exclusive Inverter for the Pump (Q-Drive)

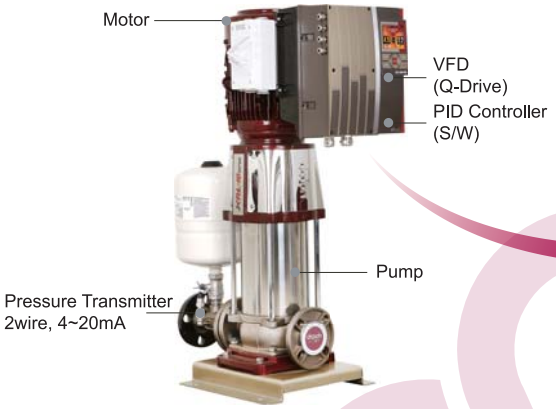
Features of the Q-Drive

- Saves the energy up to 50%
- Suitable for various applications
- Built-in pump protection functions
- Convenient installation and user friendly

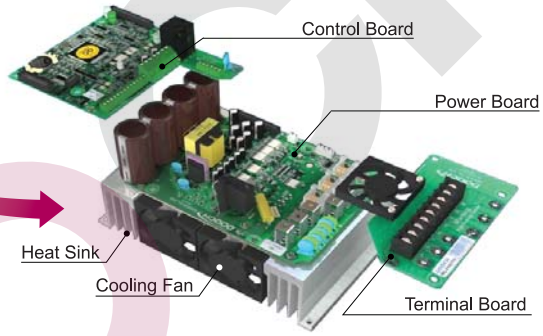
Applications

- Booster pump
- Heat Circulation pump
- Submersible pump
- Centrifugal Pump

E-Pump

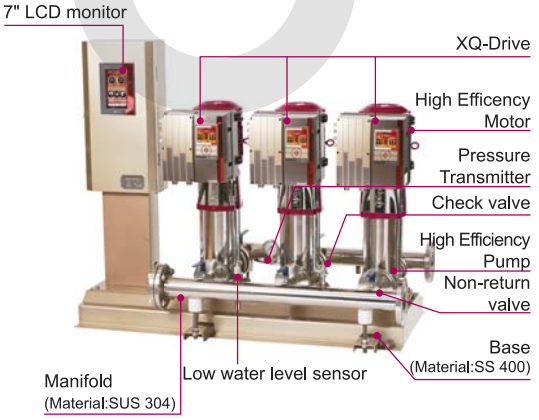


Q-Drive



Booster pump built-in individual inverter

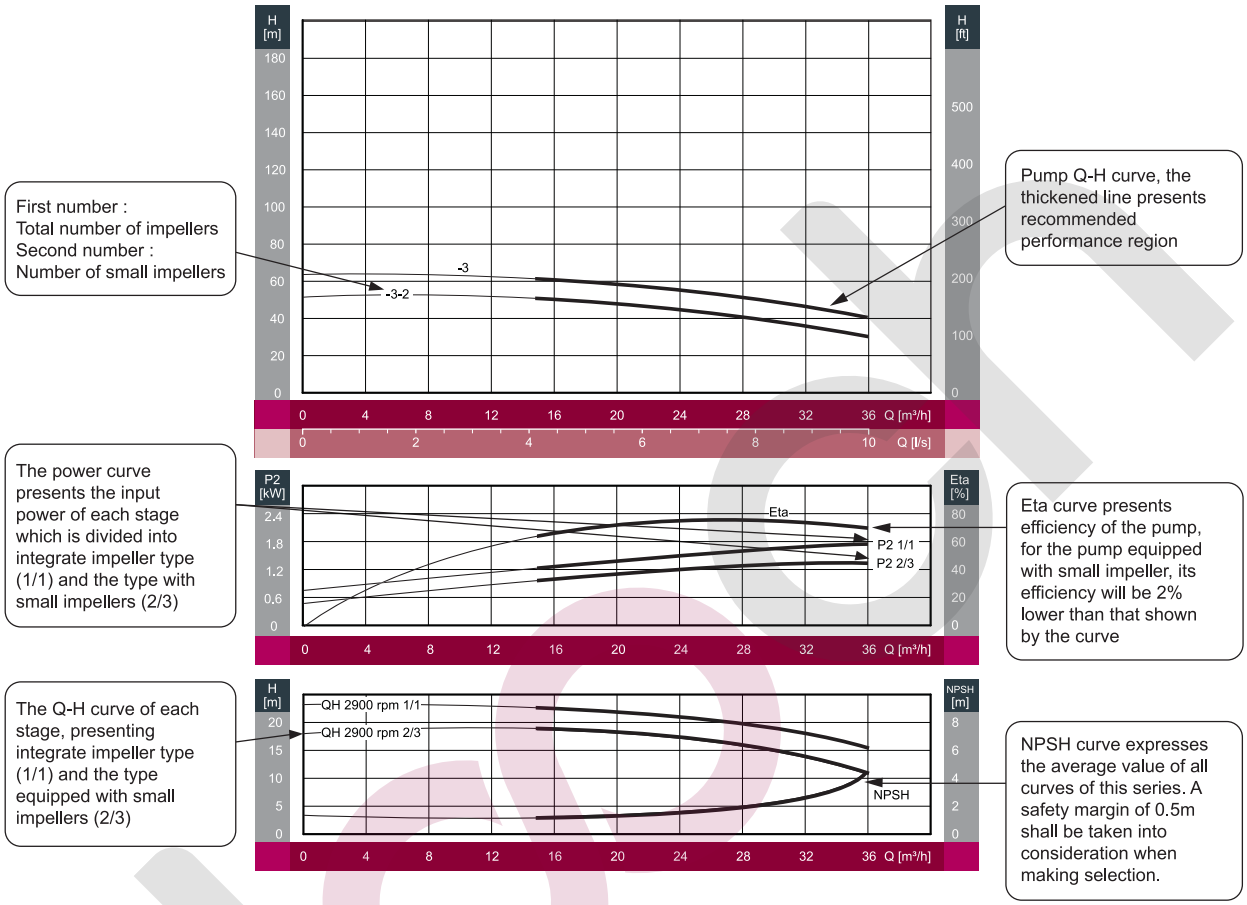
- All pumps are fitted with an intergrated variable frequency drive.
- Up to 6 electronically speed-controlled pumps.
- High reliability.
- Excellent procurement quality product



In-line pump built-in inverter

- In-line pump fitted with an intergated variable frequency drive.
- Suitable for various applications and saves the energy up to 50%
- Up to 22kW

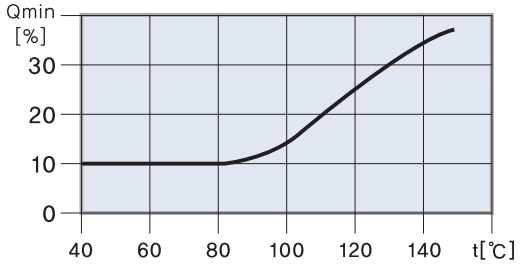
Product Range Description



Performance Curve

1. Curve tolerance in conformity with ISO9906, Annex A
2. All curves are based on the measurement by DOOCH standard motor
3. Measurement is done within 20℃ air-free water, kinematic vi'skosity of 1mm²/sec
4. The operation of the pump shall refer to the performance region indicated by the thickened curve to prevent overheating due to the small flow rate oroverload of motor due to the large flow rate.

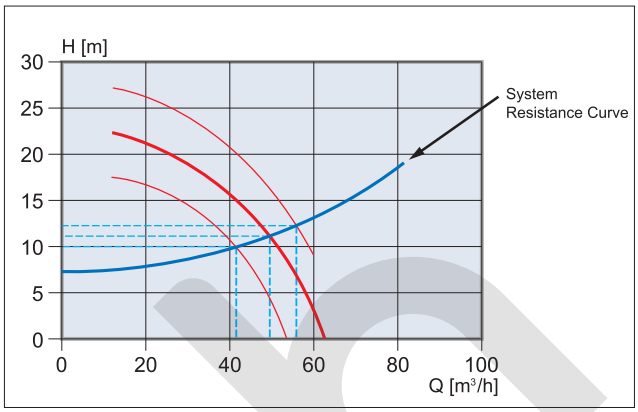
The following figure shows the temperature according to min.flow and rated flow



Pump Selections

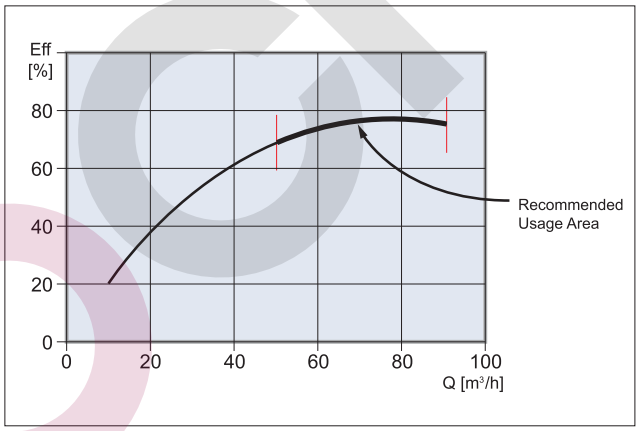
Selection of pump, the following should be considered:
- Usage (Service)
- Maximum flow and pressure
- Comparison of positive suction head

Note: Piping size should be under 1.5m/sec. of the liquid speed



Efficiency

If the pump always runs at a steady start point, a pump should be selected to meet the max. efficiency point and start point. In case the water usage changes, a pump should be selected to meet the max. Q usage and usage pattern.



Min. Inlet Pressure NPSH

If the pressure in the pump is lower than the steaming pressure, cavitations might occur. To avoid cavitations, a minimum pressure at the inlet side of the pump must be guarenteed. The max. suction head can refer to the below figure and be calculated with the following formula;

H = Pa X 10.2 - NPSH - Hf - Hv - Hs

Pb = atmosphere pressure(bar), the pressure can be set 1 bar. In a closed system, Pb means system pressure(bar)

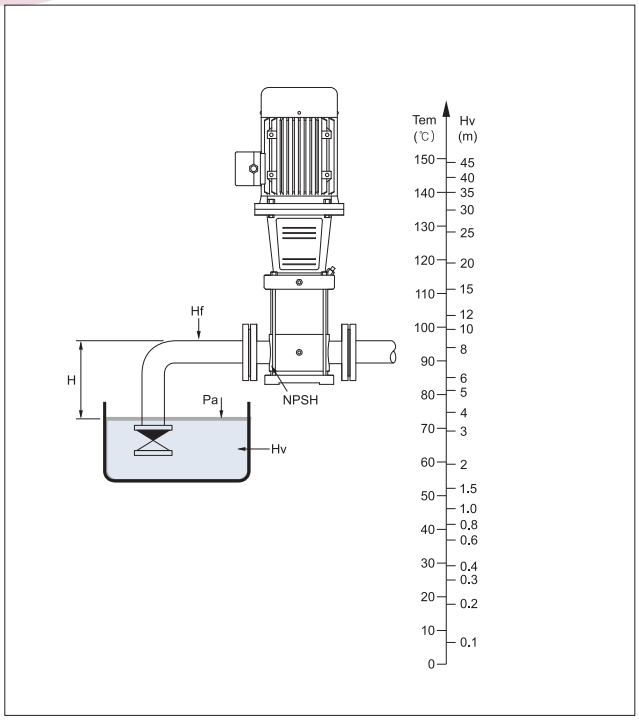
NPSH = Net positive suction head(m), it can be read out from the point of possible max flow rate shown NPSH curve

Hf = Pipeline loss at the inlet(m)

Hv = Steaming pressure(m)

Hs = Safety margin, it means minimum 0.5m delivery head

If the calculated result H is positive, the pump may run under the max suction head H.
If the calculated result H is negative, a pressure over H is reguired at the inlet side of the pump.




dooch
두크펌프

GLOBAL PUMP SOLUTION DOOCH

50Hz


• XQP


• MQ


• N747D


• NSQP


• HNSQP

BOOSTER PUMP SYSTEM

XQP, MQ, N747D, (H)NSQ(P) SERIES

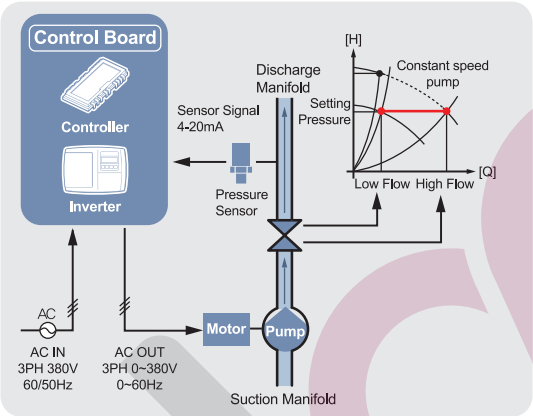
dooch
두크펌프

Booster System

Dooch's Booster Systems provides constant pressured water where it is required which can be applied in residential buildings or high rise office buildings. It maintains the lowest possible energy consumption in accordance with the water demand to control the Nomber of pumps and the speed of the motor

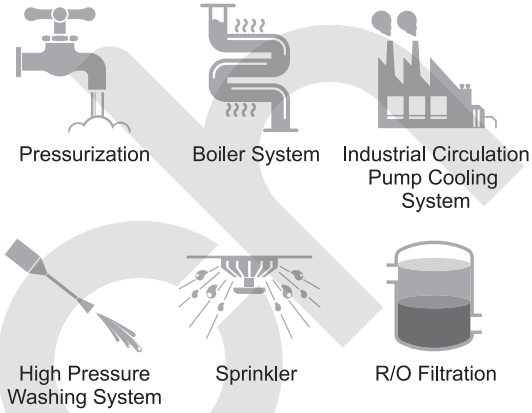
Features

Outstanding reliability
High efficiency
Fully integrated, all-in-one systems
Systems to match every need and requirement
Easy installation and operation



Applications

- Apartments
- Residential Buildings
- Office Buildings
- Hotels
- Industry



System Specification

Method of Control	Individual VFD	General Inverter
Models	XQP, NSQ(P), HNSQ(P) MQ - Series	747D - Series
Operation Method	Controlled by a VFD installed on each and every pump	Controlled by one inverter on one pump
Installation	Indoor	
Temperature	-10℃~+40℃	
Liquid Type	Clean Water	
Liquid Temp.	0℃~70℃	
Pump	Vertical/Horizontal Multi-stage Centrifugal Pump	
No. Of Pumps	2~6	
Power	3PH×380V×50Hz 1PH×220V×50Hz (XQP Exception)	3PH×220/380V×50Hz
Inlet/Outlet Manifold	Stainless Steel	

Control Specifications/Features

	XQP-Series Individual Inverter Booster System	MQ-Series Multi-Inverter Booster System	747D-Series Single Inverter Booster System
Appearance			
Features	• All pumps are fitted with an integrated V.F.D. which is directly mounted onto the motor • Newly designed V.F.D. hardware (XQ Drive) • Pumps range from 0.75kW~22kW • 2~6 electronically speed controlled pumps • Equipped with a 7.0 "Touch Monitor" • Low energy consumption (Above 30kW, 747D-Series is required)	• All pumps are connected via an integrated V.F.D. which is located within the MQ Panel • Pumps range from 0.75kW~22kW • 2~6 electronically speed controlled pumps • Constant discharge pressure • Low energy consumption (Above 30kW, 747D-Series is required)	• Control panel is integrated with a general inverter which controls the pumps within the system. • Pumps range from 0.75kW~110kW • 2~6 electronically speed controlled pumps • Constant discharge pressure • Low energy consumption • Equipped with Dooch's own 747D controller
Inverters	V.F.D. for pumps(XQ-Drive) 	V.F.D. installed within the Panels(MQ) 	General Inverter 
Type of Manifolds	 Standard Manifold	 Standard Manifold	 Standard Manifold
Panel	  7" LCD Touch Screen Monitor	 V.F.D. within the panel	 General Inverter within the Panel

Control Specifications/Features

	NSQP-Series Individual Inverter Booster System	NSQ-Series Individual Inverter Booster System
Appearance		
Features	• All pumps are fitted with an integrated V.F.D. which is directly mounted onto the motor • Newly designed V.F.D. hardware (NSQ Drive) • Pumps range from 0.75kW~22kW • 2~6 electronically speed controlled pumps • Equipped with a 7.0" Touch Monitor • Low energy consumption	• All pumps are fitted with an integrated V.F.D. which is directly mounted onto the motor • Newly designed V.F.D. hardware (NSQ Drive) • Pumps range from 0.75kW~22kW • 2~6 Electronically speed controlled pumps • Low energy consumption
Inverters	V.F.D. for pumps(NSQ-Drive) 	V.F.D. for pumps(NSQ-Drive) 
Type of Manifolds	 Standard Manifold	 Standard Manifold
Panel	  7" LCD Touch Screen Monitor	 Side Panel with individual circuit breakers

Control Specifications/Features

	HNSQP-Series Individual Inverter Booster System (In-line Type Manifolds)	HNSQ-Series Individual Inverter Booster System (In-line Type Manifolds)
Appearance		
Features	• All pumps are fitted with an integrated V.F.D. which is directly mounted onto the motor • Newly designed V.F.D. hardware (NSQ Drive) • Pumps range from 0.75kW~22kW • 2~6 electronically speed controlled pumps • Equipped with a 7.0" Touch Monitor • Low energy consumption	• All pumps are fitted with an integrated V.F.D. which is directly mounted onto the motor • Newly designed V.F.D. hardware (NSQ Drive) • Pumps range from 0.75kW~22kW • 2~6 electronically speed controlled pumps • Low energy consumption
Inverters	V.F.D. for pumps(NSQ-Drive) 	V.F.D. for pumps(NSQ-Drive) 
Type of Manifolds	 In-Line Type Manifolds	 In-Line Type Manifolds
Panel	  7" LCD Touch Screen Monitor	 Side Panel with individual circuit breakers

Control Specifications/Features

	XQ-XR(L) Series Premium V.F.D. Multi-stage Vertical Pump	NSQ-XR(L) Series V.F.D. Multi-stage Vertical Pump
Appearance		
Features	• Integrated V.F.D. which is directly mounted onto the motor • Newly designed V.F.D. hardware (XQ Drive) • Low energy consumption • Compact Design, no need for additional control panels	• Integrated V.F.D. which is directly mounted onto the motor • Newly designed V.F.D. hardware (NSQ Drive) • Low energy consumption • Compact Design, no need for additional control panels
Inverters	 Premium V.F.D. for pumps (XQ-Drive)	 V.F.D. for pumps (NSQ-Drive)
Manifolds	 Exclusive piping for V.F.D. pumps	 Exclusive piping for V.F.D. pumps

History Of Dooch's Booster Systems

Generation: 1

Pressure Control Booster System

- Pressure ON/OFF switch
- Pressure Deviation
- Pressure Differences : ± 1.2 kgf/cm²

1985~

Generation: 2

General Inverter Booster System

- Single pump RPM controlled
- General Inverter
- Centeralized Control
- Stable Pressure
- Pressure Differences : ± 0.7 kgf/cm²

1995~

Generation: 2.5

V.F.D. Booster System (Partial)

- Specific pumps RPM controlled via V.F.D.
- Stable Pressure
- Pressure Differences : ± 0.5 kgf/cm
- Half pump system
- Max. power saving

2005~

Generation: 3

Individual V.F.D. Booster System

- All pumps equipped with V.F.D.
- Stable Pressure
- Color 7" LCD Touch Monitor
- High Reliability
- Pressure Differences : ± 0.3 kgf/cm²

2005~

Generation: 3.5

Individual Premium V.F.D. Booster System

- All pumps RPM controlled
- All pumps equipped with V.F.D.
- EMC Filter/DC reactor internally installed
- Color 7" LCD Touch Monitor
- Stable Pressure, power saving
- Pressure Differences : ± 0.3 kgf/cm²

2015~

XQ-DRIVE
VARIABLE FREQUENCY DRIVE

Premium XQ-Drive

XQ-DRIVES are pump specific variable frequency drive that manages pump performance to match a wide range of system conditions and requirements.
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 motorindependent structure, it can be mounted directly on the motor or on the wall.
XQ DRIVES are equipped with the lastest GUI 3.5" color LCD display. A noise filtering EMC filter and DC reactor is also installed within the XQ DRIVES.

Technical Specification

Power Range	0.75~22kW
Input Power	3Φ×380V~440V
Output Power	3Φ×380V~440V
Frequency	50/60Hz
Max. Frequency	60Hz
IP Class	IP 55
Max. Distance Of Pressure Transmitter	Max. 10m
Ambient Temp.	-10℃~+40℃

Protections

- Dry Running
- Low Water Level Detection
- Over/Under Voltage Inverter
- Min. Flow Stop
- Temp. Pressure Setting
- Sensor Failure
- Pump Freezing
- Pump Overload

XQ-Drive Features

1. 3.5" LCD Display (Graphical User Interface)
2. Energy Savings up to 70%
3. Multi-pump control capacity of up to 6 pumps
4. Hydraulic control functions included
5. Electrical and hydraulic pump protections
6. Automatic recovery after power failure
7. Easy retrofitting on existing pump system
8. Flexible installation either directly on a standard I.E.C. motors or on the wall
9. EMC filter and DC reactor built-in

   -Reduce 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 requirements.
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.

Technical Specification

Power Range	0.75~22kW
Input Power	1Φ×200~230V (0.75~2.2kW) 3Φ×380~440V (0.75~22kW)
Output Power	3Φ×380V
Frequency	50/60Hz
Max. Frequency	60Hz
IP Class	IP 55
Max. Distance Of Pressure Transmitter	Max. 10m
Ambient Temp.	-10℃~+40℃

Protections

- Dry Running
- Low Water Level Detection
- Over/Under Voltage Inverter
- Min. Flow Stop
- Temp. Pressure Setting
- Sensor Failure
- Pump Freezing
- Pump Overload

NSQ-Drive Features

1. Energy Savings up to 70%
2. Multi-pump control capacity up to 6 pumps
3. Hydraulic control functions included
4. Electrical and hydraulic pump protections
5. Automatic recovery after power failure
6. Easy retrofitting on existing pump system
7. Flexible installation either directly on a standard I.E.C. motors or on the wall

SQ-DRIVE
VARIABLE FREQUENCY DRIVE

SQ-Drive

SQ-DRIVE is a single phase variable frequency drive that manages pump performance to match a wide range of system conditions and requirements.
Adjusting the pump speed is the most efficient means of controlling the pump flow and reducing the energy consumption.
SQ-Drive is a motor-independent structure, it can be mounted directly on the motor or on the wall.

Technical Specification

Power Range	0.55~1.1kW
Input Power	1Φ×220V
Output Power	3Φ×220V
Frequency	50/60Hz
Max. Frequency	60Hz
IP Class	IP 55
Max. Distance Of Pressure Transmitter	Max. 10m
Ambient Temp.	-10℃~+40℃

Protections

- Dry Running
- Low Water Level Detection
- Over/Under Voltage Inverter
- Min. Flow Stop
- Temp. Pressure Setting
- Sensor Failure
- Pump Freezing
- Pump Overload

SQ-Drive Features

1. Stand alone inverter for a single pump
2. Hydraulic control functions included
3. Electrical and hydraulic pump protections
4. Hydraulic control functions included
5. Easy retrofitting on existing pump systems
6. Flexible installations(motor, wall)
7. Small compact design and space saving
8. FND display for easy status monitoring and programing

Features

- Full Color Display
- Touch Screen Interface
- User-Friendly/Easy to function
- Icons include: History of Run/Alarm and other various information
- Languages include: Korean/Chinese/English
- RS 485: Integrated communication UX & GUI USB
- USB PORT: Firmware upgrade port

Specification

- 7" TFT LCD
- Touch Screen Monitor
- RS-485 PORT : 2 ports
- CAN COM. PORT : 1
- Run/Alarm contact
- Power: 220~440V
- Temp. & Humidity : -10~40℃ / 90%Under
- USB PORT

Model Application

Models	Available	Unavailable
NSQ-Series		●
NSQP-Series	●	
HNSQ-Series		●
HNSQP-Series	●	

※ P: Indicates a TM 7.0" Touch Monitor is included in the system

GUI(Graphic User Interface) Introduction

1. Current Date and Time
2. Setting Pressure Value
3. Current Pressure Value
4. Current Output Ratio
5. Icon/Current condition of each pump (Up to 6 pumps)

Ratio Current operating ratio		**Current** Current Value	
Power Current power consumption		**Frequency** Current operating frequency	
Accumulated Power Current Power accumulated		**Output Power** Current Output Power	

6. Status
7. Run History
8. Set-Up

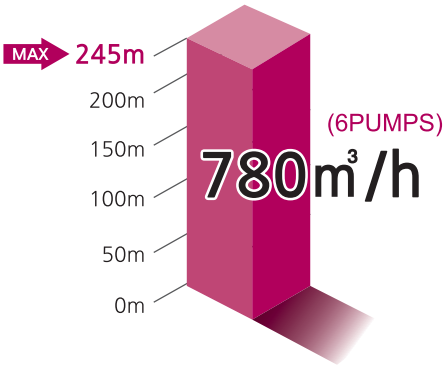
XQP Series System

GOOD DESIGN 산업통상자원부선정

NEP 신제품인증 NEW EXCELLENT PRODUCT

Specification

- Max. Flow(Q) : 780m³/h
- Max. Head (H) : 245m
- Pump Connection : Up to 6 Pumps
- Motor Power: 0.75~22kW (1~30HP)

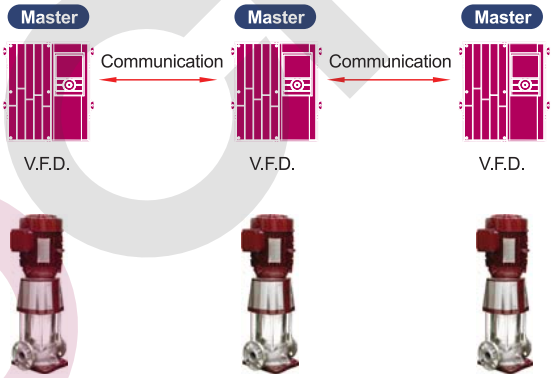


Functions

- Pressure settings
- Alternative operation
- Pump Freeze Protection
- Automatic detection of low flow on discharge
- Automatic recovery after power failure
- XQ drive will protect the pump
- Operation display and data storage
- Equipped with an RS485 interface

Features

- 7" color LCD touch monitor
- Each pump is individually controlled by a XQ drive
- High reliability (Multi-master control)
- Constant discharge pressure
- Reduced tank and panel sizes
- Less wear of the system during operation
- Compact assembly and installation
- High reliability with an installation of two pressure transmitters
- Lowest possible energy consumption
- Up to 22kW and connection of up to 6 pumps



- **Alternative Operation**
  - Alternative operation refers to the total sum of the power accumulated
  - This in-return ensures that the operating of each pump will be the same and extends lifetime of each pump as the wear is evenly distributed amongst the pumps.

Main Components

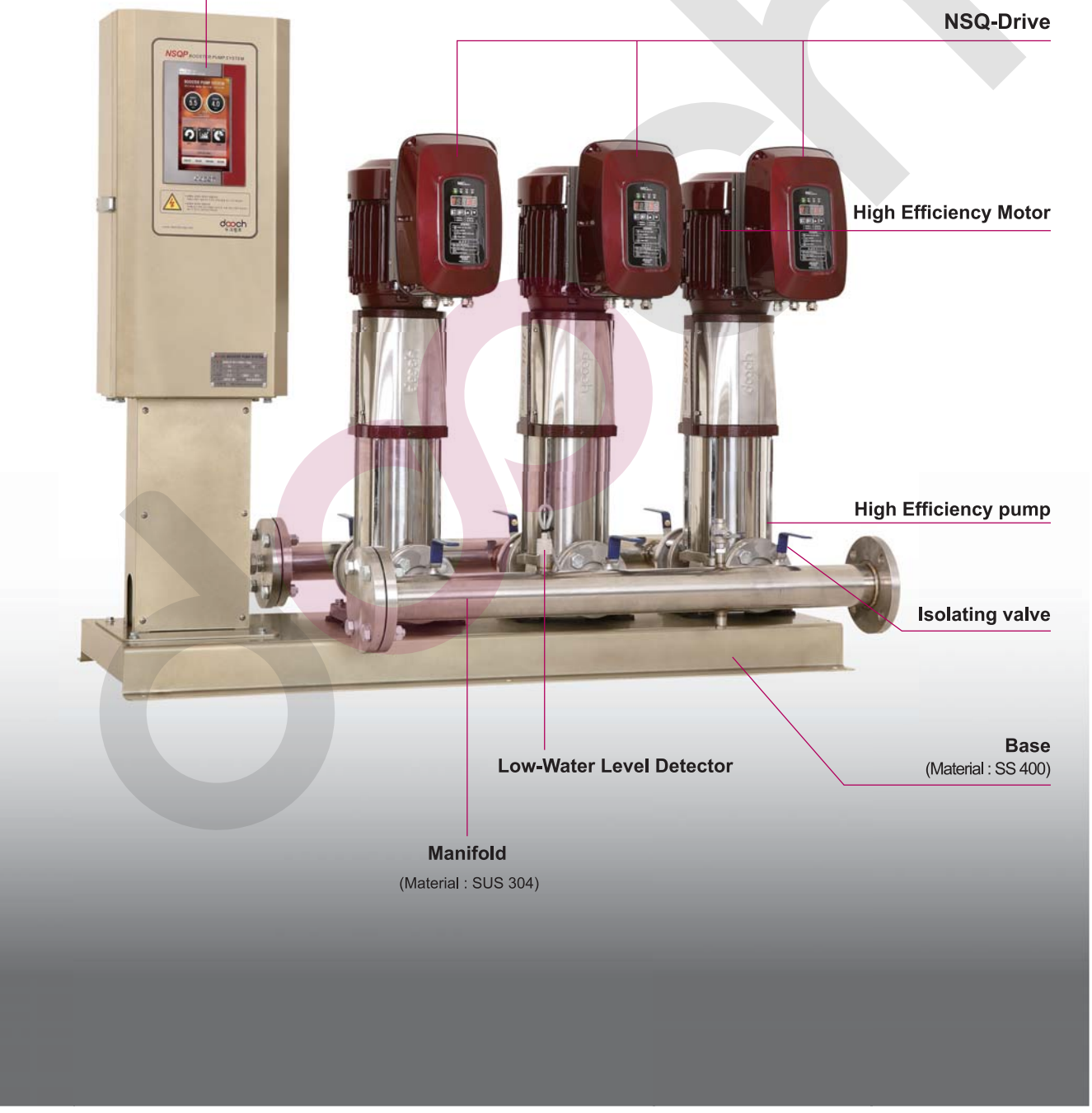
7" LCD Touch Screen Monitor embedded into the Panel

V.F.D. XQ-Drive

High Efficiency Pump XRL Series

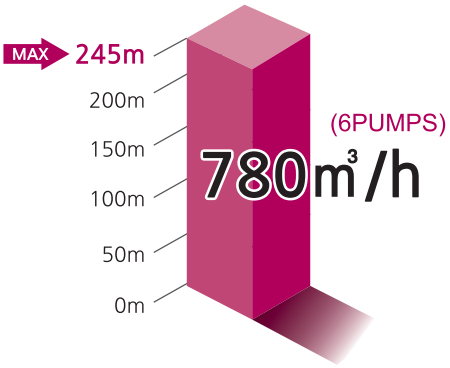
Standard Manifold

NSQP Series System



Specification

- Max. Flow(Q) : 780m³/h
- Max. Head (H) : 245m
- Pump Connection : Up to 6 Pumps
- Motor Power: 0.75~22kW (1~30HP)



Features

- Pressure settings
- Alternative operation
- Pump Freeze Protection
- Automatic detection of low flow on discharge
- Automatic recovery after power failure
- NSQ drive will protect the pump
- Operation display and data storage
- Equipped with an RS485 interface

Features

- 7" color LCD touch monitor
- Each pump is individually controlled by a NSQ drive
- High reliability (Multi-master control)
- Constant discharge pressure
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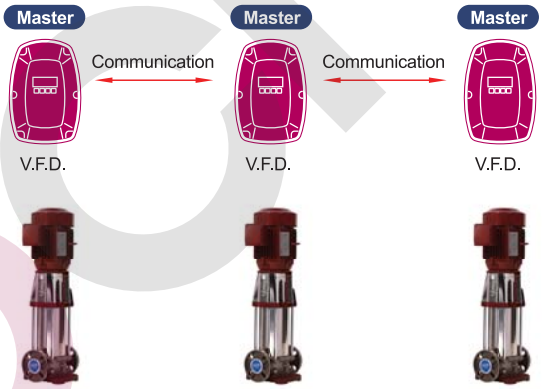
- Less wear of the system during operation
- Compact assembly and installation
- High reliability with an installation of two pressure transmitters
- Lowest possible energy consumption
- Up to 22kW and connection of up to 6 pumps



- **Alternative Operation**
  - Alternative operation refers to the total sum of the power accumulated
  - This in-return ensures that the operating of each pump will be the same and extends lifetime of each pump as the wear is evenly distributed amongst the pumps.

Main Components

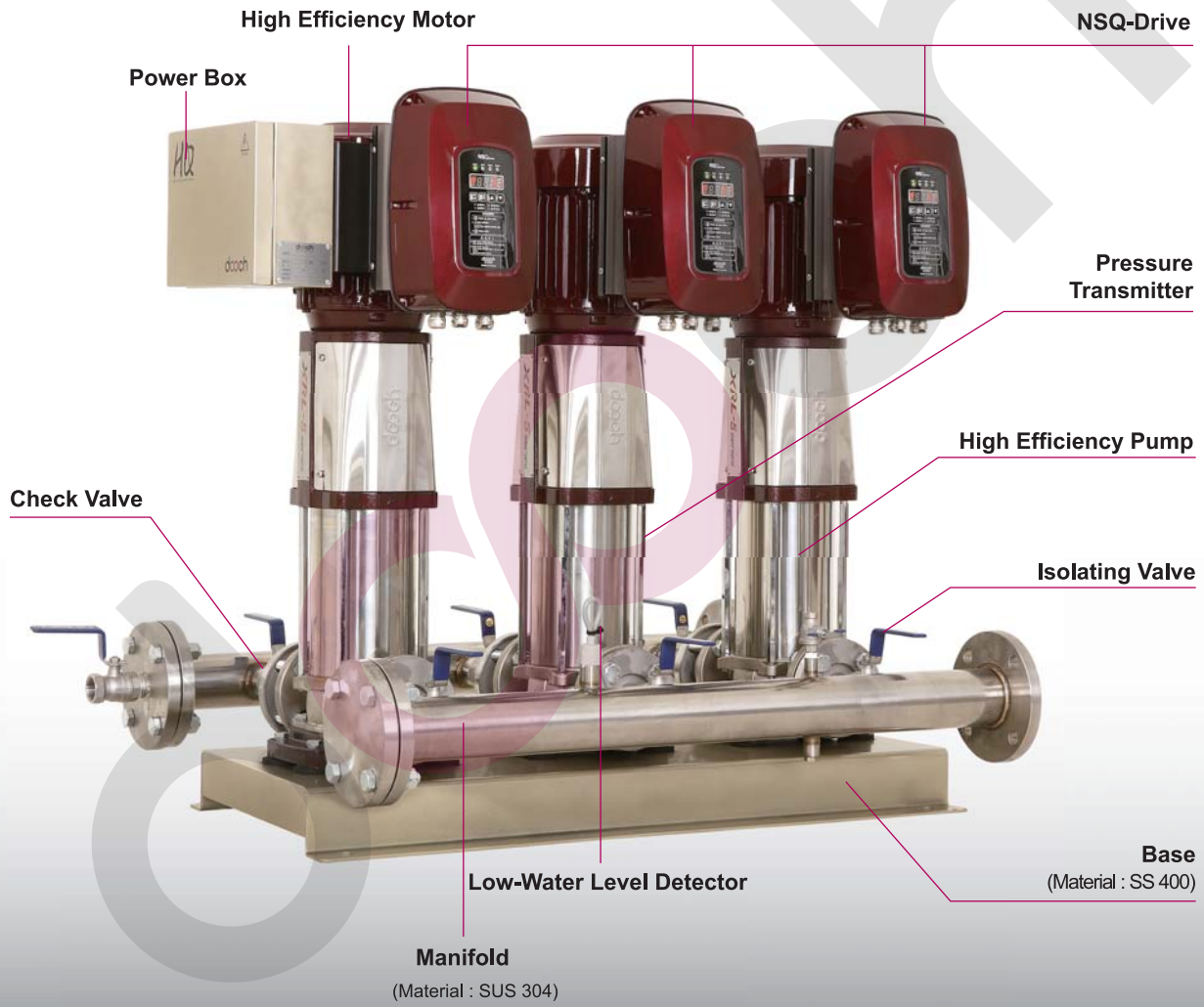
7" LCD Touch Screen Monitor embedded into the Panel

V.F.D. NSQ-Drive

High Efficiency Pump XRL Series

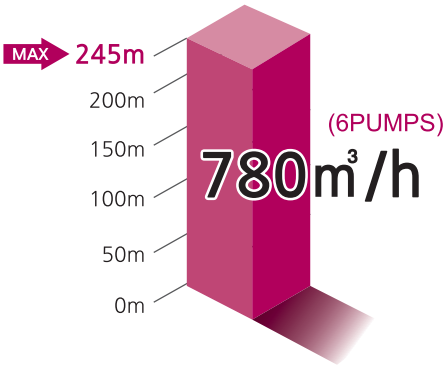
Standard Manifold

NSQ Series System



Specification

- Max. Flow(Q) : 780m³/h
- Max. Head (H) : 245m
- Pump Connection : Up to 6 Pumps
- Motor Power: 0.75~22kW (1~30HP)

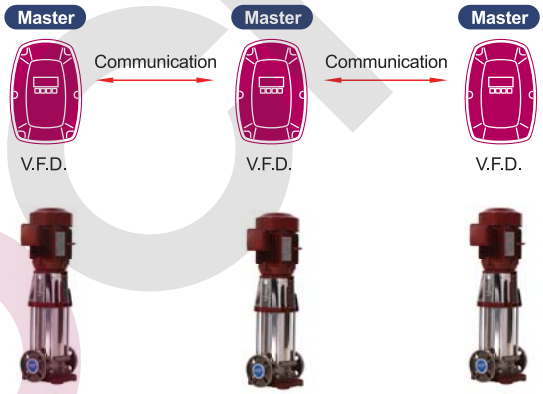


Functions

- Pressure settings
- Alternative operation
- Pump Freeze Protection
- Automatic detection of low flow on discharge
- Automatic recovery after power failure
- NSQ drive will protect the pump
- Operation display and data storage
- Equipped with an RS485 interface

Features

- 7" color LCD touch monitor
- Each pump is individually controlled by a NSQ drive
- High reliability (Multi-master control)
- Constant discharge pressure
- Reduced tank and panel sizes
- Less wear of the system during operation
- Compact assembly and installation
- High reliability with an installation of two pressure transmitters
- Lowest possible energy consumption
- Up to 22kW and connection of up to 6 pumps

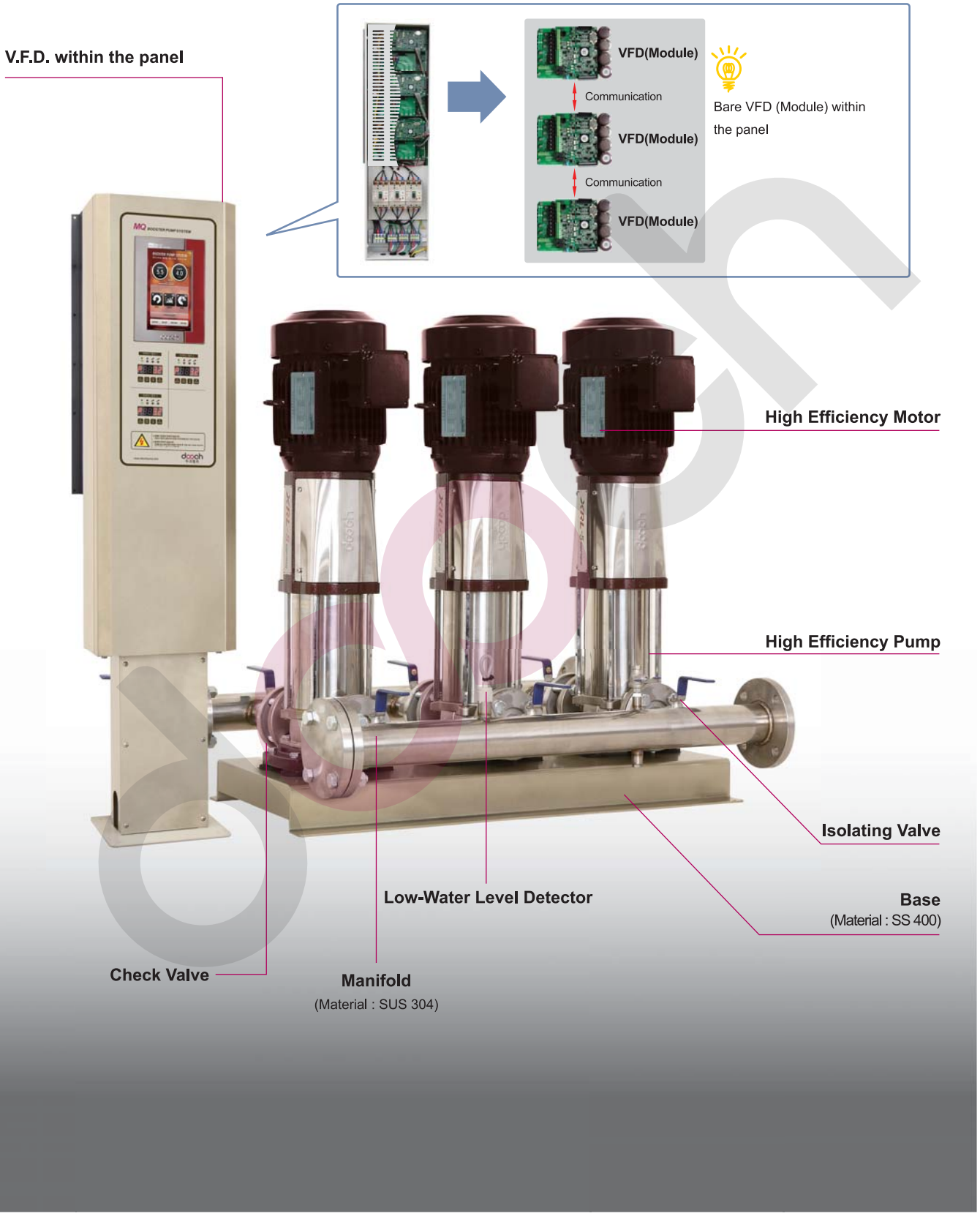


- **Alternative Operation**
  - Alternative operation refers to the total sum of the power accumulated
  - This in-return ensures that the operating of each pump will be the same and extends lifetime of each pump as the wear is evenly distributed amongst the pumps.

Main Components

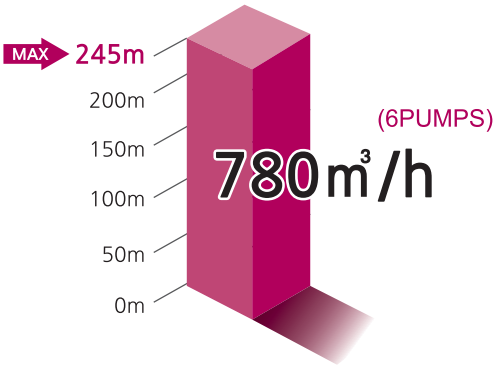
Power Box | **NSQ-Drive** | **High Efficiency Pump XRL Series** | **Standard Manifold**

MQ Series System



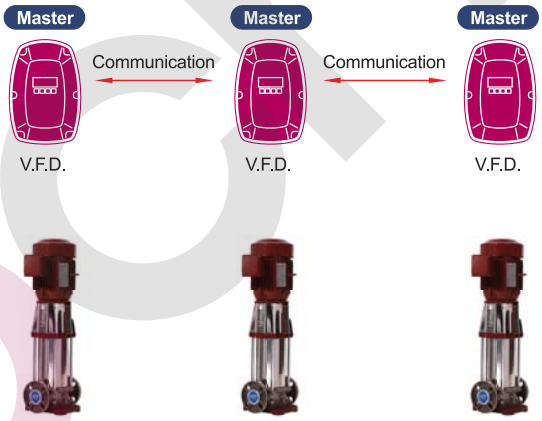
Specification

- Max. Flow(Q) : 780m³/h
- Max. Head (H) : 245m
- Pump Connection : Up to 6 Pumps
- Motor Power: 0.75~22kW (1~30HP)



Features

- 7" color LCD touch monitor
- Each pump is individually controlled by a VFD module within the panel
- High reliability (Multi-master control)
- Constant discharge pressure
- Reduced tank and panel sizes
- Less wear of the system during operation
- Compact assembly and installation
- High reliability with an installation of two pressure transmitters
- Lowest possible energy consumption
- Up to 22kW and connection of up to 6 pumps



Functions

- Pressure settings
- Alternative operation
- Pump Freeze Protection
- Automatic detection of low flow on discharge
- Automatic recovery after power failure
- Operation display and data storage
- Equipped with an RS485 interface

- **Alternative Operation**
  - Alternative operation refers to the total sum of the power accumulated
  - This in-return ensures that the operating of each pump will be the same and extends lifetime of each pump as the wear is evenly distributed amongst the pumps.

Main Components

VFD Module within the panel

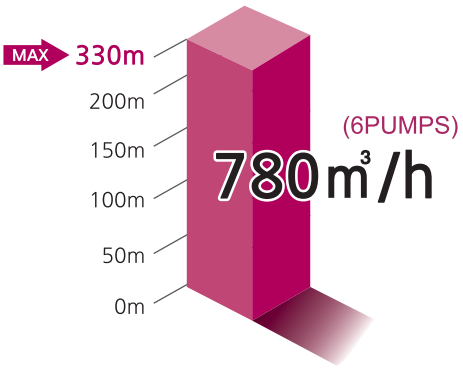
High Efficiency Pump
XRL Series

Standard Manifold

N747D Series System

Specification

- Max. Flow(Q) : 780m³/h
- Max. Head (H) : 330m
- Pump Connection : Up to 6 Pumps
- Motor Power: 0.75~110kW (1~150HP)



Specification

- N747D Controller built within the panel
- System is operated by a single general inverter
- Up to 110kW with a general inverter
- Constant discharge pressure
- Reduced tank and panel sizes
- Less wear of the system during operation
- Compact assembly and installation
- High reliability with an installation of two pressure transmitters
- Lowest possible energy consumption

Functions

- Pressure settings
- Alternative operation
- Pump Freeze Protection
- Automatic detection of low flow on discharge
- Automatic recovery after power failure
- LCD Monitor
- Operation display and interface
- Equipped with RS485 interface

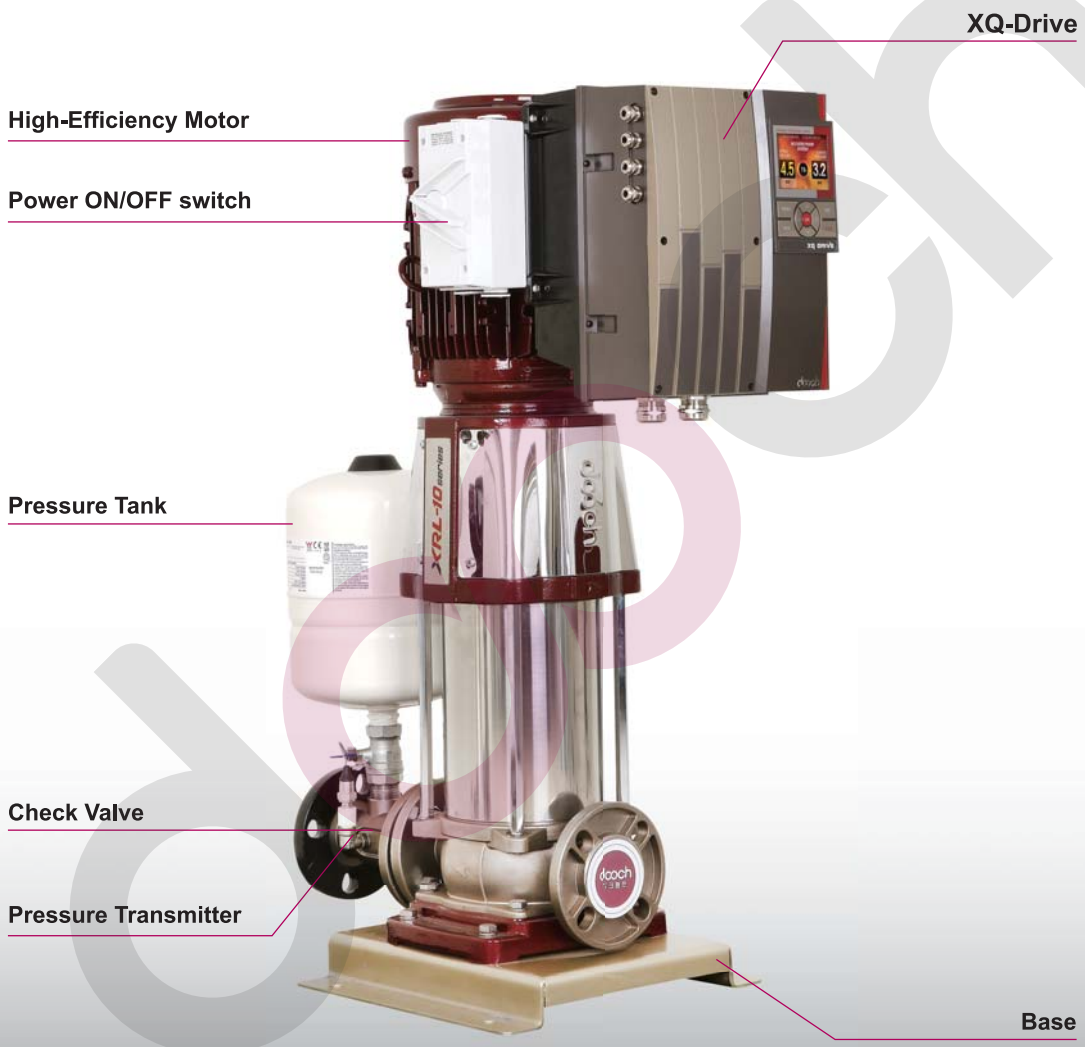
Main Components

General Inverter within the panel

High Efficiency Pump
XRL Series

Standard Manifold

XQ-XR(L)


XQ-Drive
High-Efficiency Motor
Power ON/OFF switch
Pressure Tank
Check Valve
Pressure Transmitter
Base

XQ-XR(L) Series

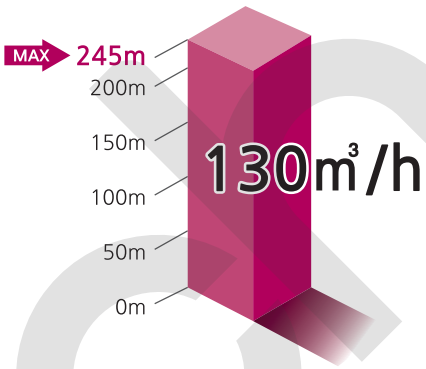
PREMIUM VFD MULTI-STAGE PUMP

XQ-XR(L)

XQ-XR(L) pumps are built on the basis of XR(L) pumps. Enhanced with the XQ-Drive, the XR(L) pump together with the appropriate sensor is turned into an intelligent, variable speed pumping system. The XQ-Drives are frequency converter integrated into the pump which adjusts the motor speed according to provide constant pressure or differential pressure according to the flow rate.

Specification

- Max. Flow : 130m³/h
- Max. Head: 245m
- Motor Power : 0.75~22kW (1~30HP)
- Input Power: 3Φ×380V~440V / 50 & 60Hz
- Ouput Power: 3Φ×380V / 50 & 60Hz



Functions

- Pressure settings
- Alternative operation
- Pump Freeze Protection
- Automatic detection of low flow on discharge
- Automatic recovery after power failure
- XQ drive will protect the pump
- Operation display and data storage
- Equipped with RS485 interface

XQ-XR(L) Benefits

- 3.5" color display
- Built-in EMC filter/DC reactor
  - Reduce noise and harmonic distortion
- Energy Saving (Up to 50%)
- Maintains constant pressure
- Simplicity (Eliminates separate control panels)
- Soft start functionality to minimize mechanical stress on the pumping system

Main Components

XR(L) Series

XQ-Drive

Pressure tank

Check Valve

NSQ-XR(L)

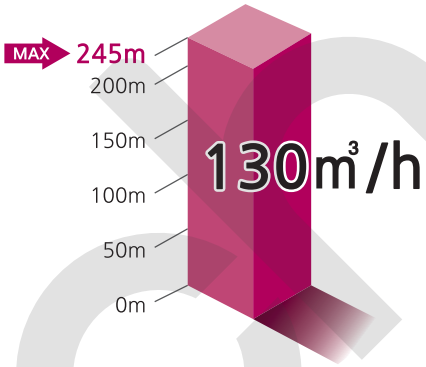

NSQ-Drive
High-Efficiency Motor
Power ON/OFF switch
Pressure Tank
Check Valve
Pressure Transmitter
Base

NSQ-XR(L)

NSQ-XR(L) pumps are built on the basis of XR(L) pumps. Enhanced with the NSQ-Drive, the XR(L) pump together with the appropriate sensor is turned into an intelligent, variable speed pump system. The NSQ-Drives are frequency converter integrated into the pump which adjusts the motor speed to provide constant pressure or differential pressure according to the flow rate.

Specification

- Max. Flow : 130m³/h
- Max. Head : 245m
- Motor Power : 0.75~22kW (1~30HP)
- Input Power : 3Φ×380V~440V / 50 & 60Hz
  1Φ×220V~230V / 50 & 60Hz
- Ouput Power : 3Φ×220V~380V / 50 & 60Hz



Functions

- Pressure settings
- Alternative operation
- Pump Freeze Protection
- Automatic detection of low flow on discharge
- Automatic recovery after power outage
- NSQ drive will protect the pump
- Operation display and data storage
- Equipped with RS485 interface

NSQ-XR(L) Benefits

- Energy Saving (Up to 50%)
- Maintains constant pressure
- Simplicity (Eliminates separate control panels)
- Soft start functionality to minimize mechanical stress on the pumping system

Main Components

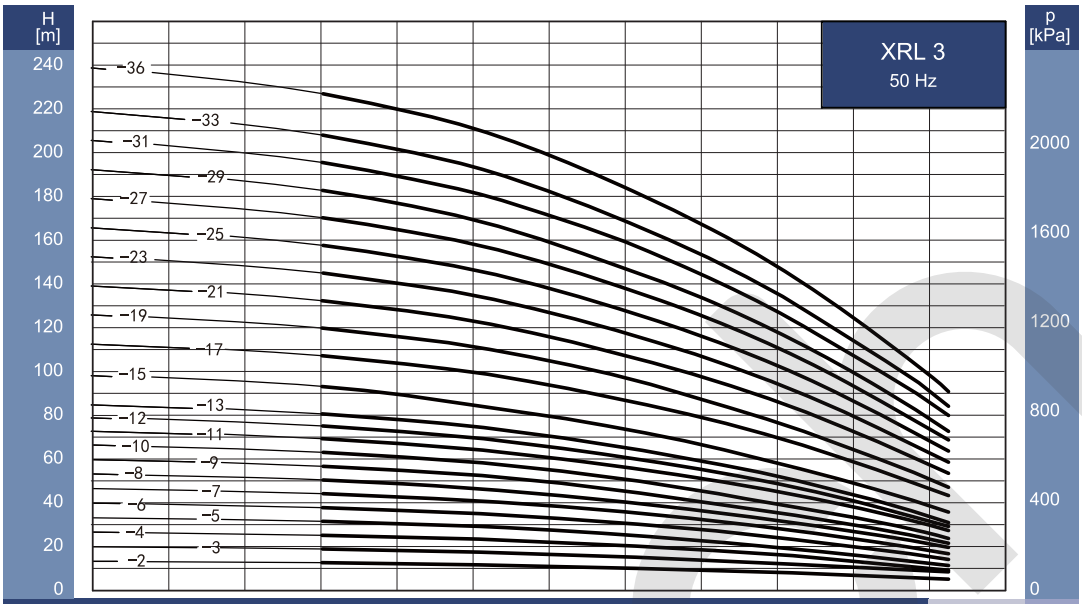
XR(L) Series

NSQ-Drive

Pressure tank

Check Valve

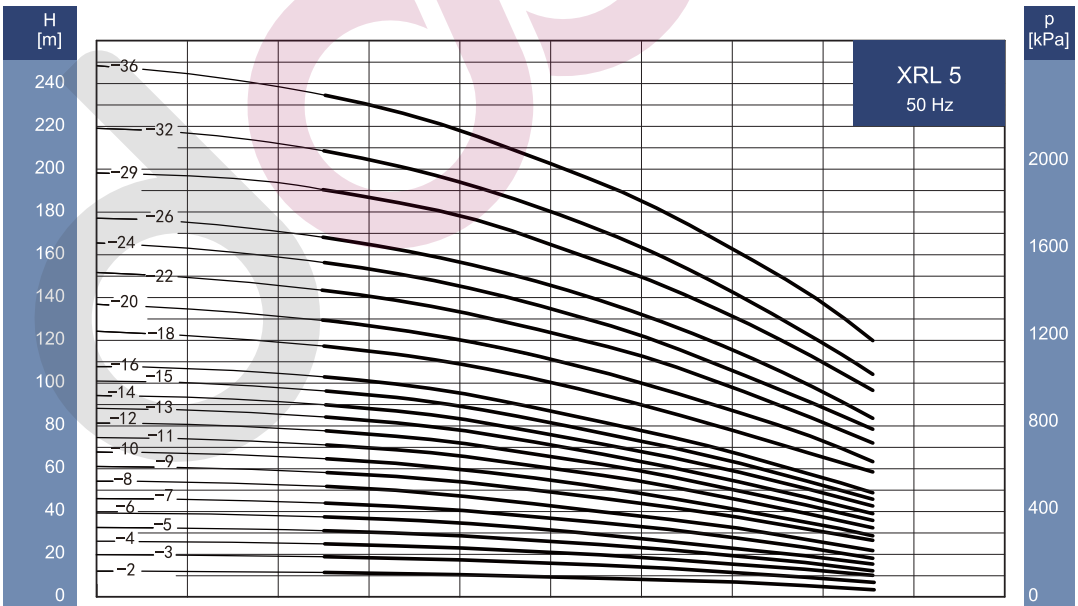
XRL 3 Series



1 Pump	0	0.4	0.8	1.2	1.6	2.0	2.4	2.8	3.2	3.6	4.0
2 Pump	0	0.8	1.6	2.4	3.2	4.0	4.8	5.6	6.4	7.2	8.0
3 Pump	0	1.2	2.4	3.6	4.8	6.0	7.2	8.4	9.6	10.8	12.0
4 Pump	0	1.6	3.2	4.8	6.4	8.0	9.6	11.2	12.8	14.4	16.0
5 Pump	0	2.0	4.0	6.0	8.0	10.0	12.0	14.0	16.0	18.0	20.0
6 Pump	0	2.4	4.8	7.2	9.6	12.0	14.4	16.8	19.2	21.6	24.0

Q [m³/h]

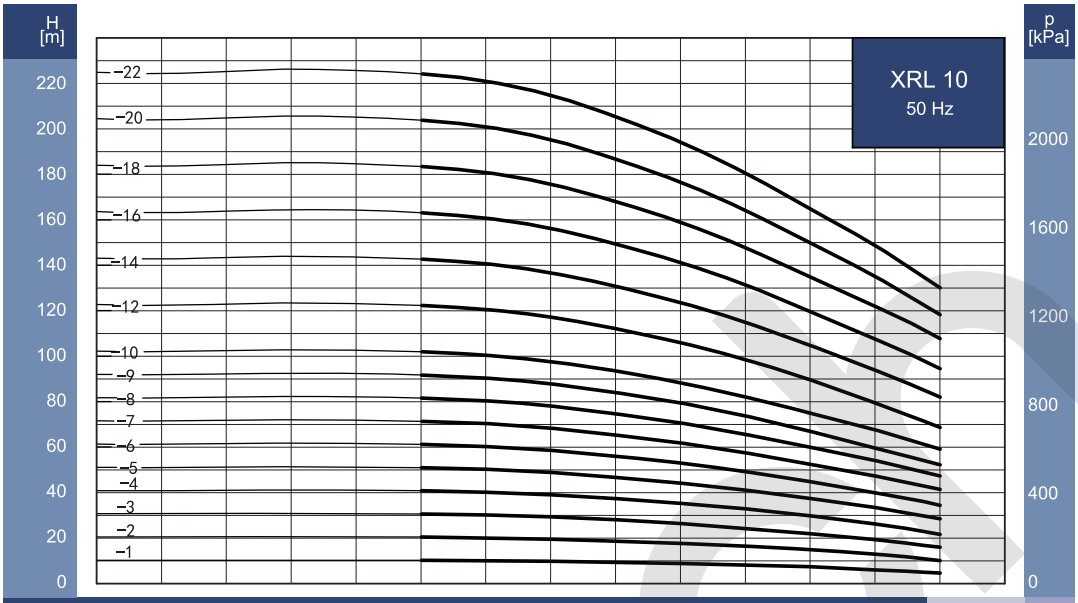
XRL 5 Series



1 Pump	0	1	2	3	4	5	6	7	8
2 Pump	0	2	4	6	8	10	12	14	16
3 Pump	0	3	6	9	12	15	18	21	24
4 Pump	0	4	8	12	16	20	24	28	32
5 Pump	0	5	10	15	20	25	30	35	40
6 Pump	0	6	12	18	24	30	36	42	48

Q [m³/h]

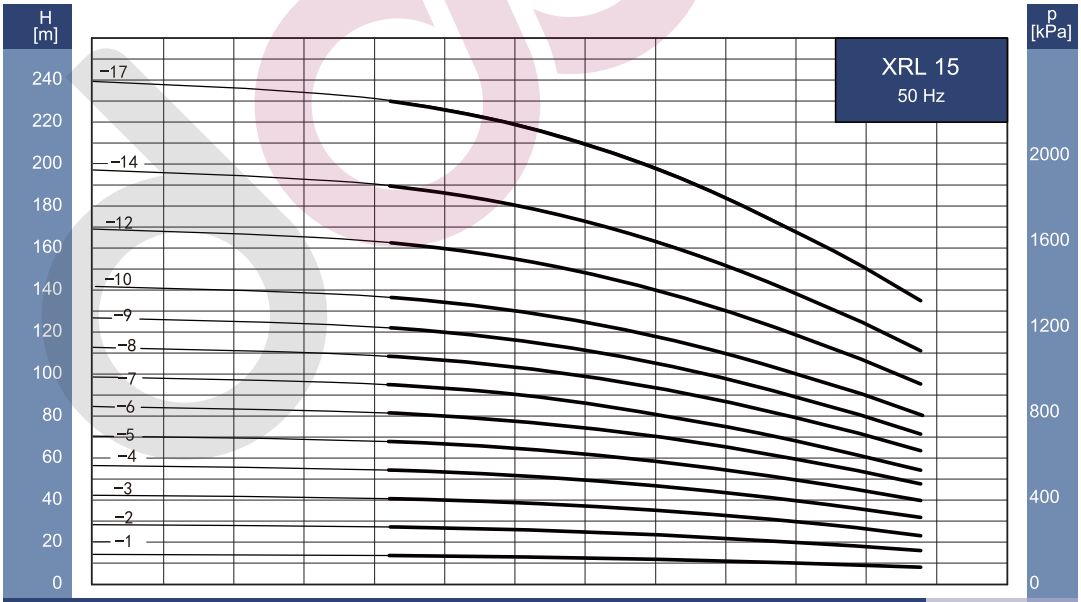
XRL 10 Series



1 Pump	0	1	2	3	4	5	6	7	8	9	10	11	12
2 Pump	0	2	4	6	8	10	12	14	16	18	20	22	24
3 Pump	0	3	6	9	12	15	18	21	24	27	30	33	36
4 Pump	0	4	8	12	16	20	24	28	32	36	40	44	48
5 Pump	0	5	10	15	20	25	30	35	40	45	50	55	60
6 Pump	0	6	12	18	24	30	36	42	48	54	60	66	72

Q [m³/h]

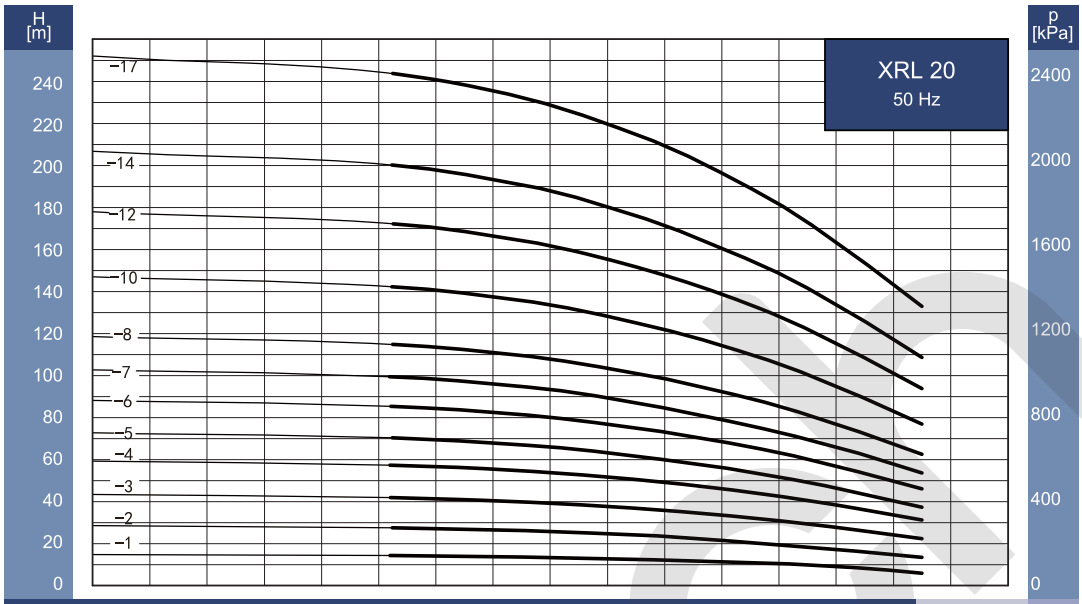
XRL 15 Series



1 Pump	0	2	4	6	8	10	12	14	16	18	20	22
2 Pump	0	4	8	12	16	20	24	28	32	36	40	44
3 Pump	0	6	12	18	24	30	36	42	48	54	60	66
4 Pump	0	8	16	24	32	40	48	56	64	72	80	88
5 Pump	0	10	20	30	40	50	60	70	80	90	100	110
6 Pump	0	12	24	36	48	60	72	84	96	108	120	132

Q [m³/h]

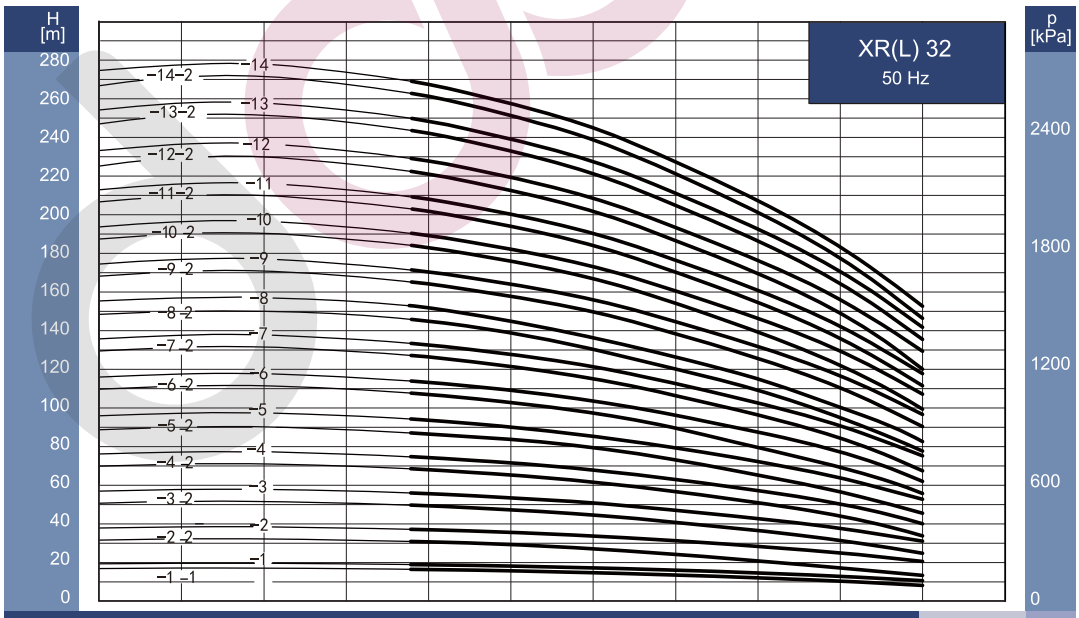
XRL 20 Series



1 Pump	0	2	4	6	8	10	12	14	16	18	20	22	24	26	28
2 Pump	0	4	8	12	16	20	24	28	32	36	40	44	48	52	56
3 Pump	0	6	12	18	24	30	36	42	48	54	60	66	72	78	84
4 Pump	0	8	16	24	32	40	48	56	64	72	80	88	96	104	112
5 Pump	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140
6 Pump	0	12	24	36	48	60	72	84	96	108	120	132	144	156	168

Q [m³/h]

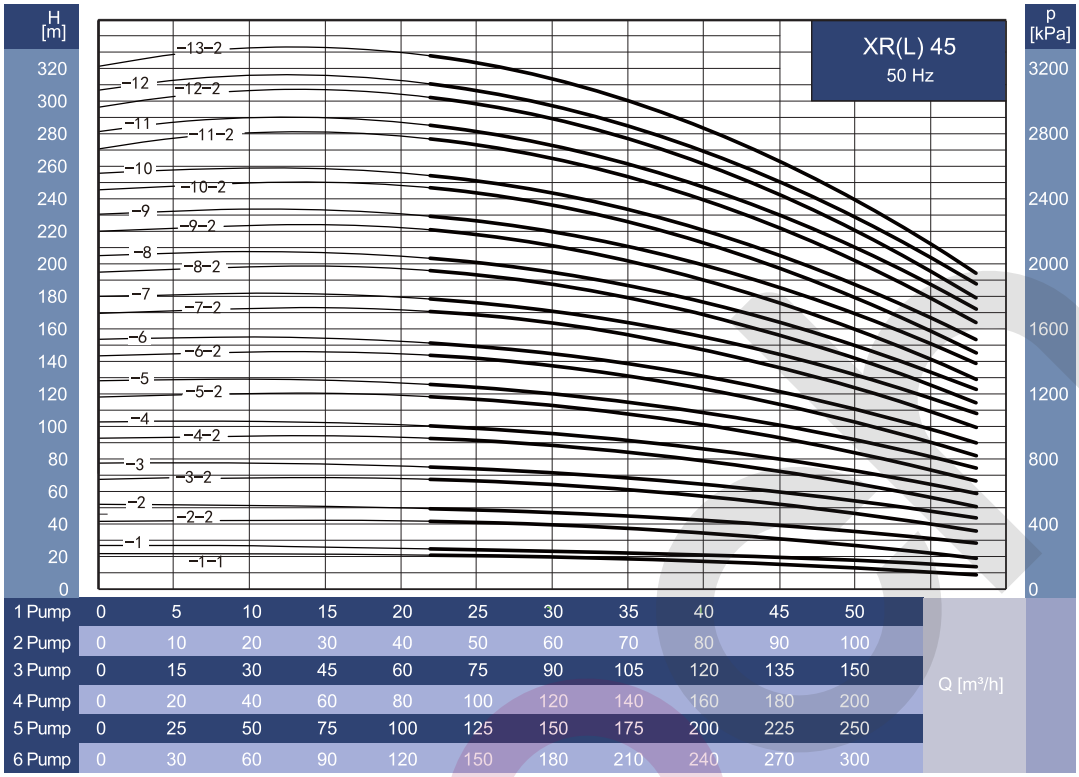
XR(L) 32 Series



1 Pump	0	4	8	12	16	20	24	28	32	36
2 Pump	0	8	16	24	32	40	48	56	64	72
3 Pump	0	12	24	36	48	60	72	84	96	108
4 Pump	0	16	32	48	64	80	96	112	128	144
5 Pump	0	20	40	60	80	100	120	140	160	180
6 Pump	0	24	48	72	96	120	144	168	192	216

Q [m³/h]

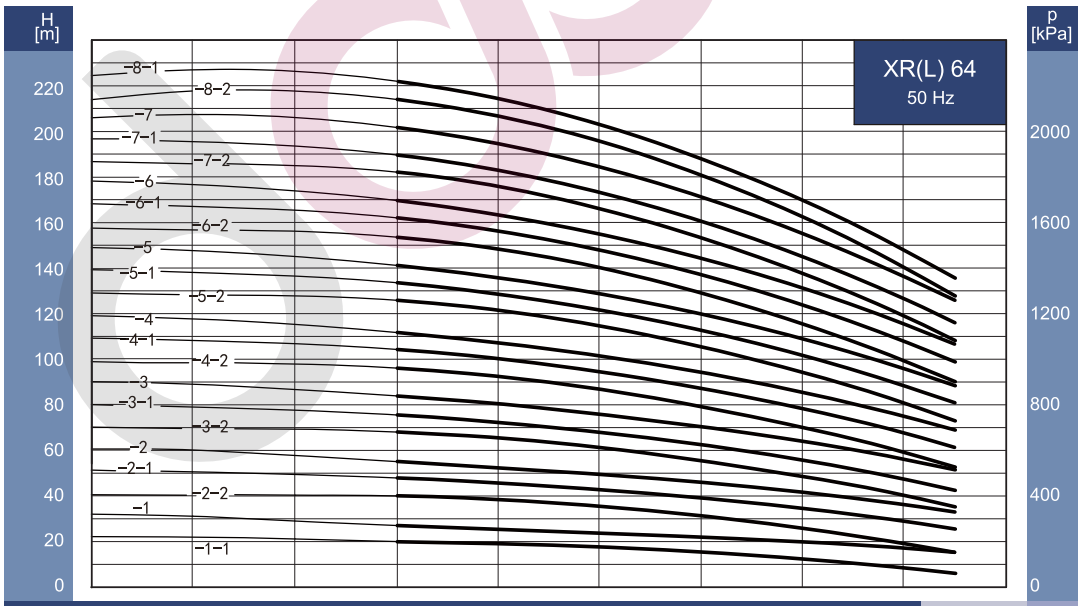
XR(L) 45 Series



1 Pump	0	5	10	15	20	25	30	35	40	45	50
2 Pump	0	10	20	30	40	50	60	70	80	90	100
3 Pump	0	15	30	45	60	75	90	105	120	135	150
4 Pump	0	20	40	60	80	100	120	140	160	180	200
5 Pump	0	25	50	75	100	125	150	175	200	225	250
6 Pump	0	30	60	90	120	150	180	210	240	270	300

Q [m³/h]

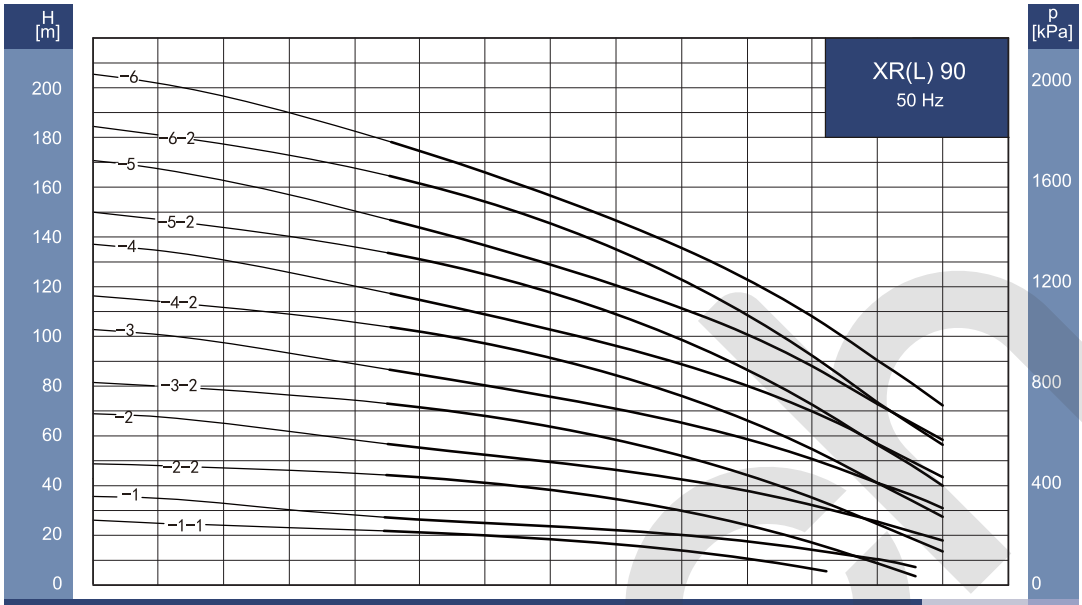
XR(L) 64 Series



1 Pump	0	10	20	30	40	50	60	70	80
2 Pump	0	20	40	60	80	100	120	140	160
3 Pump	0	30	60	90	120	150	180	210	240
4 Pump	0	40	80	120	160	200	240	280	320
5 Pump	0	50	100	150	200	250	300	350	400
6 Pump	0	60	120	180	240	300	360	420	480

Q [m³/h]

XR(L) 90 Series



1 Pump	0	10	20	30	40	50	60	70	80	90	100	110	120
2 Pump	0	20	40	60	80	100	120	140	160	180	200	220	240
3 Pump	0	30	60	90	120	150	180	210	240	270	300	330	360
4 Pump	0	40	80	120	160	200	240	280	320	360	400	440	480
5 Pump	0	50	100	150	200	250	300	350	400	450	500	550	600
6 Pump	0	60	120	180	240	300	360	420	480	540	600	660	720

Q [m³/h]


dooch
두크펌프

GLOBAL PUMP SOLUTION DOOCH

50Hz


•NSQP-3DHF


• NSQ-3DHF


• SQ-2DHF


• 3NSQP


• 2SQ

BOOSTER PUMP SYSTEM

NSQ(P)-2(3)DHF(T), SQ-2DHF(T), 2(3)NSQ(P), 2SQ SERIES

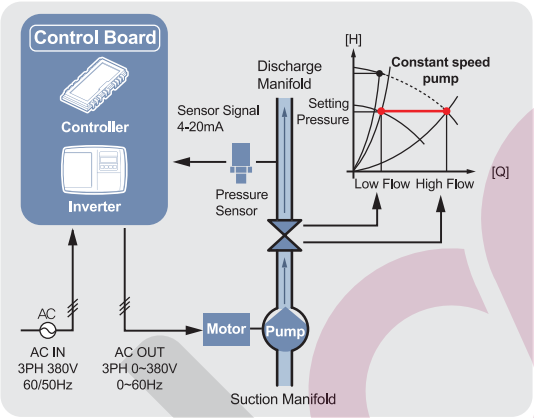
dooch
두크펌프

Booster System

Dooch's Booster system provides constant pressurized water which can be applied in residential buildings or high-rise office buildings. It maintains the lowest possible energy consumption in accordance with the water demand to control the number of pumps and the speed of the motor.

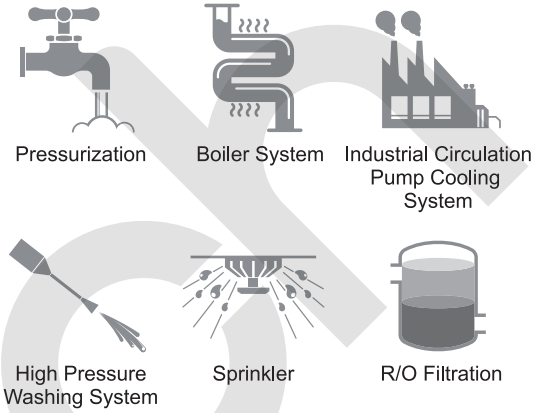
Features

Outstanding reliability
High efficiency
Fully integrated, all-in-one systems
Systems to match every need and requirement
Easy installation and operation



Applications

- Apartments,
- Residential Buildings
- Office Buildings
- Hotels
- Industries



System Specification

Method of Control	Individual VFD
Models	NSQ(P)-2(3)DHF(T), SQ-2DHF(T) NSQ(P)-2(3)DHM, SQ-2DHM
Type	VFD installed on each pump
Installation	Indoor
Temperature	-10℃~+40℃
Liquid Type	Clean Water
Liquid Temp.	0℃~70℃
Pump	Horizontal Centrifugal Pumps
No. of Pumps	2~3
Power	SQ-1PH 220V×50Hz NSQ-1PH 220V, 3PH 380V×50Hz

Definition of Model(DHF series)

NSQ P - 3 DHF (T) 4 - 3 (M) - 50A - 1L × 3

- 1L × 3 — Number of pressure tanks
- 50A — Manifold Dimensions
- (M) — Input power (1PH 220V)

M Indicates	Without "M" Indicates
Input Power: 1PH 220V	Input Power: 3PH 380V

- 3 — Number of Impellers
- 4 — Max. Flow rate(m^3/h)
- (T) — Inlet/Outlet Casing Material

"T" Indicates	Without "T" Indicates
(GCD450)	Stainless steel

- DHF — Pump Model
- 3 — Number of Pumps
- P — Premium Model

P Indicates
7" Touch screen LCD monitor 

- NSQ — Type of V.F.D.

Model	NSQ-Drive	SQ-Drive (1PH)
Features		
Specification	Motor Power : 0.55~22kW Input : 1PH 200~230V (0.55~2.2kW) 3PH 380~440V (0.55~22kW) Output : 3PH 380~440V Frequency : 50/60Hz	Motor Power: 0.55~1.5kW Input : 1PH 200~230V (0.55~1.5kW) Output: 3PH 220V Frequency : 50/60Hz 7" touch monitor is un-adaptable

Definition of Model(DHM series)

NSQ P - 3 DHM 4 - 1.5 (M) - 50A - 1L × 3

- 1L × 3 — Number of pressure tanks
- 50A — Manifold Dimensions
- (M) — Input power (1PH 220V)

M Indicates	Without "M" Indicates
Input Power: 1PH 220V	Input Power: 3PH 380V

- 1.5 — Motor Power(kW)
- 4 — Max. Flow rate(m^3/h)
- DHM — Pump Model
- 3 — Number of Pumps
- P — Premium Model

P Indicates
7" Touch screen LCD monitor 

- NSQ — Type of V.F.D.

Model	NSQ-Drive	SQ-Drive (1PH)
Features		
Specification	Motor Power : 0.55~22kW Input : 1PH 200~230V (0.55~2.2kW) 3PH 380~440V (0.55~22kW) Output : 3PH 380~440V Frequency : 50/60Hz	Motor Power: 0.55~1.5kW Input : 1PH 200~230V (0.55~1.5kW) Output: 3PH 220V Frequency : 50/60Hz 7" touch monitor is un-adaptable

Control Specifications/Features

	NSQP-2(3) DHF(T) Series Individual Inverter Horizontal Booster System (Premium Model)	SQ-2DHF(T) Series Individual Inverter Horizontal Booster System
Appearance		
Features	• 7" LCD touch monitor • All pumps are fitted with an integrated V.F.D. which is directly mounted onto the motor • High reliability • Communication between pumps	• All pumps are fitted with an integrated V.F.D. which is directly mounted onto the motor • High reliability • Constant discharge pressure • Lowest energy consumption
Inverters	(NSQ-Drive) 	(SQ-Drive) 
Manifolds	 Standard Manifold	 Standard Manifold
Panel	  7" LCD Touch Screen Monitor	

Control Specifications/Features

	NSQ-DHF(T) Series Inverter Horizontal Pump	SQ-DHF(T) Series Inverter Horizontal Pump
Appearance		
Features	• Equipped with a NSQ-Drive • High Reliability • Maintains constant pressure • Soft start functionality • Compact design/Easy installation	• Equipped with a SQ-Drive • High Reliability • Maintains constant pressure • Soft start functionality • Compact design/Easy installation
Inverters	(NSQ-Drive) 	(SQ-Drive) 
Manifolds	 Check Valve	 Check Valve

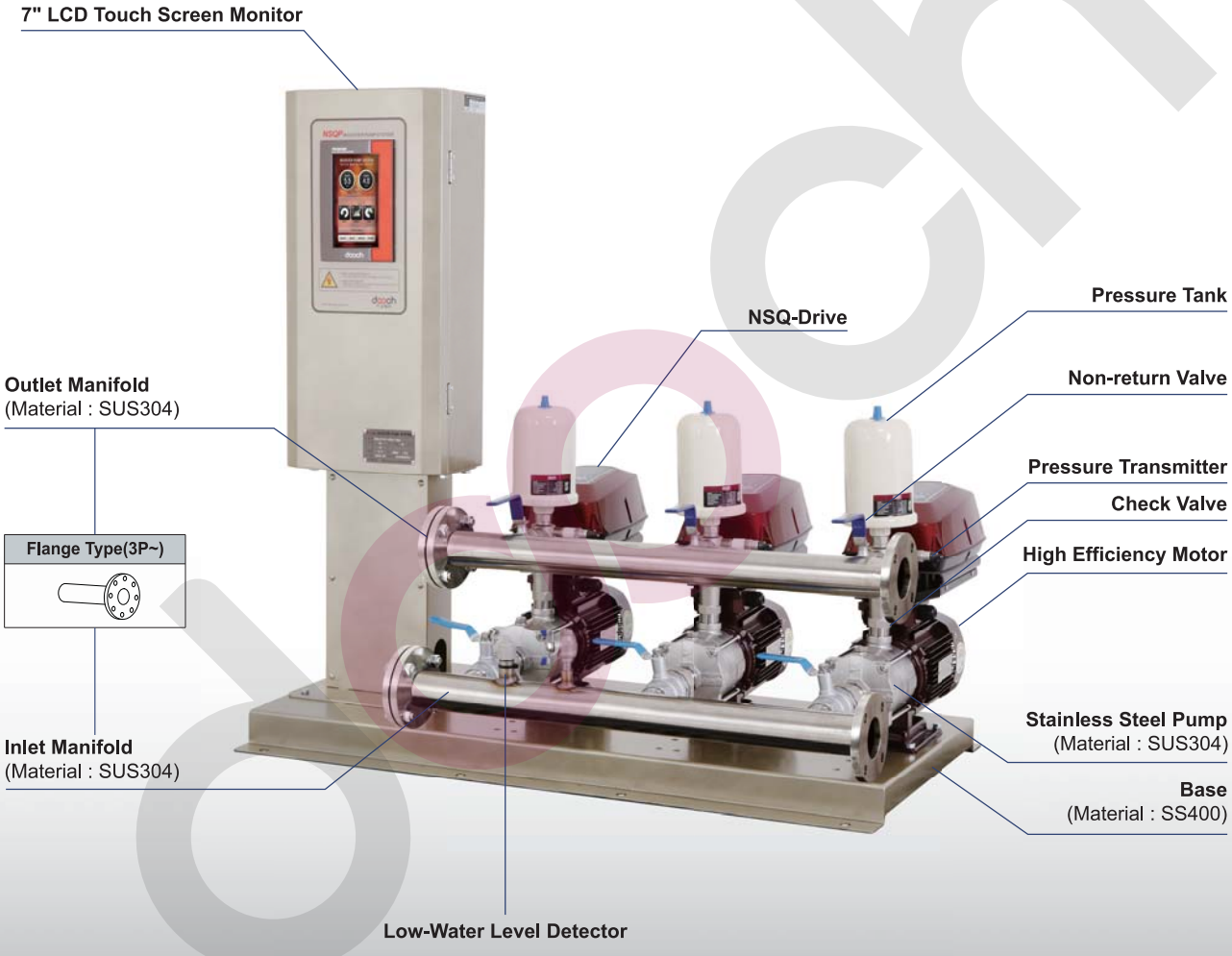
Control Specifications/Features

	NSQP-2(3)DHM Series Individual Inverter Horizontal Booster System (Premium Model)	SQ-2DHM Series Individual Inverter Horizontal Booster System
Appearance		
Features	• 7" LCD touch monitor • All pumps are fitted with an integrated V.F.D. which is directly mounted onto the motor • High reliability • Communication between pumps	• All pumps are fitted with an integrated V.F.D. which is directly mounted onto the motor • High reliability • Constant discharge pressure • Lowest energy consumption
Inverters	(NSQ-Drive) 	(SQ-Drive) 
Manifolds	 Standard Manifold	 Standard Manifold
Panel	  7" LCD Touch Screen Monitor	

Control Specifications/Features

	NSQ-DHM Series Inverter Horizontal Pump	SQ-DHM Series Inverter Horizontal Pump
Appearance		
Features	• Equipped with a NSQ-Drive • High Reliability • Maintains constant pressure • Soft start functionality • Compact design/Easy installation	• Equipped with a SQ-Drive • High Reliability • Maintains constant pressure • Soft start functionality • Compact design/Easy installation
Inverters	(NSQ-Drive) 	(SQ-Drive) 
Manifolds	 Check Valve	 Check Valve

NSQP-2(3)DHF(T) Series System

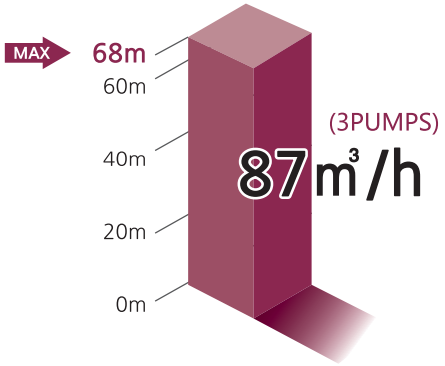


NSQP-2(3)DHF(T) Series

INDIVIDUAL INVERTER HORIZONTAL BOOSTER SYSTEM(PREMIUM MODEL)

Specification

- Max. Flow(Q) : 87m³/h
- Max. Head(H) : 68m
- Number of pumps : Up to 3 pumps
- Input Power : 3PH 380V~440V / 50 & 60Hz (0.75~7.5HP)
  1PH 200V~230V / 50 & 60Hz (0.75~3HP)



NSQP-2(3)DHF(T) Series

NSQP-DHF(T) pumps are built on the basis of DHF pumps. The main difference between DHF and NSQP-DHF(T) pump is the variable frequency drive. Enhanced with the NSQ-Drive, NSQP-DHF(T) pump together with the appropriate sensor is turned into an intelligent, variable speed pump system. The NSQ-Drives adjust the motor speed which in turn provides constant pressure or differential pressure accroding to the flow rate. NSQP-DHF(T) is also equipped with the 7" touch screen monitor that is embedded into the panel which features the lastest GUI.

※ Inlet/Outlet casing material
"T" indicates : GCD450
Without "T" indicates : Stainless steel

Functions

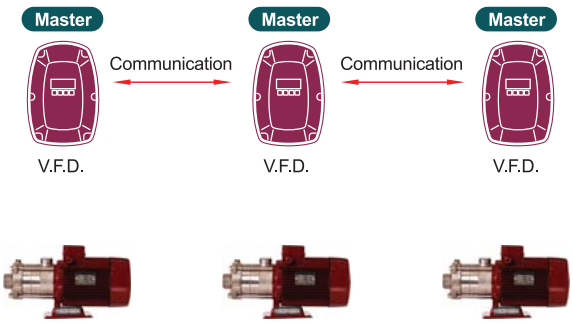
- Control mode - pressure/ differential pressure
- Set the setting pressure
- Dry-running and freeze protection
- Automatic flowless Sensor
- Automatic recovery after inverter power failure
- Pump protection
- FND- status monitoring
- RS485 communication interface

Features

- 7" color LCD touch monitor
- Each pump is individually controlled by a NSQ drive
- High reliability (Multi-master control)
- Constant discharge pressure
- Reduced tank and panel sizes
- Less wear of the system during operation
- Compact assembly and installation
- High reliability

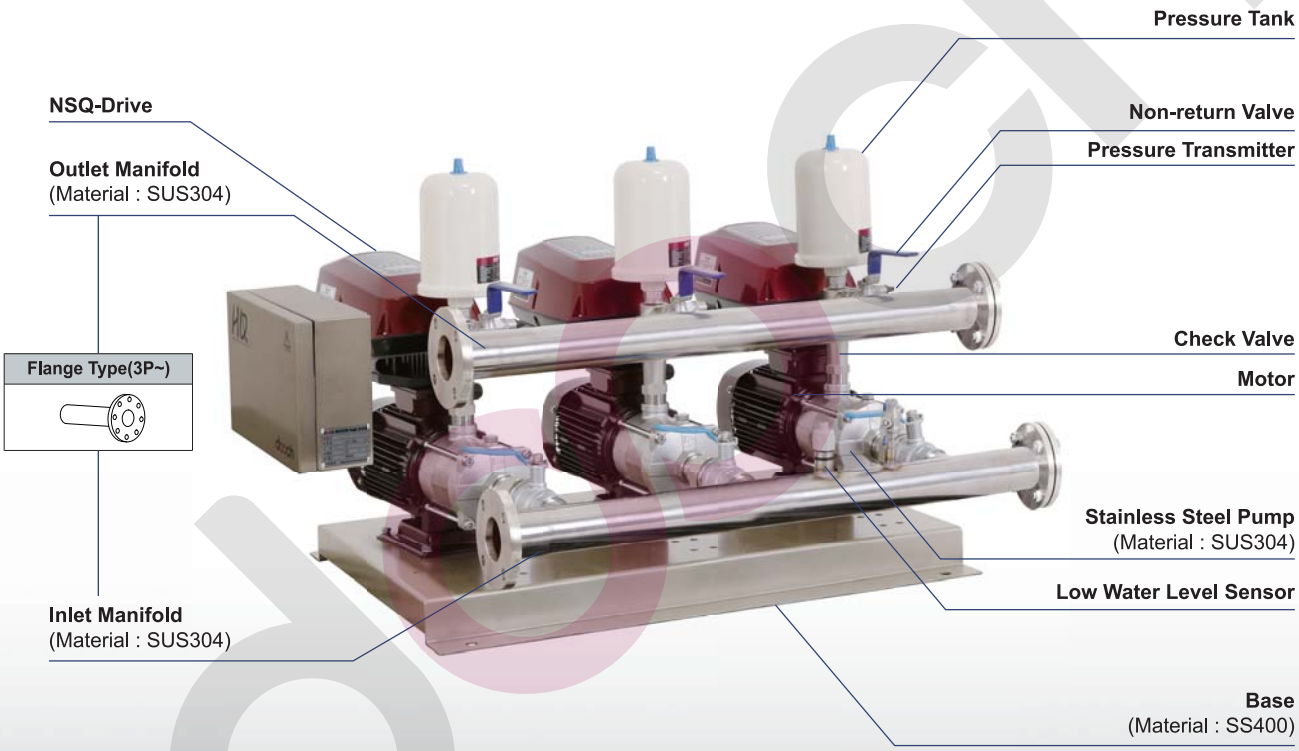
Applications

- Booster systems
- Domestic water supply systems
- Cooling systems
- Air-conditioning systems
- Small industrial water supply systems
- Horticultural irrigation systems



- **Alternative Operation**
  - Alternative operation refers to the total sum of the power accumulated
  - This in-return ensures that the operating of each pump will be the same and extends lifetime of each pump as the wear is evenly distributed amongst the pumps.

NSQ-2(3)DHF(T) Series System

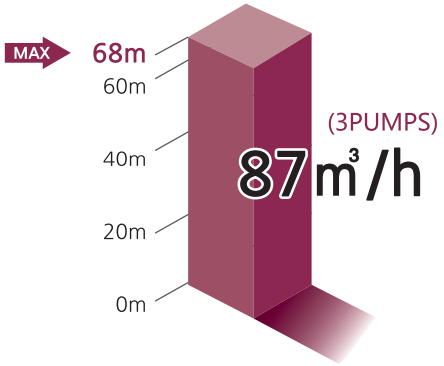


NSQ-2(3)DHF(T) Series

INDIVIDUAL INVERTER HORIZONTAL BOOSTER SYSTEM

Specification

- Max. Flow(Q) : 87m³/h
- max. Head(H) : 68m
- Number of pumps : Up to 3 pumps
- Input Power : 2PUMP - 3PH 380V~440V / 50 & 60Hz (0.75~7.5HP)
  1PH 200V~230V / 50 & 60Hz (0.75~3HP)
  3PUMP - 3PH 380V~440V / 50 & 60Hz (0.75~7.5HP)
  1PH 200V~230V / 50 & 60Hz (0.75~3HP)



NSQ-2(3)DHF(T) Series

NSQ-DHF(T) pumps are built on the basis of DHF pumps. The main difference between DHF and NSQ-DHF(T) pump is the variable frequency drive. Enhanced with the NSQ-Drive, NSQ-DHF(T) pump together with the appropriate sensor is turned into an intelligent, variable speed pump system. The NSQ-Drives adjust the motor speed which in turn provides constant pressure or differential pressure accroding to the flow rate.

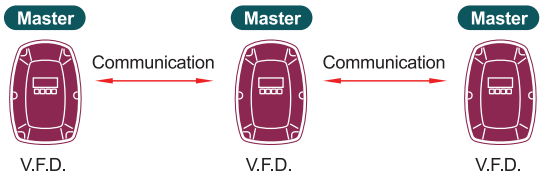
※ Inlet/Outlet casing material
"T" indicates : GCD450
Without "T" indicates : Stainless steel

Functions

- Control mode - pressure/ differential pressure
- Set the setting pressure
- Dry-running and freeze protection
- Automatic flowless Sensor
- Automatic recovery after inverter power failure
- Pump protection
- FND- status monitoring
- RS485 communication interface

Features

- Each pump is individually controlled by a NSQ drive
- High reliability (Multi-master control)
- Constant discharge pressure
- Reduced tank and panel sizes
- Less wear of the system during operation
- Compact assembly and installation
- High reliability

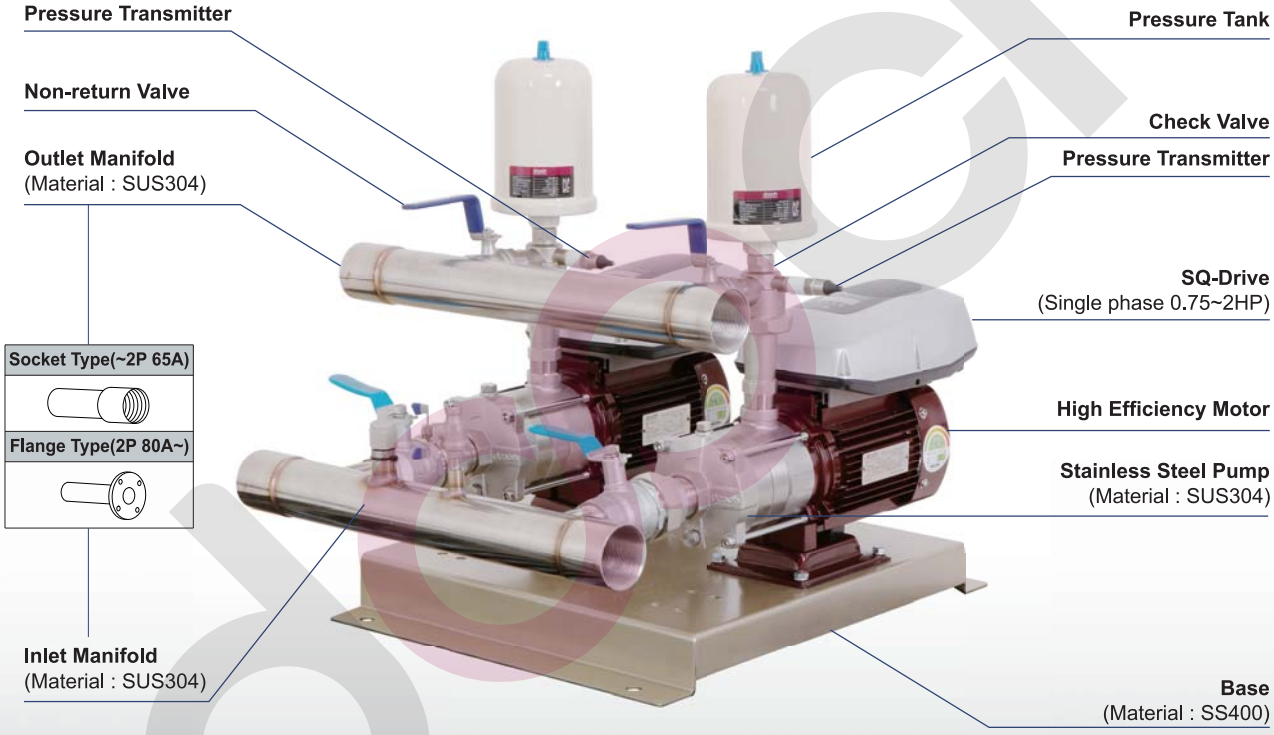


- **Alternative Operation**
  - Alternative operation refers to the total sum of the power accumulated
  - This in-return ensures that the operating of each pump will be the same and extends lifetime of each pump as the wear is evenly distributed amongst the pumps.

Applications

- Booster systems
- Domestic water supply systems
- Cooling systems
- Air-conditioning systems
- Small industrial water supply systems
- Horticultural irrigation systems

SQ-2DHF(T) Series System

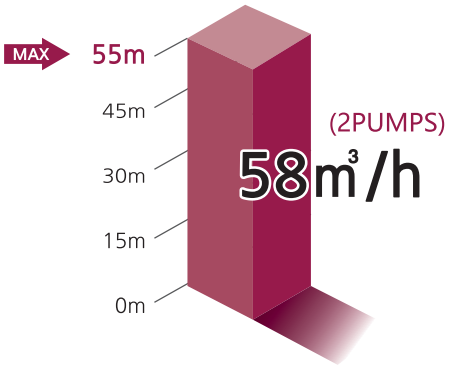


SQ-2DHF(T) Series

INDIVIDUAL INVERTER HORIZONTAL BOOSTER SYSTEM

Specification

- Max. Flow(Q) : 58m³/h
- Max. Head(H) : 55m
- Number of pumps : Up to 2 pumps
- Input Power : 1PH 200V~230V / 50 & 60Hz (0.75~2HP)



SQ-2DHF(T) Series

SQ-DHF(T) pumps are built on the basis of DHF pumps. The main difference between DHF and SQ-DHF(T) pump is the variable frequency drive. Enhanced with the SQ-Drive, SQ-DHF(T) pump together with the appropriate sensor is turned into an intelligent, variable speed pump system. The SQ-Drives adjust the motor speed which in turn provides constant pressure or differential pressure according to the flow rate.

※ Inlet/Outlet casing material
"T" indicates : GCD450
Without "T" indicates : Stainless steel

Functions

- Control mode - pressure/ differential pressure
- Set the setting pressure
- Dry-running and freeze protection
- Automatic flowless sensor
- Automatic recovery after inverter power failure
- Pump protection
- FND- communication monitoring

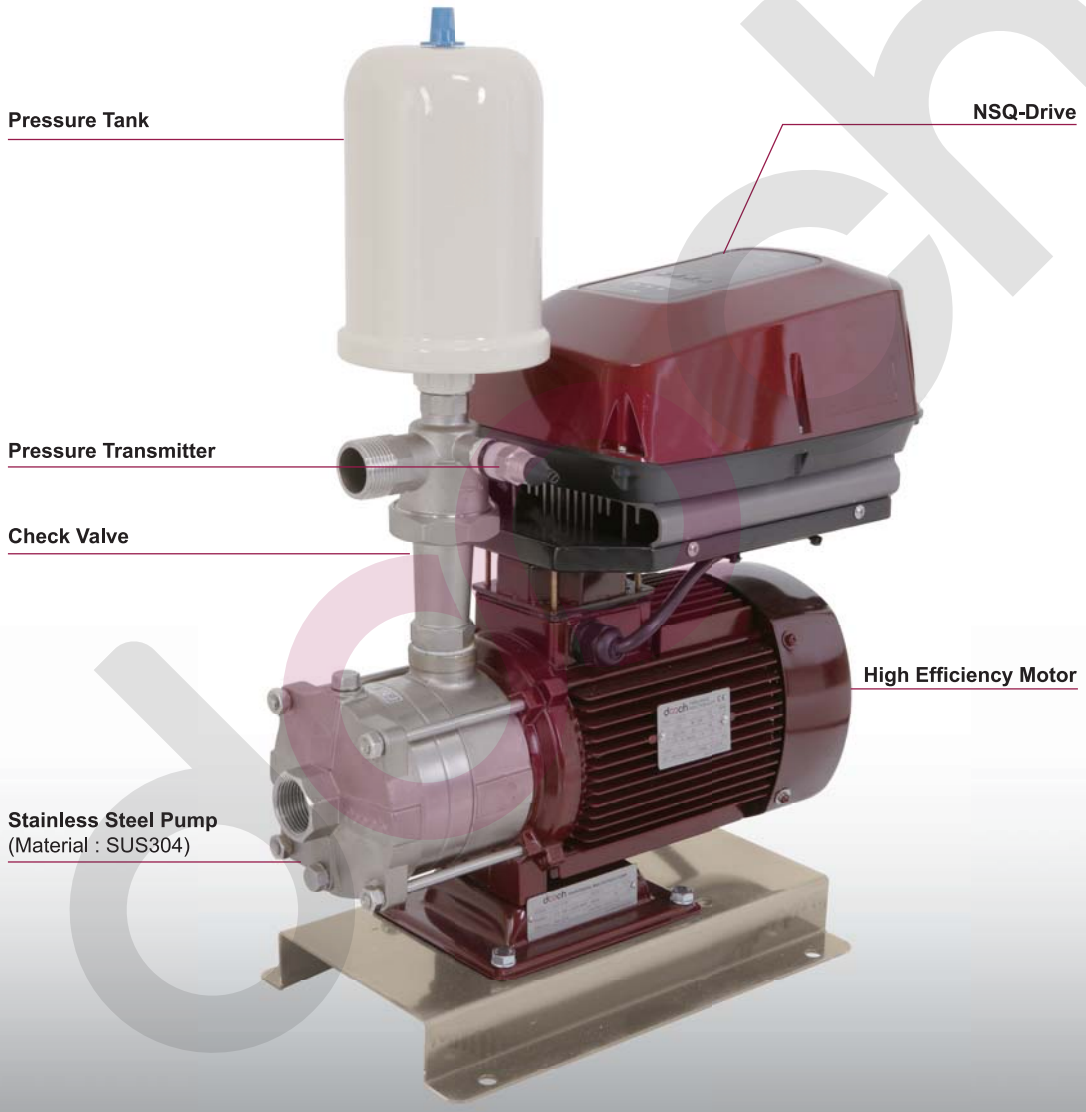
Features

- Each pump is individually controlled by a SQ drive
- High reliability (Multi-master control)
- Constant discharge pressure
- Reduced tank and panel sizes
- Less wear of the system during operation
- Compact assembly and installation
- High reliability

Applications

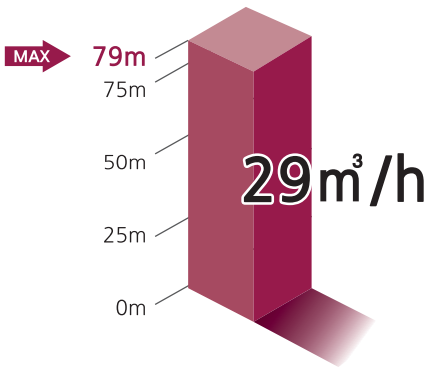
- Booster systems
- Domestic water supply systems
- Cooling systems
- Air-conditioning systems
- Small industrial water supply systems
- Horticultural irrigation systems

NSQ-DHF(T) Series



Specification

- Max. Flow(Q) : 29 m³/h
- Max. Head(H) : 68m
- Motor Power : 0.55~5.5kW (0.75~7.5HP)
- Input Power : 3Φ×380V~440V / 50 & 60Hz (0.75~7.5HP)
  1Φ×200V~230V / 50 & 60Hz (0.75~3HP)



NSQ-DHF(T) Series

NSQ-DHF(T) pumps are built on the basis of DHF pumps. The main difference between DHF and NSQ-DHF(T) pump is the variable frequency drive. Enhanced with the NSQ-Drive, NSQ-DHF(T) pump together with the appropriate sensor is turned into an intelligent, variable speed pump system. The NSQ-Drives adjust the motor speed which in turn provides constant pressure or differential pressure according to the flow rate.

※ Inlet/Outlet casing material
"T" indicates : GCD450
Without "T" indicates : Stainless steel

Functions

- Control mode - pressure/ differential pressure
- Set the setting pressure
- Dry-running and freeze protection
- Automatic flowless sensor
- Automatic recovery after inverter power failure
- Pump protection
- FND- status monitoring
- RS485 communication interface

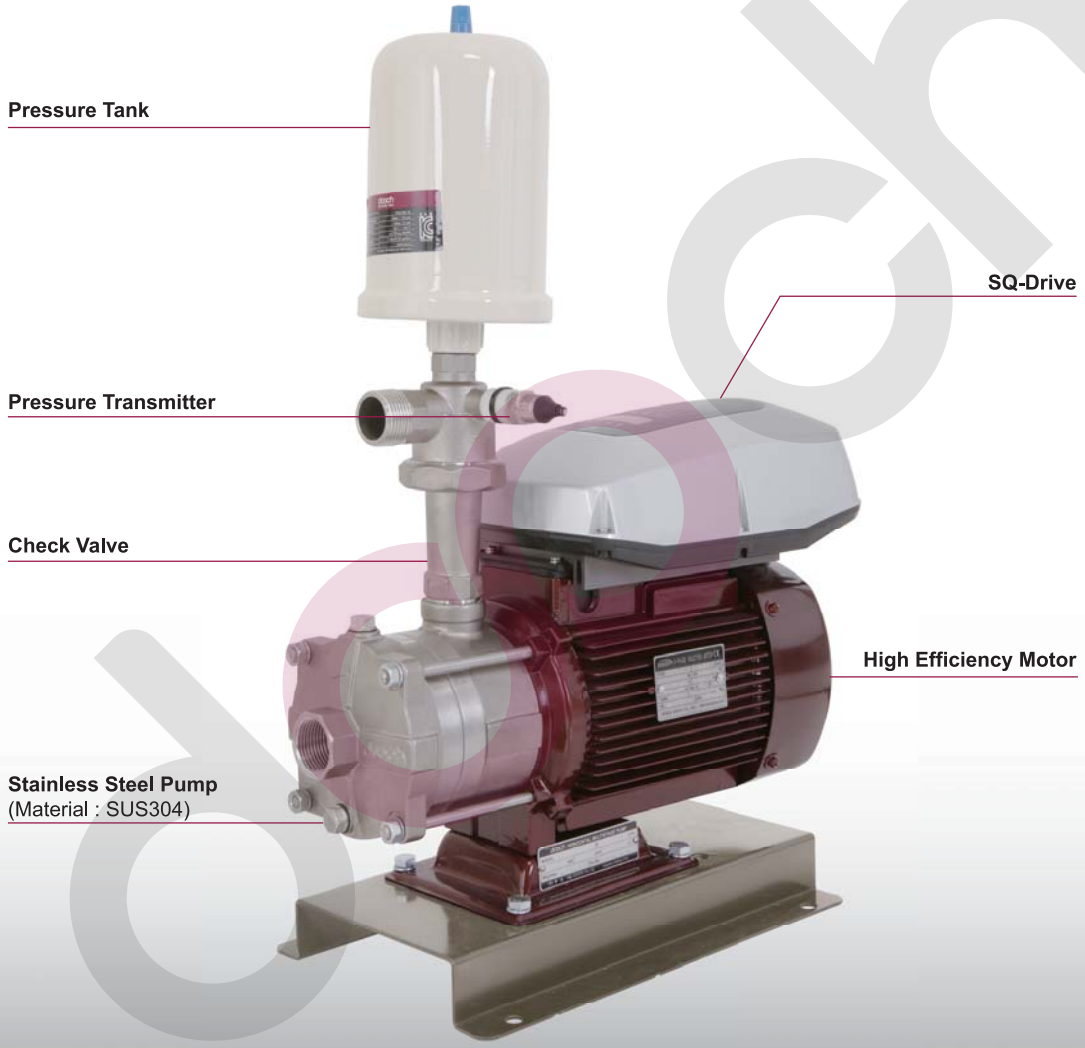
Features

- Each pump is individually controlled by a NSQ drive
- High reliability (Multi-master control)
- Constant discharge pressure
- Less wear of the system during operation
- Compact assembly and installation
- High reliability

Applications

- Booster systems
- Domestic water supply systems
- Cooling systems
- Air-conditioning systems
- Small industrial water supply systems
- Horticultural irrigation systems

SQ-DHF(T) Series

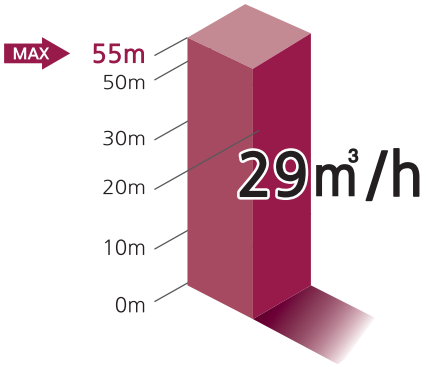


SQ-DHF(T) Series

INDIVIDUAL INVERTER HORIZONTAL PUMP

Specification

- Max. Flow(Q) : 29m³/h
- Max. Head(H) : 55m
- Motor Power : 0.55~1.5kW (0.75~2HP)
- Input Power : 1Φ×200V~230V / 50 & 60Hz (0.75~2HP)



SQ-DHF(T) Series

SQ-DHF(T) pumps are built on the basis of DHF pumps. The main difference between DHF and SQ-DHF(T)pump is the variable frequency drive. Enhanced with the SQ-Drive, SQ-DHF(T) pump together with the appropriate sensor is turned into an intelligent, variable speed pump system. The SQ-Drives adjust the motor speed which in turn provides constant pressure or differential pressure according to the flow rate.

※ Inlet/Outlet casing material
"T" indicates : GCD450
Without "T" indicates : Stainless steel

Functions

- Control mode - pressure/ differential pressure
- Set the setting pressure
- Dry-running and freeze protection
- Automatic flowless sensor
- Automatic recovery after inverter power failure
- Pump protection
- FND- status monitoring

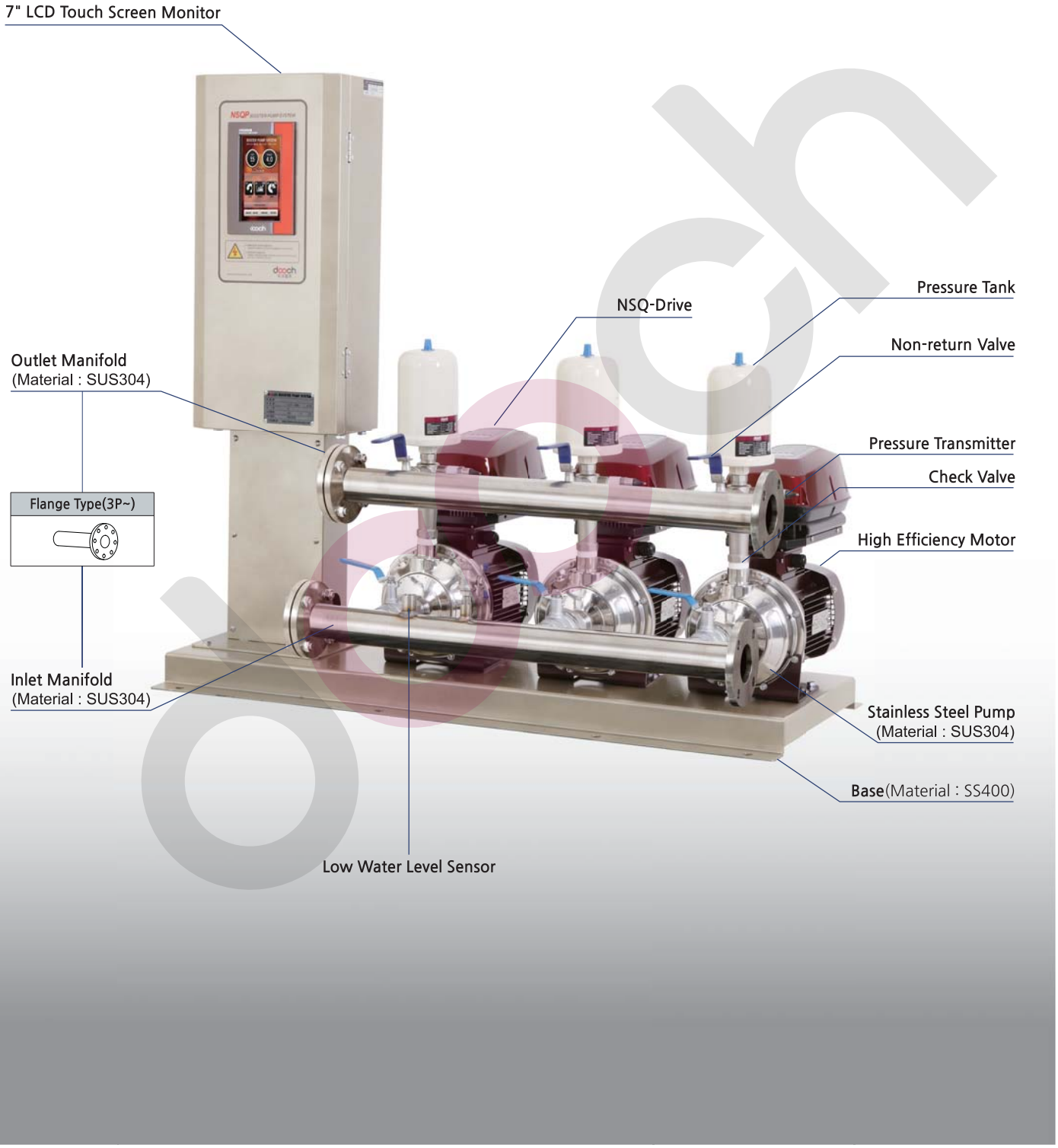
Features

- Each pump is individually controlled by a SQ drive
- High reliability (Multi-master control)
- Constant discharge pressure
- Less wear of the system during operation
- Compact assembly and installation
- High reliability

Applications

- Booster systems
- Domestic water supply systems
- Cooling systems
- Air-conditioning systems
- Small industrial water supply systems
- Horticultural irrigation systems

NSQP-2(3)DHM Series System

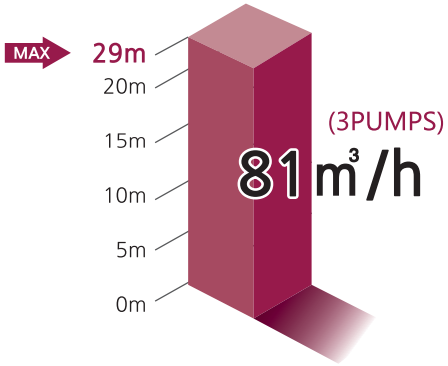


NSQP-2(3)DHM Series

INDIVIDUAL INVERTER HORIZONTAL BOOSTER SYSTEM(PREMIUM MODEL)

Specification

- Max. Flow(Q) : 81m³/h
- Max. Head(H) : 29m
- Number of pumps : Up to 3 pumps
- Input Power : 3PH 380V~440V / 50 & 60Hz (0.5~3HP)
  1PH 200V~230V / 50 & 60Hz (0.5~3HP)



NSQP-2(3)DHM Series

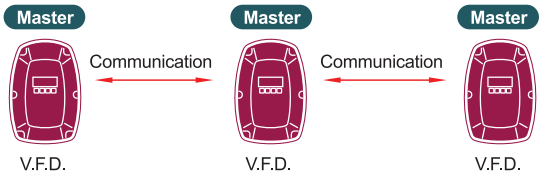
NSQP-2(3)DHM pumps are built on the basis of DHM pumps. The main difference between DHM and NSQP-2(3)DHM pump is the variable frequency drive. Enhanced with the NSQ-Drive, NSQP-2(3)DHM pump together with the appropriate sensor is turned into an intelligent, variable speed pump system. The NSQ-Drives adjust the motor speed which in turn provides constant pressure or differential pressure according to the flow rate.
NSQP-2(3)DHM is also equipped with the 7" touch screen monitor that is embedded into the panel which features the lastest GUI.

Functions

- Control mode - pressure/ differential pressure
- Set the setting pressure
- Dry-running and freeze protection
- Automatic flowless sensor
- Automatic recovery after inverter power failure
- Pump protection
- FND- status monitoring
- RS485 communication interface

Features

- 7" color LCD touch monitor
- Each pump is individually controlled by a NSQ drive
- High reliability (Multi-master control)
- Constant discharge pressure
- Reduced tank and panel sizes
- Less wear of the system during operation
- Compact assembly and installation
- High reliability



Applications

- Booster systems
- Domestic water supply systems
- Cooling systems
- Air-conditioning systems
- Small industrial water supply systems
- Horticultural irrigation systems

- **Alternative Operation**
  - Alternative operation refers to the total sum of the power accumulated
  - This in turn ensures that the operating of each pump will be the same and extends lifetime of each pump as the wear is evenly distributed amongst the pumps.

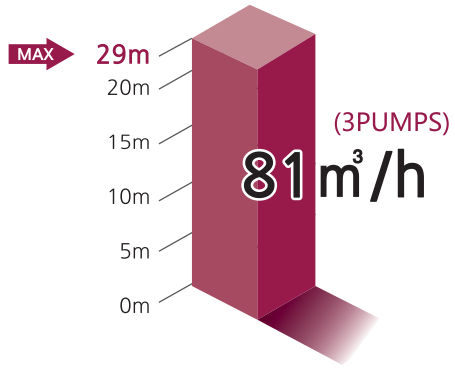
NSQ-2(3)DHM Series System

NSQ-2(3)DHM Series

INDIVIDUAL INVERTER HORIZONTAL BOOSTER SYSTEM

Specification

- Max. Flow(Q) : 81 m³/h
- Max. Head(H) : 29m
- Number of pumps : Up to 3 pumps
- Motor Power : 0.37~2.2kW (0.5~3HP)
- Input Power : 2PUMP - 3PH 380V~440V / 50 & 60Hz (0.5~3HP)
  1PH 200V~230V / 50 & 60Hz (0.5~3HP)
  3PUMP - 3PH 380V~440V / 50 & 60Hz (0.5~3HP)
  1PH 200V~230V / 50 & 60Hz (0.5~3HP)



NSQ-2(3)DHM Series

NSQ-2(3)DHM pumps are built on the basis of DHM pumps. The main difference between DHM and NSQ-2(3)DHM pump is the variable frequency drive. Enhanced with the NSQ-Drive, NSQ-2(3)DHM pump together with the appropriate sensor is turned into an intelligent, variable speed pump system. The NSQ-Drives adjust the motor speed which in turn provides constant pressure or differential pressure according to the flow rate.

Functions

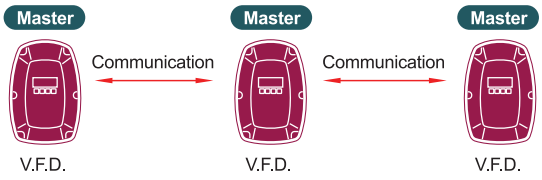
- Control mode - pressure/ differential pressure
- Set the setting pressure
- Dry-running and freeze protection
- Automatic flowless sensor
- Automatic recovery after inverter power failure
- Pump protection
- FND- status monitoring
- RS485 communication interface

Features

- Each pump is individually controlled by a NSQ drive
- High reliability (Multi-master control)
- Constant discharge pressure
- Reduced tank and panel sizes
- Less wear of the system during operation
- Compact assembly and installation
- High reliability

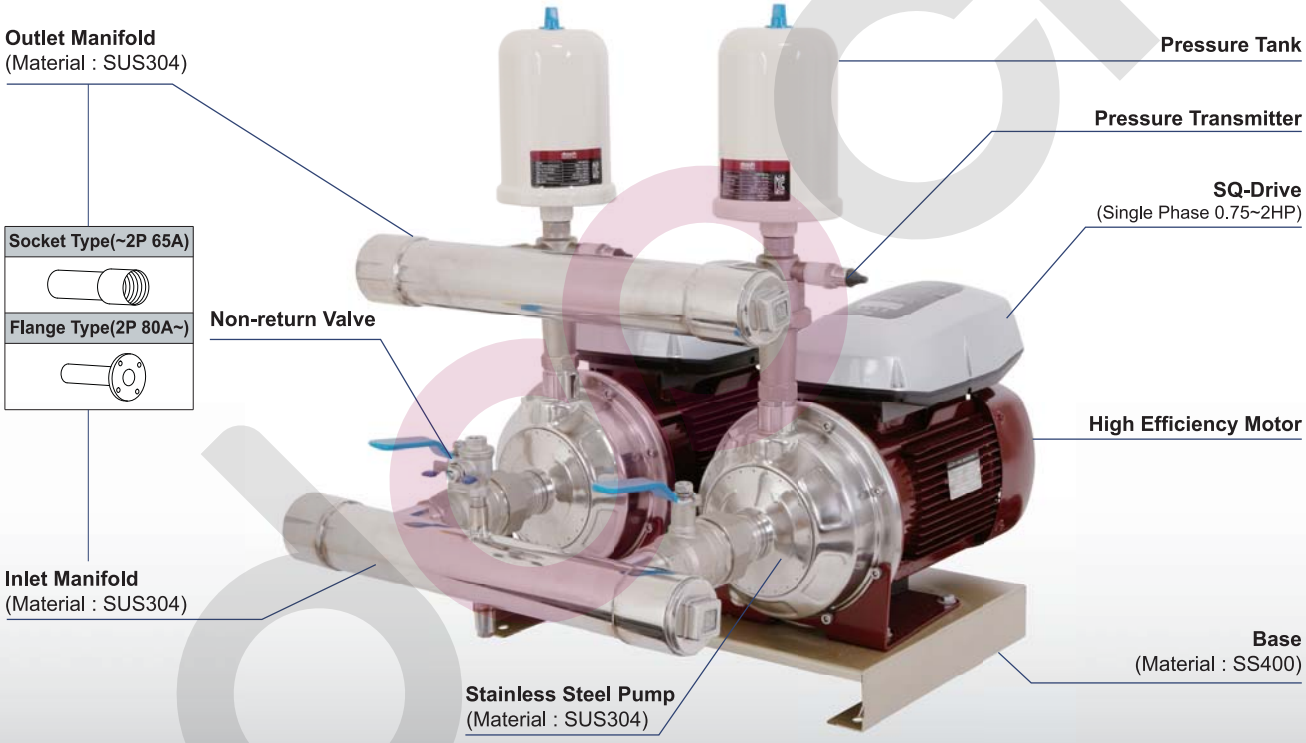
Applications

- Booster systems
- Domestic water supply systems
- Cooling systems
- Air-conditioning systems
- Small industrial water supply systems
- Horticultural irrigation systems



- **Alternative Operation**
  - Alternative operation refers to the total sum of the power accumulated
  - This in turn ensures that the operating of each pump will be the same and extends lifetime of each pump as the wear is evenly distributed amongst the pumps.

SQ-2DHM Series System

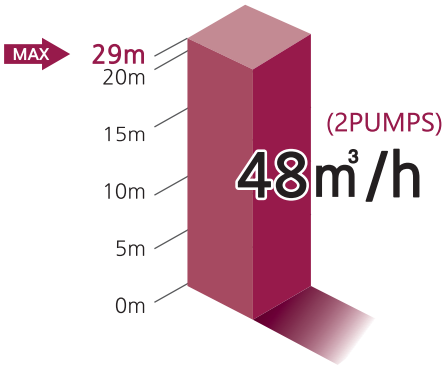


SQ-2DHM Series

INDIVIDUAL INVERTER HORIZONTAL BOOSTER SYSTEM

Specification

- Max. Flow(Q) : 48m³/h
- Max. Head(H) : 29m
- Number of pumps : Up to 2 pumps
- Input Power : 1PH 200V~230V / 50 & 60Hz (0.5~2HP)



SQ-2DHM Series

SQ-2DHM pumps are built on the basis of DHM pumps. The main difference between DHM and SQ-2DHM pump is the variable frequency drive. Enhanced with the SQ-Drive, SQ-2DHM pump together with the appropriate sensor is turned into an intelligent, variable speed pump system. The SQ-Drives adjust the motor speed which in turn provides constant pressure or differential pressure according to the flow rate.

Functions

- Control mode - pressure/ differential pressure
- Set the setting pressure
- Dry-running and freeze protection
- Automatic flowless Sensor
- Automatic recovery after inverter power failure
- Pump protection
- FND- status monitoring

Features

- Each pump is individually controlled by a SQ drive
- High reliability (Multi-master control)
- Constant discharge pressure
- Reduced tank and panel sizes
- Less wear of the system during operation
- Compact assembly and installation
- High reliability

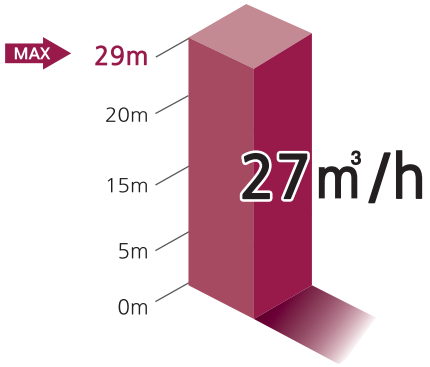
Applications

- Booster systems
- Domestic water supply systems
- Cooling systems
- Air-conditioning systems
- Small industrial water supply systems
- Horticultural irrigation systems

NSQ-DHM Series

Specification

- Max. Flow(Q) : 27m³/h
- Max. Head(H) : 29m
- Motor Power : 0.37~2.2kW (0.5~3HP)
- Input Power : 3Φ×380V~440V / 50 & 60Hz (0.5~3HP)
  1Φ×200V~230V / 50 & 60Hz (0.5~3HP)



NSQ-DHM Series

NSQ-DHM pumps are built on the basis of DHM pumps. The main difference between DHM and NSQ-DHM pump is the variable frequency drive. Enhanced with the NSQ-Drive, NSQ-DHM pump together with the appropriate sensor is turned into an intelligent, variable speed pump system. The NSQ-Drives adjust the motor speed which in turn provides constant pressure or differential pressure according to the flow rate.

Functions

- Control mode - pressure/ differential pressure
- Set the setting pressure
- Dry-running and freeze protection
- Automatic flowless sensor
- Automatic recovery after inverter power failure
- Pump protection
- FND- status monitoring
- RS485 communication interface

Features

- Each pump is individually controlled by a NSQ drive
- High reliability (Multi-master control)
- Constant discharge pressure
- Less wear of the system during operation
- Compact assembly and installation
- High reliability

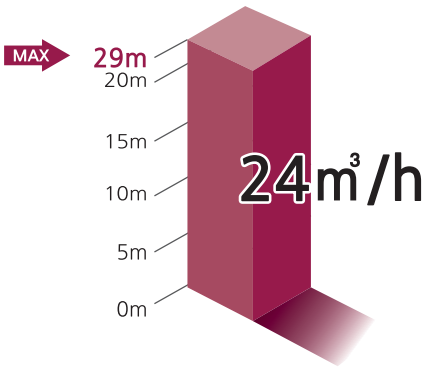
Applications

- Booster systems
- Domestic water supply systems
- Cooling systems
- Air-conditioning systems
- Small industrial water supply systems
- Horticultural irrigation systems

SQ-DHM Series

Specification

- Max. Flow(Q) : 24m³/h
- Max. Head(H) : 29m
- Motor Power : 0.37~1.5kW (0.5~2HP)
- Input Power : 1Φ×200V~230V / 50 & 60Hz (0.5~2HP)



SQ-DHM Series

SQ-DHM pumps are built on the basis of DHM pumps. The main difference between DHM and SQ-DHM pump is the variable frequency drive. Enhanced with the SQ-Drive, SQ-DHM pump together with the appropriate sensor is turned into an intelligent, variable speed pump system. The SQ-Drives adjust the motor speed which in turn provides constant pressure or differential pressure according to the flow rate.

Functions

- Control mode - pressure/ differential pressure
- Set the setting pressure
- Dry-running and freeze protection
- Automatic flowless sensor
- Automatic recovery after inverter power failure
- Pump protection
- FND- status monitoring

Features

- Each pump is individually controlled by a SQ drive
- High reliability (Multi-master control)
- Constant discharge pressure
- Less wear of the system during operation
- Compact assembly and installation
- High reliability

Applications

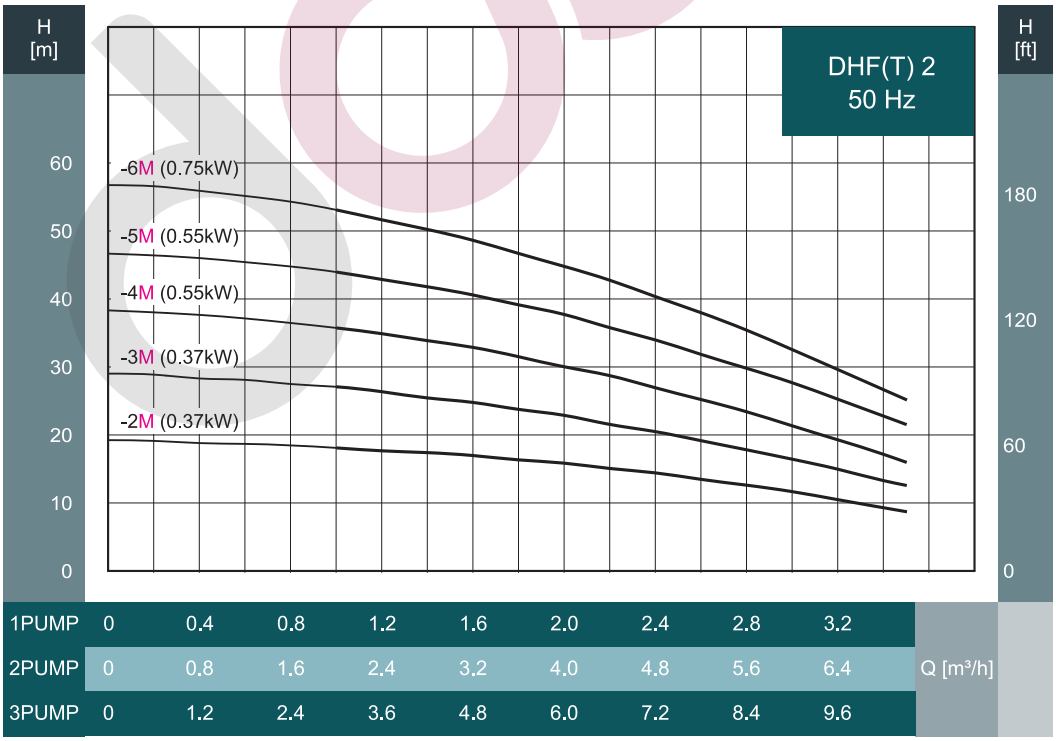
- Booster systems
- Domestic water supply systems
- Cooling systems
- Air-conditioning systems
- Small industrial water supply systems
- Horticultural irrigation systems

Model Features

Model	Power Specifications		Number of Pumps		LCD Touch Panel
	1PH 200V~230V 50Hz (0.75~2HP)	1PH 200V~230V 50Hz (3HP) 3PH 380V~440V 50Hz (0.75~7.5HP)	2	3	
NSQ(P)-2(3)DHF(T) Series	●	●	●	●	●
SQ-2DHF(T) Series	●	×	●	×	×

※ Inlet/Outlet Casing Material
With "T" : GCD450
Without "T" : Stainless steel

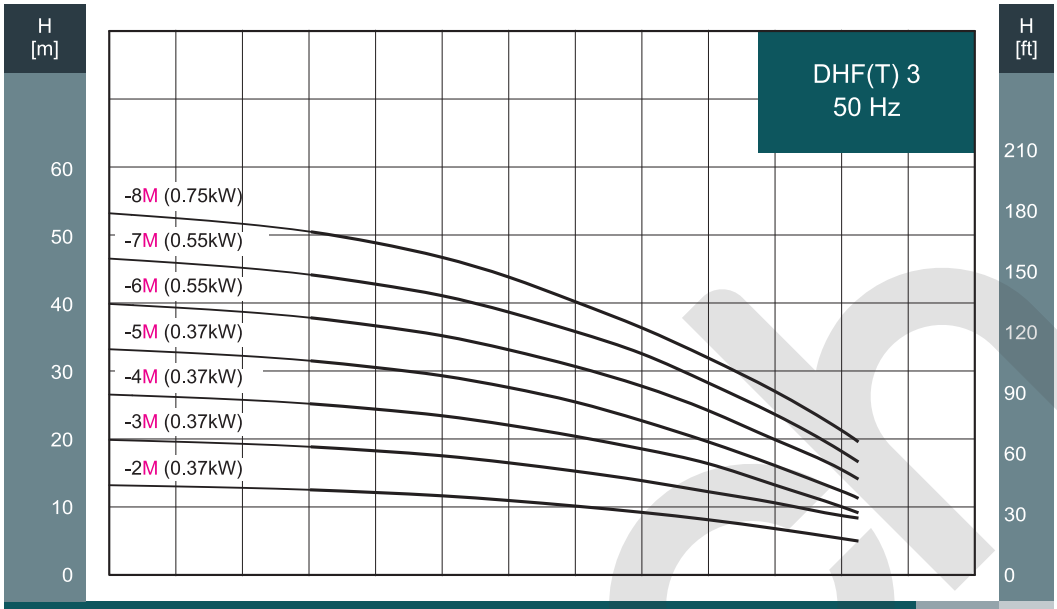
2(3)DHF(T) 2 Series



1PUMP	0	0.4	0.8	1.2	1.6	2.0	2.4	2.8	3.2	Q [m³/h]
2PUMP	0	0.8	1.6	2.4	3.2	4.0	4.8	5.6	6.4	
3PUMP	0	1.2	2.4	3.6	4.8	6.0	7.2	8.4	9.6	

Remark | "M" is 220V/Single Phase Model
SQ-DHF(T) can be applied up to 2HP

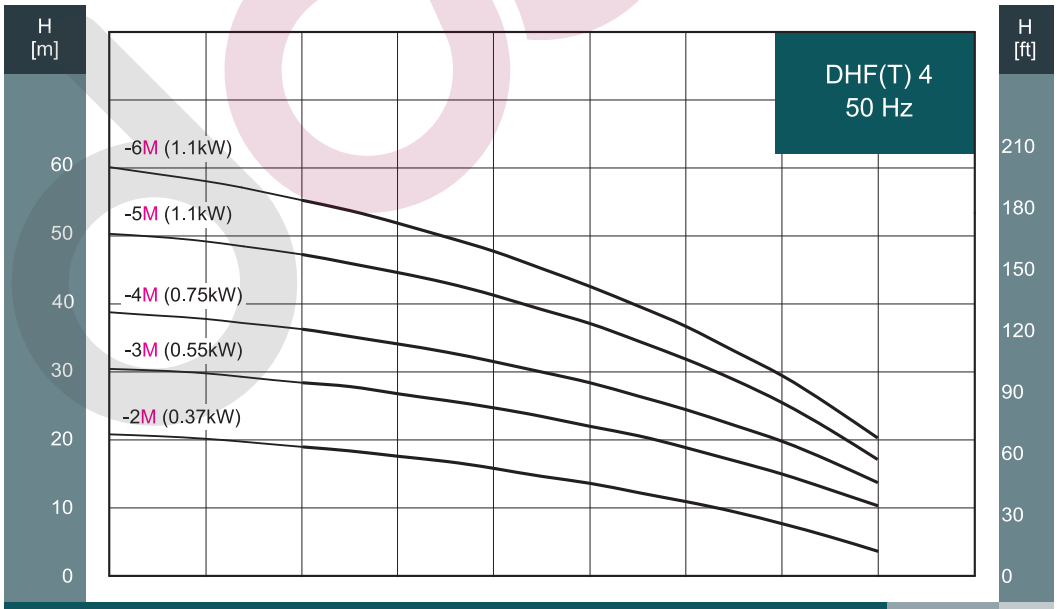
2(3)DHF(T) 3 Series



1PUMP	0	0.4	0.8	1.2	1.6	2.0	2.4	2.8	3.2	3.6	4.0	4.4	Q [m³/h]
2PUMP	0	0.8	1.6	2.4	3.2	4.0	4.8	5.6	6.4	7.2	8.0	8.8	
3PUMP	0	1.2	2.4	3.6	4.8	6.0	7.2	8.4	9.6	10.8	12.0	13.2	

Remark | "M" is 220V/Single Phase Model
SQ-DHF(T) can be applied up to 2HP

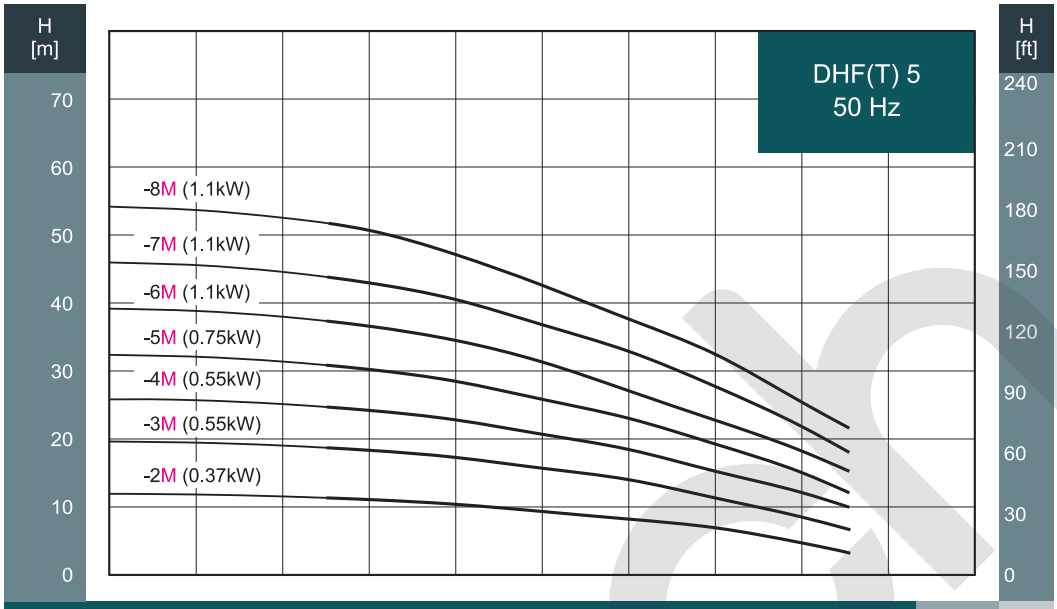
2(3)DHF(T) 4 Series



1PUMP	0	1	2	3	4	5	6	7	Q [m³/h]
2PUMP	0	2	4	6	8	10	12	14	
3PUMP	0	3	6	9	12	15	18	21	

Remark | "M" is 220V/Single Phase Model
SQ-DHF(T) can be applied up to 2HP

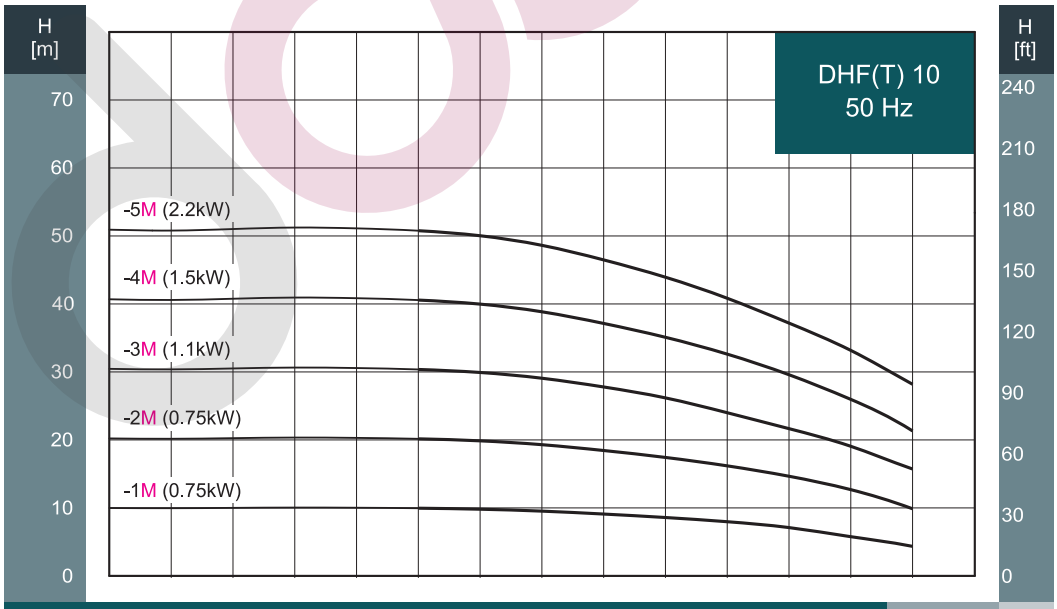
2(3)DHF(T) 5 Series



1PUMP	0	1	2	3	4	5	6	7	8	9	
2PUMP	0	2	4	6	8	10	12	14	16	18	Q [m³/h]
3PUMP	0	3	6	9	12	15	18	21	24	27	

Remark | "M" is 220V/Single Phase Model
SQ-DHF(T) can be applied up to 2HP

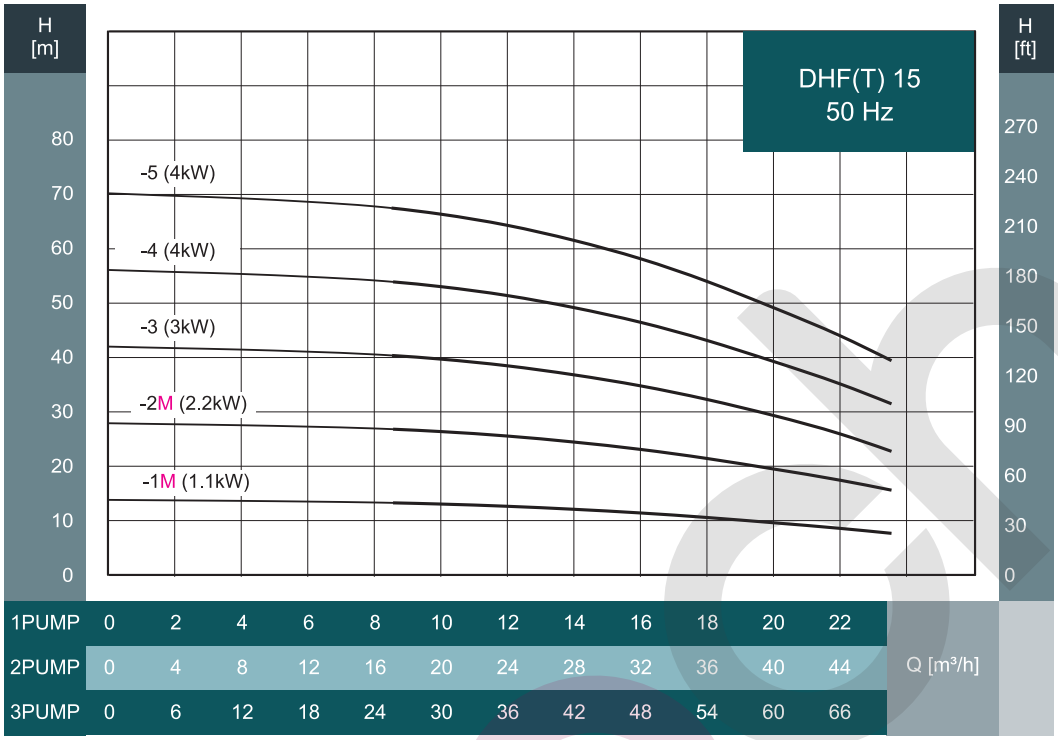
2(3)DHF(T) 10 Series



1PUMP	0	1	2	3	4	5	6	7	8	9	10	11	12	
2PUMP	0	2	4	6	8	10	12	14	16	18	20	22	24	Q [m³/h]
3PUMP	0	3	6	9	12	15	18	21	24	27	30	33	36	

Remark | "M" is 220V/Single Phase Model
SQ-DHF(T) can be applied up to 2HP

2(3)DHF(T) 15 Series

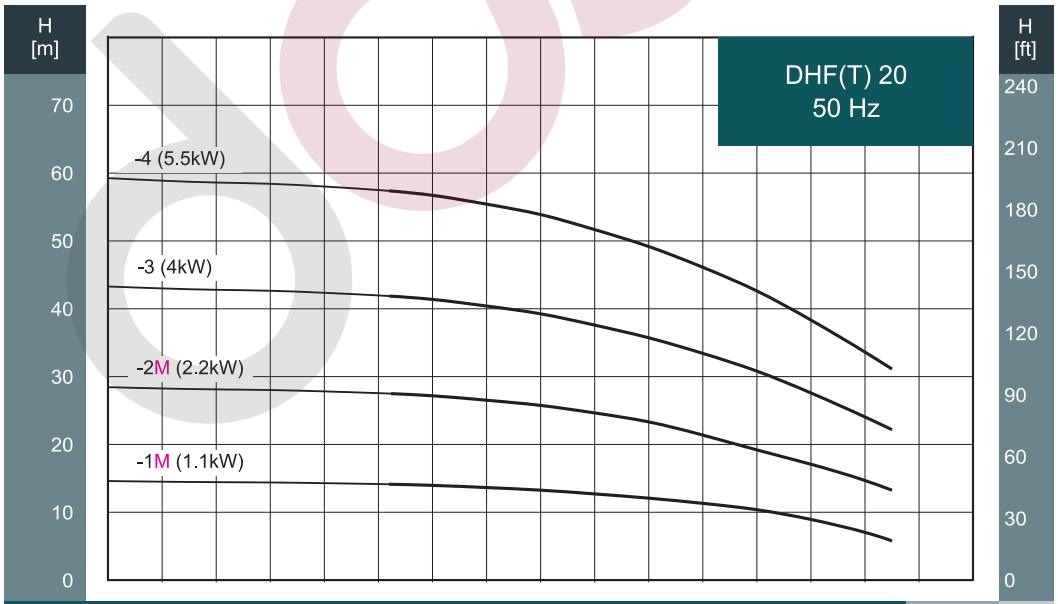


1PUMP	0	2	4	6	8	10	12	14	16	18	20	22
2PUMP	0	4	8	12	16	20	24	28	32	36	40	44
3PUMP	0	6	12	18	24	30	36	42	48	54	60	66

Q [m³/h]

Remark | "M" is 220V/Single Phase Model
SQ-DHF(T) can be applied up to 2HP

2(3)DHF(T) 20 Series



1PUMP	0	2	4	6	8	10	12	14	16	18	20	22	24	26	28
2PUMP	0	4	8	12	16	20	24	28	32	36	40	44	48	52	56
3PUMP	0	6	12	18	24	30	36	42	48	54	60	66	72	78	84

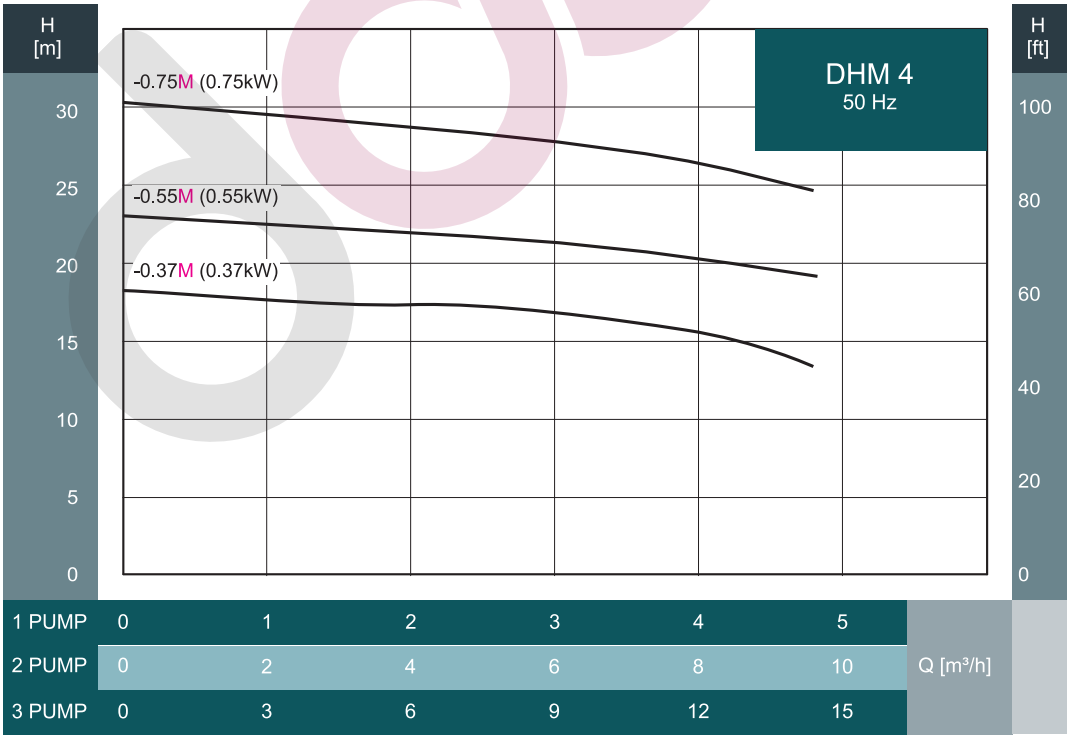
Q [m³/h]

Remark | "M" is 220V/Single Phase Model

Model Features

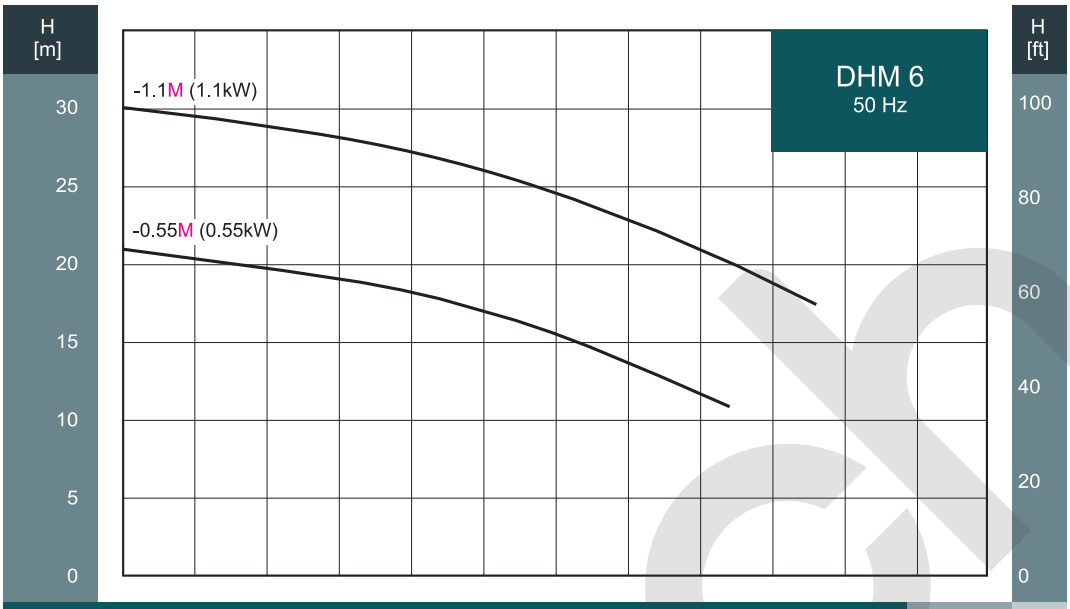
Model	Power Specifications		Number of Pumps		LCD Touch Panel
	1PH 200V~230V 50Hz (0.5~2HP)	1 PH 200V~230V 50Hz (3HP) 3PH 380V~440V 50Hz (0.5~3HP)	2	3	
NSQ(P)-2(3)DHM Series	●	●	●	●	●
SQ-2DHM Series	●	×	●	×	×

(2)3DHM 4 series



Remark | "M" is 220V/Single Phase Model
SQ-series can be applied up to 2HP

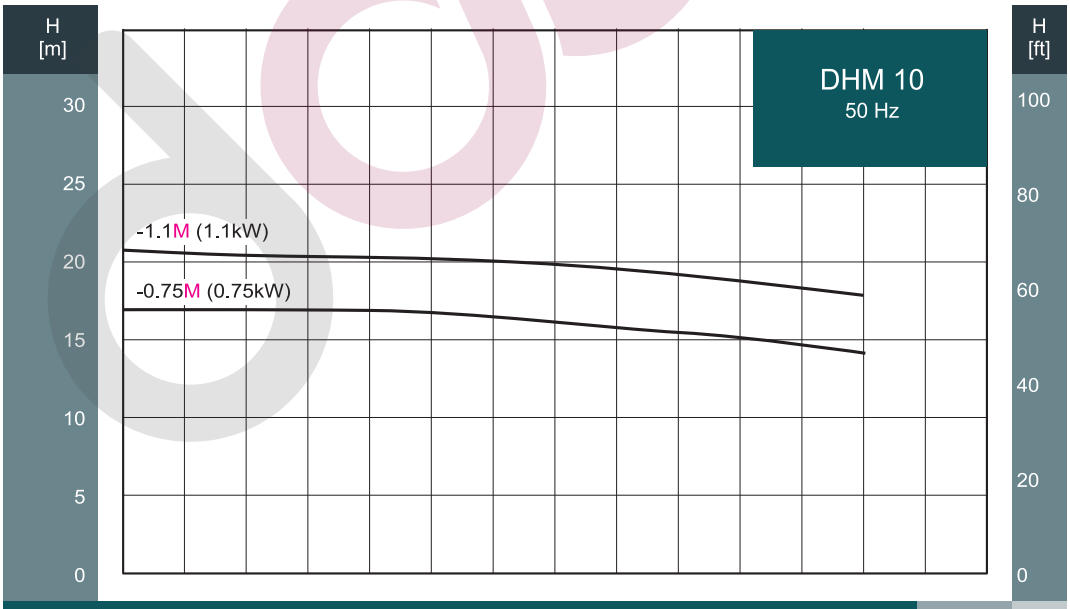
(2)3DHM 6 series



1 PUMP	0	1	2	3	4	5	6	7	8	9	10	
2 PUMP	0	2	4	6	8	10	12	14	16	18	20	Q [m³/h]
3 PUMP	0	3	6	9	12	15	18	21	24	27	30	

Remark | "M" is 220V/Single Phase Model
SQ-series can be applied up to 2HP

(2)3DHM 10 series

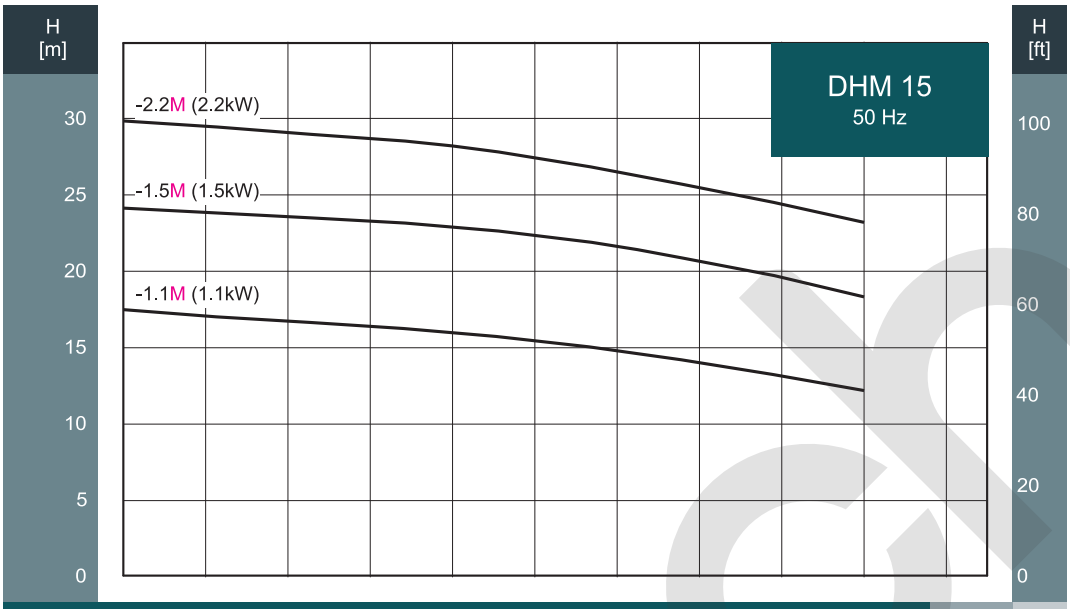


1 PUMP	0	1	2	3	4	5	6	7	8	9	10	11	12
2 PUMP	0	2	4	6	8	10	12	14	16	18	20	22	24
3 PUMP	0	3	6	9	12	15	18	21	24	27	30	33	36

Q [m³/h]

Remark | "M" is 220V/Single Phase Model
SQ-series can be applied up to 2HP

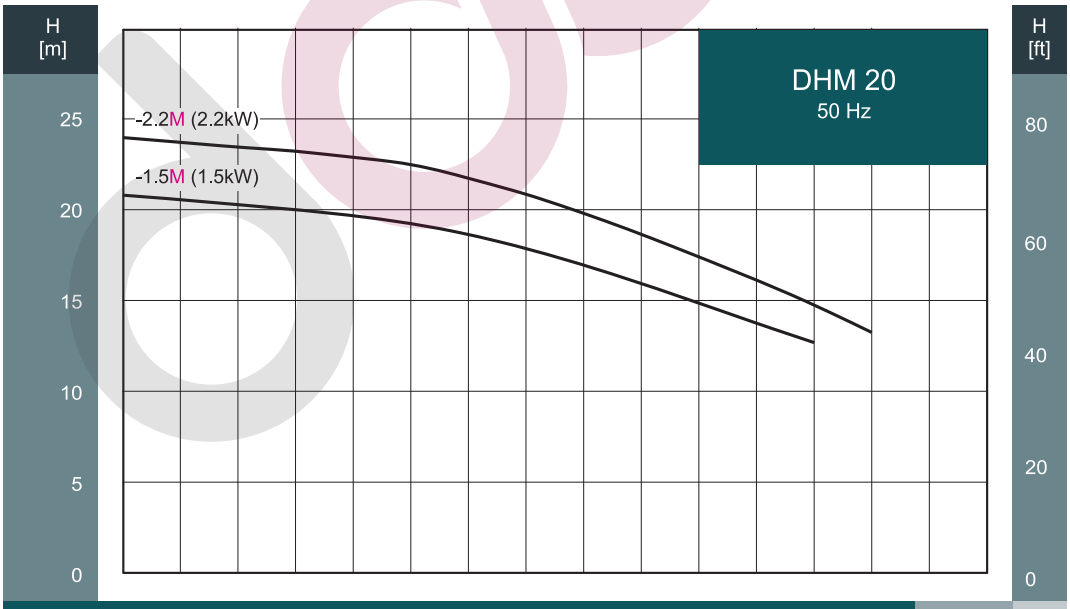
(2)3DHM 15 series



1 PUMP	0	2	4	6	8	10	12	14	16	18	
2 PUMP	0	4	8	12	16	20	24	28	32	36	Q [m³/h]
3 PUMP	0	6	12	18	24	30	36	42	48	54	

Remark | "M" is 220V/Single Phase Model
SQ-series can be applied up to 2HP

(2)3DHM 20 series



1 PUMP	0	2	4	6	8	10	12	14	16	18	20	22	24	26	
2 PUMP	0	4	8	12	16	20	24	28	32	36	40	44	48	52	Q [m³/h]
3 PUMP	0	6	12	18	24	30	36	42	48	54	60	66	72	78	

Remark | "M" is 220V/Single Phase Model
SQ-series can be applied up to 2HP


dooch
두크펌프

GLOBAL PUMP SOLUTION DOOCH

50Hz


• XRL


• XQ-XRL


• NSQ-XRL

VERTICAL MULTI-STAGE PUMP

XR(L) SERIES

dooch
두크펌프

Feature

XR, XRL pumps are vertical non-self priming multistage centrifugal pump of in-line design, which is driven by a standard electric motor. The motor output shaft directly connects with the pump shaft through a coupling. The pressure-resistant cylinder and flow passage components are fixed between the pump head and the pump casing by means of staybolts. The pump casing has suction and discharge ports on the same level (in-line).
All pumps are equipped with a cartridge mechanical seal for easy maintenance.
XR, XRL pumps are available in various sizes and various numbers of stage to provide the flow and pressure required. The pumps are available with DOOCH variable frequency drive (NQ/XQ/NSQ Drive).

Definition of Model

XR(L) 32 – 4 – 2

- 2 — Number of small impellers
- 4 — Number of impellers
- 32 — Rated flow(m^3/h)
- XR(L) — Pump Type : Vertical Multi-stage pump
  XR : Cast iron pump casing
  XRL : Stainless steel pump casing

Motor

Full-enclosed fan cooled two-pole standard motor
Protection class : IP55
Insulation class : F
Standard voltage : 50Hz : 1×220-230 / 240V
3×200-220 / 346-380V
3×220-240 / 380-415V
3×380-415V

Pumping Liquid

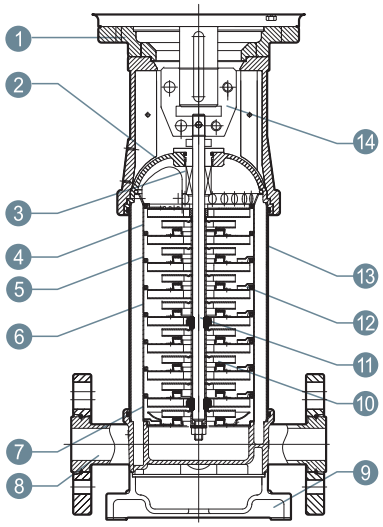
- Pumped liquids :
  Thin, clean, non-flammable and non-explosive liquid containing no solid granules and fibers.
- Liquid temperature : Normal temperature : -15℃~+70℃
  Hot water type : +70℃~+120℃
- Ambient temperature : up to +40℃
- Altitude : up to 1000m

Application

The pumps are suitable for liquid transfer in
- Water supply systems
- Washing systems
- Cooling and air conditioning systems
- Water treatment systems
- Fire fighting systems
- Industrial plants
- Boiler feed systems

Sectional Drawing

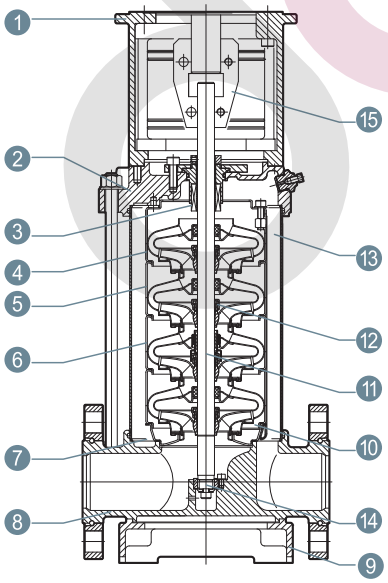
XRL1, 3, 5, 10, 15, 20



NO.	PARTS	MATERIAL	EN/DIN	AISI/ASTM
1	Motor bracket	Cast iron	EN-GJL-200	ASTM25B
2	Pump Head	Stainless steel	1,4301	AISI304
3	Mechanical seal	Cartridge type		
4	Top diffuser	Stainless steel	1,4301	AISI304
5	Diffuser	Stainless steel	1,4301	AISI304
6	Support diffuser	Stainless steel	1,4301	AISI304
7	Inducer	Stainless steel	1,4301	AISI304
8	Pump casing	Stainless steel	1,4301	AISI304
9	Base	Cast iron	EN-GJL-200	ASTM25B
10	Impeller	Stainless steel	1,4301	AISI304
11	Shaft	Stainless steel	1,4301/1,4401	AISI304
12	Impeller sleeve	Stainless steel	1,4301	AISI304
13	Cylinder	Stainless steel	1,4301	AISI304
14	Coupling	Carbon steel		
	Rubber part	NBR or FKM		

* AISI316(Option)

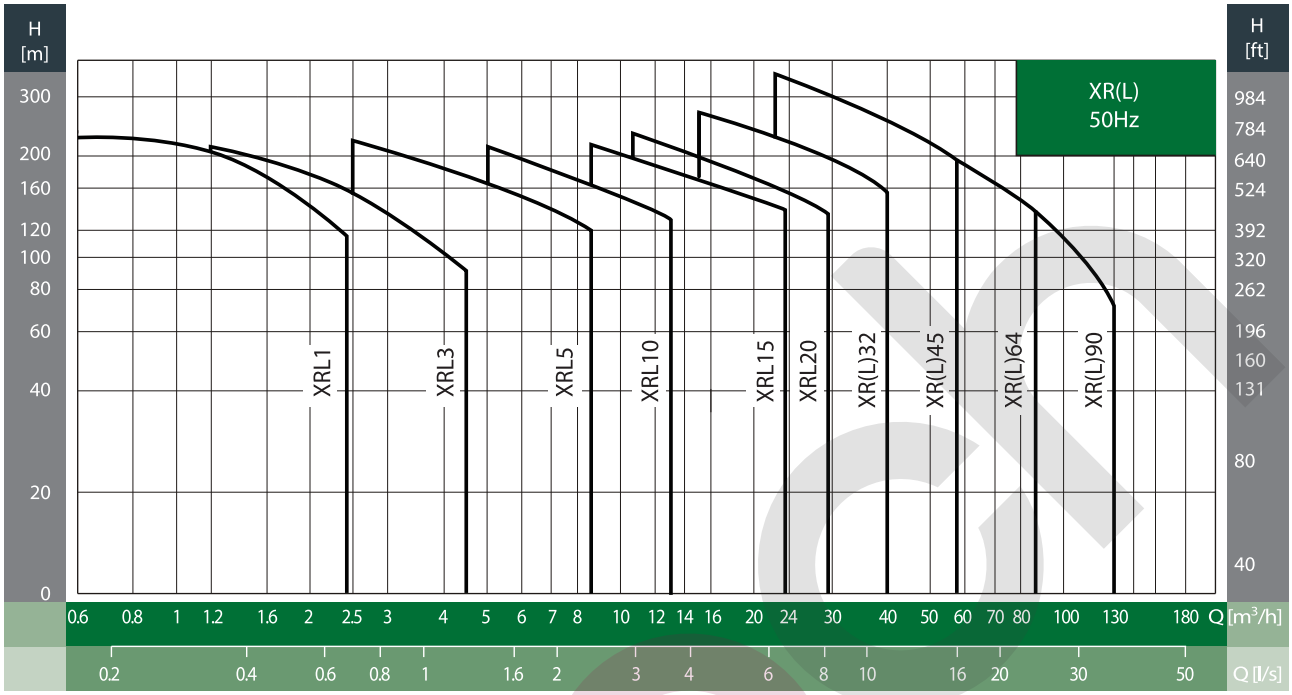
XR(L)32, 45, 64, 90



NO.	PARTS	MATERIAL	EN/DIN	AISI/ASTM
1	Motor bracket	Cast iron	EN-GJL-200	ASTM25B
3	Mechanical seal	Cartridge type		
4	Top diffuser	Stainless steel	1,4301	AISI304
5	Support diffuser	Stainless steel	1,4301	AISI304
6	Diffuser	Stainless steel	1,4301	AISI304
7	Inducer	Stainless steel	1,4301	AISI304
9	Base	Cast iron	EN-GJL-200	ASTM25B
10	Impeller	Stainless steel	1,4301	AISI304
11	Shaft	Stainless steel	1,4301/1,4301/1,4401	AISI304
12	Intermediate Bearing	Tungsten carbide		
13	Cylinder	Stainless steel	1,4301	AISI304
14	Bottom Bearing	Tungsten carbide		
15	Coupling	Carbon steel		
	Rubber part	NBR		
	XR			
2	Pump Head	Cast iron	EN-GJL-200	ASTM25B
8	Pump casing	Cast iron	EN-GJL-200	ASTM25B
	XRL			
2	Pump Head	Stainless steel	1,4301	AISI304
8	Pump casing	Stainless steel	1,4301	AISI304

* AISI316(Option)

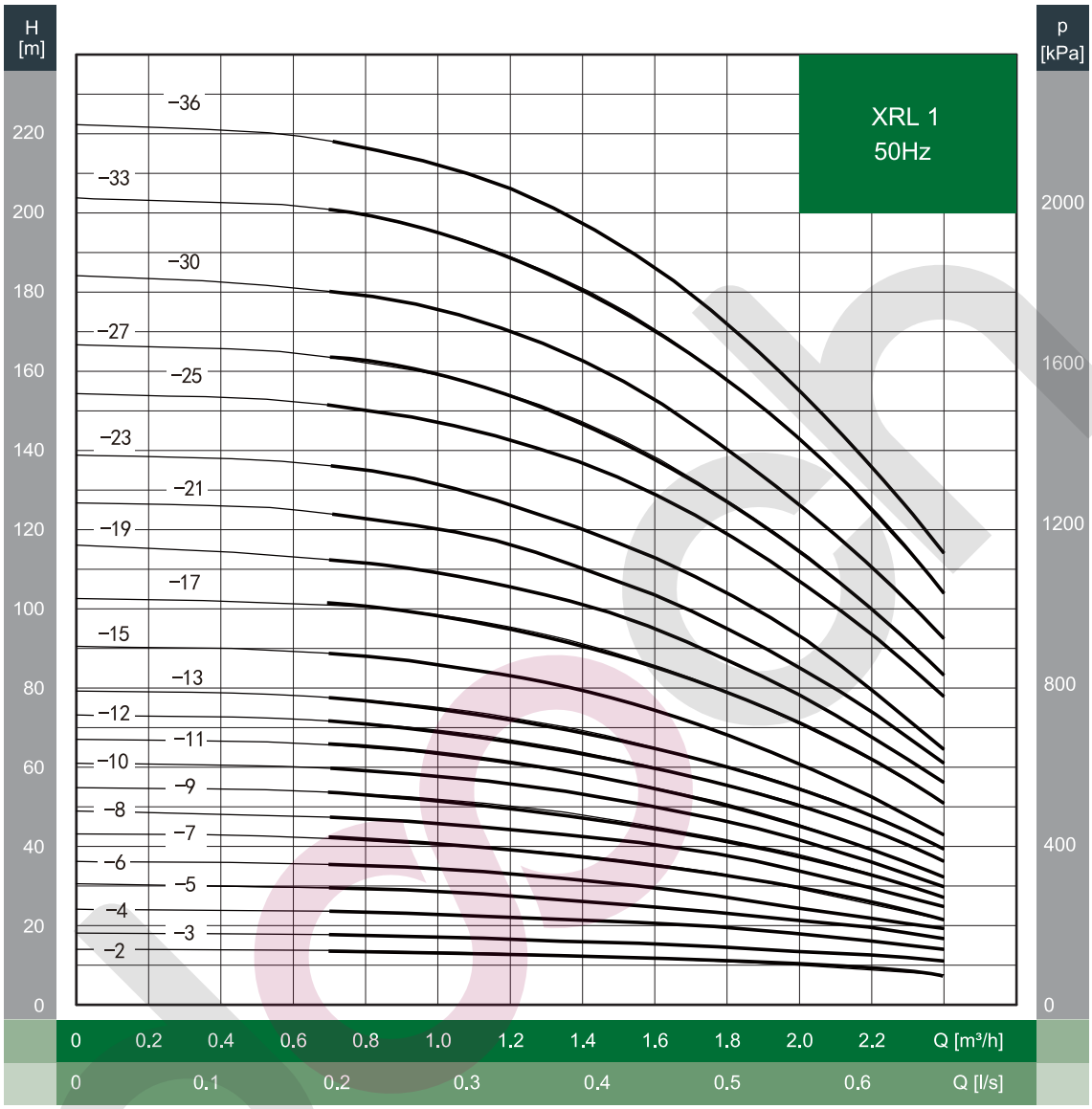
Performance Range

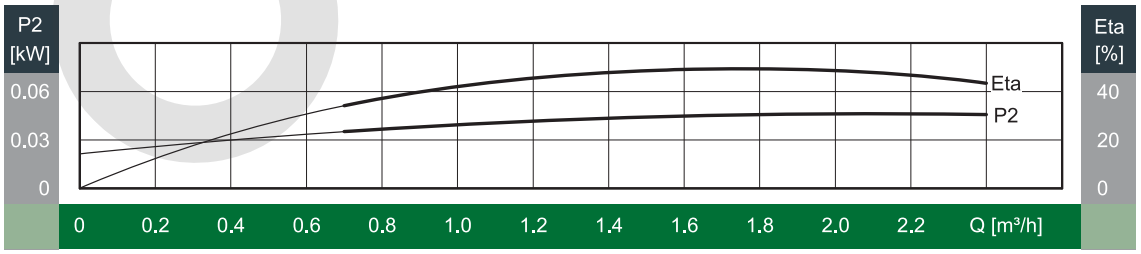


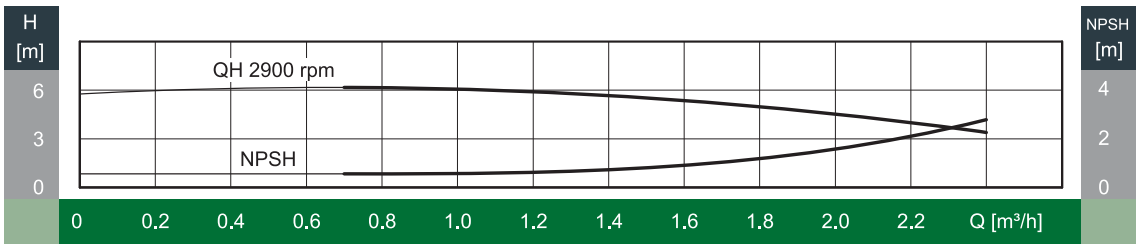
Specification

DESCRIPTION	XRL1	XRL3	XRL5	XRL10	XRL15	XRL20	XR(L)32	XR(L)45	XR(L)64	XR(L)90
Rated flow [m³/h]	1	3	5	10	15	20	32	45	64	90
Flow range [m³/h]	0.7-2.4	1.2-4.5	2.5-8.5	5-13	8.5-23.5	10.5-29	15- 40	22-58	30-85	45-130
Max. pressure [bar]	22	23	24	22	23	25	27	33	22	18
Motor power [kW]	0.37-2.2	0.37-3	0.37-5.5	0.75-7.5	1.1-15	1.1-18.5	1.5-30	3-45	4-45	5.5-45
Liquid Temperature[℃]	-15~+120℃									
Pump Type	Vertical Multi-stage Centrifugal Pump									
XR							●	●	●	●
XRL	●	●	●	●	●	●	●	●	●	●
DIN Flange	DN25 /DN32	DN25 /DN32	DN25 /DN32	DN40	DN50	DN50	DN65	DN80	DN100	DN100
Internal Pressure	PN25	PN25	PN25	PN16-25	PN16-25	PN16-25	PN25-40	PN16-25	PN16	PN16

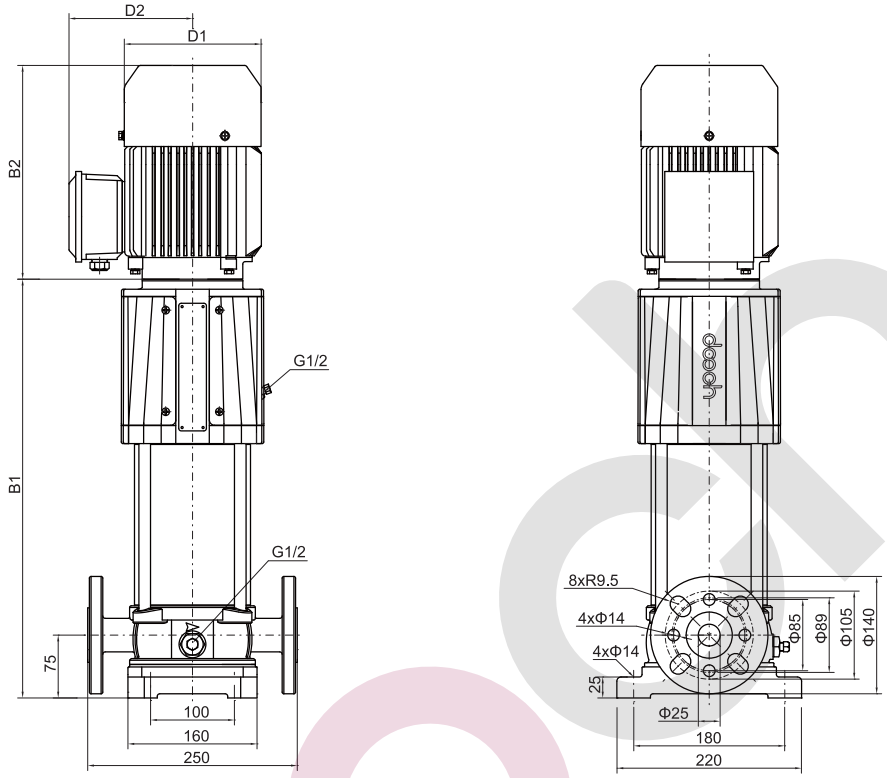
Performance Curve







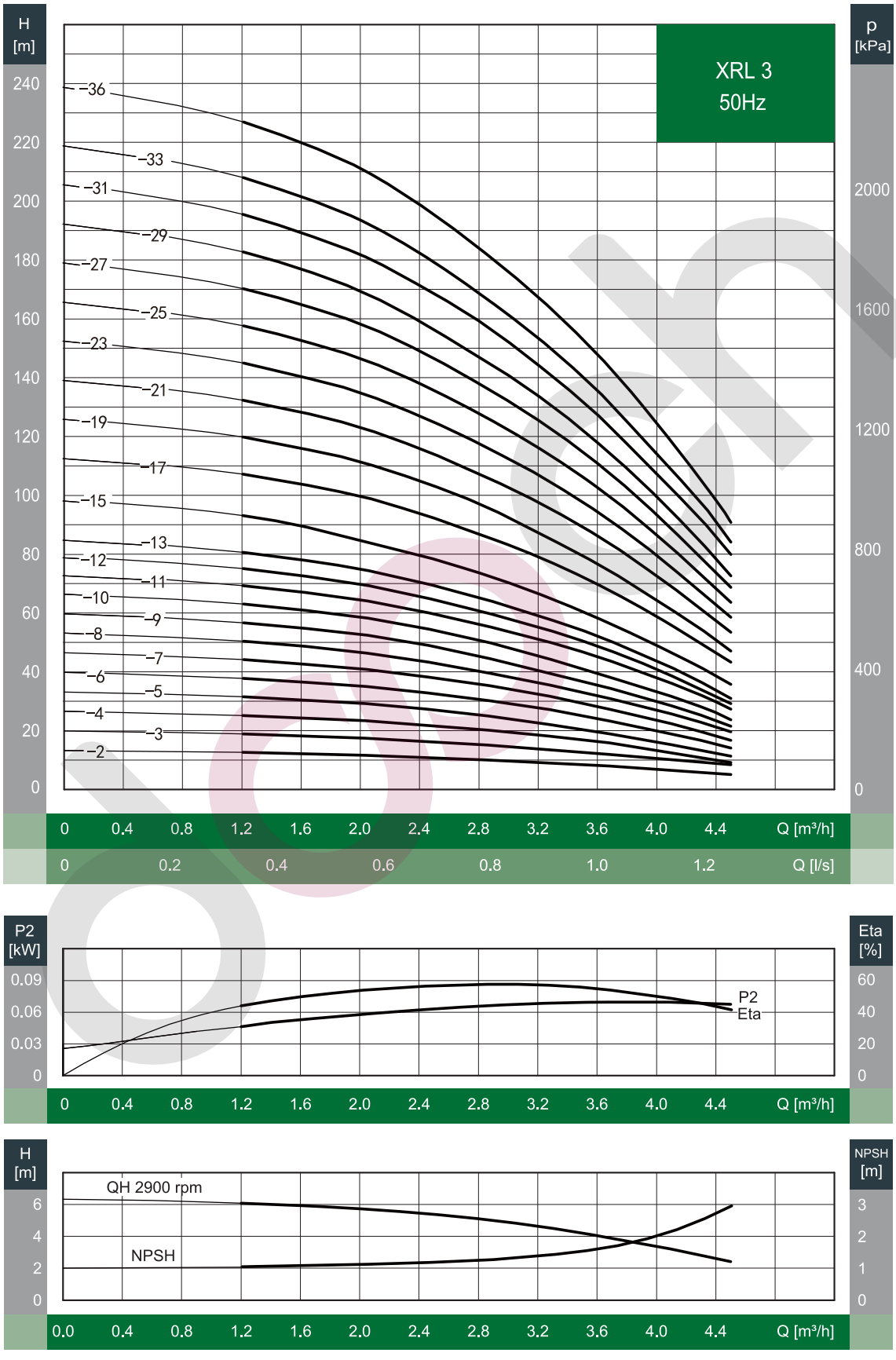
Installation Sketch



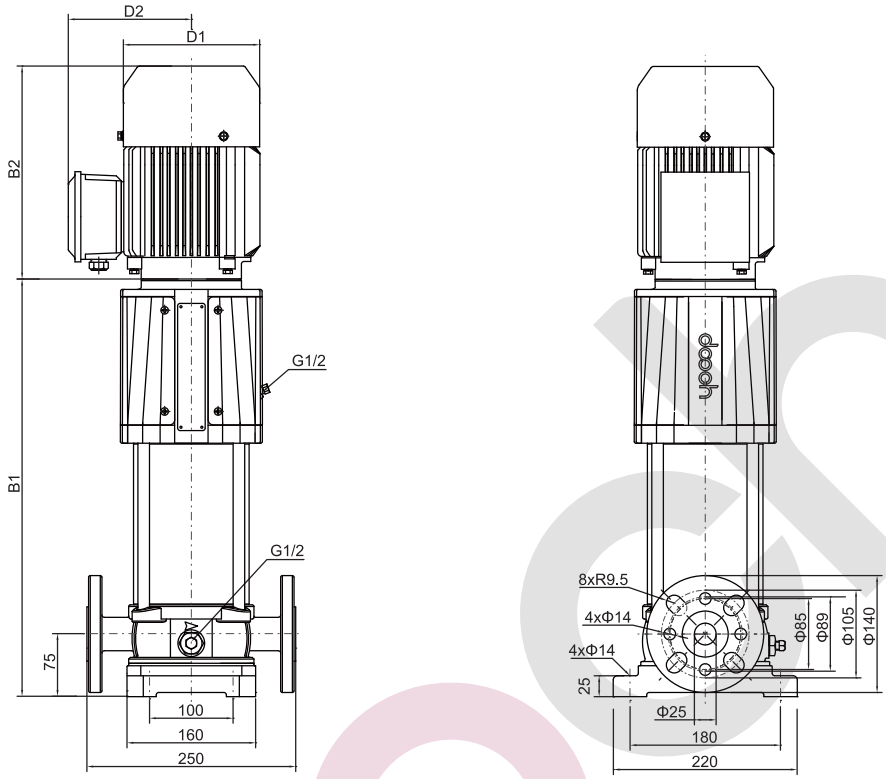
Dimension/ Weight

MODEL	POWER		DIMENSION (UNIT: mm)					WEIGHT (kg)
	kW	HP	B1	B1+B2	D1	D2	D3	
XR(L)1-2	0.37	0.5	348.5	563.5	138	127	-	20
XR(L)1-3	0.37	0.5	366.5	581.5	138	127	-	21
XR(L)1-4	0.37	0.5	384.5	599.5	138	127	-	21
XR(L)1-5	0.37	0.5	402.5	617.5	138	127	-	21
XR(L)1-6	0.37	0.5	420.5	635.5	138	127	-	22
XR(L)1-7	0.37	0.5	438.5	653.5	138	127	-	22
XR(L)1-8	0.55	0.75	456.5	671.5	138	127	-	23
XR(L)1-9	0.55	0.75	474.5	689.5	138	127	-	24
XR(L)1-10	0.55	0.75	492.5	707.5	138	127	-	24
XR(L)1-11	0.55	0.75	510.5	725.5	138	127	-	24
XR(L)1-12	0.75	1	528.5	783.5	158	143	-	27
XR(L)1-13	0.75	1	546.5	801.5	158	143	-	28
XR(L)1-15	0.75	1	582.5	837.5	158	143	-	28
XR(L)1-17	1.1	1.5	618.5	873.5	158	143	-	31
XR(L)1-19	1.1	1.5	654.5	909.5	158	143	-	32
XR(L)1-21	1.1	1.5	690.5	945.5	158	143	-	33
XR(L)1-23	1.1	1.5	726.5	981.5	158	143	-	34
XR(L)1-25	1.5	2	762.5	1052.5	180	155	-	41
XR(L)1-27	1.5	2	798.5	1088.5	180	155	-	42
XR(L)1-30	1.5	2	852.5	1142.5	180	155	-	43
XR(L)1-33	2.2	3	906.5	1196.5	180	155	-	45
XR(L)1-36	2.2	3	960.5	1250.5	180	155	-	46

Performance Curve



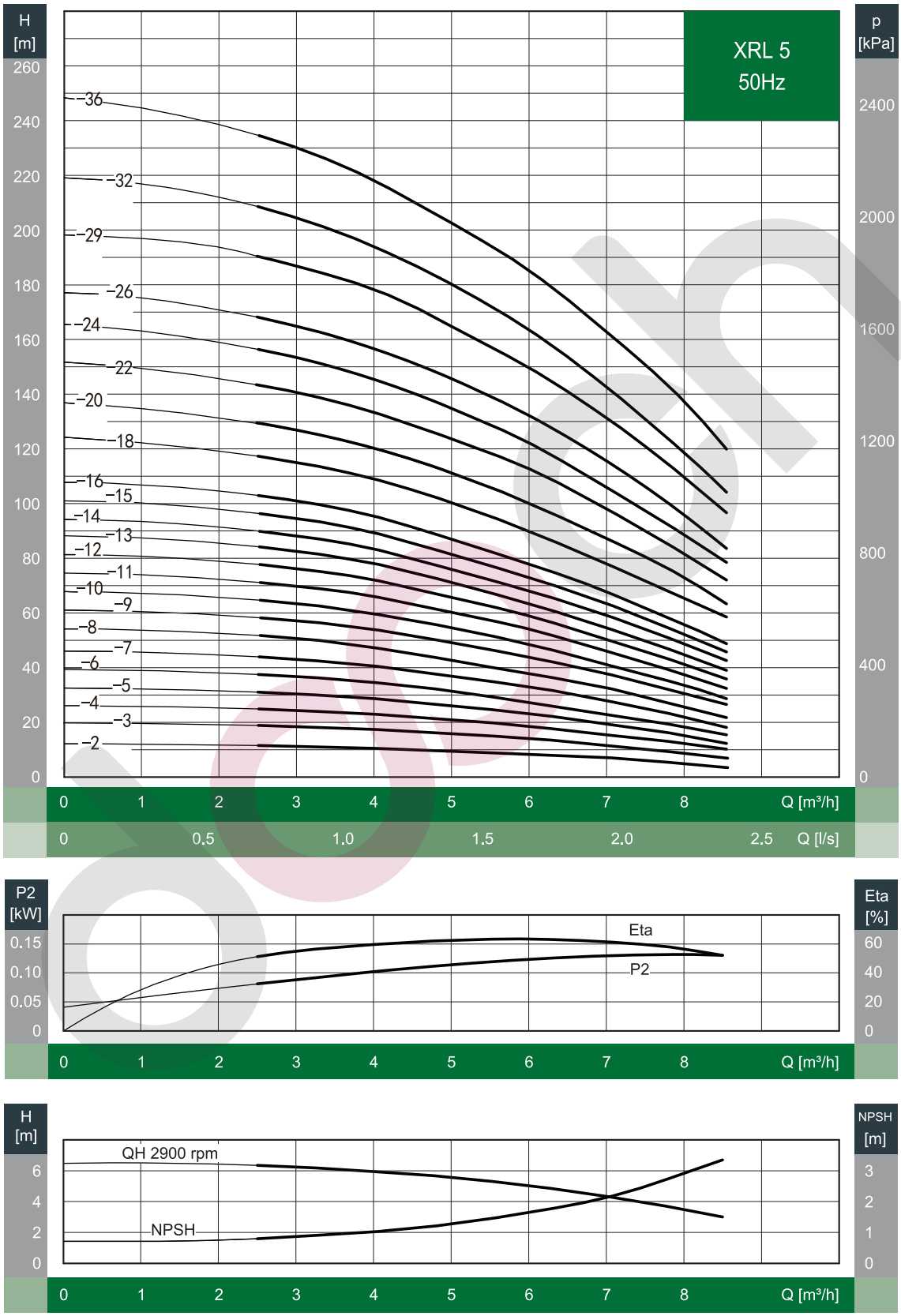
Installation Sketch



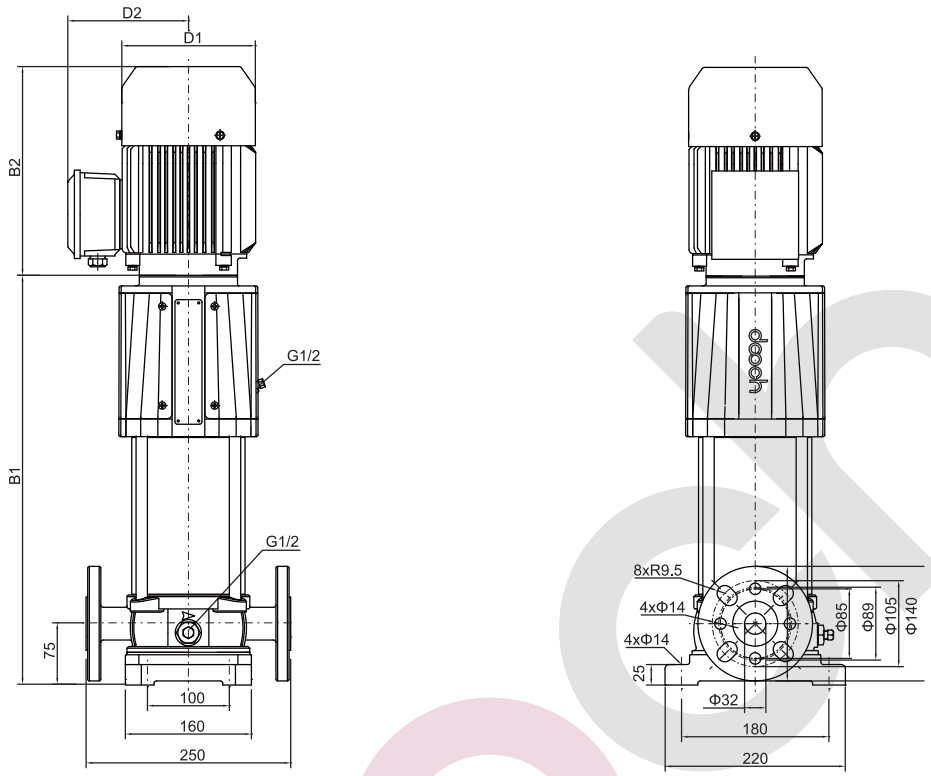
Dimension/ Weight

MODEL	POWER		DIMENSION (UNIT: mm)					WEIGHT (kg)
	kW	HP	B1	B1+B2	D1	D2	D3	
XR(L)3-2	0.37	0.5	348.5	563.5	138	127	-	20
XR(L)3-3	0.37	0.5	366.5	581.5	138	127	-	21
XR(L)3-4	0.37	0.5	384.5	599.5	138	127	-	21
XR(L)3-5	0.37	0.5	402.5	617.5	138	127	-	21
XR(L)3-6	0.55	0.75	420.5	635.5	138	127	-	23
XR(L)3-7	0.55	0.75	438.5	653.5	138	127	-	23
XR(L)3-8	0.75	1	456.5	711.5	158	143	-	26
XR(L)3-9	0.75	1	474.5	729.5	158	143	-	26
XR(L)3-10	0.75	1	492.5	747.5	158	143	-	26
XR(L)3-11	1.1	1.5	510.5	765.5	158	143	-	29
XR(L)3-12	1.1	1.5	528.5	783.5	158	143	-	29
XR(L)3-13	1.1	1.5	546.5	801.5	158	143	-	30
XR(L)3-15	1.1	1.5	582.5	837.5	158	143	-	31
XR(L)3-17	1.5	2	618.5	908.5	180	155	-	38
XR(L)3-19	1.5	2	654.5	944.5	180	155	-	39
XR(L)3-21	2.2	3	690.5	980.5	180	155	-	40
XR(L)3-23	2.2	3	726.5	1016.5	180	155	-	41
XR(L)3-25	2.2	3	762.5	1052.5	180	155	-	42
XR(L)3-27	2.2	3	798.5	1088.5	180	155	-	42
XR(L)3-29	2.2	3	834.5	1124.5	180	155	-	43
XR(L)3-31	3	3	870.5	1210.5	220	195	-	48
XR(L)3-33	3	3	906.5	1246.5	220	195	-	49
XR(L)3-36	3	3	960.5	1300.5	220	195	-	50

Performance Curve



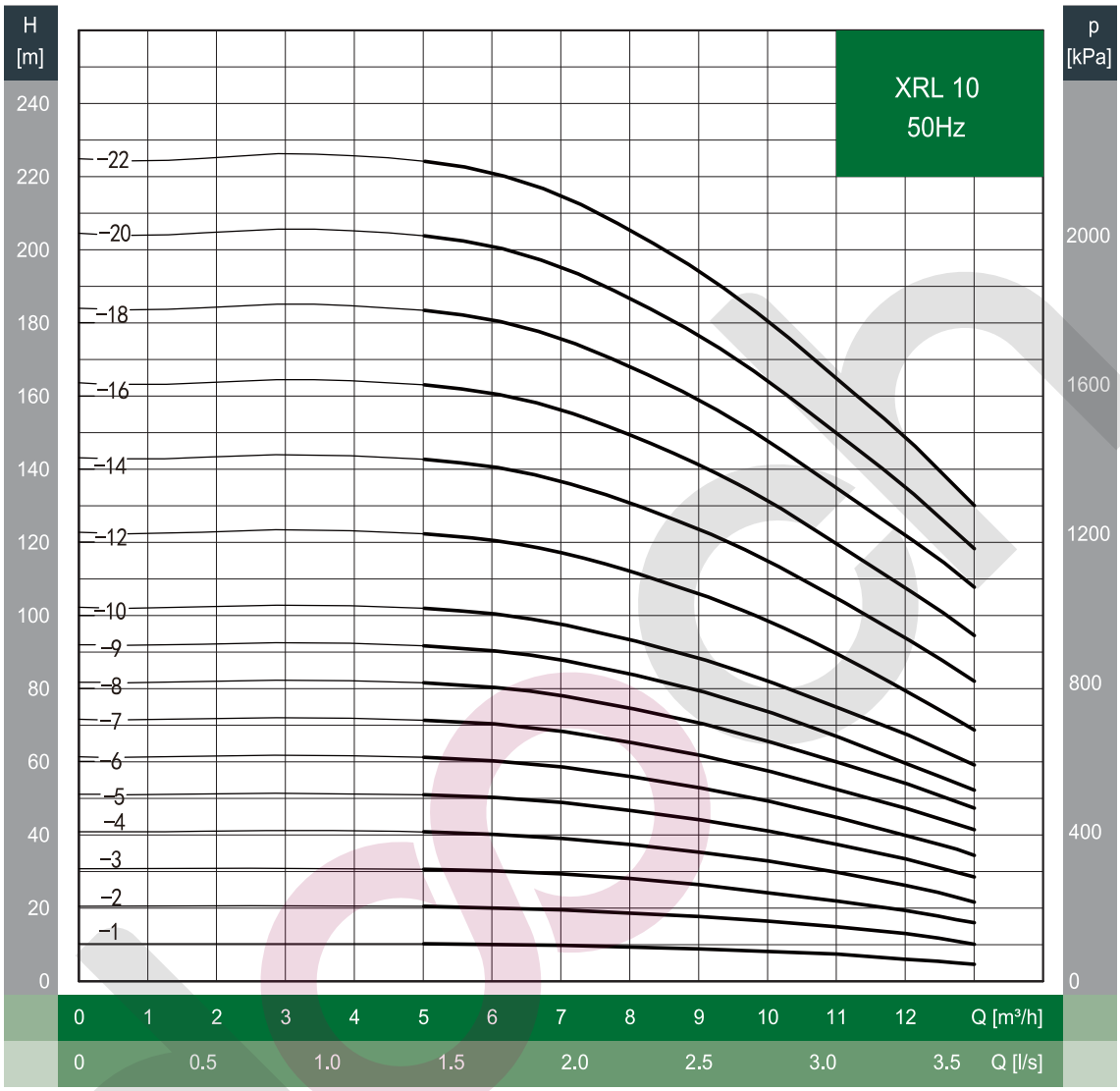
Installation Sketch

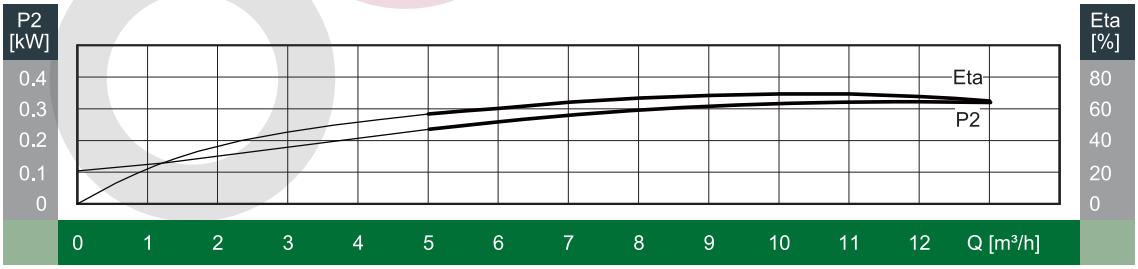


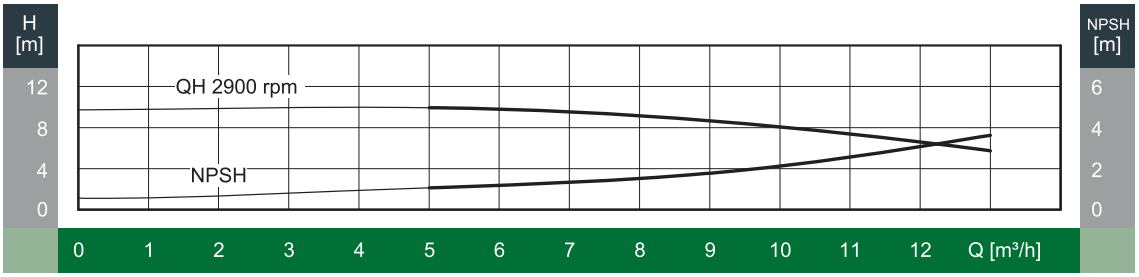
Dimension/ Weight

MODEL	POWER		DIMENSION (UNIT: mm)					WEIGHT (kg)
	kW	HP	B1	B1+B2	D1	D2	D3	
XR(L)5-2	0.37	0.5	366.5	581.5	138	127	-	21
XR(L)5-3	0.55	0.75	393.5	608.5	138	127	-	22
XR(L)5-4	0.55	0.75	420.5	635.5	138	127	-	22
XR(L)5-5	0.75	1	447.5	702.5	158	143	-	25
XR(L)5-6	1.1	1.5	474.5	729.5	158	143	-	28
XR(L)5-7	1.1	1.5	501.5	756.5	158	143	-	28
XR(L)5-8	1.1	1.5	528.5	783.5	158	143	-	29
XR(L)5-9	1.5	2	555.5	845.5	180	155	-	36
XR(L)5-10	1.5	2	582.5	872.5	180	155	-	37
XR(L)5-11	2.2	3	609.5	899.5	180	155	-	38
XR(L)5-12	2.2	3	636.5	926.5	180	155	-	38
XR(L)5-13	2.2	3	663.5	953.5	180	155	-	39
XR(L)5-15	2.2	3	717.5	1007.5	180	155	-	40
XR(L)5-16	2.2	3	744.5	1034.5	180	155	-	41
XR(L)5-18	3	4	798.5	1138.5	220	195	-	46
XR(L)5-20	3	4	852.5	1192.5	220	195	-	47
XR(L)5-22	4	5	906.5	1246.5	220	195	-	59
XR(L)5-24	4	5	960.5	1300.5	220	195	-	61
XR(L)5-26	4	5	1014.5	1354.5	220	195	-	62
XR(L)5-29	4	5	1095.5	1435.5	220	195	-	64
XR(L)5-32	5.5	7.5	1204.5	1589.5	260	215	-	79
XR(L)5-36	5.5	7.5	1312.5	1697.5	260	215	-	81

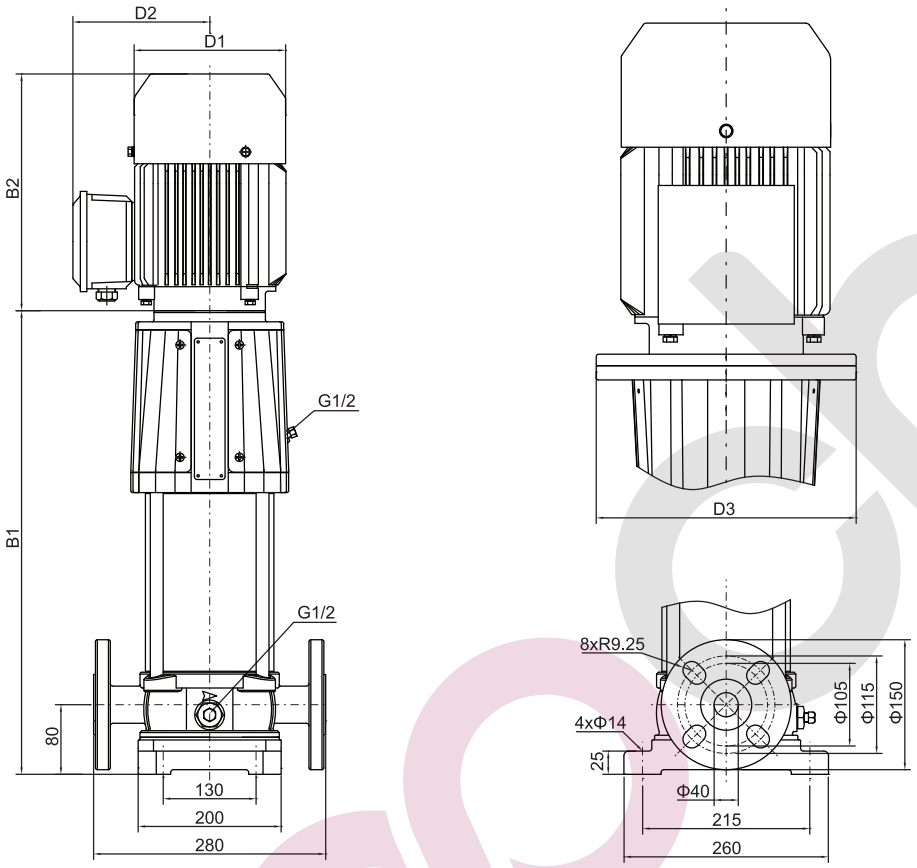
Performance Curve







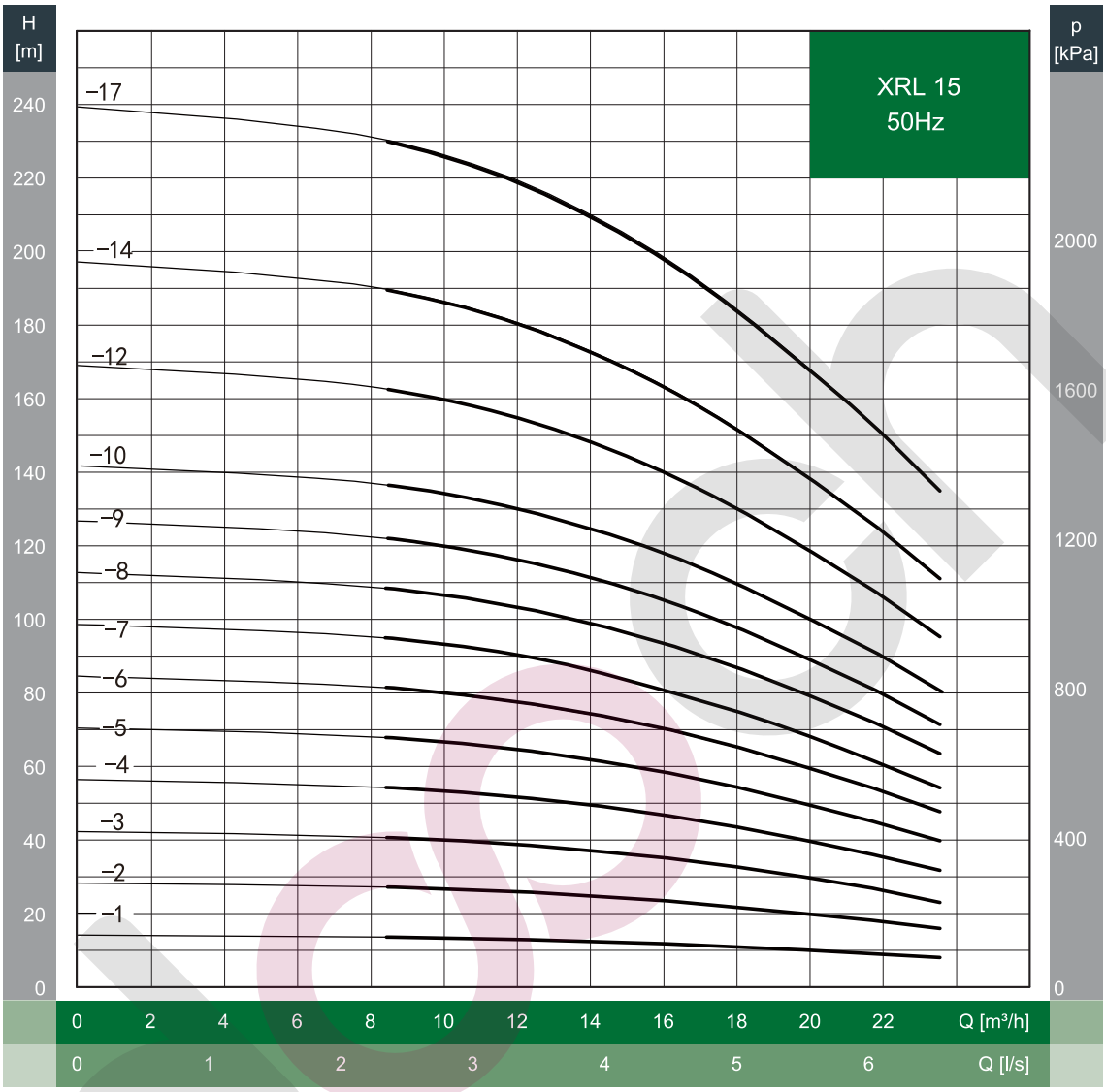
Installation Sketch

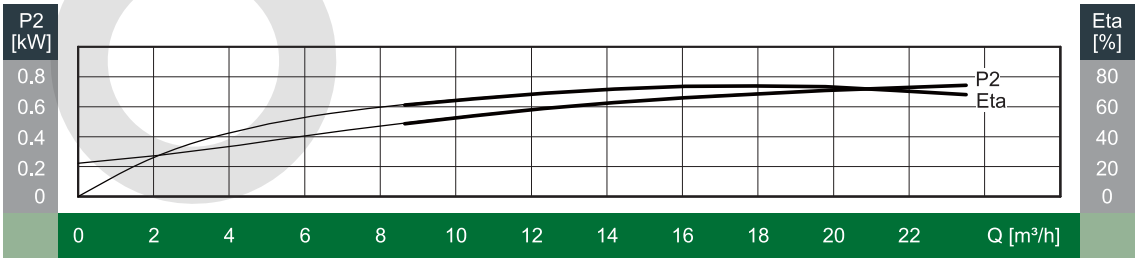


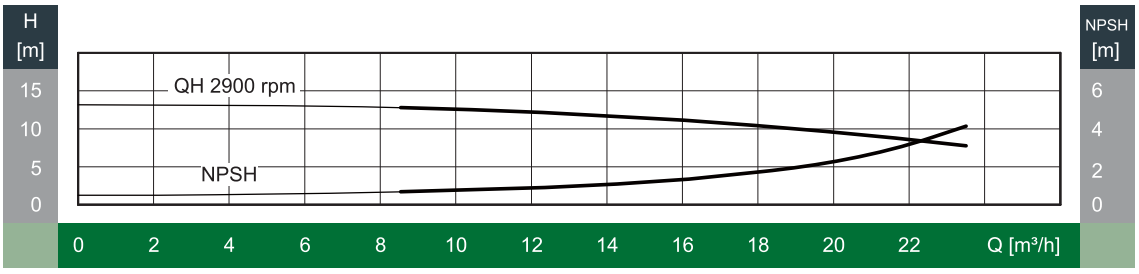
Dimension/ Weight

MODEL	POWER		DIMENSION (UNIT: mm)					WEIGHT (kg)
	kW	HP	B1	B1+B2	D1	D2	D3	
XR(L)10-1	0.75	1	433	688	160	145	-	32
XR(L)10-2	0.75	1	433	688	160	145	-	34
XR(L)10-3	1.1	1.5	463	718	160	145	-	38
XR(L)10-4	1.5	2	493	783	180	155	-	46
XR(L)10-5	2.2	3	524	814	180	155	-	47
XR(L)10-6	2.2	3	554	844	180	155	-	48
XR(L)10-7	3	4	583	923	200	180	-	54
XR(L)10-8	3	4	613	953	200	180	-	55
XR(L)10-9	3	4	643	983	200	180	-	56
XR(L)10-10	4	5.5	673	1013	220	193	-	68
XR(L)10-12	4	5.5	733	1073	220	193	-	70
XR(L)10-14	5.5	7.5	815	1198	265	223	-	93
XR(L)10-16	5.5	7.5	875	1258	265	223	-	95
XR(L)10-18	7.5	10	933	1358	265	223	-	99
XR(L)10-20	7.5	10	993	1418	265	223	-	101
XR(L)10-22	7.5	10	1053	1478	265	223	-	104

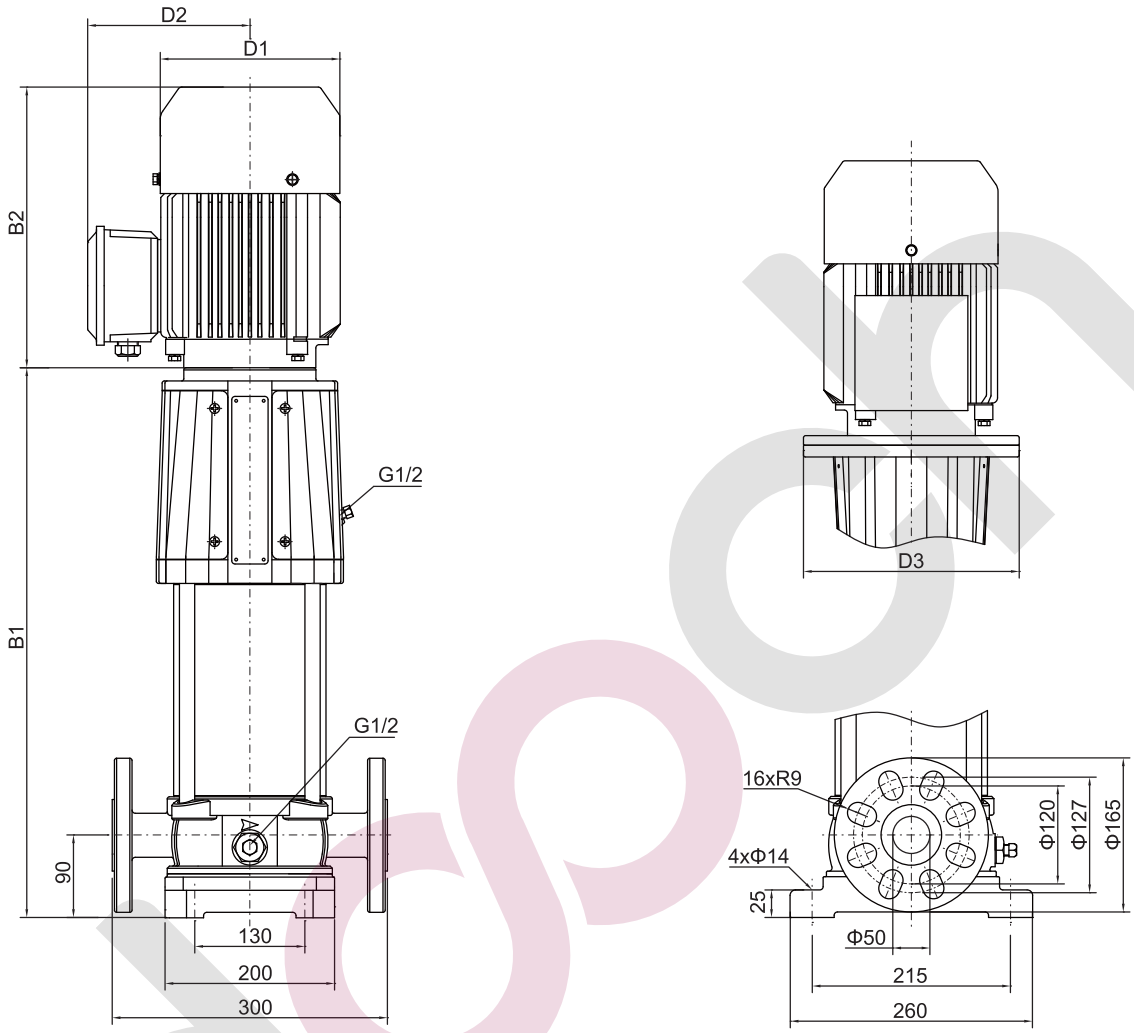
Performance Curve







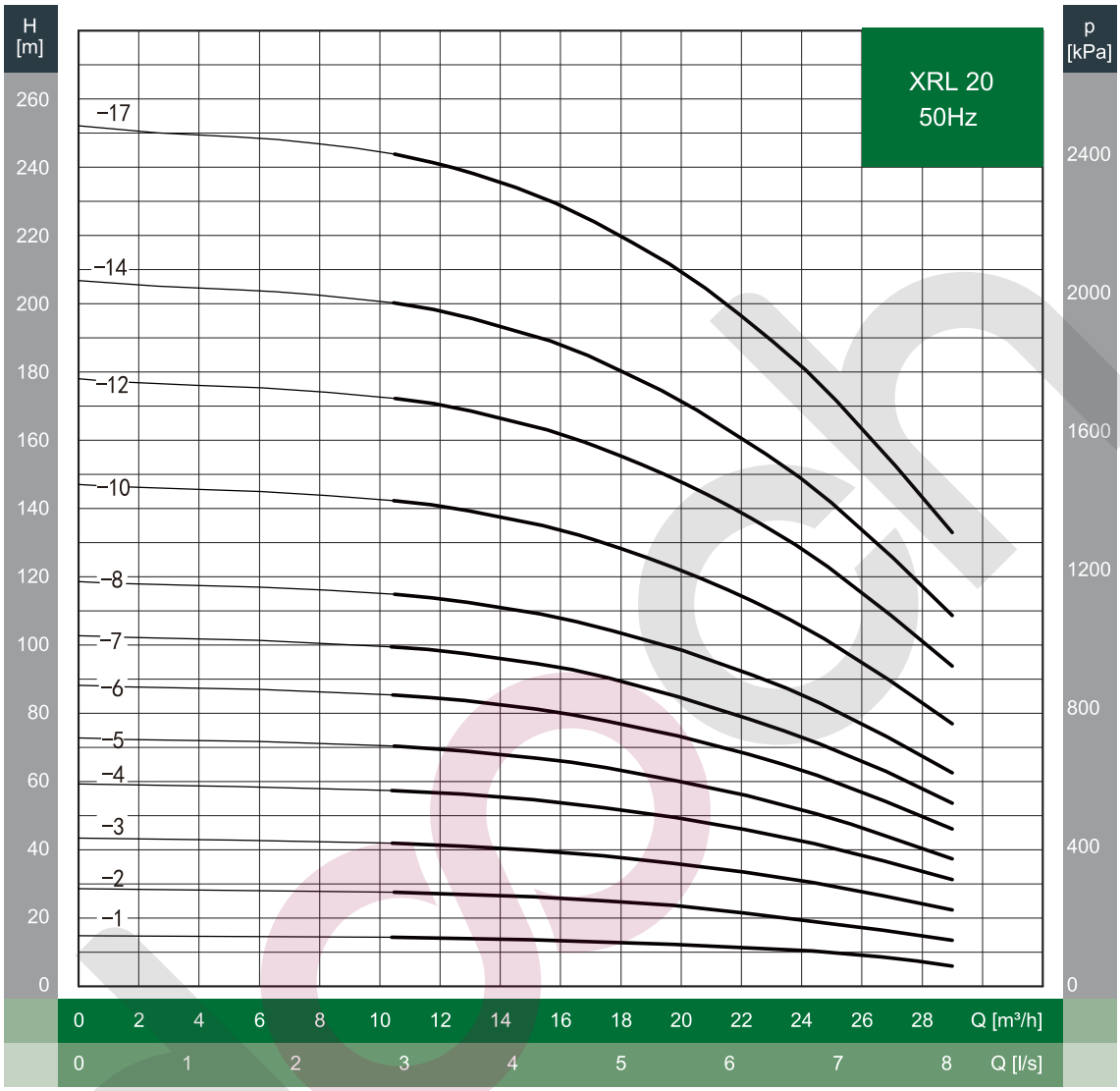
Installation Sketch

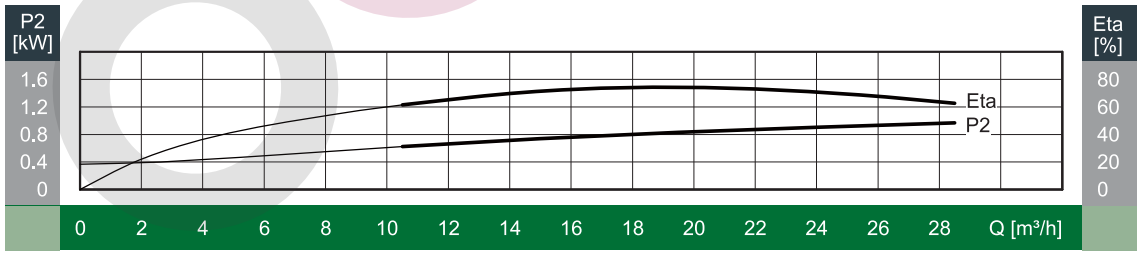


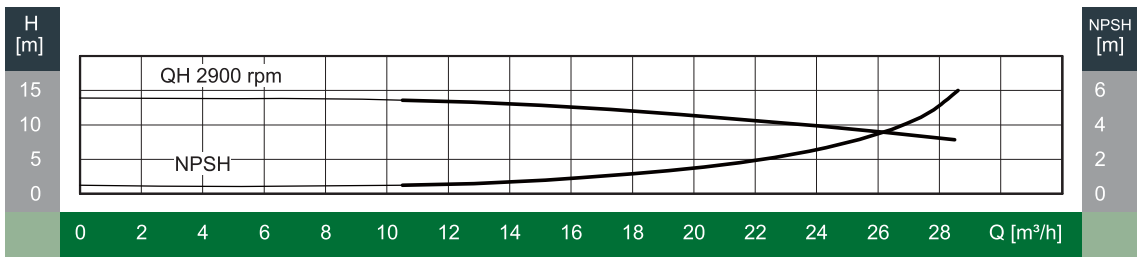
Dimension/ Weight

MODEL	POWER		DIMENSION (UNIT: mm)					WEIGHT (kg)
	kW	HP	B1	B1+B2	D1	D2	D3	
XR(L)15-1	1.1	1.5	478	733	158	143	-	39
XR(L)15-2	2.2	3	478	768	180	155	-	47
XR(L)15-3	3	4	523	863	220	195	-	53
XR(L)15-4	4	5.5	568	908	220	195	-	65
XR(L)15-5	4	5.5	613	953	220	195	-	67
XR(L)15-6	5.5	7.5	678	1061	260	215	-	89
XR(L)15-7	5.5	7.5	723	1106	260	215	-	90
XR(L)15-8	7.5	10	768	1151	260	215	-	94
XR(L)15-9	7.5	10	813	1196	260	215	-	96
XR(L)15-10	11	15	888	1393	320	260	350	148
XR(L)15-12	11	15	978	1483	320	260	350	151
XR(L)15-14	11	15	1068	1573	320	260	350	154
XR(L)15-17	15	20	1203	1708	320	260	350	171

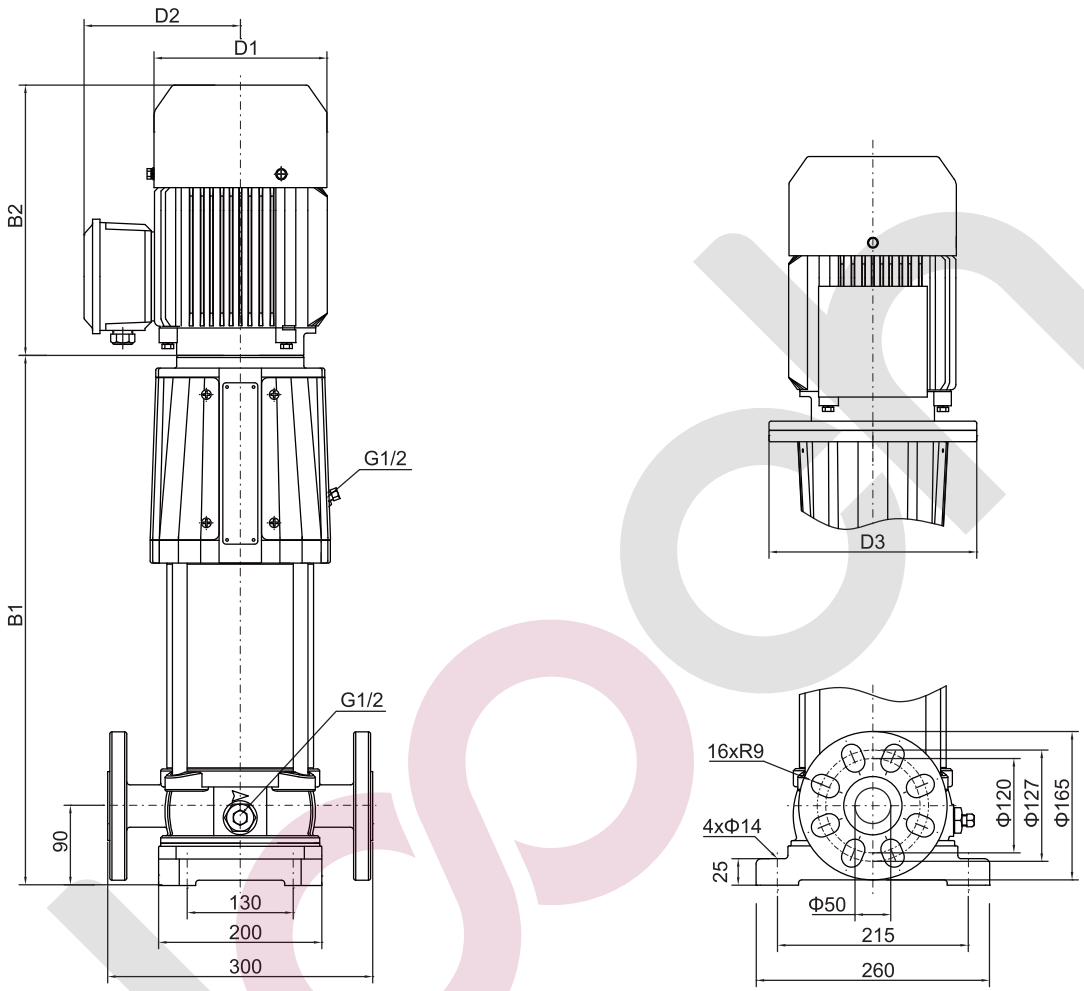
Performance Curve







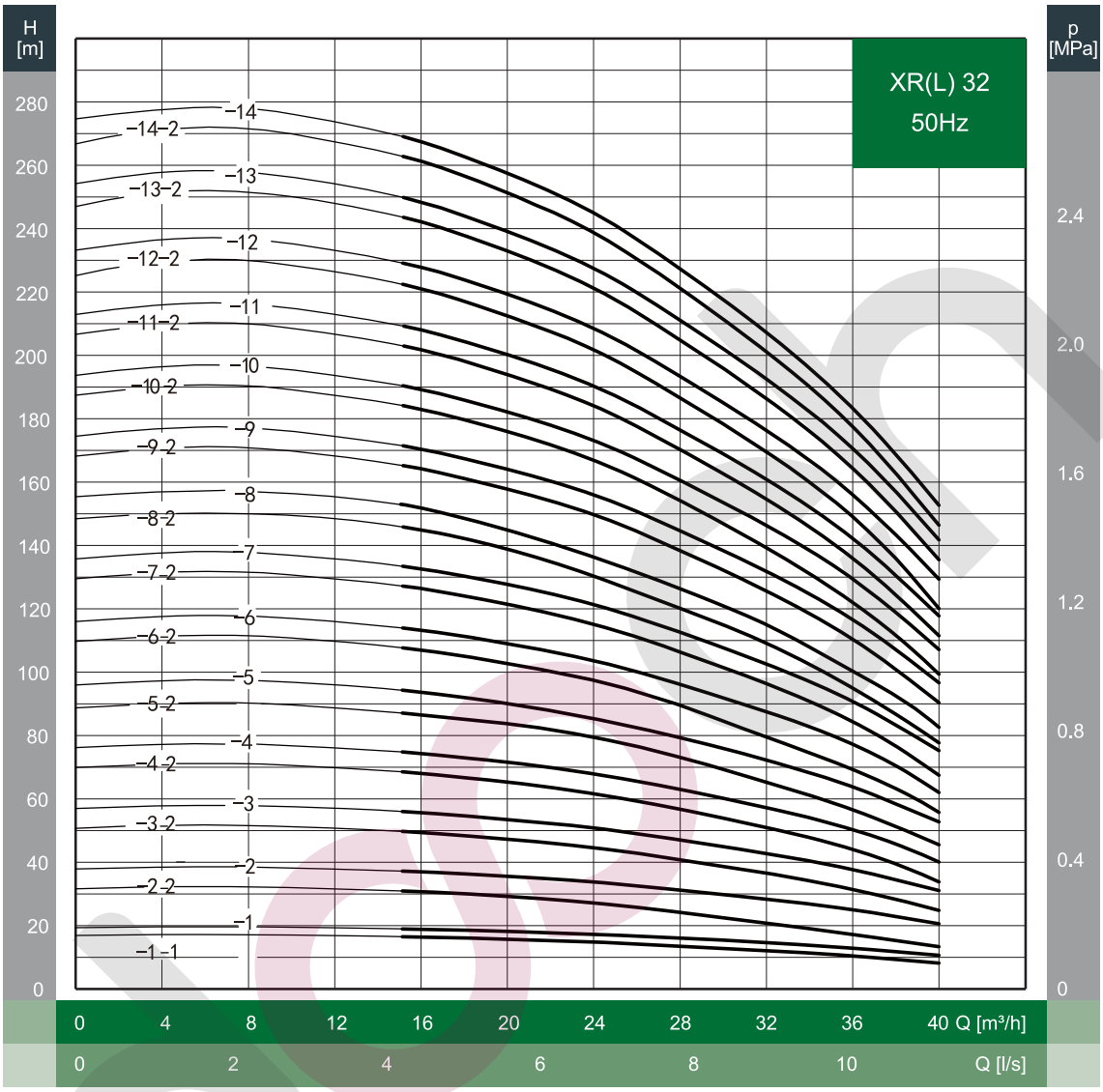
Installation Sketch

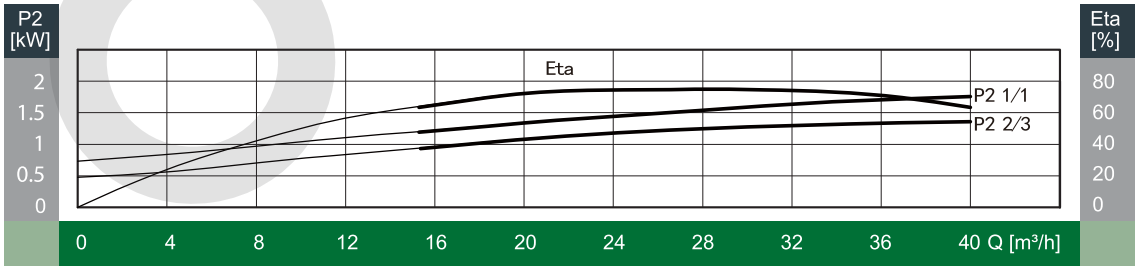


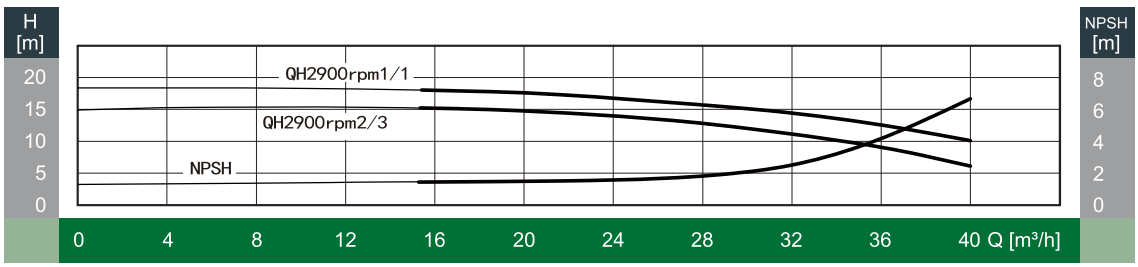
Dimension/ Weight

MODEL	POWER		DIMENSION (UNIT: mm)					WEIGHT (kg)
	kW	HP	B1	B2	B1+B2	D1	D3	
XR(L)20-1	1.1	1.5	478	733	158	143	-	39
XR(L)20-2	2.2	3	478	768	180	155	-	47
XR(L)20-3	4	5.5	523	863	220	195	-	64
XR(L)20-4	5.5	7.5	588	971	260	215	-	86
XR(L)20-5	5.5	7.5	633	1016	260	215	-	87
XR(L)20-6	7.5	10	678	1061	260	215	-	111
XR(L)20-7	7.5	10	723	1106	260	215	-	112
XR(L)20-8	11	15	798	1303	320	260	350	144
XR(L)20-10	11	15	888	1393	320	260	350	148
XR(L)20-12	15	20	978	1483	320	260	350	163
XR(L)20-14	15	20	1068	1573	320	260	350	166
XR(L)20-17	18.5	25	1203	1763	320	260	350	184

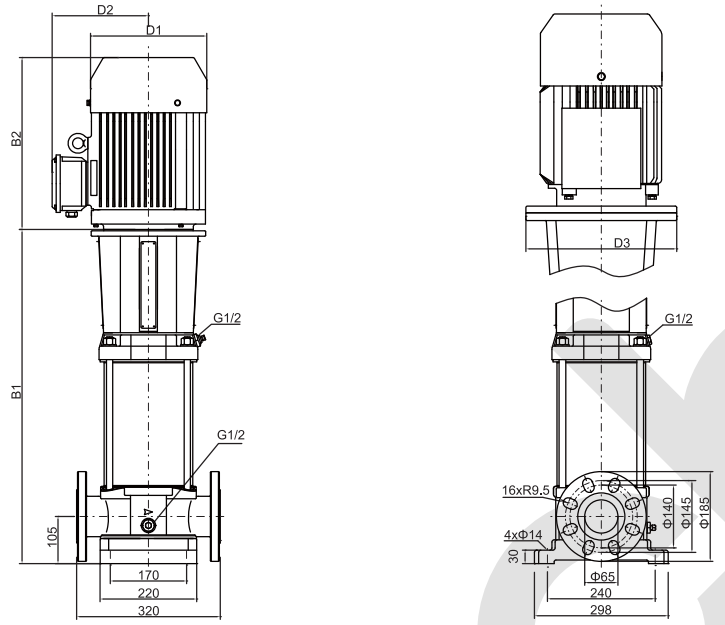
Performance Curve







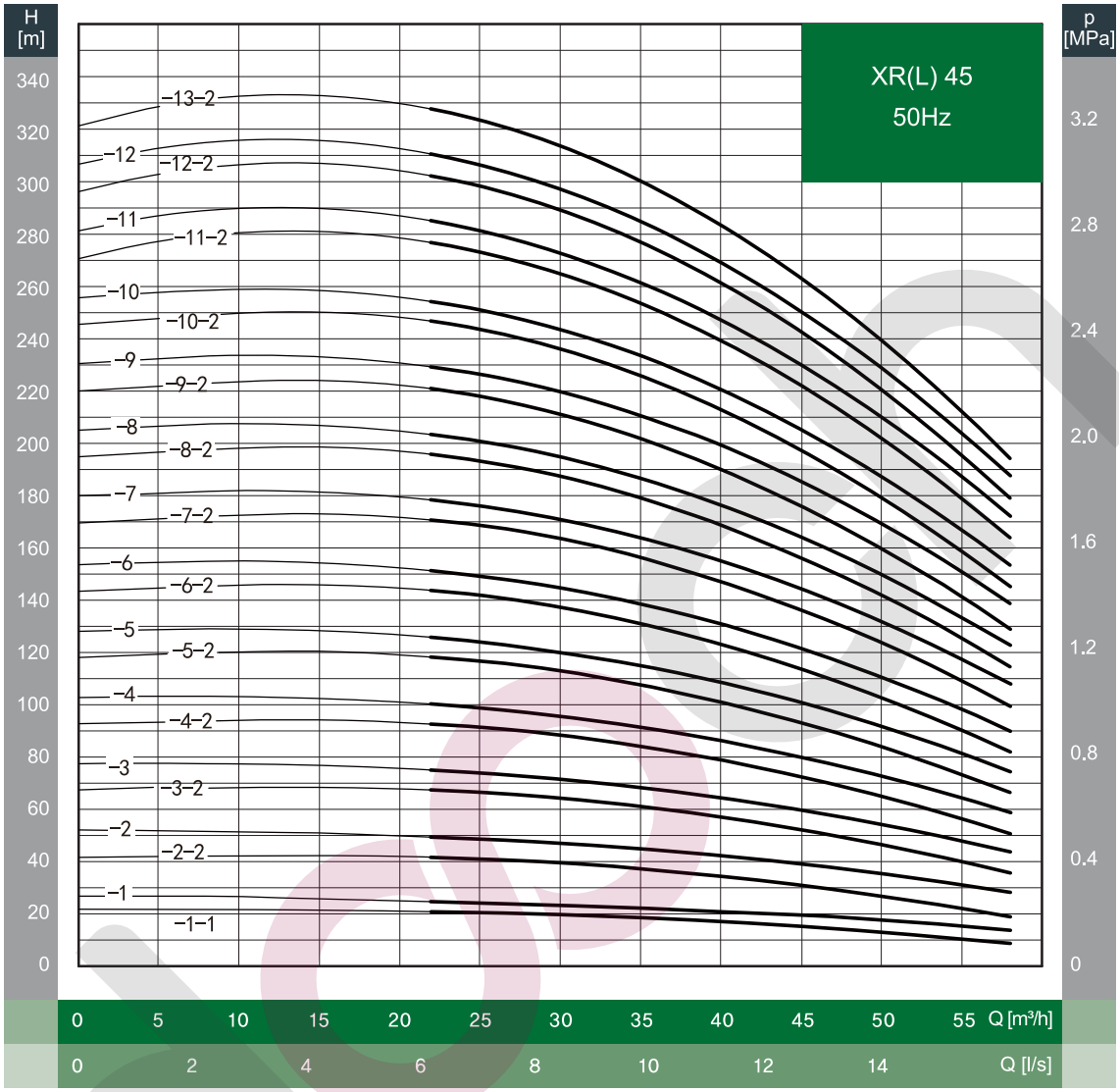
Installation Sketch

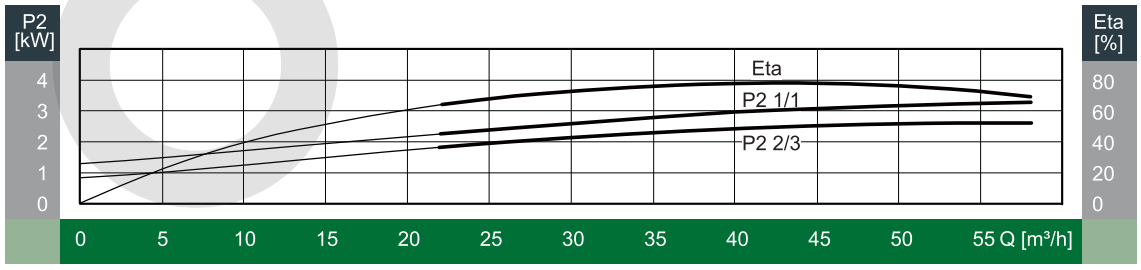


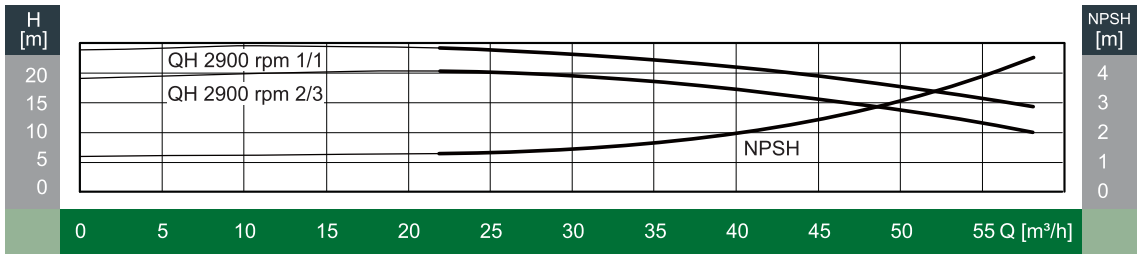
Dimension/ Weight

MODEL	POWER		DIMENSION (UNIT: mm)					WEIGHT (kg)
	kW	HP	B1	B1+B2	D1	D2	D3	
XR(L)32-1-1	1.5	2	575	865	180	155	-	66
XR(L)32-1	2.2	3	575	865	180	155	-	66
XR(L)32-2-2	3	4	645	985	220	195	-	73
XR(L)32-2	4	5.5	645	985	220	195	-	84
XR(L)32-3-2	5.5	7.5	715	1098	260	215	-	99
XR(L)32-3	5.5	7.5	715	1098	260	215	-	99
XR(L)32-4-2	7.5	10	785	1168	260	215	-	104
XR(L)32-4	7.5	10	785	1168	260	215	-	104
XR(L)32-5-2	11	15	885	1390	320	260	350	161
XR(L)32-5	11	15	885	1390	320	260	350	161
XR(L)32-6-2	11	15	955	1460	320	260	350	164
XR(L)32-6	11	15	955	1460	320	260	350	164
XR(L)32-7-2	15	20	1025	1530	320	260	350	179
XR(L)32-7	15	20	1025	1530	320	260	350	179
XR(L)32-8-2	15	20	1095	1600	320	260	350	185
XR(L)32-8	15	20	1095	1600	320	260	350	185
XR(L)32-9-2	18.5	25	1165	1725	320	260	350	202
XR(L)32-9	18.5	25	1165	1725	320	260	350	202
XR(L)32-10-2	18.5	25	1235	1795	320	260	350	205
XR(L)32-10	18.5	25	1235	1795	320	260	350	205
XR(L)32-11-2	22	30	1305	1883	355	280	350	222
XR(L)32-11	22	30	1305	1883	355	280	350	222
XR(L)32-12-2	22	30	1375	1953	355	280	350	226
XR(L)32-12	22	30	1375	1953	355	280	350	226
XR(L)32-13-2	30	40	1445	2095	400	330	400	384
XR(L)32-13	30	40	1445	2095	400	330	400	384
XR(L)32-14-2	30	40	1515	2165	400	330	400	387
XR(L)32-14	30	40	1515	2165	400	330	400	387

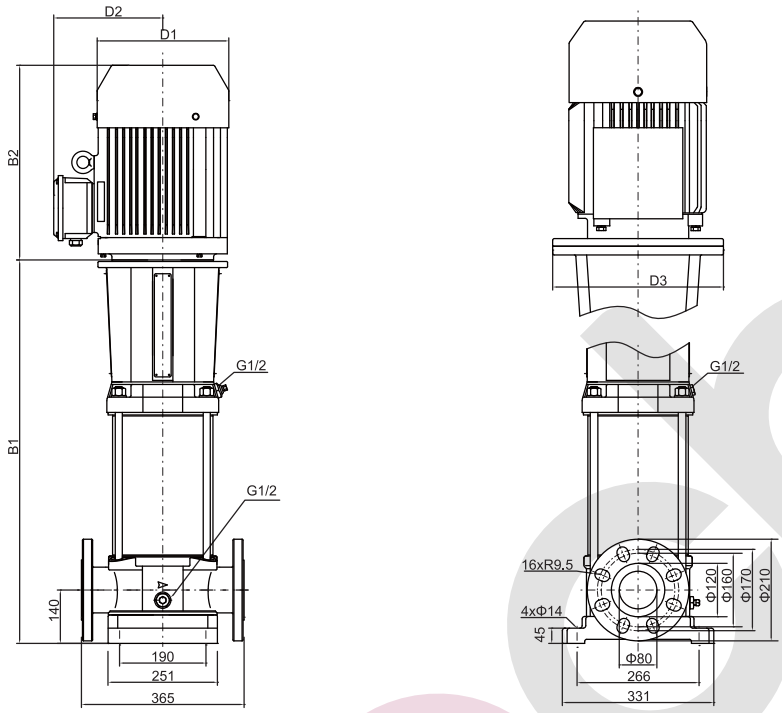
Performance Curve







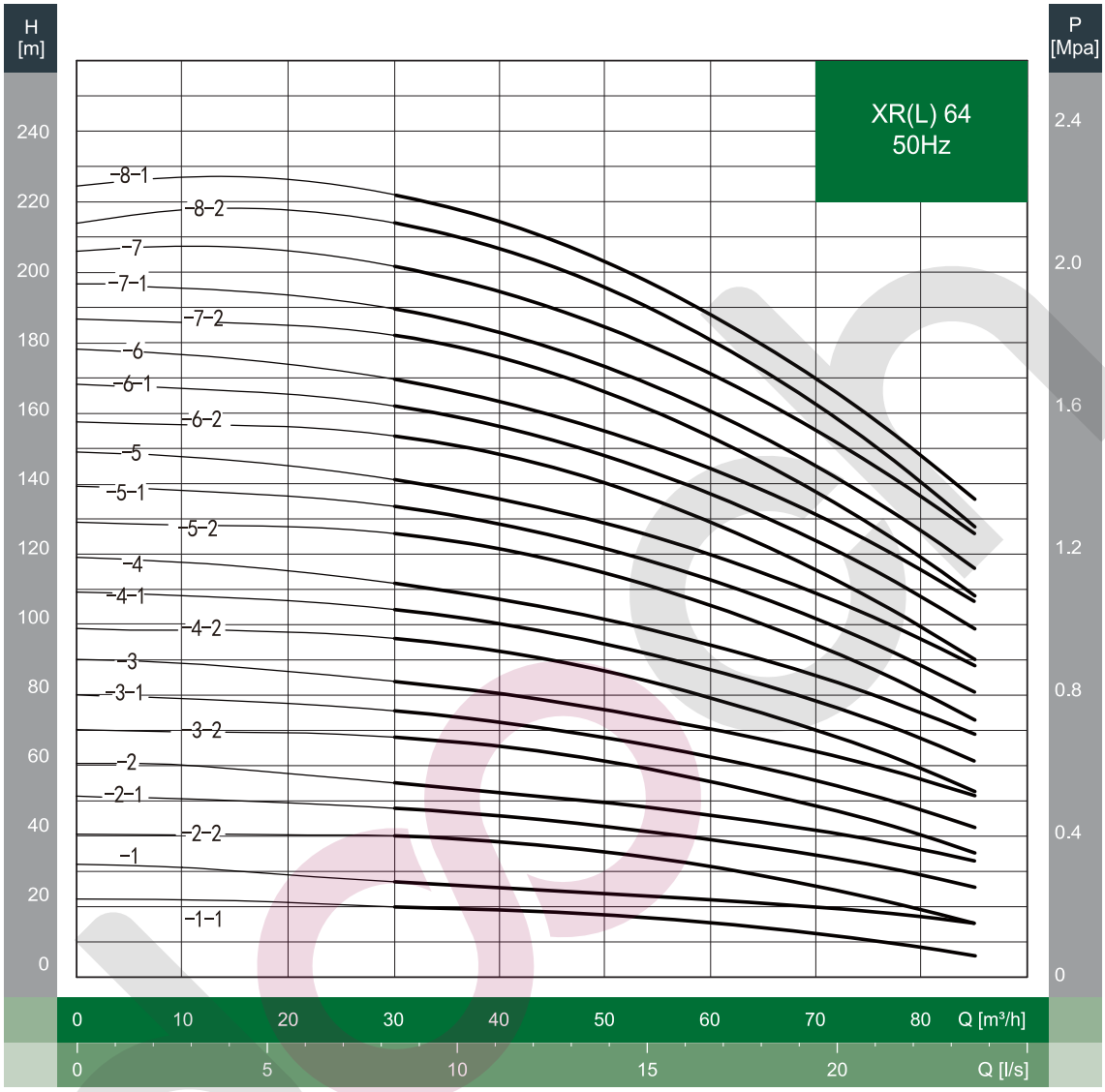
Installation Sketch

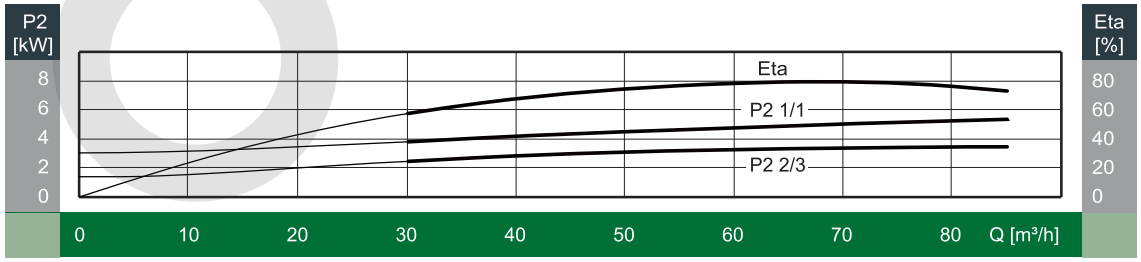


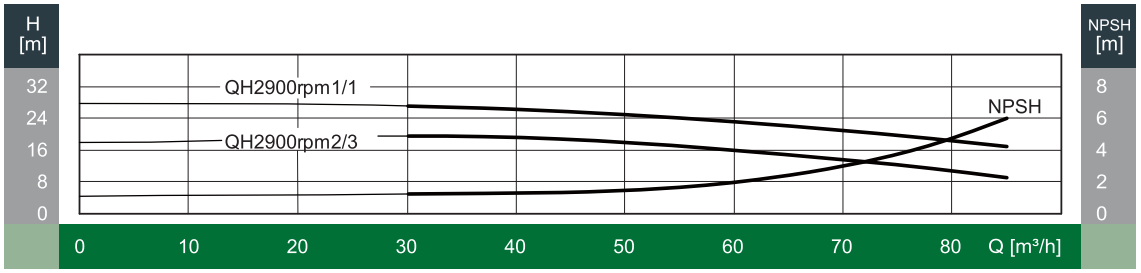
Dimension/ Weight

MODEL	POWER		DIMENSION (UNIT: mm)					WEIGHT (kg)
	kW	HP	B1	B1+B2	D1	D2	D3	
XR(L)45-1-1	3	4	629	964	198	120	-	78
XR(L)45-1	4	5.5	629	1000	220	134	-	89
XR(L)45-2-2	5.5	7.5	709	1100	220	134	-	104
XR(L)45-2	7.5	10	709	1088	260	159	-	106
XR(L)45-3-2	11	15	819	1290	314	204	350	165
XR(L)45-3	11	15	819	1290	314	204	350	165
XR(L)45-4-2	15	20	899	1370	314	204	350	180
XR(L)45-4	15	20	899	1370	314	204	350	180
XR(L)45-5-2	18.5	25	979	1494	314	204	350	197
XR(L)45-5	18.5	25	979	1494	314	204	350	197
XR(L)45-6-2	22	30	1059	1600	314	204	350	218
XR(L)45-6	22	30	1059	1600	314	204	350	218
XR(L)45-7-2	30	40	1139	1749	402	300	400	324
XR(L)45-7	30	40	1139	1749	402	300	400	324
XR(L)45-8-2	30	40	1219	1829	402	300	400	328
XR(L)45-8	30	40	1219	1829	402	300	400	328
XR(L)45-9-2	30	40	1299	1909	402	300	400	333
XR(L)45-9	37	50	1299	1966	402	300	400	363
XR(L)45-10-2	37	50	1379	2046	402	300	400	367
XR(L)45-10	37	50	1379	2046	402	300	400	367
XR(L)45-11-2	45	60	1459	2168	442	325	450	450
XR(L)45-11	45	60	1459	2168	442	325	450	450
XR(L)45-12-2	45	60	1539	2248	442	325	450	455
XR(L)45-12	45	60	1539	2248	442	325	450	455
XR(L)45-13-2	45	60	1619	2328	442	325	450	459

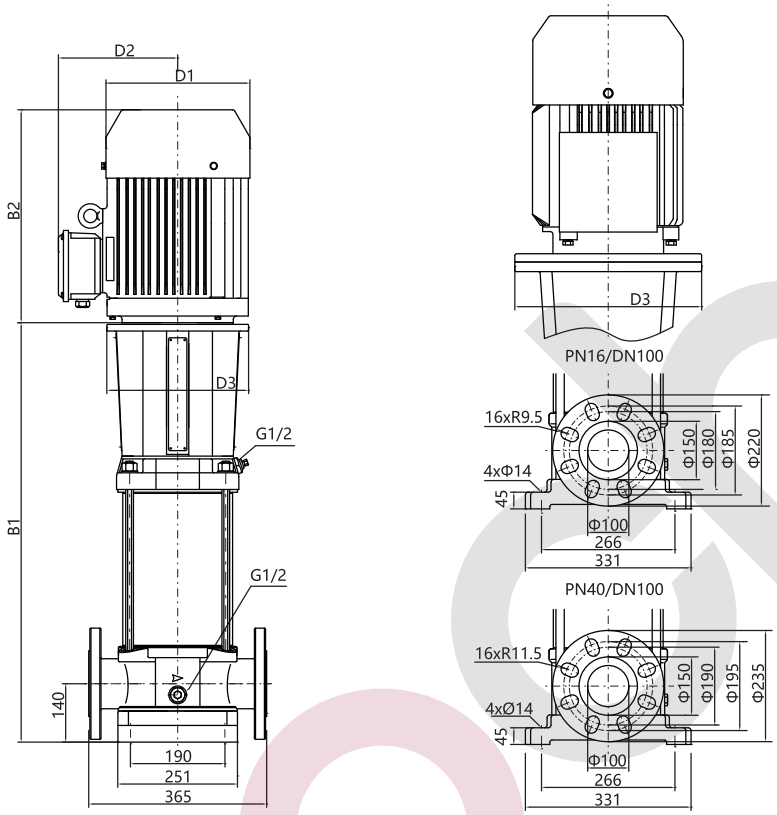
Performance Curve







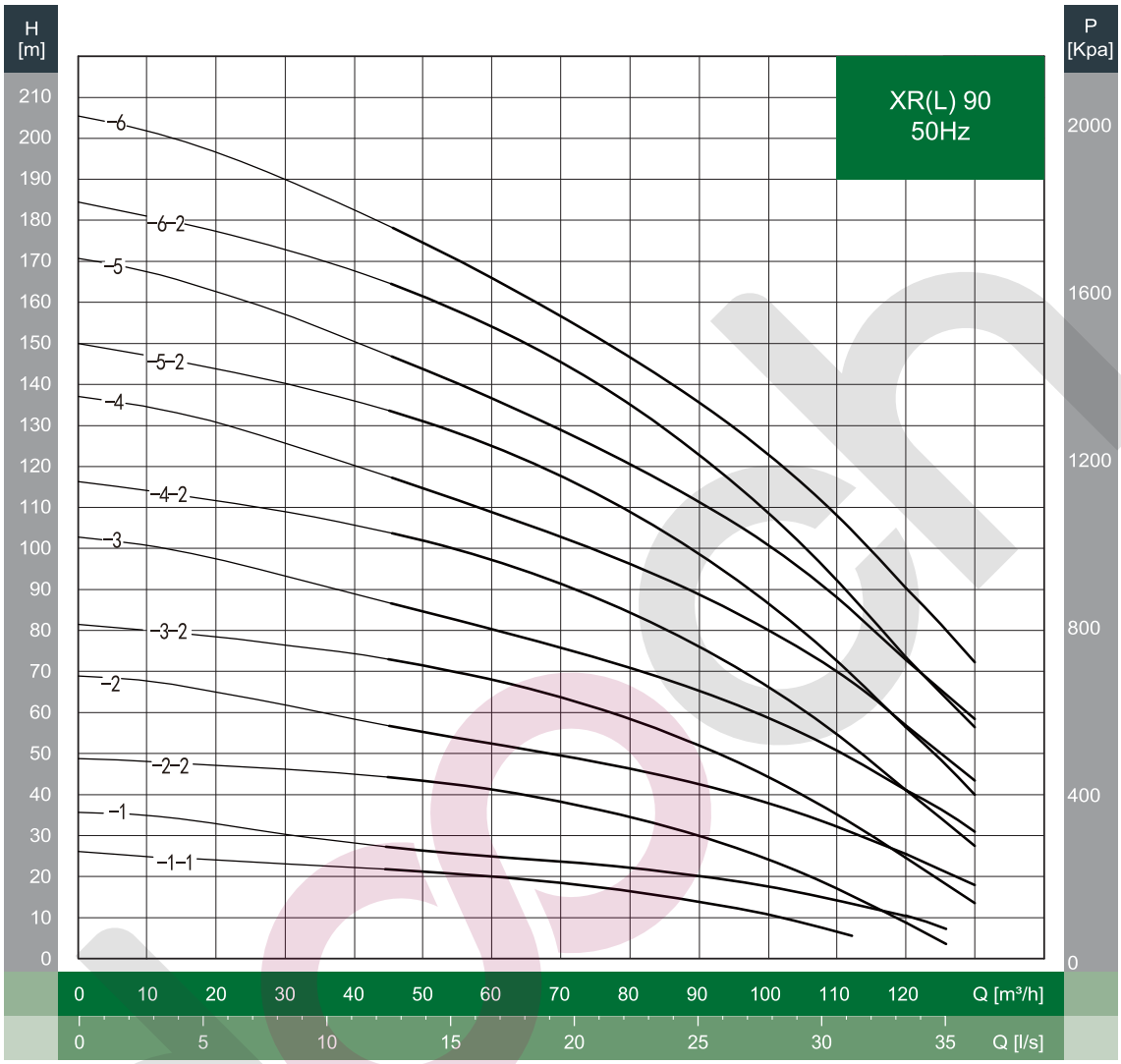
Installation Sketch

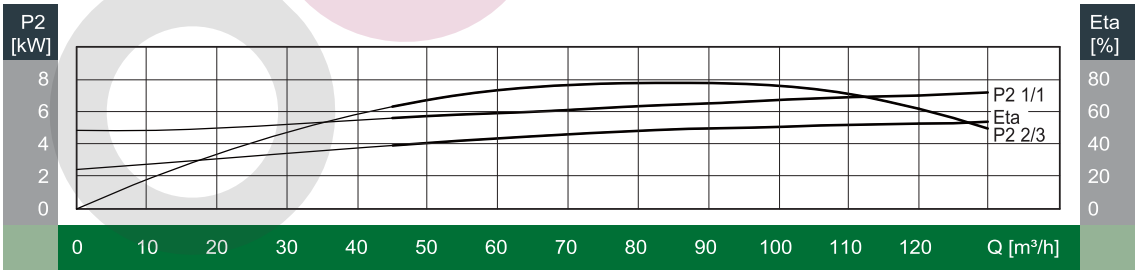


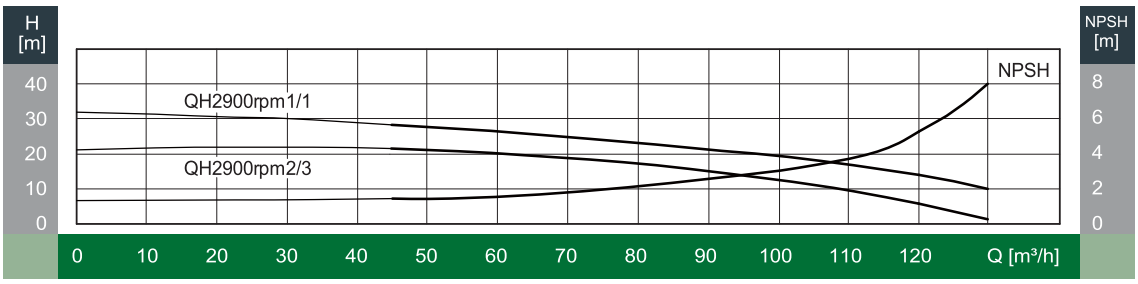
Dimension/ Weight

MODEL	POWER		DIMENSION (UNIT: mm)					WEIGHT (kg)
	kW	HP	B1	B1+B2	D1	D2	D3	
XR(L)64-1-1	4	5.5	631	1003	220	134	-	91
XR(L)64-1	5.5	7.5	631	1022	220	134	-	102
XR(L)64-2-2	7.5	10	714	1093	260	159	-	109
XR(L)64-2-1	11	15	744	1215	314	204	350	163
XR(L)64-2	11	15	744	1215	314	204	350	163
XR(L)64-3-2	15	20	826	1297	314	204	350	180
XR(L)64-3-1	15	20	826	1297	314	204	350	180
XR(L)64-3	18.5	25	826	1341	314	204	350	193
XR(L)64-4-2	18.5	25	909	1424	314	204	350	197
XR(L)64-4-1	22	30	909	1450	314	204	350	211
XR(L)64-4	22	30	909	1450	314	204	350	211
XR(L)64-5-2	30	40	991	1600	402	300	400	318
XR(L)64-5-1	30	40	991	1600	402	300	400	318
XR(L)64-5	30	40	991	1600	402	300	400	318
XR(L)64-6-2	30	40	1074	1684	402	300	400	325
XR(L)64-6-1	37	50	1074	1741	402	300	400	355
XR(L)64-6	37	50	1074	1741	402	300	400	355
XR(L)64-7-2	37	50	1156	1823	402	300	400	359
XR(L)64-7-1	37	50	1156	1823	402	300	400	359
XR(L)64-7	45	60	1156	1865	442	325	450	439
XR(L)64-8-2	45	60	1239	1948	442	325	450	443
XR(L)64-8-1	45	60	1239	1948	442	325	450	443

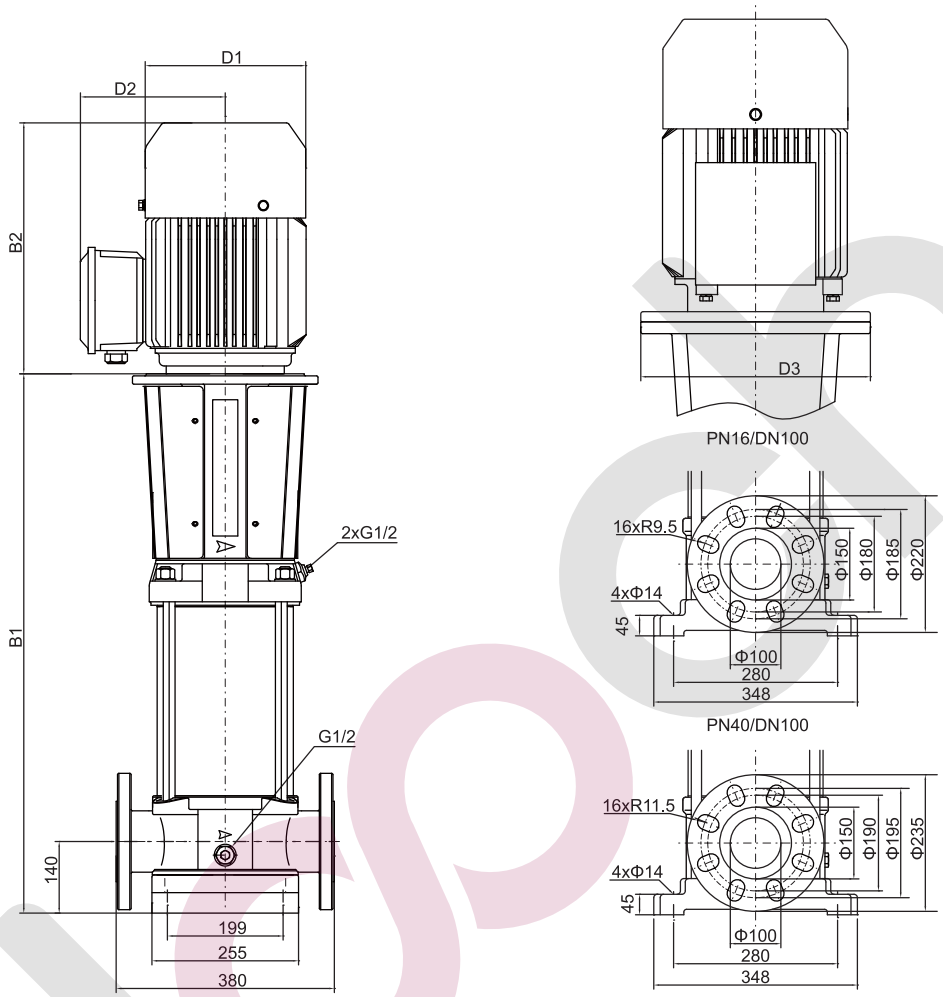
Performance Curve







Installation Sketch



Dimension/ Weight

MODEL	POWER		DIMENSION (UNIT: mm)					WEIGHT (kg)
	kW	HP	B1	B1+B2	D1	D2	D3	
XR(L)90-1-1	5.5	7.5	641	1032	220	134	-	109
XR(L)90-1	7.5	10	641	1032	260	159	-	111
XR(L)90-2-2	11	15	763	1234	314	204	350	170
XR(L)90-2	15	20	763	1234	314	204	350	182
XR(L)90-3-2	18.5	25	855	1370	314	204	350	200
XR(L)90-3	22	30	855	1396	314	204	350	214
XR(L)90-4-2	30	40	947	1557	402	300	400	321
XR(L)90-4	30	40	947	1557	402	300	400	321
XR(L)90-5-2	37	50	1039	1706	402	300	400	359
XR(L)90-5	37	50	1039	1706	402	300	400	359
XR(L)90-6-2	45	60	1131	1840	442	325	450	443
XR(L)90-6	45	60	1131	1840	442	325	450	443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GLOBAL PUMP SOLUTIONS DOOCH

50Hz


• DHF


• DHM


• NSQ-DHF


• SQ-DHF

HORIZONTAL MULTI/SINGLE-STAGE PUMP

DHF, DHM SERIES

dooch
두크펌프

DHF(T) 50Hz

STAINLESS STEEL HORIZONTAL MULTI-STAGE PUMP

Feauture

DHF(T) are non-self priming, orizontal and multi-stage pump. The DHF(T) pump is designed for the needs of commercial and industrial application. The DHF(T) pumps consist of mechanical seal, shaft and axial suction, radial discharge. Corrosion resistance, material of water contact parts is Mstainless steel.

Application

Pressure boost system
Water treatment
Cooling system
Irrigation system
Sprinkler system
Industrial water supply system

Definition of Model

DHF (T) 4 – 3 (M)

- (M): Single phase, 220V (Without M, 3phase)
- 3: The number of impellers
- 4: Rated flow (m^3/h)
- (T): Intel/Outlet casing Material With "T" : GCD450 Without "T" : Stainless Steel
- DHF: Pump Type : Horizontal multistage centrifugal pump

Pumped Liquid

Clean, thin, non-flammable and explosive,
not containing the liquid with solid particle and fiber

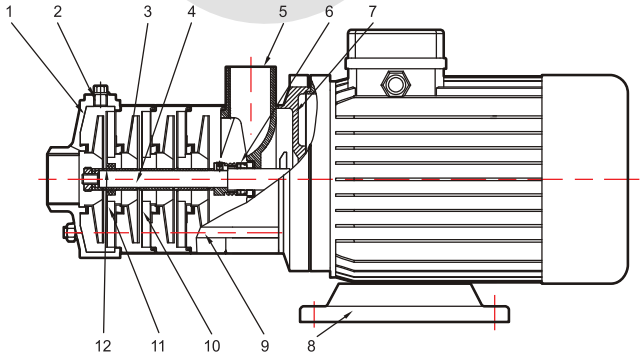
Installation Requirement

- The pump shall be fastened on a stable horizontal base
- The installation of the pump shall ensure that the pump will not be forced by the tension of the pipeline
- The pump shall be installed on the ventilating and anti-freezing location
- Electric wiring device shall guarantee that the pump will not be damaged by lack of phase, unstable voltage, current leakage and overload

Motor specification

Motor type : TEFC
Protection class : IP54
Insulation class : F
Standard voltage : 3 phase 220V/380V, 50Hz
single phase 220V, 50Hz

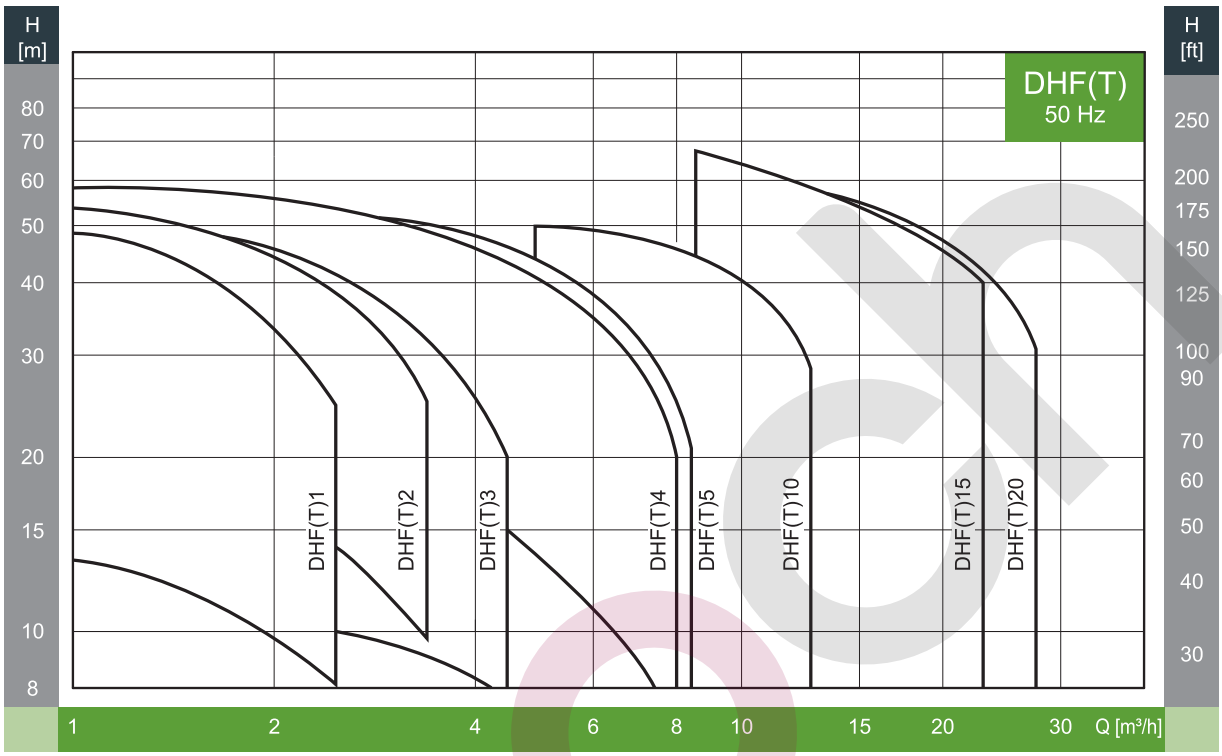
Sectional Drawing



Material

NO.	PART	MATERIAL	AISI/ASTM
1	Suction casing	Stainless steel	CF 8 (AISI304)
2	Air release valve	Stainless steel	AISI304
3	Impeller	Stainless steel	AISI304
4	Shaft	Stainless steel	AISI304
5	Discharge casing	Stainless steel	CF 8 (AISI304)
6	Mechanical Seal		
7	Motor flange	Aluminum alloy	
8	Base	Steel	AISI1015
9	Bolt	Stainless steel	AISI304
10	Diffuser	Stainless steel	AISI304
11	Support Diffuser	Stainless steel	AISI304
12	Sleeve	Stainless steel	AISI304

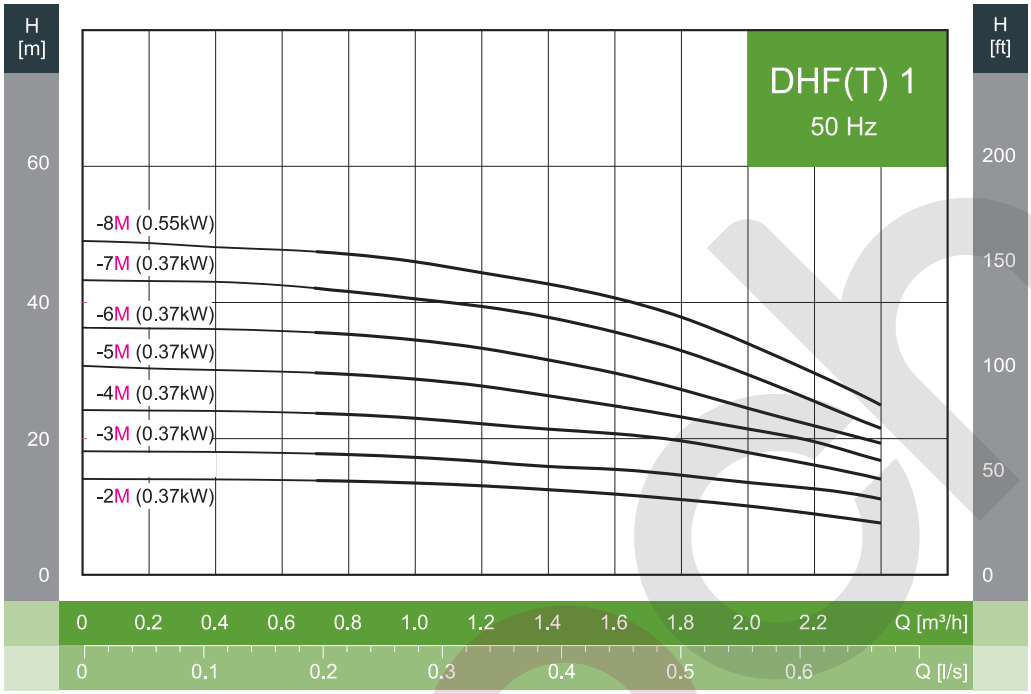
Performance Range (50Hz)

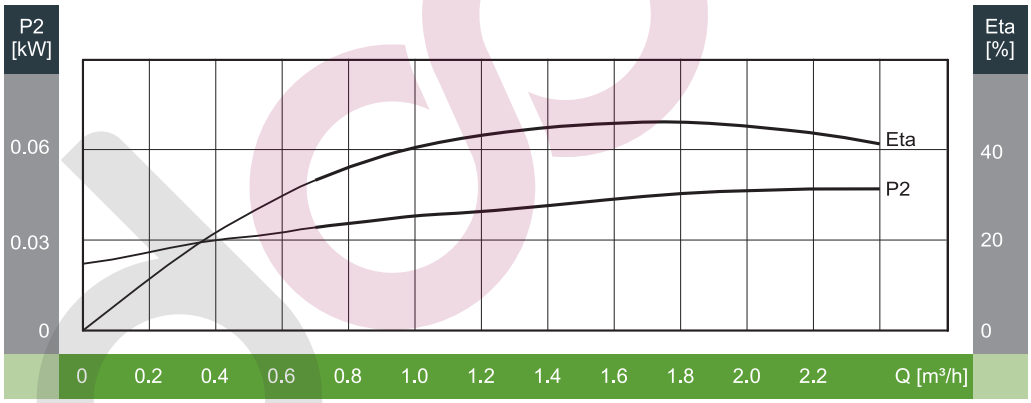


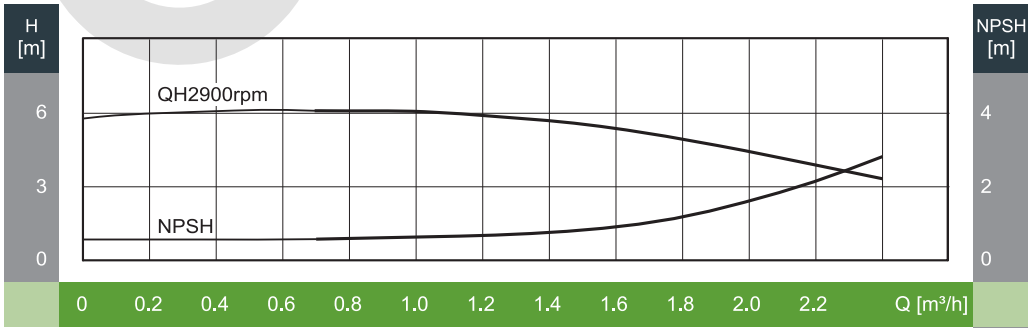
Specification

Descrption	DHF(T)1	DHF(T)2	DHF(T)3	DHF(T)4	DHF(T)5	DHF(T)10	DHF(T)15	DHF(T)20
Rated Flow [m³/h]	1	2	3	4	5	10	15	20
Flow Range [m³/h]	0.7-2.4	1-3.5	1.2-4.5	2-8	2.5-8.5	5-13	8.5-23.5	10.5-29
Max. operation Pressure [bar]	10	10	10	10	10	10	10	10
Motor Power [kW]	0.37-0.55	0.37-0.75	0.37-0.75	0.37-1.1	0.37-1.1	0.75-2.2	1.1-4	1.1-5.5
Liquid Temperature [℃]	-10 ~ 110℃							
Ambient Temperature [℃]	Max. 40℃							
Pump Type	Horizontal Multi-stage Pump							
Inlet size	25A	25A	25A	32A	32A	40A	50A	50A
Outlet size	25A	25A	25A	25A	25A	32A	50A	50A

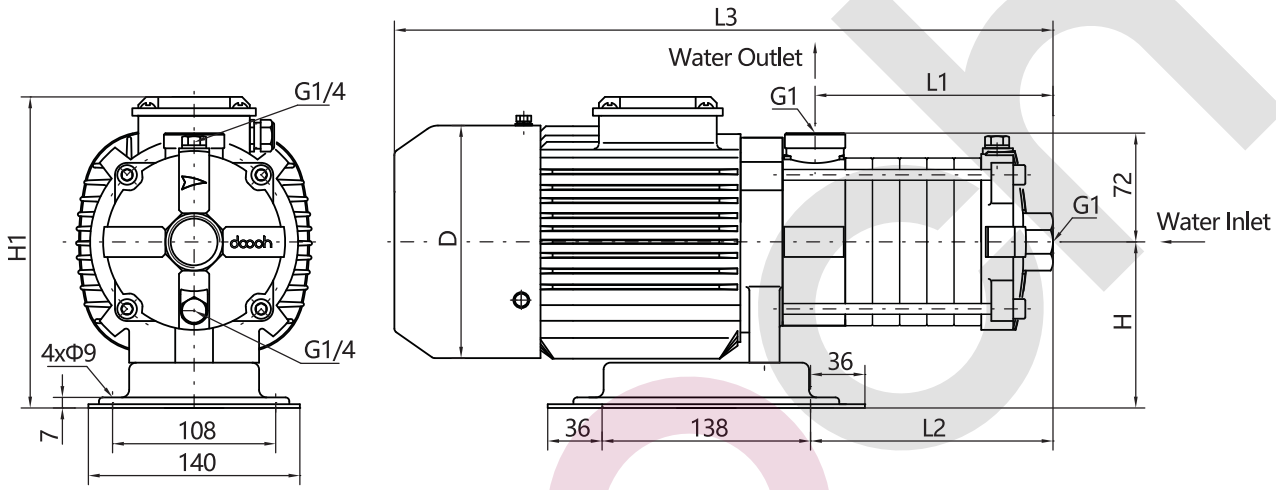
Performance Curve







Installation Sketch

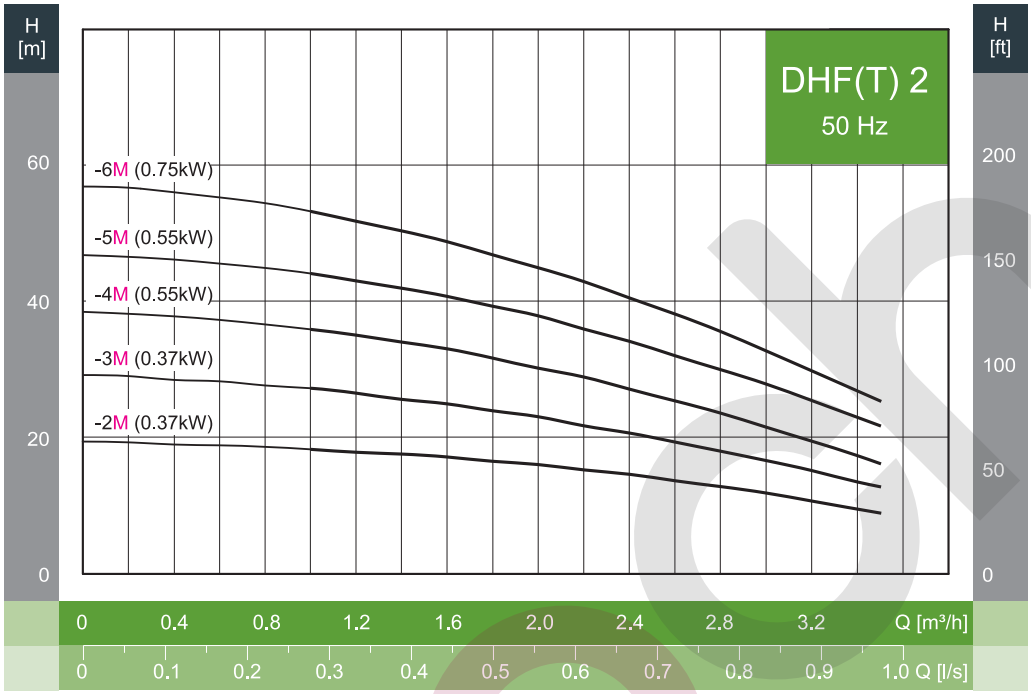


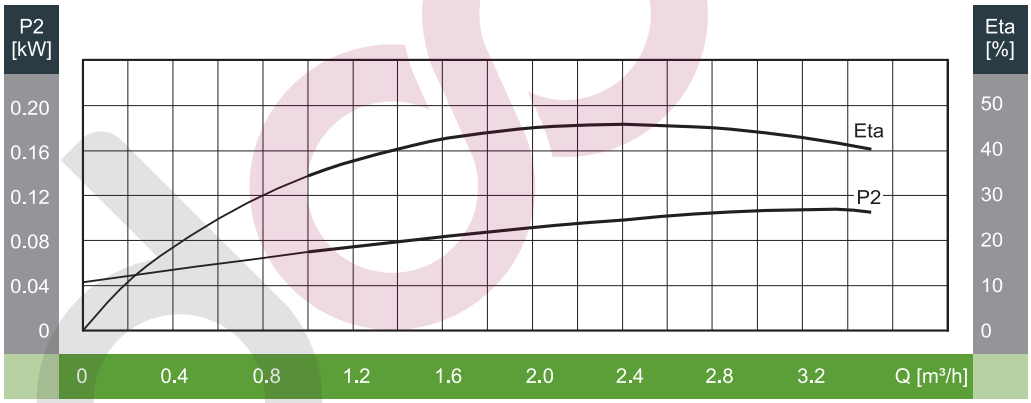
Dimension / Weight

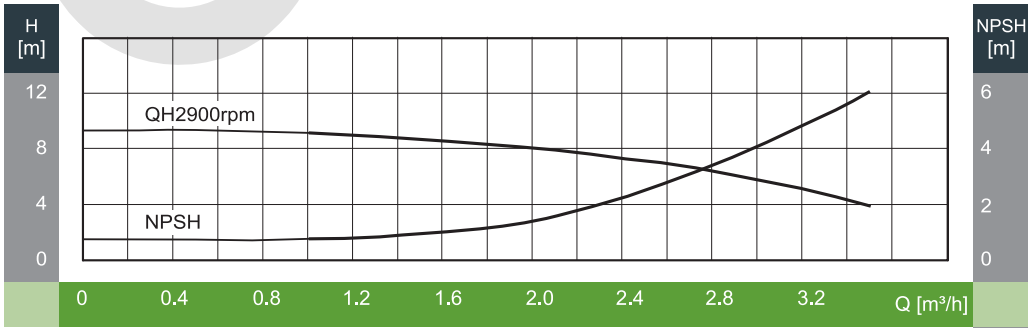
MODEL	POWER		SIZE(mm)						WEIGHT (kg)
	kW	HP	L1	L2	L3	H	H1	D	
DHF(T) 1-2M	0.37	0.5	85.5	88.5	327	110	220	140	16
DHF(T) 1-3M	0.37	0.5	103.5	106.5	345	110	220	140	16
DHF(T) 1-4M	0.37	0.5	121.5	124.5	363	110	220	140	16
DHF(T) 1-5M	0.37	0.5	139.5	142.5	381	110	220	140	16
DHF(T) 1-6M	0.37	0.5	157.5	160.5	399	110	220	140	16
DHF(T) 1-7M	0.37	0.5	175.5	178.5	417	110	220	140	16
DHF(T) 1-8M	0.55	0.75	193.5	196.5	435	110	220	140	17

Notice | For the 3phase 380V power input, "M" is omitted from the model name.

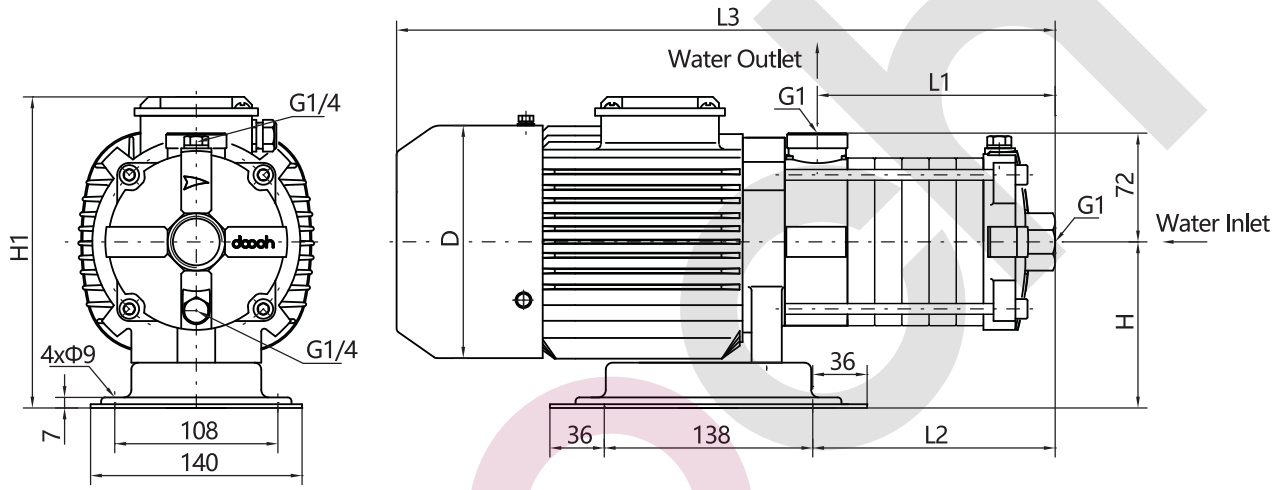
Performance Curve







Installation Sketch

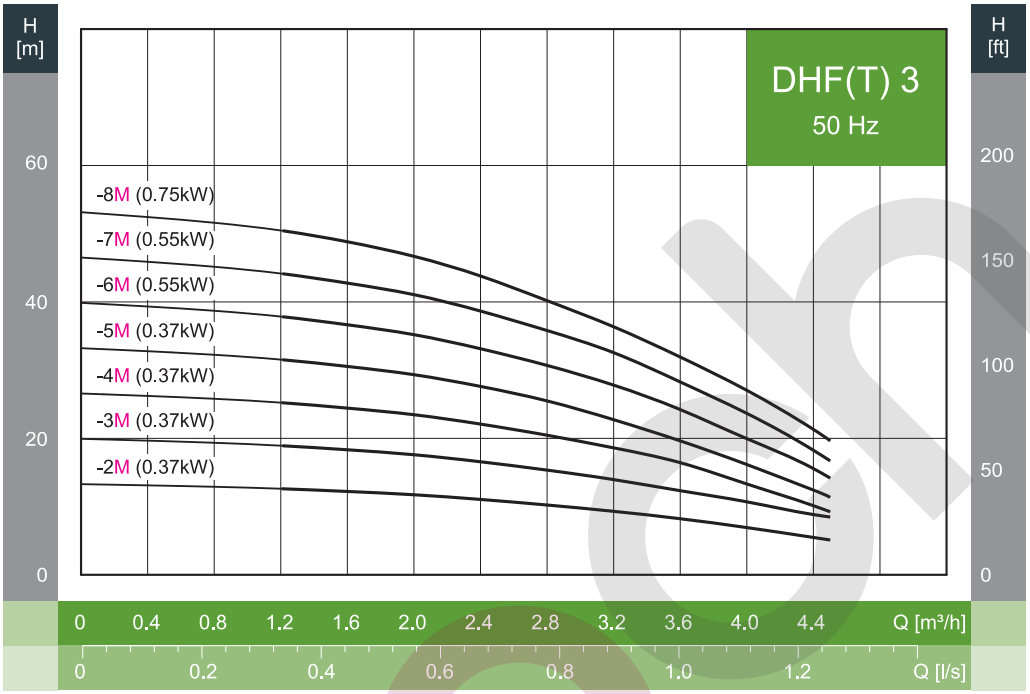


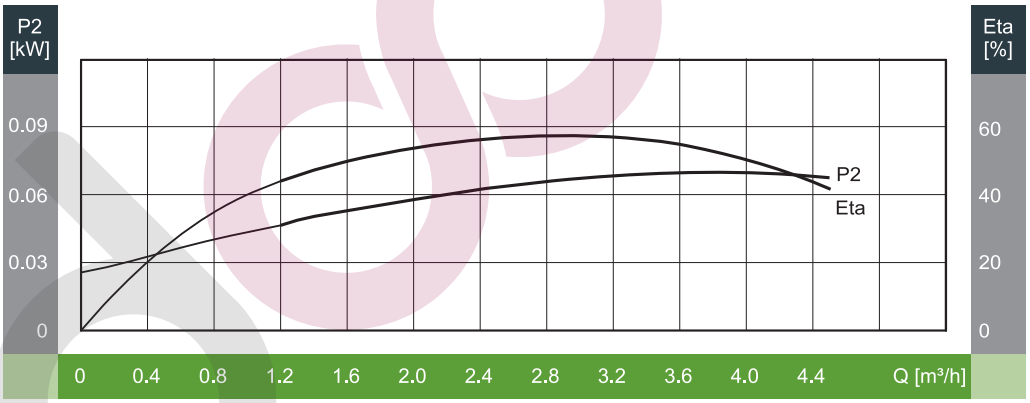
Dimension / Weight

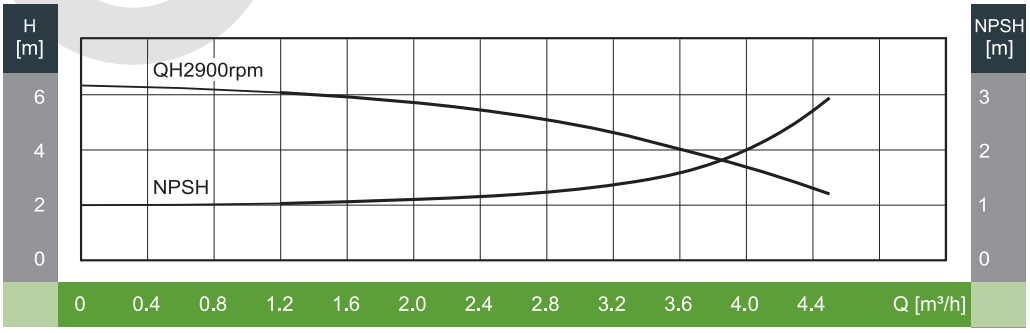
MODEL	POWER		SIZE(mm)						WEIGHT (kg)
	kW	HP	L1	L2	L3	H	H1	D	
DHF(T) 2-2M	0.37	0.5	85.5	88.5	327	110	220	140	16
DHF(T) 2-3M	0.37	0.5	103.5	106.5	345	110	220	140	16
DHF(T) 2-4M	0.55	0.75	121.5	124.5	363	110	220	140	17
DHF(T) 2-5M	0.55	0.75	139.5	142.5	381	110	220	140	17
DHF(T) 2-6M	0.75	1	157.5	160.5	443	110	230	158	18

Notice | For the 3phase 380V power input, "M" is omitted from the model name.

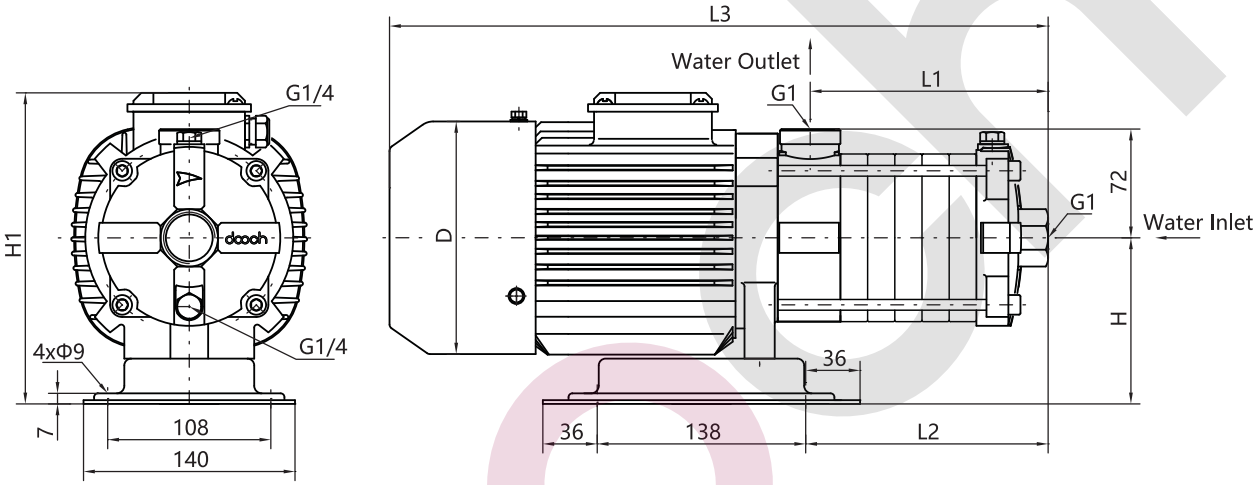
Performance Curve







Installation Sketch

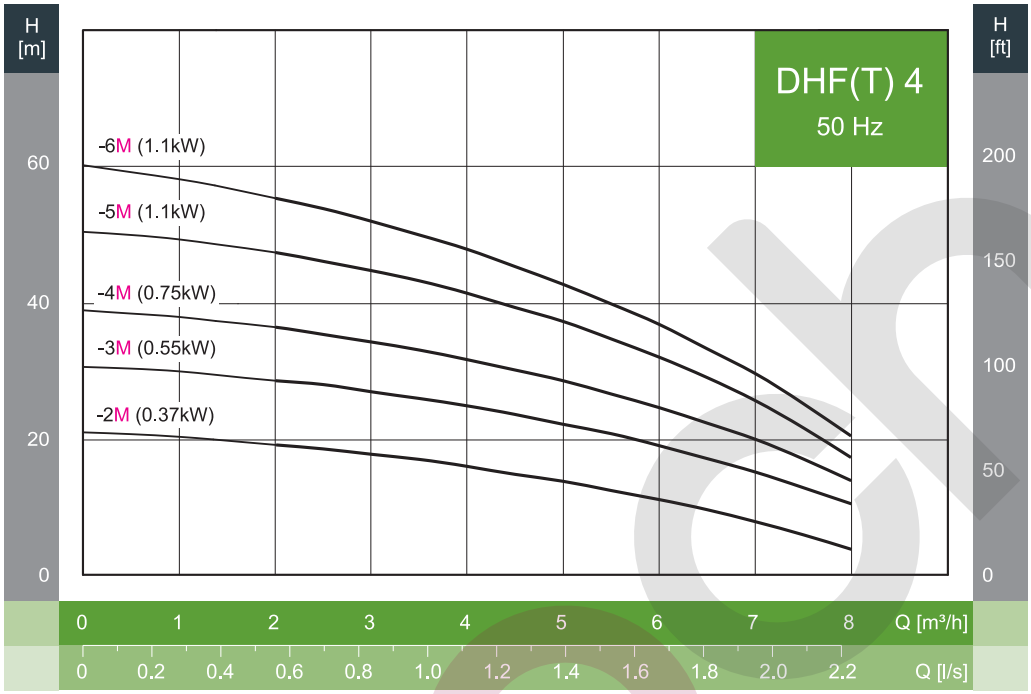


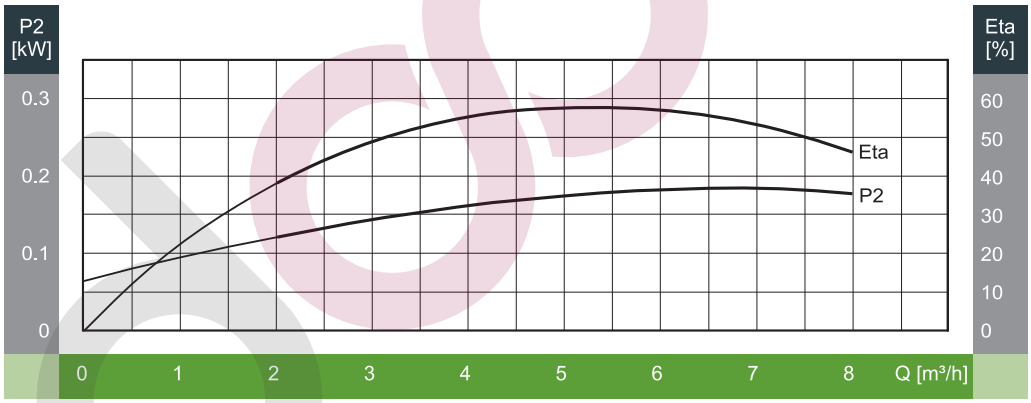
Dimension / Weight

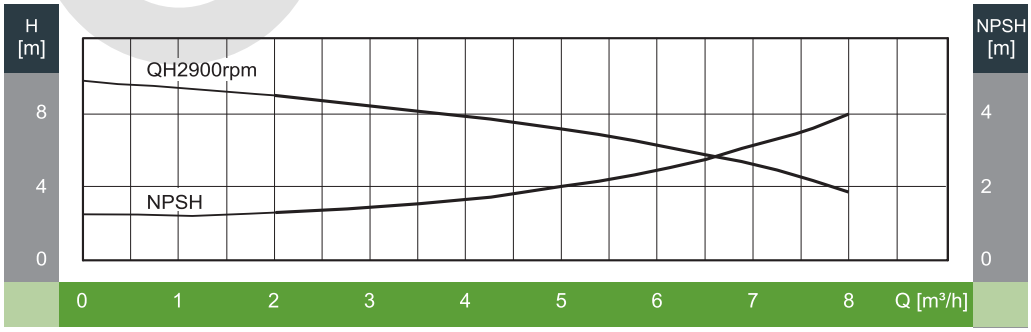
MODEL	POWER		SIZE(mm)						WEIGHT (kg)
	kW	HP	L1	L2	L3	H	H1	D	
DHF(T) 3-2M	0.37	0.5	85.5	88.5	327	110	220	140	16
DHF(T) 3-3M	0.37	0.5	103.5	106.5	345	110	220	140	16
DHF(T) 3-4M	0.37	0.5	121.5	124.5	363	110	220	140	16
DHF(T) 3-5M	0.37	0.5	139.5	142.5	381	110	220	140	16
DHF(T) 3-6M	0.55	0.75	157.5	160.5	399	110	220	140	17
DHF(T) 3-7M	0.55	0.75	175.5	178.5	417	110	220	140	17
DHF(T) 3-8M	0.75	1	193.5	196.5	479	110	230	158	18

Notice | For the 3phase 380V power input, "M" is omitted from the model name.

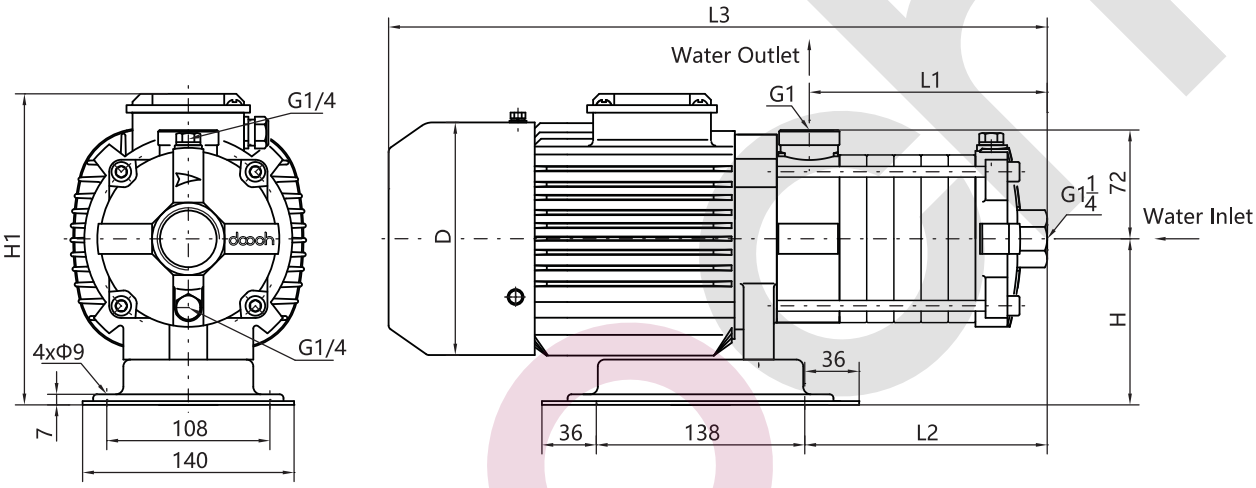
Performance Curve







Installation Sketch

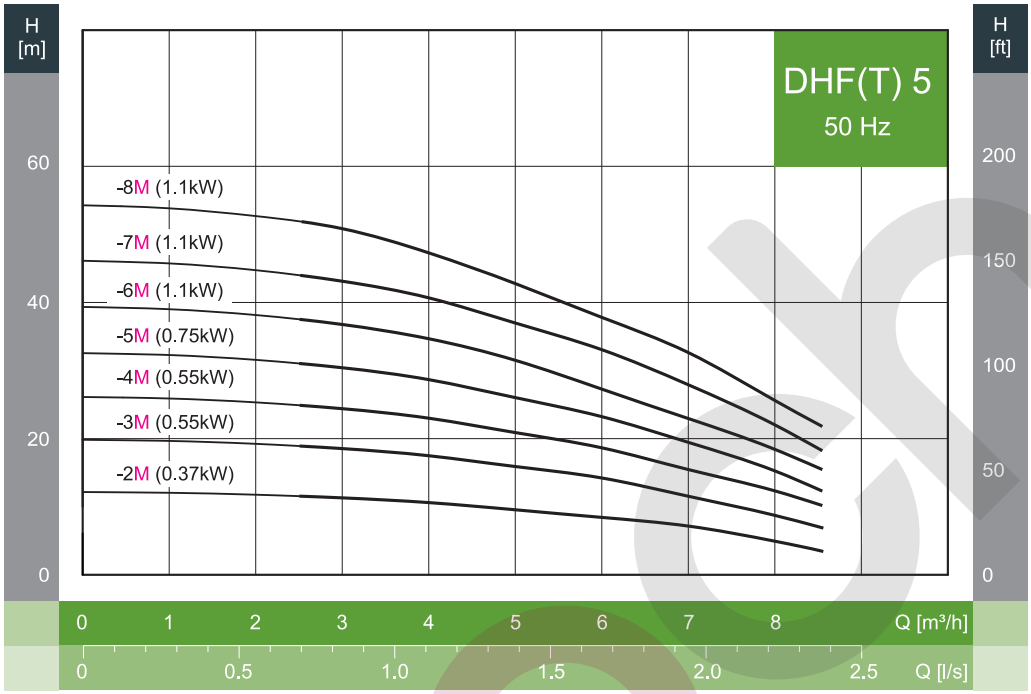


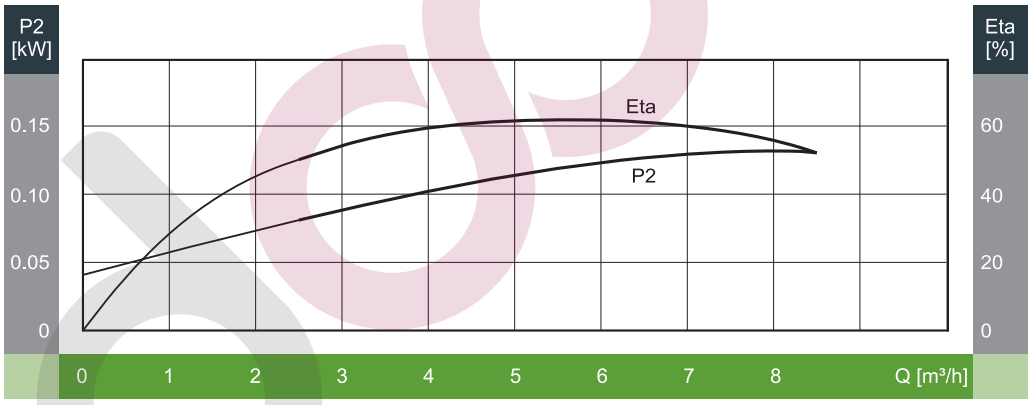
Dimension / Weight

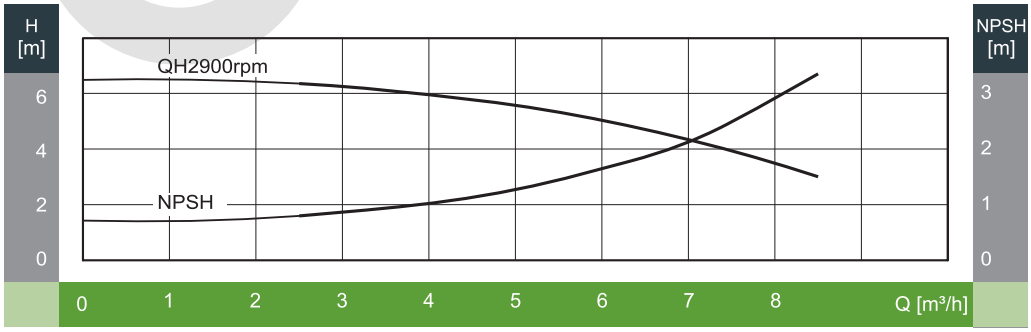
MODEL	POWER		SIZE(mm)						WEIGHT (kg)
	kW	HP	L1	L2	L3	H	H1	D	
DHF(T) 4-2M	0.37	0.5	103	106	344.5	110	220	140	16
DHF(T) 4-3M	0.55	0.75	130	133	371.5	110	220	140	17
DHF(T) 4-4M	0.75	1	157	160	442.5	110	230	158	18
DHF(T) 4-5M	1.1	1.5	184	187	469.5	110	230	158	19
DHF(T) 4-6M	1.1	1.5	211	214	496.5	110	230	158	19

Notice | For the 3phase 380V power input, "M" is omitted from the model name.

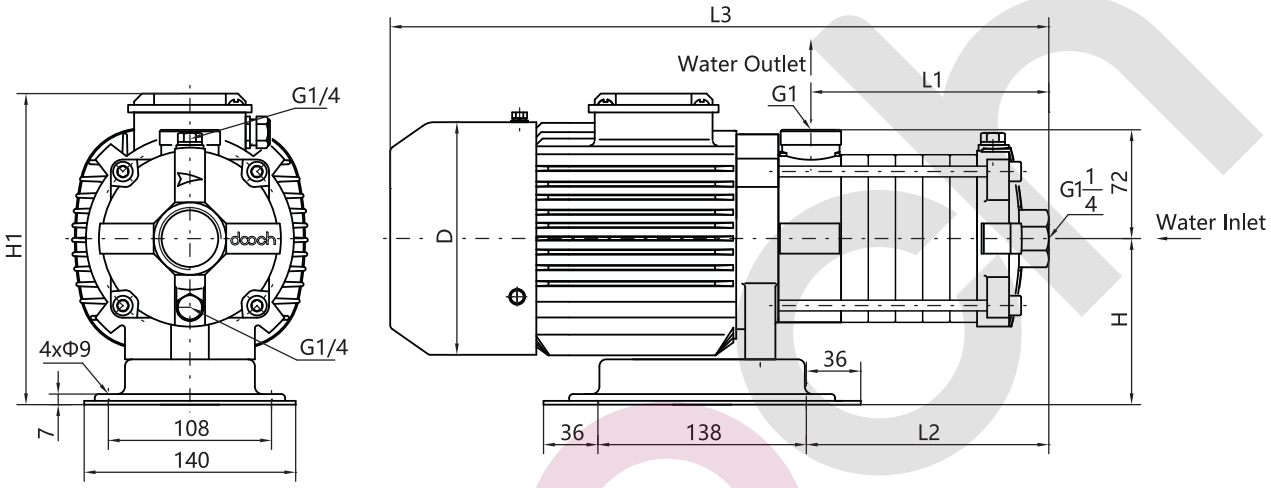
Performance Curve







Installation Sketch

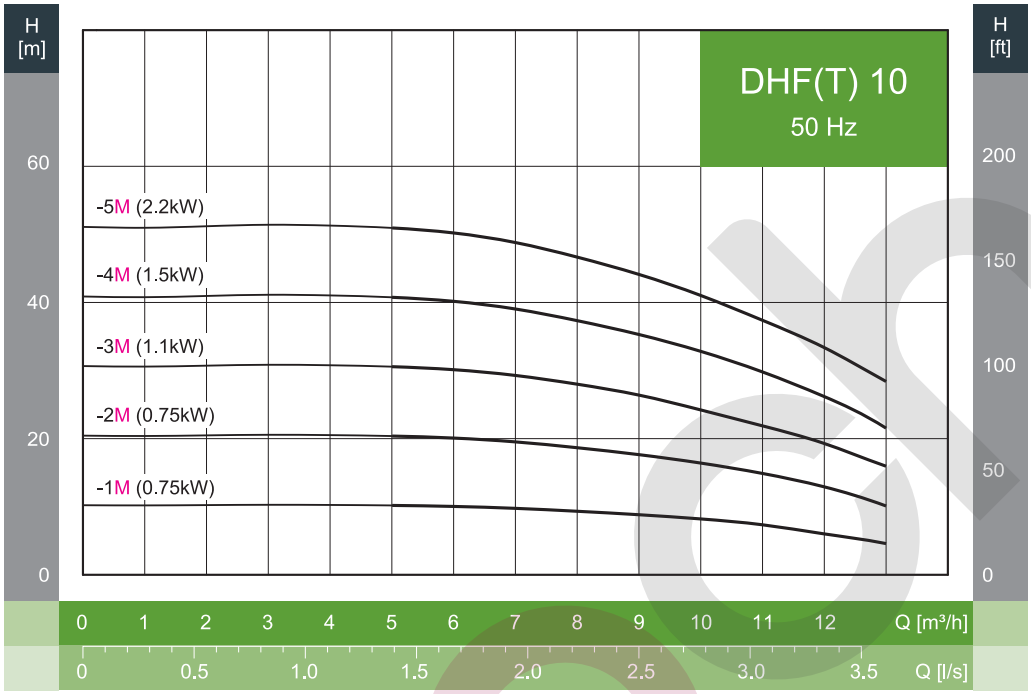


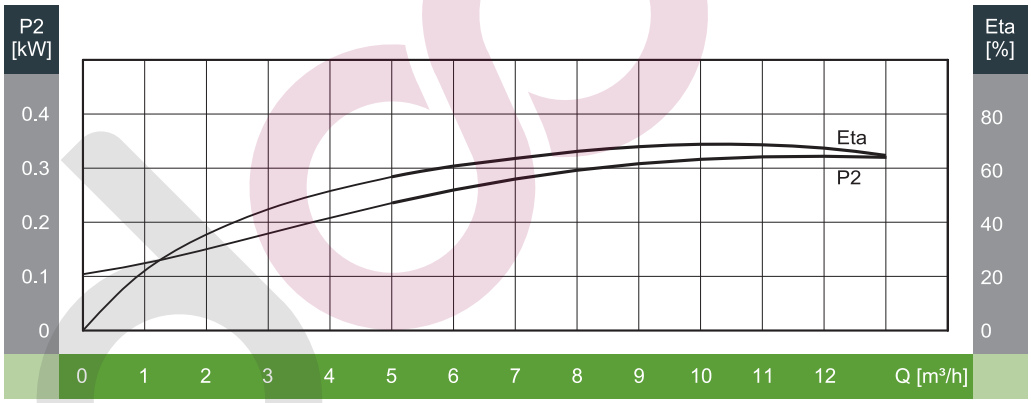
Dimension / Weight

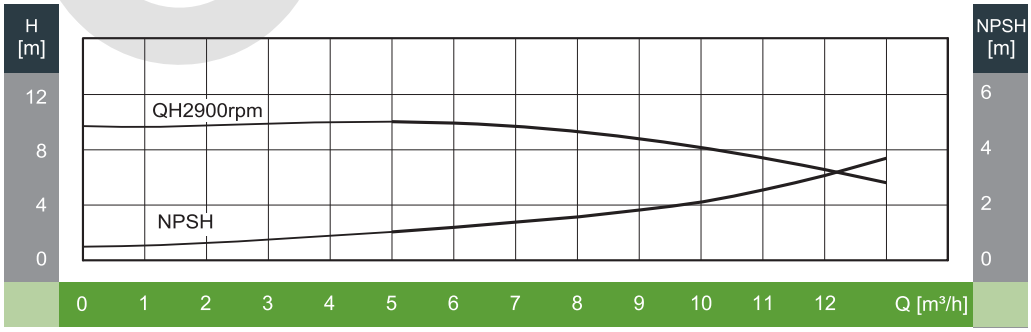
MODEL	POWER		SIZE(mm)						WEIGHT (kg)
	kW	HP	L1	L2	L3	H	H1	D	
DHF(T) 5-2M	0.37	0.5	103	106	344.5	110	220	140	16
DHF(T) 5-3M	0.55	0.75	130	133	371.5	110	220	140	17
DHF(T) 5-4M	0.55	0.75	157	160	398.5	110	220	140	17
DHF(T) 5-5M	0.75	1	184	187	469.5	110	230	158	18
DHF(T) 5-6M	1.1	1.5	211	214	496.5	110	230	158	19
DHF(T) 5-7M	1.1	1.5	238	241	523.5	110	230	158	19
DHF(T) 5-8M	1.1	1.5	265	268	550.5	110	230	158	19

Notice | For the 3phase 380V power input, "M" is omitted from the model name.

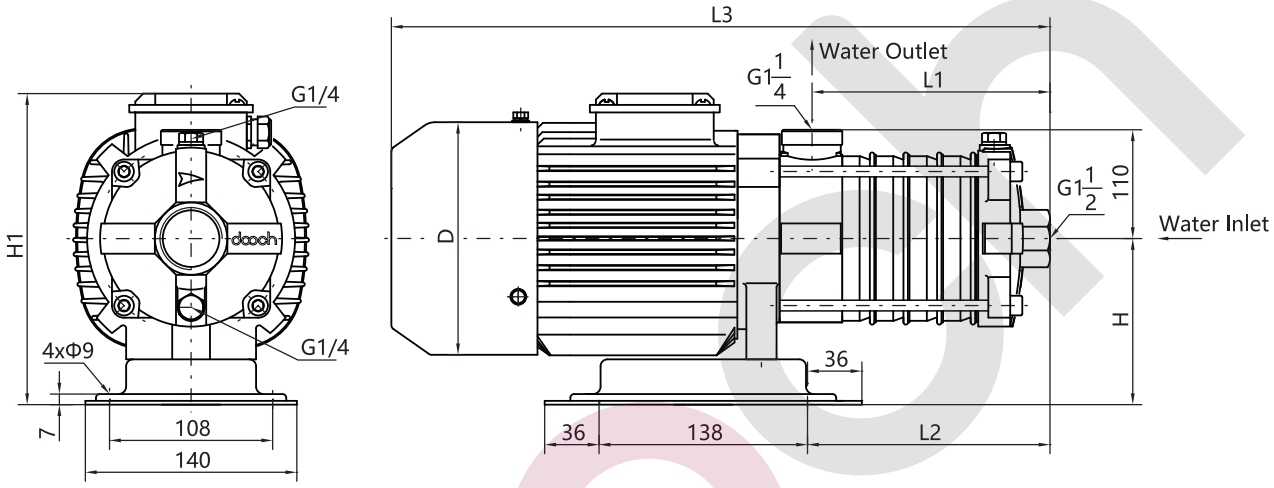
Performance Curve







Installation Sketch

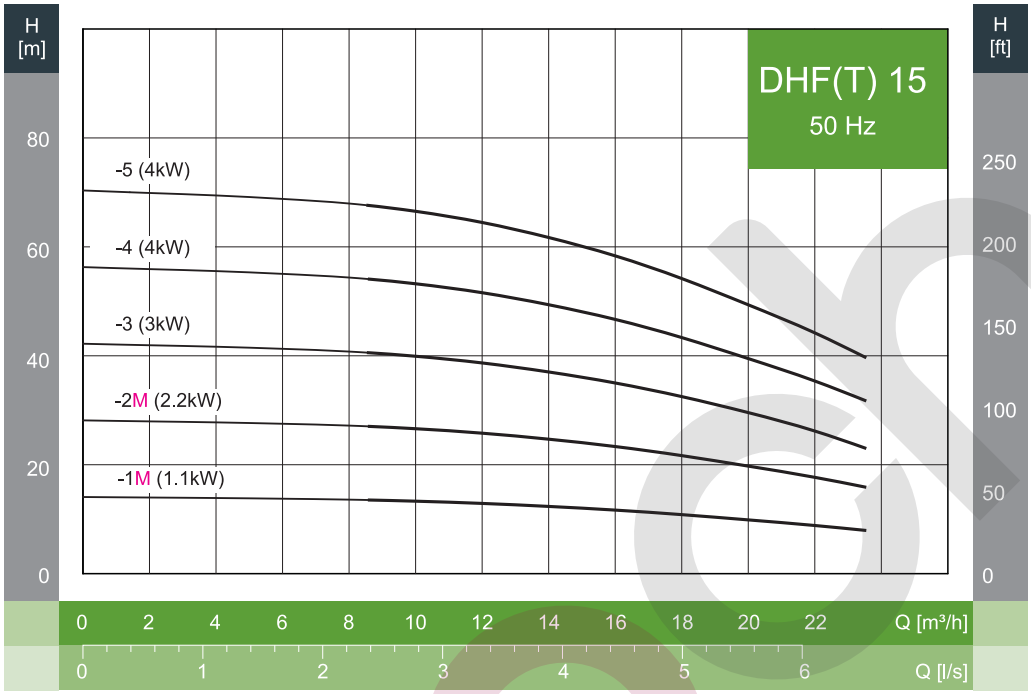


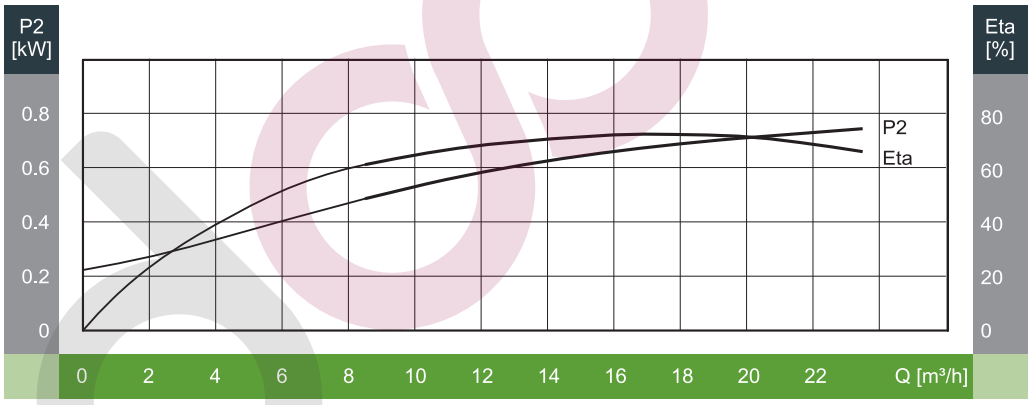
Dimension / Weight

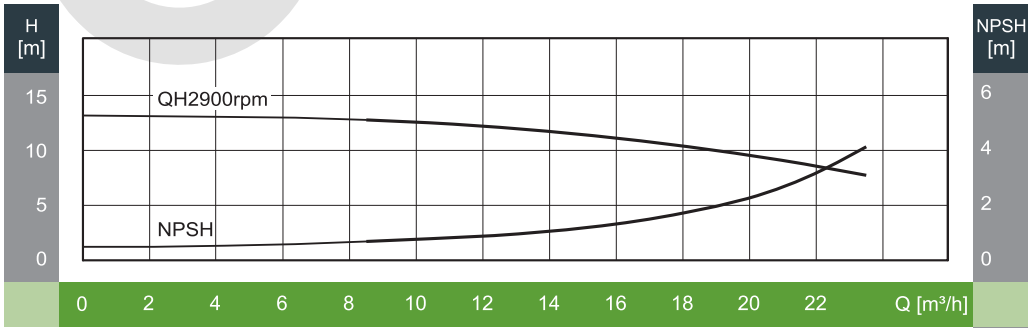
MODEL	POWER		SIZE(mm)						WEIGHT (kg)
	kW	HP	L1	L2	L3	H	H1	D	
DHF(T) 10-1M	0.75	1	76	94	372	118	235	158	21
DHF(T) 10-2M	0.75	1	106	124	402	118	235	158	21
DHF(T) 10-3M	1.1	1.5	136	154	432	118	235	158	22
DHF(T) 10-4M	1.5	2	166	184	482	118	240	175	27
DHF(T) 10-5M	2.2	3	196	214	537	118	240	175	30

Notice | For the 3phase 380V power input, "M" is omitted from the model name.

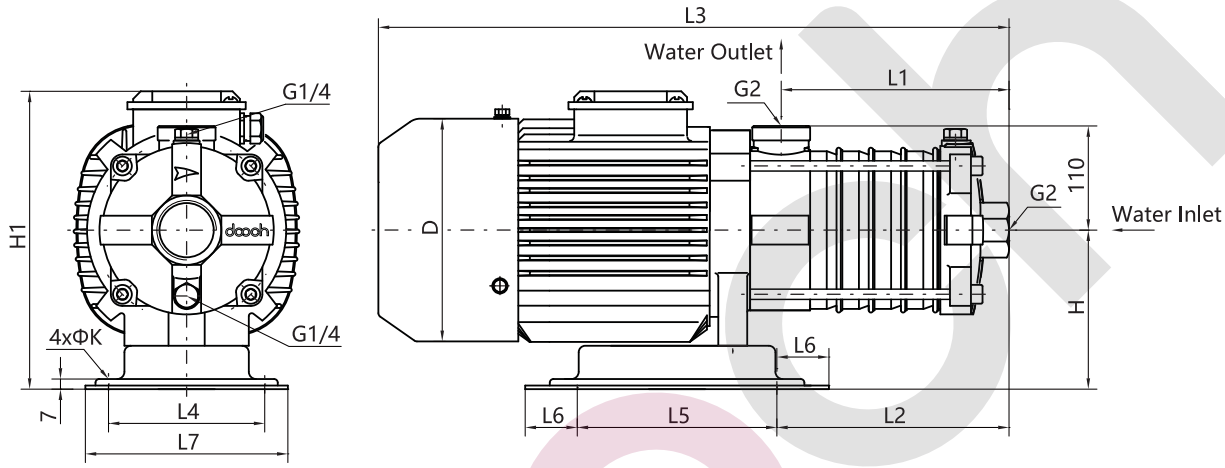
Performance Curve







Installation Sketch

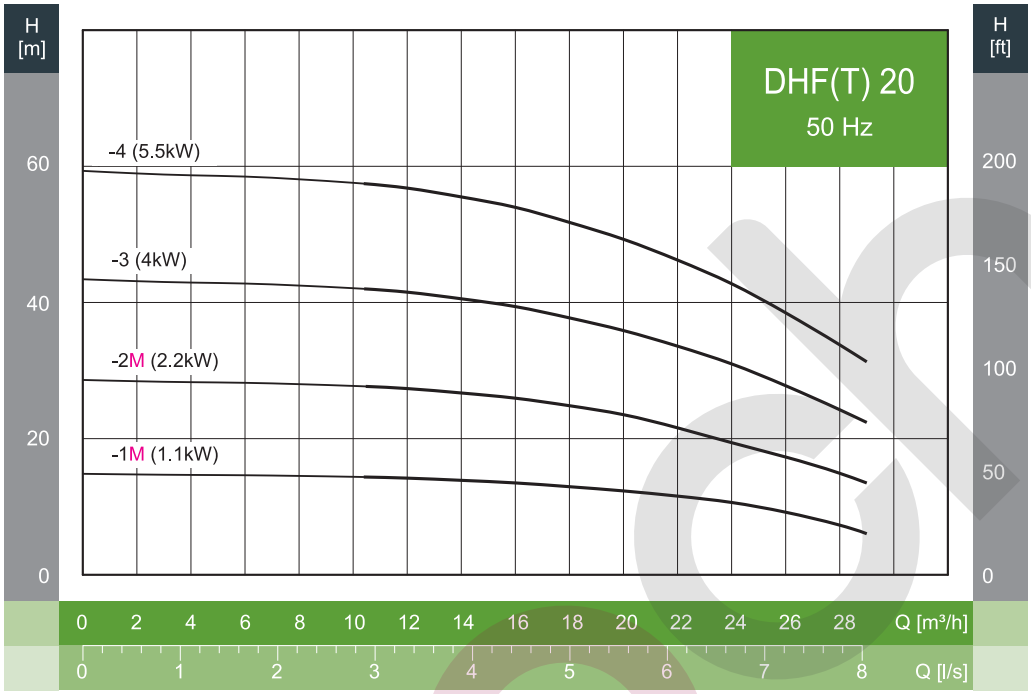


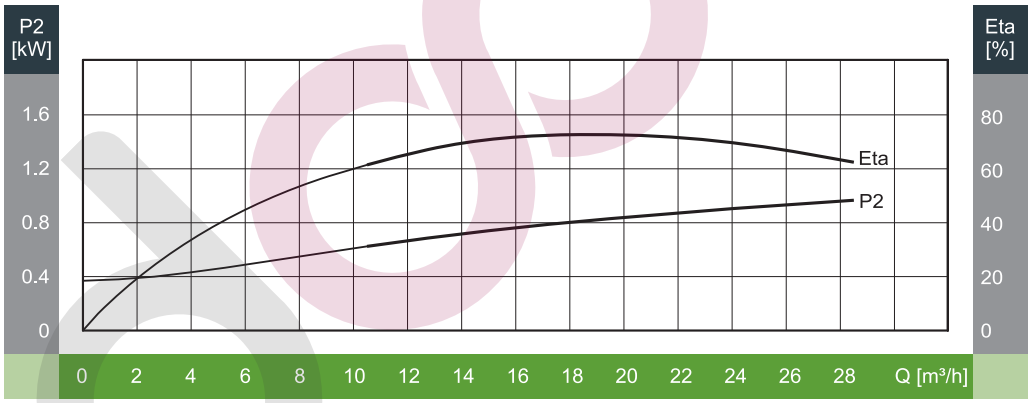
Dimension / Weight

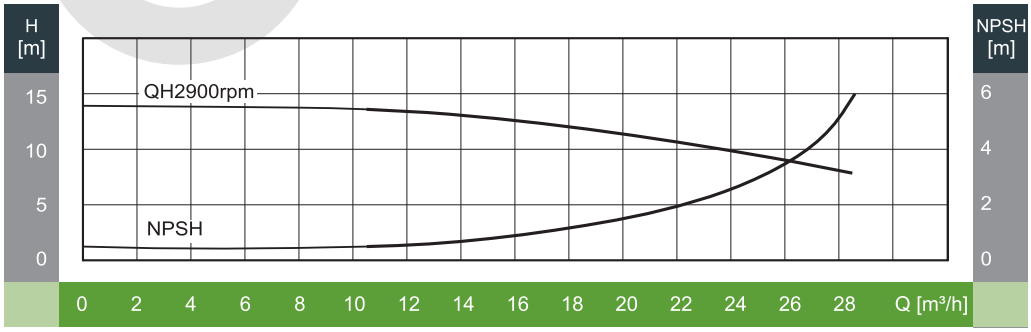
MODEL	POWER		SIZE(mm)											WEIGHT (kg)
	kW	HP	L1	L2	L3	L4	L5	L6	L7	H	H1	D	K	
DHF(T) 15-1M	1.1	1.5	81	105	383	108	138	36	140	118	235	158	9	23
DHF(T) 15-2M	2.2	3	126	150	473	108	138	36	140	118	240	175	9	31
DHF(T) 15-3M	3	4	171	195	565	108	138	36	140	130	255	196	9	39
DHF(T) 15-4M	4	4	216	336	634	190	140	15	222	120	300	220	12	46
DHF(T) 15-5M	4	4	261	381	679	190	140	15	222	120	300	220	12	46

Notice | For the 3phase 380V power input, "M" is omitted from the model name.

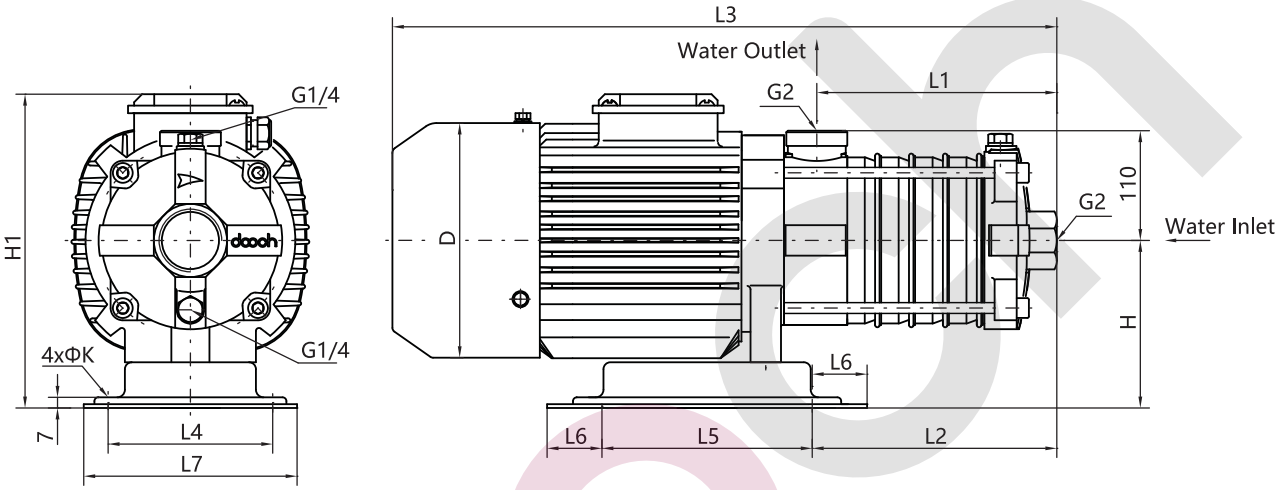
Performance Curve







Installation Sketch



Dimension / Weight

MODEL	POWER		SIZE(mm)											WEIGHT (kg)
	kW	HP	L1	L2	L3	L4	L5	L6	L7	H	H1	D	K	
DHF(T) 20-1M	1.1	1.5	81	105	383	108	138	36	140	118	235	158	9	23
DHF(T) 20-2M	2.2	3	126	150	473	108	138	36	140	118	240	175	9	31
DHF(T) 20-3	4	5.5	171	291	589	190	140	15	222	120	300	220	12	46
DHF(T) 20-4	5.5	7.5	216	349	640	216	140	22	250	132	300	258	12	64

Notice | For the 3phase 380V power input, "M" is omitted from the model name.

DHM 50Hz

STAINLESS STEEL HORIZONTAL SINGLE-STAGE PUMP

Features

- DHM is single-stage centrifugal pump and features an axial suction and radial discharge.
- Compact structure, the pump is directly connected to the motor
- Convenient installation, screw thread water inlet and outlet
- Light weight, thin, plate pressing structure for main parts and components

Application

- Pressurization and pumping of industrial and civilian clean water or other liquids.
- Water treatment
- Water circulating system
- Other fields for water supply

Definition of Model

DHM 15 – 1.5 (M)

- (M): Single Phase, 220V (Without M, 3 Phase)
- 1.5: Motor Power(kW)
- 15: Rated Flow (m^3/h)
- DHM: Pump Type : Horizontal single stage centrifugal pump

Pump Liquid

Clean, thin, non-flammable and explosive,

not containing the liquid with solid particle or fiber.

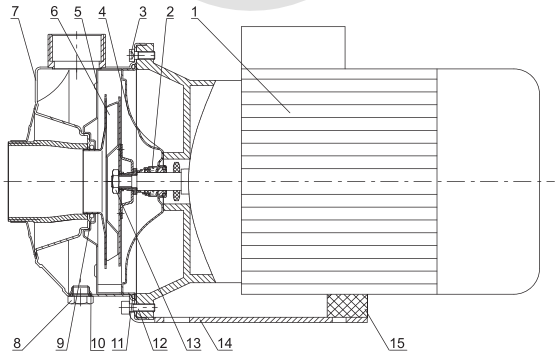
Installation Requirement

- The pump shall be fastened on the stable horizontal base
- The installation of the pump shall ensure that the pump will not be forced by the tension of the pipeline
- The pump shall be installed on the ventilating and anti-freezing place
- Electric wiring device shall gurantee that the pump will not be damaged by lack of phase, unstable voltage, current leakage and overload.

Motor Specification

Motor type : TEFC
Protection class : IP54
Insulation class : F
Standard voltage : 3 phase 220V/380V, 50Hz
single phase 220V, 50Hz

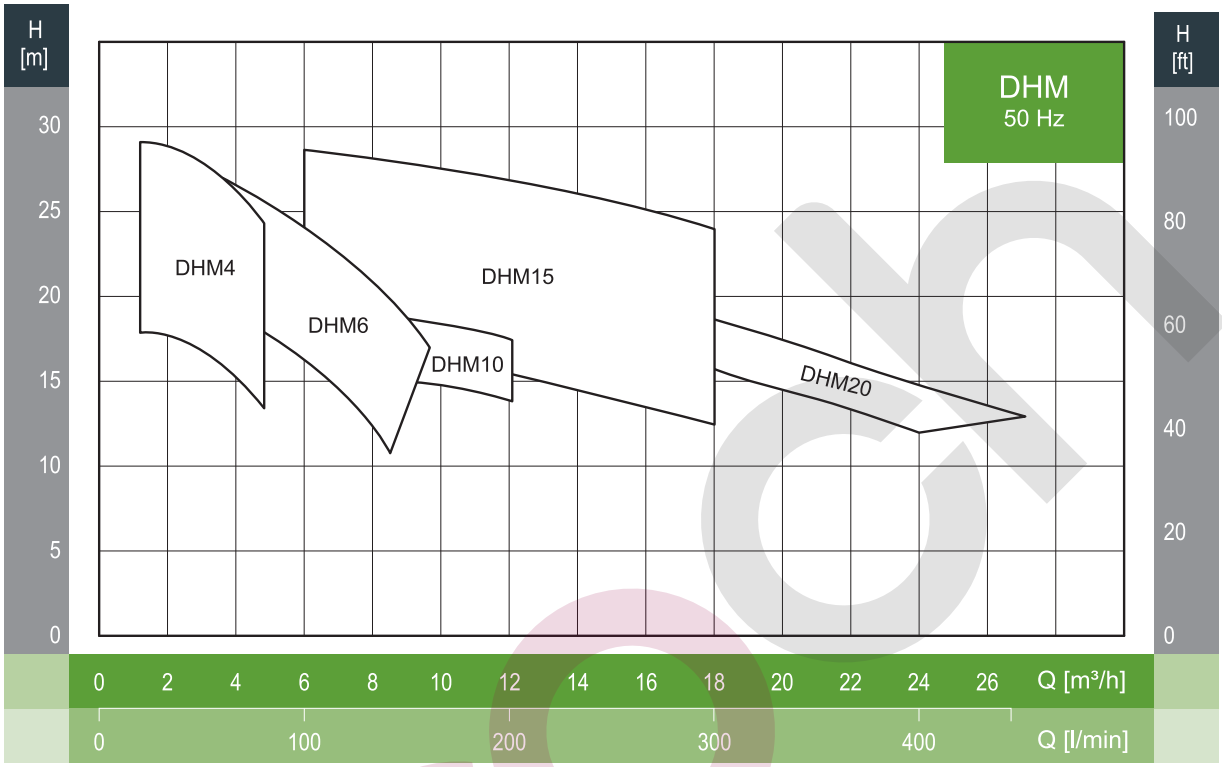
Sectional Drawing



Materials

NO.	PART	MATERIAL	AISI/ASTM
1	Motor	Cast iron / Aluminum diecastings	
2	Mechanical Seal		
3	Bolt	Stainless steel	AISI304
4	Seal Housing	Stainless steel	AISI304
5	Diffuser	Stainless steel	AISI304
6	Impeller	Stainless steel	AISI304
7	Pump Body	Stainless steel	AISI304
8	Drain Plug	Stainless steel	AISI304
9-11	O-ring	NBR	
12	Bolt	Stainless steel	AISI304
13	Impeller nut M10	Stainless steel	AISI304
14	Base	Steel	A570
15	Support	NBR	

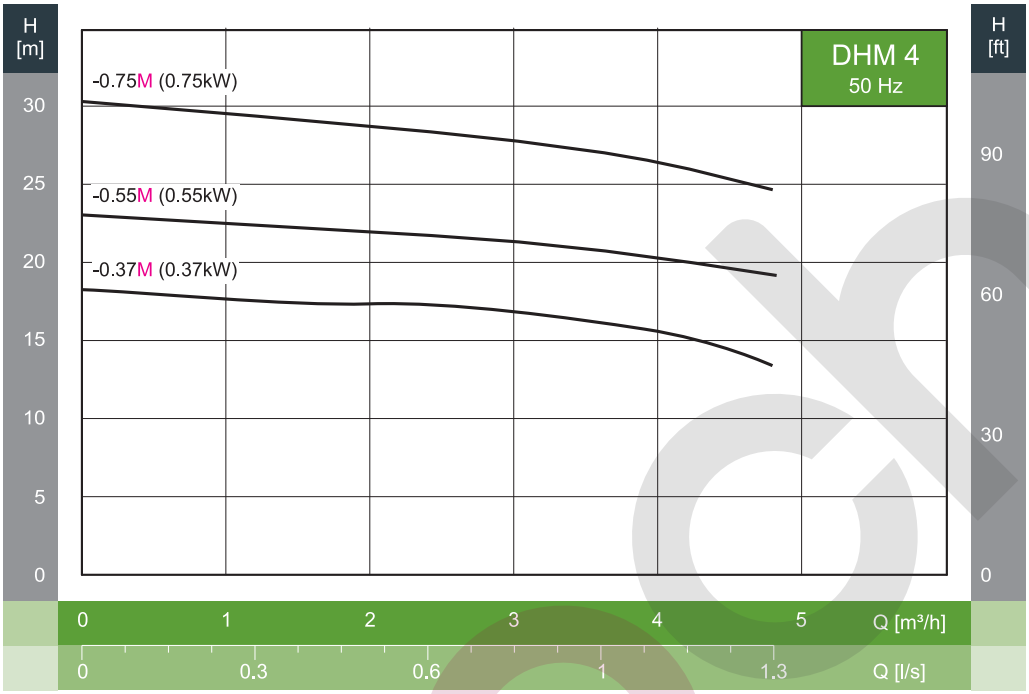
Performance Range

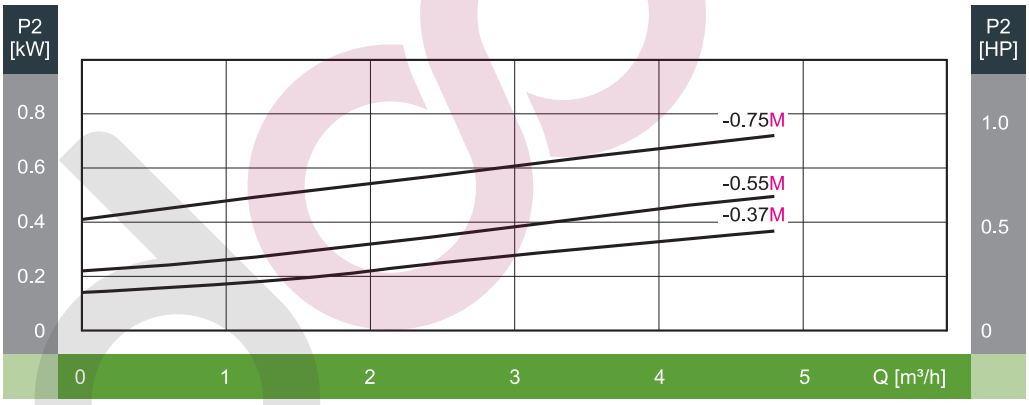


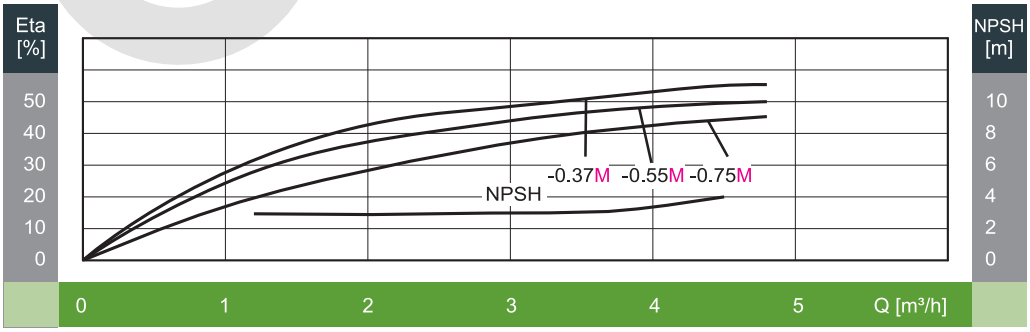
Specification

Descrption	DHM4	DHM6	DHM10	DHM15	DHM20
Rated Flow [m³/h]	4	6	10	15	20
Flow Range [m³/h]	1.2-4.8	2.4-9.6	3.6-12	6-18	7.2-27
Max. operation Pressure [bar]	8	8	8	8	8
Motor Power [kW]	0.37-0.75	0.55-1.1	0.75-1.1	1.1-1.5	1.5-2.2
Liquid Temperature [℃]	0 ~ 70℃				
Ambient Temperature [℃]	Max. 50℃				
Pump Type	Horizontal Single-Stage Pump				
Inlet Diameter	32A	32A	40A	40A	50A
Outlet Diameter	25A	25A	32A	32A	32A

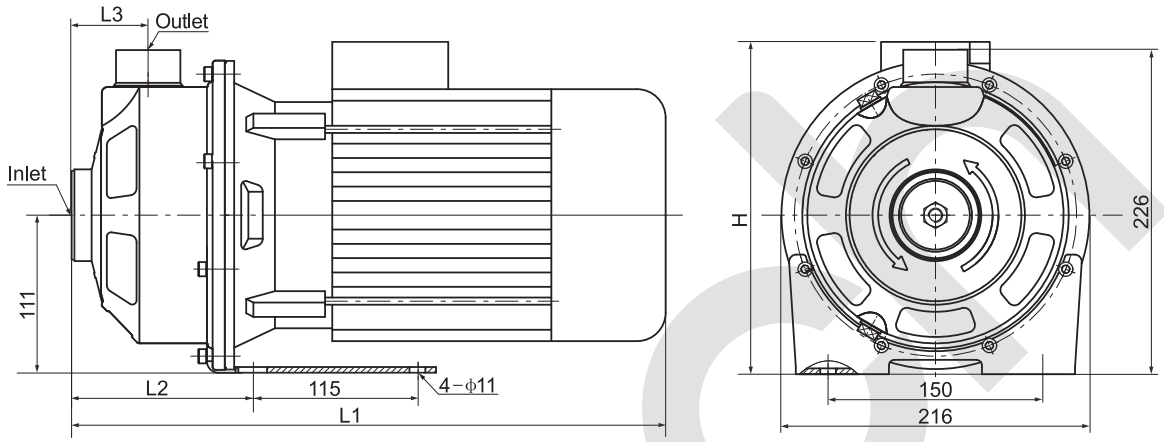
Performance Curve







Installation Sketch

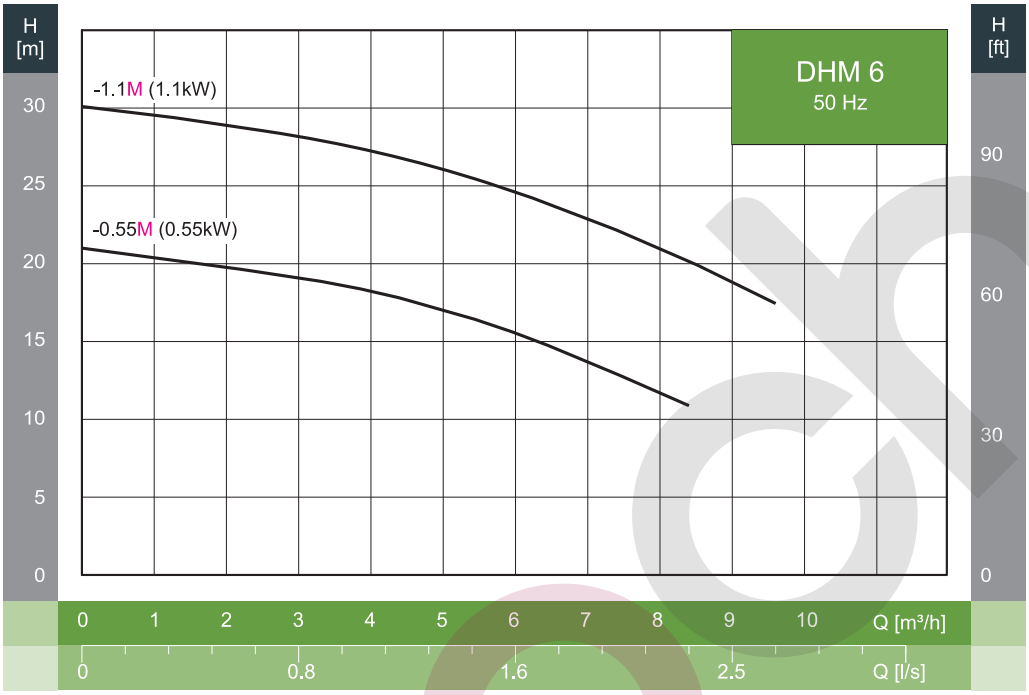


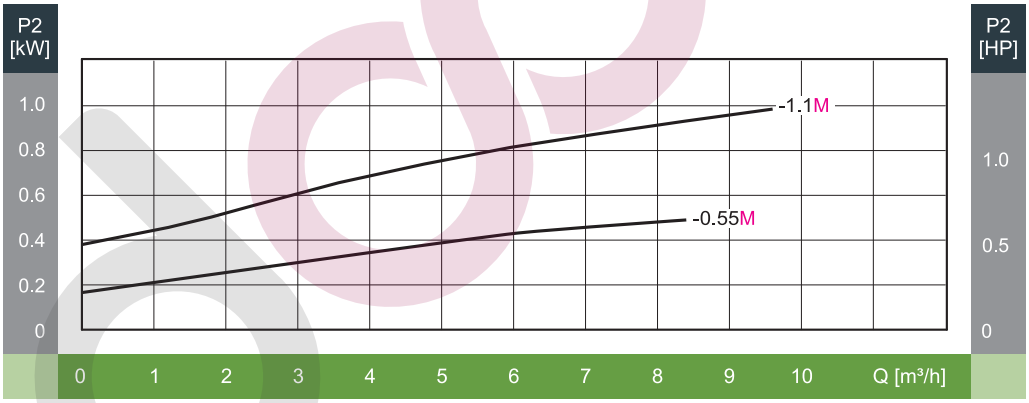
Dimension / Weight

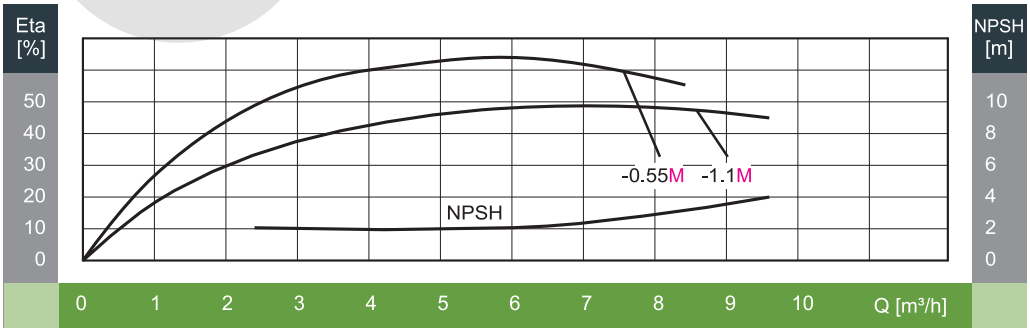
MODEL	DIAMETER		POWER		SIZE (mm)				WEIGHT (kg)
	INLET	OUTLET	kW	HP	L1	L2	L3	H	
DHM4-0.37M	32A	25A	0.37	0.5	322.5	112.5	51	227	10
DHM4-0.55M	32A	25A	0.55	0.75	322.5	112.5	51	227	12
DHM4-0.75M	32A	25A	0.75	1	350.5	112.5	51	232.5	14

Notice | For the 3phase 380V power input, "M" is omitted from the model name.

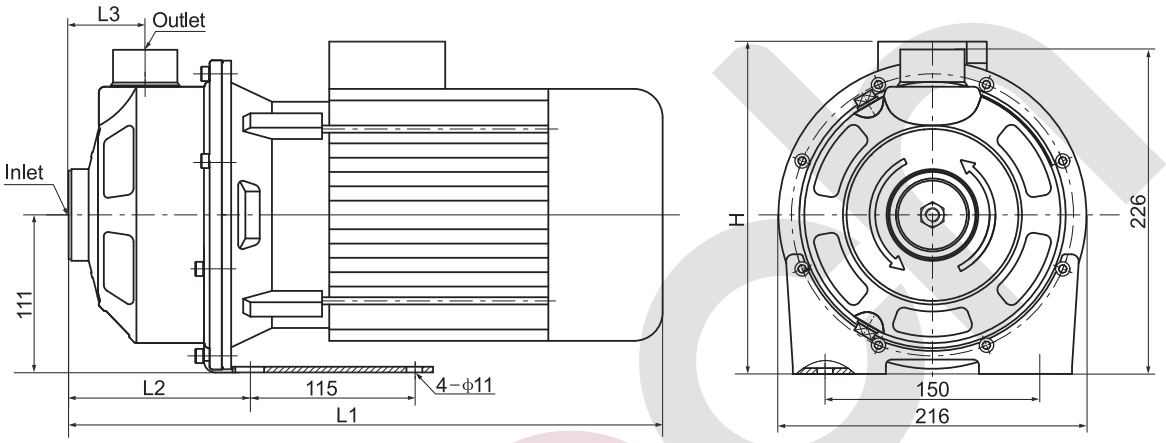
Performance Curve







Installation Sketch

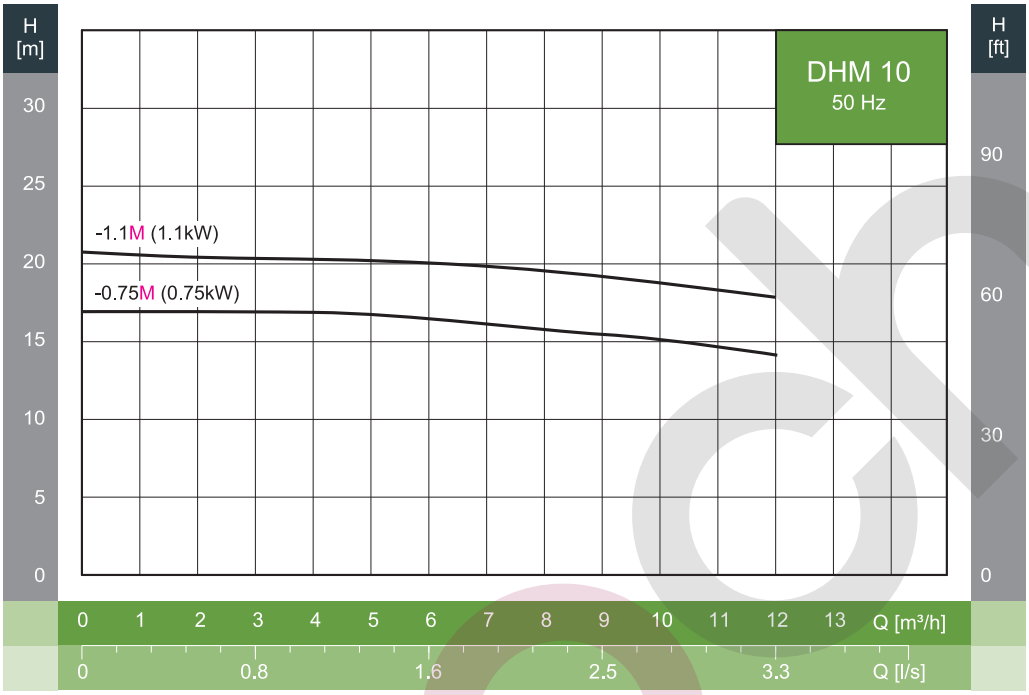


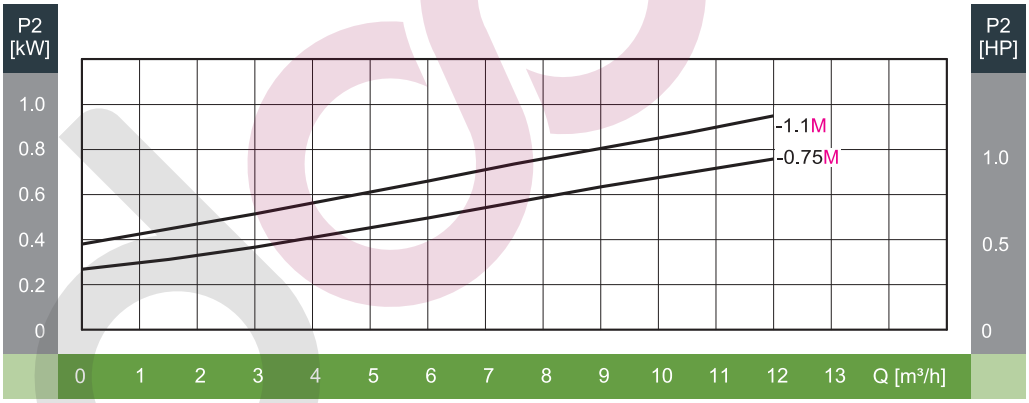
Dimension / Weight

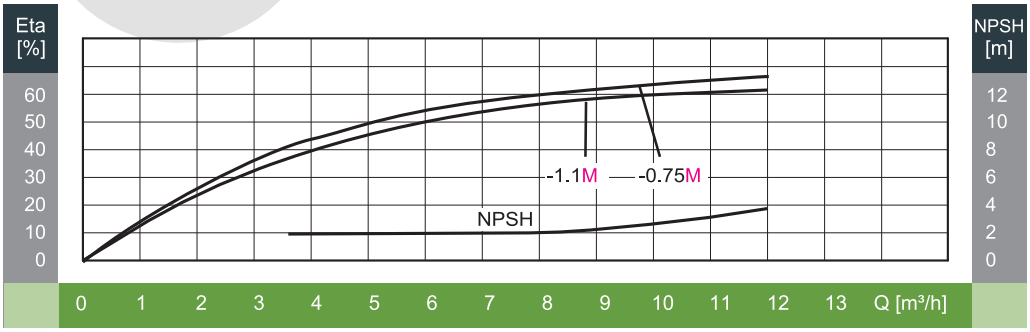
MODEL	DIAMETER		POWER		SIZE (mm)				WEIGHT (kg)
	INLET	OUTLET	kW	HP	L1	L2	L3	H	
DHM6-0.55M	32A	25A	0.55	0.75	322.5	112.5	51	227	12
DHM6-1.1M	32A	25A	1.1	1.5	350.5	112.5	51	232.5	16

Notice | For the 3phase 380V power input, "M" is omitted from the model name.

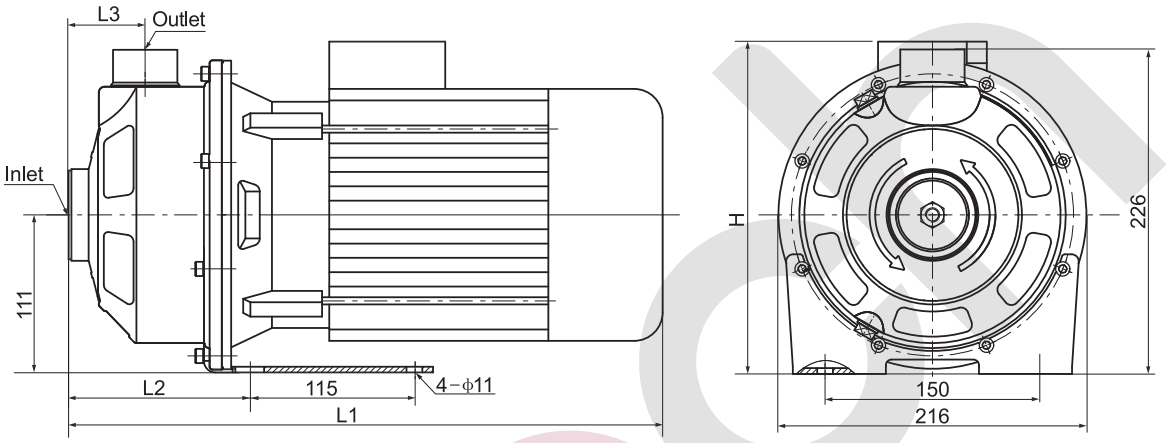
Performance Curve







Installation Sketch

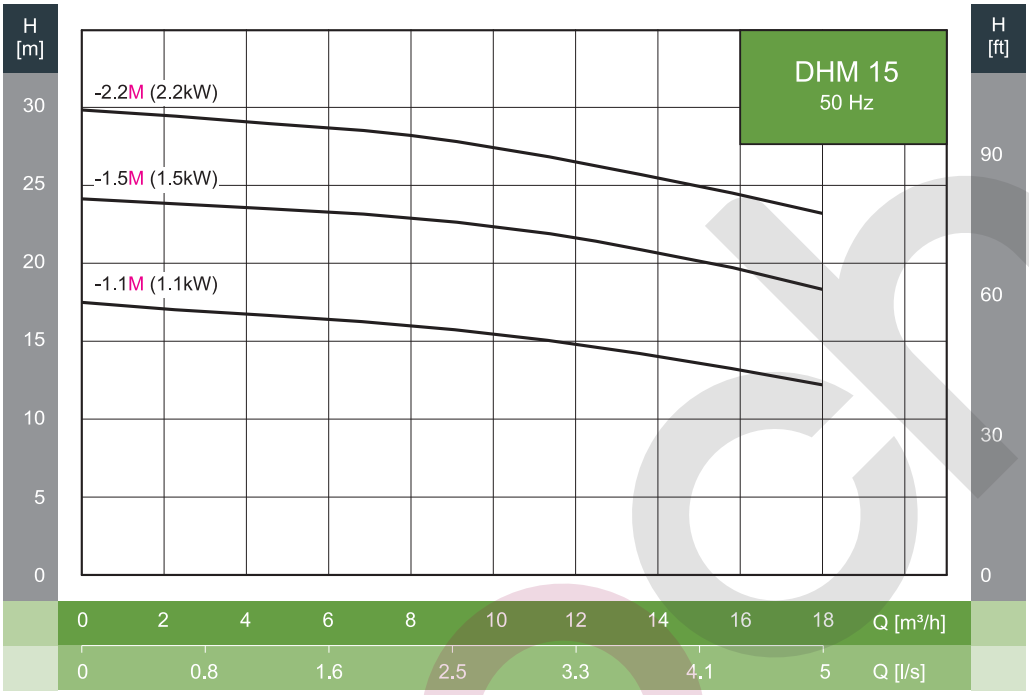


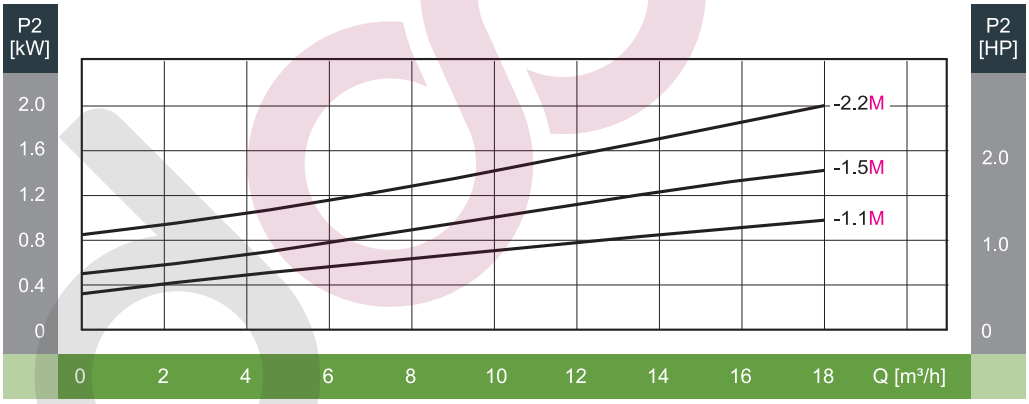
Dimension / Weight

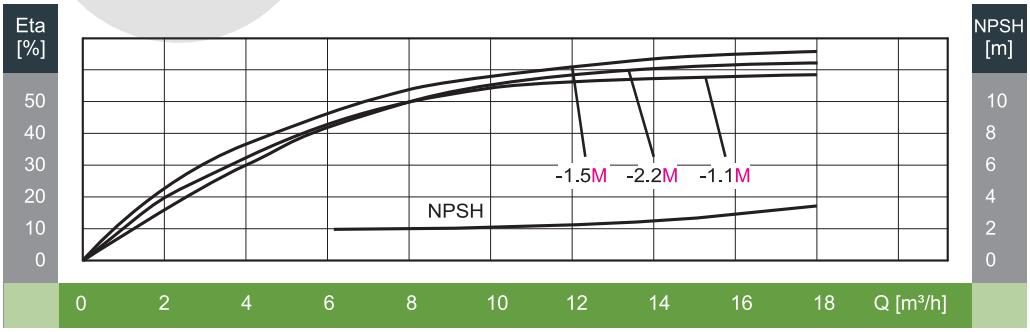
MODEL	DIAMETER		POWER		SIZE (mm)				WEIGHT (kg)
	INLET	OUTLET	kW	HP	L1	L2	L3	H	
DHM10-0.75M	40A	32A	0.75	1	364.5	127	54	232.5	14
DHM10-1.1M	40A	32A	1.1	1.5	364.5	127	54	232.5	16

Notice | For the 3phase 380V power input, "M" is omitted from the model name.

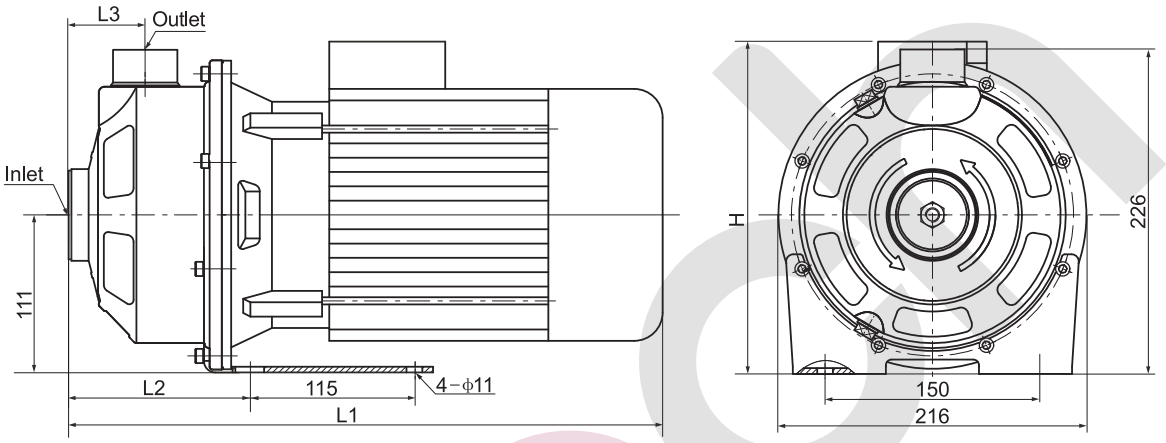
Performance Curve







Installation Sketch

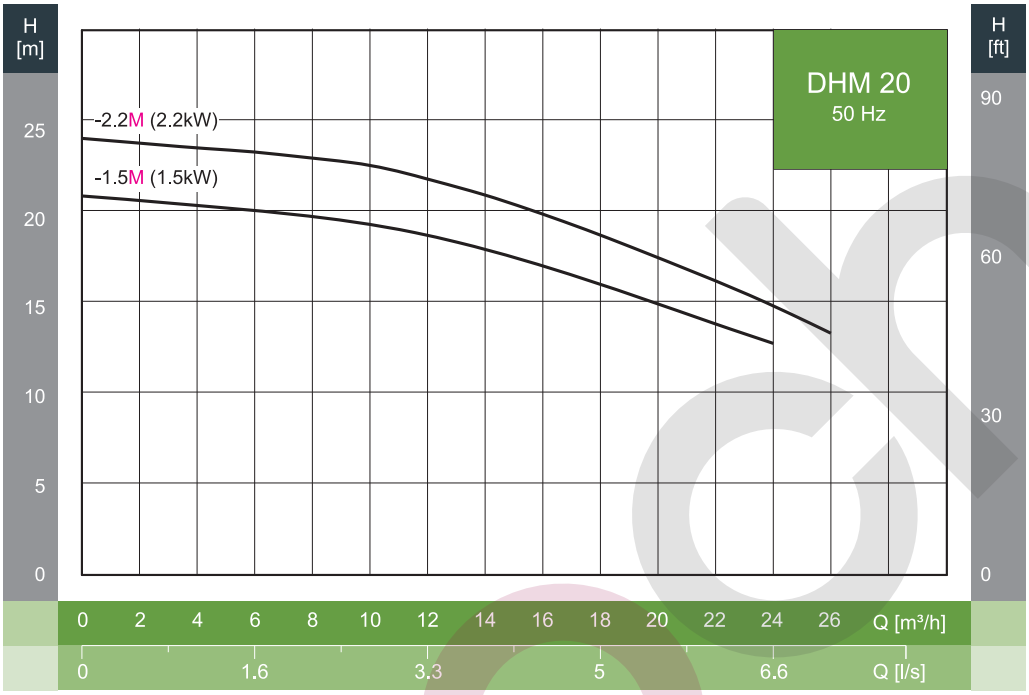


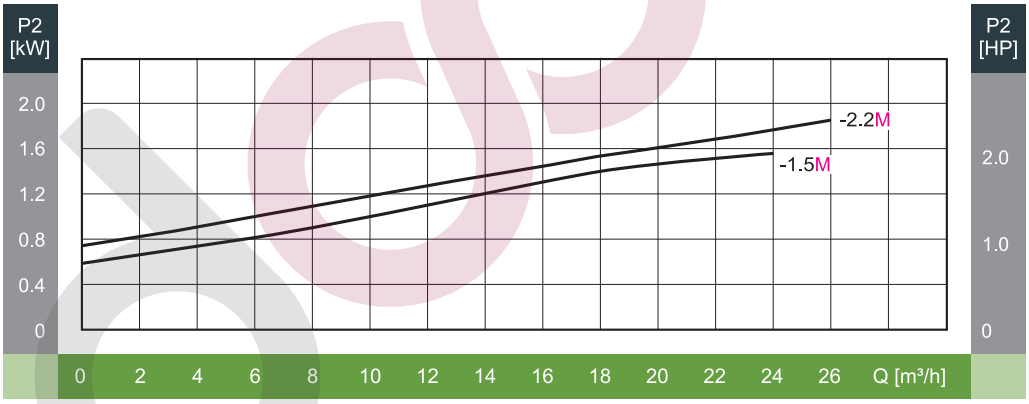
Dimension / Weight

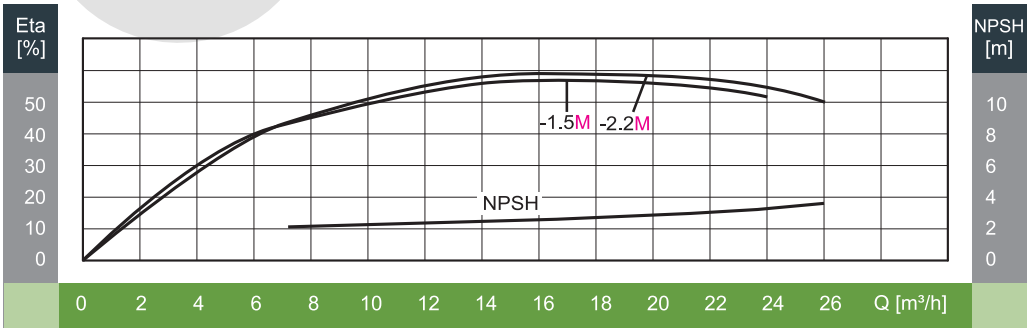
MODEL	DIAMETER		POWER		SIZE (mm)				WEIGHT (kg)
	INLET	OUTLET	kW	HP	L1	L2	L3	H	
DHM15-1.1M	40A	32A	1.1	1.5	364.5	127	54	232.5	16
DHM15-1.5M	40A	32A	1.5	2	405.5	127	54	248.5	20
DHM15-2.2M	40A	32A	2.2	3	405.5	127	54	248.5	23

Notice | For the 3phase 380V power input, "M" is omitted from the model name.

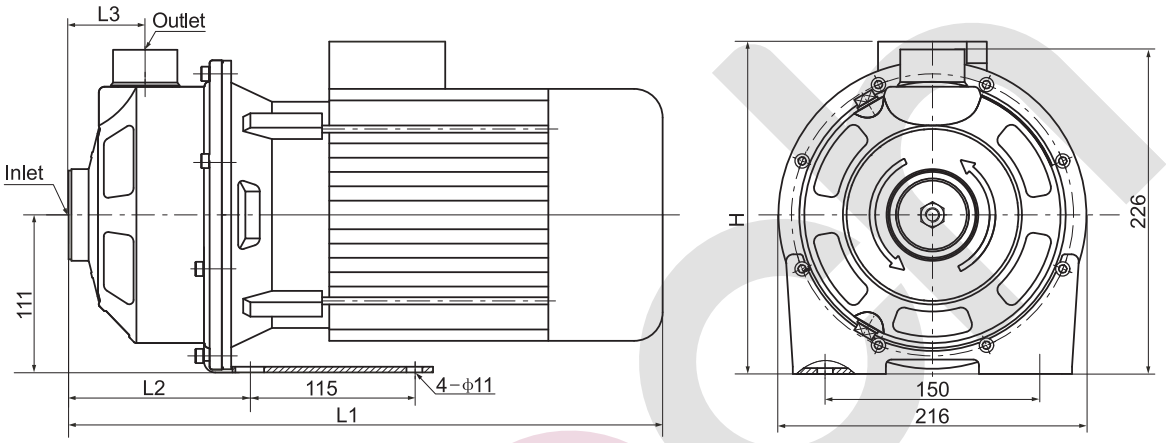
Performance Curve







Installation Sketch



Dimension / Weight

MODEL	DIAMETER		POWER		SIZE (mm)				WEIGHT (kg)
	INLET	OUTLET	kW	HP	L1	L2	L3	H	
DHM20-1.5M	50A	32A	1.5	2	405.5	127	54	248.5	20
DHM20-2.2M	50A	32A	2.2	3	405.5	127	54	248.5	23

Notice | For the 3phase 380V power input, "M" is omitted from the model name.


dooch
두크펌프

GLOBAL PUMP SOLUTION DOOCH

50Hz


• DP


• XQ-DP


• NSQ-DP

IN-LINE CIRCULATION PUMP SYSTEM

DP, XQ-DP, NSQ-DP SERIES

dooch
두크펌프

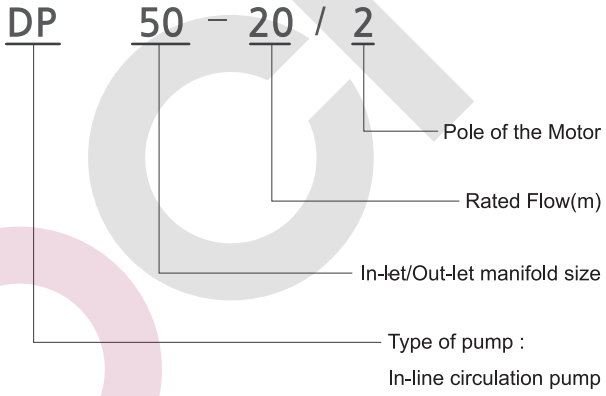
DP 50Hz

IN-LINE CIRCULATION PUMP

Feature

DP pumps are all single stage, inline centrifugal pumps equipped with a standard motor and a mechanical seal. Compared with other pumps in similar structure, these pumps are less accessible to the impurity in the liquid. The pumps are designed to be pulled out from the top when diassembled. It can be repaired without affecting the pipelines. The mechanical seal for DP200 and above is a cartridge mechanical seal. The DP pumps have the option to be equipped with Dooch's variable frequency drives (NSQ-DP, XQ-DP).

Definition of the Model



Motor specification

Motor Type : TEFC
Protection class : 54~55
Insulation class : F
Power Range : Under 7.5kW-3phase 220/380V
Over 11kW - 3phase 380V

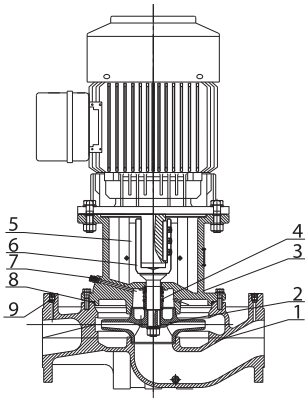
Application

Cooling / heating system
Housing heating system
Air-conditioning system
Industrial water supply system

Pumping Liquid

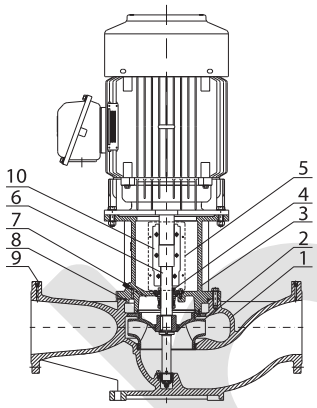
Thin, clean, non-explosive liquid, not containing solid particles or fibers

Sectional Drawing(DP32 ~ DP150)



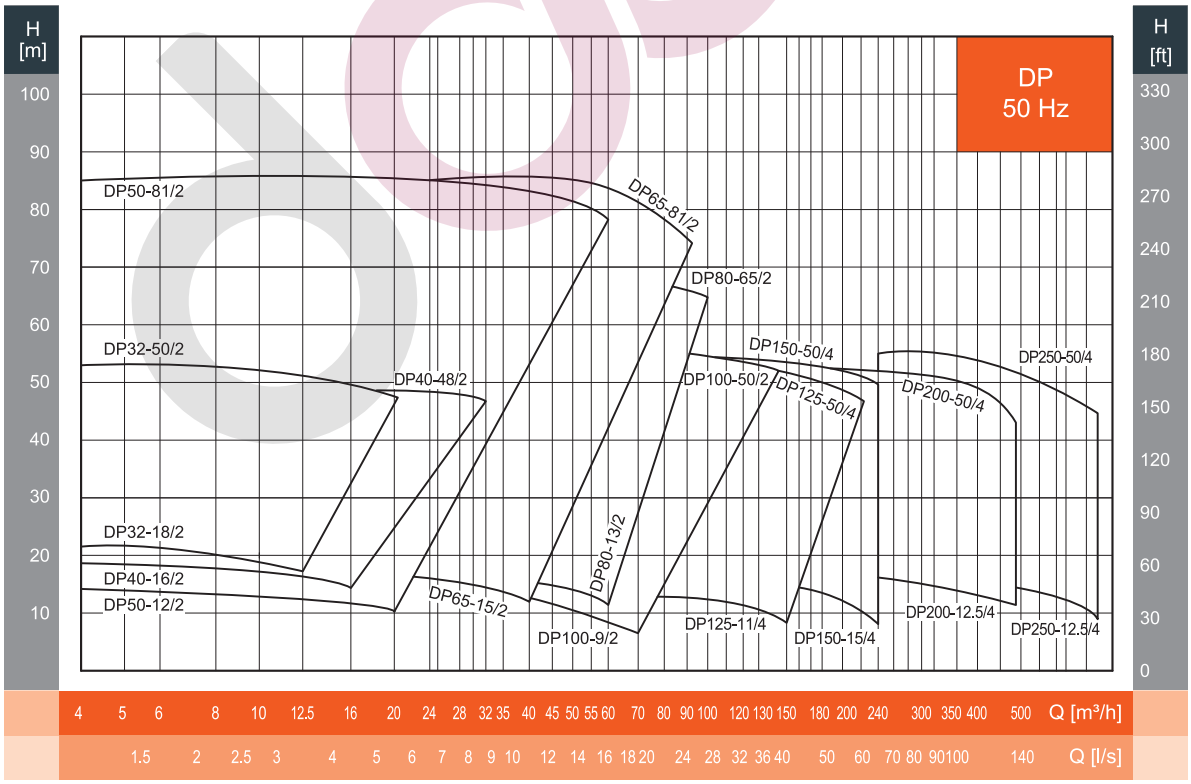
No.	PARTS	MATERIAL
1	Pump housing	Cast iron
2	Impeller	Cast iron
3	Pump head	Cast iron
4	Mechanical Seal	Carbon/Silicon carbide
5	Coupling Cover	Stainless steel
6	Shaft	Stainless steel
7	Air bolt	Brass
8	O-ring	NBR
9	Plug	Stainless steel

Sectional Drawing(DP200 ~ DP250)



No.	PARTS	MATERIAL
1	Pump Housing	Cast iron
2	Impeller	Cast iron
3	Pump head	Cast iron
4	Mechanical Seal	Carbon/SIC, EPDM (Cartridge seal type)
5	Coupling Cover	Stainless steel
6	Shaft	Stainless steel
7	Air bolt	Brass
8	O-ring	NBR
9	Plug	Stainless steel
10	Coupling	Carbon steel

Performance Range



XQ-DP / NSQ-DP
INVERTER IN-LINE CIRCULATION PUMP

Inverter In-line Pump

XQ-DP/NSQ-DP pumps are built on the basis of DP pumps. Enhanced with the NSQ/XQ drives, the DP pump together with the appropriate sensor is turned into an intelligent, variable speed pump system. The NSQ/XQ drives adjust the speed of the motor to provide constant pressure or differential pressure according to the flow rate.

Operation

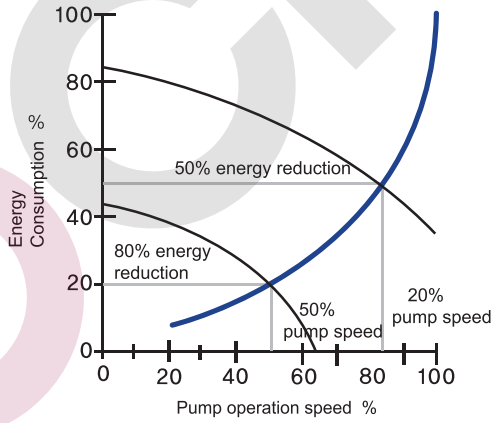
The system consists of an electric pump operated by an electronic control system(VFD) that delivers constant pressure by reducing or increasing the flow rate based on the water demand. In case of an excessive system pressure decrease, the VFD drive starts the pump and regulates its speed until the operating pressure is re-established. The pump's speed depends on the water demand. If the water consumption increases, the control system raises the speed of the pump up to the max. set value. If there is no further water demand, the pump automatically stops.

Application

- To control frequent water consumption
- To supply water with constant pressure
- To communicate pump with external communication.

Energy Consumption Curve At Varions Pump Speed

If the pump speed decreases 20% depending on flow and head, the pump energy consumption descend 50%.



Benefits

- Energy saving (max 50%)
- Eliminates the need for separate control panel, bypass lines and control valves.
- Water hammer protection
- Soft start functionality to reduce the mechanical stress on pump system
- Compact assembly and installation

Definition of model

NSQ - DP 50 - 20 / 2 (M) I

- NSQ: V.F.D.
- DP: Pump Type :In-line circulation pump
- 50: Inlet/Outlet flange size
- 20: Rated Flow(m)
- 2: Pole of the motor
- (M): Input power
- I: Application

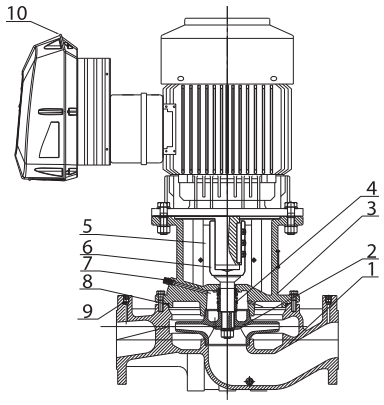
I	Without I
Water supply	Circulation

M	Without M
Input power 1Φ×220V	Input power3Φ×380V

2	4
2 pole	4 pole

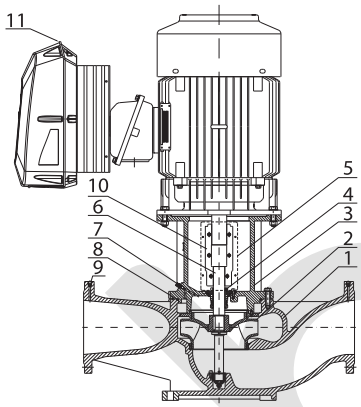
Model	XQ-Drive	NSQ-Drive
Feature		
	Built-in DC reactor and EMC filter provides optimal stability and the lowest possible energy consumption.	Variable Frequency Drive mounted exclusive controller for pump

Sectioanl Drawing(DP32 ~ DP150)



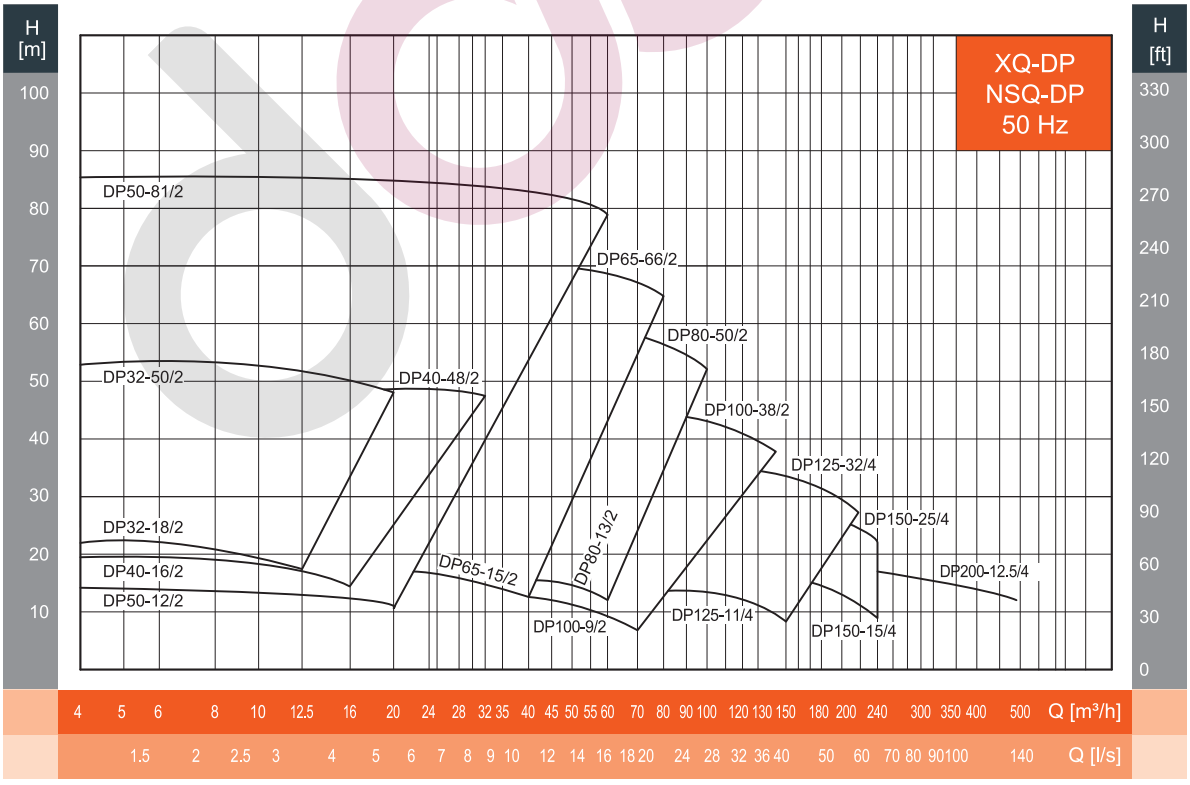
No.	PARTS	MATERIAL
1	Pump housing	Cast iron
2	Impeller	Cast iron
3	Pump head	Cast iron
4	Mechanical Seal	Carbon/Silicon carbide
5	Coupling Cover	Stainless steel
6	Shaft	Stainless steel
7	Air bolt	Brass
8	O-ring	NBR
9	Plug	Stainless steel
10	V.F.D.	XQ or NSQ Drive

Sectional Drawing(DP200)



No.	PARTS	MATERIAL
1	Pump housing	Cast iron
2	Impeller	Cast iron
3	Pump head	Cast iron
4	Mechanical Seal	Carbon/SIC, EPDM (Cartridge seal type)
5	Coupling Cover	Stainless steel
6	Shaft	Stainless steel
7	Air bolt	Brass
8	O-ring	NBR
9	Plug	Stainless steel
10	Coupling	Carbon steel
11	V.F.D.	XQ or NSQ Drive

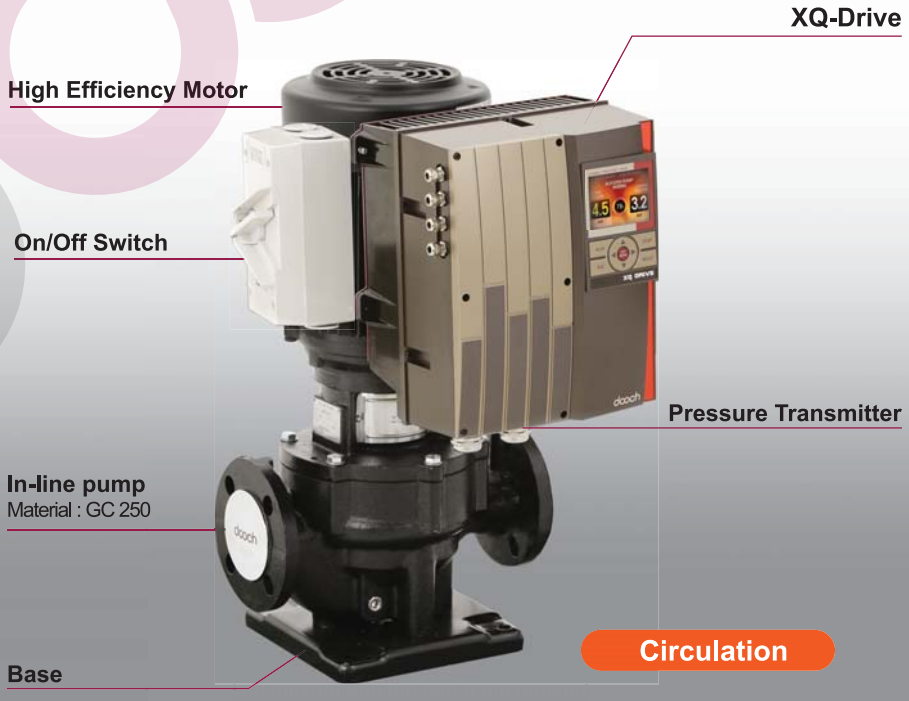
Performance Range



XQ-DP

Water Supply

Circulation



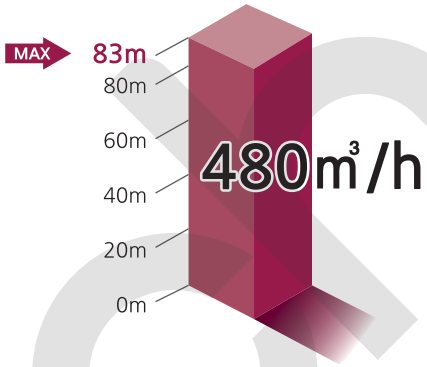
XQ-DP features

XQ-DP pumps are bulit on the basis of DP pumps. Enhanced with XQ-Drive, the pump together with the appropriate sensor is turned into an intelligent, variable speed pump system.

3.5" color display is able to provide the operating status of the pump and GUI(Graphical User Interface)is able for user to set the pressure easily.

Specification

- Max. Flow : 480m³/h
- Max. Head : 83m
- Motor Power: 0.75~22kW (1~30HP)
- Input Power : 3Φ×380V / 50 & 60Hz
- Control Mode : pressure/differential pressure/ temperature



Functions

- Control mode- pressure/differential pressure
- Pressure setting
- Dry-running protection
- Freezing protection
- Detect discharge flowless automatically.
- Automatic recovery after power failure
- Protect pump and drive
- 3.5" color LCD
- Display operation status and RS-485 communication (OPTION)

XQ-DP benefit

- 3.5" color LCD
- Built-in EMC filter and DC reactor - Reduce noise and harmonic distortion
- Energy saving (MAX. 50%)
- Optimize the pump operation
- Water hammer protection and low noise operation
- Compact assembly and installation
- Eliminate the need for separate control panel, bypass lines and control valves.
- Extend the life of the pump
- Easy and convenient installation
- User friendly

Main Components

In-line Pump
DP Series

Premium V.F.D. for pump
XQ-Drive

Pressure tank

Exclusive valve for Pump

NSQ-DP

Water Supply

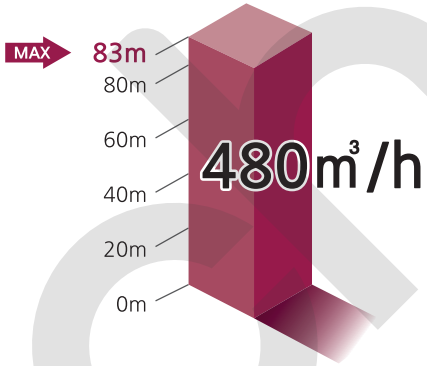
Circulation

NSQ-DP Features

NSQ-DP consist of an electric pump(DP pump)operated by an electronic control system(V.F.D).
Compared with DP pump, NSQ drive and DP pump together with the appropriate sensor are turned into an intelligent, variable speed pump system.

Specification

- Max. : 480m³/h
- Max Q. : 83m
- Pump Power : 0.75~22kW (1~30HP)
- Input Power : 3Φ×380V / 50 & 60Hz
  1Φ×220V / 50 & 60Hz
- Control mode : pressure /differential pressure / temperature



Function

- Control mode - pressure/ differential pressure
- Set the setting pressure
- Dry-running and freeze protection
- Automatic flowless Sensor
- Automatic recovery after power failure
- Inverter and pump protection
- FND- status monitoring

NSQ-DP

- Energy saving (Max. 50%)
- Optimize the pump operation
- Water hammer protection / Low noise operation
- Compact assembly and installation
- Eliminate the need for separate control panel, bypass-lines and control valves.
- Extend life of the pump and motor
- Easy and convenient installation
- User friendly

Main Components

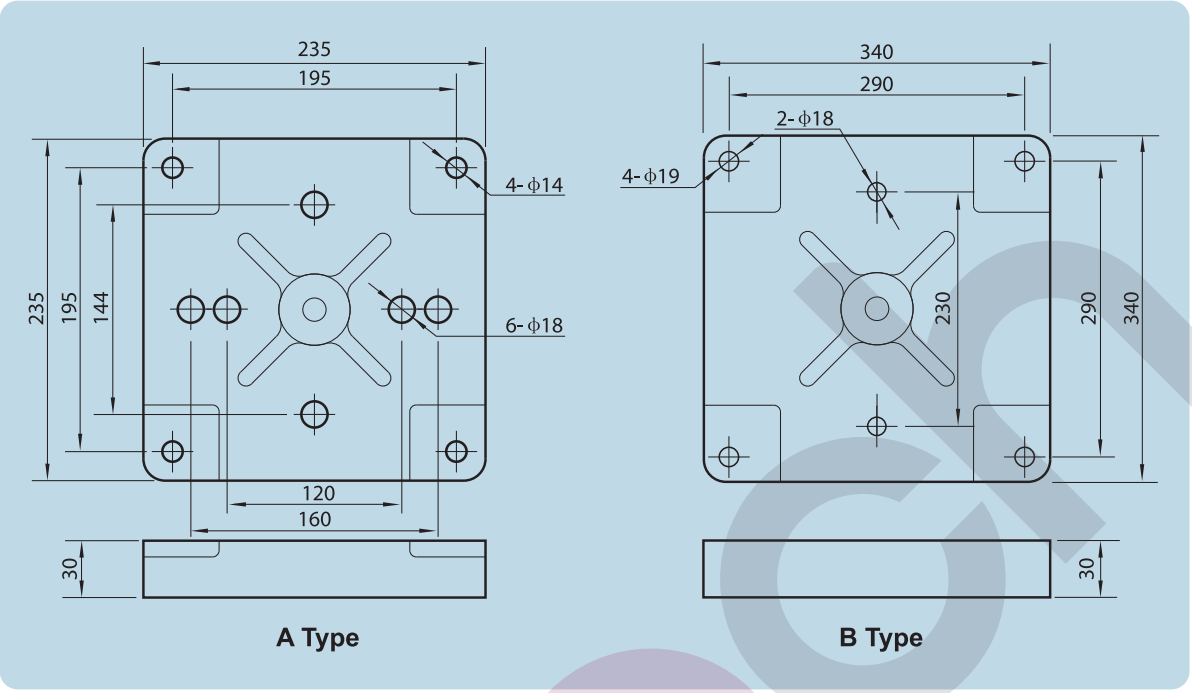
In-Line Pump
DP Series

V.F.D. for pump
NSQ-Drive

Pressure Tank

Exclusive Valve for Pump

Base Plate



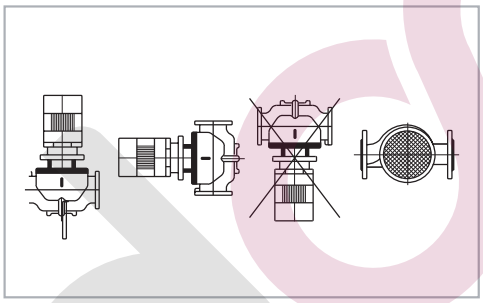
No.	MODEL	BASE PLATE TYPE	No.	MODEL	BASE PLATE TYPE	No.	MODEL	BASE PLATE TYPE
1	DP32-18/2	A	24	DP65-15/2	A	47	DP100-22/2	A
2	DP32-21/2	A	25	DP65-18/2	A	48	DP100-25/2	B
3	DP32-25/2	A	26	DP65-22/2	A	49	DP100-32/2	B
4	DP32-32/2	A	27	DP65-30/2	A	50	DP100-34/2	B
5	DP32-38/2	A	28	DP65-34/2	A	51	DP100-38/2	B
6	DP32-50/2	A	29	DP65-40/2	A	52	DP100-52/2	B
7	DP40-16/2	A	30	DP65-50/2	A	53	DP125-11/4	B
8	DP40-18/2	A	31	DP65-60/2	A	54	DP125-14/4	B
9	DP40-20/2	A	32	DP65-66/2	A	55	DP125-20/4	B
10	DP40-25/2	A	33	DP65-81/2	A	56	DP125-24/4	B
11	DP40-30/2	A	34	DP80-13/2	A	57	DP125-28/4	B
12	DP40-36/2	A	35	DP80-18/2	A	58	DP125-32/4	B
13	DP40-48/2	A	36	DP80-20/2	A	59	DP125-38/4	B
14	DP50-12/2	A	37	DP80-26/2	A	60	DP125-42/4	B
15	DP50-15/2	A	38	DP80-30/2	A	61	DP125-50/4	B
16	DP50-18/2	A	39	DP80-38/2	A	62	DP150-15/4	B
17	DP50-24/2	A	40	DP80-47/2	A	63	DP150-18/4	B
18	DP50-28/2	A	41	DP80-50/2	A	64	DP150-20/4	B
19	DP50-35/2	A	42	DP80-65/2	A	65	DP150-25/4	B
20	DP50-40/2	A	43	DP100-9/2	A	66	DP150-33/4	B
21	DP50-50/2	A	44	DP100-11/2	A	67	DP150-40/4	B
22	DP50-65/2	A	45	DP100-15/2	A	68	DP150-50/4	B
23	DP50-81/2	A	46	DP100-17/2	A			

INSTALLATION REQUIREMENTS

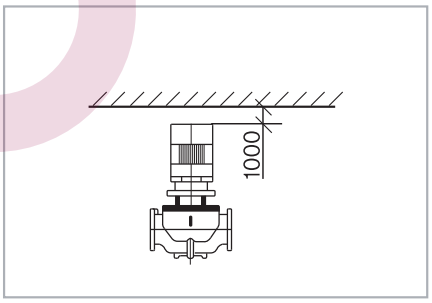
Detailed requirements of installation

1. If the system pipeline can support the pumps, pumps with 2.2kW motor power(including 2.2kW) can be hung in line; if the system pipeline can not support the pumps or the pump motor power is higher than 2.2kW, the pumps must be installed in brackets or base.
2. Pump with motor power lower than 2.2kW(including 2.2kW) can be installed horizontally or vertically to the pipeline. Pumps with motor power higher than 2.2kW, can only be installed vertically to the pipeline. (see 2-A)
3. The pump installation shall not allow the system pipeline tensile force to be transferred to the pump body.
4. The pump should be installed in the environment with sufficient cooling and the cooling air shall not be above 40˚C
5. If the pumps are installed outdoors, covers should be installed to protect electric components from water.
6. For the convenient maintenance, there should be enough space above and below the pumps. (see 2-B).
7. To prevent noises and vibration and ensure the best operation, anti-vibration base shall be used during installation. Generally, cement base with the weight equal or bigger than 1.5 x pump weight shall be adopted. (see 2-C)
8. The base is optional as the client's requirement. (Refer to the base lay-out for the dimension.)

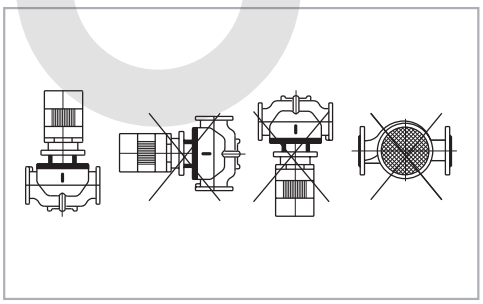
For power 〈 2.2kW



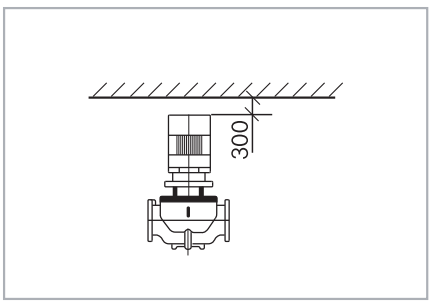
For power 〉 5.5kW



For power 〉 2.2kW



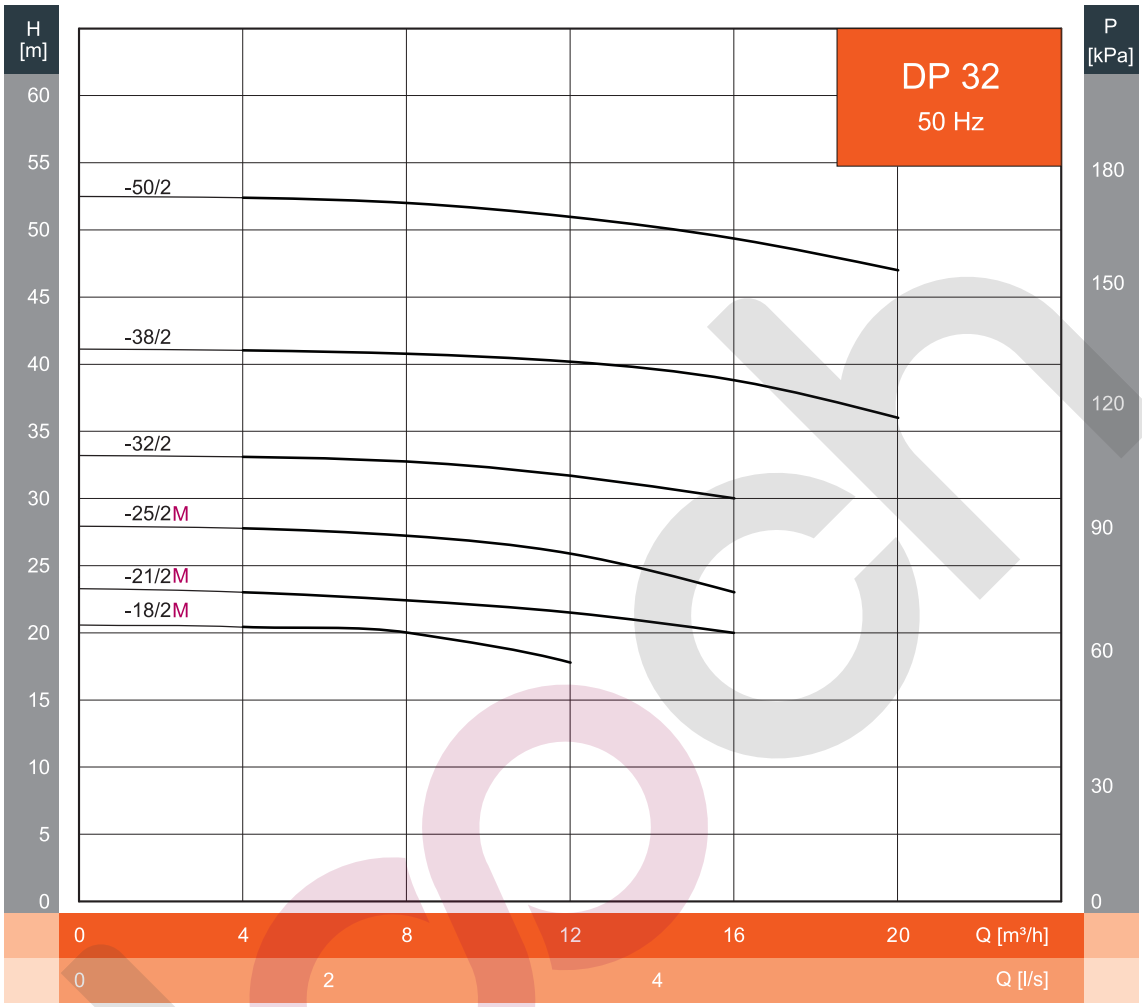
For power 〈 5.5kW

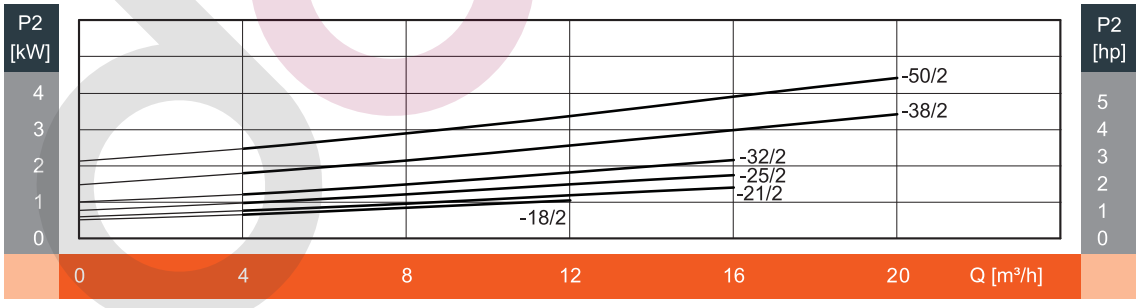


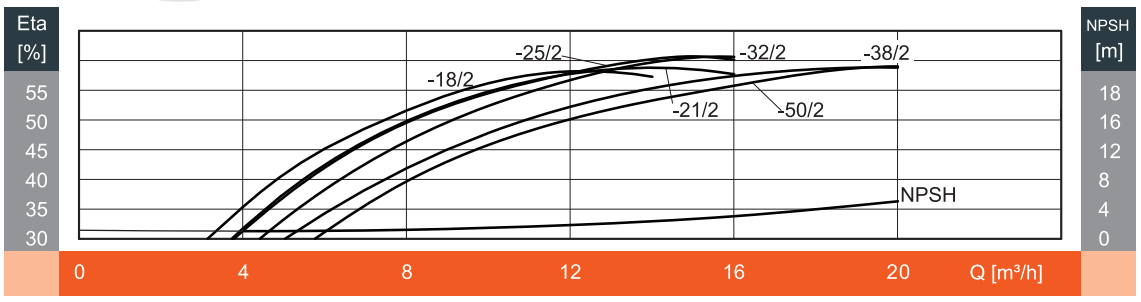
Pic. 2-A

Pic. 2-B

Performance Curve



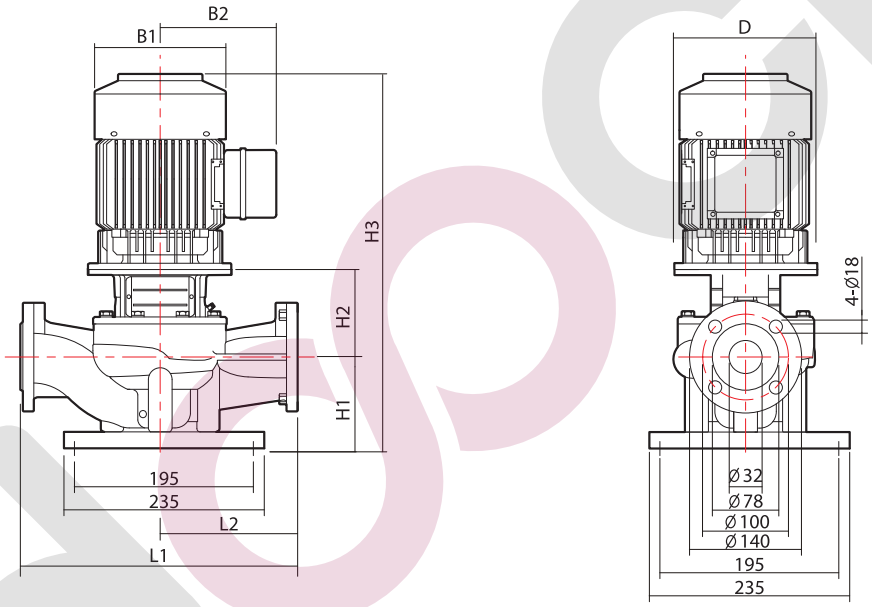




Data Sheet

MODEL	POWER		Q (m^3/hr)	4	8	12.5	16	20
	kW	HP						
DP32-18/2	1.1	1.5	HEAD (m)	19	18	17		
DP32-21/2	1.5	2		23	22	21	19	
DP32-25/2	2.2	3		28	27	26	23	
DP32-32/2	3	4		33.5	33	32	31	
DP32-38/2	4	5.5		41.5	41	40	37	36
DP32-50/2	5.5	7.5		51.8	51.5	51	49	47

Installation Sketch

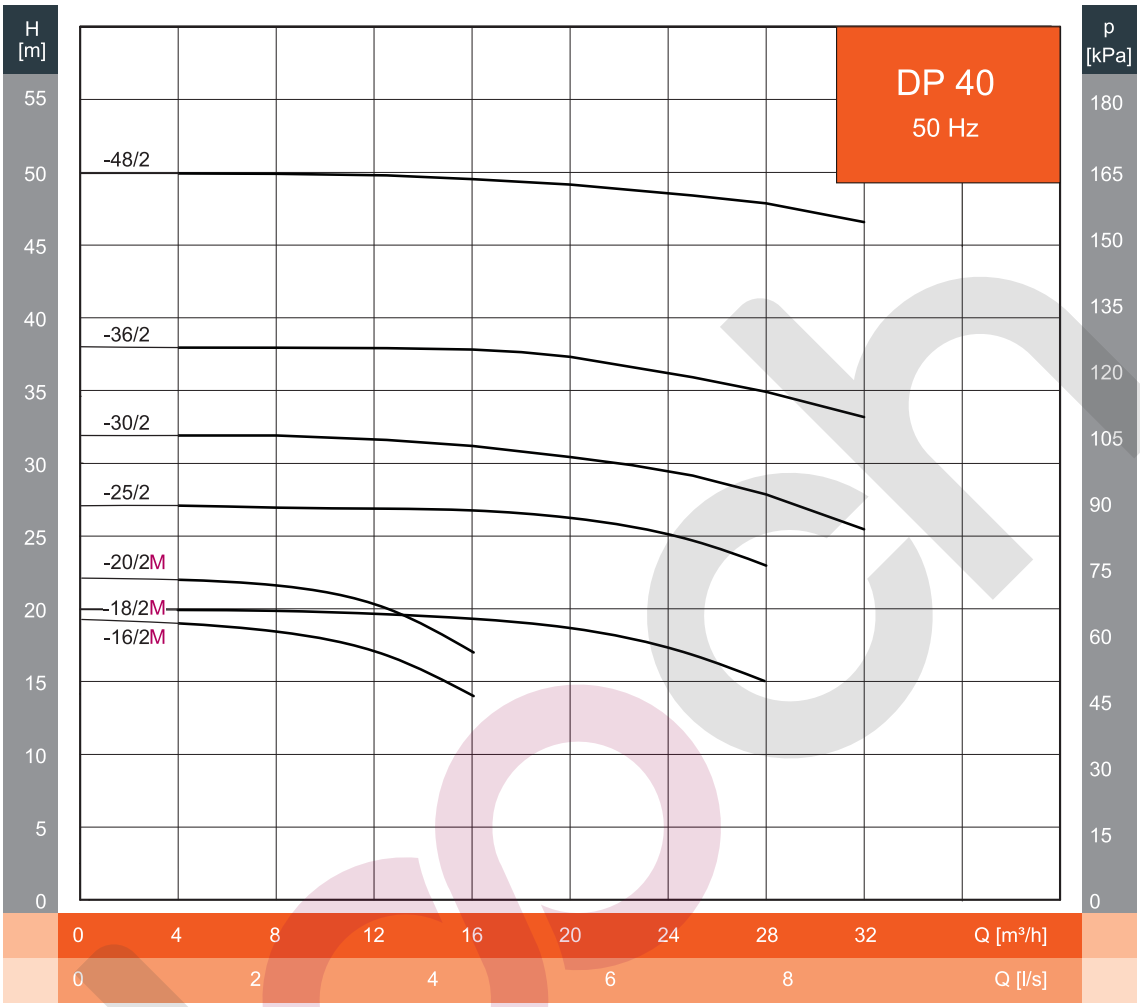


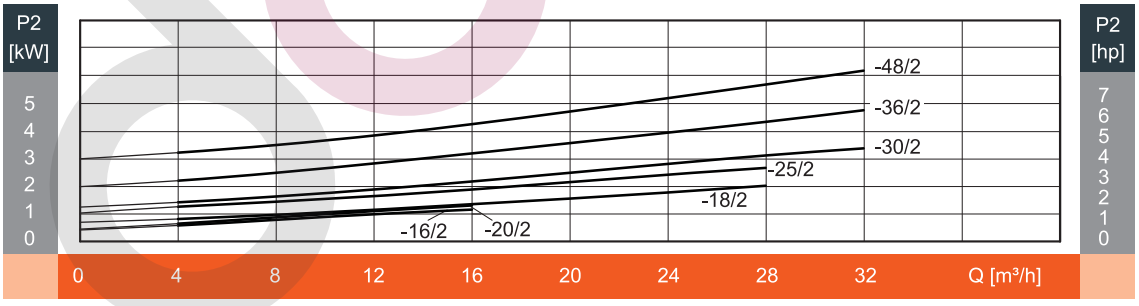
Dimension / Weight

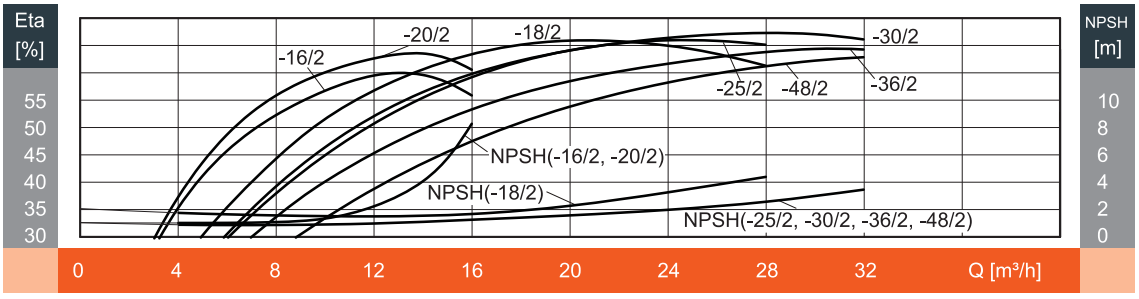
MODEL	DIMENSION (mm)								WEIGHT (kg)
	D	B1	B2	H1	H2	H3	L1	L2	
DP32-18/2	140	158	143	100	165.5	520.5	340	170	56
DP32-21/2	140	180	155	100	165.5	555.5	340	170	62
DP32-25/2	140	180	155	100	165.5	555.5	340	170	65
DP32-32/2	160	220	195	100	184.5	624.5	340	170	74
DP32-38/2	160	220	195	100	184.5	624.5	440	220	85
DP32-50/2	200	260	215	100	212.5	695.5	440	220	119

Remark | The motor specification is based on Dooch's standard motor.

Performance Curve



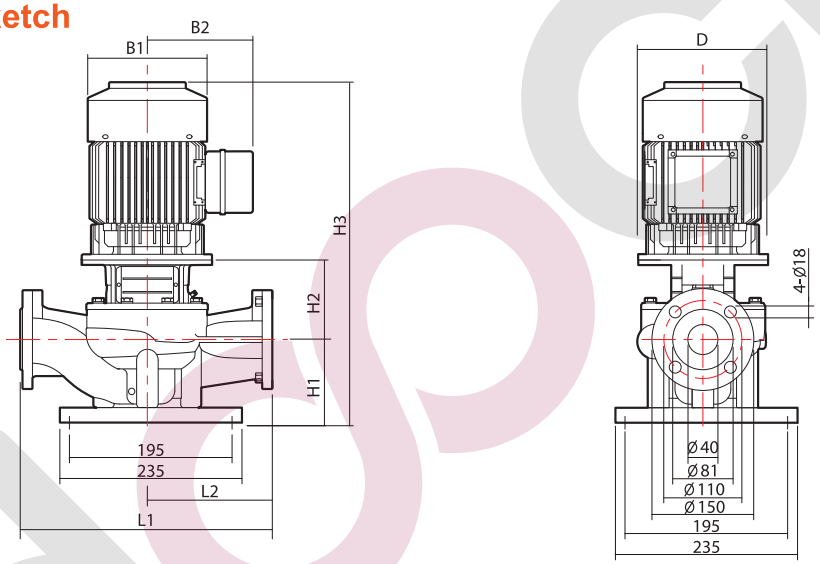




Data Sheet

MODEL	POWER		Q (m^3/hr)	4	8	12.5	16	20	25	28	32
	kW	HP									
DP40-16/2	1.1	1.5	HEAD (m)	19	18.5	17	14.5				
DP40-20/2	1.5	2		22	21	20	17				
DP40-18/2	2.2	3		21.5	21	20.5	20	19	17.5	16	
DP40-25/2	3	4		27.7	27.6	27.4	27	26	25	24	21
DP40-30/2	4	5.5		32	31.9	31.8	31.6	31	30	28	26
DP40-36/2	5.5	7.5		38.4	38.5	38.4	38.2	37	36	35	34
DP40-48/2	7.5	10		50.6	50.3	50.1	50	49	48	47	46

Installation Sketch

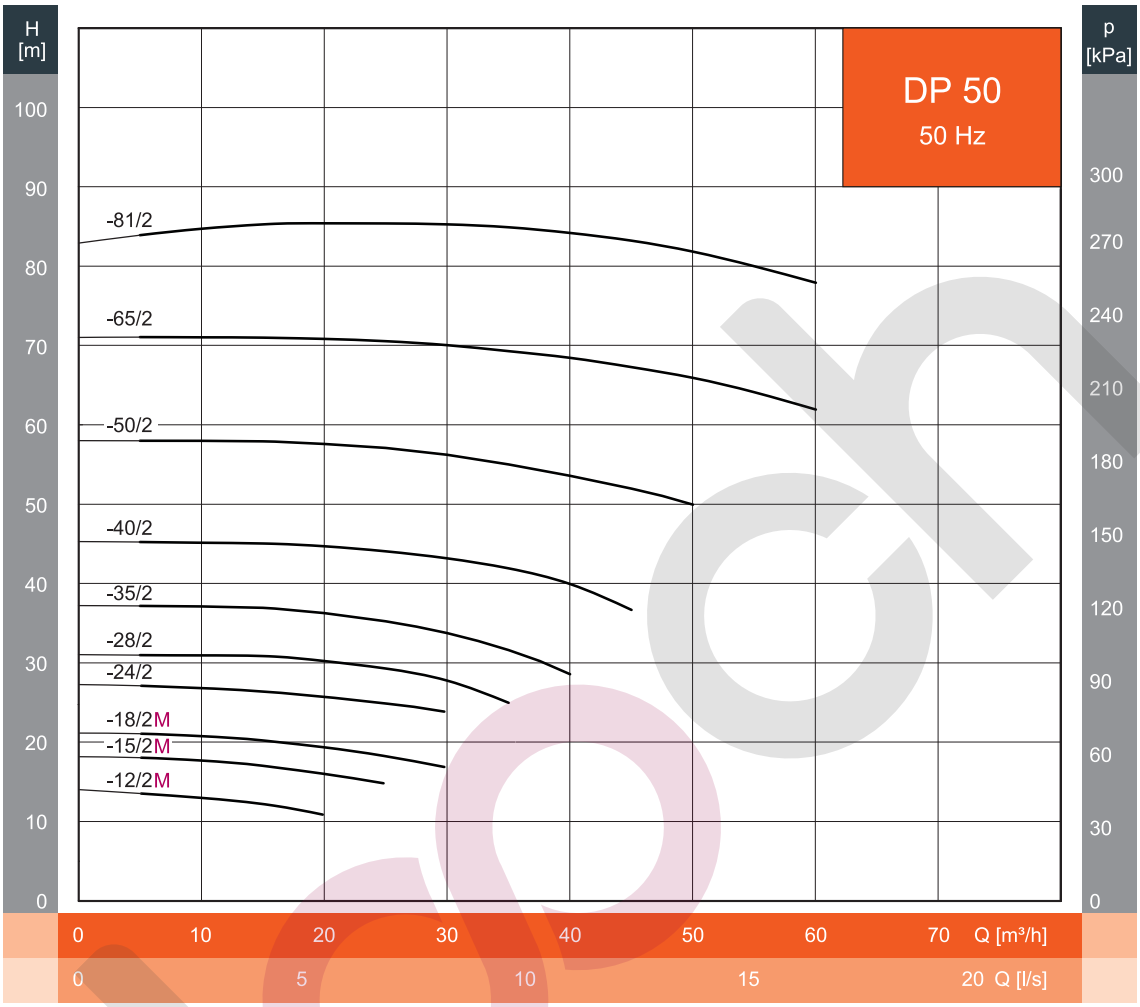


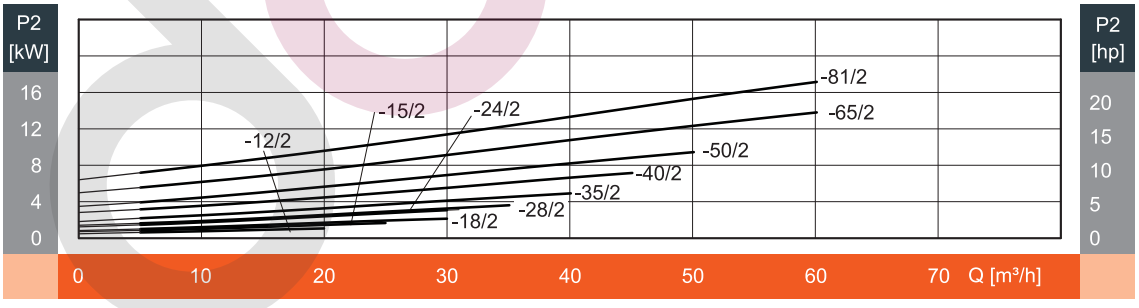
Dimension / Weight

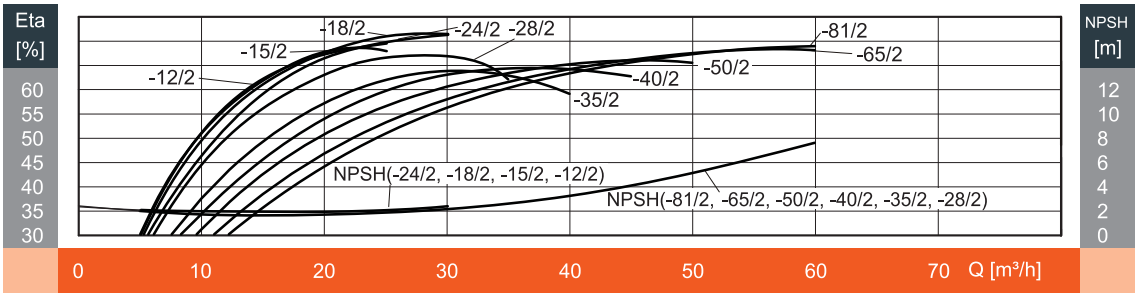
MODEL	DIMENSION (mm)								WEIGHT (kg)
	D	B1	B2	H1	H2	H3	L1	L2	
DP40-16/2	122	158	143	68	150	473	320	160	46
DP40-20/2	140	180	155	68	160	518	320	160	52
DP40-18/2	140	180	155	100	165.5	555.5	340	170	59
DP40-25/2	160	220	195	100	184.5	624.5	340	170	76
DP40-30/2	160	220	195	100	184.5	624.5	340	170	83
DP40-36/2	200	260	215	110	212.5	705.5	440	220	121
DP40-48/2	200	260	215	110	212.5	705.5	440	220	125

Remark | The motor specification is based on Dooch's standard motor.

Performance Curve



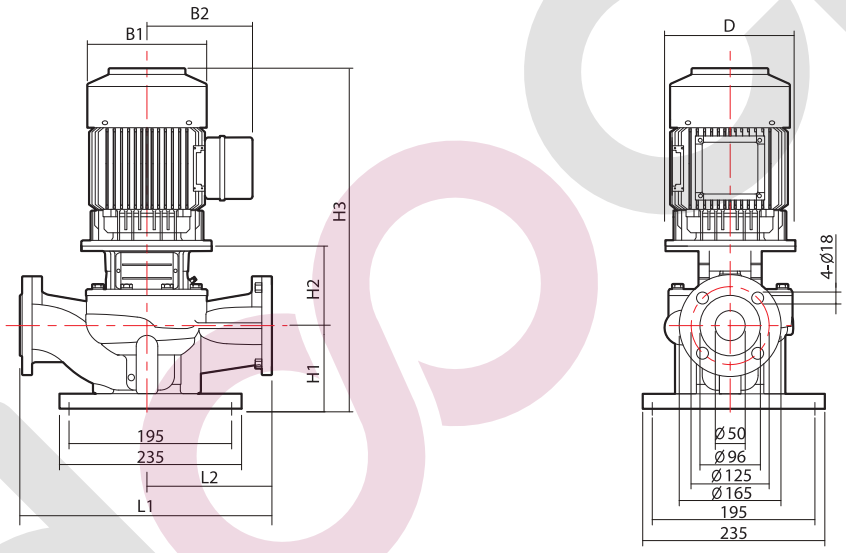




Data Sheet

MODEL	POWER		Q (m^3/hr)	5	10	15	16	20	25	30	35	40	45	50	55	60
	kW	HP														
DP50-12/2	1.1	1.5	HEAD (m)	14	13.5	13	12	11	10							
DP50-15/2	1.5	2		18	17.8	17.2	17	16	15							
DP50-18/2	2.2	3		21	20.7	20.2	20	19	18	17						
DP50-24/2	3	4		27	26.8	26.4	26	25	24	23	22					
DP50-28/2	4	5.5		31.7	31.5	31.2	31	30	29	28	25					
DP50-35/2	5.5	7.5		37.6	37.5	37.1	37	36.5	36	35	32	28	24			
DP50-40/2	7.5	10		45.8	45.7	45.5	45.3	45	44	43.5	42	40	37			
DP50-50/2	11	15		58	58.5	58.6	58.5	58	57	56	55	53	52	49	46	
DP50-65/2	15	20		70	71.15	71.4	71.5	71.3	70.98	70	69	68	67.5	66	64	62
DP50-81/2	18.5	25		83.2	83.7	84	84.2	84.4	84.5	84	83.5	83	82	81	79	77

Installation Sketch

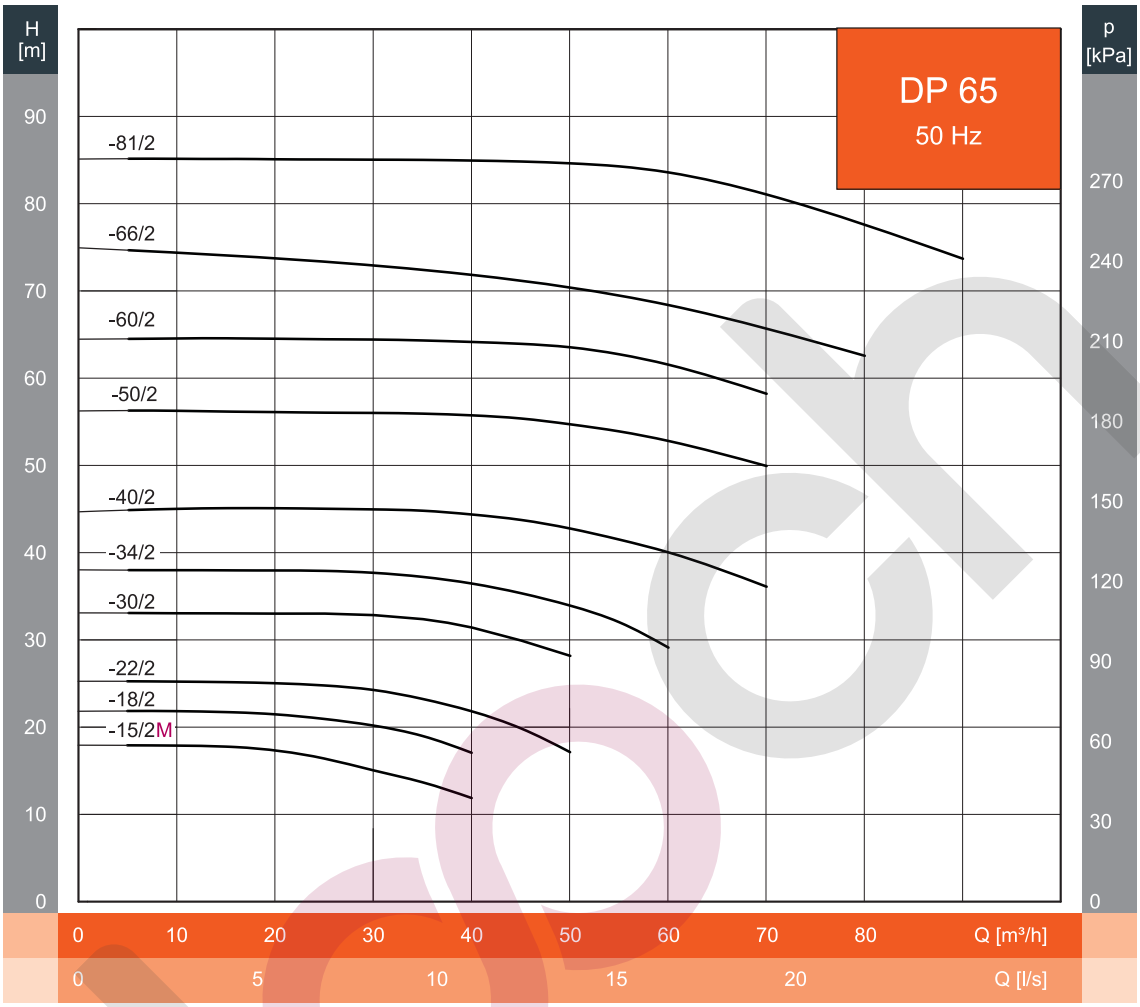


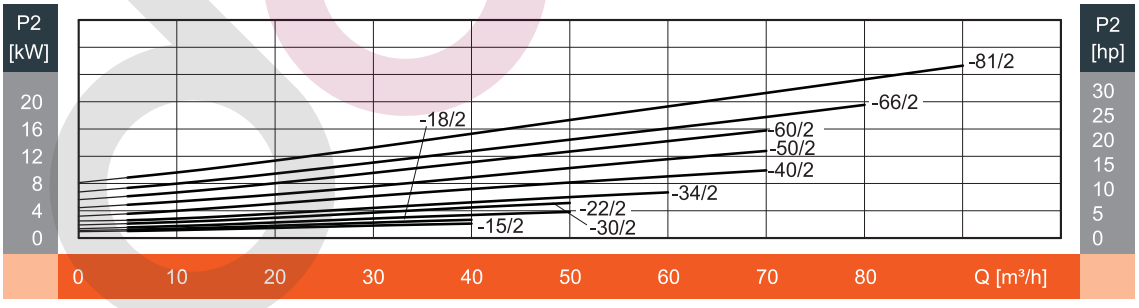
Dimension / Weight

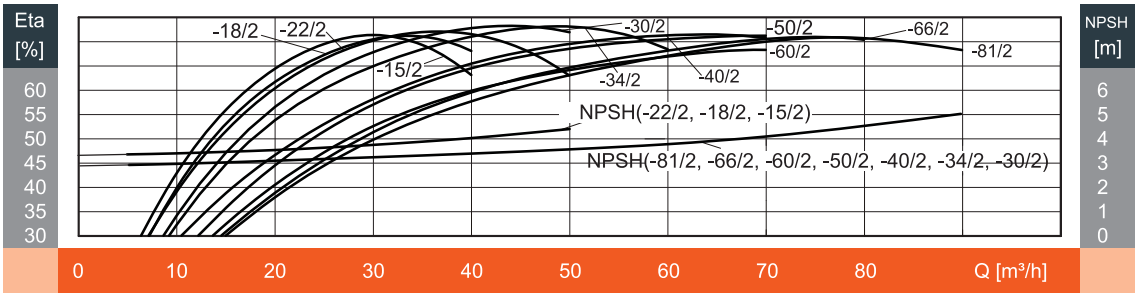
MODEL	DIMENSION (mm)								WEIGHT (kg)
	D	B1	B2	H1	H2	H3	L1	L2	
DP50-12/2	140	158	143	115	153	523	340	170	62
DP50-15/2	140	180	155	115	153	558	340	170	68
DP50-18/2	140	180	155	115	153	558	340	170	71
DP50-24/2	160	220	195	115	172	627	340	170	80
DP50-28/2	160	220	195	115	174.5	629.5	340	170	85
DP50-35/2	200	260	215	115	196.5	694.5	340	170	118
DP50-40/2	200	260	215	115	187	685	440	220	133
DP50-50/2	350	320	260	115	250	870	440	220	199
DP50-65/2	350	320	260	115	250	870	440	220	209
DP50-81/2	350	320	260	115	250	925	440	220	267

Remark | The motor specification is based on Dooch's standard motor.

Performance Curve



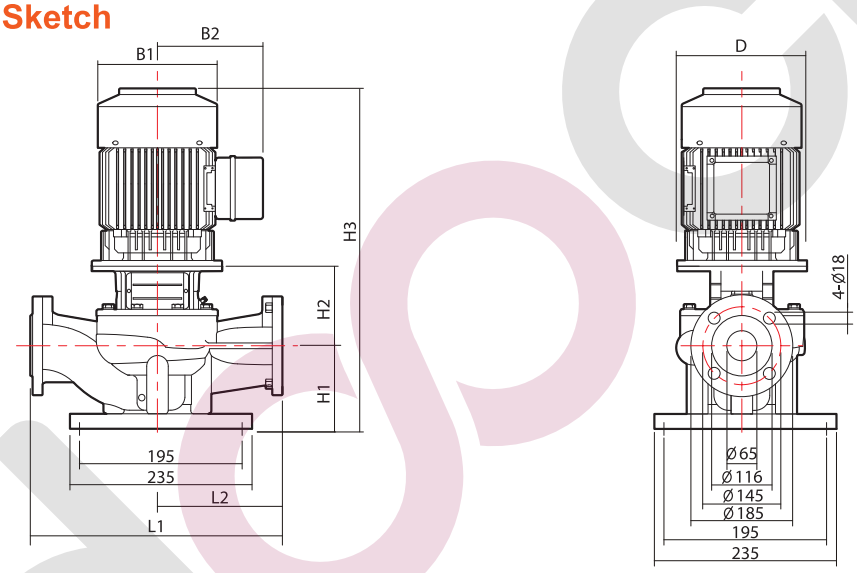




Data Sheet

MODEL	POWER		Q (m^3/hr)	5	10	15	16	20	25	30	35	40	45	50	55	60	70	80	90
	kW	HP																	
DP65-15/2	2.2	3	HEAD (m)	18.1	18.2	18	17.5	17	16	15	14	12							
DP65-18/2	3	4		22	21.9	21.7	21.6	21.5	21	20	18	17							
DP65-22/2	4	5.5		26	26.1	26	25.9	25.8	25.5	24.5	24	22	20	17					
DP65-30/2	5.5	7.5		33.4	33.5	33.6	33.5	33.4	33.2	33	32	31	29	28	26	23			
DP65-34/2	7.5	10		38.2	38.3	38.5	38.4	38.3	38	37.5	37	36	35	34	32	29			
DP65-40/2	11	15		44	45	45.3	45.5	45.7	45.6	45.5	45	44	43	42	40	39	37		
DP65-50/2	15	20		55	56	56.5	56.6	56.7	56.6	46.4	56	55.5	55	52	50	48	46		
DP65-60/2	18.5	25		64	64.5	64.7	64.8	65	65.1	65	64.8	64.5	64	63	62	61	59		
DP65-66/2	22	30		72	72.8	73	73.5	74	74.2	74	73.8	73.5	72	71	70	68	65	63	
DP65-81/2	30	40		84	85	85.5	85.6	85.7	85.8	85.9	85.8	85.5	85	84.5	84	83	81	79	74

Installation Sketch

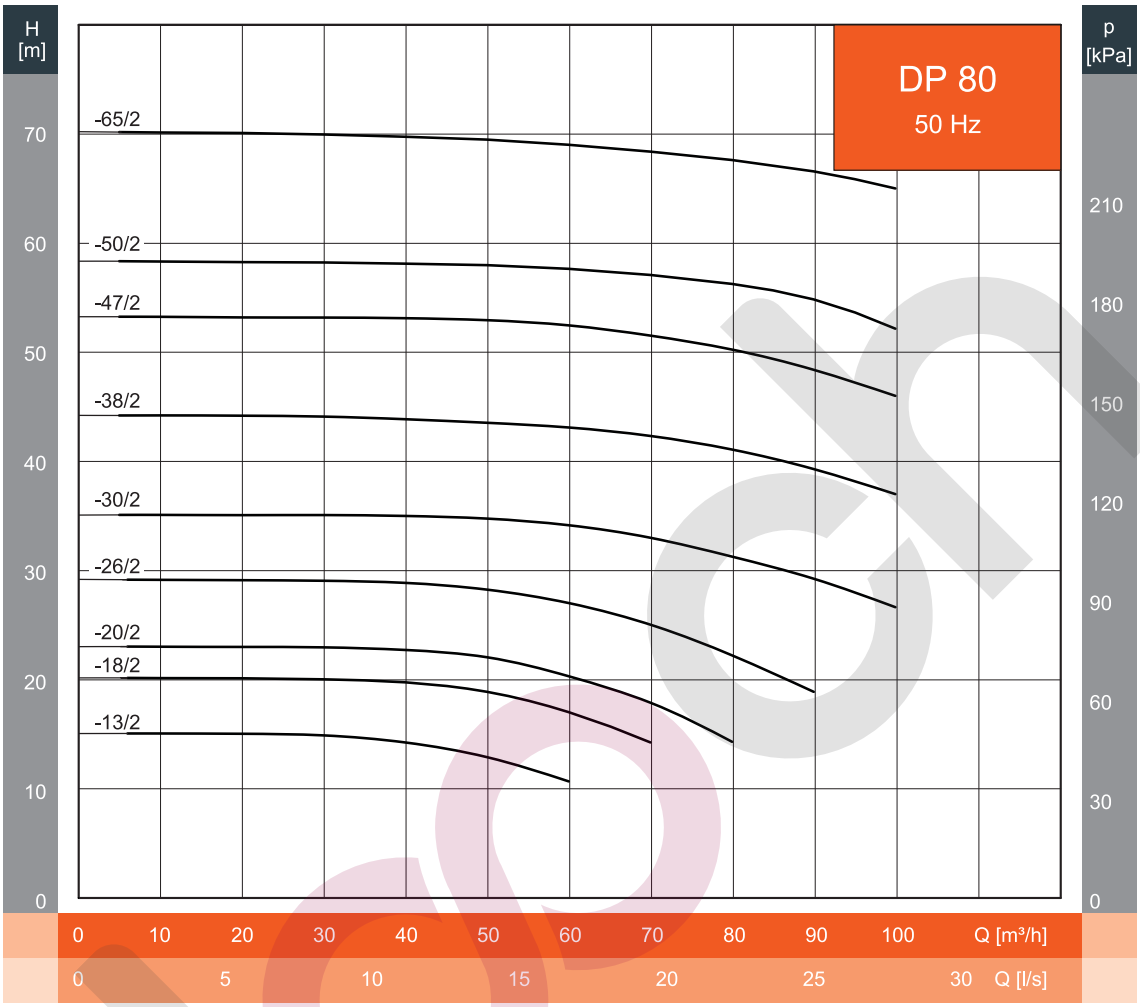


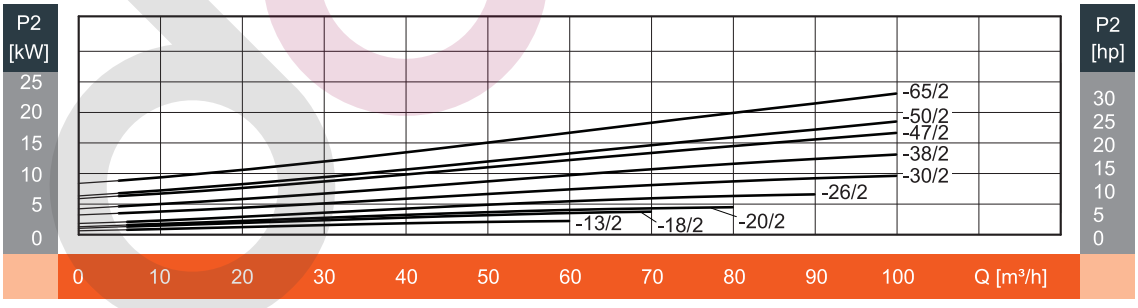
Dimension / Weight

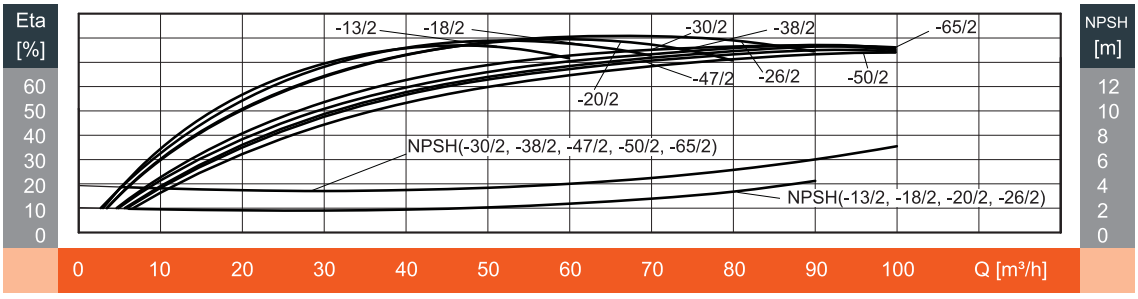
MODEL	DIMENSION (mm)								WEIGHT (kg)
	D	B1	B2	H1	H2	H3	L1	L2	
DP65-15/2	140	180	155	105	172	567	340	170	62
DP65-18/2	160	220	195	105	191	636	340	170	68
DP65-22/2	160	220	195	105	191	636	340	170	71
DP65-30/2	200	260	215	105	213	701	340	170	80
DP65-34/2	200	260	215	105	213	701	340	170	85
DP65-40/2	350	320	260	125	262	892	475	237.5	118
DP65-50/2	350	320	260	125	262	892	475	237.5	133
DP65-60/2	350	320	260	125	262	947	475	237.5	199
DP65-66/2	350	355	280	125	262	965	475	237.5	209
DP65-81/2	400	400	305	125	262	1047	475	237.5	227

Remark | The motor specification is based on Dooch's standard motor.

Performance Curve



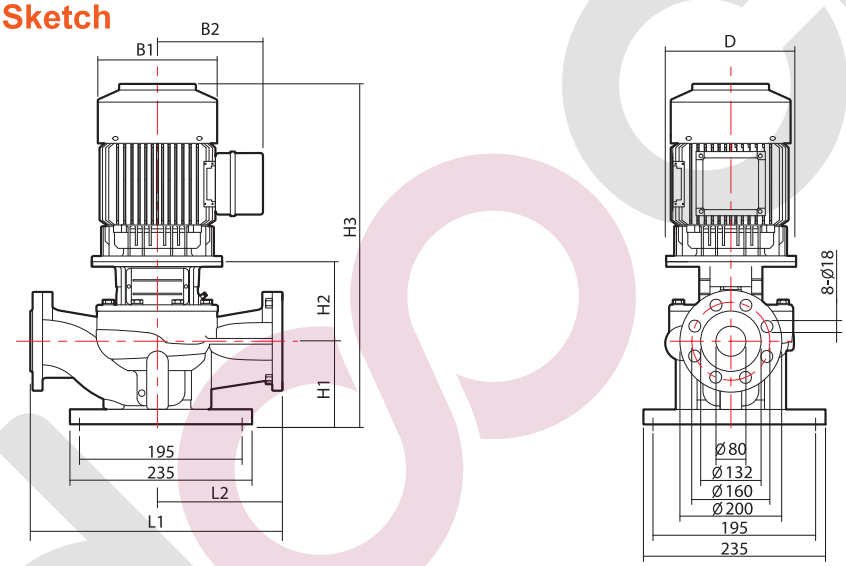




Data Sheet

MODEL	POWER		Q (m^3/hr)	5	10	20	30	40	50	60	70	80	90	100	110	120
	kW	HP														
DP80-13/2	3	4	HEAD (m)	15	15.7	16	15	14	13	10						
DP80-18/2	4	5.5		20	20.3	20.6	20.5	20	19	17	14	11				
DP80-20/2	5.5	7.5		23	23.4	23.6	23.5	23	22	20	18	14				
DP80-26/2	7.5	10		29.3	29.5	29.7	30	29	28	27	25	22	19			
DP80-30/2	11	15		35.3	35.4	35.5	35.4	35	34	33.5	33	31	29	27		
DP80-38/2	15	20		44	44.2	44.5	44.3	44	43.5	43	42	41	40	37		
DP80-47/2	18.5	25		53	53.3	53.5	53.4	53	52.5	52	51	50	48	46		
DP80-50/2	22	30		58.2	58.4	58.6	58.5	58.4	58	57.8	57	56	54	53	48	43
DP80-65/2	30	40		69.5	69.6	69.8	70	69.9	69.7	69	68	67	66	65	62	59

Installation Sketch

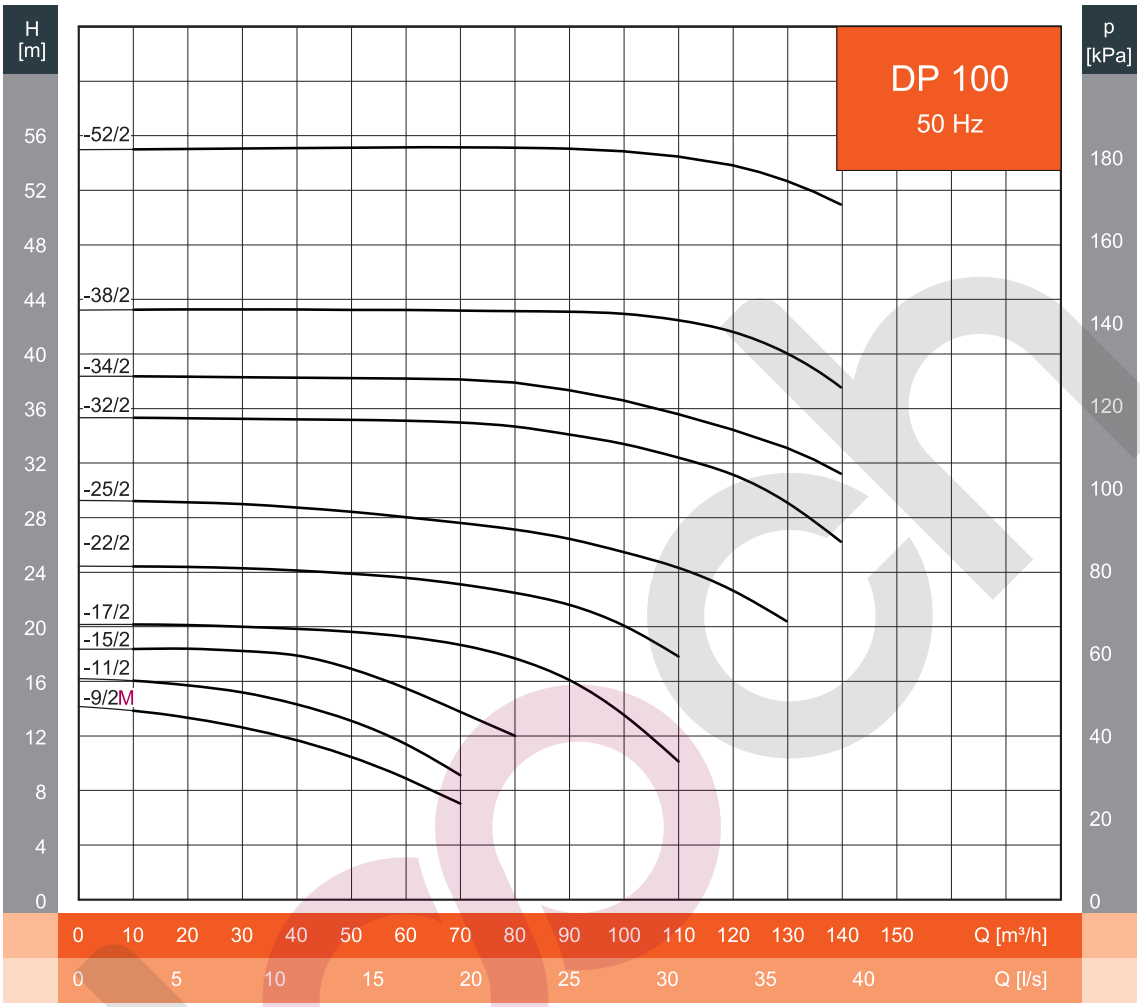


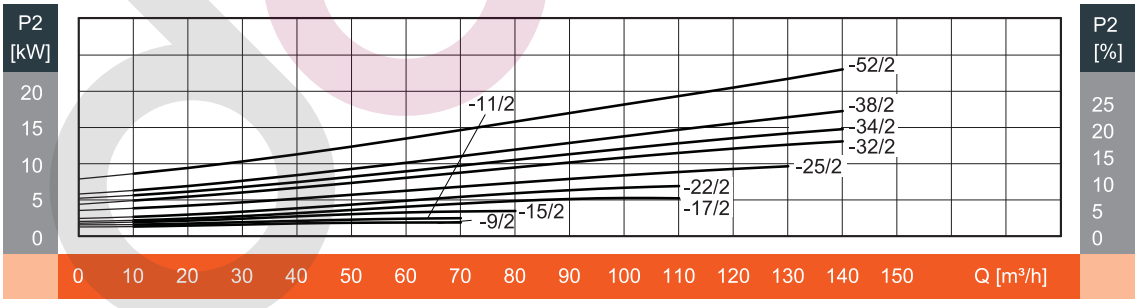
Dimension / Weight

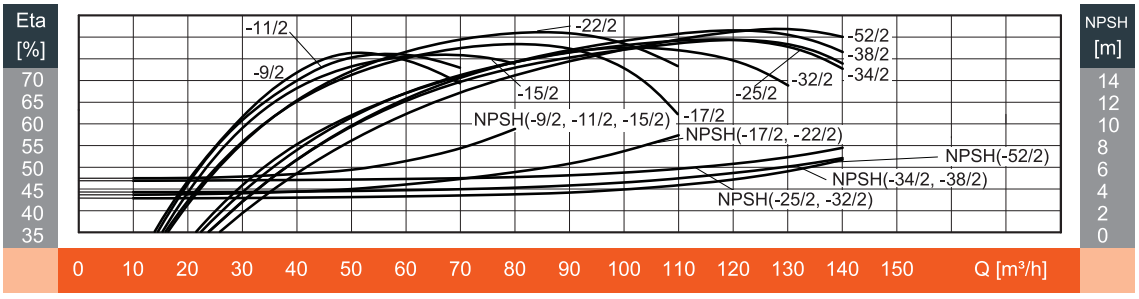
MODEL	DIMENSION (mm)								WEIGHT (kg)
	D	B1	B2	H1	H2	H3	L1	L2	
DP80-13/2	160	220	195	97	219	656	450	225	90
DP80-18/2	160	220	195	97	219	656	450	225	97
DP80-20/2	200	260	215	97	241	721	450	225	120
DP80-26/2	200	260	215	97	241	721	450	225	123
DP80-30/2	350	320	260	115	279	899	500	250	200
DP80-38/2	350	320	260	115	279	899	500	250	210
DP80-47/2	350	320	260	115	279	954	500	250	228
DP80-50/2	350	355	280	115	279	972	500	250	264
DP80-65/2	400	400	305	115	279	1054	500	250	325

Remark | The motor specification is based on Dooch's standard motor.

Performance Curve



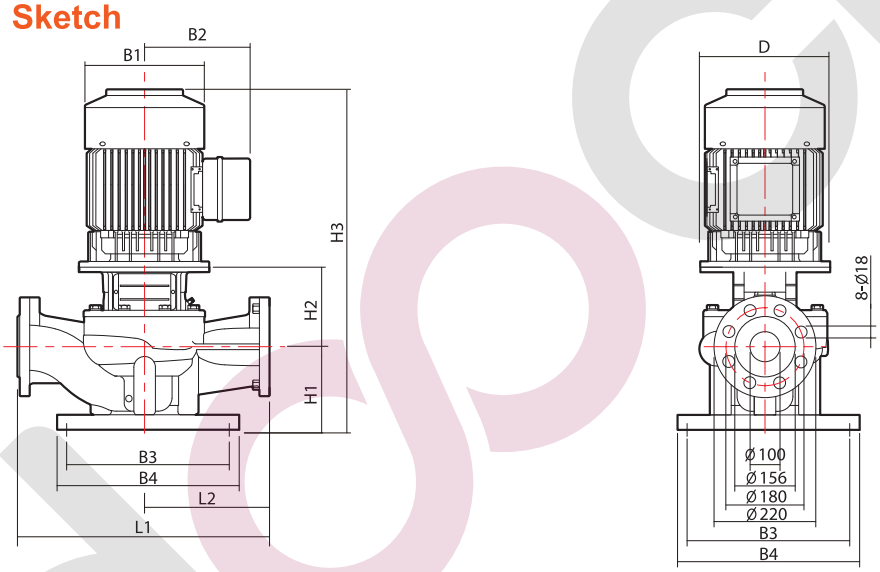




Data Sheet

MODEL	POWER		Q (m^3/hr)	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160
	kW	HP																	
DP100-9/2	2.2	3	HEAD (m)	13	13	12	11	10	8	7									
DP100-11/2	3	4		15	15.5	14.5	14	13	11	10									
DP100-15/2	4	5.5		18.9	18.5	18.6	18	17	15	14	12								
DP100-17/2	5.5	7.5		20	20.5	19.8	19.7	19.6	19.4	19	18	16	14	11					
DP100-22/2	7.5	10		24	24.2	24.1	24	23.8	23.5	23	22	21	20	17					
DP100-25/2	11	15		28.5	29	28.8	28.5	28	27.7	27.5	27	26	25	24	22	20			
DP100-32/2	15	20		35.3	35.5	35.6	35.5	35.3	35	34.5	34	33.5	33	32	31	29	26		
DP100-34/2	18.5	25		37	38	38.1	38.3	38.2	38	37.8	37.5	37	36	35	34	33	31	28	
DP100-38/2	22	30		44	44.5	44.7	44.9	45	45	44.9	44.7	44.5	44	42	41	37	36	33	
DP100-52/2	30	40		54.5	54.5	54.5	54.5	54	54	54.8	54.8	54.9	55	54.8	54.5	53	51	46	40

Installation Sketch

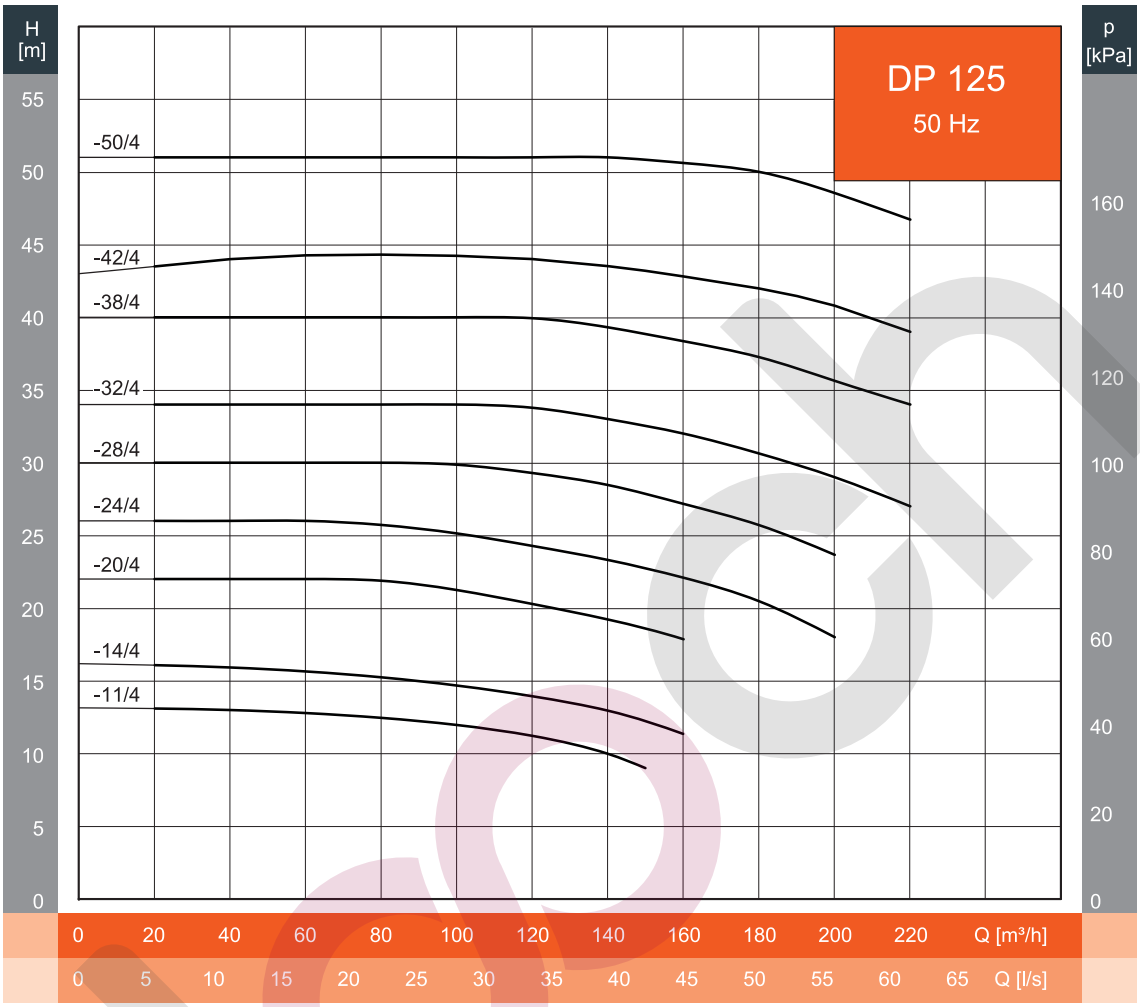


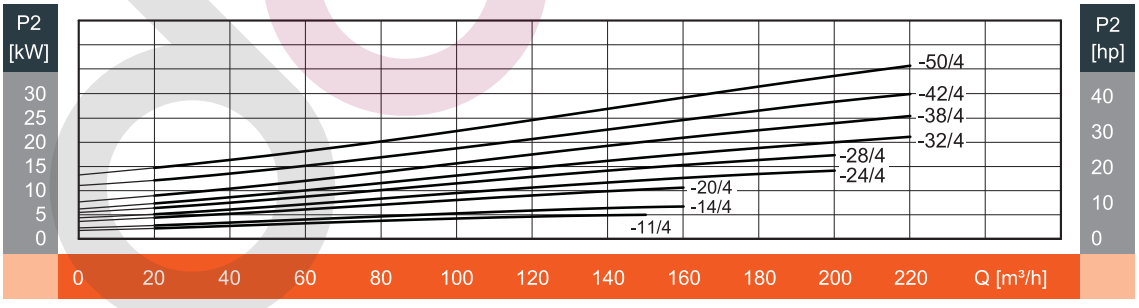
Dimension / Weight

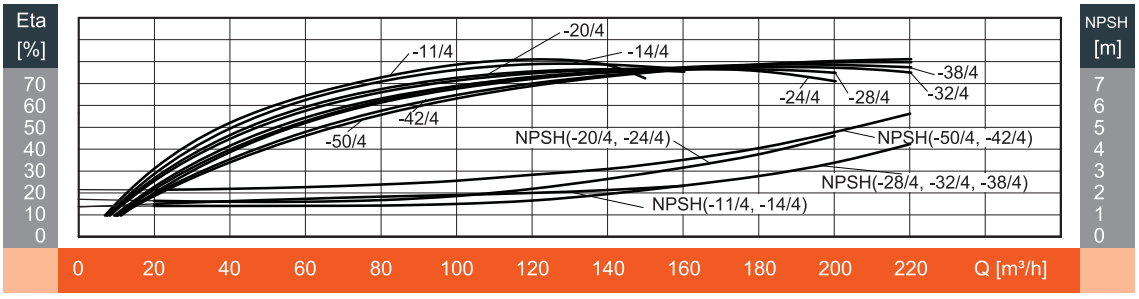
MODEL	DIMENSION (mm)										WEIGHT (kg)
	D	B1	B2	B3	B4	H1	H2	H3	L1	L2	
DP100-9/2	140	180	155	195	235	107	171.5	568.5	450	225	80
DP100-11/2	160	220	195	195	235	107	189.5	636.5	450	225	97
DP100-15/2	160	220	195	195	235	107	189.5	636.5	450	225	98
DP100-17/2	200	260	215	195	235	140	215	738	500	250	137
DP100-22/2	200	260	215	195	235	140	215	738	500	250	140
DP100-25/2	350	320	260	290	340	140	270	915	550	275	219
DP100-32/2	350	320	260	290	340	140	270	915	550	275	229
DP100-34/2	350	320	260	290	340	140	270	970	550	275	246
DP100-38/2	350	355	280	290	340	140	270	988	550	275	285
DP100-52/2	400	400	305	290	340	140	270	1070	550	275	343

Remark | The motor specification is based on Dooch's standard motor.

Performance Curve



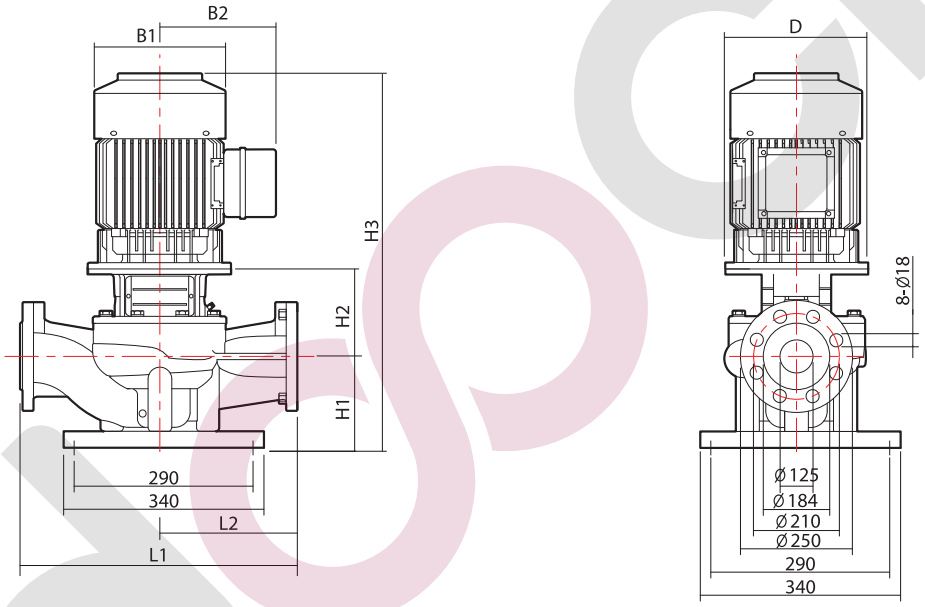




Data Sheet

MODEL	POWER		Q (m^3/hr)	20	40	60	80	100	120	140	150	160	180	200	220
	kW	HP													
DP125-11/4	5.5	7.5	HEAD (m)	13.5	13.4	13	12.5	12	11	10	9				
DP125-14/4	7.5	10		16.5	16	15.8	15.5	15	14	13	12	11			
DP125-20/4	11	15		22.3	22.5	22.3	22	21	20	19	19	18	16		
DP125-24/4	15	20		26.1	26.2	26	25.5	25	24	23	23	22	21	18	
DP125-28/4	18.5	25		30	30.3	30.5	30.2	30	29	28	27	26	25	24	
DP125-32/4	22	30		34	34.5	34.9	34.9	34.7	34	33	32	31.5	31	29	27
DP125-38/4	30	40		40.3	40.6	40.9	41	40.5	40	39	38	37.5	37	36	34
DP125-42/4	37	50		44.5	45.2	45.3	45.3	45	44.5	44	43.5	43	42	40	39
DP125-50/4	45	60		52.7	53	53.2	53.5	53.4	53	52.5	52	51	50	49	48

Installation Sketch

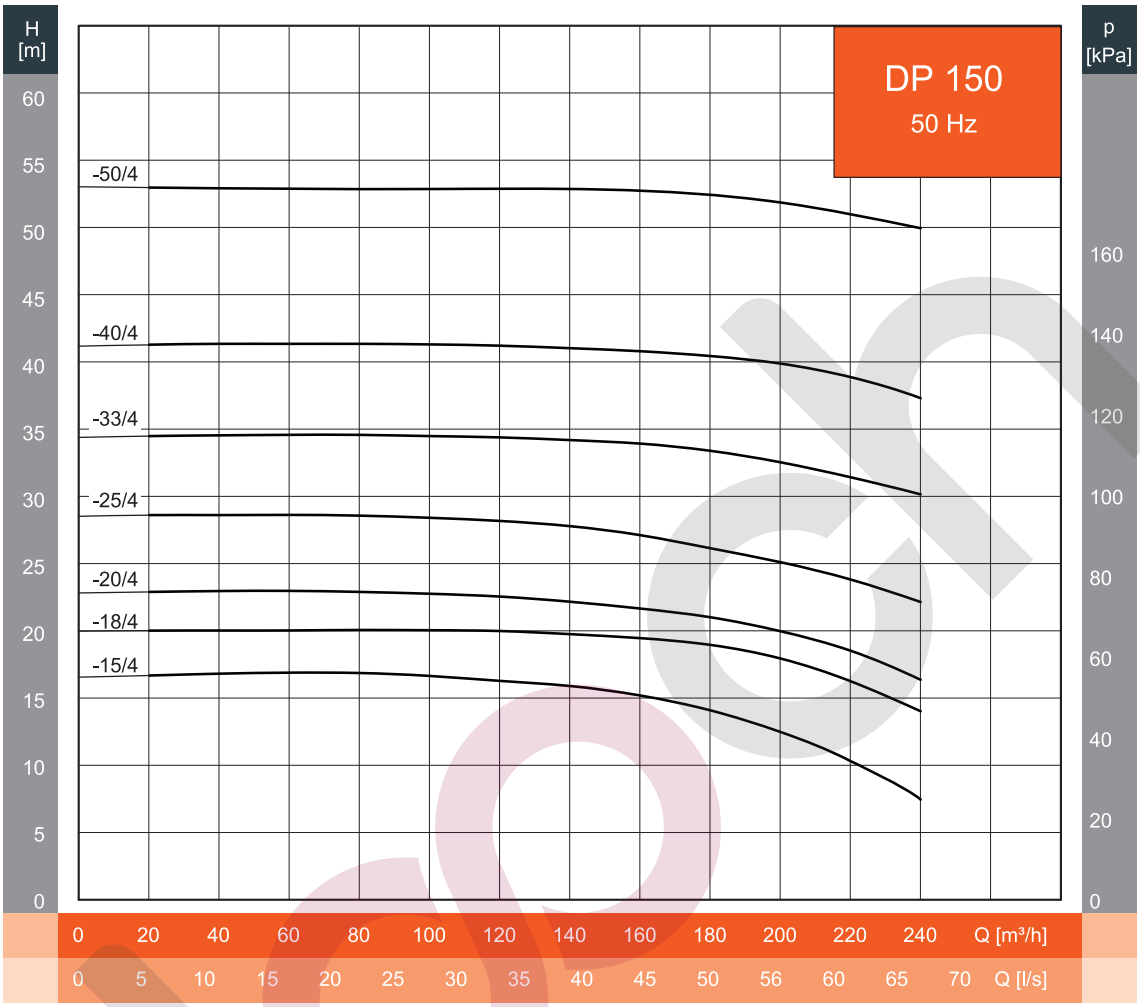


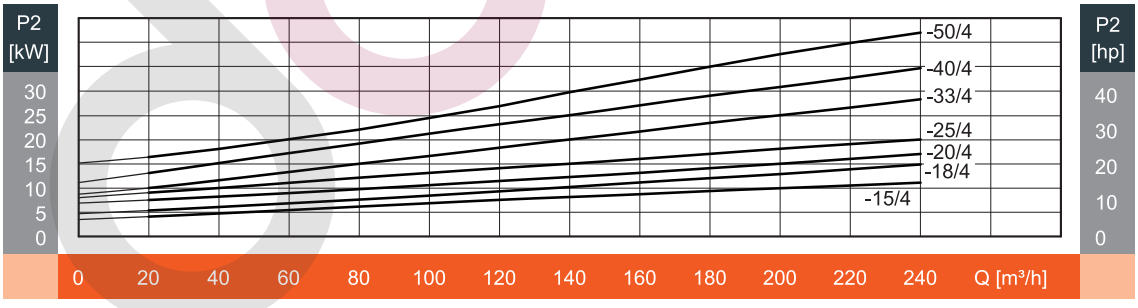
Dimension / Weight

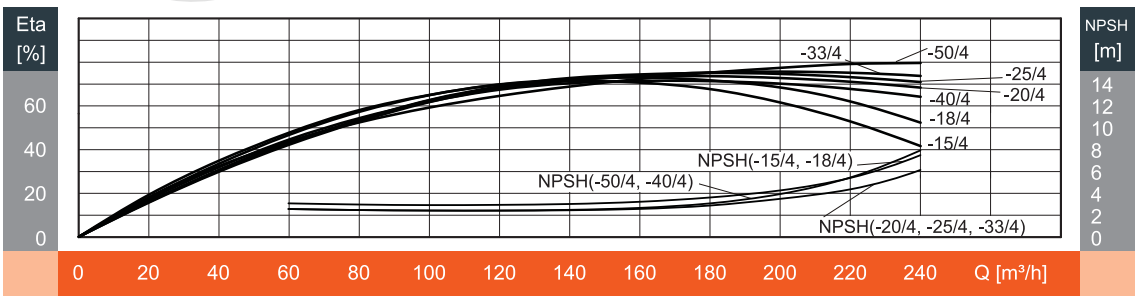
MODEL	DIMENSION (mm)								WEIGHT (kg)
	D	B1	B2	H1	H2	H3	L1	L2	
DP125-11/4	200	260	215	215	227.5	825.5	620	310	184
DP125-14/4	200	260	215	215	227.5	863.5	620	310	187
DP125-20/4	350	320	260	215	299	1019	800	400	342
DP125-24/4	350	320	260	215	299	1074	800	400	352
DP125-28/4	350	355	280	215	299	1092	800	400	376
DP125-32/4	350	355	280	215	299	1130	800	400	411
DP125-38/4	400	400	305	215	301	1176	800	400	476
DP125-42/4	450	450	330	215	319	1234	800	400	501
DP125-50/4	450	450	330	215	319	1259	800	400	538

Remark | The motor specification is based on Dooch's standard motor.

Performance Curve



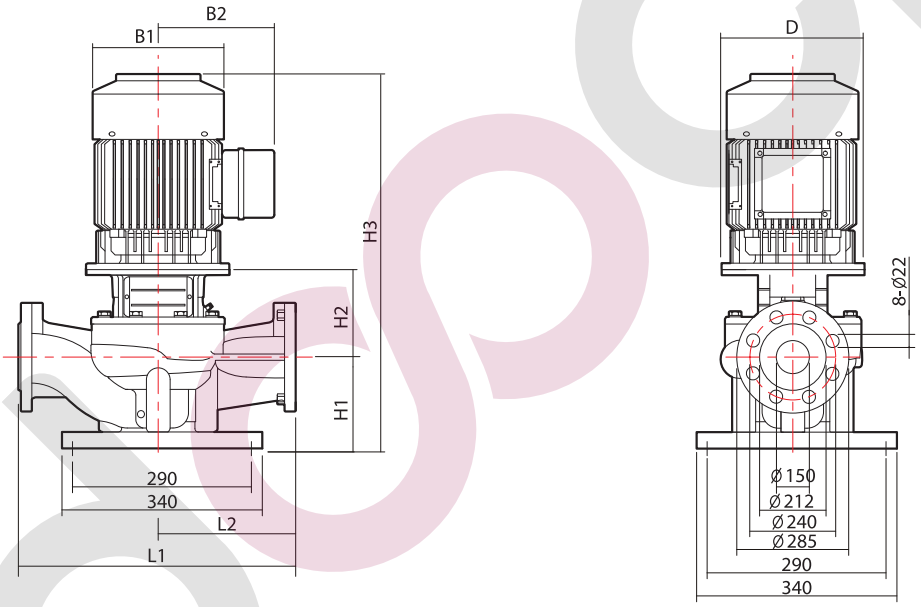




Data Sheet

MODEL	POWER		Q (m^3/hr)	20	40	60	80	100	120	140	160	180	200	220	240
	kW	HP													
DP150-15/4	11	15	HEAD (m)	20.1	20	19.5	19	18.5	18	17.5	16	14.5	12.5	10	7
DP150-18/4	15	20		20	20.1	20.4	20.5	20.2	19.8	19.3	18.7	18	17	16	14.2
DP150-20/4	18.5	25		23.7	23.9	24	23.8	23.4	22.9	22.3	21.6	20.8	20	18.9	16.8
DP150-25/4	22	30		27.6	27.9	28.2	28.3	28.1	27.7	27.1	26.3	26.2	25	23.9	22.6
DP150-33/4	30	40		34.5	34.6	34.7	34.8	34.7	34.6	34.4	34	33.7	33	32	30.8
DP150-40/4	37	50		42.3	42.5	42.6	42.7	42.6	42.4	42	41.5	40.8	40	39.2	37
DP150-50/4	45	60		53.1	53.2	53	52.8	52.7	52.6	52.5	52.4	52.3	52	51	49

Installation Sketch

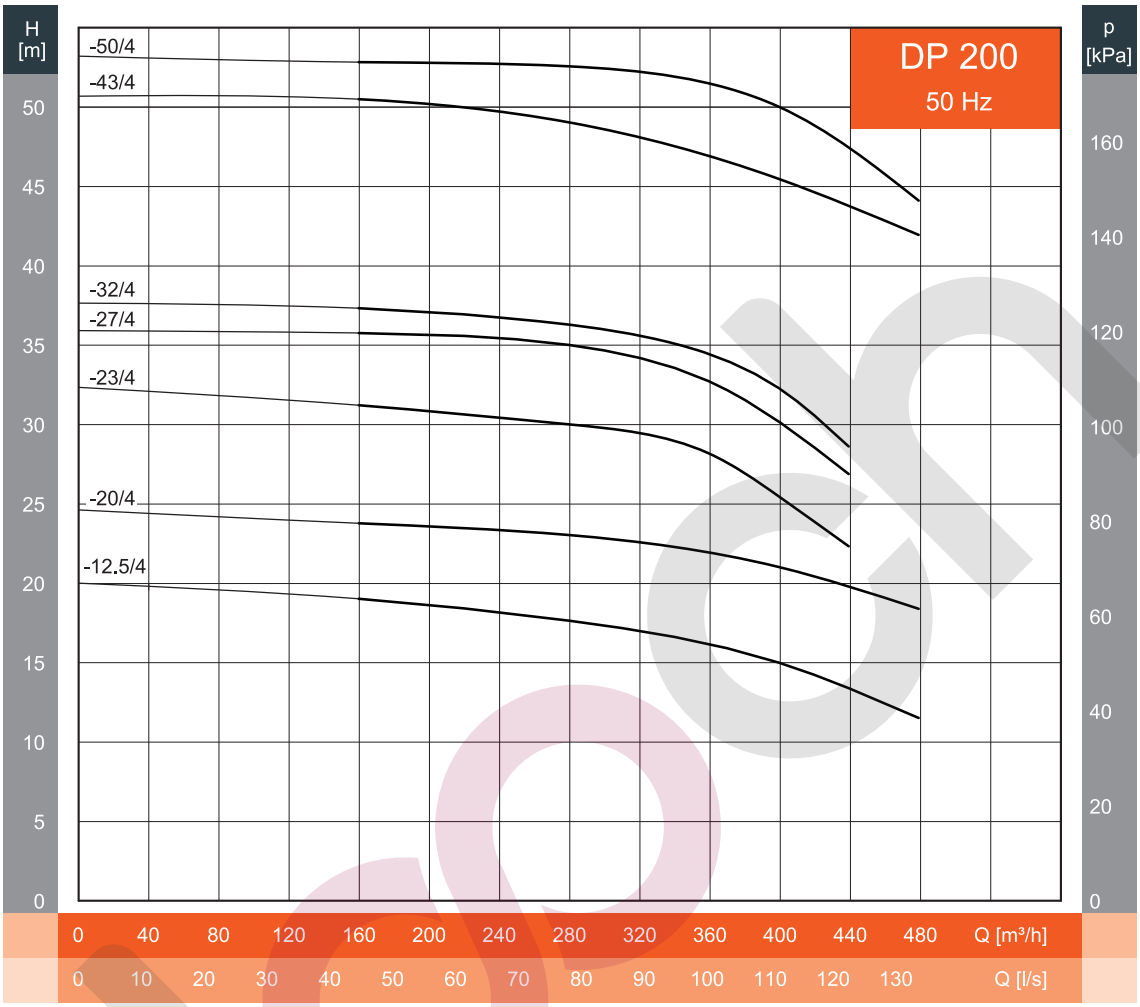


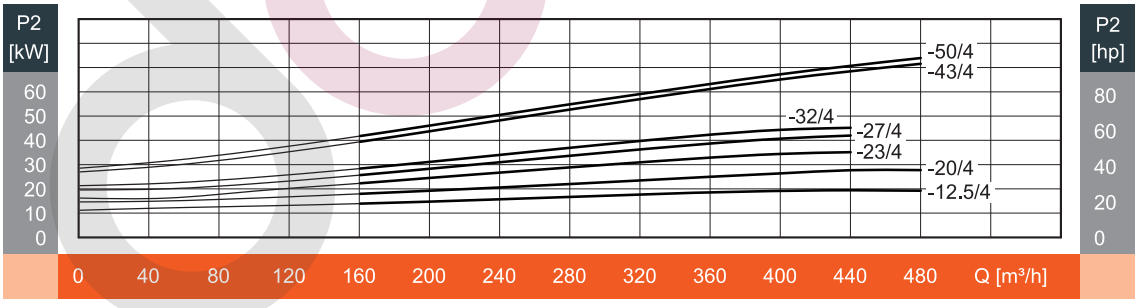
Dimension / Weight

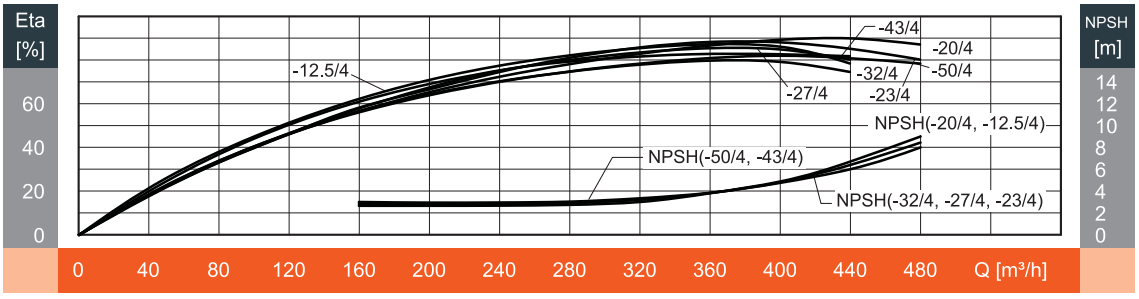
MODEL	DIMENSION (mm)								WEIGHT (kg)
	D	B1	B2	H1	H2	H3	L1	L2	
DP150-15/4	350	320	260	215	268	988	800	400	307
DP150-18/4	350	320	260	215	268	1043	800	400	328
DP150-20/4	350	355	280	215	268	1061	800	400	370
DP150-25/4	350	355	280	215	268	1099	800	400	380
DP150-33/4	400	400	305	215	268	1143	800	400	442
DP150-40/4	450	450	330	230	295	1195	900	450	545
DP150-50/4	450	450	330	230	295	1220	900	450	600

Remark | The motor specification is based on Dooch's standard motor.

Performance Curve



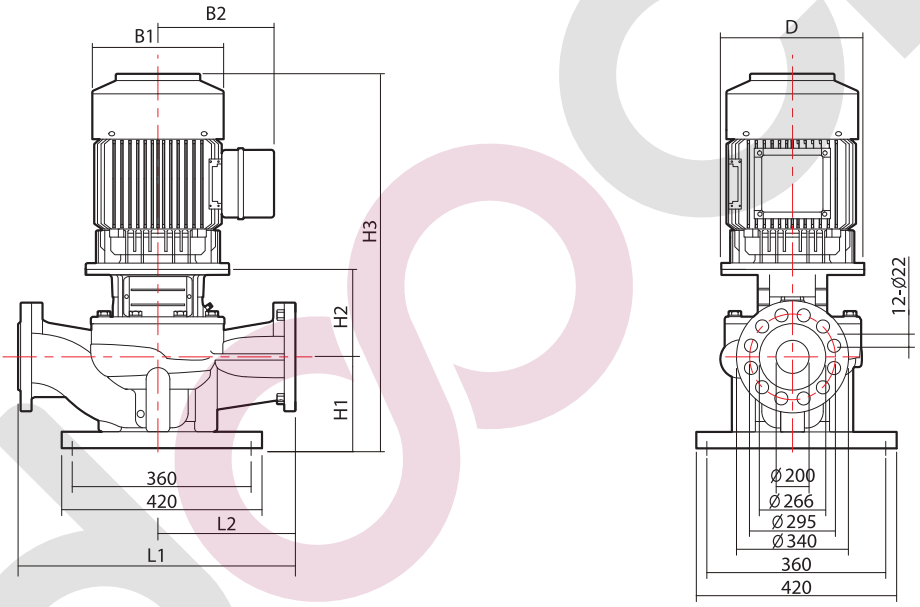




Data Sheet

MODEL	POWER		Q (m^3/hr)	160	200	240	280	320	360	400	440	480
	kW	HP										
DP200-12.5/4	22	30	HEAD (m)	18.4	18.2	18	17.5	17	16	14	13.5	8
DP200-20/4	30	40		24.6	24.4	24	23.6	22.8	21.7	20	17.5	14.2
DP200-23/4	37	50		31.7	31.5	31	30.5	30	29	25	22	18
DP200-27/4	45	60		35.6	35.5	35.4	35	34.5	33	30	27	22.5
DP200-32/4	55	75		37.5	37	36.5	35.7	34.7	33.3	32	29.9	27.7
DP200-43/4	75	100		50.4	50.5	51.25	51	50.5	50	45	43	42
DP200-50/4	90	120		52.9	52.8	52.6	52	51.5	51	50	48	45.5

Installation Sketch

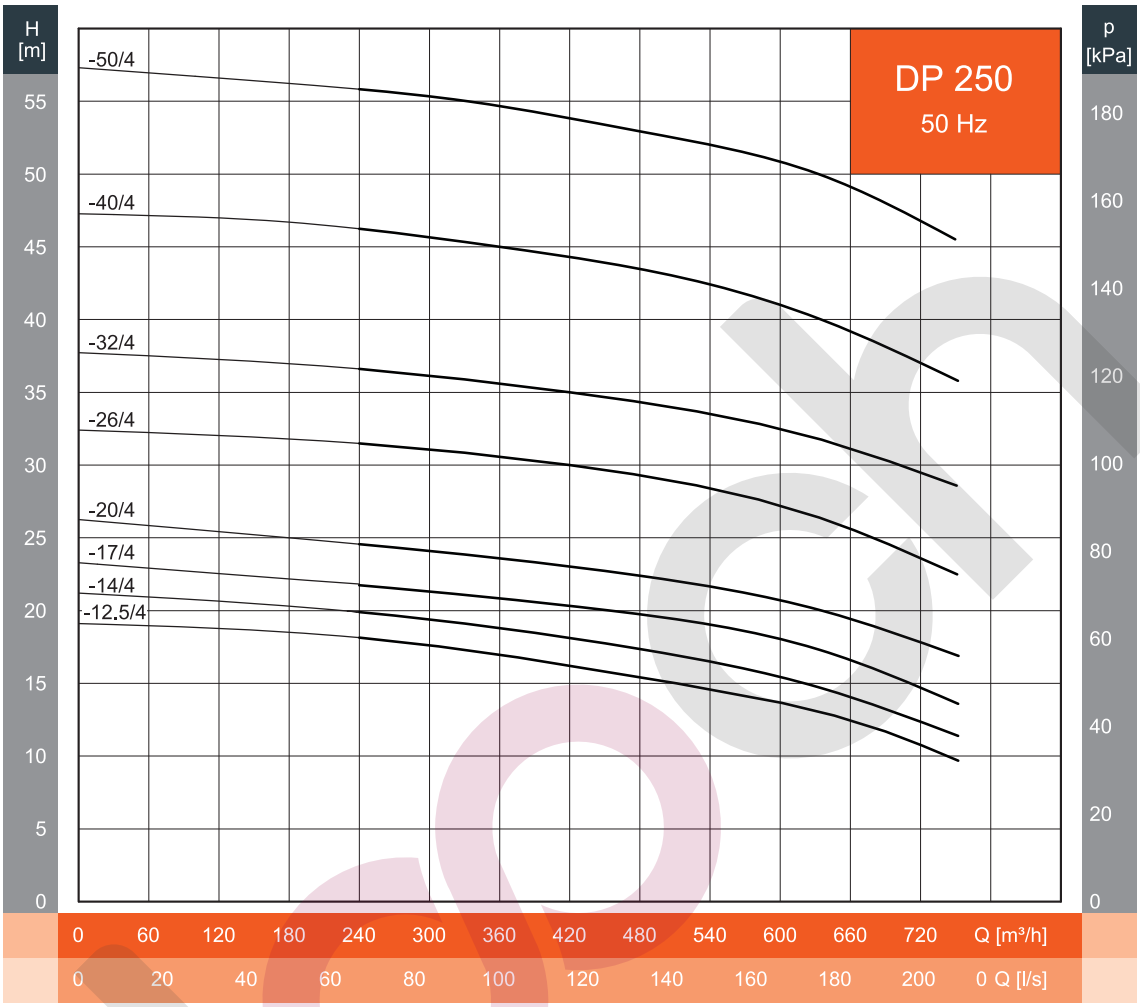


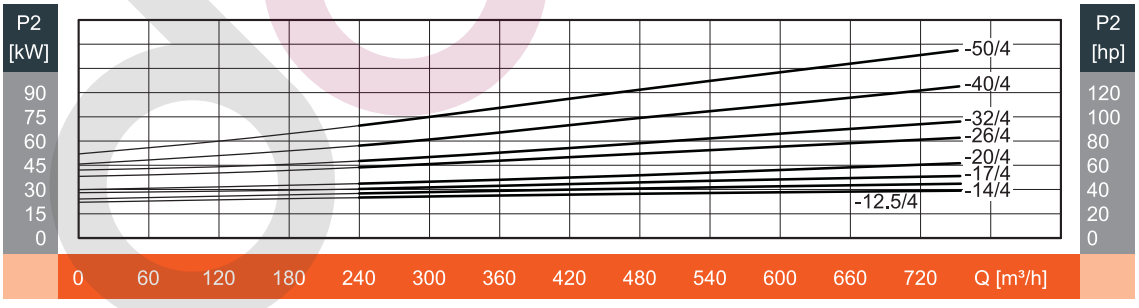
Dimension / Weight

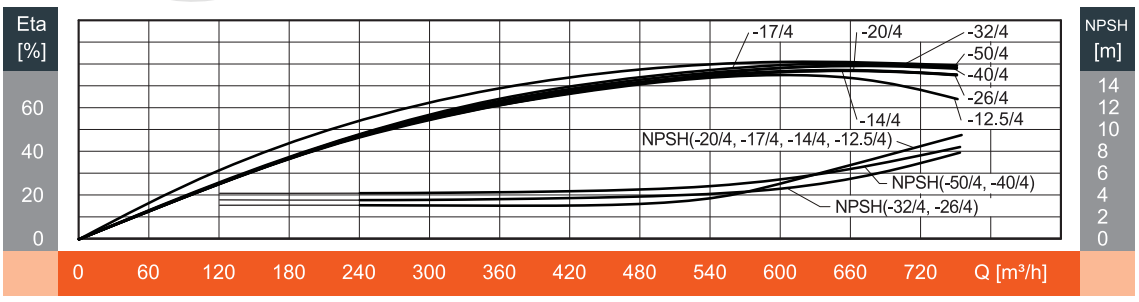
MODEL	DIMENSION (mm)								WEIGHT (kg)
	D	B1	B2	H1	H2	H3	L1	L2	
DP200-12.5/4	350	355	280	270	415	1301	1000	500	567
DP200-20/4	400	400	305	270	415	1345	1000	500	627
DP200-23/4	450	550	330	270	450	1390	1100	550	737
DP200-27/4	450	550	330	270	450	1415	1100	550	773
DP200-32/4	550	490	365	270	450	1490	1100	550	845
DP200-43/4	550	550	400	270	454	1594	1100	550	1018
DP200-50/4	550	550	400	270	454	1644	1100	550	1110

Remark | The motor specification is based on Dooch's standard motor.

Performance Curve



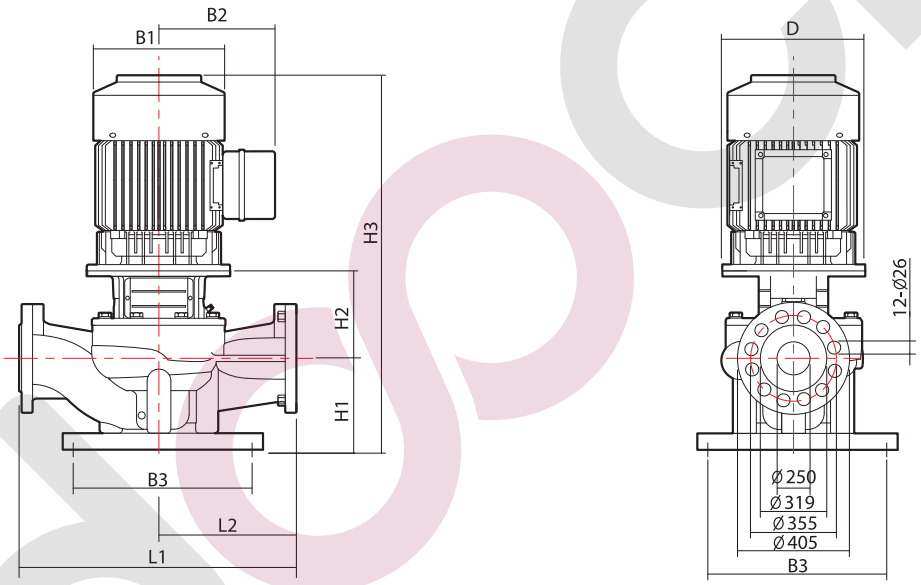




Data Sheet

MODEL	POWER		Q (m^3/hr)	240	300	360	420	480	540	600	630	660	720	750
	kW	HP												
DP250-12.5/4	30	40	HEAD (m)	18.4	17.9	17.2	16.4	15.5	14.5	13.2	12.5	11.8	9.9	8.7
DP250-14/4	37	50		20	19.5	18.9	18.2	17.5	16.6	15.6	14	13.4	12.6	11.6
DP250-17/4	45	60		21.8	21.3	20.8	20.1	19.4	18.6	17.6	17	16.3	14.4	13.4
DP250-20/4	55	75		24.5	24.1	23.7	23.1	22.4	21.5	20.5	20	19.3	17.6	16.5
DP250-26/4	75	100		31.7	31.1	30.6	29.9	29.1	28.2	26.8	26	25.2	23.1	21.9
DP250-32/4	90	120		36.7	36.3	35.7	35.1	34.3	33.5	32.6	32	31.3	29.5	28.4
DP250-40/4	110	150		46	45.5	44.9	44.2	43.4	42.3	40.8	40	39.1	36.8	35.5
DP250-50/4	132	180		55.6	55.2	54.6	53.9	53.2	52.3	50.9	50	49	46.7	45.4

Installation Sketch



Dimension / Weight

MODEL	DIMENSION (mm)									WEIGHT (kg)
	D	B1	B2	B3	H1	H2	H3	L1	L2	
DP250-12.5/4	400	400	305	390	300	465	1415	1100	550	672
DP250-14/4	450	450	335	390	300	495	1475	1100	550	733
DP250-17/4	450	450	335	390	300	495	1500	1100	550	769
DP250-20/4	550	490	365	390	300	495	1585	1100	550	842
DP250-26/4	550	550	400	440	300	507	1667	1100	550	1029
DP250-32/4	550	550	400	440	300	507	1717	1100	550	1119
DP250-40/4	660	625	555	440	305	525	1860	1200	600	1539
DP250-50/4	660	625	555	440	305	525	1910	1200	600	1623

Remark | The motor specification is based on Dooch's standard motor.

E-1912

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