

WE ARE **SENSITIVE TO LIFE**



ABOUT US

We help you to choose the most suitable systems for your needs with our **high-efficiency, environment-friendly and innovative** pumps and booster sets.

With our expertise in the pump industry, we produce **quality pumping systems** in accordance with **TSE, ISO** and **CE** standards; we create reliable living spaces in residences, office buildings, industrial facilities, educational institutions, energy facilities, fuel and gas industry.

We adopt a customer-oriented approach to meet the expectations of our business stakeholders at the highest level, and we prioritize customer satisfaction in all processes from R&D to production of pump technologies. As **Duyar Pompa**, our mission is to provide the best service in the field of pump technologies as soon as possible, with a wide dealer and service network throughout Turkey.

As one of the new leading manufacturers of HVAC projects with its wide product range, benefiting from **Duyar Vana's** more than **55 years of industry experience** and knowledge, we will continue to produce and develop with our domestic roots and global vision.

**INNOVATIVE
RELIABLE
HIGH QUALITY**

+400 + 90

SUCCESSFUL PROJECT DELIVERY

AUTHORIZED SERVICE

55

**YEARS OF
INDUSTRY EXPERIENCE**

**SAFE AND PROBLEM-FREE DELIVERY
IN ALL OF OUR PROJECTS**

**WIDE SERVICE NETWORK TO EVERY
POINT OF TURKEY**

**100% DOMESTIC PRODUCTION
WITH OUR EXPERIENCED TEAM IN
THE FIELD OF PUMP AND BOOSTER**

TABLE OF CONTENTS



FIRE PUMP SYSTEMS 3-16



BOOSTER SETS 17-44



DIP
IN-LINE PUMPS 45-57



OPUS
VARIABLE SPEED
CIRCULATOR PUMPS 59-68



DWWP
WASTEWATER PUMPS 69-84

DUYAR



FIRE PUMP SYSTEMS

With its high efficiency fire pumps and wide after-sales service programs, **Duyar Pompa** helps in choosing the right pump and pumping systems for the needs. Duyar Pompa is a long-term business partner that saves time in the selection and evaluation of pumps and pumping systems for large industrial and public institutions of our country.

Duyar Pompa produces quality fire pumps and pumping systems, with its expertise in the field of fire, that work reliably when necessary and comply with NFPA20, TSE and CE standards. These devices can be used in;

- Building Technologies
- Industrial Facilities
- Energy Facilities
- Fuel and Gas Industry

Fire and Responsibility

Combustion; is a chemical reaction that takes place by the combination of oxygen, heat and combustible material. Fire, on the other hand, is a type of disaster that causes material and moral damages that occur outside of our will and control.

A fire protection system including a fire cabinet suitable for fire risk class, sprinkler line, hydrant, foam monitor etc. must be installed t building or

facility within the scope of the regulation published for fire protection.

Duyar Pump's compact designed, split body, end-suction and staged fire pumps, which are produced in accordance with NFPA20 criteria with the latest technology in production can be used in new investments, package fire revisions and renovation projects.

Low Installation and Usage Costs

Our technology-leading, high-efficiency pump designs;

- Consumes less power,
- Chooses smaller equipment,
- Provides smaller boards.

These factors contribute to lower equipment cost. Fabrication parts are manufactured as standard for high durability and accurate pump assembly. Rotating parts bring mechanical reliability, reliable operation and minimal maintenance costs with precision-bored balancing.



Areas of Usage

Building Technology
Industrial Facilities
Energy Facilities
Fuel and Gas Industry



NFPA



National Fire Protection Association (NFPA) was established in the United States in 1896 by a group of insurers to minimize the effects of fire and other risks. NFPA 20 is the most common and detailed resource used in fire suppression systems worldwide, describing the requirements for the installation of fire pumps used for fire protection. NFPA 20; covers the selection, installation, acceptance testing and operation of fire pumps.

Material Properties

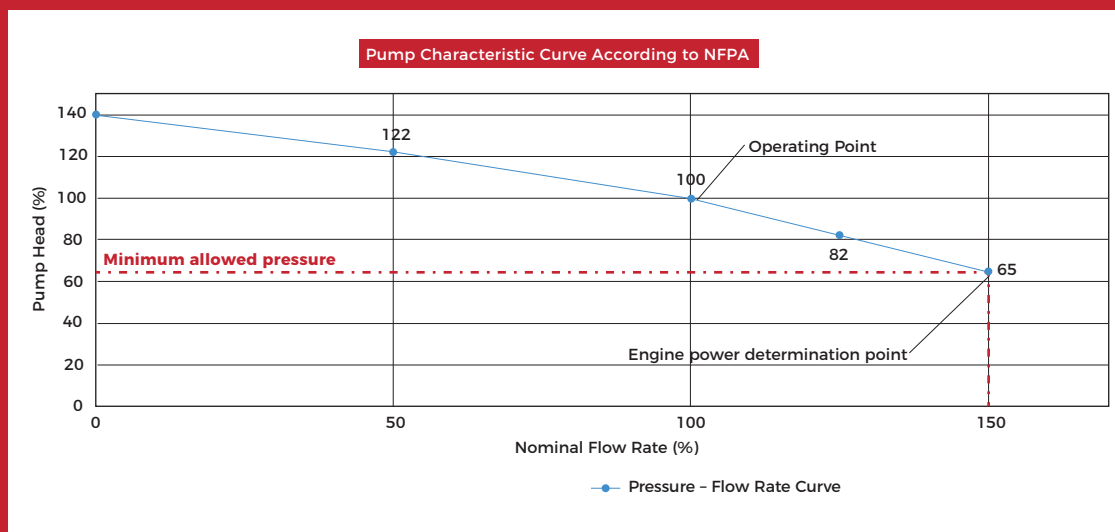
- **Body** : GG25 (Gray Cast Iron)
- **Impeller** : CuSn10 (Bronze) – AISI 304
- **Shaft** : AISI 316 - AISI 420
- **Shaft Bushing** : AISI 316 - AISI 304
- **Sealing** : At least five (5) turns must be supplied with a mild sealing gland.
- **Bearing** : Bearings must have a service life of at least 5000 hours at maximum load.

What Are the Characteristics of a Pump System That Complies with NFPA 20?

- Standard pump types are specified as Horizontal split case pump, Horizontal end suction, Horizontal Gradual End suction, In-line pumps and line shaft vertical turbine.
- NFPA 20 allows suction from negative elevation for fire pumps only for “Vertical Turbine” pumps, End-suction and split-case pumps should never be operated with negative suction.
- The fire pump curve must provide a capacity value of 150% of the rated flow, and the pressure value at a capacity of 150% flow cannot be less than 65% of the nominal (rated) pressure.
- The closed valve pressure value of the fire pump (the maximum pressure that the pump can give at zero flow) should not exceed 140% of the nominal value.

- Control panels of each pump must be separate.
- At nominal flow, the flow velocity in the suction pipe is less than 3 m/s.
- In NFPA 20, fire pump suction diameters are determined according to the maximum speed condition at 150% of the rated flow rate (4.6 m/s).
- Service factor (overload factor) of electric motors should not exceed 1.15.
- Fire pumps must have a rising spindle valve between the suction line and the suction collector.
- It is absolutely necessary not to put a strainer on the suction line.
- There should be check valves and butterfly valves in the discharge line of fire pumps, respectively.
- If the fire pumps are selected as 2 electric, there must be a reliable power source to feed the pumps and panels even if the electricity is cut off. In the absence of a reliable power source, at least one of the pumps must be selected with a diesel engine.
- The jockey pump is used to eliminate small pressure drops in the fire installation before the main fire pumps are activated and its flow rate is min. It should be 1/100th of it, and its pressure is min. Of the main fire pump pressure. It should be above 1 bar.

Performance Curves





TS EN 12845 + A1

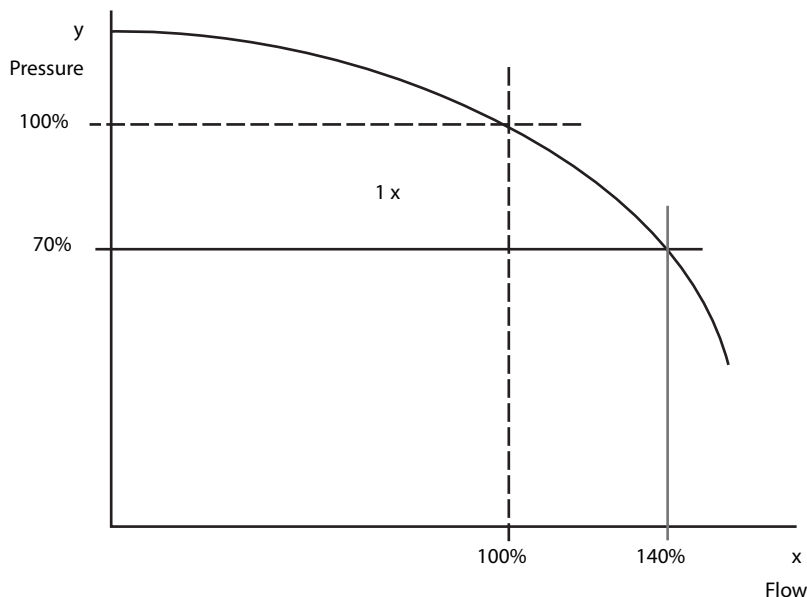
This Standard CEN/TC 191 "Fixed firefighting systems" was prepared by the Technical Committee, it was approved by CEN on 12.12.2019 and it was accepted as a Turkish Standard at the meeting of the Technical Board of the Turkish Standards Institute on 03.02.2020 and it was decided to be published.

"EN 12845 + A1" is the national standard criterion of Germany, Austria, Belgium, United Kingdom, Bulgaria, Czech Republic, Denmark, Estonia, Finland, France, Croatia, Netherlands, Ireland, Spain, Sweden, Switzerland, Italy, Iceland, Cyprus, Latvia, Lithuania, Luxembourg, Hungary, Macedonia, Malta, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Turkey and Greece.

The "EN 12845" standard, which Europe has created in the field of fire, is accepted in English by the TSE institution directly under the title of TS EN 12845 Standard in our country. The main basic features that should be in fire pump systems according to EN 12845 standards are as follows.

- According to TS EN 12845 + A1 standards, pumps must have a stable H (Q) curve.
- If the pump is required, it must be able to operate at a minimum of 140% of the rated flow and the pump pressure at 140% flow must be 70% of the minimum pump rated pressure.
- The pumps should be able to be activated automatically and manually depending on the pressure drop in the system and should be deactivated manually only. Pumps must not be automatically switched off.
- The pressure drop in the system, which will give the command to the fire pumps to work, is felt through the pressure switches and starts the pump. Each pump should have two pressure switches, one of which is spare.
- According to EN 12845 + A1 standards, if two pumps are used in the system, each pump must meet the 100% capacity flow of the system need. In cases where multiple pumps are required, for example, when a system with three pumps is designed, each pump must meet the flow rate of 50% of the system demand at the specified pressure.

Performance Curves



DSP

Horizontal Split Case Pump

Material Specifications

Pump Casing	GG25 (Cast Iron) - GGG40 (Nodular Cast Iron)
Impeller	CuSn10 (Bronze) - GG25 (Cast Iron)
Shaft	AISI 420 - AISI 316
Sealing	Gland Packing

Technical Specifications

Fluid Temperature	-20 / +80 °C
Electricity Grid	3 - 440 V, 50 Hz / 60 Hz
Operating Pressure	16 Bar
Flow Rate Q (GPM)	100 - 2.500
Pressure Hm (PSI)	76 - 189
Speed (rpm)	1.450 - 3.000
Suction Flange	DN 100 - DN 250
Discharge Flange	DN 65 - DN 200

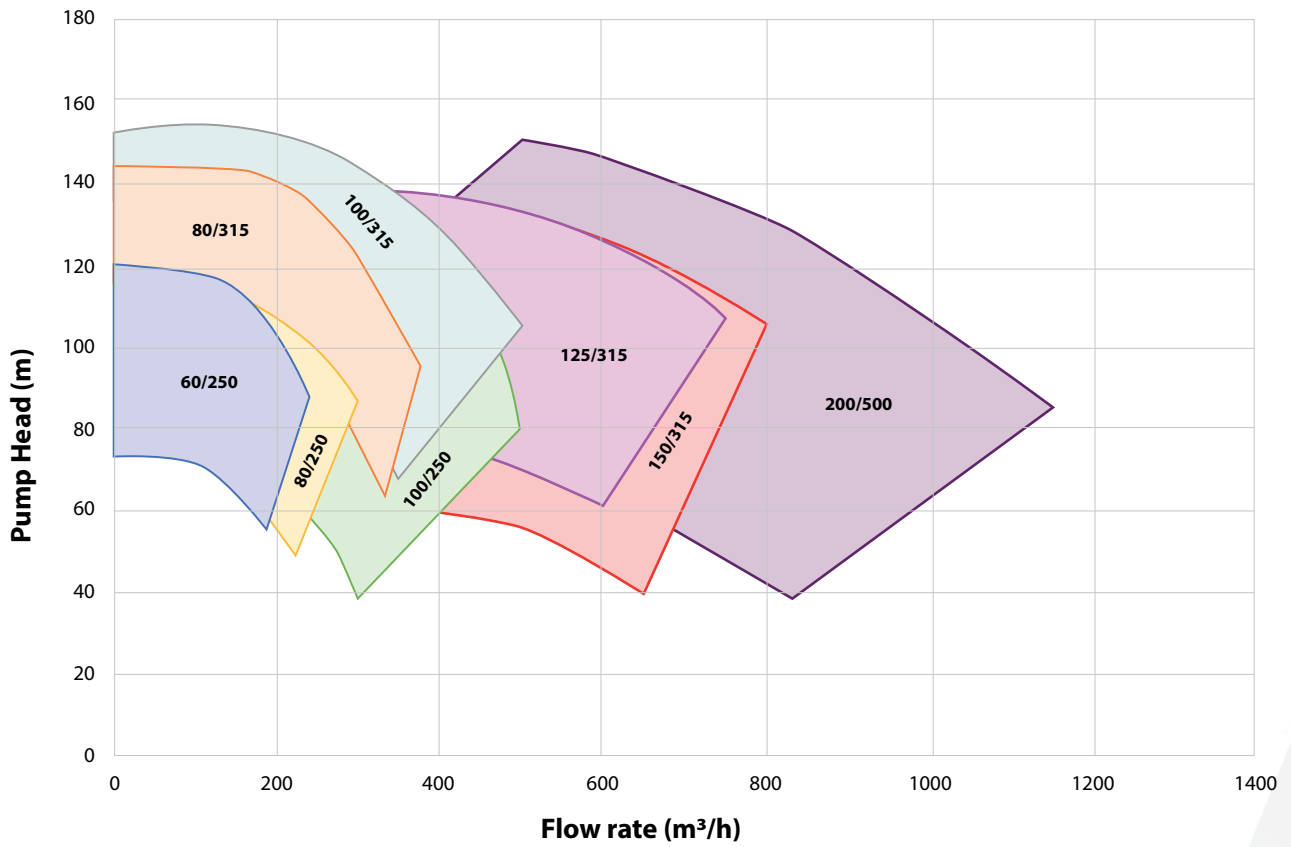
System Equipment

Air Release Valve	Check Valve	Jockey Pump	Prosestat
Body Relief Valve	Manometer	Expansion Tank	Pressure Switch

Product Specifications

- The pumps are double-suction, axially split case, suction and pressure flanges are located on the lower body, on the same level.
- Provides **low usage costs** due to optimized efficiency.
- Provides **cavitation-free operation** due to its low NPSH values.
- Impeller is balanced in accordance with **ISO 1940 class 6.3**.
- Greased bearing and soft sealing.
- The direction of pump rotation is clockwise when viewed from the motor side.
- The equipment used in the suction and discharge lines are of the brand "**Duyar Valve**".
- Suction and pressure flanges comply with **ISO 7005-2/PN16** standard.
- It is optionally suitable for production in ANSI flange norm.

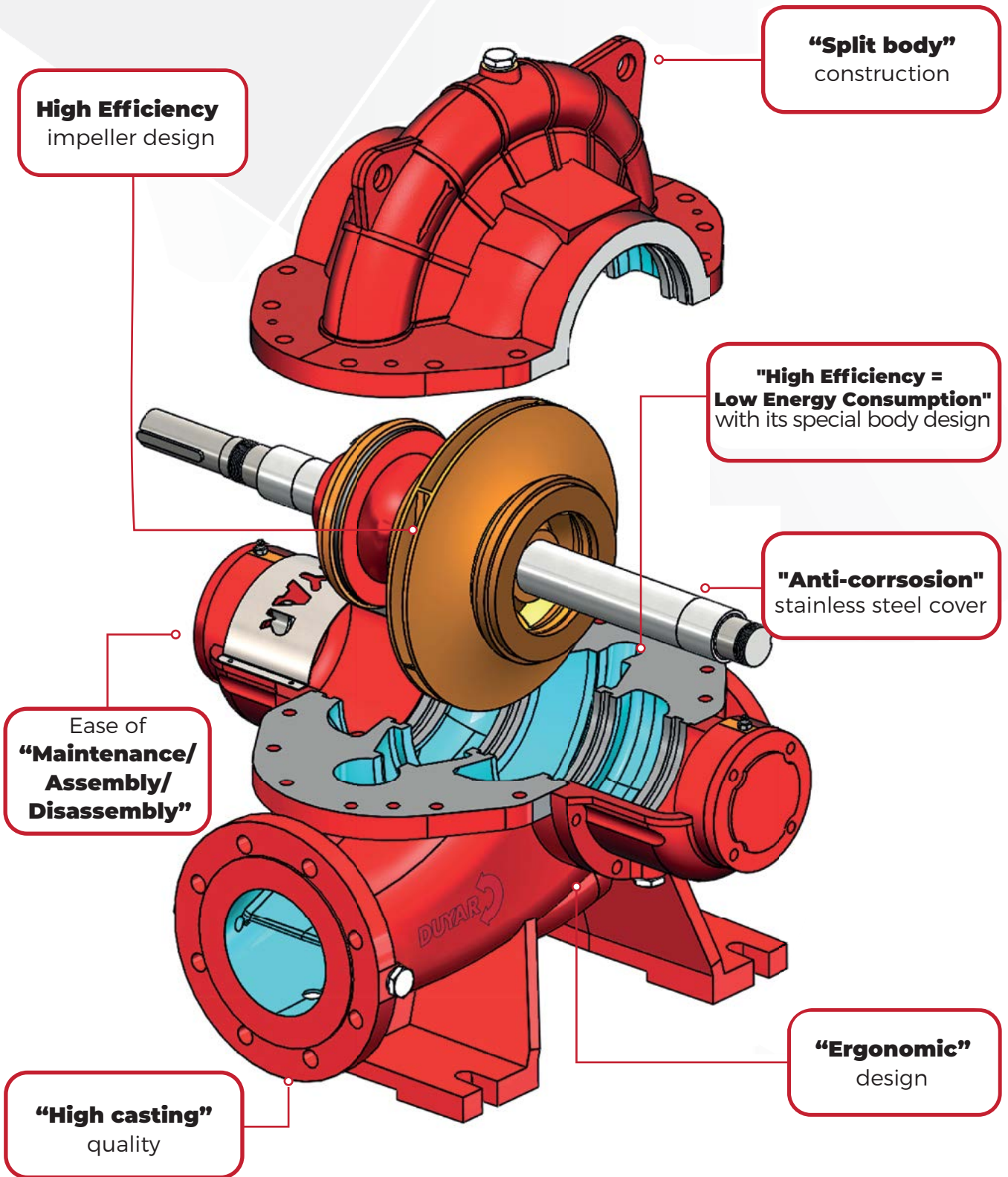
Hydraulic Range



DSP Series Horizontal Split Case Pump Set - NFPA 20



Horizontal Split Case Pump



DNP

Horizontal End Suction Pump

Material Specifications

Pump Casing	GG25 (Cast Iron)
Impeller	CuSn10 (Bronze) - GG25 (Cast Iron)
Shaft	AISI 316 - AISI 420
Sealing	Gland Packing

Technical Specifications

Fluid Temperature	-20 / +80 °C
Electricity Grid	380 - 440 Volt, 50 Hz / 60 Hz
Operating Pressure	5 - 14 Bar
Flow Rate Q (GPM)	88 - 3.500
Pressure Hm (PSI)	70 - 197
Speed (rpm)	1.450 - 2.950 d/d
Suction Flange	DN 50 - DN 250
Discharge Flange	DN 32 - DN 200

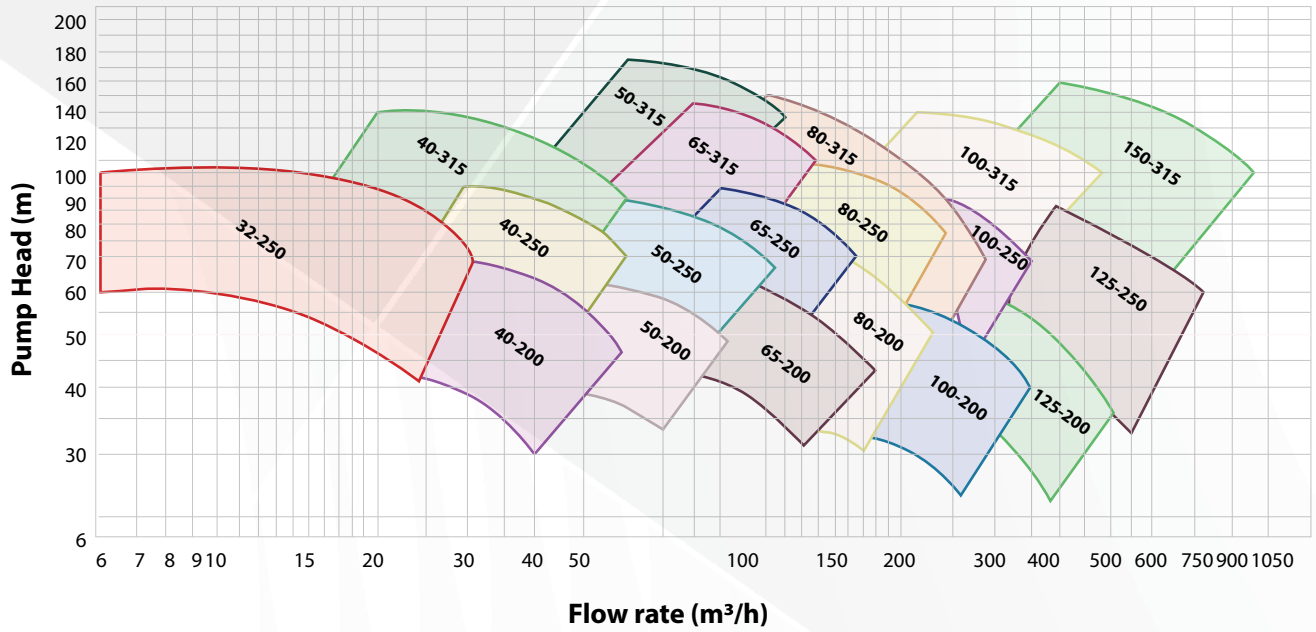
System Equipments

Casing Relief Valve	Manometer	Expansion Tank	Air Release Valve
Check Valve	Jockey Pump	Pressure Switch	Prosestat

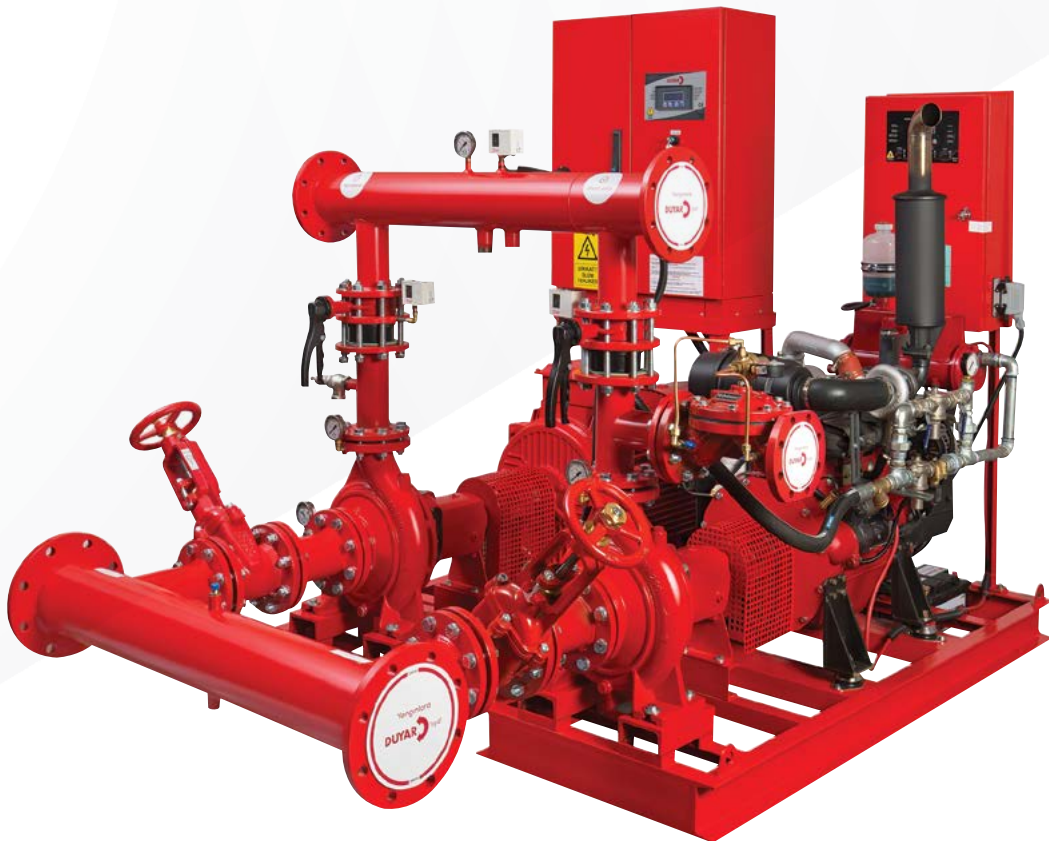
Product Specifications

- Single-stage, end-suction, axial type pumps with closed impellers.
- Pump and motor connection is made on a common chassis using a flexible coupling.
- Equipped with grease-lubricated, long-life bearings.
- Soft sealing is used for sealing.
- The direction of pump rotation is clockwise when viewed from the motor side.
- The equipment used in the suction and discharge lines are of the brand "Duyar Vana."
- Suction and discharge flanges comply with **ISO 7005-2/PN16** standard.

Hydraulic Range



DNP Series End-Suction Pump Set - NFPA 20



DMP

Horizontal Multi-Stage Pump

Material Properties

Pump Casing	GG25 (Cast Iron) - GGG40 (Nodular Cast Iron)
Impeller	CuSn10 (Bronze) - GG25 (Cast Iron)
Shaft	AISI 420 - AISI 41050
Sealing	Gland Packing

Technical Specifications

Fluid Temperature	-20 / +80 °C
Electricity Grid	380 - 440 Volt, 50 Hz / 60 Hz
Operating Pressure	5 - 24 Bar
Flow Rate Q (GPM)	17.6 - 704
Pressure Hm (PSI)	70 - 338
Speed (rpm)	1.450 - 2.950 d/d
Suction Flange	DN 40 - DN 250
Discharge flange	DN 32 - DN 200

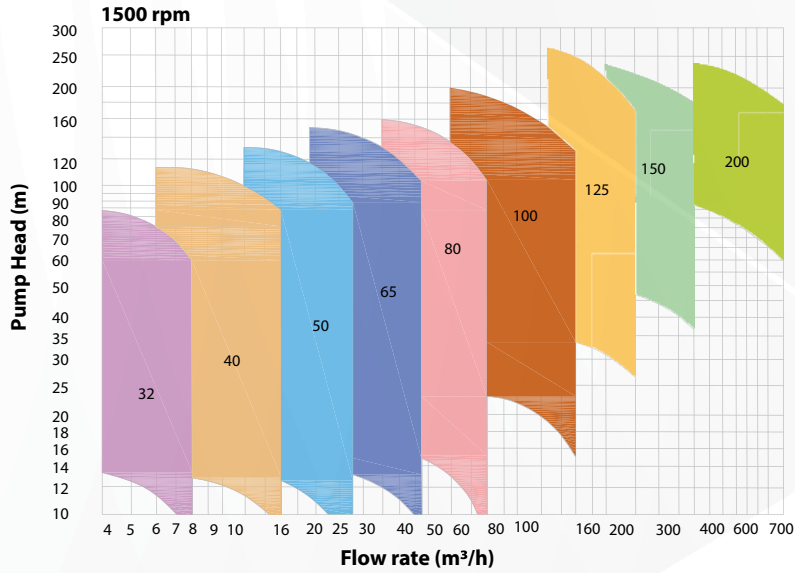
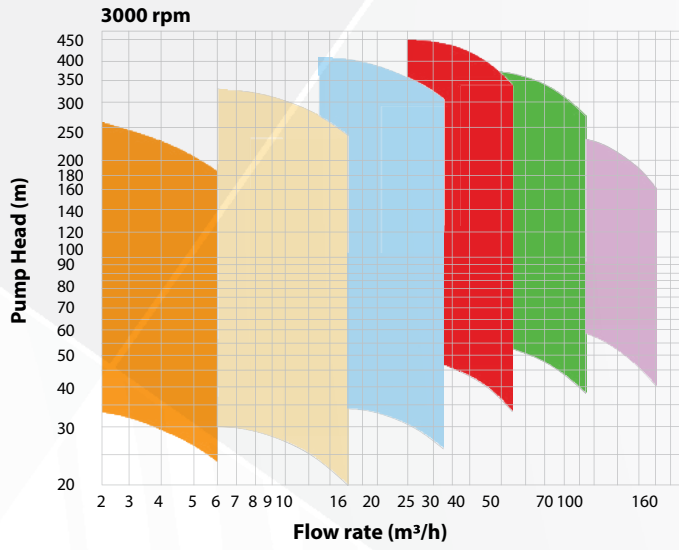
System Equipments

Casing Relief Valve	Manometer	Expansion Tank	Air Release Valve
Check Valve	Jockey Pump	Pressure Switch	Prosestat

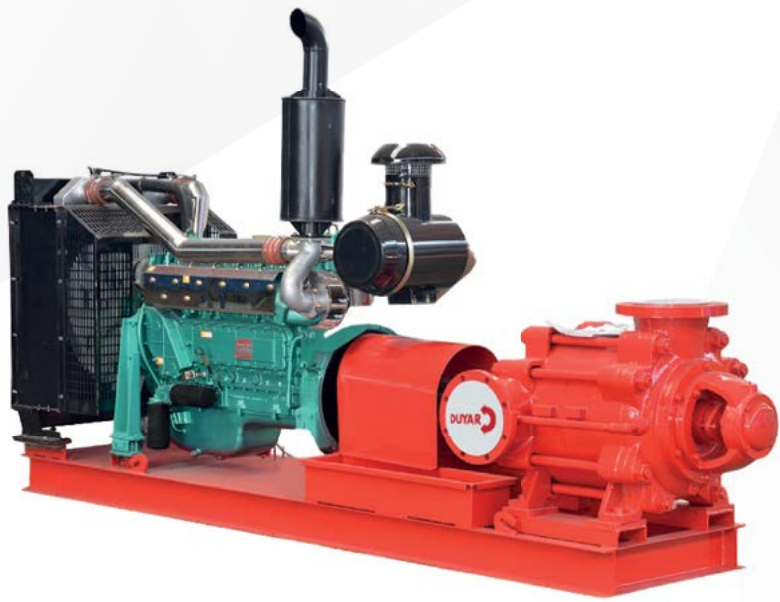
Product Specifications

- It is used in projects where high pressure is required.
- Soft sealing is used for sealing.
- Impellers are produced with balance holes to meet axial loads.
- Long-lasting cylindrical roller bearings that can withstand heavy conditions are used in the pumps.
- The direction of pump rotation is clockwise when viewed from the motor side.
- Suction and pressure flanges can be PN16, PN25 or PN40 as needed.
- Body castings can be GG25 (CAST IRON) or GG40 (SFERO) castings depending on the required pressure value.

Hydraulic Range



DMP Series Horizontal Multistage Fire Pump - Diesel Engine



CONTROL PANELS

Electric and/or diesel driven, automatic or manual control is provided for each pump separately and independently with an electrical and/or diesel control panel. Our panels, manufactured according to NFPA20 standards, are compact, fire-fighting equipment suitable for automation, easy to use and maintain, with alarm and control features.

ELECTRIC DRIVE CONTROL PANEL

- Measuring 3 phase voltage values and monitoring the screen
- Memorizing the past twenty events with time and date information
- Voltage protection 'Active and 'Passive selection'
- Ability to test 2 days a week
- Pump screen monitoring
- Displaying the pump run time on the screen
- Float protection against running without water, selection of 'Active and 'Passive'
- Possibility of using a pressure transmitter
- Relay contact notification of all faults / operations with BMS feature
- Turkish/English menu
- Displaying date and time information on the screen
- 4x20 LCD screen



DIESEL DRIVE CONTROL PANEL

- Dual battery system
- Battery voltage value display monitoring
- Displaying the temperature value on the screen with the temperature sensor
- Displaying the oil pressure on the screen with the oil sensor
- Display the fuel status on the screen
- Possibility to limit the number of starters
- Possibility to adjust the cranking time
- Manual start/stop feature
- Diesel run time screen tracking
- Possibility to set diesel stop delay (0-240 minutes)
- Low battery voltage notification
- Displaying the diesel rpm (RPM) on the screen
- Ability to test 2 days a week
- Possibility to use a pressure transmitter
- Relay contact notification of all faults/operations with BMS feature
- Turkish/English menu
- Ability to see date and time information on the screen
- 4x20 LCD screen
- Auto - Manual start switch



DMVP JOCKEY PUMP SET

These systems are used to keep the fire line constantly under pressure. At the same time, it prevents unnecessary start-ups and exits of the main pumps by meeting the small leaks that may occur in the line. This product, which is supplied as a set with a vertical shaft pump, expansion tank, control panel and other necessary equipment, is included in the fire pump set.

- Multistage Pump (with base plate)
- Electric motor
- Control Panel
- 100 L expansion tank
- Ball valve
- Check valve
- Pressure Switch
- Level Floater

