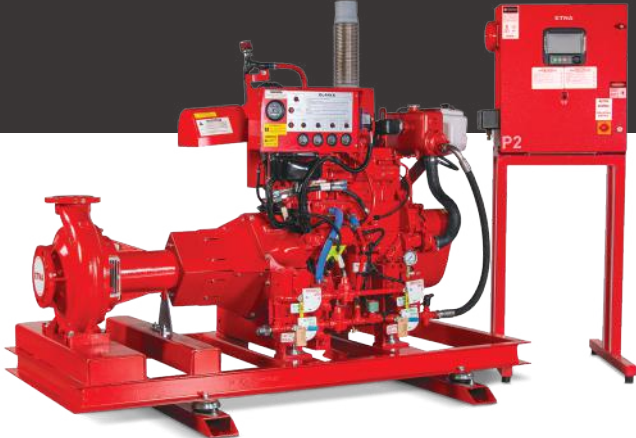




# UL Listed and FM Approved Fire Pump Systems

✓ETN UF Series





## Experience

With our R&D, production and implementation experience of more than 40 years in the pump technologies field, we protect you and your investments without compromising from quality with our expert sales and after sales staff.

We offer complete solutions for building pump systems with our wide product range including in-line dry rotor circulation pumps, end suction pumps, vertical multi stage centrifugal pumps, horizontal split case pumps, waste water and drainage pumps, waste water lifting units, booster systems for residential and commercial buildings, residential fire fighting booster systems, mobile fire extinguishing and flood discharging pumps and fire pumps complying with EN 12845 and NFPA 20 standard under the brand of ETNA.

ETNA has also UL448 and FM1319 certificates for its end suction EA series centrifugal pumps; it can meet the fire pump demands as UL listed and FM approved. In ESC series split case pumps, it has UL448 "Standard for Centrifugal Stationary Pumps for Fire- Protection Service" approval in the range of 500 - 2000 gpm flow rate and 80-288 psi pressure range.

## Green Engineering

By blending advanced pump features with innovative technologies, we offer high-quality, high-performance, energy-efficient, environmentally-friendly products with low operating costs to end users.

Set off with the vision of offering sustainable products, ETNA products are preferred in prestigious projects in both Turkey and the world, and they perform reliably.

## ETNA Fire Pump Systems



### **UL Listed and FM Approved Fire Pump Systems**

ETNA's UL Listed and FM Approved fire pumps are among the most powerful equipment for fire protection systems in the buildings such as residences, industrial facilities, schools, hospitals, airports, hotels, shopping malls and more!

### **Exact Answer to Your Needs**

Our UL Listed and FM Approved sets consisting of high-performance and long-lasting pumps, motors, control panels and system accessories ensure the safety of your buildings and your beloved ones.





### What is UL?

US-based Underwriters Laboratories Inc. (UL) is an independent product safety certification organization that sets standards for product reliability and tests the reliability of materials, products, structures, facilities, processes or systems based on these standards.

UL scientifically evaluates and tests construction materials, energy, fire systems, lighting, plastics and their components, wires and cables, sanitary fixtures, and water system components against electrical, fire and injury risks.

UL has approved approximately 20 billion products, developed more than 1,600 standards, and evaluated about 96,000 products since its establishment in 1894. UL offers test and certification services to its customers with its 170 laboratories located in 104 countries.

UL's official website ([www.ul.com](http://www.ul.com)) includes a directory (UL Directory) with product certifications, in which all UL certified products and their manufacturers are available.

### UL 448 Standard

The UL 448 standard defines design and test conditions of pumps used in fire systems. Although NFPA 20 standard for "Installation of Stationary Pumps for Fire Protection" underlies the UL 448, there are differences in the requirements of UL 448 and NFPA 20 standard.



### What is FM?

Founded in 1835, the US-based FM Global (Factory Mutual Insurance Company) is an international insurance company that provides title insurance and risk management solutions.

FM Approvals is a department of FM Global that certifies industrial, commercial products and services for companies. FM Approvals is an international leader in third-party testing and certification services. In order to prevent property damage, it ensures that products and services meet the highest quality, technical integrity and performance standards for use in commercial and industrial facilities.

If a product or service complies with the standards of FM Approvals, then the product is marked with "FM APPROVED". A total of 45,000 types products and systems have been certified by FM so far, and these products are published in FM Approval Guide at [www.approvalguide.com](http://www.approvalguide.com), which is the official website of FM.

Just like NFPA, FM has its own standards and although these standards are similar to each other, FM standards are stricter than NFPA standards. These standards are available at [www.fmapprovals.com](http://www.fmapprovals.com).

### FM 1319 Standard

The FM 1319 contains test and approval conditions for horizontal end suction centrifugal fire pumps. The requirements in this standard are mainly based on the ANSI Hydraulic Institute (HI) and NFPA 20 standards.



### ETN UF Series

UL Listed and FM Approved single-stage, end suction fire pumps are delivered as a complete set with driver, control panel, pilot pump along with standard fire pump system accessories.

### Specifications

Pump Model	Capacity (GPM)	Size (DN) Suction - Discharge	Net Pressure Range (psi)	Speed (RPM)	Maximum Operating Pressure (psi)
EA 80-32	500	100 - 80	119 - 195	2950	200
EA 100-32	750	125 - 100	112 - 172	2950	290
EA 100-32	1000	125 - 100	145 - 164	2950	175

1 gpm = 1/4.4 m<sup>3</sup>/h

1 psi = 1/14.5 bar

### Design Features

- Pump performance tests meet the requirements of UL and FM standards.
- The main pump dimensions are based on DIN 24256.
- Pump flanges are designed in accordance with the ISO 7005 PN16 standard. Can optionally be produced as ANSI/ASME B16.1 Class 300.
- The single-suction enclosed impeller has been balanced against the axial load with wear rings and dynamically with bearings.
- Elements such as bolts and screws that come into contact with the water inside the pump are made of bronze or corrosion-resistant materials.

### Scope of Delivery for ETN UF Series

- UL/FM listed diesel engine
- Electric motor in accordance with the IEC standards
- UL listed electric motor (optional)
- UL/FM approved electrical/diesel panel
- Jockey Pump

### Material Specifications

- Pump Body : GGG40
- Impeller : Bronze (CuSn10)
- Shaft : AISI 420
- Sealing : Gland Packing
- Bearing : Long-Lasting, Greased, Closed Type

### Accessories (UL/FM)

- Air Release Valve
- Casing Relief Valve
- Main Relief Valve
- Flow Meter (Optional)

### Fields of Application

- Sprinkler systems
- Hydrant systems
- Foam extinguishing systems (monitor nozzles, foam generators etc.)

### **Pump Performance Conditions**

UL listed and FM approved pumps are required to meet the conditions described below.

#### **Flow Rate and Pressure:**

The pressure value at 150% of pump's rated flow rate should not fall below 65% of the rated pressure value.

For example, a pump with a rated flow rate and a pressure head of 100 m<sup>3</sup>/h - 100 mSS should be able to meet a minimum flow rate of  $100 \times 1.5 = 150$  m<sup>3</sup>/h and provide a minimum pressure head of  $100 \times 0.65 = 65$  mSS at this flow rate.



Please contact us for information on optional features.



Please contact us for information on optional features.

#### **Closed Valve Pressure:**

Closed valve value should not exceed 140% of rated pressure value.

For example, the pump with a rated pressure of 100 mSS should have a closed valve pressure lower than pressure head of  $100 \times 1.4 = 140$  mSS.

#### **Motor Power:**

The rated motor power should be greater than the motor power required at 150% of the pump's rated flow rate.

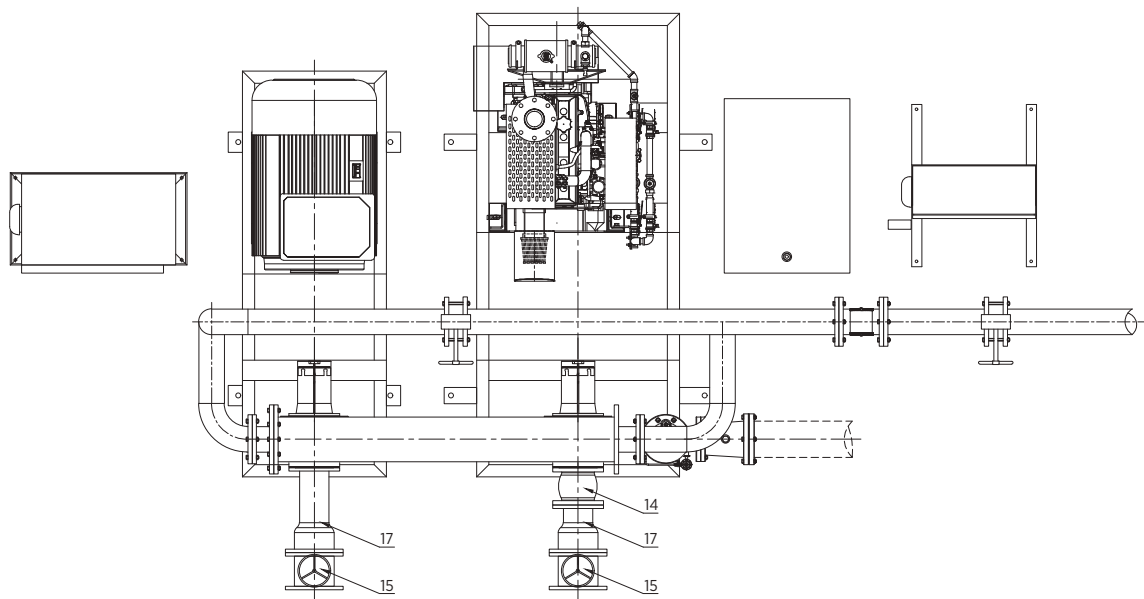
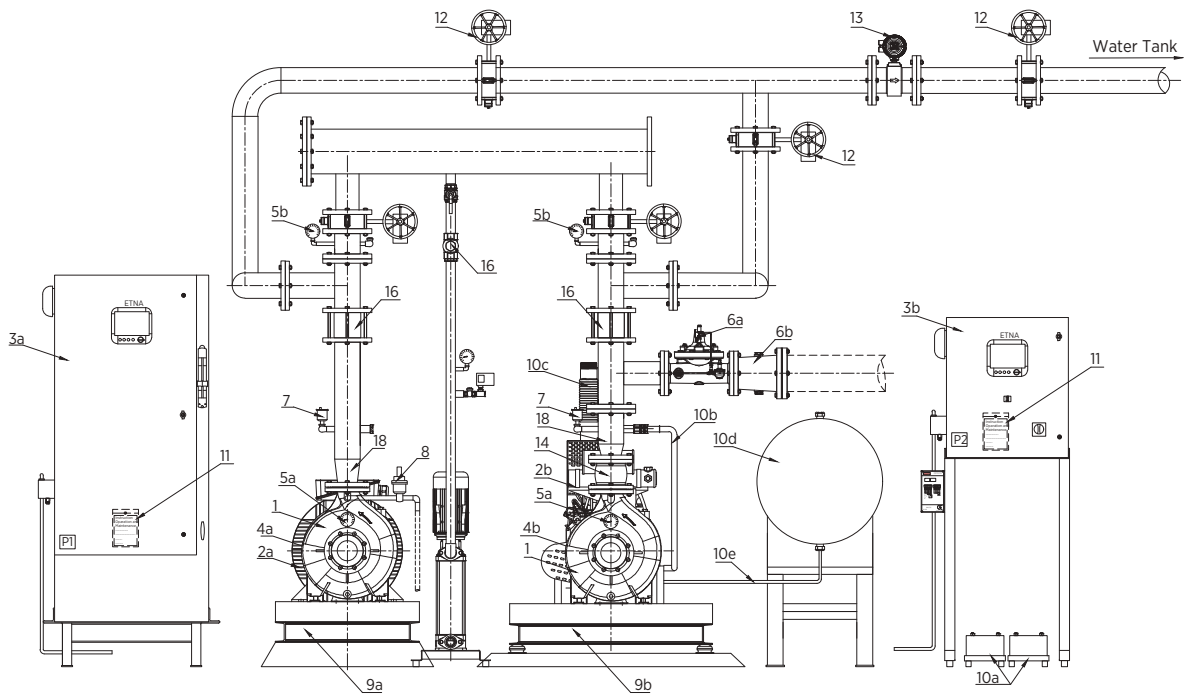
### **General Properties of Electrical Control Panel**

- Microprocessor-controlled
- Standard Nema 2 protected
- Pressure and event recorder
- Single operator for both isolating switch and circuit breaker
- Voltage and current display
- Surge arrester
- Test start button
- Compatible with auto transfer switch
- Emergency Start handle
- Start/Stop buttons
- Pressure transducers and test solenoid valve externally mounted
- Locked rotor protector
- Phase reversal indication
- Audible alarm
- Alarm contacts for remote monitoring
- Available with full voltage and reduced voltage starting

### **General Properties of GDP Diesel Control Panel**

- Microprocessor-controlled
- Standard Nema 2 protected
- Battery voltage and current display
- Pressure and event recorder
- Manual starter buttons
- Stop button
- Pressure transducers and run test solenoid valve externally mounted
- Audible alarm
- Alarm contacts for remote monitoring
- Weekly test timer
- Adjustable auto shut-off
- Sequential filling timer
- Programmable sequential start timer (delay start timer)

## Overall View of Fire-Protection Water Pump Systems in accordance with NFPA Standards



<b>1</b>	Fire Pump
<b>2a</b>	Electric Motor
<b>2b</b>	Diesel Engine
<b>3a</b>	Electrical Pump Control Panel
<b>3b</b>	Diesel Pump Control Panel
<b>4a</b>	Flex Coupling
<b>5a</b>	Vacuum Meter
<b>5b</b>	Manometer
<b>6a</b>	Main Relief Valve
<b>6b</b>	Waste Cone
<b>7</b>	Air Release Valve
<b>8</b>	Casing Relief Valve

<b>10a</b>	Diesel Engine Batteries
<b>10b</b>	Cooling Line
<b>10c</b>	Exhaust Pipes and Silencer
<b>10d</b>	Fuel Tank
<b>10e</b>	Fuel Supply
<b>12</b>	Butterfly Valve with Supervisory Switch
<b>13</b>	Flow Meter
<b>14</b>	Compensator
<b>15</b>	OSY Valve
<b>16</b>	Check Valve
<b>17</b>	Eccentric Suction Reducer
<b>18</b>	Concentric Increaser

# FM Certificate of Compliance



## Certificate of Compliance

This certificate is issued for the following:

**Centrifugal Fire Pumps  
(Horizontal, End Suction Type)**

**Models EA 80-32 and EA 100-32**  
(see attached listing)

**Prepared for:**

ALP Pompa Teknolojileri A.Ş.  
Dudullu OSB, 2. Cad. No: 14  
PK: 34775 Ümraniye – Istanbul  
Turkey

FM Approvals Class: 1319 (January 2018)

Approval Identification: PR453496

Approval Granted: March 12, 2020

To verify the product continues to be Approved please refer to [www.approvalguide.com](http://www.approvalguide.com).

Said Approval is subject to satisfactory field performance, continuing Surveillance Audits, and strict conformity to the constructions as shown in the Approval Guide, an online resource of FM Approvals.

David B. Fuller  
VP, Manager – Fire Protection  
FM Approvals  
1151 Boston-Providence Turnpike  
Norwood, MA 02062



## Certificate of Compliance

Product	Rated Capacity, (gal/min)	Rated Capacity, (dm <sup>3</sup> /min)	Rated Net Head at Rated Capacity, psi	Rated Net Head at Rated Capacity, kPa	Rated Speed, r/min	Suction Inlet, dia., in.	Discharge Outlet, dia., in.	Stage(s)
EA 80-32	500	1895	119-195	820-1345	2950	4	3	1
EA 100-32	750	2840	112-172	770-1185	2950	5	4	1
EA 100-32	1000	3785	145-164	1000-1130	2950	5	4	1







# UL Certificate of Compliance

16.11.2020 QWZU.EX28101 - Centrifugal Fire Pumps, End Suction | UL Product iQ

**UL Product iQ™**

QWZU.EX28101 - Centrifugal Fire Pumps, End Suction

Centrifugal Fire Pumps, End Suction

See General Information for Centrifugal Fire Pumps, End Suction

**ALP POMPA (ETNA) TEKNOLOJILERI SAN. VE TIC. A.S.** EX28101  
 Dudullu OSB. 2.  
 Cad. No:14  
 34775 Ümraniye, -STANBUL TURKEY

Rated Capacity GPM	Size In.	Model Dsg	Rated Net Pressure Range psi	Approx Speed RPM	Max Working Pressure psi
500	4X3	EA 80-32	127 - 196	2950	290
750	5X4	EA 100-32	115 - 174	2950	290
1000	5X4	EA 100-32	149 - 169	2950	290

Last Updated on 2020-06-18

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19.08.2021 QXJY.EX28651 - Centrifugal Fire Pumps, Split Case | UL Product iQ

**UL Product iQ™**

QXJY.EX28651 - Centrifugal Fire Pumps, Split Case

Centrifugal Fire Pumps, Split Case

**Alp Pompa (ETNA) Teknolojileri San. Ve Tic. A.S.** EX28651  
 Dudullu OSB. 2.  
 Cad. No:14  
 Ümraniye, ISTANBUL 34775 Turkey

Fire pumps, single stage

Rated Capacity (gpm)	Size (in.)	Model Dsg	Rated Net Pressure Range (psi)	Approx Speed (rpm)	Max Working Pressure (psi)
500	6x4	ESC100-250	80-140	2900	232
500	6x4	ESC100-310	130-204	2900	290
500	6x4	ESC100-375	219-300	2900	400
750	6x4	ESC100-250	73-139	2900	232
750	6x4	ESC100-310	125-198	2900	290
750	6x4	ESC100-375	199-280	2900	400
1000	8x5	ESC125-290	101-177	2900	232
1000	8x5	ESC125-365	178-288	2900	348
1250	8x5	ESC125-290	97-175	2900	232
1250	8x5	ESC125-365	165-278	2900	348
1500	8x6	ESC150-290	98-155	2900	232
1500	8x6	ESC150-360	150-242	2900	320
2000	8x6	ESC150-290	94-149	2900	232
2000	8x6	ESC150-360	138-234	2900	320

Last Updated on 2021-08-18

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