

## MATERIAL LIST & TECHNICAL SPECIFICATION

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|--|-------|
| 1) Fire Fighting Pump with Electrical Motor  | 2 Ea. |
| Type : Single Stage, Horizontal Split-case   |       |
| Rated Flow : 500 gpm   |       |
| Rated Head : 120 psi   |       |
| Shut-off head : max 130 psi  |       |
| Motor Rotation : Clockwise   |       |
| Conformity : NFPA 20   |       |
| Main Body : Axial Split Type and Cast Iron   |       |
| Includes : Body Cooling Valve, Manometers, Air Release Valve                                 |       |
| Approval : FM Approval, UL Listed, CE Certificate  |       |
| 2) Control Panels for Electrical Motor Pumps   | 2 Ea. |
| Type : With micro processor  |       |
| Motor Starting : Star-Delta  |       |
| Power Supply : 380 VAC/3-Ph//50Hz  |       |
| Includes : Pressure Control Device, Phase Number / Sequence Relay, Min. Run Time Timer       |       |
| Approval : FM Approval, UL Listed, CE Certificate  |       |
| 3) Electric Motorized Leakage Pump (Jockey Pump)   | 1 Ea. |
| Type : Vertical Shaft, Multi Stage   |       |
| Rated Flow : 10 gpm  |       |
| Rated Head : 130 psi   |       |
| Electrical motor : ODP   |       |
| Includes : Safety vent, Manometers, vent valve   |       |
| Approval : TSE, CE Certificate   |       |
| 4) Control Panels for Electric Motorized Leakage Pump (Jockey Pump)                          | 1 Ea. |
| Type : With Relay  |       |
| Protection Class : NEMA 2 (IEC IP11)   |       |
| Power Supply : Chosen according to the pump  |       |
| Includes : Pressure Control Device, Min. Run time timer, Totaliser                           |       |
| Approval : TSE, CE Certificate   |       |
| 5) Test Flow Measuring Device  | 1 Ea. |
| Type : Annubar or Venturi  |       |
| Inlet - Output : DN 200, (8")  |       |
| Indicator : 0-4000 gpm   |       |
| Operating pressure : Max. 12 bar (175psi)  |       |
| Confirmation : UL Listed, FM Approval  |       |
| 6) Test Flow Measuring Device  | 1 Ea. |
| <i>As above but;</i>   |       |
| Inlet - Output : DN 150, (6")  |       |
| Indicator : 0-2000 gpm   |       |
| 7) OS&Y Gate Valve   | 1 Ea. |
| Diameter : DN200 (8")  |       |
| Connection Type : Flanged  |       |
| Pressure Class : 175 psi   |       |
| Opening : Flywheel   |       |
| Material : - Valve Body: Cast Iron   |       |
| - Disk : EPDM Coated Cast Iron   |       |
| Accessories : With Monitoring Switch   |       |
| Manufacturer : Fivalco, Kennedy, Stockham or Similar   |       |
| Approval : UL Listed, FM Approval  |       |
| 8) Pressure Relief Valve   | 1 Ea. |
| Diameter : DN150 x DN150 (6" x 6")   |       |
| Type : Pilot Type (Spring Mechanism)   |       |
| Connection Type : Flanged  |       |
| Approval : UL Listed, FM Approval  |       |
| 9) Automatic Drip Valve  | 1 Ea. |
| Function : Draining the water remaining in the pipe  |       |
| Material : - Body: Bronze  |       |
| - Sphere: Stainless steel or Brass   |       |
| Type : Automatic, Spring   |       |
| Inlet : DN15 (1/2") threaded   |       |
| Confirmation : UL Listed, FM Approval  |       |
| 10) Fire Brigade Connection Valve  | 1 Ea. |
| Function : Providing external fire water supply to the fire water system with the fire truck |       |

Output Connections	: DN65 x DN65 (2-1/2" x 2-1/2")	
Rear Connection	: 4"	
Accessories	: Outlet spouts with protective cover, bronze wall badge and drip valve 2 Ea. 2-1/2" - DN 65 Storz adapter	
Approval	: UL Listed, FM Approval	
11) Check Valve		2 Ea.
Inlet– Outlet	: DN 150 (6")	
Type	: Swing	
Connection Type	: Flanged	
Mounting Style	: Upright or horizontal	
Manufacturer	: Fivalco, Kennedy, Stockham or Similar	
Approval	: UL Listed, FM Approval	
12) Check Valve		1 Ea.
As above but;		
Inlet– Outlet	: DN 50 (2-1/2")	
13) Butterfly valve,		2 Ea.
Inlet– Outlet	: DN 250 (12")	
Connection	: Wafer Type	
Mounting Style	: Vertical-Horizontal	
Opening	: With handwheel with gearbox	
Material	: Cast iron body, bronze disc	
Indicator	: Position indicating pointer	
Accessories	: TKÇY Monitoring key and 2 pcs. With Connection Clamp	
Manufacturer	: Fivalco, Nibco, Tyco, Victaulic Or Similar	
Approval	: UL Listed, FM Approval	
14) Butterfly valve,		2 Ea.
As above but;		
Inlet– Outlet	: DN 150 (6")	
15) Butterfly valve,		1 Ea.
As above but;		
Inlet– Outlet	: DN 50 (2-1/2")	
16) Flow Switch		1 Ea.
Function	: Providing Electrical Contact From Automatic or Manual Extinguishing Process	
Application Diameter	: DN50 (2")	
Type	: Clamp on pipe	
Mounting Style	: Horizontal or vertical	
Delay	: Adjustable up to 1 min.	
Contact Type	: TKÇY free contact	
Manufacturer	: Potter, System Sensor or Similar	
Approval	: UL Listed, FM Approval	
17) Test and Drain Valve, K=80		1 Ea.
Diameter	: DN25 (1")	
K Factor	: 80 (metric)	
Monitoring Glass	: Available	
Manometer	: 0-16 bar, With Glycerin and Tap	
Manufacturer	: AGF, Giacomini, or similar	
Approval	: UL Listed, FM Approval	
18) Grooved Pipe Clamp, Flexible		2 Ea.
Function	: Creating a flexible connection point on the pipe,	
Diameter	: DN250 (10")	
Type	: Flexible	
Material	: Cast Iron	
Clamp Gasket	: EPDM (Suitable for Fire Use)	
Manufacturer	: Gruvlock, Shurejoint, Victaulic or Similar	
Approval	: UL Listed, FM Approval	
19) Grooved Pipe Clamp, Flexible		2 Ea.
As above but		
Diameter	: DN150 (6")	
20) Grooved Pipe Clamp, Flexible		2 Ea.
As above but		
Diameter	: DN50 (2")	
21) 0-16 bar Manometer and Cut-Off Valve		1 Ea.
Display Range	: 0-16 bar indicator	
Type	: Glycerine type	

Accessory	: Valve bottom, With 3-way shut-off and relief valve	
Connection	: Grooved Connection	
Approval	: EN-TSE Approved	
22) Pipe Support		10 Ea.
Support Material	: Steel C120 profile (average 1 m long)	
Fixing Material	: M14 U-bolt	
23) Welded Black Steel Pipe, DN200 (8")		6 m
Diameter	: DN200 (8")	
Pressure Class	: PN16	
Standard	: TS EN 10217-1	
Manufacturing	: 1 layer antirust and 2 layers RAL 3000 oil paint on black steel in accordance with the standards	
Manufacturer	: Borusan or Çayirova	
24) Welded Black Steel Pipe, DN150 (6")		18 m
<i>As above but;</i>		
Diameter	: DN150 (6")	
Standard	: TSE EN 10255 MW	
25) Welded Black Steel Pipe, DN50 (2")		18 m
<i>As above but;</i>		
Diameter	: DN50 (2")	
26) Collector İmalatı, DN350 (14")		1 Ea.
Diameter	: DN350 (14")	
Material	: Welded Black Steel Pipe	
Lenght	: 4 m	
Inlet-Outlet	: 2xDN150, 1xDN32 Flanged Inlet - 2xDN250, 1xDN100 Flanged Outlet	
Pressure Class	: PN16	
Standard	: TS EN 10217-1	
Manufacture	: Antirust + 2 layer oil paint	
Brand	: Borusan, Çayirova etc.	
Approval	: EN-TSE Approved	
27) Vortex Plate		2 Ea.
Material	: Black Steel Pipe	
Production	: Galvanized Coating	

Note: According to the Specification Requirements, all kinds of Auxiliary Materials, Labor, Transportation, Lifting Machines and Engineering Services will be considered in unit prices. These items include, but are not limited to:

All kinds of Auxiliary Materials and Engineering Services according to the Specification Requirements

- All kinds of working fasteners, auxiliary materials, Labor Services for the realization of the work
- All kinds of fasteners, installation materials
- Manufacturing and ready-made elements for fixing purposes
- Fittings, welding, sealing materials
- Corrosion protection, installation painting works
- Labeling and marking
- All kinds of installation materials required to complete the job
- Preparation of Manufacturing Drawings
- Repair Works
- Test and Commissioning works
- All kinds of engineering services according to specification requirements
- All kinds of work and equipment for the realization of the work