



AS2941 : 2013

Fixed Fire Protection Installations -
Pumpset Systems

CP52 : 2004

Automatic Fire Sprinkler System

NFPA 20 : 2019

Standard For The Installation Of
Stationary Pumps For Fire Protection

Fire Pumps
VERTICAL TURBINE PUMPS

VT *series*



CODING SYSTEM

Eg.

6	A	VM	1	T1	/	10	PBCC
X	X	XX	X	XX	/	XX	XXXX

BOWL DIAMETER (INCH)

Bowl Diameter (inch) 6 = 6"

TYPE OF CAPACITY

A is Lower capacity, B, C, D higher capacity

TYPE OF IMPELLER

VM = Closed Impeller
VS = Semi-open impeller

TYPE OF LUBRICATION LINE SHAFT

1 = Water Lubrication type
2 = Oil Lubrication type

TYPE OF DRIVER

T0 = Bare Shaft Pump for VSS Electric Motor Type
T1 = IE1 Vertical Solid Shaft Electric Motor
T2 = IE2 Vertical Solid Shaft Electric Motor
T3 = IE3 Vertical Solid Shaft Electric Motor

H0 = Bare Shaft Pump for VSS Electric Motor Type
H1= IE3 Vertical Hollow Shaft Electric Motor
H2= IE3 Vertical Hollow Shaft Electric Motor
H3= IE3 Vertical Hollow Shaft Electric Motor

E0 = Bare Shaft Pump for Diesel Engine
A1 = Diesel Engine (tier1) with air-cool
W1 = Diesel Engine (tier1) with heat exchanges
A2 = Diesel Engine (tier2) with air-cool
W2 = Diesel Engine (tier2) with heat exchanges

NUMBER OF STAGE

10 = 10 stage

PUMP MATERIAL

PBCC = (P)Packing Seal, (B) Impeller-Bronze, (C) Discharge head-CI, (C) Bowl-CI.
PBDD = (P)Packing Seal, (B) Impeller-Bronze, (D) Discharge head-DI, (D) Bowl-DI.
PSCC = (P)Packing Seal, (B) Impeller-SS304, (C) Discharge head-CI, (C) Bowl-CI.
PSDD = (P)Packing Seal, (B) Impeller-SS304, (D) Discharge head-DI, (D) Bowl-DI.

INTRODUCTION

DESCRIPTION

VT Series are Vertical turbine pump, as multistage centrifugal pumps. The pump is deep well pumps are generation and energy saving equipment for lifting water. They are with advanced structure, for the adopting the core produced with the resin sand and the impeller & diffuser adopting the new technique that top coated with epoxy, advantage hydraulic model. Excellent performance curve without hump and wide high efficiency range.

OPERATING DATA

Capacity,Q	: ≤ 5000 m ³ /hr
Head,H	: ≤ 350 m
Speed	: 1450rpm (50Hz) / 3000rpm (50Hz) / 1770 rpm (60HZ) / 3550 rpm (60HZ)
Motor Power	: 5.5 Kw - 1600 Kw
Rated Voltage	: 380V-415V, 6kV, 10kV
Well Diameter	: 6" - 20" inch
Max. Discharge Diameter	: 650 mm

CONSTRUCTION

The fire pump usually consist of a Pump body, Electric motor or Diesel Engine, Drive shaft, right angle gear box (for Diesel Engine), Flexible coupling (for Diesel Engine), column pipe assembly , controller and other parts etc. The construction characteristic as following :

a)Pump Body

VT Series pump body consist of pump casing, pump shaft, impeller, shaft sleeve, bushing, wear ring, suction bell and others parts etc. The main material is normally Cast Iron or stainless steel. The pump efficiency is high, and the curve of character is smooth. And the zone of efficiency is extensive.

b)Electric Motor / Diesel Engine

i) Electric Motor

It have two type of Electrical motor which is **Vertical Solid Shaft** and **Vertical Hollow Shaft**.

ii)Diesel Engine

We can adopt international famous fire pump diesel engine, such as Cummins, Caterpillar, Clarke and so on. The accessory of the diesel engine such as silencer and battery shall arrange to the customer requirements. The diesel engine shall be of the compression ignition type and could provide emergency starting function.

We also can provide right angle gear box, flexible coupling, base and other accessories base on customer requirement.

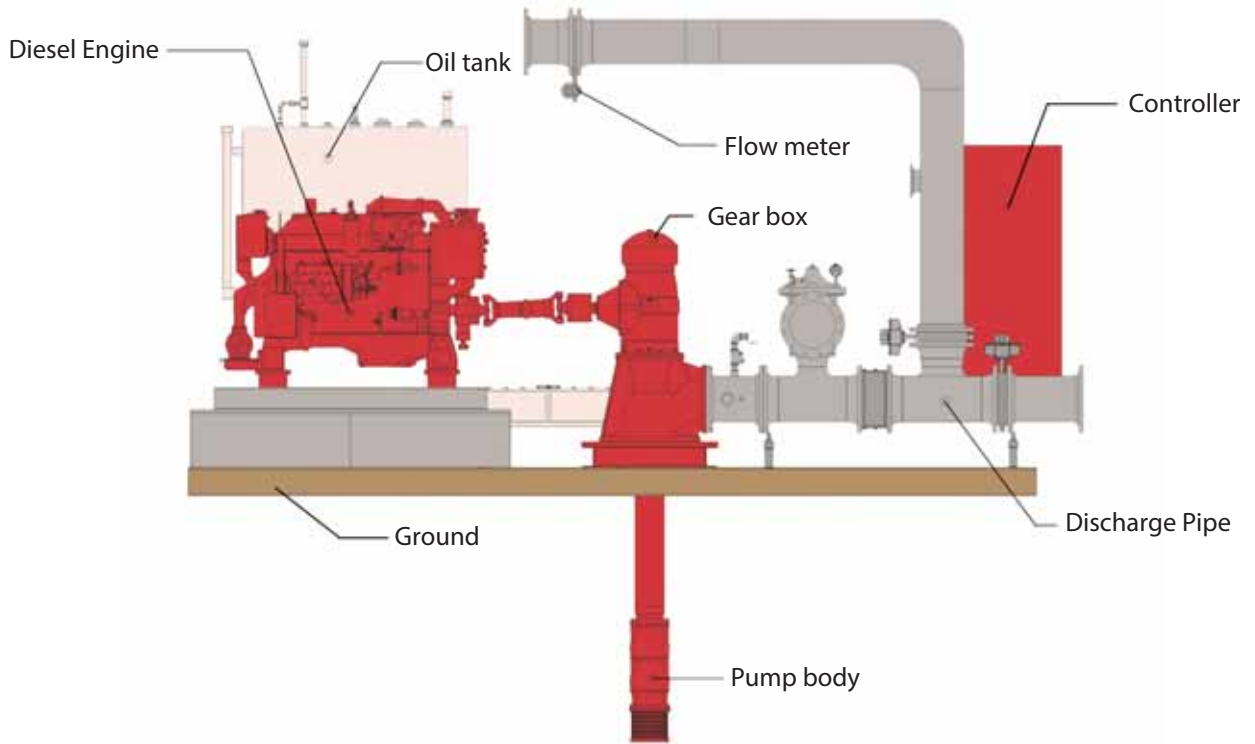
PERFORMANCE CHART

50 Hz & 60Hz

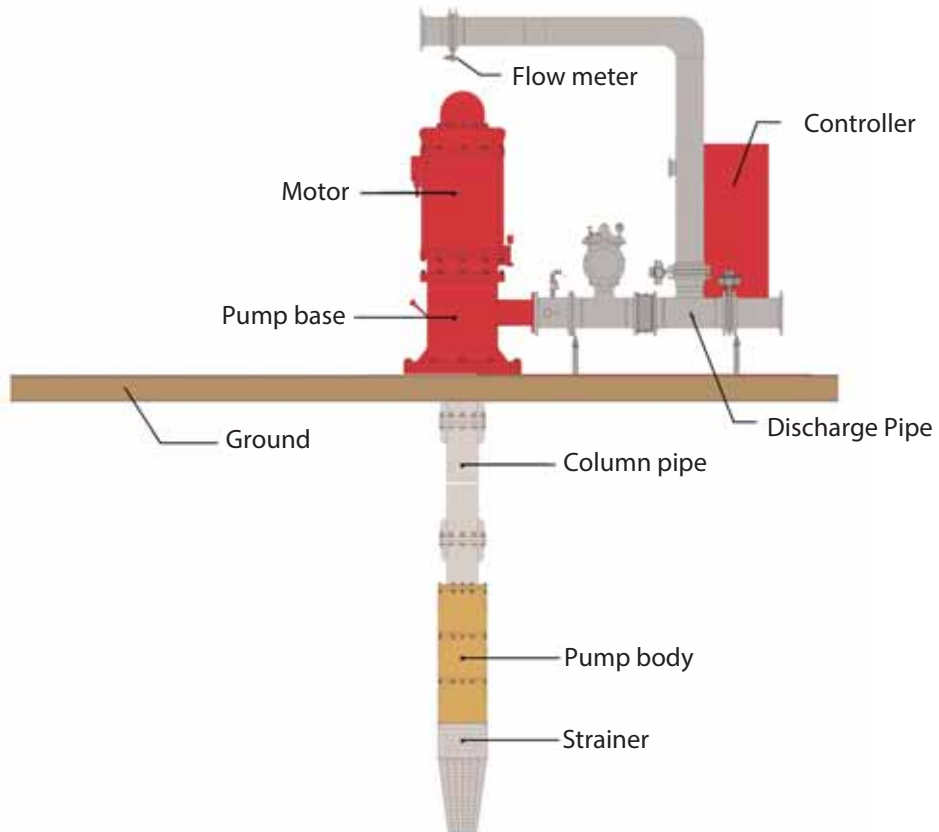
VT Series / 1475 RPM / 50HZ						
NO	Pump Model	Capacity (USGPM)	Speed (rpm)	Single Stage Head (m)	Max Stage	Max. Pressure (psi)
1	10A	400	1475	9	33	430
2	11B	500	1475	14.5	18	380
3	12C	750	1475	13.5	17	340
4	14A	1000	1475	16.5	14	340
5	14B	1250	1475	18	13	340
6	16A	1500	1475	33.5	6	322
7	16B	2000	1475	28	8	335
8	18B	2500	1475	33	6	310
9	18B	3000	1475	32	6	310
10	20B	4000	1475	34	6	310
VT Series / 2875 RPM / 50HZ						
1	9A	400	2875	30	9	400
2	9B	500	2875	36	7	400
3	11A	750	2875	50	5	380
4	11C	1000	2875	54	5	380
VT Series / 1770 RPM / 60HZ						
1	9C	400	1770	8.5	33	400
2	11A	500	1770	18	14	380
3	12B	750	1770	18	13	340
4	14A	1000	1770	26	9	340
5	14B	1250	1770	27	8	340
6	16A	1500	1770	49	4	322
7	16B	2000	1770	41	5	335
8	18A	2500	1770	47.5	5	348
9	18B	3000	1770	47.5	4	310
10	20A	4000	1770	45.5	4	310
VT Series / 3550 RPM / 60HZ						
1	9A	400	3550	40	7	400
2	9B	500	3550	46	6	400
3	11A	750	3550	65	4	380
4	11B	1000	3550	68	4	380

FIRE PUMPSET SCHEMATIC

1) DIESEL ENGINE DRIVEN - FIRE PUMP SET SCHEMATIC



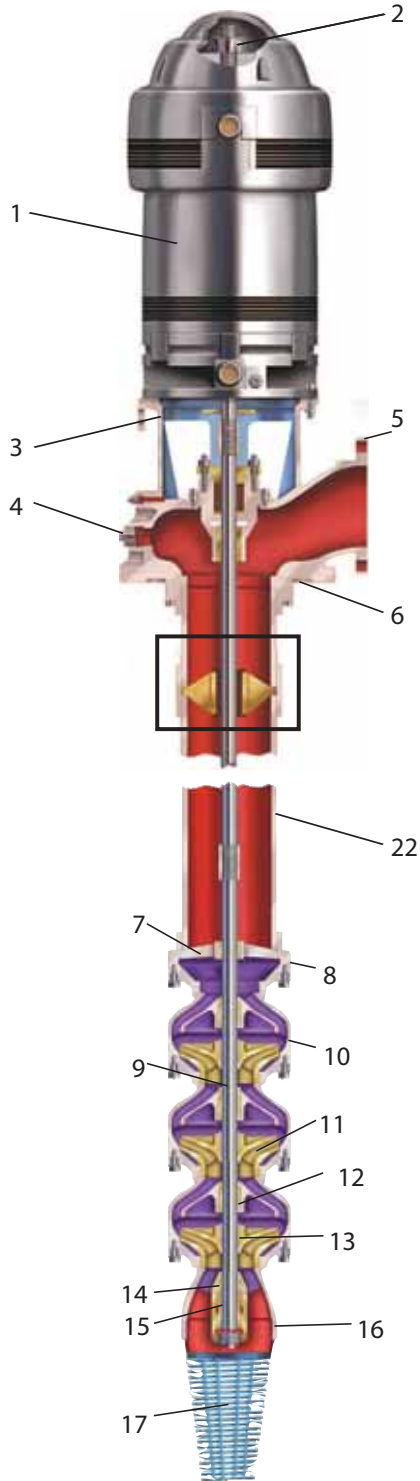
2) ELECTRIC MOTOR DRIVEN - FIRE PUMP SET SCHEMATIC



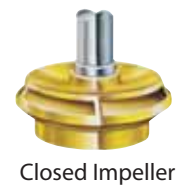
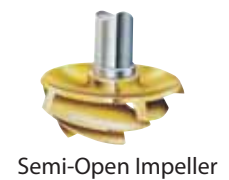
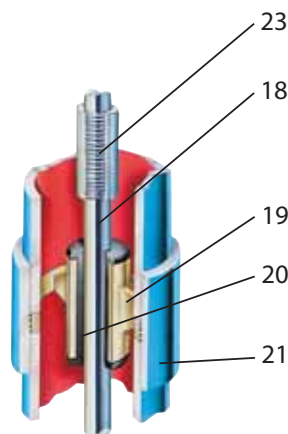
SECTION VIEW

LINE SHAFT

a) Water Lubrication



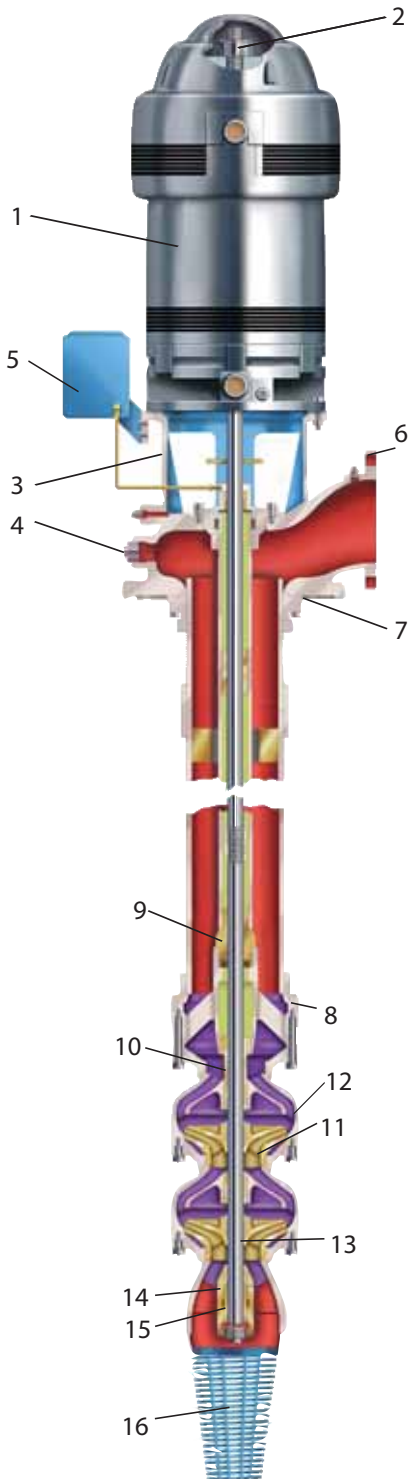
Pos.	Description
1	Motor
2	Adjusting nut
3	Discharge head
4	Pre-lubricating plug
5	Suction flange
6	Upper short column
7	Upper bowl bearing
8	Discharge bowl
9	Impeller shaft
10	Intermediate bowl
11	Impeller
12	Bowl bearing
13	Lock Collet
14	Prevention sand ring
15	Suction bowl bearing
16	Suction bowl bearing
17	Strainer
18	Lineshaft
19	Spider
20	Spider bearing
21	Coupling
22	Coloumn (Optional)
23	Coupling



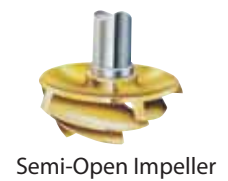
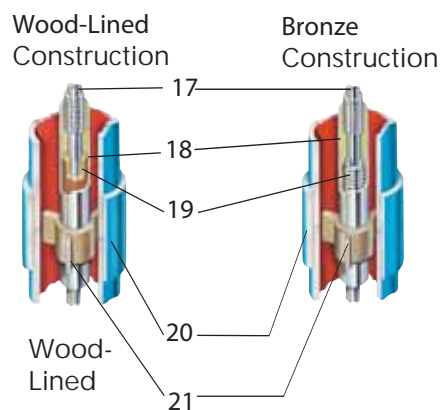
SECTION VIEW

LINE SHAFT

b) Oil Lubrication



Pos.	Description
1	Motor
2	Adjusting nut
3	Discharge head
4	Pre-lubricating plug
5	Large Capacity Manual or Solenoid Oiler
6	Suction flange
7	Upper short column
8	Discharge bowl
9	Adapter Bushing
10	Discharge bowl bearing
11	Impeller
12	Intermediate Bowl
13	Intermediate Bowl Bearing
14	Sand Collar
15	Suction Bowl Bearing
16	Strainer
17	Line Shaft
18	Enclosing Tube
19	Enclosing line shaft Bearing
20	Column Pipe and Coupling
21	Tube Centering Spider



Your local distributor details:



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