



# Vertical Turbine Fire Pumps





## An Introduction to NAFFCO

NAFFCO FZCO is among the world's leading manufacturers and suppliers of top-tier firefighting equipment, fire protection systems, fire alarms, security and safety engineering systems worldwide. Since its humble beginnings, NAFFCO has grown from its headquarters in Dubai, UAE to expand to serving over 100 countries around the world.

### One Stop Shopping for All Your Fire Safety and Security Needs

Today's companies recognize the importance and convenience of having multiple safety services available under one roof, a "one-stop shopping" source for all types of fire protection systems. As the undisputed leader in

firefighting technology and fire safety solutions, NAFFCO has worked in both the private and government sectors, as well as manufacturing plants, hospitals, stadiums, malls and other organizational projects, delivering comprehensive fire safety and engineering solutions.

NAFFCO is associated with globally renowned international companies in the fire protection industry such as Esser, Secutron, Megalights, Evax, Fike, Central, Shield, Mueller, Giacomini, RB Pumps, Bombas, Ideal Pumps, Joslyn Pumps, Peerless Pumps.

At NAFFCO we are passionate about sustaining, upgrading and improving any means of safety, by having over 2 million square foot of manufacturing space, over 450 engineers, and following all the latest technology available. We live by our passion, the passion to protect.



# FIRE FIGHTING PUMPS

NAFFCO's UL listed Vertical Turbine fire pumps provide you with a reliable solution for your underground water source type fire fighting pump needs by combining the stringent quality measures of UL and NFPA standards with our proven experience in the fire protection field. We can offer you a complete package of services

starting from engineering assistance to field start-up and periodic maintenance. Each pump set is tested in our factory, prior to dispatch, as per UL and NFPA standards. These pumps are covered by a warranty of one year subject to standard terms and conditions.

## VERTICAL TURBINE PUMPS



### FEATURES

- Complete unit responsibility.
- Complete in-house fabrication capabilities.
- Hydrostatic strength testing facilities.
- Operation run test as per NFPA 20, UL 448 requirements.
- Vertical turbine models for capacities from 50 to 1500 US GPM.
- Drivers: Electric motor drive or diesel engine drive.
- Electrical testing capabilities for motors and controllers as per NFPA standards.
- Capable to supply additional accessories wherever required.
- Rugged construction for longer service life.
- Specifically designed for fire fighting applications as per NFPA 20.
- Excellent mechanical and hydraulic design characteristics for efficient performance.



### SUCTION ASSEMBLY

Suction bell is furnished with an extra long bearing that strengthens and provides rigid support for the lower end of the pump shaft. Suction bell provides efficient flow into the eye of the first stage impeller.

### DISCHARGE HEAD

The rugged pump discharge head assembly is made of close-grained cast iron. It has smooth passageways that ensures efficient overall operation and provides an above ground connection to the discharge piping.

### BOWL

The pump bowls have vanes cast integrally in them. These vanes are designed to match accurately with the impeller, and are smoothly contoured to guide the flow to next stage with maximum efficiency.

### IMPELLER

Impellers are enclosed type, made of bronze / SS 304 and matched to the pump bowls. Each impeller is statically / dynamically balanced as per ISO 1940-1 to insure highest efficiency and vibration free operation.

### COLUMN

Pump column pipe shall be in sections not longer than 10 ft each. Column pipe is flanged type. Flanged connections are accurately machined to accept bearing retainers and are bolted together securely for proper sealing.

### SHAFT SEAL

The shaft sealing is gland packing type. A lantern ring is furnished between the packing and it relieves pump pressure from the upper packing rings by bypassing the high pressure water through its relief ports.

## CERTIFIED FIRE PUMP MODELS WITH RATINGS

### RATED CAPACITY - 50 GPM

SL. No	Pump Model	UL Listed Pressure (PSI)	Rated Speed (RPM)	Discharge Outlet Dia. (mm)	Stages
1	NF-4VTP22	42-188	2900	100	3-10

### RATED CAPACITY - 100 GPM

SL. No	Pump Model	UL Listed Pressure (PSI)	Rated Speed (RPM)	Discharge Outlet Dia. (mm)	Stages
1	NF-4VTP22	52-173	2900	100	4-10

### RATED CAPACITY - 150 GPM

SL. No	Pump Model	UL Listed Pressure (PSI)	Rated Speed (RPM)	Discharge Outlet Dia. (mm)	Stages
1	NF-4VTP60	87-254	2900	100	3-6

### RATED CAPACITY - 200 GPM

SL. No	Pump Model	UL Listed Pressure (PSI)	Rated Speed (RPM)	Discharge Outlet Dia. (mm)	Stages
1	NF-4VTP60	84-246	2900	100	3-6

### RATED CAPACITY - 250 GPM

SL. No	Pump Model	UL Listed Pressure (PSI)	Rated Speed (RPM)	Discharge Outlet Dia. (mm)	Stages
1	NF-4VTP60	50-235	2900	100	2-6

### RATED CAPACITY - 300 GPM

SL. No	Pump Model	UL Listed Pressure (PSI)	Rated Speed (RPM)	Discharge Outlet Dia. (mm)	Stages
1	NF-6VTP115	69-86	1450	150	3
2	NF-6VTP115	92-230	1450	150	4-8

### RATED CAPACITY - 400 GPM

SL. No	Pump Model	UL Listed Pressure (PSI)	Rated Speed (RPM)	Discharge Outlet Dia. (mm)	Stages
1	NF-6VTP115	66-82	1450	150	3
2	NF-6VTP115	88-221	1450	150	4-8

### RATED CAPACITY - 500 GPM

SL. No	Pump Model	UL Listed Pressure (PSI)	Rated Speed (RPM)	Discharge Outlet Dia. (mm)	Stages
1	NF-6VTP115	63-80	1450	150	3
2	NF-6VTP115	84-215	1450	150	4-8

### RATED CAPACITY - 750 GPM

SL. No	Pump Model	UL Listed Pressure (PSI)	Rated Speed (RPM)	Discharge Outlet Dia. (mm)	Stages
1	NF-8VTP170	84-108	1450	200	3
2	NF-8VTP170	112-288	1450	200	4-8

### RATED CAPACITY - 1000 GPM

SL. No	Pump Model	UL Listed Pressure (PSI)	Rated Speed (RPM)	Discharge Outlet Dia. (mm)	Stages
1	NF-8VTP230	81-99	1450	200	3
2	NF-8VTP230	108-132	1450	200	4
3	NF-8VTP230	135-265	1450	200	5-8

### RATED CAPACITY - 1250 GPM

SL. No	Pump Model	UL Listed Pressure (PSI)	Rated Speed (RPM)	Discharge Outlet Dia. (mm)	Stages
1	NF-10VTP285	105-283	1450	250	3-6

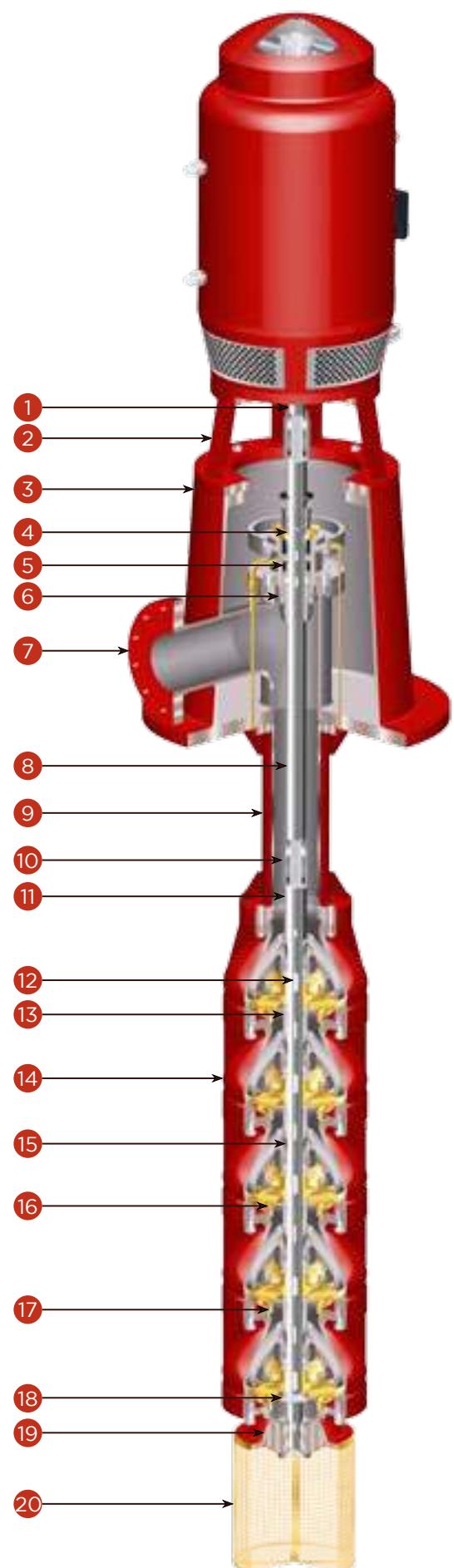
### RATED CAPACITY - 1500 GPM

SL. No	Pump Model	UL Listed Pressure (PSI)	Rated Speed (RPM)	Discharge Outlet Dia. (mm)	Stages
1	NF-10VTP340	108-135	1450	250	3
2	NF-10VTP340	144-270	1450	250	4-6

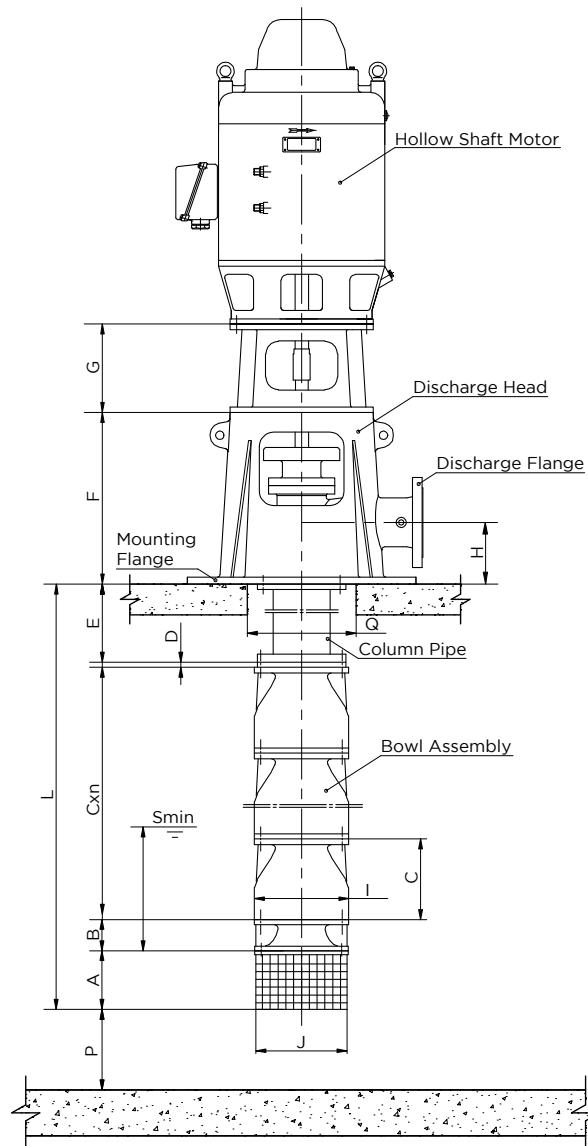
# CROSS SECTIONAL VIEW



DESCRIPTION		
No.	Part Name	Material
1	Top Shaft	S/S 416
2	Driver Riser	Cast Iron ASTM A48 Class 40
3	Discharge Head	Cast Iron ASTM A48 Class 40
4	Shaft Sleeve	S/S 416
5	Gland Packing	Graphite Impregnated
6	Stuffing Box	Ductile Iron ASTM A536 Gr 60
7	Discharge Flange	Cast Iron ASTM A48 Class 40
8	Middle Line Shaft	S/S 416
9	Column Pipe	Steel ASTM A53
10	Coupling	S/S 416
11	Lower Shaft	S/S 416
12	Impeller Key	S/S 416
13	Spacer Sleeve	S/S 416
14	Bowls	Ductile Iron ASTM A536 Gr 60
15	Guide Bearing	Teflon
16	Impellers	Bronze SAE 40 / SS 304
17	Impeller Wearing Ring	Bronze SAE 40 / SS 304
18	Round Nut	S/S 416
19	Suction Bell	Ductile Iron ASTM A536 Gr 60
20	Strainer	SS 316 / SS 304 / Bronze

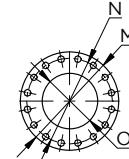


# DIMENSIONAL DRAWING - ELECTRIC MOTOR DRIVEN PUMP

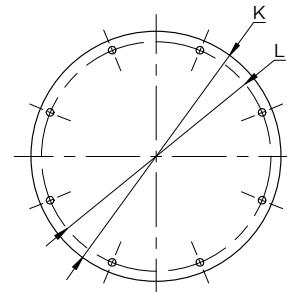


## Discharge Flange Data

Standard - ASME B16.1  
Class Rating - CLASS 250



**DISCHARGE FLANGE**



**MOUNTING FLANGE**

**TABLE OF DIMENSIONS**

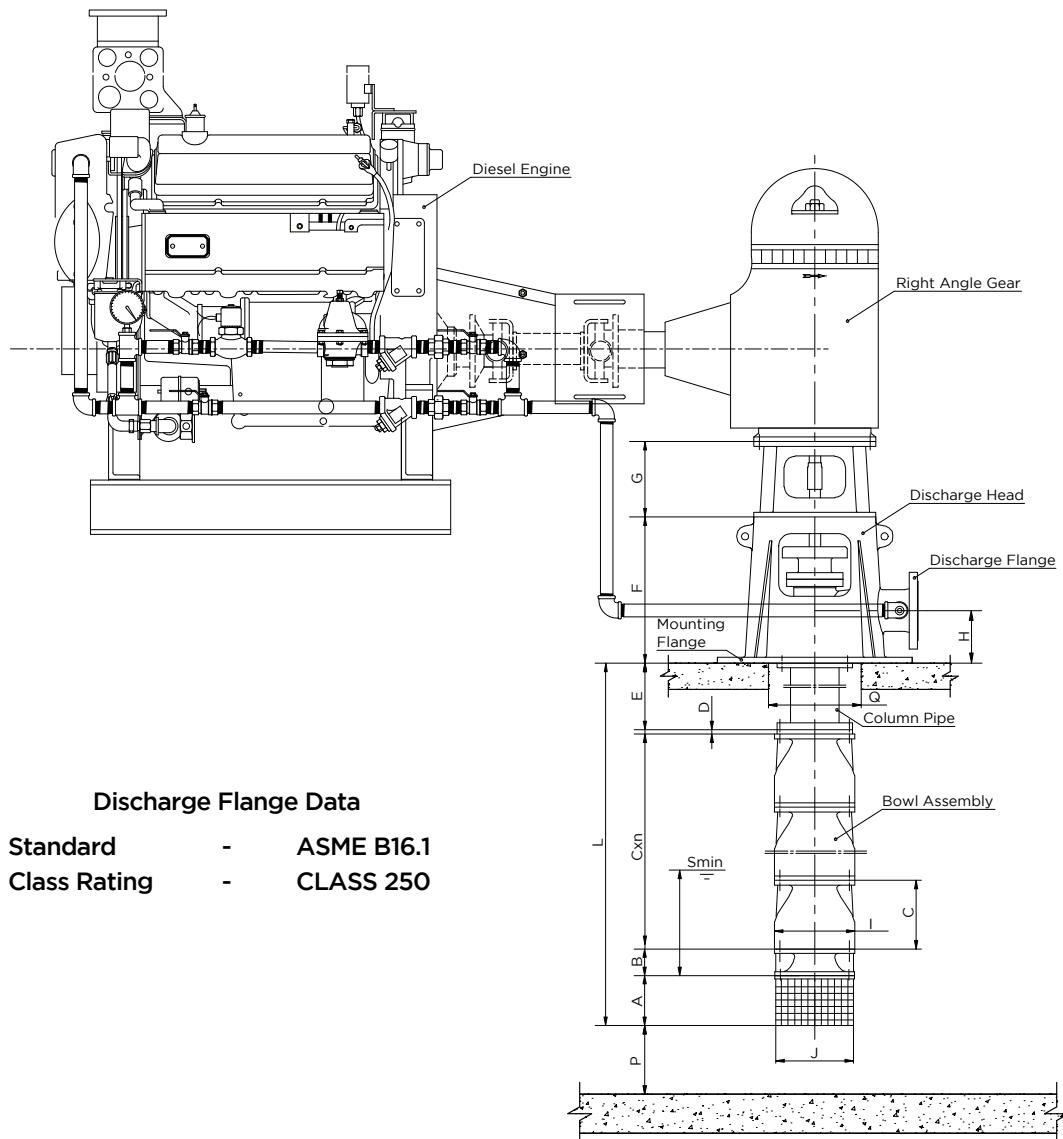
Model	A	B	Cxn*	D	E	F	G	H	I	J	Smin	Q	P
NF-4VTP22	166	95	135xn	25	495	455	200	180	ø180	ø172	422	320	300
NF-4VTP60	245	90	180xn	-	605	455	200	180	ø235	ø233	600	380	300
NF-6VTP115	340	100	250xn	15	495	620	250	230	ø358	ø302	535	500	300
NF-8VTP170	350	120	300xn	-	495	645	300	250	ø420	ø362	775	560	300
NF-8VTP230	350	120	300xn	-	495	645	300	250	ø420	ø362	775	560	300
NF-10VTP285	345	150	330xn	-	495	745	370	300	ø477	ø392	820	620	300
NF-10VTP340	345	150	330xn	-	495	745	370	300	ø477	ø392	820	620	300
Model	Mounting Flange				Discharge Flange								
	K (Out Side Diameter)	L (PCD)	Diameter of Holes	Number of Holes	M (Out Side Diameter)	N (PCD)	O (Inside Diameter)	Diameter of Holes	Number of Holes	M	N	O	P
NF-4VTP22	ø570	ø520	ø25	8	ø255	ø200	ø100	ø22	8				
NF-4VTP60	ø570	ø520	ø25	8	ø255	ø200	ø100	ø22	8				
NF-6VTP115	ø760	ø700	ø30	8	ø320	ø270	ø150	ø22	12				
NF-8VTP170	ø880	ø800	ø30	8	ø380	ø330	ø200	ø25	12				
NF-8VTP230	ø880	ø800	ø30	8	ø380	ø330	ø200	ø25	12				
NF-10VTP285	ø980	ø900	ø30	8	ø445	ø387	ø250	ø30	16				
NF-10VTP340	ø980	ø900	ø30	8	ø445	ø387	ø250	ø30	16				

\*n = number of stages

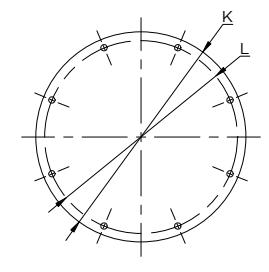
L = A+B+Cxn+D+E

All dimensions are in mm unless otherwise indicated.

# DIMENSIONAL DRAWING - DIESEL ENGINE DRIVEN PUMP



**DISCHARGE FLANGE**



**MOUNTING FLANGE**

**TABLE OF DIMENSIONS**

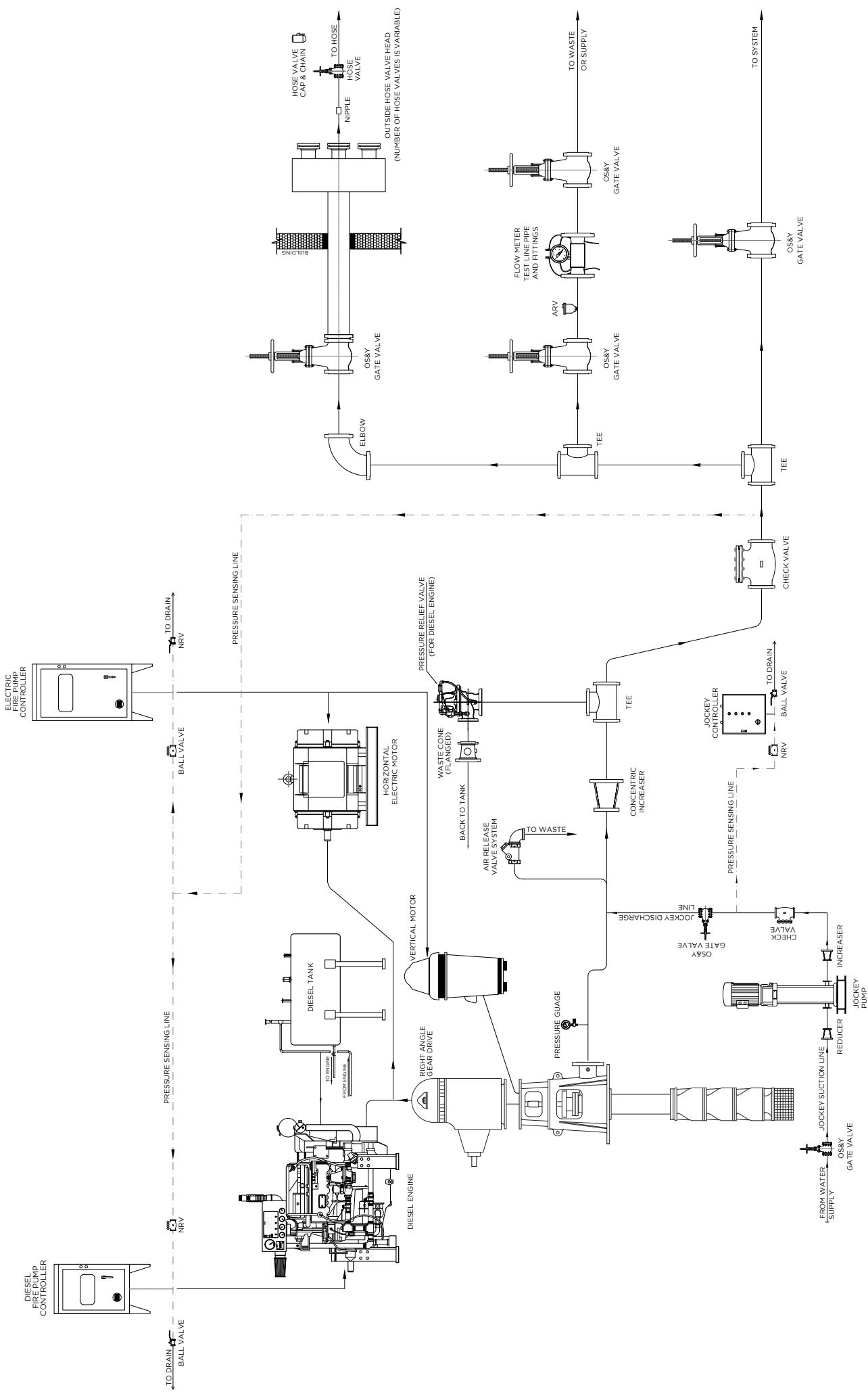
Model	A	B	Cxn*	D	E	F	G	H	I	J	Smin	Q	P
NF-4VTP22	166	95	135xn	25	495	455	200	180	ø180	ø172	422	320	300
NF-4VTP60	245	90	180xn	-	605	455	200	180	ø235	ø233	600	380	300
NF-6VTP115	340	100	250xn	15	495	620	250	230	ø358	ø302	535	500	300
NF-8VTP170	350	120	300xn	-	495	645	300	250	ø420	ø362	775	560	300
NF-8VTP230	350	120	300xn	-	495	645	300	250	ø420	ø362	775	560	300
NF-10VTP285	345	150	330xn	-	495	745	370	300	ø477	ø392	820	620	300
NF-10VTP340	345	150	330xn	-	495	745	370	300	ø477	ø392	820	620	300
Model	Mounting Flange				Discharge Flange								
	K (Out Side Diameter)	L (PCD)	Diameter of Holes	Number of Holes	M (Out Side Diameter)	N (PCD)	O (Inside Diameter)	Diameter of Holes	Number of Holes				
NF-4VTP22	ø570	ø520	ø25	8	ø255	ø200	ø100	ø22	8				
NF-4VTP60	ø570	ø520	ø25	8	ø255	ø200	ø100	ø22	8				
NF-6VTP115	ø760	ø700	ø30	8	ø320	ø270	ø150	ø22	12				
NF-8VTP170	ø880	ø800	ø30	8	ø380	ø330	ø200	ø25	12				
NF-8VTP230	ø880	ø800	ø30	8	ø380	ø330	ø200	ø25	12				
NF-10VTP285	ø980	ø900	ø30	8	ø445	ø387	ø250	ø30	16				
NF-10VTP340	ø980	ø900	ø30	8	ø445	ø387	ø250	ø30	16				

\*n = number of stages

L = A+B+Cxn+D+E

All dimensions are in mm unless otherwise indicated.

# GENERAL ARRANGEMENT DRAWING FOR FIRE PUMPS







Serving Over 100 Countries Worldwide



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In line with NAFFCO policy for continuous product development,  
NAFFCO has the right to change specifications without prior notice.