



Vertical Turbine Fire Pumps





AN INTRODUCTION TO NAFFCO

NAFFCO was founded in Dubai, UAE to become the world's leading producer and supplier of life safety solutions. By recognizing the importance and convenience of having easy access to multiple safety services, we became specialized by offering complete solutions under one roof for all types of high quality firefighting equipment, fire protection systems, fire alarms, addressable emergency systems, security systems, custom-made vehicles such as fire trucks, ambulances, mobile hospitals and airport rescue firefighting vehicles (ARFF).

With the most talented and dedicated employees from around the world, NAFFCO has over 500 passionate engineers and over 5 million square feet of manufacturing facilities. We are currently exporting to over 100 countries worldwide.

Our products have been consistently certified by UL, FM, BSI, LPCB and Global Mark according to the latest International Quality Standard for their strict adherence to ISO 9001 quality management system and certified for ISO 14001 environmental management systems and BS OHSAS 18001 for occupational safety by UL DQS.

Our success is driven by our passion to protect; our vision is to become the world's number one provider of innovative solutions in protecting life, environment and property.





MANUFACTURING

NAFFCO manufacturing department has the latest technology, state-of-the-art machines (CNC machines, hydraulic shearing and bending machines, all types of welding machines - MIG, TIG, ARC etc.), and a complete machine shop that enable us to meet the needs of any production requirement.

NAFFCO has the ability to introduce the latest technological systems & equipment in the field. Our engineers and technicians are well qualified & experienced in producing quality products.

The department is equipped with full-fledged testing facilities to test the equipment as per NFPA, EN, ICAO, KKK and Civil Defense standards & requirements, and to meet the customers specifications.

Considering the above facilities and excellence in engineering capabilities, NAFFCO can meet any challenges to produce bulk quantities of fire safety materials.



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 2000 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, are made with 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 section 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.



Approved Fire Pump Models with Ratings

RATED CAPACITY - 50 US GPM

SL. No.	Pump Model	Rated Speed (RPM)	UL Listing		FM Approval		Discharge Outlet Dia. (Inch)
			Pressure (PSI)	Stages	Pressure (PSI)	Stages	
1	NF-4VTP22	2900	42 - 188	3-10	-		4

RATED CAPACITY - 100 US GPM

SL. No.	Pump Model	Rated Speed (RPM)	UL Listing		FM Approval		Discharge Outlet Dia. (Inch)
			Pressure (PSI)	Stages	Pressure (PSI)	Stages	
1	NF-4VTP22	2900	52 - 173	4 - 10	-		4

RATED CAPACITY - 150 US GPM

SL. No.	Pump Model	Rated Speed (RPM)	UL Listing		FM Approval		Discharge Outlet Dia. (Inch)
			Pressure (PSI)	Stages	Pressure (PSI)	Stages	
1	NF-4VTP60	2900	87 - 254	3 - 6	-		4

RATED CAPACITY - 200 US GPM

SL. No.	Pump Model	Rated Speed (RPM)	UL Listing		FM Approval		Discharge Outlet Dia. (Inch)
			Pressure (PSI)	Stages	Pressure (PSI)	Stages	
1	NF-4VTP60	2900	84 - 246	3 - 6	-		4

RATED CAPACITY - 250 US GPM

SL. No.	Pump Model	Rated Speed (RPM)	UL Listing		FM Approval		Discharge Outlet Dia. (Inch)
			Pressure (PSI)	Stages	Pressure (PSI)	Stages	
1	NF-4VTP60	2900	50 - 235	2 - 6	-		4

RATED CAPACITY - 300 US GPM

SL. No.	Pump Model	Rated Speed (RPM)	UL Listing		FM Approval		Discharge Outlet Dia. (Inch)
			Pressure (PSI)	Stages	Pressure (PSI)	Stages	
1	NF-6VTP115	1450	69 - 86	3	-		6
			92 - 230	4 - 8			

RATED CAPACITY - 400 US GPM

SL. No.	Pump Model	Rated Speed (RPM)	UL Listing		FM Approval		Discharge Outlet Dia. (Inch)
			Pressure (PSI)	Stages	Pressure (PSI)	Stages	
1	NF-6VTP115	1450	66 - 82	3	-		6
			88 - 221	4 - 8			

RATED CAPACITY - 500 US GPM

SL. No.	Pump Model	Rated Speed (RPM)	UL Listing		FM Approval		Discharge Outlet Dia. (Inch)
			Pressure (PSI)	Stages	Pressure (PSI)	Stages	
1	NF-6VTP115	1450	63 - 80	3	41 - 206	2 - 8	6
			84 - 215	4 - 8			
2		1750	-		43 - 220	2 - 7	
3	VTP-150-170-290	2900	79 - 88	1	-	-	6
			157 - 176	2			
			236 - 264	3			
4		2950	82 - 91	1	-	-	
			164 - 182	2			
			245 - 273	3			

Approved Fire Pump Models with Ratings

RATED CAPACITY - 750 US GPM

SL. No.	Pump Model	Rated Speed (RPM)	UL Listing		FM Approval		Discharge Outlet Dia. (Inch)
			Pressure (PSI)	Stages	Pressure (PSI)	Stages	
1	NF-8VTP170	1450	84 - 108	3	55 - 278	2 - 8	8
2		112 - 288	4 - 8				
2		1750	-		60 - 271	2 - 5	
3	VTP-150-170-290	2900	75 - 86	1	-	-	6
			149 - 172	2			
			224 - 257	3			
4		2950	77 - 89	1	-	-	
			155 - 178	2			
	232 - 267		3				

RATED CAPACITY - 1000 US GPM

SL. No.	Pump Model	Rated Speed (RPM)	UL Listing		FM Approval		Discharge Outlet Dia. (Inch)
			Pressure (PSI)	Stages	Pressure (PSI)	Stages	
1	NF-8VTP230	1450	84 - 99	3	59 - 255	2 - 8	8
			108 - 132	4			
			135 - 265	5 - 8			
2		1750	-		65 - 249	2 - 5	
3	VTP-150-170-290	2900	69 - 80	1	-	-	6
			137 - 160	2			
			206 - 240	3			
4		2950	72 - 83	1	-	-	
			143 - 167	2			
			215 - 250	3			

RATED CAPACITY - 1250 US GPM

SL. No.	Pump Model	Rated Speed (RPM)	UL Listing		FM Approval		Discharge Outlet Dia. (Inch)
			Pressure (PSI)	Stages	Pressure (PSI)	Stages	
1	NF-10VTP285	1450	105 - 283	3 - 6	67 - 280	2 - 6	10
2		1750	-	-	72 - 272	2 - 4	

RATED CAPACITY - 1500 US GPM

SL. No.	Pump Model	Rated Speed (RPM)	UL Listing		FM Approval		Discharge Outlet Dia. (Inch)
			Pressure (PSI)	Stages	Pressure (PSI)	Stages	
1	NF-10VTP340	1450	108 - 135	3	76 - 266	2 - 6	10
			144 - 270	4 - 6			
2	NF-10VTP450	1450	65 - 92	2	-		10
			102 - 224	3 - 5			
3	NF-10VTP340	1750	-	-	88 - 259	2 - 4	10

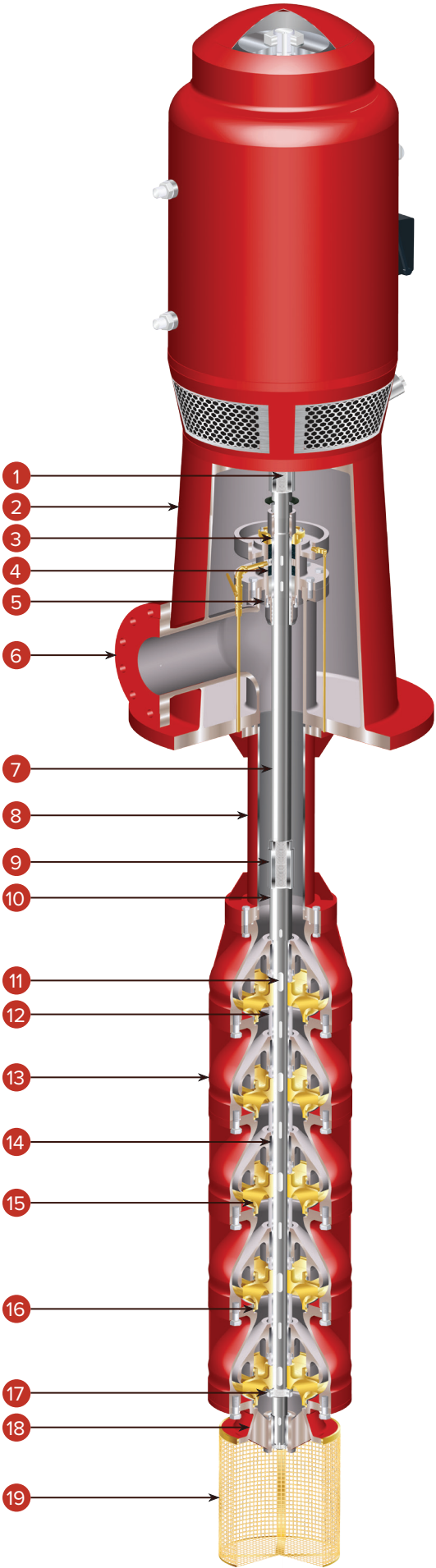
RATED CAPACITY - 2000 US GPM

SL. No.	Pump Model	Rated Speed (RPM)	UL Listing		FM Approval		Discharge Outlet Dia. (Inch)
			Pressure (PSI)	Stages	Pressure (PSI)	Stages	
1	NF-10VTP450	1450	58 - 83	2	-		10
			92 - 204	3 - 5			

CROSS SECTIONAL VIEW



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



DIMENSIONAL DRAWING - ELECTRIC MOTOR DRIVEN PUMP

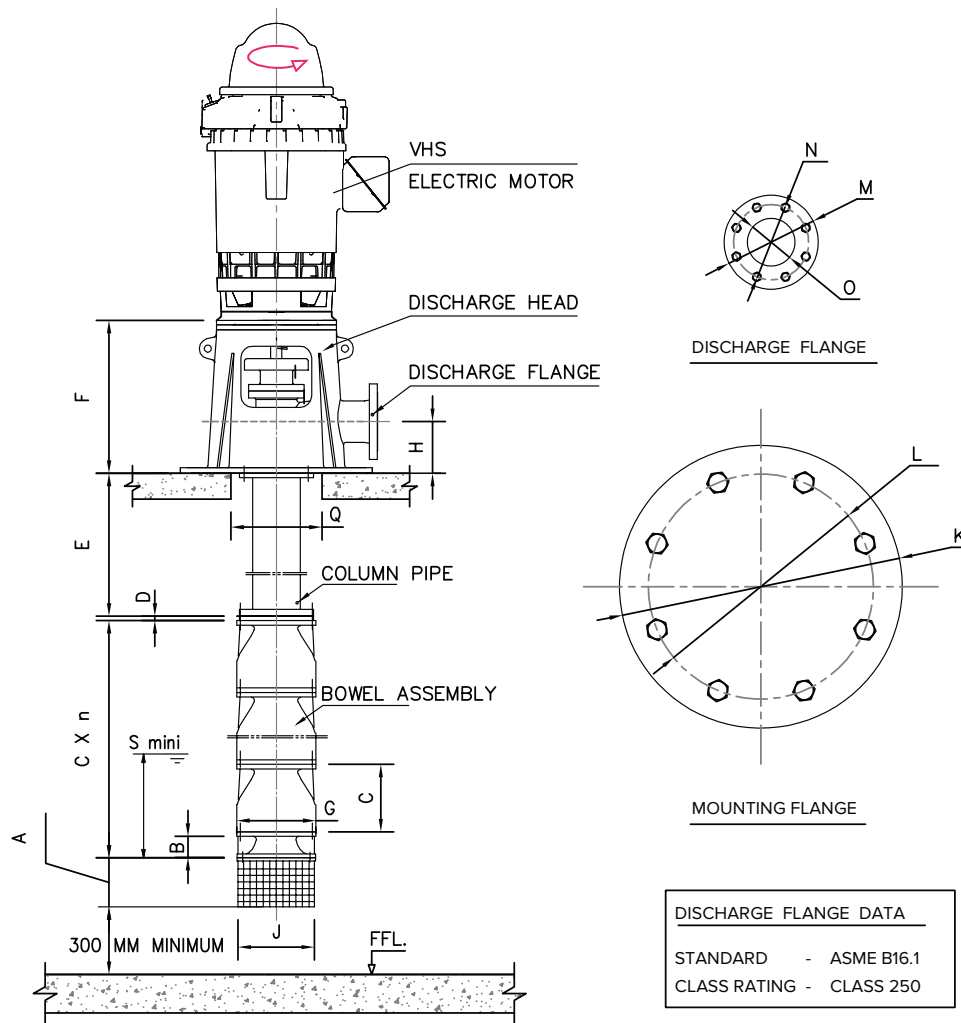


TABLE OF DIMENSIONS											
Model	A	B	C x n*	D	E	F	G	H	J	Q	Smin
NF-4VTP22	150	95	135xn	25	495	465	Ø 180	145	Ø 172	320	422
NF-4VTP60	225	90	180xn	-	495	465	Ø 235	145	Ø 233	380	600
NF-6VTP115	320	100	250xn	15	495	540	Ø 358	180	Ø 302	500	535
NF-8VTP170	320	120	300xn	-	495	630	Ø 420	220	Ø 362	560	775
NF-8VTP230	320	120	300xn	-	495	630	Ø 420	220	Ø 362	560	775
NF-10VTP285	320	150	330xn	-	495	725	Ø 477	260	Ø 392	620	820
NF-10VTP340	320	150	330xn	-	495	725	Ø 477	260	Ø 392	620	820
NF-10VTP450	340	170	365xn	-	495	725	Ø 440	260	Ø 430	620	875
VTP-150-170-290	320	100	250xn	15	495	540	Ø 358	180	Ø 302	500	535
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	Ø 500	Ø 460	Ø 20	8	Ø 255	Ø 200	Ø 100	Ø 22	8		
NF-4VTP60	Ø 500	Ø 460	Ø 20	8	Ø 255	Ø 200	Ø 100	Ø 22	8		
NF-6VTP115	Ø 650	Ø 600	Ø 25	8	Ø 320	Ø 270	Ø 150	Ø 22	12		
NF-8VTP170	Ø 750	Ø 700	Ø 25	8	Ø 380	Ø 330	Ø 200	Ø 25	12		
NF-8VTP230	Ø 750	Ø 700	Ø 25	8	Ø 380	Ø 330	Ø 200	Ø 25	12		
NF-10VTP285	Ø 860	Ø 800	Ø 30	8	Ø 445	Ø 387	Ø 250	Ø 30	16		
NF-10VTP340	Ø 860	Ø 800	Ø 30	8	Ø 445	Ø 387	Ø 250	Ø 30	16		
NF-10VTP450	Ø 860	Ø 800	Ø 30	8	Ø 445	Ø 387	Ø 250	Ø 30	16		
VTP-150-170-290	Ø 650	Ø 600	Ø 25	8	Ø 320	Ø 270	Ø 150	Ø 22	12		

NOTE : All dimension are in MM

Drawing subject to change with out notice

n* = number of stage

Do not scale

DIMENSIONAL DRAWING - DIESEL ENGINE DRIVEN PUMP

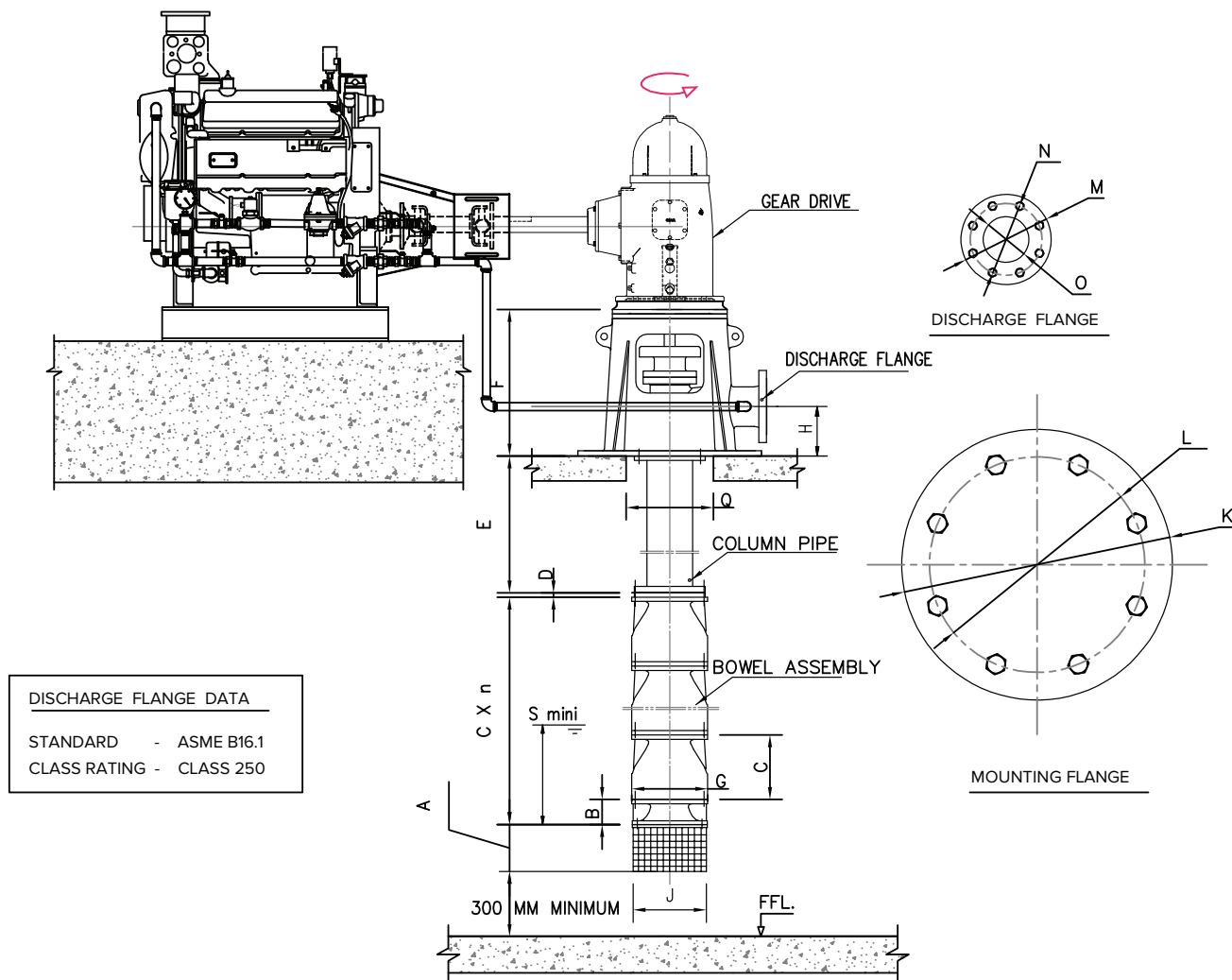


TABLE OF DIMENSIONS											
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NF-4VTP22	150	95	135xn	25	495	465	Ø 180	145	Ø 172	320	422
NF-4VTP60	225	90	180xn	-	495	465	Ø 235	145	Ø 233	380	600
NF-6VTP115	320	100	250xn	15	495	540	Ø 358	180	Ø 302	500	535
NF-8VTP170	320	120	300xn	-	495	630	Ø 420	220	Ø 362	560	775
NF-8VTP230	320	120	300xn	-	495	630	Ø 420	220	Ø 362	560	775
NF-10VTP285	320	150	330xn	-	495	725	Ø 477	260	Ø 392	620	820
NF-10VTP340	320	150	330xn	-	495	725	Ø 477	260	Ø 392	620	820
NF-10VTP450	340	170	365xn	-	495	725	Ø 440	260	Ø 430	620	875
VTP-150-170-290	320	100	250xn	15	495	540	Ø 358	180	Ø 302	500	535
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	Ø 500	Ø 460	Ø 20	8	Ø 255	Ø 200	Ø 100	Ø 22	8		
NF-4VTP60	Ø 500	Ø 460	Ø 20	8	Ø 255	Ø 200	Ø 100	Ø 22	8		
NF-6VTP115	Ø 650	Ø 600	Ø 25	8	Ø 320	Ø 270	Ø 150	Ø 22	12		
NF-8VTP170	Ø 750	Ø 700	Ø 25	8	Ø 380	Ø 330	Ø 200	Ø 25	12		
NF-8VTP230	Ø 750	Ø 700	Ø 25	8	Ø 380	Ø 330	Ø 200	Ø 25	12		
NF-10VTP285	Ø 860	Ø 800	Ø 30	8	Ø 445	Ø 387	Ø 250	Ø 30	16		
NF-10VTP340	Ø 860	Ø 800	Ø 30	8	Ø 445	Ø 387	Ø 250	Ø 30	16		
NF-10VTP450	Ø 860	Ø 800	Ø 30	8	Ø 445	Ø 387	Ø 250	Ø 30	16		
VTP-150-170-290	Ø 650	Ø 600	Ø 25	8	Ø 320	Ø 270	Ø 150	Ø 22	12		

NOTE : All dimension are in MM
Drawing subject to change with out notice

n* = number of stage

Do not scale

WEIGHTS - VERTICAL TURBINE FIRE PUMP

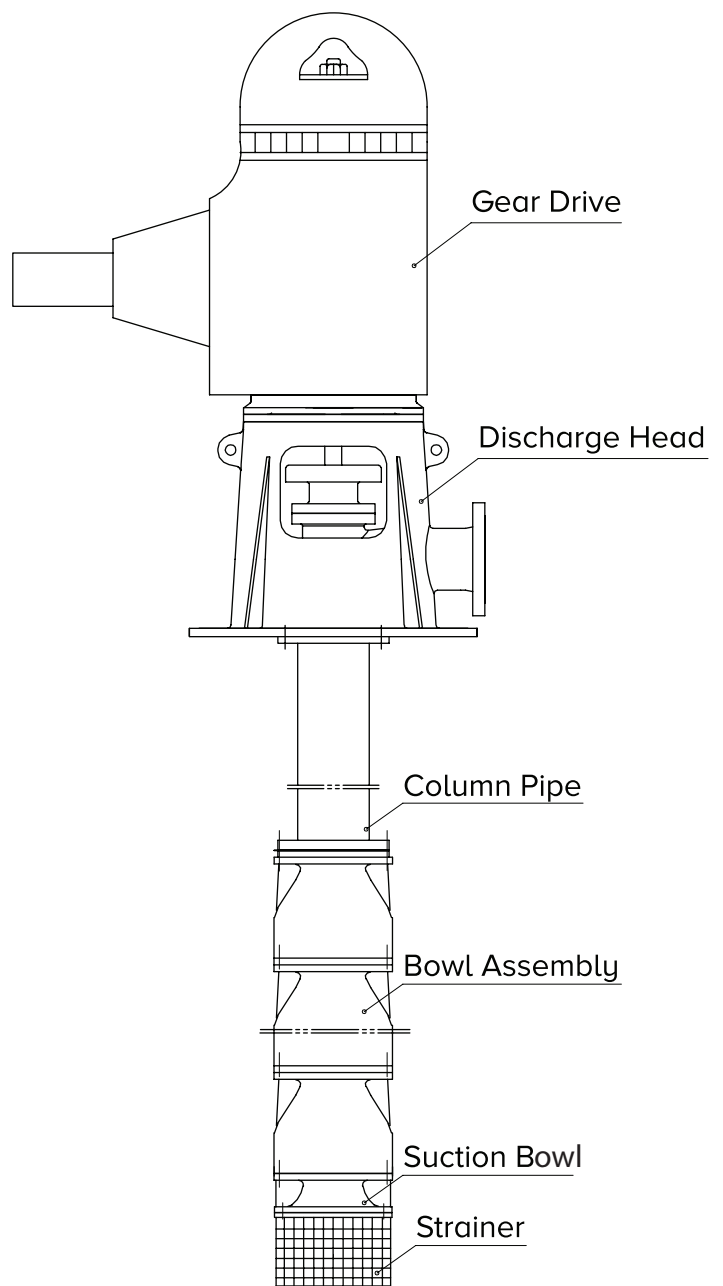
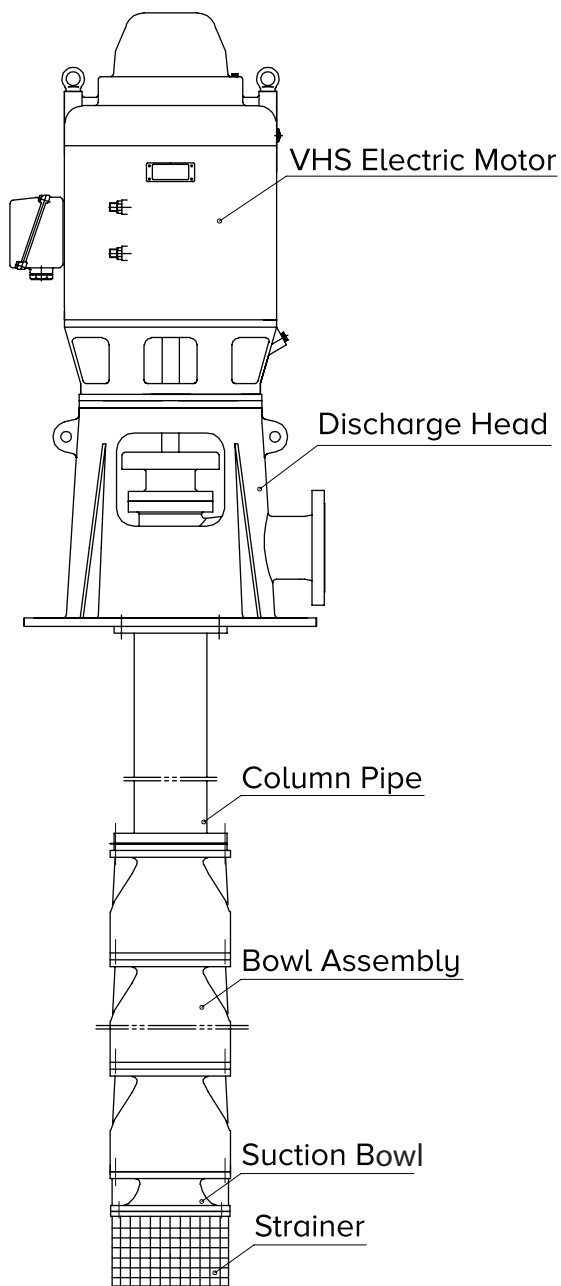
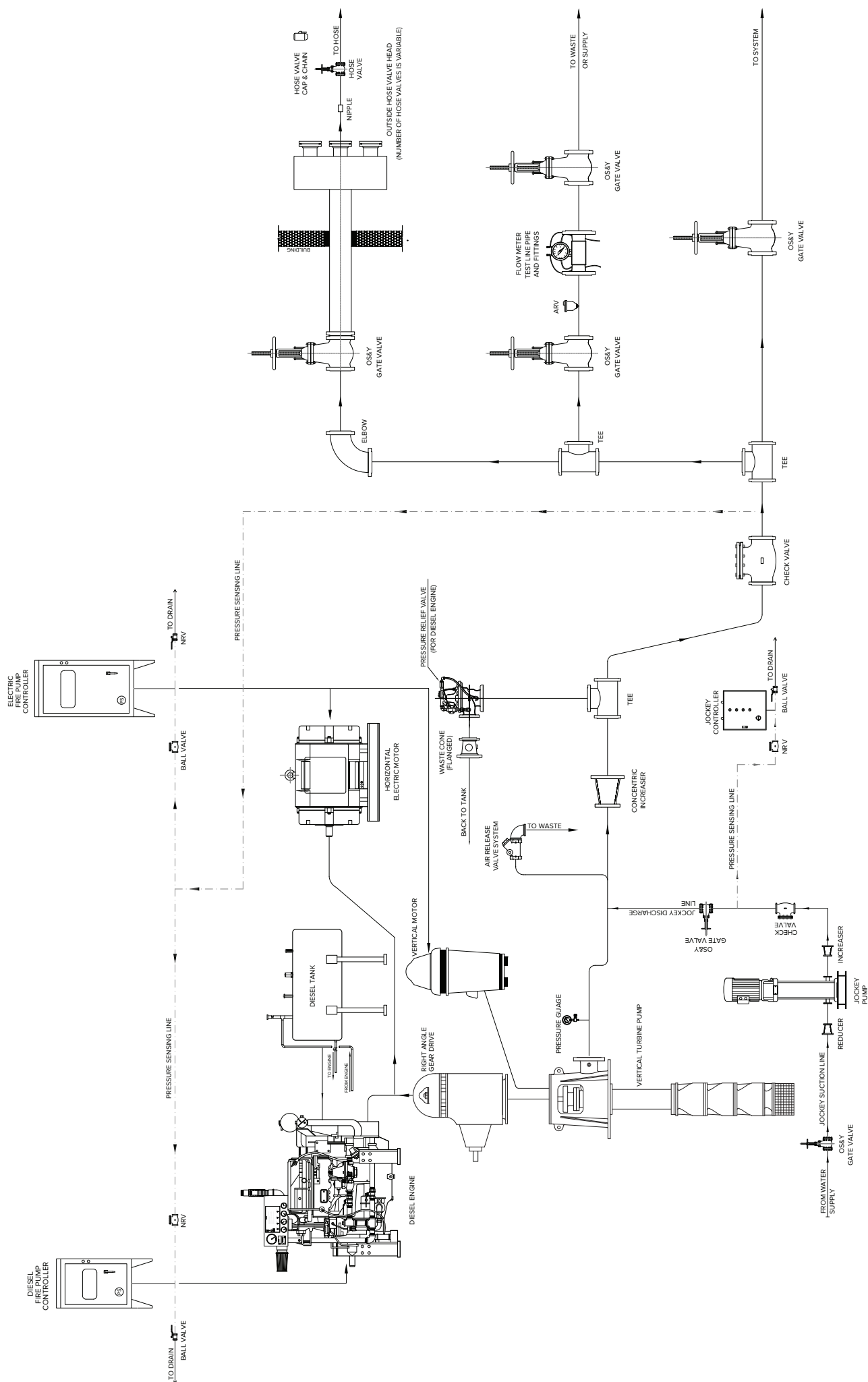


TABLE OF WEIGHTS

Model	Single Bowl Assembly (kg)	Strainer (kg)	Suction Bowl (kg)	Column Pipe (kg/m)	Discharge Head (kg)
NF-4VTP22	15	2	7	38	192
NF-4VTP60	29	3	11	40	200
NF-6VTP115	75	6.5	25	74	213
NF-8VTP170	132	8	35	109	338.6
NF-8VTP230	132	8	35	109	338.6
NF-10VTP285	188	8.5	50	143	491
NF-10VTP340	188	8.5	50	143	491
NF-10VTP450	166	9.5	40	143	718
VTP-150-170-290	75	6.5	25	74	213

GENERAL ARRANGEMENT DRAWING FOR FIRE PUMPS





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

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