



جائزة محمد بن راشد آل مكتوم للأعمال  
MOHAMMED BIN RASHID AL MAKTOUM BUSINESS AWARD

EXPORT 2005  
MANUFACTURING 2006  
MANUFACTURING 2010  
JAFZA

# FIRE PUMPS



THE FIRE PROTECTION SPECIALISTS



# Introduction

National Fire Fighting Manufacturing FZCO (NAFFCO) was established in 1991 and has grown to become the largest fire fighting equipment manufacturer in the Middle East and one of the top manufacturers worldwide.

The company's core business focuses on design, manufacture, supply, installation and after sales services with our highly trained and experienced technicians and engineers for fire fighting products ranging from basic fire extinguishers to highly sophisticated fire engines. The company provides total fire protection solutions to the most prestigious developments around the world, including residential buildings, commercial complexes, telecommunication centers, industrial installations, oil refineries and petrochemical plants and airport installations.

With its presence in over 100 countries, NAFFCO headquarters is located in United Arab Emirates, where a wide range of innovative fire fighting equipment is manufactured with the company's state-of-the-art technology.

The company is renowned for providing superb quality and assuring the timely performance of its products at all times. With simple yet effective fire extinguishers of all sizes, custom made fire cabinets, heavy duty fire hoses, high capacity powerful pumps, mobile fire fighting systems, including CAFS systems, and highly advanced fire engines, NAFFCO dedicated itself to the science of fire fighting.

Moreover, NAFFCO has diversified from the passive fire protection arena and is now one of the specialists in the field of automation and control for all types of fire alarm and security systems..

NAFFCO's ISO 9001 QUALITY MANAGEMENT SYSTEM is certified by UL DQS inc, LPCB and BV. This organization endeavors to continually and effectively improve the quality of our products which are certified by international bodies like UL, FM, LPCB, BSI, SAI Global and SABS in accordance with the international standards of NFPA.

As recognition to the success of our business growth, we have been accredited with the prestigious Mohammed Bin Rashid Al Maktoum Business Award, in the year 2005 for excellence in exports, in 2006 & 2010 for manufacturing excellence under the free zones category. Furthermore as a manufacturer of complete fire protection solution provider, NAFFCO has also been recognized by the Dubai Quality Appreciation 2008, which is a testimony to our commitment to quality and consistent focus on business excellence.

Motivated by our motto "Think Safety, Think NAFFCO!" we strive to be the global leader in providing comprehensive and reliable fire protection solutions to make the world a safer place to live in.



## FIRE FIGHTING PUMPS

NAFFCO's new range of UL listed and FM approved fire pumps provide you a reliable solution for your fire fighting pump needs by combining the stringent quality measures of UL/FM and NFPA standards with our proven experience in the fire protection field. We can offer you a complete package of service starting from engineering assistance to field start-up and periodic maintenance. Each pump sets are tested in our factory, prior to dispatch, as per UL/FM and NFPA standards. These pumps are covered by a warranty of one year subject to standard terms and conditions.

## HORIZONTAL SPLIT CASE PUMPS

### Features :

- Complete unit responsibility.
- Complete in-house fabrication capabilities.
- Hydrostatic testing facilities.
- Operation run test as per NFPA, UL and FM requirements.
- Horizontal Split case pumps for capacities of 750 US GPM, 1000 US GPM, 1250 US GPM and 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.



## Approved Fire Pump Models with Ratings

### RATED CAPACITY - 750 US GPM

SL. No	Pump Model	UL Listed Pressure(PSI)	FM Approved Pressure(PSI)	Rated Speed (RPM)	Suction Inlet Dia (Inch)	Discharge Outlet Dia (Inch)	Stage(s)
1	NF-S-125-80	236	236	2900	5	3	1
2	NF-S-150-100	112-213	159-216	2900	6	4	1
3	NF-S-150-100-375	226-276	227-280	2900	6	4	1

### RATED CAPACITY - 1000 US GPM

SL. No	Pump Model	UL Listed Pressure(PSI)	FM Approved Pressure(PSI)	Rated Speed (RPM)	Suction Inlet Dia (Inch)	Discharge Outlet Dia (Inch)	Stage(s)
1	NF-S-150-100	101-208	101-215	2900	6	4	1
2	NF-S-150-100-375	219-273	215-273	2900	6	4	1
3	NF-S-200-125	143-267	143-252	2900	8	5	1

### RATED CAPACITY - 1250 US GPM

SL. No	Pump Model	UL Listed Pressure(PSI)	FM Approved Pressure(PSI)	Rated Speed (RPM)	Suction Inlet Dia (Inch)	Discharge Outlet Dia (Inch)	Stage(s)
1	NF-S-200-125	137-263	134-250	2900	8	5	1

### RATED CAPACITY - 1500 US GPM

SL. No	Pump Model	UL Listed Pressure(PSI)	FM Approved Pressure(PSI)	Rated Speed (RPM)	Suction Inlet Dia (Inch)	Discharge Outlet Dia (Inch)	Stage(s)
1	NF-S-200-125	130-256	121-242	2900	8	5	1

### PUMP CASING:

This casing is axially split, which permits removal of the complete rotor without moving either piping or motor. Pumps generating high heads have double volutes to reduce radial forces, ensuring minimal shaft deflection and low bearing loads. Replaceable wear rings protect the casing at the impeller running clearances.

### IMPELLER:

The closed impellers have double curved vanes. The double suction design gives practically zero axial forces. Each impeller is dynamically balanced according to ISO 1940 - 1 standard.

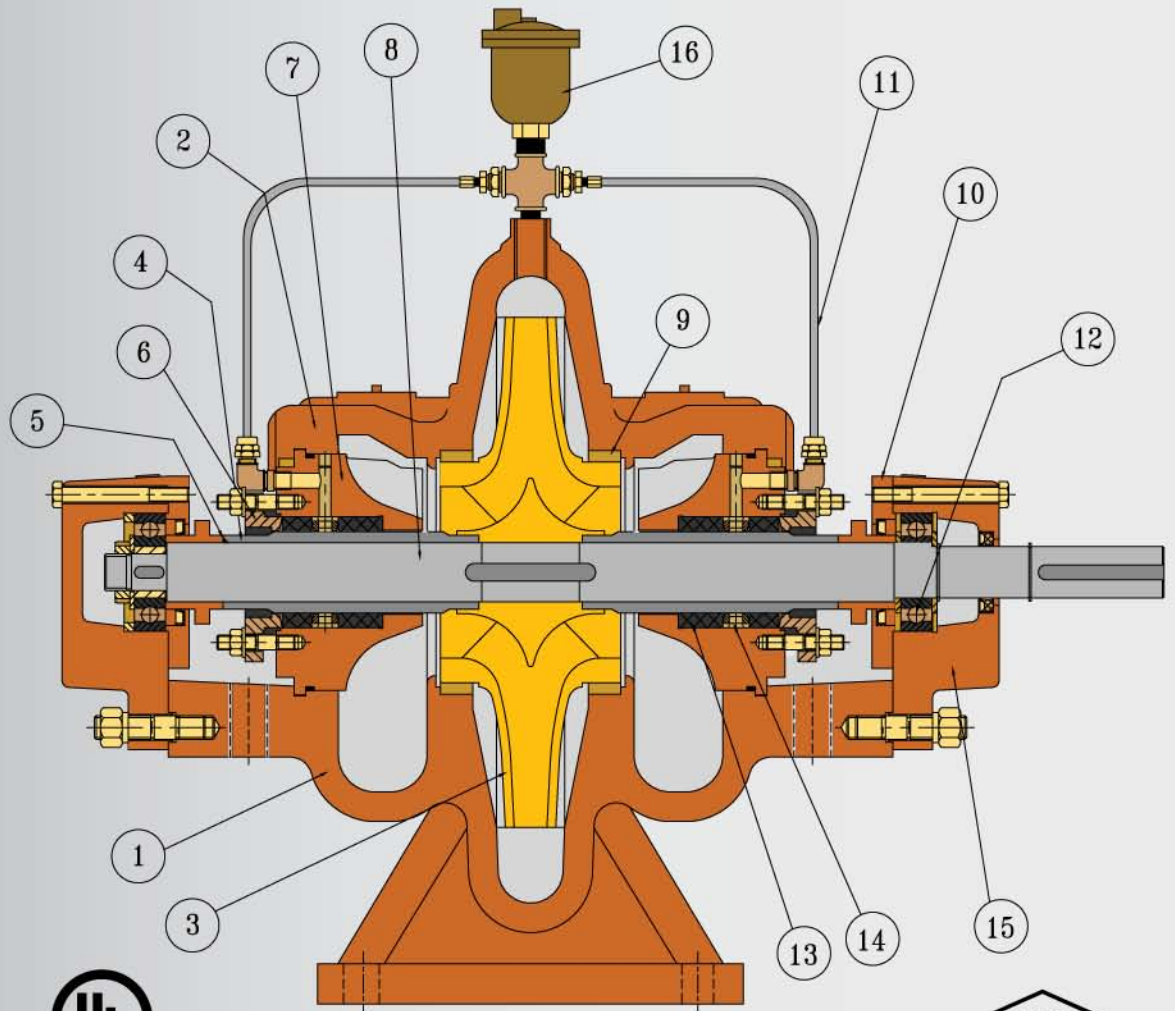
### BEARINGS:

On both sides grease lubricated deep groove ball bearings, sealed for life.

### SHAFT SEAL:

Soft-packed stuffing box. Cooling lines are provided for additional cooling of the graphite impregnated type gland packing.

## CROSS SECTIONAL DRAWING

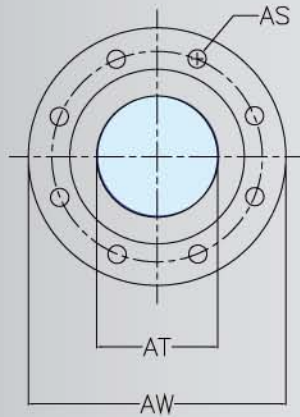


### DESCRIPTION

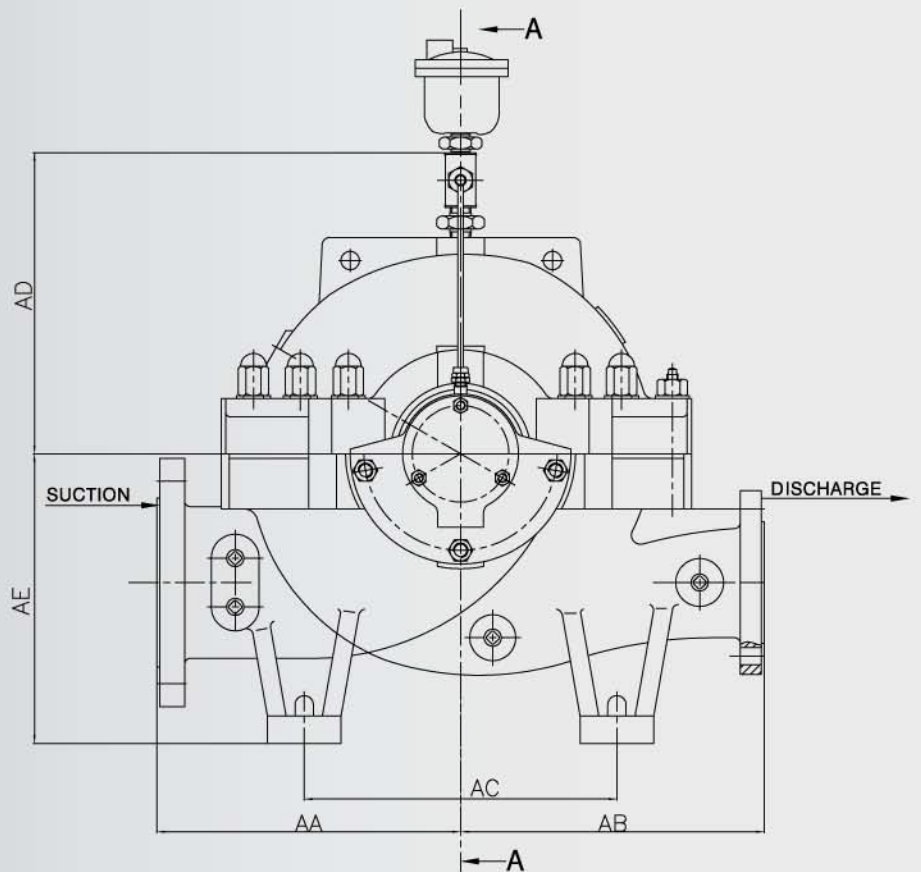
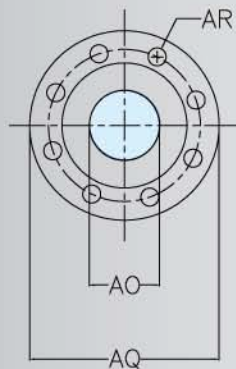
No.	Part Name	Material	Qty
1	Lower casing	Cast iron ASTM A 48 CI 40	1
2	Upper casing	Cast iron ASTM A 48 CI 40	1
3	Impeller	Bronze SAE 40	1
4	Shaft sleeve	Stainless steel AISI 420	2
5	O-ring	Buna N Rubber	2
6	Gland	Bronze SAE 40	2
7	Stuffing box	Cast iron ASTM A 48 CI 40	2
8	Shaft	Alloy steel AISI 4340	1
9	Wear ring	Bronze SAE 40	2
10	Bearing cover	Cast iron ASTM A 48 CI 40	2
11	Flashing pipe	Stainless steel, Gr. 304	2
12	Bearing	Bearing steel	2
13	Gland packing	Graphite impregnated	8
14	Lantern ring	Bronze SAE 40	2
15	Bearing housing	Cast iron ASTM A 48 CI 40	2
16	Automatic air release valve	Brass, 1/2" NPT Threaded	1

## DIMENSIONS

SUCTION FLANGE



DISCHARGE FLANGE



## TABLE OF DIMENSIONS

DIMENSIONS IN MM											
Model no.	Suction Flange					Discharge Flange					
	AA	AB	AC	AD	AE	AW	AT	AS	AQ	AO	AR
NF-S-125-80	330	330	340	306	315	280	5"	8 holes Ø22 on PCD 235	210	3"	8 holes Ø22 on PCD 168
NF-S-150-100	330	330	400	267	355	320	6"	12 holes Ø22 on PCD 270	255	4"	8 holes Ø22 on PCD 200
NF-S-150-100-375	375	375	400	340	355	320	6"	12 holes Ø22 on PCD 270	255	4"	8 holes Ø22 on PCD 200
NF-S-200-125	395	370	450	367	400	380	8"	12 holes Ø28 on PCD 330	280	5"	8 holes Ø22 on PCD 235

## END SUCTION FIRE PUMPS

### Features :

- Complete unit responsibility.
- Complete in-house fabrication capabilities.
- Hydrostatic strength testing facilities.
- Operation run test as per NFPA, UL and FM requirements.
- End suction models for capacities from 50 to 500 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.
- Capable to supply single skid mounted fire pump set.



### PUMP CASING :

The casing is designed for back pull-out which permits the removal of complete rotor unit without removing suction and discharge pipe. The cast iron volute casing is of robust design with integrally cast feet, vertical top centerline discharge with axial suction incorporating cast inlet vane to give best flow to impeller eye.

### IMPELLER :

Impeller is double shrouded type. It is hydraulically balanced and positively driven by shaft key and axially locked between sleeve and impeller nut.

### BEARINGS :

Driven end /non driven end bearings are grease lubricated deep groove ball bearings, sealed for life.

### SHAFT SEAL :

Soft – packed stuffing box. Graphite impregnated type gland packing.

### Approved Fire Pump Models with Ratings

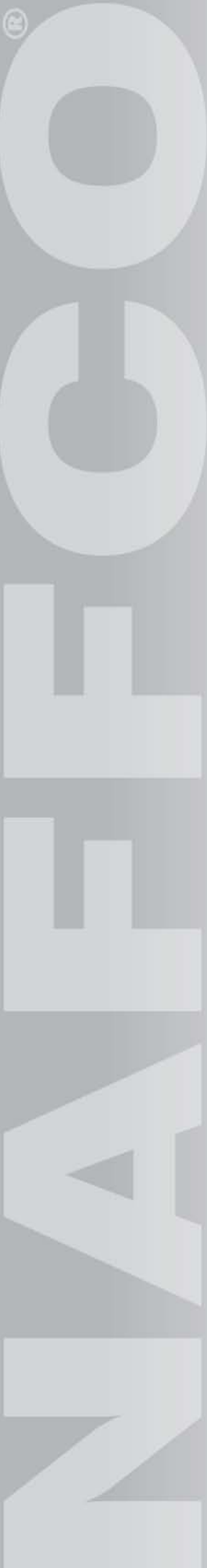
RATED CAPACITY - 50 US GPM							
SL. No	Pump Model	UL Listed Pressure(PSI)	FM Approved Pressure(PSI)	Rated Speed (RPM)	Suction Inlet Dia (Inch)	Discharge Outlet Dia (Inch)	Stage(s)
1	NF-E 32-20	50-87	---	2900	2	1¼	1
2	NF-E 32-26	88-139	---	2900	2	1¼	1
3	NF-E 40-20	59-95	---	2900	2.5	1.5	1
4	NF-E 40-26	77-128	---	2900	2.5	1.5	1
5	NF-E 50-20	58-89	---	2900	2.5	2	1
6	NF-E 50-26	93-138	---	2900	2.5	2	1
7	NF-E 65-20	58-89	---	2900	3	2.5	1

RATED CAPACITY - 100 US GPM							
SL. No	Pump Model	UL Listed Pressure(PSI)	FM Approved Pressure(PSI)	Rated Speed (RPM)	Suction Inlet Dia (Inch)	Discharge Outlet Dia (Inch)	Stage(s)
1	NF-E 32-26	126	---	2900	2	1¼	1
2	NF-E 40-20	53-92	---	2900	2.5	1.5	1
3	NF-E 40-26	70-124	---	2900	2.5	1.5	1
4	NF-E 50-20	61-91	---	2900	2.5	2	1
5	NF-E 50-26	93-139	---	2900	2.5	2	1
6	NF-E 65-20	58-88	---	2900	3	2.5	1

RATED CAPACITY - 150 US GPM							
SL. No	Pump Model	UL Listed Pressure(PSI)	FM Approved Pressure(PSI)	Rated Speed (RPM)	Suction Inlet Dia (Inch)	Discharge Outlet Dia (Inch)	Stage(s)
1	NF-E 40-26	114	---	2900	2.5	1.5	1
2	NF-E 50-20	62-93	---	2900	2.5	2	1
3	NF-E 50-26	90-139	---	2900	2.5	2	1
4	NF-E 65-20	56-86	---	2900	3	2.5	1



RATED CAPACITY - 200 US GPM							
SL. No	Pump Model	UL Listed Pressure(PSI)	FM Approved Pressure(PSI)	Rated Speed (RPM)	Suction Inlet Dia (Inch)	Discharge Outlet Dia (Inch)	Stage(s)
1	NF-E 65-26	92-141	94-144	2900	3	2.5	1
2	NF-E 65-32	133-211	135-216	2900	3	2.5	1

RATED CAPACITY - 250 US GPM							
SL. No	Pump Model	UL Listed Pressure(PSI)	FM Approved Pressure(PSI)	Rated Speed (RPM)	Suction Inlet Dia (Inch)	Discharge Outlet Dia (Inch)	Stage(s)
1	NF-E 65-26	89-140	91-143	2900	3	2.5	1
2	NF-E 65-32	132-210	133-211	2900	3	2.5	1
3	NF-E 80-32	126-208	---	2900	4	3	1

RATED CAPACITY - 300 US GPM							
SL. No	Pump Model	UL Listed Pressure(PSI)	FM Approved Pressure(PSI)	Rated Speed (RPM)	Suction Inlet Dia (Inch)	Discharge Outlet Dia (Inch)	Stage(s)
1	NF-E 65-26	87-139	88-142	2900	3	2.5	1
2	NF-E 65-32	129-209	130-206	2900	3	2.5	1
3	NF-E 80-26	87-135	93-145	2900	4	3	1
4	NF-E 80-32	125-207	132-213	2900	4	3	1

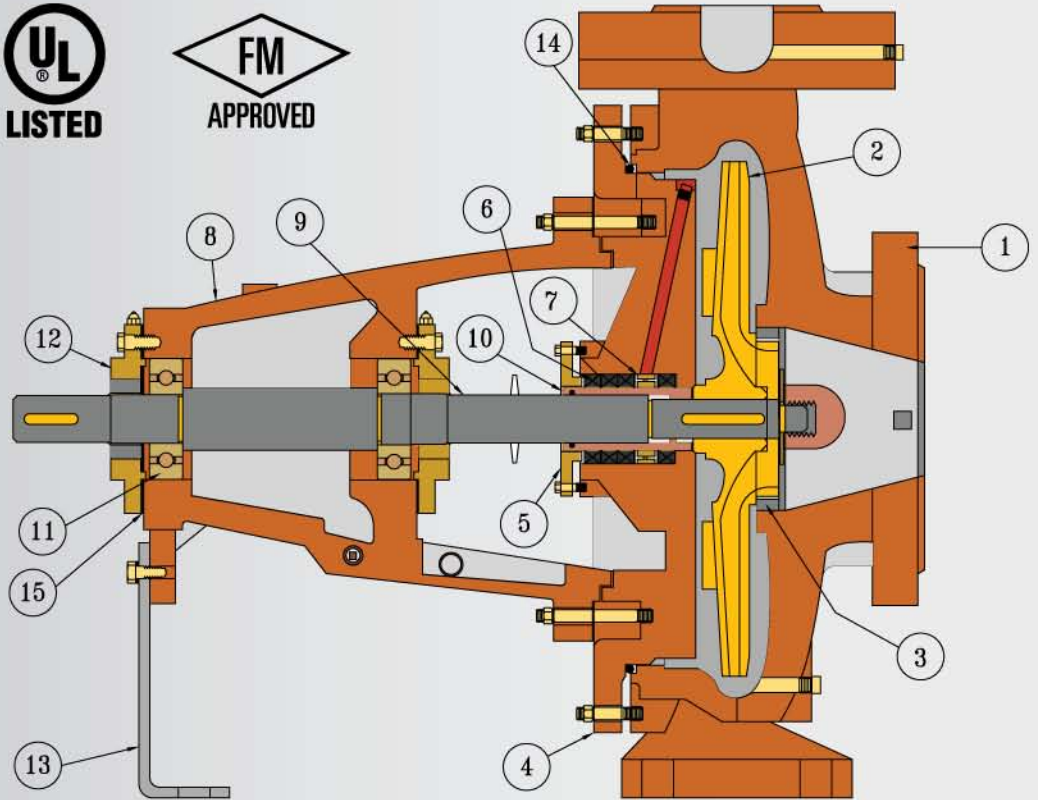
RATED CAPACITY - 350 US GPM							
SL. No	Pump Model	UL Listed Pressure(PSI)	FM Approved Pressure(PSI)	Rated Speed (RPM)	Suction Inlet Dia (Inch)	Discharge Outlet Dia (Inch)	Stage(s)
1	NF-E 80-26	---	91-144	2900	4	3	1
2	NF-E 80-32	---	131-211	2900	4	3	1

RATED CAPACITY - 400 US GPM							
SL. No	Pump Model	UL Listed Pressure(PSI)	FM Approved Pressure(PSI)	Rated Speed (RPM)	Suction Inlet Dia (Inch)	Discharge Outlet Dia (Inch)	Stage(s)
1	NF-E 80-26	84-133	88-142	2900	4	3	1
2	NF-E 80-32	122-204	130-209	2900	4	3	1

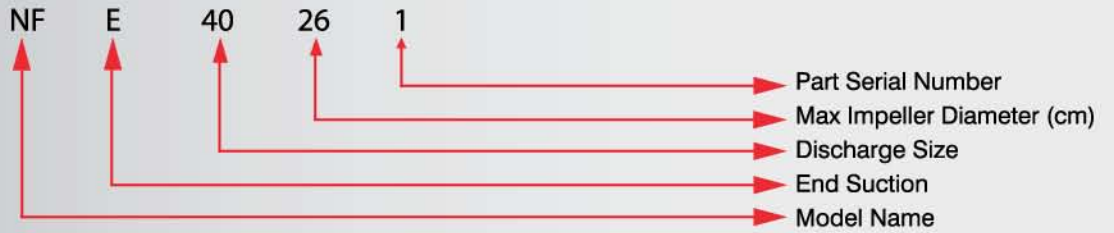
RATED CAPACITY - 450 US GPM							
SL. No	Pump Model	UL Listed Pressure(PSI)	FM Approved Pressure(PSI)	Rated Speed (RPM)	Suction Inlet Dia (Inch)	Discharge Outlet Dia (Inch)	Stage(s)
1	NF-E 80-26	81-132	83-141	2900	4	3	1
2	NF-E 80-32	119-203	129-207	2900	4	3	1

RATED CAPACITY - 500 US GPM							
SL. No	Pump Model	UL Listed Pressure(PSI)	FM Approved Pressure(PSI)	Rated Speed (RPM)	Suction Inlet Dia (Inch)	Discharge Outlet Dia (Inch)	Stage(s)
1	NF-E 80-26	130	79-139	2900	4	3	1
2	NF-E 80-32	202	126-203	2900	4	3	1

## CROSS SECTIONAL DRAWING



**Pumps Part Number Illustration**

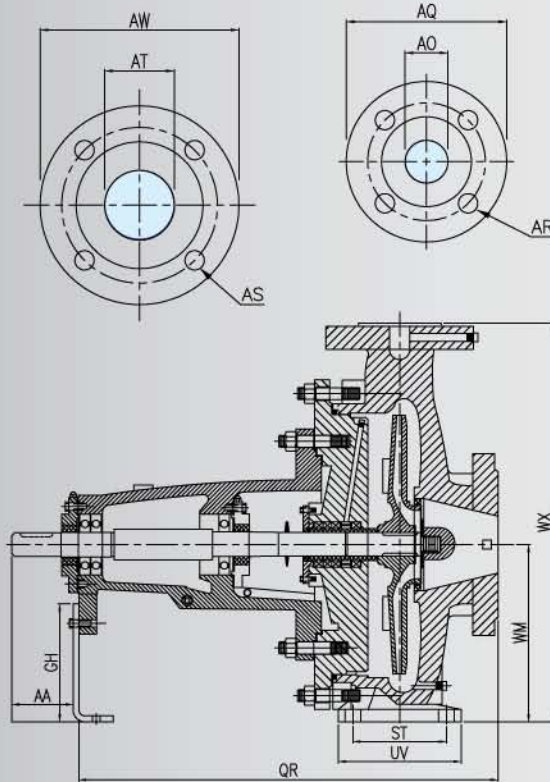


### PART SERIAL NUMBER

S. #	Description	Material	Qty.
1	Casing	Cast Iron - ASTM A48 CI 40	1
2	Impeller	Bronze - SAE 40	1
3	Wear Ring	Bronze - SAE 40	1
4	Stuffing Box (Casing Cover)	Cast Iron - ASTM A48 CI 40	1
5	Gland	Bronze - SAE 40	1
6	Gland Packing	Graphite Impregnated	4
7	Lantern Ring	Bronze - SAE 40	1
8	Bearing Housing	Cast Iron - ASTM A48 CI 40	1
9	Shaft	Stainless Steel	1
10	Shaft Sleeve	Stainless Steel - AISI 420	1
11	Bearing	Bearing Steel	2
12	Bearing Cover	Cast Iron - ASTM A48 CI 40	2
13	Foot Support	Steel	1
14	"O" Ring	Buna N Rubber	1
15	Gasket	Gasket Paper	2



## DIMENSIONAL DRAWING



Fire Pump Assembly - End Suction Section View



TABLE OF DIMENSIONS IN MM

Model								Suction Flange			Discharge Flange		
	AA	GH	QR	UV	ST	WM	WX	AW	AT	AS	AQ	AO	AR
NF-E 32-20	68	100	370	100	70	160	340	165	50	4 Holes $\Phi$ 18 on PCD 125	140	32	4 Holes $\Phi$ 18 on PCD 100
NF-E 32-26	55	120	410	127	95	177	400	165	50	4 Holes $\Phi$ 17 on PCD 125	140	32	4 Holes $\Phi$ 17 on PCD 100
NF-E 40-20	68	100	390	100	70	160	405	185	65	4 Holes $\Phi$ 18 on PCD 145	150	40	4 Holes $\Phi$ 18 on PCD 110
NF-E 40-26	62	120	425	125	95	180	405	185	65	4 Holes $\Phi$ 18 on PCD 145	150	40	4 Holes $\Phi$ 18 on PCD 110
NF-E 50-20	62	99	390	100	70	160	360	185	65	4 Holes $\Phi$ 18 on PCD 145	165	50	4 Holes $\Phi$ 18 on PCD 125
NF-E 50-26	62	120	390	125	95	180	405	185	65	4 Holes $\Phi$ 18 on PCD 145	165	50	4 Holes $\Phi$ 18 on PCD 125
NF-E 65-20	63	120	408	125	95	177	405	200	80	8 Holes $\Phi$ 18 on PCD 160	185	65	4 Holes $\Phi$ 18 on PCD 145
NF-E 65-26	62	120	450	160	120	200	450	200	80	8 Holes $\Phi$ 18 on PCD 160	185	65	4 Holes $\Phi$ 18 on PCD 145
NF-E 65-32	132	120	510	165	120	225	505	200	80	8 Holes $\Phi$ 18 on PCD 160	185	65	4 Holes $\Phi$ 18 on PCD 145
NF-E 80-26	88	120	531	160	120	200	480	220	100	8 Holes $\Phi$ 18 on PCD 180	200	80	8 Holes $\Phi$ 18 on PCD 160
NF-E 80-32	133	160	510	160	120	250	565	220	100	8 Holes $\Phi$ 18 on PCD 180	200	80	8 Holes $\Phi$ 18 on PCD 160



## FIRE PUMP INSTALLATION INSTRUCTION



### IMPORTANT INSTRUCTION TO BE FOLLOW WHILE INSTALLATION

1. Minimum distance of straight pipe line should be maintained between pump flange and fittings at suction pipe line.
2. Eccentric reducer should be used in suction line.
3. The pressure sensing line shall be brass, copper or stainless steel pipe with minimum 15 mm dia.
4. The pressure sensing line shall have ½ " dia. with 2.4 mm hole on clapper (check valve) which shall be connected in opposite direction and shall have end drain valve.
5. The test line should have minimum length of up stream and down stream as per flow meter manufacturer recommendation.
6. If the exhaust pipe length exceeds 15 ft then the pipe size should be increased based on pipe length and back pressure.
7. Exhaust pipe materials shall be mild steel.
8. Fuel pipe line shall not be of galvanized steel or copper.





Australian Standard

### QUALITY SYSTEM

National Fire Fighting Manufacturing FZCO is certified to ISO 9001 Quality system by UL DQS Inc, Loss Prevention Certification Board UK & Bureau Veritas. Our manufacturing processes are based on a quality system that ensures the use of raw material confirming to relevant International Standards. Our In process production is monitored by work standards & quality plans confirming to relevant International standards enabling us to deliver quality products.

### APPROVALS

NAFFCO has successfully achieved ISO 9001 Quality Management system certified by UL, LPCB & BV. Further we have achieved Product certification from UL, FM, LPCB, BSI, CE & SAI Global on wide range of products which include Fire Extinguishers, Fire Hose Reels, Centrifugal Fire Pumps, Diesel Engine for driving Fire pumps, Fire doors, Fire Fighting equipment & Certification for Fire Alarm systems installations.

### ENGINEERING CAPABILITIES

NAFFCO is backed by a team of professionals who are well qualified and specialized in their respective field viz - Design, Development, Production and Project Implementation. Our investment in applied research and development program concentrates on innovations which meets customer needs.

### PRODUCT RANGE



We reserve the right to modify specifications without prior notice

***Our Aim is to become your supplier of choice while focusing on value added products and services that matter most to you***



National Fire Fighting Manufacturing FZCO