

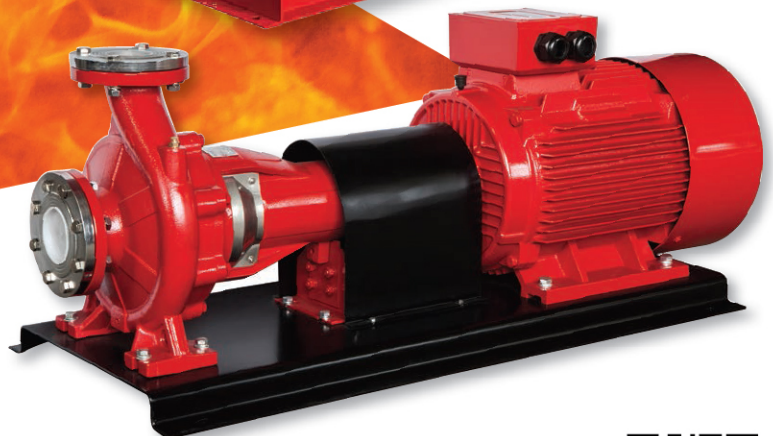
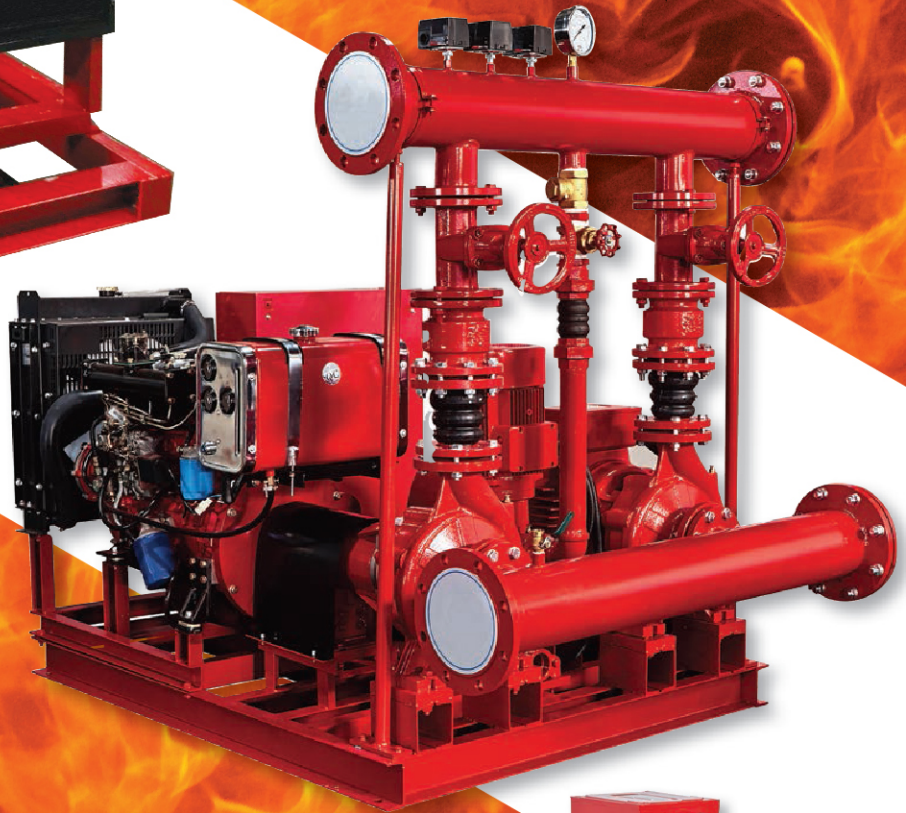


FIRE FIGHTING PUMP SYSTEM

STANDARD 750GPM@8Bar

According to NFPA

According to BS EN733



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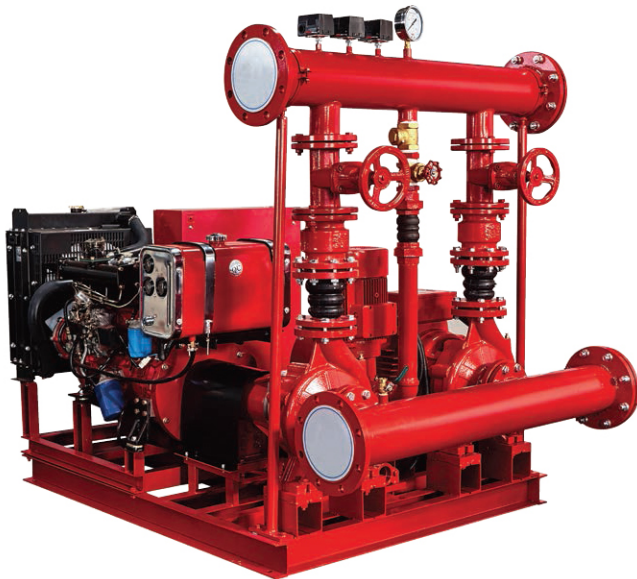
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Willenhall • WV13 1NX • United Kingdom



FGEDJ

Fire fighting system



DESCRIPTION

- Fire pumps are designed for whole operational life, the maximum reliability is always the first priority
- The components affixed onto a steel framing structure
- Each controller has its own individual pressure sensing line
- The suction line should never include a strainer
- Check valve and gate valve in the discharge line

FGEDJ Fire Pump Set consists of End Suction Centrifugal Pump driven by Electric Motor, End Suction Diesel Pump, and Vertical Jockey Pump. Pumps are assembled with discharge line accessories as well as Control (250GPM@2500GPM) and other capacity can be customized.

Accessories include Suction pipe, Discharge pipe with Flanges, Battery, Gate Valves, Check Valves, Flexible Expansion Joints, Pressure Switches, Pressure Gauge, Base Frame, etc.

PRINCIPLE

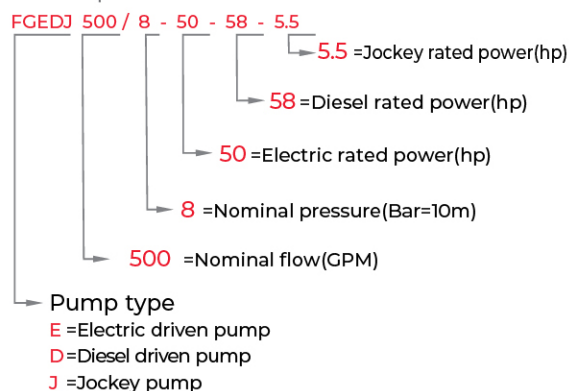
When pressure drops below the set value, jockey starts running with the signal from the pressure switch and continues running for 10 minutes till the system pressure reaches the set value. If the pressure continues drop, first the main pump starts to run. If the system pressure can't supply and pressure continues drop, the standby pump starts to run.

Advantages

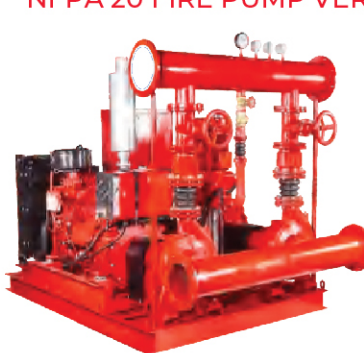
- Switch Automatically among the three pumps
- Both Manual and Automatic operation is available
- Can work when the power is off
- Easy Installation
- Customized size and pump group
- FGYE high efficient motor with protection IP55 class F
- High performance and low power consumption
- Pump case with Anti-corrosive coating With quality NSK bearings, wear resistance mechanical seal
- Circuit available up on request
- Different Mounting Styles
- Low Maintenance Cost and available spare parts
- Electronic battery charger

MODEL CODE

For example



NFPA 20 FIRE PUMP VERSIONS



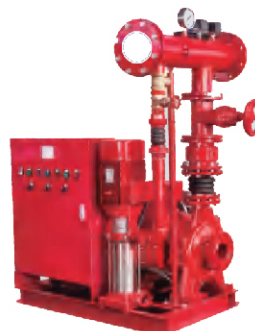
FGEDJ Version:

Fire pump set consists of Electric pump+Diesel pump+Jockey pump and all accessories



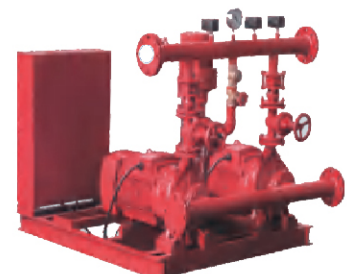
FGD Version:

Fire pump set consists of Diesel pump+Jockey pump and all accessories



FGEJ Version:

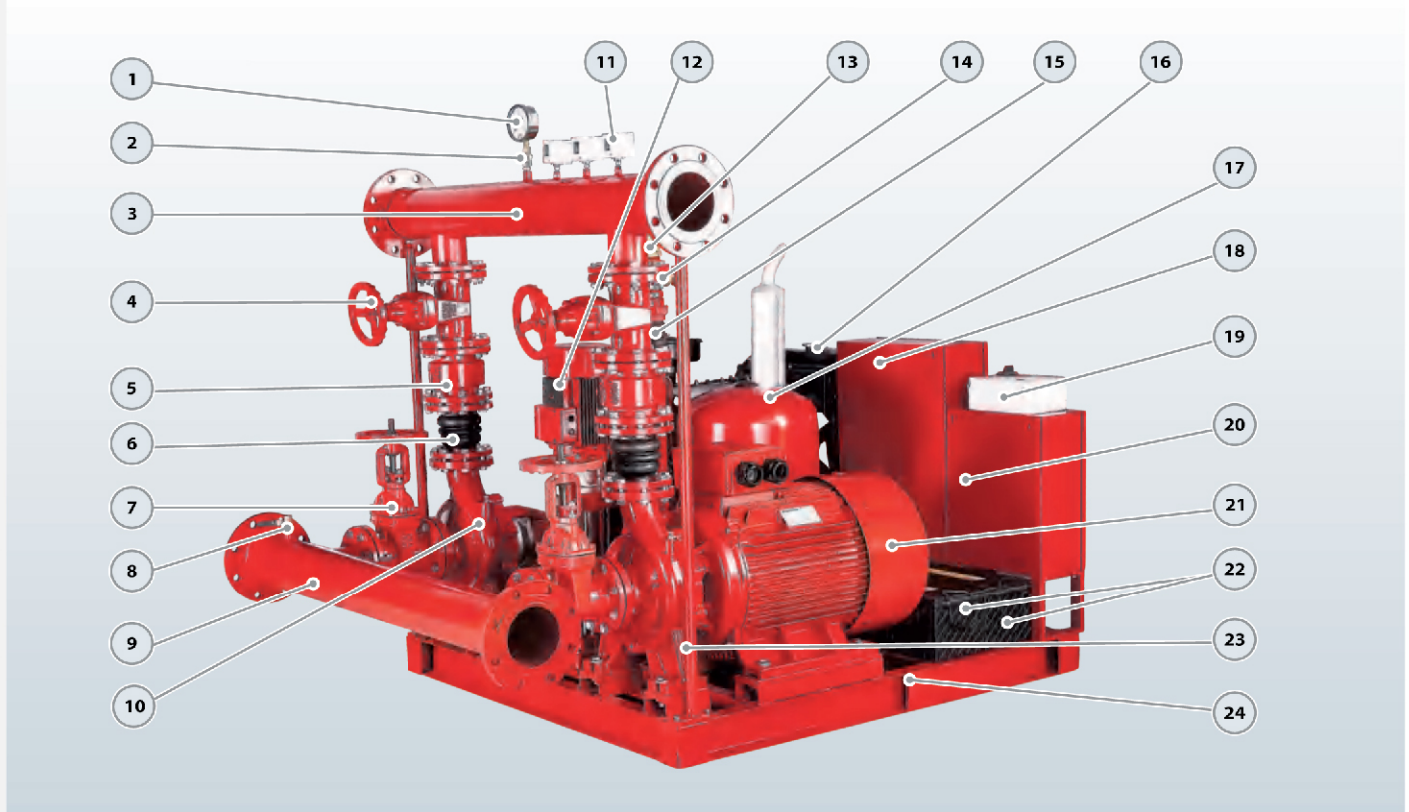
Fire pump set consists of Electric pump+Jockey pump and all accessories



FGEEJ Version:

Fire pump set consists of Electric pump+Electric pump+Jockey pump and all accessories

MATERIAL DESCRIPTION



No.	Description	Material	No.	Description	Material	No.	Description	Material
1	Pressure Gauge	0-16bar	9	Suction pipeline	Carbon steel	17	Pressure tank	Iron/ EPDM membrane
2	Relief Valve	Brass	10	Diesel pump	Standby supplier	18	Electric controller	DOL/Star-delta
3	Discharge pipeline	Carbon steel	11	Pressure Switch	0-16bar	19	Jockey controller	DOL
4	Gate Valve	Ductile Iron UL, FM	12	Jockey pump	Maintain supplier	20	Diesel controller	DOL
5	Check Valve	Ductile Iron UL, FM	13	Jockey Check Valve	Brass	21	Electric pump	Main supplier
6	Flexible Joint	Rubber/SS304	14	Jockey Gate Valve	Brass	22	Batteries	Main/Standby
7	OS&Y valve	Ductile Iron	15	Flexible Joint	Rubber	23	Support rod	Iron
8	Relief Valve	Brass	16	Diesel engine	Internal combustion	24	Base	Iron

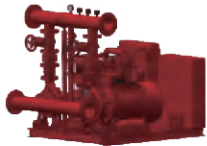
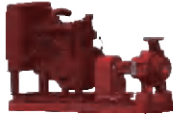
750GPM@8Bar

STANDARD

According to NFPA
According to BS EN733

TECHNICAL DATA

50 Hz n=2900 1/min

	Q	H	Electric Separate coupled	Diesel Coupling type	Jockey SS304 impeller
	GPM	Bar			
FGEDJ 750/8-100-100-10	750	8	FGSM 100-250/750 100HP	FGSD 100-250/750 100HP	FGVT(S) 16-8 10HP

FGDJ FGEJ FGEEJ also available

Other model can provide on request

PIPE DIAMETERS TABLE

Pump Flow Rate		Minimum Pipe Diameters (Nominal)	
GPM	m³/h	Suction	Discharge
750	170	6"-DN150	6"-DN150

TECHNICAL DATA

MODEL	DN	Power		GPM	H(bar)	H(max) m	Suct.H	V	V	CI	IP	A	Hz	T max	ph	min-1
	mm	kw	hp													
FGSM 100-250/750	125x100	75	100	750	8.6	91	7	380	660	F	55	134/77	50	100	3	2900
FGSD 100-250/750	125x100	75	100	750	8.6	91	7	/	/	/	/	/	50	100	3	2900
FGVT 16-8	50x50	7.5	10	75	9	110	7	380	660	F	55	15/8.7	50	100	3	2900

TECHNICAL SHEET

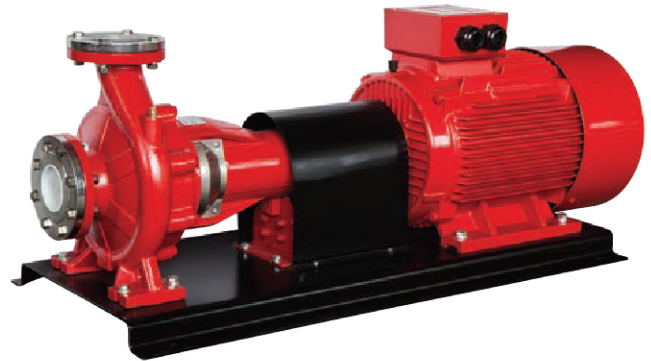
Model	FGSM	
Capacity	0-5000 gpm	m ³ /h
Head	0-164	m
DN	32-150	mm
Speed	2900	rpm
T max	120	°C
Power	1.5-315	kW
Casing	Grey cast iron	
Impeller	Bronze	
Shaft	AISI 304	
Shaft seal	Mechanical Seal	
Bearing	Grease lubrication rolling bearing	

DESCRIPTION

- New EN733 standard centrifugal pump
- Original design
- Available complete with electric motor or diesel engine
- Easily back pull-out from driver
- Pump case with anti-corrosive coating
- Impeller in stainless steel AISI 304 or brass
- Shaft in stainless steel AISI 304
- Galvanized counter flange with bolts, nuts and gaskets
- Quality NSK bearing, wear resistance mechanical seal
- According to NFPA20, centrifugal pump shall be of the overhung impeller design with close or separate coupled end suction type
- Pump capacities are based on the calculated system demand
- Fire pump shutoff head should not exceed 140% of the nominal value
- Recommended the maximum system demand flow correlate to a point on pump curve between 90% to 140% of the pump capacity

Electric

Electric pump to primarily provide flow and pressure in the system



FGSM

Seperate coupled type

MODEL CODE

For example

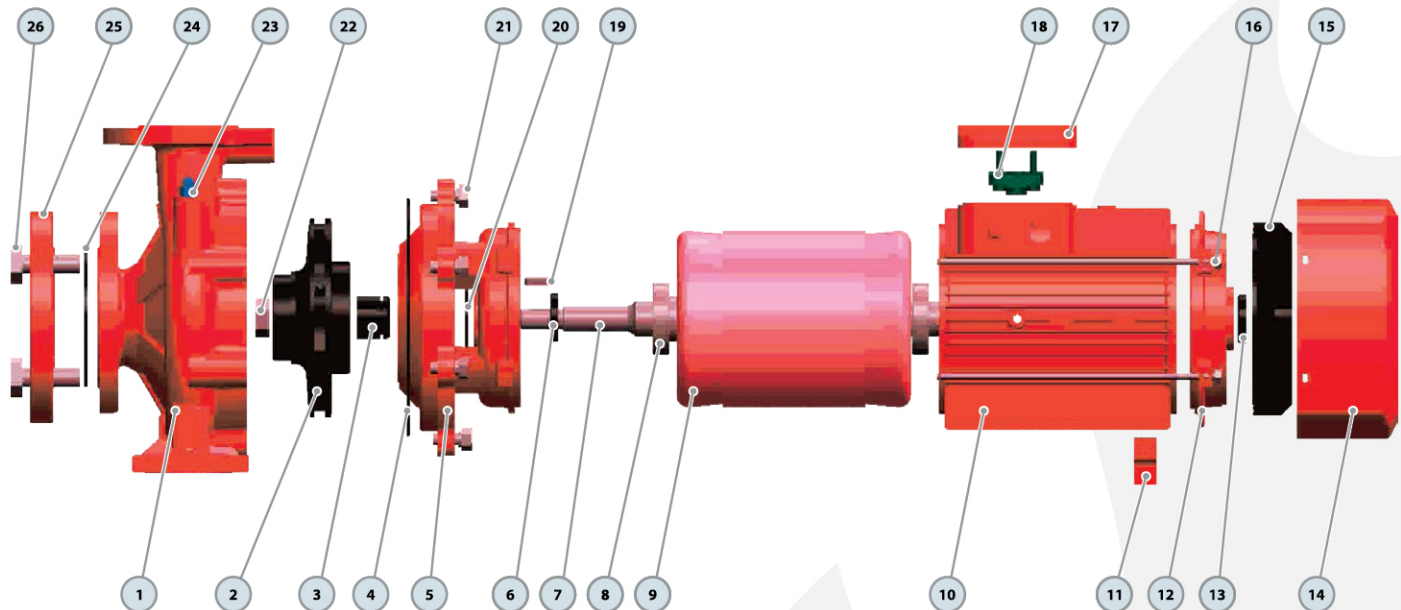
FGS (FGSM) 50 - 250 / 220

- **220** = Rated power(kw)x10
- **250** = Nominal impeller size(mm)
- **250H** = High flow type
- **50** = Discharge (mm)
- **FGSM** = End suction pump with motor&base
- **FGSBM** = End suction pump with motor&base (in type B bearing house)
- **FGS** = End suction pump only
- **FGSB** = End suction pump only (in type B bearing house)

TECHNICAL DATA

50 Hz n=2950 1/min

MODEL	DN	Implr dia.	Power		Q=DELIVERY																		
					us gpm	0	250	400	500	600	750	850	950	1000	1250	1350	1500	1750	2000	2500	3000	3500	4500
					l/min	0	950	1517	1900	2267	2833	3217	3600	3783	4733	5100	5683	6617	7567	9467	11350	13250	17033
					m³/h	0	57	91	114	136	170	193	216	227	284	306	341	397	454	568	681	795	1022
H=Head (m)																							
FGSM 100-250/750	125x100	257	75	100	91	91	90.5	89.7	88	86	84	82	81	71.7	68.5	56	-	-	-	-	-	-	



MATERIAL DESCRIPTION

No.	Description	Material	No.	Description	Material	No.	Description	Material
1	Pump Case	Cast iron	10	Motor Case	Aluminum	19	Impeller Key	Iron
2	Impeller	Bronze	11	Support Foot	Plastic	20	Water Deflector	Rubber
3	Mechanical Seal	SiC/Carbon/SS304	12	Back Cover	Cast iron	21	Connection Bolt	Steel
4	O-ring	Rubber	13	Reinforced Seal	Rubber	22	Impeller Nut	Galvanized Steel
5	Connection	Cast iron	14	Fan Cover	Aluminum	23	Release Valve	Brass
6	Reinforced Seal	Rubber	15	Fan	Plastic	24	Gasket	Rubber
7	Shaft	SS304/45# Steel	16	Through Bolt	Steel	25	Counter Flange	Galvanized Cast iron
8	Bearing	Ball Bearing	17	Terminal Box	Aluminum	26	Flange Bolt	Steel
9	Wound Stator/Rotor	Silicon Steel/Copper	18	Terminal Board	Plastic			

MODEL CODE

For example

FGYE - 160 (S/M/L) 2/1-2/4

→ **2**=2 poles motor 2900rpm

4=4 poles motor 1450rpm

→ Stator size code

2=Longer size

1=Long size

Blank: Standard size

→ Frame length code

S=Short size

M=Middle size

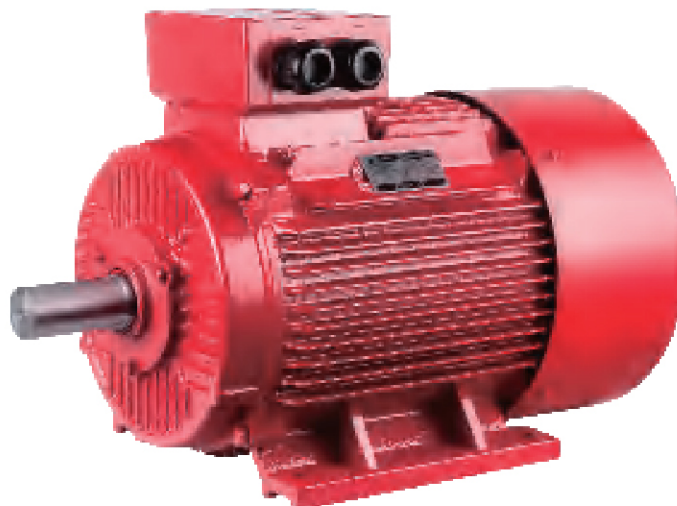
L=Long size

→ **160**=Motor frame size(mm)

→ **FGYE**=FGYE high efficient motor

FGYE

Electric motor TEFC type



DESCRIPTION

- Design according to IEC60034 standard
- TOTAL ENCLOSED FAN COOLING TYPE motor
- FGYE high efficient motor
- Protection IP55 class F

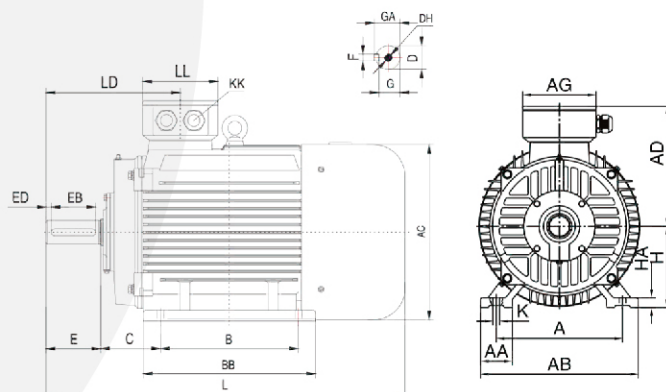
- Quality NSK bearing
- Continuous duty S1
- Reliable used for fire fighting system etc.
- Ambient temperature up to +50°C
- Cooling type: IC411

TECHNICAL DATA

50 Hz n=2900 1/min

MODEL	Power		RPM 1/min	η	η	η	cosΦ	A	Nm	Ts/Tn	Tmax/ Tn	Is/In	dB(A)	Kgs
	kw	hp		%	75%	50%								
FGYE-280S-2	75	100	2975	94.7	94.7	92.8	0.9	134/77	240.8	1.8	2.3	7.1	94	546

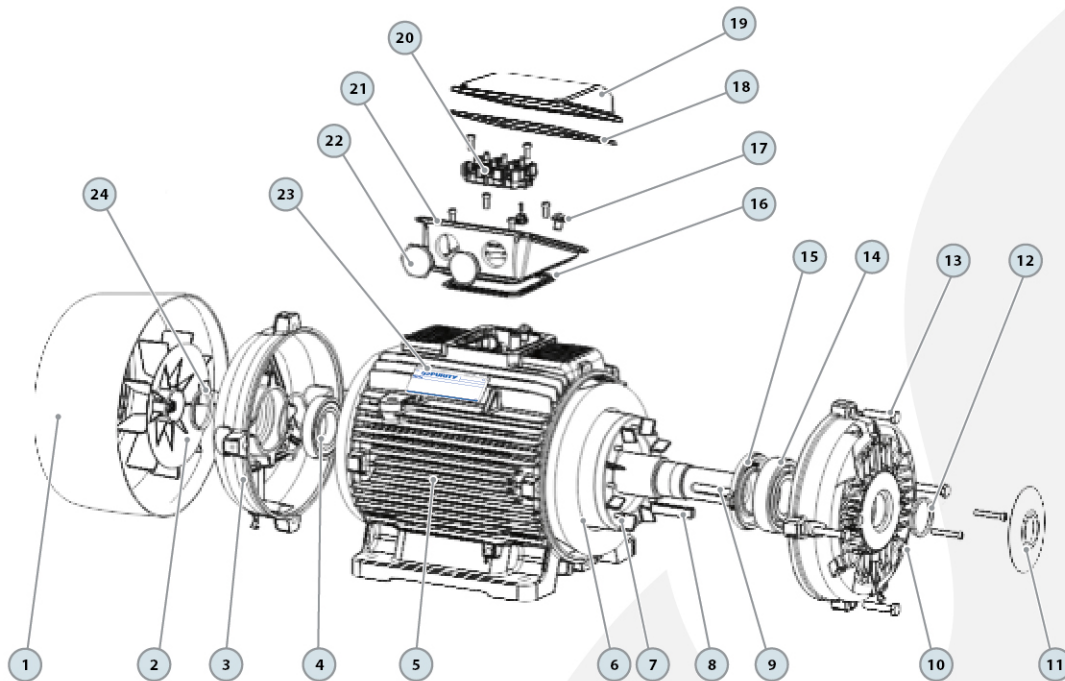
DIMENSIONS



160-355

MODEL	DIMENSIONS mm																			
	A	AA	AB	AC	AD	AG	B	BB	C	D	DH	E	EB	ED	F	G	GA	H	HA	K
280S	457	85	542	547	387	248	368	485	190	65	M20X42	140	125	7.5	18	58	69	280	35	4-Ø 24

MATERIAL DESCRIPTION



No.	Description	Material	No.	Description	Material	No.	Description	Material
1	Fan cover	Iron	9	Shaft	SS304/45# Steel	17	Screw	Steel
2	Fan	Plastic	10	Front endshield	Cast iron	18	Gasket	Rubber
3	Rear endshield	Cast iron	11	Bearing cap	Cast iron	19	Terminal box cover	Aluminum
4	Rear bearing	Ball Bearing	12	Seal	Rubber	20	Terminal board	Plastic
5	Frame	Cast iron	13	Bolt	Steel	21	Terminal box	Aluminum
6	Wound Stator	Silicon Steel/Copper	14	Front bearing	Ball Bearing	22	Terminal box plug	Plastic
7	Rotor	Silicon Steel	15	Internal bearing cap	Cast iron	23	Nameplate	Aluminum
8	Key	Iron	16	Gasket	Rubber	24	Seal	Rubber

TECHNICAL SHEET

Model	FGSD	
Capacity	0-5000GPM	m ³ /h
Head	0-164	m
DN	32-150	mm
Speed	3000	rpm
T max	120	°C
Power	6.3-300	kW
Casing	Grey cast iron	
Impeller	Bronze	
Shaft	AISI 304	
Shaft seal	Mechanical Seal	
Bearing	Grease lubrication rolling bearing	

Diesel

Diesel pump as standby provider flow and pressure in the system



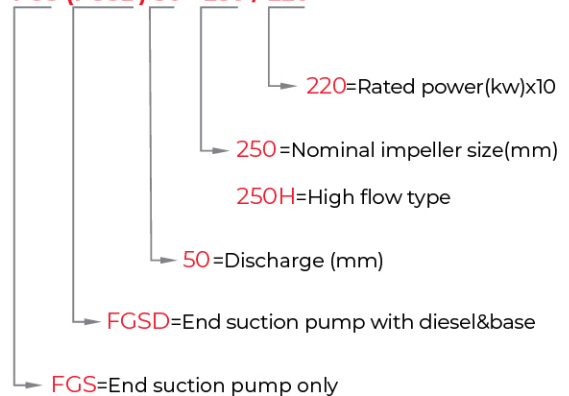
DESCRIPTION

- Diesel engines have proven to be very reliable and effective for driving fire pumps
- Diesel engines are currently the only type of internal combustion engine permitted by NFPA 20
- Each engine shall be provided with two storage battery units according to NFPA20
- Diesel engines for fire pump is of the compression ignition type
- Advanced direct injection and combustion system.

MODEL CODE

For example

FGS (FGSD) 50 - 250 / 220



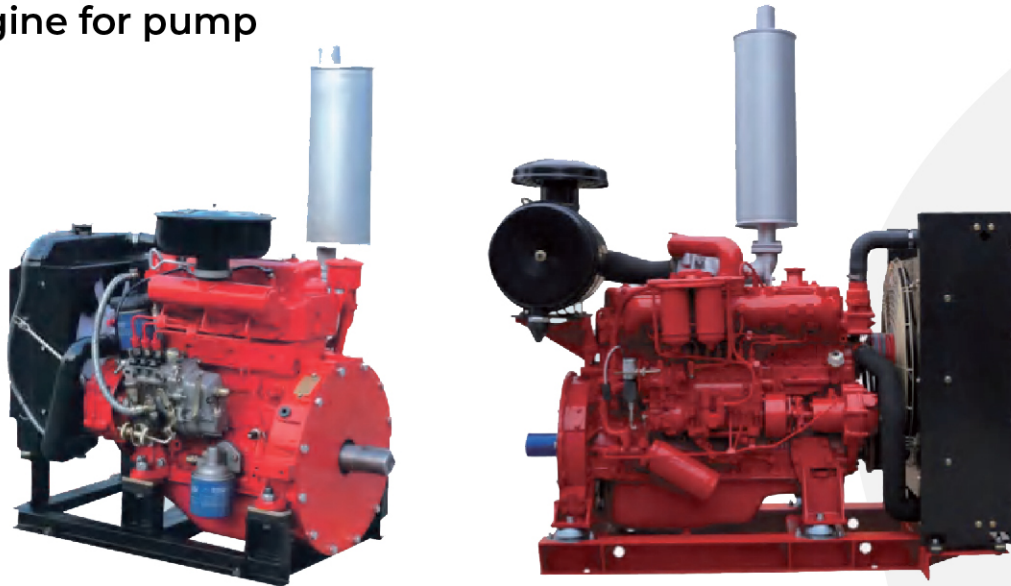
TECHNICAL DATA

50 Hz n=3000 1/min

MODEL	DN	Implr dia	Power		Q=DELIVERY																	
					us gpm	250	400	500	600	750	850	950	1000	1250	1350	1500	1750	2000	2500	3000	3500	4500
					l/min	950	1517	1900	2267	2833	3217	3600	3783	4733	5100	5683	6617	7567	9467	11350	13250	17033
					m³/h	57	91	114	136	170	193	216	227	284	306	341	397	454	568	681	795	1022
H=Head(m)																						
FGSD 100-250/750	125x100	257	75	100	91	91	90.5	89.7	88	86	84	82	81	71.7	68.5	56	-	-	-	-	-	

FGD

Diesel engine for pump



DESCRIPTION

- Air-cooled 1-cylinder in-line naturally aspirated engines
- Water-cooling 3-to 6-cylinder naturally and turbo engines
- Advanced direct injection and combustion system
- Extremely compact dimensions,easy to assemble
- Noise-optimized technology,stronger power
- Low fuel consumption,environmental protective

MODEL CODE

For example

FGD 4 102 Z

- Z/T** =Turbo-charging type
- Blank**=Naturally Aspirated
- N** =Novel model
- L** =Large power type
- S** =Larger power type
- 102** =Bore size(mm)
- 4**=Cylinder number
- FGD** =Diesel engine for pump

TECHNICAL DATA

Model	485Z	490NZ	498Z	4102Z	4105Z	4108Z	490Z	4108T	4108TL	6102NT	6102T	6102TL	6126T	6126TL	6126TS
Type	Direct Injection,4 strokes, Water-cooling														
Intake Type	Turbo-charging									Naturally	Turbo-charging				
Bore*Stroke(mm)	85*100	90*100	98*105	102*118	105*118	108*118	90*102	108*125	108*125	102*118	102*118	102*118	126*130	126*130	126*155
Cylinder No.	4	4	4	4	4	4	4	4	4	6	6	6	6	6	6
Displacement	2.27L	2.54L	3.168L	3.857L	4.087L	4.324L	2.6L	3.8L	3.8L	5.78L	5.78L	5.78L	9.726L	9.726L	9.726L
r/min	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000
Rated kW	44KW	50KW	60KW	73KW	75KW	83KW	55KW	75KW	90KW	110KW	125KW	165KW	200KW	250KW	300KW
Rated HP	60HP	68HP	81 HP	99HP	102HP	113HP	75HP	100HP	125HP	150HP	170HP	225HP	270HP	340HP	410HP
Fuel Consumption (g/kw.h)	228	228	228	238	238	238	228	218	218	229	229	229	250	250	250
Start Voltage	12V	12V	12V	24V	24V	24V	12V	24V	24V	24V	24V	24V	24V	24V	24V
Speed regulation type	Mechanical												Electronic		
Including	Radiator, Fan, Starter, charge alternator, Air filter, Muffler, Stop Solenoid, PTO shaft, Fuel Tank, Meter Panel														

TECHNICAL SHEET

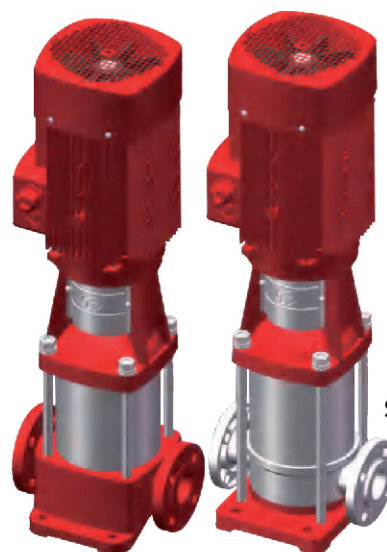
Model	FGVT/S	
Capacity	0-110	m³/h
Head	0-305	m
DN	25-100	mm
Speed	2900	rpm
T max	120	°C
Power	0.37-45	kW
Voltage	220/380/400/440	V
HZ	50	
Class	Class F/IP 55	
Duty	S1 continuous	
Casing	Grey Cast iron	
Impeller	AISI304	
Shaft	AISI304	
Shaft seal	Mechanical Seal	
Bearing	Grease lubrication rolling bearing	

DESCRIPTION

- The jockey pump is designed to maintain the pressure on the fire protection system between preset limits when the system is not flowing water.
- Rated capacity not less than any normal leakage rate.
- Discharge pressure sufficient to maintain the desired fire protection system pressure.
- FGVE high efficient motor, with protection IP55 class F.
- SS304 vertical, multistage centrifugal pump
- The suction and discharge ports on the same level
- FGVT pump head and base are in cast iron
- FGVT pump impeller and shaft are in stainless steel
- FGVS pump all wetted parts are in stainless steel
- ◆ Quality bearing, wear resistance mechanical seal
- ◆ Liquid temperature between -10°C and +120°C

Jockey

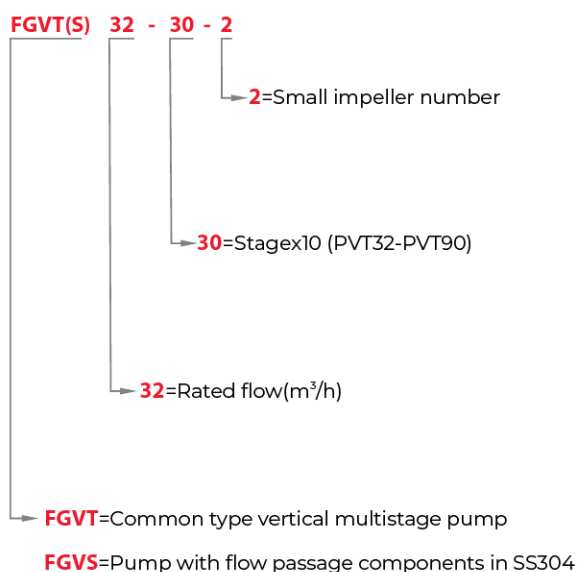
Jockey pump to maintain the necessary pressure in the system



SS304 impeller type

MODEL CODE

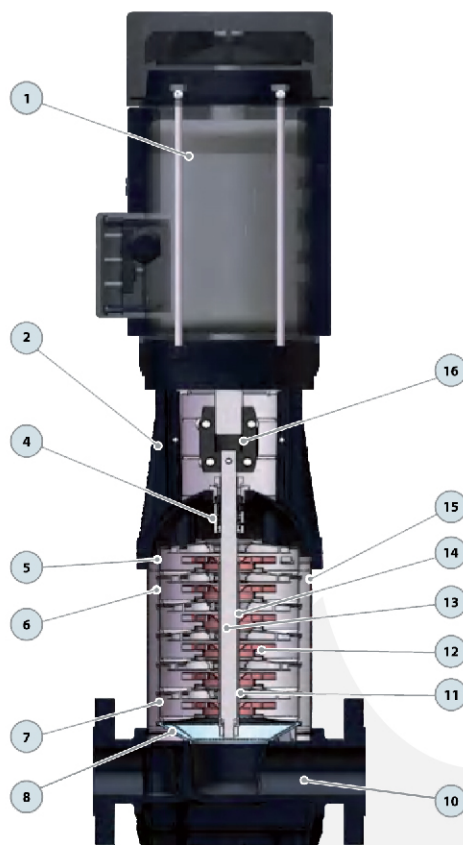
For example



TECHNICAL DATA

MODEL	DN mm	Power kw hp	GPM	H(bar)	H(max) m	Suct.H	V	V	CI	IP	A	Hz	T max	ph	min-1
FGVT 16-8	50x50	7.5 10	75	9	110	7	380	660	F	55	15/8.7	50	100	3	2900

MATERIAL DESCRIPTION



FGVT

No.	Description	Material	No.	Description	Material
1	Motor	IP55 Class F	9	Base Plate	Cast iron
2	Pump Case	Cast iron	10	Inlet&Outlet Chamber	PVT:Cast iron PVS:SS304
3	Seal Base	SS304	11	Bearing	Tungsten Carbide
4	Mechanical Seal	SS304	12	Impeller	SS304
5	Top Diffuser	SS304	13	Shaft	SS304
6	Diffuser	SS304	14	Impeller Sleeve	SS304
7	Support Diffuser	SS304	15	Cylinder	SS304
8	Inducer	SS304	16	Coupling	Carbon Steel



Controller

Fire pump controllers are control panels containing electrical components such as circuit breaker, switches, relays and other devices dedicated to the operation of fire pumps. The devices within a fire pump controller panel perform such functions as receiving signals from alarm devices, such as pressure operated switches, sprinkler alarm valves or remote fire alarm equipment; activating motor control devices to provide electric power to motors driving fire pumps and monitoring the fire pump operation and performance.

All controllers are completely assembled, wired and tested by the manufacturer before shipment from the factory.

The pump consists of three separate controllers; electric, diesel & jockey controllers.

Electrical components such as circuit breaker, switches, relays and other devices dedicated to the operation of fire pumps are schneider products.

DESCRIPTION

- Equipped with integrates digitalization, intellectualization and network technologies for precise data measurement, alarm protection, remote control, measuring and communication
- DOL or Star Delta starter
- All controllers completely assembled, wired, and tested
- Self-acting to start, run, and protect the driver
- Automatic or manual operation options





100 - 250

2900rpm

