



Auto Prime Engine Pump Set

Profile

The pump is started by diesel engine that drives this pump directly. The pump equipped non clog impeller and vacuum system. While impeller is rotating and vacuum pumps synchronized, that drive out air and finished self priming water. It is not necessary to fill the pump casing with water. Therefore, this pump can drain off water effectively.

For diesel driven versions, the engine is within easy reach for changing oil, air and fuel filters, and for maintenance on the starter motor and alternator.

The compact dimensions of the units facilitate transport and storage.

Solids handling, dry-running and portability make the CPM series the perfect choice for dewatering and bypassing applications.

Main Features

① SOLIDS HANDLING ② DRY RUNNING ③ PORTABILITY



CPM20



CPM30



CPM40

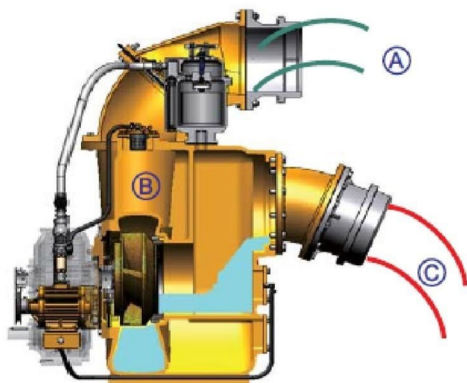
Features

1. Auto prime pumps have a special design vacuum that can detect water automatically, under no water condition.
2. The special design chamber can separate water and air. The pump will fill water in few minutes automatically.
3. Non-clog design impeller, can pass large solid. The pump has clean hole for cleaning sediment.
4. Engine speed adjustment tool, allow you control the rotational speed.
5. Many types of advanced control system for your choice for warning and protection.
6. The better aluminum-made quick connection joint is easy to operate and light weight. The rubber water pipe can match the connecting joint firmly and closely.
7. Light weight and small size, easy to setup and moveable. This pump is available for draining water at basement.

Auto Prime Engine Pump Set

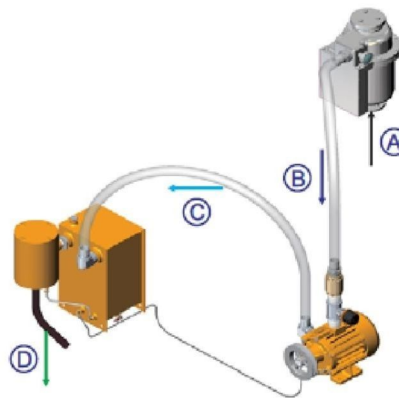
Pump Priming Theory

- A. While motor starts working, the vacuum pump draw out the air from pump.
- B. Vacuum chamber assisted vacuum pump in separating water and air.
- C. Once all of the air has been expelled from the suction pipe, the pump is primed and works like a normal centrifugal pump. The pump can also work with an air-liquid mixture.



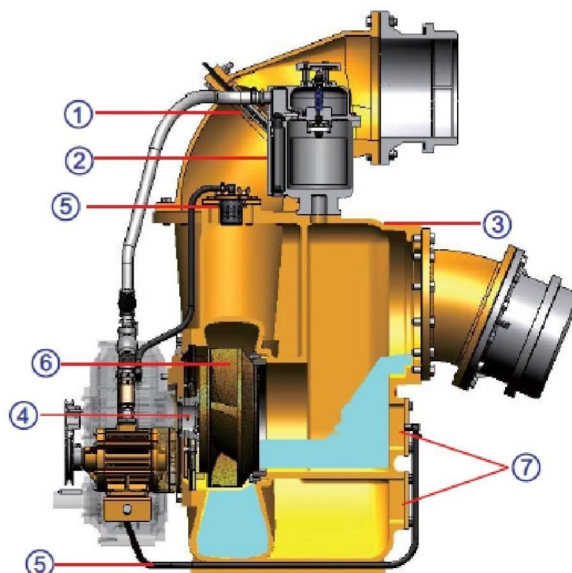
Vacuum Assistant System

- A. The air is sucked out of pump and pipes through vacuum chamber when the engine is started.
- B. The vacuum chamber works to separate the air and water, and prevent the water sucked into the vacuum pump.
- C. The vacuum pump is oil-lubricated, its can operate for long time to assist the pump keeping the vacuum degree.
- D. The oil tank passes the air out and collects the oil gas, circling the oil to vacuum pump.



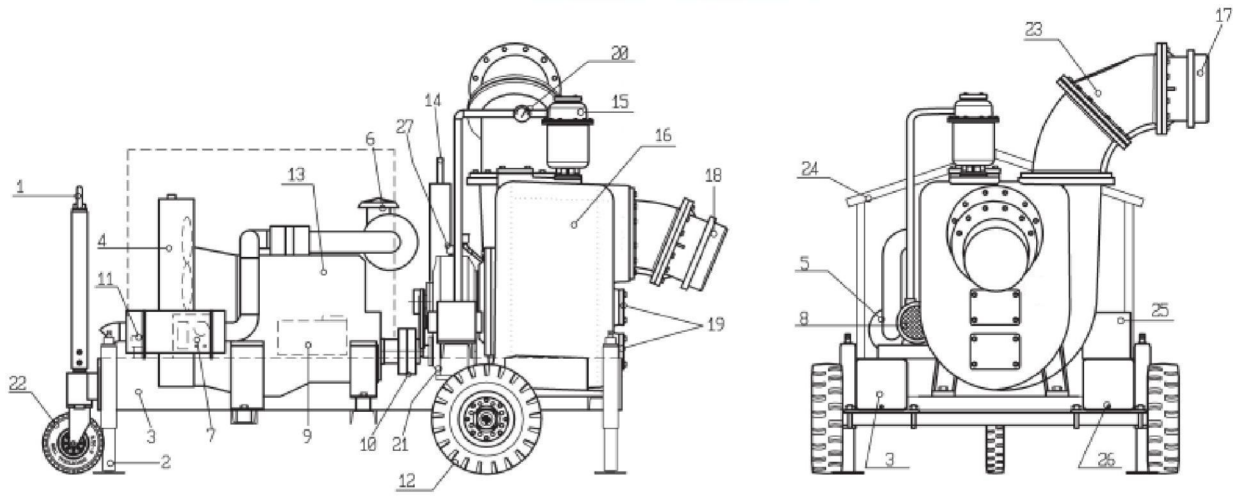
Pump Special Design

- 1. Check valve is rubber coated that is stainless. Therefore, air is not leaking.
- 2. Patented vacuum chamber is automatic design that water won't get into vacuum pump.
- 3. Pump equipped with water detect sensor. Pump will stop automatically if pump doesn't prime in 3 minutes.
- 4. Pump is compact because pump and gear box use the same shaft.
- 5. Gear box equipped with cooling device that connect to pump. Cooling device can provide function of heat exchange and cooling. With filter to prevent pump from clogging and easy to clean.
- 6. Big solid can pass because of non clog impeller.
- 7. It is easy to disassemble and clean because of pump with two cleaning holes.



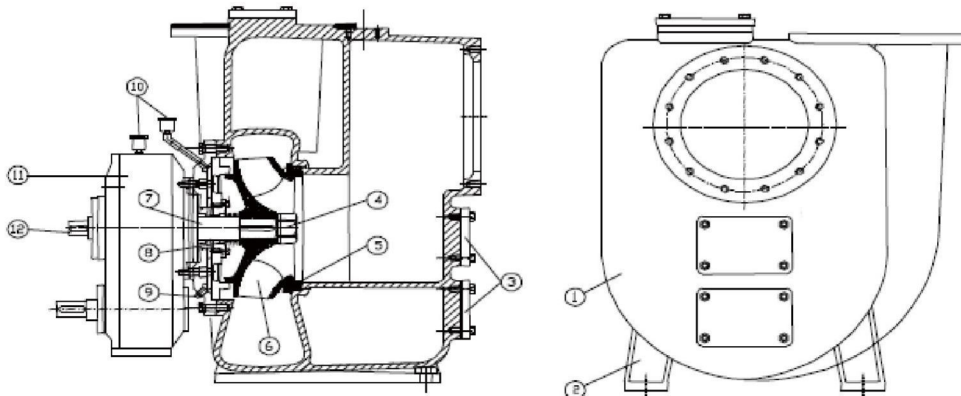
Auto Prime Engine Pump Set

Structure Drawing



- | | | | |
|--------------------|-------------------|---------------------|-----------------------|
| 1. drag rod | 8. vacuum pump | 15. vacuum chamber | 22. steering wheel |
| 2. adjustable rack | 9. battery | 16. self prime pump | 23. check valve |
| 3. fuel tank | 10. coupling | 17. outlet | 24. protective shield |
| 4. radiator | 11. fuelling hole | 18. inlet | 25. lube tank |
| 5. exhaust pipe | 12. rubber tires | 19. cleaning hole | 26. leak plug |
| 6. air cleaner | 13. engine | 20. vacuum gauge | 27. filler hole |
| 7. control panel | 14. lift rack | 21. gear box | |

Material Chart

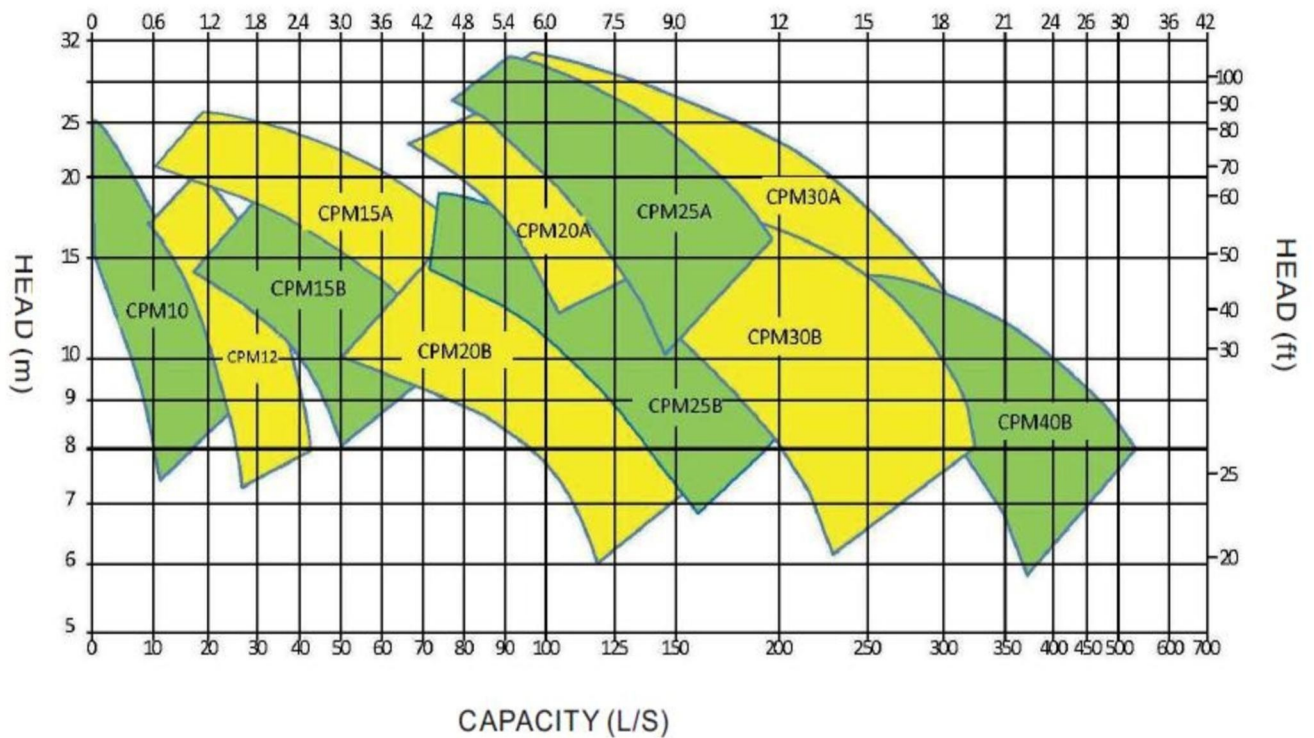


NO	Item	Material	NO	Item	Material
1	Pump body	FC250	7	Shaft	SUS410
2	Foot	FC250	8	Seal	SIC/TC
3	Cleaning hole	FC250	9	Oil drain off Plug	-
4	Impeller nut	SS41	10	Oil cup	SUS
5	Impeller sleeve	FC250	11	Gear box	FC250
6	Impeller	FC250	15	Vacuum pump shaft	SUS410

※ Customer's specifications are acceptable.

Auto Prime Engine Pump Set

Performance Curve



Performance Specification

TYPE	Diameter Inch	Max. Capacity M ³ /min	Max. Head m	Speed Rpm	Solid Passage mm	Displacement L/m in
CPM10	4	1.6	25	3000	20	-
CPM12	5	2.5	21	3000	25	300
CPM15A	6	5	26	1800	40	300
CPM15B	6	5	18	1500	40	300
CPM20A	8	10	28	1800	45	700
CPM20B	8	10	16	1400	45	700
CPM25A	10	14	30	1800	60	700
CPM25B	10	14	20	1500	75	700
CPM30A	12	21	31	1000	65	800
CPM30B	12	21	21	1000	75	800
CPM40B	16	35	14	800	100	1000

✘ Customer's specifications are acceptable.

Auto Prime Engine Pump Set



Water Supply Rubber Hose



Steel Wire Reinforced Rubber Hose



Aluminum Quick Connecting Joint



Aluminum Quick Connecting Joint

Water Supply Rubber Hose Specification

Item	Diameter		Thickness		Weight		Working pressure Kg/cm ²	Maximum pressure Kg/cm ²
	mm	Inch	mm	Inch	Kg/m	Pond/ft		
1	100	4	2.3	0.09	2.0	0.9	3	6
2	150	6	3	0.12	3.6	2.4	3	6
3	200	8	4	0.16	5.0	3.4	3	6
4	250	10	5	0.20	6	4.0	3	6
5	300	12	6	0.24	8	5.3	3	6
6	400	16	8	0.32	12	8.1	3	6

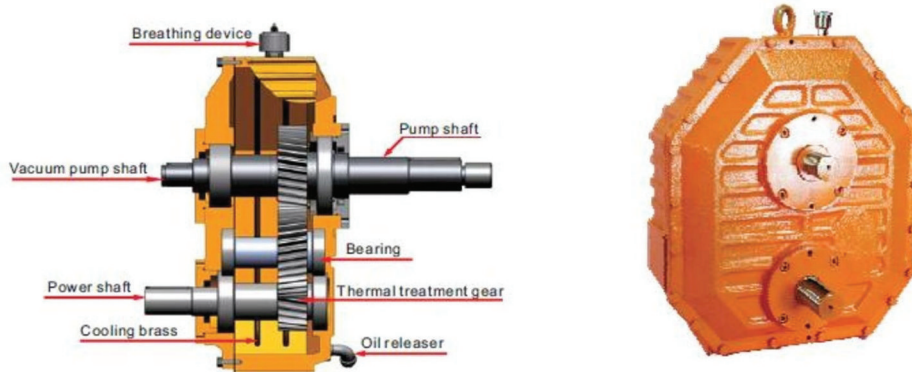
Steel Wire Reinforced Rubber Hose Specification

Item	Diameter		Thickness		Length m	Weight		Bending radius		Working pressure Kg/cm ²	Maximum pressure Kg/cm ²
	mm	Inch	mm	Inch		Kg/m	Pond/ft	mm	Inch		
1	100	4	6	0.24	1-15	4	2.7	600	23.6	5	10
2	150	6	7	0.28	1-15	7	4.7	900	35.4	5	10
3	200	8	8	0.31	1-15	10	6.7	1200	47.2	5	10
4	250	10	9	0.35	1-12	15	10.1	1500	59.1	5	10
5	300	12	10	0.39	1-12	18	14.8	1800	70.9	5	10
6	400	16	14	0.55	1-10	42	28.3	3000	118.1	5	10

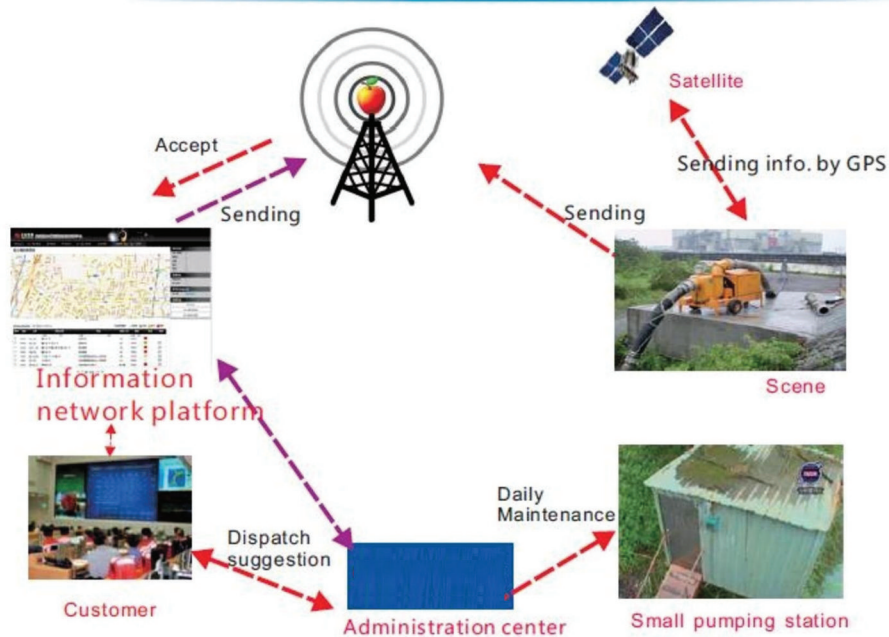
Main Accessory of Pump Set

Gear Box

1. Heat Exchanger build inside the gear box. Gear box can be operated under long term situation without over heat.
2. The gears process precisely according to AGMA and have been thermal treated. It is silent and smooth when running.
3. With the best quality seal and ball bearing, gear box can run in long life.
4. Efficiency of gear transmission can reach 95%.
5. With two output shafts, gear boxes offer various application.
6. Dimensionally accurate and compact in size, our gear boxes offer high performance free from any problem.



GPS Intelligent Monitor System



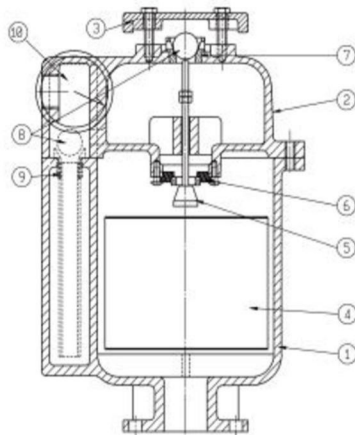
Main Accessory of Pump Set

Vacuum Chamber

1. The vacuum chamber is patent certificated in Taiwan, its special design for the auto prime pump.
2. Vacuum chamber is made of aluminum, and compact design reduced weight of pump.
3. With vacuum gauge, it is easy to observe pressure of pump.
4. Automatic design will adjust vacuum suction between vacuum pump and pump body. After vacuum pump exhausts, vacuum chamber will relief pressure automatically that makes no water into the vacuum pump.



Specification



NO	Item	Material
1	Casing	Aluminum
2	Separator	
3	Valve cap	Styrofoam
4	Floating ball	
5	Valve plug	Plastic
6	Valve plug	Plastic
7	Valve plug	Plastic
8	Ball valve	Rubber
9	Suction Valve set	Plastic
10	Gauge	Stainless steel

Control Panel

1. LED type control panel is suitable in the wet environments.
2. LED type control panel is easier to operate and observe.
3. Control panel is made of stainless steel, that can be used in raining day.
4. Digital screen control panel could store 2,000 information.
5. Board is cover by waterproof design to prevent humidity.
6. Digital screen control panel could extend function of GPRS communication to control engine.



LED type control panel



Digital screen control panel

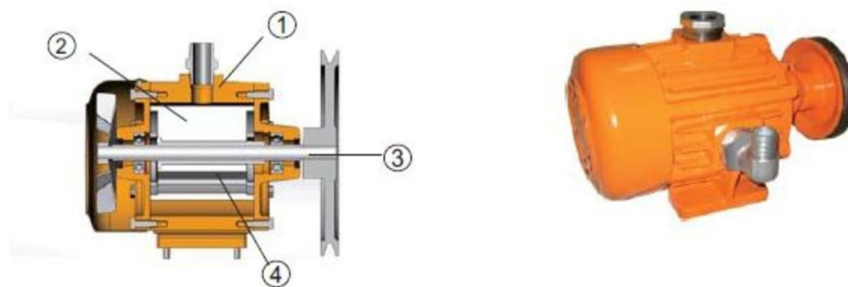


Board

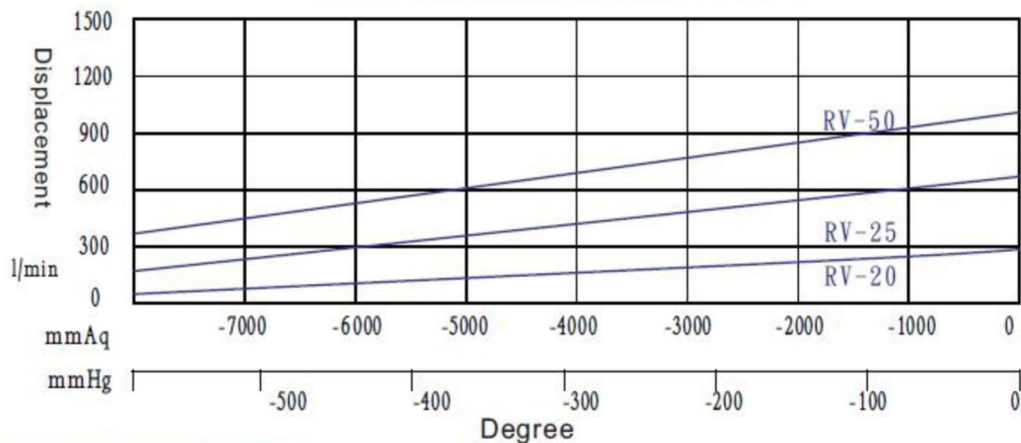
Main Accessory of Pump Set

Vacuum Pump

1. The vacuum pump with special design rotor, that can work 24 hours continuous operating without overheat.
2. Smooth and quiet continuous operation.
3. Highly efficient oil circulation system ensures perfect lubrication and sealing in all critical areas of pump.
4. Equipped with the vacuum adjuster to setup the rated vacuum pressure and the oil gas collector that reduced loss of oil under 0.7% per hour.
5. Automatic clutch is an optional device that will reduce power loss and synchronizes with pump when water discharge or not.



Performance Curve



on

Material Charts

No	Parts	Material
1	Body	FC 250
2	Impeller hub	FC 250
3	Shaft	S30C / SUS 410
4	Impeller	CARBON

Material Charts

Type	power		Dia.	Displacement L/Min	Rated speed rpm
	hp	Kw	Inch		
RV-20	1	0.75	3/4	300	1000
RV-25	2	1.49	1	700	600
RV-50	3	2.2	2	1000	500

Optional Accessory of Pump Set

Optional Accessories



Aluminum-Quick Connecting Elbow



Strainer



Stainless Strainer



Y type Connecting Joint



PVC Hose

Optional Trailer



Standard trailer



Standard trailer with suspension

Pump Testing and Achievement



Pump test



Pump test



Agricultural irrigation



Agricultural irrigation



Agricultural irrigation



Agricultural irrigation



Draining water at basement



Draining water at basement

Pump Testing and Achievement



Pump rental at airport



Pump rental at airport



Flood water drainage promptly



Flood water drainage promptly



Water drainage from reservoir



Small pumping station



Water drainage from reservoir



Water drainage from reservoir