

ISO 9001
ISO 14001
OHSAS 18001
CERTIFIED COMPANY

PARANAA[®]
PUMPS

HYDRODrive
PRESSURE BOOSTING SYSTEMS

EFFICIENT
RELIABLE
INTELLIGENT
COMPACT



PRESSURE BOOSTING SYSTEMS

PERFECT ENGINEERS
THE PERFECT PUMP



COMPANY

PARANAA® PUMPS guarantees top quality, robust, reliable and cost effective pressure boosting systems with maximum efficiency which satisfies the need of every customer in various range of applications. **PARANAA® PUMPS** has recorded a remarkable growth with commitment towards value creation for its customers and impeccable stress on Research & Development.

QUALITY POLICY

"Our commitment is to achieve Customer Satisfaction by supplying quality products on time, with the involvement of employees and by continually improving the effectiveness of the Quality Management System."

ENERGY EFFICIENT

PARANAA® PUMPS - Pressure Boosting Systems are equipped with smart variable frequency drive which are fully integrated which intelligently controls every pump speed resulting in high energy savings. All pumps are fitted with energy efficient Electric Motors.

RELIABLE

PARANAA® PUMPS - Pressure Boosting Systems are robust and effectively tested to be fail-safe. This ensures maximum flexibility and reliability resulting in optimum performance.

PARANAA® PUMPS - Pressure Boosting Systems facilitates smooth operations with Cutting-edge Technology that is Powered by Quality which has been Designed to Deliver the Engineering Excellence."

INTELLIGENT

PARANAA® PUMPS - Pressure Boosting Systems are controlled by responsible & integrated variable frequency drive with inbuilt pressure sensor of flow sensor. The entire system is intelligently well protected to ensure smooth and trouble free operation. The system guarantees longer life for the pump with less noise, soft start & stop, by saving upto 60% energy.

COMPACT

PARANAA® PUMPS - Pressure Boosting Systems are very compact and unique in construction with plug and play technology which is very easy to install at the site without any hassle.

MULTI VFD SYSTEMS

PARANAA® PUMPS pressure boosting systems are a class apart when it comes to boosting pressure in Small Homes, Large Homes, Apartments, Hotels, Commercial Buildings and Industries. The old conventional methods of boosting pressure, is where the pump runs at full speed and stores the water in a large pressure tank and then is distributed when there is requirement. Then a VFD (Variable Frequency Drive) is connected to 3 or 4 pumps where the first pump runs at variable speed and when the maximum capacity of the pump is reached the other pumps start one by one at DOL full speed based on usage. In most countries these two types of systems are considered as non-efficient method of pressure boosting due to low power savings, variable pressure, increased failure of VFD & pumps etc.

PARANAA® PUMPS Multi VFT pressure boosting systems are built based on the concept of one VFD controller for each pump. This allows the system to work precisely delivering the water at constant pressure at all times. In most cases the VFD are with built in pressure sensor & flow sensor which facilitates smooth operation of the system.

All pumps are made of 100% stainless steel components. The stainless steel components are very hygienic and prevents the formation of bacteria and avoids water stagnation. SS 304 & SS 316 grades of stainless steel sheets are processed using state-of-the-art machineries to be made into Impellers, diffusers, housings and shaft. All components that are in contact with water are made of stainless steel.

The high efficiency motors save a lot of energy when used individually or together in systems. The motors are conformed to CE Certification according to the European standards and also has many certifications in the domestic market. Whether running at variable speed or at constant speed the motors are designed to deliver maximum efficiency to enable silent operation.

INBUILT FEATURES

- ❖ VFD - Variable Frequency Drive with built-in Pressure Sensor & Flow Sensor*
- ❖ Dry Running Protection with Auto Restart
- ❖ High Voltage Protection
- ❖ Low Voltage Protection
- ❖ High Temperature Protection
- ❖ Phase Failure Protection
- ❖ Anti Frost Protection*

ADVANTAGES

- ❖ Flow through architecture and Stand-alone
- ❖ Maintains constant pressure
- ❖ Each pump is fitted with a individual VFD, very high power saving (upto 60% power savings)
- ❖ Communicates with each unit and maintains the required pressure
- ❖ Automatic Pump alternation ensures equal number of running hours for each pump
- ❖ Built-in program adapts and changes set point based on flow to compensate pressure and friction loss
- ❖ Two pressure points can be set according to the requirement*
- ❖ Soft Start / Stop - Increases pump and motor life by more than 30%
- ❖ Avoids water hammering
- ❖ Upto 60% power saving
- ❖ BMS compatible
- ❖ Compact design and very silent operation
- ❖ Daily unlock (Automatically runs for few cycles if not used for 23 hrs.)
- ❖ Connect upto 6 pumps with Double Master & Fail-safe twin pressure sensor.

MATERIAL OF CONSTRUCTION

- ❖ Impeller & Diffuser - SS 304 (SS 316 on request)
- ❖ All wet parts are stainless steel
- ❖ Manifolds - Brass & Stainless Steel / GI
- ❖ Pump Adapter - Cast Iron
- ❖ Motor Housing - Aluminium / Cast Iron
- ❖ Mechanical Seal - Tungsten Vs. Graphite

(* Flow-through VFD's only)

APPLICATIONS

PARANAA[®] PUMPS pressure boosting systems are used in a wide range of applications like Residential Houses, Apartments, Commercial Buildings, Hotels, Shopping Malls, Hospitals, Irrigation and Industries. Our Robust state-of-the-art Pressure Boosting Systems are also widely used in Large Cooling and Industrial Applications.

Residential Houses & Farms



Apartments & Commercial Buildings



Hotels, Shopping Malls & Hospitals



Irrigation, Landscaping & Industries



COMPETITIVE EDGE

Advantages	Dharani Pressure Boosting Systems	Other Pressure Boosting Systems available in market
Maintains Constant Pressure	The only Multi VFD System with system with built-in Pressure Sensor & Flow Sensor. The Flow through architecture is designed to maintain constant pressure as the water flows through the unit.	Pressure is maintained in the pressure tank with a set Cut in and Cut off pressure, hence there is a wide variation in pressure during operation. The mix of Hot & Cold water is not perfect in this case.
Power Saving Mode	Yes, Up to 60% Power saving. The VFD (Variable Frequency Drive) controls & runs the motor at various speeds according to the requirement of water. There is a huge amount of power saving due to this feature.	As and when there is request of water it runs the motor at the full speed (max speed of the motor) consuming the full current of the motor. The motor life is very less due to this overloading.
Inbuilt VFD	VFD is inbuilt in each controller. So each pump is run using a VFD.	External VFD (Optional). It can run only 1 pump at a time.
Increases Pump life by more than 30%	The unit allows the pump to soft start thereby reducing the sudden initial load on the motor. The full power of the pump is used only when large amount of water is needed. Globally acknowledged way of using systems.	When the motor starts, the initial starting current will be up to 2 times of the max amps of the desired motor amperage. (In a hydro pneumatic system the No. of On and Offs in a motor are very high, so the life of the motor will be less in this case)
VFD	Available - Inbuilt	Not Available - Additional
Pressure Sensor	Available - Inbuilt	Not Available - Additional
Flow Sensor	Available - Inbuilt	Not Available - Additional
Flow through Architecture	Available (Water flows through the system and also maintains the pressure constant)	Not Available
Dry Running Protection	Available - Inbuilt	Not Available – Additional
Single Phase Protection	Available - Inbuilt	Not Available – Additional
Low Voltage Protection	Available - Inbuilt	Not Available – Additional
High Voltage Protection	Available - Inbuilt	Not Available – Additional
Over Load Protection	Available - Inbuilt	Not Available
High Temperature Protection	Available - Inbuilt	Not Available
RS 485 Communication Port	Available	Not Available
Phase Failure Protection	Available (In case there is any damage to the wire, the system senses a phase missing and automatically stops)	Not Available – Additional
Dry Running Auto Restart Function	Available	Not Available
Pressure Setting	2 Pressure set points can be set and can be used according to our requirement at the desired time without any modification to the system*	Not Possible
Space Requirement	Minimal Space is enough. (Can be kept on top of the sump)	More Space is required. (A room is required to accommodate the system, rack control panel and big Pressure Tank takes up a lot of space)
Pressure Tank Requirement	Small Pressure Tank is enough (60 or 100 Liters)	Required big Pressure Tank (500 or 1000 Liters)
Anti Block Function	Available - If pump does not run for 23 Hours the controller automatically gives the signal to the pump to make a few rotations, hence avoiding the pump Jamming.*	Not Available
Automatic pump change over function	Available. 1) Pump 1 ON & Pump 2 is Kept OFF. 2) Pump 2 is ON and Pump 1 is kept OFF. 3) If usage is more Pump 1 & Pump 2 goes ON evenly balancing	Not Available. 1) Always ON Pump 1. 2) If usage is more in Pump 1 & 2 Goes ON at DOL.
Display Mode	The controller indicates. Pump Current, Operating Pressure, Lack of Water, Operating Frequency, Setting Frequency, Overload Current, Dry Running Status.	Indicates Pump ON/OFF Status, Error Status Only.
Multi Frequency Mode Start.	Available. Can be run at 50Hz, 60 Hz and more.	Not Available.

* Flow through VFD only

RANGE OF SYSTEMS



Horizontal Pump with VFD



2+1 Horizontal Pump Multi VFD System



2+1 Vertical Pump Multi VFD System



1+1 Vertical Pump Multi VFD System

Also available in 3+1 Horizontal/Vertical Pump Multi VFD Systems

SINGLE VFD SYSTEMS

Our Single VFD Pressure Boosting Systems are designed to deliver optimum performance when it comes to boosting pressure in Homes, Farms, Apartments, Hotels, High Rise and Commercial Buildings, Irrigation and Industries. These Systems are built-in with cascading facility to ensure constant pressure and superior power savings. The VFD is connected to two, three or four pumps which switches between pumps on time-based cycle ensuring equal usage of the pumps.



INBUILT FEATURES

- ❖ VFD - Variable Frequency Drive with Cascading operation
- ❖ Dry Run Protection
- ❖ High Voltage Protection
- ❖ Low Voltage Protection
- ❖ Phase Failure Protection

ADVANTAGES

- ❖ Maintains constant pressure
- ❖ VFD - Automatic Pump alternation ensures equal number of running hours for each pump (time-based cycle)
- ❖ Built-in program adapts and changes set point based on flow to compensate pressure and friction loss
- ❖ More power savings
- ❖ BMS compatible
- ❖ Compact design and very silent operation

MATERIAL OF CONSTRUCTION

- ❖ Impeller & Diffuser - SS 304 (SS 316 on request)
- ❖ All wet parts are stainless steel
- ❖ Manifolds - Brass, Stainless Steel & G.I.
- ❖ Motor Housing - Aluminium / Cast Iron
- ❖ Mechanical Seal - Tungsten Vs. Graphite

MICROPROCESSOR-BASED CONTROL SYSTEM

- ❖ Microprocessor controlled twin pump operating system
- ❖ Automatic pump alternation
- ❖ Applicable for water transfer / tank filling operation
- ❖ Dry Run Protection
- ❖ High Voltage Protection
- ❖ Low Voltage Protection
- ❖ Phase Failure Protection

TECHNICAL FEATURES

Types of Systems	: Internal Multi VFD / External Multi VFD / Single VFD / Microprocessor Controlled
Types of Pumps	: Horizontal Multistage / Vertical Multistage / Submersible / Centrifugal
Power Rating	: 0.50 HP (0.37 kW) – 60 HP (45 kW) per pump
No. of Pumps	: Single – up to 6 Pumps in a System
Flow Range	: 1 – 120 m ³ /hr per pump
Pressure Range	: 1.5 – 15 Bar
Pressure Tank	: 24 / 60 / 100 / 200 / 300 / 500 Ltrs e-coat MS with replaceable bladder (EPDM bladder)
Manifolds	: Upto 4" in SS 304 5" – 8" in GI
Connectors & Valves	: Forged brass / SS 304 / Cast Iron
VFD Operation Mode	: Multi VFD / Cycle-based / Time-based / Switch over
Protection	: Phase failure, High / low Voltage, Dry run, Overload
Pressure Setting	: Constant / Cut-in - Cut-off
Types of Suction	: Flooded / Positive Suction for Vertical Multistage Pumps Negative (Upto 3 m max.) for Horizontal Multistage Pumps Negative (Upto 3 m max.) for Centrifugal Pumps Vertical / 45° max. inclined installation for Submersible Pumps

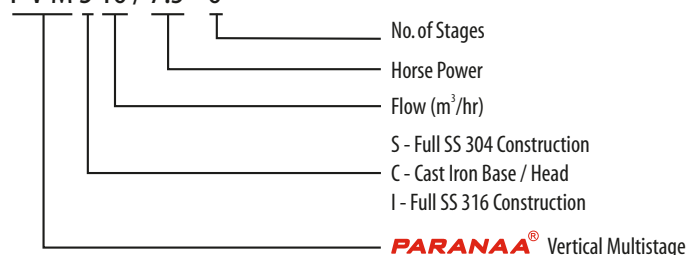
PVMS, PVMC & PVMI - Vertical Multistage Pumps

Characteristics

- Energy efficient motor
- Robust pump construction
- Liquid temperature: -15°C to 110°C
- Ambient temperature up to 40°C

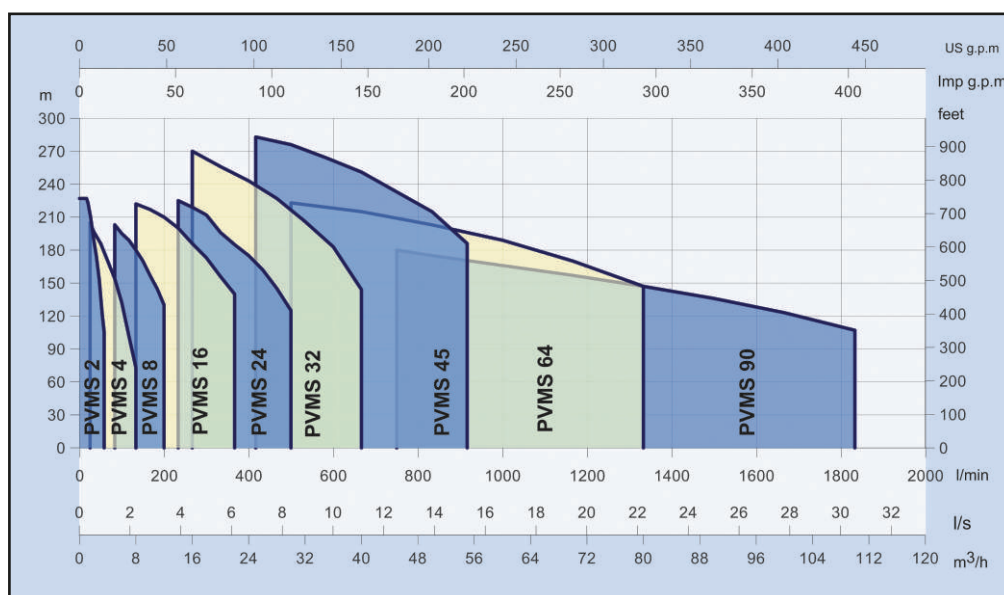
Product Reference

PVMS 16/7.5 - 6



Material of Construction

Part Name	Material
Motor Housing	Aluminium / Cast Iron
Pump Base & Adaptor	Cast Iron
Pump Chamber	SS 304 / Cast Iron / SS 316
Impeller	SS 304 / SS 316
Diffuser	SS 304 / SS 316
Shaft	SS 304 / SS 316
Mechanical Seal	Tungsten Carbide Vs. Graphite



Save Water



Save Earth

We are a group of companies with social responsibilities

Authorised Dealer

Contact:

Paranaa Pumps & Motors

S.F. No. 328, Kalapatti Road

Coimbatore - 641 048, Tamil Nadu, India

Phone : +91 422 6464 034, 6464 036

E-mail : enquiry@peindia.net

info@paranaapumps.com

Website : www.paranaapumps.com

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