



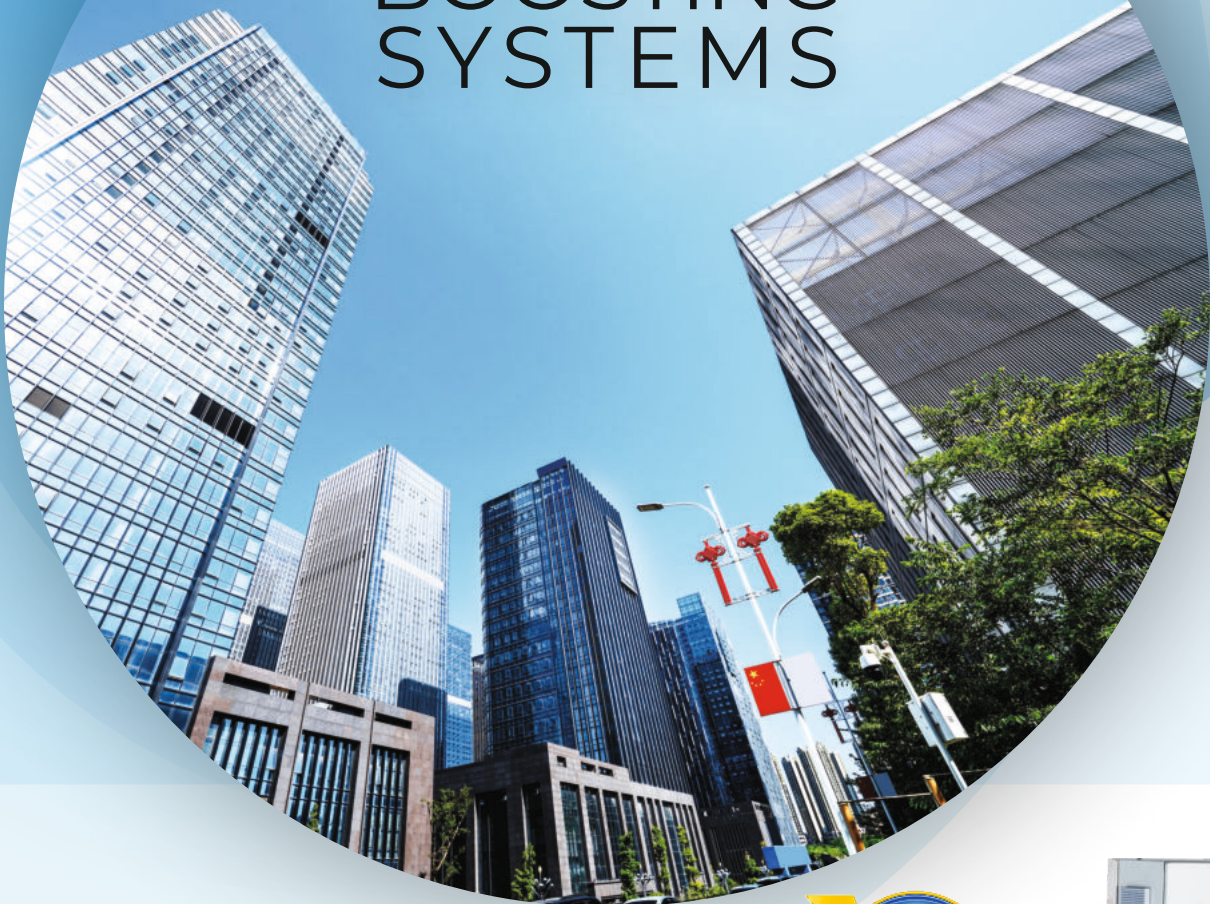
**ONE STOP
PUMPING
SOLUTIONS**



C.R.I. PUMPS

Pumping trust... Worldwide.

PRESSURE BOOSTING SYSTEMS



www.crigroups.com

◆ COMMITMENT ◆ RELIABILITY ◆ INNOVATION



ABOUT US

The beginning of C.R.I., way back in 1961, was a resolute attempt to produce a few irrigation equipments using the limited facilities of an in-house foundry. Eventually the founder's dream was coming true as the small production unit he started kept growing rapidly. Now, after more than five eventful decades, it is an enormous, widely reputed organization, which produces more than 1500 varieties of perfectly engineered pumps and motors and sells its products in numerous countries spread across 6 continents.

C.R.I., is one among the few pioneers in the world to produce 100% stainless steel submersible pumps. Having achieved a record production capacity of over 2 million pumps per annum, today C.R.I. is rubbing its shoulders with the best brands in the world, with advanced technology and safety standards as its hallmarks.



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VISION, MISSION AND VALUES

To be the industry leader providing best - in - class fluid management solutions to individual and institutional customers and societies in our chosen markets.

We will achieve this through our dedicated efforts to enhance the welfare of all our stakeholders and by living by our values of **commitment, reliability** and **innovation**.

DESIGNED FOR
HIGH RISE

BUILDINGS





ENERGY EFFICIENCY

IE3 | IE4 | IE5 CLASS MOTORS

High-Efficiency Pumps:

Engineered to reduce energy consumption while ensuring optimal performance.

Variable Frequency Drives (VFDs):

These systems adjust the pump's speed according to demand, leading to lower energy usage



SMART CONTROLS

Automated Pump Controls:

These systems enhance operation by utilizing real-time data, minimizing downtime and boosting efficiency.

Monitoring Systems:

They help in tracking performance and identifying issues early to prevent energy loss.



SUSTAINABLE MATERIALS

Eco-Friendly Materials:

The construction of pumps using materials that have a reduced environmental footprint.

Recyclable Components:

Designing pumps with parts that can be easily recycled.



MAINTENANCE AND OPTIMIZATION

Regular Maintenance:

This practice ensures pumps function efficiently and prolongs their operational life.

System Optimization:

Adjusting pump systems to adapt to varying demands and enhance overall efficiency.



HYDRO PNEUMATIC PRESSURE BOOSTING SYSTEM

G E N E R A L

C.R.I.'s Pressure Booster Systems are engineered with precision using advanced technology and intelligent control devices to ensure efficient performance and energy savings. Today, these systems have become a vital component in all types of buildings, including individual homes.

Designed to support a wide range of applications, C.R.I.'s booster systems are fully customizable to meet specific customer requirements. They feature robust stainless-steel vertical or horizontal multistage pumps, powered by high-efficiency IE-Class motors.

The control system integrates PLCs, microcontrollers, or VFDs to maintain constant pressure, optimize energy usage, and enable automatic, fail-safe operation. Each system is delivered as a complete package, including manifolds, pressure vessels, control panels, isolation and non-return valves, pressure gauges, and transmitters.

Special attention is given to minimizing noise and space requirements, making the system both quiet and compact. These systems also offer a modern alternative to traditional overhead tanks, helping reduce water contamination and construction costs.

In summary, C.R.I.'s Pressure Booster Systems are reliable, energy-efficient, quiet, cost-effective, and smartly designed to suit any application.

MVHS SERIES



APPLICATIONS

Commercial Buildings :

Ideal for a wide range of commercial infrastructure, including:
Corporate Offices; Hotels & Resorts; Airports; Educational Institutions (Schools & Colleges); Shopping Malls & Commercial Complexes; Leisure Parks & Recreational Facilities

Irrigation Systems :

Supports modern agricultural and horticultural practices through:
Automated Sprinkler and Drip Irrigation Systems; Controlled Water Supply for Nurseries and Greenhouses

Industrial Use :

Engineered to meet diverse industrial water management needs:
General Water Supply Systems; Industrial Washing & High-Pressure Cleaning; Condensate & Boiler Feed Applications; Pressure Feed Systems for Softflow Machines

Public Sector & Residential :

Efficiently serves various public and residential environments:
Apartment Complexes; Independent Villas & Small Homes; Landscape Irrigation & Garden Watering

SPECIFICATIONS

Max. Flow	: 2370 m ³ /h
Max. Head	: 300 m
Max. Power	: 315 kW
Max. Liquid Temp	: 70° C
Speed in rpm	: 2900

MATERIAL OF CONSTRUCTION

Pump	: S.S
Valves	: Nickel Plate / C.I / S.S
NRV	: Brass / C.I
Base frame	: G.I / S.S
Manifold	: G.I / S.S

ADVANTAGES

- Sophisticated water pressure throughout the building round the clock and ensures Efficient & Constant Water Pressure Management.
- No manual interference to operate the pumping system.
- Low noise & Vibration level, tough & reliable, low operating & maintenance cost
- Pressure comfort for modern bathroom gadgets.
- Due to multiple pumps operating in parallel, failure of single pump does not lead to complete system breakdown.
- Reliable automation.
- It helps to Improve building elevation and overall aesthetics.
- Shorter downtime and low-pressure protection.

KEY FEATURES AND CONTROLS

Pump Operationals

SOP (OTED) Technology | Cascading | Faulty Pump Isolation | Elapsed Running Hours | Maintenance Call / Life Timer | Auto-manual Selector | Warm Up | RTC

Pressure Feedbacks

Actual Pressure | Set Point | Pressure Transducer Calibration

Protection Functions

Pump Dry Run (CT) | Sump Empty (Float) | Single Phase Prevention | Overload | Phase Reversal Preventer | Phase Sequence | Emergency Off | Limit ON/OFF Frequency | Three Level Passwords | Low Pressure Protection | Pressure Set Lock

Alarms – Visual / Audible

Pump Dry Run (CT) | Sump Empty (Float) | Single Phase Prevention | Overload | Phase Reversal Preventer | Phase Sequence | Emergency Off | Limit ON/OFF Frequency | Three Level Passwords | Low Pressure Protection

Communication Protocol

Modbus RS 485 (Optional: Ethernet)

SYSTEM PIPING

The Suction & Delivery manifold is a device that connects the system piping to the pump. It is made of MS/SS material and has a pressure gauge and a pressure transmitter on the delivery side. The pressure gauge is filled with glycerin and the pressure transmitter is made of stainless steel. The suction side has a pressure switch or a float switch (optional) to detect low suction pressure.

SELECTION CRITERIA

The performance and efficiency of a booster system are highly dependent on accurate selection and sizing tailored to the specific application. To ensure optimal functionality, several critical parameters must be evaluated and calculated, including:

Application Type

The nature of the facility—whether a hotel, school, hospital, office, or residential complex—significantly influences water demand patterns.

Water Discharge Requirements

Flow requirements vary by application and must account for both peak consumption and part-load conditions to determine the appropriate capacity and number of pumps.

Required Pressure and Head

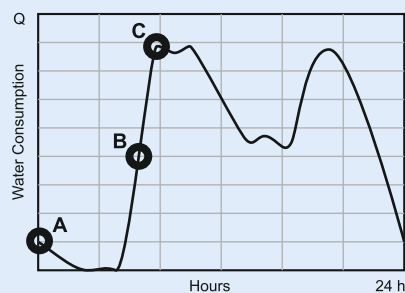
The desired outlet pressure is influenced by factors such as the building's height (topmost delivery point), friction losses in piping and fittings, suction conditions, and the specific pressure needs of end-use fixtures.

Piping System Design

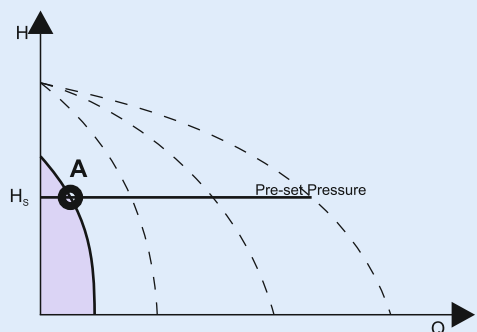
The layout, material, and diameter of the piping system affect both pressure loss and flow efficiency, and must be considered during system design. Properly assessing these parameters ensures the booster system delivers reliable performance, energy efficiency, and long-term operational stability.

LOAD PATTERNS

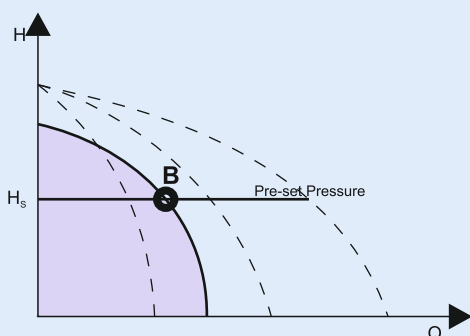
The system intelligently manages the variation in water consumption during the day, which depends on the type of application. It does this by adjusting the frequency of the pumps and activating or deactivating them as needed. The system maintains the pressure within the pre-set level by switching off the excess pumps.



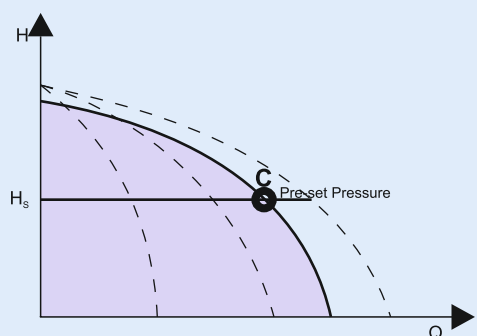
LOAD / CONSUMPTION PROFILE



MINIMUM CONSUMPTION - 1 PUMP OPERATION

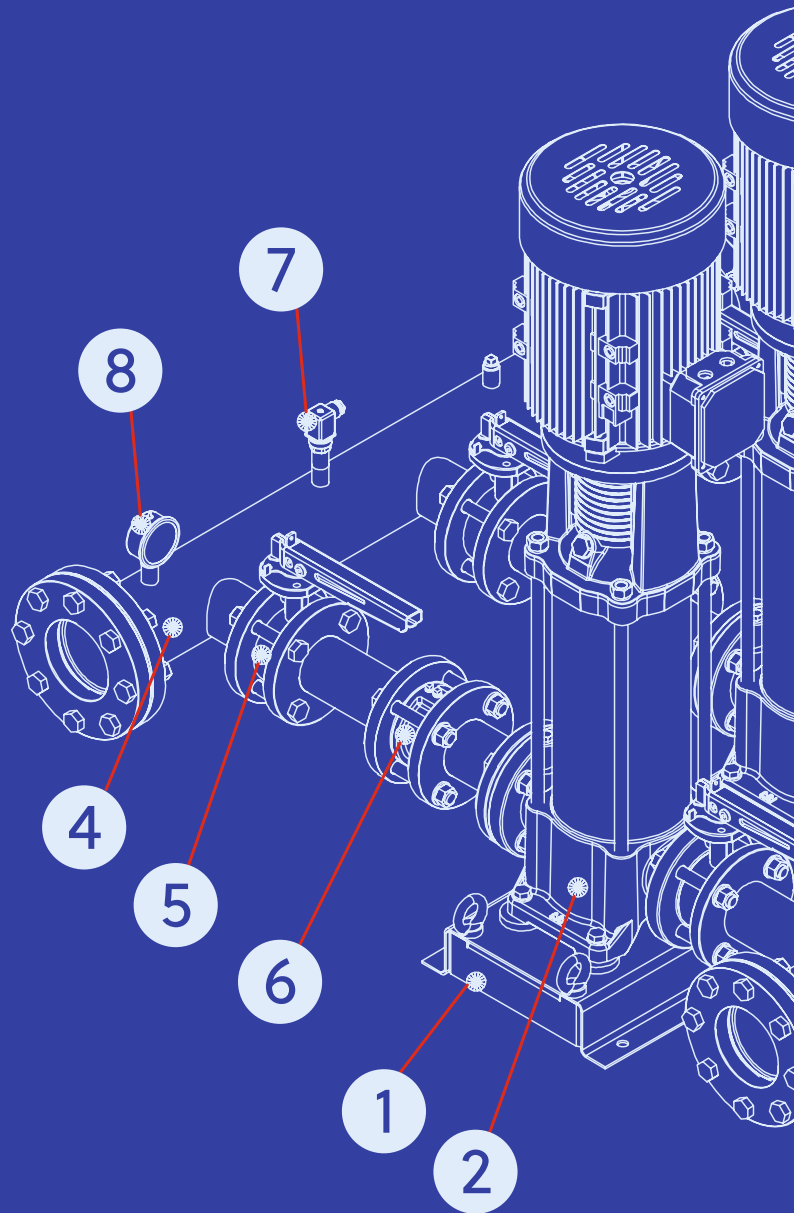


MODERATE CONSUMPTION - 2 PUMP OPERATION



PEAK CONSUMPTION - 3 PUMP OPERATION

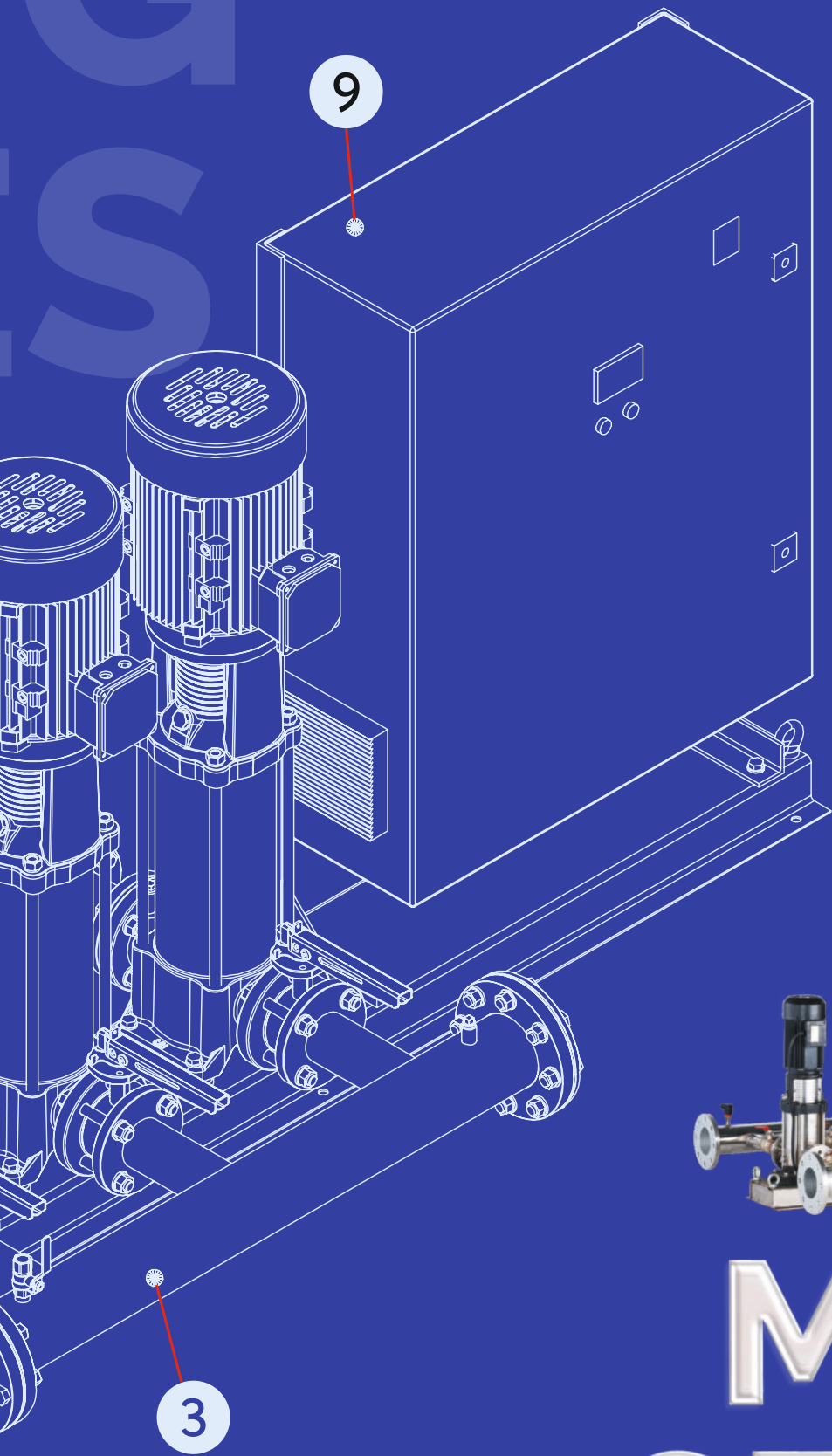
BUILDING SERVICE



Part No	Parts Names
1	Factory Fitted Common Skid
2	Pump with Energy Efficient Motor
3	Suction Manifold
4	Delivery Manifold
5	Isolation Valves
6	Non-return Valves
7	Pressure Feedback Unit (Pressure Transmitter / Pressure Switch)
8	Glycerin Filled Pressure Guage
9	Control Panel (Variable / Fixed)



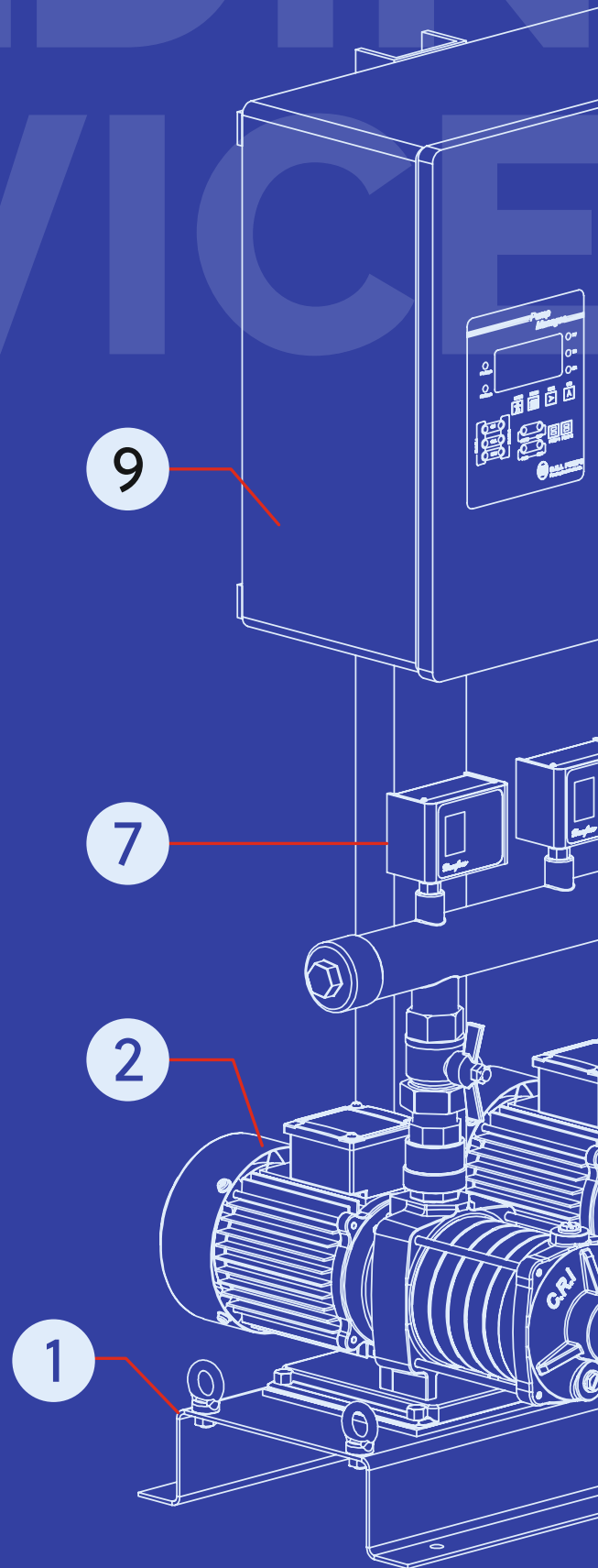
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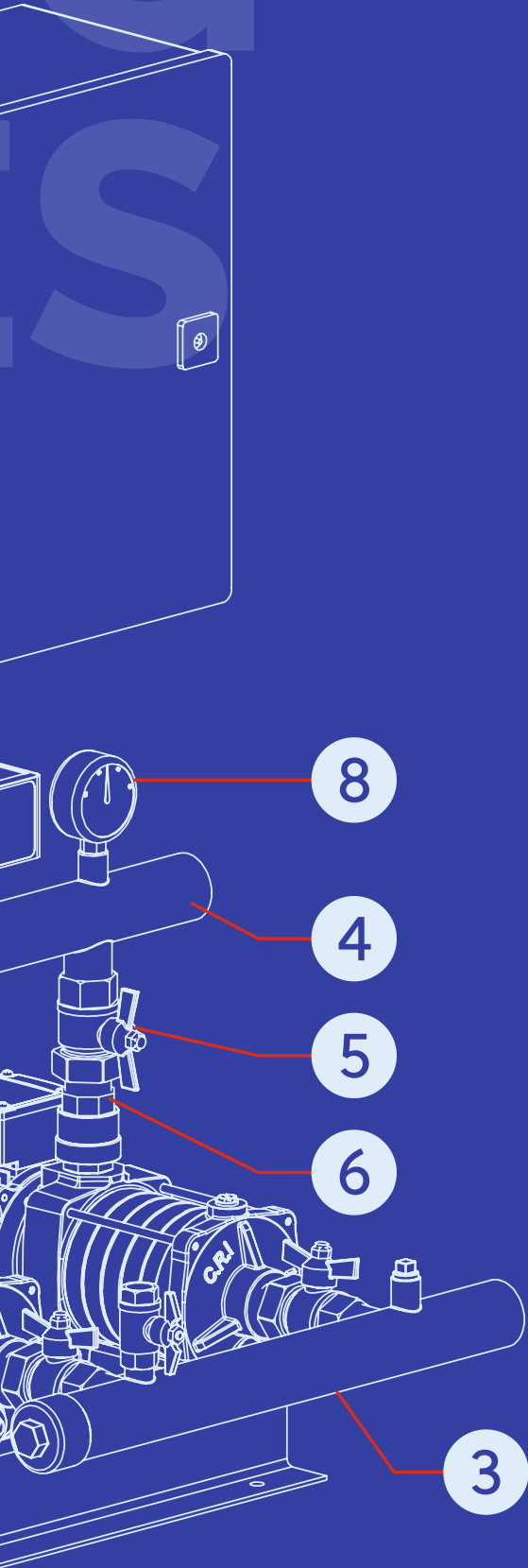
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KEY FEATURES

01

Automatic cascade control of pumps by means of one / two pressure switch(es).

02

Automatic change over by SOP Technology

03

Start & Stop delays to prevent simultaneous starting / stopping of the pumps.

04

Dry running protection by means of current sensing program.

05

Automatic circuit breaker protecting the motor against short circuit and overload.

06

Simple & Robust construction.



APPLICATIONS

Residential | Apartments | Small Farms | Washing System | Gardening | Hospitals, Hotels, Schools
Small Industries | Sprinkler System

SPECIFICATIONS

Max. Flow	: 100 m ³ /h
Max. Head	: 50 m
Max. Power	: 7.5 kW
Max. Liquid Temp	: 70° C
Speed in rpm	: 2900

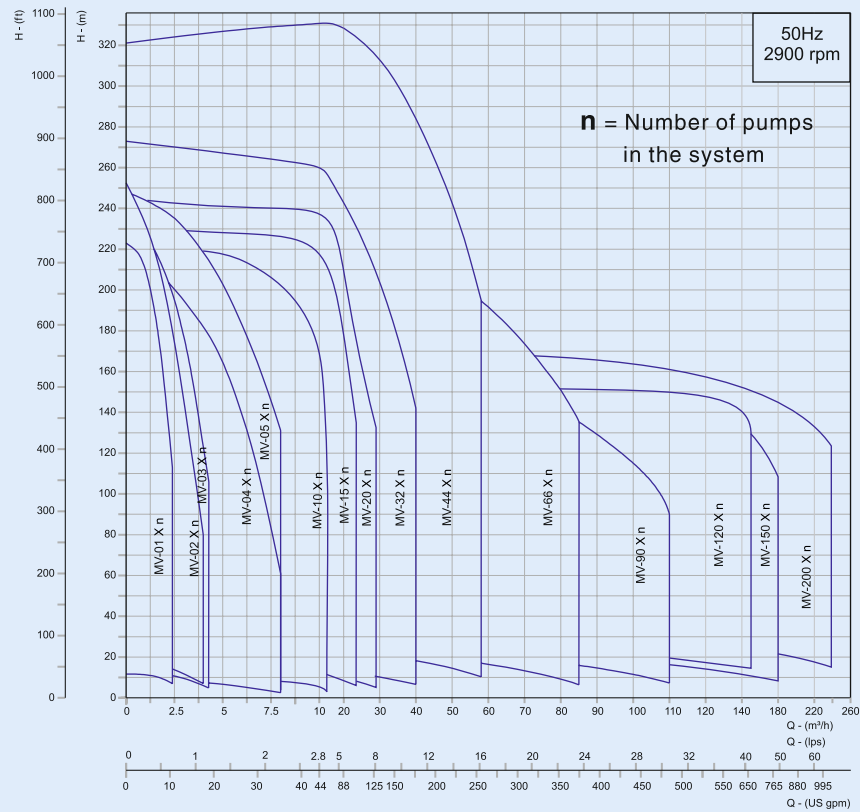
MATERIAL OF CONSTRUCTION

Pump	: S.S
Valves	: Nickel Plate / S.S
NRV	: Brass
Base frame	: G.I / S.S
Manifold	: G.I / S.S

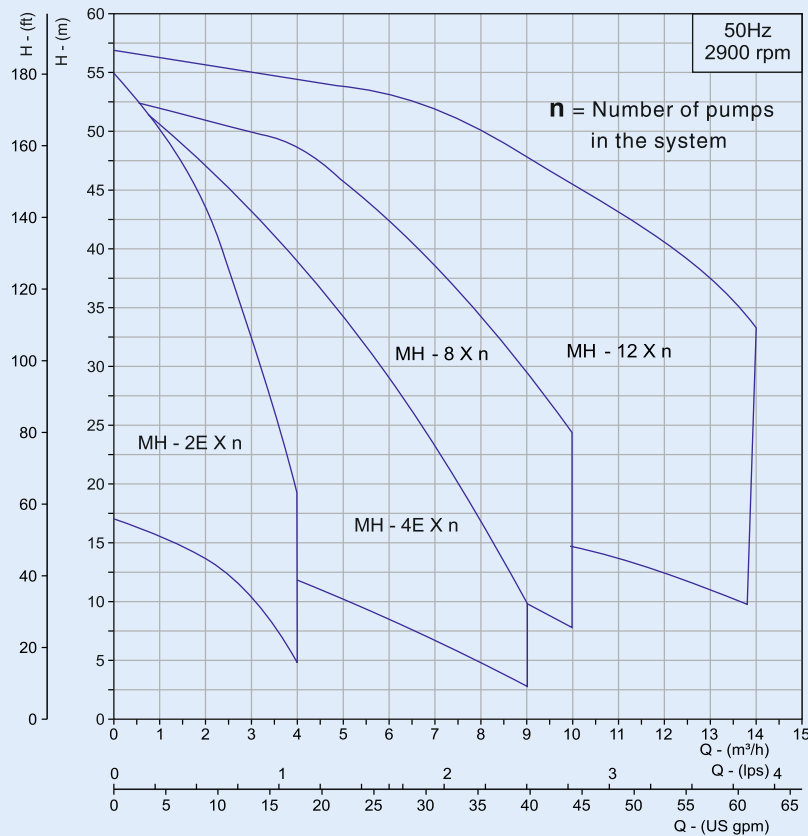
DEDICATED CONTROL PANELS

FEATURES	I Series	M Series	SP Series	F Series
Controller Interface				
Ammeter & Voltmeter	✓	✓	✓	✓
iOT Solutions	✓	✓	✓	✗
BMS Alert & Test Run	✓	✓	✓	✓
Dry Run	CT/Float	CT/Float	CT/Float	CT/Float
Emergency Off	✓	✓	✓	✗
Error Log	✓	✓	✗	✗
Faulty Pump Isolation	✓	✓	N/A	✓
Float Switch Provision	✓	✓	✓	✓
Graphical Interface	HMI	HMI	VFD Keypad	MMI
HMI	✓	✓	✗	✗
ON/OFF Frequency Limit	✓	✓	✗	✓
Maintenance Call	✓	✓	✓	✓
Overload Protection	✓	✓	✓	✓
Password Protection	✓	✓	✗	✓
Pressure Lock	✓	✗	✗	✗
Pressure Switch	N/A	N/A	N/A	✓
Pressure Transmitter	✓	✓	✓	✗
RS 485 Modbus	✓	✓	✓	✗
Single Phase Design	✗	✗	✗	✓
Single Phase Preventer	✓	N/A	N/A	✓
Phase Reversal	✓	N/A	N/A	✓
Standby Pump Selection	✓	✓	N/A	✗
Warm Up	✓	✓	✗	✗
Bypass Option	✓	✓	✓	✓
Outdoor Application	✓	✓	✓	✓
Manual Mode Operation	✓	✓	✓	✓
Cascade Logic	SOP (OTED) Technology	IMS Logic	N/A	SOP (OTED) Technology

PERFORMANCE CURVE



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WINNING WAYS

When you have a good thing going it is quite in the fitting of things that recognitions come our way. Several prestigious awards, which decorate our shelf, say it all. These rewards not only acknowledge our position as a leader in the water pump industry but also serve as reminders about what the customer expects from a winner. And we, as ever, have our ears perfectly tuned to customer expectations.



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7/46-1, Keeranatham Road,
Saravanampatti,
Coimbatore - 641 035.



bcsmkt@cripumps.com



www.crigroups.com



+91-422-7117000



1800 121 1243



+91-422-7117005