



UDYOG
ENGINEERING



HYPN SYSTEM

**Powering Water Flow with
Intelligence and Efficiency.**

Engineered for modern infrastructure, the HYPN System delivers consistent water pressure with advanced automation, energy efficiency, and long-term reliability. Designed for residential, commercial, and industrial applications, it ensures uninterrupted water supply across varying demand conditions.



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ABOUT US

Intelligent Pressure. Reliable Performance.

Udyog Engineering specializes in advanced Hydro Pneumatic (HYPN) Systems designed for efficient and reliable water pressure management. We deliver customized solutions ranging from fixed speed to fully automated VFD systems, tailored to diverse application needs.

With a focus on quality, energy efficiency, and smart control, our systems ensure consistent performance and long-term reliability across residential, commercial, and industrial projects.



PRODUCT OVERVIEW

HYPN (Hydro Pneumatic) Systems are fully automatic pressure boosting systems that maintain constant water pressure across the distribution network. Built with high-efficiency pumps, intelligent controllers, and robust components, the system adapts dynamically to demand.

How It Works

- Pressure drops → Pump starts
- Pressure reaches set point → Pump stops

Applications

- Small residential buildings
- Low-rise apartments
- Applications with steady water demand

Advantages

- Economical solution
- Minimal control complexity
- Easy troubleshooting

PRODUCT CATEGORIES

FIXED SPEED SYSTEM

Reliable Pressure Control. Simplified Operation.

DESCRIPTION

The Fixed Speed HYPN System operates using conventional ON/OFF control logic. Pumps start and stop based on pressure thresholds, making it a cost-effective solution for applications with relatively stable demand.

KEY FEATURES

- Automatic pressure-based ON/OFF operation
- Simple and robust control system
- Low initial investment
- Easy installation and maintenance
- Proven and reliable technology



PRODUCT CATEGORIES

Single VFD System

Smart Efficiency with Adaptive Performance.

Description

The Single VFD HYPN System uses one Variable Frequency Drive (VFD) to control pump speed dynamically. It ensures better pressure stability and improved energy efficiency compared to fixed speed systems.

Key Features

- One VFD controlling multiple pumps (flying VFD concept)
- Continuous pressure monitoring
- Energy-efficient operation
- Reduced mechanical stress on pumps
- Smooth start and stop (no water hammer)



How It Works

- VFD adjusts pump speed based on demand
- Additional pumps start in cascade when demand increases

Application

- Mid-size residential and commercial buildings
- Hotels and hospitals
- Variable water demand applications

Advantages

- Energy savings up to 30–40%
- Improved system life
- Stable water pressure

All VFD System

Maximum Control. Maximum Efficiency.

Description

The All VFD HYPN System equips each pump with an individual VFD, providing precise control and maximum energy optimization. This is the most advanced and intelligent configuration.

Key Features

- Individual VFD for each pump
- Real-time pressure control with high accuracy
- Intelligent load sharing between pumps
- Redundancy for maximum reliability
- Advanced automation & monitoring

How It Works

- All pumps operate with variable speed
- System automatically balances load across pumps
- Ensures optimal efficiency at all times

Application

- High-rise buildings
- IT parks and commercial complexes
- Airports, malls, and large infrastructure
- Critical applications requiring uninterrupted supply

Advantages

- Maximum energy savings
- Highest operational efficiency
- Longest equipment life
- Precise pressure control





Why Choose HYPN System

Engineered for Performance. Built for Reliability.

We offer intelligently designed HYPN systems that combine energy efficiency, smart automation, and robust construction to deliver consistent and dependable performance. Each system is customized to meet specific project requirements, ensuring optimal operation, long service life, and reliable water pressure across all applications.



Standard Configuration

- 2-6 high-pressure pumps
- Suction & discharge manifolds
- NRV & isolation valves
- Pressure sensor & gauge
- MS base frame
- Control panel
- Dry run protection



Technical Specifications

- Capacity: Up to 660 m³/hr
- Head: Up to 160 m
- Pressure: 10 / 16 bar
- Temp: -20°C to +160°C
- Power: 3 Phase, 415V, 50Hz
- Motor: 2 Pole



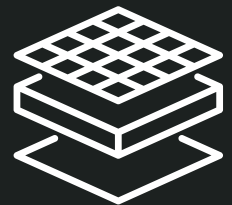
Key Features

- Fully automatic
- Energy efficient
- BMS compatible
- Built-in protections
- User-friendly controls
- Durable construction



Applications

- Residential
- Commercial
- Hospitals & Hotels
- Airports
- Industrial
- Firefighting



Materials

- SS hydraulics
- CI / SS casing
- Brass / SS valves
- EPDM elastomers
- Silicon carbide seals
- Coated manifolds