BLAIRS®
water... is life

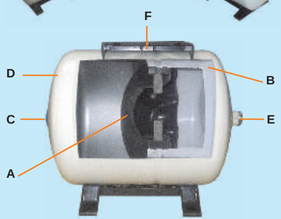
BDS Engineering provides end-to-end pressure tank solutions, the best value for your investment and is the best quality pressure vessels available today.

SHAMS Pressure Tanks provide an efficient cycling to optimal control of pump performance to extending the life of the pump. All materials in contact with water are approved by NSF, IAMPO listing.

The diaphragm and liner are both reinforced in specific wear areas for longer life, high-grade, cold rolled steel for an optimal strength to weight ratio. All internal parts including the air valve are rounded to prevent piercing of the diaphragm in extreme conditions. Tanks are quality tested at several stages on the production line to insure the structural integrity of every tank.

SHAMS tanks are ideally suited for a wide range of applications including:
Air conditioning
Booster systems
Fire fighting
Green power solar water heater
Hydraulic hammer arresting
Irrigation systems
Thermal expansion

Technical Specifications :-
- Maximum Working Pressure 145 psi / 10bar
- Maximum Working Temperature 200° F/90° C
- Standard Pre-charge 30 psi
- Maintenance free
- NSF Standard 61 / UPC, CE B+C1, ISO 9001 Approved
- Single diaphragm design
- Comprehensive testing



Design Features :-

A) Heavy-Duty Butyl Rubber Diaphragm
B) FDA Grade Virgin Polypropylene Liner
C) Leak free brass air valve, sealed by a threaded O-ring
D) Highly rust resistant durable baked epoxy coating
E) System connection Stainless Steel 304, 1"
F) Nylon Plastic Tank Stand

PRESSURIZED WATER AND EXPANSION TANKS

Varem® S.p.A. (Italy) are in the water and heating field for more than 25 years and is a world leader in the production of expansion of water tanks. Varem® not only distinguishes itself in the manufacturing of metal tanks, but also for the production of their rubber membranes. With research and continuous investment Varem® has been able to maintain the CE and ISO 9001:2000 certification, a synonym of constant product quality and service efficiency.

Varem® pressurized water tanks are being used for various applications like hydro pneumatic systems, home water pressure boosting systems, commercial water distribution systems, mineral/RO plants, solar heating systems over time and not even single problem with these tanks had been reported in INDIA.

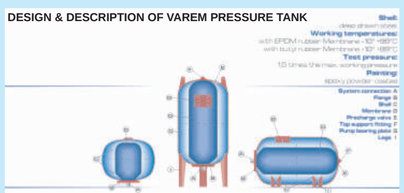
BLADDERS FOR PRESSURE TANKS

The bladders for pressure tanks are made of a compound for products intended for con-tact with drinking water or for water to be conditioned. The white-cream coloured com-pound is made up of a mixture of NATURAL RUBBER, natural mineral fillers, mineral white oil refined for pharmaceutical use, physiologically harmless pigments and non-toxic vulcanizers. The maximum working tem-peratureis 60°C. By request, we can supply black bladders in EPDM – synthetic rubber – (ethylen/poly-propylene) resistant untill a temperature of 90°C and in BUTYL – butyl synthetic rubber, whose resistance reaches 100°C. Hardness: 40 ±5 SH

KEY FEATURES

- Maintains equal water pressure in entire system.
- Widely used to withstand water hammer in pressurized systems.
- Requires very little/zero maintenance.
- The tank is made of Food & Drug Administration (FDA) and National Sanitation Federation (NSF) listed materials, thus environmentally safe and will not introduce any undesirable chemicals or elements.
- The membrane is easy to replace.
- Suitable for usage in drinking water systems, which use Reverse Osmosis technology.
- The membrane which does not rub against tank wall, will have longer life.

DESIGN & DESCRIPTION OF VAREM PRESSURE TANK



WHY ONLY VAREM?

VAREM Water Storage Tanks are built tough to last. As a result, they've long been known as the world's most reliable Pressure tanks. Our tanks are individually tested, making them extremely safe. They're designed to meet the most demanding specifications for potable water. No one offers a broader line of tanks than we do. So, when you're looking for a Pressure tank for a specific application, you can be sure we'll have it for you.

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NON RETURN VALVE

HOSE PIPE WITH ELBOW

FLOAT SWITCHES

PRESSURE GAUGE

CONNECTORS

PRESSURE SWITCH

ITALTECNICA, S.R.L. Italy

Note :- BLAIRS reserves right to modify design and technical specification without any notification.

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Website : www.bdsblairs.com

Dealer / Distributor :-

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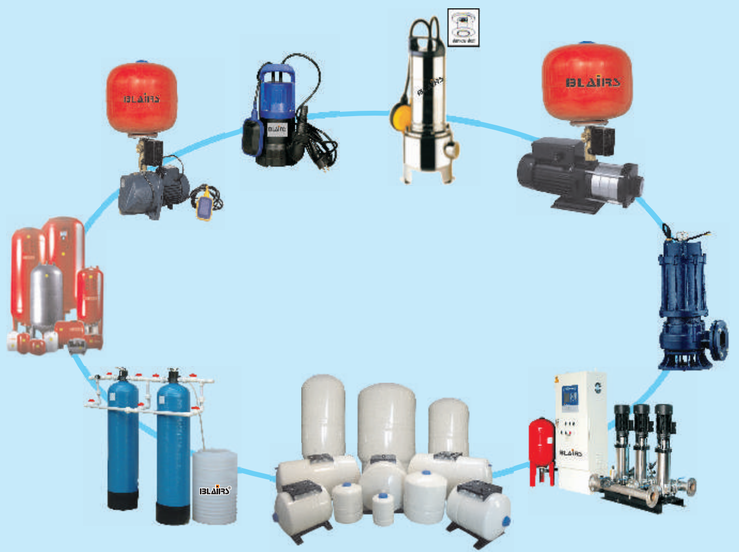


bds

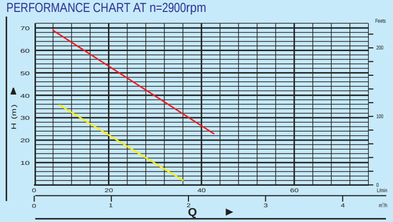
www.bdsblairs.com

Total water pumping & treatment equipments

BLAIRS®
water... is life

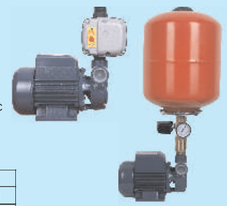
BLAIRS booster Pump is an equipment to achieve the right water resource/pressure. The automatic pressure systems are designed to automatically start and stop the pump on opening and closing of taps. Pressure booster Pump is coupled with a Compact designed composed pump, a manometer, a Pressure diaphragm tank, a pressure adjustable switch, dry running protector and a 3 or 5 ways connection in stamped brass. These pumps should be installed in a covered area, protected against the weather. Self priming jet pump has a very high hydraulic performance and a considerable pressure capacity. They are very silent and reliable. These pumps should be installed in a covered area, protected against the weather.

PERFORMANCE CHART AT n=2900rpm

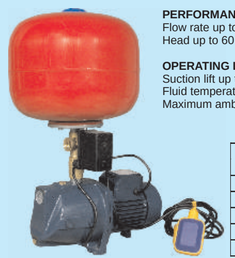


PERFORMANCE RANGE
Flow rate up to 50 l/min.(3.0m3/h)
Head up to 60 m

OPERATING LIMITS
Suction lift up to 8 m
Fluid temperature up to 60°C
Maximum ambient temperature 40°C



Pump Model	POWER	
Single phase	KW	HP
PBP 60	0.37	0.6
PBP 80	0.6	0.8

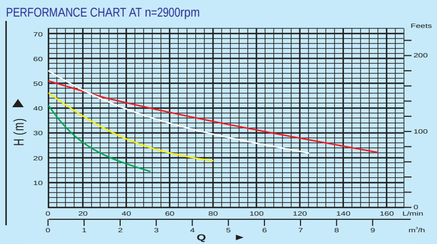


PERFORMANCE RANGE
Flow rate up to 225 l/min.(13.5 m3/h)
Head up to 60 m

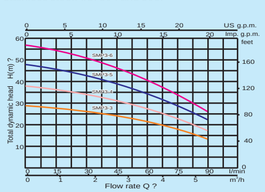
OPERATING LIMITS
Suction lift up to 9 m
Fluid temperature up to 60°C
Maximum ambient temperature 40°C

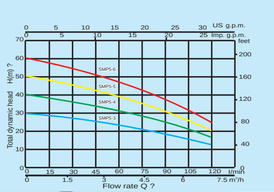
MODEL	POWER	
	KW	HP
JBP 70	0.5	0.7
JBP 100	0.8	1.0
JBP150	1.1	1.5
JBP 200	1.5	2.0

PERFORMANCE CHART AT n=2900rpm



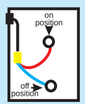
BLAIRS Stainless-steel Multistage pump is designed with advanced features such as the leakage-free design and fully stainless steel materials for rust-free operation without affecting your water quality. These pumps provide silent, strong & comfortable for water pressure all the time. They assure you the best water pumping performance for your applications, higher in efficiency and easy to operate Stainless-steel pumps. Featured with flat curves and construction in SS assures safe drinking water. Multistage design of the pump with high accuracy allows high head with lower motor capacity, which is ideally used for all high-pressure applications. The most exceptional merit of these SS Pumps is that it's all wetted parts and casings including suction and delivery casing are made of stainless steel AISI 304 and 303.





PERFORMANCE RANGE
Max. Flow rate up to 60 M3/hr (1000 ltr/min)
Head max up to 230 M.

OPERATING LIMITS
Temperature ranges of 0º C to +110º C.
Single mechanical seals very easy to interchange.



DRY RUNNING PROTECTOR FUNCTIONING INSTRUCTIONS

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BLAIRS HPS constantly monitors the system pressure and acts according to the change in pressure. HPS can be installed at overhead tank or over the water storage sump which is mostly located in cellar or basement. With an assembly of a logic control panel unit with 2 to 6 pumps and a Pre charged Membrane pressure tank, the system is uniquely easy to operate from installation to everyday surveillance. Only required numbers of pumps are operational at anytime. The control panel variably adjusts the output of the pump for required operations. Providing change over from one stand by pump to another is unique feature of HPS. This ensures that all the pumps are put to equal use and operation of entire systems is steady and constant It also equipped with protection system from dry running when the suction tank is empty. The materials used for designing ensures that all wet parts never corrodes and no harmful traces of metal pass into the water. The pressure tank is made of Food & Drug Administration (FDA) and National Sanitation Federation (NSF) listed materials, thus are environmentally safe, Complete and efficient management of water & pressure.

BLAIRS hydro-pneumatic pressure booster system consists of an automatic pressure controlled pump and a pressure tank. This contains an air filled poly-ether-urethene (PEU) bladder. The water gets pumped in this tank that compresses it and pressurizes the bladder which in turn maintains a desired pressure within the whole water system. This automatic system requires no manual intervention and is built for low maintenance. As the entire distribution system is kept under pressure by the system. HIGHLY ADVANCE VARIABLE FREQUENCY DRIVE (VFD)OPERATED WATER BOOSTER SYSTEM. The method of reducing starting current and inverter loading is to vary motor speed. The law of effinity states that the power required to run a pump varies as the cube of any change in speed. If one reduces the normal running speed of a 1 HP pump by 50% only 1/8 HP is required to run it at the lower speed. By starting the pump at a lower frequency and ramping up to full speed over a period of a second or so, starting current is greatly reduced. Another advantage of VFD controlled pump is that their speeds can be controlled automatically to provide constant pressure during varying flow conditions. A simple pressure transducer, connected to the VFD, monitors pump discharge pressure and varies motor speed accordingly. At the end power requirement will be reduced and power reduction will defiantly give savings of electricity bills.

BLAIRS Hot water circulation system monitors temperature in return pipe operates according to the increase and decrease of temperature, starts as the temperature decreases and stop as soon as reach the required temperature maintains an stable temperature through out the pipe line. Control panel consisting of MCB's, Contactors, overload relay, cyclic timer for pumps to be rotary every 15 minute (adjustable as per requirement), push button, auto manual switch and switch for particular pump operation, Digital Temperature Display in return Pipe, volt meter, ampere meter, Temperature sincere to switch on the pump and off the pump at an certain temperature.

APPLICATIONS:
Hydro Pneumatic systems are in fix drive or Variable Frequency Drive for gated communities, Process Industry, Utility Usage, Industrial Washing, Sprinkler Application, Chemical Industry, Food Processing Industry, Multi-storey buildings, Hotels, Schools, Hospitals, IT Parks, high end musical Fountains, Public/municipal water supply and distribution networks to get equal water pressure for all Commercial & Residential Complexes and All type of industries, as they are considered as energy efficient systems resulting in reduction of electrical costs

A water softener uses a medium that serves to exchange "ions" of Calcium and magnesium with sodium and potassium. This occurs in following steps :- To do the ion replacement, the water runs through a resin bead of small plastic beads. The beads are covered with sodium or potassium ions. As the water flows past the ions they swap places with the calcium and magnesium ions. Eventually the beads contain nothing but calcium, magnesium and softening stops. It is then time to regenerate the beads. To regenerate the beads need to regain their sodium & potassium ions by being flooded with a salty brine solution that is rich in sodium and potassium. Once completed, the calcium and magnesium, dirt and sediments are flushed from the beads into the drain in a process called backwash. The final phase rinses the mineral tank with fresh water and loads the brine tank so it's ready for the next cycle.

Benefits :- 1. Soaps and shampoos don't lather, leave you feeling unwashed. Which is why you'll love water softener: It cuts out the hardness in water and puts the goodness right back, leaving your skin smooth as silk. 2. Hard water causes residual deposits and scale build-ups, damaging your water heaters, washing machines, showers, dishwashers, pipelines, taps and other appliances, Their life goes down by 45% while maintenance costs go up by 25%. 3. "Fine crystal stands for fine taste". But it needs soft water to keep its sheen. And hard water can make life hard for it. 4. Hard water reduces the cleaning power of detergents. Soft water reduces soaps requirements by about 70%. 5. Food and water taste different. Cooking takes longer than ever before. Cooking gas consumption increases by 30%. Hard water also causes scale deposits on utensils. 6. Would you bear to see your expensive bathroom fittings decay? Hard water leaves scales which clog pipes, faucets, valves and fixtures. 7. Hard water leads to deterioration and fading of fabrics. It reduces life of your fabrics by 15% 8. Hard water makes hard work out of washing floors, tiles and walls. It renders cleaning ineffective. 9. Craggy hairs, dry hairs, hair loss, all have roots in hard water. 10. Hard water reacts adversely with detergents, which means even your little ones ultra soft towels turn rough on their soft skin. Soft water caresses: Hard water irritates.

RO Six Stage Cleaning Process...
Stage 1: Sediment filter removes physical and suspended impurities such as sand, dust and rust etc. Stage 2: Antiscalant removes chemical hardness. Stage 3: GAC - Granular Activated Carbon removes colors and free chlorine in the water and also absorbs organics on its surfaces. Stage 4: This stage implies a protective mechanism to preserve the highly sensitive RO membrane. Stage 5: The advanced thin film composite RO membrane removes dissolved salts, heavy metal micro-organisms and other chemical impurities to drain. Stage 6: The post filter & polisher keeps a check on the growth of bacteria at the point of use and restores the natural taste of water.

Ten Standard Models: Domestic with storage capacity 12 ltrs. 25, 50, 100, 150, 300, 1000, 2700, 4000, 5400, 8000, 12000, & 16000 LPM Units.

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BLAIRS submersible draining pumps is suitable for automatic fixed domestic applications and for draining cellars and garages subject to flooding, also particularly useful as a portable pump for emergencies such as draining waste from tanks or rivers, emptying muddy swimming pools, fountains or excavations and subways. These pumps can lift liquids even with suspended solids in sewage water from septic tank. Level float switch offers permanent and automatic pump operation.

PERFORMANCE RANGE
Flow rate up to 225 l/min.(13.5m3/h)
Head up to 8 m

OPERATING LIMITS
Fluid temperature up to 35°C
Maximum ambient temperature 40°C

MODEL	INPUT POWER (W)	MAX.FLOW (m3/h)	MAX.HEAD (m)
MSP 400	400	9	6
MSP 750	750	13.5	8

BLAIRS Single vane stainless steel submersible pump for professional use. particularly efficient and reliable in fixed installations with automatic operation with general motor specification and hard-faced mechanical seal. pump are highly efficiency pumps for professional use & built completely in stainless steel. They are extremely reliable and suitable for continuo's duty. Single vane impeller is mounted on the end of the drive shaft and enclosed in a large ring chamber framed by the pump body and the base. The suction opening is direct with the liquid to be pumped. The rotating impeller which is centrifuged in the ring chamber transmits kinetic energy to the water; kinetic energy is transformed into pressure energy. The particular shape of the impeller optimizes efficiency. Max. Free passage of Grain size up to Ø 50 mm.

Single Vane Stainless Steel Impeller

PERFORMANCE RANGE
Flow rate up to 500 l/min. (30m3/h)
Head up to 12 m

OPERATING LIMITS
Fluid temperature up to 50 °C
Maximum operating depth 5m below water level
Maximum passage for Grain size inlet Ø 30 mm

Model	POWER		Q m3/h	0	3.0	6.0	1	12	15	18	21	24	30
	KW	HP	l/min	0	50	100	150	200	250	300	350	400	500
SVS 75	0.55	0.75	H (m)	9	8	6.5	5	2.5	1				
SVS 100	0.75	1		10	8.7	7.5	6.5	5.8	4.8	3.9	2		
SVS 150	1.1	1.5		12	10.7	9.5	8.7	7.8	6.8	5.9	4.3	3	1

BLAIRS Sewage submersible Pumps are ideal for pumping drainage water, sewage or waste water or nuisance water. These pumps are outstanding for their reliability in fixed installations with automatic operation. Exceptional sturdiness even under severe working conditions also featured by its long durability and safety with stable performance curves

CSCP (Cast-iron Sewage double-channel) Pump is equipped with a double-channel impeller.
CSVP (Cast-iron Sewage vortex Pump) Pump is equipped with a VORTEX pumps.

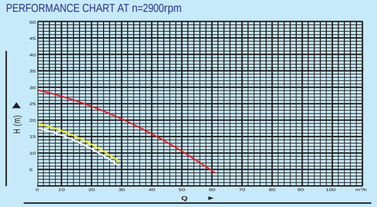
PERFORMANCE RANGE
Flow rate up to 1083 l/min. (65m3/h) Head up to 30 m

OPERATING LIMITS
Fluid temperature up to 40°C
Maximum ambient temperature 40°C
Maximum operating depth 8m below water level
Maximum passage for Grain size inlet Ø 35 mm

MODEL	SIZE	POWER	
	MM	KW	HP
CSVP(T) 15-13-1.5	50	1.5	2
CSVP(T) 20-13-2.2	75	2.25	3
CSVP(T) 30-20-4	75	4.1	5.5

MODEL	SIZE	POWER	
	MM	KW	HP
CSCP 6 -12- 0.55	35	0.55	0.75
CSCP 10 -7- 0.55	35	0.55	0.75
CSCP 6 -16- 0.75	35	0.75	1
CSCP 10 -10- 0.75	35	0.75	1
CSCP 15 -9- 1.1	75	1.1	1.5
CSCP 15 -10- 1.5	65	1.5	2
CSCP 15 -20- 2.2	65	2.2	3

PERFORMANCE CHART AT n=2900rpm



PERFORMANCE CHART AT n=2900rpm