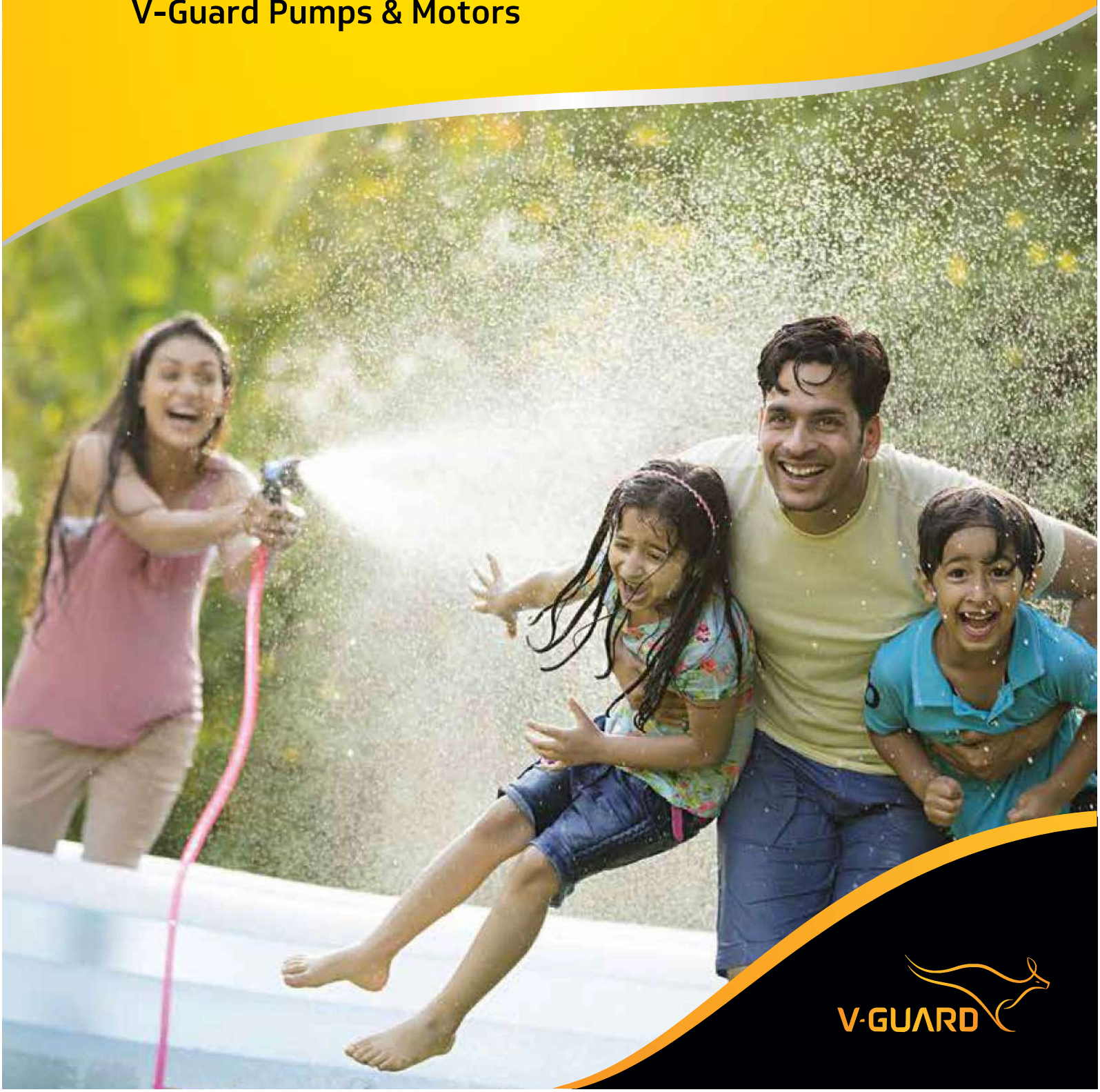
Efficient Pumps.
Powerful Motors.
The perfect combination.

V-Guard Pumps & Motors



Lasting Performance

The making of V-Guard's Pumps and Motors begins with the procurement of top-grade castings and the finest components. The state-of-the-art manufacturing process is closely monitored with stringent quality checks that meet and exceed international quality standards. The Pumps are built to be sturdy, compact and most importantly, powerful. The Motors make the perfect counterpart for the Pumps by way of delivering superior performance with the least consumption of power. All of this, combined with V-Guard's promise of enriching the consumer's life with thoughtfully engineered products, has come together to make the impeccable combination of V-Guard's Pumps and Motors.

Salient Features

- 99.9% Copper motor winding
- Wide voltage range operation
- Assured Quality via Stringent QA process
- Guaranteed performance
- Silent operation

Products available

REGENERATIVE PUMPS

Premium Series | Neon & Revo Series | Neon N Series | Super & Wonder Suction Series | Slow Speed Series

CENTRIFUGAL PUMPS

VC-Normal Voltage Series | VCN & Blue Series | VC-Special & Low Voltage Series | Extended Shaft Series | VCSW Series | VP Series

BOOSTER PUMPS

Centrifugal Booster Series | Regenerative Mini Booster Series | Circulatory Series

JET CENTRIFUGAL PUMPS

VJ & VJO Series | Neon Series

OPENWELL PUMPS

VOS & VOSS Series | VOSR Series | Revo Series | Nova & VOSK Series | VOSV Series

BOREWELL SUBMERSIBLE PUMPS

3" VBS3 & VBS3AM Series | 2.5" NOVA Series | 3" VBSO3 Series | 3.5" VBS4SAM Series | 4" VBS Series | 4" VBSN & VBSNAM Series | 4" NEON Series | 4" VBSR Series | 4" VBS2 Series | 4" VBSRAM Series | 4" VBSO & VBSAM Series | 4" NOVA Series

BOREWELL COMPRESSOR PUMP FOR LIFTING WATER WITH AIR DISTRIBUTOR PIPE

Monobloc Compressor Pumps

Belt Driven Compressor pumps

SEWAGE PUMPS

Dry type submersible induction motor | With SS fasteners

| Rugged cast iron pump housing

PRESSURE WASH PUMPS

Powered by copper wound induction motor

Reinforced pressure hose

PUMP CONTROL PANELS

Powder coated MS and Acrylonitrile Butadiene Styrene (ABS) Panels available

| Provided with pushbutton for voltmeter for enhanced life

SMART SERIES

Three phase Electric motors conform to IS 12615

Comes in Cast Iron body as well as aluminium body

ENDURA SERIES

Single phase standard duty and heavy duty motors with performance conform to IS 996 | Comes in Cast Iron body and aluminium body

DELITE SERIES

Single phase commercial duty motors with performance conform to IS 996 | Comes in MS body

High-pressure pumps for low-stress water solutions

V-GUARD PUMPS are designed and developed by V-Guard Industries Ltd., the company which has carved a niche for itself in the last 44 years with a wide range of electrical & electronic products that are used and trusted by more than 50 million people across India. V-Guard Pumps are made from top-grade castings, finest components and high-quality Gun metal using state-of-the-art technology, to conform to the latest International standards. Besides, each and every stage in the manufacturing process is closely monitored through stringent quality tests to ensure impeccable standards, superior performance and unmatched durability. V-Guard Pumps are available in more than 350 models, ranging from 0.18 HP to 3.00 HP to suit all domestic requirements.

IMPORTANT NOTE

- All performance data & technical specifications given in this brochure are based on our lab tests conducted at standard conditions and are likely to change with various field conditions. Friction and flow losses in pipe fittings have not been calculated.
- As improvements are made in design from time to time, specifications and performance are subject to change without prior information.
- The 'Power' shown in the table indicates the output power of the motor; i.e, input power to the pump. So the actual power consumption, that is the input to the motor will be higher than this output and this fact has to be considered while calculating the connected load.

Regenerative Pumps

Compact, Lucrative, and Hassle free.

For clear, cold* water free from abrasive & chemically aggressive particles to satisfy the needs of Domestic water supply, gardens and Lawn sprinklers.

*Max. liquid temperature 45°C

TEFC*, CSR• / CSCR# / CSIR• induction motors as prime mover

Provides constant speed and better torque.
(*Totally enclosed fan cooled, •Capacitor start and run, #Capacitor start Capacitor run & •Capacitor start induction run)

Cast iron and Aluminium extruded/die-casted Motor body*

Makes extremely compact and light weight.
(*Except for VSP series)

Forged Brass impeller

Ensures prolonged life.

99.99% Super enamelled copper windings

Constitutes efficient and long lasting motor.

Superior quality electrical stampings

Ascertain highly efficient motor.

High quality alloy steel motor shaft

Offers rust free, stuck free persistent operation.

Double sealed ball bearings with life lubrication

Enables smooth and silent functioning.

High quality mechanical seal with graphite face

Contributes leak free operation.

Equipped with Thermal Overload Protector (T.O.P)

Assures safe and secure operation.

Wide voltage band operation

Maintaining consistent performance.

Operating/Technical specifications

Input supply: 1Φ AC, 160-240V*, 50Hz (*Voltage required at motor input terminal)

Power range: 0.18 – 1.1kW (0.25 to 1.5HP)

Head range: Up to 60m

Flow range: 4500 – 300LPH

Rated Speed: 2800rpm

Type of duty: S1 (Continuous)

Insulation class: F/B

Rotation: Counter clockwise, when viewed from pump side

Premium Series

VSPAR, VSPAD, VSPA & VSPRC Series

Speciality

- Premium quality pump sets.
- ISI Models available.
- Brass inserted casing for improved performance and serviceability in VSPAR Series.
- Light weight, compact, powder coated aluminium die-casted body in VSPAR & VSPAD Series.
- VSPA Series possess powder coated aluminium extruded/Die Casted body.
- F-Class electrical insulation in VSPAR & VSPAD Series while B-Class in VSPA Series.
- Energy efficient motor.
- Stainless steel hardwares (except VSPA series).
- IP 55 dust proof and splash proof (only for VSPAR).
- Available models from 0.25 - 1.5HP.
- 24/25 months service warranty.

VSPAR-F180

VSPAD-F150

VSPRC-F130

PERFORMANCE DETAILS

Models	Power		Pipe size (cm)		Total head in metre Vs Discharge in LPH																			
	HP	kW	Suction	Delivery	m	6	9	12	15	18	21	24	27	30	33	36	39	42	45	50	53	55	60
Super Premium Model																								
VSPAR-F180*•	1.0	0.75	2.5	2.5	LPH	3700	3500	3200	3000	2800	2600	2500	2350	2150	2050	1850	1700	1600	1400	1200	1100	1000	700
*Super premium model with 25 months service warranty.																								
Premium Models																								
VSPA-Q60•	0.25	0.18	2.0	2.0		1600	1350	1150	950	800														
VSPA-H80•	0.5	0.37	2.5	2.5		1900	1650	1400	1250	1050	850	650												
VSPRC-H80-PRO	0.5	0.37	2.5	2.5		1900	1650	1400	1250	1050	850	650	450											
VSPAD-H100•	0.5	0.37	2.5	2.5		2200	1840	1700	1550	1400	1250	1150	980	720										
VSPAD-F110	1.0	0.75	2.5	2.5	LPH	2550	2350	2150	1950	1730	1500	1250	1000	750	450									
VSPRC-F130	1.0	0.75	2.5	2.5		2100	1950	1750	1600	1450	1250	1100	950	750	600	450	300							
VSPAD-F150•	1.0	0.75	2.5	2.5		3550	3350	3100	3000	2800	2550	2450	2200	2050	1900	1700	1500	1300	1100	900	750			
VSPA-F160-PRO•	1.0	0.75	2.5	2.5		3600	3450	3300	3100	2900	2700	2550	2300	2100	1950	1750	1550	1350	1200	950	800	650		
VSPAD-FH180	1.5	1.1	2.5	2.5		4500	4250	4200	4000	3800	3650	3400	3250	3000	2800	2700	2350	2150	2050	1700	1400	1200	900	
•ISI Models																								

NEON, REVO & NEON-N Series

Speciality

- Economic pump set.
- ISI models are available.
- Normal voltage as well as Low voltage models are available in Revo Series.
- Aluminium extruded motor body with FG 200 Castings.
- High Quality alloy steel Motor shaft.
- B-Class electrical insulation.
- Zinc coated hardwares.
- 12/18/24 months service warranty.
- Available models from 0.5 - 1.5HP.

NEON-F150

NEON-RH110

REVO-H Plus

NEON-NH80

PERFORMANCE DETAILS

Models	Power		Pipe size (cm)		Total head in metre Vs Discharge in LPH														
	HP	kW	Suction	Delivery	m	6	9	12	15	18	21	24	27	30	33	36	39	42	45
NEON-H80	0.5	0.37	2.5	2.5	LPH	1900	1650	1400	1250	1050	850	650							
NEON-RH110*	0.5	0.37	2.5	2.5		2100	1950	1800	1550	1400	1250	1100	900	750	550				
NEON-F130	1.0	0.75	2.5	2.5		2100	1950	1750	1600	1450	1250	1100	950	750	600	450	300		
NEON-F150*	1.0	0.75	2.5	2.5		2700	2550	2450	2200	2000	1850	1650	1500	1300	1200	1050	850	700	550
NEON-FH150	1.5	1.1	2.5	2.5		4300	4100	3900	3700	3500	3250	3000	2750	2500	2250	2000	1750	1500	750
REVO Series - Normal Voltage Models																			
REVO-H90	0.5	0.37	2.5	2.5	LPH	1850	1550	1300	1150	950	750	550	350						
REVO-H Plus	0.5	0.37	2.5	2.5		1850	1550	1300	1150	950	750	550							
REVO-F Plus	1.0	0.75	2.5	2.5		2100	1950	1750	1600	1450	1250	1100	950	700	550	400			
REVO Series - Low Voltage Models																			
REVO-LH110	0.5	0.37	2.5	2.5	LPH	2000	1700	1550	1350	1150	1050	900	750	600	350				
*ISI models																			

Models	Power		Pipe size (cm)		Total head in metre Vs Discharge in LPH												
	HP	kW	Suction	Delivery	m	6	9	12	15	18	21	24	27	30	33	36	39
NEON-NH60	0.5	0.37	2.5	2.5	LPH	1500	1300	1100	925	750							
NEON-NH80	0.5	0.37	2.5	2.5		1850	1550	1300	1150	950	750	550					

SUPER & WONDER Suction Series

Speciality

- Faster self priming capability
- Aluminium extruded motor body with FG 200 Castings.
- Cast Iron motor body is also available. (VSPS series & VSPAW F100)
- ISI models available in Super & Wonder suction Series.
- FG-260 castings in VSPS-H100.
- High Quality alloy steel Motor shaft.
- B-Class electrical insulation.
- Zinc coated hardwares.
- Available up to 1.0HP.
- 18 / 12 months service warranty.

VSPAW-F100

NEON-WSH100

VSPS-H100

PERFORMANCE DETAILS

Models	Power		Pipe size (cm)		Total head in metre Vs Discharge in LPH									
	HP	kW	Suction	Delivery	m	6	9	12	15	18	21	24	27	30
Super Suction Models														
VSPS-H100*	0.5	0.37	2.5	2.5	LPH	2300	1900	1780	1600	1450	1300	1200	1000	750
VSPAS-H100	0.5	0.37	2.5	2.5		2250	1800	1650	1500	1350	1200	1100	900	650
VSPS-F100	1.0	0.75	2.5	2.5		3200	3000	2800	2550	2400	2300	2150	1900	1700
Wonder Suction Models														
VSPAW-F100	1.0	0.75	2.5	2.5	LPH	2200	2000	1850	1700	1500	1350	1200	1050	950
NEON-WSH100	0.5	0.37	1.25	1.25		1600	1500	1300	1150	1050	900	750	600	400
NEON-WH100P	0.5	0.37	2.5	2.5		1600	1500	1300	1150	1050	900	750	600	400
NEON-WSF100	1.0	0.75	2.5	2.5		2150	2000	1850	1700	1500	1350	1200	1050	850
NOVA-WSH100	1.0	0.75	2.5	2.5		1700	1500	1300	1100	900	700	500	300	
*ISI model														

Slow Speed Series

VSP Series

Speciality

- 1440 rpm motors with Minimum wear and tear.
- Higher self-priming capabilities.
- Rigid Cast Iron/MS Body imparts longer endurance and easy maintenance.
- High tensile brass impeller.
- B-Class electrical insulation.
- 12 months service warranty.

VSP-F130

VSP-H80

VSPR-F130

PERFORMANCE DETAILS

Models	Power		Pipe size (cm)		Total head in metre Vs Discharge in LPH													
	HP	kW	Suction	Delivery	m	6	9	12	15	18	21	24	27	30	33	36	39	42
VSPN-H80/1440	1.0	0.75	2.5	2.5	LPH	2500	2300	2100	1800	1500	1100	800						
VSPN-F130/1440	1.0	0.75	2.5	2.5		3300	3200	3100	2850	2700	2450	2200	2000	1800	1550	1350	1050	750
VSP-H80 / 1440	0.5	0.37	2.5	2.5		2500	2300	2100	1900	1650	1300	1100						
VSP-F130 / 1440	1.0	0.75	2.5	2.5		3150	2900	2650	2400	2150	2000	1800	1650	1400	1200	950	700	500
VSPC-F130 / 1440	1.0	0.75	2.5	2.5		3400	3300	3200	2950	2800	2550	2300	2100	1900	1650	1450	1150	850
Single Capacitor Models																		
VSPR-H80 / 1440	0.5	0.37	2.5	2.5	LPH	2800	2500	2300	2050	1850	1350	1000						
VSPR-F130 / 1440	1.0	0.75	2.5	2.5		3300	3200	3100	2800	2600	2450	2150	1950	1700	1450	1200	950	750

Precautions to use Regenerative Pumps !

- Ensure sufficient ventilation to the pump set and then cover it suitably for protection against unfavorable conditions of weather.
- Connect quality strainers at suction pipe to check entry of foreign particles in to.
- Use standard and proper size cable for electrical connection.
- Cable joint should be intact and as per Instruction manual.
- If seems as if stuck, do electrically isolate the pump set first and then rotate it manually for any stuck; if not, then restart it.

Centrifugal Pumps

Sturdy, Durable and Ace pumping.

For clear, cold* water free from abrasive & chemically aggressive particles to satisfy the needs of domestic water supply, gardens, small farms, irrigation and agricultural applications, draining of wells and tanks, filling water in swimming pool.

*Max. liquid temperature 45°C

TEFC, Capacitor start and run type induction motor
Provides constant speed and better torque.

Rigid Cast Iron-FG200/Aluminium extruded Motor body
Ensures constructional ruggedness for long lasting consistent performance.

Cast iron impeller*
Ensures prolonged operating life.
(*Except for BLUE-CH45, BLUE-CH60, VCN-H80 (Noryl) and VCA-TF80 (Gun metal)).

99.99% Super enamelled copper windings
Constitutes efficient and long lasting motor.

Superior quality electrical stampings
Ascertain highly efficient motor.

High quality alloy steel motor shaft
Offers rust free, stuck free persistent operation.

Double sealed ball bearings with life lubrication
Enables smooth and silent functioning.

High quality mechanical seal with graphite face
Contributes leak free operation.

Equipped with Thermal Overload Protector (T.O.P)
Assures safe and secure operation.

Wide voltage band operation
Maintaining consistent performance.

Operating/Technical specifications

Input supply: 1Φ AC, 120-240V*, 50Hz (*Voltage required at motor input terminal)

Power range: 0.37 – 2.2kW (0.5 to 3HP)

Head range: Up to 50m

Flow range: 67200 – 500LPH

Rated Speed: 2800rpm

Type of duty: S1 (Continuous)

Insulation class: F/B

Rotation: Counter clockwise, when viewed from pump side

V-GUARD

VC Series - Normal Voltage

Speciality

- Premium quality pump sets.
- Energy efficient motor.
- ISI Models and Star rated models available.
- Cast iron impeller; exceptionally Gun metal for VCA-TF80.
- High quality alloy steel motor shaft.
- F-Class electrical insulation in VCS F80; rest of all are B-class.
- Available up to 2HP.
- 12/24 months service warranty.

VC-H60

VCA-TF90

VCS-F80

PERFORMANCE DETAILS

Models	Power		Pipe size (cm)		Total head in metre Vs Discharge in LPH												
	HP	KW	Suction	Delivery	m	3	6	9	12	15	18	21	24	27	30	33	42
VC-H40	0.5	0.37	4.0	4.0	LPH	*	12000	10000	6500								
VC-H45•	0.5	0.37	2.5	2.5		*	5300	4500	3350	2100							
VC-H50	0.5	0.37	2.5	2.5		*	6000	5000	3800	2500							
VC-H60•	0.5	0.37	2.5	2.5		*	7000	6500	6000	4800	2500						
VC-H80	0.5	0.37	2.5	2.5		*	*	*	6100	5450	4480	3450	1250				
VCA-TF80	0.75	0.55	2.5	2.5		*	*	*	7000	6000	5000	4000	2500	600			
VCA-TF90	0.75	0.55	2.5	2.5		*	*	*	7600	6450	5900	5050	4050	3300			
VC-F25	1.0	0.75	7.5	7.5		62000	45000	23000									
VC-F40	1.0	0.75	5.0	5.0		27000	25000	19000	13000								
VC-F60•	1.0	0.75	4.0	4.0		*	15000	13200	12500	7150	5500						
VC-F80	1.0	0.75	3.2	2.5		*	*	*	9700	9000	8000	6800	5500				
VCS-F80¤	1.0	0.75	3.2	2.5		*	*	*	8000	6800	6500	5500	4000				
VC-F100	1.0	0.75	3.2	2.5		*	*	*	8500	8300	7700	7100	6200	5500	4450		
VCS-F110	1.0	0.75	2.5	2.5		*	*	*	*	*	5500	5000	4600	4200	3300	2000	
VC-FH40	1.5	1.1	6.5	5.0		34000	30000	26000	23000								
VC-FH45¤	1.5	1.1	5.0	5.0		31100	28500	25500	22100	17100							
VC-FH70¤	1.5	1.1	5.0	4.0		*	20400	19100	17000	12800	10000	6000					
VC-FH100	1.5	1.1	4.0	3.2		*	*	*	*	12000	10500	9000	6900	3000			
VC-FH140	1.5	1.1	3.2	2.5		*	*	*	*	7500	7400	6800	6200	5600	5000	4000	2000
VC-TW30	2.0	1.5	10	10		67200	57600	42000									
VC-TW40	2.0	1.5	7.5	7.5		*	50000	40000	33000								
VC-TW70	2.0	1.5	6.5	5.0		*	*	*	28000	25000	21000	13000					
VC-TW80	2.0	1.5	4.0	4.0		*	*	*	16080	15300	14280	13500	11000				
VCS-TW100	2.0	1.5	4.0	3.2		*	*	*	14500	13500	12500	11000	9000	7500	5000		
VCR-TW100	2.0	1.5	5.0	4.0		*	*	*	*	*	21500	20500	19000	16200	7000		
VC-TW110	2.0	1.5	4.0	4.0		*	*	*	*	*	*	10800	9600	8100	5700	3900	

¤Star rated model •ISI models * Over loading region

VCN & BLUE Series

Speciality

- Aluminium extruded Motor body*
  (*Cast Iron body for VCN-F60, VCN-F40).
- ISI models available in VCN series.
- Available with Noryl impeller.
- Comes with B-Class / F-Class (VCN-F80) electrical insulation.
- 12 months service warranty.

VCN-F40

BLUE-CH60

BLUE-CH45

PERFORMANCE DETAILS

Models	Power		Pipe size (cm)		Total head in metre Vs Discharge in LPH								
	HP	KW	Suction	Delivery	m	3	6	9	12	15	18	21	24
VCN-H80	0.5	0.37	2.5	2.5	LPH	*	*	*	5700	4700	3700	2300	800
VCN-F40	1.0	0.75	5.0	5.0		*	31000	26000	21000				
VCN-F60	1.0	0.75	5.0	4.0		*	19000	17300	12600	7800			
VCN-F80	1.0	0.75	2.5	2.5		*	*	*	8000	6800	6500	5500	4000
•ISI models *Overloading region #Noryl impeller													

Models	Power		Pipe size (cm)		Total head in metre Vs Discharge in LPH								
	HP	kW	Suction	Delivery	m	6	9	12	15	18	21	24	27
BLUE-CH45#	0.5	0.37	2.5	2.5	LPH	5000	4000	2600	1800	*	*	*	*
BLUE-CH60#	0.5	0.37	2.5	2.5		5500	5000	4400	3600	1900	*	*	*
BLUE-CF80	1	0.75	3.2	2.5		*	*	7800	6700	6200	5200	3700	*
BLUE-CF90	1	0.75	2.5	2.5		*	*	8000	7300	6600	5800	5100	3400
* Overloading region # ISI Models													

VC Series - Special & Low Voltages

Speciality

- Low voltage models (Voltage range 120-200V) as well as wide voltage models are available.
- Rigid Cast Iron-FG200 Motor body.
- B-Class & F-Class electrical insulation.
- Available up to 3 HP.
- 12 months service warranty.

VCL-TW40

VCL-H40

VCS-TW30

PERFORMANCE DETAILS

Models	Power		Pipe size (cm)		Total head in metre Vs Discharge in LPH						
	HP	kW	Suction	Delivery	m	3	6	9	12	15	18
Special Voltage Models											
VCS-FH50	1.5	1.1	6.5	5.0	LPH	*	35000	28000	22000	15500	
VCS-TW30	2.0	1.5	10	10		62500	53000	38000			
VCS-TW40	2.0	1.5	7.5	7.5		*	53500	45000	31000		
VCSE-TW40	2.0	1.5	7.5	7.5		*	53500	45000	31000		
VCS-TW70	2.0	1.5	6.5	5.0		*	36500	31500	26500	22000	9000
VCS-TR50	3.0	2.2	10	10		*	67000	59800	48500	24000	
Low Voltage Models											
VCL-H40	0.5	0.37	4.0	4.0	LPH	*	12000	10000	6500		
VCL-H45	0.5	0.37	2.5	2.5		*	5000	4100	3000	1900	
VCL-H50	0.5	0.37	2.5	2.5		*	5700	4900	3900	2400	1900
VCL-F40	1.0	0.75	5.0	5.0		27000	25000	19000	13000		
VCL-TW30	2.0	1.5	10	10		57000	48000	33000			
VCL-TW40	2.0	1.5	7.5	7.5		*	44000	33500	20000		

*Overloading region # Extended shaft

Special Application Centrifugal Pumps
Extended Shaft

Speciality

- Specially designed to operate with prime movers other than induction motors and in certain situations as a prime mover for other machines as well.
- Rigid Cast Iron-FG200 body ensures constructional ruggedness.
- Equipped with B-Class insulation.
- 12 months service warranty.

VCE-H40

VCE-TW40

PERFORMANCE DETAILS

Models	Power		Pipe size (cm)		Total head in metre Vs Discharge in LPH				
	HP	kW	Suction	Delivery	m	3	6	9	12
VCE-H40	0.5	0.37	4.0	4.0	LPH	*	12000	10000	6500
VCE-F25	1.0	0.75	7.5	7.5		62000	45000	23000	
VCE-F40	1.0	0.75	5.0	5.0		27000	25000	19000	13000
VCE-TW40	2.0	1.5	7.5	7.5		*	50000	40000	33000
* Overloading region									

VCSW Series (Self-Priming Centrifugal Jet)

Speciality

- Aluminium extruded motor body with FG 200 Castings (Aluminium die-casted body for VCSWT-F120).
- Available with Cast Iron, Noryl and Gunmetal impeller.
- Having B-Class electrical insulation.
- Suction Capacity upto 9 metre.
- 12 months service warranty.

VCSW-H90

VCSW-F120

VCSWT-F120

PERFORMANCE DETAILS

Models	Power		Pipe size (cm)		Total head in metre Vs Discharge in LPH													
	HP	kW	Suction	Delivery	m	3	6	9	12	15	18	21	24	27	30	33	36	39
VCSW-NH70	0.5	0.37	2.5	2.5	LPH	*	2170	2000	1700	1300	950	500						
VCSW-H90	0.5	0.37	2.5	2.5		*	3500	3300	3250	3150	2850	2400	1750	1350				
VCSW-F120	1.0	0.75	2.5	2.5		*	3700	3600	3450	3300	3150	2900	2700	2300	1750	900	600	
VCSWS-F120	1.0	0.75	2.5	2.5		*	3700	3600	3450	3300	3150	2900	2700	2300	1750	900	600	
VCSWT-F120	1.0	0.75	2.5	2.5		*	*	3900	3800	3750	3650	3400	2900	2300	1700	1300	850	
VCSW-F120 PRO	1.0	0.75	2.5	2.5		*	3700	3600	3450	3300	3150	2950	2700	2300	1750	1200	800	400
* Overloading region																		

Prime Models
VP Series

Speciality

- TEFC, Capacitor start and run type induction motors as prime mover.
- Aluminium extruded Motor body.
- Forged Brass impeller.
- 99.99% Super enamelled copper winding.
- Superior quality electrical stamping.
- High quality alloy steel motor shaft.
- Equipped with Thermal overload protector.
- Wide voltage Band Operation.
- B-Class electrical insulation.
- Available in 0.5 HP.
- 12 months service warranty.

VPA-H100

PERFORMANCE DETAILS

Models	Power		Pipe size (cm)		Total head in metre Vs Discharge in LPH											
	HP	kW	Suction	Delivery	m	1.5	3	6	9	12	15	18	21	24	27	30
VPA-H100*	0.5	0.37	2.5	2.5	LPH	*	*	2200	1840	1700	1550	1400	1250	1150	980	720
*ISI model																

Precautions to use Centrifugal Pumps !

- Ensure sufficient ventilation to the pumpset and then cover it suitably for protection against unfavorable conditions of weather.
- Select a pump that is best suited for the total head requirements as per field conditions and capability to deliver the required volume of water.
- Never use high head models for low head applications.
- Use standard and proper size cable for electrical connection.
- Cable joint should be intact and as per Instruction manual.

Booster Pumps

Up-surged, Incessant and Reliable.

For clear, cold* water free from abrasive & chemically aggressive particles to satisfy the needs of residential pressure boosting applications

*Max. liquid temperature 90°C

Aluminium pressure die-casted body
For non-corrosive, long lasting life.

SS Impeller*
For rust free and consistent performance.
(*Except for mini boosters with brass impellers).

99.9% pure copper winding wires
Provides better electrical operational characteristics.

Superior quality electrical stampings
Ascertain highly efficient motor.

SS410 motor shaft
Offers rust free, stuck free persistent operation.

High quality double sealed ball bearings
For a smooth & silent functioning.

F Class insulation
Improved insulation protection and prevents unwanted energy losses.

SS Hardwares
Ensures endurance against aggressive corrosion failures.

World class pressure tanks
Imported tanks are meant to assure safe working and prolonged operational consistency.

Operating/Technical specifications

Input supply: 1Φ AC, 180-240V*, 50Hz (*Voltage required at motor input terminal)

Power range: 0.14 – 1.1kW (0.18 to 1.5HP)

Flow range: 7900 - 215 LPH

Pressure range: 1.5 - 4.5 bar

Rated Speed: 2800rpm

Type of duty: S1 (Continuous)

Insulation class: F

Rotation: Counter clockwise, when viewed from pump side

Centrifugal Booster Series

Speciality

- Premium quality pump sets.
- Rust preventive Aluminium die-casted motor body.
- Rigid built cast iron casings.
- Stainless steel hardwares.
- Fitted with hot water seal.
- Imported pressure tank.
- F-class insulation.
- Suitable for hot water application.
- Float switch for dry run protection.

VB60-FH3B

Accessories

Pressure Tank

Pressure sensing switch

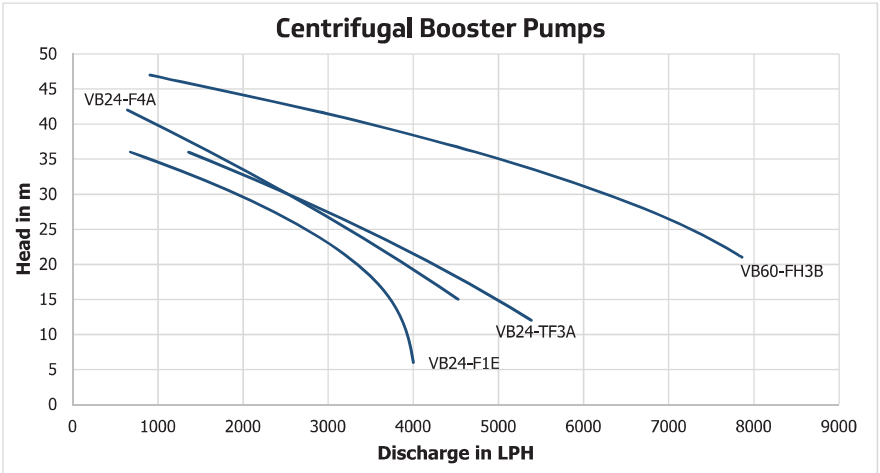
Pressure gauge

Float switch

PERFORMANCE DETAILS & CURVES

Models	Power		Pipe size (cm)		Total head in metre Vs Discharge in LPH														
	HP	kW	Suction	Delivery	m	6	9	12	15	18	21	24	27	30	33	36	39	42	47
VB24-TF3A	0.75	0.55	2.5	2.5	LPH	*	*	5250	5000	4450	4000	3450	2900	2300	1800	1100			
VB24-F1E	1.0	0.75	2.5	2.5		3900	3900	3800	3750	3650	3400	2900	2300	1700	1300	850			
VB24-F4A	1.0	0.75	2.5	2.5		*	*	*	5600	5250	4900	4400	4000	3700	3150	2650	2150	1350	
VB60-FH3B	1.5	1.1	2.5	2.5		*	*	*	*	*	7900	7400	6800	6150	5800	5000	3500	2700	1000

Models	Power		Pump Stage	Type of Tank	Tank Capacity (L)	Drawdown capacity (L)	Pressure setting range (kg/cm^2)	Max capacity (LPH)	Approximate suitable for
	HP	kW							
VB24-TF3A	0.75	0.55	3	Inline vertical	24	10	2.0 to 3.5	5600	2 Bathrooms
VB24-F1E	1.0	0.75	1	Inline vertical	24	9	2.0 to 3.5	4200	3 Bathrooms
VB24-F4A	1.0	0.75	4	Inline vertical	24	12	2.0 to 4.5	6000	4 Bathrooms
VB60-FH3B	1.5	1.1	3	Inline vertical	60	35	2.0 to 4.5	9500	5 Bathrooms
*Overloading region									



Regenerative Mini Booster Pumps

Speciality

- Premium quality pump sets.
- Rust preventive Aluminium die-casted body.
- Rigid built cast iron casing.
- Stainless steel hardware.
- Brass impeller.
- Imported pressure tank.
- F-class insulation.
- Suitable for hot water application.

VB1-H1S

Accessories

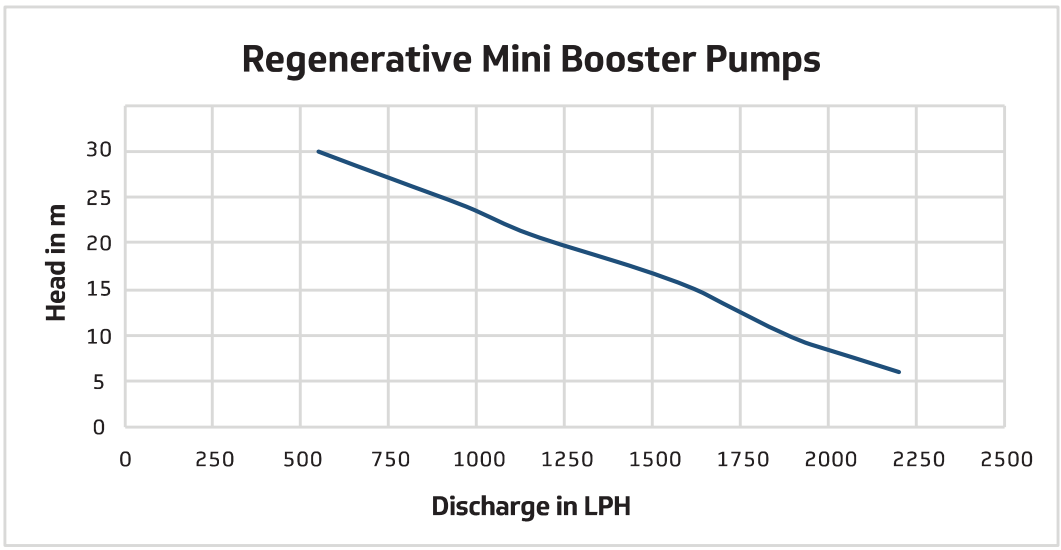
Pressure Tank

Pressure sensing switch

PERFORMANCE DETAILS & CURVES

Models	Power		Pipe size (cm)		Total head in metre Vs Discharge in LPH													
	HP	kW	Suction	Delivery	m	6	9	12	15	18	21	24	27	30	33	36	39	42
VB1-H1S	0.5	0.37	2.5	2.5	LPH	2200	1950	1700	1650	1400	1150	970	760	550				

Models	Power		Pump Stage	Type of Tank	Tank Capacity (L)	Drawdown capacity (L)	Pressure setting range (kg/cm^2)	Max capacity (LPH)	Approximate suitable for
	HP	kW							
VB1-H1S	0.5	0.37	1	Inline	1	0.5	1.5 to 2.5	2800	1 Bathroom



Circulatory Pumps

Speciality

- High efficiency Inline circulating pump.
- Vibration-less, noiseless operation.
- Generates constant pressure.
- B class electrical insulation.
- IP 44 protection.
- Automatic and Manual operation.
- Suitable for hot water application.

VCB14-FO30

Operating/Technical specifications

Input supply: 1Φ AC, 160-240V*, 50Hz
(*Voltage required at motor input terminal)
Current: 0.54 A
Power: 140W (0.18HP)
Pressure: 1bar
Discharge: 1800LPH
Max.Head: 9 metre
Insulation Class: B
Pipe Size: 1.2 cm x 1.2 cm

VCB25-FO40

Operating/Technical specifications

Input supply: 1Φ AC, 160-240V*, 50Hz
(*Voltage required at motor input terminal)
Current: 1.13 A
Power: 250W (0.33HP)
Pressure: 1.3bar
Discharge: 3000LPH
Max.Head: 13 metre
Insulation Class: F
Pipe Size: 2 cm x 2 cm

Precautions to use Booster Pumps !

- Pump should be protected against weather by giving proper covering.
- The pump must be used for handling clear, cold fresh water, having the (Max. liquid temperature 45°C, Equipped with hot water seal upto 90°C) characteristics specified as Max. Chloride ion density 500 ppm, Total solids - 3000 ppm, pH value - 6.5 to 8, Specific gravity 1.004, Hardness: 300 mg.
- All pipe joints must be leak proof; it is advisable to use GI/PVC pipes with ISI mark.
- Check the pre-charged air pressure inside the pressure tank periodically to ensure the smooth working of pressure booster pump.
- A bypass line should be provided to facilitate normal flow of water in the absence of electricity.
- The difference in pressure should not be lesser than 1.9 bar in Centrifugal Booster Pumps.

Jet Centrifugal Pumps

Persistent, Steadfast and Lofty up lifter.

For clear, cold* water free from abrasive & chemically aggressive particles to satisfy the needs of deep water source- lifting applications. Also suitable for 5, 7.5, 10 & 15 cm borewell applications.

*Max. liquid temperature 45°C

Dynamically Balanced Impeller
Provides better consistent performance

Specially designed Gunmetal Jet Assembly
Ensures corrosion free long life.

TEFC, CSCR type induction motors as prime mover
Provides constant speed and better torque.

99.99% Super enamelled copper winding
Constitutes efficient and long lasting motor.

Superior quality electrical stamping
Ascertain highly efficient motor

High quality alloy steel motor shaft
Offers rust free, stuck free persistent operation.

Double sealed ball bearings with life lubrication
Enables smooth and silent functioning.

High quality mechanical seal with graphite face
Contributes leak free operation

Equipped with Thermal Overload Protector (T.O.P)
Assures safe and secure operation.

Wide voltage band operation
Allows maintaining consistent performance.

Operating/Technical specifications

Input supply: 1Φ AC, 180-240V*, 50Hz
(*Voltage required at motor input terminal)

Power range: 0.37 – 1.1kW (0.5 to 1.5HP)

Head range: Up to 70m

Flow range: 3400 - 100LPH

DLWL Range: Up to 70m

Rated Speed: 2800rpm

Type of duty: S1 (Continuous)

Insulation class: F/B

Rotation: Counter clockwise, when viewed from pump side

VJ & VJO Series

Speciality

- Premium quality pump sets.
- ISI Models available.
- CI FG200 Impeller. (Except for VJON Models)
- Cast Iron/Gunmetal Jet assembly.
- B-class electrical insulation.
- Energy efficient motor.
- Available up to 1.5HP.
- 12 months service warranty.

VJON-F100

Accessories

Jet assembly

PRV

VJ-H70

PERFORMANCE DETAILS

Models	Power		Pipe size (cm)	DLWL* in metre Vs Discharge in LPH																
	HP	KW	Suc X Pre X Del	m	9	12	15	18	21	24	27	30	33	36	39	42	45	48	51	54
VJ -H70♦	0.5	0.37	3.2x2.5x2.5	LPH	1450	1250	1050	800	600											
VJG - F80	1.0	0.75	4x3.2x2.5		1700	1620	1500	1425	1350	1300										
VJ-FH180BW	1.5	1.1	3.2x2.5x2.5		*	*	*	*	*	*	1100	1075	1050	1000	900	800	750	700	650	500
*Depth to low water level ♦ISI Models																				

Models	Power		Pipe size (cm)	DLWL in metre Vs Discharge in LPH								
	HP	kW	Suc X Pre X Del	m	9	12	15	18	21	24	27	30
VJON-F80	1.0	0.75	4x3.2x2.5	LPH	2000	1500	1000	500				
VJON-F100BW	1.0	0.75	3.2x2.5x2.5		1550	1300	1200	1125	1000	850	750	675

VJP2 & VJT Series

VJP2-F100

VJT-F200

PERFORMANCE DETAILS

Models	Power		Pipe size (cm)	DLWL in metre Vs Discharge in LPH									
	HP	kW	Suc X Pre X Del	m	30	35	40	45	50	55	60	65	70
VJT-F200	1.0	0.75	3.2x2.5x2.5	LPH	*	1080	936	720	504	324	210	130	100

Models	Power		Pipe size (cm)	DLWL in metre Vs Discharge in LPH									
	HP	kW	Suc X Pre X Del	m	6	9	12	15	18	21	24	27	30
VJP2-F100*	1.0	0.75	3.2x2.5x2.5	LPH	*	1800	1550	1300	1000	700	550	300	100
*Packer Jet													

NEON Series

Speciality

- FG 200 CI Impeller
- Aluminium extruded motor body with FG 200 Casting for Neon JF80
- Brass/Cast Iron jet assembly
- High Quality alloy steel Motor shaft
- B-Class electrical insulation

Accessories

Jet assembly

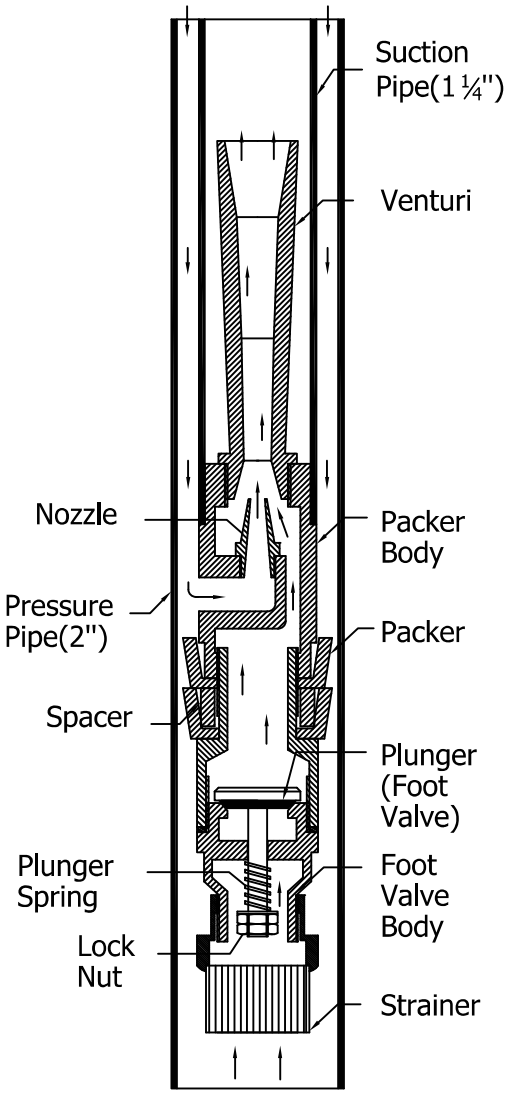
PRV

NEON-JF80

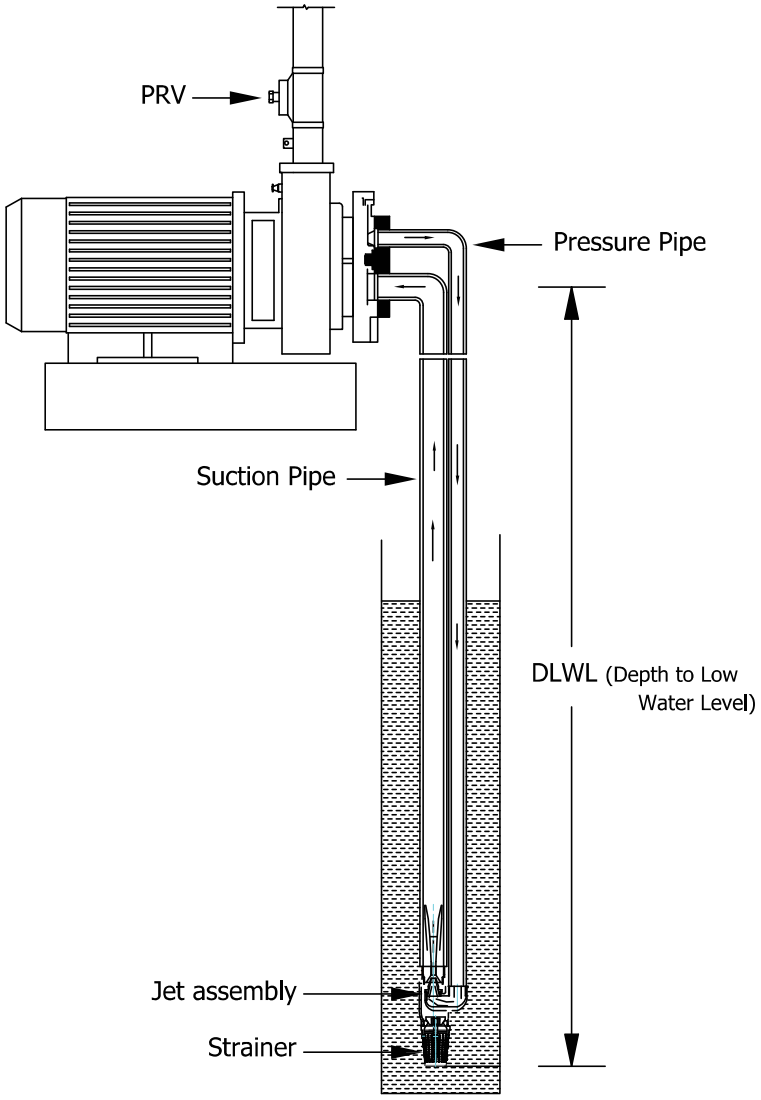
PERFORMANCE DETAILS

Models	Power		Pipe size (cm)	DLWL in metre Vs Discharge in LPH														
	HP	kW	Suc X Pre X Del	m	6	9	12	15	18	21	24	27	30	33	36	39	42	45
NEON-JF 80	1.0	0.75	4.0x3.2x2.5	LPH	*	1600	1520	1400	1325	1250	1200							
NEON-JF100BWP⋆	1.0	0.75	3.2x2.5x2.5		*	1150	1025	975	925	825	750	600	500					
NEON-JF100BW3*	1.0	0.75	2.5x2.0x2.5		*	*	900	700	600	500	390	300	230					
NEON-JF150BW	1.0	0.75	3.2x2.5x2.5		*	*	*	*	1100	1075	1050	1025	975	900	850	725	600	450
*Suitable for 7.5 cm Borewells, ⋆ISI model																		

Jet Pump Installation



Packer Jet



Jet Pump Installation

Precautions to use Jet Centrifugal Pumps !

- Suitably cover the pump set for getting protected against bad weather.
- Use standard and proper size cable for electrical connection.
- Cable joint should be intact and as per Instruction manual.
- If seems as if stuck, do electrically isolate the pump set first and then rotate it manually for any stuck. If not, then restart it.
- Periodically regulate the pressure regulating valve to get maximum discharge under varying DLWL.
- Select a pump that is best suited for the DLWL requirements as per field conditions and capability to deliver the required volume of water. Wrong selection may cause lower efficiency and more power consumption.
- Never use high head pumps for low head applications. If used, it may cause over heating and lead to winding burning of motor.
- All pipe joints must be leak proof. It is advisable to use GI/PVC pipes with ISI mark.

Openwell
Submersible Pumps

Priming free, Vibration free, Noise free.

For clear, cold* water free from abrasive & chemically aggressive particles to satisfy the needs of household water supply, drip irrigation, gardens, water fountains, water sprinkling and light/medium industrial applications.

*Max. liquid temperature 45°C

Cast Iron/SS Motor body*
Provides protection against structural failures due to corrosion.

Cast Iron impeller*
Ensures constructional ruggedness, for long lasting consistent performance.

(*Noryl Impeller in Nova, VOSK & VOSV series)

Triple layered poly wrapped copper wires
For better insulation protection and durability.

Superior quality electrical stampings
Ascertain highly efficient motor.

SS410 motor shaft
Offers rust free, stuck free persistent operation.

LTB Bush bearings
Marine class water lubricated bush bearings for smooth & silent functioning.

Marine grade electrical joints
Improves insulation protection and prevents unwanted energy losses.

Operating/Technical specifications

Input supply: 1ΦAC, 180-240V*, 50Hz (*Voltage required at motor input terminal)

Power range: 0.37 – 1.5kW (0.5 to 2HP)

Head range: Up to 91m

Flow range: 21000 – 1250LPH

Rated Speed: 2800rpm

Type of duty: S1 (Continuous)

Insulation class: B

Rotation: Counter clockwise, when viewed from pump side

Water Cooled Horizontal Openwell Submersible Pumps
VOS, VOSS & VOSR Series

Speciality

- Rust preventive SS Body with matt finish in VOSS series.
- Rigid built cast iron body in VOS series except for 0.5HP variants.
- High quality stainless steel hardwares.
- Energy efficient motor.
- BEE 5 star rated & ISI Models available.
- Available up to 2HP.

10/15 METRE 3 CORE CABLE♦

VOSS-F90

VOS-FH110

VOSR-F90

Accessories

Control Panel

Pipe bend with strainer

Cable joining kit

PERFORMANCE DETAILS

Models	Power		Pipe size (cm)	Total head in metre Vs Discharge in LPH														
	HP	kW	Suction X Delivery	m	6	9	12	15	18	21	24	27	30	33	36	39	42	45
VOS-F60	1.0	0.75	4.0 x 4.0		21000	18500	15000	11000	5000									
VOS-F90¤	1.0	0.75	3.2 x 2.5		*	*	10100	9500	7500	5300	3600	3450						
VOSS-F90¤	1.0	0.75	3.2 x 2.5		*	*	10100	9500	7500	5300	3600	3450						
VOSS-FH80¤	1.5	1.1	4.0 x 4.0		*	*	13000	12000	11000	9000	8000							
VOS-FH110	1.5	1.1	3.2 x 2.5	LPH	*	*	*	9700	9100	8600	8000	7200	6300	4500				
VOSS-FH110	1.5	1.1	3.2 x 2.5		*	*	*	9700	9100	8600	8000	7200	6300	4500				
VOS-FH150	1.5	1.1	2.5 x 2.5		*	*	*	*	*	*	*	7200	6800	6300	5300	4500	3200	1300
VOSS-FH150	1.5	1.1	2.5 x 2.5		*	*	*	*	*	*	*	7200	6800	6300	5300	4500	3200	1300
VOSS-TW100	2.0	1.5	5.0 x 5.0		*	*	*	14500	13000	12000	10500	9000	7500					
VOSR-F90¤	1.0	0.75	3.2 x 2.5		*	*	9200	8300	6900	4500	2800	2400						

¤Star rated models *Denotes overloading region ♦ Except VOSS-FH110 & VOSS-FH150.

REVO Series

Speciality

- Reliable motor construction.
- Rust preventive SS Body with matt finish.
- Stainless steel hardwares.
- Available up to 1.5 HP.

REVO-0SSF80

REVO-0SSFH130

REVO-0SSF110

Accessories

Control Panel

Pipe bend with strainer

Cable joining kit

PERFORMANCE DETAILS

Models	Power		Pipe size (cm)	Total head in metre Vs Discharge in LPH												
	HP	kW	Suction X Delivery	m	6	9	12	15	18	21	24	27	30	33	36	38
REVO-0SSH60	0.5	0.37	2.5 x 2.5	LPH	8000	7000	5800	4500								
REVO-0SSF80	1.0	0.75	3.2 x 2.5		*	*	9800	9000	7600	6000	3800					
REVO-0SSF110	1.0	0.75	3.2 x 2.5		*	*	*	*	8600	8000	7000	6000	4500	3000		
REVO-0SSFH130	1.5	1.1	3.2 x 2.5		*	*	*	*	*	6400	6000	5600	4800	4200	3300	2500
*Denotes overloading region																

NOVA & VOSK Series

Speciality

- Pressure regulating diaphragm
- Rust preventive SS Body with matt finish
- Noryl impellers for smooth & silent operation
- Stainless steel hardwares

NOVA-OSSF80

NOVA-OSSH60

VOSK-F90

Accessories

Control Panel

Pipe bend with strainer

Cable joining kit

PERFORMANCE DETAILS

Models	Power		Pipe size (cm)	Total head in metre Vs Discharge in LPH							
	HP	kW	Suction X Delivery	m	6	9	12	15	18	21	24
NOVA-OSSH60	0.5	0.37	2.5 x 2.5	LPH	8000	7000	5800	4500			
NOVA-OSSF80*	1.0	0.75	2.5 x 2.5		9000	8500	7800	7300	6300	5500	4500
*ISI Model											

Models	Power		Pipe size (cm)	Total head in metre Vs Discharge in LPH									
	HP	kW	Suction X Delivery	m	6	8	10	12	15	18	21	24	27	30
VOSK-H60	0.5	0.37	2.5 x 2.5	LPH	9000	8500	7800	7000	4300					
VOSK-F90☆	1.0	0.75	2.5 x 2.5		*	*	*	10000	9000	8000	6500	4200	2000	
VOSK-F110#	1.0	0.75	2.5 x 2.5		*	*	*	*	9500	8500	7000	5000	3000	900
☆Star rated #ISI Model *Denotes overloading region														

Water Cooled Vertical Openwell Submersible Pumps
VOSV Series

Speciality

- Suitable for both Openwell & 10 cm/150 cm borewell applications (Model for 10 cm borewell-VOSV-F140).
- Rust preventive SS Body with matt finish.
- Noryl impeller and diffuser for smooth & silent operation.
- Stainless steel hardwares.
- 3 metre 3 core cable.
- Available up to 1.5HP.

Accessories

Control Panel

Cable joining kit

VOSV-F140

VOSV-F120

PERFORMANCE DETAILS

Models	Power		Pipe size (cm)	Total head in metre Vs Discharge in LPH																
	HP	kW	Delivery	m	18	21	24	30	36	40	42	45	48	54	60	66	72	76	82	91
VOSV-F120	1.0	0.75	3.2		*	4000	3500	2500	1500											
VOSV-F150	1.0	0.75	3.2		*	*	4000	3600	3100	2000	2200	1500								
VOSV-F250	1.0	0.75	3.2	LPH	*	*	*	*	*	*	4000	3800	3600	3300	2900	2500	2000	1500		
VOSV-FH300	1.5	1.1	3.2		*	*	*	*	*	*	*	*	*	4000	3000	3500	3000	2700	2300	1500
VOSV-F140	1.0	0.75	2.5		4300	4100	3900	3400	2600	2100										

*Denotes overloading region

Precautions to use Openwell Submersible Pumps !

- Fill the motor with enough clear, cold drinking water before installation.
- Use standard and proper size cable for connection.
- Cable joint should be intact and as per Instruction manual.
- Electrical connections are to be made as per circuit diagrams given in instruction manual/capacitor box.
- Do not operate the pump set without minimum submergence of 1.5m.

Borewell
Submersible Pumps

Priming free, Efficient and Tranquil.

For clear, cold* water free from abrasive & chemically aggressive particles to satisfy the needs of household water supply, agricultural applications, multi-storied buildings and light/medium industrial applications.

*Max. liquid temperature 45°C

SS Motor body
Provides protection against structural failures due to corrosion.

Noryl Bowl sets
Impellers & diffusers maintain the dimensional stability for consistent performance.

Triple layered copper*/99.99% super enamelled# copper wires
For better insulation protection and durability.

Superior quality electrical stamping
Ascertain highly efficient motor.

Stainless steel motor shaft
Offers rust free, stuck free persistent operation.

LTB Bush bearings*/double sealed ball bearings# with life lubrication
Marine class water lubricated bush bearings for smooth & silent functioning.

Marine grade electrical joints
Improves insulation protection and prevents unwanted energy losses.

*For water cooled models # For oil cooled models

Operating/Technical specifications

Input supply: 1ΦAC, 180-240V*, 50Hz (*Voltage required at motor input terminal)

Power range: 0.37 – 2.2kW (0.5 to 3HP)

Head range: Up to 240m

Flow range: 21600 - 600 LPH

Rated Speed: 2800rpm

Type of duty: S1 (Continuous)

Insulation class: B

Rotation: Counter clockwise, when viewed from top side

V-GUARD

V3 Borewell Submersible Pumps
VBS3 & VBS3AM Series - Water Cooled

Speciality

- Premium quality pump sets with 72/75 mm Pump OD.
- Rust preventive SS Body with matt finish.
- Rigid built cast iron housing parts.
- SS Shaft with dynamically balanced copper rotor/Aluminium rotor (VBSN3AM).
- Energy efficient motor.
- Stainless steel hardwares.
- Water lubricated SS thrust bearing and LTB bush bearings for motor.
- Wide voltage band 180-240v.
- Poly wrapped winding wire with Least leakage.
- Hylum pad prevents initial stuck possibilities.
- Non return valve to avoid return flow and sand accumulation in pump.
- Rubber diaphragm balances the pressure fluctuations.

Accessories

Control Panel

Cable joining kit

Control Panel (For VBS3AM Series only), Cable joining kit, Nylon strainer, Cable guard.

PERFORMANCE DETAILS

Models	Power		Pipe size (cm)	Total head in metre Vs Discharge in LPH/LPM											
				LPM	60	50	45	40	35	30	25	20	15	10	0
	HP	kW		LPH	3600	3000	2700	2400	2100	1800	1500	1200	900	600	0
VBS3-F130/10 #	1.0	0.75	3.2	Head in Metre	25	29	32	35	37	39	41	43	44	45	50
VBS3-F170/13 #	1.0	0.75	2.5		33	40	44	47	49	51	53	55	57	59	65
VBS3-F120/12 #*	1.0	0.75	3.2		25	31	34	36	38	40	42	44	45	47	50
VBS3-F150/15 #*	1.0	0.75	3.2		27	35	39	42	45	48	51	54	56	58	62
VBS3AM-F250/20	1.0	0.75	3.2		23	37	43	48	53	58	62	66	70	73	78
VBS3AM-FH325/20	1.5	1.1	3.2		55	64	68	71	74	77	81	85	90	95	100
VBS3AM-FH400/30	1.5	1.1	3.2		25	47	56	65	72	80	90	100	107	115	123
# All models are also available in VBS3AM series (With capacitor box) * Outer diameter of the pump is 72 mm															

Models	Power		Pipe size (cm)	Total head in metre Vs Discharge in LPH/LPM											
				LPM	60	50	45	40	35	30	25	20	15	10	0
	HP	kW		LPH	3600	3000	2700	2400	2100	1800	1500	1200	900	600	0
VBSN3AM-F130/10	1.0	0.75	3.2	Head in Metre	25	29	32	35	37	39	41	43	44	45	50
VBSN3AM-F170/13	1.0	0.75	2.5		33	40	44	47	49	51	53	55	57	59	65
VBSN3AM-F250/20	1.0	0.75	3.2		23	37	43	48	53	58	62	66	70	73	78

V3 Borewell Submersible Pumps
NOVA Series - Oil Cooled

Speciality

- Premium quality pump sets with 66 mm Pump OD.
- SS body and shaft for both pump and motor
- Food grade paraffin oil filled
- Dynamically balanced rotor
- Anti-friction ball bearings with lifelong lubrication
- 99.99% pure super enamelled copper wire
- Rubber diaphragm balances the pressure fluctuations

PERFORMANCE DETAILS

Models	Power		Pipe size (cm)	Total head in metre Vs Discharge in LPH/LPM									
				LPM	40	35	30	25	20	15	10	5	0
	HP	kW		LPH	2400	2100	1800	1500	1200	900	600	300	0
NOVA-02.5T0524	0.5	0.37	2.5	Head in Metre	12	26	36	43	50	54	58	62	66

V3 Borewell Submersible Pumps
VBSO3 Series - Oil Cooled

Speciality

- SS body and shaft for both pump and motor.
- Food grade paraffin oil pre filled.
- Dynamically balanced rotor.
- Anti-friction ball bearings with lifelong lubrication.
- Wide voltage band (180-240v) operation.
- 99.99% pure super enamelled copper wire.
- Non return valve to avoid return flow and sand accumulation in pump.
- Rubber diaphragm balances the pressure fluctuations.

Accessories

Control Panel

Cable joining kit

Control Panel (For VBSO3AM Series only), Cable guard.

PERFORMANCE DETAILS

Models	Power		Pipe size (cm)	Total head in metre Vs Discharge in LPH/LPM										
				LPM	60	50	45	40	35	30	25	20	15	0
	HP	kW		LPH	3600	3000	2700	2400	2100	1800	1500	1200	900	0
VBSO3AM-F250/20	1.0	0.75	3.2	Head in Metre	23	37	43	48	53	58	62	66	70	78

Slim V4 Borewell Submersible Pumps
VBS4SAM Series - Water Cooled

Speciality

- SS body for both pump and motor.
- Rigid built cast iron housing parts.
- SS Shaft with dynamically balanced rotor.
- Energy efficient motor.
- Stainless steel hardwares.
- Water lubricated SS thrust bearing and LTB bush bearings for motor.
- Wide voltage band 180-240v.
- Poly wrapped winding wire with Least leakage.
- Non return valve to avoid return flow and sand accumulation in pump.
- Rubber diaphragm balances the pressure fluctuations.

Accessories

Control Panel

Cable joining kit

Control Panel, Cable joining kit, Nylon strainer, Cable guard.

PERFORMANCE DETAILS

Models	Power		Pipe size (cm)	Total head in metre Vs Discharge in LPH/LPM											
				LPM	60	50	45	40	35	30	25	20	15	10	0
	HP	kW		LPH	3600	3000	2700	2400	2100	1800	1500	1200	900	600	0
VBS4SAM-F180/15	1.0	0.75	2.5	Head in Metre	25	35	39	45	47	50	53	56	59	61	65
VBS4SAM-F250/20	1.0	0.75	2.5		26	40	46	51	56	61	65	69	73	76	80
VBS4SAM-FH325/26	1.5	1.1	2.5		32	50	58	65	72	78	83	88	92	96	110

V4 Borewell Submersible Pumps
VBS Series - Water Cooled

Speciality

- Aluminium rotor model with enhanced low voltage performance.
- Rust preventive SS Body with matt finish.
- Rigid built cast iron housing parts.
- SS Shaft with dynamically balanced rotor.
- Energy efficient motor.
- Stainless steel hardware.
- Water lubricated SS thrust bearing and LTB bush bearings for motor.
- Wide voltage band 180-240v.
- Poly wrapped winding wire with Least leakage.

Accessories

Cable joining kit

Cable joining kit, Nylon strainer, Cable guard.

PERFORMANCE DETAILS

Models	Power		Pipe size (cm)	Total head in metre Vs Discharge in LPH/LPM												
				LPM	90	80	70	60	50	45	40	35	30	20	15	0
	HP	kW		LPH	5400	4800	4200	3600	3000	2700	2400	2100	1800	1200	900	0
VBS-H200/10	0.5	0.37	3.2	Head in Metre					15	24	32	38	44	54	59	64
VBS-F120/8	1.0	0.75	3.2		13	20	26	30	34	38	41	42	43	45	46	48
VBS-F150/10	1.0	0.75	3.2		16	25	33	38	43	47	51	53	54	59	58	60
VBS-F180/12	1.0	0.75	3.2		20	30	40	46	52	57	62	63	65	67	69	72
VBS-FH180/12	1.5	1.1	3.2		21	31	41	47	53	58	63	64	66	68	70	73
Models	Power		Pipe size (cm)	Total head in metre Vs Discharge in LPH/LPM												
				LPM	180	160	140	120	110	100	90	80	70	60	50	0
	HP	kW		LPH	10800	9600	8400	7200	6600	6000	5400	4800	4200	3600	3000	0
VBS-F160/8*	1.0	0.75	4.0	Head in Metre			14	22	26	30	34	37	40	42	44	50
VBS-FH160/8	1.5	1.1	4.0		11	19	26	32	34	37	40	42	44	45	46	54
VBS-FH240/12	1.5	1.1	4.0				21	33	39	45	51	56	60	63	66	74

* Star rated models.

V4 Borewell Submersible Pumps
VBSN & VBSNAM Series - Water Cooled

Speciality

- Aluminium rotor model with enhanced low voltage performance.
- Rust preventive SS Body with matt finish.
- Rigid built cast iron housing parts.
- SS Shaft with dynamically balanced rotor.
- Energy efficient motor.
- Stainless steel hardware.
- Water lubricated SS thrust bearing and LTB bush bearings for motor.
- Wide voltage band 180 -240v.
- Poly wrapped winding wire with Least leakage.

Accessories

Control Panel

Cable joining kit

Control Panel* (For VBSNAM Series only), Cable joining kit, Nylon strainer, Cable guard.

PERFORMANCE DETAILS

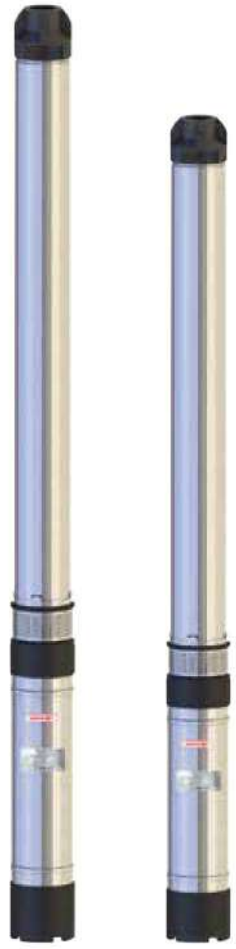
Models	Power		Pipe size (cm)	Total head in metre Vs Discharge in LPH/LPM											
				LPM	80	70	60	50	45	40	35	30	20	15	0
	HP	kW		LPH	4800	4200	3600	3000	2700	2400	2100	1800	1200	900	0
VBSN-H150/7	0.5	0.37	3.2	Head in Metre				12	19	24	30	35	40	44	49
VBSN-F180/9	1.0	0.75	3.2		27	36	43.5	49.5	52.5	55	58	60	62	63.5	66
VBSN-FH330/15	1.5	1.1	3.2		46	60	74	83	88	92	96	101	104	107	110
VBSNAM-TW440/20	2.0	1.5	3.2					50	70	80	92	106	122	128	137
VBSNAM-F200/10	1.0	0.75	3.2			30	39	45	48	51	54	57	60	63	66
VBSNAM-F300/15	1.0	0.75	3.2							50	59	68	83	90	98
VBSNAM-FH330/14	1.5	1.1	3.2		43	56	69	77	82	86	90	94	97	99	103
VBSNAM-FH400/19	1.5	1.1	3.2							63	74	86	105	114	124
VBSNAM-FH440/20	1.5	1.1	3.2					32	50	66	78	90	110	120	134
VBSNAM-FH550/25	1.5	1.1	3.2					38	61	87	96	111	136	148	168
VBSNAM-TW550/25	2.0	1.5	3.2					40	63	89	98	113	138	150	168
VBSNAM-TW650/30	2.0	1.5	3.2					48	75	99	117	135	165	180	199

Models	Power		Pipe size (cm)	Total head in metre Vs Discharge in LPH/LPM									
				LPM	140	120	100	90	80	70	60	50	0
	HP	kW		LPH	8400	7200	6000	5400	4800	4200	3600	3000	0
VBSN-TW300/15	2.0	1.5	4.0	Head in Metres	24	40	56	63	69	75	78	82	92
VBSNAM-FH240/12	1.5	1.1	4.0		21	33	45	51	56	60	63	66	74

V4 Borewell Submersible Pumps
NEON Series - Water Cooled

Speciality

- Rust preventive SS body with mat finish.
- Rigid built cast iron housing parts.
- SS Shaft with dynamically balanced Aluminium rotor.
- Energy efficient motor.
- Stainless steel hardware.
- Water lubricated SS thrust bearing and LTB bush bearings for motor.
- Wide voltage band 180 -240v.
- Poly wrapped winding wire with Least leakage.
- Non return valve to avoid return flow and sand accumulation in pump.
- Rubber diaphragm balances the pressure fluctuations.



Accessories

Cable joining kit, Nylon strainer, Cable guard.

Cable joining kit

PERFORMANCE DETAILS

Models	Power		Pipe size (cm)	Total head in metre Vs Discharge in LPH/LPM											
				LPM	80	70	60	50	45	40	35	30	25	15	0
	HP	kW		LPH	4800	4200	3600	3000	2700	2400	2100	1800	1500	900	0
NEON-T0108	1.0	0.75	3.2	Head in Meter		24	31	36	39	41	43	46	48	50	53
NEON-T0110	1.0	0.75	3.2			30	39	45	48	51	54	57	60	63	66
NEON-T1512	1.5	1.1	3.2		36	48	58	66	70	73	77	80	82	85	88

V4 Borewell Submersible Pumps
VBSR Series - Water Cooled

Speciality

- Rust preventive SS Body with matt finish.
- Rigid built cast iron housing parts.
- Stainless steel hardware.
- SS Shaft with dynamically balanced copper rotor.
- Water lubricated SS thrust bearing and LTB bush bearings for motor.
- Wide voltage band 180 -240v.
- Poly wrapped winding wire with Least leakage.
- Non return valve to avoid return flow and sand accumulation in pump.
- Rubber diaphragm balances the pressure fluctuations.
- Energy efficient motor.

Accessories

Cable joining kit, Nylon strainer, Cable guard.

PERFORMANCE DETAILS

Models	Power		Pipe size (cm)	Total head in metre Vs Discharge in LPH/LPM												
				LPM	90	80	70	60	50	45	40	35	30	20	15	0
	HP	kW		LPH	5400	4800	4200	3600	3000	2700	2400	2100	1800	1200	900	0
VBSR-H220/10#	0.5	0.37	3.2	Head in Metre					16	25	33	39	45	55	60	68
VBSR-F220/10#	1.0	0.75	3.2						26	35	40	45	50	60	65	69
VBSR-F330/15#	1.0	0.75	3.2						24	38	50	59	68	83	90	98
VBSR-FH330/15	1.5	1.1	3.2						38	53	60	68	75	90	96	101
VBSR-FH440/20#	1.5	1.1	3.2						32	50	66	78	90	110	120	134
VBSR-FH550/25#	1.5	1.1	3.2						40	63	83	98	113	138	150	168
VBSR-TW440/20	2.0	1.5	3.2						50	70	80	90	100	120	128	135
VBSR-TW650/30#	2.0	1.5	3.2						48	75	99	117	135	165	180	199
#ISI models																

Models	Power		Pipe size (cm)	Total head in metre Vs Discharge in LPH/LPM											
				LPM	120	110	100	90	80	70	60	50	40	30	20	0
	HP	kW		LPH	7200	6600	6000	5400	4800	4200	3600	3000	2400	1800	1200	0
VBSR-TW240/10	2.0	1.5	5.0	Head in Metre	23	29	35	40	45	49	54	58	62	66		72

Models	Power		Pipe size (cm)	Total head in metre Vs Discharge in LPH/LPM												
				LPM	390	360	330	300	270	240	210	180	150	120	90	0
	HP	kW		LPH	23400	21600	19800	18000	16200	14400	12600	10800	9000	7200	5400	0
VBSR-TW90/6 #	2.0	1.5	5.0	Head in Metre		11	13	15	17	18	20	21	22	24	25	29
VBSR-TR120/8 *#	3.0	2.2	5.0			14	17	20	23	26	28	30	32	34	35	40
VBSR-TR135/9 *	3.0	2.2	6.5			19	22	25	28	31	33	35	38	40	42	45
¤ Star rated models. #ISI models * Mixed flow models																

Models	Power		Pipe size (cm)	Total head in metre Vs Discharge in LPH/LPM												
				LPM	200	180	160	140	120	100	90	80	70	60	50	0
	HP	kW		LPH	12000	10800	9600	8400	7200	6000	5400	4800	4200	3600	3000	0
VBSR-TW180/10#	2.0	1.5	5.0	Head in Metre		16	24	34	40	46	49	53	56	58	61	64
VBSR-TW300/15¤	2.0	1.5	4.0					24	40	56	63	69	75	78	82	92
VBSR-TR300/15¤	3.0	2.2	5.0			24	40	56	70	80	83	86	89	92	93	100
VBSR-TR400/20	3.0	2.2	4.0					35	59	80	90	96	100	104	108	122
¤Star rated models. #ISI models																

V4 Borewell Submersible Pumps
VBS2 Series - Water Cooled (Special Voltage)

Speciality

- High discharge mixed flow model.
- Wide voltage band 200-380v.
- Rust preventive SS Body with matt finish.
- Rigid built cast iron housing parts.
- SS Shaft with dynamically balanced copper rotor.
- Energy efficient motor.
- Stainless steel hardware.
- Water lubricated SS thrust bearing and LTB bush bearings for motor.
- Poly wrapped winding wire with Least leakage.
- Rubber diaphragm balances the pressure fluctuations.

Accessories

Cable joining kit, Nylon strainer, Cable guard.

Cable joining kit

PERFORMANCE DETAILS

Models	Power		Pipe size (cm)	Total head in metre Vs Discharge in LPH/LPM												
				LPM	390	360	330	300	270	240	210	180	150	120	90	0
	HP	KW		LPH	23400	21600	19800	18000	16200	14400	12600	10800	9000	7200	5400	0
VBS2-TW90/6	2.0	1.5	5.0	Head in Metre		11	13	15	17	18	20	21	22	24	25	29
VBS2-TR135/9	3.0	2.2	6.5			19	22	25	28	31	33	35	38	40	42	45

Models	Power		Pipe size (cm)	Total head in metre Vs Discharge in LPH/LPM												
				LPM	200	180	160	140	120	100	90	80	70	60	50	0
	HP	KW		LPH	12000	10800	9600	8400	7200	6000	5400	4800	4200	3600	3000	0
VBS2-TW180/10	2.0	1.5	5.0	Head in Metre		16	24	34	40	46	49	53	56	58	60	64
VBS2-TR240/12	3.0	2.2	5.0		20	33	42	52	60	67						80

V4 Borewell Submersible Pumps
VBSRAM Series - Water Cooled

Speciality

- SS Shaft with dynamically balanced Copper rotor. • High operating efficiency.
- Clearance increased bowl sets. • Corrosion resistant stainless steel body for motor & pump.
- Water lubricated motor with easily rewindable stator. • Specially designed six segment fixed type SS thrust bearing to withstand high axial load.

Accessories

Control Panel

Cable joining kit

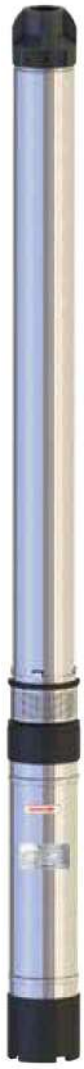
Control Panel, Cable joining kit, Nylon strainer, Cable guard.

Models	Power		Pipe size (cm)	Total head in metre Vs Discharge in LPH/LPM												
				LPM	90	80	70	60	50	45	40	35	30	20	15	0
	HP	kW		LPH	5400	4800	4200	3600	3000	2700	2400	2100	1800	1200	900	0
VBSRAM-F220/10	1.0	0.75	3.2	Head in Metre					26	35	40	45	50	60	65	69
VBSRAM-F330/15	1.0	0.75	3.2						24	38	50	59	68	83	90	98
VBSRAM-FH330/14	1.5	1.1	3.2			43	56	69	77	82	86	90	94	96	99	103
VBSRAM-FH440/20	1.5	1.1	3.2						32	50	66	78	90	110	120	134
VBSRAM-FH550/25	1.5	1.1	3.2						40	63	83	98	113	138	150	168
VBSRAM-TW425/19	2.0	1.5	3.2			58	76	93	105	111	117	122	127	132	135	140
VBSRAM-TW525/25	2.0	1.5	3.2						40	63	83	98	113	138	150	163
VBSRAM-TW650/30	2.0	1.5	3.2						48	75	99	117	135	165	180	199
VBSRAM-TR750/30⌑	3.0	2.2	3.2			90	117	144	165	174	183	191	198	211	217	229
VBSRAM-TR800/40⌑	3.0	2.2	3.2						64	100	132	156	180	220	240	260
⌑ Star rated models																

Models	Power		Pipe size (cm)	Total head in metre Vs Discharge in LPH/LPM												
				LPM	130	110	90	80	70	60	50	40	30	20	10	0
	HP	kW		LPH	7800	6600	5400	4800	4200	3600	3000	2400	1800	1200	600	0
VBSRAMW-FH250/13	1.5	1.1	4.0	Head in Metre	30	40	50	53	58	61	64	68	70	74	77	80

Models	Power		Pipe size (cm)	Total head in metre Vs Discharge in LPH/LPM												
				LPM	200	180	160	140	120	100	90	80	70	60	50	0
	HP	kW		LPH	12000	10800	9600	8400	7200	6000	5400	4800	4200	3600	3000	0
VBSRAM-TW225/13	2.0	1.5	4.0	Head in Metre				22	35	49	55	60	65	68	71	80
VBSRAM-TW300/15	2.0	1.5	4.0					24	40	56	63	69	75	78	82	92

V4 Borewell Submersible Pumps
VBSO & VBSOAM Series - Oil Cooled



Speciality

- SS body for both pump and motor.
- Food grade paraffin oil pre filled.
- Dynamically balanced rotor.
- SS Shaft for both motor and pump.
- Anti-friction ball bearings with lifelong lubrication.
- B-Class Electrical insulation.
- Wide voltage band (180 -240) operation.
- 99.99% pure super enamelled copper wire.
- Non return valve to avoid return flow and sand accumulation in pump.
- Rubber diaphragm balances the pressure fluctuations.

Accessories

Control Panel

Cable joining kit

Control Panel, Cable joining kit, Nylon strainer, Cable guard.

PERFORMANCE DETAILS

Models	Power		Pipe size (cm)	Total head in metre Vs Discharge in LPH/LPM												
				LPM	90	80	70	60	50	45	40	35	30	20	10	0
	HP	kW		LPH	5400	4800	4200	3600	3000	2700	2400	2100	1800	1200	600	0
VBSOAM-F160/10⌑	1.0	0.75	3.2	Head in Metre		35	38	41	44	46	48	49	50	53	56	60
VBSOAM-F180/12⌑	1.0	0.75	3.2			42	46	49	52	55	57	59	60	64	68	72
VBSOAM-F330/15	1.0	0.75	3.2						24	38	50	59	68	83	94	101
VBSOAM-FH325/21⌑	1.5	1.1	3.2						48	65	75	85	93	103	110	115
VBSOAM-FH440/20	1.5	1.1	3.2						32	50	66	78	90	110	125	134
VBSOAM-TW525/25⌑	2.0	1.5	3.2							80	100	120	130	140	150	165
⌑ Star rated models																

V4 Borewell Submersible Pumps
NOVA Series - Oil Cooled

Speciality

• SS body for both pump and motor • Food grade paraffin oil filled • Dynamically balanced rotor • SS Shaft for both motor and pump • Anti-friction ball bearings with lifelong lubrication • B-Class Electrical insulation • Wide voltage band (180 -240v) operation • 99.99% pure super enamelled copper wire • Non return valve to avoid return flow and sand accumulation in pump • Rubber diaphragm balances the pressure fluctuations

Accessories

Control Panel

Cable joining kit

Control Panel* (For NOVA-OTM Series only), Cable joining kit, Nylon strainer, Cable guard.

PERFORMANCE DETAILS

Models	Power		Pipe size (cm)	Total head in metre Vs Discharge in LPH/LPM												
				LPM	140	120	100	90	80	70	60	50	40	30	20	0
	HP	kW		LPH	8400	7200	6000	5400	4800	4200	3600	3000	2400	1800	1200	0
NOVA-OT0110	1.0	0.75	3.2	Head in Metre					15	29	40	50	58	64	68	72
NOVA-OTM0108	1.0	0.75	3.2				13	21	28	36	41	46	51	53	54	57
NOVA-OT0108	1.0	0.75	3.2				13	21	28	36	41	46	51	53	54	57
NOVA-OT1512	1.5	1.1	3.2				27	39	49	58	66	73	78	81	82	87
NOVA-OT1508	1.5	1.1	4.0		19	29	37	40	44	46	48	49	51	52	54	57
NOVA-OT0216	2.0	1.5	4.0		32	55	70	77	84	89	93	96	99	101	103	108

Models	Power		Pipe size (cm)	Total head in metre Vs Discharge in LPH/LPM										
				LPM	55	50	45	40	35	30	25	20	15	0
	HP	kW		LPH	3300	3000	2700	2400	2100	1800	1500	1200	900	0
NOVA-OT00507	0.5	0.37	3.2	Head in Metre	13	21	27	32	36	40	43	45	46	48
NOVA-OT0113	1.0	0.75	3.2			39	49	58	66	73	79	84	87	90
NOVA-OT1520	1.5	1.01	3.2			60	78	93	105	105	124	134	137	140

Precautions to use Borewell Submersible Pumps !

- Fill the motor with enough clear, cold drinking water (except oil cooled series) before installation.
- Use standard and proper size cable for connection.
- Cable joint should be intact and as per Instruction manual.
- Electrical connections are to be made as per circuit diagrams given in instruction manual/capacitor box.
- Do not operate the pump set without water under any circumstance, as this will cause damage to the motor.

Borewell Compressor Pump
For Lifting Water with Air Distributor Pipe

Robust, Long lasting and Efficient.

For clear, cold* water free from abrasive & chemically aggressive particles to satisfy the needs of water lifting from borewells having fewer yields, muddy water and at places where tube well pumps are not suitable.

*Max. liquid temperature 45°C

Cast Iron Motor body
Ensures constructional ruggedness for long lasting consistent performance.

Superior quality electrical stamping
Ascertain highly efficient motor.

Special steel alloy motor shaft
Offers rust free, stuck free persistent operation.

Splash lubrication
It reduces frictional damages in machine elements.

Special Cast iron Cylinder
Deep finned for quick heat dissipation.

Aluminium alloy Piston
Automotive low expansion type.

Special Steel alloy Valve Plate
For high resistance, high efficiency and for self-floating.

Operating/Technical specifications

Input supply: 1ΦAC, 180-240V*, 50Hz (*Voltage required at motor input terminal)

Power range: 0.75 – 1.5kW (1HP to 2HP)

Maximum Head: 180m.

Type of duty: S1 (Continuous)

Insulation class: B

Rotation: Clockwise, when viewed from motor side

V-GUARD

Monobloc Compressor Pumps

Speciality

- Compact design.
- Less maintenance required.
- Head range up to 120m.
- Available 1HP to 1.5HP.
- 12 months warranty.

Accessories

Air distributor.

VMC-FH400

PERFORMANCE DETAILS

			VMC-F300	VMC-F400	VMC-FH400
Capacity (HP/kW)			1.0/0.75	1.0/0.75	1.5/1.1
Water pipe size (cm)			2.5	2.5	2.5
Air pipe Size (cm)			1.2	1.2	1.2
Operatng Pressure (kg/cm2)			7	9	9
Speed in RPM			1440	1440	1440
Weight (kg)			40	43.5	45
Total Head (m)	Pumping Height (m)	Lifting Height (m)	Discharge in LPH		
30	5	25	1400	1525	1725
30	15	15	1800	2000	2200
30	25	5	3900	4200	4200
61	15	45	1100	1250	1450
61	30	30	1225	1350	1550
61	45	15	2600	3000	3000
91	25	70	900	1100	1200
91	45	45	1050	1300	1300
91	70	25	2300	2600	2700
122	30	90		900	1050
122	60	60		1200	1250
122	90	30		2500	2600

Belt Driven Compressor Pumps

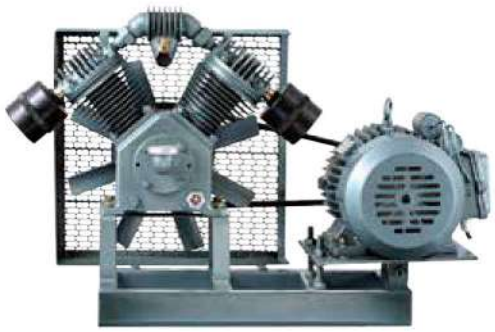
Speciality

- Available in two types - Twin stage & Single stage.
- Lower operation temperature.
- Vibration absorption.
- 12 months warranty.
- Available 1.0 HP to 2 HP.
- Head range upto 180m.

VBCM-F400

Accessories

Belt, hardwares/fasteners.

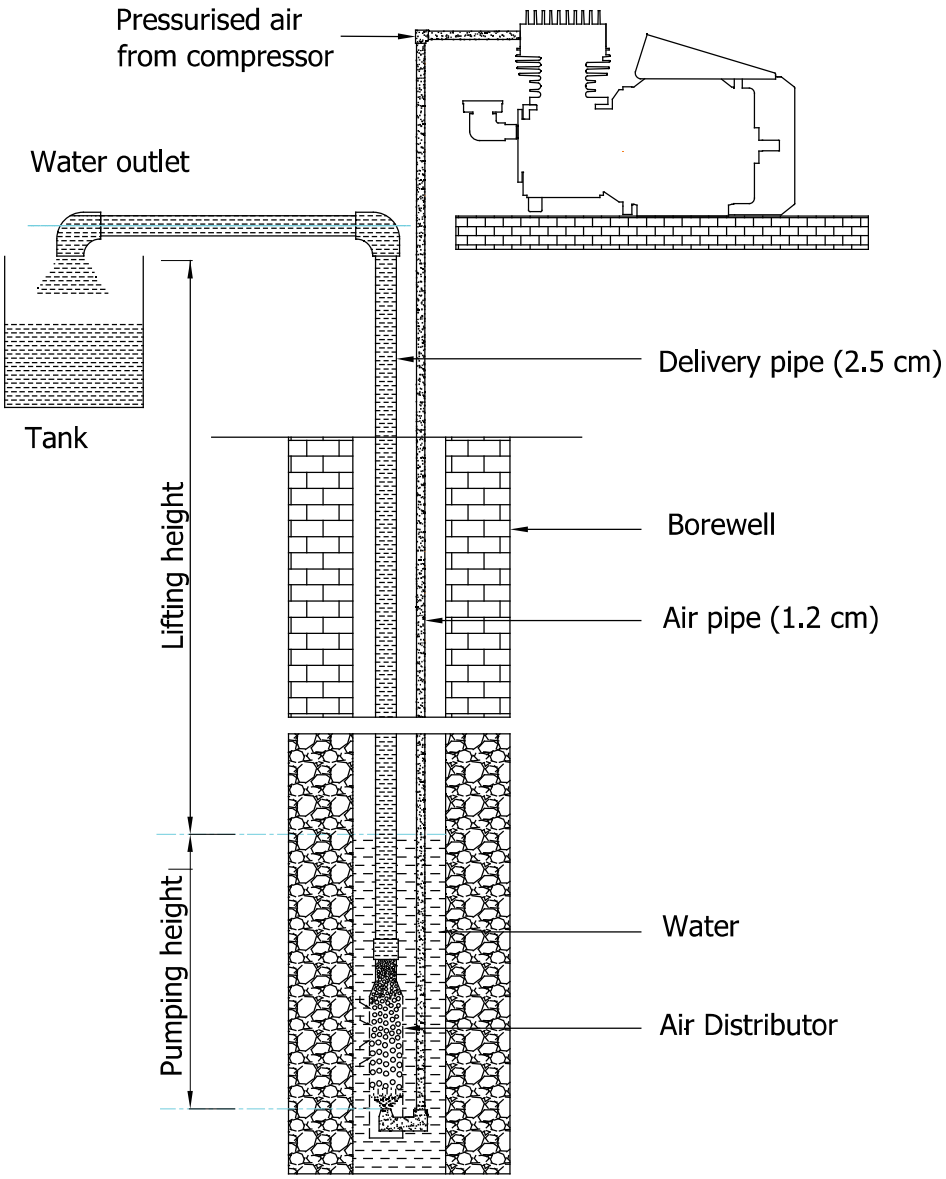


VBCDM-TW600

PERFORMANCE DETAILS

			VBCM-F400	VBCM-FH400	VBCDM-TW600
Capacity (HP/kW)			1.0/0.75	1.5/1.1	2/1.5
Water pipe size (cm)			2.5	2.5	2.5
Air pipe Size (cm)			1.2	1.2	1.2
Operating Pressure (kg/cm^2)			7	7	13
Speed in RPM			1200	900	580
Weight (kg)			29	30	45
Belt			A 38	A 38	B 48
Total Head (m)	Pumping Height (m)	Lifting Height (m)	Discharge in LPH		
30	5	25	1500	1700	2300
30	15	15	1800	2000	3500
30	25	5	4000	4000	7200
61	15	45	1100	1300	1900
61	30	30	1200	1400	2500
61	45	15	2800	2800	6000
91	25	70	900	1000	1650
91	45	45	1100	1100	2000
91	70	25	2400	2500	5000
122	30	90	800	950	1300
122	60	60	950	1000	2000
122	90	30	2300	2400	4500
152	30	120			900
152	75	75			1100
152	120	30			4000
183	60	120			700
183	90	90			1000
183	120	60			3500

Compressor Pump Installation



Precautions to use Borewell Compressor Pump For Lifting Water with Air Distributor Pipe !

- Cable joint should be intact and as per Instruction manual.
- Use standard and proper size cable for connection.
- Pump should be installed in a well-ventilated area and kept away from sunlight and rainfall.
- Motor must be connected to the power supply only through a motor starter; if the starter is tripped at the time of starting, unscrew the air relief valve fitted on the outlet nipple (on delivery side) and allow the air inside the cylinder to escape. Then close the valve and start the compressor.
- Ensure the direction of the fan should be same as the direction indicated on compressor pulley. Clean air filter once in a week. Use GI pipe as air pipe for 4.5 to 6 metre from the outlet, because air coming from the compressor is too hot to damage PVC pipe (if used).
- Check the oil level in the crank case daily (oil level should be within the circle marked on the oil level indicator), ensure that sufficient quantity of oil is present.
- The oil (SAE 40) in the pump has to be removed after 150 hours of working after installation. Then it is required to change the oil for every 500 hours of working.

Sewage Pumps

Robust, Long lasting and Efficient.

The sewage pumps are specifically designed for pumping domestic sewage and effluent liquids with a pH value of 6.5 - 8.5. These pumps are designed for fully submerged continuous operation.

*Max. liquid temperature 40°C

CSCR Induction motors as prime mover.

Provides constant speed and better torque.

The dual silicon carbide mechanical seal system and extra oil seal protection

Protects the motor from sewage contamination, to provide you exceptionally long pump service life. Contributes leak free operation.

Equipped with auto reset motor protector

Prevents the motor damage from abnormal heat and current.

99.99% ; Super enameled copper windings

Constitutes efficient and long-lasting motor.

Stainless shaft and fasteners

For enhanced life.

Rugged cast iron pump housing, impeller and motor casing

Long life of operation even with rough condition of usages.

Operating/Technical specifications

Input supply: 1ΦAC, 180-240V*, 50Hz (*Voltage required at motor input terminal)

Power range: 0.75 - 1.5kW (1HP to 2HP)

Flow range: 3700 - 6000

Rated Speed: 2800

Type of duty: S1 (Continuous)

Insulation class: B

Rotation: Clockwise, when viewed from motor side

V-GUARD

Sewage Pumps

Speciality

- Dry type submersible induction motor
- Shaft and fasteners are in stainless steel to enhance life
- Impeller and casing are coated with chemical resistance coating to improve life and performance
- Solid handling size upto 20 mm
- Cable connectors filled with resin to prevent water leakage into the motor through the cable wire
- Dual mechanical seal prevents water entry into the dry motor portion at two interfaces, one at pump portion to oil chamber and another at oil chamber to dry motor portion
- Compact in construction
- High Efficiency
- Long Durability

VSWS-F25US

VSWS-FH45US

VSWS-TW55US

PERFORMANCE DETAILS

Models	Power		Pipe size (cm)	Total head in metre Vs Discharge in LPH					
	HP	kW	Delivery	m	3	6	9	12	15
VSWS-F25US	1.0	0.75	5.0	LPH	24800	19000	7500		
VSWS-FH45US	1.5	1.1	5.0		26000	20500	14000	6000	
VSWS-TW55US	2.0	1.5	5.0			30000	25200	20000	12000

Precautions to use Sewage Pumps !

- The pumping medium temperature must not exceed 40 degree Celsius
- PH range of medium between 6.5-8.5
- Ensure proper earthing to avoid electrical risks
- The depth of water must be less than 5 meters, more than 0.5 meters
- The pump must not be operated in dry condition
- The allowable particle size is upto 20 mm

Pressure Wash Pumps

Smooth, Silent and Efficient.

The pressure wash pumps are specially designed for high pressure cleaning solution with less consumption of water.

*Max. liquid temperature 40°C

Powered by copper wound induction motor*.

Constitutes efficient and long-lasting motor.

Equiped with auto reset motor protector

Prevents the motor damage from abnormal heat and current.

Highly durable steel reinforced hoses

For enhanced life even in rough condition.

Dual filter system for enhanced water filteration.

Protect's the pump from sewage contamination, to provide you exceptionally long pump service life.

*Except Hybrid model (Used universal motor).

V-GUARD

Pressure Wash Pumps

Speciality

- Automatic operation
- Consume less water for cleaning.
- Powerful and versatile.
- Added accessories for special application.
- Low operational noise.
- Highly durable reinforced hoses.
- Powered by copper wound motor with F class insulation*.
- Extreme pressure and vacuum# for effective cleaning.

*Except Hybrid model. # In selected model.

Technical Specifications

Model	Hyper Wash-1590
Voltage/Freq.	200V-240V/50Hz
Motor Type	Induction Motor
Working Pressure	90bar
Max. Pressure	135bar
Flow max.	6.0 L/min
Power	1500 Watts
Power Cable Length	5 Meter
Hose Length	5 Meter
Handle	Yes
Soap Tank	Yes
Wheels	No
Gross Weight	14.5 Kg

Model	Hyper Wash-18110
Voltage/Freq.	200V-240V/50Hz
Motor Type	Induction Motor
Working Pressure	110bar
Max. Pressure	140bar
Flow max.	7.0 L/min
Power	1800w
Power Cable Length	5 Meter
Hose Length	5 Meter
Handle	Yes
Soap Tank	Yes
Wheels	Yes
Gross Weight	18.5 Kg

Model	HYBRID PW-90/VC18
Voltage/Freq.	200V-240V/50Hz
Motor Type	Carbon brush Motor
Working Pressure	90 bar
Max. Pressure	120 bar
Vacuum	1800 mm Of water column
Flow max.	6 L/min
Power (Dual Motor)	1500 W (PW), 1200 W (VC)
Power Cable Length	5 Meter
Hose Length	5 Meter
Soap Tank	Yes
Dust Capacity	3 L
Gross Weight	17.5 Kg

Precautions to use Pressure Wash Pumps !

- The pumping medium temperature must not exceed 40 degree Celsius.
- Ensure proper earthing to avoid electrical risks.
- Do not operate the pump set without water under any circumstance, as this will cause damage to the pump.
- All accessories / pipe joints must be leak proof.
- Use standard and proper size cable for connection.
- Recommended for domestic use only.

Pump Control Panels

Speciality

• Powder coated MS enclosure for complete corrosion resistance [1] • High quality virgin Acrylonitrile Butadiene Styrene (ABS) used [2] • Fitted with premium quality Miniature Circuit Breaker for rapid overload & short circuit protection • Fitted with Heavy Duty Start & Run Capacitors • Designed for easy & quick mounting • Pleasing aesthetic look • Premium panels with superior quality voltmeter & ammeters [3] • Premium panels with high quality AC contactors with rugged design [3] • Provided with pushbutton for voltmeter for enhanced life • Fitted with premium quality connectors & wire joints.

V-GUARD

Openwell

Sl.No	Panel Code	Running	Starting	MCB (A)	Contactor (A)	Ammeter	Voltmeter	Panel material	Panel Type
1	NOSS-H60	25	Nil	6	Nil	Nil	Nil	ABS	Regular
2	OS-H60	36	Nil	6	Nil	Nil	Nil	ABS	Regular
3	OS-F90	30	40/60	10	Nil	Nil	Nil	Metal	Regular
4	OSS-F90	45	Nil	10	Nil	Nil	Nil	ABS	Regular
5	OS-RF90	36	Nil	10	Nil	Nil	Nil	ABS	Regular
6	OSS-F110	45	Nil	16	Nil	Nil	Nil	ABS	Regular
7	OSK-F110 (OW Panel 50µF)	50	Nil	10A	Nil	Nil	Nil	ABS	Regular
8	OS-FH150	75	60/80	16	Nil	Nil	Nil	Metal	Regular
9	OSS-TW100	60	100/120	16	Nil	Nil	Nil	Metal	Regular
10	OSV-FH300 (OW Panel 60, 40/60µF)	60	40/60	10A	Nil	Nil	Nil	Metal	Regular
11	OSV-F120 (OW Panel 36, 40/60µF)	36	40/60	10A	Nil	Nil	Nil	Metal	Regular
12	OSV-F150 (OW Panel 50, 40/60µF)	50	40/60	10A	Nil	Nil	Nil	Metal	Regular
13	OSS-FH130 (OW Panel 90, 60/80µF)	90	60/80	16A	Nil	Nil	Nil	Metal	Regular

Tubewell

Sl.No	Panel Code	Running	Starting	MCB (A)	Contactor (A)	Ammeter	Voltmeter	Panel material	Panel Type
1	3BAM-1012	50	100/120	10	12	(0-30A)	(0-300V)	Metal	Regular
2	3BAM-1018	60	100/120	10	12	(0-30A)	(0-300V)	Metal	Regular
3	BAM-1508	60	100/120	16	16	(0-30A)	(0-300V)	Metal	Regular
4	BAMR-1015	36	100/120	10	12	(0-30A)	(0-300V)	Metal	Regular
5	BAMR-1520	50	120/150	16	16	(0-30A)	(0-300V)	Metal	Regular
6	BAMR-2030	90(45+45)	150/200	16	16	(0-30A)	(0-300V)	Metal	Regular
7	BAMR-3009	90(45+45)	150/200	20	25	(0-30A)	(0-300V)	Metal	Regular
8	BAMR-3040	136(100+36)	200/250	25	25	(0-30A)	(0-300V)	Metal	Regular
9	VBM72F16R (BW Panel 72,150/200µF)	72	150/200	16A	16A-2P	(0-30A)	(0-300V)	Metal	Regular
10	VBM25D6D (BW Panel 25,100/120µF)	25	100/120	6A	25A- 1P	Digital	Digital	Metal	Regular
11	VBM36D6D (BW Panel 36,100/120µF)	36	100/120	6A	25A- 1P	Digital	Digital	Metal	Regular
12	VBM50D10D (BW Panel 50,100/120µF)	50	100/120	10A	25A- 1P	Digital	Digital	Metal	Regular
13	VBM60D10D (BW Panel 60,100/120µF)	60	100/120	10A	25A- 1P	Digital	Digital	Metal	Regular
14	VBM50E10R2 (BW Panel 50-660V,120/150µF)	50-660V	120/150-440V	10A	12A-4P	(0-30A)	(0-300V)	Metal	Regular
15	VBM75F16R2 (BW Panel 75-660V,150/200µF)	75-660V	150/200-440V	16A	16A-4P	(0-30A)	(0-300V)	Metal	Regular
16	VBM36D6 (BW Panel 36,100/120µF)	36	100/120	6A	Nil	(0-30A)	(0-300V)	Metal	Regular
17	VBM36D10 (BW Panel 36,100/120µF)	36	100/120	10A	Nil	(0-30A)	(0-300V)	Metal	Regular
18	VBM50D10 (BW Panel 50,100/120µF)	50	100/120	10A	Nil	(0-30A)	(0-300V)	Metal	Regular

(1)Applicable for panels with Sheet metal body. (2) Applicable for panels with plastic / ABS body. (3) Applicable for premium borewell submersible pump panels.

Electronic Control Switch

Sl.No	Model Code	Type	Pipe Size	Type of Mounting	Starting Pressure	Maximum Pressure	Maximum Pump Current	Gross Weight
1	Automatic Pump Controller	VAPC-03	1" BSP	Inline Vertical	1.2 Bar	10 Bar	10 Amps	1 Kg

Cable Selection Chart

CABLE SELECTION CHART FOR BOREWELL PUMPS

Motor Rating			Cable Size in sq.mm						
VOLTS	kW	HP	1.0	1.5	2.5	4.0	6.0	10	
220-240V	0.37	0.5	80	120	190	290	430	780	Maximum Length in Metres
	0.55	0.75	70	105	170	250	380	700	
	0.75	1.0	50	75	125	190	280	520	
	0.93	1.25	45	70	110	170	250	440	
	1.1	1.5	-	65	110	160	240	420	
	1.5	2.0	-	60	100	150	210	380	
	1.86	2.5	-	-	80	120	180	320	
	2.2	3.0	-	-	60	90	140	240	

CABLE SELECTION CHART FOR OPEN WELL PUMPS

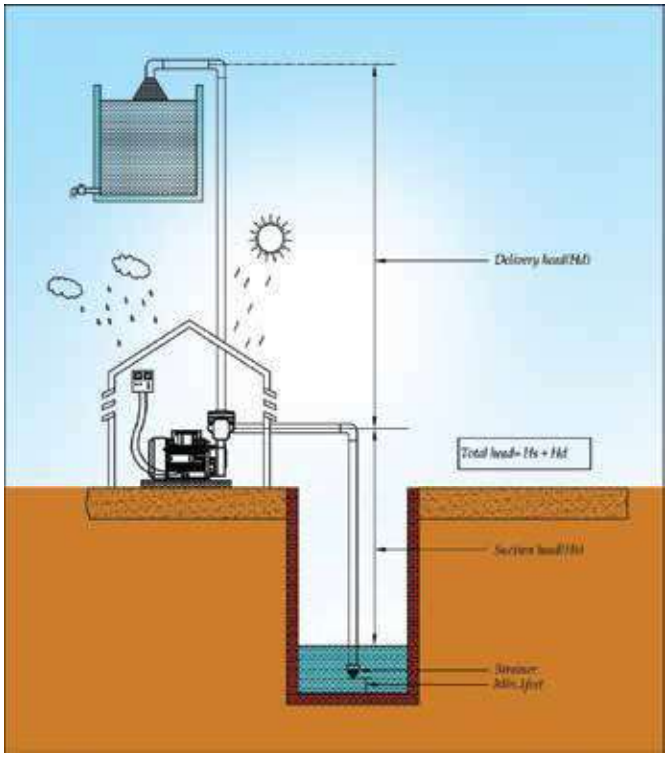
Motor Rating			Cable Size in sq.mm						
VOLTS	kW	HP	1.0	1.5	2.5	4.0	6.0	10	
220-240V	0.37	0.5	90	135	220	330	490	850	Maximum Length in Metres
	0.55	0.75	7.0	115	190	280	420	730	
	0.75	1.0	60	85	138	210	310	530	
	0.93	1.25	57	80	135	200	300	510	
	1.1	1.5	-	70	115	170	260	440	
	1.5	2.0	-	65	100	150	230	390	
	1.86	2.5	-	-	85	130	190	330	
	2.2	3.0	-	-	65	100	150	260	

Note: * The table states maximum allowable length of three core flat PVC sheathed, submersible copper cables for installation of single phase submersible pumps.
* The Maximum Voltage drop considered here is 20 V.

GENERAL POINTS TO BE CONSIDERED WHILE INSTALLING A PUMP

- Pump should be located as near as possible to the water source.
- Reduce the number of pipe fittings and replace 'elbows' with 'bends' in the pipe connection.
- Minimize the usage of flexible green hose pipes because it causes higher friction loss.
- Use only recommended pipe size. Use ISI marked pipes having minimum friction loss.
- Provide proper shielding for the pump to prevent water entry. Ensure that it does not block the air circulation to the pump.
- Install the pump in a dry place. Do not cover the pump with material such as plastic cover, polyethylene sheet, rubber sheet, canvas clothes, etc., because it can hold moisture. Higher moisture content will lead to burning of windings.
- Do not operate the pump at peak hours/other than recommended voltage range.

Pump Installation



For more information about the working of pump, selection, installation and any other doubts related to pumps, please contact your nearest V-Guard Branch /Service centres.

- Use proper gauge wire with sufficient length for electrical connection. Avoid excess length of wires otherwise it may cause Voltage drop. Cable joint should be insulated properly and also avoid loose contacts in the joints.
- It is better to use a good motor starter.
- Use ISI marked foot valve with good quality strainer.
- Avoid using of Submersible pumps in plastic tanks, if used it should be properly earthed.

SELECTION OF PUMPS

Before selecting a pump, the **total head** against which the pump has to work must be calculated. The following factors are to be considered while calculating the total head (see fig.).

Suction Head (Hs): The vertical distance between the top of the water level in the well and the center of the pump. While calculating suction head we have to consider the lowest possible water level in the well (lowest level considering the seasonal variations).

Delivery Head (Hd): The vertical distance between the pump side and the top of the delivery pipe i.e., the level at which water is to be delivered.

Friction Head (Hf): The loss due to pipe and pipe fittings must be calculated.

Head loss due to friction at pipe and pipe fittings (HF)	
Pipe lies in a horizontal position	The friction loss will be in the ratio of 10:1 (i.e. for each 10 feet/10 metre of pipe, head loss will be 1 feet/1 metre
Pipe lies in an inclined position	The friction loss will be in the ratio of 8:1 (i.e. for each 8 feet/8 metre of pipe, head loss will be 1 feet/1 metre)
Bend	The friction loss will be 2 feet for each bend
Elbow	The friction loss will be 3 feet for each elbow

Total head of the pump Hs + Hd + Hf

Besides that, we have to consider/check the recommended Voltage range of the pump, in order to suit the voltage availability at site.

CONVERSION CHART	
1 Metre	3.28 feet
1 Foot	0.305 metre
1 Foot	12 inch
1 Inch	25.4 mm
1 Kg/cm^2	10.33 m of water column
1 HP	746 watts
1 Litre	0.001 cubic metre
1 Cubic metre	1000 litre
1 Gallon	3.78 litre
1 PSI	0.0703 kg/cm^2

V-Guard Electric Motors

Improved efficiency Power packed performance

The most powerful performance in extreme conditions...

V-Guard Motors are designed and developed by V-Guard industries Ltd., the company which has carved a niche for itself in the last 40 years with a wide range of electrical & electronic products that are used and trusted by more than 50 million people across India. V-Guard motors are made from top grade castings & finest components using state-of-the-art technology, to the latest International Standards. Each and every state in the manufacturing process is closely monitored through stringent quality tests to ensure impeccable standards, superior performance and unmatched durability. V-guard motors are available in more than 200 models ranging from 0.25 HP to 3.0 HP in single phase segment and 0.5 HP to 25 HP in three phase segments.

LINE OPERATED THREE PHASE AC MOTORS (IE2)

Three Phase Squirrel Cage

Smart Series

PRODUCT RANGE

Output range	:	0.5 to 25HP (0.37 kW to 18.5kW)
Frame size	:	71 to 200L
Phase	:	Three
No. of pole	:	2/4/6
Enclosure material	:	Cast Iron frame
Type of enclosure	:	Totally Enclosed Fan Cooled (TEFC)
Mounting Type	:	Foot (B3), Flange (B5), Face (B14) and combinations

SALIENT FEATURES

- Superior Energy Efficient Motor as per IS 12615 – Lower on power consumption
- High efficient stator laminations with superior low loss CRNO steel
- Suitable for VFD applications
- Robust & Optimized designs
- Lower heat generation

STANDARDS & REFERENCES

V-Guard "SMART" Series motors conform to the following Indian & International standards

Title		**Indian Standards**	**International Standards**
Three phase induction motor	:	IS : 12615 - 2018	IEC 60034 – 1
Method of determining losses & efficiency	:	IS : 12615 - 2018	IEC 60034 – 2
Dimensions & Output for electric machines	:	IS : 1231 – 1974 **(Foot mounted motors)** IS : 2223 – 1983 **(Flange mounted motors)**	IEC 60072 - 1
Classification of degree of protection	:	IS : 4691 – 1985	IEC 60034 – 5
Noise limit	:	IS : 12065 – 1987	IEC 60034 – 9
Vibration limit	:	IS : 12075 – 1987	IEC 60034 – 14
Terminal marking & direction of rotation	:	IS : 4728 – 1975	IEC 60034 – 8
Symbols of construction and mounting arrangement	:	IS : 2253 – 1974	IEC 60034 – 7
Method of Cooling	:	IS : 6362 – 1971	

DERATION FOR HIGHER AMBIENT & ALTITUDE

DERATING FACTORS: The deration factors applicable under different conditions are given below:

Operating conditions: 415V ± 10%,50Hz ± 5%

Table A: Permissible output as % of standard output for different Ambient temperatures

40˚C	45˚C	50˚C	55˚C	60˚C	65˚C
100%	100%	92%	85%	78%	70.5%

Table B: Permissible output as % of standard output at different altitude in meters. (Above MSL)

1000m	1500m	2000m	2500m	3000m	3500m	4000m
100%	95%	90%	84%	78%	75%	70%

Table C: Permissible output as % of standard output for different % of unbalance in Voltage

1%	2%	3%	4%	5%
100%	95%	90%	78%	70%

Table D: Permissible output as % of standard output at different voltages

Voltage	100%	90%	85%	80%	70%
40°C Ambient	100%	100%	90%	85%	75%
45°C Ambient	100%	90%	85%	80%	70%

EFFECT OF VARIATION OF VOLATGE AND FREQUENCY ON THE CHARACTERISTICS OF MOTOR

Characteristics	Voltage		Frequency	
	110%	90%	105%	95%
TORQUE Starting & Maximum	Increase 21%	Decrease 19%	Decrease 10%	Increase 11%
SPEED Synchronous Full load	No Change Increase 1%	No Change Decrease 1.5%	Increase 5% Increase 5%	Decrease 5% Decrease 5%
CURRENT No Load Starting Full Load Temp. Rise Overload Capacity Magnetic Noise	Increase 10-15% Increase 10-12% Decrease 7% Decrease 3-4% Increase 21% Slight Increase	Decrease 10-12% Decrease 10-12% Increase 11% Increase 6-7% Decrease 19% Slight Decrease	Decrease 5-6% Decrease 5-6% Slight Decrease Slight Decrease Slight Decrease Slight Decrease	Increase 5-6% Increase 5-6% Slight Increase Slight Increase Slight Increase Slight Increase
EFFICIENCY Full Load	Increase 0.5-1.0%	Decrease 2%	Slight Increase	Slight Decrease
POWER FACTOR	Decrease 3%	Increase 1%	Slight Increase	Slight Decrease

PERMISSIBLE TEMPERATURE RISE

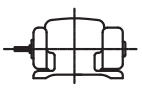
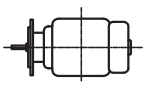
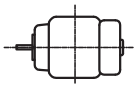
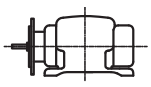
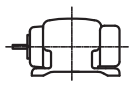
Standard three phase motors are manufactured with Class 'F' insulation and temperature rise restricted to Class 'B'

Class of insulation	Max. Permissible Temp. Limit ˚C	Max. Permissible temp rise for windings at Amb. Temp. in ˚C			
		40	45	50	60
A	105	60	55	50	40
B	130	80	75	70	60
F	155	105	100	90	85
H	180	125	120	115	105

Temperature rise and maximum temperature at the hottest points of the winding Tmax according to the temperature classes of IEC 600034-1/IS 12615.

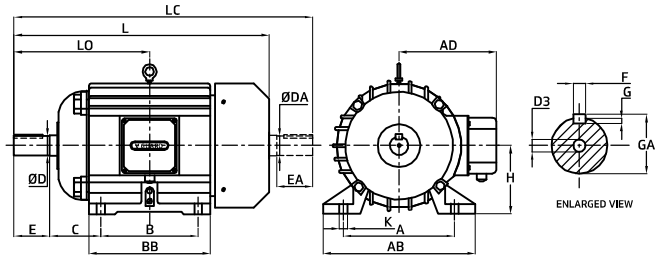
1st characteristic numeral → / 2nd characteristic numeral ↓	Non-protected machine	Machine protected against solid objects greater than 50 mm	Machine protected against solid objects greater than 12 mm	Machine protected against solid objects greater than 2.5 mm	Machine protected against solid objects greater than 1 mm	Dust-protected machine	Dust-tight machines
Non-protected machine	0	1	2	3	4	5	6
Machine protected against dripping water	1						
Machine protected against dripping water when tilted up to 15°	2						
Machine protected against spraying water up to 60°	3						
Machine protected against splashing water	4				IP 44		
Machine protected against water jets	5					IP 55	
Machine protected against heavy seas	6						
Machine protected against the effects of immersion	7						
Machine protected against the effects of continuous submersion	8						

MOUNTING ARRANGEMENTS

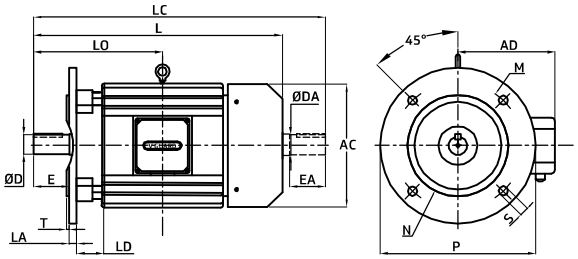
Mounting	Foot Mounted	Flange Mounted	Face Mounted	Foot Cum Flange	Foot Cum Face
					
Basic	B3 /IM 1001	B5 /IM 3001	B14 /IM 3601	B35 / IM 2001	B34 / IM 2101
Variations	B6,B7,B8,V5 & V6	V1 & V3	V18 & V19	V15 & V 36	-
Frames	63 to 160L	63 to 160L	63 to 100L	63 to 160L	63 to 100L

MOUNTING AND OVERALL DIMENSIONS

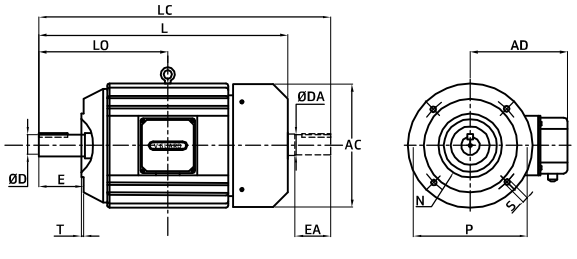
Foot Mounted Motors (B3)



Flange Mounted Motors (B5)



Face Mounted Motors (B14)



FRAME SIZE	COMMON DIMENSIONS											FOOT MOUNT (B3)					FLANGE MOUNT (B5)							FACE MOUNT (B14)				
	ØD, ØDA	E, EA	F	GA	G	ØD3	L	LC	LO	AD	ØAC	A	B	C	H	ØK	ØM	ØN	ØP	S	T max.	LA	LD min	ØM	ØN	ØP	ØS	T max.
63	11j6	23	4	12.5	8.5	M4	208	237	103	93	118	100	80	40	63	7	115	95j6	140	10	3	9	16	75	60	90	M5	2.5
71	14j6	30	5	16	11	M5	253	285	125	115	140	112	90	45	71	7	130	110j6	160	10	3.5	9	16	85	70	105	M6	2.5
80	19j6	40	6	21.5	15.5	M6	280	321	140	126	160	125	100	50	80	10	165	130j6	200	12	3.5	10	20	100	80	120	M6	3
90S	24j6	50	8	27	20	M8	320	358	168	136	178	140	100	56	90	10	165	130j6	200	12	3.5	10	20	115	95	140	M8	3
90L	24j6	50	8	27	20	M8	320	384	168	136	178	140	125	56	90	10	165	130j6	200	12	3.5	10	20	115	95	140	M8	3
100L	28j6	60	8	31	24	M10	375	438	193	150	200	160	140	63	100	12	215	180j6	250	15	4	11	24	130	110	160	M8	3.5
112M	28j6	60	8	31	24	M10	388	454	200	168	225	190	140	70	112	12	215	180j6	250	15	4	11	24	-	-	-	-	-
132S	38k6	80	10	41	33	M12	445	531	239	210	260	216	140	89	132	12	265	230j6	300	15	4	12	24	-	-	-	-	-
132M	38k6	80	10	41	33	M12	483	569	256	210	260	216	178	89	132	12	265	230j6	300	15	4	12	24	-	-	-	-	-
160M	42k6	110	12	45	37	M16	606	724	323	254	320	254	210	108	160	15	300	250j6	350	19	5	13	32	-	-	-	-	-
160L	42k6	110	12	45	37	M16	649	785	355	254	320	254	254	108	160	15	300	250j6	350	19	5	13	32	-	-	-	-	-

Dimensions of foot mounted motors as per IS: 1231-1974, Flange & face mounted motors as per IS: 2223-1983. All dimensions are in mm.

NOMENCLATURE

How to read the model code : VIT4A80-10

Letter	What it means
V	V-Guard
I	Industrial motor
T	Three Phase
2/4/6/8	2-2880RPM; 4-1440RPM; 6-960 RPM 8-740RPM
A/B/C/D/E	A-Foot Mount (B3); B-Flange Mount; C-Face Mount (B14); D-Foot cum flange (B35); E-Foot cum face (B34)
Frame size	63,71,80,90S,90L,100L,112M,132S,132M,160M,160L,200L
Power output	Q-0.25hp; H-0.5hp; TF-0.75 hp10-1hp;15-1.5hp;75-7.5hp;100-10hp;250-25hp

THREE PHASE AC SQUIRREL CAGE INDUCTION MOTORS

Voltage	: 415 Volts ±10%, 3Ø A.C	Frequency	: 50Hz ± 5%
Combined Variation	: ±10%	Ambient temperature	: 45°C
Insulation	: Class 'F'	Winding temperature rise	: Designed to operate within class 'B' limit
Duty	: Continuous (S1)	Protection class	: IP 55
Altitude	: Up to 1000 meters above MSL	Service Factor	: 1.15

PERFORMANCE CHARACTERISTICS OF ENERGY EFFICIENT INDUCTION MOTOR

2 Pole 3000 RPM									
Output		Model*	Frame	FL Speed (rpm)	FL Current (Amps)	FL Torque (kg-m)	TB / T	IB / I	Efficiency (%)
HP	kW								
0.50	0.37	VIT2A71-H	71	2750	1.2	0.13	1.7	6.5	72.2
0.75	0.55	VIT2A71-TF	71	2760	1.6	0.19	1.7	6.5	74.8
1.0	0.75	VIT2A80-10	80	2780	2.0	0.26	1.7	6.5	77.4
1.5	1.1	VIT2A80-15	80	2790	2.8	0.38	1.7	6.5	79.6
2.0	1.5	VIT2A90S-20	90S	2800	3.7	0.52	1.7	6.5	81.3
3.0	2.2	VIT2A90L-30	90L	2810	5.0	0.76	1.7	7.0	83.2
5.0	3.7	VIT2A100L-50	100L	2820	8.0	1.28	1.6	7.0	85.5
7.5	5.5	VIT2A132S-75	132S	2830	11.0	1.89	1.6	7.0	87.0
10.0	7.5	VIT2A132S-100	132S	2840	15.0	2.57	1.6	7.0	88.1
15.0	11.0	VIT2A160M-150	160M	2860	21.5	3.74	1.6	7.0	89.4
20.0	15.0	VIT2A160M-200	160M	2870	29.0	5.09	1.6	7.0	90.3
25.0	18.5	VIT2A160L-250	160L	2880	35.0	6.25	1.6	7.0	90.9
4 Pole 1500 RPM									
Output		Model*	Frame	FL Speed (rpm)	FL Current (Amps)	FL Torque (kg-m)	TB / T	IB / I	Efficiency (%)
HP	kW								
0.50	0.37	VIT4A71-H	71	1330	1.4	0.27	1.7	6.0	70.1
0.75	0.55	VIT4A80-TF	80	1340	1.7	0.40	1.7	6.0	75.1
1.0	0.75	VIT4A80-10	80	1360	2.2	0.54	1.7	6.0	79.6
1.5	1.1	VIT4A90S-15	90S	1370	2.9	0.78	1.7	6.0	81.4
2.0	1.5	VIT4A90L-20	90L	1380	3.8	1.06	1.7	6.0	82.8
3.00	2.20	VIT4A100L-30	100L	1390	5.1	1.54	1.7	7.0	84.3
5.0	3.7	VIT4A112M-50	112M	1410	8.1	2.55	1.6	7.0	86.3
7.5	5.5	VIT4A132S-75	132S	1420	11.4	3.77	1.6	7.0	87.7
10.0	7.5	VIT4A132M-100	132M	1430	15.4	5.11	1.6	7.0	88.7
15.0	11.0	VIT4A160M-150	160M	1440	22.0	7.44	1.6	7.0	89.8
20.0	15.0	VIT4A160L-200	160L	1440	30.0	10.14	1.6	7.0	90.6
25.0	18.5	VIT4A180M-250	180M	1440	36.0	12.51	1.6	7.0	91.2
6 Pole 1000 RPM									
Output		Model*	Frame	FL Speed (rpm)	FL Current (Amps)	FL Torque (kg-m)	TB / T	IB / I	Efficiency (%)
HP	kW								
0.50	0.37	VIT6A80-H	80	870	1.4	0.41	1.6	6.0	69.0
0.75	0.55	VIT6A80-TF	80	870	1.9	0.62	1.6	6.0	72.9
1.0	0.75	VIT6A90S-10	90S	890	2.3	0.82	1.6	6.0	75.9
1.5	1.1	VIT6A90L-15	90L	900	3.2	1.19	1.6	6.0	78.1
2.0	1.5	VIT6A100L-20	100L	900	4.0	1.62	1.6	6.0	79.8
3.0	2.2	VIT6A112M-30	112M	910	5.5	2.35	1.5	7.0	81.8
5.0	3.7	VIT6A132S-50	132S	920	8.8	3.91	1.5	7.0	84.3
7.5	5.5	VIT6A132M-75	132M	920	12.7	5.82	1.5	7.0	86.0
10.0	7.5	VIT6A160M-100	160M	930	16.7	7.85	1.5	7.0	87.2
15.0	11.0	VIT6A160L-150	160L	935	23.0	11.45	1.4	7.0	88.7
20.0	15.0	VIT6A180L-200	180L	940	30.5	15.53	1.4	7.0	89.7
25.0	18.5	VIT6A200L-250	200L	940	37.5	19.16	1.4	7.0	90.4

All performance figures are subjected to IS: 12615 – 2018, IS: 325 – 1996 & IEC 60034 – 1

* Corresponding Flange & Face Mount models are available with same features

FL Speed : Minimum Speed at Rated Output
FL Torque : Maximum Torque at Rated Output
IB / I : Maximum Breakaway Current in terms of Full load Current
FL Current : Maximum Current at Rated Output
TB / T : Minimum Breakaway Torque in terms of Full load Torque

Single Phase Squirrel Cage

Endura Series

PRODUCT RANGE

Output range	: 0.25 to 3HP (0.18 kW to 2.2kW)
Frame size	: 63 to 112M
Phase	: Single
No. of pole	: 4
Enclosure material	: Cast Iron frame
Type of enclosure	: Totally Enclosed Fan Cooled (TEFC) Drip proof (DP)
Mounting Type	: Foot (B3), Flange (B5), Face (B14) and combinations

SALIENT FEATURES

- Standard designs as per IS, NEMA standards
- Super Enamel coated Copper winding wire
- Single phase motors are fitted with T.O.P.
- Customized motor design capability
- Low maintenance cost

STANDARDS & REFERENCES

V-Guard "ENDURA" Series motors conform to the following Indian & International standards

Title		Indian Standards	International Standards
Single phase induction motors	:	IS : 996 – 2009	
Method of determining losses & efficiency	:	IS : 7572 – 1974	
Dimensions & Output for electric machines	:	IS : 1231 – 1974 **(Foot mounted motors)**	IEC 60072 - 1
		IS : 2223 – 1983 **(Flange mounted motors)**	

NOMENCLATURE

How to read the model code : VIS4A90-HDG

Letter	What it means
V	V-Guard
I	Industrial motor
S	Single Phase
4	1440RPM
A/B/C/D/E	A-Foot Mount (B3); B-Flange Mount (B5); C-Face Mount (B14); D-Foot cum flange (B35); E-Foot cum face (B34)
Frame size	63,71,80,90S,90L,100L,112M
Power output	Q-0.25hp; H-0.5hp;TF-0.75;10-1hp;15-1.5hp;20-2hp; 30-3hp
R, S & D	R-CSR S- CSIR & D -CSCR
G & X	G-Grinder segments code & X-Heavy duty application

SINGLE PHASE AC SQUIRREL CAGE INDUCTION MOTORS

Voltage	: 220 Volts ±10%, 1Ø A.C	Frequency	: 50Hz ± 5%
Combined Variation	: ±10%	Ambient temperature	: 45°C
Insulation	: Class 'B'/'F'	Protection class	: IP 44
Duty	: Continuous (S1)	Direction	: Bi-directional

PERFORMANCE CHARACTERISTICS OF SINGLE PHASE AC SQUIRREL CAGE INDUCTION MOTORS

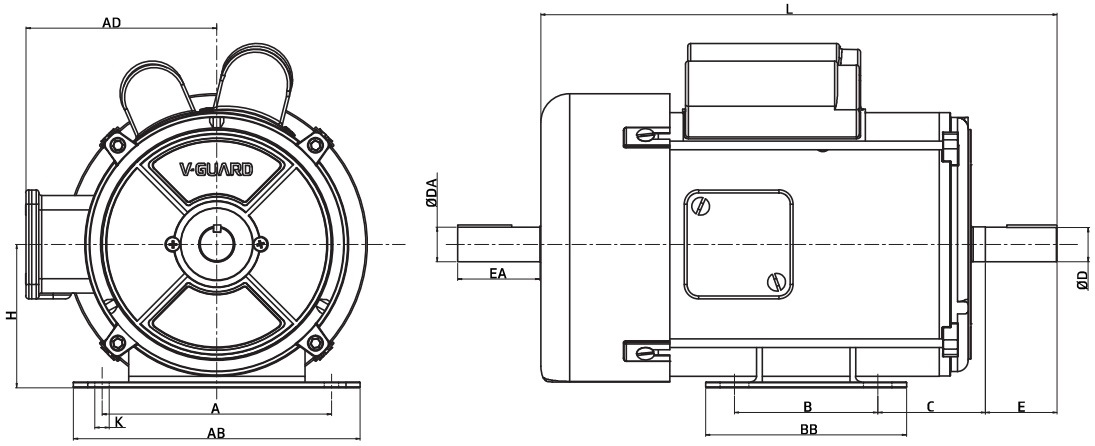
4 Pole 1500 RPM

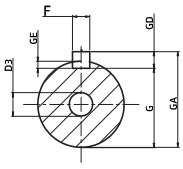
Sl. No.	Output		Foot mount Model	Enclosure	Frame	FL Speed (rpm)	FL Current (Amps)	FL Torque (kg-m)	TB / T	IB / I	Efficiency (%)	Cap. Run (mfd)	Cap. Start (mfd)
	HP	kW											
1	0.25	0.18	VIS4A90S-QSG*	DP	90S	1420	2.4	0.12	1.5	6.5	58	---	40/60
2	0.5	0.37	VIS4A80-HD	TEFC	80	1420	3	0.25	1.5	6.5	65	20	60/80
3	0.5	0.37	VIS4A90S-HDG*	DP	90S	1440	2.7	0.25	1.5	6.5	69	15	60/80
4	1.0	0.75	VIS4A90L-10D	TEFC	90L	1410	5	0.52	1.5	6.5	71	25	90
5	1.0	0.75	VIS4A100L-10D	TEFC	100L	1440	5	0.51	1.5	6.5	75	20	90
6	1.5	1.1	VIS4A100L-15D	TEFC	100L	1440	7	0.74	1.5	6.5	78	25	90
7	2.0	1.5	VIS4A100L-20D	TEFC	100L	1440	10	1.01	1.5	6.5	78	36	90
8	2.0	1.5	VIS4A112M-20D	TEFC	112M	1440	10	1.01	1.5	6.5	73	36	200/250
9	3.0	2.2	VIS4A112M-30D	TEFC	112M	1450	14	1.48	1.5	6.5	75	45	200/250

All performance figures are subjected to IS: 996-2009
* IP not applicable

FL Speed : Minimum Speed at Rated Output
FL Torque : Maximum Torque at Rated Output
IB / I : Maximum Breakaway Current in terms of Full load Current
FL Current : Maximum Current at Rated Output
TB / T : Minimum Breakaway Torque in terms of Full load Torque

MOUNTING & OVERALL DIMENSIONS





ENLARGED VIEW

MODEL	L (± 2.5mm)	A	AB	B	BB	C	K	ØD, ØDA	E,EA	F	G	GA	GD	GE	H
VIS4AB56E1-HS	256	130	172	75	105	98	20*10	16(j6)	48	5	13.5	21	2.5	2.5	89
VIS4AB56E1-10S	360														
VIS4AB56E1-10D															
VIS4AB56E1-10DT															
VIS4A100SE1-15D	336	160	200	112	140	65	17.5*12	24(j6)	50	8	20	27	4	3	100
VIS4A100SE1-20DGN	356														
VIS4A100SE1-20D															
VIS4A100SE1-20DW															
VIS4A100SE1-30D	376														
VIS4A100SE1-30DW															

Single Phase Commercial Motors

Delite Series

PRODUCT RANGE

Output range	: 0.25 to 3HP (0.18 kW to 2.2kW)
Frame size	: B48, B56 &100S
Phase	: Single
No. of pole	: 4
Enclosure material	: MS Frame
Type of enclosure	: Totally Enclosed Fan Cooled (TEFC) Drip Proof Fan Cooled (DPFC), Drip Proof (DP)
Mounting Type	: Foot (B3), Flange (B5)

SALIENT FEATURES

- Power packed performance
- Powder coated enclosure

NOMENCLATURE

How to read the model code : VIS4A100SE1-20DW

Letter	What it means
V	V-Guard
I	Industrial motor
S	Single Phase
4	1440RPM
A/B/C/D/E	A-Foot Mount (B3); B-Flange Mount; C-Face Mount (B14); D-Foot cum flange (B35); E-Foot cum face (B34)
Frame size	B48,B56,100S,
E1	E1-Commercial segment code
Power output	Q-0.25hp; H-0.5hp;TF-0.75;10-1hp;15-1.5hp;20-2hp; 30-3hp
R, S & D	R-CSR S- CSIR & D -CSCR
W	W-Wood cutting series motor

SINGLE PHASE COMMERCIAL AC SQUIRREL CAGE INDUCTION MOTORS

Voltage	: 220 Volts ±10%, 1Ø A.C	Frequency	: 50Hz ± 5%
Combined Variation	: ±10%	Ambient temperature	: 45°C
Insulation	: Class 'B'/'F'	Direction	: Bi-directional
Duty	: Continuous (S1)		

PERFORMANCE CHARACTERISTICS OF SINGLE PHASE COMMERCIAL AC SQUIRREL CAGE INDUCTION MOTORS

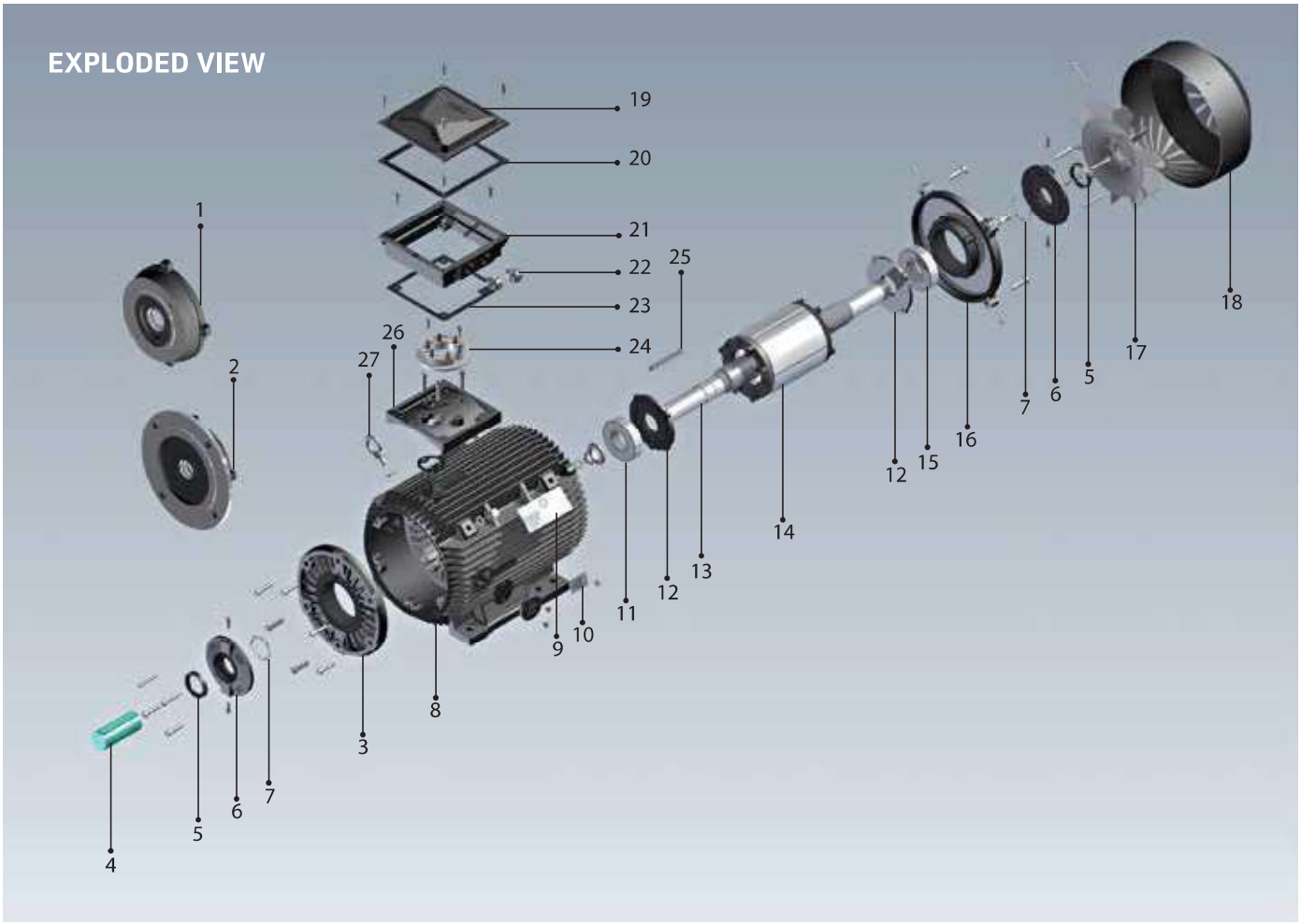
4 Pole 1500 RPM

Sl. No.	Output		Foot mount Model	Enclosure	Frame	FL Speed (rpm)	FL Current (Amps)	FL Torque (kg-m)	TB / T	IB / I	Efficiency (%)	Cap. Run	Cap. Start
	HP	kW											
1	0.5	0.37	VIS4AB56E1-HS	DP	B56	1400	3.5	0.26	1.5	6.5	70	---	60/80
2	1.0	0.75	VIS4AB56E1-10S	DPFC	B56	1380	7.3	0.53	1.5	6.5	69	---	80/100
3	1.0	0.75	VIS4AB56E1-10D	DPFC	B56	1410	6	0.52	1.5	6.5	74	10	80/100
4	1.0	0.75	VIS4AB56E1-10DT	TEFC	B56	1430	6	0.52	1.5	6.5	74	15	120/150
5	1.5	1.1	VIS4A100SE1-15D	TEFC	100S	1440	8	0.74	1.5	6.5	80	15	200/250
6	2.0	1.5	VIS4A100SE1-20DGN	TEFC	100S	1440	8	0.74	1.5	6.5	80	25	200/250
7	2.0	1.5	VIS4A100SE1-20D	TEFC	100S	1440	10	1.01	1.5	6.5	81	20	200/250
8	2.0	1.5	VIS4A100SE1-20DW	TEFC	100S	1440	10	1.01	1.5	6.5	81	20	200/250
9	3.0	2.2	VIS4A100SE1-30D	TEFC	100S	1440	14	1.49	1.5	6.5	76	30	200/250
10	3.0	2.2	VIS4A100SE1-30DW	TEFC	100S	1440	14	1.49	1.5	6.5	76	30	200/250

All performance values are at full load conditions.

FL Speed : Minimum Speed at Rated Output
FL Torque : Maximum Torque at Rated Output
IB / I : Maximum Breakaway Current in terms of Full load Current
FL Current : Maximum Current at Rated Output
TB / T : Minimum Breakaway Torque in terms of Full load Torque

Note: As improvements are made in design from time to time, specifications and performance are subjected to change without prior information. For latest details, you may get in touch with our Branches or Service Centres.
All pictures shown are for illustration purpose only. Actual product may vary.



LIST OF MOTOR SPARES

1. Face cover (B14)
2. Flange cover (B5)
3. Foot drive end cover (B3)
4. Shaft protection
5. Oil seal
6. Bearing cover outside
7. Wave washer
8. Motor body
9. Nameplate
10. Earth plate
11. Drive end bearing
12. Bearing cover inside
13. Shaft
14. Rotor
15. Non-drive end bearing
16. Back cover
17. Cooling fan
18. Fan cover
19. Terminal box top
20. Terminal box gasket lid
21. Terminal box middle
22. Cable gland
23. Terminal box gasket
24. Terminal connector
25. Key
26. Terminial box bottom
27. Eye bolt

Notes : .....

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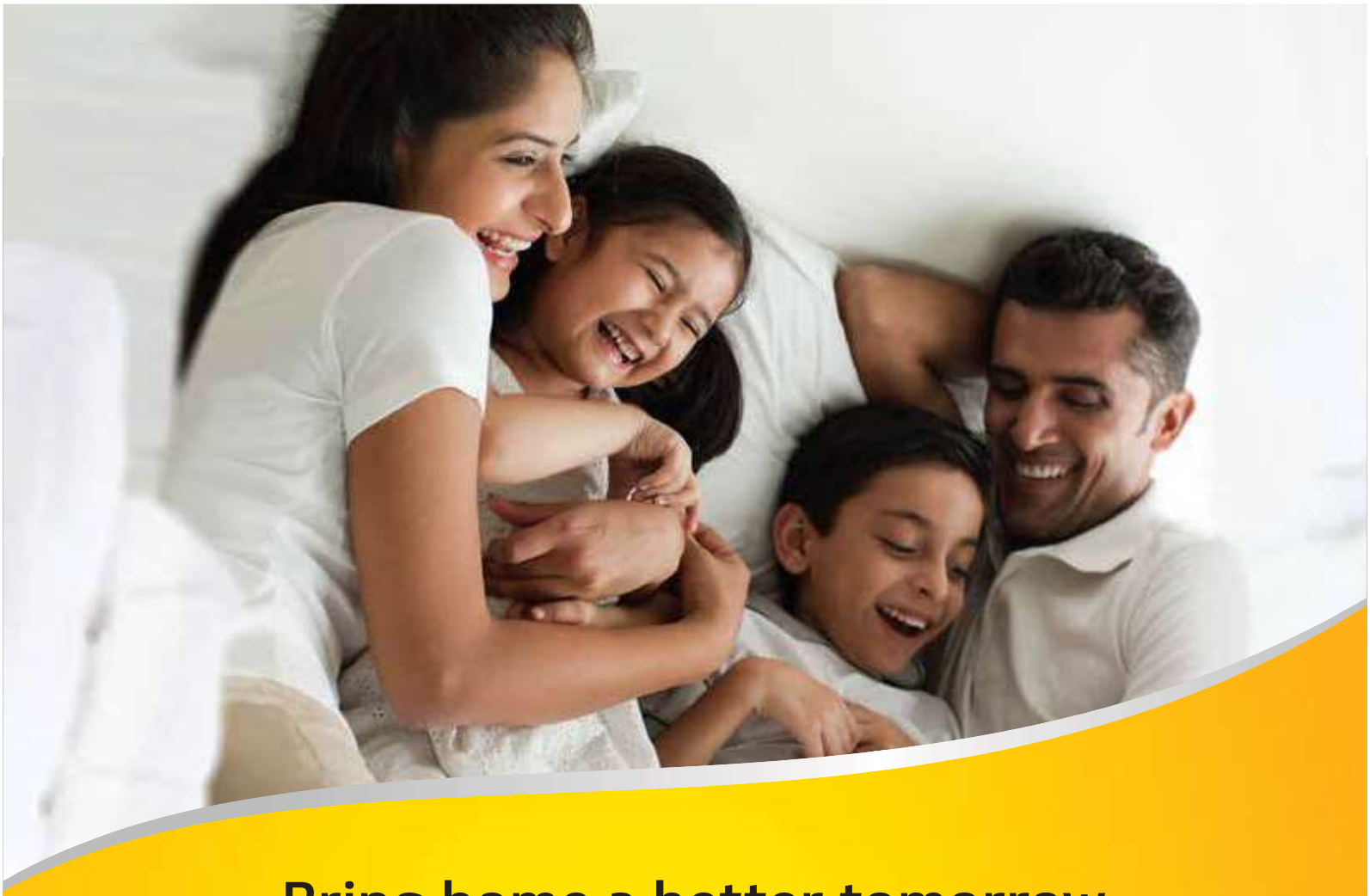

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