DAB®
WATER•TECHNOLOGY

4" Submersible Borehole Pump

Product Range

WHITE® INTERNATIONAL

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TESTIMONIAL

"The new DAB iSolar System…it's the future…a real new innovation, easy install. Incredible performance & efficiency…to replace all old windmill systems"

John Wilde
Moree Pumps Irrigation & Plumbing

4" BOREHOLE PUMPS - INTRODUCTION

With over 2 million units produced every year, DAB's electronic pumps are synonymous with technology and reliability.

Thanks to a merger with TESLA, a leading Italian manufacturer of submersible borehole motors, DAB is now a world leader in the manufacturer of submersible borehole motors with more than 200,000 units produced annually from the factory in Italy.

When combined with the pump production by DAB of a wide range of submersible borehole pumps from 3" to 12", DAB are able to provide specific solutions for every kind of application, from small domestic irrigation to the most demanding industrial applications and municipal water supply.

The range of TESLA motors, **designed and manufactured in Italy** with ISO 9001 certified processes, is capable of satisfying a wide range of needs and includes water encapsulated motors (4" and 6"), water cooled rewindable motors (up to 14") and oil filled rewindable (4").

The range has now been further extended with the addition of a 4" DC / AC powered motor allowing for input power from Solar, Mains or Generator energy sources giving complete flexibility on and off the grid.

White International Pty Ltd have partnered with DAB Pumps since 1988 and are the exclusive importer, distributor and technical representative for DAB Pumps in Australasia.

Our businesses work closely together and technically collaborate on pump projects to find tailor made solutions for our customers' pumping requirements.

DAB Pumps and White International Pty Ltd puts at your disposal a dedicated technical and commercial team, which provide product development, immediate support and flexibility, while also offering a high degree of customization for all your borehole pump requirements.

KEY POINTS

- A professional quality pump
- Micro casted stainless steel structural parts , supporting higher performance, higher power and higher torque when in use
- Proven techno polymer floating stack design- reduced wear, binding and easier starts in heavy sand applications guaranteed capability up to 120g/m^3
- Integrated non - return valve in discharge for stable system operation

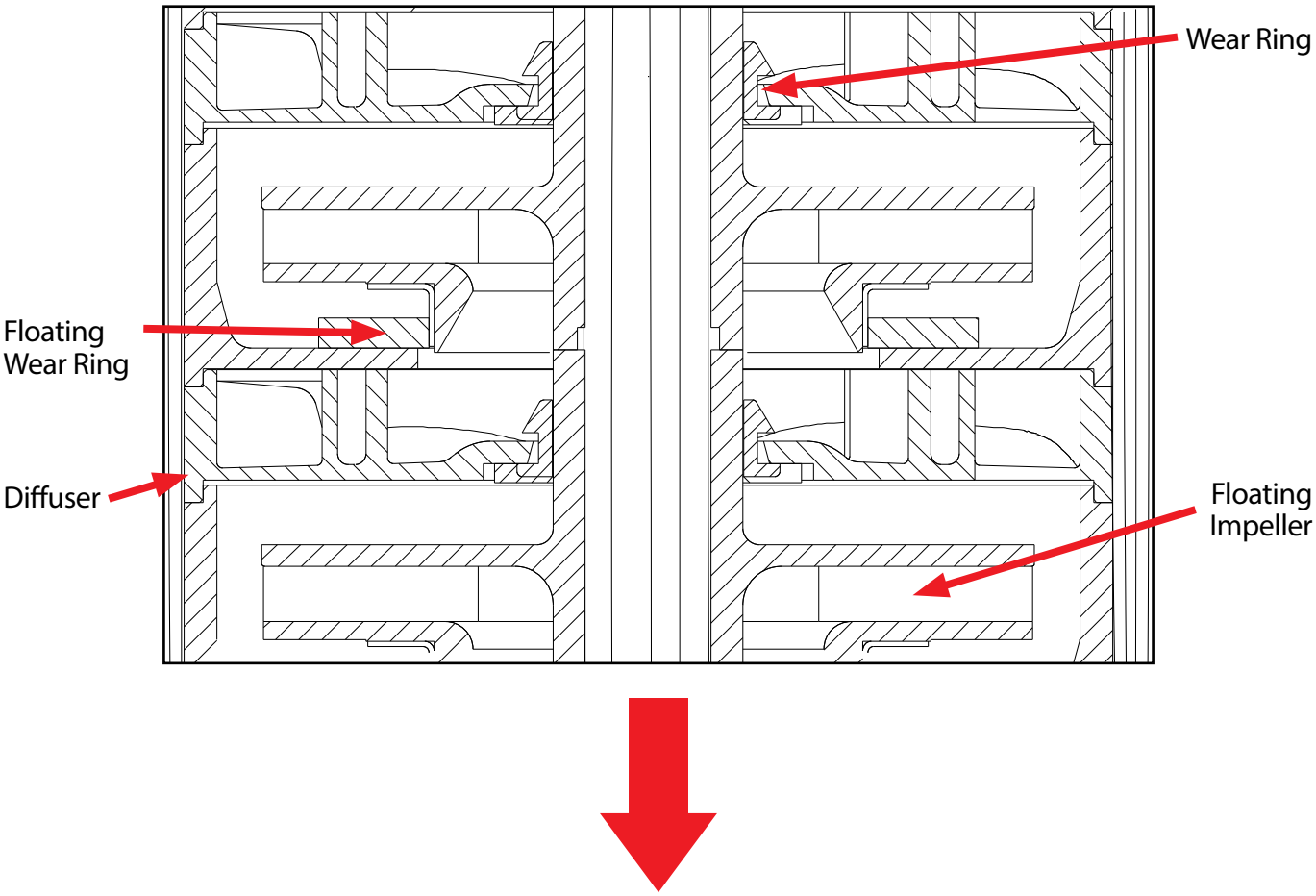
4" BOREHOLE SUBMERSIBLE PUMPS

Sand Tolerance

The floating impeller stack allows vertical movement of impellers to enable small solids to be passed through without locking up the pump.

This also allows easier start ups by preventing sand lock up and ensures trouble free operation and longer motor life.

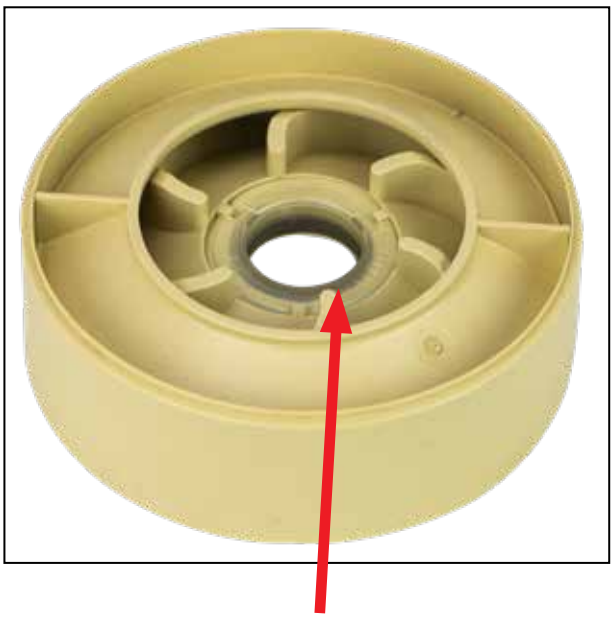
FLOATING STACK =
sand capable up to 120g / m^3



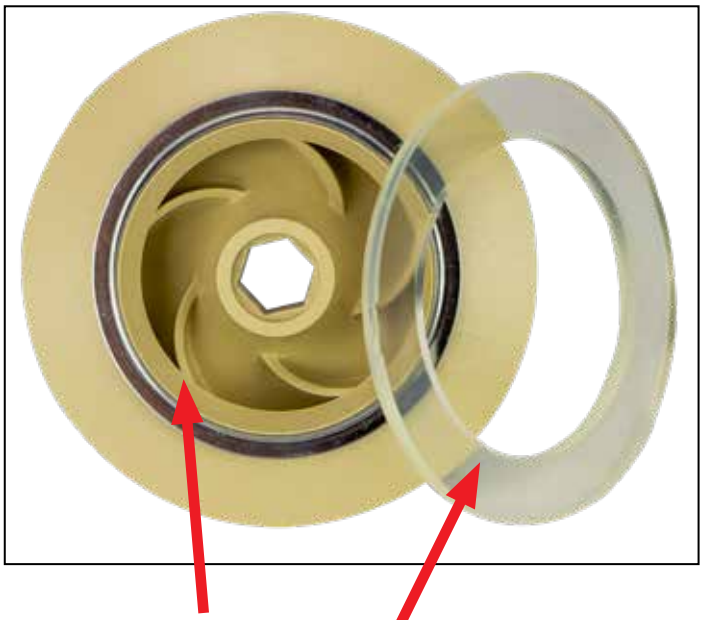
Floating impeller stack
High resistance to abrasion thanks to the hydraulic design:
Max amount of suspended sand: 120 g/m^3

4" BOREHOLE SUBMERSIBLE PUMPS

Impellers and Diffusers



Diffuser with wear ring



Impeller with AISI 304 wear ring

Separation between stage casing and impeller by floating ring

REDUCED WEAR OR BLOCKING ISSUES IN HEAVY SAND CONDITIONS

- Impellers, diffusers and stage casing made in technopolymer
- Hexagonal posi drive shaft with splined coupling in AISI 304 (NEMA)

4" BOREHOLE SUBMERSIBLE PUMPS

Applications

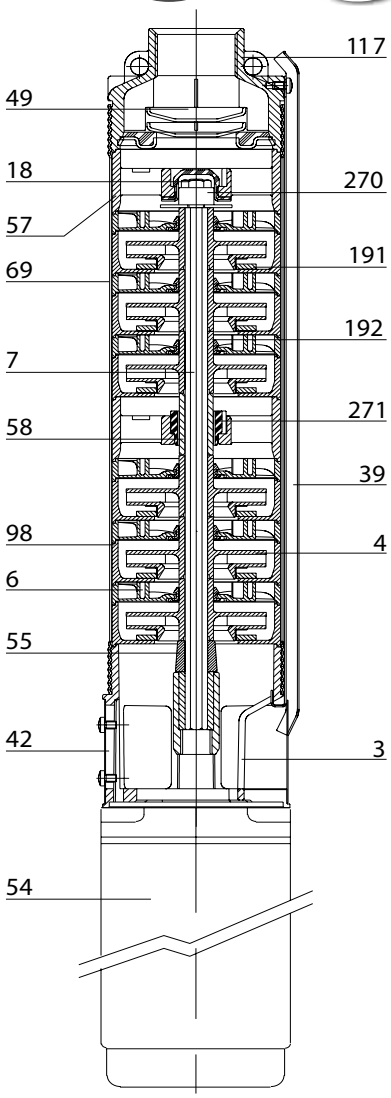
Submersible electric pumps for 4" wells or larger, capable of generating a wide range of flows and heads. These units have a very extensive range of applications for lifting, distribution, and pressurisation in domestic, farming, civil and industrial water systems, filling of pressure vessels and tanks, irrigation and fire-fighting systems. For Example: Water supply for domestic dwellings, irrigation of gardens and nursery's, horticultural and agricultural water supply, filling of storage tanks and cisterns, extreme lifts to storage tanks and off-grid water supplies.

DAB Borehole submersible pumps incorporate the latest technology in hydraulic design and materials to reduce running costs, extend pump life and increase serviceability.

- Technopolymer impellers and diffusers for resistance to wear and corrosion
- Floating special material abrasion wear ring reduces wear due to sand, allows easier starting
- Micro cast stainless steel support and valve body for high strength and corrosion resistance
- 4GG and 4OL single phase motors use remote starter box with manual reset overload
- Large range to suit most applications
- Floating impeller stack for easier starts in abrasive conditions
- Posi drive pump shaft improves impeller life in adverse conditions
- Maximum sand quantity = 120 gm / m^3.

Materials

N.	PART*	MATERIALS
3	BASE SUPPORT	AISI 304 MICROCAST STAINLESS STEEL
4	IMPELLER	TECHNOPOLYMER A with thrust in STAINLESS STEEL AISI 304 X5CrNi1810 - UNI 6900/71
6	DIFFUSER	TECHNOPOLYMER A
7	SHAFT WITH COUPLING	STAINLESS STEEL AISI 304 X5CrNi1810 - UNI 6900/71
18	LOCKING NUT	STAINLESS STEEL
39	CABLE SHEATH	STAINLESS STEEL AISI 304 X5CrNi1810 - UNI 6900/71
42	STRAINER	STAINLESS STEEL
49	VALVE	STAINLESS STEEL AISI 304 X5CrNi1810 - UNI 6900/71
54	MOTOR	STAINLESS STEEL AISI 304 X5CrNi1810 - UNI 6900/71
55	SPACER	TECHNOPOLYMER A
57	SUPPORT	TECHNOPOLYMER A
58	INTERMEDIATE BUSHING	STAINLESS STEEL AISI 304 X5CrNi1810 - UNI 6900/71
69	PUMP LINER	STAINLESS STEEL AISI 304 X5CrNi1810 - UNI 6900/71
98	DIFFUSER BODY	TECHNOPOLYMER A
117	UPPER HEAD	AISI 304 MICROCAST STAINLESS STEEL
191	FRONT THRUST RING	AISI 304 MICROCAST STAINLESS STEEL
192	REAR THRUST RING	AISI 304 MICROCAST STAINLESS STEEL
270	UPPER SHAFT GUIDE BUSH	RUBBER
271	INTERMEDIATE SHAFT GUIDE BUSH	ABRASION - PROOF SYNTHETIC MATERIAL



4" BOREHOLE MOTORS - WATER FILLED - 4GG

Technical Data

Flanging: NEMA 4"
Insulation Class: F
Protection Class: IP68
Cooling Flow Speed: min. 0,3 m/s 35ºC
Power Supply Tolerance: + 6% / - 10%
Max. Starts: 20/h
Max Operating Depth: 300 m
Horizontal Operation: 0,5 HP - 10 HP

KEY POINTS

- Canned motor design
  - Stator now resin filled for better heat management and mechanical resistance.
- Motor filled with water - no risk of contamination
- Proven Kingsbury thrust bearings
- All water contact parts made of 304 Stainless Steel
- VFD compatible

General Data

4" submersible asynchronous two-pole electric motor made entirely of AISI 304 stainless steel for the parts in contact with water. The thrust block and bushes are cooled and lubricated with a mixture of water and glycol.

The rotor is mounted on a Kingsbury self-centering thrust block designed to withstand significant axial loads. Stator housed in an airtight AISI 304L stainless steel casing with internal sleeve and outer casing and flanges.

The cable connector is removable for the purpose of quick and easy maintenance. The cable is ACS, WRAS and KTW certified. The motor is suitable for use with variable frequency drive (30 Hz - 50 Hz). For the 50 Hz single-phase version, the capacitor and manually resettable overload protection are in the electrical control box provided separately.

Overload protection to be provided by the user for the three-phase version.

SS WATER FILLED CONSTRUCTION FEATURES			
	Stator housed in an outer casing and flanges in AISI 304L. The stator has 24 slots to ensure better elasticity and smooth operation; the copper conductors have a double layer of Class H insulating enamel.		Kingsbury thrust block equipped with carbon clearance ring and oscillating pads in highstrength stainless steel machined by Tesla with a spherical lapping process. From 0,5 HP to 1.5 HP: 2000 N From 2 HP to 3 HP: 3000 N From 4 HP to 10 HP: 6000 N
			Shafts with terminal in AISI 304/Duplex, with special surface hardening and polishing in the work area of the bushings. Squirrel cage rotor in aluminium for power ratings up to 3 HP and in copper for motors of power above 4 HP.

4" BOREHOLE MOTORS - OIL FILLED - 4OL

Technical Data

NEW

Flanging: NEMA 4"
Insulation Class: F
Protection Class: IP68
Cooling Flow Speed: min. 0,3 m/s 35ºC
Power Supply Tolerance: + 6% / - 10%
Max. Starts: 20/h
Max Operating Depth: 250 m
Horizontal Operation: 0,5 HP - 10 HP

KEY POINTS

- Reduced cost
- Rewindable stator therefore repairable
- Ball bearing design better for lower speed applications
- 24 slot motor design that is VFD compatible, we are the only oil filled motor that is currently.
- All water contact parts made of 304 Stainless Steel
- FDA approved food grade oil removing risk of bore contamination.

General Data

4" rewindable submersible asynchronous two-pole electric motor made entirely of AISI 304 stainless steel for the parts in contact with water. Cooling and lubrication of ball bearings is assured by a special FDA approved coolant (no risk of bore contamination).

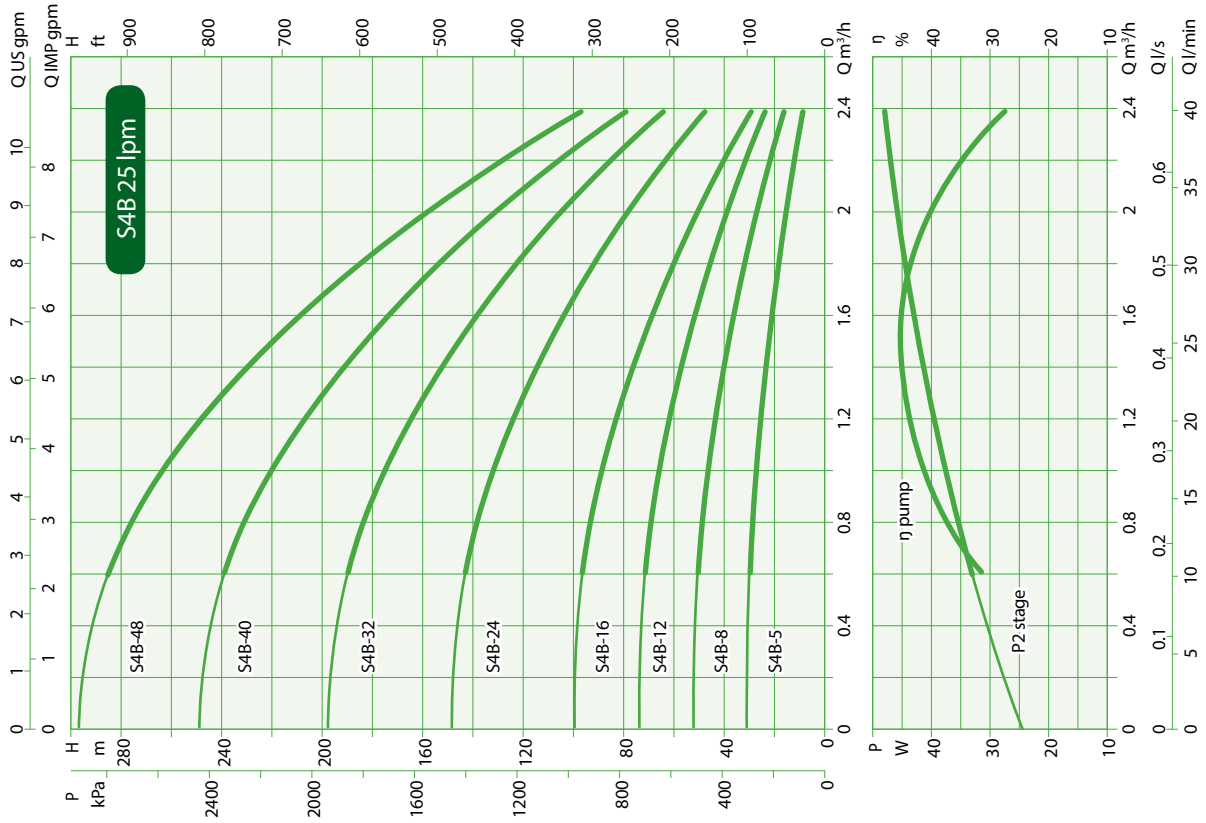
Stator housed in a AISI 304L stainless steel casing fixed with steel pins to the upper support of the motor.

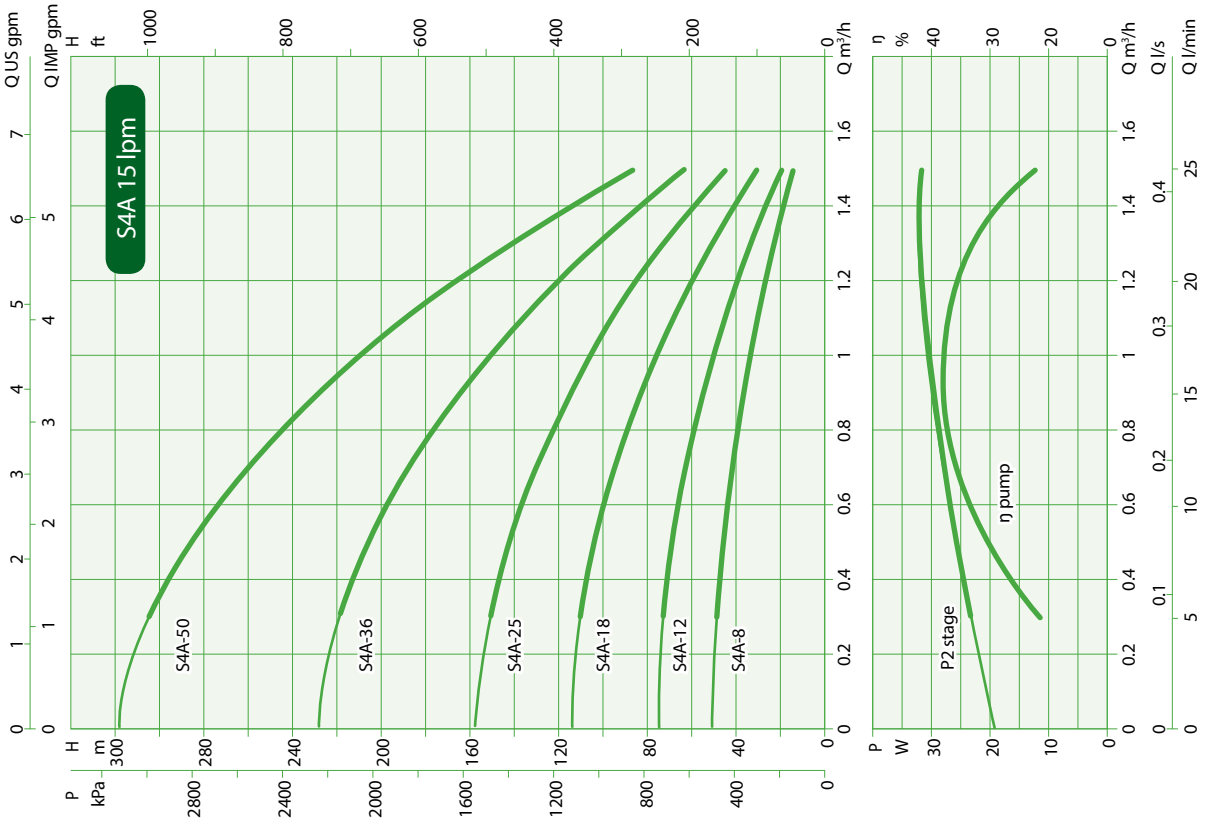
The cable connector is removable for the purpose of quick and easy maintenance. The cable is ACS, WRAS and KTW certified. The motor is suitable for use with variable frequency drive (30 Hz - 50/60 Hz). For the single-phase version, the capacitor and manually resettable overload protection are in the electrical control box provided separately.

Overload protection to be provided by the user for the three-phase version.

SS OIL FILLED CONSTRUCTION FEATURES		
 Rewindable stator housed in an outer casing in AISI 304L. The stator has 24 slots to ensure better elasticity and smooth operation; copper conductors with a double layer of Class H insulating enamel.	 Oversized ball bearings of high axial load. From 0,5 HP to 2 HP: 2000 N 3 HP: 3000 N From 4 HP to 5,5 HP: 4000 N From 7,5 HP to 10 HP: 5000 N	 Shafts with terminal in AISI 304/Duplex, with special surface hardening process. Squirrel cage rotor in aluminium for power ratings up to 3 HP and in copper for motors of power above 4 HP.

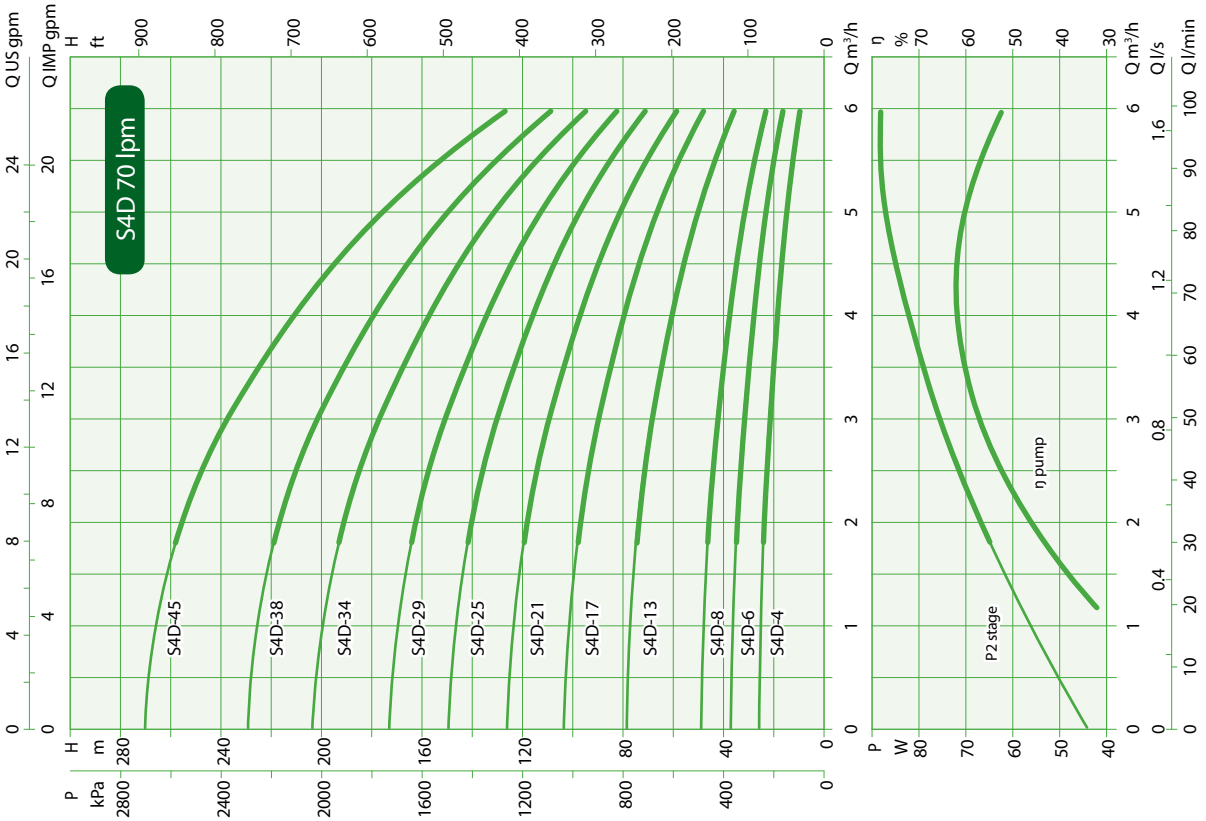
4" BOREHOLE SUBMERSIBLE PUMPS

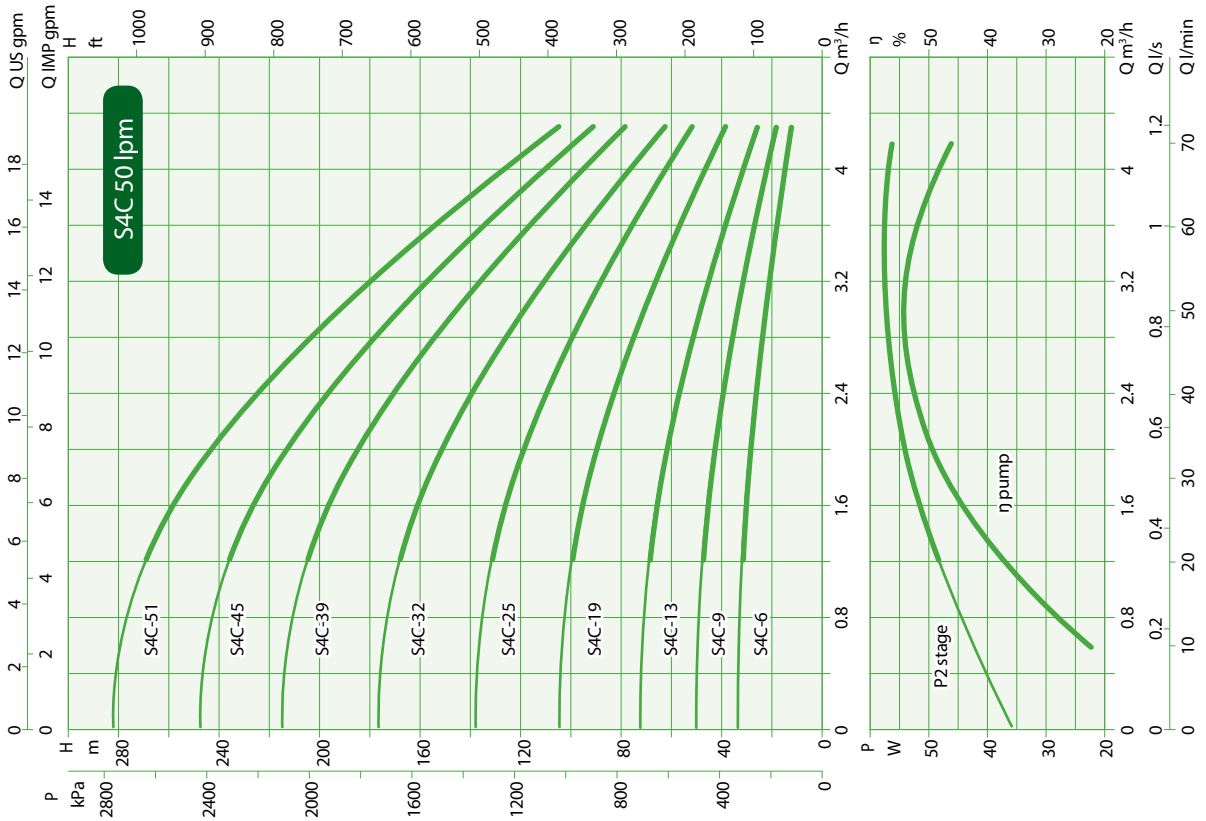




Note: Pumps should be operated as close as possible to the middle of the performance curve and not outside maximum and minimum flows.

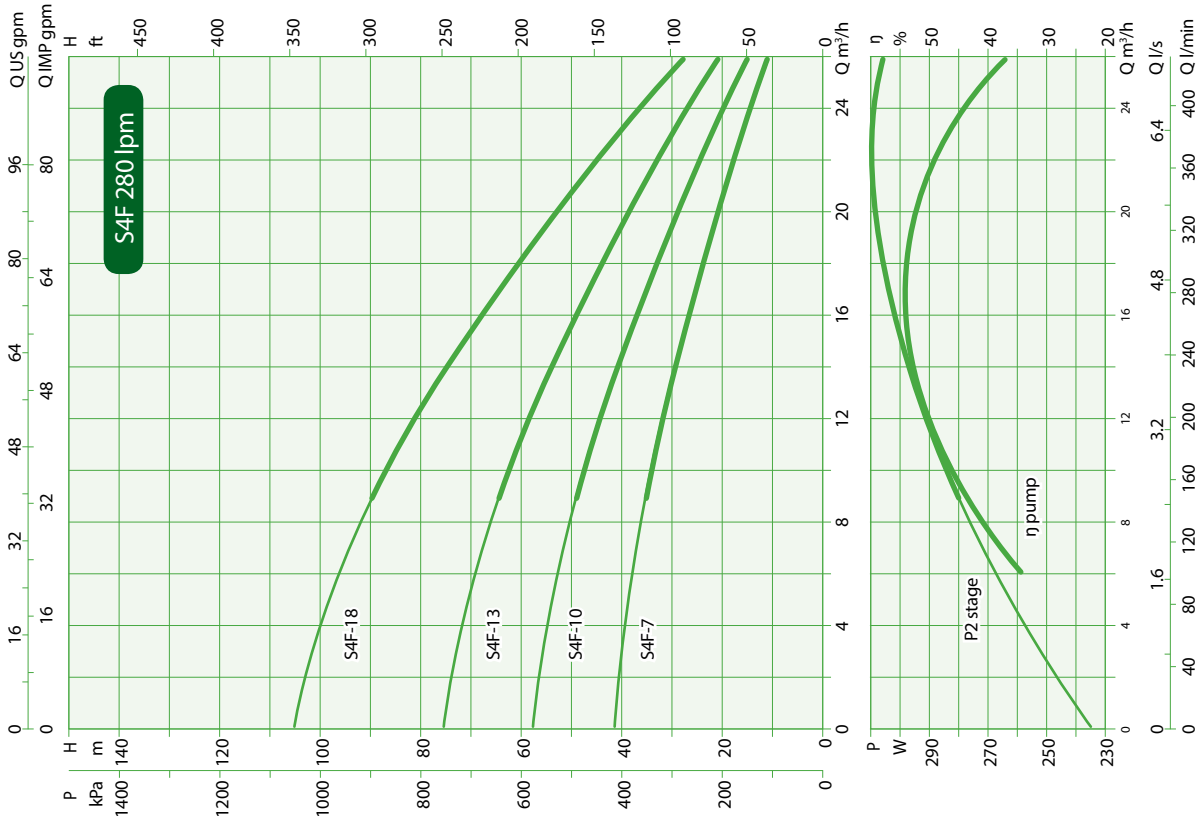
4" BOREHOLE SUBMERSIBLE PUMPS

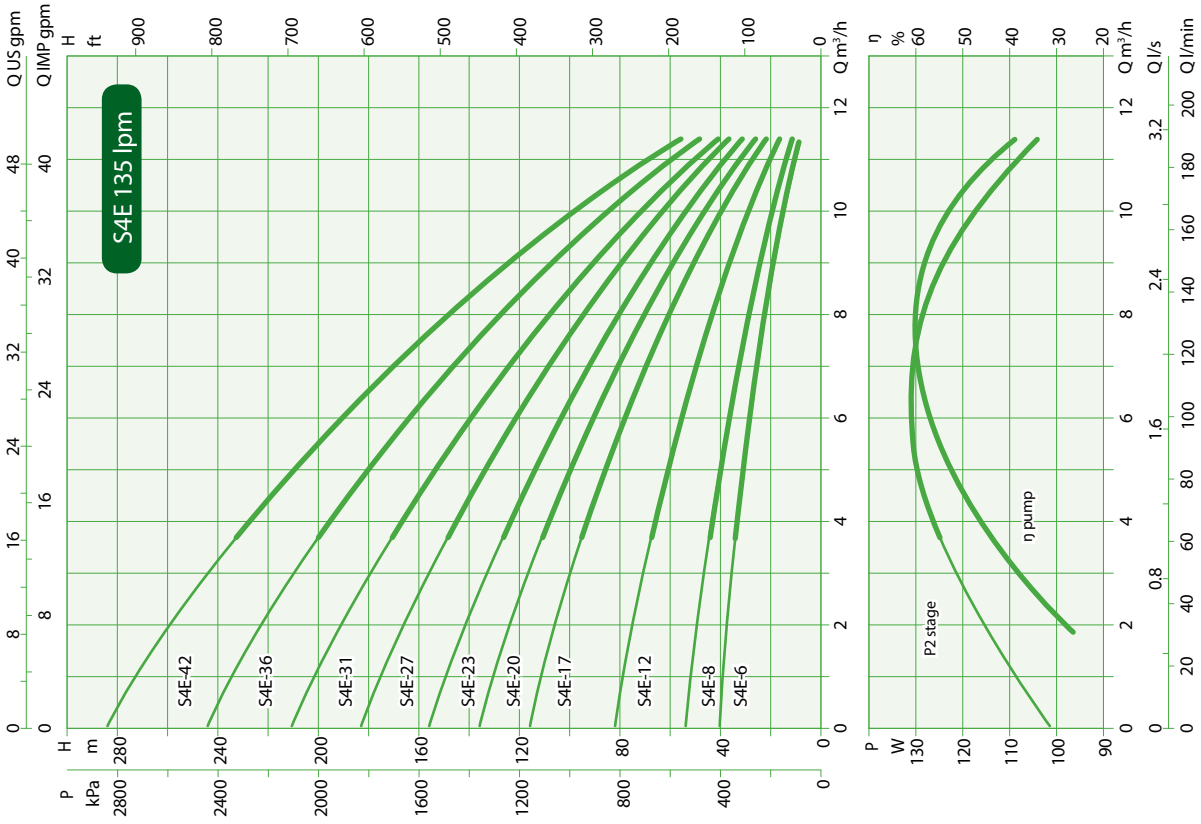




Note: Pumps should be operated as close as possible to the middle of the performance curve and not outside maximum and minimum flows.

4" BOREHOLE SUBMERSIBLE PUMPS





Note: Pumps should be operated as close as possible to the middle of the performance curve and not outside maximum and minimum flows.

4" BOREHOLE SUBMERSIBLE PUMPS

Selection Chart

Model		P2 Nominal		m³/h	0	0.6	1.2	1.5	1.8	2.14	3	4.2	4.8	6	9	11.4	18	24	27
Single	Three-phase	kW	hp	l/min	0	10	20	25	30	40	50	70	80	100	150	190	300	400	500
S4A-8M		0.37	0.50			44.4	26.8	13.7											
S4A-12M	S4A-12T	0.37	0.50			66.6	40.2	20.5											
S4A-18M	S4A-18T	0.55	0.75			99.8	60.3	30.8											
S4A-25M	S4A-25T	0.75	1.00			138.7	83.7	42.7											
S4A-36M	S4A-36T	1.10	1.50			200.0	120.6	61.6											
S4A-50M	S4A-50T	1.50	2.00			277.4	167.5	85.5											
S4B-5M		0.37	0.50			30.0	26.0	22.6	19.0	10.0									
S4B-8M	S4B-8T	0.37	0.50			47.8	41.5	36.2	30.6	16.0									
S4B-12M	S4B-12T	0.55	0.75			71.8	62.3	54.4	45.8	24.0									
S4B-16M	S4B-16T	0.75	1.00			95.7	83.0	72.5	61.0	32.0									
S4B-24M	S4B-24T	1.10	1.50			143.5	124.6	108.7	91.7	48.0									
S4B-32M	S4B-32T	1.50	2.00			191.4	166.0	144.9	122.2	64.0									
S4B-40M	S4B-40T	2.20	3.00			239.2	207.6	181.2	152.8	80.0									
S4B-48M	S4B-48T	2.20	3.00			287.1	249.2	217.4	183.4	96.0									
S4C-6M	S4C-6T	0.37	0.50				31.8	30.7	29.4	26.4	22.7	13.2							
S4C-9M	S4C-9T	0.55	0.75				47.7	46.0	44.0	39.6	34.0	19.8							
S4C-13M	S4C-13T	0.75	1.00				68.9	66.4	63.7	57.2	49.2	28.6							
S4C-19M	S4C-19T	1.10	1.50				100.7	97.0	93.0	83.6	71.8	41.8							
S4C-25M	S4C-25T	1.50	2.00				132.5	128.0	122.5	110.0	94.5	55.0							
S4C-32M	S4C-32T	2.20	3.00				169.6	163.0	156.8	140.8	120.9	70.4							
S4C-39M	S4C-39T	2.20	3.00				206.7	200.0	191.1	171.6	147.4	85.8							
	S4C-45T	3.00	4.00				238.5	229.0	220.5	198.0	170.1	99.0							
	S4C-51T	3.00	4.00				270.3	261.0	250.0	224.4	192.8	112.2							
S4D-4M	S4D-4T	0.37	0.50	H					23.0	22.0	21.8	18.0	16.2	11.2					
S4D-6M	S4D-6T	0.55	0.75	(m)					34.5	33.0	31.5	27.0	24.3	16.8					
S4D-8M	S4D-8T	0.75	1.00						46.0	44.0	42.0	36.0	32.5	22.4					
S4D-13M	S4D-13T	1.10	1.50						47.7	71.5	68.3	59.0	52.6	36.4					
S4D-17M	S4D-17T	1.50	2.00						98.0	93.5	89.5	77.5	6.88	47.6					
S4D-21M	S4D-21T	2.20	3.00						121.0	115.5	110.0	96.0	85.0	8.5					
S4D-25M	S4D-25T	2.20	3.00						144.0	137.5	132.0	114.5	101.2	70.0					
	S4D-29T	3.00	4.00						166.0	159.5	152.0	132.0	117.4	81.2					
	S4D-34T	3.00	4.00						196.0	187.0	179.5	155.0	137.7	95.2					
	S4D-38T	4.00	5.50						219.0	209.0	200.0	173.0	153.9	106.4					
	S4D-45T	4.00	5.50						259.0	247.5	237.0	205.0	182.2	127.0					
S4E-6M	S4E-6T	0.75	1.00									31.5	30.0	27.0	17.6	7.7			
S4E-8M	S4E-8T	1.10	1.50									42.0	40.0	37.0	23.4	10.3			
S4E-12M	S4E-12T	1.50	2.00									63.0	60.0	55.0	35.2	15.5			
S4E-17M	S4E-17T	2.20	3.00									89.5	86.0	78.0	49.8	21.9			
	S4E-20T	3.00	4.00									105.0	101.5	91.0	58.6	25.7			
	S4E-23T	3.00	4.00									120.5	117.0	104.5	67.4	29.6			
	S4E-27T	4.00	5.50									141.5	137.0	122.5	79.2	34.8			
	S4E-31T	4.00	5.50									162.0	156.0	140.0	90.9	39.9			
	S4E-36T	5.50	7.50									188.0	180.0	162.0	105.5	46.5			
	S4E-42T	5.50	7.50									220.0	211.0	189.0	123.2	54.0			
S4F-7M	S4F-7T	2.20	3.00												36.0	33.0	24.0	15.0	11.0
	S4F-10T	3.00	4.00												50.8	47.0	34.0	22.0	16.0
	S4F-13T	4.00	5.50												66.0	62.0	44.7	28.0	20.0
	S4F-18T	5.50	7.50												91.0	84.0	61.2	39.0	28.0

Note: Pumps should be operated as close as possible to the middle of the performance curve and not outside maximum and minimum flows.

4" BOREHOLE PUMPS - SOLAR POWERED

NEW

Revolutionary BLDC design, iCON iSolar motor powers the new DAB system for the supply of ground water based on the most widely available renewable energy, the sun.

By means of the electric power supplied by a series of photovoltaic panels and taking advantage of the combination of a DAB S4 series 4" submersible pump with a built-in inverter type controller, the system is able to ensure a continuous drawing of water from underground even with varying solar irradiation conditions.
The permanent-magnet motor technology assures high efficiency of the system that now requires a smaller number of photovoltaic panels in order to work.

It is designed for easy use and requires no maintenance.
It is the ideal solution for supplying water in remote areas, where the normal power supply of electricity to the power grid is inconsistent or completely unavailable.

Comes complete with controller to enable automatic switching between DC and AC power.

Plug and Play Version Available

Solar Panel & Frames

*Special Order Only

PART NO.	ITEM CODE	DESCRIPTION		
		NO. OF PANELS	MOUNT	TOTAL WATTS
SOLAR ARRAYS*				
BIA-ER02PM	805923	2	POST	630
BIA-ER03PM	805924	3	POST	945
BIA-ER04PM	805925	4	POST	1260
BIA-ER05PM	806215	5	POST	1575
BIA-ER06PM	805926	6	POST	1890
BIA-ER07PM	806216	7	POST	2205
BIA-ER08PM	805927	8	POST	2520
BIA-ER09PM	806217	9	POST	2835
BIA-ER10PM	805928	10	POST X 2	3150
BIA-ER03GM	805918	3	GROUND	945
BIA-ER04GM	805919	4	GROUND	1260
BIA-ER06GM	805920	6	GROUND	1890
BIA-ER08GM	805921	8	GROUND	2520
BIA-ER10GM	805922	10	GROUND	3150

Solar Motor Controller

PART NO.	ITEM CODE	DESCRIPTION
BIA-SOLCONTV3-FLOW32	806067	iCON Solar Motor V3 Controller with Flow meter 32
BIA-SOLCONTV3-FLOW50	806068	iCON Solar Motor V3 Controller with Flow meter 50
BIA-SOLCONTPRO-FLOW32	806069	iCON Solar Motor Pro Control Plug & Play with Flow meter 32
BIA-SOLCONTPRO-FLOW50	806070	iCON Solar Motor Pro Control Plug & Play with Flow meter 50

INCLUDES:
- MC4 Lead - 3m
- MC4 Lead - 10m
- 3 Phase 20A AC Isolator Rotary Switch
- Post Mount or Ground Mount Framing
- 315W Solar Panels

KEY POINTS

DAB iCON iSOLAR motor
- Revolutionary Brushless DC motor design
- Two motor sizes: M110 and M240.
- Permanent magnets for high efficiency operation
- Integrated Variable Frequency Drive able to accept AC or DC power sources directly
- Motor uses both Vector and MPPT control to ensure best operation according to duty
- Proven Kingsbury thrust bearings

DAB iCON iSOLAR Controller
- Multiple power source controller to allow for Auto and Manual control of AC and DC power sources
- Multiple input type to allow for wider use as complete pressure or float based system
- Integrate output contact for generator start control
- Flow meter capable to ensure long term system life

View the iSolar Selector at http://isolarselector.whiteint.com.au/

4" BOREHOLE PUMPS - SOLAR POWERED

Applications

DAB Borehole submersible pumps incorporate the latest technology in hydraulic design and materials to reduce running costs, extend pump life and increase serviceability.

- Technopolymer impellers and diffusers for resistance to wear and corrosion
- Special material abrasion wear ring reduces wear due to sand, allows easier starting
- Cast stainless steel support and valve body for high strength and corrosion resistance
- Large range to suit most applications
- Floating impeller stack for easier starts in abrasive conditions
- Posi drive pump shaft improves impeller life in adverse conditions
- Maximum sand quantity = 120 gm / m^3.

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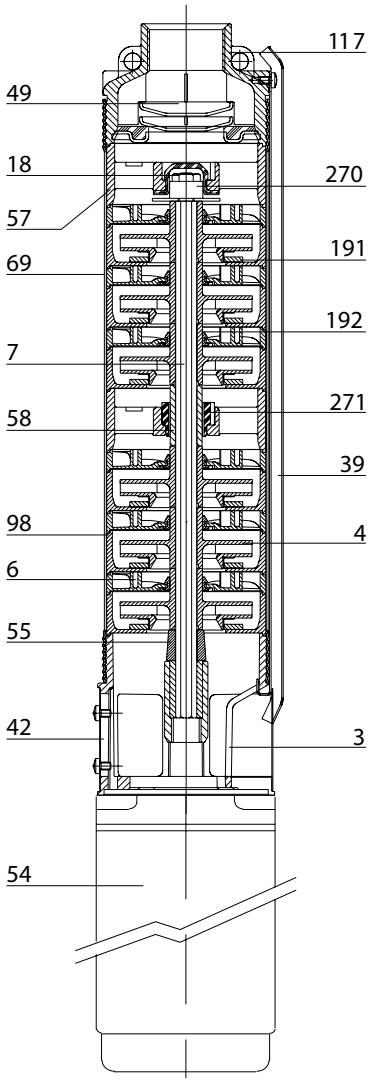
6	DIFFUSER	TECHNOPOLYMER A
7	SHAFT WITH COUPLING	STAINLESS STEEL AISI 304 X5CrNi1810 - UNI 6900/71
18	LOCKING NUT	STAINLESS STEEL
39	CABLE SHEATH	STAINLESS STEEL AISI 304 X5CrNi1810 - UNI 6900/71
42	STRAINER	STAINLESS STEEL
49	VALVE	STAINLESS STEEL AISI 304 X5CrNi1810 - UNI 6900/71
54	MOTOR	STAINLESS STEEL AISI 304 X5CrNi1810 - UNI 6900/71
55	SPACER	TECHNOPOLYMER A
57	SUPPORT	TECHNOPOLYMER A
58	INTERMEDIATE BUSHING	STAINLESS STEEL AISI 304 X5CrNi1810 - UNI 6900/71
69	PUMP LINER	STAINLESS STEEL AISI 304 X5CrNi1810 - UNI 6900/71
98	DIFFUSER BODY	TECHNOPOLYMER A
117	UPPER HEAD	AISI 304 MICROCAST STAINLESS STEEL
191	FRONT THRUST RING	AISI 304 MICROCAST STAINLESS STEEL
192	REAR THRUST RING	AISI 304 MICROCAST STAINLESS STEEL
270	UPPER SHAFT GUIDE BUSH	RUBBER
271	INTERMEDIATE SHAFT GUIDE BUSH	ABRASION - PROOF SYNTHETIC MATERIAL



TESTIMONIAL

"The new DAB iSolar System…is a game-changer...the flexibility of power options it offers to the farmer so they are never out of water is incredible…very impressed!"

John Barden
Barden Pumps

4" BOREHOLE PUMPS - SOLAR POWERED

Construction Features of the iCON iSolar Motor

Innovative design allows the motor to be powered by both AC and DC power sources.

The motor is available in two sizes: M110 and M240. The speed range of the motor is 1800 rpm to 3000 rpm depending on the power input and load.

The motor uses rare earth permanent magnets, and has a built-in electronic unit comprising a frequency converter and motor controller. Vector control and MPPT are used to select the best operating point for the pump.

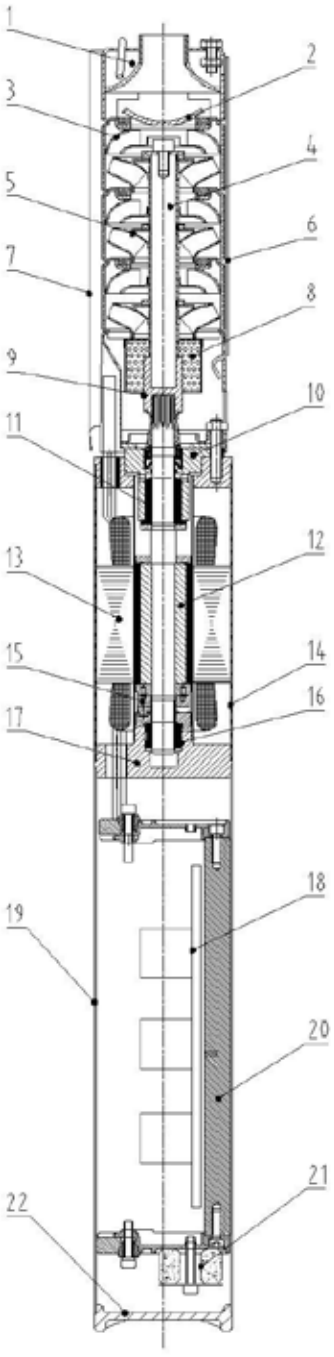
The motor can be supplied with either AC or DC voltage.

55 - 360 VDC, 1ph 240 VAC M110.

90 - 360 VDC, 1ph 240 VAC M240.

BLDC Motor Design.

High Efficiency Intelligent Variable Power Motor

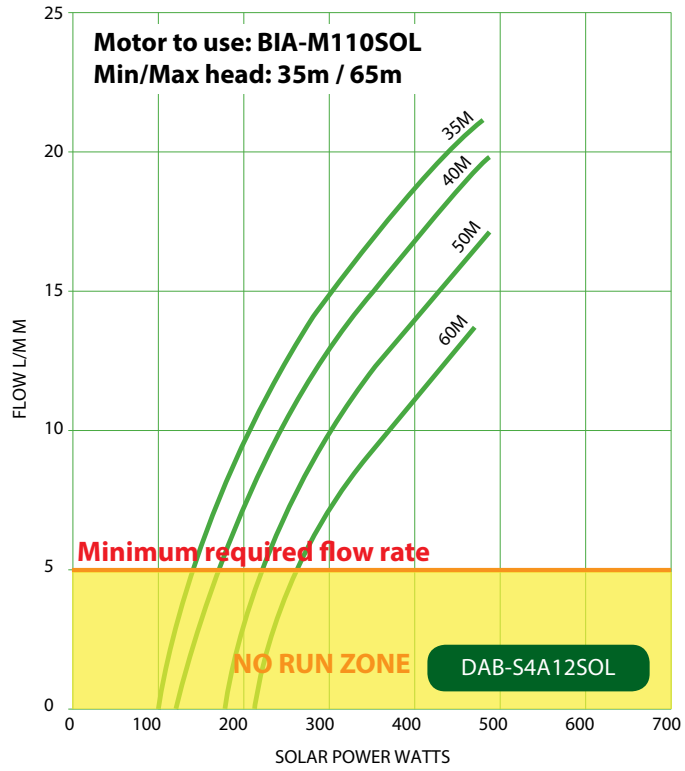


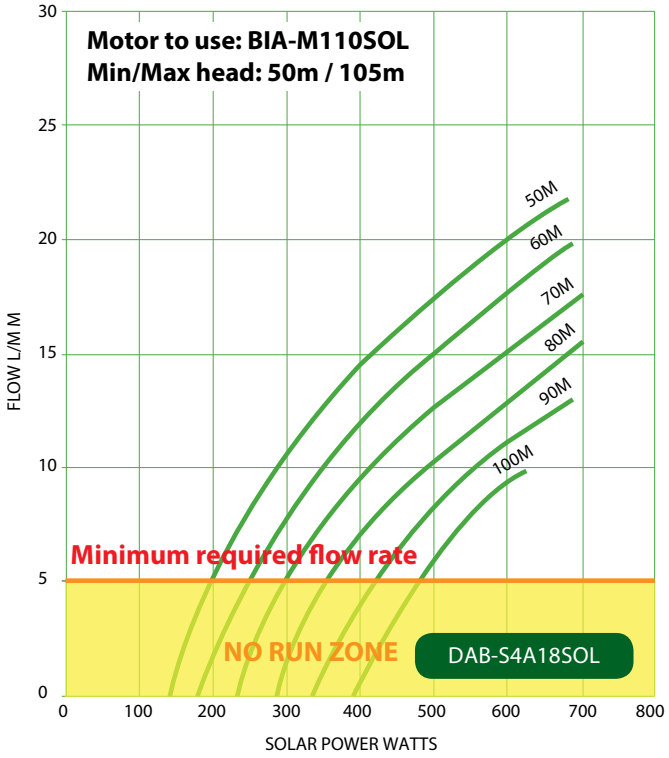
Materials

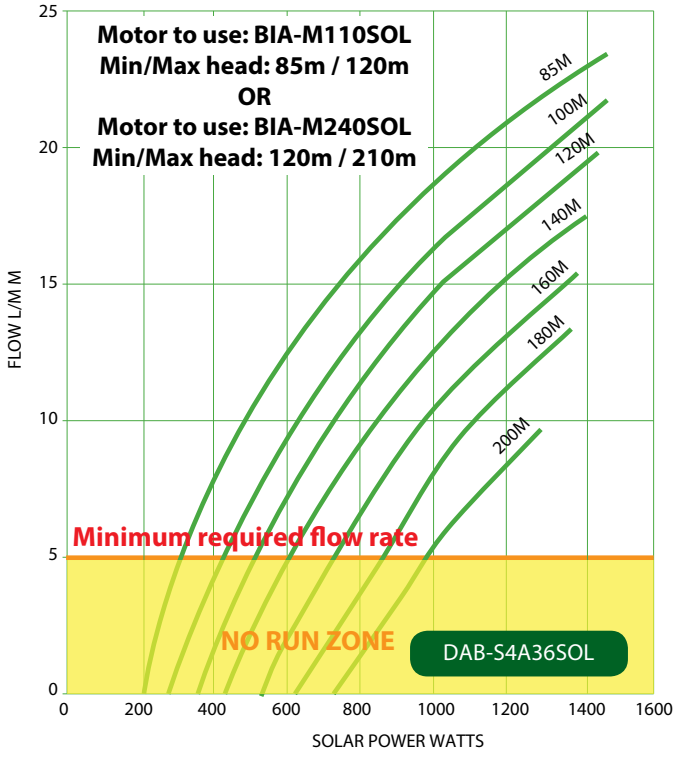
N.	PART*	MATERIALS
1	DISCHARGE CHAMBER	STAINLESS STEEL
2	NON-RETURN VALVE	STAINLESS STEEL
3	GUIDE VANES	PC/STAINLESS STEE
4	PUMP SHAFT	STAINLESS STEEL
5	IMPELLER	POM/STAINLESS STEEL
6	IMPELLER FASTENER	STAINLESS STEEL
7	CABLE COVER	STAINLESS STEEL
8	INLET PART	STAINLESS STEEL
9	SHAFT COUPLING	STAINLESS STEEL
10	UPPER BEARING HOUSING	STAINLESS STEEL
11	UPPER BEARING	SILICON CARBIDE
12	PM ROTOR	- -
13	STATOR	- -
14	PUMP HOUSING	STAINLESS STEEL
15	THRUST BEARING	GRAPHITE
16	LOWER BEARING	SILICON CARBIDE
17	LOWER BEARING HOUSING	STAINLESS STEEL
18	PABA	CONTROLLER ELECTRONIC PART
19	CONTROLLER HOUSING	STAINLESS STEEL
20	RADIATOR	ALUMINIUM
21	INDUCTOR	- -
22	BASE	STAINLESS STEEL

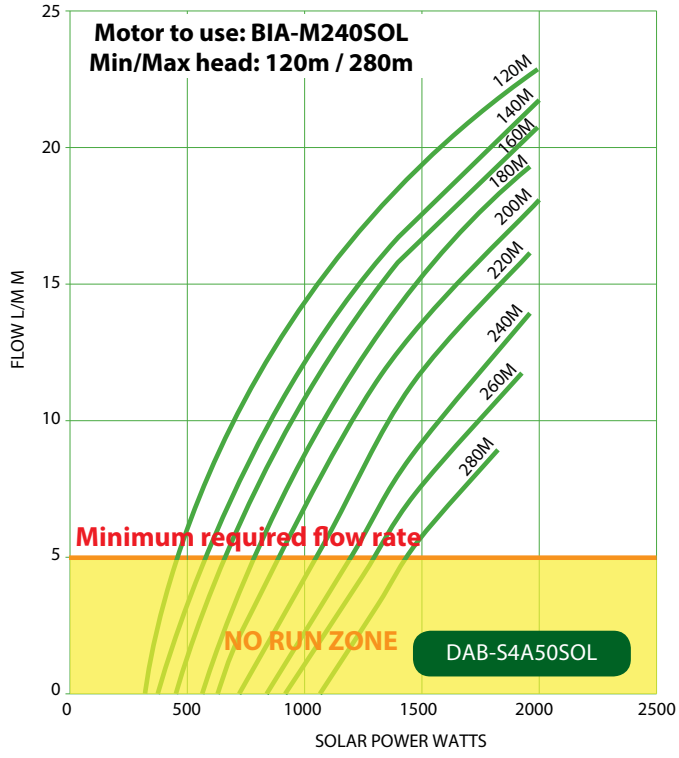
4" BOREHOLE PUMPS - SOLAR POWERED

Performance Curves

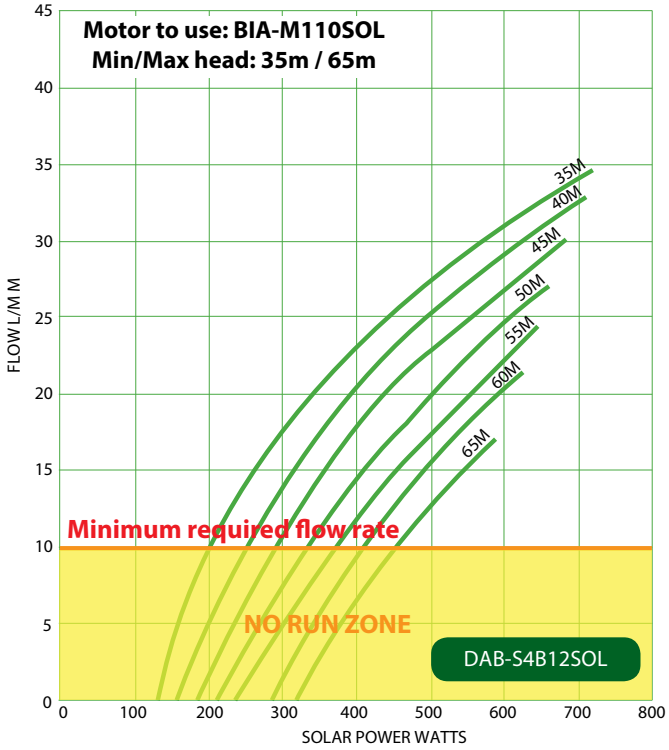


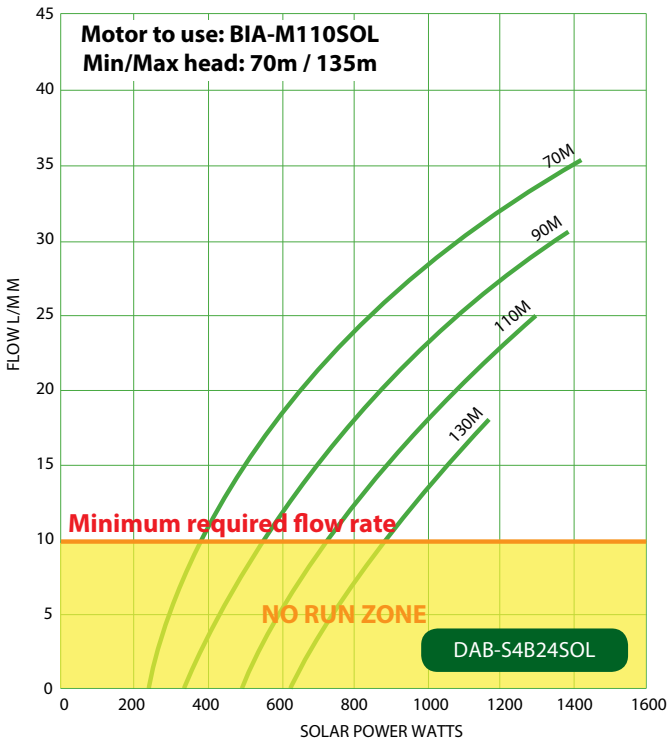


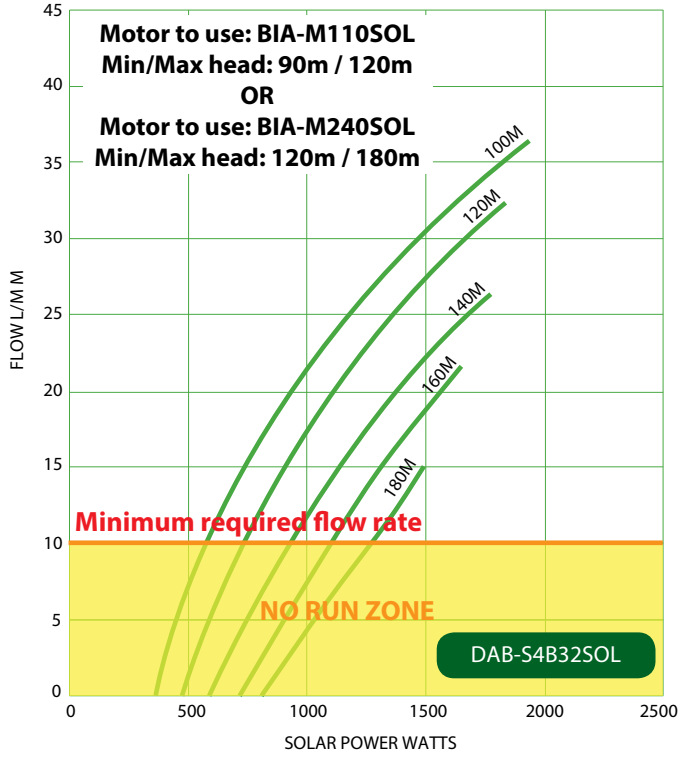


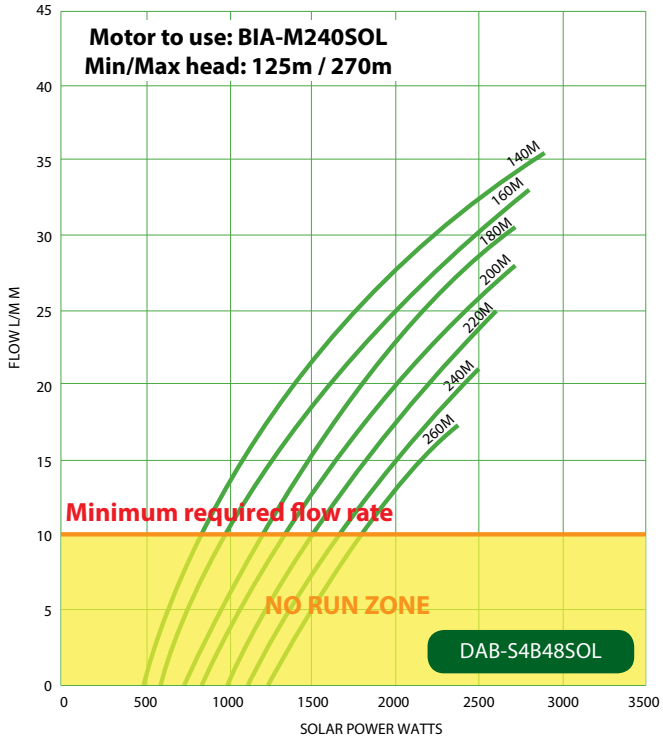


4" BOREHOLE PUMPS - SOLAR POWERED



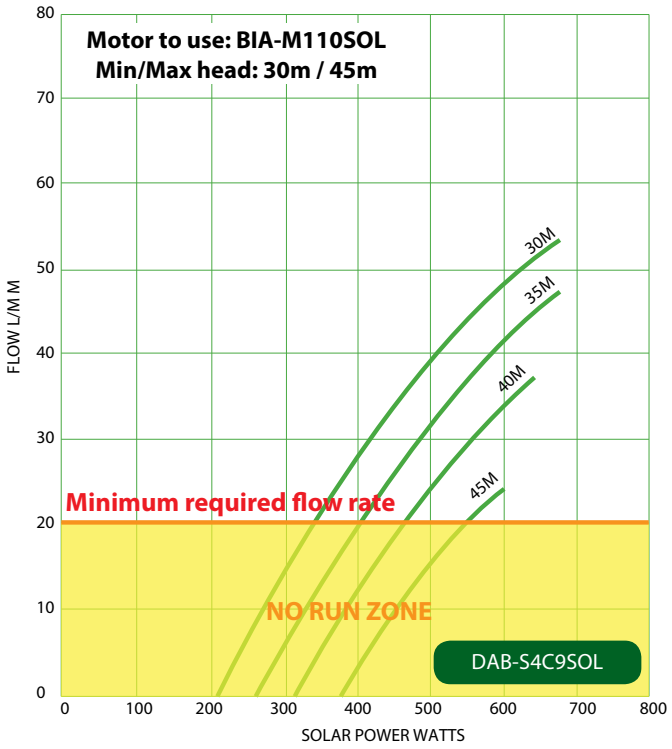


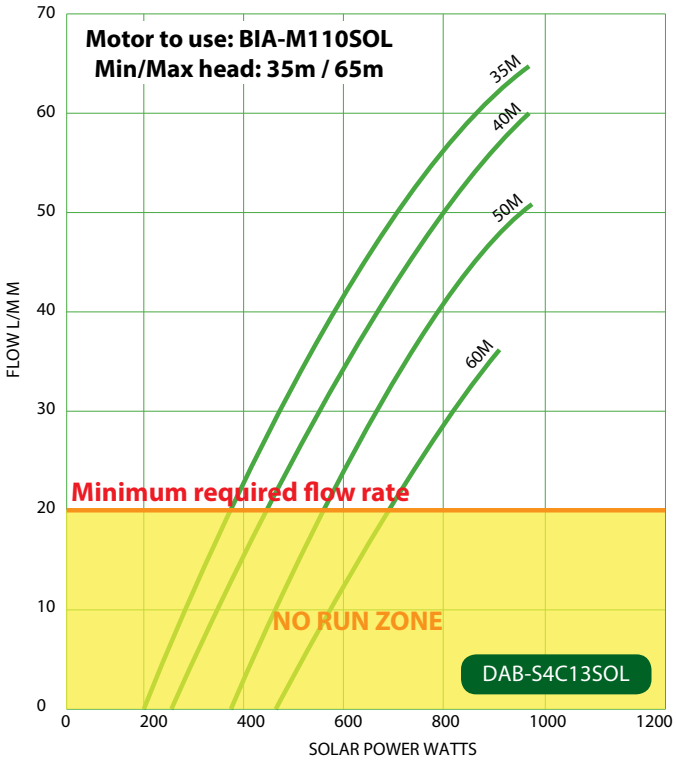


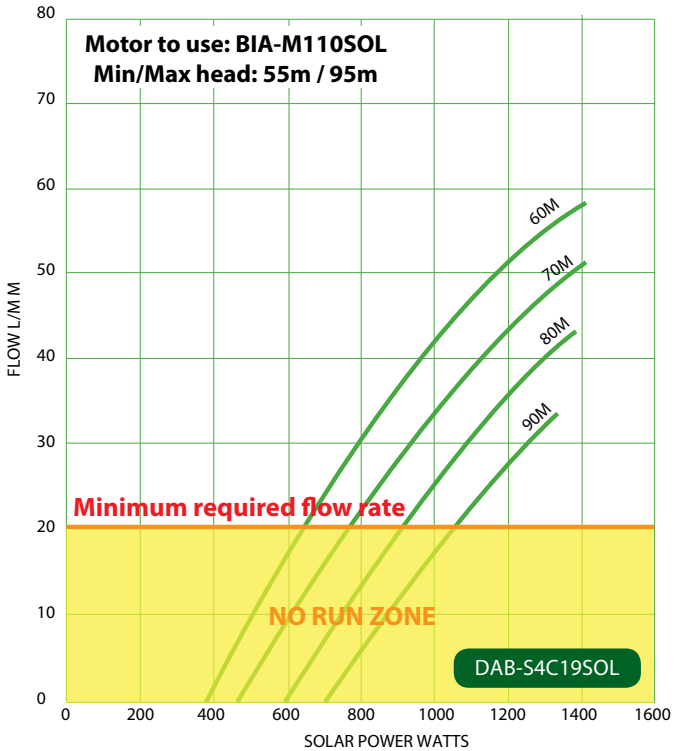


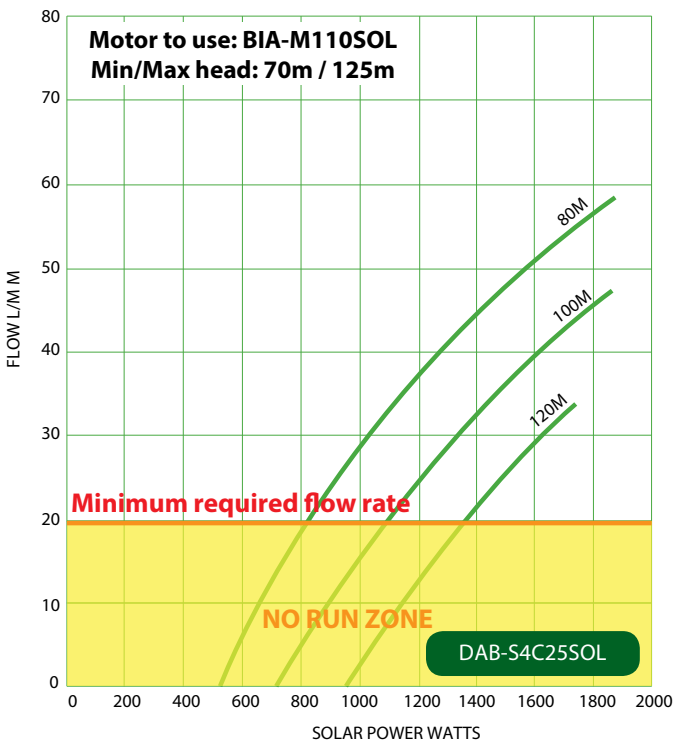
4" BOREHOLE PUMPS - SOLAR POWERED

Performance Curves



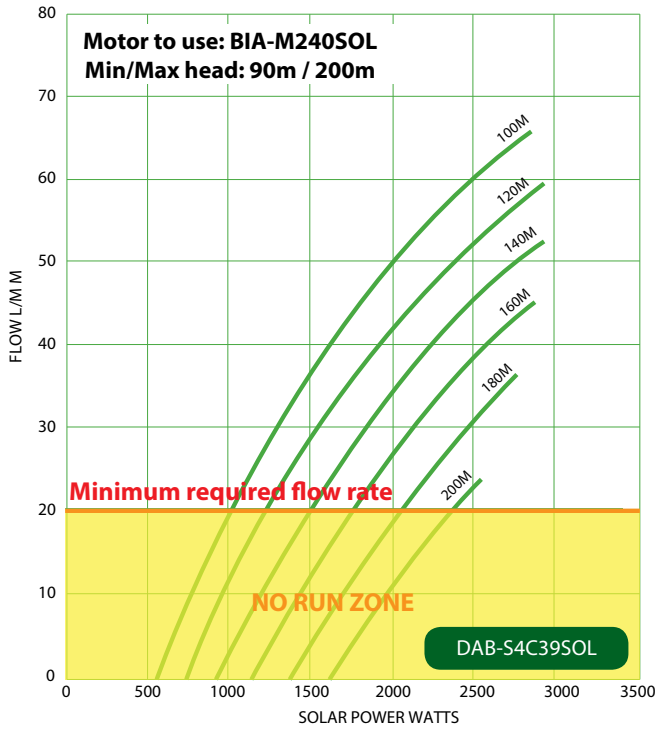


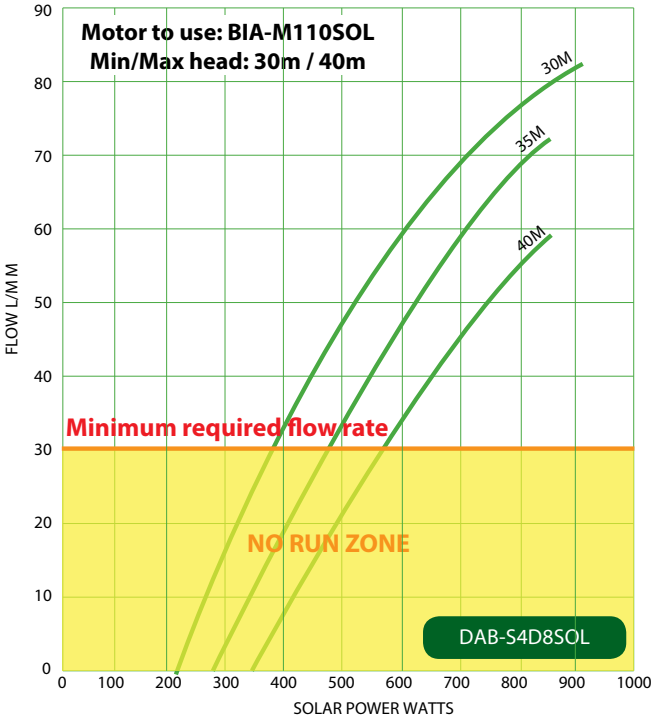


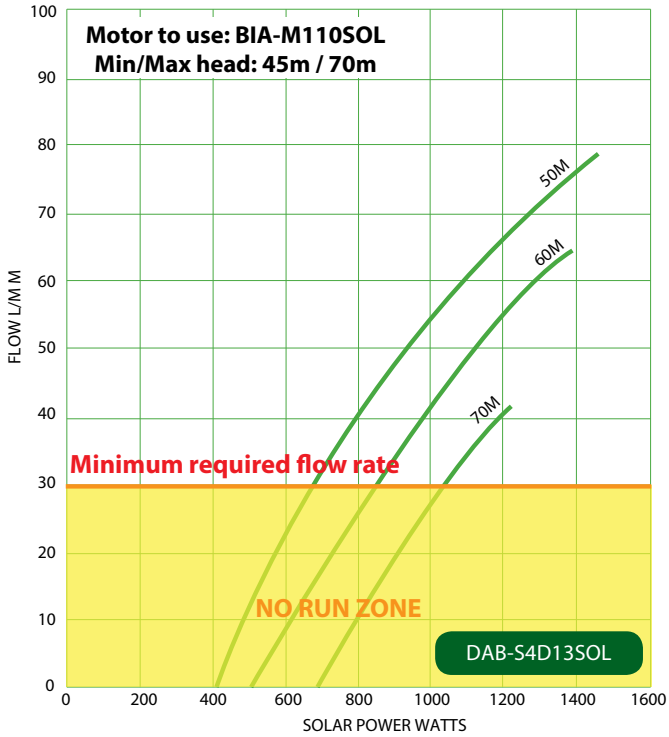


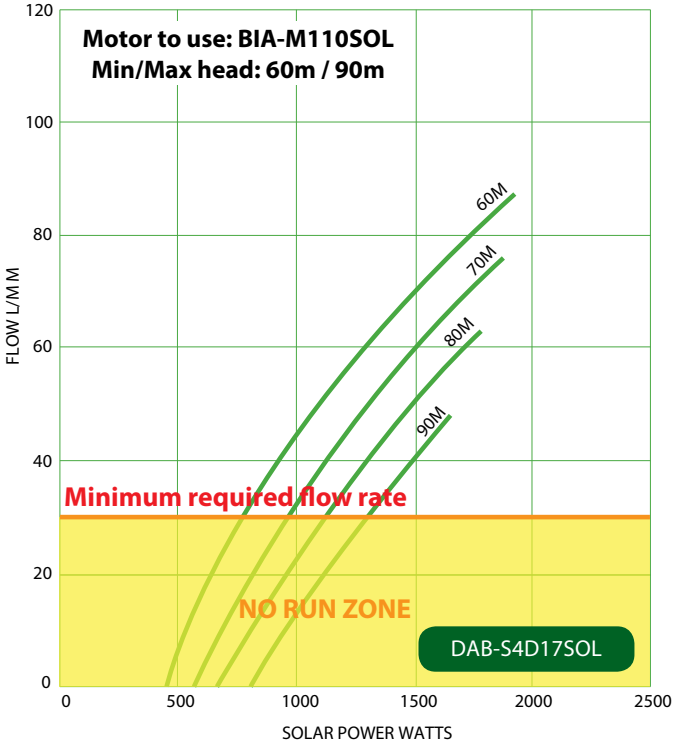
4" BOREHOLE PUMPS - SOLAR POWERED

Performance Curves



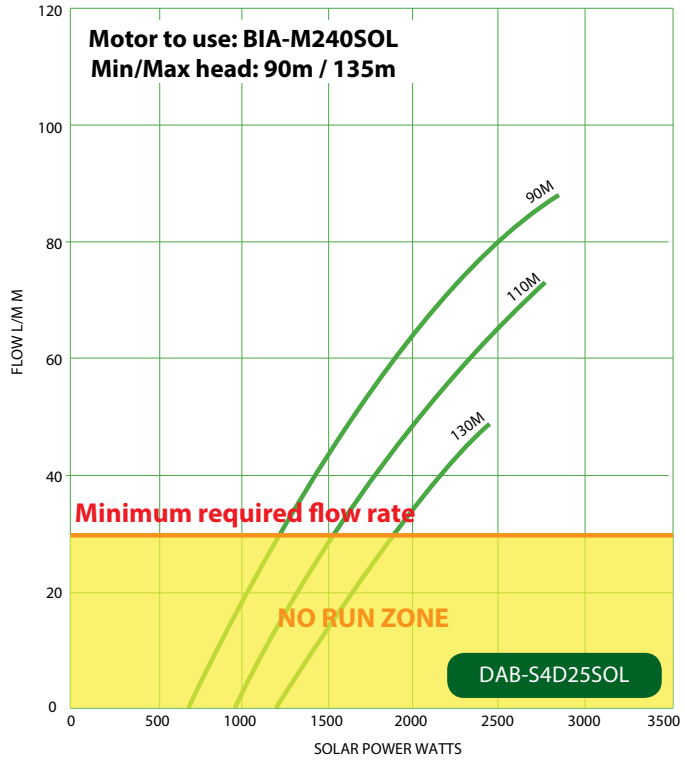


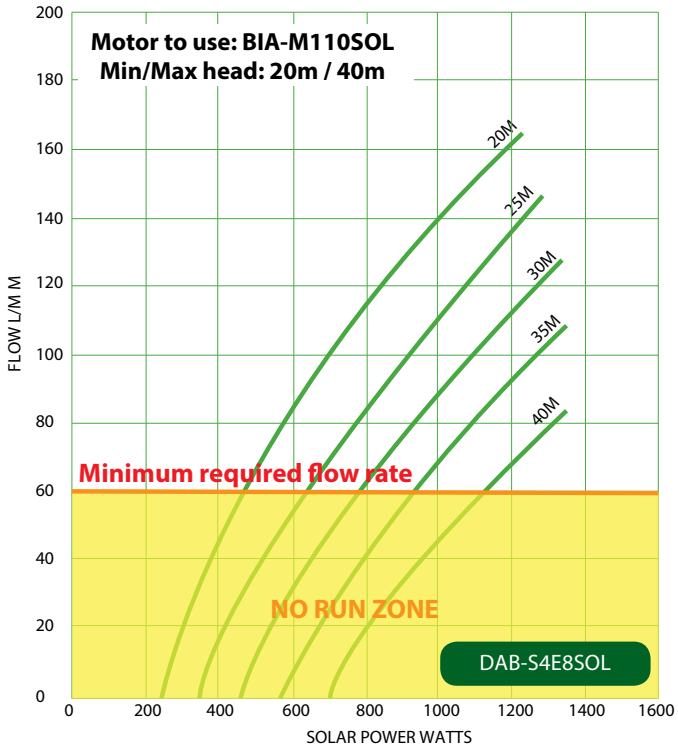


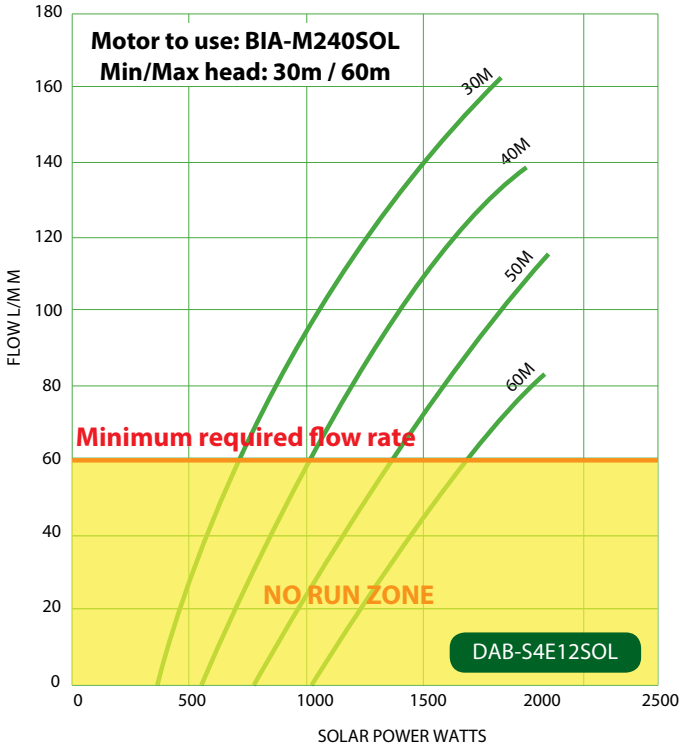


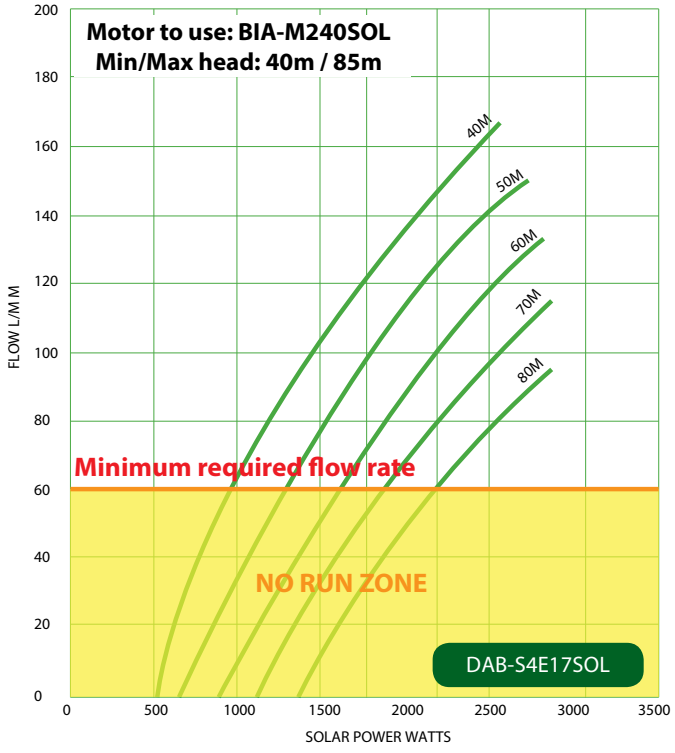
4" BOREHOLE PUMPS - SOLAR POWERED

Performance Curves



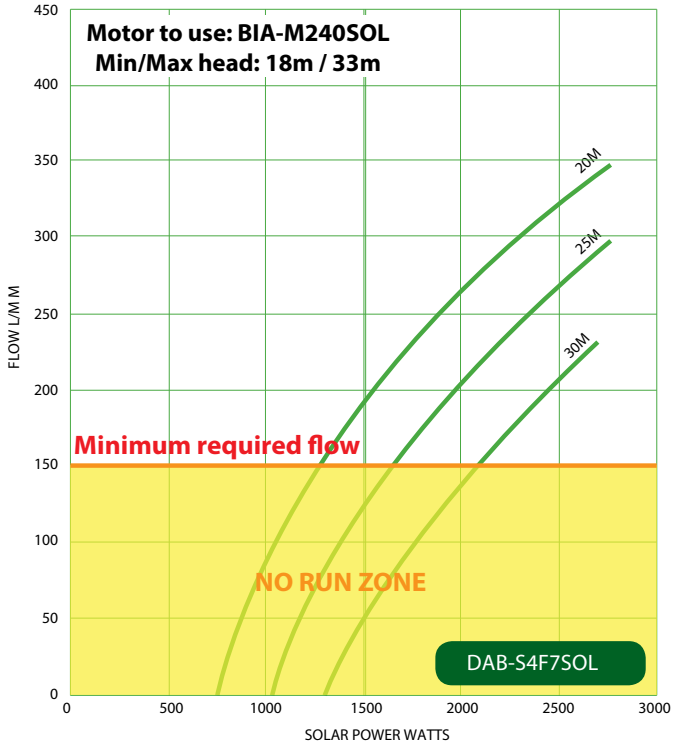






4" BOREHOLE PUMPS - SOLAR POWERED

Performance Curves



TESTIMONIAL

" The pump was installed several months ago and has been run predominantly on DC for that time. It successfully runs our garden pop up sprays, and maintains the water level easily in our 25,000-litre tank.

The system also has run a small 5 spray irrigation line for stock feed. It has even pumped some water into the tank at 7am on a foggy morning on DC power.

I would have no hesitation in recommending this system, and happy for prospective purchasers to look at the system or call me. "

Bruce Payne
Moree Pumps Irrigation & Plumbing

4" BOREHOLE PUMPS
VARIABLE FREQUENCY DRIVE

The iSUB22 is a 240V single phase input variable frequency drive for the control of pumps up to 1.5kW, 240V 3 phase.

The iSUB37 is a 240V single phase input variable frequency drive for the control of pumps up to 3.0kW, 240V 3 phase.

Particularly suited to borehole pumps, Variable frequency drives are mounted in an outdoor enclosure with independent fan cooling and inspection window. Also included is a 1" stainless manifold, pressure transducer and pressure gauge.

Features:

- Constant water pressure
- Optimises pump performance
- Soft start, low motor start current
- No large pressure tank required

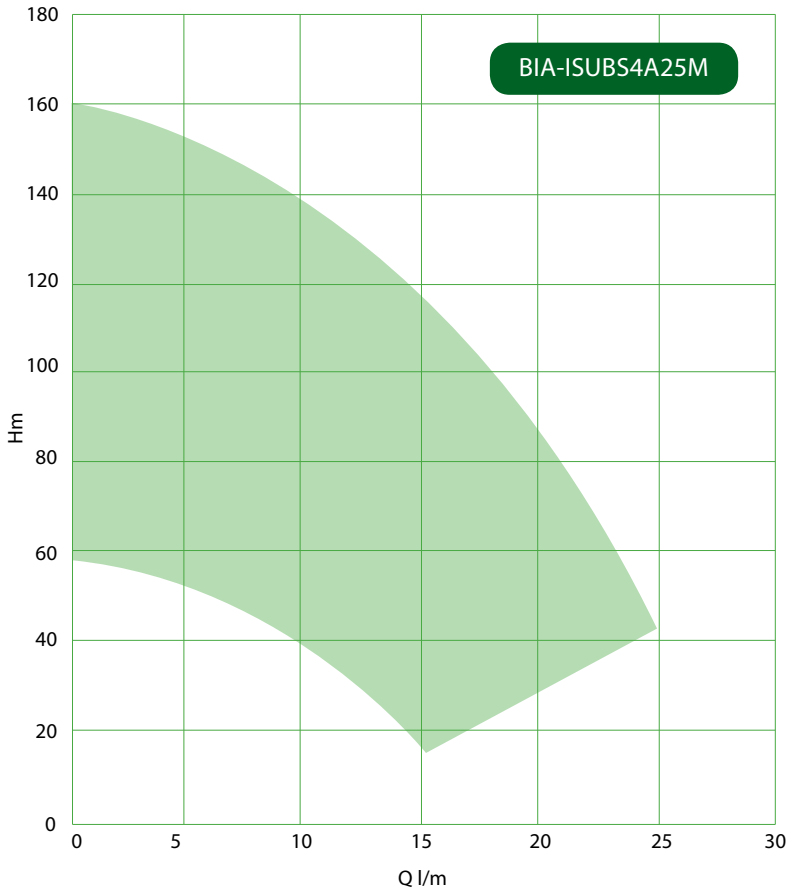
Protection:

- Dry run protection
- High and low voltage protection
- Input and output short circuit protection
- High and low water pressure protection
- Input and output phase failure protection
- Over temperature protection
- Sensor fault protection

Standard Pump kits are also available using iSUB22, 1" stainless manifold, 18 litre pressure tank, pressure transducer and pressure gauge along with a selection of 0.75 kW and 1.5 kW DAB S4 Series 4" Borehole Pumps.

4" BOREHOLE PUMPS

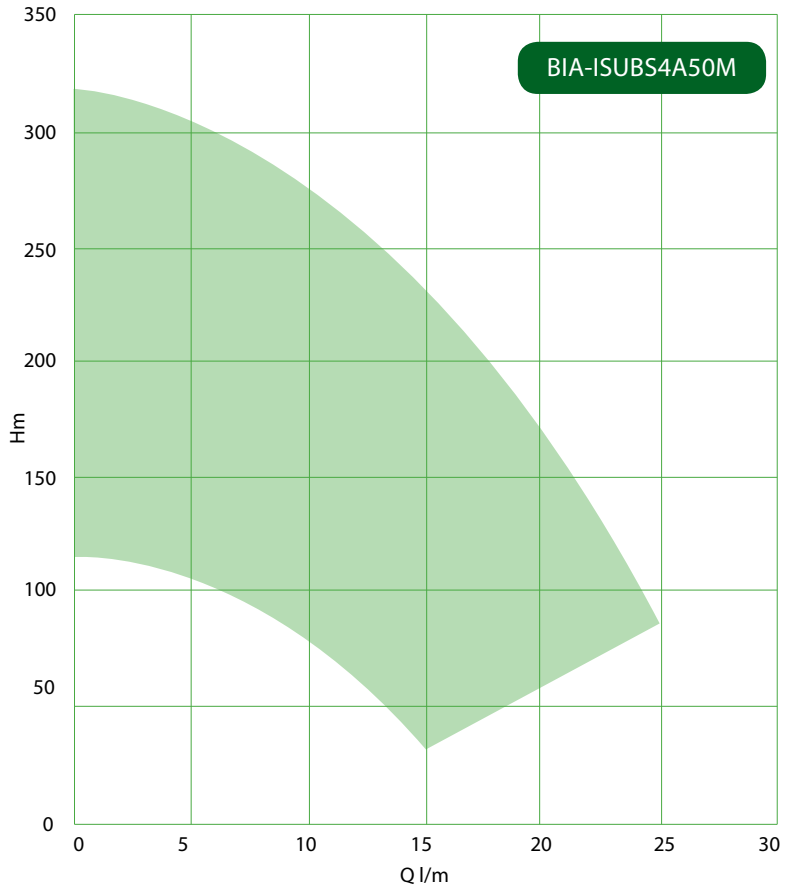
Variable Frequency Drive - Curves



Depth or lift in m																	
metres	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	SHUT
0					25	23	22	21	19	18	16	14	12	9	6		159.4
10				25	23	22	21	19	18	16	14	12	9	6			159.4
20			25	23	22	21	19	18	16	14	12	9	6				159.4
30		25	23	22	21	19	18	16	14	12	9	6					159.4
40	25	23	22	21	19	18	16	14	12	9	6						159.4
50	23	22	21	19	18	16	14	12	9	6							159.4
60	22	21	19	18	16	14	12	9	6								159.4
70	21	19	18	16	14	12	9	6									159.4
80	19	18	16	14	12	9	6										159.4
90	18	16	14	12	9	6											159.4
100	16	14	12	9	6												159.4
110	14	12	9	6													159.4
120	12	9	6														159.4
130	9	6															159.4
140	6																159.4
150														litres/min.			159.4
160																	159.4
SHUT	149.4	139.4	129.4	119.4	109.4	99.4	89.4	79.4	69.4	59.4	49.4	39.4	29.4	19.4	9.4		

4" BOREHOLE PUMPS

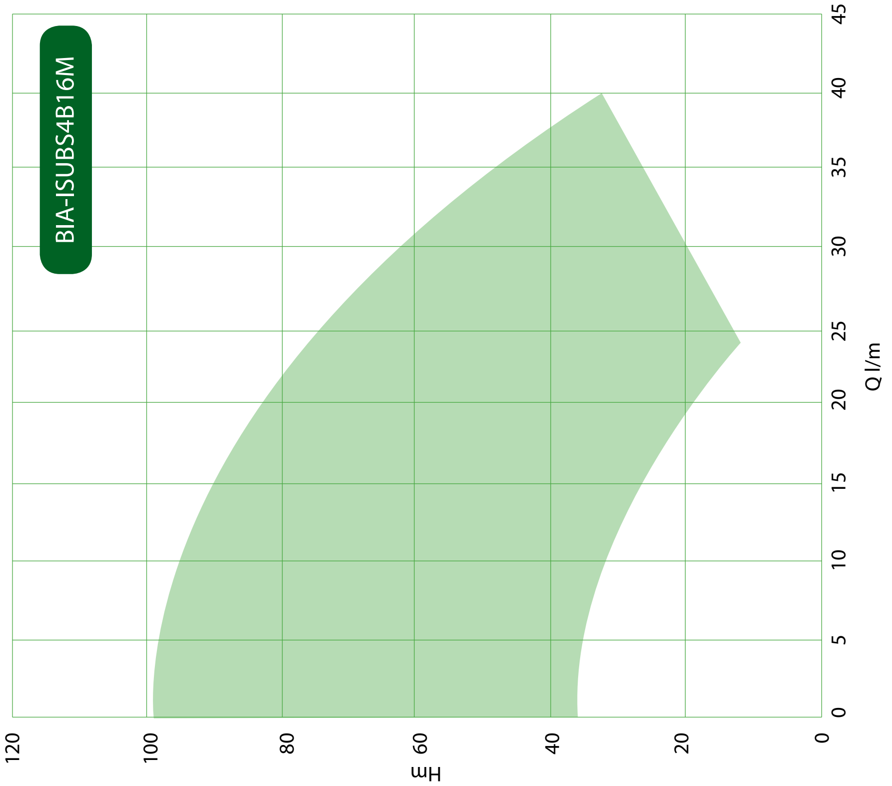
Variable Frequency Drive - Curves



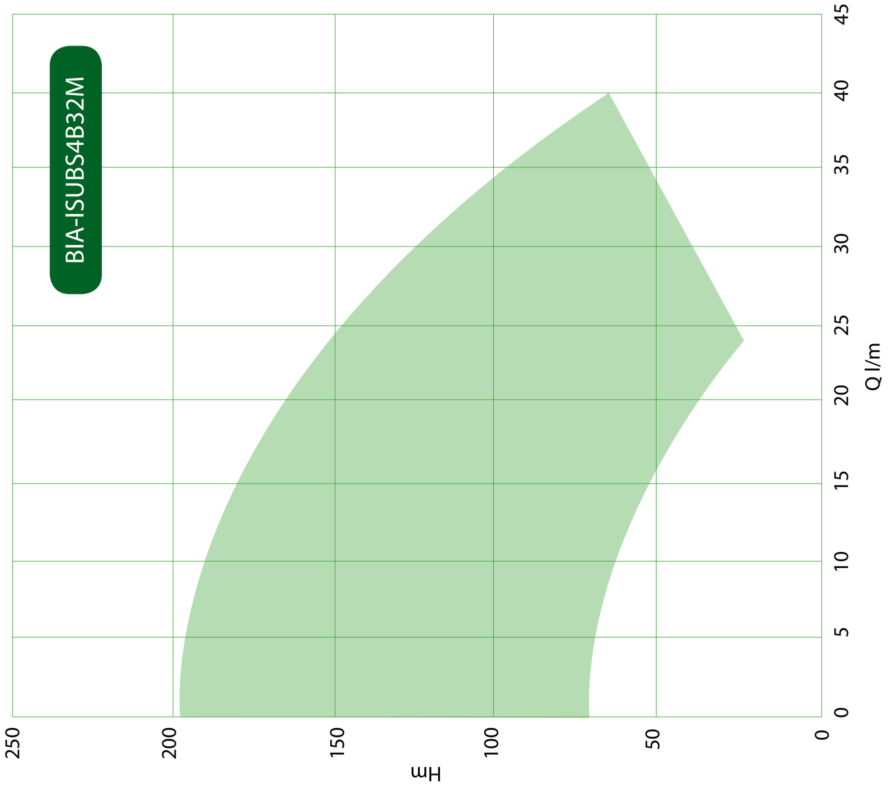
Depth or lift in m																	
metres	20	40	60	80	100	120	140	160	180	200	220	240	260	280	300	320	SHUT
0						23	22	21	19	17	16	14	12	9	6		318.8
20					23	22	21	19	17	16	14	12	9	6			318.8
40				23	22	21	19	17	16	14	12	9	6				318.8
60			23	22	21	19	17	16	14	12	9	6					318.8
80		23	22	21	19	17	16	14	12	9	6						318.8
100	23	22	21	19	17	16	14	12	9	6							318.8
120	22	21	19	17	16	14	12	9	6								318.8
140	21	19	17	16	14	12	9	6									318.8
160	19	17	16	14	12	9	6										318.8
180	17	16	14	12	9	6											318.8
200	16	14	12	9	6												318.8
220	14	12	9	6													318.8
240	12	9	6														318.8
260	9	6															318.8
280	6																318.8
300														litres/min.			318.8
320																	318.8
SHUT	298.8	278.8	258.8	238.8	218.8	198.8	178.8	158.8	138.8	118.8	98.8	78.8	58.8	38.8	18.8		

4" BOREHOLE PUMPS

Variable Frequency Drive - Curves



Depth or lift in m											
metres	10	20	30	40	50	60	70	80	90	100	SHUT
0			40	37	34	31	27	22	17		99.2
10		40	37	34	31	27	22	17			99.2
20	40	37	34	31	27	22	17				99.2
30	37	34	31	27	22	17					99.2
40	34	31	27	22	17						99.2
50	31	27	22	17							99.2
60	27	22	17								99.2
70	22	17									99.2
80	17										99.2
90								litres/min.			99.2
100											99.2
SHUT	89.2	79.2	69.2	59.2	49.2	39.2	29.2	19.2	9.2		

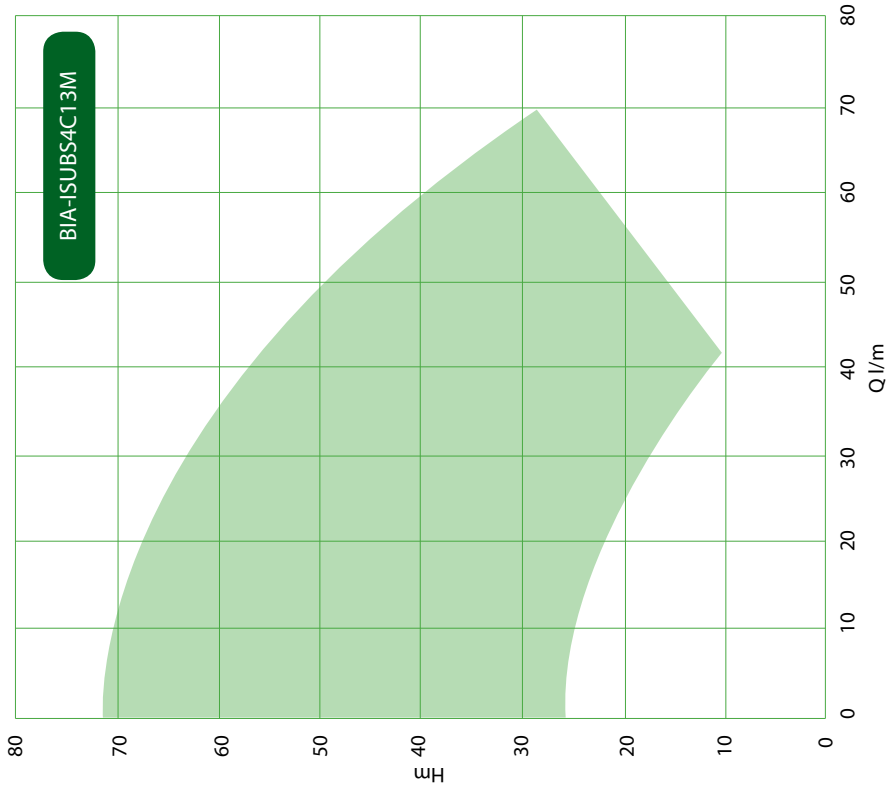


Depth or lift in m											
metres	20	40	60	80	100	120	140	160	180	200	SHUT
0			40	37	34	31	27	22	14		198.4
20		40	37	34	31	27	22	14			198.4
40	40	37	34	31	27	22	14				198.4
60	37	34	31	27	22	14					198.4
80	34	31	27	22	14						198.4
100	31	27	22	14							198.4
120	27	22	14								198.4
140	22	14									198.4
160	14										198.4
180								litres/min.			198.4
200											99.2
SHUT	178.4	158.4	138.4	118.4	98.4	78.4	58.4	38.4	18.4		

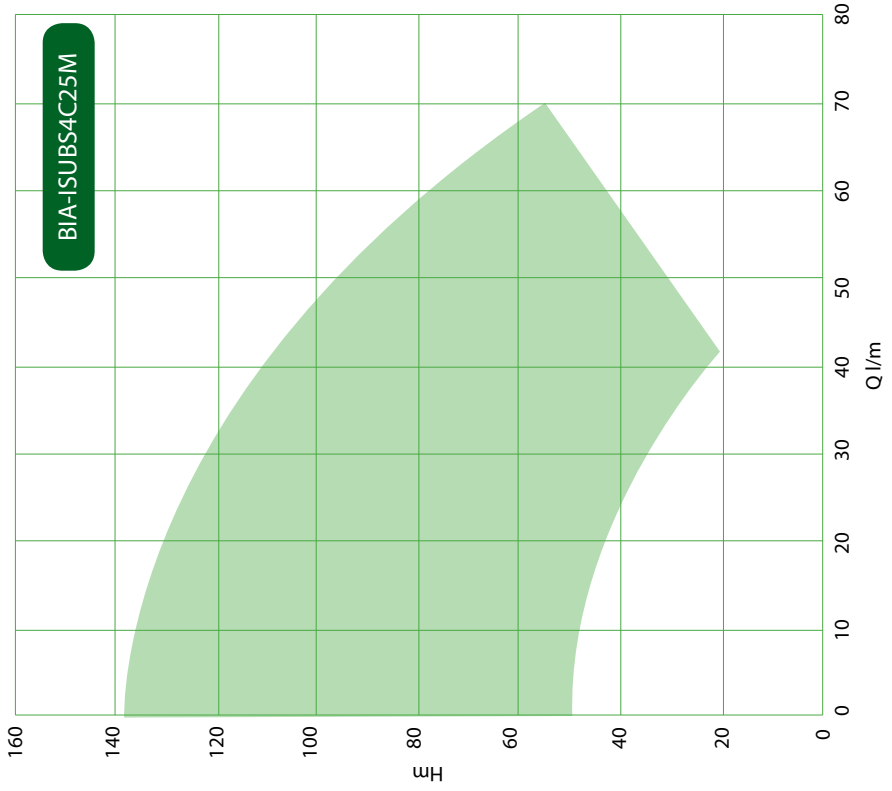
Disclaimer: Every effort has been made to publish the correct details in this brochure.
No responsibility will be taken for errors, omissions or changes in product specifications.

4" BOREHOLE PUMPS

Variable Frequency Drive - Curves



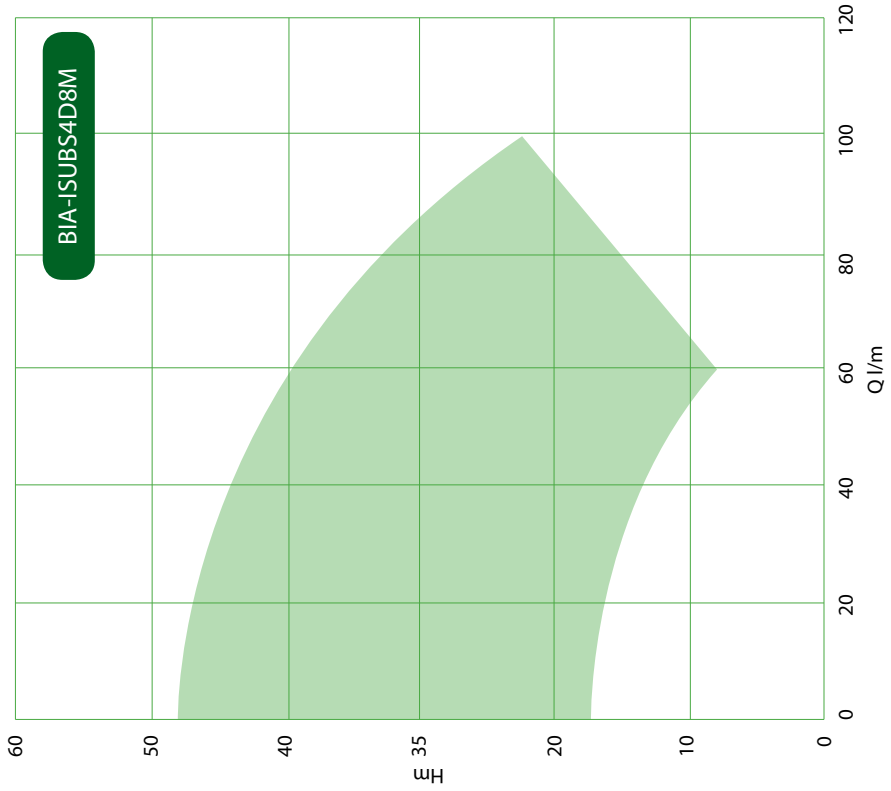
Depth or lift in m								
metres	10	20	30	40	50	60	70	SHUT
10		69	59	51	37	13		71.5
20	69	59	51	37	13			71.5
30	59	51	37	13				71.5
40	51	37	13					71.5
50	37	13						71.5
60	13							71.5
70					litres/min.			71.5
SHUT	61.5	51.5	41.5	31.5	21.5	11.5	1.5	



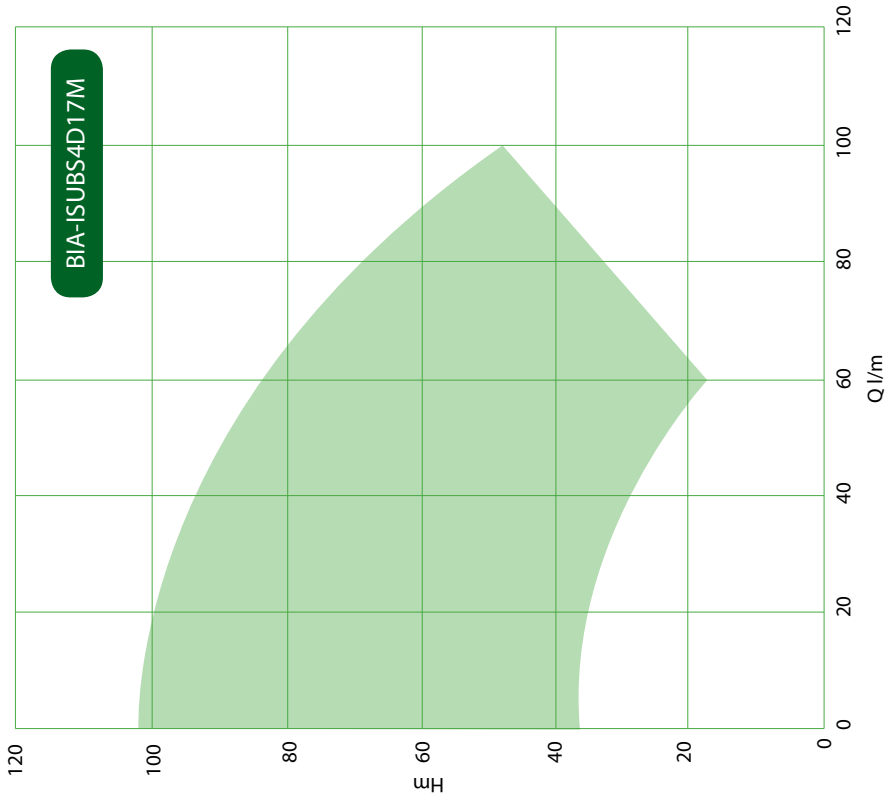
Depth or lift in m								
metres	20	40	60	80	100	120	140	SHUT
20		67	58	47	33			137.5
40	67	58	47	33				137.5
60	58	47	33					137.5
80	47	33						137.5
100	33							137.5
120					litres/min.			137.5
140								137.5
SHUT	117.5	97.5	77.5	57.5	37.5	17.5		

4" BOREHOLE PUMPS

Variable Frequency Drive - Curves



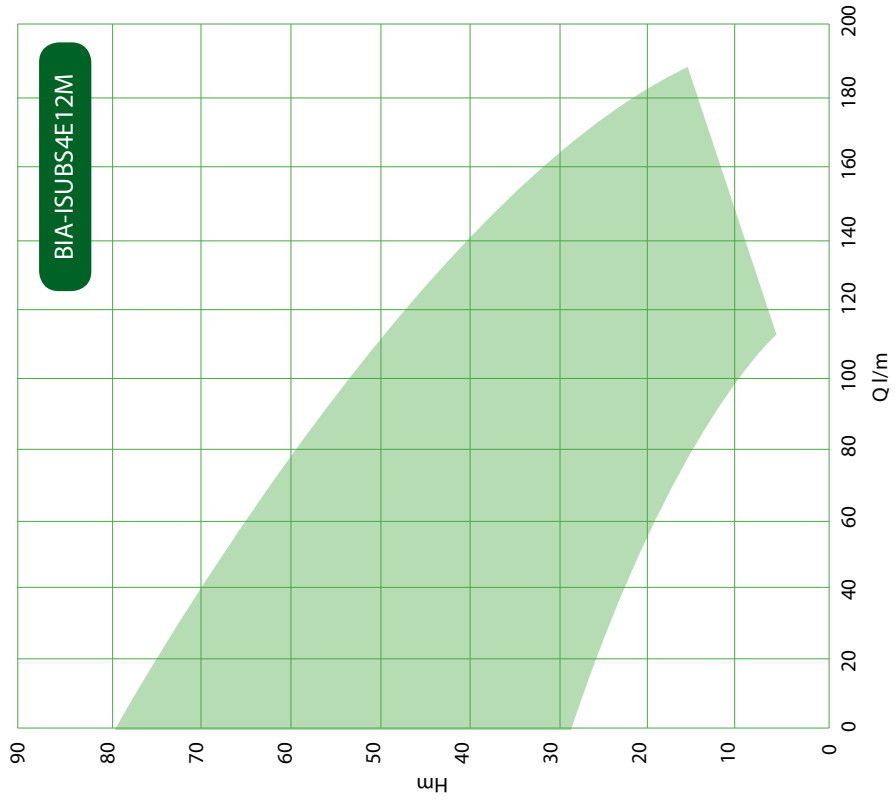
Depth or lift in m								
metres	10	15	20	25	30	35		SHUT
10		90	85	72	60	35		48
15	90	85	72	60	35			48
20	85	72	60	35				48
25	72	60	35					48
30	60	35				litres/min.		48
35	35							48
SHUT	38	33	28	23	18	13		



Depth or lift in m								
metres	20	30	40	50	60	70		SHUT
20		100	88	79	65	50		102
30	100	88	79	65	50			102
40	88	79	65	50				102
50	79	65	50					102
60	65	50				litres/min.		102
70	50							102
SHUT	82	72	62	52	42	32		

4" BOREHOLE PUMPS

Variable Frequency Drive - Curves



Depth or lift in m								
metres	10	20	30	40	50	60	70	SHUT
10	182	165	140	115	83	50		
20	165	140	115	83	50			81
30	140	115	83	50				81
40	115	83	50					81
50	83	50						81
60	50				litres/min.			81
70								81
SHUT	72	62	52	42	32	22	12	

ACCESSORIES

DAB 4" Tesla Motor Control Boxes

Electrical control box for operation of single-phase submersible electric pumps, containing manually resettable thermal protection, capacitor, and terminals for the connection of a pressure switch/float switch.

DAB 4" TESLA PSC MOTOR CONTROL BOXES - 2 YEAR TESLA WARRANTY		
TES-CBOX037	**709836**	Control Box TESLA, 0.37kW, 0.5hp.
TES-CBOX055	**709837**	Control Box TESLA, 0.55kW, 0.75hp.
TES-CBOX075	**709838**	Control Box TESLA, 0.75kW, 1.0hp.
TES-CBOX110	**709839**	Control Box TESLA, 1.1kW, 1.5hp.
TES-CBOX150	**709840**	Control Box TESLA, 1.5kW, 2.0hp.
TES-CBOX220	**709841**	Control Box TESLA, 2.2kW, 3.0hp.

DAB S4 Series 4" Tesla 2 Wire Motors

4" submersible asynchronous two-pole electric motor made entirely of AISI 304 stainless steel for the parts in contact with water. The thrust block and bushes are cooled and lubricated with a mixture of water and glycol. The rotor is mounted on a Kingsbury self-centering thrust block designed to withstand significant axial loads. Stator housed in an airtight AISI 304L stainless steel casing with internal sleeve and outer casing and flanges.

The cable is ACS, WRAS and KTW certified. The motor is suitable for use with variable frequency drive (30 Hz - 50Hz).

The capacitor is included in the Noryl cartridge box. Thermal protection included in the motor of 0,5 HP to 1,5 HP in the 50 Hz version.

DAB S4 SERIES 4" TESLA 2 WIRE MOTORS - 2 YEAR TESLA WARRANTY		
TES-M037S2W	**709881**	TESLA Motor 240V 2 Wire, 0.37kW, 0.5hp.
TES-M055S2W	**709884**	TESLA Motor 240V 2 Wire, 0.55kW, 0.75hp.
TES-M075S2W	**709887**	TESLA Motor 240V 2 Wire, 0.75kW, 1.0hp.
TES-M110S2W	**709890**	TESLA Motor 240V 2 Wire, 1.1kW, 1.5hp.
* Note: Tesla psc motors require Tesla psc control boxes		

ACCESSORIES CONTINUED...

Borehole Pump Accessories

Bianco iPROTECT

Tesla Guardian ME

BOREHOLE PUMP ACCESSORIES		
BIA-IPROTECT	**802697**	Pump Protection Control 240V, 0.37-2.2kW
TES-GUARDIAN-ME	**709879**	Probless Management Control 240V 18A, 2.2kW, 3.0hp.
TES-GUARDIAN-1E	**709877**	Probless Management Control 415V 9A, 3.0kW, 4.0hp.
TES-GUARDIAN-2E	**709878**	Probless Management Control 415V 18A, 7.5kW, 10.0hp.
DAB-SBC	**701941**	Bore Cap 1-1/2"
DAB-SDC2.5	**701948**	Electrical Drop Cable 2.5mm Waterproof to 100m per metre
DAB-SSR	**702722**	Synthetic Cable Rope per metre
TES-FASTKITCABLE	**709876**	Adaptor Franklin to Tesla
TES-MOTCABLE1.7	**709908**	TESLA Flat Cable for Motor 1.5m
TES-MOTCABLE2.7	**709909**	TESLA Flat Cable for Motor 2.5m
DAB-JKIT	**701610**	Splice Kit for 2.5mm Cable

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iSOLAR SELECTION MATRIX

iSOLAR BOREPUMP SELECTION BASED ON AVERAGE 6 SOLAR HOURS/DAY SUMMER, 4 SOLAR HOURS/DAY WINTER — LITRES/MIN, **LITRES/DAY**

HEAD M	400 W SUMMER	400 W WINTER	600 W SUMMER	600 W WINTER	800 W SUMMER	800 W WINTER	1000 W SUMMER	1000 W WINTER	1200 W SUMMER	1200 W WINTER	1400 W SUMMER	1400 W WINTER	1600 W SUMMER	1600 W WINTER	2000 W SUMMER	2000 W WINTER	2400 W SUMMER	2400 W WINTER	2800 W SUMMER	2800 W WINTER	3200 W SUMMER	3200 W WINTER
20			S4E8SOL 84 **30240**	S4E8SOL 84 **20160**	S4E8SOL 115 **41400**	S4E8SOL 115 **27600**	S4E8SOL 140 **50400**	S4E8SOL 140 **33600**	S4E8SOL 161 **57960**	S4E8SOL 161 **38640**	S4E8SOL 165 **59400**	S4E8SOL 165 **39600**										
20											S4F7SOL 185 **66600**	S4F7SOL 185 **44400**	S4F7SOL 215 **77400**	S4F7SOL 215 **51600**	S4F7SOL 261 **93960**	S4F7SOL 261 **62640**	S4F7SOL 308 **110880**	S4F7SOL 308 **73920**	S4F7SOL 350 **126000**	S4F7SOL 350 **84000**		
30	S4C9SOL 27 **9720**	S4C9SOL 27 **6480**	S4C9SOL 48 **17280**	S4C9SOL 48 **11520**																		
30			S4D8SOL 60 **21600**	S4D8SOL 60 **14400**	S4D8SOL 75 **27000**	S4D8SOL 75 **18000**																
30							S4E8SOL 88 **31680**	S4E8SOL 88 **21120**	S4E8SOL 112 **40320**	S4E8SOL 112 **26880**	S4E8SOL 128 **46080**	S4E8SOL 128 **30720**										
30					S4E12SOL 76 **27360**	S4E12SOL 76 **18240**	S4E12SOL 96 **34560**	S4E12SOL 96 **23040**	S4E12SOL 112 **40320**	S4E12SOL 112 **26880**	S4E12SOL 128 **46080**	S4E12SOL 128 **30720**	S4E12SOL 147 **52920**	S4E12SOL 147 **35280**	S4E12SOL 163 **58680**	S4E12SOL 163 **39120**						
30																	S4F7SOL 191 **68760**	S4F7SOL 191 **45840**	S4F7SOL 230 **82800**	S4F7SOL 230 **55200**		
40	S4A12SOL 16 **5760**	S4A12SOL 16 **3840**	S4A12SOL 20 **7200**	S4A12SOL 20 **4800**																		
40	S4B12SOL 21 **7560**	S4B12SOL 21 **5040**	S4B12SOL 28 **10080**	S4B12SOL 28 **6720**	S4B12SOL 33 **11880**	S4B12SOL 33 **7920**																
40			S4C9SOL 34 **12240**	S4C9SOL 34 **8160**	S4C9SOL 37 **13320**	S4C9SOL 37 **8880**																
40			S4C13SOL 38 **13680**	S4C13SOL 38 **9120**	S4C13SOL 50 **18000**	S4C13SOL 50 **12000**	S4C13SOL 60 **21600**	S4C13SOL 60 **14400**														
40					S4D8SOL 55 **19800**	S4D8SOL 55 **13200**																
40									S4E8SOL 68 **24480**	S4E8SOL 68 **16320**	S4E8SOL 84 **30240**	S4E8SOL 84 **20160**										
40							S4E12SOL 60 **21600**	S4E12SOL 60 **14400**	S4E12SOL 81 **29160**	S4E12SOL 81 **19440**	S4E12SOL 99 **35640**	S4E12SOL 99 **23760**	S4E12SOL 117 **42120**	S4E12SOL 117 **28080**	S4E12SOL 140 **50400**	S4E12SOL 140 **33600**						
40					S4E17SOL 49 **17640**	S4E17SOL 49 **11760**	S4E17SOL 67 **24120**	S4E17SOL 67 **16080**	S4E17SOL 82 **29520**	S4E17SOL 82 **19680**	S4E17SOL 95 **34200**	S4E17SOL 95 **22800**	S4E17SOL 108 **38880**	S4E17SOL 108 **25920**	S4E17SOL 133 **47880**	S4E17SOL 133 **31920**	S4E17SOL 180 **64800**	S4E17SOL 180 **43200**				

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iSOLAR SELECTION MATRIX

iSOLAR BOREPUMP SELECTION BASED ON AVERAGE 6 SOLAR HOURS/DAY SUMMER, 4 SOLAR HOURS/DAY WINTER — LITRES/MIN, **LITRES/DAY**

HEAD M	400 W SUMMER	400 W WINTER	600 W SUMMER	600 W WINTER	800 W SUMMER	800 W WINTER	1000 W SUMMER	1000 W WINTER	1200 W SUMMER	1200 W WINTER	1400 W SUMMER	1400 W WINTER	1600 W SUMMER	1600 W WINTER	2000 W SUMMER	2000 W WINTER	2400 W SUMMER	2400 W WINTER	2800 W SUMMER	2800 W WINTER	3200 W SUMMER	3200 W WINTER
50	S4A12SOL 13 **4680**	S4A12SOL 13 **3120**	S4A12SOL 16 **5760**	S4A12SOL 16 **3840**																		
50	S4A18SOL 14 **5040**	S4A18SOL 14 **3360**	S4A18SOL 20 **7200**	S4A18SOL 20 **4800**																		
50	S4B12SOL 15 **5400**	S4B12SOL 15 **3600**	S4B12SOL 25 **9000**	S4B12SOL 25 **6000**	S4B12SOL 27 **9720**	S4B12SOL 27 **6480**																
50			S4C13SOL 24 **8640**	S4C13SOL 24 **5760**	S4C13SOL 40 **14400**	S4C13SOL 40 **9600**	S4C13SOL 50 **18000**	S4C13SOL 50 **12000**														
50					S4D13SOL 40 **14400**	S4D13SOL 40 **9600**	S4D13SOL 53 **19080**	S4D13SOL 53 **12720**	S4D13SOL 66 **23760**	S4D13SOL 66 **15840**	S4D13SOL 76 **27360**	S4D13SOL 76 **18240**										
50											S4E12SOL 63 **22680**	S4E12SOL 63 **15120**	S4E12SOL 82 **29520**	S4E12SOL 82 **19680**	S4E12SOL 113 **40680**	S4E12SOL 113 **27120**						
50											S4E17SOL 72 **25920**	S4E17SOL 72 **17280**	S4E17SOL 88 **31680**	S4E17SOL 88 **21120**	S4E17SOL 112 **40320**	S4E17SOL 112 **26880**	S4E17SOL 134 **48240**	S4E17SOL 134 **32160**	S4E17SOL 150 **54000**	S4E17SOL 150 **36000**		
60	S4A12SOL 11 **3960**	S4A12SOL 11 **2640**	S4A12SOL 13 **4680**	S4A12SOL 13 **3120**																		
60	S4A18SOL 12 **4320**	S4A18SOL 12 **2880**	S4A18SOL 17 **6120**	S4A18SOL 17 **4080**																		
60			S4B12SOL 20 **7200**	S4B12SOL 20 **4800**	S4B12SOL 22 **7920**	S4B12SOL 22 **5280**																
60					S4C13SOL 27 **9720**	S4C13SOL 27 **6480**	S4C13SOL 39 **14040**	S4C13SOL 39 **9360**														
60					S4C19SOL 30 **10800**	S4C19SOL 30 **7200**	S4C19SOL 42 **15120**	S4C19SOL 42 **10080**	S4C19SOL 51 **18360**	S4C19SOL 51 **12240**	S4C19SOL 58 **20880**	S4C19SOL 58 **13920**										
60							S4D13SOL 42 **15120**	S4D13SOL 42 **10080**	S4D13SOL 55 **19800**	S4D13SOL 55 **13200**	S4D13SOL 64 **23040**	S4D13SOL 64 **15360**										
60					S4D17SOL 32 **11520**	S4D17SOL 32 **7680**	S4D17SOL 46 **16560**	S4D17SOL 46 **11040**	S4D17SOL 56 **20160**	S4D17SOL 56 **13440**	S4D17SOL 66 **23760**	S4D17SOL 66 **15840**	S4D17SOL 74 **26640**	S4D17SOL 74 **17760**	S4D17SOL 87 **31320**	S4D17SOL 87 **20880**						
60															S4E17SOL 89 **32040**	S4E17SOL 89 **21360**	S4E17SOL 111 **39960**	S4E17SOL 111 **26640**	S4E17SOL 132 **47520**	S4E17SOL 132 **31680**		
70	S4A18SOL 9 **3240**	S4A18SOL 9 **2160**	S4A18SOL 15 **5400**	S4A18SOL 15 **3600**																		
70	S4B24SOL 11 **3960**	S4B24SOL 11 **2640**	S4B24SOL 18 **6480**	S4B24SOL 18 **4320**	S4B24SOL 23 **8280**	S4B24SOL 23 **5520**	S4B24SOL 28 **10080**	S4B24SOL 28 **6720**	S4B24SOL 32 **11520**	S4B24SOL 32 **7680**	S4B24SOL 35 **12600**	S4B24SOL 35 **8400**										
70					S4C19SOL 22 **7920**	S4C19SOL 22 **5280**	S4C19SOL 33 **11880**	S4C19SOL 33 **7920**	S4C19SOL 43 **15480**	S4C19SOL 43 **10320**	S4C19SOL 51 **18360**	S4C19SOL 51 **12240**										

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iSOLAR BOREPUMP SELECTION BASED ON AVERAGE 6 SOLAR HOURS/DAY SUMMER, 4 SOLAR HOURS/DAY WINTER — LITRES/MIN, **LITRES/DAY**

HEAD M	400 W SUMMER	400 W WINTER	600 W SUMMER	600 W WINTER	800 W SUMMER	800 W WINTER	1000 W SUMMER	1000 W WINTER	1200 W SUMMER	1200 W WINTER	1400 W SUMMER	1400 W WINTER	1600 W SUMMER	1600 W WINTER	2000 W SUMMER	2000 W WINTER	2400 W SUMMER	2400 W WINTER	2800 W SUMMER	2800 W WINTER	3200 W SUMMER	3200 W WINTER
70					S4C25SOL 27 **9720**	S4C25SOL 27 **6480**	S4C25SOL 36 **12960**	S4C25SOL 36 **8640**	S4C25SOL 43 **15480**	S4C25SOL 43 **10320**	S4C25SOL 49 **17640**	S4C25SOL 49 **11760**	S4C25SOL 55 **19800**	S4C25SOL 55 **13200**								
70							S4D17SOL 32 **11520**	S4D17SOL 32 **7680**	S4D17SOL 44 **15840**	S4D17SOL 44 **10560**	S4D17SOL 56 **20160**	S4D17SOL 56 **13440**	S4D17SOL 65 **23400**	S4D17SOL 65 **15600**	S4D17SOL 76 **27360**	S4D17SOL 76 **18240**						
70															S4E17SOL 68 **24480**	S4E17SOL 68 **16320**	S4E17SOL 91 **32760**	S4E17SOL 91 **21840**	S4E17SOL 112 **40320**	S4E17SOL 112 **26880**		
80	S4A18SOL 7 **2520**	S4A18SOL 7 **1680**	S4A18SOL 13 **4680**	S4A18SOL 13 **3120**																		
80			S4B24SOL 15 **5400**	S4B24SOL 15 **3600**	S4B24SOL 21 **7560**	S4B24SOL 21 **5040**	S4B24SOL 26 **9360**	S4B24SOL 26 **6240**	S4B24SOL 29 **10440**	S4B24SOL 29 **6960**	S4B24SOL 33 **11880**	S4B24SOL 33 **7920**										
80							S4C19SOL 25 **9000**	S4C19SOL 25 **6000**	S4C19SOL 35 **12600**	S4C19SOL 35 **8400**	S4C19SOL 43 **15480**	S4C19SOL 43 **10320**										
80					S4C25SOL 20 **7200**	S4C25SOL 20 **4800**	S4C25SOL 30 **10800**	S4C25SOL 30 **7200**	S4C25SOL 37 **13320**	S4C25SOL 37 **8880**	S4C25SOL 44 **15840**	S4C25SOL 44 **10560**	S4C25SOL 50 **18000**	S4C25SOL 50 **12000**								
80									S4D17SOL 33 **11880**	S4D17SOL 33 **7920**	S4D17SOL 46 **16560**	S4D17SOL 46 **11040**	S4D17SOL 56 **20160**	S4D17SOL 56 **13440**	S4D17SOL 63 **22680**	S4D17SOL 63 **15120**						
80													S4E17SOL 22 **7920**	S4E17SOL 22 **5280**	S4E17SOL 50 **18000**	S4E17SOL 50 **12000**	S4E17SOL 72 **25920**	S4E17SOL 72 **17280**	S4E17SOL 93 **33480**	S4E17SOL 93 **22320**		
90			S4A18SOL 11 **3960**	S4A18SOL 11 **2640**																		
90	S4A36SOL 7 **2520**	S4A36SOL 7 **1680**	S4A36SOL 11 **3960**	S4A36SOL 11 **2640**	S4A36SOL 15 **5400**	S4A36SOL 15 **3600**	S4A36SOL 18 **6480**	S4A36SOL 18 **4320**	S4A36SOL 21 **7560**	S4A36SOL 21 **5040**	S4A36SOL 23 **8280**	S4A36SOL 23 **5520**										
90			S4B24SOL 12 **4320**	S4B24SOL 12 **2880**	S4B24SOL 18 **6480**	S4B24SOL 18 **4320**	S4B24SOL 23 **8280**	S4B24SOL 23 **5520**	S4B24SOL 27 **9720**	S4B24SOL 27 **6480**	S4B24SOL 31 **11160**	S4B24SOL 31 **7440**										
90			S4B32SOL 12 **4320**	S4B32SOL 12 **2880**	S4B32SOL 18 **6480**	S4B32SOL 18 **4320**	S4B32SOL 23 **8280**	S4B32SOL 23 **5520**	S4B32SOL 26 **9360**	S4B32SOL 26 **6240**	S4B32SOL 29 **10440**	S4B32SOL 29 **6960**	S4B32SOL 32 **11520**	S4B32SOL 32 **7680**								
90									S4C19SOL 28 **10080**	S4C19SOL 28 **6720**	S4C19SOL 34 **12240**	S4C19SOL 34 **8160**										
90							S4C25SOL 23 **8280**	S4C25SOL 23 **5520**	S4C25SOL 32 **11520**	S4C25SOL 32 **7680**	S4C25SOL 37 **13320**	S4C25SOL 37 **8880**	S4C25SOL 44 **15840**	S4C25SOL 44 **10560**								
90							S4C39SOL 24 **8640**	S4C39SOL 24 **5760**	S4C39SOL 32 **11520**	S4C39SOL 32 **7680**	S4C39SOL 37 **13320**	S4C39SOL 37 **8880**	S4C39SOL 43 **15480**	S4C39SOL 43 **10320**	S4C39SOL 53 **19080**	S4C39SOL 53 **12720**	S4C39SOL 61 **21960**	S4C39SOL 61 **14640**	S4C39SOL 66 **23760**	S4C39SOL 66 **15840**	S4C39SOL 66 **23760**	S4C39SOL 66 **15840**
90											S4D17SOL 34 **12240**	S4D17SOL 34 **8160**	S4D17SOL 46 **16560**	S4D17SOL 46 **11040**	S4D17SOL 48 **17280**	S4D17SOL 48 **11520**						
90											S4D25SOL 38 **13680**	S4D25SOL 38 **9120**	S4D25SOL 47 **16920**	S4D25SOL 47 **11280**	S4D25SOL 65 **23400**	S4D25SOL 65 **15600**	S4D25SOL 78 **28080**	S4D25SOL 78 **18720**	S4D25SOL 86 **30960**	S4D25SOL 86 **20640**		

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iSOLAR BOREPUMP SELECTION BASED ON AVERAGE 6 SOLAR HOURS/DAY SUMMER, 4 SOLAR HOURS/DAY WINTER — LITRES/MIN, **LITRES/DAY**

HEAD M	400 W		600 W		800 W		1000 W		1200 W		1400 W		1600 W		2000 W		2400 W		2800 W		3200 W	
	SUMMER	WINTER	SUMMER	WINTER	SUMMER	WINTER	SUMMER	WINTER	SUMMER	WINTER	SUMMER	WINTER	SUMMER	WINTER	SUMMER	WINTER	SUMMER	WINTER	SUMMER	WINTER	SUMMER	WINTER
100			S4A18SOL 9 **3240**	S4A18SOL 9 **2160**																		
100	S4A36SOL 5 **1800**	S4A36SOL 5 **1200**	S4A36SOL 10 **3600**	S4A36SOL 10 **2400**	S4A36SOL 14 **5040**	S4A36SOL 14 **3360**	S4A36SOL 17 **6120**	S4A36SOL 17 **4080**	S4A36SOL 20 **7200**	S4A36SOL 20 **4800**	S4A36SOL 22 **7920**	S4A36SOL 22 **5280**										
100					S4B24SOL 15 **5400**	S4B24SOL 15 **3600**	S4B24SOL 21 **7560**	S4B24SOL 21 **5040**	S4B24SOL 25 **9000**	S4B24SOL 25 **6000**	S4B24SOL 28 **10080**	S4B24SOL 28 **6720**										
100			S4B32SOL 11 **3960**	S4B32SOL 11 **2640**	S4B32SOL 16 **5760**	S4B32SOL 16 **3840**	S4B32SOL 21 **7560**	S4B32SOL 21 **5040**	S4B32SOL 24 **8640**	S4B32SOL 24 **5760**	S4B32SOL 27 **9720**	S4B32SOL 27 **6480**	S4B32SOL 30 **10800**	S4B32SOL 30 **7200**								
100									S4C25SOL 26 **9360**	S4C25SOL 26 **6240**	S4C25SOL 32 **11520**	S4C25SOL 32 **7680**	S4C25SOL 38 **13680**	S4C25SOL 38 **9120**								
100							S4C39SOL 20 **7200**	S4C39SOL 20 **4800**	S4C39SOL 27 **9720**	S4C39SOL 27 **6480**	S4C39SOL 33 **11880**	S4C39SOL 33 **7920**	S4C39SOL 39 **14040**	S4C39SOL 39 **9360**	S4C39SOL 49 **17640**	S4C39SOL 49 **11760**	S4C39SOL 58 **20880**	S4C39SOL 58 **13920**	S4C39SOL 64 **23040**	S4C39SOL 64 **15360**	S4C39SOL 66 **23760**	S4C39SOL 66 **15840**
100									S4D25SOL 22 **7920**	S4D25SOL 22 **5280**	S4D25SOL 30 **10800**	S4D25SOL 30 **7200**	S4D25SOL 39 **14040**	S4D25SOL 39 **9360**	S4D25SOL 55 **19800**	S4D25SOL 55 **13200**	S4D25SOL 69 **24840**	S4D25SOL 69 **16560**	S4D25SOL 80 **28800**	S4D25SOL 80 **19200**		
110			S4A36SOL 9 **3240**	S4A36SOL 9 **2160**	S4A36SOL 13 **4680**	S4A36SOL 13 **3120**	S4A36SOL 17 **6120**	S4A36SOL 17 **4080**	S4A36SOL 19 **6840**	S4A36SOL 19 **4560**	S4A36SOL 26 **9360**	S4A36SOL 26 **6240**										
110					S4B24SOL 12 **4320**	S4B24SOL 12 **2880**	S4B24SOL 17 **6120**	S4B24SOL 17 **4080**	S4B24SOL 23 **8280**	S4B24SOL 23 **5520**	S4B24SOL 25 **9000**	S4B24SOL 25 **6000**										
110					S4B32SOL 13 **4680**	S4B32SOL 13 **3120**	S4B32SOL 18 **6480**	S4B32SOL 18 **4320**	S4B32SOL 23 **8280**	S4B32SOL 23 **5520**	S4B32SOL 26 **9360**	S4B32SOL 26 **6240**	S4B32SOL 28 **10080**	S4B32SOL 28 **6720**								
110									S4C25SOL 20 **7200**	S4C25SOL 20 **4800**	S4C25SOL 27 **9720**	S4C25SOL 27 **6480**	S4C25SOL 34 **12240**	S4C25SOL 34 **8160**								
110									S4C39SOL 23 **8280**	S4C39SOL 23 **5520**	S4C39SOL 28 **10080**	S4C39SOL 28 **6720**	S4C39SOL 35 **12600**	S4C39SOL 35 **8400**	S4C39SOL 45 **16200**	S4C39SOL 45 **10800**	S4C39SOL 53 **19080**	S4C39SOL 53 **12720**	S4C39SOL 60 **21600**	S4C39SOL 60 **14400**	S4C39SOL 63 **22680**	S4C39SOL 63 **15120**
110													S4D25SOL 34 **12240**	S4D25SOL 34 **8160**	S4D25SOL 48 **17280**	S4D25SOL 48 **11520**	S4D25SOL 61 **21960**	S4D25SOL 61 **14640**	S4D25SOL 73 **26280**	S4D25SOL 73 **17520**		
120					S4B24SOL 10 **3600**	S4B24SOL 10 **2400**	S4B24SOL 15 **5400**	S4B24SOL 15 **3600**	S4B24SOL 20 **7200**	S4B24SOL 20 **4800**	S4B24SOL 21 **7560**	S4B24SOL 21 **5040**										
120			S4A36SOL 8 **2880**	S4A36SOL 8 **1920**	S4A36SOL 12 **4320**	S4A36SOL 12 **2880**	S4A36SOL 16 **5760**	S4A36SOL 16 **3840**	S4A36SOL 18 **6480**	S4A36SOL 18 **4320**	S4A36SOL 24 **8640**	S4A36SOL 24 **5760**										
120					S4B32SOL 12 **4320**	S4B32SOL 12 **2880**	S4B32SOL 17 **6120**	S4B32SOL 17 **4080**	S4B32SOL 21 **7560**	S4B32SOL 21 **5040**	S4B32SOL 24 **8640**	S4B32SOL 24 **5760**	S4B32SOL 27 **9720**	S4B32SOL 27 **6480**								
120											S4C25SOL 22 **7920**	S4C25SOL 22 **5280**	S4C25SOL 28 **10080**	S4C25SOL 28 **6720**								
120													S4D25SOL 25 **9000**	S4D25SOL 25 **6000**	S4D25SOL 41 **14760**	S4D25SOL 41 **9840**	S4D25SOL 54 **19440**	S4D25SOL 54 **12960**	S4D25SOL 58 **20880**	S4D25SOL 58 **13920**		

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iSOLAR BOREPUMP SELECTION BASED ON AVERAGE 6 SOLAR HOURS/DAY SUMMER, 4 SOLAR HOURS/DAY WINTER											LITRES/MIN, **LITRES/DAY**											
HEAD M	400 W		600 W		800 W		1000 W		1200 W		1400 W		1600 W		2000 W		2400 W		2800 W		3200 W	
	SUMMER	WINTER	SUMMER	WINTER	SUMMER	WINTER	SUMMER	WINTER	SUMMER	WINTER	SUMMER	WINTER	SUMMER	WINTER	SUMMER	WINTER	SUMMER	WINTER	SUMMER	WINTER	SUMMER	WINTER
130			S4A36SOL 6 **2160**	S4A36SOL 6 **1440**	S4A36SOL 11 **3960**	S4A36SOL 11 **2640**	S4A36SOL 14 **5040**	S4A36SOL 14 **3360**	S4A36SOL 17 **6120**	S4A36SOL 17 **4080**	S4A36SOL 19 **6840**	S4A36SOL 19 **4560**										
130							S4B24SOL 13 **4680**	S4B24SOL 13 **3120**	S4B24SOL 17 **6120**	S4B24SOL 17 **4080**	S4B24SOL 17 **6120**	S4B24SOL 17 **4080**										
130							S4B32SOL 15 **5400**	S4B32SOL 15 **3600**	S4B32SOL 18 **6480**	S4B32SOL 18 **4320**	S4B32SOL 22 **7920**	S4B32SOL 22 **5280**	S4B32SOL 25 **9000**	S4B32SOL 25 **6000**								
130					S4B48SOL 11 **3960**	S4B48SOL 11 **2640**	S4B48SOL 15 **5400**	S4B48SOL 15 **3600**	S4B48SOL 19 **6840**	S4B48SOL 19 **4560**	S4B48SOL 22 **7920**	S4B48SOL 22 **5280**	S4B48SOL 25 **9000**	S4B48SOL 25 **6000**	S4B48SOL 29 **10440**	S4B48SOL 29 **6960**	S4B48SOL 32 **11520**	S4B48SOL 32 **7680**	S4B48SOL 35 **12600**	S4B48SOL 35 **8400**	S4B48SOL 36 **12960**	S4B48SOL 36 **8640**
130											S4C39SOL 20 **7200**	S4C39SOL 20 **4800**	S4C39SOL 27 **9720**	S4C39SOL 27 **6480**	S4C39SOL 37 **13320**	S4C39SOL 37 **8880**	S4C39SOL 45 **16200**	S4C39SOL 45 **10800**	S4C39SOL 53 **19080**	S4C39SOL 53 **12720**	S4C39SOL 56 **20160**	S4C39SOL 56 **13440**
130															S4D25SOL 34	S4D25SOL 34	S4D25SOL 47	S4D25SOL 47	S4D25SOL 50	S4D25SOL 50		
140					S4A36SOL 10 **3600**	S4A36SOL 10 **2400**	S4A36SOL 13 **4680**	S4A36SOL 13 **3120**	S4A36SOL 16 **5760**	S4A36SOL 16 **3840**	S4A36SOL 18 **6480**	S4A36SOL 18 **4320**										
140							S4B32SOL 13 **4680**	S4B32SOL 13 **3120**	S4B32SOL 17 **6120**	S4B32SOL 17 **4080**	S4B32SOL 20 **7200**	S4B32SOL 20 **4800**	S4B32SOL 23 **8280**	S4B32SOL 23 **5520**								
140							S4B48SOL 13 **4680**	S4B48SOL 13 **3120**	S4B48SOL 17 **6120**	S4B48SOL 17 **4080**	S4B48SOL 20 **7200**	S4B48SOL 20 **4800**	S4B48SOL 24 **8640**	S4B48SOL 24 **5760**	S4B48SOL 28 **10080**	S4B48SOL 28 **6720**	S4B48SOL 31 **11160**	S4B48SOL 31 **7440**	S4B48SOL 34 **12240**	S4B48SOL 34 **8160**	S4B48SOL 36 **12960**	S4B48SOL 36 **8640**
140													S4C39SOL 23 **8280**	S4C39SOL 23 **5520**	S4C39SOL 34 **12240**	S4C39SOL 34 **8160**	S4C39SOL 42 **15120**	S4C39SOL 42 **10080**	S4C39SOL 50 **18000**	S4C39SOL 50 **12000**	S4C39SOL 53 **19080**	S4C39SOL 53 **12720**
150					S4A36SOL 8 **2880**	S4A36SOL 8 **1920**	S4A36SOL 12 **4320**	S4A36SOL 12 **2880**	S4A36SOL 14 **5040**	S4A36SOL 14 **3360**	S4A36SOL 17 **6120**	S4A36SOL 17 **4080**										
150							S4B32SOL 10 **3600**	S4B32SOL 10 **2400**	S4B32SOL 14 **5040**	S4B32SOL 14 **3360**	S4B32SOL 18 **6480**	S4B32SOL 18 **4320**	S4B32SOL 22 **7920**	S4B32SOL 22 **5280**								
150							S4B48SOL 11 **3960**	S4B48SOL 11 **2640**	S4B48SOL 15 **5400**	S4B48SOL 15 **3600**	S4B48SOL 19 **6840**	S4B48SOL 19 **4560**	S4B48SOL 22 **7920**	S4B48SOL 22 **5280**	S4B48SOL 26 **9360**	S4B48SOL 26 **6240**	S4B48SOL 30 **10800**	S4B48SOL 30 **7200**	S4B48SOL 34 **12240**	S4B48SOL 34 **8160**	S4B48SOL 34 **12240**	S4B48SOL 34 **8160**
150															S4C39SOL 30 **10800**	S4C39SOL 30 **7200**	S4C39SOL 38 **13680**	S4C39SOL 38 **9120**	S4C39SOL 46 **16560**	S4C39SOL 46 **11040**	S4C39SOL 48 **17280**	S4C39SOL 48 **11520**

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iSOLAR SELECTION MATRIX

iSOLAR BOREPUMP SELECTION BASED ON AVERAGE 6 SOLAR HOURS/DAY SUMMER, 4 SOLAR HOURS/DAY WINTER															LITRES/MIN, **LITRES/DAY**							
HEAD M	400 W		600 W		800 W		1000 W		1200 W		1400 W		1600 W		2000 W		2400 W		2800 W		3200 W	
	SUMMER	WINTER	SUMMER	WINTER	SUMMER	WINTER	SUMMER	WINTER	SUMMER	WINTER	SUMMER	WINTER	SUMMER	WINTER	SUMMER	WINTER	SUMMER	WINTER	SUMMER	WINTER	SUMMER	WINTER
																	10080	6720	12960	8640	12960	8640
160					S4A36SOL 7 2520	S4A36SOL 7 1680	S4A36SOL 11 3960	S4A36SOL 11 2640	S4A36SOL 13 4680	S4A36SOL 13 3120	S4A36SOL 15 5400	S4A36SOL 15 3600										
160									S4B32SOL 13 4680	S4B32SOL 13 3120	S4B32SOL 17 6120	S4B32SOL 17 4080	S4B32SOL 21 7560	S4B32SOL 21 5040								
160									S4B48SOL 14 5040	S4B48SOL 14 3360	S4B48SOL 18 6480	S4B48SOL 18 4320	S4B48SOL 20 7200	S4B48SOL 20 4800	S4B48SOL 25 9000	S4B48SOL 25 6000	S4B48SOL 29 10440	S4B48SOL 29 6960	S4B48SOL 33 11880	S4B48SOL 33 7920	S4B48SOL 33 11880	S4B48SOL 33 7920
160															S4C39SOL 27 9720	S4C39SOL 27 6480	S4C39SOL 35 12600	S4C39SOL 35 8400	S4C39SOL 43 15480	S4C39SOL 43 10320	S4C39SOL 45 16200	S4C39SOL 45 10800
180							S4A36SOL 8 2880	S4A36SOL 8 1920	S4A36SOL 11 3960	S4A36SOL 11 2640	S4A36SOL 13 4680	S4A36SOL 13 3120										
180											S4B32SOL 13 4680	S4B32SOL 13 3120	S4B32SOL 15 5400	S4B32SOL 15 3600								
180									S4B48SOL 11 3960	S4B48SOL 11 2640	S4B48SOL 14 5040	S4B48SOL 14 3360	S4B48SOL 17 6120	S4B48SOL 17 4080	S4B48SOL 22 7920	S4B48SOL 22 5280	S4B48SOL 27 9720	S4B48SOL 27 6480	S4B48SOL 31 11160	S4B48SOL 31 7440	S4B48SOL 31 11160	S4B48SOL 31 7440
180																	S4C39SOL 28	S4C39SOL 28	S4C39SOL 36	S4C39SOL 36	S4C39SOL 36	S4C39SOL 36
200							S4A36SOL 6 2160	S4A36SOL 6 1440	S4A36SOL 9 3240	S4A36SOL 9 2160	S4A36SOL 10 3600	S4A36SOL 10 2400										
200											S4B48SOL 11 3960	S4B48SOL 11 2640	S4B48SOL 14 5040	S4B48SOL 14 3360	S4B48SOL 19 6840	S4B48SOL 19 4560	S4B48SOL 24 8640	S4B48SOL 24 5760	S4B48SOL 28 10080	S4B48SOL 28 6720	S4B48SOL 28 10080	S4B48SOL 28 6720
200																	S4C39SOL 21 7560	S4C39SOL 21 5040	S4C39SOL 24 8640	S4C39SOL 24 5760	S4C39SOL 24 8640	S4C39SOL 24 5760
220													S4B48SOL 12 4320	S4B48SOL 12 2880	S4B48SOL 17 6120	S4B48SOL 17 4080	S4B48SOL 22 7920	S4B48SOL 22 5280	S4B48SOL 25 9000	S4B48SOL 25 6000		
240															S4B48SOL 15 5400	S4B48SOL 15 3600	S4B48SOL 20 7200	S4B48SOL 20 4800	S4B48SOL 21 7560	S4B48SOL 21 5040		
260															S4B48SOL 13 4680	S4B48SOL 13 3120	S4B48SOL 18 6480	S4B48SOL 18 4320	S4B48SOL 18 6480	S4B48SOL 18 4320		

Notes

Notes

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