



**SURFACE MOUNTED &
SUBMERSIBLE PUMPS RANGE
PRODUCT BROCHURE 2021**



DEPENDABLE & DURABLE WATER PUMP SOLUTIONS FOR NOW AND INTO THE FUTURE

Innovative, efficient pumps for Agricultural,
Horticultural, Residential and Commercial markets

INOX



When it comes to supplying water to your home, our range of domestic and household pumps are the obvious choice. Suitable for any home from a holiday house to a block of flats, our range of surface mounted, waste water and drainage pressure systems are ideal for 2 to 18 taps.

No two families are the same. However, with our range of pressure systems, you'll be sure to find a package that perfectly suits your family's needs.

Our range of accessories are the perfect addition to your pump or pressure system and ensure your system runs efficiently each and every time.

Whatever the application, there's something to suit your application in our domestic and household range.



4	WHAT PUMP IS FOR WHAT APPLICATION?	A guide to choose the most suitable domestic pump for your application.
5	PUMP TERMINOLOGY	A quick guide for terminology and phrases used in the pump environment.
6	INTELLIGENT PUMP CONTROLLERS	New Single, Dual and Tri mode pump controllers with dry run protection.
	SURFACE MOUNTED PRESSURE SYSTEMS	Suitable for automatic water supply applications for domestic, agricultural or gardening applications.
	INOX SERIES	Self-priming jet pumps suitable for drawing water from above or below ground rainwater tanks, stainless steel pump body.
8	FERRO SERIES	Self-priming jet pumps suitable for drawing water from above or below ground rainwater tanks, cast iron pump body with cataphoresis coating.
	PTF SERIES	Peripheral turbine pumps suitable for drawing water from above ground rainwater tanks, cast iron pump body with cataphoresis coating.
	MULTI SERIES	Horizontal multi-stage pumps suitable for drawing water from above ground rainwater tanks, quiet operation with stainless steel pump body.
	CENTRIFUGAL PUMPS	Suitable for water supply applications for domestic, agricultural or gardening applications.
12	BLC SERIES	End suction centrifugal, stainless steel construction.
	FC SERIES	End suction centrifugal, cast iron construction with cataphoresis coating.
	COMMERCIAL CONSTRUCTION PUMPS	Suitable for dewatering construction sites, stormwater pits and basements where abrasive material is present.
14	HS SERIES	240V portable construction site pumps.
	KT SERIES	415V portable construction site pumps.
	DRAINAGE PUMPS	Suitable for clean water dewatering tasks.
16	JH SERIES	Plastic, light weight and portable, 240V clean water dewatering pumps.
	HIGH HEAD PUMPS	Suitable for AWTs applications and clean water dewatering. MPCX version for automatic domestic water supply.
17	VORTEX PUMPS	Suitable for pumping dirty water with soft solids in suspension.
18	JH SERIES	Plastic, light weight and portable, 240V dirty water dewatering pumps.
	B SERIES	Cast Iron and Stainless, 240V dirty water dewatering pumps.
	Q SERIES	Stainless steel, light weight and portable, 240V dirty water dewatering pump, Calf Milk pump.
	HIGH HEAD GRINDER PUMPS	
21	PDG SERIES	Positive Displacement Grinder Pump with a heavy duty cutter and cutter ring used to treat unstrained wastewaters in "low" flow, high head applications..
	GRINDER PUMP	
22	B SERIES GRINDER	Industrial grade sewage grinder pump.
	iCON PACKAGED PUMP STATION	
23		250L Polyethylene lifting pump station with single free standing plumbing and sewage grinder pump.
	INTELLIGENT iCON CONTROLLERS	
24		Bianco iCON range of intelligent controllers are suitable for installation in various industrial and domestic applications.
	CIRCULATOR PUMPS	Suitable for hot water boosting and circulation.
26	ICIRC SERIES	Variable speed hot water circulator pump for energy savings.
	C SERIES	Domestic 3 speed hot water circulator pumps.
	C SERIES	Domestic hot water booster pump.
	ACCESSORIES	
29		Range of Bianco Pumpz accessories.
	REFLEX PRESSURE SYSTEMS	
30		Pressure vessels store energy in the form of pressurised water to save energy by reducing pump starts and cycling.

WHAT PUMP IS FOR WHAT APPLICATION?

TYPICAL WATER FLOW RATES:

Toilet	9 L/min
Shower	10-15 L/min
Water Saving Shower Head	6-7 L/min
Household Tap	10-15 L/min
Dishwasher	15 L/min
Washing Machine	10-15 L/min
Garden Hose	20 L/min
Lawn Sprinkler	10-15 L/min

There are many different types of pump products needed, covering:

- Domestic pressure pumps with variable speed energy saving devices
- Rain saving device pumps to regulate water pressure and flows
- Hot water pressure boosting circulators
- Submersible pumps for drainage, dirty water and sewage

SURFACE MOUNTED MULTISTAGE PUMP

BIA-MULTI56NXTP

Suitable for domestic use for water supply and pressurisation, irrigation of gardens and moving water in general.



AUTOMATIC PRESSURISATION SYSTEM

BIA-INOX90S2NXT

Integrated system for water pressure boosting in domestic applications.



DRAINAGE PUMP

BIA-JH400S2

Suitable for all dewatering tasks including pumping out sumps, flooded areas and drawing water from wells.



HEAVY DUTY SUBMERSIBLE PUMP

BIA-B75VAS2

Suitable for pumping sewer water and waste water in general containing solids up to a maximum size of 25 mm



HOT WATER CIRCULATING PUMP

BIA-2060-150

For hot water circulation in domestic systems.



REFLEX PRESSURE TANK

An energy saving device stores energy in the form of pressurised water.



PACKAGED PUMP STATION

BIA-ICON250PSFB120GS2-ALM

250L Pump Station with Grinder pump and high level alarm.



MULTISTAGE SUBMERSIBLE PUMP

BIA-B42ACMPCX

Suitable for pressurisation, rainwater re-use, gardening and irrigation activities in residential applications.



BENEFITS OF PUMP MATERIALS

TECHNOPOLYMER



Technopolymer pump bodies do not corrode and make the pump a little quieter and more price competitive.

Pro: Does not stain stationary water. Pump body is corrosion resistant. Quieter and price competitive.

STAINLESS STEEL



Stainless steel pump bodies do not rust and look attractive however transmits more noise than other materials.

Pro: Does not stain stationary water. Pump body is corrosion resistant. Withstands up to 8 bar.

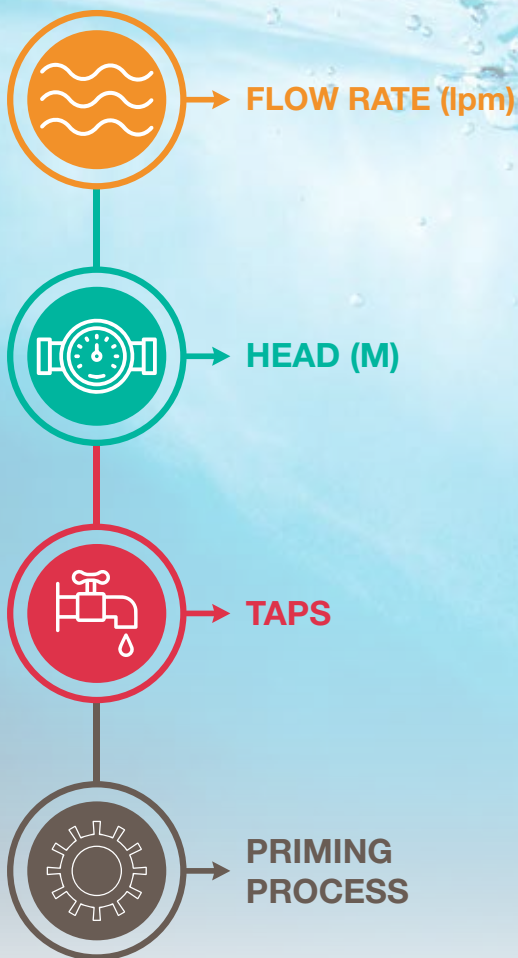
CAST IRON



Cast iron pump bodies are strong and make the pump quieter, however the iron can stain stationary water.

Pro: Cast iron damps noise.

PUMP TERMINOLOGY



Flow rate for domestic pumps is usually expressed as Max Flow which is the maximum flow possible from the pump in litres per minute (lpm). The flow rate determines how many taps could be used at once.

Head is similar to pressure for domestic pumps and is usually expressed as Max Head (m) which is the maximum head possible from the pump in metres. This means that a 30m Max Head pump could pump water 30 metres up in the air or provide a pressure of about 300 kPa. Most houses are limited to 500 kPa. The head determines how much pressure might be available at taps, sprinklers and at the top of a hill.

Note: When comparing pump flow rates, it is recommended to look at the pump performance (Flow/Pressure) at 3 bar.

The data often includes the number of taps that the domestic pressure pump is rated to, and is a visual interpretation of the pump's maximum flow rate, each tap being the equivalent to 10 lpm. Actual tap flow rates vary; an interior tap might be 10 lpm, a garden tap might be 20 lpm, washing machines and toilets less than 6 lpm.

All centrifugal pumps need to be primed before initial operation which involves filling the pump body and suction line full of water before starting the pump for the first time. In the case of "self priming" centrifugal pumps, just the pump body needs to be filled with water before initial operation. It is then best to start the pump with a discharge valve closed, then gradually opening the discharge valve to allow the flow of water.

BENEFITS OF PUMP CONTROL TYPES



PRESSURE SWITCH & TANK SYSTEMS

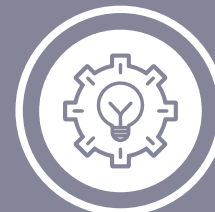
- Less pump starts when fitted with a correctly sized tank
- Reduced power consumption
- Reduced wear and tear
- Can handle poor voltage
- Adjustable differential
- Brass hardware and gauge

Note: Pressure switch provided has no dry-run protection function



ELECTRONIC PRESSURE SYSTEMS

- Runs without cycling down to low flows
- Dry Run Protection
- Auto restart in case of running out of water
- Pressure gauge
- Digital display (NXT)
- Dual mode (NXTP)



INVERTER DRIVE (VARIABLE FREQUENCY DRIVE) PUMPS

- Potential for large energy savings
- Numerous pump protection functions
- Smooth operation
- Dry Run Protection
- Digital display
- Auto restart in case of running out of water
- Runs without cycling down to low flows

The Bianco iCON nXt controllers are tested in Australia to ensure operation in the toughest of environments, combining innovative technology with robust proven architecture to guarantee constant supply of pressurised water when and where you need it the most. Ideal for pumps supplying clean, non-volatile liquids without fibers or solids in applications such as:



SINGLE MODE ELECTRONIC PUMP CONTROLLER

- Monitors both pressure and flow to control the operation of the pump automatically.
- Protects the pump should the water supply fail (water tank running dry) and will automatically restart operation once water is restored.
- Protects the pump from seizing through lack of use, or frequent starts where there is a water leak.
- LED display that displays real time system pressure and can display indication of flow and any warnings.
- IEC plug and play lead for pump. AX version with round 3 pin socket for pump.



DUAL MODE ELECTRONIC PUMP CONTROLLER

- Monitors both pressure and flow to control the operation of the pump automatically.
- Protects the pump should the water supply fail (water tank running dry) and will automatically restart operation once water is restored.
- Protect the pump from seizing through lack of use, or frequent starts where there is a water leak.
- In MODE 1 the starting pressure can be adjusted and in MODE 2 both the starting and stopping pressures can be adjusted to fine tune the installation. A pressure tank is required for MODE 2.
- LED display that displays real time system pressure and can display indication of flow and any warnings.
- IEC plug and play lead for pump. AX version with round 3 pin socket for pump.

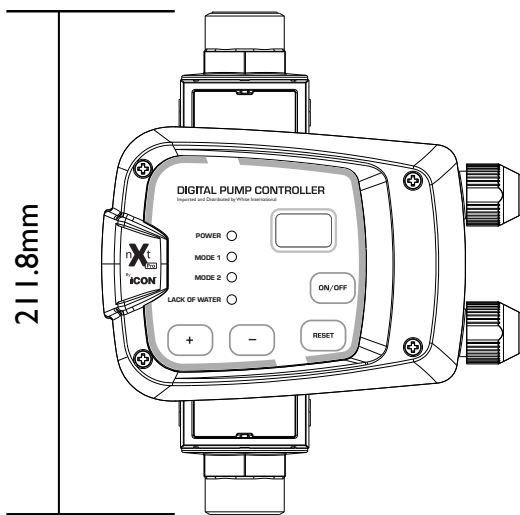


TRI MODE ELECTRONIC DUAL PUMP CONTROLLER

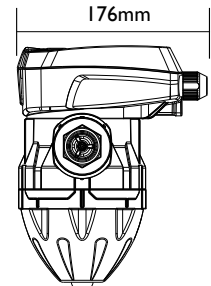
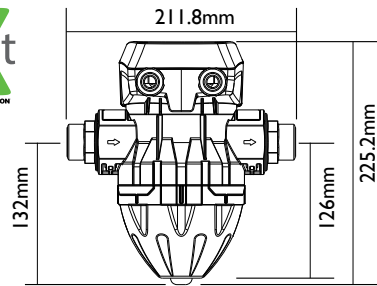
- Monitors both pressure and flow to control the operation of one or two pumps automatically.
- Protects the pump/s should the water supply fail (water tank running dry) and will automatically restart operation once water is restored. It will also protect the pump/s from seizing through lack of use, or frequent starts where there is a water leak.
- In MODE 1 the starting pressure can be adjusted and in MODE 2 both the starting and stopping pressures can be adjusted and in MODE 3 it will control two pumps in a duty/assist configuration with independent starting and stopping pressures.
- In MODE 1 and 2 it is possible to connect two pumps and they will operate as duty/standby with the same starting or starting and stopping pressures. A pressure tank is required for MODE 2 and MODE 3.
- LED display that displays real time system pressure and can display indication of flow and any warnings.

Part Number	Item Code	Modes	Rated Power (W)	A max	IP Rating	kW	Cable to Pump	Union Size	Start Pressure	Stop Pressure
BIA-NXT	808034	Single	1500	10	IP65	1.5	Plug & play	1"	2.2 bar	On no flow
BIA-NXTPRO	808035	Dual	2200	16		2.2	Plug & play	1"	Adjustable	Adjustable
BIA-NXTPROPLUS	808036	Triple					Hardwired (No Cable)	(1 1/4" sold separately)		
Accessories										
BIA-NXTUNION32	808431	1 1/4" union set								
BIA-NXTTANK	808432	Pressure tank to suit nXt Pro and nXt Pro Plus models. 0.3L								
BIA-AXADAPTOR	808675	IEC AX adaptor for NXT								

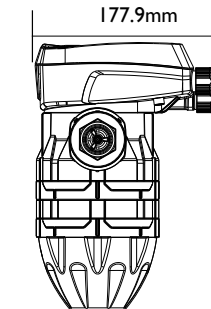
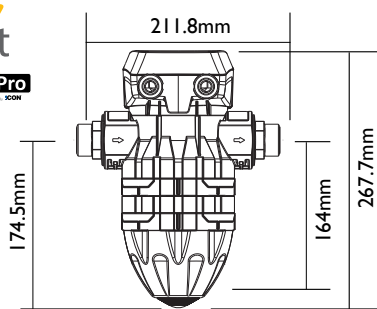
ICON nXt DIMENSIONAL DRAWINGS (mm)



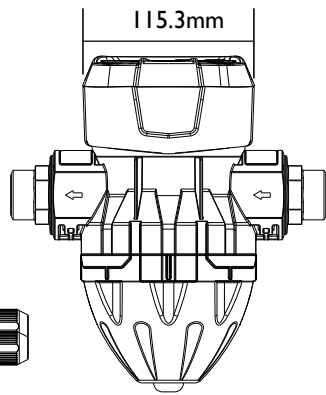
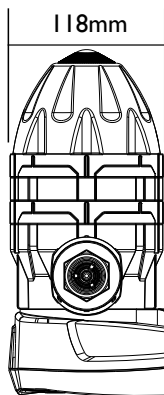
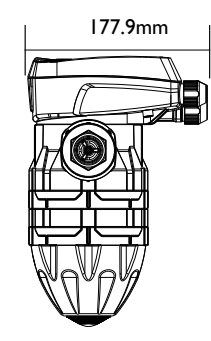
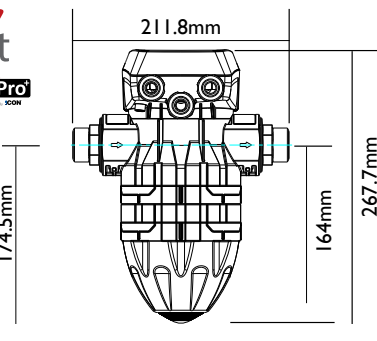
nXt



nXt Pro



nXt Pro



Innovative flow sensor/
non return poppet.
Easy to clean or replace.

Push and Connect
tool-less swivel fittings

1" port standard for
all models.
For flows up to 150 lpm
1 1/4" unions available
nXt Pro & Pro Plus models
For flows up to 350 lpm

Digital display of running
conditions.
Easy programming with
full button-press menu.

Removeable tank
on nXt Pro and
nXt Pro Plus models

No limits. Mount in
any direction.



CERTIFICATIONS & WARRANTY



Patent Pending: 2019901734
Registered Design: 201912797

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.

SURFACE MOUNTED PRESSURE SYSTEMS

Stainless Steel Jet Pump with Electronic Pump Controller

The Inox range of pumps are self-priming surface mounted pressure systems and have a suction capability of up to 8m. These pumps are used for supplying water to domestic installations and applications where a suction lift is required. Suitable for water supply applications with suction wells, water supply and boosting of domestic systems, agricultural and gardening applications.

FEATURES:

- 💧 The new nXt Intelligent electronic pump control is fitted and wired to the pump with plug and play leads for automatic starting, stopping and restarting after power loss or water loss
- 💧 Run dry protection to prevent pump damage
- 💧 The nXt controller has an in-built check valve to prevent water back-flow through the pump
- 💧 Corrosion resistant pump body, diffuser and impeller to ensure pump durability
- 💧 240V single phase totally enclosed fan cooled (TEFC) motor with in-built auto reset thermal overload to prevent pump from damage
- 💧 A pressure tank is recommended
- 💧 1" BSPF In, 1" BSPM Out
- 💧 Start Pressure: 2.2 bar



INOX



CERTIFICATIONS & WARRANTY

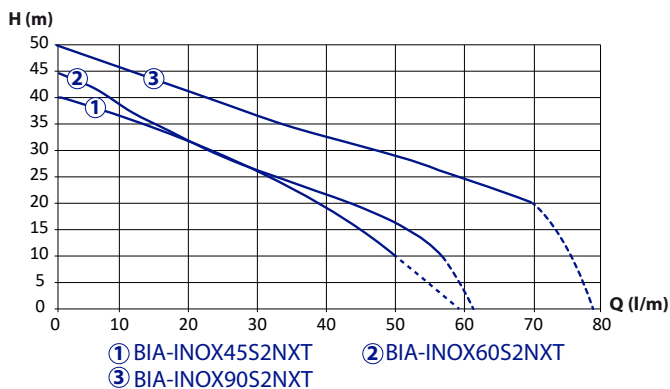


Approved for
Drinking Water
AS/NZ 4020

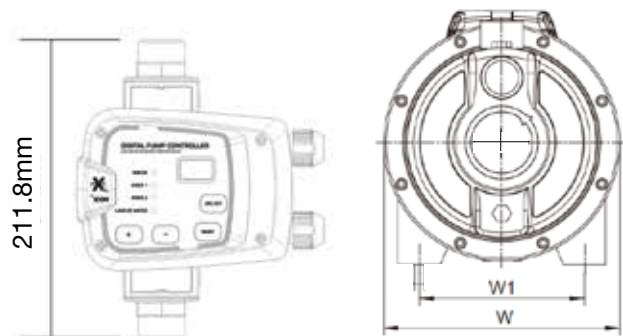
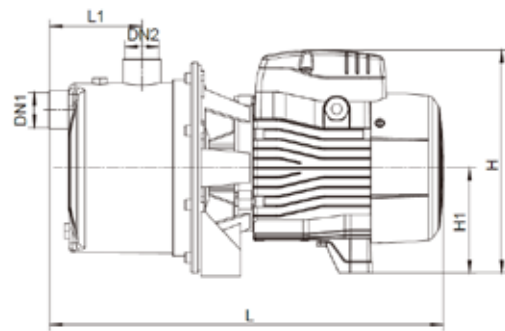
Part Number	Item Code	kW	hp	Taps	Max Head (m)	Max Flow (lpm)
BIA-INOX45S2NXT	808393	0.45	0.6	5	40	58
BIA-INOX60S2NXT	808394	0.6	0.8	6	45	62
BIA-INOX90S2NXT	808395	0.9	1.2	7	50	78

*Taps calculated at 10 L/m

PERFORMANCE CURVE:



DIMENSIONAL DRAWINGS:



Model	DN1	DN2	L (mm)	W (mm)	H (mm)	L1 (mm)	W1 (mm)	H1 (mm)
INOX45			337	180	181.5	78	140	90
INOX60	1" BSPF	1" BSPF	376	200	214	88.5	140	100
INOX90								



SURFACE MOUNTED PRESSURE SYSTEMS

Cast Iron Jet Pump with Electronic Pump Controller

The pump is a self-priming surface mounted pressure system supplied with plug and play leads (IEC type) wired and ready to install. The self-priming ability provides excellent suction capacity of up to 9m. Suitable for supplying water to domestic households. Also suitable for small scale garden irrigation.

FEATURES:

- 💧 The new nXt intelligent electronic pump control is fitted and wired to the pump with plug and play leads for automatic starting, stopping and restarting after power loss or water loss
- 💧 Run dry protection to prevent pump damage
- 💧 The nXt controller has an in-built check valve to prevent water back-flow through the pump
- 💧 Corrosion resistant pump body, diffuser and impeller to ensure pump durability
- 💧 Cataphoresis¹ treatment of pump body for rust prevention to ensure no water dis-coloration or suspended particles
- 💧 High quality mechanical shaft seal and high quality bearings
- 💧 240V single phase TEFC motor with in-built auto reset thermal overload to prevent the pump from overheating
- 💧 A pressure tank is recommended
- 💧 1" BSPF In, 1" BSPM Out
- 💧 Start Pressure: 2.2 bar

FERRO



Part Number	Item Code	kW	hp	Max Head (m)	Max Flow (lpm)	Taps
BIA-FERRO60NXT	808397	0.6	0.8	45	63	4

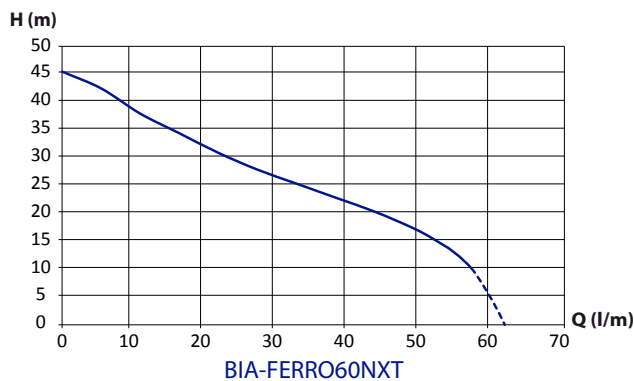
*Taps calculated at 10 L/m

¹Cataphoresis is an electrochemical coating process for metallic surfaces widely used in the industry due to its penetration and long-life, either as a priming coat or finished paint for corrosion resistance.

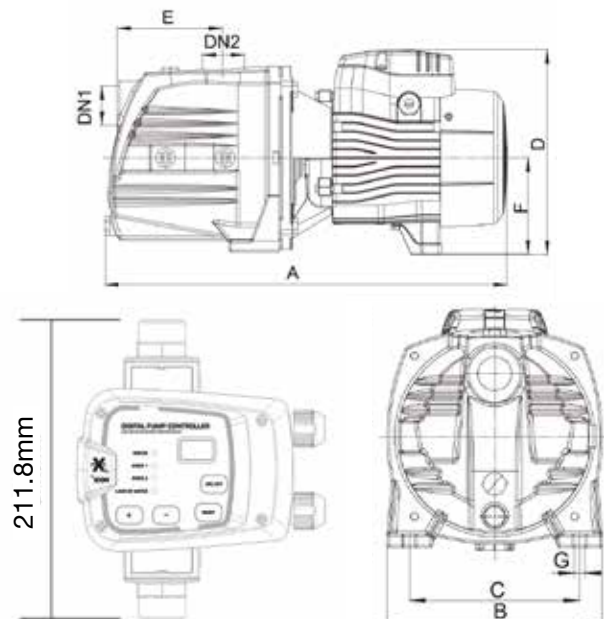
CERTIFICATIONS & WARRANTY



PERFORMANCE CURVE:



DIMENSIONAL DRAWING:



DN1	DN2	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)
1" BSPF	1" BSPF	418	190	150	212	113	100	10

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SURFACE MOUNTED PERIPHERAL TURBINE PUMPS

Cast Iron Pumps

The Bianco Pumpz end suction peripheral turbine pump is ideal for low flow applications. Cast iron with cataphoresis¹ coating and stainless steel impeller. Suitable applications are jacking pumps, Commercial & Industrial washdowns, Domestic gardening, tank water transfer & clean water in applications where there is flooded suction.

FEATURES:

- The new nXt intelligent electronic pump control is fitted and wired to the pump with plug and play leads for automatic starting, stopping and restarting after power loss or water loss
- The nXt controller has an in-built check valve to prevent water back-flow through the pump
- Corrosion resistant pump body, diffuser and impeller to ensure pump durability
- Cataphoresis¹ treatment of pump body for rust prevention to ensure no water dis-coloration or suspended particles
- High quality mechanical shaft seal and high quality bearings
- 240V single phase TEFC motor with in-built auto reset thermal overload to prevent the pump from overheating

PTF

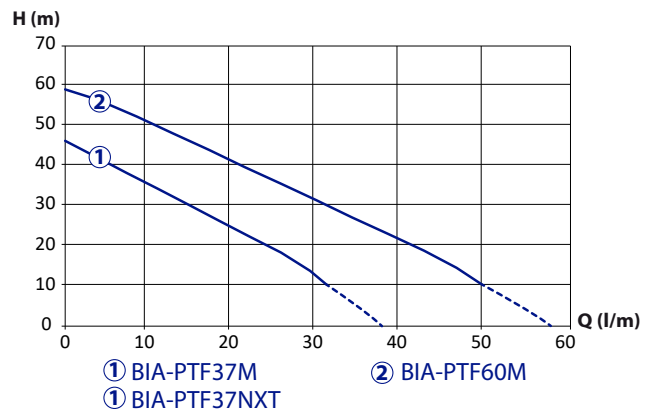


PTF37M

PTF37NXT



PERFORMANCE CURVE:



① BIA-PTF37M

① BIA-PTF37NXT

② BIA-PTF60M

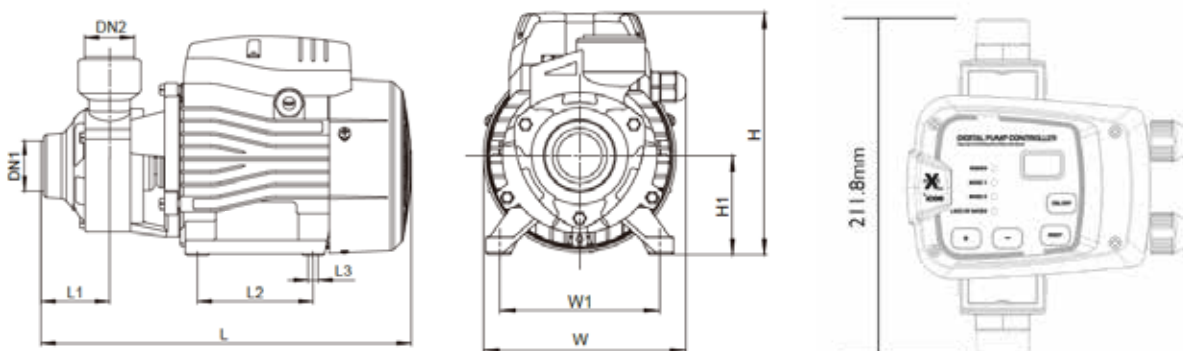
WARRANTY



Part Number	Item Code	kW	hp	Max Head (m)	Max Flow (lpm)	Volts	Connections
BIA-PTF37M	802788	0.37	0.5	45	37	240	1" BSPF In x 1" BSPM Out
BIA-PTF37NXT	808396						
BIA-PTF60M	802790	0.6	0.8	58	58		

¹Cataphoresis is an electrochemical coating process for metallic surfaces widely used in the industry due to its penetration and long-life, either as a priming coat or finished paint for corrosion resistance.

DIMENSIONAL DRAWINGS:



Model	DN1	DN2	L (mm)	W (mm)	H (mm)	L1 (mm)	L2 (mm)	L3 (mm)	W1 (mm)	H1 (mm)
BIA-PTF37M	1" BSPF	1" BSPF	260	132	155	46.5	80	8.5	100	63
BIA-PTF60M			282	147	183	51	90		112	71

SURFACE MOUNTED PRESSURE SYSTEMS

Horizontal Multistage Pressure Systems

Ideal for domestic water supply for homes of all sizes, irrigation, car washing and general water transfer systems, these horizontal multi-stage pressure systems are corrosion resistant with a robust stainless steel construction. Best suited to Positive Inlet Feed eg. Surface mounted rain water tanks and Mains water boosting applications .

MULTI SERIES

FEATURES:

- ◆ The new nXt Pro intelligent electronic pump control is fitted and wired to the pump with plug and play leads for automatic starting, stopping and restarting after power loss or water loss
- ◆ The nXt Pro controller has an in-built check valve to prevent water back-flow through the pump
- ◆ In MODE 1 the starting pressure can be adjusted and in MODE 2 both the starting and stopping pressures can be adjusted to fine tune the installation. A pressure tank is required for MODE 2.
- ◆ Corrosion resistant pump body, diffuser and impeller
- ◆ Mechanical shaft seal
- ◆ Comes complete with plug and play leads
- ◆ 240V single phase TEFC motor with in-built auto reset thermal overload
- ◆ A pressure vessel must be used in Mode 2
- ◆ Two operating modes: Mode 1 & Mode 2



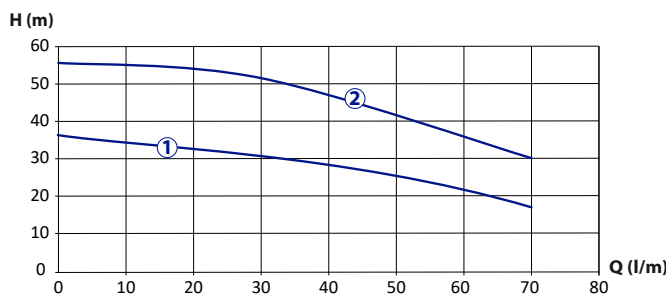
CERTIFICATIONS & WARRANTY



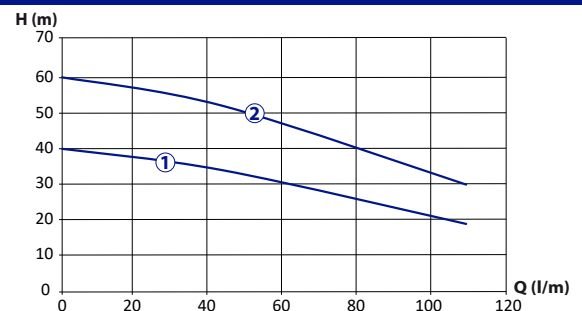
Part Number	Item Code	kW	hp	Max Head (m)	Max Flow (lpm)	Taps	Connections	Start Pressure
BIA-MULTI34NXTP	808398	0.55	0.75	37	70	7	1" BSPF x 1" BSPM	2.2
BIA-MULTI36NXTP	808399	0.75	1.0	55				
BIA-MULTI54NXTP	808400			40	108	10	1-1/4" BSPF x 1" BSPM	
BIA-MULTI56NXTP	808401	1.3	1.75	60				
BIA-MULTI103NXTP	808402	2.2	3	49	233	23	1-1/2" BSPF x 1-1/4" BSPM	

*Taps calculated at 10 L/m

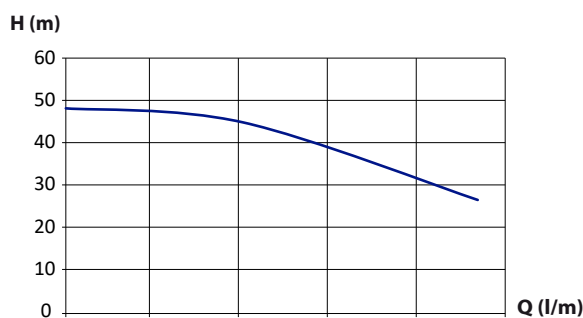
PERFORMANCE CURVES:



① BIA-MULTI34NXTP ② BIA-MULTI36NXTP

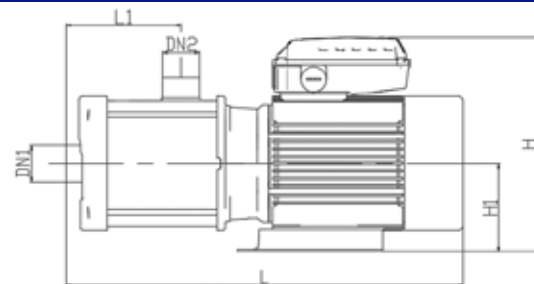


① BIA-MULTI54NXTP ② BIA-MULTI56NXTP



BIA-MULTI103NXTP

DIMENSIONAL DRAWING:



Model	DN1 (BSPF)	DN2 (BSPF)	L (mm)	L1 (mm)	H (mm)	H1 (mm)	DN1 (mm)	DN2 (mm)
BIA-MULTI34NXTP	1"	1"	370	90	207	78.5	207	78.5
BIA-MULTI36NXTP			410	125				
BIA-MULTI54NXTP			370	90				
BIA-MULTI56NXTP	1-1/4"	1"	420	120	235	90	235	90
BIA-MULTI103NXTP	1-1/2"	1-1/2"	480					

CENTRIFUGAL PUMPS

Close Coupled Stainless Steel Motor Pump Units

Suitable for water circulation, wash down purposes, tank transfer, fountains, irrigation and vat washing.

FEATURES:

- 💧 Quiet and reliable operation
- 💧 High Performance
- 💧 Water temperature up to 85°C
- 💧 Constructed from AISI 304 Stainless Steel
- 💧 Corrosion resistant

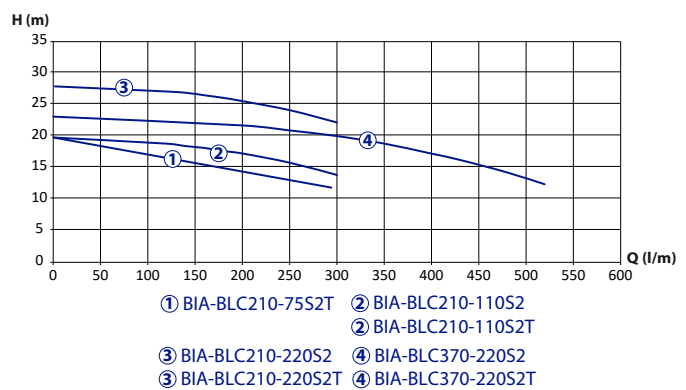
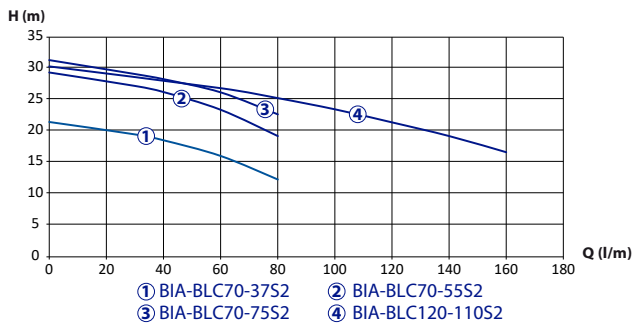


Part Number	Item Code	kW	Hp	Volts	Max Head (m)	Max Flow (lpm)	Inlet	Outlet
BIA-BLC70-37S2	808700	0.37	0.5	240	20.9	80	1 ¼" BSPF	1" BSPF
BIA-BLC70-55S2	802812	0.55	0.75		29.5			
BIA-BLC70-75S2	808403	0.75	1.0		30.4			
BIA-BLC120-110S2	802813	1.1	1.5		30.2			
BIA-BLC120-110S2T	808436			30.2				
BIA-BLC210-075S2T	802815	0.75	1.0	415	17	296	1 ½" BSPF	1 ¼" BSPF
BIA-BLC210-110S2	808404	1.1	1.5	240	19.7	300		
BIA-BLC210-110S2T	808405			415				
BIA-BLC210-220S2	808406	2.2	3.0	240	27.5	520		
BIA-BLC210-220S2T	802814			415				
BIA-BLC370-220S2	808407			240	23.1		2" BSPF	
BIA-BLC370-220S2T	808437			415				

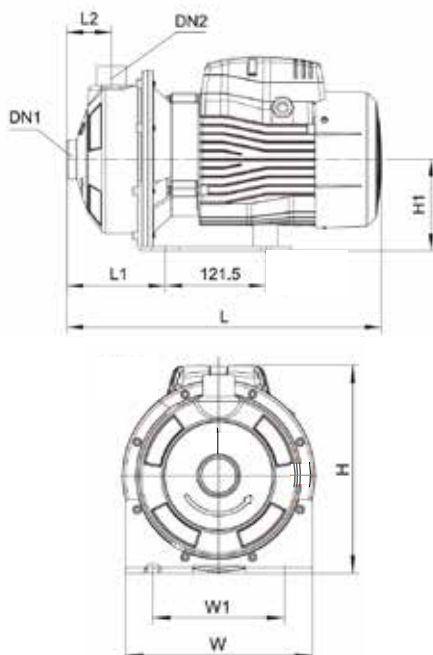
WARRANTY



PERFORMANCE CURVES:



DIMENSIONAL DRAWING (mm):



Model	DN1 (BSPF)	DN2 (BSPF)	L (mm)	W (mm)	H (mm)	L1 (mm)	L2 (mm)	W1 (mm)	H1 (mm)
BIA-BLC70-37S2	1-1/4"	1"	332	210	224	119	55	150	110
BIA-BLC70-55S2			381		234				
BIA-BLC70-75S2			332		224				
BIA-BLC120-110S2			381		224				
BIA-BLC120-110S2T	1-1/2"	1-1/4"	392	210	234	129	55	150	110
BIA-BLC210-075S2T			440		250				
BIA-BLC210-110S2			440		250				
BIA-BLC210-110S2T			440		250				
BIA-BLC210-220S2	2"	1-1/4"	440	210	250	129	55	150	110
BIA-BLC210-220S2T			440		250				
BIA-BLC370-220S2	2"	1-1/4"	440	210	250	129	55	150	110
BIA-BLC370-220S2T			440		250				

CENTRIFUGAL PUMPS

Horizontal Single Stage Cast Iron Pumps

Suitable for industrial wash down, water transfer and tank filling, HVAC, circulation and pressure boosting.

FEATURES:

- 💧 Cataphoresis¹ treatment of pump body for rust prevention
- 💧 Stainless steel impellers
- 💧 Quiet and reliable operation
- 💧 High Performance
- 💧 Water temperature up to 85°C
- 💧 Corrosion resistant

CONTROLLER OPTIONS (AVAILABLE SEPARATELY):

- nXt Pro Pump Controller (BIA-NXTPRO - 808035)
Only for BIA-FC75M, FC150M & FCT150M
- Adjustable Pump Pressure Switch (BIA-SK9A - 700969)
- Variable Frequency Drive (BIA-iDRIVE)



nXt Pro

WARRANTY

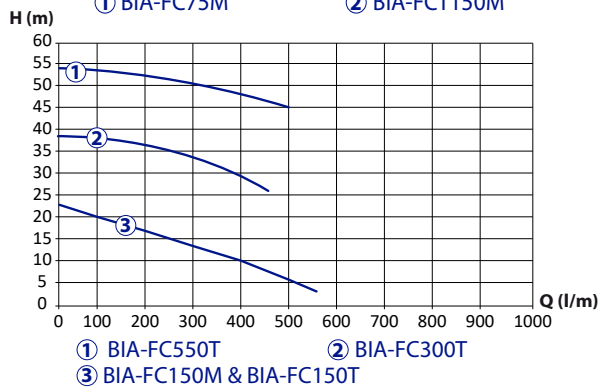
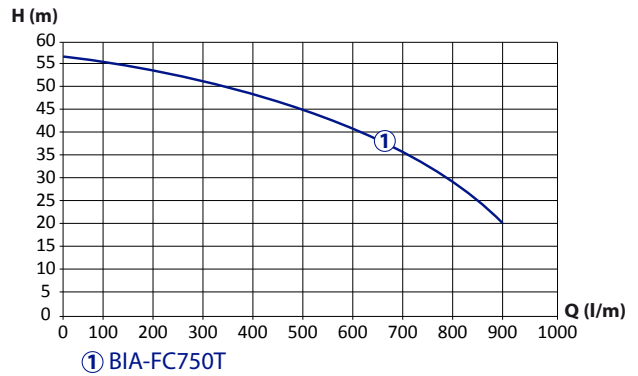
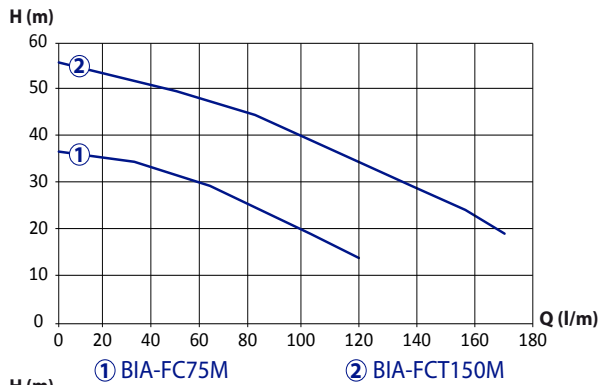


Part Number	Item Code	kW	hp	Volts	Max Head (m)	Max Flow (lpm)	Ports
BIA-FC75M	802805	0.75	1.0	240	37	119	1" BSPF In, 1" BSPF Out
BIA-FC150M	802806	1.5	2.0		22.5	559	2" BSPF In, 2" BSPF Out
BIA-FCT150M*	802816				56	170	1½" BSPF In, 1" BSPF Out
BIA-FC300T	802808	3.0	4.0	415	38	450	2" BSPF In, 2" BSPF Out
BIA-FC550T	802809	5.5	7.5		54	500	
BIA-FC750T	802810	7.5	10		56	900	

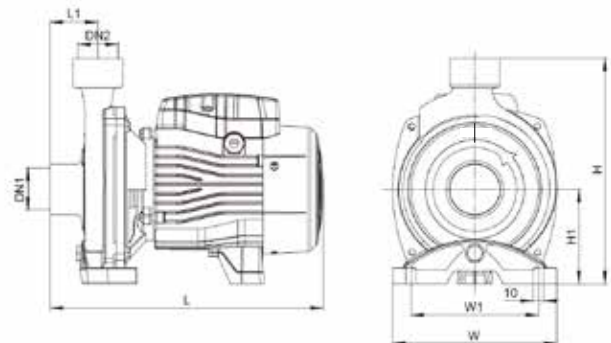
*Twin impeller model

¹Cataphoresis is an electrochemical coating process for metallic surfaces widely used in the industry due to its penetration and long-life, either as a priming coat or finished paint for corrosion resistance.

PERFORMANCE CURVES:



DIMENSIONAL DRAWING (mm):



Model	DN1 (BSPF)	DN2 (BSPF)	L (mm)	W (mm)	H (mm)	L1 (mm)	W1 (mm)	H1 (mm)
BIA-FC75M	1"		298	190	240	44	160	100
BIA-FC150M	1-1/4"	1"	360	240	286	51	207	115
BIA-FCT150M	1-1/2"		400	225	262	80	185	112
BIA-FC300T			444	255	315	65	186	132
BIA-FC550T	2"	2"	496.5	280	326	70	195	136
BIA-FC750T		2"	515	290	360	85	216	150

COMMERCIAL CONSTRUCTION PUMPS

Submersible Drainage Pumps

Designed for de-watering of construction sites, pits, storm water and basements where there is abrasive material.

FEATURES:

- 💧 Industrial grade coating
- 💧 Stainless Steel Handle
- 💧 Easy service round style float
- 💧 Corrosion resistant pump components
- 💧 Automatic and manual operations available
- 💧 Dual mechanical seal in oil bath, silicon carbide/silicon carbide + carbon ceramic
- 💧 Fitted with semi-vortex, urethane coated impeller which allows pumping of suspended solids, sandy and stringy material
- 💧 Agitator on the end of the pump shaft helps prevent air locking and clogging
- 💧 Versatile outlet connection
- 💧 240V single phase motor with in-built auto reset thermal overload
- 💧 10m of power cable (H07RNF)
- 💧 Urethane strainer resists damage
- 💧 Can handle particles to 25mm x 10mm
- 💧 Water temperature range: 2° to 35°
- 💧 Max submergence 20m

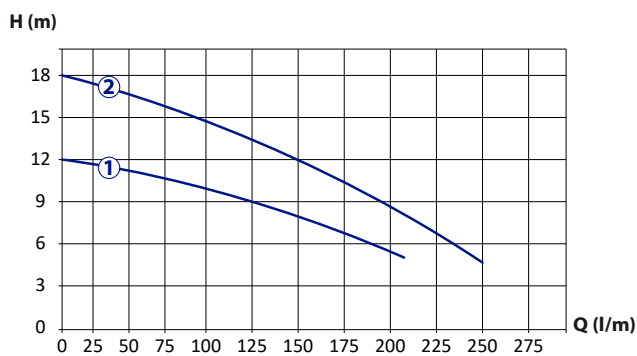


WARRANTY



Part Number	Item Code	kW	Hz	Max Head (m)	Max Flow (lpm)	IP Rating	Pipe Connection Discharge	Float
BIA-HSA500	808479	0.5	50	12	210	IP68	2"	Yes
BIA-HSM500	808480							No
BIA-HSA750	808481	0.75	50	18	250	IP68	2"	Yes
BIA-HSM750	808482							No
BIA-LAYFLATKIT	700755	Lay Flat 20m 2" Hose						

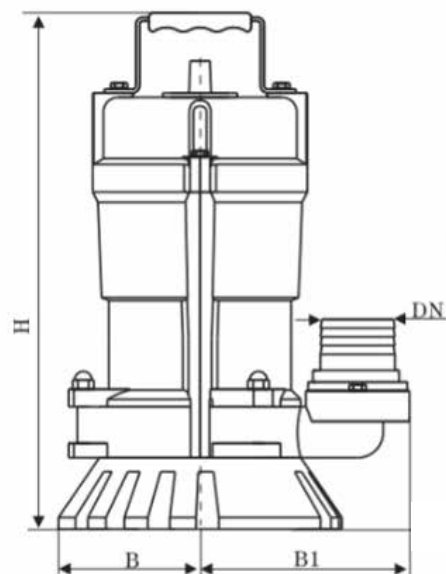
PERFORMANCE CURVE:



- ① BIA-HSA500 & BIA-HSM500
- ② BIA-HSA750 & BIA-HSM750



DIMENSIONAL DRAWING:



Model	H (mm)	B (mm)	B1 (mm)	DN
BIA-HSA500	356	97	142	2" BSP
BIA-HSM500				
BIA-HSA750	189	98	214	
BIA-HSM750				

COMMERCIAL CONSTRUCTION PUMPS

KT Series

The KT Series is a new range of industrial submersible pumps which are suitable for de-watering of construction sites, tunnels and pumping ground or storm water from residential, commercial, mining and building sites. The KT Series range uses Hi-Chrome components to achieve superior abrasion resistant submersible pumps.

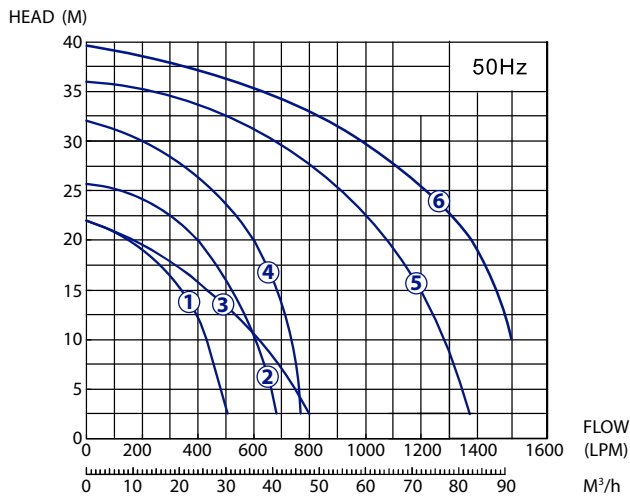
FEATURES:

- 💧 Industrial grade coating
- 💧 Through body motor cooling
- 💧 Heavy duty handle
- 💧 Hi-Chrome components
- 💧 Epoxy resin sealed cable entry
- 💧 Stainless steel strainer
- 💧 Max water depth: 8m

WARRANTY

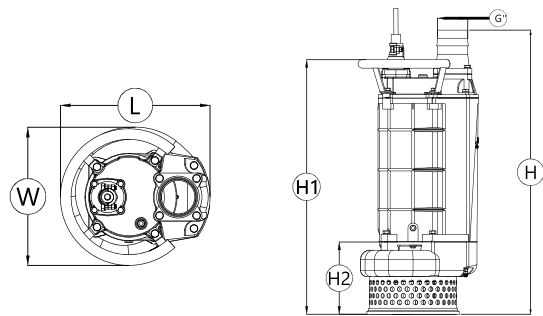


PERFORMANCE CURVE:



- ① BIA-KT215
- ② BIA-KT222
- ③ BIA-KT322
- ④ BIA-KT337
- ⑤ BIA-KT355
- ⑥ BIA-KT475

DIMENSIONAL DRAWING:



Model	L (mm)	W (mm)	H (mm)	H1 (mm)	H2 (mm)	G (inch)
BIA-KT215	250	235	600	570	130	2
BIA-KT222	250	235	600	570	130	2
BIA-KT322	250	235	600	570	130	3
BIA-KT337	285	255	660	670	150	3
BIA-KT355	310	260	700	705	155	3
BIA-KT475	380	350	900	805	195	4

Part Number	Item Code	kW	Hz	Volts	Amps	Max Head (m)	Max Flow (lpm)	IP Rating	Outlet Connection	Float	Weight (kg)
BIA-KT215	806182	1.5	50	415	3.2	22	505	68-8m	50mm 2" hose	No	33
BIA-KT222	806183	2.2			5.0	26	670				38
BIA-KT322	806184	2.2			5.0	22	800		38		
BIA-KT337	806185	3.7			8.0	32	760		68		
BIA-KT355	806186	5.5			11.5	36	1360		78		
BIA-KT475	806187	7.5			15.0	39	1550		139		
								100mm 4" hose			

Accessories

Part Number	Item Code	Description
BIA-DPC3-40	802692	Dual Pump Control Panel
BIA-DPC3-110	802693	Dual Pump Control Panel
BIA-iCOVER	802700	Metal enclosure for control panel with lockable door. Includes 803417 audio and visual alarm. 500W x 400H x 200D
BIA-SK12(5M)	700965	5m Float Switch 10A with HO5 Neoprene Cable
BIA-SK12(10M)	700962	10m Float Switch 10A with HO5 Neoprene Cable
BIA-SK12(20M)	700963	20m Float Switch 10A with HO5 Neoprene Cable
BIA-SK12(30M)	700964	30m Float Switch 10A with HO5 Neoprene Cable

DRAINAGE PUMPS

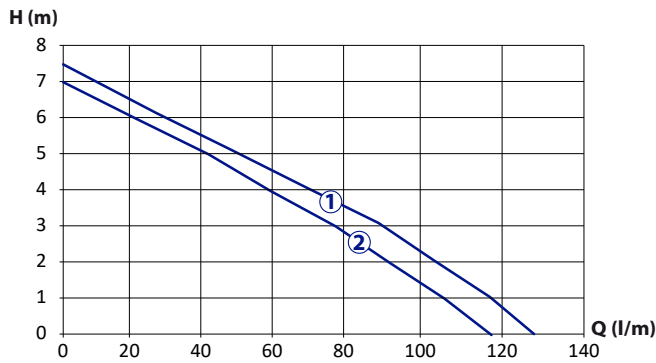
Submersible Drainage Pumps

Suitable for all clean de-watering tasks including emptying sumps, flooded areas and drawing water from shallow wells. Ideal for pits and confined spaces where floats do not work.

FEATURES:

- 💧 Simple installation, light and compact
- 💧 Fully automatic operation, float controlled
- 💧 Supplied complete with 10 metres of electric cable (H07RNF)
- 💧 Mechanical Seal - carbon/ceramic/nitrile

PERFORMANCE CURVE:



- ① BIA-JH400S2
- ② BIA-JH40011S2

WARRANTY



BIA-JH400S2
Includes Float



BIA-JH40011S2
Built-in float

Part Number	Item Code	kW	HP	Construction Materials	Max Head (m)	Max Flow (lpm)	Ports	Volts
BIA-JH400S2	803067	0.4	0.55	Plastic	7.3	127	1 ½" BSPF Out	240
BIA-JH40011S2	803068				7.0	118		



HIGH HEAD PUMPS

Submersible High Head Pump

Designed for pumping fluids uphill and also over long distances.

APPLICATIONS:

- ♦ Pumping clean and pre-treated water
- ♦ AWTS – Aerated wastewater treatment systems pump out to dripper beds
- ♦ De-watering of cellars and basements

FEATURES:

- ♦ Glass filled nylon pump body and Stainless Steel cover for strength and lightness.
- ♦ Easy grip, nylon carry handle
- ♦ Triple seal system: dual mechanical seal (carbon ceramic) in oil bath and Oil Seal
- ♦ 3 Stage High Head pump with durable Noryl impellers
- ♦ Elevated (88mm) suction intake with algae-proof slotted strainer
- ♦ 10m Power lead and automatic Float Switch
- ♦ All cables to H07RNF standard
- ♦ Built in auto-resetting thermal overloads

BENEFITS:

- ♦ Strainer design improves water flow and prevents blockage from algae growth
- ♦ Elevated intake draws oxygenated water from higher in tank and avoids sludge layer
- ♦ Leads to improved water quality with lower algae and anaerobic matter for better smelling water and cleaner clothes washing (**B42ACMPCX only**)
- ♦ Quality pump materials assist with longer pump life while still being light to lift and lower
- ♦ Low energy usage

DESIGNED FOR AWTS
AERATED WASTEWATER
TREATMENT SYSTEMS

**EQUIVALENT
REPLACEMENT FOR
D42AB**



B42AC

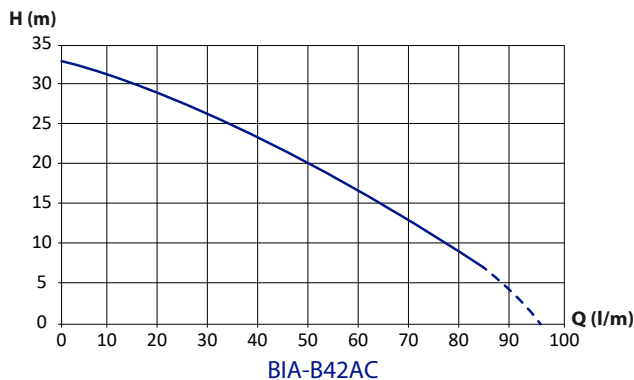
B42ACMPCX

WARRANTY & CERTIFICATIONS

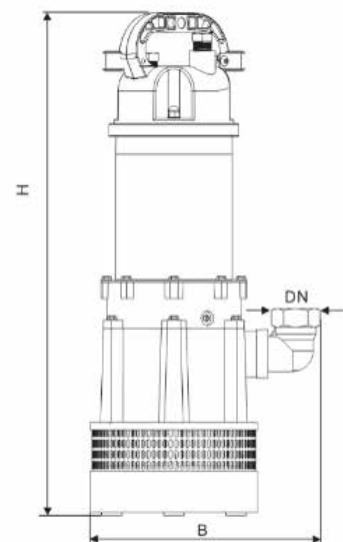


Part Number	Item Code	kW	HP	Volts	Max Head (m)	Max Flow (lpm)	Ports	Max. Solid Size (mm)
BIA-B42AC	805140	0.55	0.75	240	32	95	1" BSPF Out	3
B42ACMPCX	805663							

PERFORMANCE CURVE:



DIMENSIONAL DRAWING:



H (mm)	B (mm)	DN
490	225	1" BSP

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.

VORTEX PUMPS

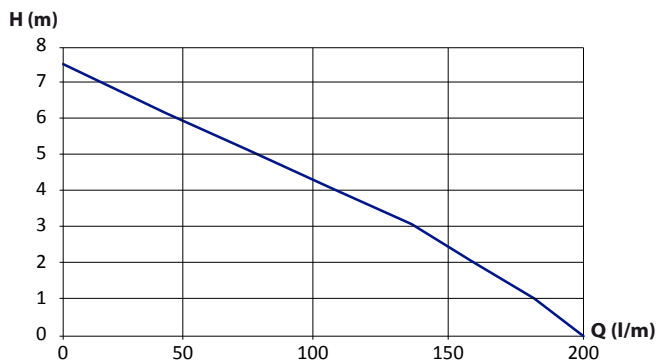
Submersible Pump

Vortex drainage pumps are designed to pump water with some organic content including non-abrasive liquids with soft solids in suspension e.g. Leaves and stringy materials. The Vortex is also capable of pumping non-abrasive solids in suspension up to 35mm particle size. Not suitable for construction sites, ponds, fountains or biotreatment.

FEATURES:

- Simple installation
- Light and compact
- Fully automatic operation, float controlled
- Great value for money
- Handle soft solids up to 35mm in size
- Supplied complete with 10 metres of electric cable (H07RNF)
- Ports: 1½" BSPF Out

PERFORMANCE CURVE:



BIA-JH550BS2



WARRANTY



Part Number	Item Code	kW	HP	Construction Materials	Max Head (m)	Max Flow (lpm)	Max. Particle Size (mm)	Power Cable (m)
BIA-JH550BS2	803070	0.55	0.75	Plastic	7.3	200	35	10



VORTEX PUMPS

Vortex B Series Drainage Pumps

De-watering of cellars, ditches, pits, ponds and drains. Pumping stormwater and waters with non-abrasive soft solids, hair and stringy materials in suspension. Ideal for greywater pump out and flooded irrigation, sump emptying, septic transfer, pumping calf milk and pumping of light slurries. Particle sizes up to 15mm (B18VAS2, B25VAS2), up to 25mm (B45VAS2, B75VAS2). Commonly used for final pump out of septic tanks to low head filter fields.

FEATURES:

- 💧 Cast iron pump body for durability
- 💧 Automatic float switch
- 💧 Triple seal system: Dual Mechanical Seal (carbon/ceramic) and oil seal
- 💧 Includes universal hose tail adapter
- 💧 240V single phase motor with in-built thermal protection
- 💧 10m H07RNF neoprene chemical and oil resistant cable



BIA-B18VAS2

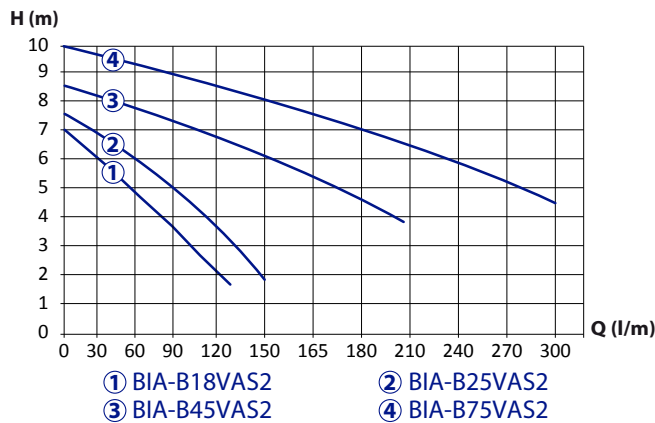


BIA-B75VAS2

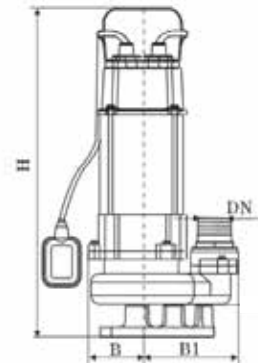
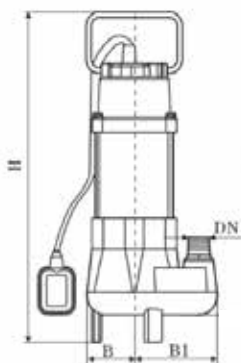


Part Number	Item Code	kW	HP	Max Head (m)	Max Flow (lpm)	Ports	Power Cable (m)	Max Solid Size (mm)
BIA-B18VAS2	802766	0.18	0.24	7	133	1 1/4" BSPF Out	10	15
BIA-B25VAS2	802767	0.25	0.33	7.5	150			
BIA-B45VAS2	802768	0.45	0.6	8.5	200	2" BSPF Out	10	25
BIA-B75VAS2	802769	0.75	1.0	10	300			

PERFORMANCE CURVE:



DIMENSIONAL DRAWINGS:



Model	H (mm)	B (mm)	B1 (mm)	DN
BIA-B18VAS2	337	60	104	1 1/4" BSP
BIA-B25VAS2	357			

Model	H (mm)	B (mm)	B1 (mm)	DN
BIA-B45VAS2	450	80	163	2" BSP
BIA-B75VAS2	482			

VORTEX PUMPS

Stainless Steel Vortex Pump

Designed to pump water with some organic content.

Capable of pumping non-abrasive solids in suspension up to 35mm particle size.

FEATURES:

- 💧 Stainless steel pump body for durability
- 💧 Ports: 1½" BSPF Out
- 💧 Volts: 240

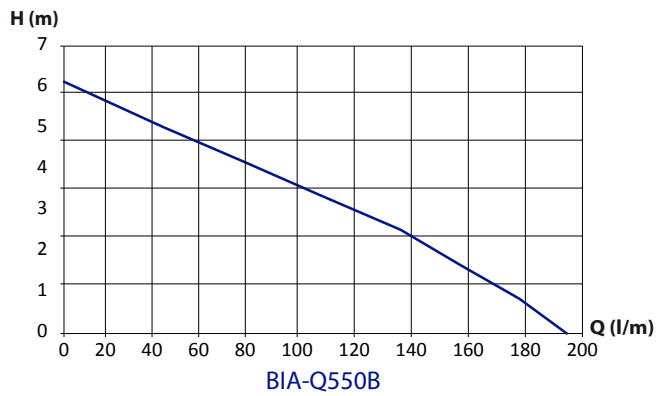


WARRANTY

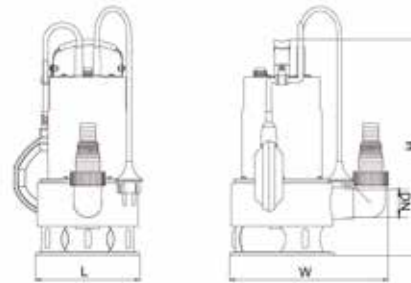


Part Number	Item Code	kW	HP	Construction Materials	Power Cable (m)	Max Head (m)	Max Flow (lpm)	Max. Particle Size (mm)
BIA-Q550B	700835	0.55	0.75	Stainless Steel	10	6.2	193	35

PERFORMANCE CURVE:



DIMENSIONAL DRAWING (mm):



DN1	L (mm)	W (mm)	H (mm)
40	165	248	340



HIGH HEAD GRINDER PUMP

Positive Displacement Grinder Pump High Pressure

Positive Displacement Grinder Pump with a heavy duty cutter and cutter ring used to treat unstrained wastewaters in "low" flow, high head applications.

FEATURES:

- Cast iron pump body for durability under harsh conditions
- Available in single phase and three phase, with and without a float
- Heavy duty silicon carbide mechanical seal
- The cutter rings break down solids to their smallest possible size to reduce clogging

APPLICATIONS:

- Unstrained wastewaters
- Low pressure sewer applications
- Used for unstrained wastewaters
- Perfect for low pressure sewer applications
- Suitable for new house dwellings in low lying areas



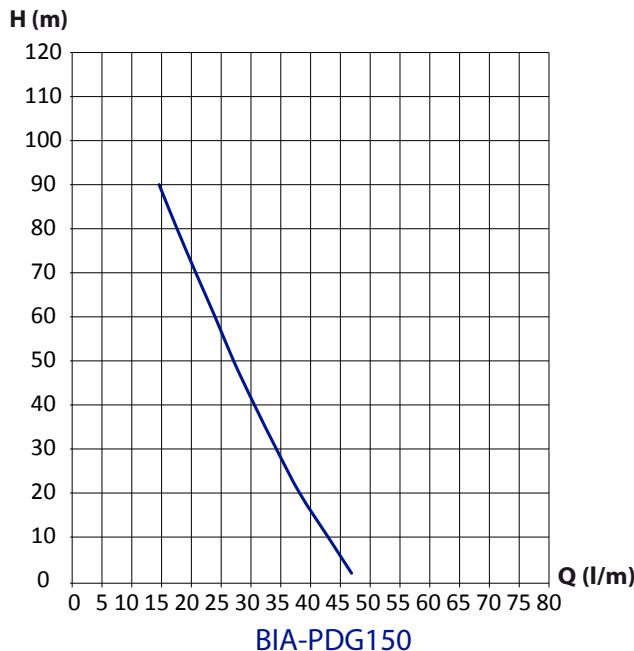
BIA PDG Discharge Pedestal 801985

WARRANTY

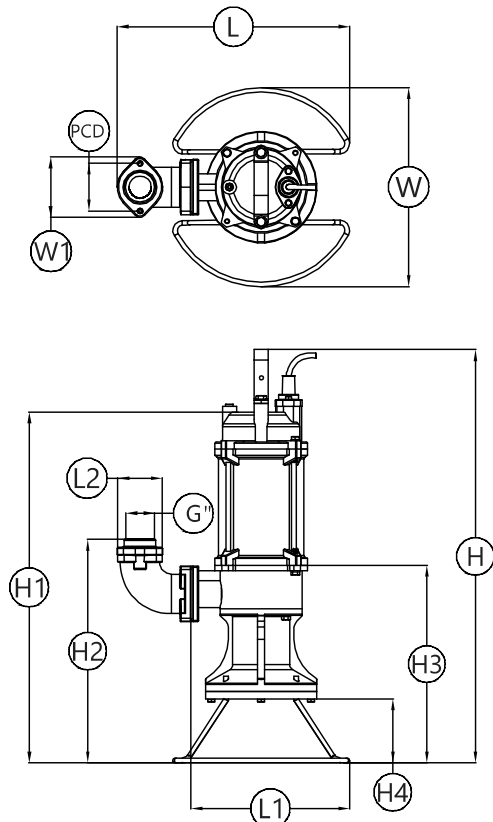


Part Number	Item Code	kW	HP	Volts	Current (amps)	Max Head (m)	Max Flow (lpm)	Float Switch	Net Weight (kg)	Discharge Outlet Size	Cable Length	Capacitor
BIA-PDG150MA	800252	1.1	1.5	240	6.3	90	50	Yes	40	1-1/4" BSPF	10m	300 uF
BIA-PDG150M	800587							No				
BIA-PDG150T	800589			415	2.1							
Part Number	Item Code	Description										
BIA-PDG150-CF32	801985	Discharge pedestal										

PERFORMANCE CURVE:



DIMENSIONAL DRAWING (mm):



L (mm)	L1 (mm)	L2 (mm)	W (mm)	W1 (mm)	H (mm)	H1 (mm)	H2 (mm)	H3 (mm)	H4 (mm)	PCD (mm)	G
408	280	78	350	105	480	380	120	160	185	84	1 1/4" BSP

GRINDER PUMP

Cast Iron Grinder and Cutter

The Bianco Pumpz industrial grade grinder pump is built for wastewater applications containing soft solids and is designed to grind various materials for pumping to sewer mains or treatment facilities.

FEATURES:

- 💧 Can lift water up to 20m and pump water up to 341 lpm
- 💧 Built with a high grade, cutting device, stainless steel shaft stainless (7CR17)
- 💧 Replaceable grinding device
- 💧 Manufactured from high chromium hardened stainless steel
- 💧 Dual ceramic/graphite mechanical seal
- 💧 H07RNF neoprene chemical and oil resistant power cable

APPLICATIONS:

- 💧 Grey & Black Water Pumping
- 💧 Sump Emptying
- 💧 Septic effluent and sewage disposal
- 💧 Pumping of wastewater with soft solids in suspension



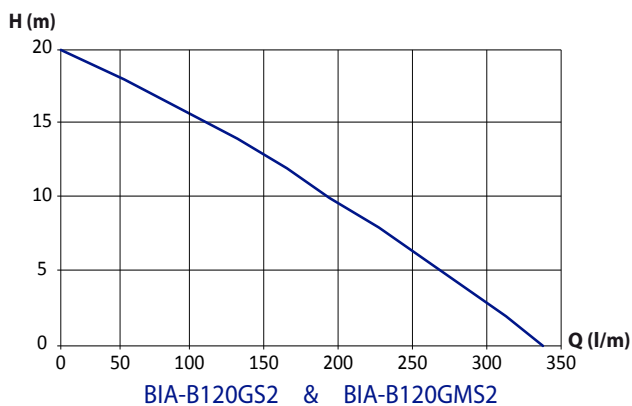
**304 Stainless Steel Shaft
7CR17 High Carbon Stainless Steel Cutting Device**

WARRANTY

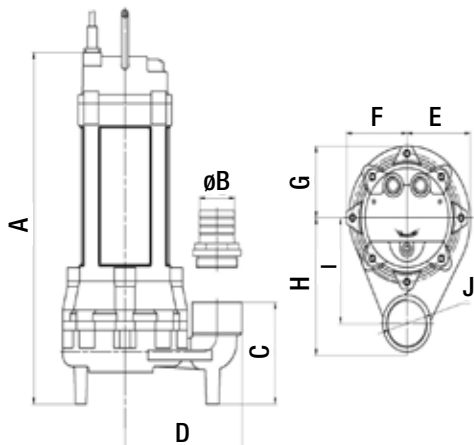


Part Number	Item Code	kW	HP	Volts	Current (amps)	Max Head (m)	Max Flow (lpm)	Float Switch	Net Weight (kg)	Discharge Outlet Size	Cable Length	Capacitor
BIA-B120GS2	802770	1.5	2	240	9.5	20	341	Yes	27	2" BSPF	10m	30 uF
BIA-B120GMS2	803150			415	4			No				-
BIA-B120TMS2	806084											

PERFORMANCE CURVE:



DIMENSIONAL DRAWING (mm):



A	B	C	D	E	F	G	H	I	J
440	50	121.5	165	9	88	88	165	130	G2



PACKAGED PUMP STATION

250L Polyethylene Lifting Pump Station with Single Free Standing Plumbing and Sewage Grinder Pump



INCLUDED:

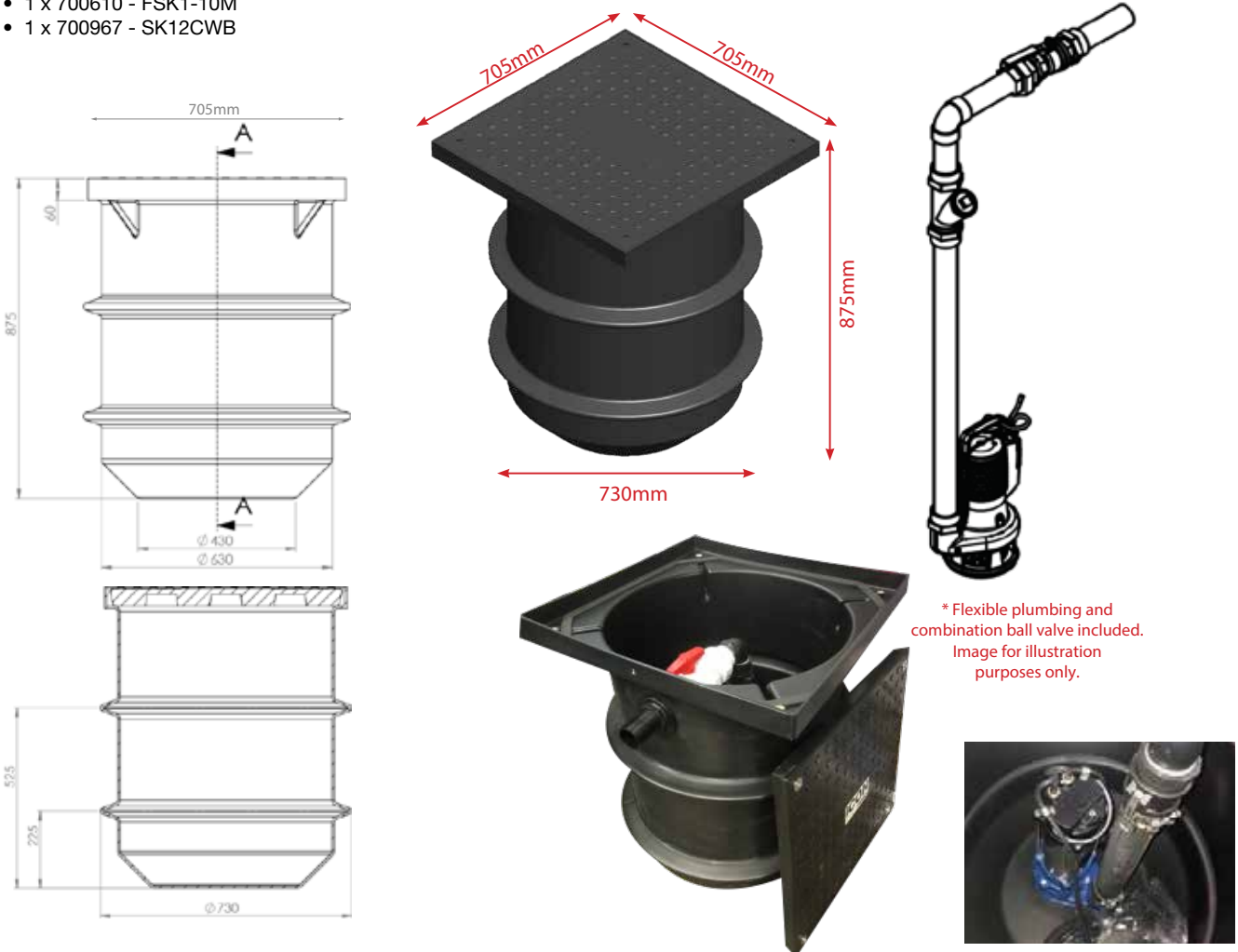
- ◆ iCON250L PUMP STATION: DIA: 630mm (base) x H: 875mm, 730mm x 730mm (top)
- ◆ PE walkover lid
- ◆ DN100 invert seal
- ◆ Combination ball/swing check valve
- ◆ Camlock to pump and discharge manifold with flexible hose
- ◆ 6mm stainless steel lifting chain and 6mm stainless steel dee shackles
- ◆ 2" tank discharge fitted
- ◆ Constructed for inground installation.
- ◆ Able to handle liquids such as storm water, trade waste, effluence and sewage.
- ◆ For pumping sewage from below the main.
- ◆ Ideal for granny flats, house extensions, boat sheds etc.

WARRANTY	
Pump - B120GS2	Package Station

BIANCO B120GS2		B120GS2 Grinder Pump 240V, QMAX: 341l/m, HMAX: 20m
Part Number	Item Code	Description
BIA-ICON250PSFB120GS2-ALM	805024	iCON 250L Tank, BIA-B120GS2, BIA-iALARM - Not IECEEx
BIA-ICON250PSFB120GS2	807859	iCON 250L Tank, BIA-B120GS2 - Not IECEEx
BIA-ICON RISER150MM	809772	150mm Riser to suit 250 PE Tank
BIA-ICON RISER300MM	809773	300mm Riser to suit 250 PE Tank

Pump Control Options (Not Included)

- 1 x 802687 - SPC1-22
- 1 x 700610 - FSK1-10M
- 1 x 700967 - SK12CWB



Note: Standard building services discount applies. As per our trading terms and conditions 7.1(ii) select bulky goods will incur freight charges as per cube and weight to all destinations. Sydney metro is FIS.

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.

INTELLIGENT iCON CONTROLLERS

Intelligent Controllers



The Bianco iCON range of intelligent controllers are:

- Suitable for installation in various industrial and domestic applications
- Function Switches for drainage, pressure boosting and transfer applications
- User Friendly features for controlling and protecting pumps and reporting faults with live data retention
- Slave control functionality included with iCON intelligent devices as standard
- RS485 communication interface for easy integration into Building Management Systems
- Ingress protection rating IP54 with intelligent dynamic LCD display for pump running information that is suitable for installation both indoors and outdoors
- Automatic Calibration of iCON intelligent controller which sets pump thermal overload by means of button push
- Optional enclosure with an external door available

SPC SERIES - SINGLE PUMP CONTROLLERS

Part Number	Item Code	Description	Volts	kW
BIA-SPC1-22	802687	Single Pump Control Panel	240	2.2
BIA-SPC1-22S	803810	Single pump Control Panel with 0-2m transducer for drainage and sewage applications.		
BIA-SPC3-40	802688	Single Pump Control Panel	415	4.0
BIA-SPC3-110	802689	Single Pump Control Panel		11.0
BIA-SPC3-150	802690	Single Pump Control Panel		15.0
BIA-SPC-SC	802698	Single Pump Slave Control		



DPC SERIES - DUAL PUMP CONTROLLERS

Part Number	Item Code	Description	Volts	kW
BIA-DPC1-22	802691	Dual Pump Control Panel	240	2.2
BIA-DPC1-22S	803811	Dual pump Control Panel with 0-2m transducer for drainage and sewage applications.		
BIA-DPC3-40	802692	Dual Pump Control Panel	415	4.0
BIA-DPC3-110	802693	Dual Pump Control Panel		11.0
BIA-DPC3-150	802694	Dual Pump Control Panel		15.0
BIA-DPC-SC	802699	Dual Pump Slave Control		



COVER

Part Number	Item Code	Description
BIA-iCOVER	802700	Metal enclosure for control panel with lockable door. Includes 803417 audio and visual alarm. 500W x 400H x 200D



INTELLIGENT iCON CONTROLLERS

BIANCO iDRIVE

The Bianco iDRIVE eliminates the requirement for large pressure tanks and switches used for automatic operation as well as associated pressure cycling.

Provides both the ability to conserve energy by operating the pump according to the speed required to maintain constant pressure and further allowing for multiple set points to be met.

The controllers are equipped with an easy to use LCD display that is designed and built for controlling pump systems from the ground up. All controllers are IP55 rated and include a mounting bracket.



WARRANTY



Part Number	Item Code	Phase In	Phase Out	kW	A	Max. No. of Drives
BIA-iDRIVE1150-240	802670	1 Phase 240V In	1 Phase 240V Out	1.5	7	1
BIA-iDRIVE1220-240	803815			2.2	14	
BIA-iDRIVE1150	802671		3 Phase 240V Out	3 Phase 240V Out	1.5	7
BIA-iDRIVE1220	802672	2.2			10	
BIA-iDRIVE3220	802673	3 Phase 415V In	3 Phase 415V Out		5	
BIA-iDRIVE3400	802674			4.0	9	
BIA-iDRIVE3550	802675			5.5	13	
BIA-iDRIVE3750	802676			7.5	17	
BIA-iDRIVE31100	803188			11	25	
BIA-iDRIVE31500	803189			15	32	
BIA-iDRIVE31850	803190			18.5	37	
Part Number	Item Code			Description		
BIA-iDRIVETRANS1MPA	802680	Transducer 4.20 MA 1 mPa				
DAB-EBOXTRANSDUCER16BAR	805323	Pressure transducer 16 bar				

BIANCO iALARM

- Level Alarm
- 10A 240V
- Includes 10m low voltage float switch with counterweight, audible and visible alarm, and high/low level alarm push button selectable.

Part Number	Item Code	Amps	Volts
BIA-iALARM	802695	10	240



WARRANTY



BIANCO iPROTECT

Bianco iPROTECT is used to control single-phase pumps up to 2.2 KW and is suited for borehole, drainage, transfer and boosting in single pump applications.

The Bianco iPROTECT is suitable for "3-wire" PSC motors where the remote capacitor can be mounted inside the Bianco iPROTECT as well as 2-wire PSC motors with internal capacitor commonly found in surface mounted and submersible drainage single-phase pumps.

Part Number	Item Code	Description
BIA-iPROTECT	802697	Pump Protection Control 240V, 0.37-2.2kW



WARRANTY



Circulators

Domestic Hot Water Circulating

- Domestic hot water circulators
- Stainless steel housing
- Suitable for under floor heating
- Maintenance free
- Quiet operation
- Comes complete with unions
- Integrated variable speed drive
- Has the highest efficiency rating 'A' in the industry
- Saving the customer money all day every day

iCIRC Circulator

Suitable for domestic systems including solar hot water and under floor heating systems.

FEATURES:

- Protection rating IP42
- Constructed with stainless steel housing
- Supplied complete with unions
- Integrated variable speed drive
- Energy efficient circulator - has the highest 'A' rating in industry
- Low noise
- Volts: 240



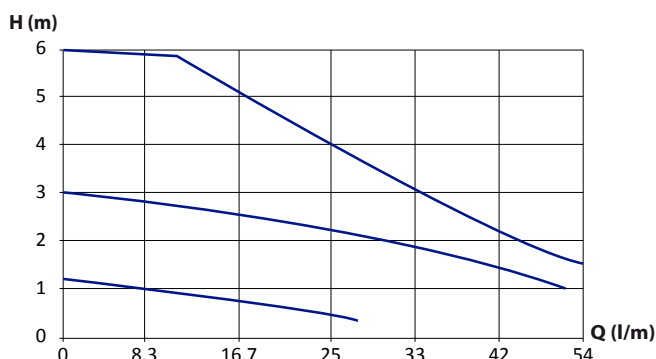
CERTIFICATIONS & WARRANTY



**VFD
CIRCULATOR**

Part Number	Item Code	Speed	Watts	Max. Operating Temperature	Max Head (m)	Max Flow (m)	Ports	Unions	Centre Distance
BIA-iCIRC150	802777	VFD operation 5 settings Self adapting auto	45	110°C	6	54	1½" BSPM Out	1" BSPF	150

PERFORMANCE CURVE:



CIRCULATOR PUMP

Stainless Steel Domestic Circulators

These circulator pumps are constructed in stainless steel and are used for hot water circulation in domestic systems, including solar hot water and under floor heating systems.

FEATURES:

- 💧 Protection rating IP44
- 💧 3 Speed
- 💧 Maximum operating temperature 110°C
- 💧 Supplied complete with unions

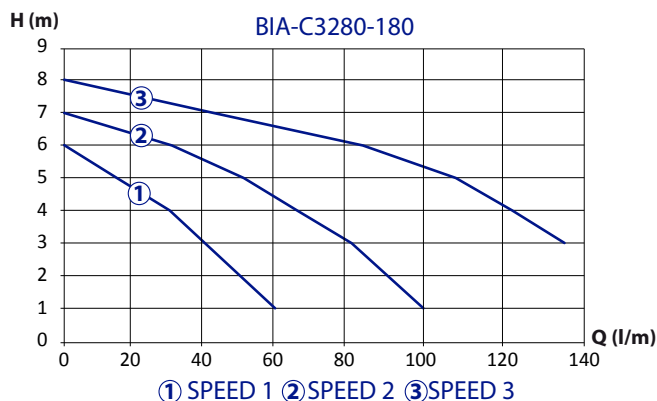
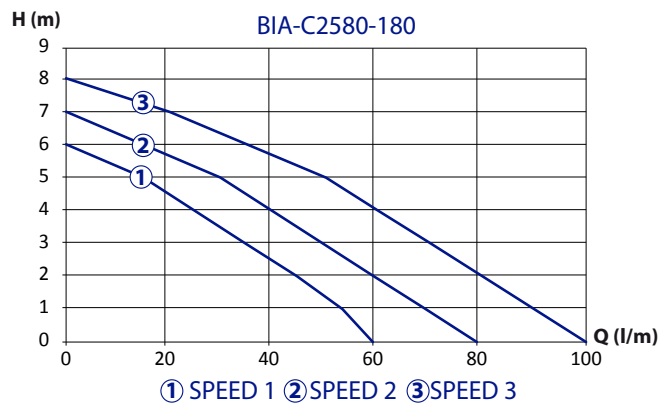
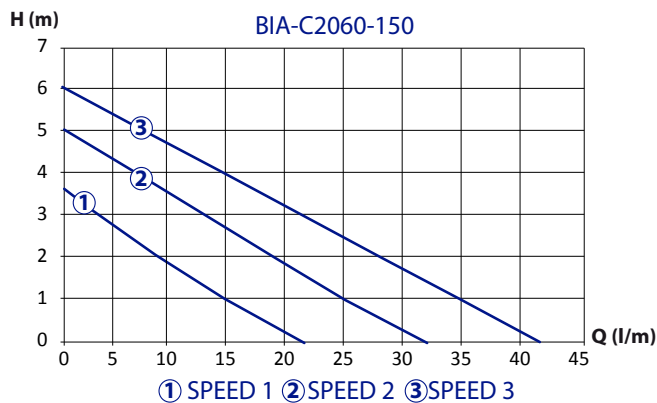


CERTIFICATIONS & WARRANTY



Part Number	Item Code	Volts	Speed	Watts	Max Head (m)	Max Flow (lpm)	Ports	Unions	Centre Distance
BIA-C2060-150	802778	240	3	100	6	42	1¼" BSPM In 1¼" BSPM Out	1-¼" F x ¾" F	150
BIA-C2580-180	802779			245	8	100	1-1½" BSPM In 1-1½" BSPM Out	1-½" F x 1" F	180
BIA-C3280-180	805645			245	134	2" BSPM In 2" BSPM Out	2" F x 1¼" F		

PERFORMANCE CURVES:



HOT WATER BOOSTER

Shower pressure letting you down? Get a boost!

Suitable for boosting pressure in gravity fed hot water systems in domestic systems.

FEATURES:

- 💧 Protection rating IP42
- 💧 Stainless steel body
- 💧 Supplied complete with unions
- 💧 Single speed operation
- 💧 Maximum operating temperature 60°C
- 💧 Automatically cuts in and out with flow due to the float control
- 💧 Volts: 240V 'plug and play'

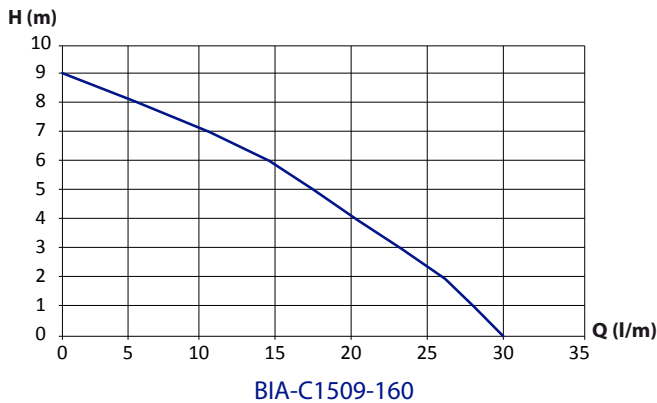


CERTIFICATIONS & WARRANTY



Part Number	Item Code	Speed	Watts	Max Head (m)	Max Flow (lpm)	Ports	Unions	Centre Distance
BIA-C1509-160	803064	Single	120	9	30	¼" BSPM Out	½" BSPM	160

PERFORMANCE CURVE:



WATER PUMP SOLUTIONS FOR NOW AND INTO THE FUTURE



ACCESSORIES

Part Number	Item Code	Description	Image
BIA-SK6	700968	Loss of prime pressure switch. Pressure Switch Setting: 1 - 6 Bar Factory Setting: 1.4 - 2.8 Bar, 240V, 1 ph, Connection: 6mm (1/4") BSP, Indoor Use	 BIA-SK6
BIA-SK9A	700969	Adjustable pressure switch 6 bar with stainless steel back plate Pressure Switch Setting: 1 - 6 Bar, Factory Setting: 1.4 - 2.8 Bar 240V, 1 ph, IP44, Connection: 6mm (1/4") BSP	 BIA-SK9A
WHI-6BARPG	701439	Pressure gauge 6 bar	
WHI-12BARPG	701379	Pressure gauge 12 bar	
BIA-UNION	808475	Technopolymer Union	 BIA-UNION
BIA-UNIONPC	701049	3pc Union 1" Male to Female	
BIA-UNIONMPCXSS	711946	Stainless Steel Union	 BIA-SK12
BIA-SK12(5M)	700965	5m Float Switch 10A with HO5 Neoprene Cable	
BIA-SK12(10M)	700962	10m Float Switch 10A with HO5 Neoprene Cable	
BIA-SK12(20M)	700963	20m Float Switch 10A with HO5 Neoprene Cable	
BIA-SK12(30M)	700964	30m Float Switch 10A with HO5 Neoprene Cable	
BIA-FSK1	700610	10 Metre float switch with H07 neoprene cable 240V, 1 ph, 10A Max, "3 wire", IP68, Max 50°C.	 BIA-SK12CWB
BIA-FSK1-20	700611	20 Metre float switch with H07 neoprene cable. 240V, 1 ph, 16A Max, "3 wire", IP68, Max 50°C.	
BIA-SK12CWB	700967	Float switch counterweight 200g gland mounting	 WHI-PIGGYBACKFLOAT
BIA-TSHKITA	701034	Suction hose & float kit	
BIA-TSHKITA-1.5M	804721	Rainwater tank suction hose & float kit 1.5M	
WHI-PIGGYBACKFLOAT-V4	802669	15 Metre piggy back float switch 16(8)a	 WHI-PUMPCOVER
WHI-PUMPCOVER	710821	Pump cover to suit pumps fitted with controllers. Sturdy two-piece design - base and lid. Cut out slots for inlet and outlet piping. Ventilation in lid. 640L x 340W x 601H Colour: Beige	

REFLEX PRESSURE SYSTEMS

Ranging from 2-400L, Reflex Pressure Tanks are manufactured in Europe and are ideally suited for a wide range of applications. These include booster systems, bore hole systems, sprinklers, irrigation systems, HVAC, thermal expansion and water hammer arresting.

An energy saving device such as a Reflex Pressure Tank pressure storage cell, stores energy in the form of pressurised water. The energy is transformed by the pump from electricity to water pressure. With a Reflex Pressure Tank, there is no loss of energy once it has been stored in the device.

By installing a Reflex Tank, the pump start events can be cut by 40 – 80%

- Saving power
- Extending pump life
- Reducing noise
- Low initial cost

The Reflex Tank is easy to fit to most pumps and can also be wall mounted.

The tank can be installed within minutes and the system can be fitted to any brand or type of pump.



Thinking solutions.



FEATURES:

- Manufactured in Europe
- 304 & 316Ti Stainless Steel water connection
- Corrosion resistant for long life
- UV resistant epoxy coating with a minimum thickness of 30 micron in blue RAL5007
- Air valve with sealing cap eliminates leaks
- Internal coating for drinking water applications
- Food grade approved high-grade butyl membranes and bladders WRAS, ACS, AS/NZS4020
- Maximum working temperature 70°C
- Maximum working pressures of 145psi/10bar or 232psi/16bar
- Tank pre-charge 58psi/4bar Nitrogen
- 5 year tank replacement guarantee

BENEFITS:

- Constructed for long life
- Extends pump life
- Reduces pump starts and noise
- Protects against water hammer and thermal expansion



REFIX DE

- 2-18 Litres
- Bladder according to DIN EN 13831
- All vessel parts in contact with water are corrosion resistant
- Meets or exceeds EC norms for pressure vessels 2014/108/EC directives
- Durable epoxy coating
- Factory pre-charged
- Vertical

REFIX HW

- 25-80 Litres
- Diaphragm according to DIN EN 13831 norm part 3
- All vessel parts are corrosion resistant
- Meets or exceeds EC norms for pressure vessels 2014/108/EC directives
- Durable epoxy coating
- Factory pre-charged
- Horizontal

REFIX DC

- 25 - 400 Litres
- Diaphragm, according to DIN EN 13831 norm part 3
- All vessel parts in contact with water are corrosion resistant
- Meets or exceeds EC norms for pressure vessels 2014/108/EC directives
- Durable epoxy coating
- Factory pre-charged
- Vertical / Free-Standing

CERTIFICATIONS & WARRANTY

REFLEX PRESSURE TANKS

DE SERIES:

Vertical tanks

High-grade butyl bladder according to DIN EN 13831

Part Number	Item Code	Vertical Size (L)	Bar	Outlet	Litres
REF-DE2**	806043	2	10	1" BSPM	1
REF-DE8**	806044	8			3
REF-DE18**	806045	18			6
REF-DE8-16	806046	8	16	1" BSPM	3
REF-DE25-16	806048	25			9
REF-DE80-16	806049	80			29

Note: Codes marked ** are WaterMark approved to WMTS-485:2018 Certificate No. 23340



Image of 8L tank

HW SERIES:

Horizontal tanks

High-grade butyl diaphragm according to DIN EN 13831

Part Number	Item Code	Horizontal Size (L)	Bar	Outlet	Litres
REF-HW25**	806058	25	10	1" BSPM	9
REF-HW60**	806059	60			22
REF-HW80**	806060	80			29

Note: Codes marked ** are WaterMark approved to WMTS-485:2018 Certificate No. 23340



DC SERIES:

Vertical tanks

High-grade butyl diaphragm according to DIN EN 13831

Part Number	Item Code	Vertical Size (L)	Bar	Outlet	Litres
REF-DC25**	806050	25	10	1" BSPM	9
REF-DC50**	806051	50			18
REF-DC80**	806052	80			29
REF-DC100**	806053	100			36
REF-DC140**	806054	140			50
REF-DC200**	806055	200			72
REF-DC300**	806056	300			108
REF-DC400**	806057	400			144

Note: Codes marked ** are WaterMark approved to WMTS-485:2018 Certificate No. 23340



Image of 50L - 400L free standing versions

REFLEX ACCESSORIES:

Part Number	Item Code	Description	Image
REF-WALLBRACKET	806107	Wall Bracket suit tanks 8L – 25L	
REF-LOCKSHIELD1	806108	Lockshield valve for maintenance and detachment of expansion vessels with drainage. According to DIN EN 12828. PN 10/120°C	
REF-PG	806109	Digital Pressure Gauge 0 – 9 bar	
REF-1000MFCKIT*	702977	1" F x 1" M x 1000mm	
REF-1000MFECKIT*	702978	1" 90°F x 1" M x 1000mm	

*Includes nuts, bolts, washers, thread tape and instruction sheet for mounting pumps onto horizontal pressure tanks. Some dealer supplied fittings may be required for some pressure systems. Maximum working pressure 2070kPa, rigid pipework is recommended.

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.

REFLEX APPLICATIONS

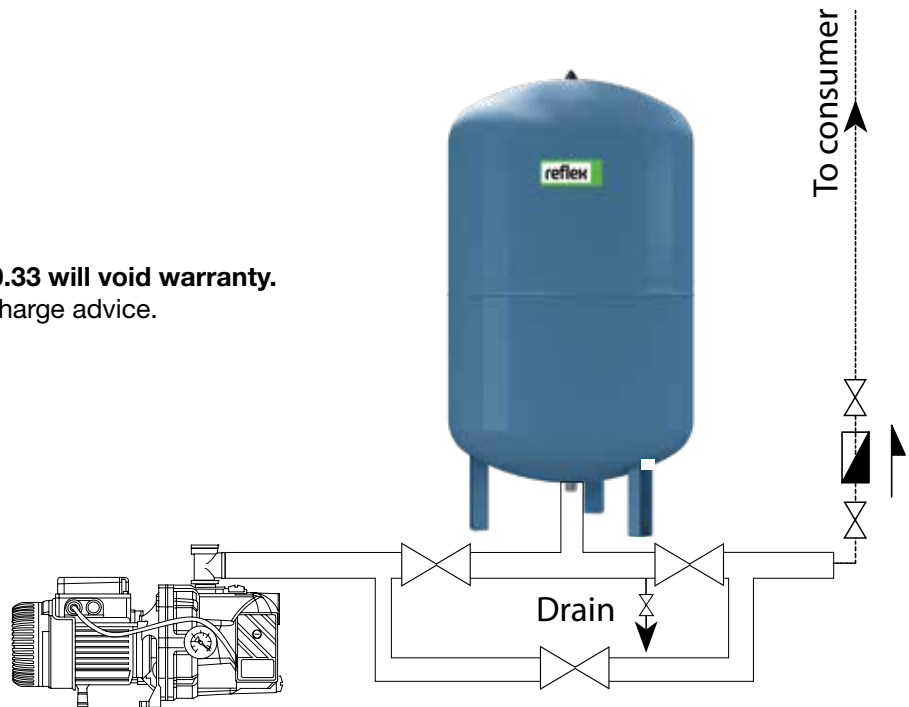
Vessel on a pressure system

With the vessel mounted on the discharge side of the booster system, the numbers of pump starts are reduced and also pump starts at small draw-offs are totally eliminated. This reduces pump wear and extends pump life time. Maintenance of the vessel can be done without shutting off the water supply with the shown pipework.



Thinking solutions.

Maximum acceptance exceeding 0.33 will void warranty.
Contact White International for pre-charge advice.



Pre-charge instructions

1. Pressure switch controlled pumps with differential pressure set at 140 kPa (20 psi), pre-charge the tank to 20 kPa (3 psi) below the cut in pressure.
2. For pumps controlled by pressure switches with higher differential pressures, electronic controls or variable speed controls, pre-charge the tank to 65% of the maximum system pressure.
3. Pressure tanks installed on mains pressure, pre-charge should be set at the mains pressure.
4. For hot water expansion, pre-charge should be set at the mains pressure.

		CUT IN PRESSURE							
		1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0
CUT OUT PRESSURE	2.5	1.30	1.80	Green cells - precharge is 20kpa below cut in pressure					
	3.0	1.66	1.80	2.30	Blue cells - precharge is 66.6% of cut out pressure				
	3.5	2	1.80	2.30	2.80				
	4.0	2.33	2.33	2.33	2.80	3.30			
	4.5	2.66	2.66	2.66	2.80	3.30	3.80		
	5.0	3	3	3	2.80	3.30	3.80	4.30	
	5.5	3.33	3.33	3.33	3.33	3.30	3.80	4.30	4.80
	6.0			3.66	3.66	3.66	3.80	4.30	4.80
	6.5			4	4	4	4	4.30	4.80
	7.0			4.33	4.33	4.33	4.33	4.33	4.80
	8.0			4.99	4.99	4.99	4.99	4.99	4.99
9.0			5.66	5.66	5.66	5.66	5.66	5.66	

Average Water Requirements

1/2" Tap (full flow)	12 to 15 lpm @ 20psi (140kPa)
Shower	15 lpm @ 20psi (140kPa)
Lawn (Sprinkler)	15 lpm @ 20psi (140kPa)
3/4" Hose & 1/4" Nozzle	40 lpm @ 30psi (210kPa)
1" Hose & 3/8 Nozzle	75lpm @30psi (210kPa)

Please note that these are average water requirements and may vary according to specific applications.

Suction Lift

Suction lift refers to the partial vacuum that pumps create into which atmospheric pressure pushes water via the suction pipework. A maximum suction lift of 6.7 metres at sea level is common but this can be affected by the following.

What affects suction lift?

- Friction loss reduced the vertical lift possible
- Altitude, as this increased the atmospheric pressure decreases and less push is exerted on the water entering the pump suction
- Pump suction performance, a better performing pump with a higher flow rate will mean less partial vacuum is created
- Water temperature, suction lift can be reduced due to higher water temperature as it is more likely to boil when exposed to a partial vacuum

A guide to suction

Elevation	Max. Practical Suction Lift	Absolute Atmospheric Pressure (cold water)
Sea Level	6.7m	10.35m
500m	6.1m	9.75m
750m	5.8m	9.46m
1,000m	5.5m	9.19m
1,500m	5.0m	8.64m
2,000m	4.5m	8.13m

Water Temp °C	Suction Lift Reduction- metres
15°	0
20°	0.06
30°	0.22
40°	0.52
50°	0.98
60°	1.73
70°	2.85
80°	4.51

Calculating Suction Lift

$$H_s = P_a - NPSHR - P_{vap} - \text{Safety}$$

Hs	Maximum suction lift including friction loss in suction pipe
Pa	Absolute atmospheric pressure at site
NPSHR	NPSH required by pump at specific flow rate
Pvap	Vapour pressure of liquid with specific temperature
Safety	Allow at least 1m safety factor

Calculating Pump Power

$$\text{Water Power (kW)} = \text{Flow (lpm)} \times \text{Head (m)} / 6122.4$$

$$\text{Pump Power (P2, kW)} = \text{Water Power} / \text{Pump Efficiency \%}$$

$$\text{Input Power (P1, kW)} = \text{Pump Power} / \text{Motor Efficiency \%}$$

Conversion Information

Flow Conversion

			Imperial	
lpm	lps	m3/hr	gpm	gph
7.6	0.13	0.45	1.7	100
10.0	0.17	0.60	2.2	132
16.7	0.28	1	3.7	220
45.5	0.76	2.73	10	601
60.0	1	3.60	13.2	793
75.7	1.26	4.54	16.7	1000
83.3	1.39	5.00	18.3	1101

Pressure/Head Conversion

Metres	kPa	Bar	Feet Head	psi
1	9.81	0.10	3.28	1.42
10.0	98.1	0.98	32.8	14.2
10.2	100	1	33.4	14.5
15.2	149.5	1.5	50.0	21.6
30.5	299.0	3.0	100	43.3
35.2	354.4	3.5	115.5	50.0
70.4	690.8	6.9	231.0	100
101.9	999.6	10.0	334.2	144.7

Volume Conversion

Litres	Cubic Metres	Imp. Gals	US Gals	Cubic Feet
1	0.001	0.22	0.264	0.0353
1000	1	220	264	35.3
4.546	0.0045	1	1.2	0.1605
3.785	0.0038	0.833	1	0.1337
28.32	0.0283	6.23	7.48	1

Length Conversion

Inch	Foot	Yard	Metres
1	0.08	0.028	0.025
12.0	1	0.33	0.305
36	3.00	1	0.91
39.4	3.28	1.09	1

Friction

Pipe friction refers to the resistance to flow caused by the pipe. Generally it is better to use the largest practical pipe size to avoid losses in pump performance.

Friction Loss Guide - See tables on next page

Friction Loss for Poly Pipe - 20mm to 63mm (m/ 100 metres of pipe)

Flow In		Medium Density Polythene Pipe																												
L/ min	Gals Hr	Rural Class B Pipe					PE80/PN8						PE80/PN10						PE80/PN12.5						PE80/PN16					
		3/4"	1"	1 1/4"	1 1/2"	2"	20	25	32	40	50	63	20	25	32	40	50	63	20	25	32	40	50	63	20	25	32	40	50	63
10	132	2.7	0.7	0.2	0.1	-	3.9	1.1	0.3	0.1	-	-	4.5	1.4	0.4	0.1	-	-	5.3	1.8	0.5	0.2	0.1	-	6.8	2.2	0.7	0.2	0.1	-
20	264	9.8	2.4	0.8	0.3	0.1	14.2	4.0	1.2	0.4	0.1	-	16.4	5.1	1.5	0.5	0.2	0.1	19.0	6.4	1.8	0.6	0.2	0.1	24.4	8.0	2.4	0.8	0.3	0.1
30	396	20.8	5.1	1.7	0.7	0.2		8.5	2.6	0.9	0.3	0.1		10.7	3.2	1.0	0.4	0.1		13.6	3.8	1.3	0.4	0.1		17.0	5.2	1.7	0.6	0.2
40	528		8.7	2.9	1.2	0.3			4.5	1.5	0.5	0.2			5.4	1.7	0.6	0.2			6.5	2.2	0.8	0.2			8.8	2.9	1.1	0.3
50	660		13.2	4.5	1.8	0.5			6.8	2.3	0.8	0.3			8.1	2.6	0.9	0.3			9.8	3.4	1.1	0.4			13.3	4.4	1.5	0.5
60	792		18.5	6.2	2.6	0.6			9.5	3.2	1.1	0.4			11.4	3.7	1.3	0.4			13.7	4.8	1.6	0.5			18.0	6.2	2.0	0.7
80	1056		30.1	10.6	4.4	1.1				5.5	1.8	0.6				6.3	2.3	0.7				8.1	2.7	0.9				10.5	3.5	1.2
100	1320			16.1	6.6	1.6				8.3	2.7	0.9				9.5	3.4	1.1				12.2	4.1	1.3				15.9	5.3	1.7
120	1584				9.3	2.3					3.8	1.3					4.8	1.5					5.8	1.9					7.4	2.4
140	1848				12.3	3.0					5.1	1.7					6.4	2.0					7.7	2.5					9.8	3.2
160	2112					3.9					6.5	2.2					8.1	2.6					9.8	3.2					12.6	4.2
180	2376					4.8						2.7						3.3						3.9						5.2
200	2639					5.9						3.3						4.0						4.8						6.3
220	2904					7.0						3.9						4.7						5.7						7.5
240	3168					8.2						4.6						5.6						6.7						8.8
250	3300					8.9						5.0						6.0						7.2						9.5

Friction Loss for Poly Pipe (m/ 100 metres of pipe)

Flow Rate			25mm O.D.		32mm O.D.		40mm O.D.		50mm O.D.		63mm O.D.		75mm O.D.		90mm O.D.		110mm O.D.	
lps	lpm	M3/hr	PN	PN	PN	PN	PN	PN	PN	PN	PN	PN	PN	PN	PN	PN	PN	PN
			6.3	12.5	6.3	12.5	6.3	12.5	6.3	12.5	6.3	12.5	6.3	12.5	6.3	12.5	6.3	12.5
0.2	12	0.72	2.12	2.97	0.56	0.90	0.02	0.32										
0.5	30	1.80	10.53	14.83	2.78	4.45	0.86	1.58	0.27	0.55								
0.8	48	2.88	24.24	34.17	6.37	10.20	1.97	3.62	0.61	1.25								
1.0	60	3.60			9.46	15.17	2.92	5.38	0.91	1.85	0.33	0.61	0.14	0.26				
1.6	96	5.76			21.88		6.73	12.41	2.08	4.25	0.75	1.13	0.33	0.49				
2.0	120	7.20					10.02	18.50	3.10	6.33	1.11	2.07	0.48	0.89	0.20	0.37		
3.0	180	10.80							6.39	13.07	2.29	4.27	0.99	1.83	0.42	0.76	0.16	0.29
4.0	240	14.40							10.70		3.82	7.15	1.65	3.05	0.69	1.27	0.27	0.49
5.0	300	18.0									5.70		2.46	4.55	1.03	1.89	0.40	0.72
6.0	360	21.6									7.92		3.42	6.32	1.43	2.63	0.55	1.00
7.0	420	25.2											4.51		1.88	3.46	0.72	1.32
9.0	540	32.4											7.09		2.96	5.45	1.14	2.07
10.0	600	36.0													3.58	6.59	1.37	2.50
15.0	900	54.0															2.85	5.20
20.0	1200	72.0															4.80	

Friction Loss for PVC Pipe (m/ 100 metres of pipe)

Flow Rate			25mm		32mm		40mm		50mm		80mm		100mm		150mm	
lps	lpm	M3/hr	PN 9	PN 12	PN 9	PN 12	PN 9	PN 12	PN 9	PN 12	PN 9	PN 12	PN 9	PN 12	PN 9	PN 12
			0.2	12	0.72	0.43	0.49	0.14	0.16	0.08	0.42					
0.5	30	1.80	2.15	2.40	0.70	0.80	0.37	0.97	0.13	0.14						
0.8	48	2.88	4.91	5.50	1.61	1.82	0.84	1.43	0.29	0.33						
1.0	60	3.60	7.29	8.16	2.38	2.70	1.24	3.30	0.42	0.48	0.07	0.08				
1.6	96	5.76	16.85	18.87	5.49	6.23	2.86	4.90	0.97	1.11	0.15	0.18				
2.0	120	7.20			8.17	9.27	4.25	10.12	1.42	1.65	0.23	0.26	0.07	0.05		
3.0	180	10.80					8.77	16.98	2.97	3.40	0.46	0.53	0.14	0.08		
4.0	240	14.40							4.98	5.68	0.77	0.89	0.23	0.16		
5.0	300	18.0							7.43	8.49	1.15	1.32	0.34	0.26		
6.0	360	21.6									1.60	1.83	0.48	0.39	0.09	0.11
7.0	420	25.2									2.11	2.42	0.63	0.55	0.12	0.14
8.0	480	28.8									2.68	3.07	0.80	0.72	0.16	0.18
9.0	540	32.4									3.31	3.80	0.98	0.91	0.19	0.22
10.0	600	36.0									4.00	4.59	1.19	1.13	0.23	0.27
15.0	900	54.0											2.47	1.36	0.48	0.55
20.0	1200	72.0													0.81	0.93

Friction Loss for Rubber Hose (m/ 100 metres of hose)

Flow			Friction Loss (m/ 100 metres of hose)				
lps	lpm	M3/hr	20mm	25mm	32mm	40mm	50mm
0.2	12	0.72	4.29	1.14	0.37	0.15	
0.5	30	1.8	22.81	5.88	1.9	0.77	0.2
1	60	3.6		21.11	6.71	2.67	0.7
2	120	7.2			24.37	9.56	2.47
3	180	10.8				20.43	5.21
4	240	14.4				35.22	8.9
4.5	270	16.2					11.1

PUMP SELECTION GUIDE

1. REQUIREMENT

- Household supply
- Tank filling / Transfer / Troughs
- Garden sprinkler(s)
- Irrigation

2. WATER SOURCE

- Dam
- River
- Shallow well
- Tricklefeed
- Above ground tank
- In ground tank
- Town mains (if pump being used to boost pressure)

3. POWER SUPPLY

- 240V Mains
- Generator
- Off grid / Solar

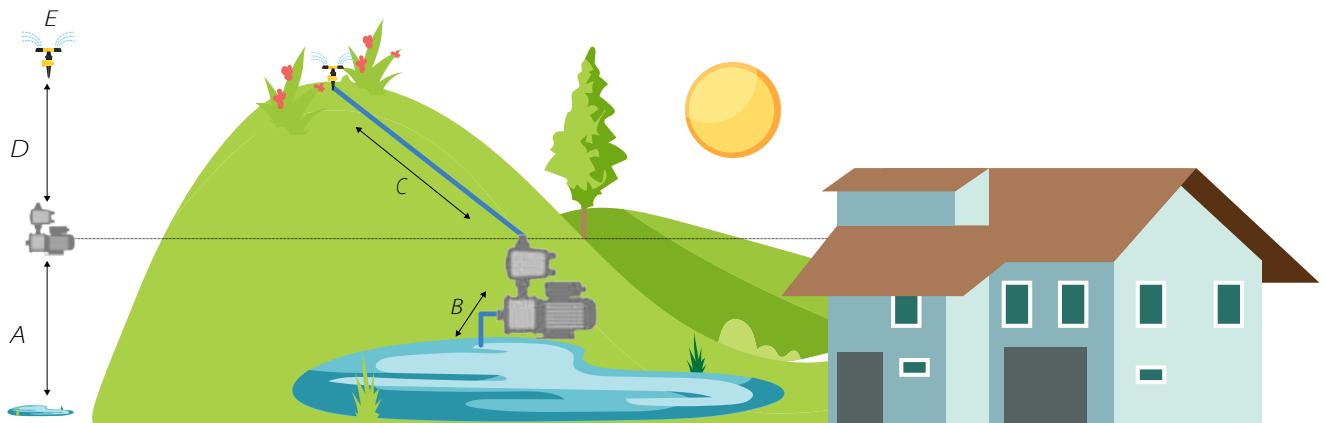
4. APPLICATION (SEE DIAGRAM)

SUCTION PIPE (FROM WATER SUPPLY TO PUMP)

- A)** Height from water to pump (vertical) _____ metres
(allow for drops in water level if below pump)
- B)** Pipe length (horizontal) _____ metres.
Type of pipe _____
Diameter of pipe _____ mm
My water supply is above or below pump inlet

DELIVERY PIPE (FROM THE PUMP TO THE APPLICATION)

- C)** Pipe length (horizontal) _____ metres
Type of pipe _____
Diameter of pipe _____ mm
My application is 1 2 3 levels high
- D)** Height of pipe to discharge _____ metres
- E)** Demand pressure Low Normal High
- F)** Use Batch / Cottage / Single dwelling
 Small house Medium House Large house
 Large house with some light irrigation



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