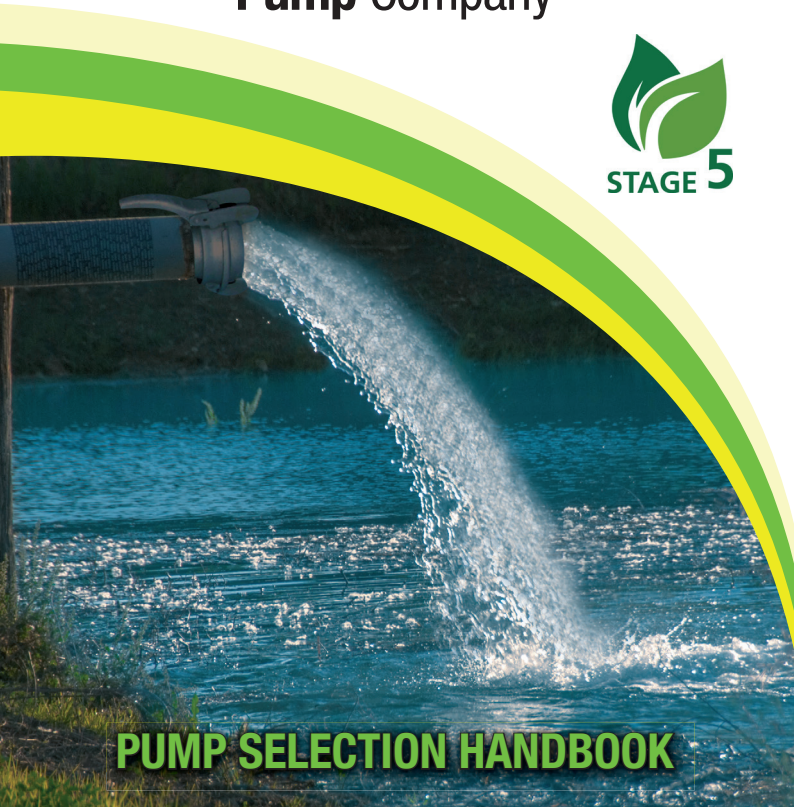


HYDRAINER

The **Submersible**
Pump Company



PUMP SELECTION HANDBOOK



Company Profile

HYDRAINER Hire and Sales have been operating in the highly competitive UK market for over 35 years and during that time have grown to become the largest specialist submersible pump hire company in the UK.

This growth is supported by an extensive and experienced knowledge base which Hydrainer can effectively apply to any pumping problem.

Our nationwide depot network offers a totally focused approach to all pumping problems, from very large 'over pumping' projects to smaller more specialist pumping applications. This wealth of practical and technical knowledge is available to all our customers enabling us to offer bespoke and truly cost effective pumping solutions.

An innovative approach to product development, attention to detail and the very high specification of its equipment, has enabled the company to build an enviable reputation as an efficient problem solver / solution provider.

Hydrainer's reputation for "Getting the Job Done" has made the company the undisputed 1st choice for our customers who know that when there is a difficult or unusual job to be undertaken they can confidently call upon the services of:

HYDRAINER "THE SOLUTION PROVIDER"





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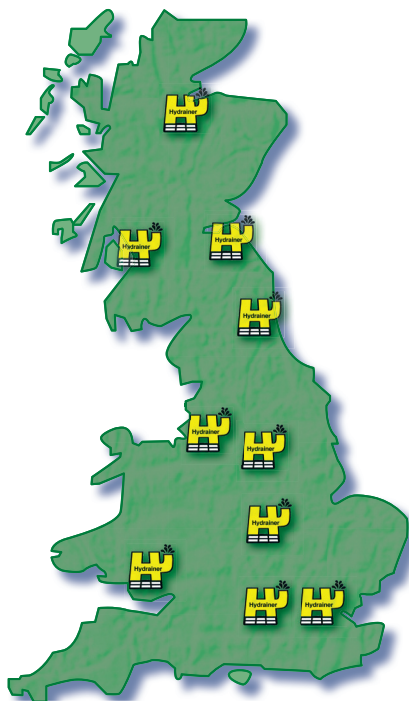


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Nationwide Depot Locations





Head Office – Sheffield

0114 2484868 – pumpsales@hydrainer.com

Inverness

01667 452284 – pumphire.inverness@hydrainer.com

Edinburgh

0131 448 0468 – pumphire.edinburgh@hydrainer.com

Glasgow

01698 824600 – pumphire.glasgow@hydrainer.com

Newcastle

0191 518 1212 – pumphire.northeast@hydrainer.com

Manchester

0161 775 1234 – pumphire.northwest@hydrainer.com

Sheffield

0114 248 9289 – pumphire.sheffield@hydrainer.com

Coventry

024 7636 8356 – pumphire.midlands@hydrainer.com

South Wales

01656 729829 – pumphire.southwales@hydrainer.com

East London

01708 370770 – pumphire.eastlondon@hydrainer.com

West London

0118 979 5839 – pumphire.westlondon@hydrainer.com



Accreditation

Hydrainer Group are committed to continual improvement and strive to provide the highest level of quality, safety and environmental standards.

ISO 9001:2008

Quality Management system



New ISO 45001

Occupational Health and Safety Assessment Series – fully accredited Health and Safety Management System.



UVDB Verify

Achilles Utilities Vendor Database – accessed by the UK utility industry to identify suppliers of products and services. The award ensures that suppliers operate and maintain a stringent, health, safety and environmental system.



FORS – Silver Standard

Fleet Operators Recognition Scheme – transport driven health and safety scheme.





Health & Safety

Method Statements and Risk Assessments

The Hydrainer Group ensure that all activities carried out are fully covered by risk assessments and method statements and include delivery to site, unloading, installation, service and maintenance. These are produced to meet individual site/contract needs and can be tailored to fit changes to clients requirements and site specific risks.

Health, Safety and Environment

The Hydrainer Group have a dedicated Health, Safety and Environment Manager covering the whole of the Hydrainer network, assessing the Company's needs with regards to health and safety training, awareness, accreditation and customer requirements, thus ensuring that the Hydrainer Group meet the health and safety policy and their continual improvement commitments.

Lifting

Lift equipment only by the nominated lifting points using the appropriately rated and certified lifting equipment.

Noise

Hydrainer manufacture the quietest range of diesel driven pumps in the market. Noise levels are quoted at 1m with the pump operating on **full load**.





Hydraulic Submersible Pumps

Hydrainer offer a full range of hydraulic submersible pumps from 1" to 6" drainage for dirty water applications and a 2" to 6" for solid handling applications, driven from specialist power packs.

Power Packs

Diesel driven power packs in three basic ranges of semi acoustic and fully sound attenuated formats. The "Decipac" range incorporate fully bunded fuel tanks, 24 hour running, integral spark arrester and a fully automated stop/start. All power Packs are available in versions which can run on HVO fuel EN15940 standard.

Bio-Degradable Oil

All Hydrainer hydraulic systems operate with the highest quality bio-degradable oil available. The hydraulic hoses are connected by bespoke quick release couplings such that they cannot be connected to other hoses removing the risk of cross contamination.

At service intervals the hydraulic oil is tested to identify any contamination in order to maintain the integrity of the hydraulic system.

Hydraulic Integrity

All Hydrainer hydraulic submersibles are intrinsically safe with the hydraulic circuit fully protected for high pressure and high temperature overload which initiate auto shut down of the power pack.



10 Series Silenced Diesel Power Pack

EngineHatz ID81C

Engine SpeedGoverned to
2000 rpm

Rated Power9.0 h.p –
6.7 kw

Fuel consumption2.2 l/hr at
full load

Fuel tank capacity35 litres –
16 hours
running time at full load

DimensionsL:1575mm W:838mm H:1220mm

Weight332kg with full diesel tank

SoundFull load dB(A)
@1m @5m @7m
74 71 67

Hydraulic systemsOpen loop. Variable flow.
Variable pump speed.

Hydraulic Hose10m and 20m lengths prefilled with
biodegradable oil and fitted with bespoke
quick release couplings extendable to 100m.

Installationeasily installed using non-skilled labour.

Stage 5Units available as stage 5 compliant.



20 Series Silenced Diesel Power Pack

Engine	Hatz 2L41C
Engine Speed	Governed to 2300 rpm
Rated Power	31 h.p – 23 kw
Fuel consumption	6.4 l/hr at full load
Fuel tank capacity	95 litres – 15 hours running time at full load
Dimensions	L:1500mm W:1000mm H:1625mm
Weight	610kg with full diesel tank
Sound	Full load dB(A) @1m @5m @7m 91 80 77
Hydraulic systems	Closed loop. Variable flow. Variable pump speed.
Hydraulic Hose	10m and 20m lengths prefilled with biodegradable oil and fitted with bespoke quick release couplings extendable to 100m.
Installation	easily installed using non-skilled labour.
Stage 5	Units available as stage 5 compliant.



30 Series Silenced Diesel Power Pack

EngineHatz 3L41C

Engine SpeedGoverned to
2600 rpm

Rated Power47 h.p –
35 kw

Fuel consumption 11.5 l/hr at
full load

Fuel tank capacity 121 litres –
10.5 hours running time at full load

DimensionsL:1700mm W:990mm H:1650mm

Weight900kg with full diesel tank

SoundFull load dB(A)
@1m @5m @7m
98 86 83

Hydraulic systemsClosed loop. Variable flow.
Variable pump speed.

Hydraulic Hose 10m and 20m lengths prefilled with
biodegradable oil and fitted with bespoke
quick release coupling extendable to 100m.

Installationeasily installed using non-skilled labour.



10 Series Super Silenced Diesel Power Pack (Decipac)

Engine	Isuzu 2CA1
Engine Speed	Governed to 2700 rpm
Rated Power	10.4 h.p – 7.7 kw
Fuel consumption	2.5l/hr at full load
Fuel tank capacity	136 litres – 54 hours running time at full load
Dimensions	L:1590mm W:900mm H:1550mm
Weight	875kg with full diesel tank
Sound	Full load dB(A) @1m @5m @7m 63 57 54
Hydraulic systems	Open loop. Variable flow. Variable pump speed.
Hydraulic Hose	10m and 20m lengths prefilled with biodegradable oil and fitted with bespoke quick release coupling extendable to 100m.
Installation	easily installed using non-skilled labour.
Stage 5	Units available as stage 5 compliant skid mounted



20 Series Super Silenced Diesel Power Pack (Decipac)

Engine	Isuzu 3CE1
Engine Speed	Governed to 2250 rpm
Rated Power	24.2 h.p – 18.1 kw
Fuel consumption	5.8l/hr at full load
Fuel tank capacity	242 litres – 42 hours running time at full load
Dimensions	L:1985mm W:1135mm H:1720mm
Weight	1600kg with full diesel tank
Sound	Full load dB(A) @1m @5m @7m 68 55 52
Hydraulic systems	Closed loop. Variable flow. Variable pump speed.
Hydraulic Hose	10m and 20m lengths prefilled with biodegradable oil and fitted with bespoke quick release coupling extendable to 100m.
Installation	easily installed using non-skilled labour.
Stage 5	Unit available as skid mount.



20 Series Silenced Diesel Power Pack Stage V Diesel

Engine	Engine Type Yanmar water cooled - 20 Series stage 5 super silenced.
Engine Speed	Governed to 2250 rpm.
Rated Power	24.2 h.p. – 18.1 kw
Fuel consumption	5.0 litres/hour at full load.
Fuel tank capacity	242 litres Approximately 42 hours consumption on full load
Dimensions	L:1985 mm W:1136mm H:1720mm
Weight	1600 kg full diesel tank
Sound	Full load dB(A). @1m @5m @7m 68 55 52
Hydraulic systems	Closed loop – 3 pipe. Variable displacement piston with boost..
Hydraulic Hose	10m and 20m lengths prefilled with biodegradable oil and fitted with bespoke quick release coupling extendable to 100m.
Installation	easily installed using non-skilled labour.



30 Series Super Silenced Diesel Power Pack (Decipac)

Engine	Isuzu 4LE1
Engine Speed	Governed to 2700 rpm
Rated Power	42.7 h.p – 31.9 kw
Fuel consumption	9.9l/hr at full load
Fuel tank capacity	242 litres – 24 hours running time at full load
Dimensions	L:1985mm W:1135mm H:1720mm
Weight	1600kg with full diesel tank
Sound	Full load dB(A) @1m @5m @7m 70 63 58
Hydraulic systems	Closed loop. Variable flow. Variable pump speed.
Hydraulic Hose	10m and 20m lengths prefilled with biodegradable oil and fitted with bespoke quick release coupling extendable to 100m.
Installation	easily installed using non-skilled labour.
Stage 5	Unit available as full stage 5 compliant.



Highway Trailer



The Highway trailer is available for use with the 10, 20 and 30 series hatz power packs. The trailer is fully compliant with the current road traffic acts and is provided with either a 50mm ball hitch or 40mm eye.

Please note that this accessory is not available for the Decipac range of power packs.



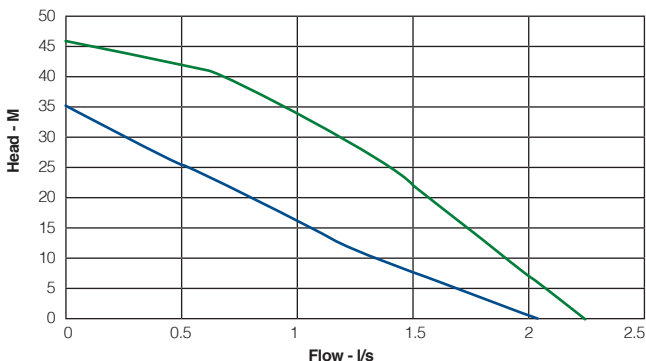
25S Borehole Pump



2 imp

3 imp

Discharge Size	25mm	25mm
Solids Size	3mm	3mm
Weight	12kg	14kg
Height	640mm	690mm
Width Max	125mm	125mm
Max Head	35m	46m
Max Output	2.0 l/s	2.3 l/s
Power Pack	10 series	10 series



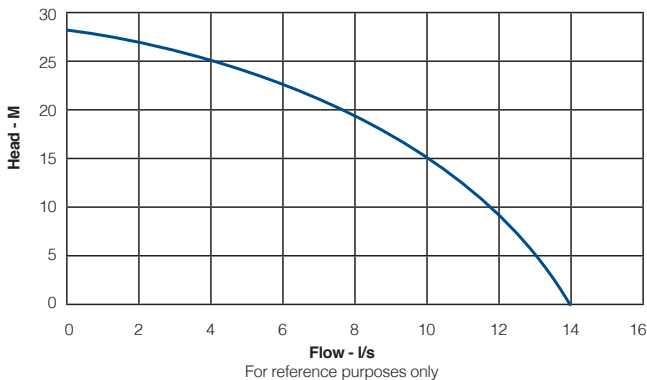
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50S General Purpose Pump



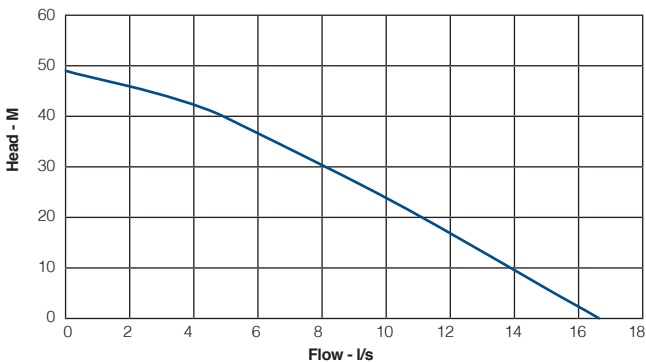
Discharge Size	50mm
Solids Size	10mm
Weight	21kg
Height	300mm
Width Max	320mm
Max Head	28m
Max Output	14.0 l/s
Power Pack	10 series



51SJ Jetting Pump



Discharge Size	50mm
Solids Size	10mm
Weight	38kg
Height	445mm
Width Max	320mm
Max Head	49m
Max Output	17.0 l/s
Power Pack	20 series



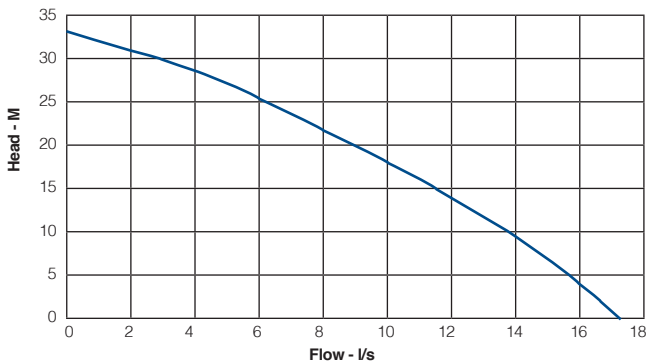
For reference purposes only



50SH Centrifugal Screw Pump



Discharge Size	50mm
Solids Size	50mm
Weight	33kg
Height	570mm
Width Max	320mm
Max Head	33m
Max Output	17.0 l/s
Power Pack	10 series



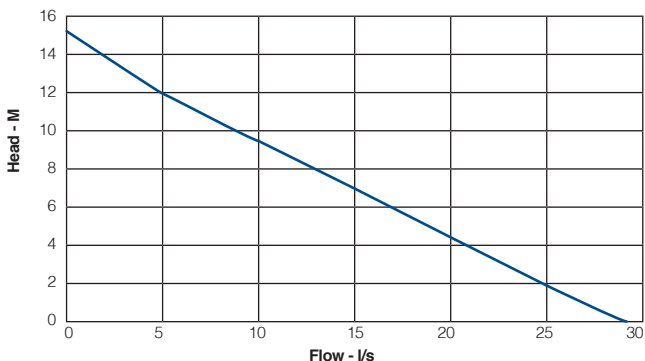
For reference purposes only



76S Solid Handling Pump End



Discharge Size	75mm
Solids Size	40mm
Weight	43kg
Height	572mm
Width Max	470mm
Max Head	15m
Max Output	29.0 l/s
Power Pack	10 series



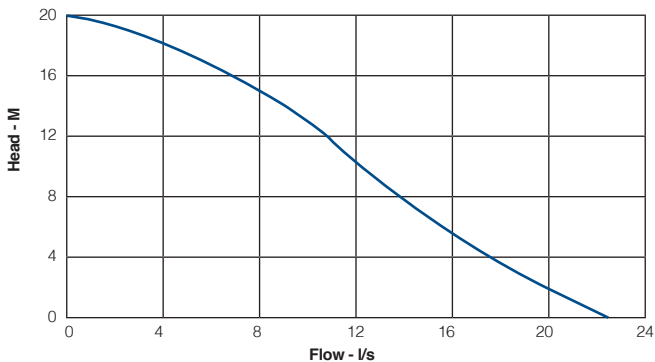
For reference purposes only



75SH Solid Handling Pump End



Discharge Size	75mm
Solids Size	65mm
Weight	77kg
Height	890mm
Width Max	500mm
Max Head	20m
Max Output	23.3 l/s
Power Pack	10 series



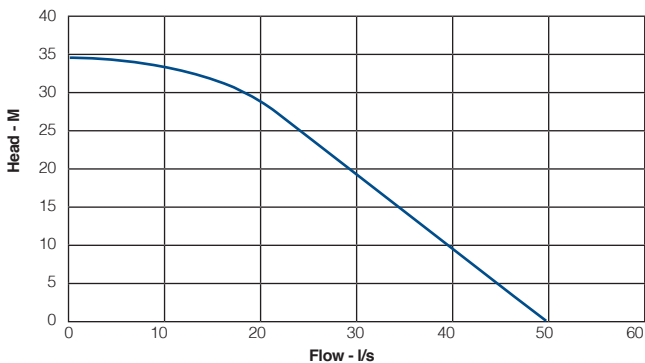
For reference purposes only



102S Solids Handling



Discharge Size	100mm
Solids Size	50mm
Weight	59kg
Height	600mm
Width Max	470mm
Max Head	35mm
Max Output	50 l/s
Power Pack	20 series



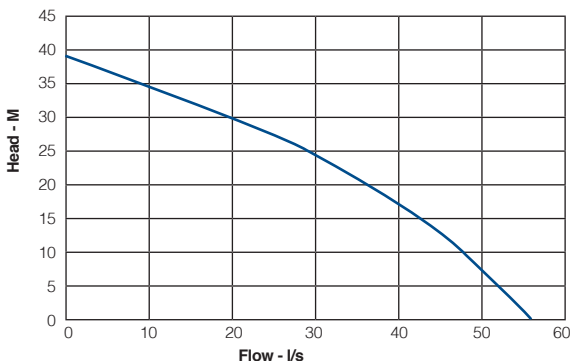
For reference purposes only



100SH Centrifugal Screw Pump



Discharge Size	100mm
Solids Size	70mm
Weight	150kg
Height	1143mm
Width Max	560mm
Max Head	38 m
Max Output	56 l/s
Power Pack	30 series



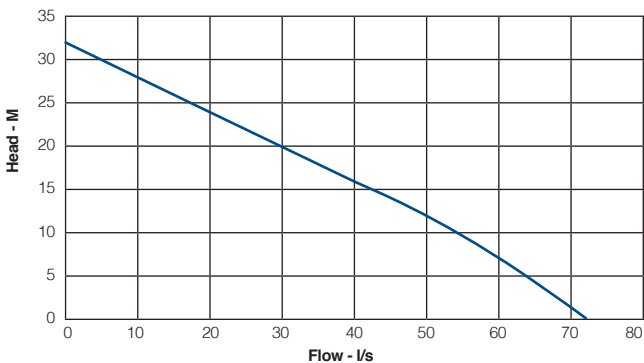
For reference purposes only



100CP25 Chopper Pump



Discharge Size	100mm
Solids Size	50mm
Weight	130kg
Height	890mm
Width Max	775mm
Max Head	32m
Max Output	72 l/s
Power Pack	30 series



For reference purposes only



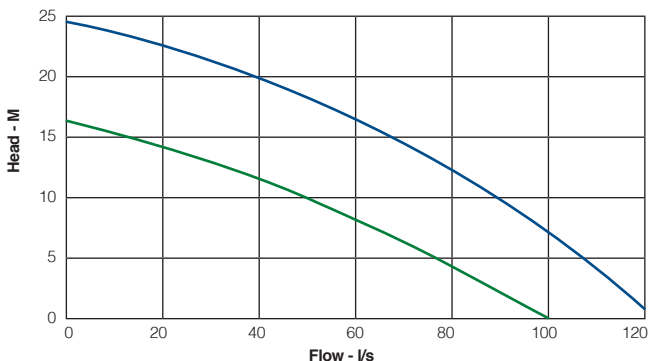
151S10/25 Solids Handling Pump End



151S10

151S25

Discharge Size	150mm	150mm
Solids Size	75mm	75mm
Weight	94kg	110kg
Height	685mm	685mm
Width Max	735mm	735mm
Max Head	16m	24m
Max Output	99 l/s	124l/s
Power Pack	20 series	30 series



For reference purposes only

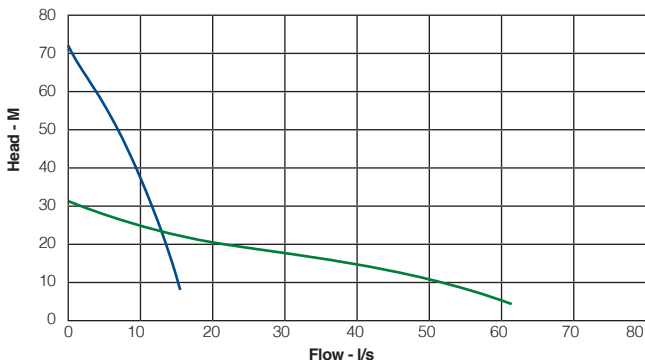


150D10 Drainage Pump



Standard High Head

	Standard	High Head
Discharge Size	150mm	75mm
Solids Size	10mm	10mm
Weight	55kg	55kg
Height	710mm	710mm
Width Max	560mm	560mm
Max Head	31m	76m
Max Output	61l/s	17l/s
Power Pack	20 series	20 series



For reference purposes only

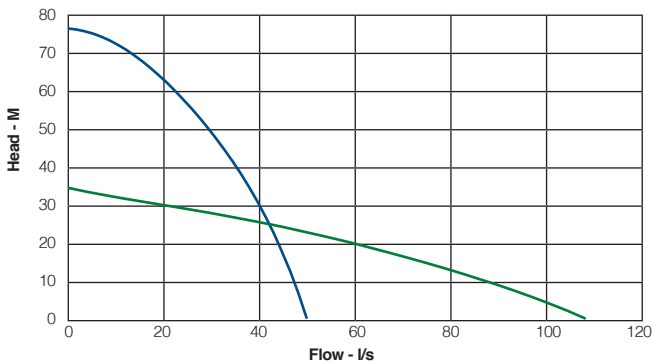


150D25 Drainage Pump



Standard High Head

	Standard	High Head
Discharge Size	150mm	100mm
Solids Size	10mm	10mm
Weight	135kg	135kg
Height	775mm	775mm
Width Max	660mm	660mm
Max Head	35m	76m
Max Output	109l/s	50l/s
Power Pack	30 series	30 series



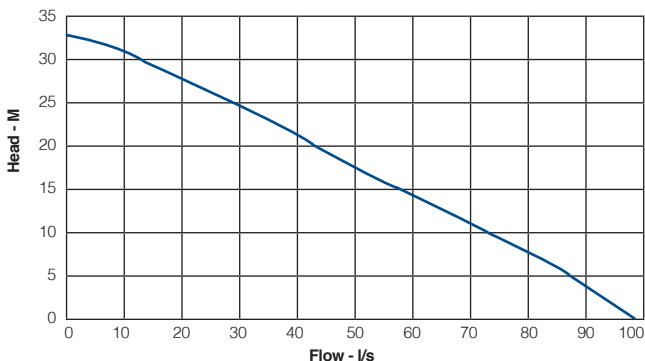
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150SH Centrifugal Screw Pump



Discharge Size	150mm
Solids Size	100mm
Weight	250kg
Height	1153mm
Width Max	710mm
Max Head	33m
Max Output	99l/s
Power Pack	30 series



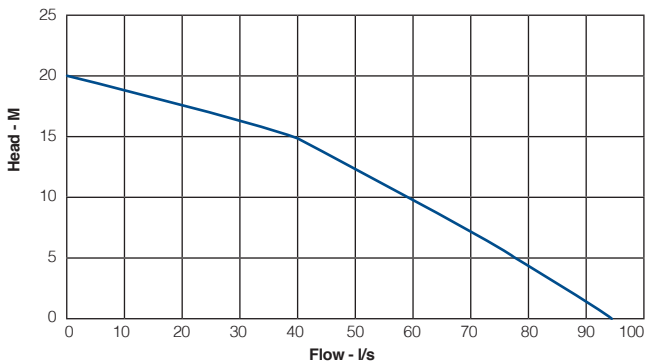
For reference purposes only



150CP Chopper Pump



Discharge Size	150mm
Solids Size	65mm
Weight	140kg
Height	1100mm
Width Max	710mm
Max Head	20m
Max Output	94 l/s
Power Pack	30 series



For reference purposes only



Mixer – Driven by 20 Series Power Pack



Mixing of heavy sludges & sewage, prior to removal of media.

Power Supply	20 Series Power Pack
Impeller Speed	310 rpm
Width	1420mm
Height	1200mm
Length	1600mm
Weight	680kg





Electric Submersibles





Electric Submersibles

Hydrainer offer a full range of electric submersible pumps from 2" to 10" drainage units for dirty water applications and 2" to 12" for solids handling applications.

Control Panels

These are available in the following ranges:

1.1-8kw.....	Single pump direct on line (DOL) (1 panel can run a range of pumps)
9-20kw.....	multi selection variable overload – soft start (1 panel can run a range of pumps)
20-90kw	multi selection – soft start (1 panel can run a range of pumps) – Variable overload
20-75kw	Variable Speed Drives Available
90kw	Variable Speed Drives Available

The majority of control panels supplied come complete with specialist plugs and sockets (plug and play), removing the need for skilled electricians to carry out installations.

Electrical Integrity

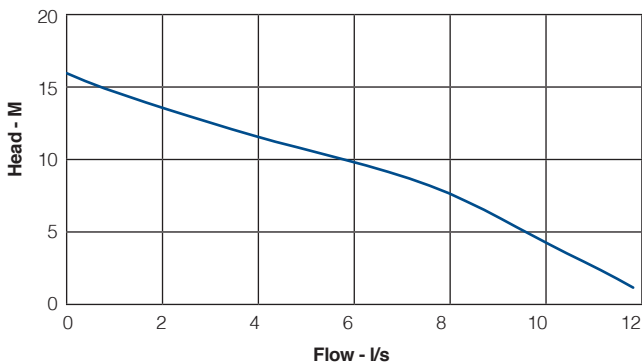
All electrical equipment has been inspected and tested by electricians qualified to 17th Edition Standards in accordance with Wiring Regulations BS7671. 17th Edition as of January 2015.





DS3057 MT

DS 3057 - 53-270-00-3170 2.4 kW 133 mm



For reference purposes only

A cast iron pump with open impeller ideal for sludges and sewage type applications

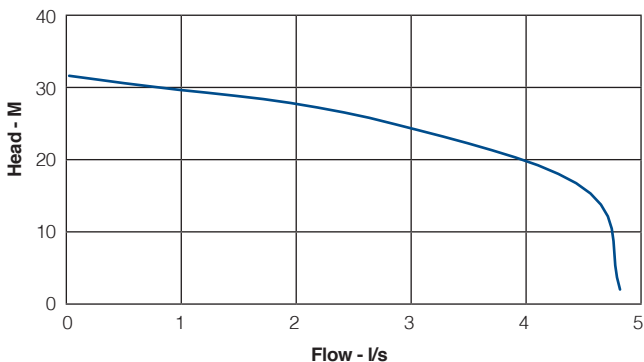
Type	Solids	Outlet	Starter	KW	W/KG	D x L x H
MT	24mm	50mm	DOL	2.4	31	235x305x505
HT	-	-	-	-	-	-
SH	-	-	-	-	-	-
LT	-	-	-	-	-	-





MF3068 HT

MF 3068 - 53-210-00-3120 2.4 kW 160 mm



For reference purposes only

A cast iron pump with open impeller ideal for sludges and sewage type applications

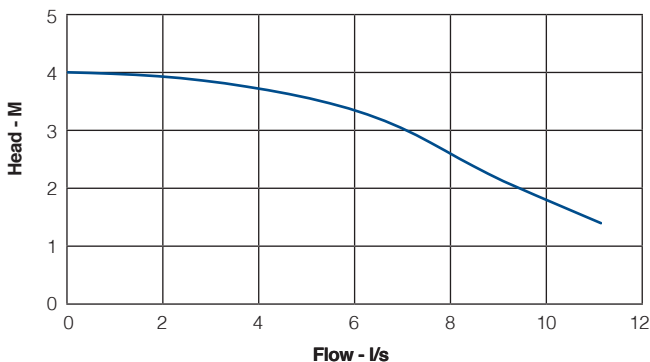
Type	Solids	Outlet	Starter	KW	W/KG	D x L x H
MT	-	-	-	-	-	-
HT	6mm	50mm	DOL	2.4	31	225x310x490
SH	-	-	-	-	-	-
LT	-	-	-	-	-	-





DF3068 MT 473

DF 3068 - 53-473-00-5180 1.5 kW 125 mm



For reference purposes only

A cast iron pump with open impeller ideal for sludges and sewage type applications

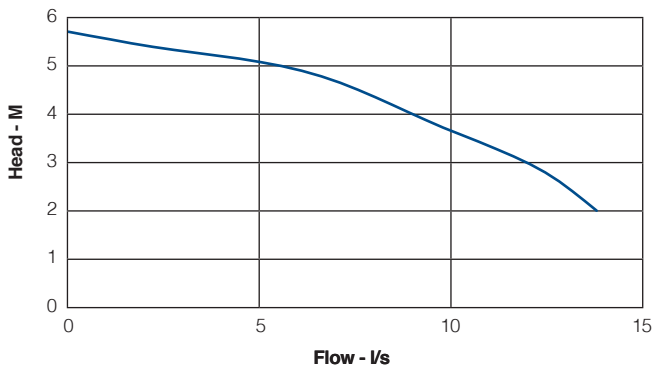
Type	Solids	Outlet	Starter	KW	W/KG	D x L x H
MT	6mm	50mm	DOL	1.5	50	290x476x580
HT	-	-	-	-	-	-
SH	-	-	-	-	-	-
LT	-	-	-	-	-	-





DF3068 MT 472

DF 3068 - 53-472-00-5180 1.5 kW 145 mm



For reference purposes only

A cast iron pump with open impeller ideal for sludges and sewage type applications

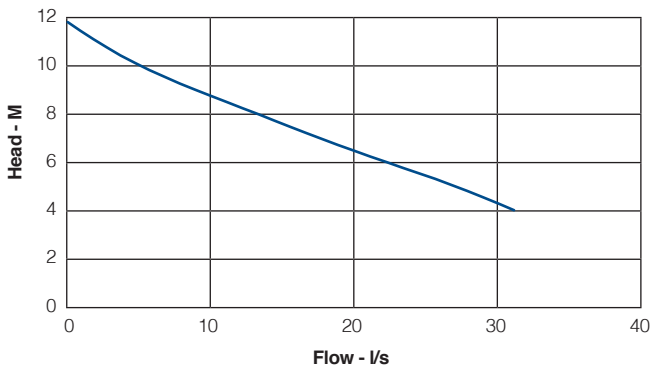
Type	Solids	Outlet	Starter	KW	W/KG	D x L x H
MT	-	75mm	DOL	1.5	50	290x476x580
HT	-	-	-	-	-	-
SH	-	-	-	-	-	-
LT	-	-	-	-	-	-





CS3085 MT

CS 3085 - 53-432-00-5430 2kW 182 mm



For reference purposes only

A cast iron pump with open impeller ideal for sludges and sewage type applications

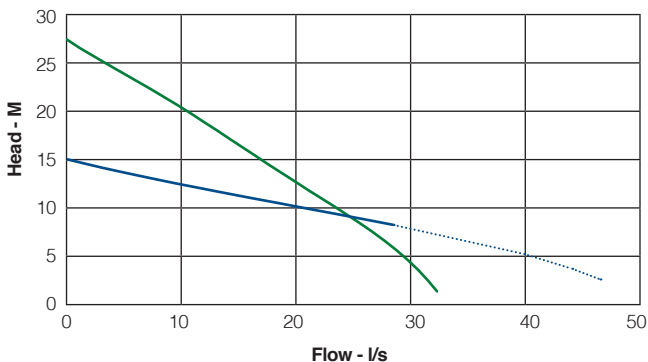
Type	Solids	Outlet	Starter	KW	W/KG	D x L x H
MT	76mm	80mm	DOL	2	90	390x445x610
HT	-	-	-	-	-	-
SH	-	-	-	-	-	-
LT	-	-	-	-	-	-



CS3102 MT/HT

CS 3102 - 53-430-00-3730 3.1 kW 208 mm

CS 3102 - 53-252-00-3730 4.4 kW 208 mm




For reference purposes only

A cast iron pump with open impeller ideal for sludges and sewage type applications

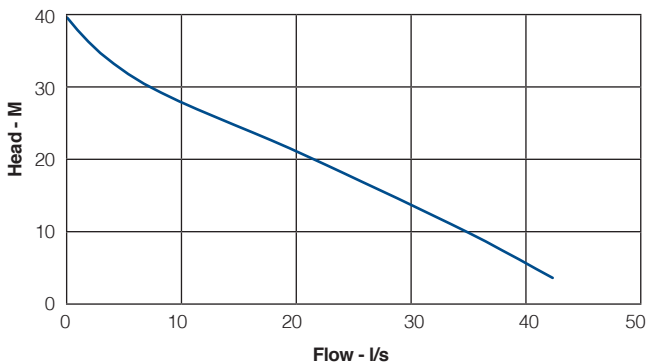
Type	Solids	Outlet	Starter	KW	W/KG	D x L x H
MT	76mm	100mm	DOL	3.1	120	380x610x705
HT	52mm	80mm	DOL	4.4	120	380x610x705
SH	-	-	-	-	-	-
LT	-	-	-	-	-	-





CS3127 HT

CS 3127 - 53-250-00-5250 7.4 kW 172 mm




For reference purposes only

A cast iron pump with open impeller ideal for sludges and sewage type applications

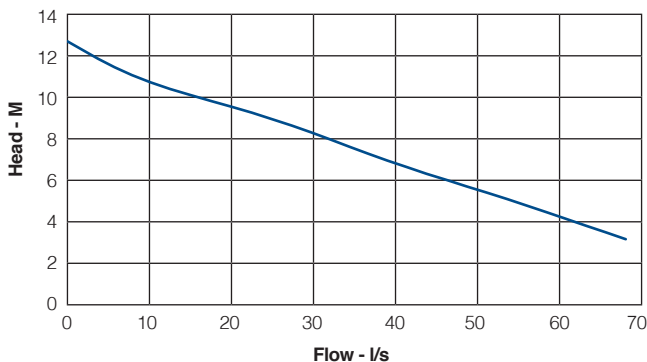
Type	Solids	Outlet	Starter	KW	W/KG	D x L x H
MT	-	-	-	-	-	-
HT	76mm	80mm	DOL	7.4	160	380x630x715
SH	-	-	-	-	-	-
LT	-	-	-	-	-	-





CS3127 LT

CS 3127 - 53-442-00-6110 4.7 kW 228 mm



For reference purposes only

A cast iron pump with open impeller ideal for sludges and sewage type applications

Type	Solids	Outlet	Starter	KW	W/KG	D x L x H
MT	-	-	-	-	-	-
HT	-	-	-	-	-	-
SH	-	-	-	-	-	-
LT	76mm	150mm	DOL	4.7	180	425x795x780

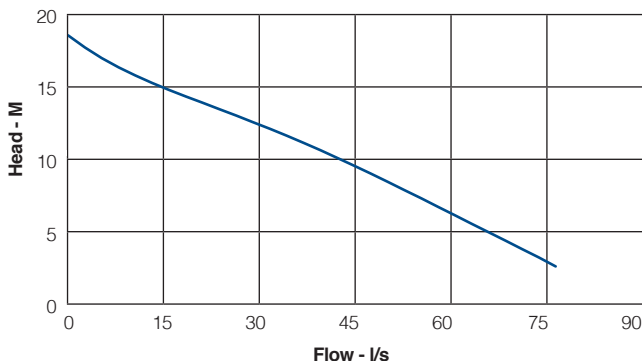


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CS3140 MT

CS 3140 - 53-434-00-3830 9 kW 263 mm



For reference purposes only

A cast iron pump with open impeller ideal for sludges and sewage type applications

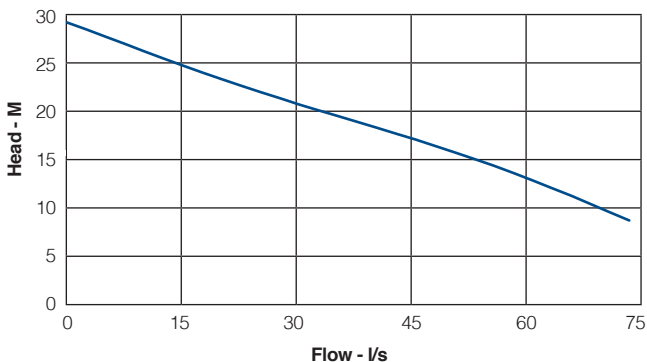
Type	Solids	Outlet	Starter	KW	W/KG	D x L x H
MT	100mm	150mm	DOL	9	282	530x775x1130
HT	-	-	-	-	-	-
SH	-	-	-	-	-	-
LT	-	-	-	-	-	-





CS3152 HT

CS 3152 - 53-452-00-5350 13.5 kW 280 mm



For reference purposes only

A cast iron pump with open impeller ideal for sludges and sewage type applications

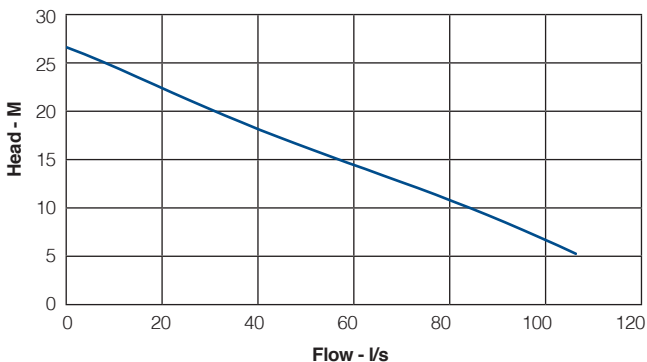
Type	Solids	Outlet	Starter	KW	W/KG	D x L x H
MT	-	-	-	-	-	-
HT	76mm	100mm	ASD	13.5	308	530x835x1090
SH	-	-	-	-	-	-
LT	-	-	-	-	-	-





CS3152 MT

CS 3152 - 53-430-00-5330 13.5 kW 287 mm



For reference purposes only

A cast iron pump with open impeller ideal for sludges and sewage type applications

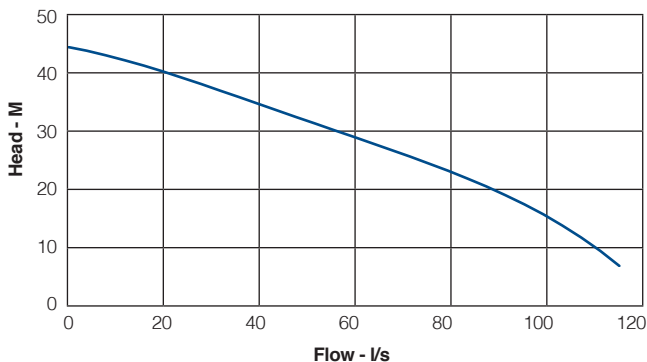
Type	Solids	Outlet	Starter	KW	W/KG	D x L x H
MT	100mm	150mm	DOL	13.5	324	530x900x1130
HT	-	-	-	-	-	-
SH	-	-	-	-	-	-
LT	-	-	-	-	-	-





CS3201 HT

CS 3201 - 53-450-00-5350 30 kW 358 mm



For reference purposes only

A cast iron pump with open impeller ideal for sludges and sewage type applications

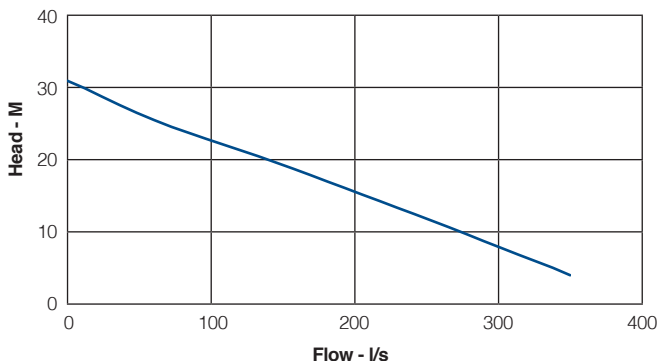
Type	Solids	Outlet	Starter	KW	W/KG	D x L x H
MT	-	-	-	-	-	-
HT	77mm	150mm	Soft Start	30	588	575x955x1455
SH	-	-	-	-	-	-
LT	-	-	-	-	-	-





CS3300 MT

CS 3300 - 53-632-00-5030 44 kW 492 mm



For reference purposes only

A cast iron pump with open impeller ideal for sludges and sewage type applications

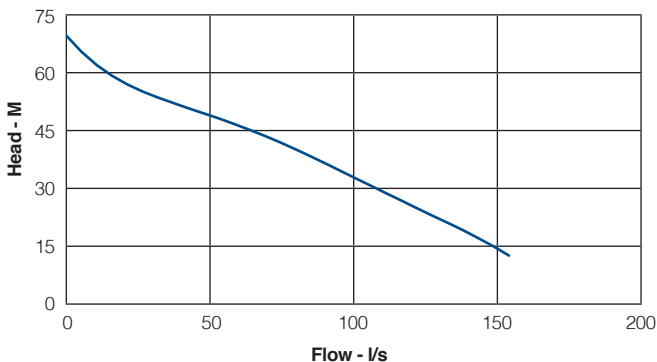
Type	Solids	Outlet	Starter	KW	W/KG	D x L x H
MT	190mm	300mm	Soft Start	44	1176	1000x1410x1915
HT	-	-	-	-	-	-
SH	-	-	-	-	-	-
LT	-	-	-	-	-	-





CS3300 HT

CS 3300 - 53-452-00-2050 54 kW 441 mm



For reference purposes only

A cast iron pump with open impeller ideal for sludges and sewage type applications

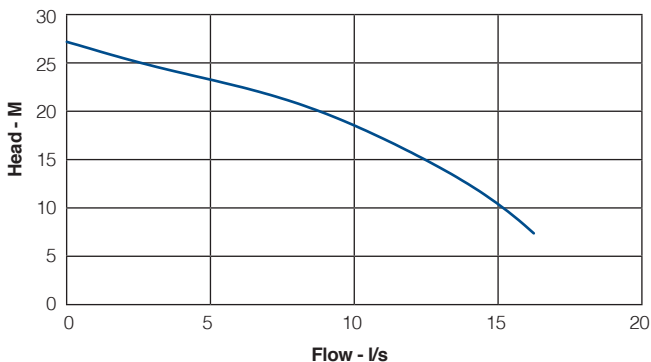
Type	Solids	Outlet	Starter	KW	W/KG	D x L x H
MT	-	-	-	-	-	-
HT	90mm	150mm	Soft Start	54	1016	1000x1230x1825
SH	-	-	-	-	-	-
LT	-	-	-	-	-	-





DS2640 MT

DS 2640 MT 3 ~ 234 5.6 kW



For reference purposes only

A cast iron pump with open impeller ideal for sludges and sewage type applications

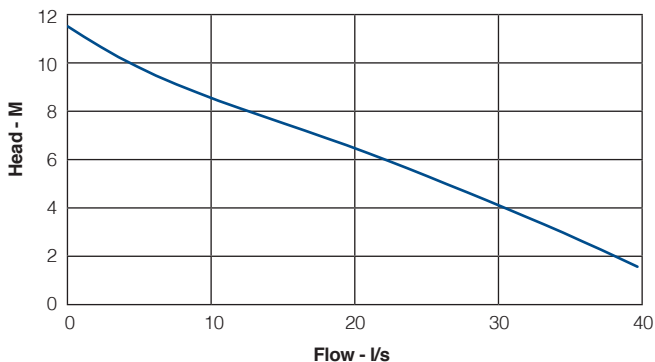
Type	Solids	Outlet	Starter	KW	W/KG	D x L x H
MT	-	80mm	DOL	5.6	31	235x305x505
HT	-	-	-	-	-	-
SH	-	-	-	-	-	-
LT	-	-	-	-	-	-





NS3085 MT

NS 3085 - 53-460-00-5460 2 kW 175 mm



For reference purposes only

A cast iron pump with open impeller ideal for sludges and sewage type applications

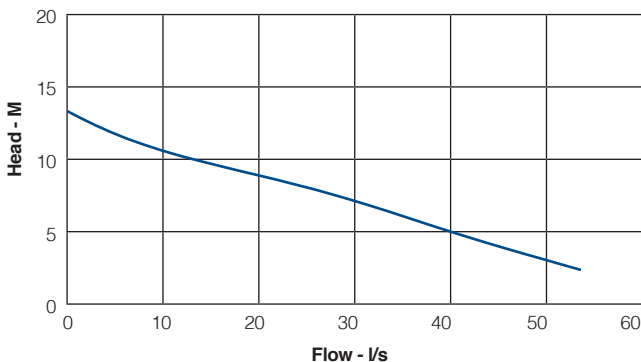
Type	Solids	Outlet	Starter	KW	W/KG	D x L x H
MT	76mm	80mm	DOL	2	90	390x490x610
HT	-	-	-	-	-	-
SH	-	-	-	-	-	-
LT	-	-	-	-	-	-





NS3102 MT

NS 3102 - 53-461-00-6530 3.1 kW 192 mm



For reference purposes only

A cast iron pump with open impeller ideal for sludges and sewage type applications

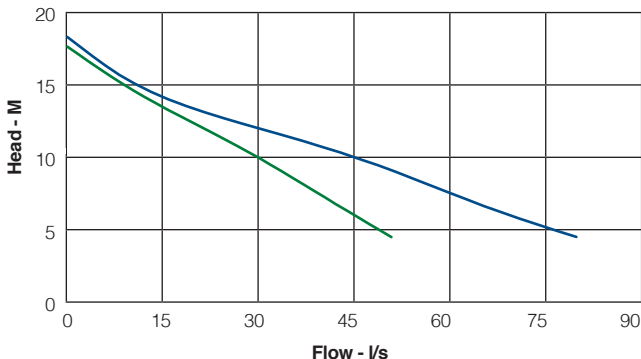
Type	Solids	Outlet	Starter	KW	W/KG	D x L x H
MT	76mm	100mm	DOL	3.1	116	380x610x705
HT	-	-	-	-	-	-
SH	-	-	-	-	-	-
LT	-	-	-	-	-	-



NS3127 MT/HT

NS 3127 - 53-437-00-3730 5.9 kW 220 mm

NS 3127 - 53-488-00-6155 4.7 kW 215 mm




For reference purposes only

A cast iron pump with open impeller ideal for sludges and sewage type applications

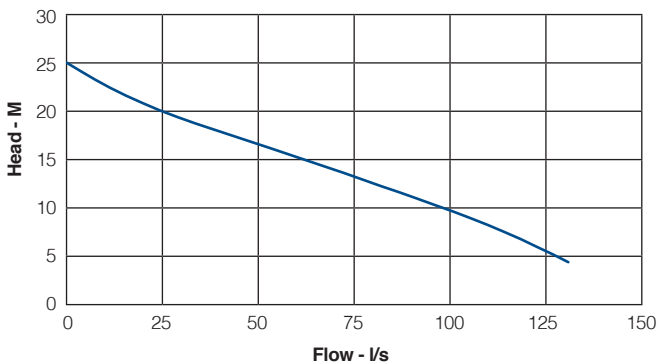
Type	Solids	Outlet	Starter	KW	W/KG	D x L x H
MT	100mm	150mm	DOL	5.9	170	425x705x765
HT	76mm	100mm	DOL	4.7	170	425x635x735
SH	-	-	-	-	-	-
LT	-	-	-	-	-	-





NS3152 MT

NS 3152 - 53-441-00-6030 13.5 kW 267 mm



For reference purposes only

A cast iron pump with open impeller ideal for sludges and sewage type applications

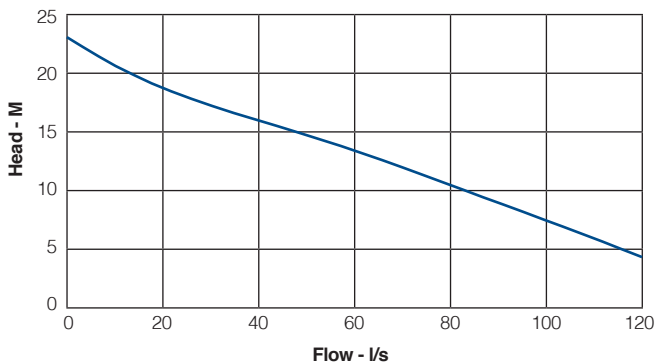
Type	Solids	Outlet	Starter	KW	W/KG	D x L x H
MT	100mm	150mm	ASD	13.5	308	530x835x1130
HT	-	-	-	-	-	-
SH	-	-	-	-	-	-
LT	-	-	-	-	-	-





NS3153 MT

NS 3153 - 53-431-00-6030 11 kW 249 mm



For reference purposes only

A cast iron pump with open impeller ideal for sludges and sewage type applications

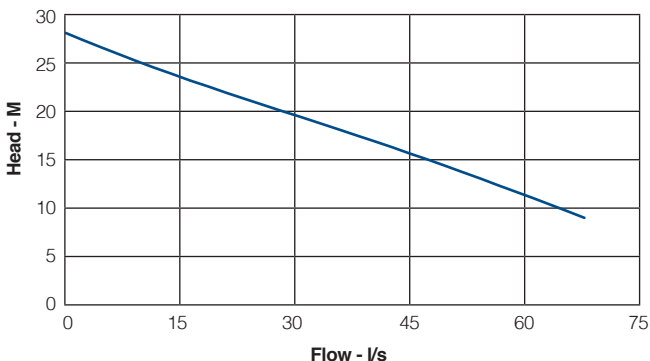
Type	Solids	Outlet	Starter	KW	W/KG	D x L x H
MT	-	150mm	ASD	11	270	530x834x1068
HT	-	-	-	-	-	-
SH	-	-	-	-	-	-
LT	-	-	-	-	-	-





NS3153 HT

NS 3153 - 53-453-00-6050 11 kW 261 mm



For reference purposes only

A cast iron pump with open impeller ideal for sludges and sewage type applications

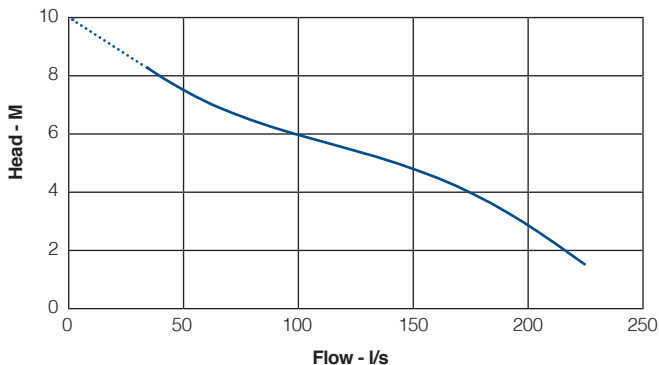
Type	Solids	Outlet	Starter	KW	W/KG	D x L x H
MT	-	-	-	-	-	-
HT	-	100mm	ASD	11	242	530x664x1041
SH	-	-	-	-	-	-
LT	-	-	-	-	-	-





NS3153 LT

NS 3153 - 53-620-00-7520 9 kW 267 mm



For reference purposes only

A cast iron pump with open impeller ideal for sludges and sewage type applications

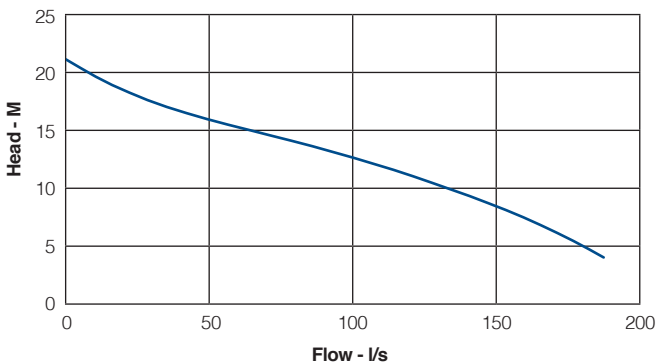
Type	Solids	Outlet	Starter	KW	W/KG	D x L x H
MT	-	-	-	-	-	-
HT	-	-	-	-	-	-
SH	-	-	-	-	-	-
LT	-	250mm	ASD	9	466	624x1063x1159





NS3201 MT

NS 3201 - 53-640-00-8930 22 kW 366 mm



For reference purposes only

A cast iron pump with open impeller ideal for sludges and sewage type applications

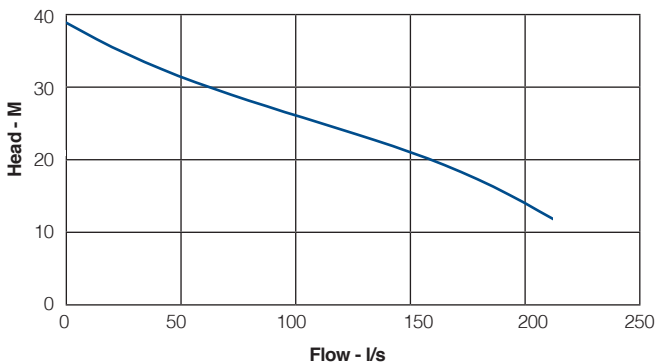
Type	Solids	Outlet	Starter	KW	W/KG	D x L x H
MT	-	200mm	Soft Start	22	636	735x1125x1445
HT	-	-	-	-	-	-
SH	-	-	-	-	-	-
LT	-	-	-	-	-	-





NS3202 MT

NS 3202 - 53-431-00-4030 45 kW 330 mm



For reference purposes only

A cast iron pump with open impeller ideal for sludges and sewage type applications

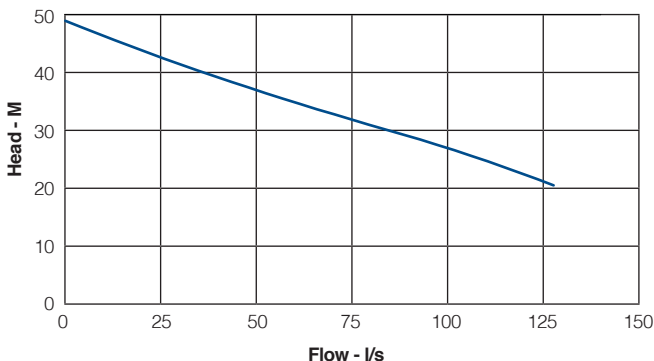
Type	Solids	Outlet	Starter	KW	W/KG	D x L x H
MT	-	200mm	Soft start	45	636	610x1059x1415
HT	-	-	-	-	-	-
SH	-	-	-	-	-	-
LT	-	-	-	-	-	-





NS3202 HT

NS 3202 - 53-454-00-4050 45 kW 344 mm



For reference purposes only

A cast iron pump with open impeller ideal for sludges and sewage type applications

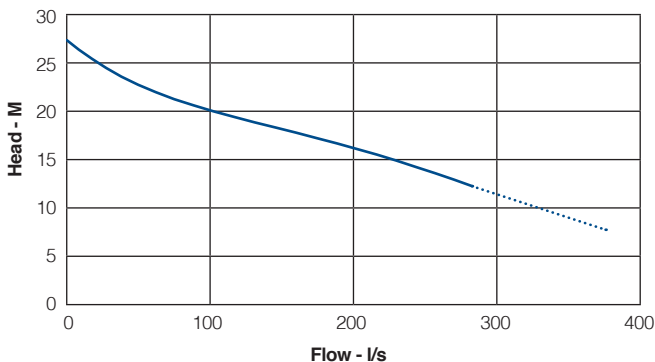
Type	Solids	Outlet	Starter	KW	W/KG	D x L x H
MT	-	-	-	-	-	-
HT	-	150mm	Soft start	45	600	580x957x1406
SH	-	-	-	-	-	-
LT	-	-	-	-	-	-





NS3300 MT

NS 3300 - 53-670-00-5130 44 kW 418 mm



For reference purposes only

A cast iron pump with open impeller ideal for sludges and sewage type applications

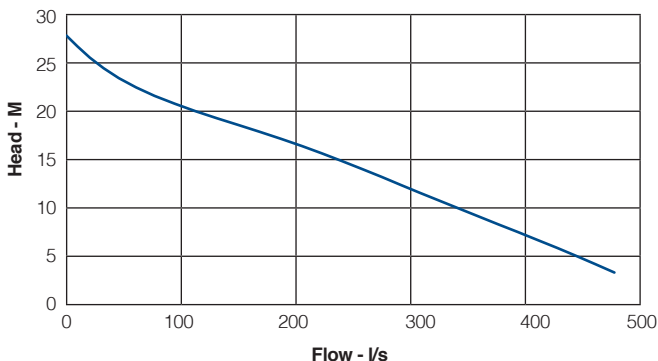
Type	Solids	Outlet	Starter	KW	W/KG	D x L x H
MT	-	300mm	Soft Start	44	1180	1000x1410x1954
HT	-	-	-	-	-	-
SH	-	-	-	-	-	-
LT	-	-	-	-	-	-





NS3300 LT

NS 3300 - 53-621-00-5120 44 kW 418 mm



For reference purposes only

A cast iron pump with open impeller ideal for sludges and sewage type applications

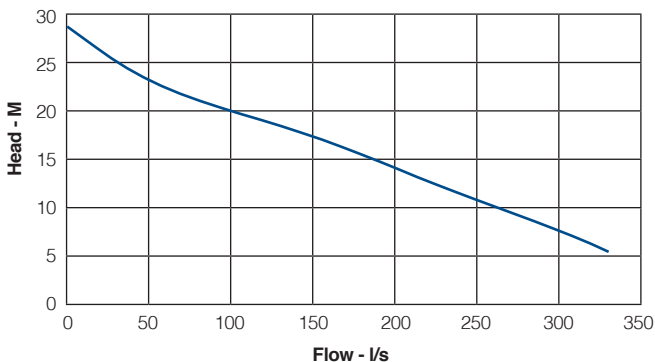
Type	Solids	Outlet	Starter	KW	W/KG	D x L x H
MT	-	-	-	-	-	-
HT	-	-	-	-	-	-
SH	-	-	-	-	-	-
LT	-	300mm	Soft Start	44	1180	1000x1440x1920





NS3301 MT

NS 3301 - 53-634-00-2130 45 kW 404 mm



For reference purposes only

A cast iron pump with open impeller ideal for sludges and sewage type applications

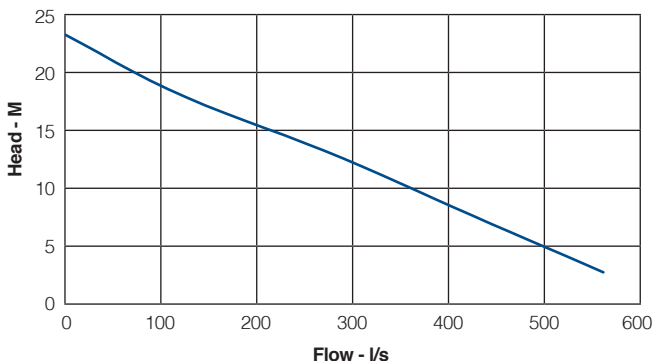
Type	Solids	Outlet	Starter	KW	W/KG	D x L x H
MT	-	300mm	Soft start	45	1148	1000x1438x1680
HT	-	-	-	-	-	-
SH	-	-	-	-	-	-
LT	-	-	-	-	-	-





NS3301 LT

NS 3301 - 53-622-00-2120 45 kW 400 mm



For reference purposes only

A cast iron pump with open impeller ideal for sludges and sewage type applications

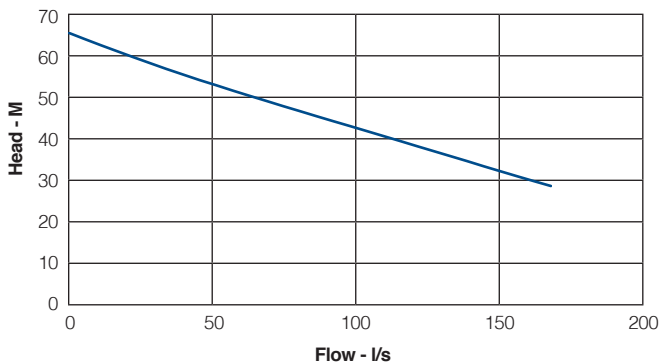
Type	Solids	Outlet	Starter	KW	W/KG	D x L x H
MT	-	-	-	-	-	-
HT	-	-	-	-	-	-
SH	-	-	-	-	-	-
LT	-	300mm	Soft start	45	1160	1000x1439x1705





NS3301 HT

NS 3301 - 53-454-00-1150 70 kW 390 mm



For reference purposes only

A cast iron pump with open impeller ideal for sludges and sewage type applications

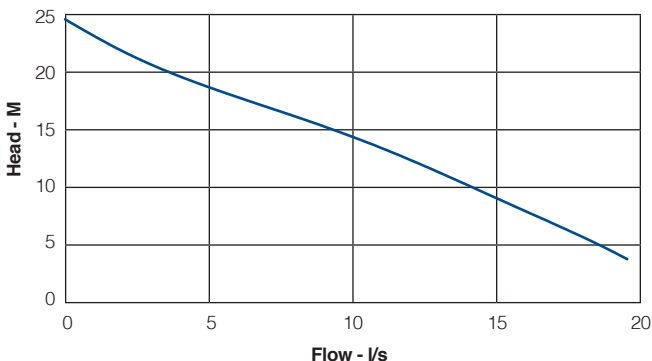
Type	Solids	Outlet	Starter	KW	W/KG	D x L x H
MT	-	-	-	-	-	-
HT	-	150mm	Soft Start	70	1016	1000x1242x1641
SH	-	-	-	-	-	-
LT	-	-	-	-	-	-





NS3085 SH

NS 3085 - SH 3 ~ 253 2.4 kW 139 mm



For reference purposes only

A cast iron pump with open impeller ideal for sludges and sewage type applications

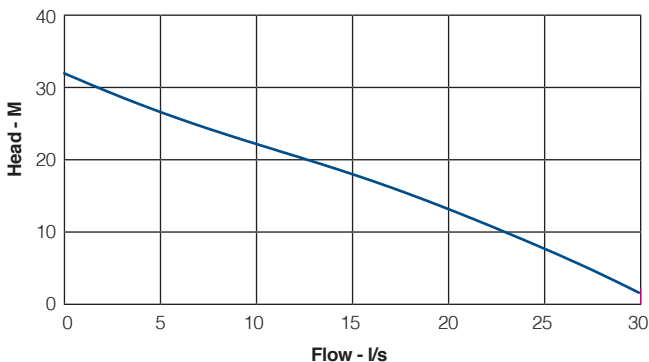
Type	Solids	Outlet	Starter	KW	W/KG	D x L x H
MT	-	-	-	-	-	-
HT	-	-	-	-	-	-
SH	N/A	80mm	DOL	2.4	90	390x465x600
LT	-	-	-	-	-	-





NS3102 SH

NS 3102 - SH 3 ~ 255 4.2 kW 152 mm



For reference purposes only

A cast iron pump with open impeller ideal for sludges and sewage type applications

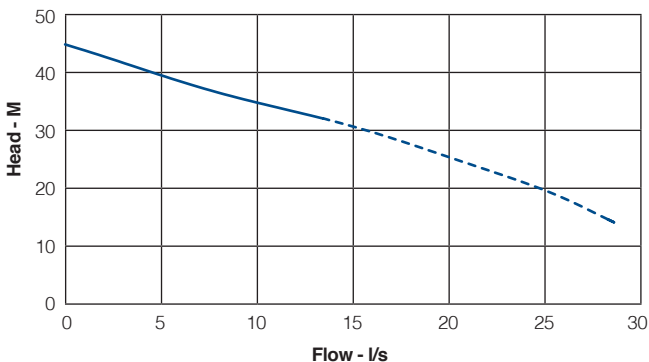
Type	Solids	Outlet	Starter	KW	W/KG	D x L x H
MT	-	-	-	-	-	-
HT	-	-	-	-	-	-
SH	N/A	80mm	DOL	4.2	120	380x600x695
LT	-	-	-	-	-	-





NS3127 SH

NS 3127 - SH 3 ~ 245 7.4 kW 180 mm



For reference purposes only

A cast iron pump with open impeller ideal for sludges and sewage type applications

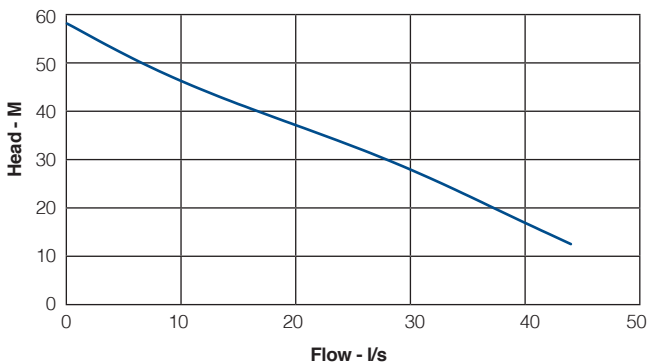
Type	Solids	Outlet	Starter	KW	W/KG	D x L x H
MT	-	-	-	-	-	-
HT	-	-	-	-	-	-
SH	N/A	80mm	DOL	7.4	155	380x650x715
LT	-	-	-	-	-	-





NS3153 SH

NS 3153 - SH 3 ~ 272 15 kW



For reference purposes only

A cast iron pump with open impeller ideal for sludges and sewage type applications

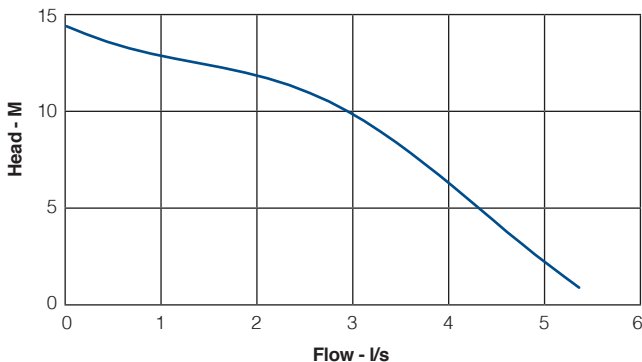
Type	Solids	Outlet	Starter	KW	W/KG	D x L x H
MT	-	-	-	-	-	-
HT	-	-	-	-	-	-
SH	N/A	80mm	Soft start	15	250	530x633x1053
LT	-	-	-	-	-	-





BS2008 MT

BS 2008 - 51-200-00-0000 0.75 kW 116 mm



For reference purposes only

Lightweight alloy pumps ideal for clean water and dirty water applications

Type	Solids	Outlet	Starter	KW	W/KG	D x L
MT	Water	50mm	Internal	0.75	14.5	184x438
HT	-	-	-	-	-	-
SH	-	-	-	-	-	-
LT	-	-	-	-	-	-

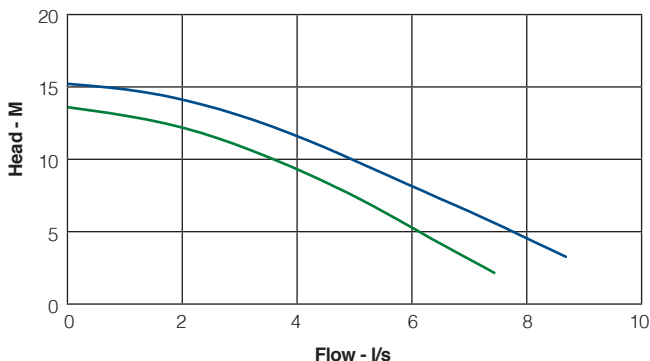




BS2052 MT 110v/400v

BS 2052 - 53-232-00-0140 1 kW 116 mm

BS 2052 - 51-231-00-2330 0.8 kW 116 mm



For reference purposes only

Lightweight alloy pumps ideal for clean water and dirty water applications

Type	Solids	Outlet	Starter	KW	W/KG	D x L
MT	Water	50mm	Internal	1	22	200x530
MT	Water	50mm	BCD 4	0.8	22	200x530
-	-	-	-	-	-	-
-	-	-	-	-	-	-

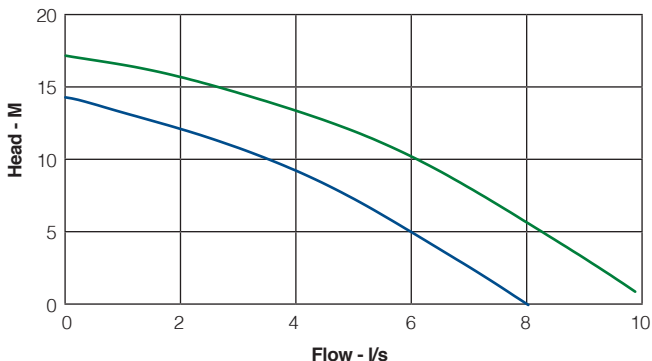




KS2610 MT 233/234

KS 2610 - MT 1 ~ 233 0.85 kW 115 mm

KS 2610 - MT 3 ~ 234 1.2 kW 126 mm



For reference purposes only

Lightweight alloy pumps ideal for clean water and dirty water applications

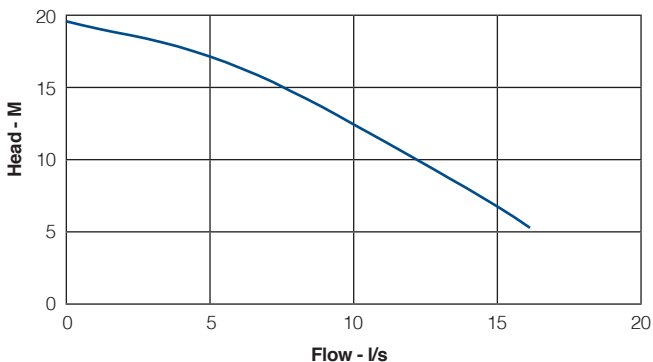
Type	Solids	Outlet	Starter	KW	W/KG	D x L
MT	Water	50mm	Internal	0.85	21.5	200x571
MT	Water	50mm	Internal	1.2	21.5	200x571
-	-	-	-	-	-	-
-	-	-	-	-	-	-





BS2066 MT

BS 2066 - 53-231-00-0100 2.2 kW



For reference purposes only

Lightweight alloy pumps ideal for clean water and dirty water applications

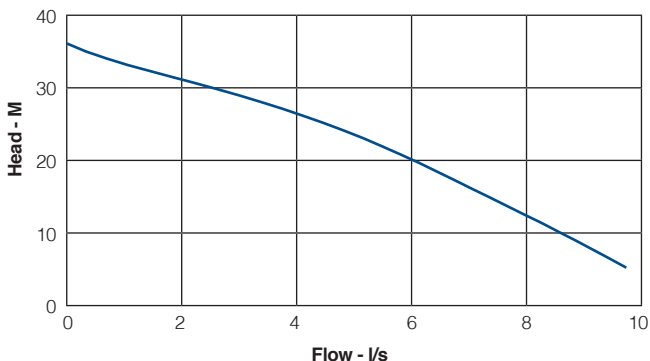
Type	Solids	Outlet	Starter	KW	W/KG	D x L
MT	Water	75mm	DOL	2.2	36	362x375
HT	-	-	-	-	-	-
SH	-	-	-	-	-	-
LT	-	-	-	-	-	-





BS2071 MT

BS 2071 - 53-231-00-2331 3 kW 129 mm



For reference purposes only

Lightweight alloy pumps ideal for clean water and dirty water applications

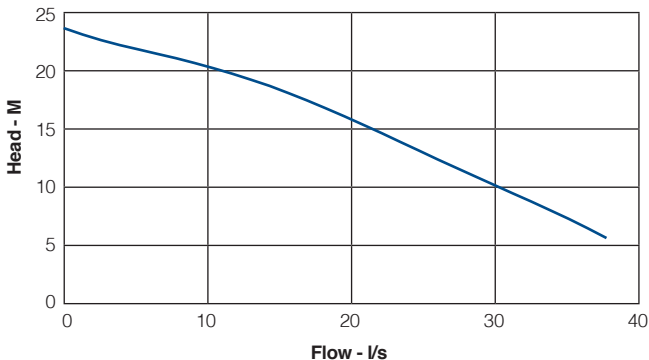
Type	Solids	Outlet	Starter	KW	W/KG	D x L
MT	Water	50mm	DOL	3	31	185x670
HT	-	-	-	-	-	-
SH	-	-	-	-	-	-
LT	-	-	-	-	-	-





BS2102 MT

BS 2102 - 53-231-00-0430 5.2 kW 140 mm



For reference purposes only

Lightweight alloy pumps ideal for clean water and dirty water applications

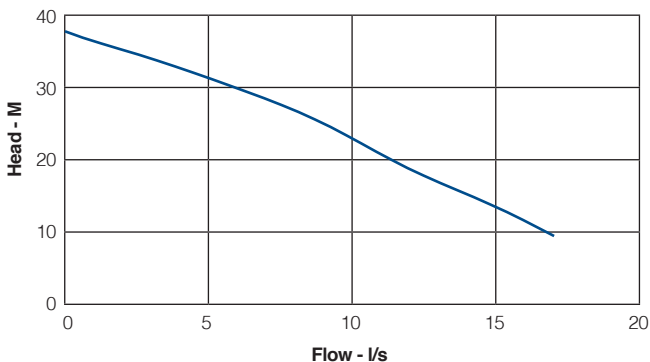
Type	Solids	Outlet	Starter	KW	W/KG	D x L x H
MT	Water	100mm	DOL	5.2	62	335x460x655
Slimline	Water	100mm	DOL	5.2	56	293x742
SH	-	-	-	-	-	-
LT	-	-	-	-	-	-





BS2102 HT

BS 2102 - 53-233-00-0250 5.2 kW 182 mm




For reference purposes only

Lightweight alloy pumps ideal for clean water and dirty water applications

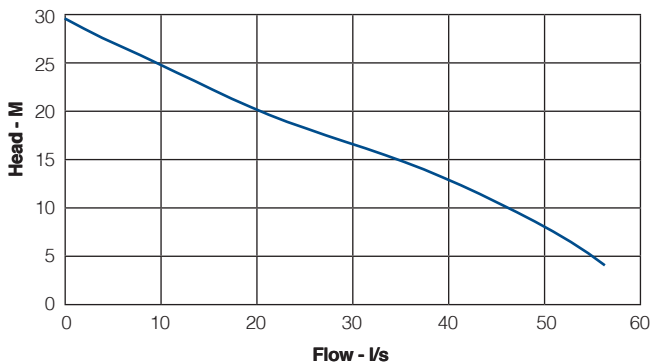
Type	Solids	Outlet	Starter	KW	W/KG	D x L x H
MT	-	-	-	-	-	-
HT	Water	100mm	DOL	5.2	62	335x445x655
Slimline	Water	80mm	DOL	5.2	56	293x742
LT	-	-	-	-	-	-





BS2125 MT

BS 2125 - 53-231-00-0230 8 kW 150 mm



For reference purposes only

Lightweight alloy pumps ideal for clean water and dirty water applications

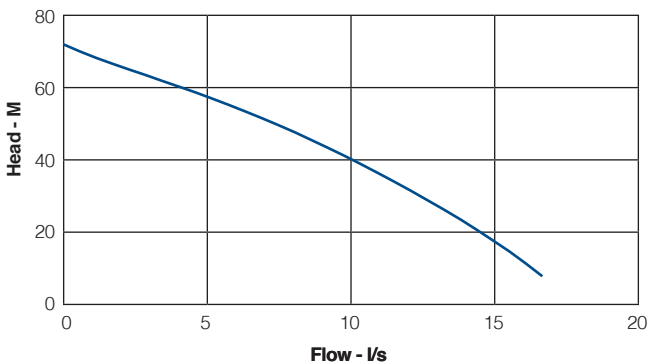
Type	Solids	Outlet	Starter	KW	W/KG	D x L x H
MT	Water	150mm	DOL	8	94	360x535x730
Slimline	Water	150mm	DOL	8	93	357x984
SH	-	-	-	-	-	-
LT	-	-	-	-	-	-





BS2125 HT

BS 2125 - 53-233-00-0150 8 kW 170 mm



For reference purposes only

Lightweight alloy pumps ideal for clean water and dirty water applications

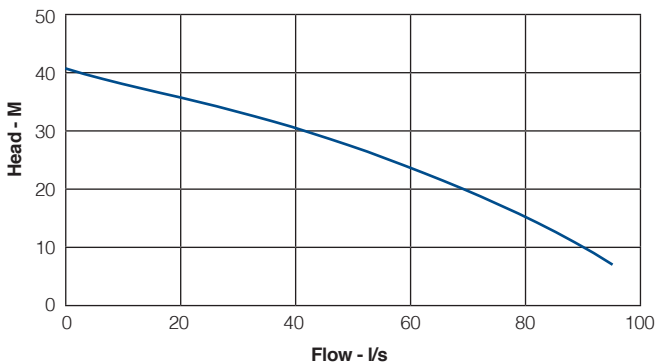
Type	Solids	Outlet	Starter	KW	W/KG	D x L x H
MT	-	-	-	-	-	-
HT	Water	150mm	DOL	8	94	360x465x730
Slimline	Water	150mm	DOL	8	93	360x927
LT	-	-	-	-	-	-





BS2151 LT

BS 2151 - 53-231-00-0210 20 kW




For reference purposes only

Lightweight alloy pumps ideal for clean water and dirty water applications

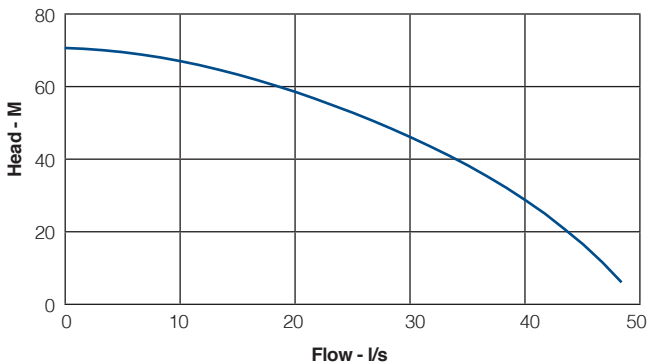
Type	Solids	Outlet	Starter	KW	W/KG	D x L x H
MT	-	-	-	-	-	-
HT	-	-	-	-	-	-
SH	-	-	-	-	-	-
LT	Water	150mm	ATX/ASD	20	188	505x655x745





BS2151 HT

BS 2151 - 53-233-00-0250 20 kW 227 mm



For reference purposes only

Lightweight alloy pumps ideal for clean water and dirty water applications

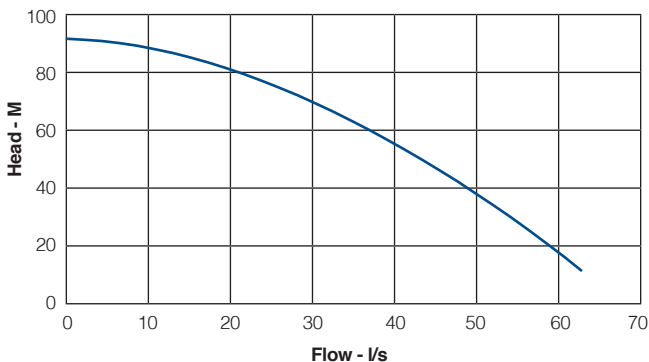
Type	Solids	Outlet	Starter	KW	W/KG	D x L x H
MT	-	-	-	-	-	-
HT	Water	100mm	ATX/ASD	20	188	505x655x745
SH	-	-	-	-	-	-
LT	-	-	-	-	-	-





BS2201 HT

BS 2201 - 53-243-00-0350 37 kW 268 mm



For reference purposes only

Lightweight alloy pumps ideal for clean water and dirty water applications

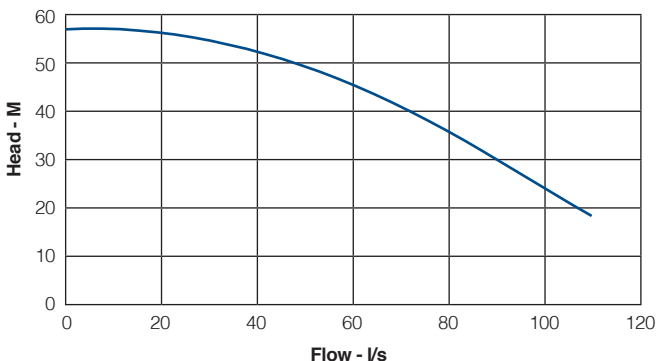
Type	Solids	Outlet	Starter	KW	W/KG	D x L
MT	-	-	-	-	-	-
HT	Water	100mm	Soft start	37	300	430x1045
SH	-	-	-	-	-	-
LT	-	-	-	-	-	-





BS2250 HT

BS 2250 - 53-433-00-0150 54 kW 430 mm



For reference purposes only

Lightweight alloy pumps ideal for clean water and dirty water applications

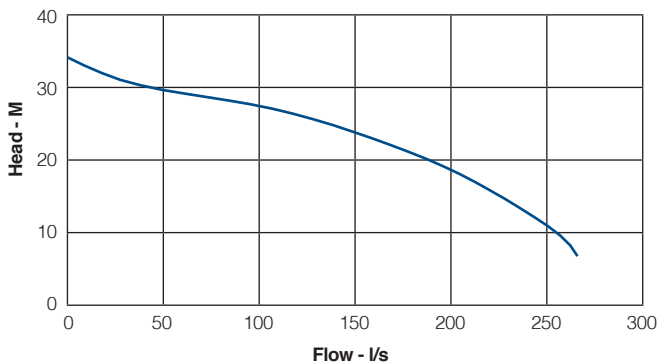
Type	Solids	Outlet	Starter	KW	W/KG	D x L x H
MT	-	-	-	-	-	-
HT	Water	150mm	Soft start	54	648	770x915x1260
SH	-	-	-	-	-	-
LT	-	-	-	-	-	-





BS2250 LT

BS 2250 - 53-431-00-0140 54 kW 286 mm



For reference purposes only

Lightweight alloy pumps ideal for clean water and dirty water applications

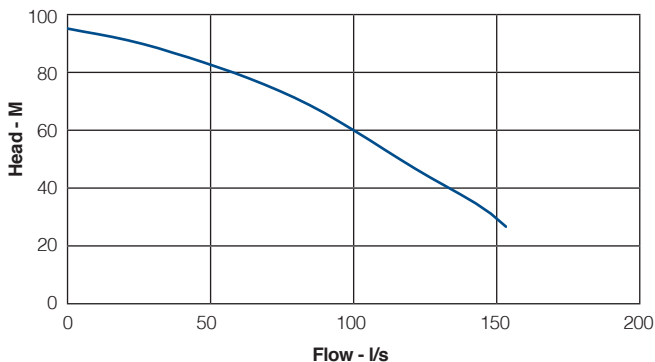
Type	Solids	Outlet	Starter	KW	W/KG	D x L x H
MT	-	-	-	-	-	-
HT	-	-	-	-	-	-
SH	-	-	-	-	-	-
LT	Water	250mm	Soft start	54	648	770x915x1260





BS2400 MT

BS 2400 - 53-231-00-1931 90 kW 283 mm



For reference purposes only

Lightweight alloy pumps ideal for clean water and dirty water applications

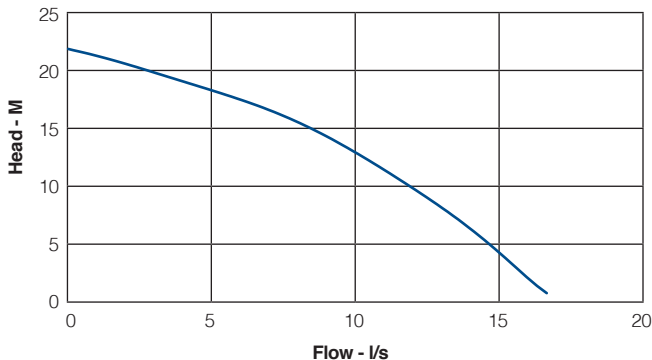
Type	Solids	Outlet	Starter	KW	W/KG	D x L
MT	Water	150mm	Soft start	90	980	770x1180
HT	-	-	-	-	-	-
SH	-	-	-	-	-	-
LT	-	-	-	-	-	-





BS2620 MT

BS 2620 - MT 3 ~ 226 2.2 kW 134 mm



For reference purposes only

Lightweight alloy pumps ideal for clean water and dirty water applications

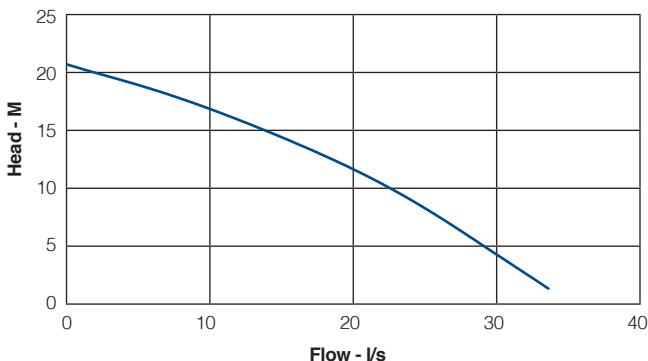
Type	Solids	Outlet	Starter	KW	W/KG	D x L
MT	Water	80mm	DOL	2.2	36	240x623
HT	-	-	-	-	-	-
SH	-	-	-	-	-	-
LT	-	-	-	-	-	-





BS2630 MT

BS 2630 - MT 3 ~ 226 3.7 kW 131 mm



For reference purposes only

Lightweight alloy pumps ideal for clean water and dirty water applications

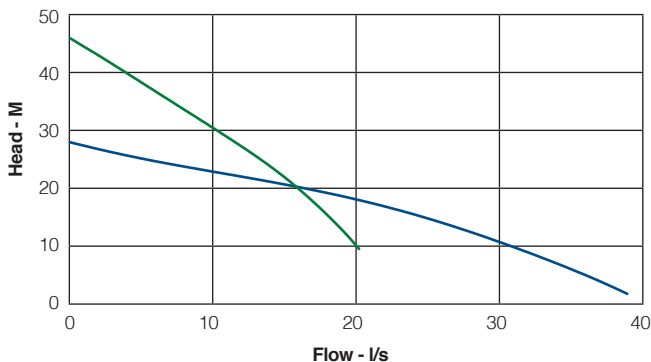
Type	Solids	Outlet	Starter	KW	W/KG	D x L
MT	Water	100mm	DOL	3.7	60	286x725
HT	-	-	-	-	-	-
SH	-	-	-	-	-	-
LT	-	-	-	-	-	-



BS2640 MT/HT

BS 2640 - MT 3 ~ 226 5.6 kW 149 mm

BS 2640 - HT 3 ~ 251 5.6 kW 183 mm



For reference purposes only

Lightweight alloy pumps ideal for clean water and dirty water applications

Type	Solids	Outlet	Starter	KW	W/KG	D x L
MT	Water	100mm	DOL	5.6	62	286x920
HT	Water	80mm	DOL	5.6	53	286x889
SH	-	-	-	-	-	-
LT	-	-	-	-	-	-

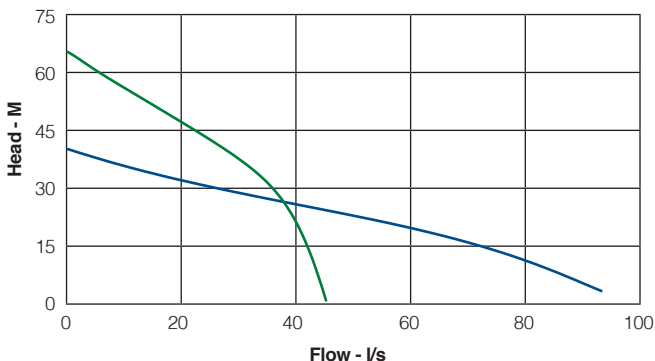




BS2670 MT/HT

BS 2670 - MT 3 ~ 226 18 kW 164 mm

BS 2670 - HT 3 ~ 251 18 kW 220 mm



For reference purposes only

Lightweight alloy pumps ideal for clean water and dirty water applications

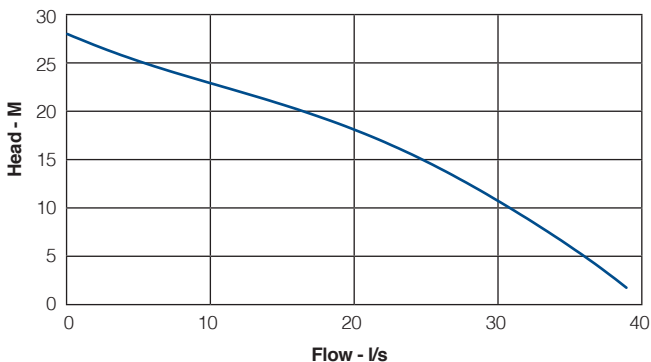
Type	Solids	Outlet	Starter	KW	W/KG	D x L
MT	Water	150mm	ASD	18	168	395x995
HT	Water	100mm	Soft start	18	168	395x995
SH	-	-	-	-	-	-
LT	-	-	-	-	-	-





BS2840 MT

BS 2840 - MT 3 ~ 226 5.6 kW 149 mm



For reference purposes only

Lightweight alloy pumps ideal for clean water and dirty water applications

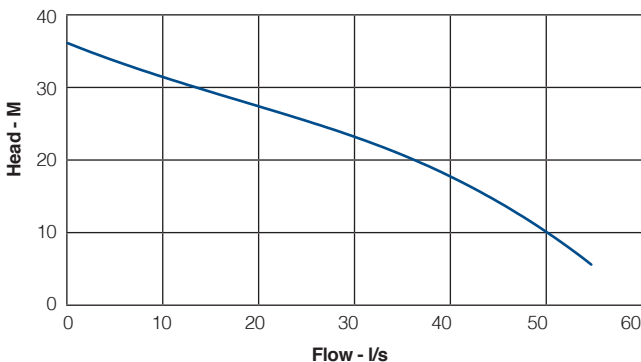
Type	Solids	Outlet	Starter	KW	W/KG	D x L
MT	Water	100mm	DOL	5.6	980	770x1180
HT	-	-	-	-	-	-
SH	-	-	-	-	-	-
LT	-	-	-	-	-	-





BS2860 MT

BS 2860 - MT 3 ~ 226 10 kW 167 mm



For reference purposes only

Lightweight alloy pumps ideal for clean water and dirty water applications

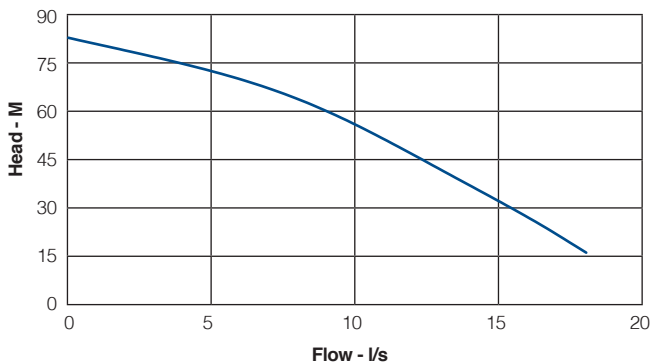
Type	Solids	Outlet	Starter	KW	W/KG	D x L
MT	Water	150mm	Soft start	10	118	505x889
HT	-	-	-	-	-	-
SH	-	-	-	-	-	-
LT	-	-	-	-	-	-





BS2860 SH

BS 2860 - SH 3 ~ 276 10 kW 180 mm



For reference purposes only

Lightweight alloy pumps ideal for clean water and dirty water applications

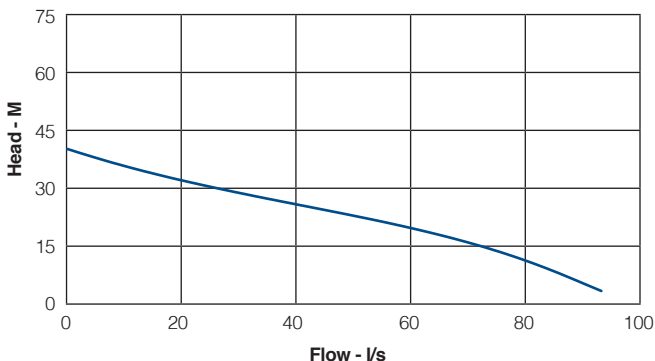
Type	Solids	Outlet	Starter	KW	W/KG	D x L
MT	-	-	-	-	-	-
HT	-	-	-	-	-	-
SH	Water	80mm	Soft start	10	118	490x975
LT	-	-	-	-	-	-





BS2870 MT

BS2870 - MT 3 ~ 226 18Kw 164mm



For reference purposes only

Lightweight alloy pumps for clean water and dirty water applications

Type	Solids	Outlet	Starter	KW	W/KG	D x L
MT	Water	150mm	DOL	18.0	160	740 x 991
HT	-	-	-	-	-	-
SH	-	-	-	-	-	-
LT	-	-	-	-	-	-



Plug and Play



The majority of Hydrainer electric submersible pumps and panels incorporate the Plug and Play System with phase rotation plugs fitted to control panels and specialist anti-flash plugs to pumps.

Additional features include plug and play floats, phase rotation fault indicator.



GSM Auto Dialler

- Intelligent communication at your fingertips.
- 4 inputs (4 xx reports... flood alert, fault reporting, power drain, low fuel, intruders etc).
- 3 Call cycles to four phone numbers, ensures connectivity with duty staff.
- Back-up text messages to all numbers if calls are not acknowledged.
- Administrator can reset the unit via a mobile phone.
- Custom Voice recording delivers messages for each location with site ID.
- Works on any 2g/3g GSM network.
- Supplied with a network roaming SIM ensuring connectivity at all times (optional).
- Easy to Programme with minimal installation.
- Stand-alone – self powered.
- Low battery warning.



GSM Telemetry Unit

This can be programmed with a number of alerts including high water level, pump tripped and power failure. The unit has up to five inputs with five individual telephone numbers stored. On activation of an alarm the unit will dial out to the first number; the unit uses a continual loop system which will continue to call the telephone numbers in sequence until acknowledged. This is a stand-alone unit incorporating its own power supply; the alarm message can be programmed to meet the end user's individual needs.



Pulsar's Ultimate Controller

Pulsar Process Measurement's Ultimate Controller is a control system that combines ultrasonic level and flow measurement, RTU and advanced pump control in one economic, easily programmed, modular unit with dedicated web server remote control and touchscreen HMI.

Integrating the world's leading non-contacting ultrasonic advanced controller with patented functions that reduce energy costs, aid Asset Management, reduce installation and maintenance costs and improve Compliance. Ultimate Controller is modular and expandable, with peripherals offering unlimited I/O, pump power monitoring and even a remote infra-red camera, allowing remote viewing of the well and the process. One supplier, one number to ring for the complete control package.



ULTIMATE CONTROLLER: INTEGRATED, MODULAR, FLEXIBLE AND COMPACT CONTROL

CLOCKWISE FROM LEFT

INFRA-RED CAMERA

I/O INTERFACE UNIT (DIN RAIL)

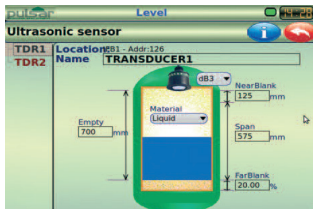
ULTIMATE CONTROLLER - FASCIA
MOUNT

ULTIMATE CONTROLLER - WALL
MOUNT

dB10 TRANSDUCER

POWER MONITOR WITH PUMP
REVERSING (DIN RAIL)

FLOW PULSE NON-INVASIVE FLOW MONITOR



A key strength of Pulsar equipment has always been the logical layout and straightforward, menu-based programming approach. Ultimate Controller is no different, and takes the concept even further with a simple, visual setup made through the HMI touchscreen. You can, of course, program the unit and adjust parameters remotely.

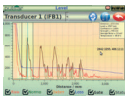
Set up the application, add a transducer, add peripherals with a few touches of the screen. Ultimate Controller will fill in parameters automatically so you get immediate feedback on important elements such as maximum range, blanking distance etc.

Ultimate Controller - intuitive simplicity

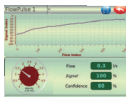




MONITOR THE PROCESS
DIRECTLY THROUGH THE
REMOTE SERVER WITH
OPTIONAL INFRA RED CAMERA



VIEW ECHO TRACES
ON THE ULTIMATE
CONTROLLER SCREEN



INSTANTANEOUS
FLOW RATE AND
FLOW TRENDS ARE
VIEWABLE WITHIN
THE HMI WHEN FLOW
PULSE MONITORS
ARE IN USE



OPTIONAL FLOW PULSE NON-INVASIVE
FLOW MONITORS RECORD FLOW RATE
FOR PUMP EFFICIENCY DIAGNOSTICS
AND ANALYSING STATION EFFICIENCY
DURING STORM CONDITIONS FOR
COMPLIANCE REPORTING



DESKTOP, LAPTOP, TABLET OR
SMARTPHONE

ACCESS CRUCIAL STATION DATA
FROM ANYWHERE



REMOTE ACCESS



DNP3 (WITS 1.2 pending)
TCP/IP/ PSTN
MODBUS
PROFIBUS

VERSATILE COMMS.
INCLUDING INDUSTRY
STANDARD DNP3. MONITOR
THE ULTIMATE CONTROLLER
ON THE MOVE VIA
DEDICATED WEB SERVER



PULSAR'S POWER MONITOR
PROVIDES IMPORTANT DATA
ABOUT PUMP PERFORMANCE
AND POWER PROFILES



DETAILED PUMP INFORMATION
AVAILABLE THROUGH THE HMI
AND REMOTELY



Flow Pulse Handheld Controller

Features

- Compact, mobile controller for Flow Pulse
- Rechargeable battery or mains operation
- IP65 polycarbonate body
- On-board logging and USB data download gives easy sensor programming
- 3.2 inch colour TFT display
- SoftTouch keypad
- Up to 5 hours continuous operation on one charge

Non-invasive flow monitoring on the move

Flow Pulse Handheld Controller is an indispensable tool for portable flow monitoring and data acquisition. The unit connects to pre-installed Flow Pulse sensors or operates as a self-contained kit, with instant feedback via its colour screen. For true portability, the Handheld Controller will power a Flow Pulse directly, monitoring flow rate to assess system or pump performance.

Pulsar's Handheld controller detects the Flow Pulse sensor when the on-board RS-485 line is connected, auto-loads operating parameters and reads instantaneous flow rate. The colour screen and simple programming allow the operator to view traces and recorded data files, as well as loading and saving parameter files. The ergonomically designed Handheld is rated IP65.

4GB of on-board memory provides storage for nearly a year's worth of data (around 120 days with traces) at 10 second recording intervals. Sleep/wake function allows extended logging, with data downloaded via USB to Pulsar Flow Pulse PC software and .csv file for further analysis. The Flow Pulse Handheld is available as a stand-alone unit to use with existing Flow Pulse sensors, or can be purchased as a complete kit with Flow Pulse and a convenient carry case. Mains or battery operation, with in-car charger.



Typical Applications

- Identify inefficient pumps
- Identify faulty non-return valves
- Record flow for analysis and comparison
- Monitor pump system performance



PHYSICAL	
Dimensions	188 x 122 x 48mm, 7.4 x 4.8 x 1.9 inches
Weight:	Nominal 560g (1.2lbs)
Enclosure material:	Polycarbonate
Cable entry:	Supplied with 5m cable with IP68 rated plug/socket and sealing cap (other cable lengths are available)
Maximum separation:	100m (328 ft)
Display:	3.2 inch TFT
Interface:	SoftTouch keyboard
ENVIRONMENTAL	
Operating temperature:	-20°C to +60°C (-4°F to +140°F) +10°C to +40°C (+50°F to +104°F) during recharging
Ingress protection:	IP65
Fire Protection:	Flame Resistant UL94 V2 rated
CE approval:	Complies with BS EN 61326-1:2006 for emissions and immunity
DATA LOGGING	
Capacity	4GB on-board (360 days without traces or 120 days with traces at 10 sec intervals)
Mode	Continuous or low-power
Format:	Flow Pulse PC and Excel CSV
Access	USB access to on-board storage for data transfer, direct data replay and format conversion
OUTPUTS	
RS485	Digital communications with sensor
RS232:	Firmware upgrade
Power supply to sensor:	10-12VDC
PROGRAMMING	
On-board:	By integral keypad
PC:	By USB for data access By internal RS232 port for firmware upgrade
SUPPLY	
Power supply:	12.6V Li-ion battery (2000mAH) 12VDC input (up to 16V max)
Power consumption:	400mA at 12VDC average 7W maximum power
Internal fuses:	400mA sensor-facing fuse 1A battery pack fuse 2A fast-blow DC input fuse Double independent thermal fuses

BBA 4" Diesel end suction pump

This diesel-driven 4" dry self-priming sewage and dewatering pump is the best performing mobile pump against a pump of equal status. With a solid handling capability of 82mm, there is no risk of clogging even in the most difficult of applications. A single-cylinder Stage V diesel engine with DriveOn® technology guarantees minimal fuel consumption and long service intervals of 1500 hours.

Pump Specifications	
Type:	BA100K D193
Max. Flow:	190m ³ /hr (836 US GPM)
Max. Pressure:	22 mwc (73ft.)
Solids handling:	82mm (3,23")
Impeller Type:	Channel Impeller
Priming System:	BBA MP50
Engine:	Hatz 1D90Z DriveOn®
Emission Standard:	Stage V
Canopy:	M10-18
Connections:	4"
Sound Level:	53 dB(A) at 10m
Dry Weight:	1450kg (3190 lbs.)



BA 100K Fuel Efficiency & Stage V Engine

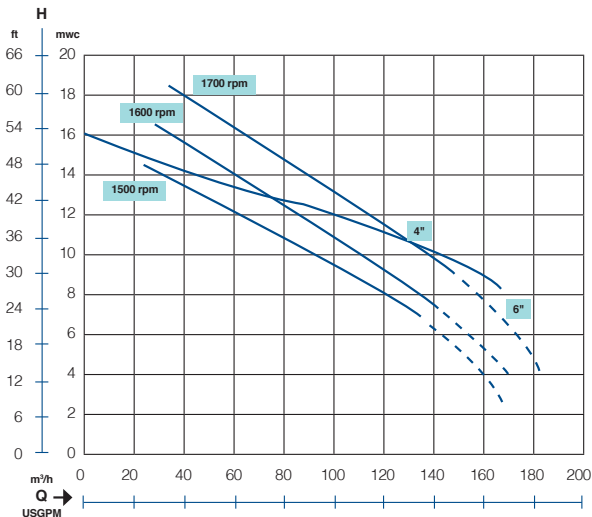
The B100K utilises a Stage V Hatz 1D90Z DriveOn® diesel engine which offers high efficiency pumping whilst minimising fuel consumption and requires 65% less maintenance. Stage V engines are 94% lower in Hydrocarbons and Nitrogen Oxides than that of the first Stage I engine introduced in 1997. The Hatz 1D90Z engine is the highest performance single-cylinder diesel engine in the world, whilst reducing the fuel consumption to 1.4 l/h at 1500RPM (BEP) meaning it's the most efficient pump in its class. Fitted with a 220L fuel tank and running at the 1500 RPM (BEP) you can expect to achieve a total running time of 157 hours per tank of fuel. Similar 4" pumps used in these types of applications use an 'average' of 4 times more fuel at their respective BEP's than the Hatz 1D90Z. The BA100K pumps up to 110 m³ per litre of fuel.

ENGINE SPEED		CAPACITY Q in m ³ /h				Fuel Consumption
RPM		40	80	120	150	(BEP) l/h
1700	H	18	15	12	8	1.8
1500	mwc	13	11	8	5	1.4
1300		10	7	4	-	1



BA 100K Performance

The BA 100K is built to be deployed in the most demanding dewatering and sewage bypassing environments. Using high efficiency pumps and market leading engines, the BA100K offers a Max. Flow of 190 m³/h and Max. Pressure of 22 MWC at minimal running costs in comparison to other pumps on the market.



With the focus of always maintaining consistent, reliable, and efficient operation, these 4" pump units feature a 100% mechanical diaphragm priming system. Capable of quickly priming and re-priming even from dry conditions. The MP50 diaphragm pump has an air handling capability of 50 m³/h (30 CFM) to achieve a max. vacuum of 8.5 meters. Exploiting the use of a diaphragm priming system eradicates the risk of oil carry over found in Vane and Venturi style primers used on other pumps in the market.

BBA 6" Diesel end suction pump

The BA 150KS 6" pump is the leading mobile pump for the strenuous contractor market. This Stage V diesel driven unit comes fitted with the highly rated and unique KS screw channel impeller which has been rigorously tested by a team of sewer specialists on various discharge projects in Holland. With a solid handling capability of 100mm the BA 150KS is perfect solution for all sewage, trash, and dewatering applications.

Pump Specifications	
Type:	BA150KS D285
Max. Flow:	490m3/hr (2150 US GPM)
Max. Pressure:	41 mwc (135ft.)
Connections:	DN150 (6")
Solids handling:	100mm (4")
Impeller Type:	Screw Channel Impeller
Priming System:	BBA MP50
Engine:	Hatz 3H50TICD
Emission Standard:	Stage V
Canopy:	M10-23X
Sound Level:	Approx. 64 dB(A) at 10m
Dry Weight:	1650kg (3630 lbs.)



BA 150KS Stage V Engine

The BA 150KS features the Hatz 3H50TICD Stage V engine. Hatz took a ground-breaking downsizing approach in the development on this engine. The outcome was an extremely compact, turbocharged, three-cylinder diesel engine which set a benchmark in performance classes - whilst maintaining the perfect balance between dynamics, quiet combustion noise, low pollutant levels, and economy.

Hatz 3H50TICD Fuel Economy

Due to a revolutionary design process the 3H50TICD has the lowest weight and consumption values of any other engine in its class. Fitted with specialist technology in fuelling and aftertreatment systems the 3H50 further reduces its carbon footprint by utilising; electronic fuel injection (EFI), diesel particulate filter (DPF), exhaust gas recirculation valve (EGR) and diesel oxidation catalyst (DOC). The results show in testing, with the BA150KS achieving 9 l/h at best efficient point (BEP) running speed, or 33 hours of running time per tank of fuel.



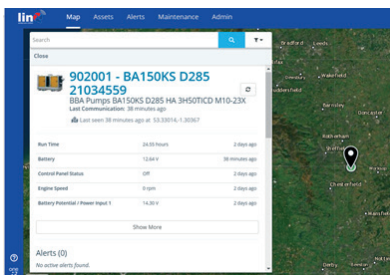
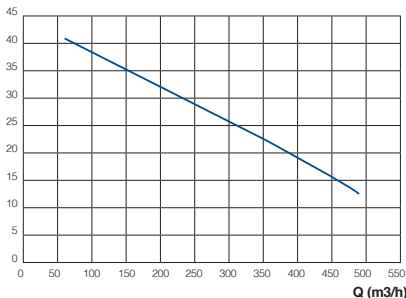
BA 150KS Performance & Features

Sewage, dewatering, and trash applications are all highly demanding environments. The BA150KS was built to handle the most challenging conditions, and this is where the KS impeller really shows its worth. Following a well-known corkscrew concept, the KS impeller can work at higher speeds, will not vibrate when a lot of air is being pumped, and will pass 100mm solids.

With the focus of always maintaining consistent, reliable, and efficient operation, these 6" pump units feature a 100% mechanical diaphragm priming system. Capable of quickly priming and re-priming even from dry conditions. The MP50 diaphragm pump has an air handling capability of 50 m³/h (30 CFM) to achieve a max. vacuum of 8.5 meters. Exploiting the use of a diaphragm priming system eradicates the risk of oil carry over found in Vane and Venturi style primers used on other pumps in the market.

Using high efficiency pumps and market leading engines, the BA150KS offers a Max. Flow of 490 m³/h and Max. Pressure of 41 MWC at minimal running costs in comparison to other pumps on the market.

H (m)





Auto Control

Auto Telemetry Control

All Hydrainer units, both hydraulic and electric, can be supplied as fully automated systems with pump start or engine stop and start facility. This can be monitored 24/7 by incorporating the Hydrainer GSM Telemetry Unit.

Basic Float Level Control System

Pear floats to activate pumps when levels rise and to shut off when levels fall.

Hydro Ranger Miltronic System

The unit features a single transducer (head) positioned above the media being pumped, sending an ultrasonic signal to the surface of the fluid. As the fluid rises the unit sends a signal to the first pump instructing it to start. Conversely as the fluid falls a signal is given to the pump to stop. Up to five pumps can be controlled by one unit.

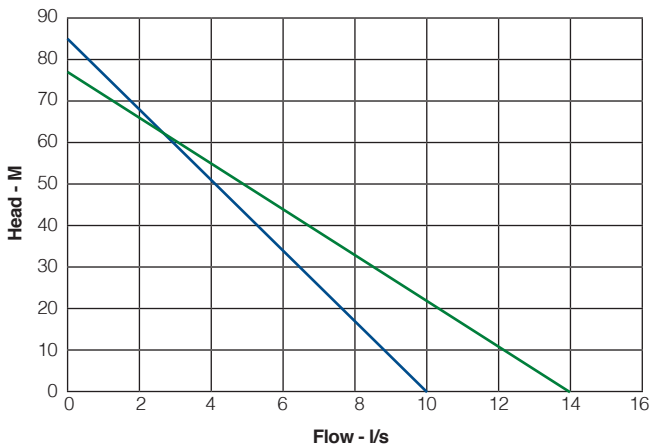


Air Diaphragm Pumps

2"

3"

Discharge size	50mm	75mm
Solids size	19mm	25mm
Weight	34kg	54kg
Height	678mm	828mm
Width Max	650mm	680mm
Max output	10l/s	14l/s
Max air inlet pressure	120 psi	120psi



For reference purposes only

Adaptors

Type	Size
Gate Valves	2" – 12"
Flanged Reducers	2" – 12"
Bauered Enlargers	2" – 12"
Y Pieces	2" – 12"
T Pieces	2" – 12"
45° Bauer Bends	2" – 12"
90° Bauer Bends	2" – 12"
Jetting Ring	





Discharge Hose

Wire Armoured

Inch	Inside Diameter	Outside Diameter	Working Pressure		Burst Pressure	
			BAR	PSI	BAR	PSI
2"	51mm	62mm	10	150	30	450
3"	76mm	89mm	10	150	30	450
4"	101mm	115mm	10	150	30	450
6"	152mm	169mm	10	150	30	450
8"	203mm	224mm	10	150	30	450
10"	254mm	275mm	10	150	30	450
12"	304mm	327mm	10	150	30	450

Flexy Hose - Green

Inch	Inside Diameter	Outside Diameter	Working Pressure		Burst Pressure	
			BAR	PSI	BAR	PSI
2"	51mm	62mm	5	72	21	304
3"	76mm	89mm	5.5	79	18	261
4"	102mm	115mm	4.5	65	14	203
6"	152mm	169mm	3	43	9	130
8"	203mm	224mm			8	116



Discharge Hose

Poly Hose

Inch	Inside Diameter	Outside Diameter	Working Pressure		Burst Pressure	
			BAR	PSI	BAR	PSI
2"	51mm	63mm	6	87	12	174
3"	76mm	90mm	6	87	12	174
4"	101mm	110mm	6	87	12	174
6"	152mm	160mm	6	87	12	174
8"	203mm	225mm	6	87	12	174

Layflat Hose

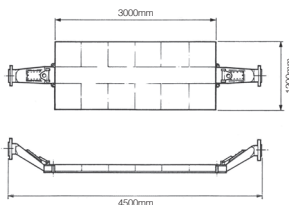
Inch	Inside Diameter	Outside Diameter	Working Pressure		Burst Pressure	
			BAR	PSI	BAR	PSI
2"	50mm	54mm	6	87	12	174
3"	75mm	79mm	6	87	12	174
4"	100mm	104mm	6	87	12	174
6"	150mm	154mm	6	87	12	174



Road Ramps

For use where pipework extends over roads or footpaths

- Box section pipework
- 650 m³/hr flows
- 720kg
- 18 ton axle weight
- Disruption reduced
- Minimal installation cost
- Road warning signs supplied
- Environmentally friendly



Settlement Tank

Hydrainer settlement tanks help reduce sediment and sludge discharge to water courses.

Accessory

Dirt box to incorporate Dirt Bag.

Capacity	4575 l
Baffles	3
Inlets	1x4"
	1x6"
Outlets	2x6"
Length	2500mm
Width	1500mm
Height	1220mm
Weight EMPTY	670kg



Silt Separator



For the reduction of sediment pollution and sludge deposits entering watercourses.

Details

- Water pumped through filtered and weir systems so sediment collects in base of tank.
- Access from bottom of unit for cleaning.
- Heavy Duty framework.
- High performance efficient filtration using bio balls media.
- Maximum input flow 70 litres per second.
- Particle filtration (subject to media pumped).
- Road warning signs supplied
- Environmentally friendly



Cleaning Benefits

- Provides efficient sediment separation.
- Can be cleaned in upright position for safer working and increasing tank life.
- Framework to protect tank.

Health & Safety

- Lifting points and tie-down points for safe transportation.
- 2.3m width with no overhang provides safe transportation
- Increased Health and Safety as no need for tipping or moving to clean.
- Drainage points reduce pressure when opening main hatch.
- Lockable cover to protect personnel from deep water.
- Baskets fitted with lifting eyes for safe removal.

Cleaning Benefits

- 2 x drain-off valves 2" – 1 in each chamber.
- 2 x 18" hatches c/w swing bolts – 1 in each chamber.
- 4 x galvanised lifting points – for use only when empty.
- 1 x 6" PN16 flange inlet and 2 x 6" PN16 flange outlets.
- Forklift pockets.
- Dimensions: 2300 x 2300 x 2600.
- 2.3m2 footprint



Mobile pH Balancing System



This system is designed for automatically reducing the alkalinity of waste water by dissolving Carbon Dioxide (CO₂) into the flow to reduce the pH to between 7 and 10, making it safe for discharge.

Advanced gas mixing technology ensures a supply of the CO₂ is mixed into the constant feed of pumped waste water offering a unique solution to the construction industry.

Intelligent control systems, supplied by Smart Storm Ltd, can vary the feed of gas so that CO₂ is only delivered when the pH deviates from the discharge control value. This means that gas is only used when the pH changes.

Technical Information	
Weight:	210kg
Length:	2500mm
Width:	1000mm
Height:	1300mm
Gas Supply:	Bottled CO2 (no dip tube)
Electrical feed:	110v
Pipe feed:	2" bauer coupling

Features and Benefits:

- Small foot print
- Mobile
- User friendly operation
- Constant treatment
- Variable gas supply
- Rugged construction
- Beacon indicators

The amount of CO2 used will be dependant on the effluent pH strength, the pH value itself, the speed of reaction and the gas pressure.

Please note that excess gas pressure will not increase the reaction



Drip Trays

Hydrainer drip trays are used to avoid the potential of oil/diesel spillages from portable plant – featuring integral oil interceptor, sight level gauge, water overflow system.

	Size 1	Size 2
Length	1800mm	2400mm
Width	1200mm	1500mm
Height	300mm	300mm
Weight DRY	174kg	220kg



Fuel Cube

Hydrainer fuel cubes are used to extend the running time between refuelling. Robust construction double bundled integrated fuel lines complete with self sealing coupling.

Fuel capacity	1000l
Length	1150mm
Width	1150mm
Height	1320mm
Weight empty	515kg
Weight full	1380kg





Friction Loss In Smooth Bore Pipes

Losses in m/100m or ft./100ft.

m ³ /h	2"	3"	4"	6"	8"	10"	12"	I.G.P.M.
10	10	1.4	0.3					40
15	20	3	0.7					55
20	35	5	1	0.1				75
30		12	2.5	0.4				110
50		18	4.5	0.6				185
75		40	10	1.2	0.4			275
100			18	2.2	0.7			370
125			28	3.5	1.1			500
150			38	4.5	1.5			600
175				6.5	2			700
200				8	2.7			800
225				10	3.4	1	0.4	900
250				13	4	1.4	0.5	1000
300				18	6	2	0.8	1200
350				26	8	3	1	1400
400				32	11	4	1.5	1600
450				36	14	4.5	2	1800
500				38	17	5	2.5	2000
650					25	9	4	2500
750					38	12	5	3000
1000						21	8	4000
1250						32	13	5000



Friction Loss In Smooth Bore Pipes

This table refers to new smooth pipes. Corrosion will increase the resistance dependant on the degree of corrosion up to 50%

Additional friction loss generated by:

	Multiplier using feet	Multiplier using metres
Mitre Elbow	5	1.5
Round bend	3	0.9
Slow bend	2	0.6
Square edged entrance	3	0.9
Gate valve fully open	2	0.6
N.R.V (flap type)	3	0.9

$\text{m}^3/\text{h} \times 3.666 = \text{Gall}/\text{min. Approx.}$





Conversions Pressure/Head

FT-WG.	PSI	BAR	Kn/m ²	M-WG
10	10	0.5	50	5
20				
30				
40	20	1	100	10
50				
60				
70	30	1.5	150	15
80				
90				
100	40	2	200	20
110				
120				
130	50	2.5	250	25
140				
150				
160	60	3	300	30
170				
180				
190	70	3.5	350	35
200				
	80	4	400	40
	90	4.5	450	45
	100	5	500	50
	110	5.5	550	55
	120	6	600	60



Metric Equivalents

Volume	
1ft ³	28.31 l
1 ton water occupies	35.9ft ³ = 1m ³
1ml	1,000,000 l
1m ³	1000 l

Pressure	
1 atmosphere	34ft/head of water = 10.5m of water
1 bar	14.5psi

Weight	
1kg	2.205lbs
1ft ³ of water	28.3kg
1lt of water	1kg

Length	
1 foot	0.3046m
1 yard	0.9114m

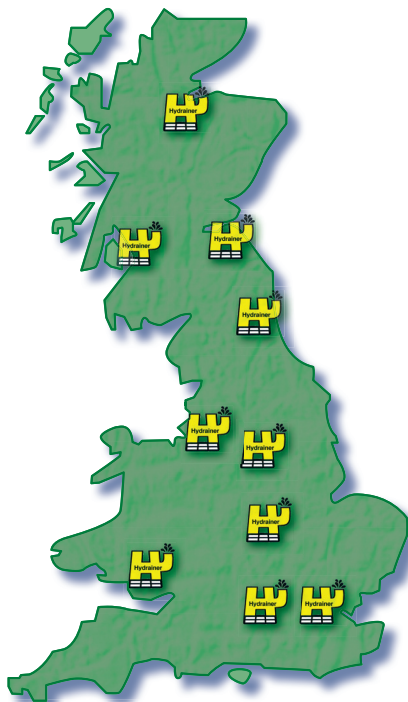
Power	
1hp	746 watts=0.746kw

Flow Rates	
1gpm	4.54 l/min = 0.076 l/sec
1ml (1,000,000/hr)	16,667 l/mil = 277.7 l/sec
1m ³ /hour	16.67 l/m = 0.278 l/sec

Weight of Water in Pipe		
Pipe Dia (ins)	lbs/ft	kg/m
4	5.40	7.93
6	7.64	11.21
8	21.70	31.86
12	48.80	71.64



Nationwide Depot Locations





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Notes





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