YARDMASTER® PRODUCT GUIDE

PUMPS | **STIRRERS** | **SEPARATORS** | **EFFLUENT MANAGEMENT**

RIGHT PUMP TROUBLE-FREE NON-CLOG DESIGN FOR THE JOB

REID & HARRISON® | Yardmaster®
Pumps & Systems

DAIRY EFFLUENT SYSTEM DESIGN ACCREDITED

DAIRY EFFLUENT WOF WARRANT OF FITNESS

Yardmaster®
PUMPS

EFFLUENT PUMPS

FOR 'PROCESSED' IRRIGATION

Multi-stage Vertical

IDEAL FOR
- Floating Frames
- High efficiency /pressure
- Green water / Small solids

Multi-stage Horizontal

IDEAL FOR
- Flood feed applications
- High efficiency /pressure
- Green water / Small solids

Self-Priming Multi-stage

IDEAL FOR
- Shore Mounting
- High efficiency /pressure
- Green water / Small solids

FOR IRRIGATION

Horizontal Pump

IDEAL FOR
- Flood feed applications
- High speed irrigation pump
- Green water with solids

Vertical Pump

IDEAL FOR
- Floating Frames
- High speed irrigation pump
- Green water with solids

Extender Pump

IDEAL FOR
- Deep Sumps
- High speed irrigation pump
- Green water with solids

Multi-Stage Pump Performance Overview

CODE	RHMS2PS110	RHMS2PS150	RHMS3PS150	RHMS3PS185	RHMS4PS185	RHMS4PS220
MOTOR SIZE (kW)	11	15	15	18.5	18.5	22
RPM	2950	2950	2950	2950	2950	2950
IMPELLER Ø (mm)	200, 162	218, 162	200, 162x2	218, 162x2	200, 162x3	218, 162x3
FLOW RANGE (L/S)	0-10.5	0-14.0	0-14.9	0-17.4	0-17.0	0-18.0
HEAD (m)	74	81	103	111	134	139

Self-Priming Multi-Stage Pump Performance Overview

CODE	RHMP2PS110	RHMP2PS150	RHMP3PS150	RHMP3PS185	RHMP4PS185	RHMP4PS220
MOTOR SIZE (kW)	11	15	15	18.5	18.5	22
RPM	2950	2950	2950	2950	2950	2950
IMPELLER Ø (mm)	215, 143	218, 162	218, 143, 143	218, 162x2	218, 143, 143, 162	218, 162, 162, 143
FLOW RANGE (L/S)	0-16.7	0-16.7	0-16.6	0-17	0-15.7	0-16.6
HEAD (m)	76	84	103	111	123	139

Irrigation Pump Performance Overview

CODE	RH5S	RH5B	RH6A	RH7	RH8	RH9	RH10
MOTOR SIZE (kW)	4	5.5	7.5	11	15	18.5	22
RPM	2900	2935	2935	2950	2950	2950	2950
IMPELLER Ø (mm)	127	145	156	178	200	210	215
FLOW RANGE (L/S)	0-8	0-8	0-13	0-7	0-7	0-7	0-9
HEAD (m)	19	28	32	46	61	69	75

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FOR VOLU ME TRANSFER

High Volume Pump

IDEAL FOR

- Volume transfer
- Green water with solids

Heavy Duty Pump

IDEAL FOR

- Volume transfer
- Liquid with solids
- Industrial applications

PTO Pump

IDEAL FOR

- Volume transfer
- Green water with solids

Trough Pump

IDEAL FOR

- Emptying of troughs
- Water with solids

FOR TRANSFER

Horizontal Pump

IDEAL FOR

- Flood feed applications
- Transfer pump
- Green water with solids

Vertical Pump

IDEAL FOR

- Floating Frames
- Transfer pump
- Green water with solids

Extender Pump

IDEAL FOR

- Deep Sumps
- Transfer pump
- Green water with solids

High Volume Pump Performance

CODE	RH4.HV3	RH6.HV4
MOTOR SIZE (kW)	4	7.5
RPM	1400	1400
FLOW RANGE (L/S)	0-20	0-40
HEAD (m)	15.5-11.5	12.9-9.5

PTO Pump Performance

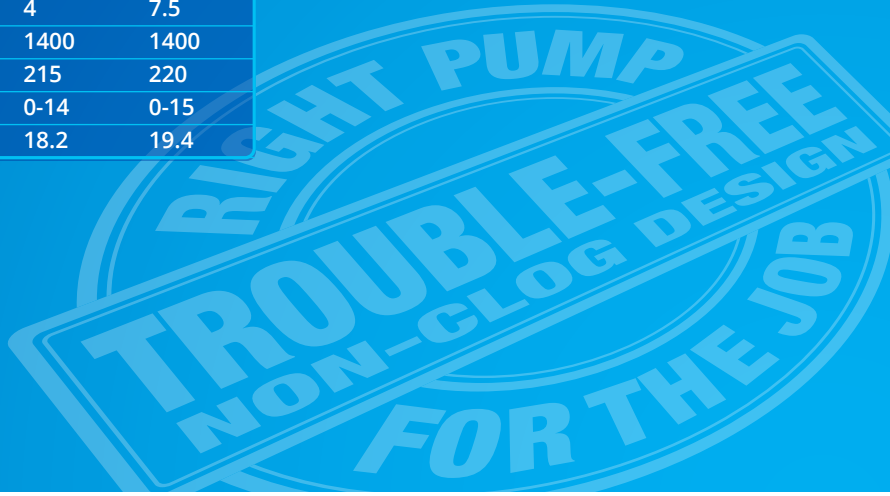
CODE	RHPTO.V	RHPTO.H
PTO RPM	540	540
IMPELLER Ø (mm)	200	200
FLOW RANGE (L/S)	0-19	0-19
HEAD (m)	64	64

Transfer Pump Performance Overview

CODE	RH1	RH2	RH3	RH4	RH6
MOTOR SIZE (kW)	0.75	1.5	2.2	4	7.5
RPM	1400	1400	1400	1400	1400
IMPELLER Ø (mm)	150	178	200	215	220
FLOW RANGE (L/S)	0-2.8	0-6.5	0-7	0-14	0-15
HEAD (m)	5	11	15.5	18.2	19.4

Trough Pump Performance

CODE	RHHYD
TRACTOR RPM (max)	1000
PRESSURE (psi)	40
IMPELLER Ø (mm)	123
FLOW (L/S)	10



Email: martin@yardmaster.co.nz

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Yardmaster®

PUMPS

Introductory
'New Product' Warranty:
this product comes with a..
2 Year Extended Manufacturer's Warranty*
* Refer to Yardmaster® Standard Warranty Terms & Conditions

EFFLUENT PUMPS

FOR 'PROCESSED' IRRIGATION

NEW

Progressive Cavity Pump

IDEAL FOR
- Constant flow
- High Efficiency
- Green water / small solids

FEATURES
- Pressure: Up to 240m Head
- Volume: Up to 55m³/hr
- Temperature Range: -10 to 100 degrees C
- Suction Lift: Up to 8.5m
- 4kW - 30kW Power options
- Six rotor speed options for each model
- Construction: Cast iron, Chrome plated rotor and Natural rubber stator

BENEFITS
- Shore Mounted Solution - Maintenance made safe
- Constant Flow - Easy to apply to any system
- Power Efficient – Lower running costs

Progressive Cavity Pump Performance Overview

CODE	PC12-040-203	PC12-055-245	PC12-055-284	PC12-075-356	PC12-075-420	PC12-075-477
MOTOR SIZE (kW)	4	5.5	5.5	7.5	7.5	7.5
ROTOR RPM	203	245	284	356	420	477
MAX HARD PARTICLE SIZE (mm)	12	12	12	12	12	12
MAX SOFT CLUMP SIZE (mm)	36	36	36	36	36	36
FLOW RANGE (L/S)	1.5-2.8	2.1-3.3	2.8-4.2	3.6-5.0	5.2-5.8	6.2-6.7
MAX HEAD (m)	120	120	120	120	100	90

CODE	PC22-055-203	PC22-075-245	PC22-110-284	PC22-110-356	PC22-110-420
MOTOR SIZE (kW)	5.5	7.5	11	11	11
ROTOR RPM	203	245	284	356	420
MAX HARD PARTICLE SIZE (mm)	14	14	14	14	14
MAX SOFT CLUMP SIZE (mm)	44	44	44	44	44
FLOW RANGE (L/S)	3.3-4.7	3.5-5.6	5.1-6.7	6.7-8.1	8.5-9.7
MAX HEAD (m)	100	120	120	120	100

CODE	PC32-110-245	PC32-110-284	PC32-150-356	PC32-150-420
MOTOR SIZE (kW)	11	11	15	15
ROTOR RPM	245	284	356	420
MAX HARD PARTICLE SIZE (mm)	13	13	13	13
MAX SOFT CLUMP SIZE (mm)	44	44	44	44
FLOW RANGE (L/S)	5.9-7.8	7.5-9.2	9.0-11.5	12.5-13.3
MAX HEAD (m)	120	110	120	100

Imported.
Assembled
& Tested in NZ

CODE	PC34-150-203	PC34-185-245	PC34-220-284	PC34-220-356	PC34-220-420
MOTOR SIZE (kW)	15	18.5	22	22	22
ROTOR RPM	203	245	284	356	420
MAX HARD PARTICLE SIZE (mm)	13	13	13	13	13
MAX SOFT CLUMP SIZE (mm)	44	44	44	44	44
FLOW RANGE (L/S)	4.5-6.6	5.8-7.5	8.3-9.2	9.7-11.4	12.3-13.6
MAX HEAD (m)	200	200	240	180	150

IMPORTED, ASSEMBLED & TESTED BY:
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Yardmaster®

PUMPS

EFFLUENT PUMPS

FOR TRANSFER

Submersible Pump

IDEAL FOR

- Feeding mechanical separators
- Transfer pump
- Green water with solids

Imported. Trialled & Tested in NZ.

Submersible Pump V Series Performance Overview

CODE	RHV080152344	RHV080152345	RHV100152348	RHV100152349	RHV100152350
MOTOR SIZE 4(kW)	2.2	3	1.7	2.2	3
RPM	1450	1450	1450	1450	1450
FREE PASSAGE (mm)	80	80	100	100	100
IMPELLER TYPE	Vortex	Vortex	Vortex	Vortex	Vortex
IMPELLER Ø (mm)	190	207	155	190	207
FLOW RANGE (L/S)	0-28	0-32	0-20	0-24	0-32
HEAD (m)	10.3-2.0	12.6-2.0	5.6-2.3	8-2.5	10.3-2.0

Submersible Pump Alpha Series Performance Overview

CODE	RHAlphaC1M/G	RHAlphaEVO2M/G	RHAlphaEVO32M/G	RHAlphaEVO55M/T	RHAlphaPRO55T	RHAlphaEVO60T
MOTOR SIZE (kW)	0.28	0.56	0.75	1.5	1.5	2.2
RPM	2850	2850	2850	2850	2850	2850
FREE PASSAGE (mm)	30	35	40	45	50	50
IMPELLER TYPE	Vortex	Vortex	Vortex	Vortex	Vortex	Vortex
IMPELLER Ø (mm)	90	96	104	120	110	125
FLOW RANGE (L/S)	0-2.5	0-4	0-8	0-9	0-10	0-11
HEAD (m)	7-1	9-2	10-2	14-2.5	14.5-2	16.5-3

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Yardmaster®

STIRRERS

STIRRERS

FOR SUMPS, PONDS OR TANKS

Vertical Stirrer

IDEAL FOR

- Floating Frame mounting or Fixed mounting
- Small tanks, sumps or ponds

Right Angle Stirrer

IDEAL FOR

- Floating Frame mounting or Fixed mounting
- Larger tanks, sumps or ponds
- Strong agitation

Shore Mounted Stirrer

IDEAL FOR

- Shore mounting
- Large ponds
- Safe access

Submersible Stirrer

IDEAL FOR

- Sumps or tanks
- Easy access when fitted with a Yardmaster lifting frame

Vertical Stirrer Performance Overview

CODE	RHST2	RHST4	RHST6
MOTOR SIZE 4P (kW)	1.5	4	7.5
PROPELLER RPM	100	100	100
PROPELLER SIZE (mm)	250	600	960
SUMP/POND SIZE (m^3)	Up to 20	20-100	100-1000

Right-Angle Stirrer Performance Overview

CODE	RHSRS4	RHSRS6	RHSRS7A
MOTOR SIZE 4P (kW)	4	7.5	11
PROPELLER RPM	300	300	300
PROPELLER SIZE (mm)	480	590	675
SUMP/POND SIZE (m^3)	Up to 500	Up to 2000	>3000

Submersible Stirrer Performance

**Available in single phase*

CODE	*RHSTST15B	RHSTS030A	RHSTS060A	RHSTS075A
MOTOR SIZE (kW)	1.5	3	6	7.5
PROPELLER RPM	350	350	350	350
PROPELLER SIZE (mm)	350	440	545	570
THRUST (N)	TBA	600	TBA	TBA
TANK SIZE (m^3)	30	Up to 800	Up to 1700	Up to 2000

Shore Mounted Stirrer Performance Overview

CODE	SHS075075	SHS075099	SHS110075	SHS110099
MOTOR SIZE (kW)	7.5	7.5	11	11
PROPELLER RPM	400	400	400	400
PROPELLER SIZE (mm)	440	440	470	470
LENGTH (m)	7.5	9.9	7.5	9.9
SUMP/POND SIZE (m^3)	Up to 3000	Up to 3000	3000-9000	3000-9000

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Yardmaster®

SEPARATORS

SEPARATORS

Inclined Screw Separator (YS)

IDEAL FOR

- Entry level separator
- Easiest installation in existing effluent systems
- Handles most duties
- May be used as primary separator

Rotary Drum Separator (RDS)

IDEAL FOR

- Low power requirements
- Moderate dry solids
- Low wear & maintenance

Static Screen Separator (SS)

IDEAL FOR

- No power
- No moving parts
- Can be used as primary separator

Centrifier™ (C)

IDEAL FOR

- Fine particles
- Secondary separator
- Minimises pond settlement

Separator Performance Overview

CODE	YS200C	YS200	YS300	RDS25	RDS60	SS30	C50
MOTOR SIZE (kW)	2.2	3	4	0.75	1.5	N/A	4
RPM	1450	1450	1450	1450	1450	N/A	1450
AUGER/DRUM RPM	29	29	29	19	15	N/A	600
SCREEN SIZE (mm)	3/4/2(s)	3/4/2(s)	3/4/2(s)	0.6-3(s)	0.6-3(s)	0.5(s)	0.025-0.25
CAPACITY (m3/hr)*	25**	30	40	30	40	20	50

* Based on <10% solids loading).
** Grass fed only.
s - Stainless steel

RIGHT SEPARATOR SUSTAINABLE CONTROL OF SOLIDS FOR THE JOB

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Yardmaster®

MANAGEMENT

HALO®

SUPERSMART | Effluent Monitoring & Control

Online HALO Dashboard - Example only

Halo Supersmart Monitoring & Control

KEY FEATURES INCLUDE:

- Enables the application of effluent at a controlled rate
- The VSD will adjust motor speed to required effluent disposal rate
- Monitor flow with auto shut-off when interrupted or compromised
- Text alerts when system stops, cause notification
- Pump run feedback with remote start/stop
- Pressure guard
- Pond level management, including freeboard alerts
- Programmable application
- Metering of applied volumes
- Manage up to six zones remotely

SIZES

11kW, 15kW, 18.5kW and 22kW VSD pump controller
All capable of running a 7.5kW DOL stirrer in tandem.

IDEAL FOR

- Flow control for varying applications
- Easy control by smart devices
- Monitored flow with auto shut off
- Environmental compliance recording

FUTURE EXPANSION

This HALO platform has the capacity to work seamlessly with our wider suite of farm management systems. Monitor milk vat storage, primary cooler efficiency, water usage, tank storage, silo level alerts, weather stations and much more.

The YARDMASTER® SUPERSMART platform can be tailored to match the requirements of your farm and you can choose from a range of additional options.

All farm data is accessible via the secure HALO Dashboard from any web-enabled device, anywhere in the world.

Operate system remotely, view system status, live data, check trend graphs, download historical information and update system settings easily from your phone, tablet or computer.

RIGHT SYSTEM SUPERSMART MONITORING & CONTROL FOR THE JOB

FARM DAIRY EFFLUENT SYSTEM DESIGN ACCREDITED

DAIRY EFFLUENT WOF WARRANT OF FITNESS

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Yardmaster®

ACCESSORIES

FRAMES & PLATFORMS

Floating Frame/ Control Arm

IDEAL FOR

- Irrigation pumps & stirrers
- Sumps and ponds

Tank Frames

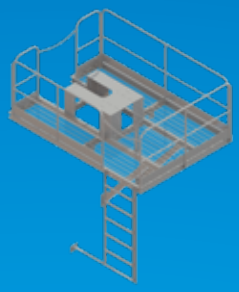
IDEAL FOR

- For covering 3.4m tanks

Submersible Stirrer and Pump Frames

IDEAL FOR

- Servicing Submersible pumps & stirrers in sumps
- Above ground tanks without affecting tank construction



Platforms

IDEAL FOR

- Positioning separators over solids bunker

FOR PUMPS

Cutter Blades

IDEAL FOR

- Yardmaster standard pumps

Inline Cutter

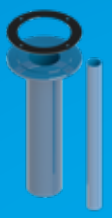
IDEAL FOR

- Eliminating blockages in multistage pumps caused by leafs & debris
- 4kW motor

Pump Covers

IDEAL FOR

- Weather protection for pump motors



Pump suction extensions

IDEAL FOR

- Yardmaster standard pumps

Automatic Greaser

IDEAL FOR

- Applying constant supply of grease over 12 month period
- Floating frame systems

Float Control Switch

IDEAL FOR

- Pump and stirrer control
- Sumps and ponds

OTHER ACCESSORIES

Headworks

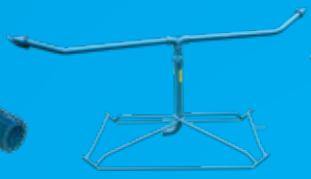
IDEAL FOR

- Mainline irrigation distribution

Pot Spray

IDEAL FOR

- Static Irrigation



Irrigator on sled

IDEAL FOR

- Static Irrigation

Yardmaster Hydrant Wash System

IDEAL FOR

- Feed pad wash down

Floating Frame Configuration

CODE	DESCRIPTION	Max Pump SIZE (Kw)		Max Vertical Stirrer SIZE (Kw)
AYPD300xx	3 Drum Frame	7.5	or	7.5
AYPD4601xx	4 Drum Single Mount Frame	18.5	or	7.5
AYPD4602xx	4 Drum Double Mount Frame	7.5	and	4
AYPD4611xx	4 Drum Right Angle Stirrer Frame			*11
AYPD6601xx	6 Drum Single Mount Frame	22	or	7.5
AYPD6602xx	6 Drum Double Mount Frame	18.5	and	7.5

*Right angle stirrer only

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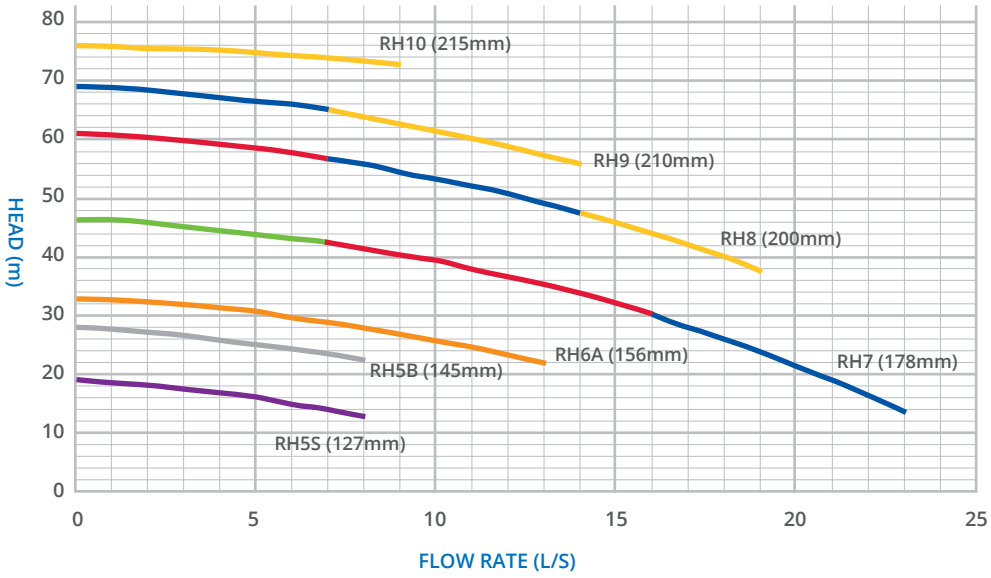
YARDMASTER® IRRIGATION PUMP PERFORMANCE CURVES

Performance Curves - TWO POLE (2800 rpm)

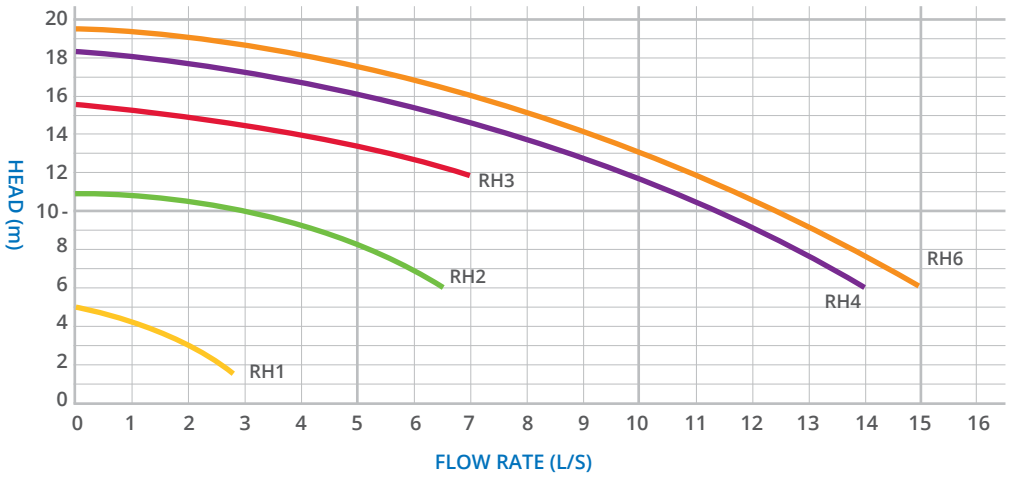


kW	HP
4	5
5.5	7.5
7.5	10
11	15
15	20
18.5	25
22	30

(Impeller Size)

YARDMASTER® TRANSFER PUMP PERFORMANCE CURVES

Performance Curves - FOUR POLE (1400 rpm)



	IMP	kW	HP
RH1	150	0.75	1
RH2	178	1.5	2
RH3	200	2.2	3
RH4	215	4	5
RH6	220	7.5	10

The performance curves stated above are those for water. When slurries, manures and effluent are to be pumped, delivery, head and power will change. Yardmaster pumps require back pressure, insufficient back pressure may cause the motor to overload. Therefore if running close to open discharge seek assistance from your Dealer or contact Reid & Harrison directly. Calculations can be made that will give details of the size of pump required for the task and specifications of performance.

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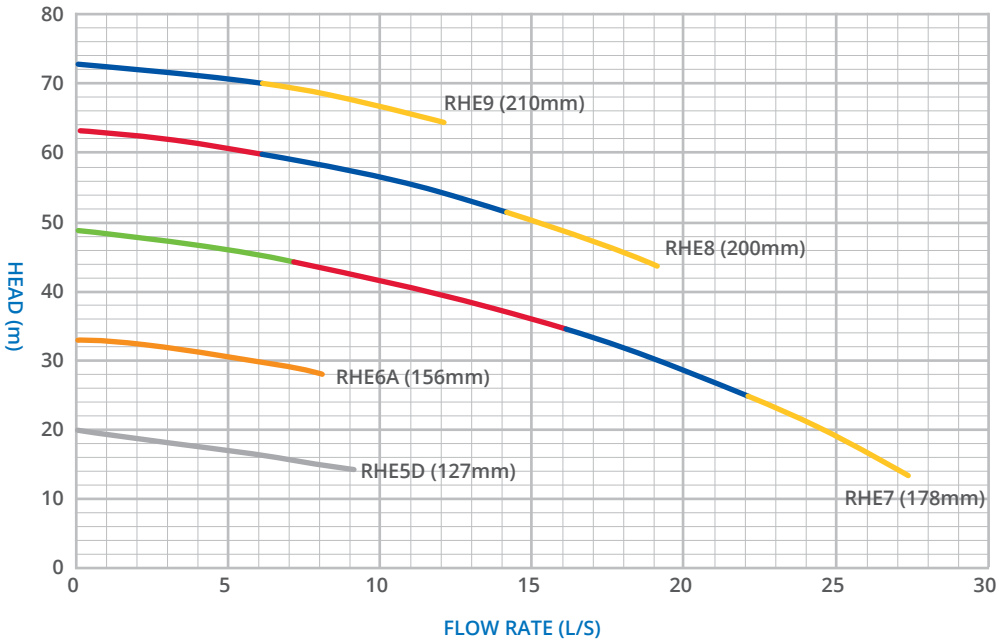
YARDMASTER® EXTENDER PUMP PERFORMANCE CURVES

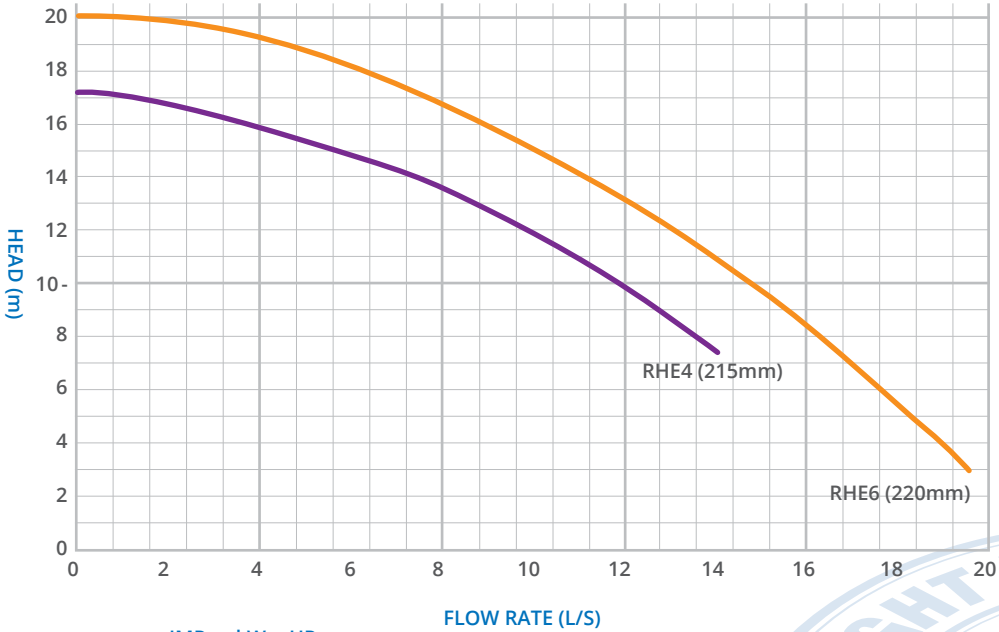
Performance Curves - TWO POLE (2800 rpm) - Irrigation Extender Pumps



kW	HP
5.5	7.5
7.5	10
11	15
15	20
18.5	25
22	30

(Impeller Size)

Performance Curves - FOUR POLE (1400 rpm)



IMP	kW	HP
215	4	5
220	7.5	10

The performance curves stated below are those for water. When slurries, manures and effluents are to be pumped, delivery, head and power will alter. For viscous liquid-solid combinations seek assistance from your agent or contact Reid & Harrison direct. Calculations can be made that will give details of the size of pump required for the task and specifications of performance.

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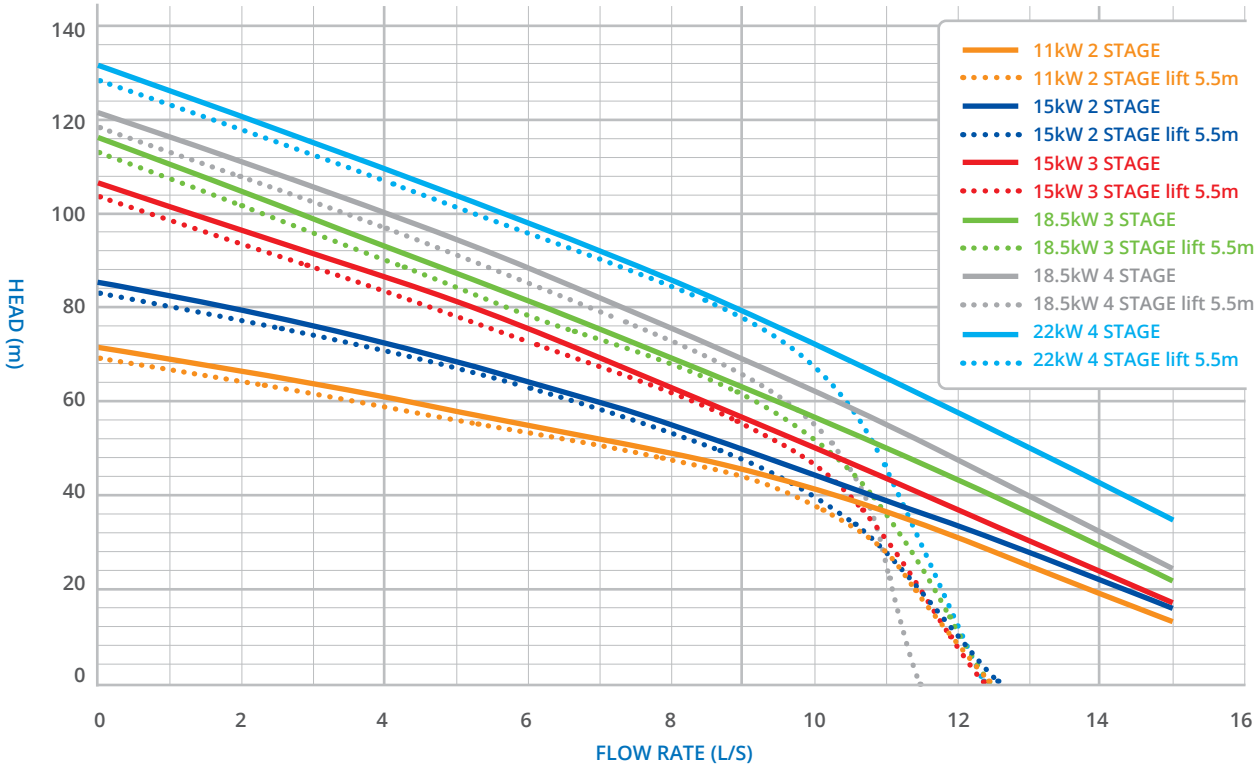
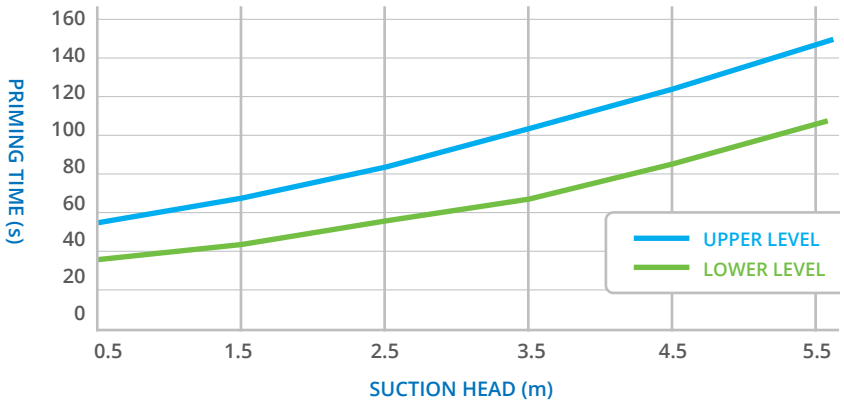
YARDMASTER®
SELF PRIMING MULTI-STAGE PERFORMANCE CURVES

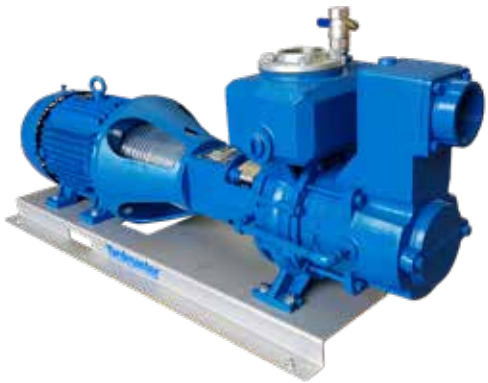
2-4 STAGES / PERFORMANCE CURVES - TWO POLE (2950 rpm)

3" x 8m SUCTION LINE USED FOR ALL TESTS



PRIMING TIME vs SUCTION LIFT - 8m SUCTION LINE





Due to continuous product development, Reid & Harrison reserve the right to change specification without notice. Performance figures are based on average test results from production pumps. Specific performance test curves can be supplied against order

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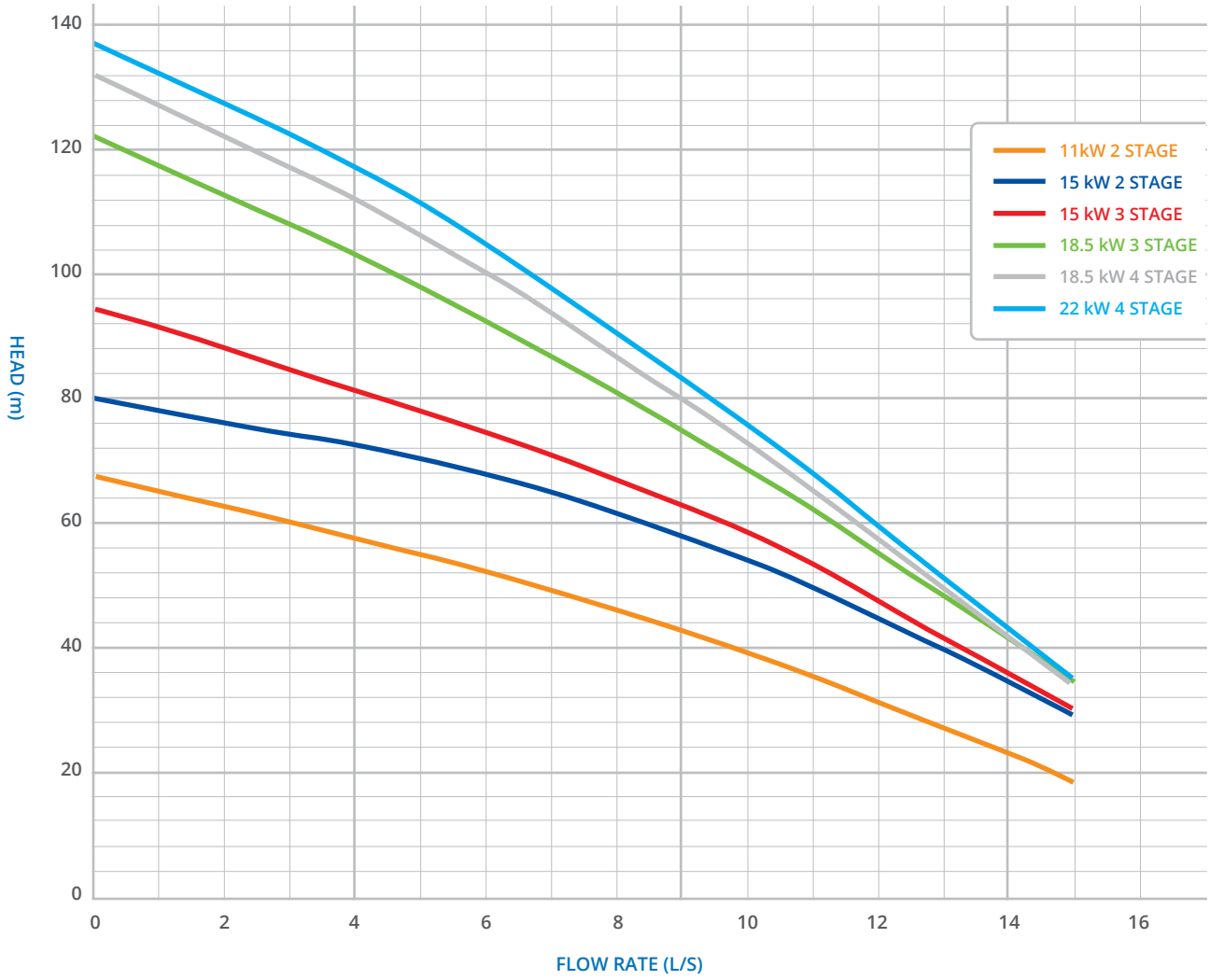
YARDMASTER®
MULTI-STAGE PUMP PERFORMANCE CURVES

1-4 STAGES / Performance Curves - TWO POLE (2800 rpm)

IMPELLERS: 1st Stages: 4v, 162 dia. Final Stage: 4v 195 dia



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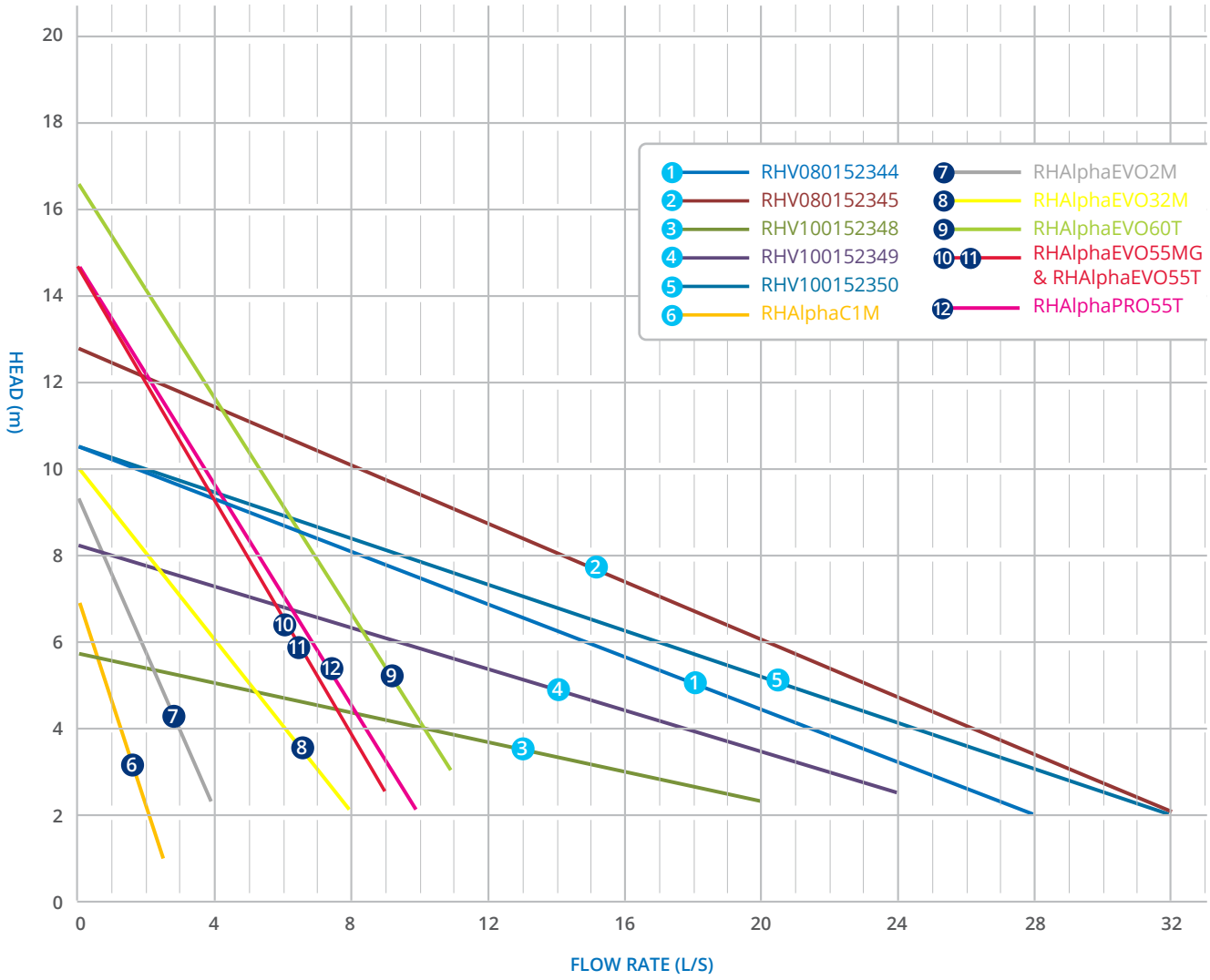
YARDMASTER®
SUBMERSIBLE PUMP
PERFORMANCE CURVES

Maximum Pump Efficiency



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RIGHT PUMP TROUBLE-FREE NON-CLOG DESIGN FOR THE JOB

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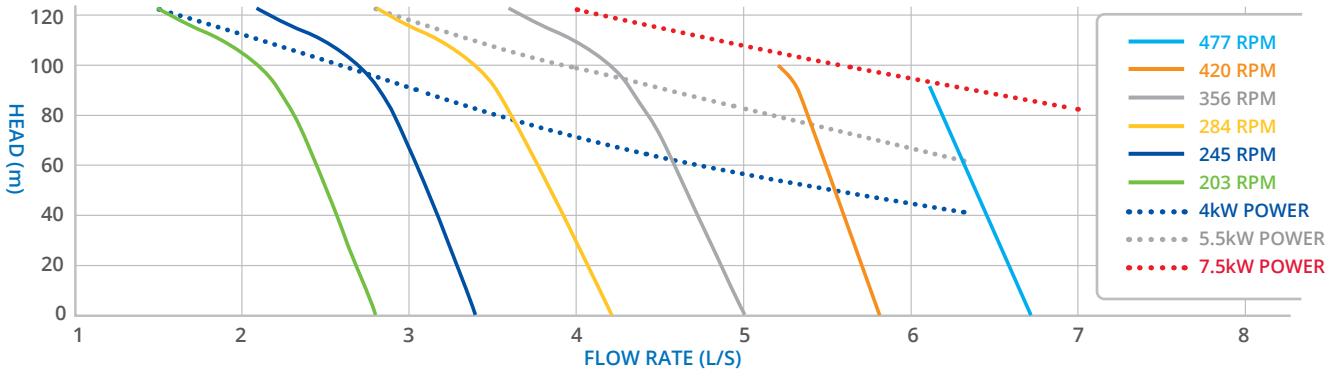
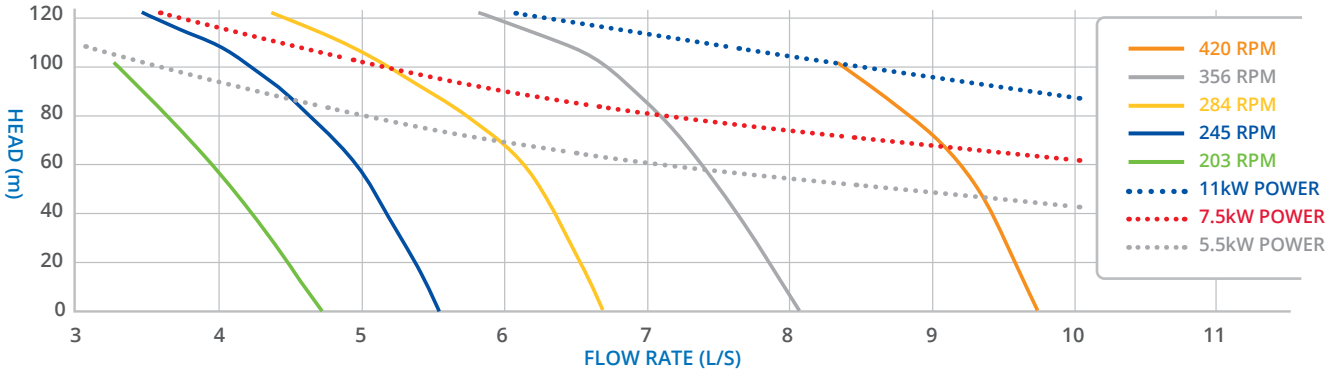
YARDMASTER®
PROGRESSIVE CAVITY PUMP PERFORMANCE CURVES

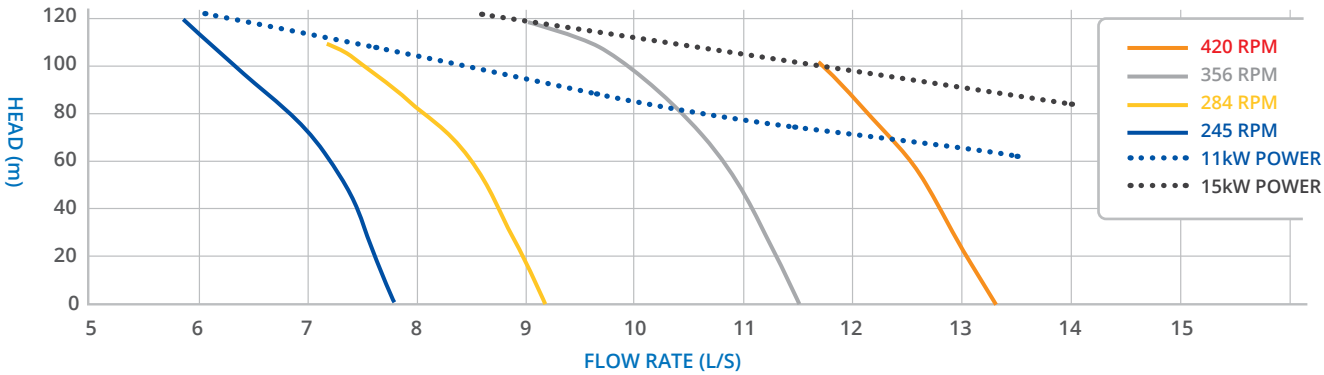
Performance Curves - PC12 PUMP



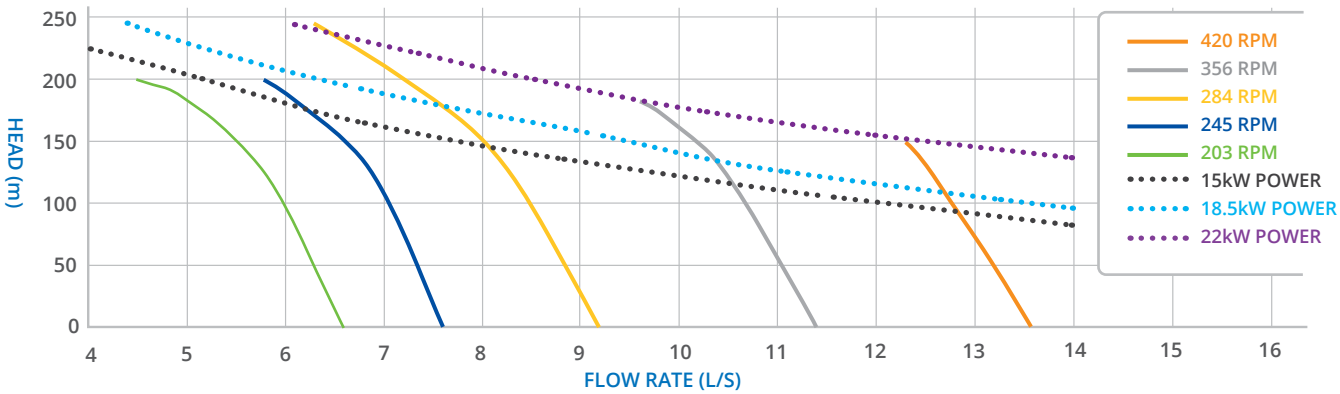
Performance Curves - PC22 PUMP



Performance Curves - PC32 PUMP



Performance Curves - PC34 PUMP



Email: martin@yardmaster.co.nz

www.yardmaster.co.nz

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DAIRY NZ - FARM DAIRY EFFLUENT SYSTEM (FDES) Design Accredited

The Farm Dairy Effluent System Design Accreditation programme provides a new way forward for Effluent System Design in NZ. The programme goal is to ensure all NZ dairy farmers have effluent systems that can achieve dairy industry and wider communities expectations for the land application of dairy effluent:

DAIRY NZ - FARM DAIRY EFFLUENT SYSTEM (FDES) WOF Certified

The Effluent W.O.F (Warrant of Fitness) programme is insightful and practical, covering the entire effluent system. We arrange a W.O.F Assessor, fully certified by Dairy NZ, to assess the health of your effluent system. A 3-4 hour assessment covers the farm's effluent consents and permitted rules, the storage capacity, nutrient loadings, soil risk, irrigator performance, off-pasture infrastructure and general health and safety requirements.

REID & HARRISON® Yardmaster®
REID & HARRISON (1980) Ltd
1 Waihou St, PO Box 254, Matamata 3440, New Zealand
Ph: 07 888 8224 Email: martin@yardmaster.co.nz
www.yardmaster.co.nz