English

MONO™ Agricultural Products

ASP - Product Manual

Section 2

	GO TO PAGE
OVERVIEW:	
Description - Motorotor	2
Applications - Motorotor	2
Features & Benefits - Motorotor	3
Description - ASP Bareshaft	4
Applications - ASP Bareshaft	4
Features & Benefits - ASP Bareshaft	5
SELECTION:	
Coding Sheets	6
Pre-Selection Curves	7
Performance Curves	8-16
Dimensions	17-21
INSTALLATION & MAINTENANCE:	
Operating & Maintenance Instructions	MPA551

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ASP Motorotor – High suction, water transfer pump

Description

The ASP Motorotor pump range replaced the range known as the AGR Motorotor.

The ASP Motorotor, developed by NOV, combines many decades of experience in agricultural water transfer with modern industrial pump design. By taking key features from the different backgrounds, NOV has developed a rugged, reliable pump to meet your water pumping needs.

The pump is available in 5 different sizes and is close coupled to either a 1450rpm (4 pole) or 960rpm (6 pole), 240V motor. The variety of pump and motor combinations available means that the ASP Motorotor range covers a wide number of agricultural water transfer applications.

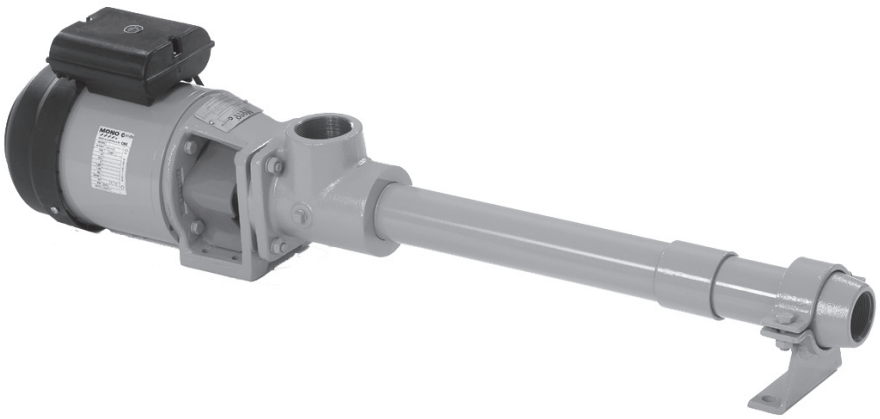
Application

The ASP Motorotor is inherently self-priming; as such it is especially suited to applications where the pump is installed above the water supply, such as when set up on riverbanks, dam walls and above shallow wells. Where a high suction lift is required, 960rpm (6 pole) motors should be used. The lower pump speed provides greater suction and subsequently the pump is less likely to cavitate.

The ASP Motorotor operates on 240V power - a 240V power supply is required.

Capable of discharge pressures up to 120m, the ASP Motorotor is suited where high pressure needs to be generated such in hilly terrain, sprinkler irrigation systems or through long pipelines.

Being a helical rotor pump, the ASP Motorotor is suitable for pumping silty water or water containing iron oxide. The pumping action, like all MONO's is continuous, non-pulsating and self cleaning.



ASP Motorotor features and benefits

Features	Benefits
• Close coupled motor & pump	• Simple design • No belts, pulleys or couplings • Easy to install • Cost effective
• Titanium Flexishaft	• Corrosion resistant • Non-wearing drive • Shortened pump length • 2 year warranty
• Stainless Steel Pump Barrel	• Corrosion resistant • Longer life • Easier to maintain
• 4 pole (1450rpm) & 6 pole (960 rpm) motors available	• Suits a wide range of flow requirements • 6 pole - 960rpm motor option provides excellent suction capability
• Mechanical seal	• No more leaking gland packing • Simple to maintain
• Industrial pump body	• Providing physical separation between the pump and motor and thus reducing possibility of water entering the motor.
• Helical rotor pump	• Highly efficient, low running cost • High discharge pressure • Excellent suction capabilities • Continuous flow output / non –pulsating • Pressure is independent of flow rate
• Hard chrome plated rotor	• Extended life • Resists abrasive wear from silty water

ASP Bareshaft – Water transfer pump

Description

The ASP bareshaft pump range replaced the range known as the AGR and the smaller sizes of the AGM range.

The ASP, developed by NOV, combines many decades of experience in agricultural water transfer with modern industrial pump design. By taking key features from the different backgrounds, NOV has developed a rugged, reliable pump to meet your water pumping needs.

The pump is available in 9 different sizes and can be supplied either as a bareshaft pump or complete on a baseplate connected to a variety of motor types. The variety of pump and motor combinations available means that the ASP range covers a wide number of agricultural water transfer applications.

Application

The ASP is an extremely versatile pump and can be used in a wide range of water pumping applications.

The ASP pump is inherently self-priming; as such it is especially suited to applications where the pump is installed above the water supply, such as when set up on riverbanks, dam walls and above shallow wells.

Capable of discharge pressures up to 240m, the ASP is suited where high pressure needs to be generated such in hilly terrain, sprinkler irrigation systems or through long pipelines.

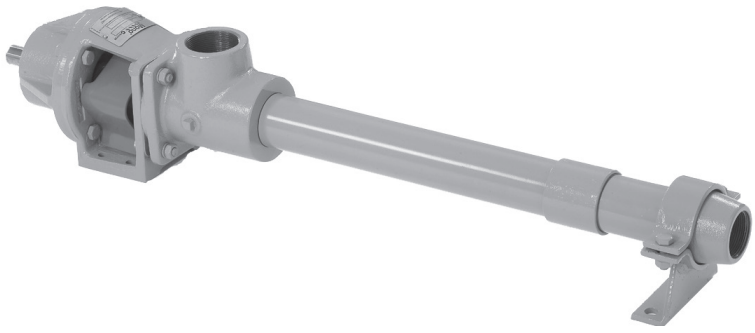
Being a helical rotor pump, the ASP is suitable for pumping silty water or water containing iron oxide. The pumping action, like all MONO style pumps is continuous, non-pulsating and self-cleaning.

ASP pumps can be supplied in the following configurations:

- Bareshaft
- Diesel
- Petrol
- Electric – 240V, 480V & 415V
- Solar (Sun-Ray range)

All motorised pump-sets are supplied complete with:

- Pump
- Motor
- Galvanised base
- Safety guard
- Belts, pulleys and clutch (if required) to suit



ASP Bareshaft features & Benefits

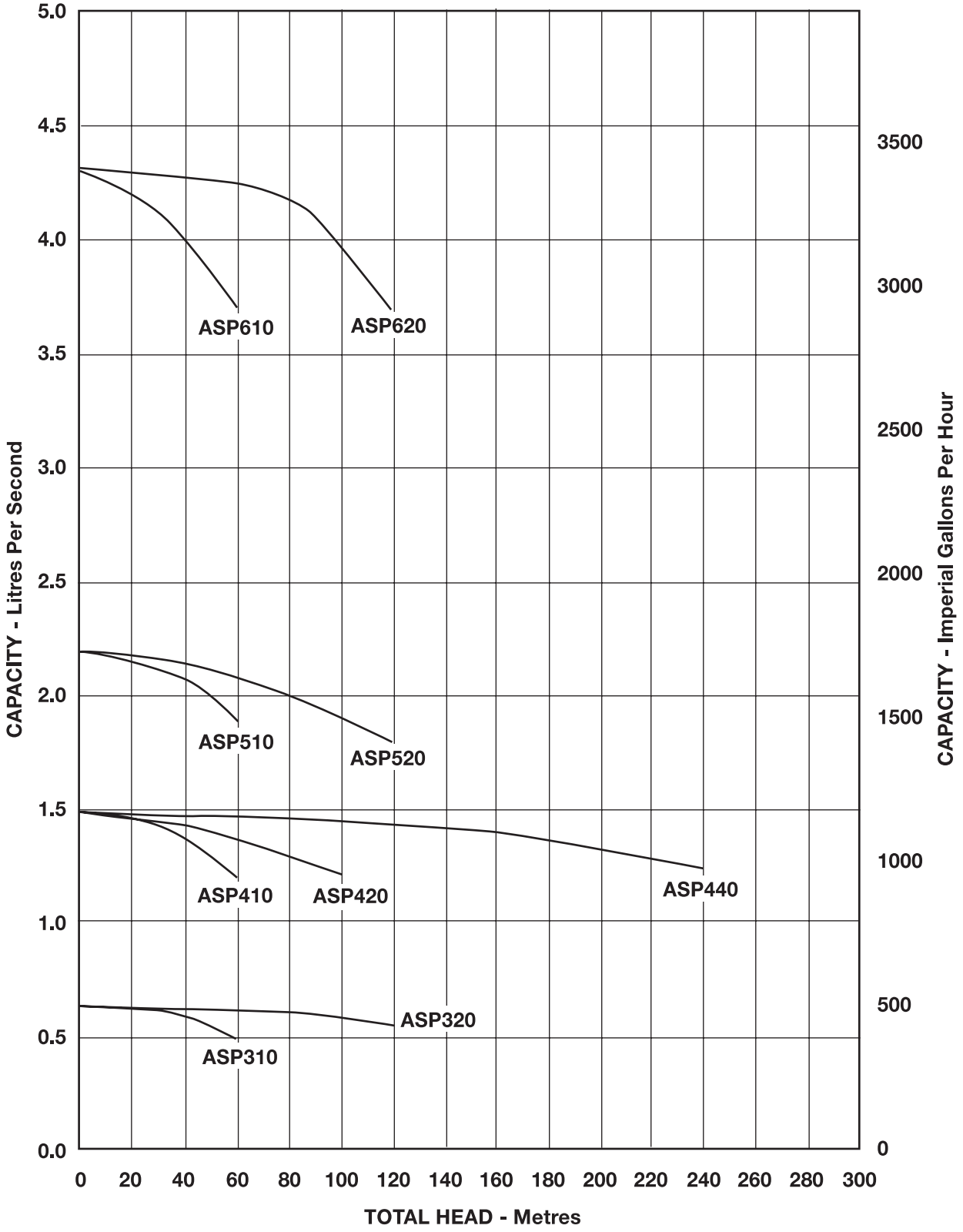
FEATURES	BENEFITS
■ Titanium Flexishaft	■ Corrosion resistant ■ Non-wearing drive ■ Shortened pump length ■ 2 year warranty
■ Stainless Steel Pump Barrel	■ Corrosion resistant ■ Longer life ■ Easier to maintain
■ Mechanical seal	■ No more leaking gland packing ■ Simple to maintain
■ Industrial pump body	■ Providing physical separation between the pump and motor and thus reducing possibility of water entering the motor.
■ Helical rotor pump	■ Highly efficient, low running costs ■ High discharge pressure ■ Excellent suction capabilities ■ Continuous flow output / non –pulsating ■ Pressure is independent of flow rate
■ Hard chrome plated rotor	■ Extended life ■ Resists abrasive wear from silty water

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NOTE:
Not all the combinations of options in this coding table are available. Please refer to the price book for specific product numbers and pricing.

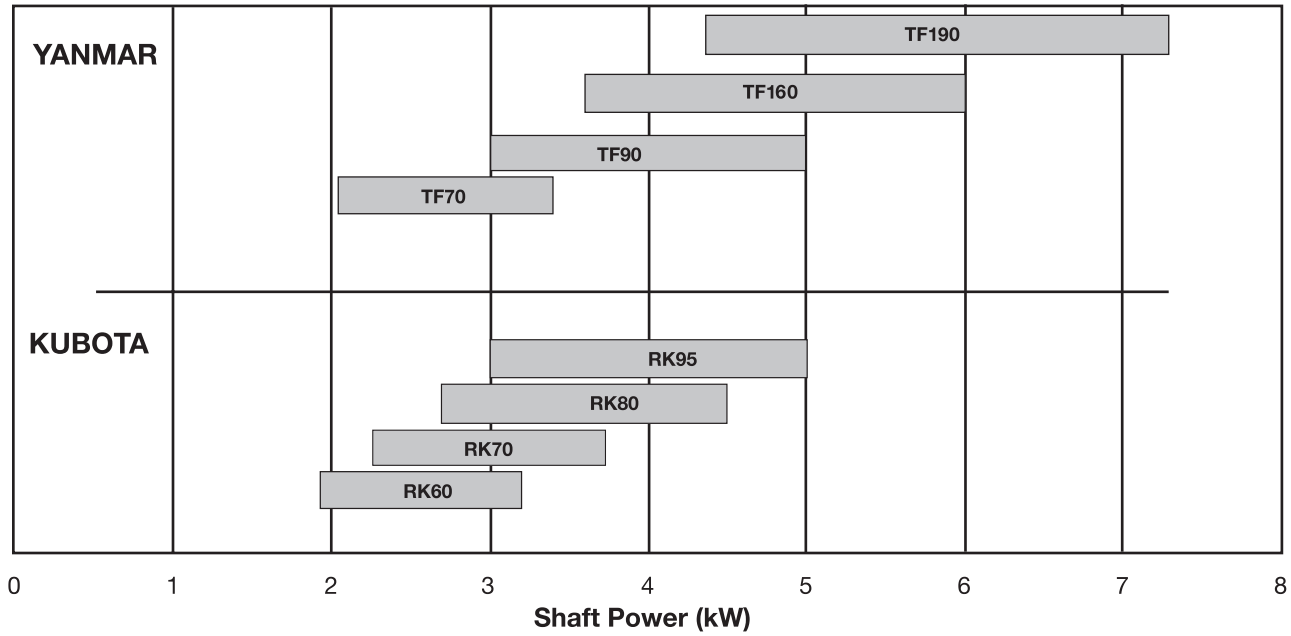
Pump Code	Maximum Pressure (Bar) (PSI)	Max Flow (lps) (GPH)	Voltage (Volts)	Speed (RPM)
ASP310MR4	6 870	0.54 427	240	1450
ASP310MR6	6 870	0.3 237	240	960
ASP320MR4	12 1740	0.575 455	240	1450
ASP320MR6	12 1740	0.28 221	240	960
ASP410MR4	6 870	1.2 950	240	1450
ASP410MR6	6 870	0.575 455	240	960
ASP420MR4	10 1450	1.15 934	240	1450
ASP520MR4	6 870	1.61 1275	240	1450

Temperature Cleared Rotors:
For a Mark 3 rotor add the suffix X3 to the system code. ContactNOV for availability and lead time on temperature cleared rotors.



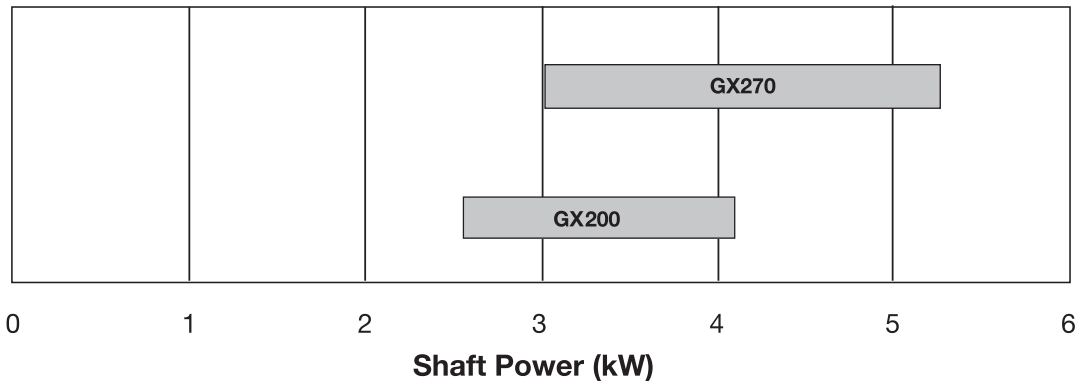
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STANDARD DIESEL MOTORS



* Shaft power is rated motor speed (**1800rpm**, except for TF60R at 1500rpm) for continuous running

HONDA PETROL MOTORS



* Shaft power is rated motor speed (**1500rpm)** for continuous running

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YANMAR DIESEL

		MOTOR SPEED		
		1500	1600	1800
PUMP SPEED	600	BKIT/1500/600Y	BKIT/1600/600Y	BKIT/1800/600Y
	800	BKIT/1500/800Y	BKIT/1600/800Y	BKIT/1800/800Y
	1000	BKIT/1500/1000Y	BKIT/1600/1000Y	BKIT/1800/1000Y
	1200	BKIT/1500/1200Y	BKIT/1600/1200Y	BKIT/1800/1200Y
	1450	BKIT/1500/1450Y	BKIT/1600/1450Y	BKIT/1800/1450Y

TF70
TF90
TF160

KUBOTA DIESEL

		MOTOR SPEED		
		1500	1600	1800
PUMP SPEED	600	BKIT/1500/600K	BKIT/1600/600K	BKIT/1800/600K
	800	BKIT/1500/800K	BKIT/1600/800K	BKIT/1800/800K
	1000	BKIT/1500/1000K	BKIT/1600/1000K	BKIT/1800/1000K
	1200	BKIT/1500/1200K	BKIT/1600/1200K	BKIT/1800/1200K
	1450	BKIT/1500/1450K	BKIT/1600/1450K	BKIT/1800/1450K

RK60
RK70
RK80
RK95

HONDA PETROL

		MOTOR SPEED
		1500
PUMP SPEED	600	BKIT/1500/600P
	800	BKIT/1500/800P
	1000	BKIT/1500/1000P
	1200	BKIT/1500/1200P
	1450	BKIT/1500/1450P

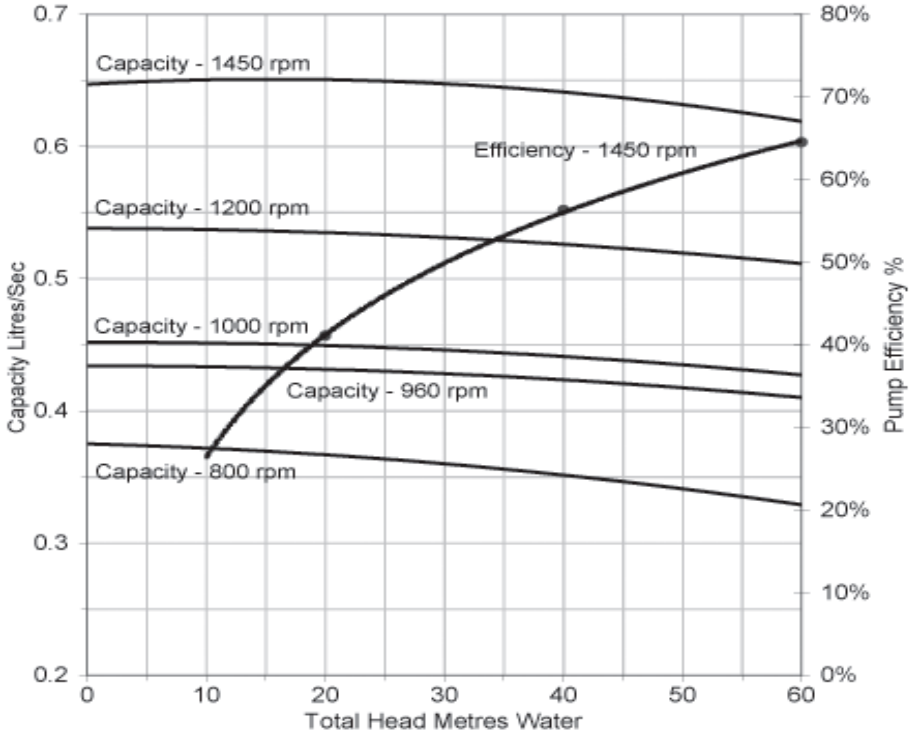
GX200
GX270

AC ELECTRIC

		MOTOR SPEED
		1450
PUMP SPEED	600	BKIT/1450/600E
	800	BKIT/1450/800E
	1000	BKIT/1450/1000E
	1200	BKIT/1450/1200E
	1450	BKIT/1450/1450E

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Bareshaft Pump Performance



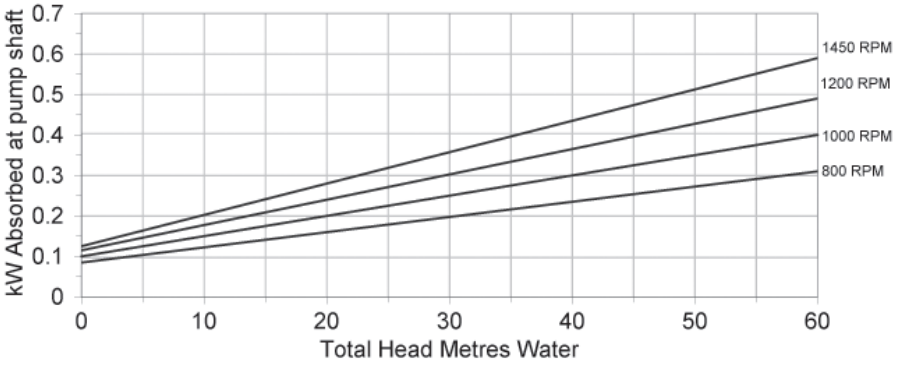
Rotor Selection
10° - 40°C Standard Rotor
41° - 70°C Mark 3 Rotor
For applications outside these temperature limits, contact NOV.

Suction Table	
RPM	Metres
1450	7.0
1200	7.5
1000	8.0
800	8.0
Figures shown are maximum suction lift at sea level at 20°C other losses due to fitting and pipe friction to be deducted for system design.	

Minimum Motor Size: 0.75kW
kW absorbed curve and figures relate to power absorbed at the pump shaft. For drive power requirements use the following multipliers.
DIESEL x 1.33 PETROL x 1.5 ELECTRIC x 1.25

Common Conversions	
1 l/sec	= 792 gal/hr
1000 gal/hr	= 75.6 l/min
10 m	= 34 ft = 14.2 psi = 98 kpa
100 ft	= 30.5 m = 43.3 psi = 298 kpa
1 hp	= 0.75kW
1 kW	= 1.34 hp

Test curve and table are typical only figures at 20°C performance may vary with temperature and field condition.



Pump Speed rpm	Capacity and Power	Total head from all causes					
		10 33ft	20 65ft	30 98ft	40 130ft	50 164ft	60 197ft
1450	Litres/Sec Gph kW abs	0.65 514 0.2	0.65 514 0.28	0.65 514 0.36	0.64 506 0.43	0.63 499 0.51	0.62 491 0.59
1200	Litres/Sec Gph kW abs	0.54 427 0.16	0.53 419 0.23	0.53 419 0.29	0.53 419 0.36	0.52 412 0.42	0.51 404 0.49
1000	Litres/Sec Gph kW abs	0.45 356 0.14	0.45 356 0.19	0.45 356 0.24	0.44 348 0.30	0.43 340 0.35	0.43 340 0.4
960	Litres/Sec Gph kW abs	0.43 342 0.13	0.43 342 0.18	0.43 342 0.23	0.42 334 0.28	0.41 327 0.33	0.41 327 0.38
800	Litres/Sec Gph kW abs	0.37 293 0.11	0.37 293 0.15	0.36 285 0.19	0.35 277 0.23	0.34 269 0.27	0.33 261 0.31

Bareshaft Pump Performance

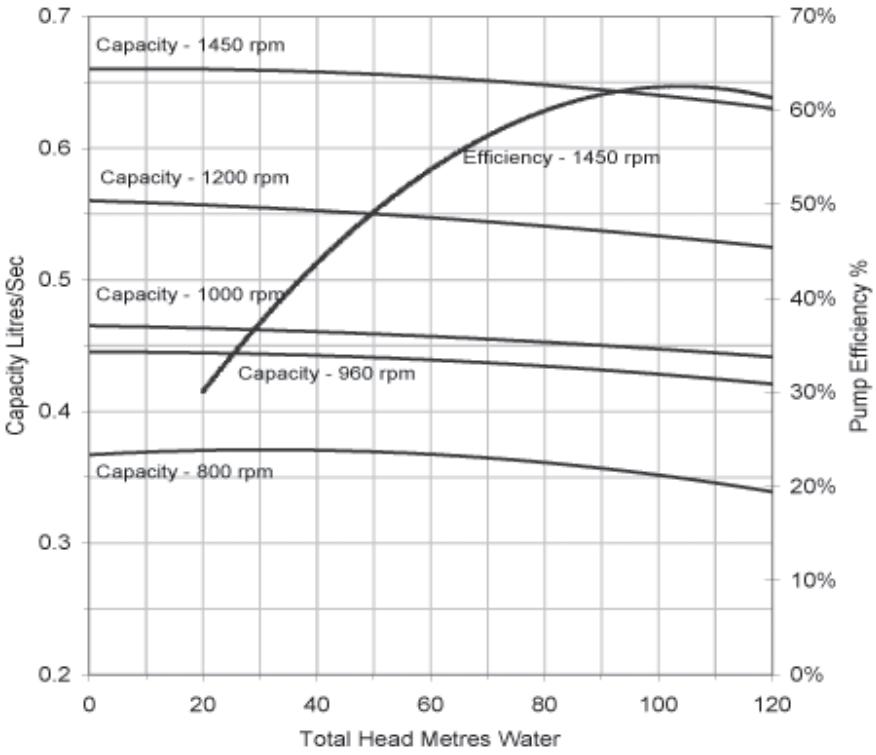
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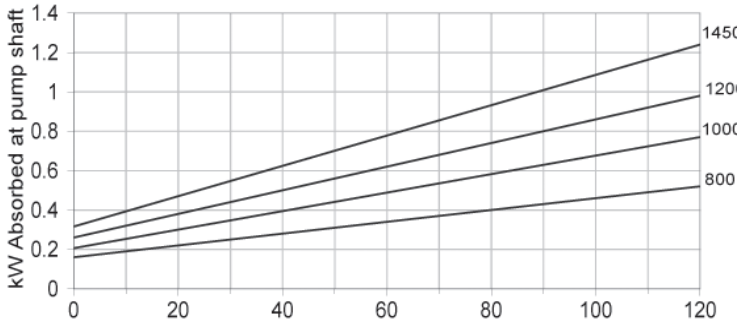
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1 hp	= 0.75kW
1 kW	= 1.34 hp

Test curve and table are typical only figures at 20°C performance may vary with temperature and field condition.





Pump Speed rpm	Capacity and Power	Total head from all causes (m)					
		20 65ft	40 130ft	60 197ft	80 262ft	100 328ft	120 393ft
1450	Litres/Sec Gph kW abs	0.66 522 0.47	0.66 522 0.62	0.65 514 0.78	0.65 514 0.93	0.64 506 1.09	0.63 499 1.24
1200	Litres/Sec Gph kW abs	0.55 435 0.38	0.55 435 0.50	0.55 435 0.62	0.54 427 0.74	0.54 427 0.86	0.52 412 0.98
1000	Litres/Sec Gph kW abs	0.46 364 0.30	0.46 364 0.39	0.46 364 0.49	0.45 356 0.58	0.45 356 0.68	0.44 348 0.77
960	Litres/Sec Gph kW abs	0.4 350 0.28	0.4 350 0.37	0.4 350 0.46	0.4 342 0.55	0.4 340 0.63	0.4 332 0.72
800	Litres/Sec Gph kW abs	0.37 293 0.22	0.37 293 0.28	0.37 293 0.34	0.36 285 0.40	0.35 277 0.46	0.34 269 0.52

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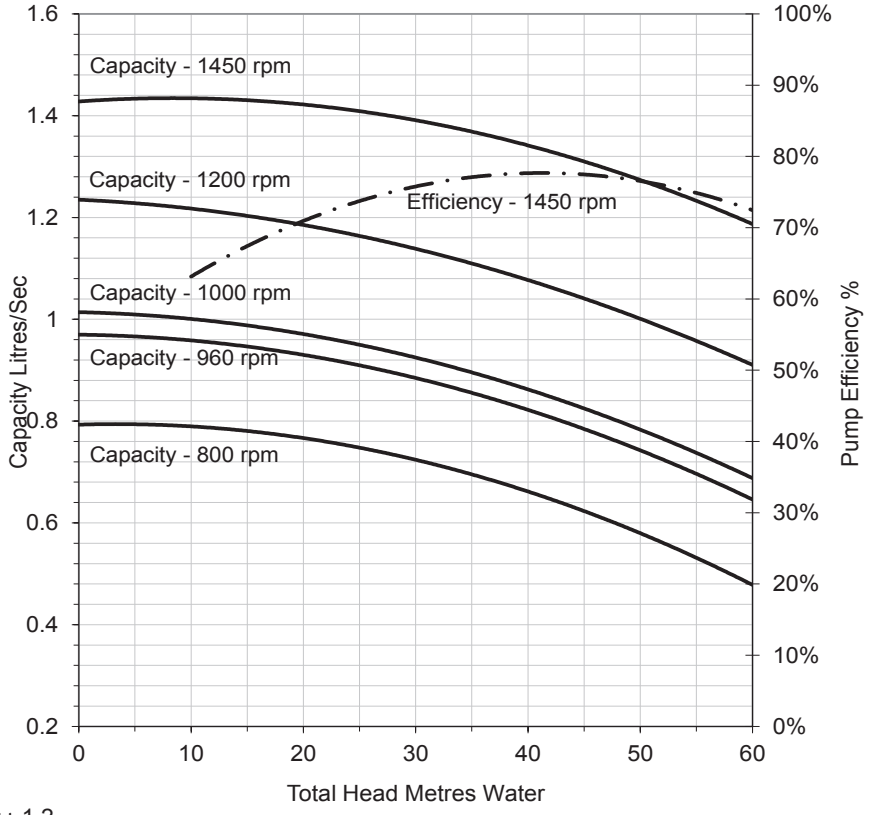
Agricultural Products

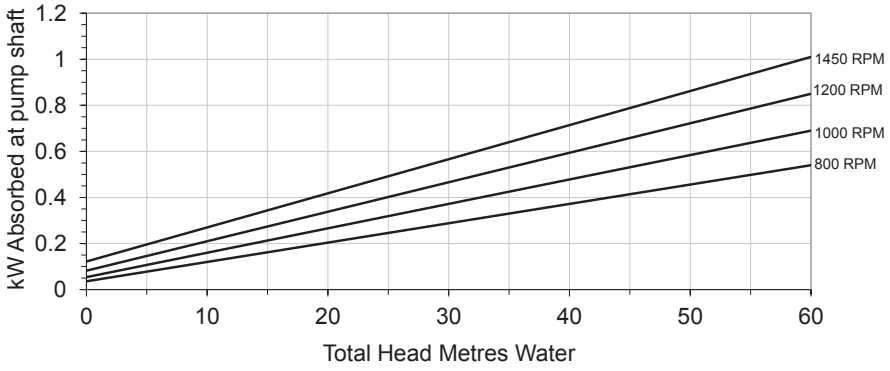
SELECTION

ASP410

Title:	ASP
Section:	2
Page:	12
Date:	January 2017

Bareshaft Pump Performance





Rotor Selection
10° - 40°C Standard Rotor
41° - 70°C Mark 3 Rotor
For applications outside these temperature limits, contactNOV.

Suction Table	
RPM	Metres
1450	6.4
1200	7.1
1000	7.4
800	7.5
Figures shown are maximum suction lift at sea level at 20°C other losses due to fitting and pipe friction to be deducted for system design.	

Minimum Motor Size: 0.75kW
kW absorbed curve and figures relate to power absorbed at the pump shaft. For drive power requirements use the following multipliers.
DIESEL x 1.33 PETROL x 1.5 ELECTRIC x 1.25

Common Conversions	
1 l/sec	= 792 gal/hr
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10 m	= 34 ft = 14.2 psi = 98 kpa
100 ft	= 30.5 m = 43.3 psi = 298 kpa
1 hp	= 0.75kw
1 kW	= 1.34 hp

Test curve and table are typical only figures at 20°C performance may vary with temperature and field condition.

Pump Speed rpm	Capacity and Power	Total head from all causes					
		10 33ft	20 65ft	30 98ft	40 130ft	50 164ft	60 197ft
1450	Litres/Sec Gph kW abs	1.43 1132 0.27	1.43 1132 0.42	1.39 1100 0.57	1.34 1060 0.71	1.27 1005 0.86	1.19 942 1.01
1200	Litres/Sec Gph kW abs	1.22 966 0.21	1.18 934 0.34	1.14 902 0.47	1.08 855 0.59	1.0 791 0.72	0.91 720 0.85
1000	Litres/Sec Gph kW abs	1.0 791 0.16	0.97 768 0.27	0.93 736 0.37	0.86 681 0.48	0.78 617 0.58	0.69 546 0.69
960	Litres/Sec Gph kW abs	1.0 760 0.15	0.9 733 0.25	0.9 704 0.36	0.8 646 0.46	0.7 592 0.56	0.6 510 0.66
800	Litres/Sec Gph kW abs	0.8 633 0.12	0.75 594 0.20	0.73 578 0.29	0.64 506 0.37	0.62 491 0.46	0.46 364 0.54

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Bareshaft Pump Performance

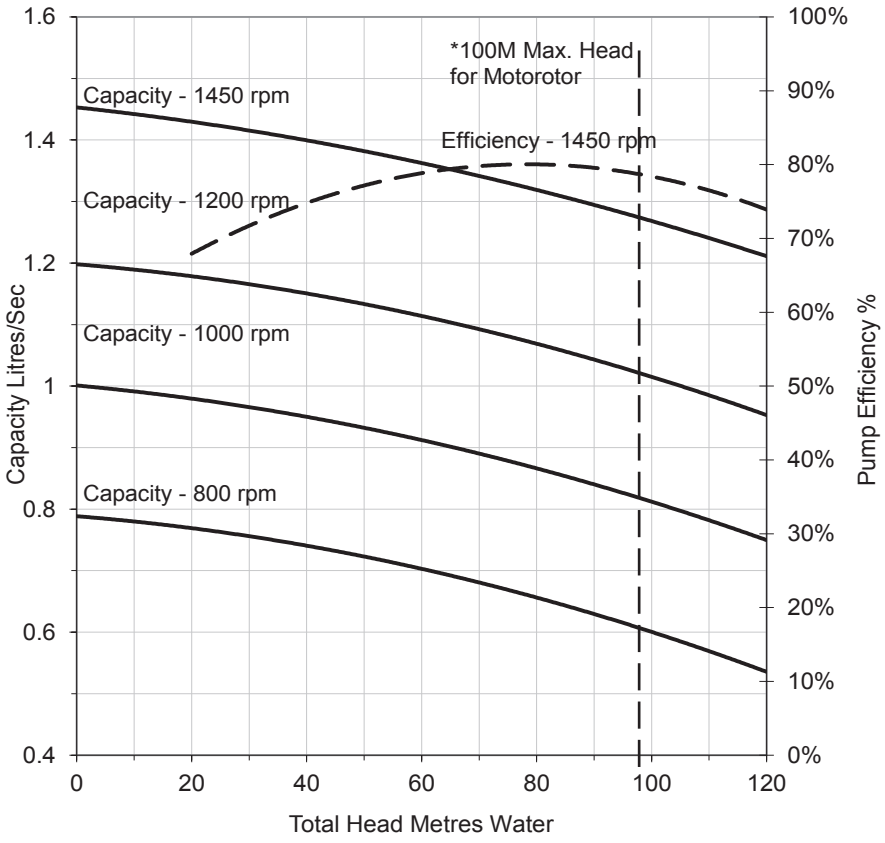
Rotor Selection
10° - 40°C Standard Rotor
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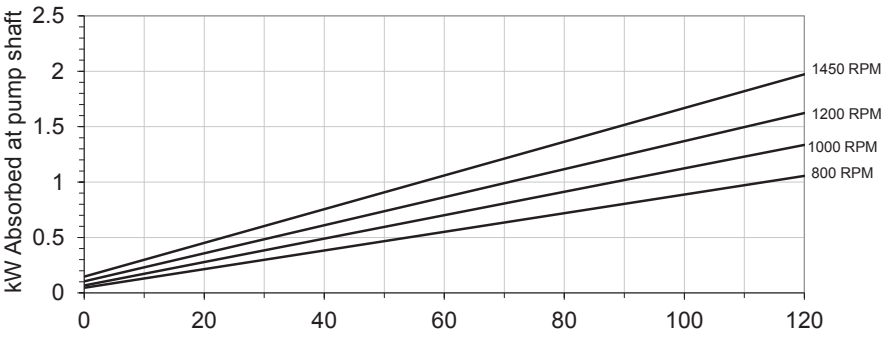
Suction Table	
RPM	Metres
1450	6.4
1200	7.1
1000	7.4
800	7.6
Figures shown are maximum suction lift at sea level at 20°C other losses due to fitting and pipe friction to be deducted for system design.	

Minimum Motor Size: 1.1kW
kW absorbed curve and figures relate to power absorbed at the pump shaft. For drive power requirements use the following multipliers.
DIESEL x 1.33 PETROL x 1.5 ELECTRIC x 1.25

Common Conversions	
1 l/sec	= 792 gal/hr
1000 gal/hr	= 75.6 l/min
10 m	= 34 ft = 14.2 psi = 98 kpa
100 ft	= 30.5 m = 43.3 psi = 298 kpa
1 hp	= 0.75kW
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Test curve and table are typical only figures at 20°C performance may vary with temperature and field condition.

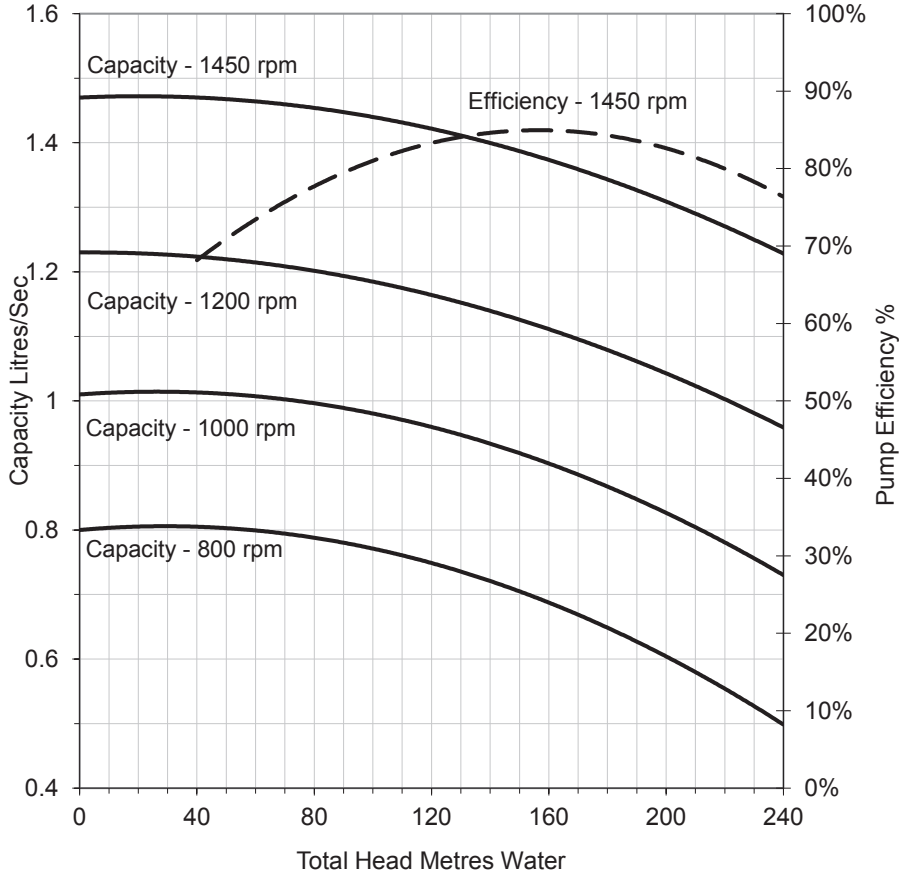


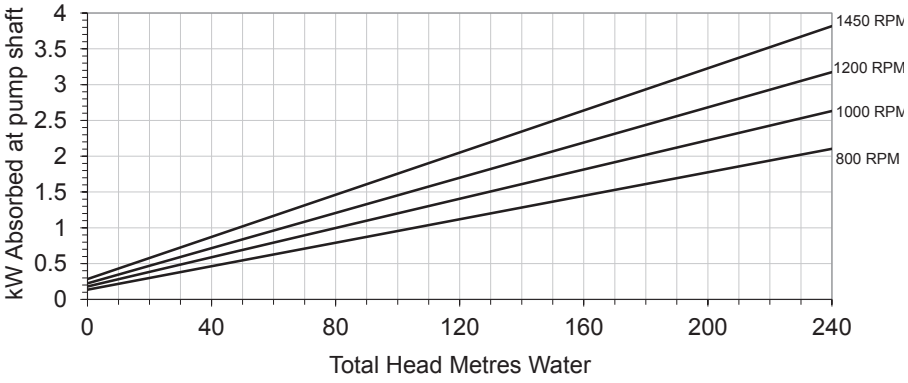


Pump Speed rpm	Capacity and Power	Total head from all causes					
		20 65ft	40 130ft	60 197ft	80 262ft	100 328ft	120 393ft
1450	Litres/Sec Gph kW abs	1.43 1132 0.46	1.4 1108 0.74	1.36 1076 1.06	1.32 1045 1.37	1.27 1005 1.67	1.21 958 1.97
1200	Litres/Sec Gph kW abs	1.18 934 0.36	1.15 910 0.6	1.11 878 0.87	1.07 847 1.12	1.02 807 1.37	0.95 752 1.62
1000	Litres/Sec Gph kW abs	0.98 776 0.28	0.95 752 0.49	0.91 720 0.7	0.87 689 0.91	0.81 641 1.12	0.75 594 1.34
800	Litres/Sec Gph kW abs	0.77 609 0.22	0.74 586 0.38	0.7 554 0.55	0.66 522 0.71	0.6 475 0.89	0.535 423 1.06

MONO™ Agricultural Products	SELECTION ASP440	Title: ASP Section: 2 Page: 14 Date: January 2017

Bareshaft Pump Performance





Rotor Selection
10° - 40°C Standard Rotor
41° - 70°C Mark 3 Rotor
For applications outside these temperature limits, contactNOV.

Suction Table	
RPM	Metres
1450	6.4
1200	7.1
1000	7.4
800	7.6
Figures shown are maximum suction lift at sea level at 20°C other losses due to fitting and pipe friction to be deducted for system design.	

Minimum Motor Size: 1.5kW
kW absorbed curve and figures relate to power absorbed at the pump shaft. For drive power requirements use the following multipliers.
DIESEL x 1.33 PETROL x 1.5 ELECTRIC x 1.25

Common Conversions	
1 l/sec	= 792 gal/hr
1000 gal/hr	= 75.6 l/min
10 m	= 34 ft = 14.2 psi = 98 kpa
100 ft	= 30.5 m = 43.3 psi = 298 kpa
1 hp	= 0.75kW
1 kW	= 1.34 hp

Test curve and table are typical only figures at 20°C performance may vary with temperature and field condition.

Pump Speed rpm	Capacity and Power	Total head from all causes					
		40 130ft	80 262ft	120 393ft	160 528ft	200 660ft	240 792ft
1450	Litres/Sec Gph kW abs	1.46 1155 0.88	1.45 1148 1.47	1.43 1132 2.05	1.38 1092 2.6	1.3 1029 3.24	1.23 973 3.83
1200	Litres/Sec Gph kW abs	1.21 958 0.73	1.19 942 1.2	1.17 926 1.7	1.12 886 2.17	1.05 831 2.68	0.95 752 3.19
1000	Litres/Sec Gph kW abs	1.0 791 0.59	0.99 783 1.01	0.97 768 1.4	0.91 720 1.8	0.82 649 2.21	0.73 578 2.65
800	Litres/Sec Gph kW abs	0.8 633 0.47	0.79 625 0.8	0.75 594 1.1	0.69 546 1.44	0.6 475 1.78	0.5 396 2.11

Bareshaft Pump Performance

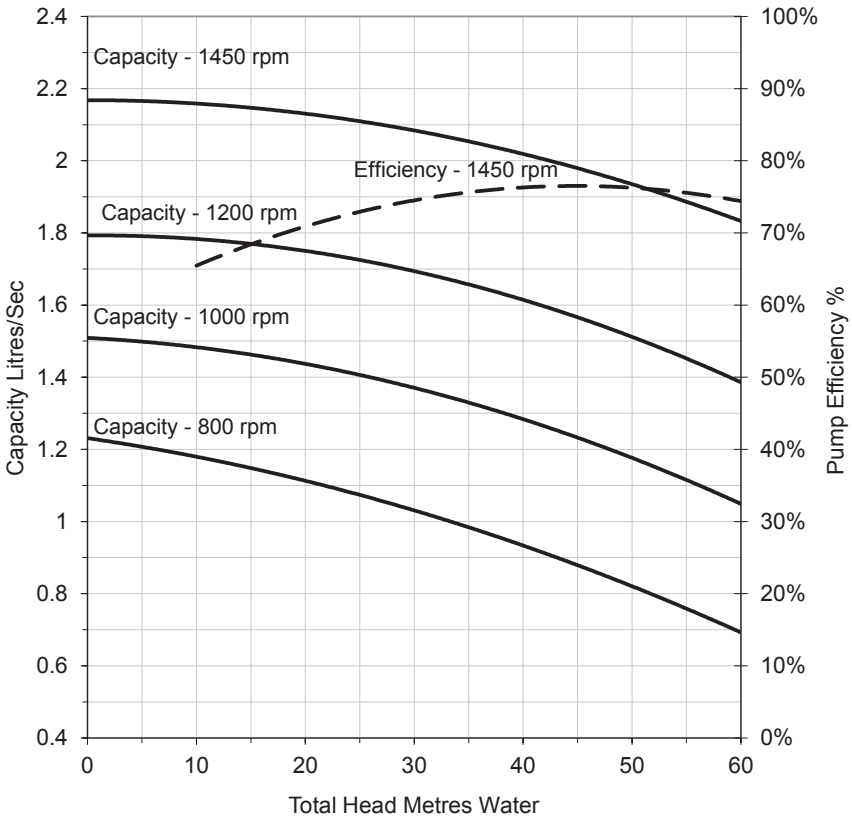
Rotor Selection
10° - 40°C Standard Rotor
41° - 70°C Mark 3 Rotor
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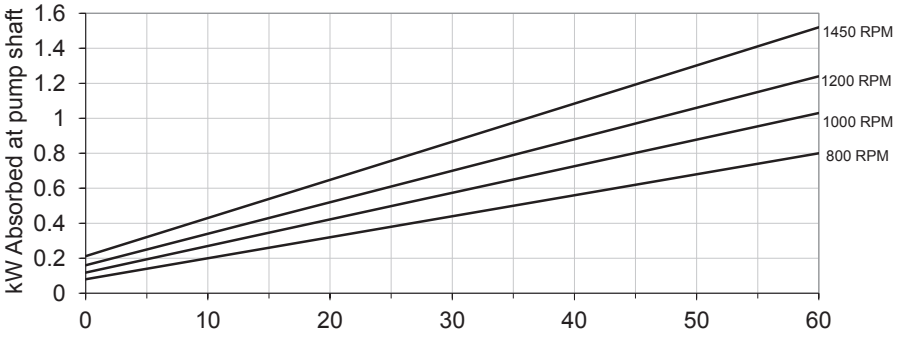
Suction Table	
RPM	Metres
1450	6.5
1200	7.0
1000	7.5
800	8.0
Figures shown are maximum suction lift at sea level at 20°C other losses due to fitting and pipe friction to be deducted for system design.	

Minimum Motor Size: 1.1kW
kW absorbed curve and figures relate to power absorbed at the pump shaft. For drive power requirements use the following multipliers.
DIESEL x 1.33 PETROL x 1.5 ELECTRIC x 1.25

Common Conversions	
1 l/sec	= 792 gal/hr
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1 hp	= 0.75kW
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Test curve and table are typical only figures at 20°C performance may vary with temperature and field condition.





Pump Speed rpm	Capacity and Power	Total head from all causes (m)					
		10 33ft	20 65ft	30 98ft	40 130ft	50 164ft	60 197ft
1450	Litres/Sec Gph kW abs	2.15 1702 0.43	2.14 1694 0.65	2.1 1662 0.87	2.0 1583 1.08	1.93 1527 1.30	1.84 1456 1.52
1200	Litres/Sec Gph kW abs	1.78 1409 0.34	1.76 1393 0.52	1.68 1330 0.70	1.63 1290 0.88	1.5 1187 1.06	1.39 1100 1.24
1000	Litres/Sec Gph kW abs	1.48 1171 0.27	1.44 1140 0.42	1.37 1084 0.57	1.3 1029 0.73	1.15 910 0.88	1.06 839 1.03
800	Litres/Sec Gph kW abs	1.17 926 0.2	1.14 902 0.32	1.0 791 0.44	0.96 760 0.56	0.8 633 0.68	0.7 554 0.8

Bareshaft Pump Performance

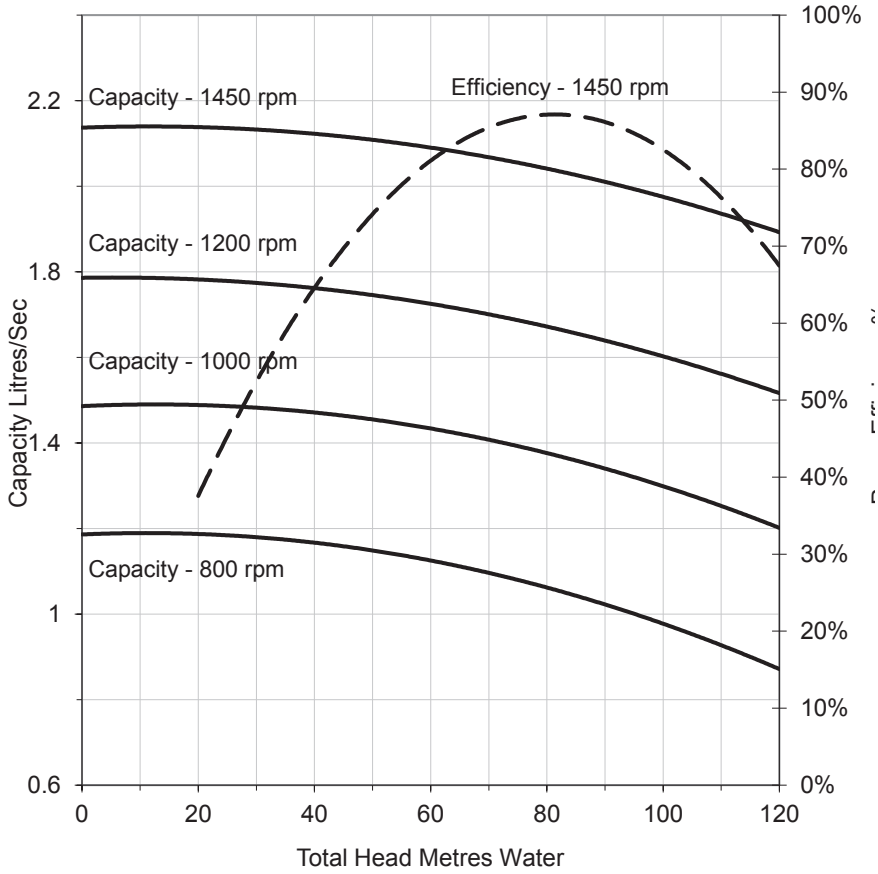
Rotor Selection
10° - 40°C Standard Rotor
41° - 70°C Mark 3 Rotor
For applications outside these temperature limits, contactNOV.

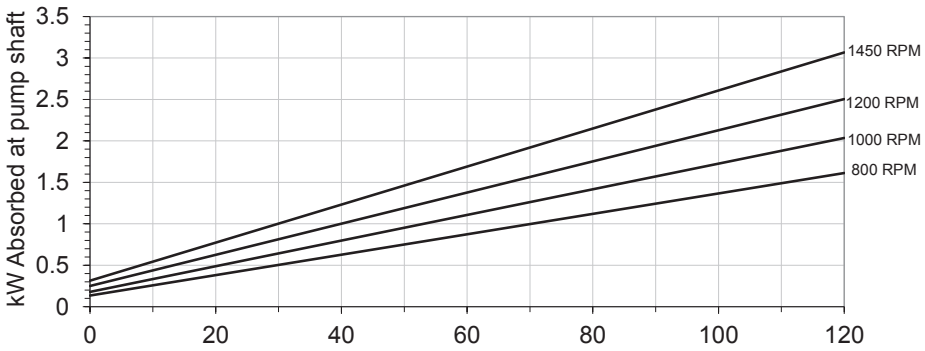
Suction Table	
RPM	Metres
1450	6.5
1200	7.0
1000	7.5
800	8.0
Figures shown are maximum suction lift at sea level at 20°C other losses due to fitting and pipe friction to be deducted for system design.	

Minimum Motor Size: 1.5kW
kW absorbed curve and figures relate to power absorbed at the pump shaft. For drive power requirements use the following multipliers.
DIESEL x 1.33 PETROL x 1.5 ELECTRIC x 1.25

Common Conversions	
1 l/sec	= 792 gal/hr
1000 gal/hr	= 75.6 l/min
10 m	= 34 ft = 14.2 psi = 98 kpa
100 ft	= 30.5 m = 43.3 psi = 298 kpa
1 hp	= 0.75kW
1 kW	= 1.34 hp

Test curve and table are typical only figures at 20°C performance may vary with temperature and field condition.





Pump Speed rpm	Capacity and Power	Total head from all causes (m)					
		20 65ft	40 130ft	60 197ft	80 262ft	100 328ft	120 393ft
1450	Litres/Sec Gph kW abs	2.14 1694 0.77	2.12 1678 1.23	2.09 1654 1.7	2.04 1614 2.15	1.98 1567 2.6	1.89 1496 3.07
1200	Litres/Sec Gph kW abs	1.79 1417 0.62	1.75 1385 1.01	1.72 1361 1.37	1.68 1330 1.76	1.61 1274 2.13	1.51 1195 2.5
1000	Litres/Sec Gph kW abs	1.49 1179 0.49	1.47 1163 0.8	1.43 1132 1.11	1.38 1092 1.4	1.3 1029 1.73	1.2 950 2.04
800	Litres/Sec Gph kW abs	1.19 942 0.39	1.16 918 0.63	1.13 894 0.87	1.06 839 1.1	0.98 776 1.36	0.87 689 1.63

MONO™ Agricultural Products	SELECTION ASP610	Title: ASP Section: 2 Page: 17 Date: January 2017

Bareshaft Pump Performance

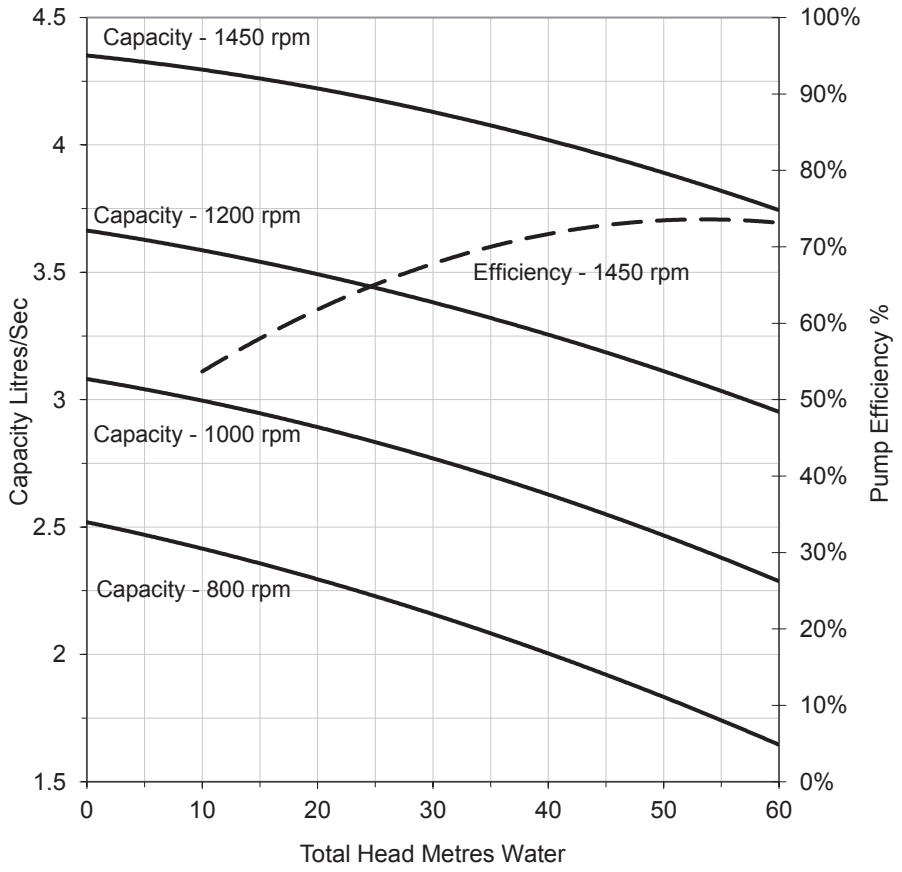
Rotor Selection
10° - 40°C Standard Rotor
41° - 70°C Mark 3 Rotor
For applications outside these temperature limits, contactNOV.

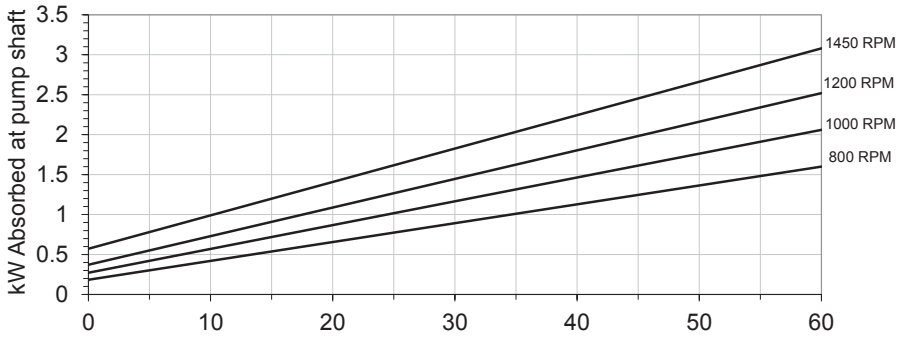
Suction Table	
RPM	Metres
1450	4.3
1200	6.0
1000	7.0
800	7.5
Figures shown are maximum suction lift at sea level at 20°C other losses due to fitting and pipe friction to be deducted for system design.	

Minimum Motor Size: 1.5kW
kW absorbed curve and figures relate to power absorbed at the pump shaft. For drive power requirements use the following multipliers.
DIESEL x 1.33 PETROL x 1.5 ELECTRIC x 1.25

Common Conversions	
1 l/sec	= 792 gal/hr
1000 gal/hr	= 75.6 l/min
10 m	= 34 ft = 14.2 psi = 98 kpa
100 ft	= 30.5 m = 43.3 psi = 298 kpa
1 hp	= 0.75kW
1 kW	= 1.34 hp

Test curve and table are typical only figures at 20°C performance may vary with temperature and field condition.



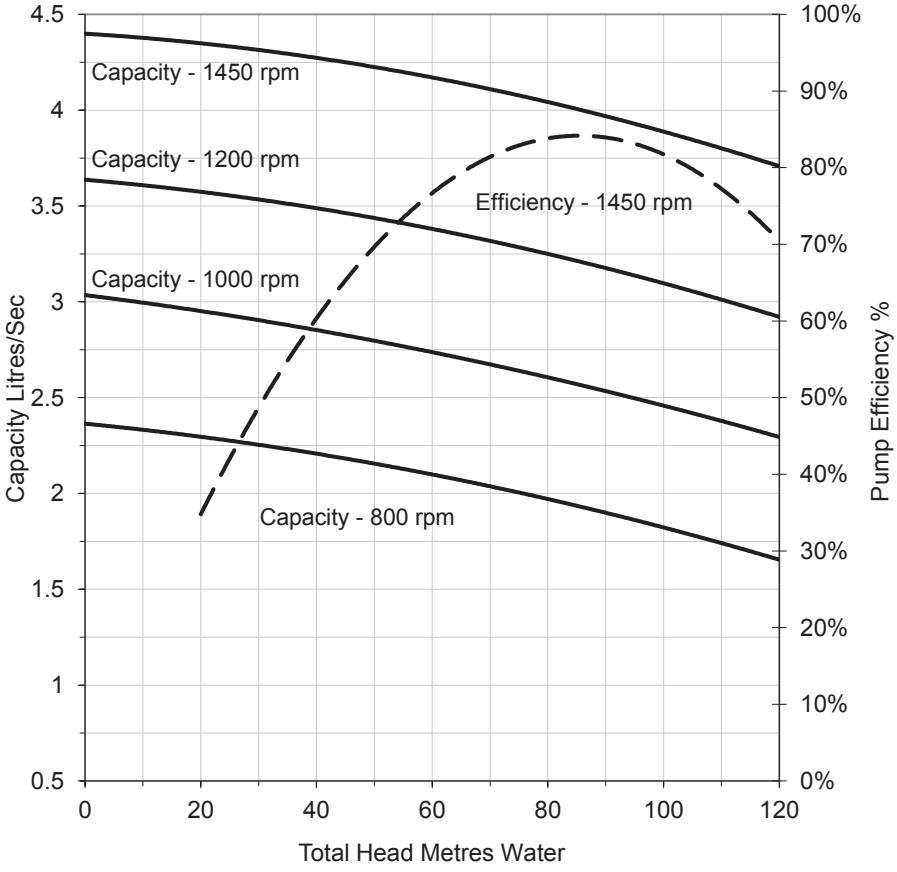


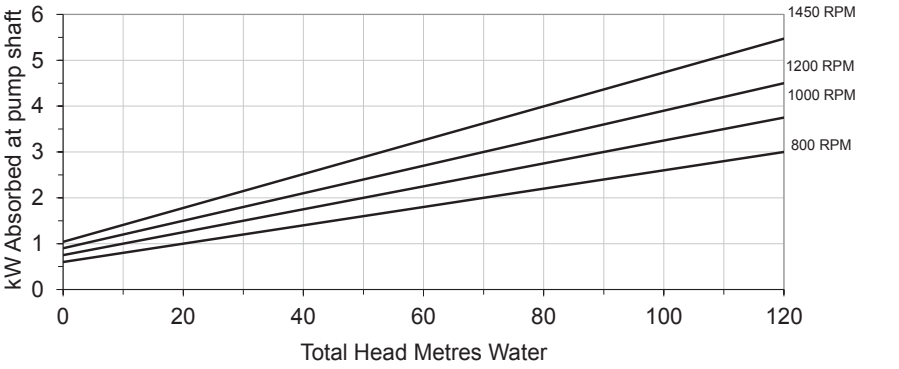
Pump Speed rpm	Capacity and Power	Total head from all causes (m)					
		10 33ft	20 65ft	30 98ft	40 130ft	50 164ft	60 197ft
1450	Litres/Sec Gph kW abs	4.3 3403 0.99	4.21 3332 1.41	4.14 3276 1.83	4.01 3174 2.24	3.9 3086 2.66	3.74 2960 3.08
1200	Litres/Sec Gph kW abs	3.6 2849 0.73	3.47 2746 1.09	3.37 2667 1.45	3.29 2604 1.80	3.1 2453 2.16	2.95 2335 2.52
1000	Litres/Sec Gph kW abs	3.0 2374 0.57	2.89 2287 0.87	2.75 2176 1.17	2.66 2105 1.46	2.45 1939 1.76	2.29 1812 2.06
800	Litres/Sec Gph kW abs	2.43 1923 0.42	2.28 1804 0.66	2.12 1678 0.89	2.06 1630 1.13	1.82 1440 1.36	1.64 1298 1.6

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MONO™ Agricultural Products	SELECTION ASP620	Title: ASP Section: 2 Page: 18 Date: January 2017

Bareshaft Pump Performance





Rotor Selection
10° - 40°C Standard Rotor
41° - 70°C Mark 3 Rotor
For applications outside these temperature limits, contact NOV

Suction Table	
RPM	Metres
1450	4.3
1200	6.0
1000	7.0
800	7.5
Figures shown are maximum suction lift at sea level at 20°C other losses due to fitting and pipe friction to be deducted for system design.	

Minimum Motor Size: 1.5kW
kW absorbed curve and figures relate to power absorbed at the pump shaft. For drive power requirements use the following multipliers.
DIESEL x 1.33 PETROL x 1.5 ELECTRIC x 1.25

Common Conversions	
1 l/sec	= 792 gal/hr
1000 gal/hr	= 75.6 l/min
10 m	= 34 ft = 14.2 psi = 98 kpa
100 ft	= 30.5 m = 43.3 psi = 298 kpa
1 hp	= 0.75kW
1 kW	= 1.34 hp

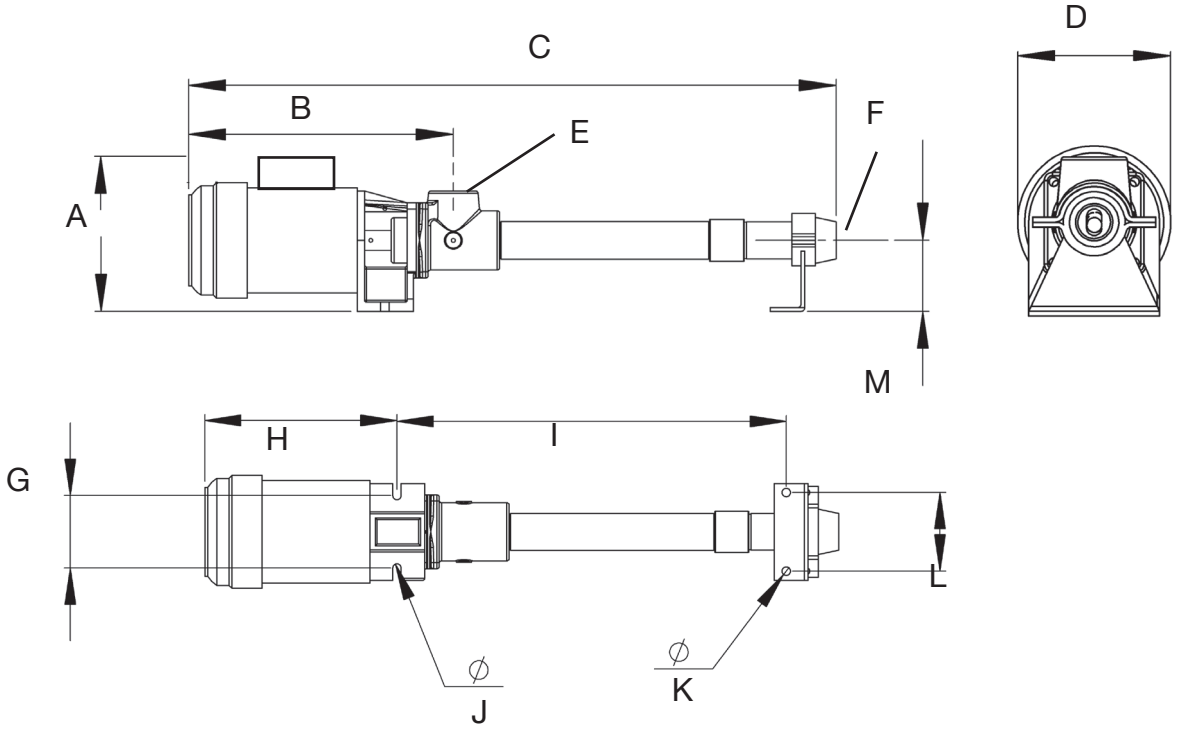
Test curve and table are typical only figures at 20°C performance may vary with temperature and field condition.

Pump Speed rpm	Capacity and Power	Total head from all causes (m)					
		20 65ft	40 130ft	60 197ft	80 262ft	100 328ft	120 393ft
1450	Litres/Sec Gph kW abs	4.35 3443 1.80	4.28 3387 2.50	4.15 3284 3.25	4.05 3205 4.00	3.90 3086 4.70	3.70 2928 5.50
1200	Litres/Sec Gph kW abs	3.57 2825 1.50	3.50 2770 2.10	3.37 2667 2.70	3.25 2572 3.30	3.10 2453 3.90	2.92 2311 4.50
1000	Litres/Sec Gph kW abs	2.95 2335 1.25	2.85 2255 1.75	2.75 2176 2.25	2.60 2058 2.75	2.45 1939 3.25	2.30 1820 3.75
800	Litres/Sec Gph kW abs	2.30 1820 1.00	2.20 1741 1.40	2.10 1662 1.80	1.97 1559 2.20	1.83 1448 2.60	1.65 1306 3.00

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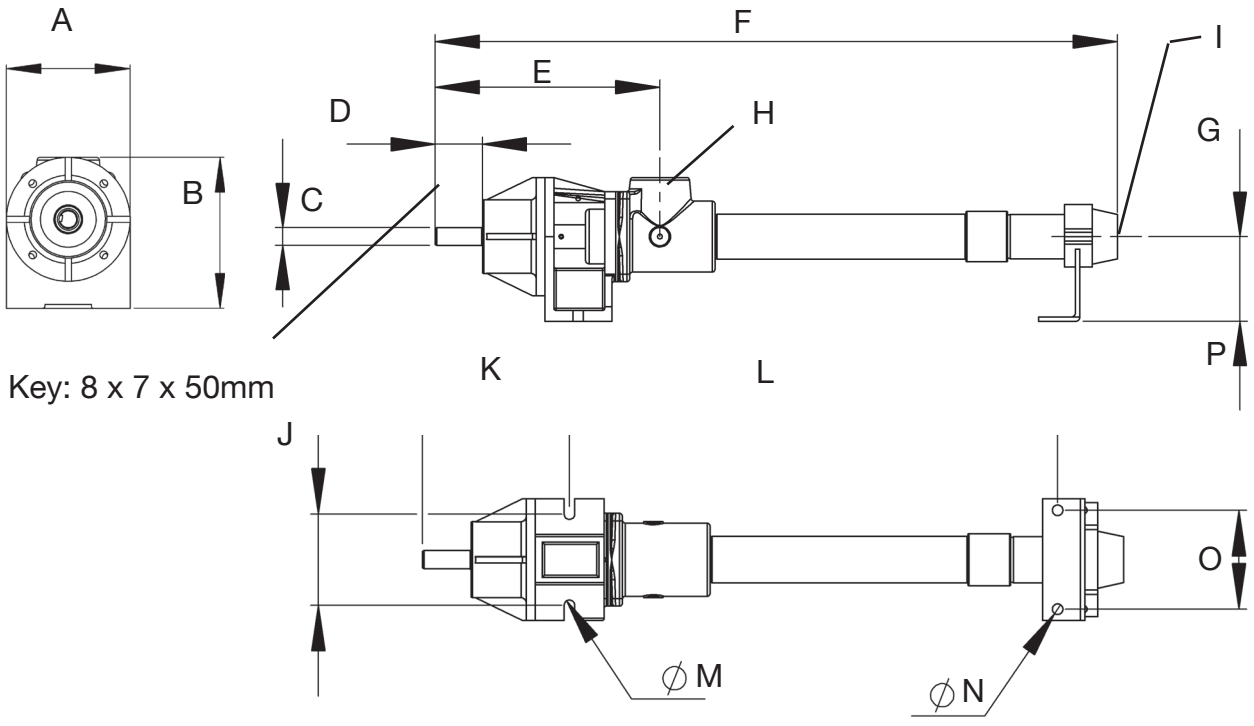
Pump Model	Power	Voltage	Current (Amps)		Dimensions (mm)					
	(kW)		Run	Start	A	B	C	D	E	F
ASP310MR4	0.56	240VAC	3.6	19.62	260	384	1004	187	2”	1 1/2”
ASP310MR6	0.37	240VAC	2.65	13.17	260	409	1029	187	2”	1 1/2”
ASP320MR4	1.1	240VAC	6.27	33.67	260	421	1166	187	2”	1 1/2”
ASP320MR6	0.75	240VAC	5.23	25.8	260	459	1204	187	2”	1 1/2”
ASP410MR4	1.1	240VAC	6.27	33.67	260	421	1080	187	2”	1 1/2”
ASP410MR6	0.75	240VAC	5.23	25.8	260	459	1118	187	2”	1 1/2”
ASP420MR4	1.7	240VAC	9.37	52	260	459	1257	187	2”	1 1/2”
ASP510MR4	1.7	240VAC	9.37	52	260	459	1233	187	2”	1 1/2”

Pump Model	Dimensions (mm)							Weight (kg)
	G	H	I	J	K	L	M	
ASP310MR4	120	273	645	14	14	130	115	30
ASP310MR6	120	298	645	14	14	130	115	32
ASP320MR4	120	310	769	14	14	130	115	34
ASP320MR6	120	348	769	14	14	130	115	36
ASP410MR4	120	310	982	14	14	130	115	40
ASP410MR6	120	348	982	14	14	130	115	46
ASP420MR4	120	348	822	14	14	130	115	41
ASP510MR4	120	348	832	14	14	130	115	43

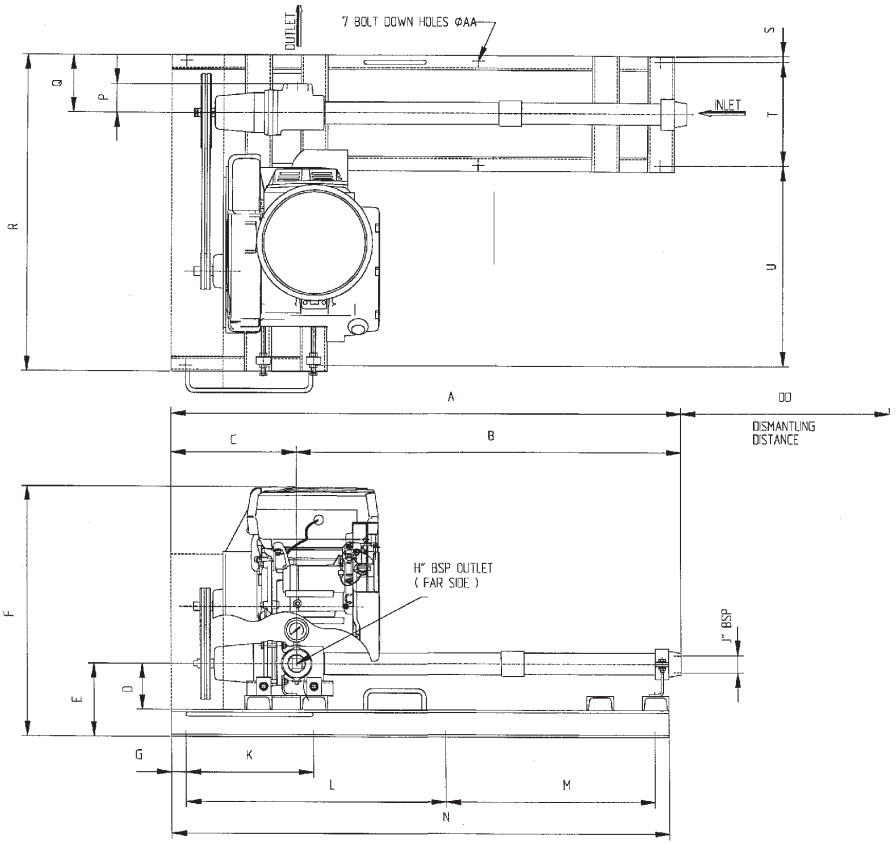


Pump Model	Dimensions (mm)								
	A	B	C	D	E	F	G	H	I
ASP310BS	187	195	24	64	305	925	115	2”	1 1/2”
ASP320BS	187	195	24	64	305	1050	115	2”	1 1/2”
ASP410BS	187	195	24	64	305	964	115	2”	1 1/2”
ASP420BS	187	195	24	64	305	1104	115	2”	1 1/2”
ASP440BS	187	195	24	64	305	1383	115	2”	1 1/2”
ASP510BS	187	195	24	64	305	1079	115	2”	2”
ASP520BS	187	195	24	64	305	1390	115	2”	2”
ASP610BS	187	195	24	64	305	1192	115	2”	2 1/2”
ASP620BS	187	195	24	64	305	1407	115	2”	2 1/2”

Pump Model	Dimensions (mm)							Weight (kg)
	J	K	L	M	N	O	P	
ASP310BS	120	194	645	14	14	130	115	23
ASP320BS	120	194	769	14	14	130	115	24
ASP410BS	120	194	683	14	14	130	115	24
ASP420BS	120	194	822	14	14	130	115	26
ASP440BS	120	194	1102	14	14	130	115	27
ASP510BS	120	194	832	14	14	130	115	28
ASP520BS	120	194	1153	14	14	130	115	29
ASP610BS	120	194	952	14	14	130	115	30
ASP620BS	120	194	1167	14	14	130	115	31



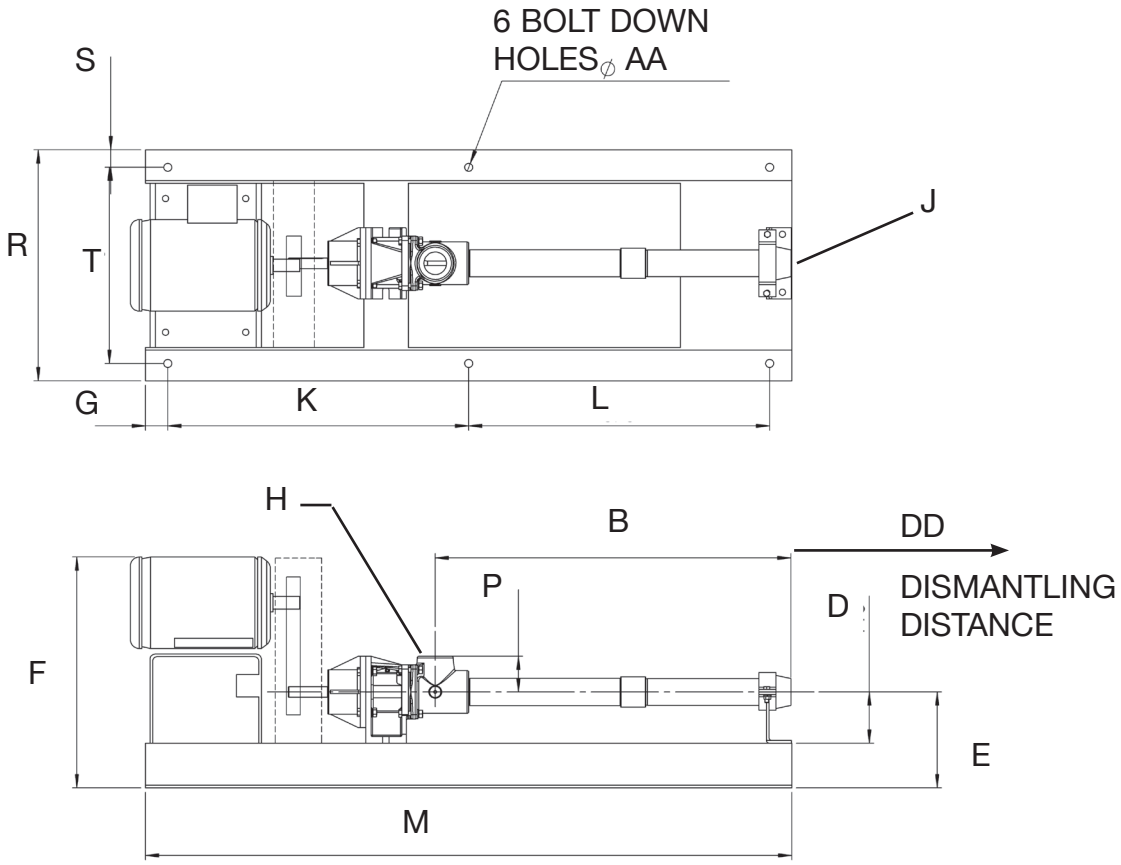
Key: 8 x 7 x 50mm



Series No.	A	B	C	D	DD	E	F	G	H	J	K	L	M	N
ASP320	1133	745	388	165	260	230	628	30	2”	1 1/2”	515	695	695	1530
ASP420	1186	798	388	165	310	230	634	30	2”	1 1/2”	515	695	695	1530
ASP440	1466	1078	388	165	590	230	634	30	2”	1 1/2”	515	695	695	1530
ASP520	1275	887	388	165	406	230	634	30	2”	2”	515	695	695	1530
ASP620	1490	1102	388	165	510	230	634	30	2”	2 1/2”	515	695	695	1530

Series No.	P	Q	R	S	T	U	AA
ASP320	80	160	900	15	290	580	17
ASP420	80	160	900	15	290	580	17
ASP440	80	160	900	15	290	580	17
ASP520	80	160	900	15	290	580	17
ASP620	80	160	900	15	290	580	17

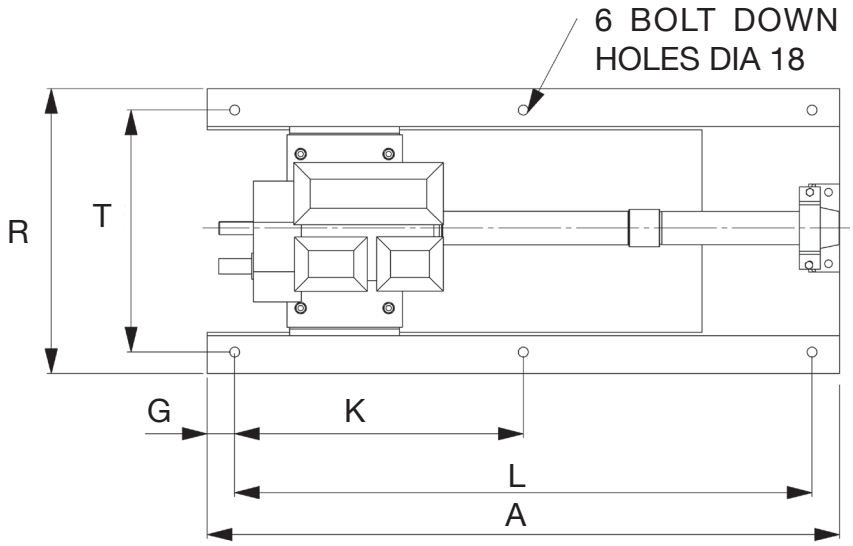
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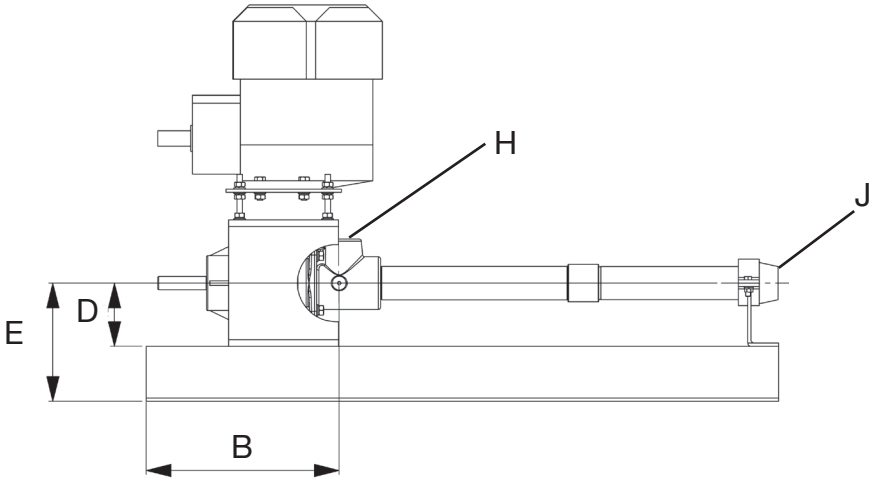


Series No.	B	D	DD	E	G	H	J	K	L	M
ASP320	745	115	260	215	50	2”	1 1/2”	675	675	1450
ASP420	798	115	310	215	50	2”	1 1/2”	675	675	1450
ASP440	1078	115	590	215	50	2”	1 1/2”	675	675	1450
ASP520	1275	115	406	215	50	2”	2”	780	795	1730
ASP620	1490	115	510	215	50	2”	2 1/2”	780	795	1730

Series No.	P	R	S	T	AA
ASP320	80	518	39	440	18
ASP420	80	518	39	440	18
ASP440	80	518	39	440	18
ASP520	80	518	39	440	18
ASP620	80	518	39	440	18

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Series No.	A	B	D	DD	E	G	H	J	K	L
ASP320	1150	351	115	260	215	50	2”	1 1/2”	525	1050
ASP420	1150	351	115	310	215	50	2”	1 1/2”	525	1050
ASP440	1430	351	115	590	215	50	2”	1 1/2”	710	1420
ASP520	1430	351	115	406	215	50	2”	2”	710	1420
ASP620	1430	351	115	510	215	50	2”	2 1/2”	710	1420

Series No.	R	T	AA
ASP320	518	440	18
ASP420	518	440	18
ASP440	518	440	18
ASP520	518	440	18
ASP620	518	440	18

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