



Submittal Data

Geo-Flo Magna3D Dual Head Insulated Pump w/ Isol. Valves



Project Name:	Representative:	
Contractor:	Engineer:	
Ref/P.O.#:	Date:	
Submitted by:	Date:	
Qty:	Part #:	Description

Technical Data

Circulator: Grundfos MAGNA3 Variable Speed, ECM Motor, 30% GF PES impeller
Cabinet: ABS plastic with powder-coated 10 ga. steel floor mounting stand
Insulation: CFC-free, polyurethane foam
Pump Housing: Cast iron (optional stainless steel)
Connections: 3" or 4" ANSI 150# flange connections (includes butterfly isol. valves)
Butterfly Valves: Cast iron body, aluminum-bronze disc, EPDM seat
Application: Central pumping, primary-secondary, and one-pipe systems using differential pressure control. Wireless communication for primary/backup or cascade (lead/lag) control is standard. BMS controls are available. **INDOOR USE ONLY.**

Max. Fluid Temperature: 230°F [110°C]
 Min. Fluid Temperature: 14°F [-10°C]
 Max. Operating Press.: 175 psi [12 bar]
 Min. Oper. Press. (65): 5.8 psi [0.4 bar]^{1,2}
 Min. Oper. Press. (80-100): 7.3 psi [0.5 bar]^{1,2}
 Ambient Air Temp: 32 to 140°F [0 to 40°C]
 Max. Sound Pressure: ≤ 43 dB(A)

NOTES:

- At 167°F [75°C].
- Min. pressures apply to a single pump operating. Increase min. pressure by 1.45 psi [0.1 bar] for dual pump operation. Increase the min. pressure by 1.45 psi [0.1 bar] for every 330 ft. (100m) above an altitude of 984 ft. (300m). Max installed altitude 6560 ft. (2000m).

Approved Antifreeze

Ethanol
 Methanol
 Propylene Glycol

Model Nomenclature

1-3	4 - 10	11	12	
M3D	065 - 150	B	C	Example: M3D065-150BC

1-3	Pump series:	M3D =	Grundfos Magna3 Dual Head
4-10	Available models:	065-150 =	65-150 dual head, 3" butterfly isol. valves, 3" flange connections
		080-100 =	80-100 dual head, 3" butterfly isol. valves, 3" flange connections
		100-120 =	100-120 dual head, 4" butterfly isol. valves, 4" flange connections
11	Voltage:	B =	208-230/1/60
12	Standard/Special:	C =	Std product (cast iron volute), cabinet, insulation, floor mounting stand
		N =	Stainless steel volute, cabinet, insulation, floor mounting stand
		- =	Engineering special (dash, followed by special code)

Electrical Data

Model	Speed	Voltage / Frequency	Amps (Min. - Max.)	Watts (Min. - Max.)
065-150	Variable	208-230/50-60	0.30 - 5.68	29 - 1301
080-100	Variable	208-230/50-60	0.32 - 4.62	32 - 1052
100-120	Variable	208-230/50-60	0.35 - 6.98	35 - 1582

Notes:

- Above data is per pump.
- Pump motor incorporates overload protection.
- Approvals are ETL and FCC W_RADIAL.
- Enclosure class Type 2, IEC 34-5: X4D;
Insulation class Type F, IEC 85: F.

Additional Motor Information: Magna3 insulated pumps use ECM motor technology. Therefore, horsepower is not shown on the submittal, as it is not pertinent to pump performance, as compared to standard pumps with variable frequency drives. Contact Geo-Flo for more information.

Mounting

Floor mounting stand provided.
 Floor anchoring recommended.
 Mounting hardware is field supplied.



NOTE: Pumps must be oriented as shown on the right. Dual head pumps are not designed to be installed with horizontal flow, due to cabinet clearance issues.



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 905 Williams Park Drive
 Bedford, Indiana 47421 U.S.A.
 Phone: 812-275-8513 Fax: 812-275-8523
 www.geo-flo.com

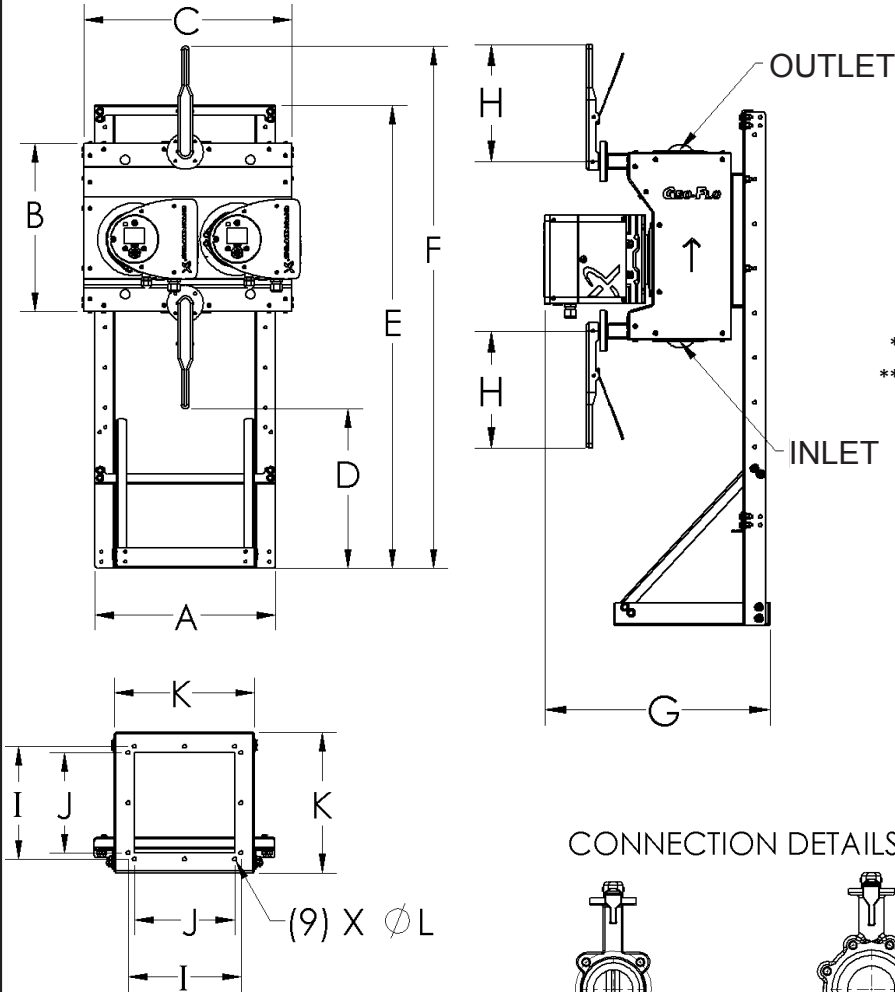
Physical and Dimensional Data: MAGNA3 Dual Head Pump

MODEL	DIM	A	B	C	D	E	F	G	H
M3D065-150	IN	18	16-7/8	20-3/4	15-7/8	46-1/4	52-1/8	20-1/4	10-1/2
	CM	45.7	42.9	52.7	40.3	117.5	132.4	51.4	26.7
M3D080-100	IN	18	17-5/8	22	15-1/2	46-1/4	52-1/2	21-1/4	10-1/2
	CM	45.7	44.8	55.9	39.4	117.5	132.4	51.4	26.7
M3D100-120	IN	18	22-1/8	22-3/4	12-1/2	46-1/4	53-1/2	21-3/4	10-1/2
	CM	45.7	56.2	57.8	31.8	117.5	132.4	51.4	26.7

MODEL	DIM	I	J	K	L	M	N	Q
M3D065-150	IN	11-1/4	10	14	3/8	6	4	5/8"-11 TAPPED
	CM	28.6	25.4	35.6	1	15.2		
M3D080-100	IN	11-1/4	10	14	3/8	6	4	5/8"-11 TAPPED
	CM	28.6	25.4	35.6	1	15.2		
M3D100-120	IN	11-1/4	10	14	3/8	7-1/2	8	5/8"-11 TAPPED
	CM	28.6	25.4	35.6	1	15.2		

NOTES:

1. Dimensional data provided for informational purposes and is rounded to nearest 1/8".
2. Metric data is a simple conversion of imperial data and should not be considered more accurate.

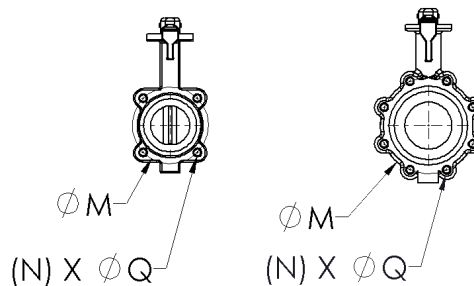


Model	Connections*	Shipping Weight, lbs. [kg]**
065-150	3" ANSI 4-bolt flange	169 [77]
080-100	3" ANSI 4-bolt flange	186 [84]
100-120	4" ANSI 8-bolt flange	219 [99]

* Includes EPDM seat at butterfly valve for flange seal.
 ** Weight is for pump, isolation valves, cabinet with insulation, and floor mounting stand. Does not include pallet or shipping straps/hardware.

NOTE: Floor anchoring recommended. Mounting hardware is field supplied.

CONNECTION DETAILS



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MAGNA3 Inputs/Outputs, Communications, and Accessories

MAGNA3 Inputs/Outputs

Two digital inputs:	External potential-free contact Contact load: 5V, 10mA Screened (shielded) cable Loop resistance: Maximum 130Ω
Analog input:	4-20mA (load: 150Ω) 0-10VDC (load >10kΩ)
Two relay outputs:	Internal potential-free changeover contact Maximum load: 250V, 2A, AC1 Minimum load: 5VDC, 20mA Screened (shielded) cable

MAGNA3 Communications (add-on interface modules)

BACnet MS/TP
LonWorks
Modbus RTU
GENibus
Profibus DP
Grundfos Remote Management (Dongle for smart phone)



CIM Modules

MAGNA3 Accessories

Geo-Flo Part Number	Description
	Pump Enable Control
3808	Pump enable control (up to 5 units w/one insul. pump or flow center), NEMA encl.
	External Controller for Magna3 for Delta-T Control -- Note 1 (see below)
4062	UPC GEO external controller, 1-10VDC output -- Note 1
3684	10k thermistor, 1/4" NPT insertion type -- Note 2
3760	AC wall adapter for 4062 -- Note 3
3807	Barrel connector for 3760 -- Note 3
	BMS Interface Modules for Magna3 / Dongle for Grundfos GO
CIM100	LonWorks Network Interface Module
CIM200	Modbus RTU Network Interface Module
CIM300	BACnet MS/TP Network Interface Module
MI204	Dongle for iPhone5
MI301	Dongle for Android (see Grundfos catalog for compatible models)



3808: Pump Enable Control



4062: External Controller

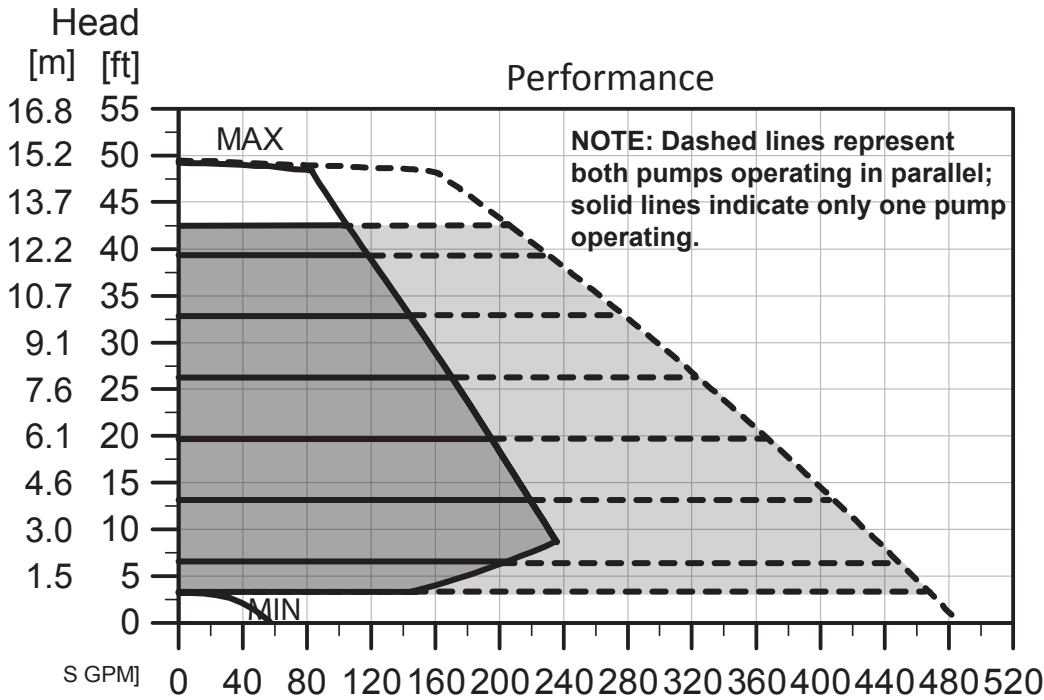
NOTES:

1. Use external controller for Magna3 Delta-T control for primary-secondary applications to provide separate heating and cooling Delta-T set points.
2. 4062 requires two thermistors.
3. Optional if 24VAC is available near 4062 location (e.g. from heat pump).

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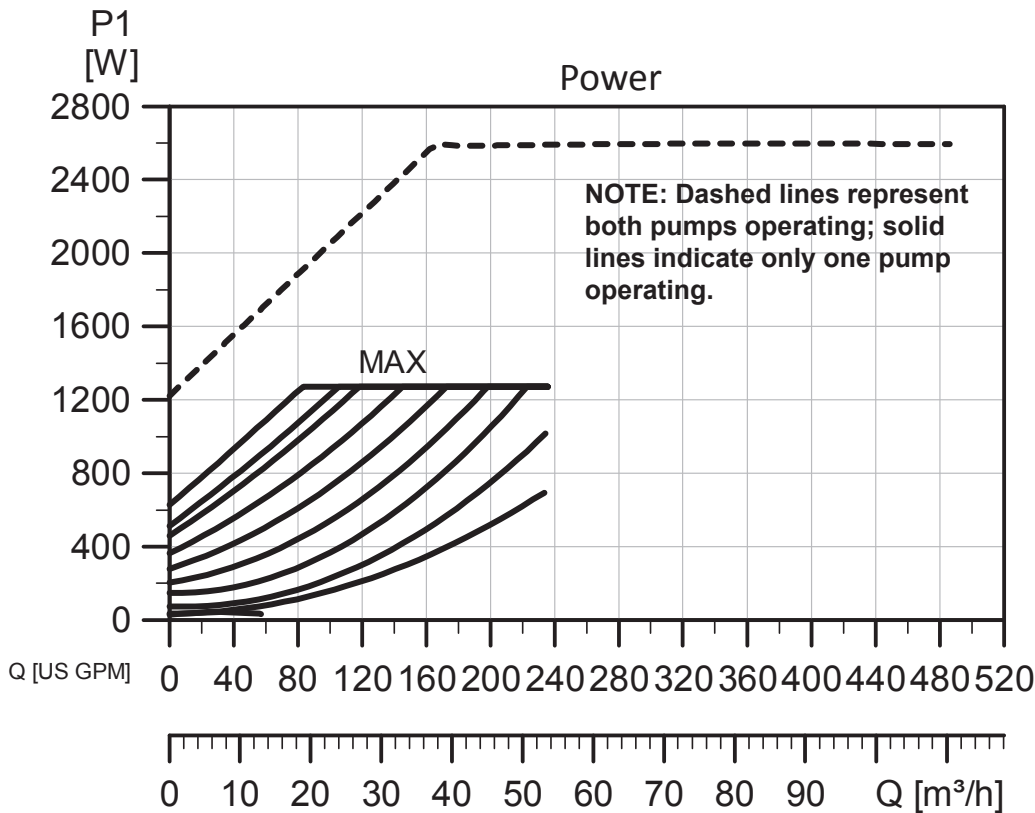
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Pump Performance Curves -- MAGNA3 M3D065-150



Pump Curve Usage:

1. In Constant Pressure (Differential Pressure) mode, pump operating range is the gray shaded area. Darker gray area is single pump operation; lighter gray + darker gray area represents both pumps operating in parallel.
2. In Constant Curve mode, pump operates between the MIN and MAX curves.

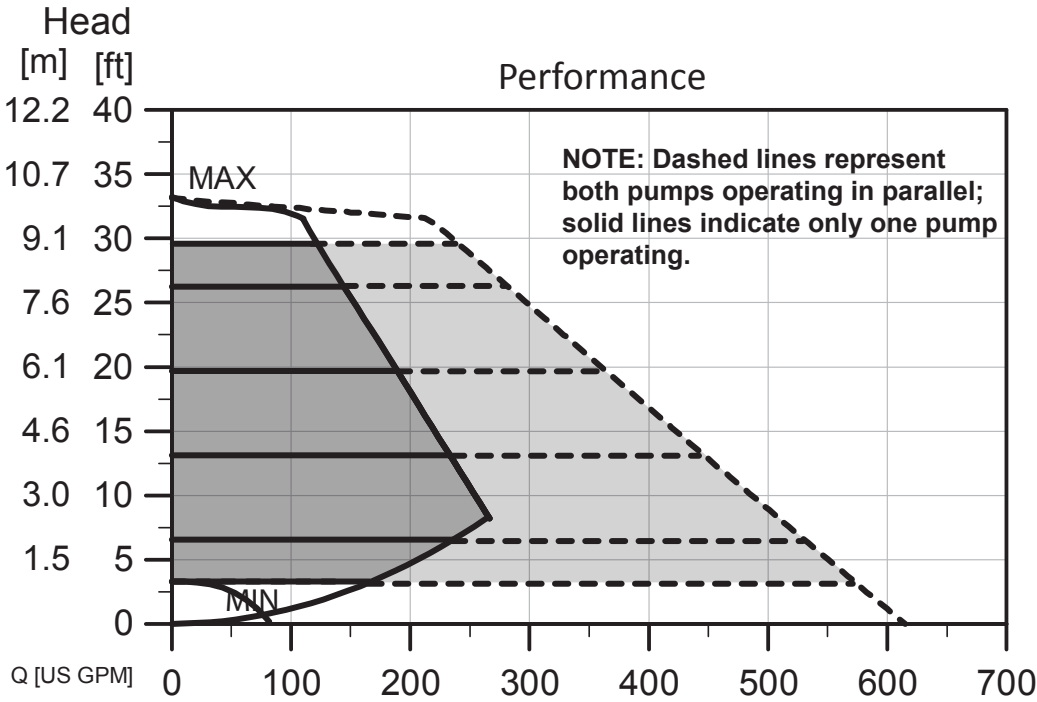


Curves are manufacturer's reported averages using water at 68°F [20°C].



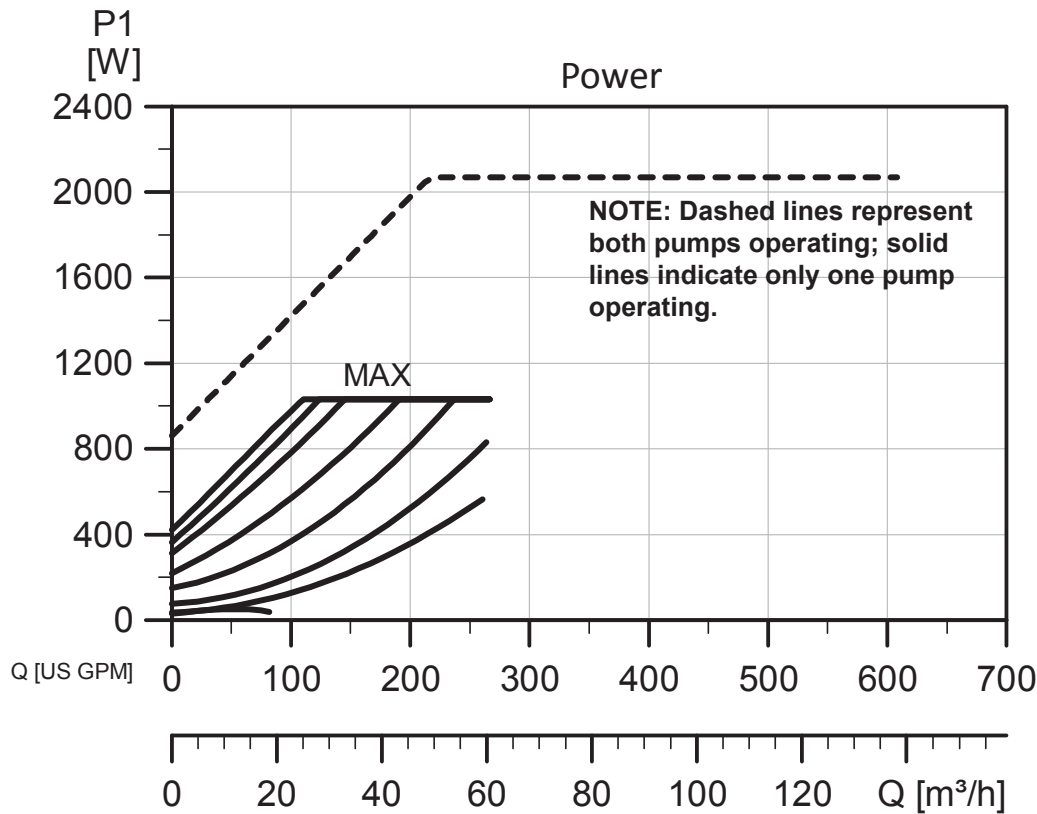
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Pump Performance Curves -- MAGNA3 M3D080-100



Pump Curve Usage:

1. In Constant Pressure (Differential Pressure) mode, pump operating range is the gray shaded area. Darker gray area is single pump operation; lighter gray + darker gray area represents both pumps operating in parallel.
2. In Constant Curve mode, pump operates between the MIN and MAX curves.

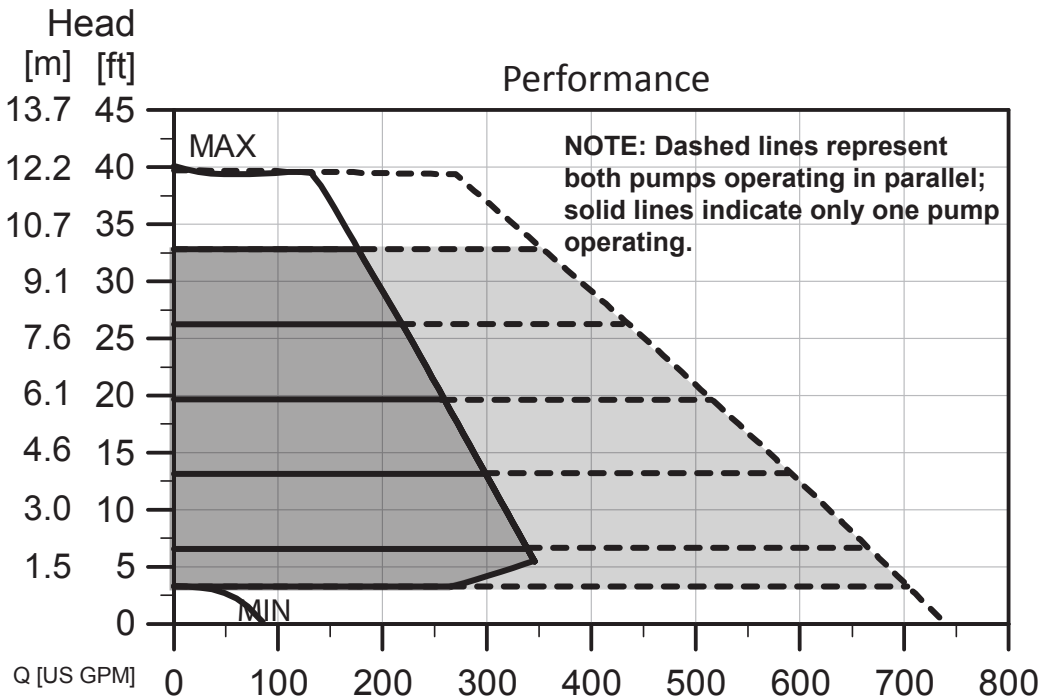


Curves are manufacturer's reported averages using water at 68°F [20°C].



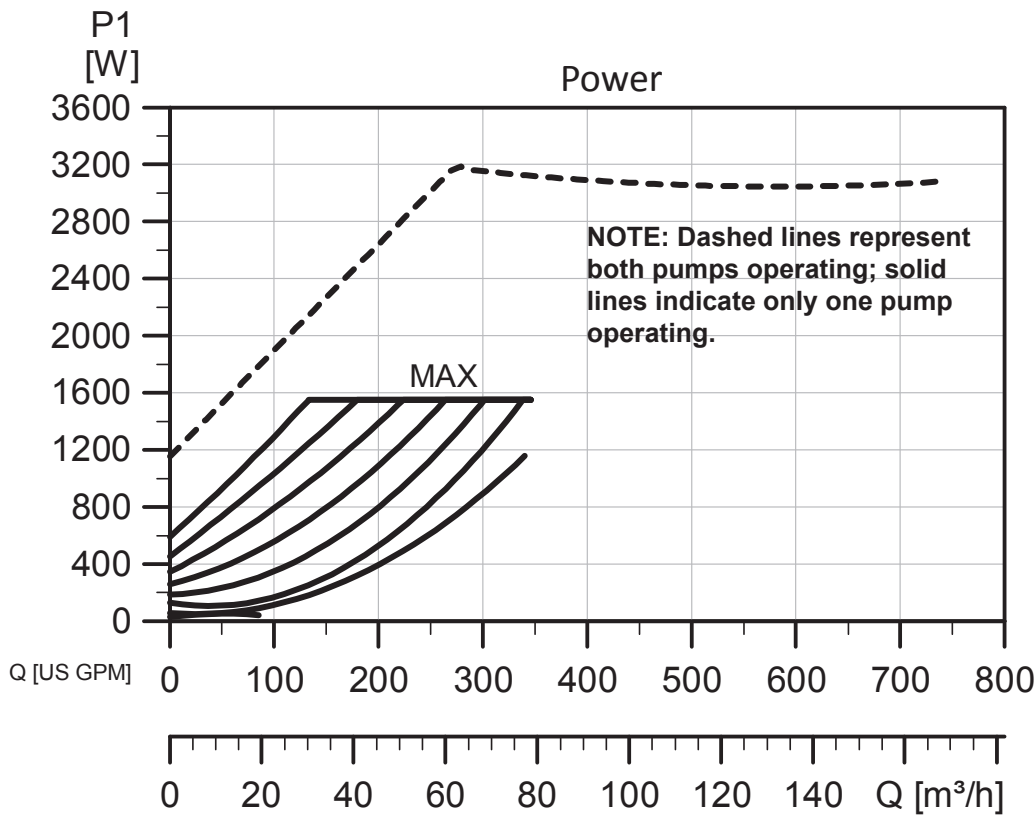
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Pump Performance Curves -- MAGNA3 M3D100-120



Pump Curve Usage:

1. In Constant Pressure (Differential Pressure) mode, pump operating range is the gray shaded area. Darker gray area is single pump operation; lighter gray + darker gray area represents both pumps operating in parallel.
2. In Constant Curve mode, pump operates between the MIN and MAX curves.



Curves are manufacturer's reported averages using water at 68°F [20°C].

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