

<p><b>Order Code</b></p> <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:15%;"><b>Base Code</b></td> <td style="width:15%; text-align: center;">Gear Set</td> <td style="width:15%; text-align: center;">Drive Mount</td> <td style="width:15%; text-align: center;">Options</td> </tr> <tr> <td style="border: 1px solid black; text-align: center;">G</td> <td style="border: 1px solid black; text-align: center;">A</td> <td style="border: 1px solid black; text-align: center;">3</td> <td style="border: 1px solid black; text-align: center;">4</td> </tr> <tr> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> <td style="text-align: center;">3</td> <td style="text-align: center;">4</td> </tr> <tr> <td colspan="2" style="text-align: center;">Model</td> <td colspan="2" style="text-align: center;">Wetted Materials</td> </tr> </table> <p style="font-size: small;">O/C: Pump S/K: Service Kit</p>	<b>Base Code</b>	Gear Set	Drive Mount	Options	G	A	3	4	1	2	3	4	Model		Wetted Materials		<p><b>Pump Construction</b></p> <p>Magnetic Drive Gear Pump Suction Shoe Style Two Spur Gears/DP120, 48 or 40 Stationary Shafts PTFE Bevel Seal (Qty 1)</p>
<b>Base Code</b>	Gear Set	Drive Mount	Options														
G	A	3	4														
1	2	3	4														
Model		Wetted Materials															

**Base Code** Select a code character for each numbered position to configure the product.

1	Code	Product Type	Specifications	Notes
	G	Gear Pump		
2	A	<b>Product Series</b> Series GA	<i>Max System Pressure (MAWP)</i> 21 Bar (300 psi)	<i>Ports</i> 1/8-27 (F) NPT Side Ports
3	-	<b>Modifier</b> Standard Design		
4		<b>Gear Set (Width/N°Gears/Pitch)</b>	<i>Displacement</i>	<i>Max Differential Pressure</i> <i>Driven Magnet (Standard)</i>
	X21	0.063/2/120 (Use C, P8, J8 Gear	0.017 ml/rev (.0045 gal/1000*rev)	1.4 Bar (20 psi) Ferrite
	V21	0.063/2/48 (Use C, P8, J8 Gear M	0.042 ml/rev (0.01 gal/1000*rev)	2.8 Bar (40 psi) Ferrite
	T23	0.125/2/40 (Hex Drive - Use P or J	0.092 ml/rev (0.02 gal/1000*rev)	5.2 Bar (75 psi) Ferrite
5		<b>Gear Material</b>	<i>Max Differential Pressure</i>	<i>Temp Range</i>
	C	Carbon Graphite	2.8 Bar (40 psi)	-46/177°C (-50/350°F)
	P	PPS (carbon fiber/ptfe)	5.2 Bar (75 psi)	-46/177°C (-50/350°F)
	J	PEEK (carbon fiber/ptfe)	5.2 Bar (75 psi)	-46/177°C (-50/350°F)
	J8	PEEK-Pin Drive	2.8 Bar (40 psi)	-46/177°C (-50/350°F)
	P8	PPS-Pin Drive	2.8 Bar (40 psi)	-46/177°C (-50/350°F)
6		<b>Static Seals</b>		<i>Temp Range</i>
	F	PTFE		-46/232°C (-50/450°F)
	D	EP		-46/149°C (-50/300°F)
	V	Viton®		-29/204°C (-20/400°F)
	K	Kalrez®		-29/260°C (-20/500°F)
7		<b>Base Materials</b>		
	S	SS316		
	D	Alloy 20		
	T	Titanium		
	C	Hast C-276®		
8		<b>Drive Mount</b>	<i>Max System Pressure (MAWP)</i>	<i>Weight (Pumphead)</i>
	A	MP Housing	21 Bar (300 psi)	0.34 kg (0.75 lbs)
	B	MP Plate	21 Bar (300 psi)	0.34 kg (0.75 lbs)
	C	MP Step Cup (2 oz-in, SS316)	21 Bar (300 psi)	0.31 kg (0.68 lbs)
	M	I-Drive™ IMS	21 Bar(300 psi) SS316	0.37 kg (0.82 lbs)
	E	NEMA 56C	21 Bar (300 psi)	1.1 kg (2.4 lbs)
	2	IEC 56-B14	21 Bar (300 psi)	1.1 kg (2.4 lbs)
	4	IEC 63-B14	21 Bar (300 psi)	1.1 kg (2.4 lbs)

**Options** Add Option codes after the Base Code to modify features or enhance the product.

**Driving Magnet (PC13)**

N3	NdFeB Driving (Ring)	1
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Notes

- 1 Available only with industrial IEC or NEMA drive mounts

PRICES ARE FOB/EX-WORKS FACTORY - Prices shown are the Manufacturer's Suggested List Price and are subject to change without notice.

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GA000S.2MPV



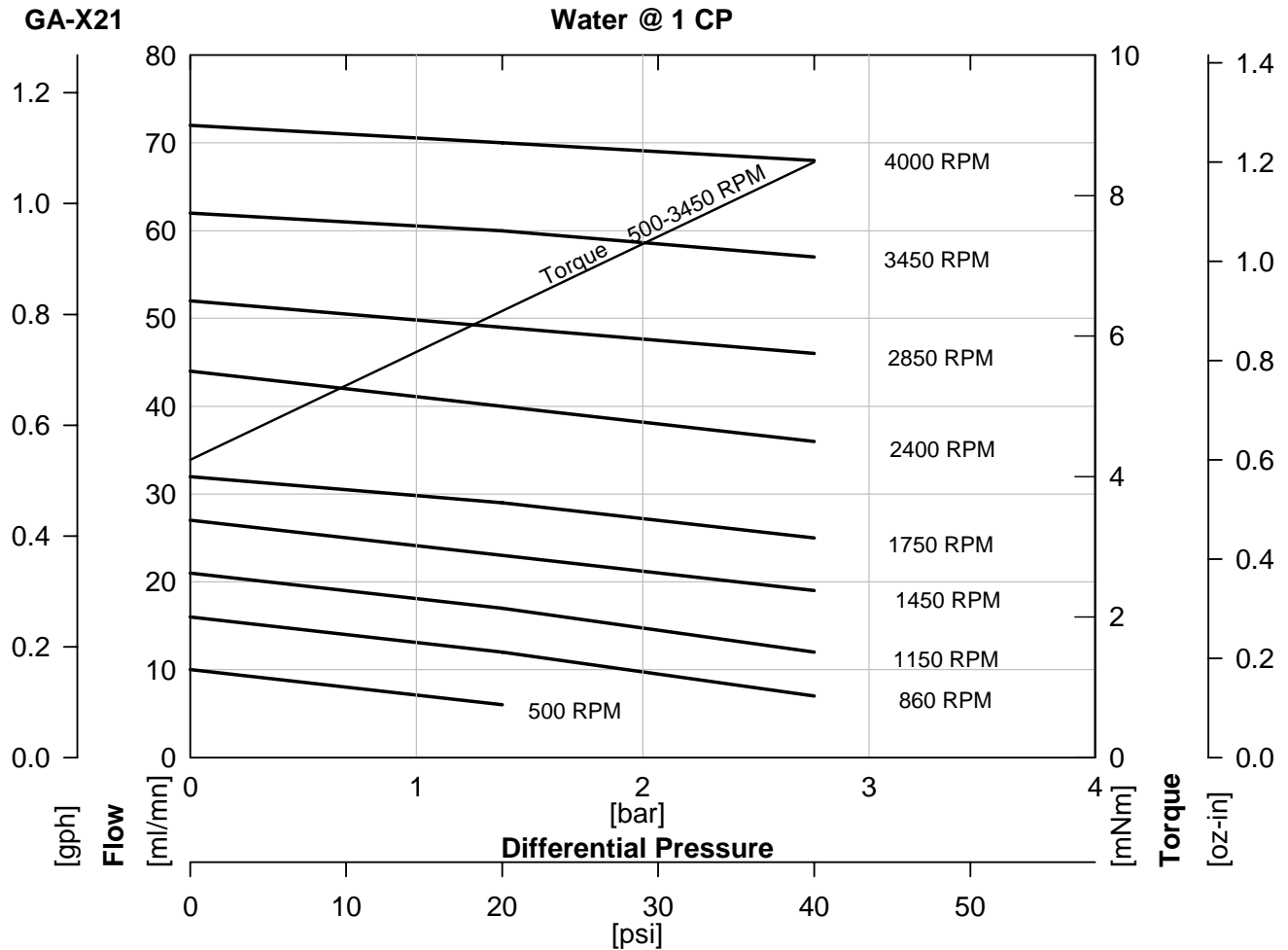
# Technical Data

# Series GA

<b>Order Code</b>				<b>Pump Construction</b>			
<b>Base Code</b>		Gear Set		Drive Mount		<b>Options</b>	
G	A	-	X21	C			
1	2	3	4	5	6	7	8
Model			Wetted Materials			O/C: Pump S/K: Service Kit	
Magnetic Drive Gear Pump Suction Shoe Style Two Spur Gears/DP120, 48 or 40 Stationary Shafts PTFE Bevel Seal (Qty 1)							



## Performance



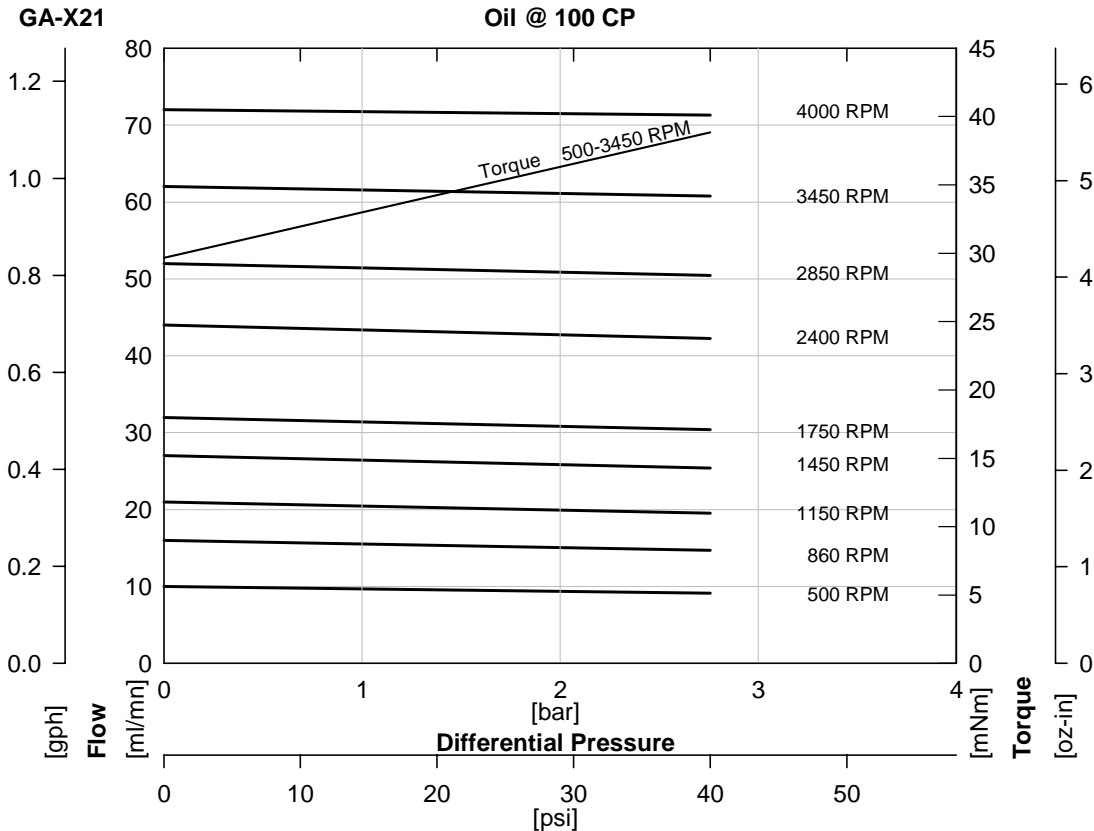
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<b>Order Code</b>				<b>Pump Construction</b>			
<b>Base Code</b>		<b>Gear Set</b>		<b>Drive Mount</b>		<b>Options</b>	
G	A	-	X21	●	C		
1	2	3	4	5	6	7	8
Model				Wetted Materials			
				O/C: Pump S/K: Service Kit			
Magnetic Drive Gear Pump Suction Shoe Style Two Spur Gears/DP120, 48 or 40 Stationary Shafts PTFE Bevel Seal (Qty 1)							



**Performance-High Viscosity**



$$\text{Watts} = \frac{\text{Torque [mNm]} \times \text{Speed [RPM]}}{9555}$$

$$\text{HP} = \frac{\text{Torque [oz-in]} \times \text{Speed [RPM]}}{1.008 \times 10^6}$$

To calculate torque, multiply correction factor by torque from viscosity curve above.

Torque Correction Factors: For Higher Viscosity Liquids				
Viscosity [cp]		1	100	1500
Max Speed [RPM]		8000	3450	1750
[Bar]	[psi]			
0.3	5	0.1	1	1.8
0.7	10	0.2	1	1.8
1.4	20	0.2	1	1.7
2.1	30	0.2	1	1.7
2.8	40	0.2	1	1.6

Magnet Decouple Torque			
Driven Magnet	Driving Hub	Torque [mNm]	Torque [oz.in]
Ferrite	Ferrite	78	11

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## Technical Data

# Series GA

Order Code				Gear				Drive Mount				Options
Base Code				Wetted Materials				Options				O/C: Pump S/K: Service Kit
1	2	3	4	5	6	7	8	9	10	11	12	
G	A	-	X21	C								

**Pump Construction**  
 Magnetic Drive Gear Pump  
 Suction Shoe Style  
 Two Spur Gears/DP120, 48 or 40  
 Stationary Shafts  
 PTFE Bevel Seal (Qty 1)



### Specifications

	SI	US
Displacement	0.017 ml/rev	.0045 gal/1000*rev
Max Flow (4 Pole Speed)	30 ml/mn 1450 RPM (50Hz)	0.5 gal/hr 1750 RPM (60Hz)
Max Flow (2 Pole Speed)	50 ml/mn 2850 RPM (50Hz)	0.9 gal/hr 3450 RPM (60Hz)
Max Differential Pressure	1 2.8 Bar	40 psi
Max System Pressure (MAWP)	21 Bar	300 psi
NIPR (Absolute)	180 mBar	2.5 psia
Wet Lift (Typical)	2 51 cm.H2O (1450 RPM)	24 in.H2O (1750 RPM)
Temp Range	3 See Gear Material	See Gear Material
Viscosity Range	4 0.2 to 1500 cp	0.2 to 1500 cp
Max Speed	8,000 RPM	8,000 RPM
Rotation (Facing Motor Shaft)	CW	CW
Weight (Pumphead)	0.34 kg	0.75 lbs
Dimensions (LxWxH)	See Drawing	See Drawing
Ports	1/8-27 (F) NPT Side Ports	1/8-27 (F) NPT Side Ports
Driven Magnet (Standard)	Ferrite	Ferrite
Optional Internal Bypass	No	No

- Notes**
- 1 See Product Options. Max pressure depends on gear material.
  - 2 Priming ability varies with operating conditions.
  - 3 See Product Options for specific temp limits.
  - 4 See Performance-High Viscosity for viscosity limits.

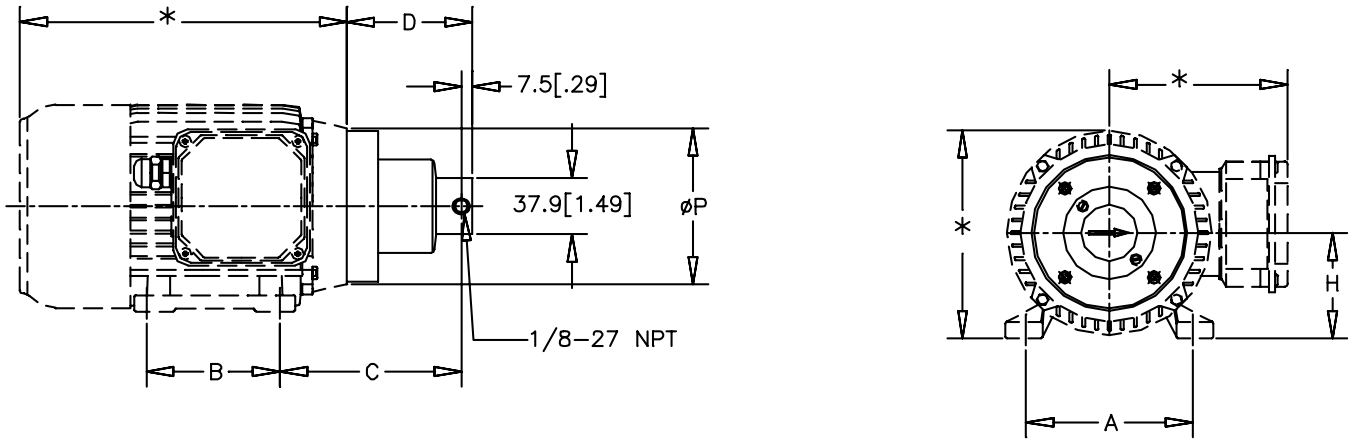
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<b>Order Code</b>				<b>Pump Construction</b>			
<b>Base Code</b>		Gear Set		Drive Mount		<b>Options</b>	
G	A	-	X21	C			2/4/6
1	2	3	4	5	6	7	8
Model				Wetted Materials			
				O/C: Pump S/K: Service Kit			
				<b>Magnetic Drive Gear Pump</b> Suction Shoe Style Two Spur Gears/DP120, 48 or 40 Stationary Shafts PTFE Bevel Seal (Qty 1)			



## Dimensions



MOUNT	A mm [in]	B mm [in]	C mm [in]	D mm [in]	H mm [in]	P mm [in]
IEC56B14B3 <sup>2</sup>	90 [3.54]	71 [2.80]	100.5 [3.96]	71.8 [2.83]	56 [2.20]	80 [3.15]
IEC63B14B3 <sup>4</sup>	100 [3.94]	80 [3.15]	110.1 [4.33]	77.5 [3.05]	63 [2.48]	90 [3.54]
IEC71B14B3 <sup>6</sup>	112 [4.41]	90 [3.54]	122.1 [4.81]	84.5 [3.33]	71 [2.80]	105 [4.13]

### NOTES:

- \*THESE DIMENSIONS WILL VARY BASED ON MOTOR SELECTION.
- ALL DIMENSIONS ARE NOMINAL.

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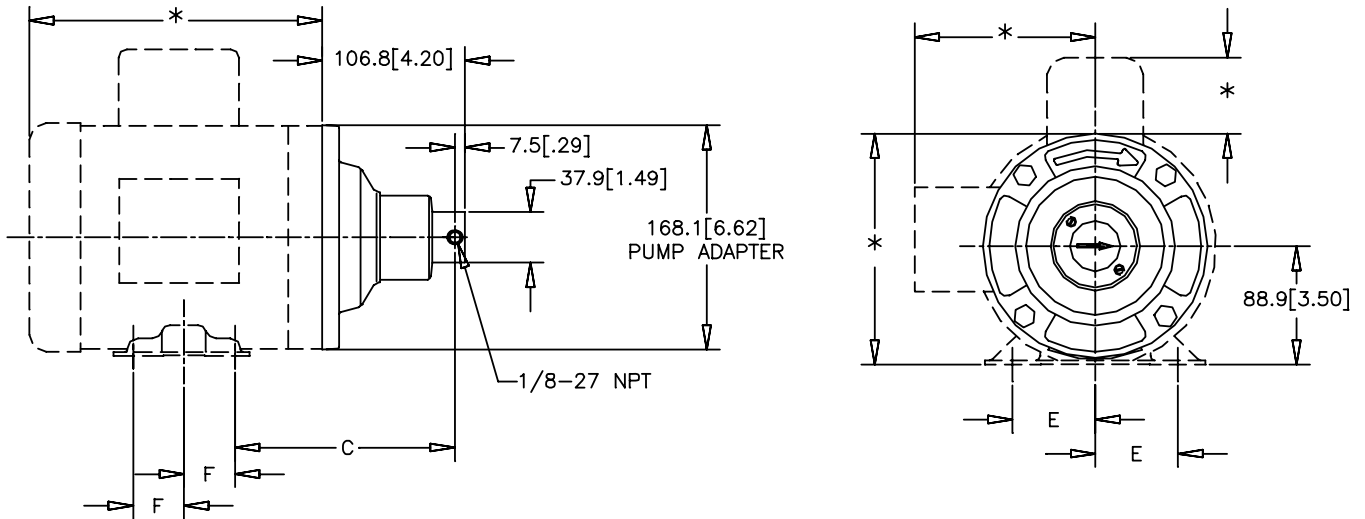


# Technical Data

# Series GA

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Base Code			Gear Set	Drive Mount			Options																										
G	A	-	X21	C	6	E	<div style="border: 1px solid black; padding: 2px; width: fit-content;">           O/C: Pump            S/K: Service Kit         </div>																										
1	2	3	4	5	6	7																											
Model			Wetted Materials																														

## Dimensions



MOUNT	C mm [in]	E mm [in]	F mm [in]
NEMA <sup>E</sup> 56C	164.6 [6.48]	61.9 [2.44]	38.1 [1.50]
NEMA <sup>K</sup> 143TC	159.9 [6.30]	69.9 [2.75]	50.8 [2.00]
NEMA <sup>K</sup> 145TC	159.9 [6.30]	69.9 [2.75]	63.5 [2.50]

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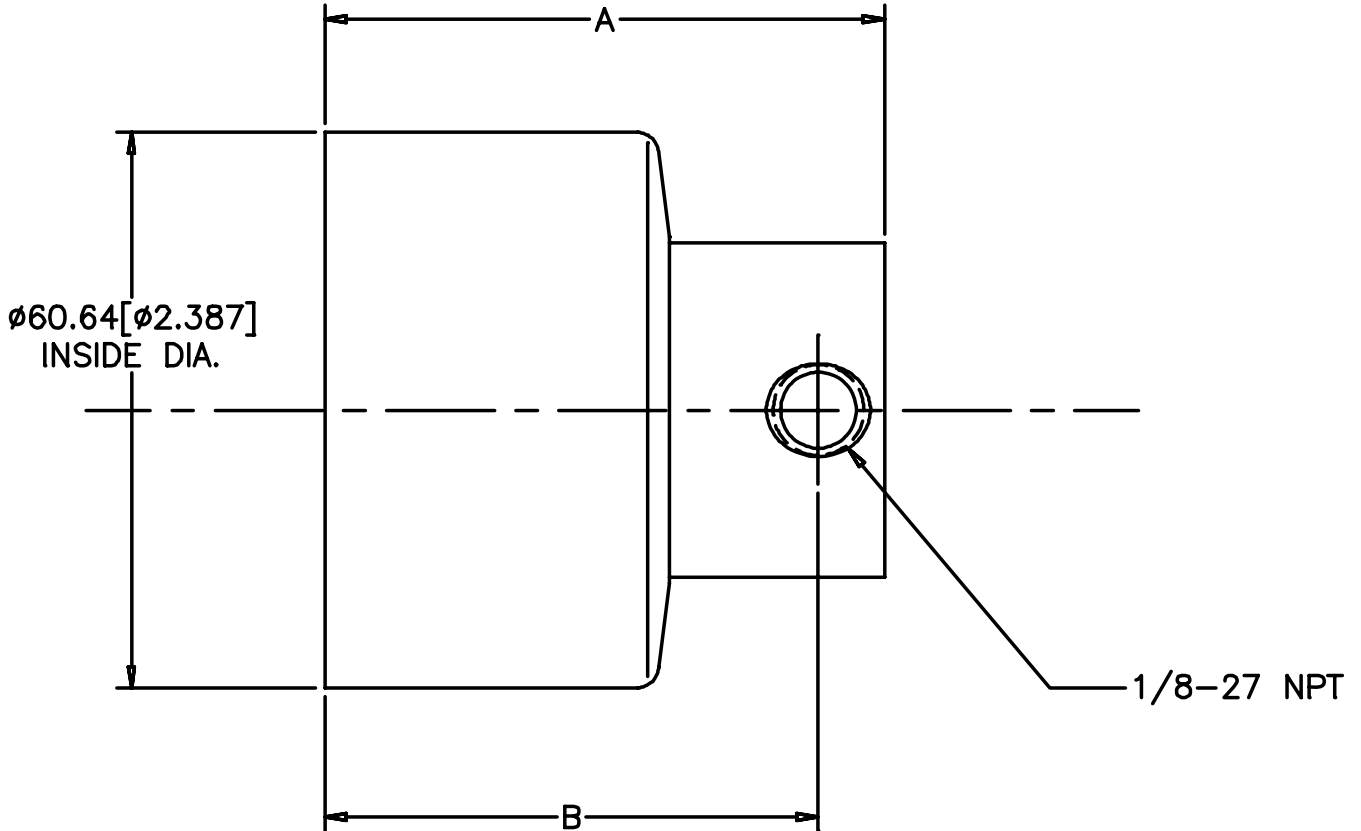


# Technical Data

# Series GA

<b>Order Code</b>								<b>Pump Construction</b>		
<b>Base Code</b>		Gear Set		Drive Mount		<b>Options</b>		 <p>Magnetic Drive Gear Pump Suction Shoe Style Two Spur Gears/DP120, 48 or 40 Stationary Shafts PTFE Bevel Seal (Qty 1)</p>		
G	A	-	X21	C			A/B			
1	2	3	4	5	6	7	8			
Model				Wetted Materials				O/C: Pump S/K: Service Kit		

## Dimensions



A (MAX) mm [in]	B mm [in]
63.5 [2.50]	56 [2.20]

### NOTES:

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# Technical Data

# Series GA

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<b>Base Code</b>		Gear Set		Drive Mount		<b>Options</b>	
G	A	-	V21	C			
1	2	3	4	5	6	7	8
Model			Wetted Materials			O/C: Pump S/K: Service Kit	

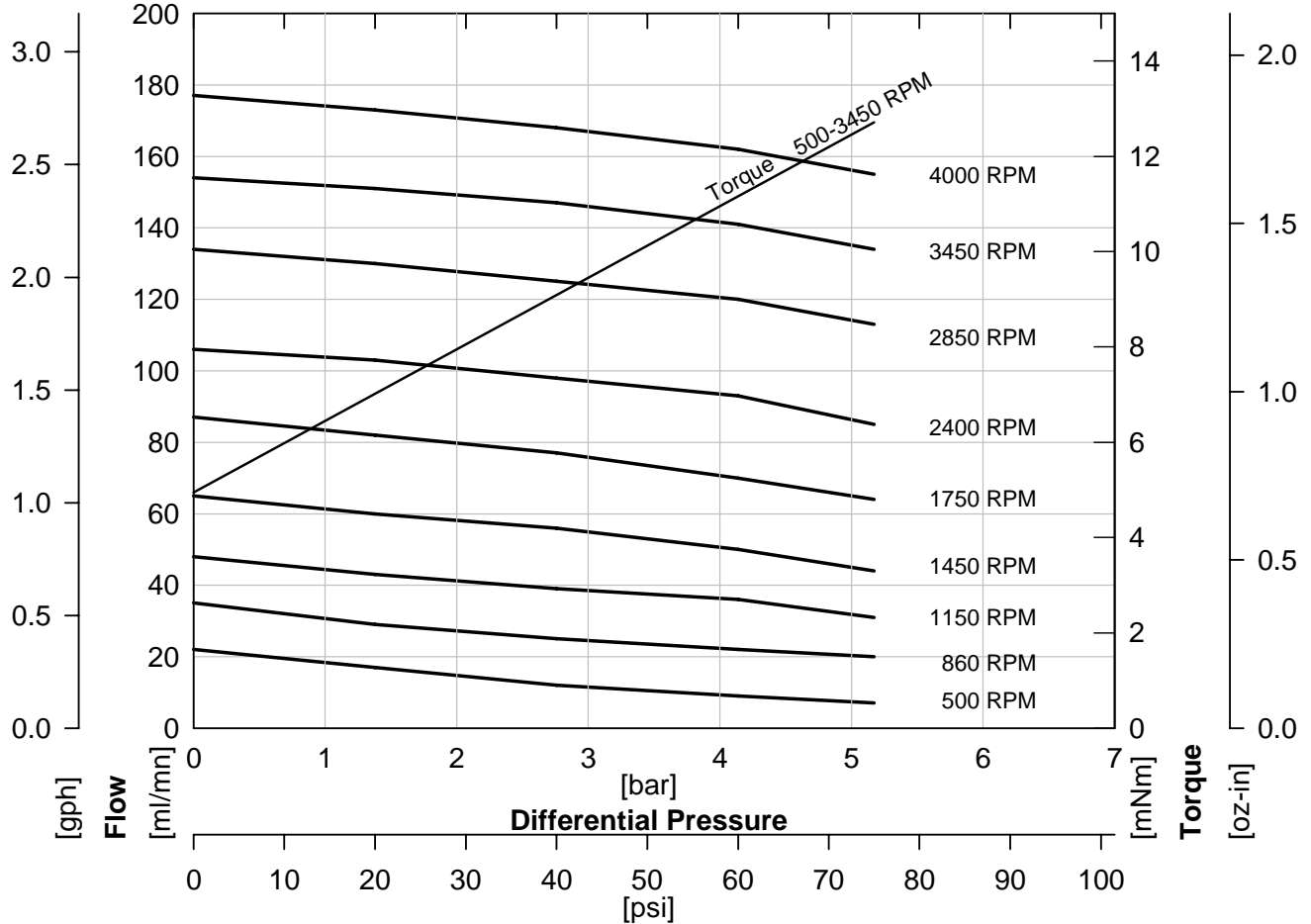
Magnetic Drive Gear Pump  
Suction Shoe Style  
Two Spur Gears/DP120, 48 or 40  
Stationary Shafts  
PTFE Bevel Seal (Qty 1)



## Performance

GA-V21

Water @ 1 CP



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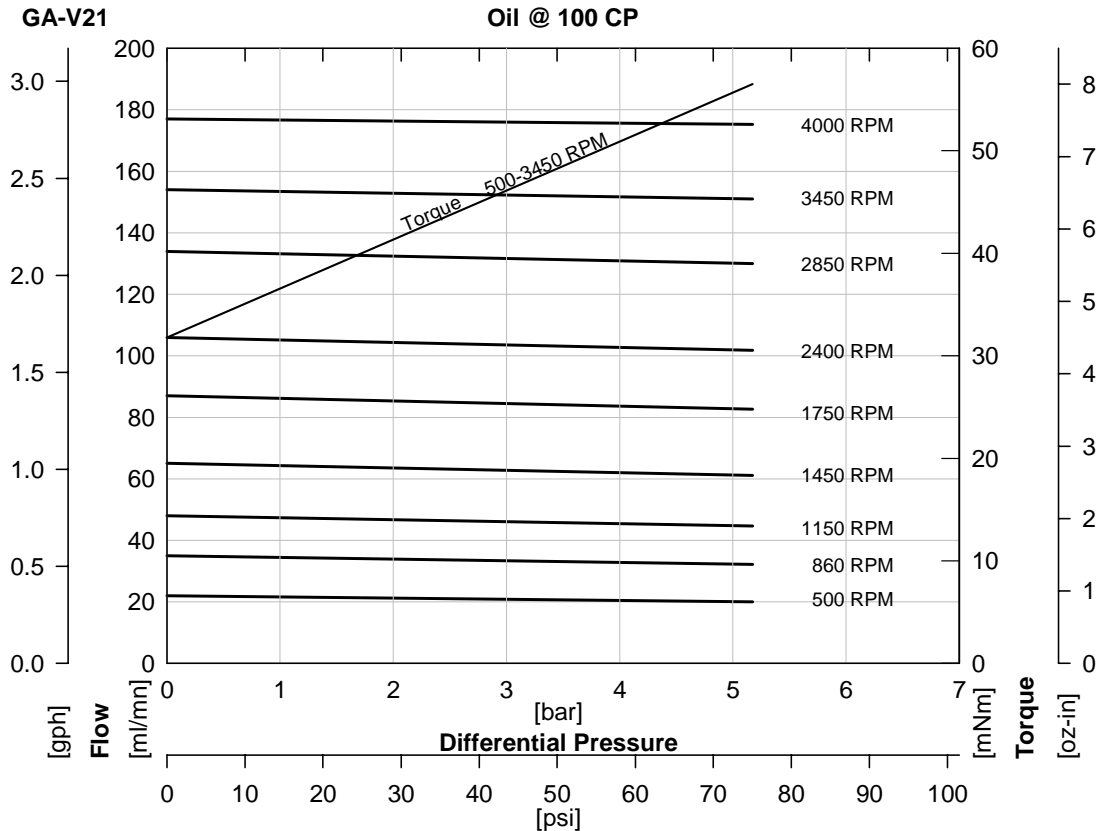
GA300 Rev A  
Page 1



<b>Order Code</b>				<b>Pump Construction</b>			
<b>Base Code</b>		<b>Gear Set</b>		<b>Drive Mount</b>		<b>Options</b>	
G	A	-	V21	C	6	7	8
Model		Wetted Materials		O/C: Pump S/K: Service Kit			
Magnetic Drive Gear Pump Suction Shoe Style Two Spur Gears/DP120, 48 or 40 Stationary Shafts PTFE Bevel Seal (Qty 1)							



## Performance-High Viscosity



$$\text{Watts} = \frac{\text{Torque [mNm]} \times \text{Speed [RPM]}}{9555}$$

$$\text{HP} = \frac{\text{Torque [oz-in]} \times \text{Speed [RPM]}}{1.008 \times 10^6}$$


To calculate torque, multiply correction factor by torque from viscosity curve above.

Torque Correction Factors: For Higher Viscosity Liquids				
Viscosity [cp]		1	100	1500
Max Speed [RPM]		8000	3450	1750
[Bar]	[psi]			
0.3	5	0.2	1	2.9
1.4	20	0.2	1	2.8
2.8	40	0.2	1	2.7
4.1	60	0.2	1	2.6
5.5	80	0.2	1	2.5

Magnet Decouple Torque			
Driven Magnet	Driving Magnet	Torque [mNm]	Torque [oz.in]
Ferrite	Ferrite	78	11

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G	A	-	V21	C	6	7	8																										
1	2	3	4	5	6	7	8																										
Model				Wetted Materials																													

## Specifications

	SI	US
Displacement	0.042 ml/rev	0.01 gal/1000*rev
Max Flow (4 Pole Speed)	70 ml/mn 1450 RPM (50Hz)	1.2 gal/hr 1750 RPM (60Hz)
Max Flow (2 Pole Speed)	120 ml/mn 2850 RPM (50Hz)	2.3 gal/hr 3450 RPM (60Hz)
Max Differential Pressure	1 2.8 Bar	40 psi
Max System Pressure (MAWP)	21 Bar	300 psi
NIPR (Absolute)	180 mBar	2.5 psia
Wet Lift (Typical)	2 51 cm.H <sub>2</sub> O (1450 RPM)	24 in.H <sub>2</sub> O (1750 RPM)
Temp Range	3 See Gear Material	See Gear Material
Viscosity Range	4 0.2 to 1500 cp	0.2 to 1500 cp
Max Speed	8,000 RPM	8,000 RPM
Rotation (Facing Motor Shaft)	CW	CW
Weight (Pumphead)	0.34 kg	0.75 lbs
Dimensions (LxWxH)	See Drawing	See Drawing
Ports	1/8-27 (F) NPT Side Ports	1/8-27 (F) NPT Side Ports
Driven Magnet (Standard)	Ferrite	Ferrite
Optional Internal Bypass	No	No

**Notes**

- 1 See Product Options. Max pressure depends on gear material.
- 2 Priming ability varies with operating conditions.
- 3 See Product Options for specific temp limits.
- 4 See Performance-High Viscosity for viscosity limits.

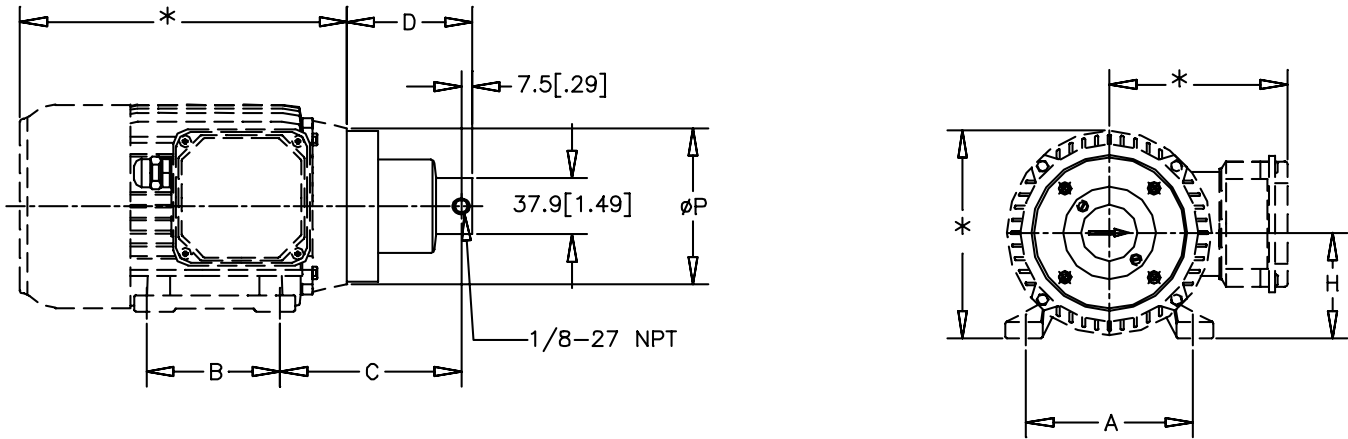
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<b>Order Code</b>				<b>Pump Construction</b>			
<b>Base Code</b>		Gear Set		Drive Mount		<b>Options</b>	
G	A	-	V21	C			2/4/6
1	2	3	4	5	6	7	8
Model			Wetted Materials			O/C: Pump S/K: Service Kit	
<b>Magnetic Drive Gear Pump</b> Suction Shoe Style Two Spur Gears/DP120, 48 or 40 Stationary Shafts PTFE Bevel Seal (Qty 1)							



## Dimensions



MOUNT	A mm [in]	B mm [in]	C mm [in]	D mm [in]	H mm [in]	P mm [in]
IEC56B14B3	90 [3.54]	71 [2.80]	100.5 [3.96]	71.8 [2.83]	56 [2.20]	80 [3.15]
IEC63B14B3	100 [3.94]	80 [3.15]	110.1 [4.33]	77.5 [3.05]	63 [2.48]	90 [3.54]
IEC71B14B3	112 [4.41]	90 [3.54]	122.1 [4.81]	84.5 [3.33]	71 [2.80]	105 [4.13]

### NOTES:

- \*THESE DIMENSIONS WILL VARY BASED ON MOTOR SELECTION.
- ALL DIMENSIONS ARE NOMINAL.

ACTUAL PERFORMANCE MAY VARY - Specifications are subject to change without notice. When multiple specs are noted, the most conservative value applies.


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GA305 Rev A  
 Dimensions 1  
 Printed 06-Oct-05

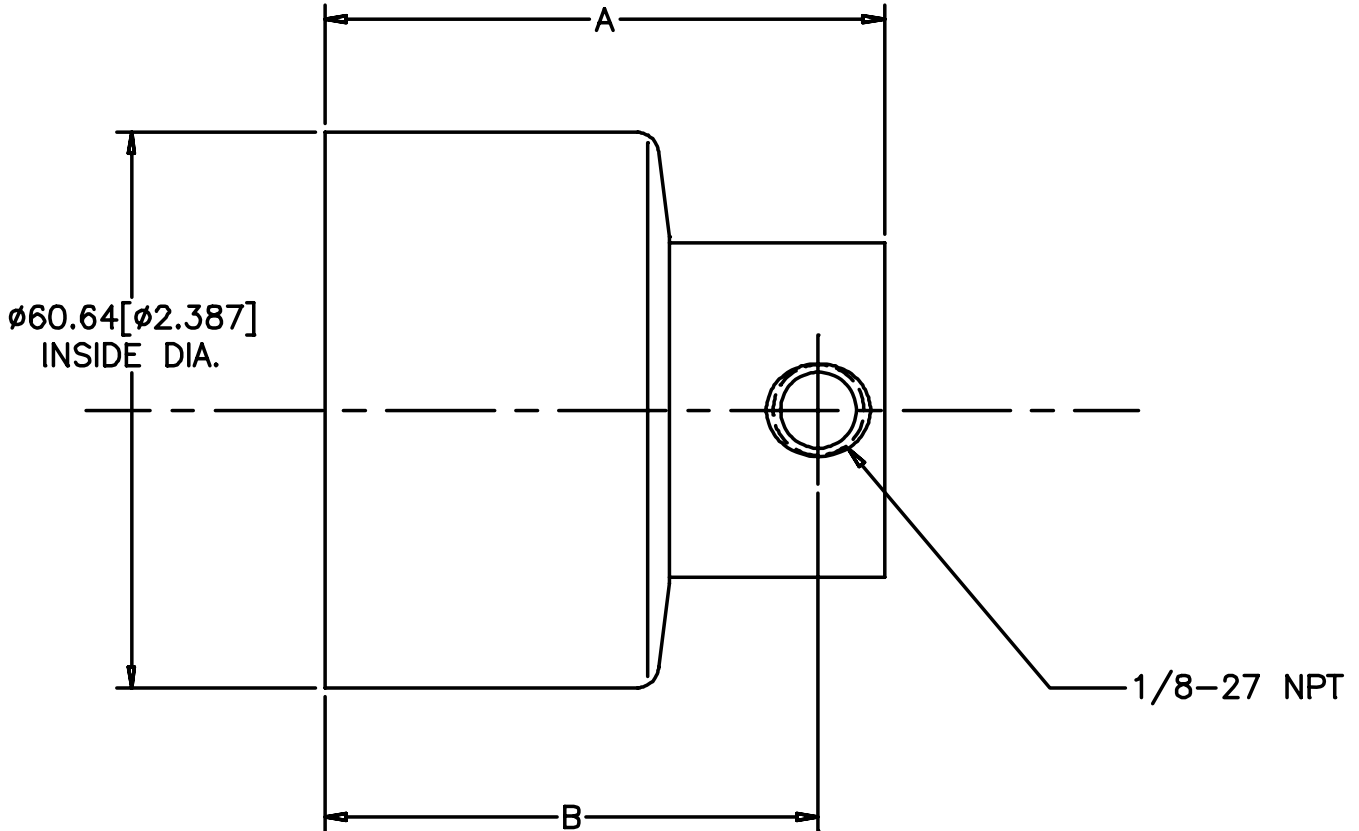


# Technical Data

# Series GA

<b>Order Code</b>								<b>Pump Construction</b>	
<b>Base Code</b>		Gear Set		Drive Mount		<b>Options</b>		 <p>Magnetic Drive Gear Pump Suction Shoe Style Two Spur Gears/DP120, 48 or 40 Stationary Shafts PTFE Bevel Seal (Qty 1)</p>	
G	A	-	V21	C			A/B		
1	2	3	4	5	6	7	8		
Model				Wetted Materials				O/C: Pump S/K: Service Kit	

## Dimensions



A (MAX) mm [in]	B mm [in]
63.5 [2.50]	56 [2.20]

### NOTES:

1. ALL DIMENSIONS ARE NOMINAL.

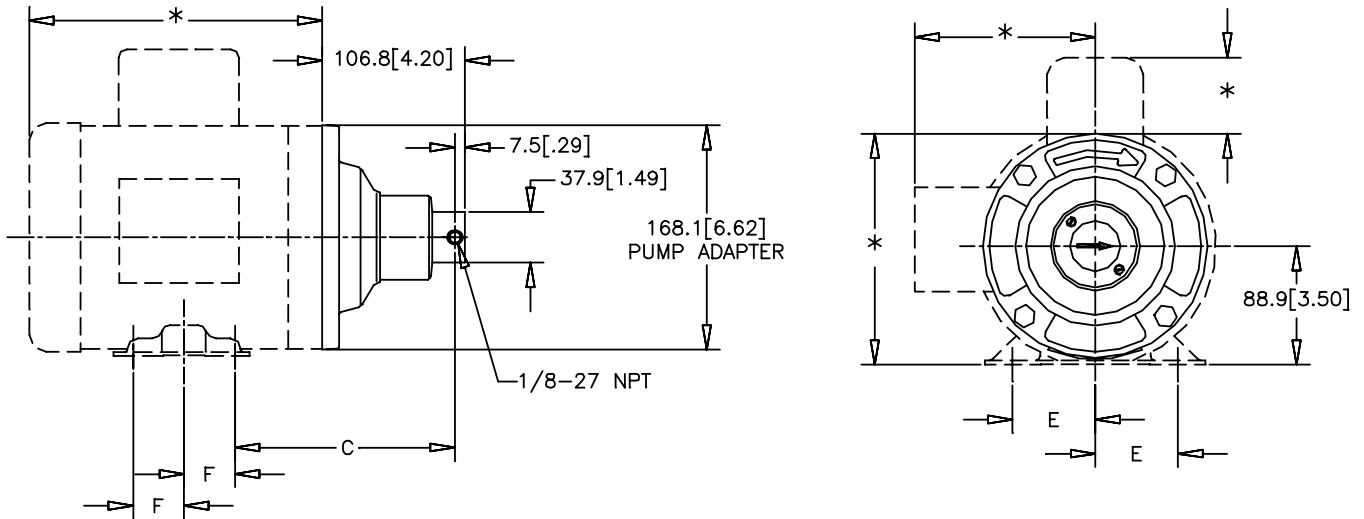
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<b>Order Code</b>				<b>Pump Construction</b>			
<b>Base Code</b>		Gear Set		Drive Mount		<b>Options</b>	
G	A	-	V21	C	E		
1	2	3	4	5	6	7	8
Model			Wetted Materials			O/C: Pump S/K: Service Kit	
Magnetic Drive Gear Pump Suction Shoe Style Two Spur Gears/DP120, 48 or 40 Stationary Shafts PTFE Bevel Seal (Qty 1)							



## Dimensions



MOUNT	C mm [in]	E mm [in]	F mm [in]
NEMA <sup>E</sup> 56C	164.6 [6.48]	61.9 [2.44]	38.1 [1.50]
NEMA <sup>K</sup> 143TC	159.9 [6.30]	69.9 [2.75]	50.8 [2.00]
NEMA <sup>K</sup> 145TC	159.9 [6.30]	69.9 [2.75]	63.5 [2.50]

**NOTES:**

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GA304 Rev A  
 Dimensions 1  
 Printed 06-Oct-05



# Technical Data

# Series GA

<b>Order Code</b>				<b>Options</b>			
<b>Base Code</b>		<b>Gear Set</b>		<b>Drive Mount</b>			
G	A	-	T23				
1	2	3	4	5	6	7	8
Model			Wetted Materials				
							O/C: Pump S/K: Service Kit

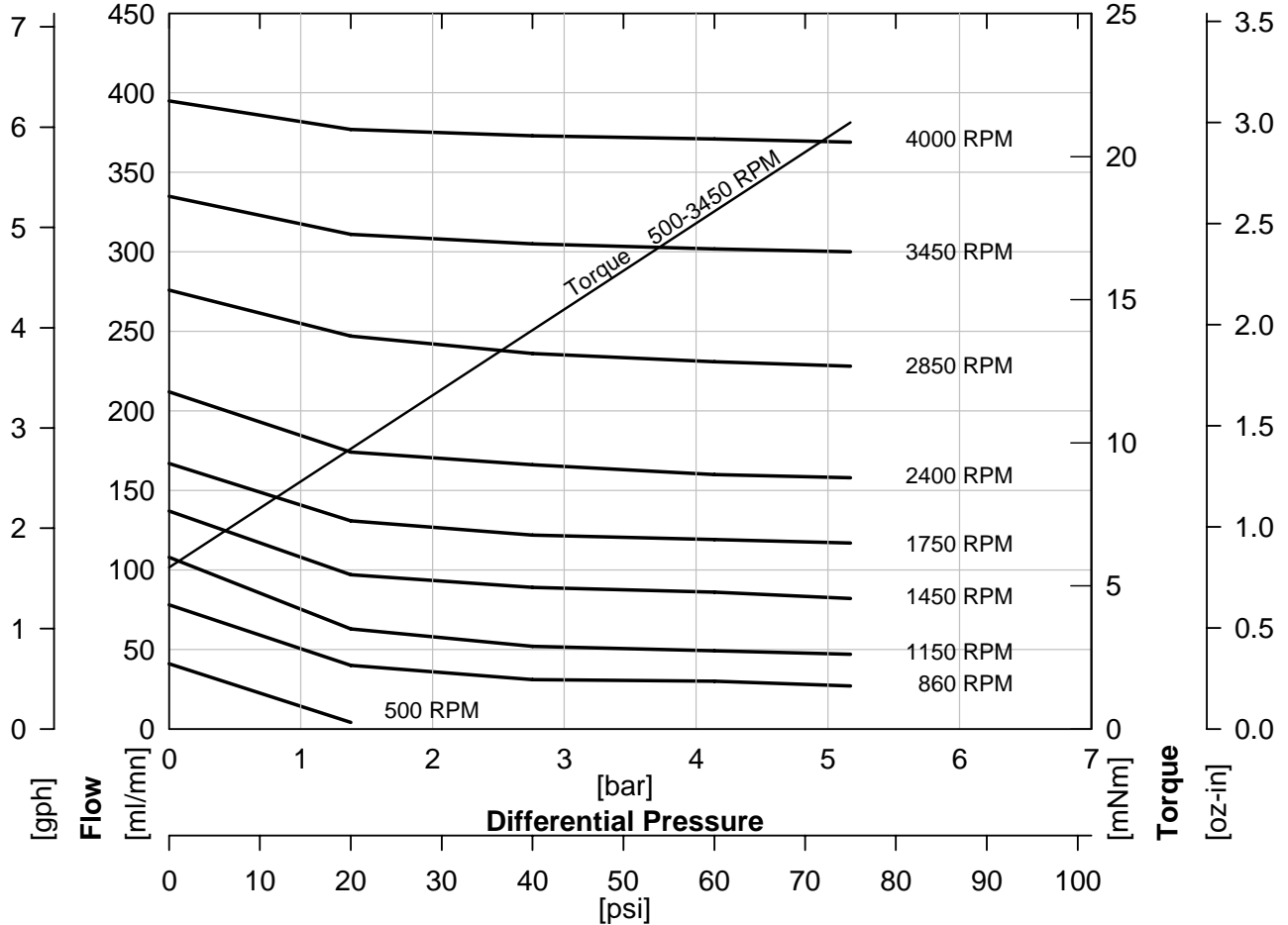
**Pump Construction**  
 Magnetic Drive Gear Pump  
 Suction Shoe Style  
 Two Spur Gears/DP120, 48 or 40  
 Stationary Shafts  
 PTFE Bevel Seal (Qty 1)



## Performance

GA-T23

Water @ 1 CP



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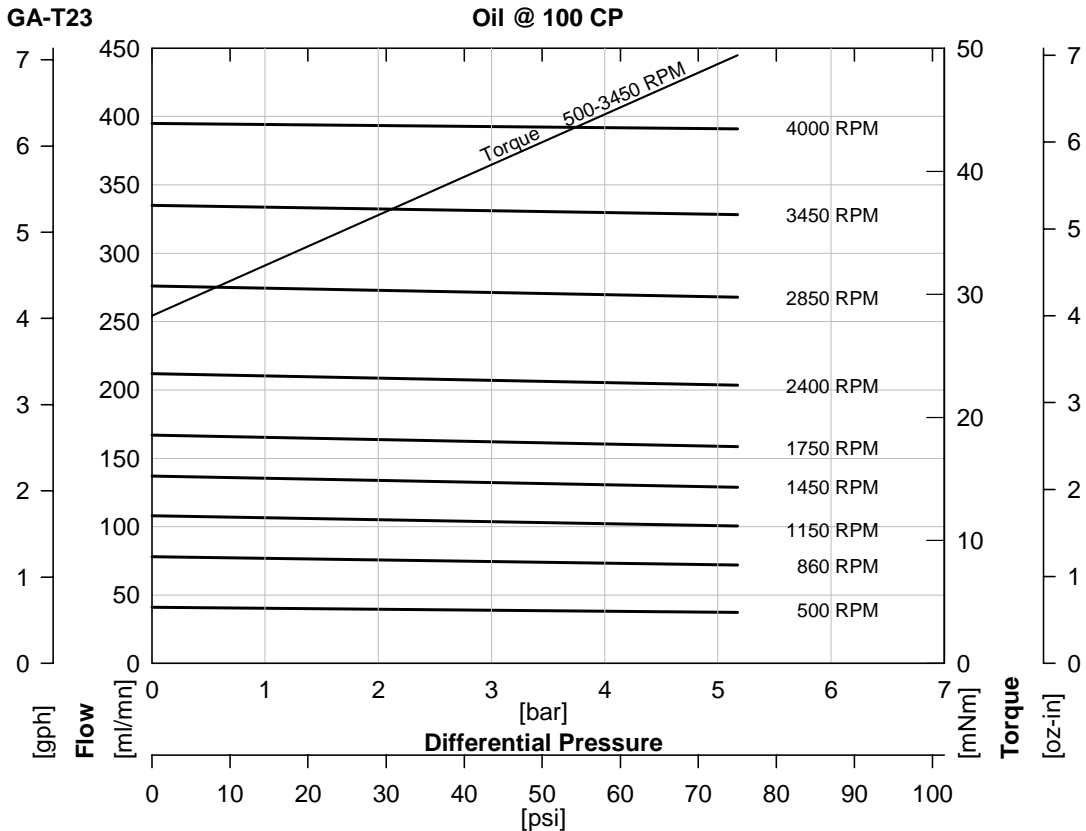
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GA700 Rev A  
Page 1

<b>Order Code</b>				<b>Pump Construction</b>			
<b>Base Code</b>		Gear Set		Drive Mount		<b>Options</b>	
G	A	-	T23	●	●	●	
1	2	3	4	5	6	7	8
Model			Wetted Materials				
							O/C: Pump S/K: Service Kit
				Magnetic Drive Gear Pump Suction Shoe Style Two Spur Gears/DP120, 48 or 40 Stationary Shafts PTFE Bevel Seal (Qty 1)			



## Performance-High Viscosity



$$\text{Watts} = \frac{\text{Torque [mNm]} \times \text{Speed [RPM]}}{9555}$$

$$\text{HP} = \frac{\text{Torque [oz-in]} \times \text{Speed [RPM]}}{1.008 \times 10^6}$$

To calculate torque, multiply correction factor by torque from viscosity curve above.

Torque Correction Factors: For Higher Viscosity Liquids				
Viscosity [cp]		1	100	1500
Max Speed [RPM]		8000	3450	1750
[Bar]	[psi]			
0.3	5	0.2	1	3.0
1.4	20	0.2	1	2.8
2.8	40	0.3	1	2.7
4.1	60	0.4	1	2.5
5.5	80	0.4	1	2.4


Magnet Decouple Torque			
Driven Magnet	Driving Hub	Torque [mNm]	Torque [oz.in]
Ferrite	Ferrite	78	11

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<b>Order Code</b>				<b>Pump Construction</b>			
<b>Base Code</b>		Gear Set		Drive Mount		<b>Options</b>	
G	A	-	T23				
1	2	3	4	5	6	7	8
Model				Wetted Materials			
				O/C: Pump S/K: Service Kit			

**Pump Construction**  
 Magnetic Drive Gear Pump  
 Suction Shoe Style  
 Two Spur Gears/DP120, 48 or 40  
 Stationary Shafts  
 PTFE Bevel Seal (Qty 1)



## Specifications

	SI	US
Displacement	0.092 ml/rev	0.02 gal/1000*rev
Max Flow (4 Pole Speed)	140 ml/mn 1450 RPM (50Hz)	2.6 gal/hr 1750 RPM (60Hz)
Max Flow (2 Pole Speed)	270 ml/mn 2850 RPM (50Hz)	5.1 gal/hr 3450 RPM (60Hz)
Max Differential Pressure	1 5.2 Bar	75 psi
Max System Pressure (MAWP)	21 Bar	300 psi
NIPR (Absolute)	180 mBar	2.5 psia
Wet Lift (Typical)	2 51 cm.H <sub>2</sub> O (1450 RPM)	24 in.H <sub>2</sub> O (1750 RPM)
Temp Range	3 See Gear Material	See Gear Material
Viscosity Range	4 0.2 to 1500 cp	0.2 to 1500 cp
Max Speed	8,000 RPM	8,000 RPM
Rotation (Facing Motor Shaft)	CW	CW
Weight (Pumphead)	0.34 kg	0.75 lbs
Dimensions (LxWxH)	See Drawing	See Drawing
Ports	1/8-27 (F) NPT Side Ports	1/8-27 (F) NPT Side Ports
Driven Magnet (Standard)	Ferrite	Ferrite
Optional Internal Bypass	No	No

**Notes**

- 1 See Product Options. Max pressure depends on gear material.
- 2 Priming ability varies with operating conditions.
- 3 See Product Options for specific temp limits.
- 4 See Performance-High Viscosity for viscosity limits.

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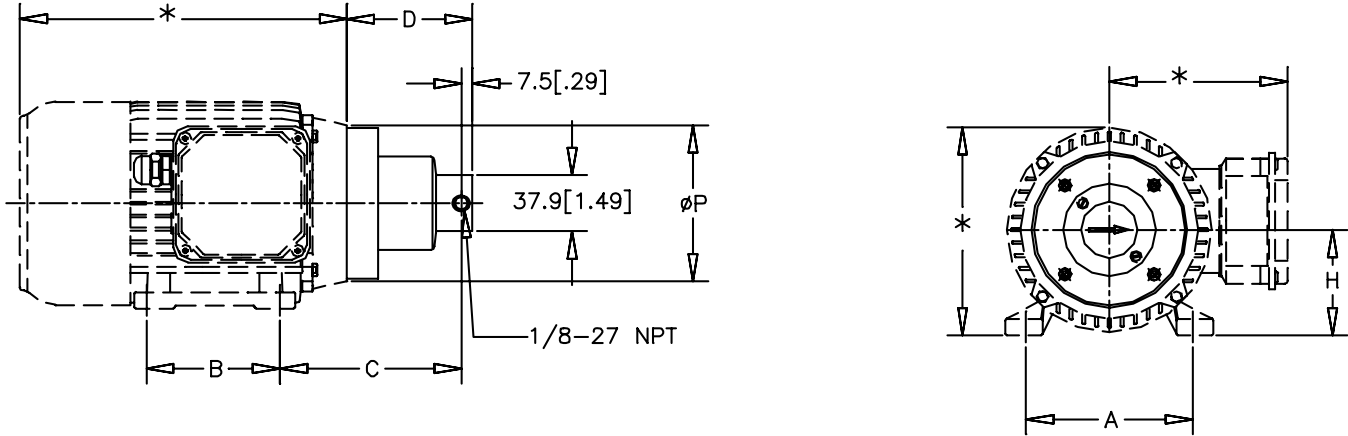
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<b>Order Code</b>				<b>Pump Construction</b>			
<b>Base Code</b>		Gear Set		Drive Mount		<b>Options</b>	
G	A	-	T23			2/4/6	
1	2	3	4	5	6	7	8
Model				Wetted Materials			
				O/C: Pump S/K: Service Kit			
				Magnetic Drive Gear Pump Suction Shoe Style Two Spur Gears/DP120, 48 or 40 Stationary Shafts PTFE Bevel Seal (Qty 1)			



## Dimensions



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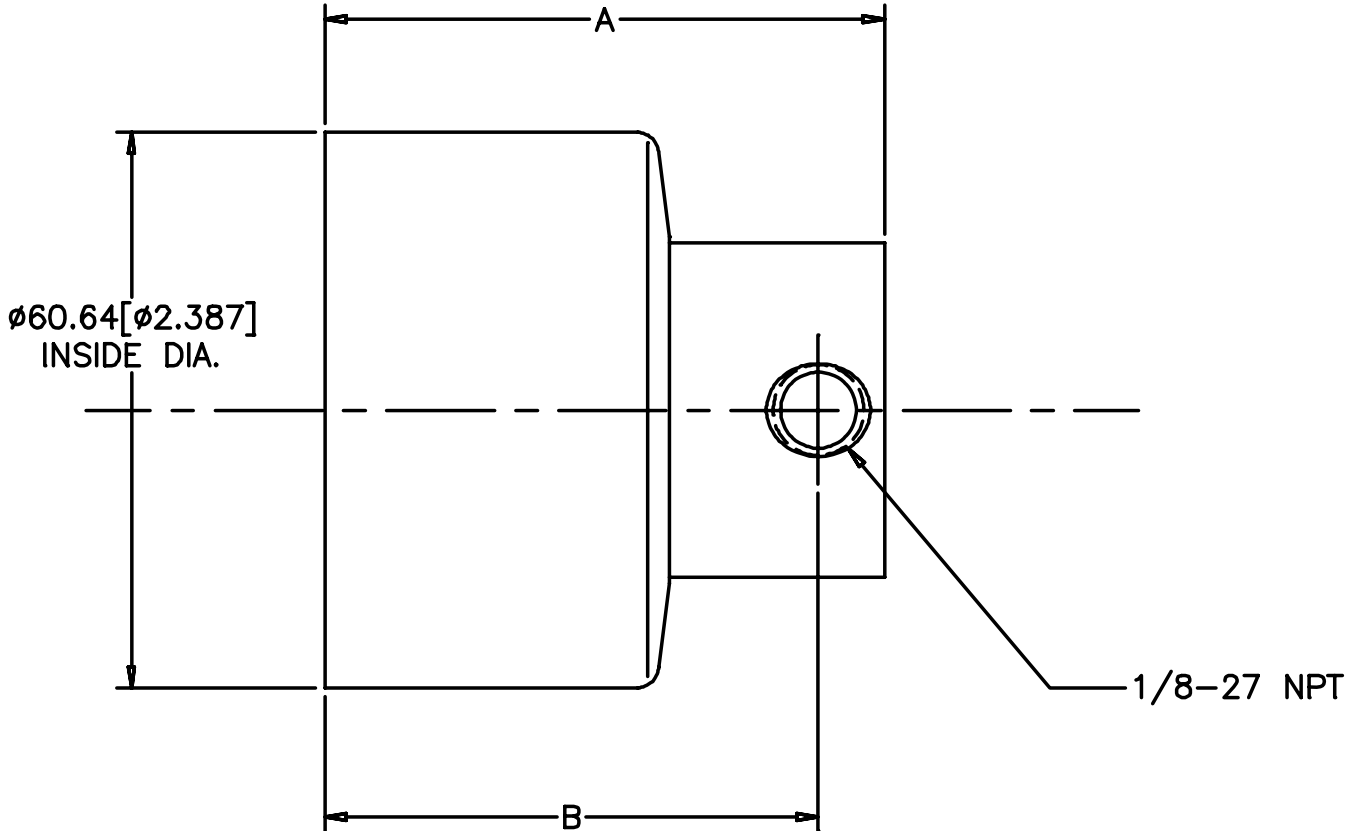
# Technical Data

# Series GA

<b>Order Code</b>				<b>Pump Construction</b>			
<b>Base Code</b>		Gear Set		Drive Mount		<b>Options</b>	
G	A	-	T23			A/B	
1	2	3	4	5	6	7	8
Model				Wetted Materials			
				O/C: Pump S/K: Service Kit			
				Magnetic Drive Gear Pump Suction Shoe Style Two Spur Gears/DP120, 48 or 40 Stationary Shafts PTFE Bevel Seal (Qty 1)			



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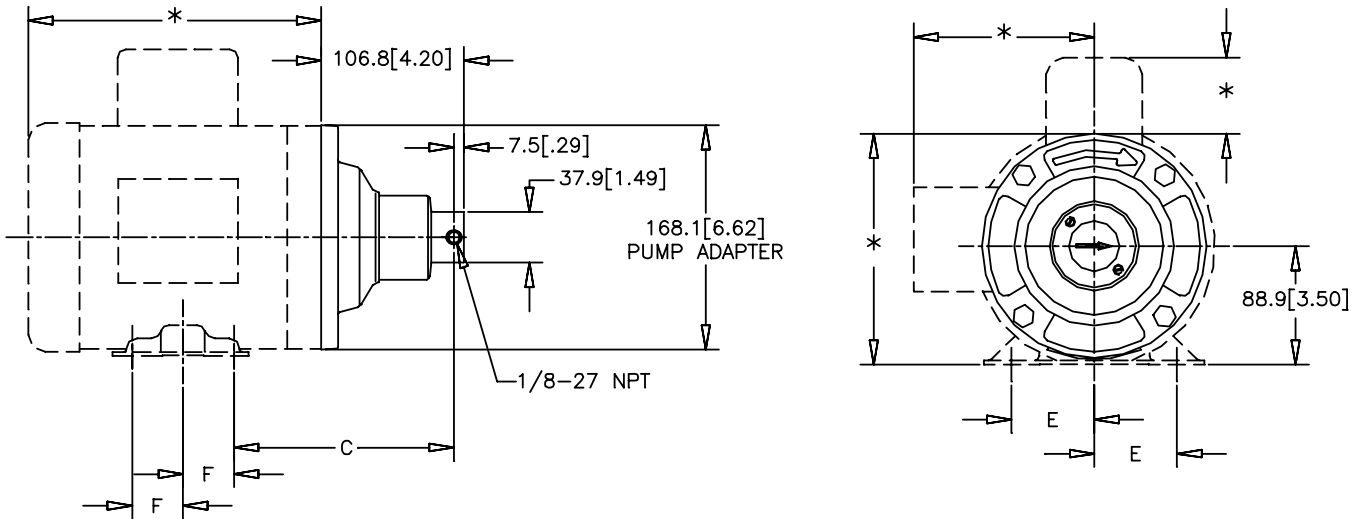
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<b>Order Code</b>				<b>Pump Construction</b>			
<b>Base Code</b>		Gear Set		Drive Mount		<b>Options</b>	
G	A	-	T23	5	6	7	E
1	2	3	4	5	6	7	8
Model				Wetted Materials			
				O/C: Pump S/K: Service Kit			
				<b>Magnetic Drive Gear Pump</b> Suction Shoe Style Two Spur Gears/DP120, 48 or 40 Stationary Shafts PTFE Bevel Seal (Qty 1)			



## Dimensions



MOUNT	C mm [in]	E mm [in]	F mm [in]
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