

<p>Order Code</p> <p style="text-align: center;"> Gear Set Drive Mount </p> <p>Base Code</p> <table border="1" style="width: 100%; text-align: center; border-collapse: collapse;"> <tr> <td style="width: 12.5%;">G</td> <td style="width: 12.5%;">A</td> <td style="width: 12.5%;"></td> <td style="width: 12.5%;"></td> <td style="width: 12.5%;"></td> <td style="width: 12.5%;"></td> <td style="width: 12.5%;"></td> <td style="width: 12.5%;"></td> <td style="width: 12.5%;"></td> <td style="width: 12.5%;"></td> </tr> <tr> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> <td>6</td> <td>7</td> <td>8</td> <td colspan="2"></td> </tr> <tr> <td colspan="3">Model</td> <td colspan="3">Wetted Materials</td> <td colspan="4"></td> </tr> </table> <p style="text-align: right; margin-top: 5px;"> O/C: Pump S/K: Service Kit </p>	G	A									1	2	3	4	5	6	7	8			Model			Wetted Materials							<p>Pump Construction</p> <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																														
1	2	3	4	5	6	7	8																								
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	Product Series		<i>Max System Pressure (MAWP)</i>	<i>Ports</i>		
	A	Series 180	21 Bar (300 psi)	1/8-27 (F) NPT Side Ports		
3	Design Modifier					
	-	Standard Design				
	H	High System Pressure		1		
4	Gear Set (Width/N°Gears/Pitch)	<i>Displacement</i>	<i>Max Differential Pressure</i>	<i>Driven Magnet (Standard)</i>		
	X21	0.063/2/120	0.017 ml/rev (.0045 gal/1000*r	1.4 Bar (20 psi)	Ferrite	2
	V21	0.063/2/48	0.042 ml/rev (0.01 gal/1000*re	2.8 Bar (40 psi)	Ferrite	2
	V23	0.125/2/48	0.084 ml/rev (0.02 gal/1000*re	2.8 Bar (40 psi)	Ferrite	2
	T23	0.125/2/40	0.092 ml/rev (0.02 gal/1000*re	5.2 Bar (75 psi)	Ferrite	3
5	Gear Material		<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)		
	K	PPSKV (aramid fiber)	5.2 Bar (75 psi)	-46/177°C (-50/350°F)		
6	Static Seals			<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)		
	B	Buna N		-29/121°C (-20/250°F)		
	K	Kalrez®		-29/260°C (-20/500°F)		
7	Base Materials					
	S	SS316				
	D	Alloy 20				
	T	Titanium				
	C	Hast C-276®				
	B	Hast B-2®				
8	Drive Mount		<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)	21 Bar (300 psi)	0.31 kg (0.68 lbs)		
	G	MP Integral Series® (SS316)	21 Bar(300 psi) SS316	0.37 kg (0.82 lbs)	4	
	E	NEMA 56C	21 Bar (300 psi)	1.1 kg (2.4 lbs)	5	
	K	NEMA 143/145TC	21 Bar (300 psi)	1.1 kg (2.4 lbs)	5	
	2	IEC 56-B14	21 Bar (300 psi)	1.1 kg (2.4 lbs)	6	
	3	IEC 63-B5	21 Bar (300 psi)	1.1 kg (2.4 lbs)	5	
	4	IEC 63-B14	21 Bar (300 psi)	1.1 kg (2.4 lbs)	5	
	5	IEC 71-B5	21 Bar (300 psi)	1.1 kg (2.4 lbs)	5	
	6	IEC 71-B14	21 Bar (300 psi)	1.1 kg (2.4 lbs)	5	

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G	A																									
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				O/C: Pump S/K: Service Kit																						

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

Driven Magnet (PC12)			
M1	SmCo Driven (Segments)		7
Driving Magnet (PC13)			
N1	SmCo Driving (Segments)		7
N3	NdFeB Driving (Ring)		7
High System Pressure (PC14) <i>Max System Pressure (MAWP)</i>			
CH20	2000 psi (Machined Cup)	138 Bar(2000 psi) Side Ports	8
CH50	5000 psi (Machined Cup)	345 Bar(5000 psi) Deck Ports	9
Ports/Fittings (PC17) <i>Ports</i>			
F5	Tri-Clamp (TC25) Fittings	1/2" 316L SS Ferrule	

Notes

- 1 Also select High System Pressure Option (PC14)
- 2 Carbon Graphite gears and shoe. Consult factory for other materials.
- 3 Not available in Carbon Graphite or PTFE.
- 4 Integral Series® SS316 only. Consult factory for other materials.
- 5 "A" mount aluminum adapter, packaged separately. Includes magnet hub.
- 6 "A" mount plastic adapter, packaged separately. Includes magnet hub.
- 7 Application details required before order entry.
- 8 Use with PC03:H. SS316 only. (housing: 14 bolt)
- 9 Use with PC03:H. SS316 only. (housing: 8 bolt)

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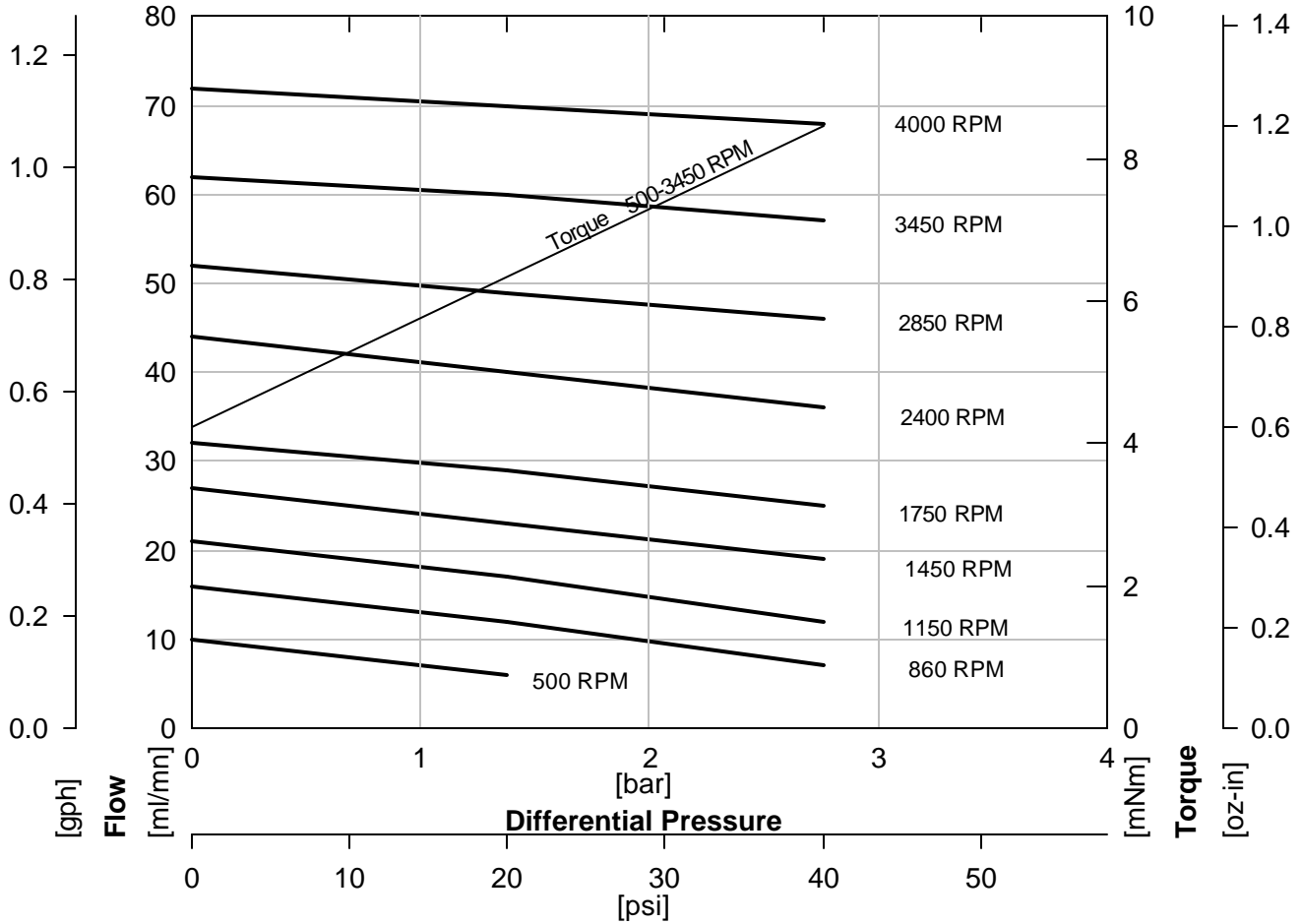
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Base Code		Gear Set		Drive Mount		Options	
G	A	-	X21	C	6	7	8
1	2	3	4	5	6	7	8
Model			Wetted Materials			O/C: Pump S/K: Service Kit	

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-X21

Water @ 1 CP



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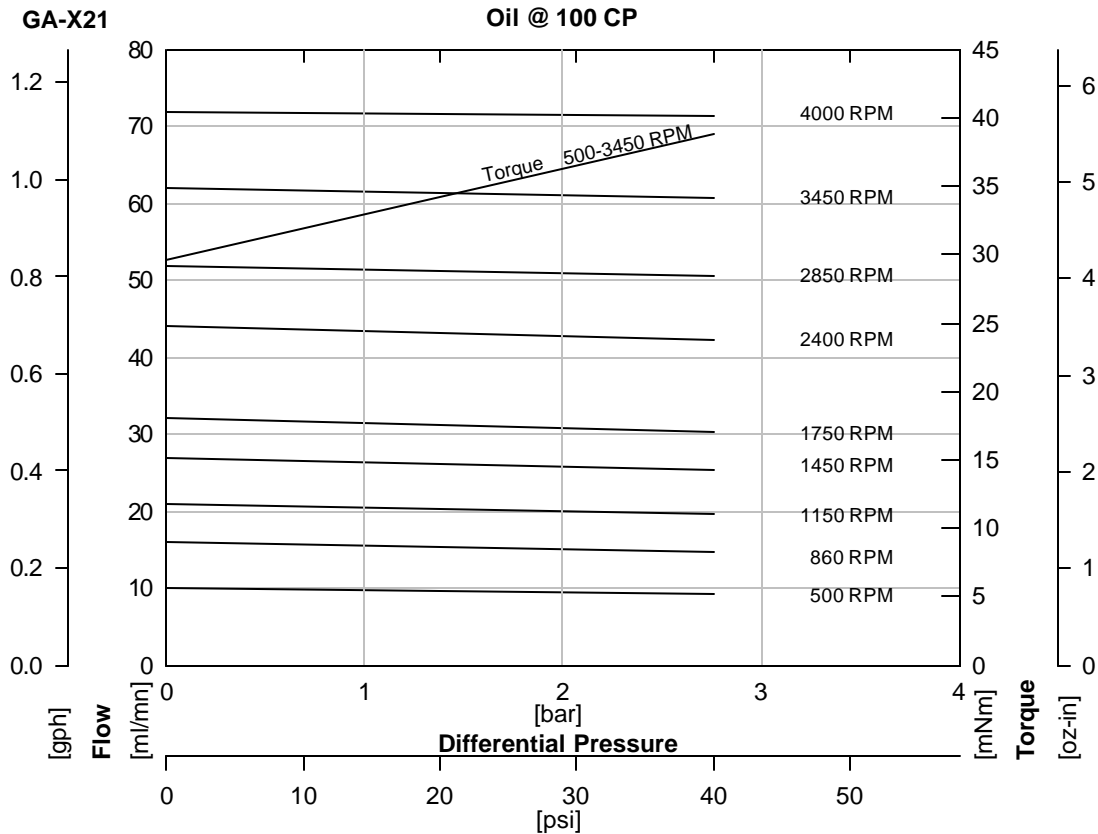
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Base Code		Gear Set		Drive Mount		Options	
G	A	-	X21	C	6	7	8
1 2 Model		3 4 5 Wetted Materials		O/C: Pump S/K: Service Kit			
Magnetic Drive Gear Pump Suction Shoe Style Two Spur Gears/DP120, 48 or 40 Stationary Shafts PTFE Bevel Seal (Qty 1)							



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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Base Code	Gear Set		Drive Mount	Options																	
G	A	-	X21	C																	
1	2	3	4	5																	
Model			Wetted Materials																		

Specification

	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.H ₂ O (1450 RPM)	24 in.H ₂ 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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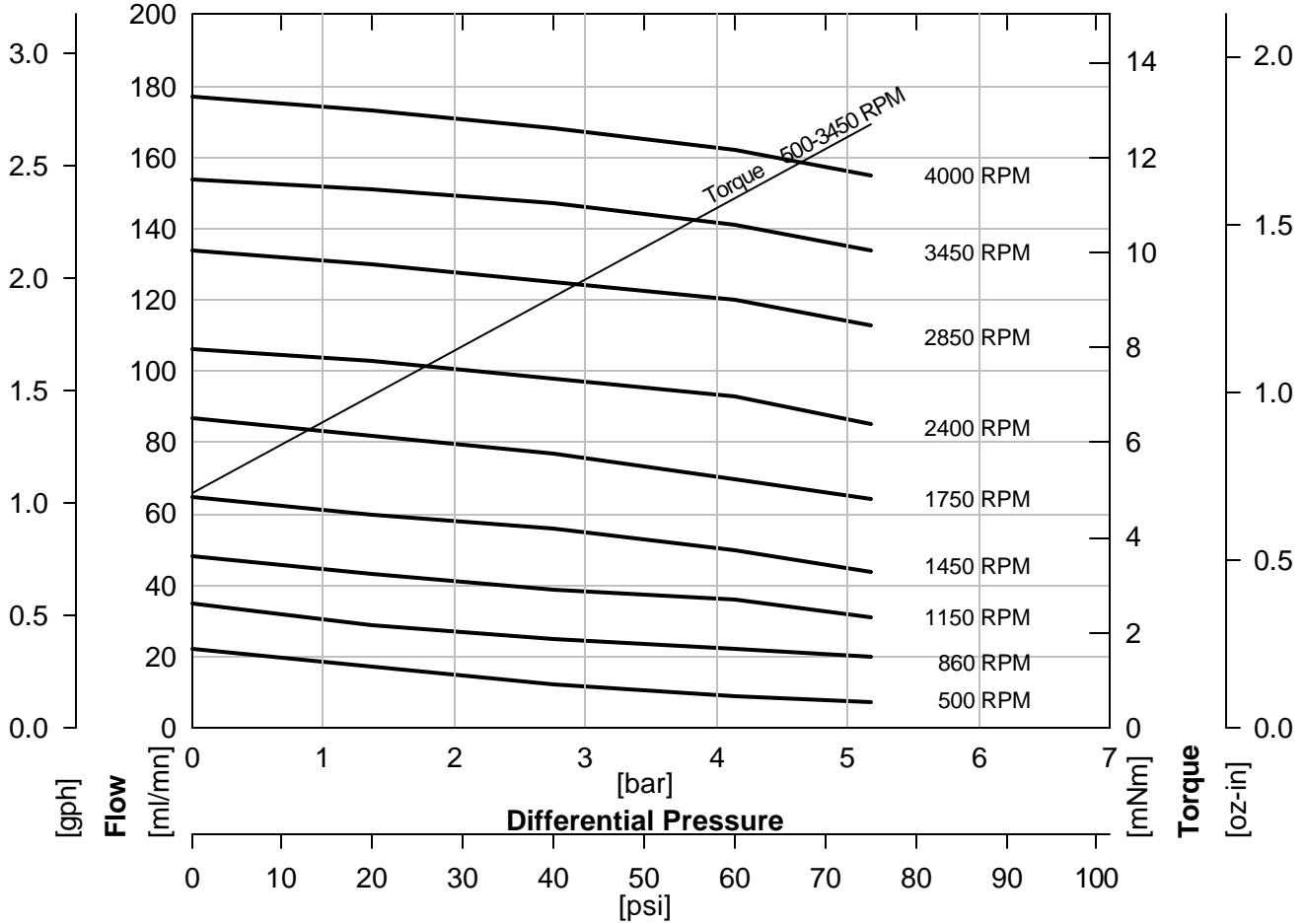
Order Code				Pump Construction			
Base Code		Gear Set		Drive Mount		Options	
G	A	-	V21	C	6	7	8
1	2	3	4	5	6	7	8
Model				Wetted Materials		O/C: Pump S/K: Service Kit	

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-V21

Water @ 1 CP



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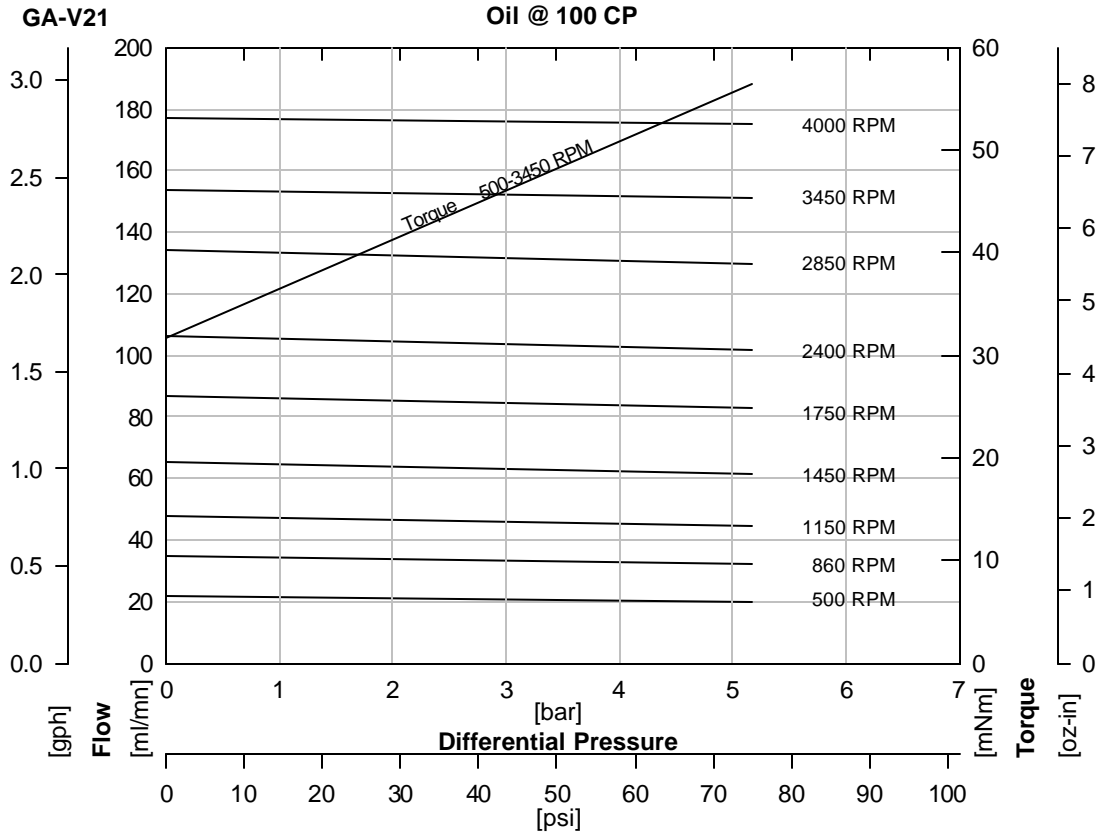
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Order Code				Pump Construction				
Base Code		Gear Set	Drive Mount		Options			
G	A	-	V21	C	6	7		
1	2	3	4	5	6	7		
Model				Wetted Materials		O/C: Pump S/K: Service Kit		
Magnetic Drive Gear Pump Suction Shoe Style Two Spur Gears/DP120, 48 or 40 Stationary 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 Hub	Torque [mNm]	Torque [oz.in]
Ferrite	Ferrite	78	11


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Base Code	Gear Set		Drive Mount	Options																	
G	A	-	V21	C																	
1	2	3	4	5																	
Model			Wetted Materials																		

Specification

	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 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.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.
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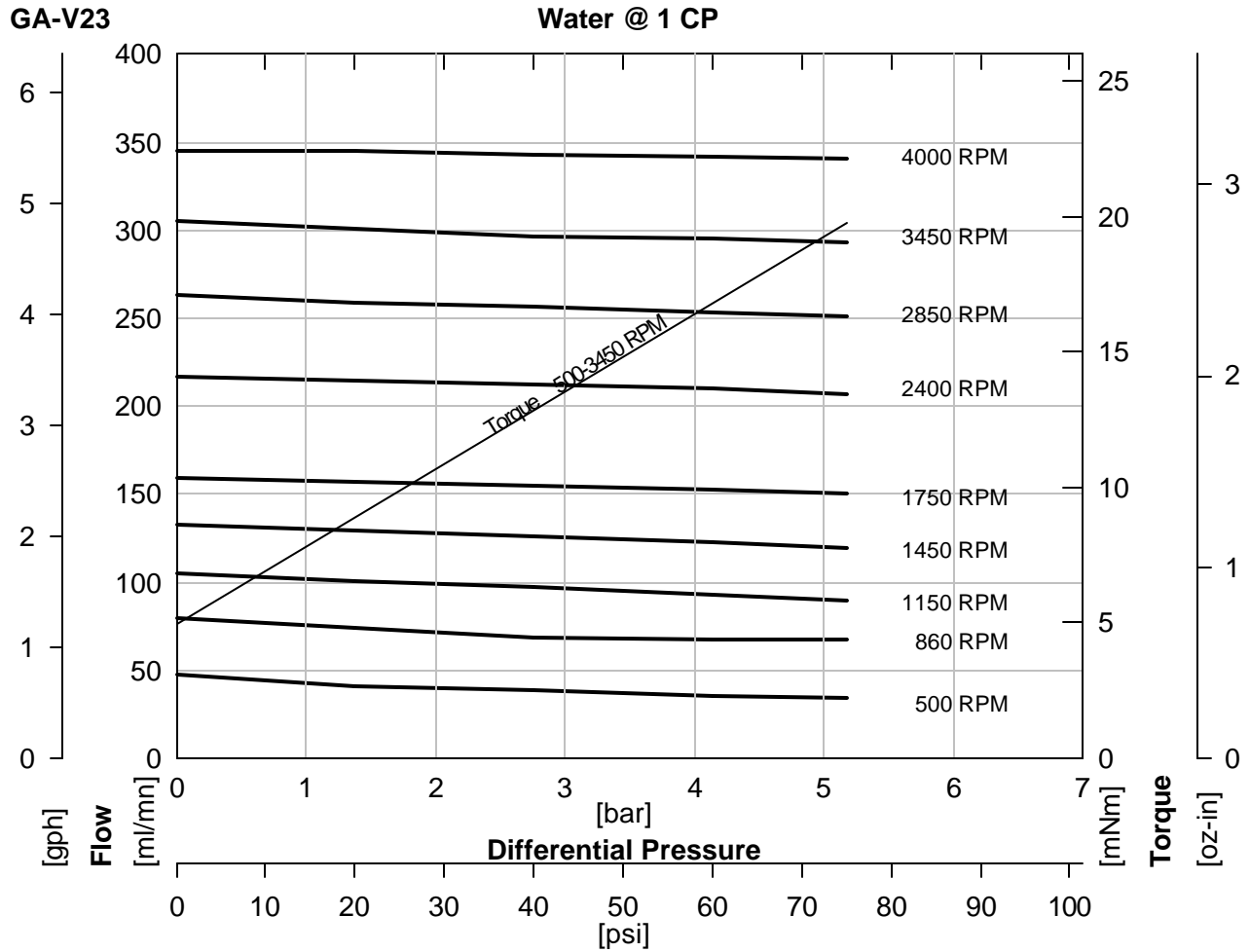
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Base Code		Gear Set		Drive Mount		Options	
G	A	-	V23	C	6	7	8
1	2	3	4	5	6	7	8
Model				Wetted Materials		O/C: Pump S/K: Service Kit	

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

Performance



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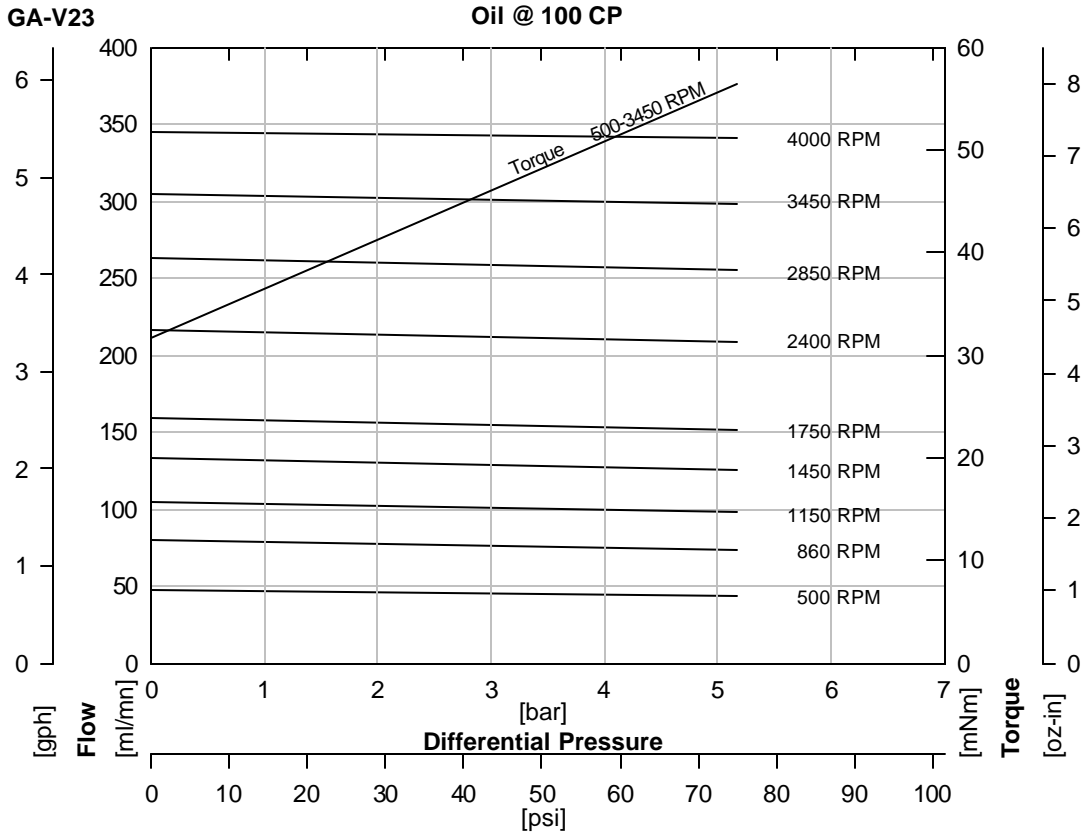
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Base Code		Gear Set	Drive Mount		Options			
G	A	-	V23	C	6	7		
1	2	3	4	5	6	7		
Model				Wetted Materials		O/C: Pump S/K: Service Kit		
Pump Construction Magnetic Drive Gear Pump Suction Shoe Style Two Spur Gears/DP120, 48 or 40 Stationary Shafts PTFE Bevel Seal (Qty 1)								

Performance-High Viscosity



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

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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	1.8
1.4	20	0.2	1	1.7
2.8	40	0.3	1	1.7
4.1	60	0.3	1	1.7
5.5	80	0.4	1	1.6

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

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<p>Order Code</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15%;">Base Code</td> <td style="width: 15%; text-align: center;">Gear Set</td> <td style="width: 15%;"></td> <td style="width: 15%; text-align: center;">Drive Mount</td> <td style="width: 15%;">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;">-</td> <td style="border: 1px solid black; text-align: center;">V23</td> <td style="border: 1px solid black; text-align: center;">C</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> <td style="text-align: center;">5</td> </tr> <tr> <td colspan="3" style="text-align: center;">Model</td> <td colspan="2" style="text-align: center;">Wetted Materials</td> </tr> </table> <div style="border: 1px solid black; padding: 2px; width: fit-content; margin-top: 5px;"> O/C: Pump S/K: Service Kit </div>	Base Code	Gear Set		Drive Mount	Options	G	A	-	V23	C	1	2	3	4	5	Model			Wetted Materials		<p>Pump Construction</p> <p>Magnetic Drive Gear Pump Suction Shoe Style Two Spur Gears/DP120, 48 or 40 Stationary Shafts PTFE Bevel Seal (Qty 1)</p>
Base Code	Gear Set		Drive Mount	Options																	
G	A	-	V23	C																	
1	2	3	4	5																	
Model			Wetted Materials																		

Specification

	SI	US
Displacement	0.084 ml/rev	0.02 gal/1000*rev
Max Flow (4 Pole Speed)	130 ml/mn 1450 RPM (50Hz)	2.4 gal/hr 1750 RPM (60Hz)
Max Flow (2 Pole Speed)	240 ml/mn 2850 RPM (50Hz)	4.6 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.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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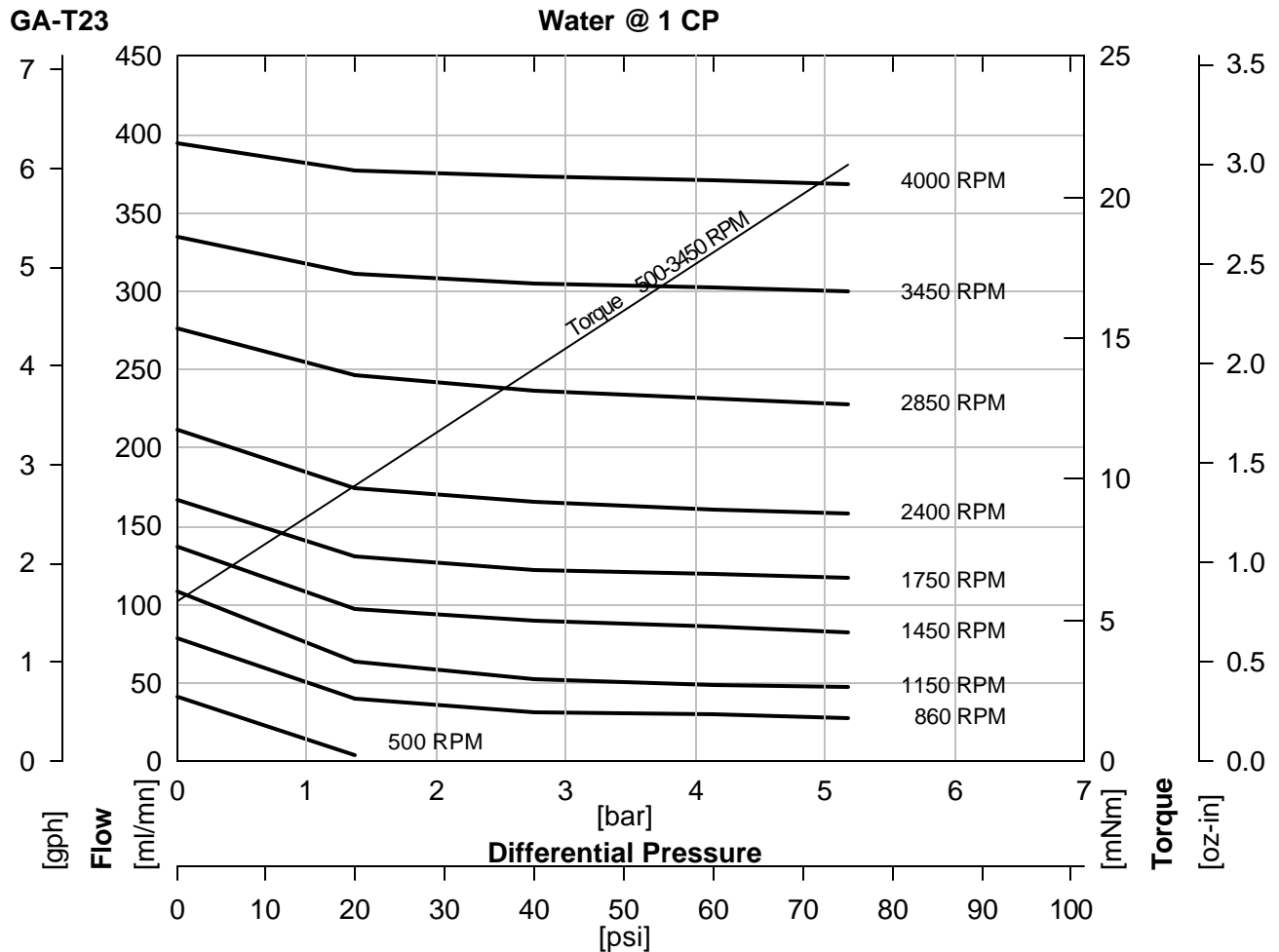
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Order Code				Pump Construction			
Base Code		Gear Set		Drive Mount		Options	
G	A	-	T23	•	•	•	•
1	2	3	4	5	6	7	8
Model			Wetted Materials				O/C: Pump S/K: Service Kit

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

Performance



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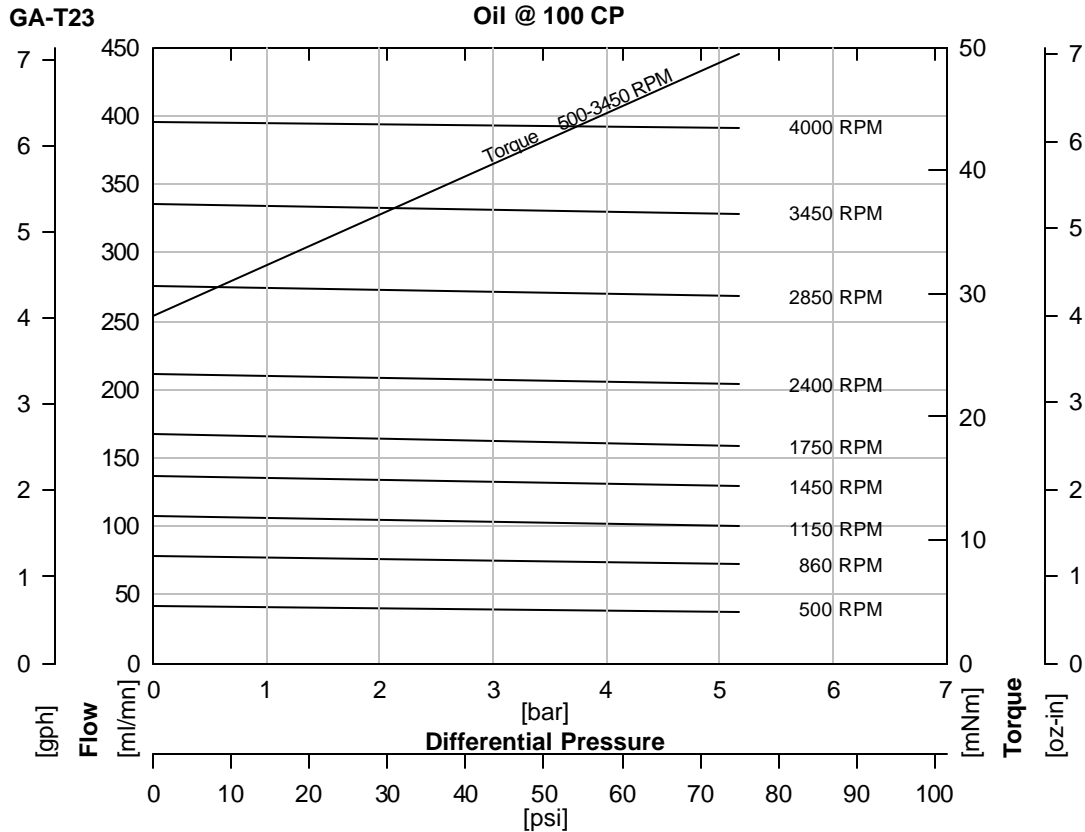
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Order Code				Pump Construction			
Base Code		Gear Set		Drive Mount		Options	
G	A	-	T23	•	•	•	
1	2	3	4	5	6	7	8
Model			Wetted Materials			O/C: Pump S/K: Service Kit	

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

Performance-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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Base Code	Gear Set		Drive Mount	Options																	
G	A	-	T23																		
1	2	3	4	5																	
Model			Wetted Materials																		

Specification

	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 ₂ O (1450 RPM)	24 in.H ₂ 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.
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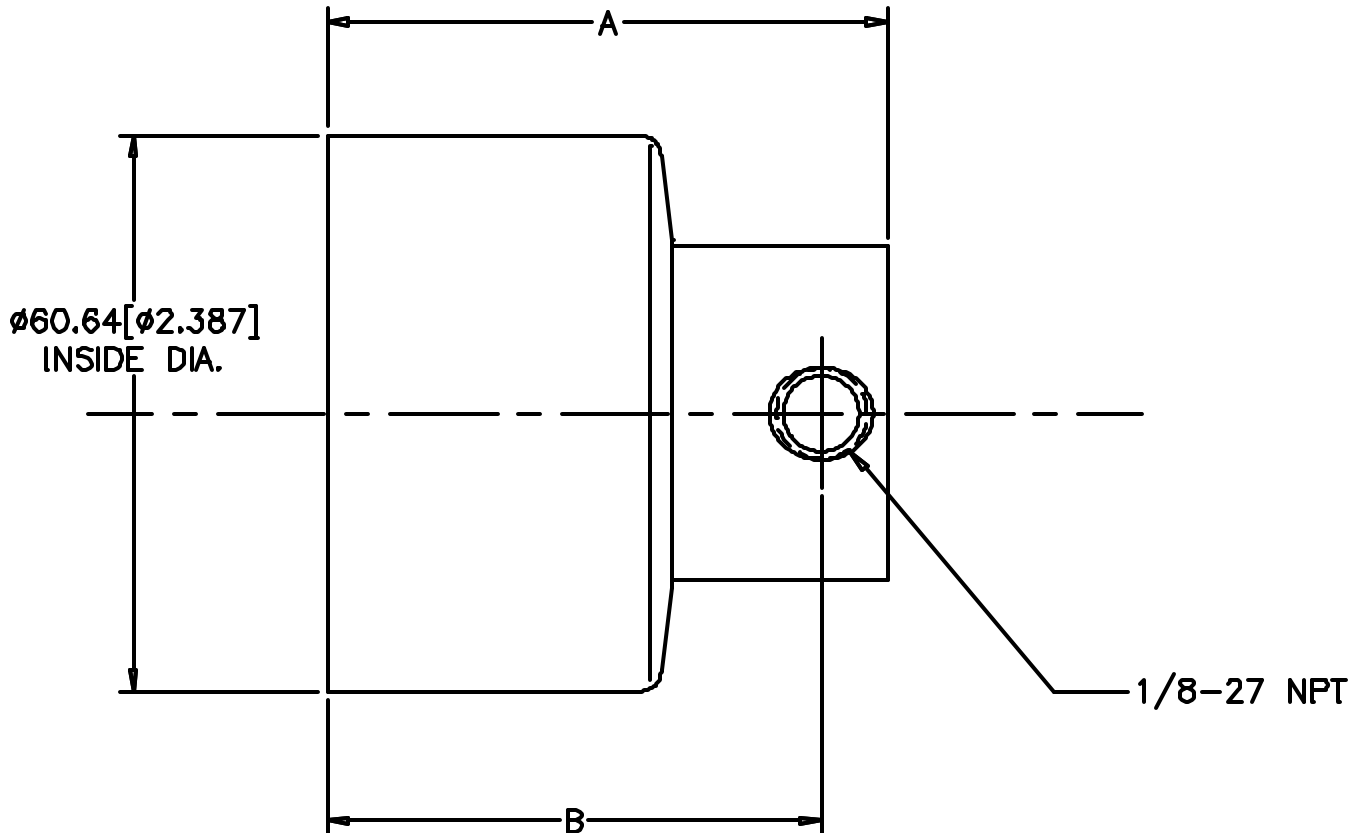
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Order Code								Pump Construction		
Base Code		Gear Set		Drive Mount		Options		 <p>Magnetic Drive Gear Pump Suction Shoe Style Two Spur Gears/DP120, 48 or 40 Stationary Shafts PTFE Bevel Seal (Qty 1)</p>		
G	A	-	X21	C			A			
1	2	3	4	5	6	7	8			
Model				Wetted Materials		O/C: Pump S/K: Service Kit				

Dimension



A (MAX) mm [in]	B mm [in]
63.5 [2.50]	56 [2 20]

NOTES:

- ALL DIMENSIONS ARE NOMINAL.


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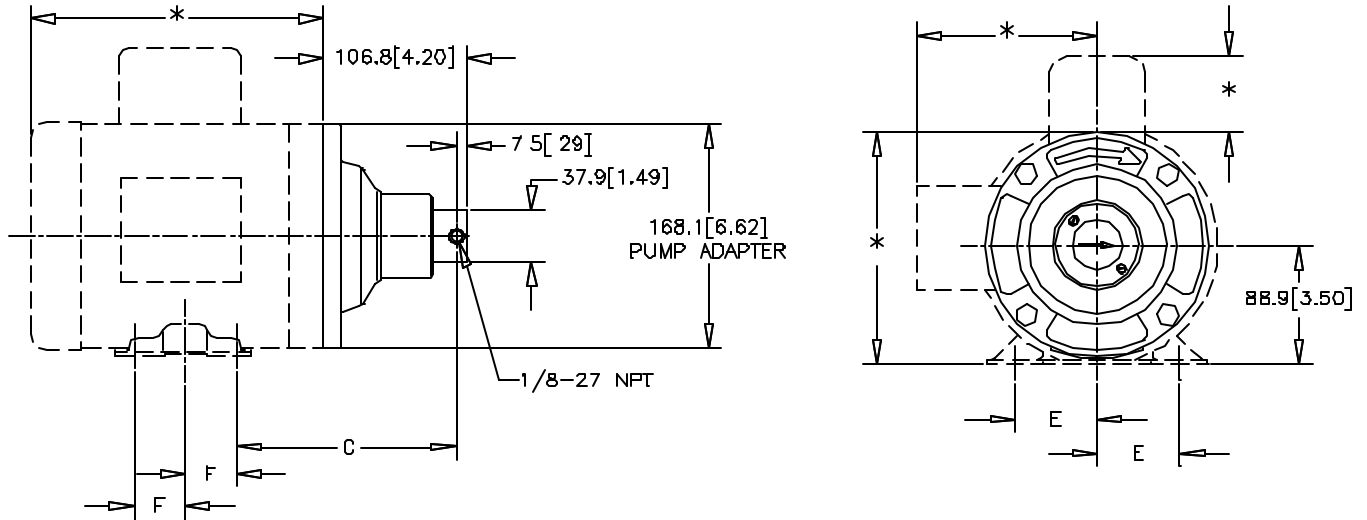
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Order Code								Pump Construction	
Base Code		Gear Set			Drive Mount			Options	
G	A	-	X21	C			E		
1	2	3	4	5	6	7	8		
Model			Wetted Materials					O/C: Pump S/K: Service Kit	
Magnetic Drive Gear Pump Suction Shoe Style Two Spur Gears/DP120, 48 or 40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

Dimension



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

NOTES:

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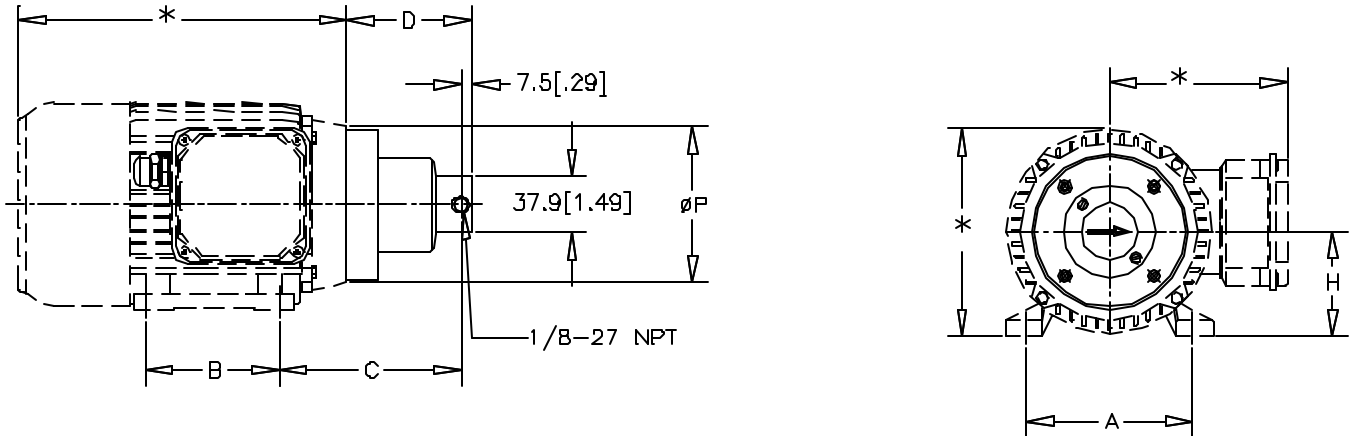
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Order Code								Pump Construction	
Base Code		Gear Set			Drive Mount			Options	
G	A	-	X21	C			2		
1	2	3	4	5	6	7	8		
Model			Wetted Materials			O/C: Pump S/K: Service Kit			
								Magnetic Drive Gear Pump Suction Shoe Style Two Spur Gears/DP120,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



Dimension



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

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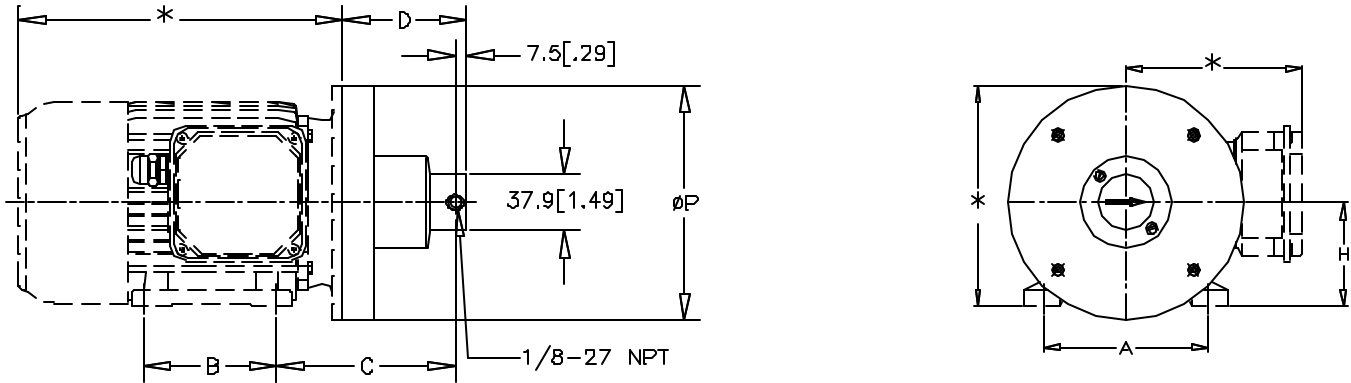
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Order Code								Pump Construction	
Base Code		Gear Set			Drive Mount			Options	
G	A	-	X21	C			3		
1	2	3	4	5	6	7	8		
Model			Wetted Materials			O/C: Pump S/K: Service Kit			
								Magnetic Drive Gear Pump Suction Shoe Style Two Spur Gears/DP120,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



Dimension



MOUNT	A mm [in]	B mm [in]	C mm [in]	D mm [in]	H mm [in]	P mm [in]
³ IEC63B5B3	100 [3.94]	80 [3.15]	110.1 [4.33]	77.5 [3.05]	63 [2.48]	140 [5.51]
⁵ IEC71B5B3	112 [4.41]	90 [3.54]	122.1 [4.81]	84.5 [3.33]	71 [2.80]	160 [6.30]

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Dimensions 1