



Series Overview

Series GA

Order Code								Pump Construction	
Base Code		Gear Set		Wetted Materials		Drive Mount		Options	
G	A								
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)



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	Series GA	Max System Pressure (MAWP) 21 Bar (300 psi)	Ports 1/8-27 (F) NPT Side Ports
3	-	Standard Design		
4		Gear Set (Width/N°Gears/Pitch)	Displacement	Max Differential Pressure Driven Magnet (Standard)
	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		Gear Material		Max Differential Pressure Temp Range
	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		Static Seals		Temp Range
	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		Base Materials		
	S	SS316		
	D	Alloy 20		
	T	Titanium		
	C	Hast C-276®		
8		Drive Mount	Max System Pressure (MAWP)	Weight (Pumphead)
	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)

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.

USA: Micropump, Inc., A Unit of IDEX Corporation • Phone 360.253.2008 • Fax 360.253.2401
UK: Micropump, Ltd., A Subsidiary of Micropump, Inc. • Phone +44 (1480) 356900 • Fax +44 (1480) 356920

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GA000S.2MPV



Technical Data

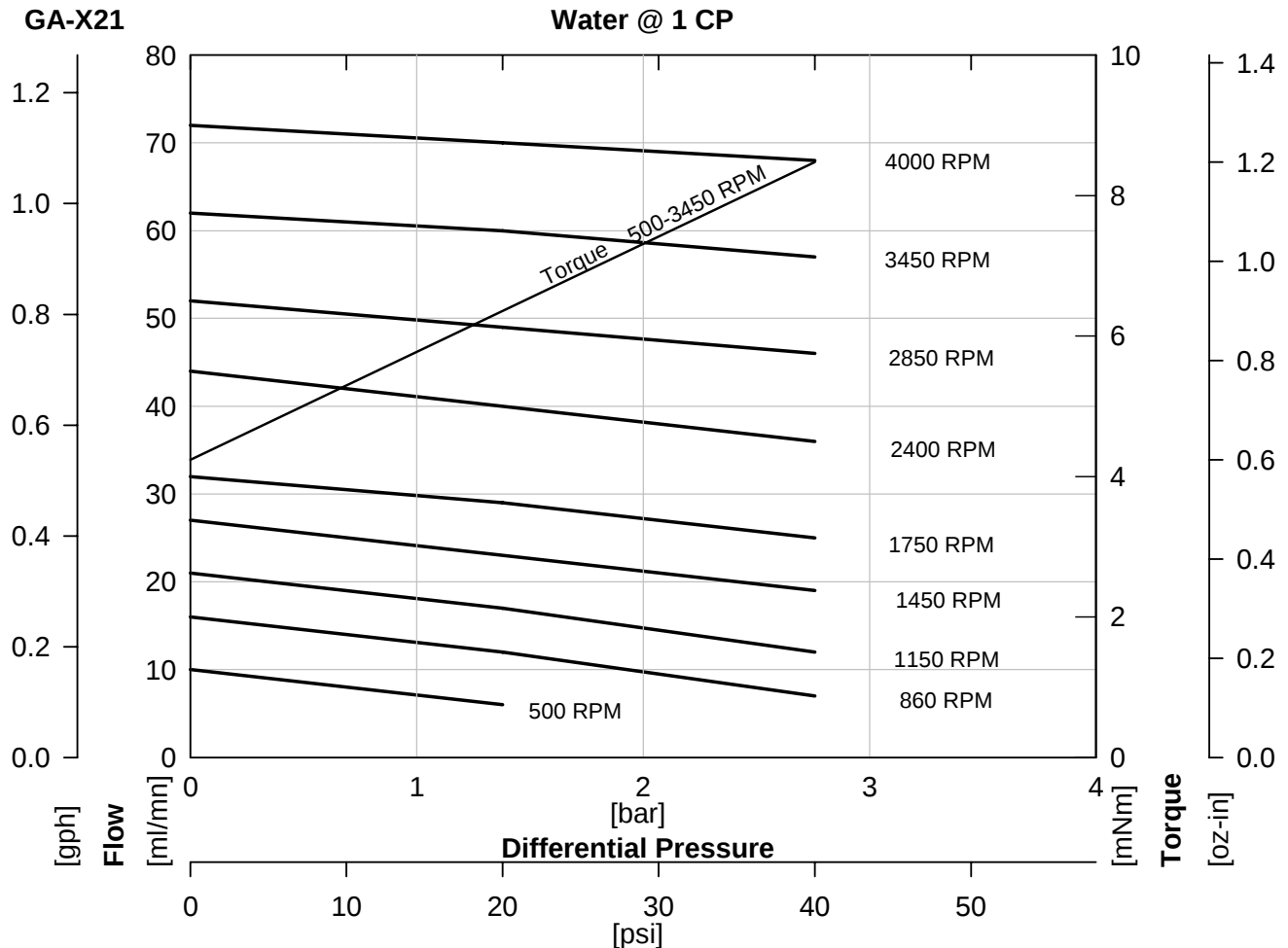
Series GA

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G	A	-	X21	C					
1	2	3	4	5	6	7	8		
Model				Wetted Materials				O/C: Pump S/K: Service Kit	

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Performance

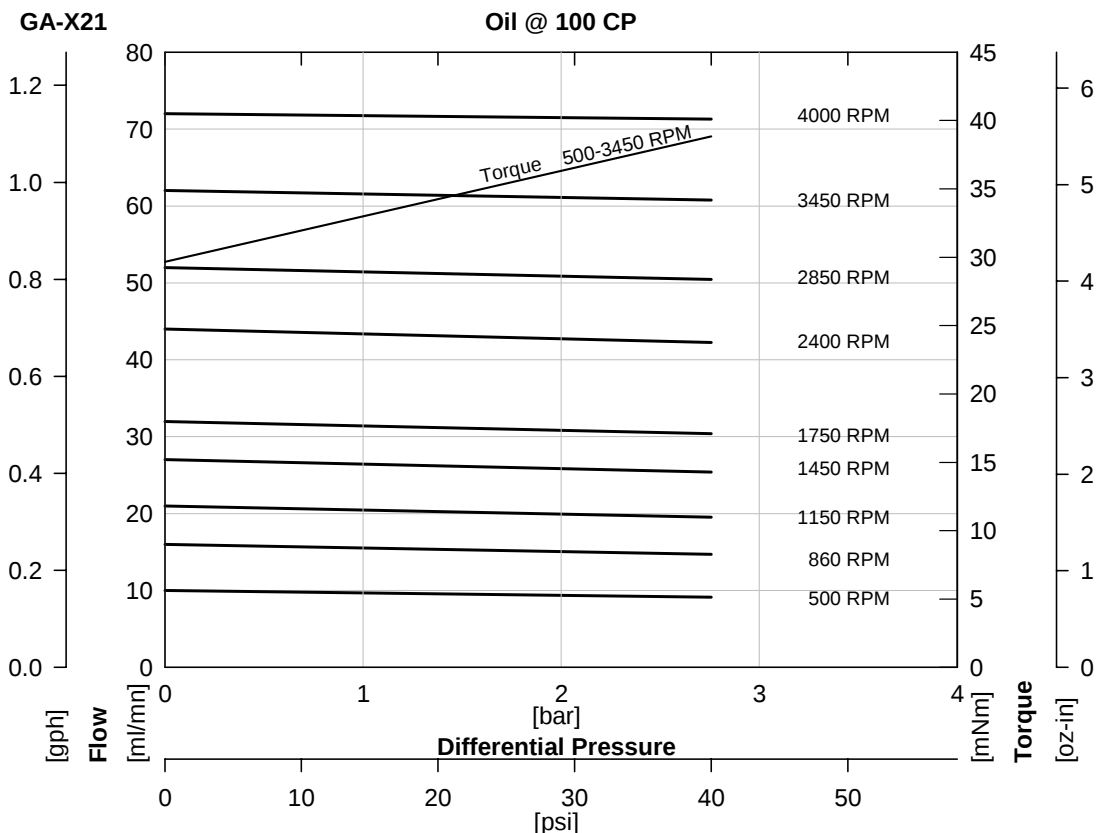


ACTUAL PERFORMANCE MAY VARY - Specifications are subject to change without notice. When multiple specs are noted, the most conservative value applies.

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

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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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	2.8 Bar	40 psi
Max System Pressure (MAWP)	21 Bar	300 psi
NIPR (Absolute)	180 mBar	2.5 psia
Wet Lift (Typical)	51 cm.H ₂ O (1450 RPM)	24 in.H ₂ O (1750 RPM)
Temp Range	See Gear Material	See Gear Material
Viscosity Range	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

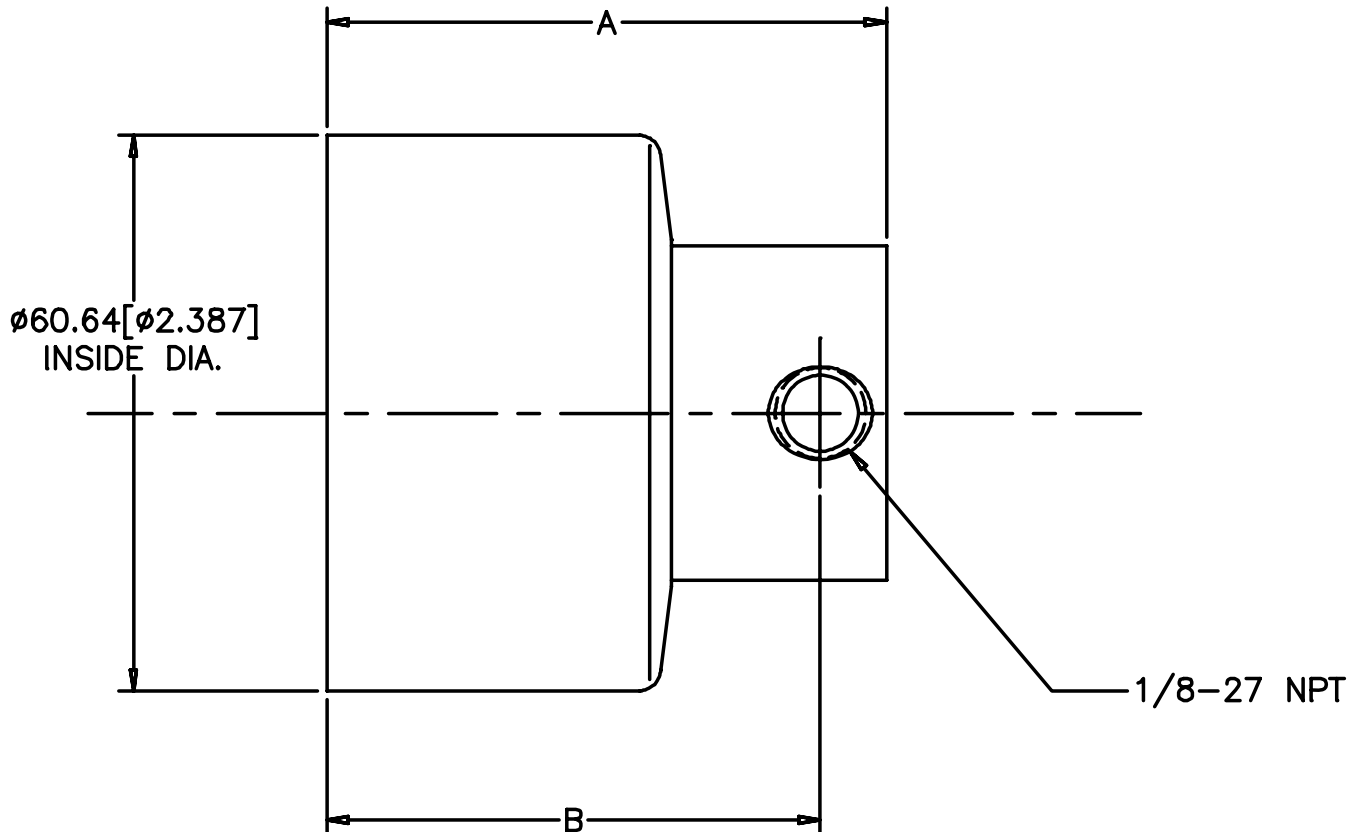
- See Product Options. Max pressure depends on gear material.
- Priming ability varies with operating conditions.
- See Product Options for specific temp limits.
- See Performance-High Viscosity for viscosity limits.

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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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