MICROPUMP
IDEX HEALTH & SCIENCE

Technical Data

Series GA

Order Code

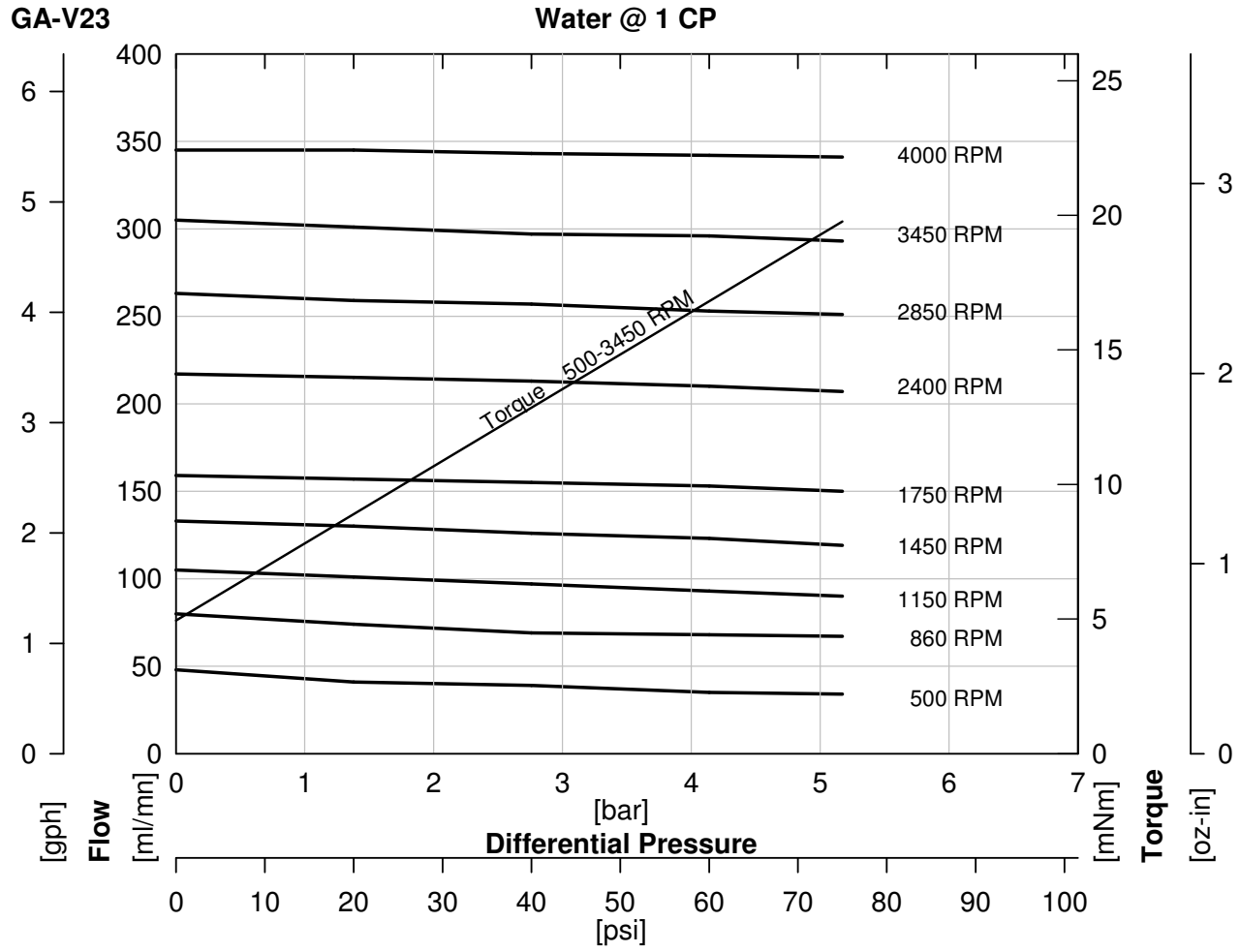
Base Code			Gear Set				Drive Mount	Options
G	A	-	V23	C				
1	2	3	4	5	6	7	8	

Model: 1–4 | Wetted Materials: 5–7

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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G	A	-	V23	C				
1	2	3	4	5	6	7	8	

Model: 1–4 · Wetted Materials: 5–7 · O/C: Pump, S/K: Service Kit

Pump Construction
Magnetic Drive Gear Pump
Suction Shoe Style
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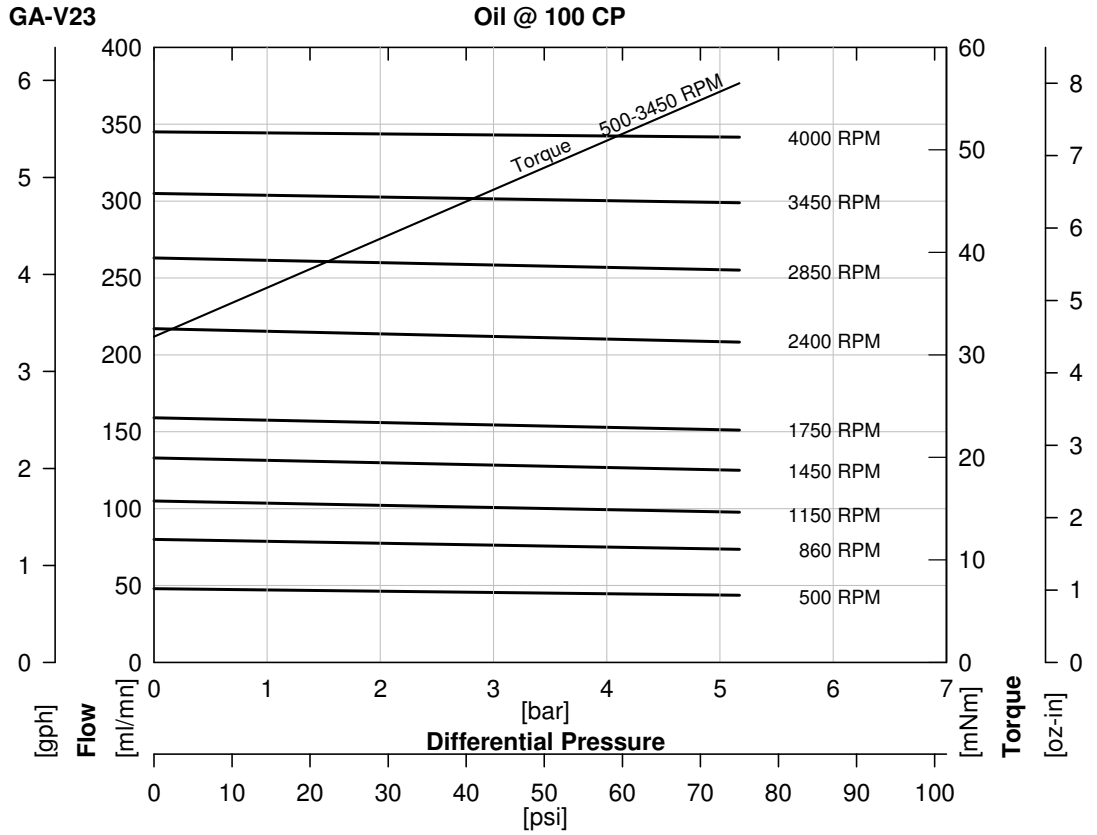
PTFE Bevel Seal (Qty 1)

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	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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Base Code			Gear Set		Drive Mount	Options
G	A	-	V23	C		
1	2	3	4	5 6 7	8	

Model: 1 2 3 4 — Wetted Materials: 5 6 7 — Drive Mount: 8

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	0.084 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]	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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Model: 1–3 | Wetted Materials: 4–7

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Suction Shoe Style
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PTFE Bevel Seal (Qty 1)

Product Options

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

	Code	Product Type	*Specifications*		Notes
1		**Product Type**			
	G	Gear Pump			
2		**Product Series**	*Max System Pressure (MAWP)*	*Ports*	
	A	Series GA	21 Bar (300 psi)	1/8-27 (F) NPT Side Ports	
3		**Modifier**			
	-	Standard Design			
5		**Gear Material**		*Max Differential Pressure* / *Temp Range*	
	C	Carbon Graphite		2.8 Bar (40 psi) / -46/177°C (-50/350°F)	
6		**Static Seals**		*Temp Range*	
	D	EP		-46/149°C (-50/300°F)	
	F	PTFE		-46/232°C (-50/450°F)	
	K	Kalrez®		-29/260°C (-20/500°F)	
	V	Viton®		-29/204°C (-20/400°F)	
7		**Base Materials**			
	T	Titanium			
	C	Hast C-276®			
	S	SS316			
	D	Alloy 20			
8		**Drive Mount**	*Max System Pressure (MAWP)*	*Weight (Pumphead)*	
	M	I-Drive™ IMS	21 Bar(300 psi) SS316	0.37 kg (0.82 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)	
	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)	
	E	NEMA 56C	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

Notes
1 Available only with industrial IEC or NEMA drive mounts

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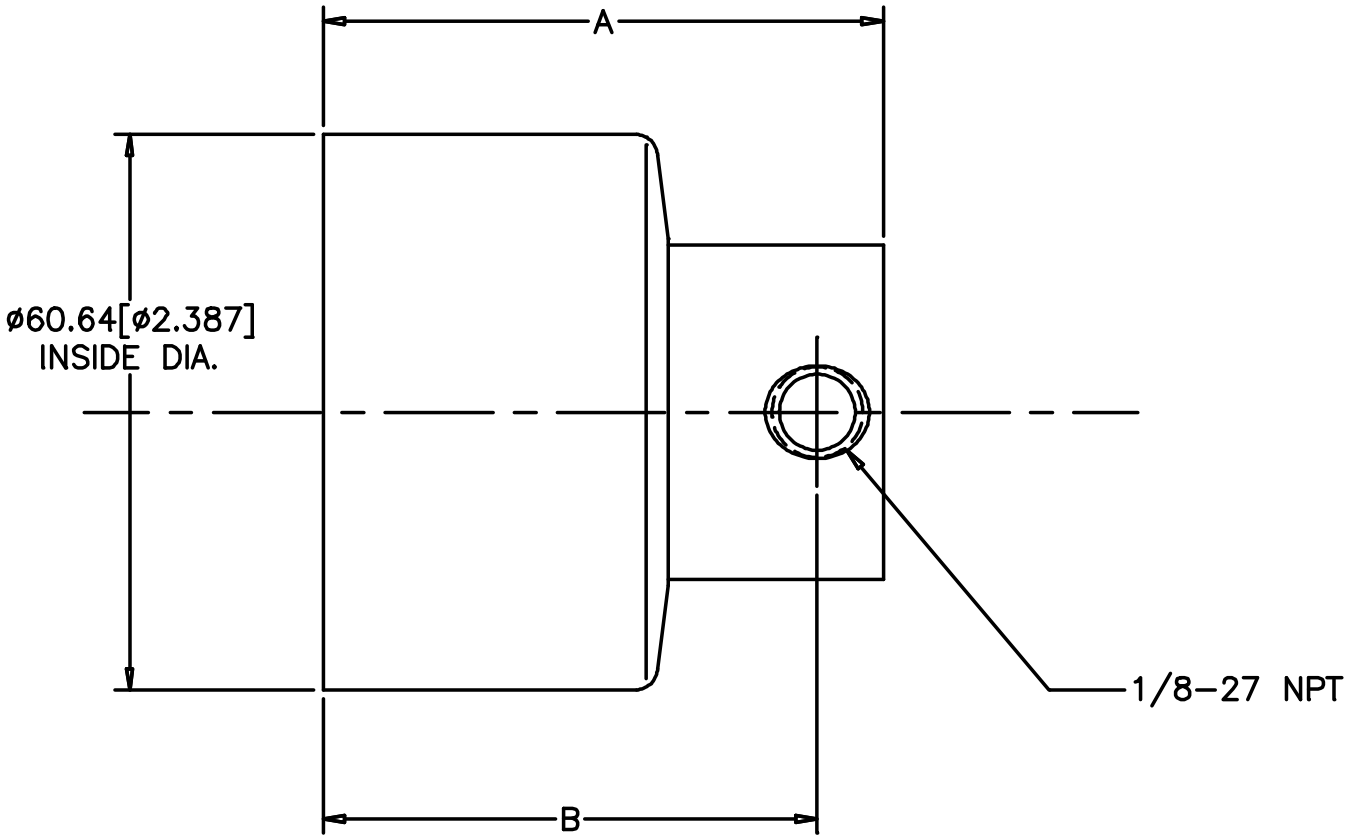
Dimensions



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

NOTES:

1. ALL DIMENSIONS ARE NOMINAL.

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