

**January 2003**

## Purpose

The purpose of this specification is to provide technical data on the Blackmer® Global Dispensing Pump (GDP) Model GDP-090.

## Unit Dimensions

The GDP has the following unit dimensions:

- 251 B X 235 L X 182 H (mm) (9.9 B X 9.3 L X 7.2 H (inches))

## Base Unit Design Features

The GDP consist of the following base unit design features:

- Unit weight of 9 kilograms (20 pounds)
- Integral air separating vortex
- Integral air / fluid separating sump
- Externally adjustable relief valve
- Die Cast aluminum housing
- Replaceable cast iron / steel pump cartridge
- Integral replaceable strainer cartridge
- Drain plug
- Integral mounting holes for 61 frame motor
- Dual configuration NPT / flange inlet port
- Optional inlet location, Bottom or Back
- Flanged discharge port configuration
- Operating temperature range of  $-40^{\circ}\text{C}$  to  $55^{\circ}\text{C}$  ( $-40^{\circ}\text{F}$  to  $131^{\circ}\text{F}$ )

## Available Options

The GDP is available with the following options:

- Sump overflow check valve
- Inlet check valve
- OIML control switch (available only through Gilbarco, Germany)

# Performance and Operation Specifications

Specification	Ratings
<b>Flow Rate:</b>	
• Standard and High Flow	2 hoses @ 45 l/m (90 l/m total)
	1 hose up to 90 l/m
	2 hoses @ 12 gpm (24 gpm total)
	1 hose up to 24 gpm
• Ultra High Flow (note 1)	2 hoses @ 70 l/m (140 l/m total)
	1 hose up to 140 l/m
	2 hoses @ 18 gpm (37 gpm total)
	1 hose up to 37 gpm
<b>Nominal Operating Speeds:</b>	
• Standard and High Flow	1300 rpm
• Ultra High Flow	1300 rpm
<b>Operating Power:</b>	
• 24 gpm	0.75 kW (1 hp)
• 37 gpm	1.59 kW (2 hp)
<b>Operating Pressure:</b>	
• 24 gpm	up to 3.5 bar (50 psi)
• 37 gpm	up to 3.5 bar (50 psi)
<b>Self Priming:</b>	
• Vacuum	0.5 bar (7 psi) minimum
<b>Operating Noise Level:</b>	
• 24 gpm	<78 dBA @ 1 meter
• 37 gpm	<83 dBA @ 1 meter
<b>OIML Air Detection (note 1):</b>	
• Minimum Air Separation	15% of liquid flow
• Petrol	error <0.5%
• Diesel	error <1.0%
<b>Fluid Compatibility:</b>	
Gasoline or Diesel fuels containing no more than the following by volume (Not intended for M85/E85 or other alcohol rich fuels)	5% methanol
	10% ethanol
	15% MTBE
Notes:	
1. Available only through Gilbarco, Germany.	

## GDP Regulatory Approvals

The GDP has the following approvals:

- UL® (Underwriters Laboratories)
- ATEX (Europe)
- OIML (Europe) – with optional switch
- NSC (Australia)

The GDP is UL approved to be used in Gilbarco's Encore™, Legacy®, Performer®, and The Advantage® Series fueling units, and NMI approved for SK700.

Use of the GDP in other OEM or remanufactured brands will require you obtain appropriate regulatory listings.

## Gilbarco Part Number & Description (North America)

Part Number	Description
M00955B207	GDP, Standard and High Flow, Non-OIML, Strainer - No Check Valve, 1 1/2-inch NPT Bottom Inlet
M00955K003	Optional Internal Check Valve Kit

*Note: The GDP has an integral sump. No separate PA0013 sump is required.*

## Related Documents

The following table provides reference documentation that contain information relative to this specification.

Manual	Description	GOLD <sup>SM</sup> Library
MDE-4096	Blackmer GDP Operation, Maintenance, and Kit Installation Manual	Service Manual

# Packaging Recommendations

Requirements	Recommendation
Unit Piping, Feedlines Form Pump To Meter	1-1/8-inch OD X 0.050-inch wall Copper Tube
Feedline Flange O-Ring	#218 (1.234-inch ID X 0.139-inch cross section) Material: Nitrile or Fluorocarbon approved for use with petroleum products by the appropriate regulatory agency.
Customer External Plumbing, Recommendations for Service Piping	<p><u>Standard Flow:</u> New 2-inch to 3-inch pipe. Use 2-inch pipe for runs up to 50 feet to a single pump. Increase to 2-1/2-inch to 3-inch pipe for runs up to 75 feet to a single pump with maximum lift condition. A dedicated line is recommended to supply each pumping unit.</p> <p><u>High Flow:</u> New 3-inch to 4-inch pipe. Use 3-inch pipe for runs up to 50 feet to a single pump. Increase to 3-1/2-inch to 4-inch pipe for runs up to 75 feet to a single pump with maximum lift condition. A dedicated line is recommended to supply each pumping unit.</p>
<div style="background-color: black; color: white; padding: 5px; font-weight: bold; font-size: 1.2em;">CAUTION</div> <div style="border: 1px solid black; padding: 10px; margin-top: 5px;"> <p>When sealing pipes, do not use Teflon® tape. Teflon tape may shred and get caught within the components and may result in <b>property or equipment damage</b>.</p> </div>	
Pipe Sealant	A pipe sealant approved for use with petroleum products should be used on all threaded pipe connections
High Flow Instructions	No pulley change is required for high flow applications. High flow can be achieved by fully turning in the adjustable by-pass on the front of the GDP and using 1-inch hose and high flow nozzles. All feedline and discharge plumbing should be a minimum of 1-inch pipe or 1-1/8-inch OD tube.

# GDP-090 Back and Bottom Inlet Layout

## Mounting Options

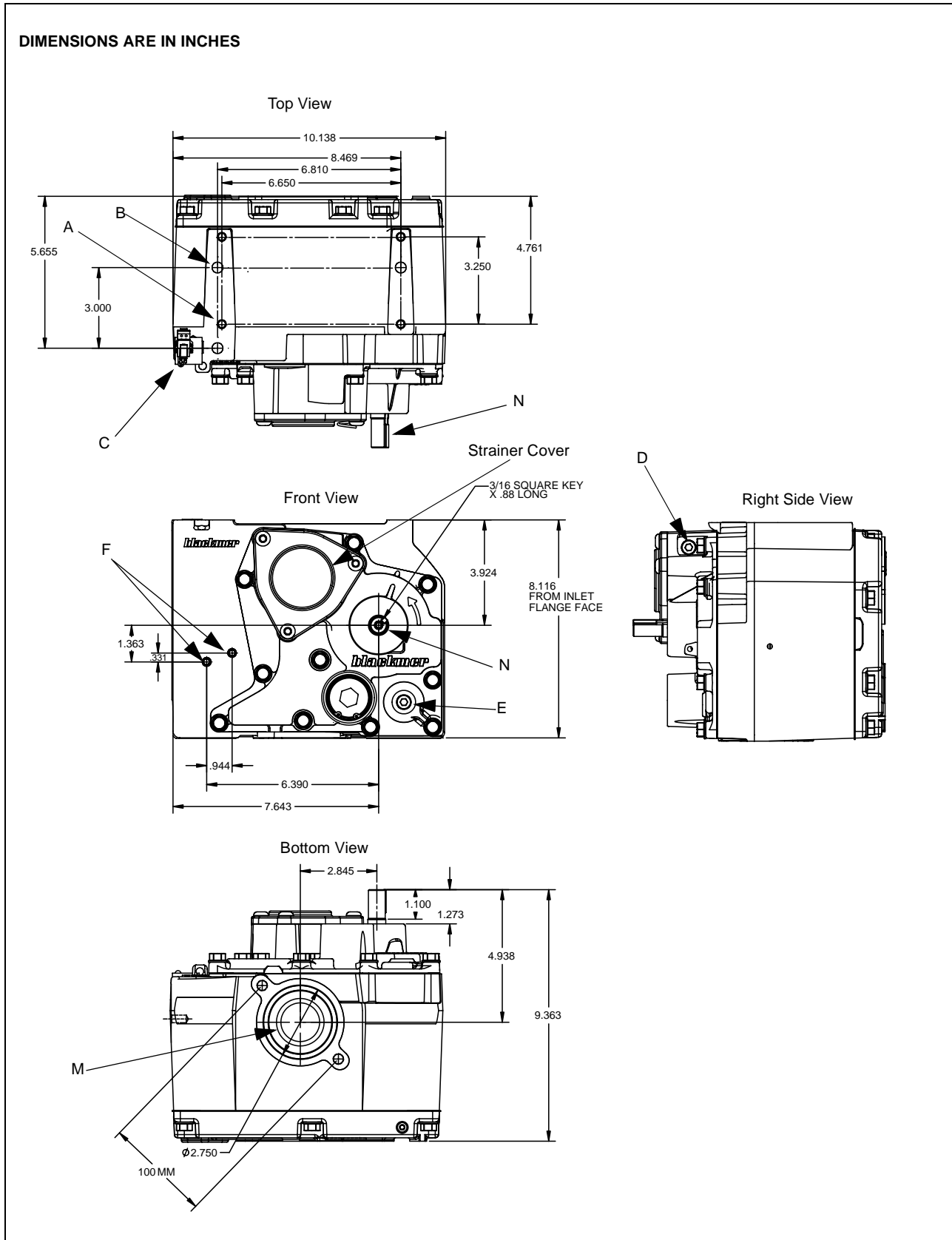
Mounting Option	Equipment	Option
<b>Standard</b>	Motor	Individual motor mounting plate or pump mounting plate
	Idler	Individual idler bracket attached to pump mounting plate
	Pump	Holes B
	Sump Vent	Hole I
		Plug Hole C with 3/8-inch NPT socket head pipe plug.
<b>Alternate</b>	Motor	Holes A
	Idler	Individual idler bracket attached to Holes F
	Pump	Holes L and H
	Sump Vent	Hole C
		Plug Hole I with 3/8-inch NPT socket head pipe plug.

## Drawing Legend

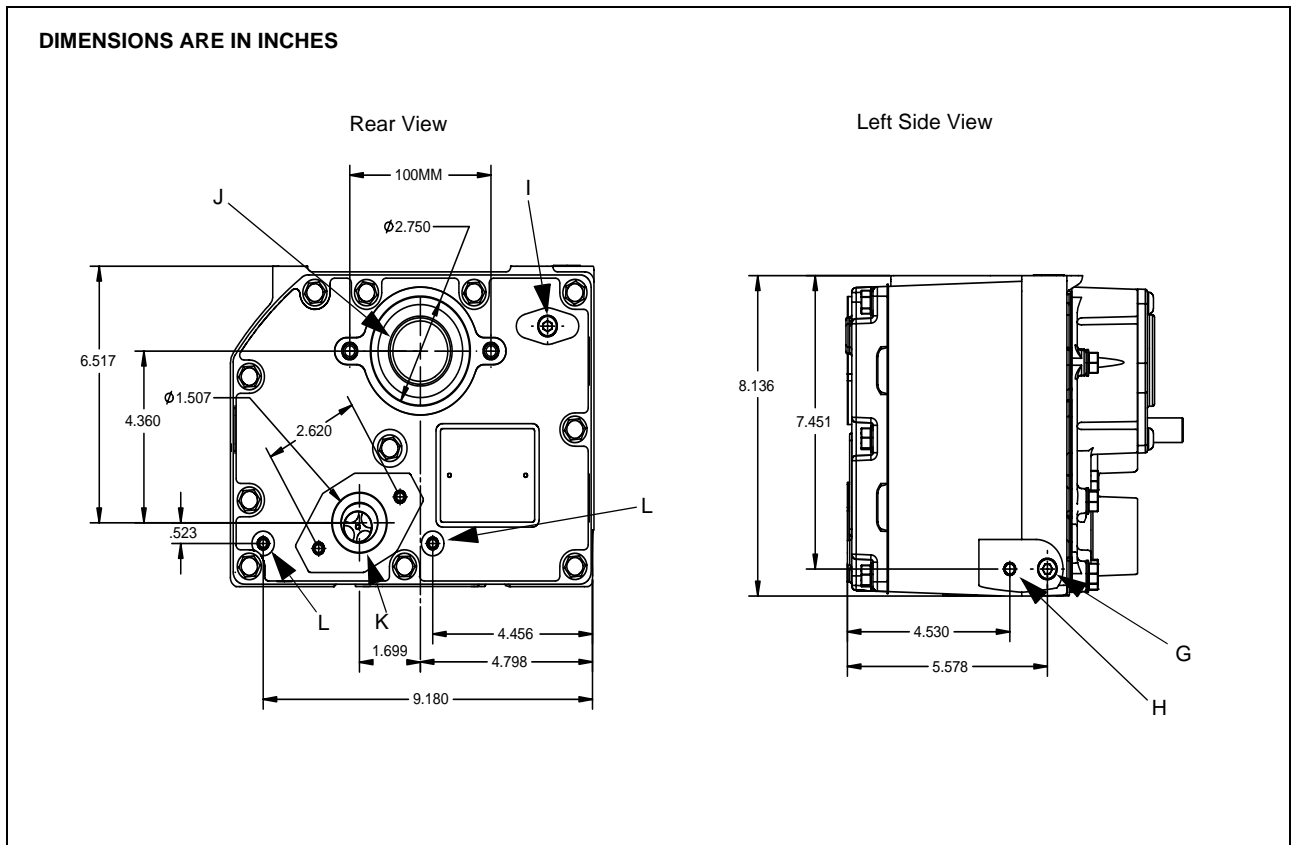
The following table describes the item callouts used on the GDP-090 Back and Bottom Inlet Layout drawings found on page 6 and page 7.

Item	Feature	Description	M00955B207
A	Motor Mounting Holes - Alternate	(4) M8 x 16 mm	X
B	Pump Mounting Holes	(3) M12 x 18 mm	X
C	Sump Vent - Alternate	(1) 3/8-inch NPT	Plugged
D	Strainer Vent	(1) 1/4-inch NPT	X
E	Vortex Drain	(1) 1/4-inch NPT	X
F	Idler Mounting Holes - Alternate	(2) M8 x 16 mm	X
G	Sump Drain	(1) 1/4-inch NPT	X
H	Side Mounting Hole - Alternate	(1) M8 x 16 mm	X
I	Rear Sump Vent	(1) 1/4 inch NPT	X
J	Rear Inlet Port	Flange, M10 x 18 mm	Non-Functional
K	Discharge Port	Flange, M8 x 16 mm	X
L	Rear Mounting Holes - Alternate	(2) M8 x 16 mm	X
M	Bottom Inlet Port	1 1/2 inch NPT / Flange, M10 x 18 mm	X
N	Input Shaft	0.625 inch diameter, M6 X 12 mm	X
	Internal Option	Inlet Check Valve / Dome Strainer	Not Included
	Internal Option	Sump Vent Check Valve	Not Included
	Internal Option	Pressure Control Valve Range (bar)	2.3 - 3.0
Q	OIML Switch	DIN ISO 228 G1/4, Amp 1-640509-0	Not Included

GDP-090 Inlet Back and Bottom Inlet Layout, Revision D (Sheet 1 of 2)



**GDP-090 Inlet Back and Bottom Inlet Layout, Revision D (Sheet 2 of 2)**



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