

# GEAR PUMP: OPTIMA

## 1000 ML/MIN – BLDC MOTOR



The Optima series is designed for applications requiring a very small package size. The construction is the same as those of its larger cousins, but by removing one of the shaft bearings the overall length is much shorter. The inlet and outlet ports can be located on the side or end of the pump, and are available in a variety of sizes. The brush-less DC motor has an integral flange allowing bulkhead mounting, and its IP-55 rating ensures it will stand up to harsh environments.

### The Optima series - Engineering Your Flow

- > Food & Beverage
- > Bulk Fluid Transfer
- > Cooling
- > Medical / Industrial Sample Fluid Delivery

## Benefits



**3D Mounting:** Our pumps are extremely versatile when it comes to mounting. The body is compact in size and the flexible inlet and outlet port locations simplifying the plumbing and conserving valuable space.



**Long Life:** DPP pumps are all characterized by their robustness and performance. Wear and tear is at its lowest, and their smart designs ensure a sustainable reduction of operating costs.



**100% Outgoing Test:** Before any pump leaves our factory, it is stringently and extensively tested in accordance with its specifications. Our customers receive detailed reports, saving them time and money.



**Chemically Resistant:** Our pumps are made from materials that are resistant to a wide range of aggressive chemicals. This means our pumps can also operate reliably and precisely in even the most environments.



**Low Pressure Pulsation:** Thanks to their smart drives and the innovative helical gear design our pumps ensure an extremely smooth fluid delivery with almost no pressure pulsation.



**No Shaft-Seals:** DPP gear pumps are hermetically sealed instead of using conventional shaft seals. This means low maintenance for you and your customers, a long service life and the highest degree of productivity.

## Specifications

### Performance

Max. continuous pressure:	4 bar
Max. intermittent pressure:	6 bar
Max. static Case pressure:	20 bar
Inlet:	Self-priming
Speed range:	300-4500 rpm
Fluid viscosity range:	0.3 to 1000 cps

### Electrical

Supply voltage:	24 vdc
Speed Control:	0-5 vdc
Tach. Output:	6V square wave, 4 pulses per revolution
Rotation:	Clockwise
Max. current:	1.8 amps
Current Overload Protection:	1.8 amps
4-conductor Teflon cable:	24 AWG
Color code:	Black=ground, Red=+24 vdc, Green=Tach. Output, White=0-5 vdc speed control
Motor rating:	IP-55

### Temperature

Fluid temperature range:	-20 to +100°C
Ambient air temp. range:	0-40°C
Relative humidity range:	0-95% non-condensing
Thermal protection:	Internal thermal sensor off at 90°C, resets at 80°C

### Construction

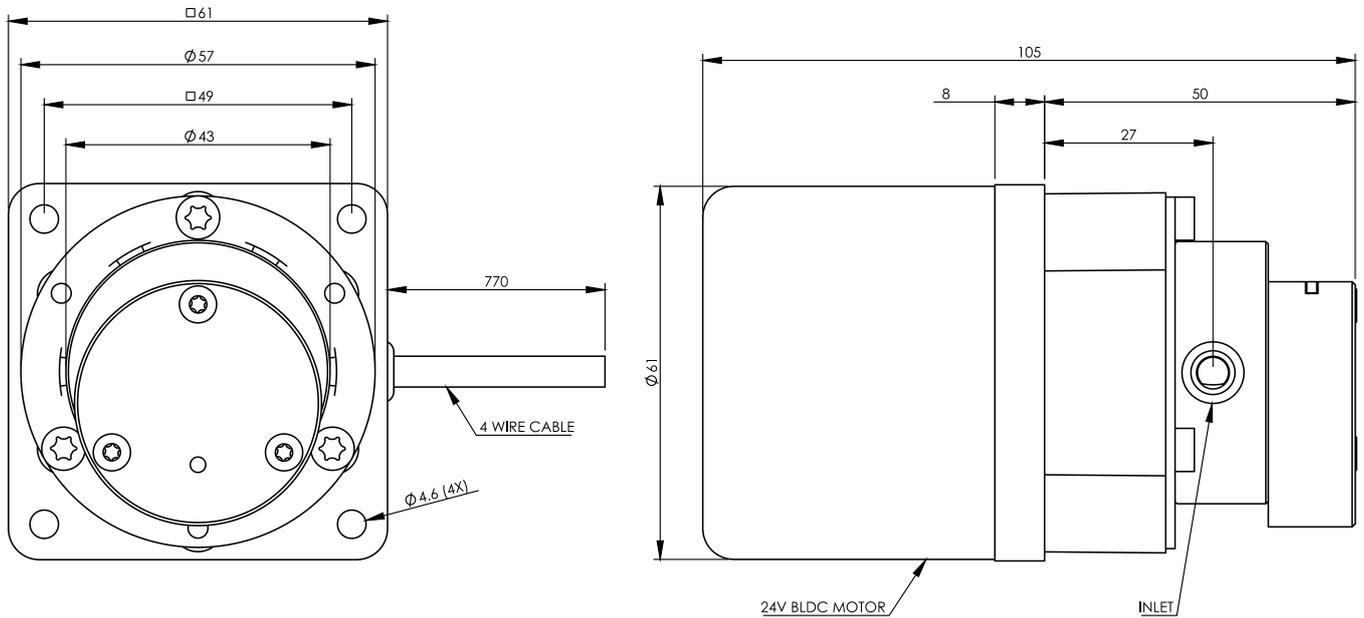
Standard:	316L stainless steel, PEEK®, EPDM
Optional:	303 SS, Alloy-C, PPS (gears), Teflon®, Silicone, Viton®, Kalrez®
Inlet/Outlet:	1/4-28 UNF (standard)
Optional:	1/8"-NPT, 1/4"-NPT, G1/8, G1/4, exiting the side or end of the pump
Marking:	Permanent laser-mark identification for 100% traceability
Mass:	0.8 kg

Performance values are limits and cannot all happen simultaneously. Please contact your sales engineer for further technical information and customized options.

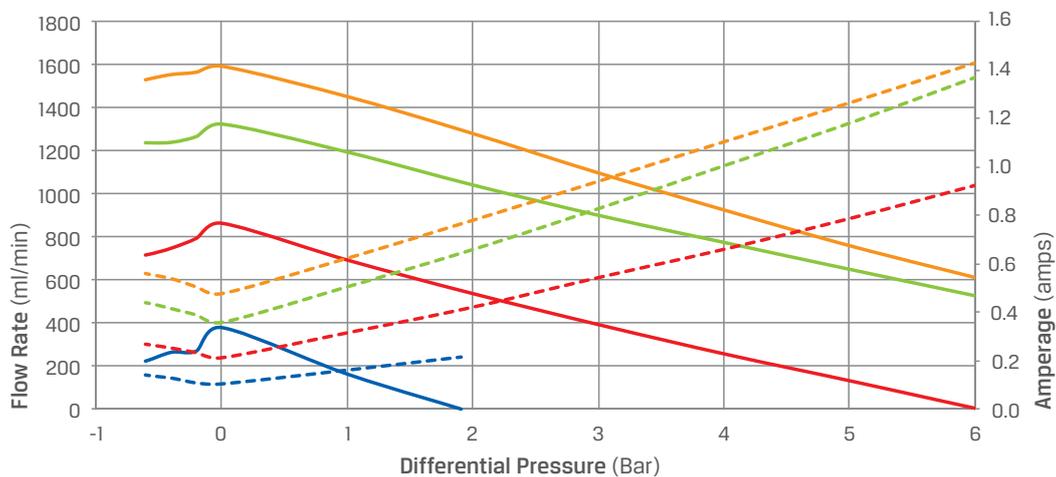


Engineering Your Flow

## Dimensional Outline Drawing (mm)



## Typical Performance Curve (Water at Room Temperature)



### Motor Control Voltage: Amperage (amps)



DPP is certified to medical standard ISO 9001 / ISO 13485 and operates a clean-room according to ISO Class 7. All pumps are customized; the information given represent one of the possibilities.

None of the information supplied by Diener Precision Pumps constitutes a warranty regarding product performance or use. Any information regarding performance or use is only offered as suggestion for investigation for use, based upon Diener Precision Pumps' or other customer experience. DPP makes no warranties, expressed or implied, concerning the suitability or fitness of any of its products for any particular purpose. It is the responsibility of the customer to determine that the product is safe, lawful and technically suitable for the intended use. The disclosure of information herein is not a license to operate under, or a recommendation to infringe any patents. All new DPP product developments are tested and confirmed according to the «ROHS Directive».