

# L & C SERIES PUMPS



■ Lubrication  
and Circulation  
Standard for  
over 75 years



**TUTHILL**  
Pump Group

Engineered Solutions

# L & C SERIES PUMPS

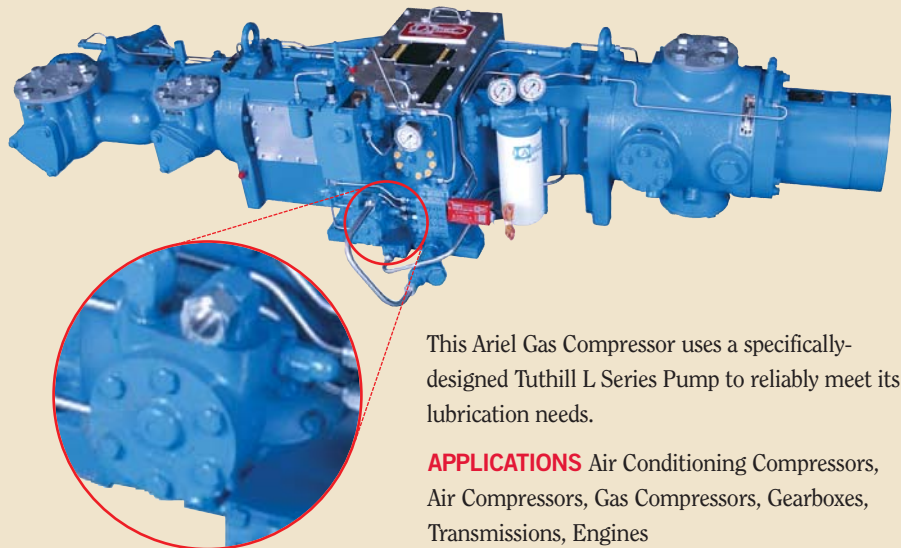
The L & C Series cast iron positive displacement pumps have been the industry standard for Lubrication & Circulation for over 75 years. They were originally designed under James B. Tuthill, the company's founder, in the 1920s. For eight decades, Tuthill has worked to improve these pumps to fit an ever-growing range of lubrication applications. The result is a family of reliable internal gear pumps that are ideal for custom OEM lubricating, low-pressure hydraulic, transfer, circulating, burner oil and many other industrial pump applications.



## L & C SERIES PUMPS –

### *Flexibility and Reliability to Meet Your Needs!*

L & C series pumps are precisely machined and assembled with only two moving parts, so they achieve and retain their reliability over a wider range of viscosities than alternative pump designs. They are also available with Tuthill's unique reversing feature, as well as mounting, driving and sealing options to suit all your applications.



This Ariel Gas Compressor uses a specifically-designed Tuthill L Series Pump to reliably meet its lubrication needs.

**APPLICATIONS** Air Conditioning Compressors, Air Compressors, Gas Compressors, Gearboxes, Transmissions, Engines

## L & C Series Pumps are a **PERFECT MATCH FOR MANY OEMS.**

Original Equipment Manufacturers worldwide incorporate Tuthill internal gear pumps into their products for lubrication and transfer service. This widespread acceptance is a result of product performance and reliability. It is also a result of the Tuthill Business System. The process begins with listening to the wants and needs of our customers and the marketplace. This enables us to quickly engineer customized solutions that provide maximum value and have made us the leading source for custom OEM positive displacement pumps.

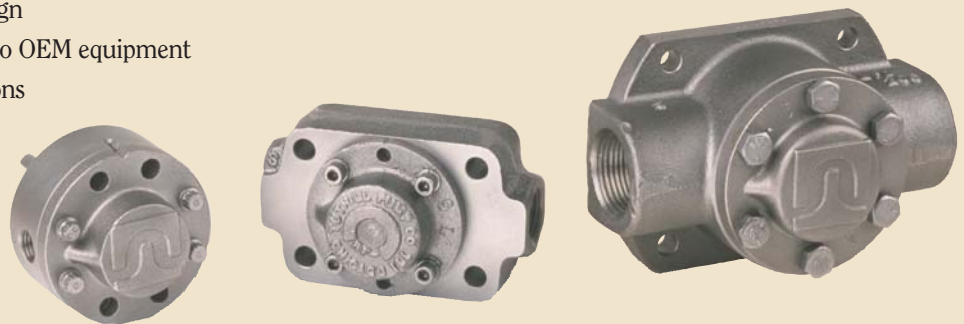
**LE PUMPS**

- Internal gear pump design
- Compact and flexible drive options
- Available with Tuthill's Reversing Feature
- Flow rates to 13.7 usgpm (3m<sup>3</sup>/hr)
- Pressures to 500 psi (34.5 bar)
- Standard with single mechanical seal
- Cast iron construction



**CARTRIDGE PUMPS**

- Internal gear cartridge pump design
- Compact design mounts directly to OEM equipment
- Multiple porting and driving options
- Flow rates to 6 usgpm (1.4m<sup>3</sup>/hr)
- Pressures to 150 psi (10.3 bar)
- Cast iron construction

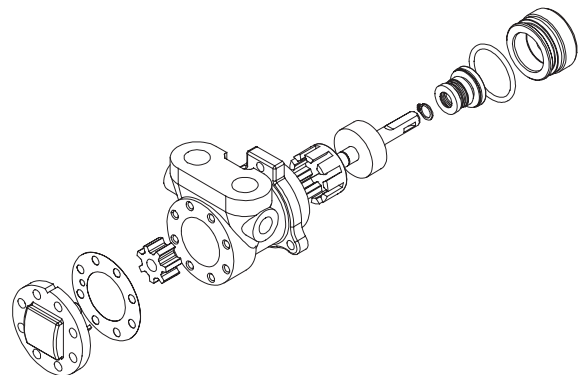


**L SERIES SPECIFICATIONS**

**CAST IRON CONSTRUCTION**

Model	USGPM	Nominal Flow Rate				
		@	1800 RPM	L/MIN	@	
30LE	0.5	@	1800 RPM	1.9	@	1800 RPM
00LE	1.0	@	1800 RPM	3.8	@	1800 RPM
0LE	1.8	@	1800 RPM	6.8	@	1800 RPM
1LE	3.0	@	1800 RPM	11.4	@	1800 RPM
2LE	5.6	@	1800 RPM	21.2	@	1800 RPM
5LE*	13.0	@	1800 RPM	49.2	@	1800 RPM

Pressures to 500 PSI (34.4 bar)                      \*Pressures to 300 psi (20.7 bar)  
 Temperatures to 475°F (246°C)  
 Viscosities from 32 SSU to 5000 SSU (1 to 1078 cst)  
 For speeds above 1800 RPM and/or viscosities above 5000 SSU consult factory



**C PUMPS**

- Internal gear pump design
- Flexible mounting, sealing and driving options
- Available with Tuthill's Reversing Feature
- Flow rates to 84 usgpm (19m<sup>3</sup>/hr)
- Pressures to 300 psi (20.7 bar)
- Standard with O-ring case seals
- Cast iron construction



**STRIPPED PUMPS**

- Internal gear pump design
- Partial pump assemblies built directly into OEM equipment
- Available with Tuthill's Reversing Feature
- Flow rates to 84 usgpm (19m<sup>3</sup>/hr)
- Pressures to 150 psi (10.3 bar)

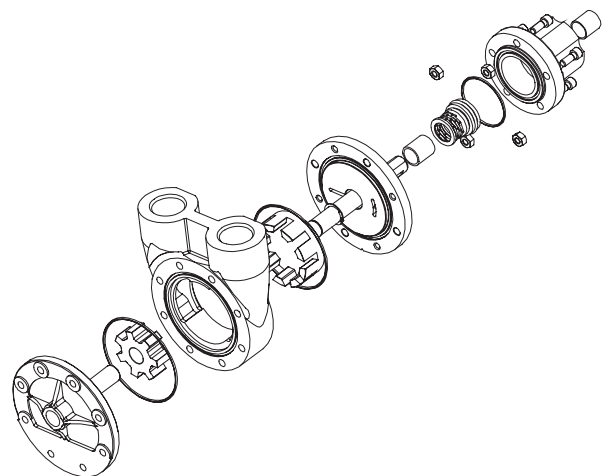


**C SERIES SPECIFICATIONS**

**CAST IRON CONSTRUCTION**

Model	Nominal Flow Rate					
	USGPM			L/MIN		
2C	9.5	@	1800 RPM	36.0	@	1800 RPM
3C	18.0	@	1800 RPM	68.1	@	1800 RPM
4C	36.0	@	1800 RPM	136.3	@	1800 RPM
5C	60.0	@	1800 RPM	227.1	@	1800 RPM
6C	84.0	@	1800 RPM	310.4	@	1800 RPM

Pressures to 300 PSI (20.7 bar)  
 Temperatures to 475°F (246°C)  
 Viscosities from 32 SSU to 25000 SSU (1 to 5394 cst)  
 For speeds above 1800 RPM and/or viscosities above 25000 SSU consult factory



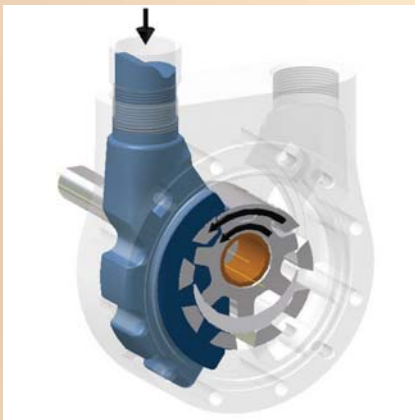


L & C Series Pumps' **SIMPLE, COMPACT DESIGN** offers high efficiency and longer life.

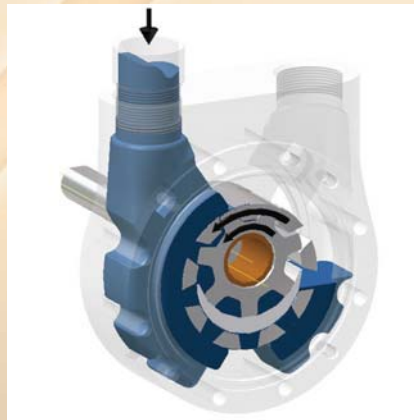
### THE PUMPING PRINCIPLE

Tuthill L & C Series cast iron pumps employ the internal gear pumping principle. There are only two moving parts. Pumping action is based on a rotor, idler gear and a cover cast with a crescent-shaped partition.

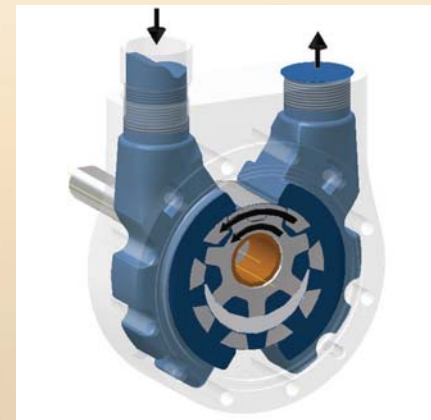
This design allows the pump to handle a wide range of viscosities while sustaining a constant flow regardless of pressure. The non-pulsating flow also runs substantially quieter than other pump designs. With minimal to moderate wear, our internal gear pumps outperform other pumping technologies.



As the pump starts, the teeth come out of mesh, increasing the volume. This creates a partial vacuum, drawing the liquid into the pump through the suction port.



The liquid fills the spaces between the idler and rotor teeth and is carried past the crescent partition through the pressure side of the pump.

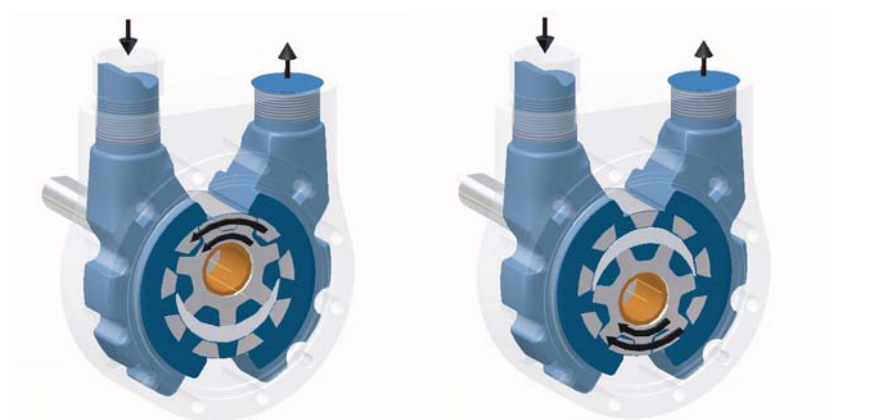


When the teeth mesh on the pressure side, the liquid is forced from the spaces and out through the discharge port.

### UNIQUE REVERSING FEATURE

This Tuthill innovation allows positive reversing action without the use of valves. Port positions remain constant regardless of the direction of shaft rotation. It is ideal for use in power transmission applications where the drive shaft direction changes, but the direction of flow must remain constant.

Other applications where shaft rotation is unknown, the reversing feature allows the customer to specify the suction and discharge ports.



When shaft rotation changes from clockwise to counter-clockwise, the idler carrier (including the idler gear and crescent) automatically rotates 180° through the suction zone to the position shown in the drawing above. This changes the direction of the flow within the pump without changing port positions. On resumption of clockwise rotation, the crescent will swing back to the original position.



## TUTHILL Pump Group

www.tuthillpump.com

To find an authorized distributor,  
visit [www.tuthillpump.com/distributors](http://www.tuthillpump.com/distributors)

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