

## MDL Series

SANITARY ROTARY LOBE PUMP



For more than half a century, SPX FLOW has been a leader in the design, manufacture and application of positive displacement pumps. SPX FLOW is dedicated to raising productivity, product quality and profitability for its equipment and systems customers.

From this dedication has come advancements in equipment development and applications; advancements that have changed the way designers solve problems. SPX FLOW PD pumps are in thousands of challenging sanitary, chemical and industrial applications around the world.

SPX FLOW, Inc. (NYSE:FLOW) is a leading manufacturer of innovative flow technologies, many of which help define the industry standard in the market segments they serve. From its headquarters in Charlotte, North Carolina, it operates a sales and support network, centers of manufacturing excellence, and advanced engineering facilities, throughout the world. Its cutting-edge flow components and process equipment portfolio includes a wide range of pumps, valves, heat exchangers, mixers, homogenizers, separators, filters, UHT, and drying technology that meet many application needs. Its expert engineering capability also makes it a premium supplier of customized solutions and complete, turn-key packages to meet the most exacting of installation demands.

Incorporating many leading brands, SPX FLOW has a long history of serving the food and beverage, power and energy, and industrial market sectors. Its designs and engineered solutions help customers drive efficiency and productivity, increase quality and reliability, and meet the latest regulatory demands. In-depth understanding of applications and processes, state-of-the-art Innovation Centers, and advanced pilot/testing technology further assist in optimizing processes and reducing timescales to reliably meet production targets.

To learn more about SPX FLOW capabilities, its latest technology innovations and complete service offerings, please visit [www.spxflow.com](http://www.spxflow.com).

## MDL Sanitary Rotary Lobe Pump with optimal efficiency

### OPERATIONAL FEATURES

- Smooth flow
- Gentle product handling
- Dry running ability with double seal
- Handles low and high viscosity products
- Simple maintenance
- Hygienic design
- Low sound level
- CIP capability standard
- Free draining pump housing
- Unique rotor attachment
- Robust construction
- Process flexibility
- Single mechanical seals standard. Optional double mechanical seals also available
- Grease lubricated bearings for positive lubrication over speed, temperature



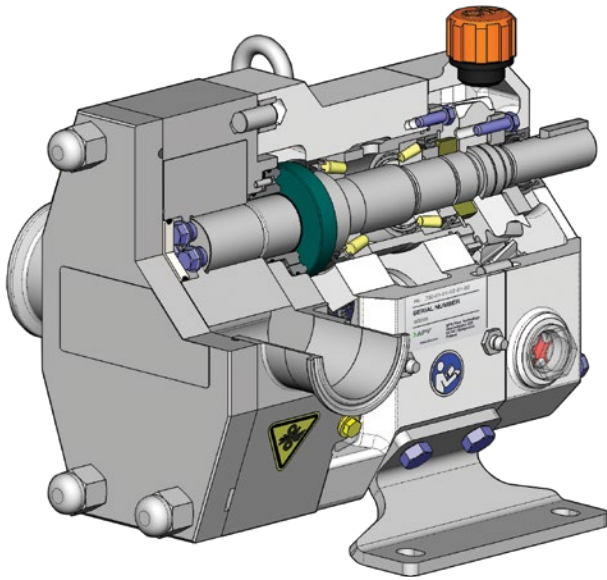
### INSTALLATION FEATURES

- Bi-directional flow
- Easy service and maintenance
- Horizontal or vertical mounting
- Easy to disassemble and reassemble
- 316L stainless steel pump body and cover
- Versatile 4-way mounting of gear case, including vertical alignment of ports

# Typical Product Applications

## PRODUCT BENEFITS

- Pumps with flushed double mechanical seals can run dry indefinitely
- Very low shear, product not damaged during pumping
- No internal rotor contact
- Large fluid cavities can pump liquids with large solids
- No cross-contamination of lubricating oil into product zone due to unique gear case design
- Pumps are energy efficient and easily cleaned, maintained and repaired



### Bakery

Batters; Flavorings; Frostings; Fruit Fillings; Fats & Oils; Sweeteners; Yeast Slurry



### Beverage

Beer, Wort, Yeast; Soft Drinks; Fruit Concentrates; Fruit Drinks



### Canning

Baby Foods, Soups, Stews; Tomato Paste; Fruit Puree; Vegetables, Diced, Slurries; Puddings, Jams, Jellies; Salad Dressings, Mayonnaise



### Confectionery

Syrups; Cream Fillings; Chocolate



### Cosmetics

Face Creams & Lotions; Hair Styling Gels & Liquids; Essential Oils; Dyes & Alcohols



### Dairy

Cream, Milk; Cheese Curd & Whey; Cottage Cheese; Yogurt



### Meat Packing

Meat Emulsions; Ground Meats; Pet Foods; Animal Fats



### Pharmaceutical

Pill Pastes; Syrups; Extracts; Emulsions; Slurries

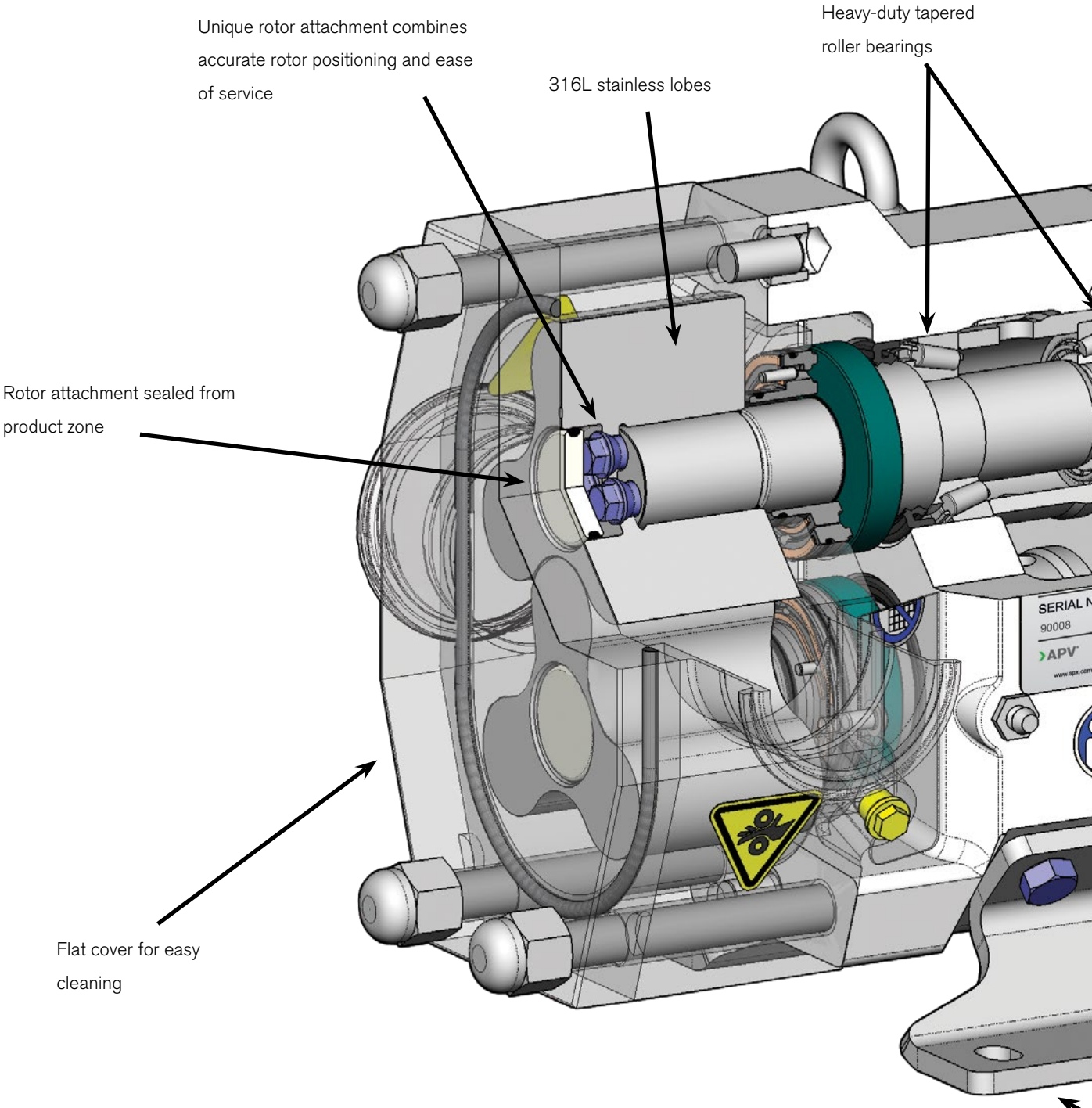


### Chemical/Industrial

Solvents; Fuels; Oils & Lubricants; Paints; Resins & Polymers; Soaps; Sludges



# Performance and long life through engineering



Unique rotor attachment combines accurate rotor positioning and ease of service

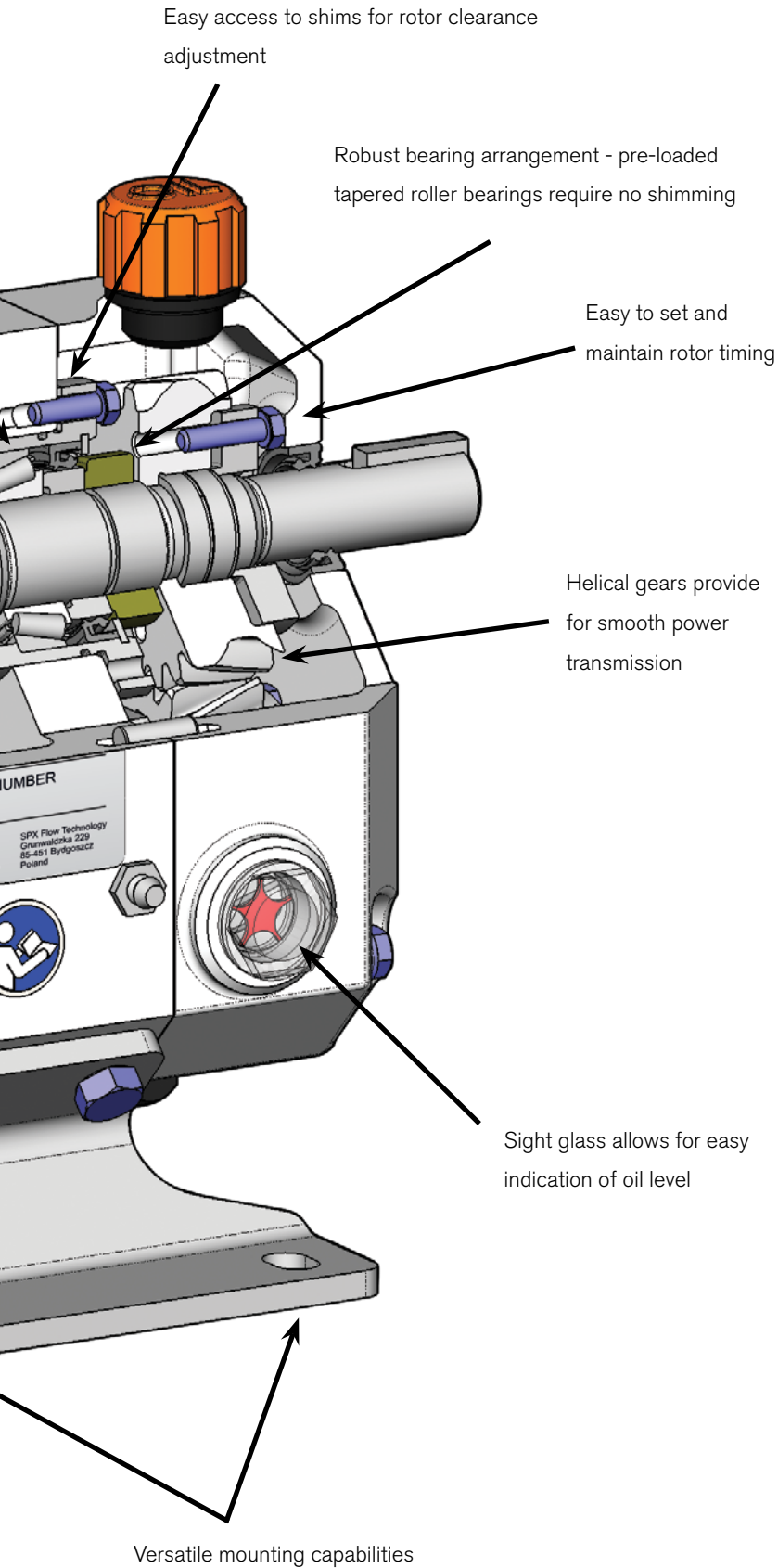
316L stainless lobes

Heavy-duty tapered roller bearings

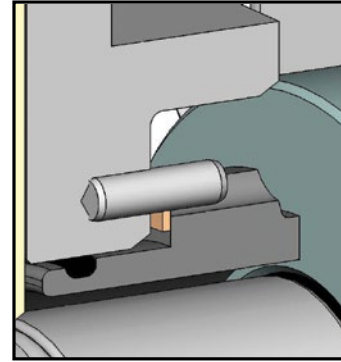
Rotor attachment sealed from product zone

Flat cover for easy cleaning

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90008  
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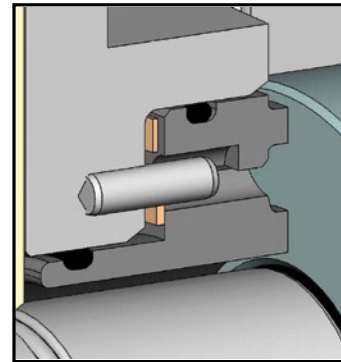
## Seal Options



### SINGLE MECHANICAL SEAL\*

Standard carbon vs. hardened stainless steel faces provides long life in most applications.

Optional silicon carbide vs. silicon carbide adds protection against abrasive wear.



### DOUBLE CONCENTRIC MECHANICAL SEAL\*

Used with flushing fluid to cool, lubricate, and rinse away residue. Best arrangement for severe service.

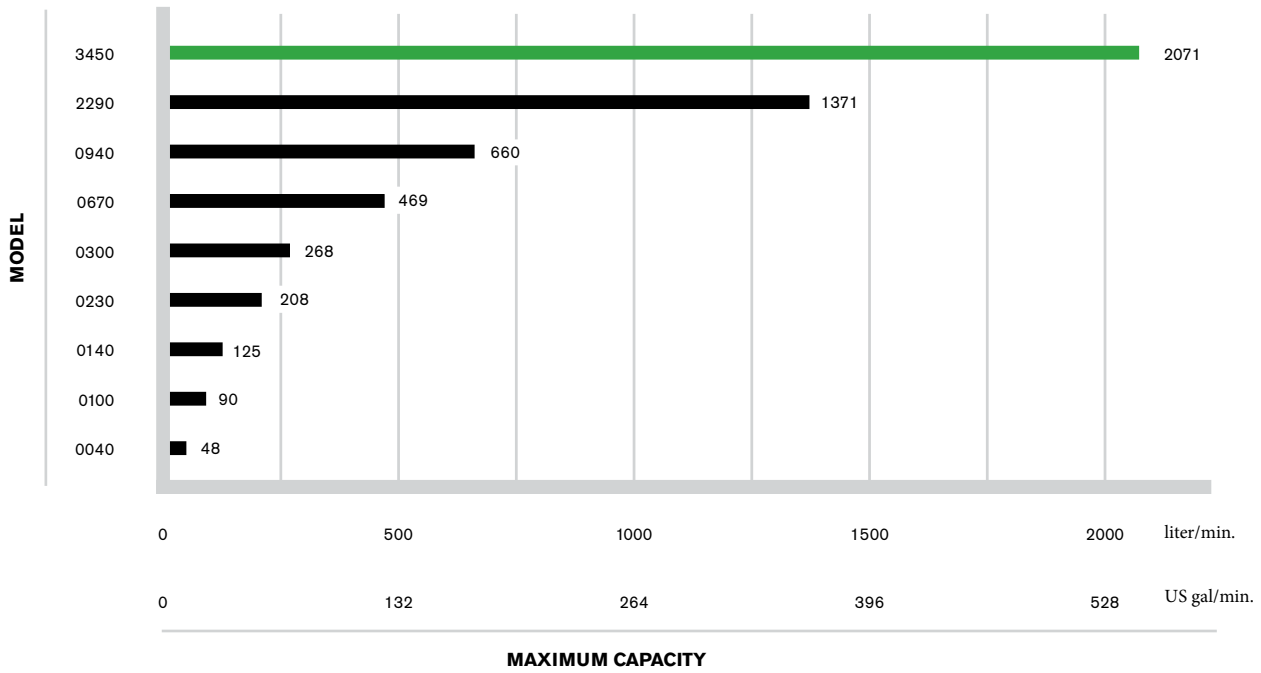
### ELASTOMER CHOICES FOR "O" RINGS:

- Fluoroelastomer (FKM)
- EPDM

### MECHANICAL SEAL MATERIAL OPTION:

- Carbon vs. Hardened Stainless Steel
- Silicon Carbide vs. Silicon Carbide

# Performance overview

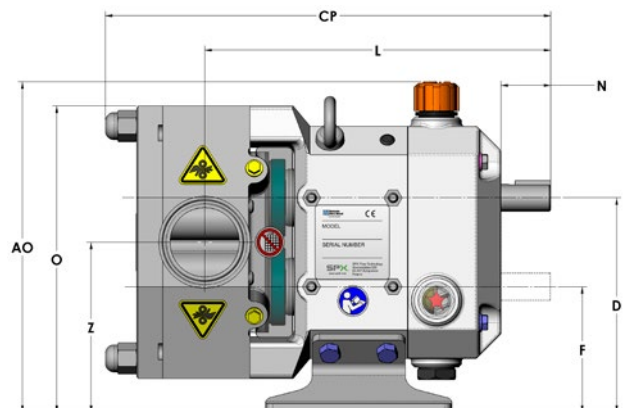
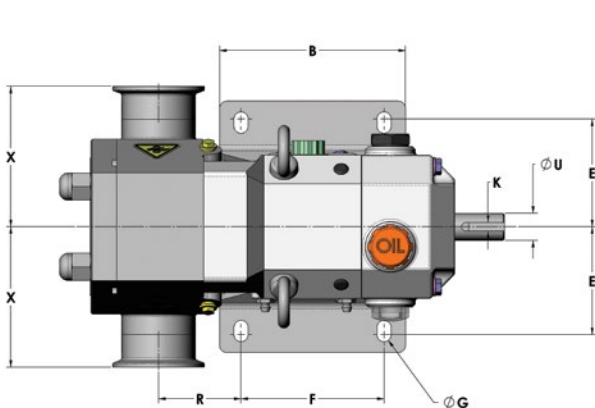


# Technical data

MODEL	DISPLACEMENT GALLON (LITER)/REV	NOMINAL CONNECTION SIZE IN (MM)	DIFFERENTIAL PRESSURE RATING PSI (BAR)	MAXIMUM PUMP SPEED RPM	INPUT SHAFT DIAMETER IN (MM)	MAXIMUM TORQUE N-M
0040	0.01 (0.04)	1" (25)	145 (10)	1200	0.75" (19)	108
0100	0.03 (0.10)	1" (25)	145 (10)	900	0.75" (19)	108
0140	0.04 (0.14)	1.5" (38)	145 (10)	900	0.75" (19)	108
0230	0.06 (0.23)	1.5" (38)	145 (10)	900	0.75" (19)	108
0300	0.08 (0.30)	2" (50)	145 (10)	900	0.75" (19)	108
0670	0.18 (0.67)	2" (50)	145 (10)	700	1.50" (38)	400
0940	0.25 (0.94)	3" (75)	145 (10)	700	1.50" (38)	400
2290	0.60 (2.29)	4" (100)	145 (10)	600	2.16" (55)	1200
3450	0.91 (3.45)	6" (150)	145 (10)	600	2.16" (55)	1200

# Dimensions

**ISO 9001  
CERTIFIED**



Dimensions are shown in IN (MM)

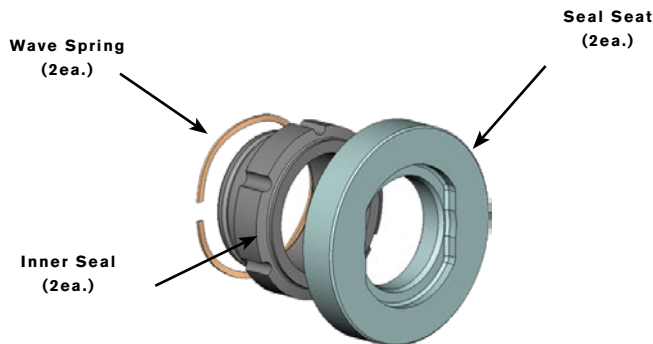
MODEL	A	AO	B	CP	D	E	F	G
0040	7" (175.5)	9" (230.5)	5" (130.0)	11" (281.4)	6" (149.6)	3" (72.8)	4" (100.0)	0.4" (10)
0100	7" (175.5)	9" (230.5)	5" (130.0)	11" (286.8)	6" (149.6)	3" (72.8)	4" (100.0)	0.4" (10)
0140	7" (175.5)	9" (230.5)	5" (130.0)	12" (298.7)	6" (149.6)	3" (72.8)	4" (100.0)	0.4" (10)
0230	7" (175.5)	9" (230.5)	5" (130.0)	12" (299.1)	6" (149.6)	3" (72.8)	4" (100.0)	0.4" (10)
0300	7" (175.5)	9" (230.5)	5" (130.0)	12" (311.1)	6" (149.6)	3" (72.8)	4" (100.0)	0.4" (10)
0670	9" (239.1)	12" (310.6)	6.3" (160.0)	16" (396.4)	8" (205.9)	4" (99.5)	5" (120.0)	0.5" (13)
0940	9" (239.1)	12" (310.6)	6.3" (160.0)	17" (423.9)	8" (205.9)	4" (99.5)	5" (120.0)	0.5" (13)
2290	12" (301.1)	15" (384.6)	9.8" (250.0)	22" (553.6)	10" (263.7)	5" (130.5)	8" (210.0)	0.5" (13)
3450	12" (301.1)	15" (384.6)	9.8" (250.0)	24" (605.6)	10" (263.7)	5" (130.5)	8" (210.0)	0.5" (13)

MODEL	J	K	L	N	O	R	U	X	Z
0040	3" (87.6)	0.2"X0.2" (6X6)	9" (227.6)	1" (34.7)	9" (231.6)	2" (43.5)	0.7" (19)	4" (98.0)	5" (118.6)
0100	3" (87.6)	0.2"X0.2" (6X6)	9" (229.0)	1" (34.7)	9" (231.6)	2" (44.9)	0.7" (19)	4" (98.0)	5" (118.6)
0140	3" (87.6)	0.2"X0.2" (6X6)	9" (235.8)	1" (34.7)	9" (231.6)	2" (51.7)	0.7" (19)	4" (98.0)	5" (118.6)
0230	3" (87.6)	0.2"X0.2" (6X6)	9" (235.9)	1" (34.7)	9" (231.6)	2" (51.8)	0.7" (19)	4" (98.0)	5" (118.6)
0300	3" (87.6)	0.2"X0.2" (6X6)	9" (241.8)	1" (34.7)	9" (231.6)	2" (57.7)	0.7" (19)	4" (98.0)	5" (118.6)
0670	4" (112.9)	0.4"X0.3" (10X8)	13" (321.0)	2" (57.6)	11" (292.9)	3" (75.5)	1" (38)	5" (124.0)	6" (159.4)
0940	4" (112.9)	0.4"X0.3" (10X8)	13" (332.6)	2" (57.6)	11" (292.9)	3" (87.1)	1" (38)	5" (134.0)	6" (159.4)
2290	5" (138.7)	0.6"X0.4" (16X10)	17" (437.0)	3" (85.6)	14" (368.2)	3" (81.5)	2" (55)	6" (159.0)	8" (201.2)
3450	5" (138.7)	0.6"X0.4" (16X10)	18" (463.2)	3" (85.6)	14" (368.2)	4" (107.7)	2" (55)	6" (159.0)	8" (201.2)

## Service Parts Kits

SERVICE KITS AVAILABLE FOR RAPID REPLACEMENT OF ROUTINE SERVICE ITEMS:

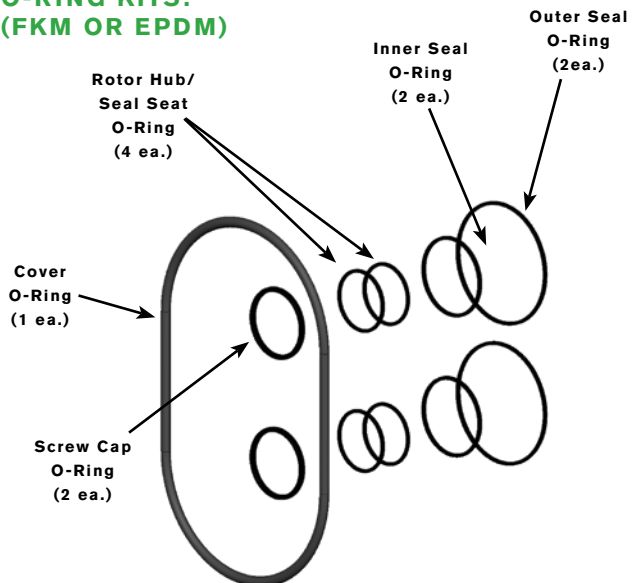
### PRODUCT SEAL KIT: (STANDARD AND SILICON CARBIDE)



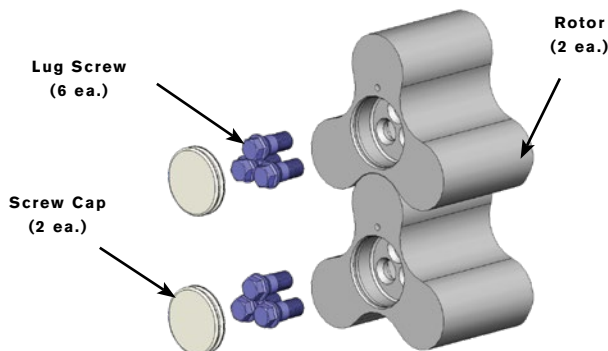
### DOUBLE SEAL KIT:



### O-RING KITS: (FKM OR EPDM)



### ROTOR REPLACEMENT KIT:



## MDL Series

### SANITARY ROTARY LOBE PUMPS

# SPXFLOW

Based in Charlotte, North Carolina, SPX FLOW, Inc. (NYSE: FLOW) is a multi-industry manufacturing leader. For more information, please visit [www.spxflow.com](http://www.spxflow.com)

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Design features, materials of construction, dimensional data and certifications as described in this bulletin, are provided for your information only and should not be relied upon unless confirmed in writing. Please contact your local sales representative for product availability in your region. For more information visit [www.spxflow.com](http://www.spxflow.com).

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