

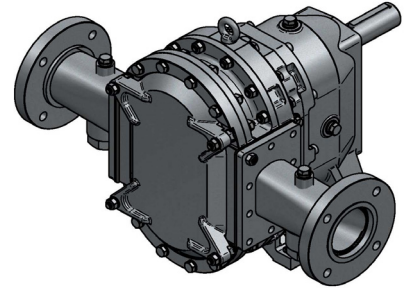


# API 676 Compliant Positive Displacement Rotary Lobe Pumps

## M34

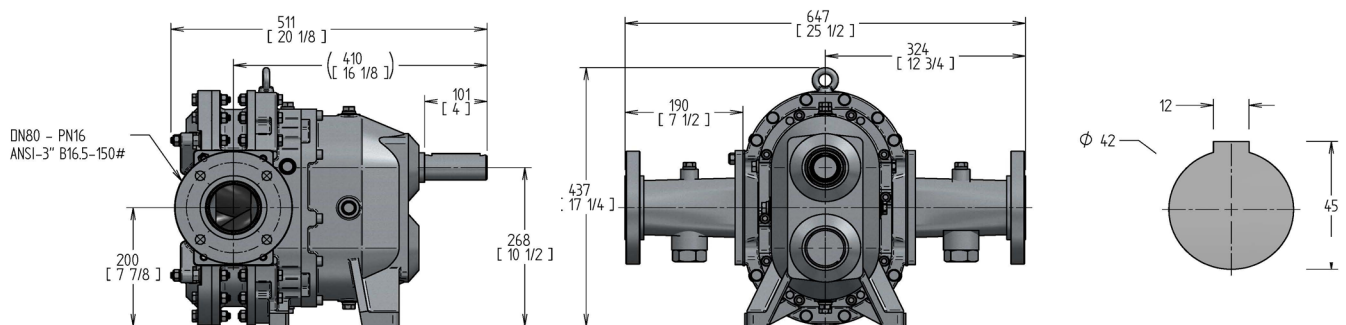
SPECIFICATIONS	US	Metric
Rated Capacity:	0-204 gpm	0-46 m <sup>3</sup> /h
Displacement (per 100 revolutions):	34 gal (US)	129 L
Maximum Continuous Pressure:	145 psi	10 bar
Starting Torque:	1,121 in lbf	127 N m
Rated Speed:	0-600 RPM**	0-600 RPM
Shaft Diameter:	1.65"	42 mm
Flange Connection Class:	ANSI 16.5-150#	DN – PN 10
Flange Connection Size:	ANSI 3"	DN 80
Weight:	257 lbs	117 kg
Solids Handling:		
Spherical Compressible	1.5"	38 mm
Spherical Hard*	1/8"	3 mm
NPSH required:	3 ft.	1 m

\* Larger hard solids will pass through but may cause damage.



MODEL >	API-SM34	API-CM34	API-DM34
Service	Non-Corrosive Sludge & Slurries	Chemical/Corrosive	Oil, Gas, Abrasive and Corrosive
<b>WETTED PARTS</b>			
<b>Rotary Lobes</b>			
Elastomer Options	NBR or HNBR, Opt. FKM, EPDM or Eng. Rec.	FKM or HNBR, Opt. NBR, EPDM or Eng. Rec.	FKM or HNBR, Opt. NBR, EPDM or Eng. Rec.
Lobe Profile	Helix, Option Straight	Helix, Option Straight	Helix, Option Straight
Number of lobe wings	4, Opt 2	4, Opt 2	4, Opt 2
Core	Carbon Steel or Eng. Rec.	Carbon Steel or Eng. Rec.	Carbon Steel or Eng. Rec.
<b>Sealing Elastomers</b>			
O-rings	FKM	FKM or Engineer Recommendation	FKM or Engineer Recommendation
Lip seals	FKM or Engineer Recommendation	FKM or Engineer Recommendation	FKM or Engineer Recommendation
<b>Shaft Seal / Mechanical Seals*</b>			
Type	LARS Single Mechanical, Opt. Tabbed or CART	LARS Single Mechanical, Opt. Tabbed or CART	LARS Single Mechanical, Opt. Tabbed or CART
Flushing	Internal Oil Cooled.	Internal Oil Cooled.	Internal Oil Cooled.
Seal Faces	Duronit, Opt. Silicon Carbide or Tungsten Carbide	Silicon Carbide, Opt. Tungsten Carbide	Tungsten Carbide, Opt. Silicon Carbide
Seal Holders	Carbon Steel with CR coating, Opt. 316SS	316 Stainless Steel	2205 Duplex
Seal Inspection & Removal	May be accomplished without removing driver	May be accomplished without removing driver	May be accomplished without removing driver
<b>Wear Plates</b>			
	AR500 Steel (Brinell 500)	Duplex Stainless Steel	Duplex Stainless Steel
<b>Housing Segments</b>			
	Duplex CD3Mn Stainless Steel or Eng. Rec.	Duplex CD3Mn Stainless Steel	Duplex CD3Mn Stainless Steel
<b>Flange:</b>			
	Carbon Steel	316 Stainless Steel	Duplex Stainless Steel
<b>Bolts - Strain Bolt</b>			
	Geomet Coated Steel	Stainless Steel A2-A4	Duplex Stainless Steel
<b>Bolts - Wear Plate</b>			
	Stainless Steel A2-A4	Stainless Steel A2-A4	Duplex Stainless Steel
<b>Pressure Disc</b>			
	Stainless Steel Type 316L	Stainless Steel Type 316L	Duplex Stainless Steel
<b>LIMITED EXPOSURE PARTS</b>			
<b>Pump Cover</b>			
	Carbon Steel or ASTM A48 Grey Iron	316L SS Cover or Eng. Recomm.	Duplex SS Cover or Eng. Recomm.
<b>Quench / Seal Cooling Chamber</b>			
	ASTM A48 Grey Iron rust primed	CIT Coated ASTM Grey Iron	CIT Coated ASTM Grey Iron
	Opt. Steel or Duplex SS Adapter / A48 Non-wetted	Opt. Duplex SS Adapter / A48 Non-wetted	Opt. Duplex SS Adapter / A48 Non-wetted
<b>NON-WETTED PARTS</b>			
<b>Timing Gears</b>			
	AGMA Class 9 SAE 1045 steel	AGMA Class 9 SAE 1045 steel	AGMA Class 9 SAE 1045 steel
<b>Gear Housing</b>			
	ASTM A48 Grey Iron rust primed	ASTM A48 Grey Iron	ASTM A48 Grey Iron
<b>Shaft</b>			
	AISI 4140 Alloy Steel	AISI 4140 Alloy Steel	AISI 4140 Alloy Steel
<b>Shaft Keyways</b>			
	Fillet radii conforming to ASME B17.2	Fillet radii conforming to ASME B17.2	Fillet radii conforming to ASME B17.2
<b>Bearings</b>			
	K5 Fit, C3 internal Clearance per AGMA7	K5 Fit, C3 internal Clearance per AGMA7	K5 Fit, C3 internal Clearance per AGMA7
<b>Pump Assembly/External Bolts</b>			
	Carbon Steel ISO 898-1	Stainless Steel A2-A4	Stainless Steel A2-A4
<b>OTHER INFORMATION</b>			
<b>Welding</b>			
	Operators qualified under ASME BPVC Section IX	Operators qualified under ASME BPVC Section IX	Operators qualified under ASME BPVC Section IX
<b>Draining and Venting</b>			
	Partially Drain capable. External venting required	Partially Drain capable. External venting required	Partially Drain capable. External venting required
<b>Flammable/Hazardous Service</b>			
	ATEX II 3G/D T3	ATEX II 3G/D T3	ATEX II 3G/D T3
<b>PAINTING REQUIREMENTS</b>			
<b>Standard Painting</b>			
	SSPC/SP6 Sandblast Paint	SSPC/SP6 Sandblast Paint	SSPC/SP6 Sandblast Paint
<b>Color</b>			
	LobePro Blue	LobePro Silver	LobePro Silver

**NOTE:** Summary of the principal features of the LobePro API 676 compliant pump. There are many other provisions of API 676 which apply to the pump. Our API series pumps comply with all of these provisions.  
\*: Our mechanical seals do not comply with API-682 due to the space and design parameters of the pump. However, our seal is not an exception and is considered an "Engineered Seal" under API 676 Revision 4. Flushing with pumped fluid (sludge/slurry) not desirable. Optional Plan 99 Oil Flush System available.



**Section 35-10**

30 January 2023

**MODEL >**

**API-SM34, API-CM34, API-DM34**

**Standard Tests**

**Test Description**

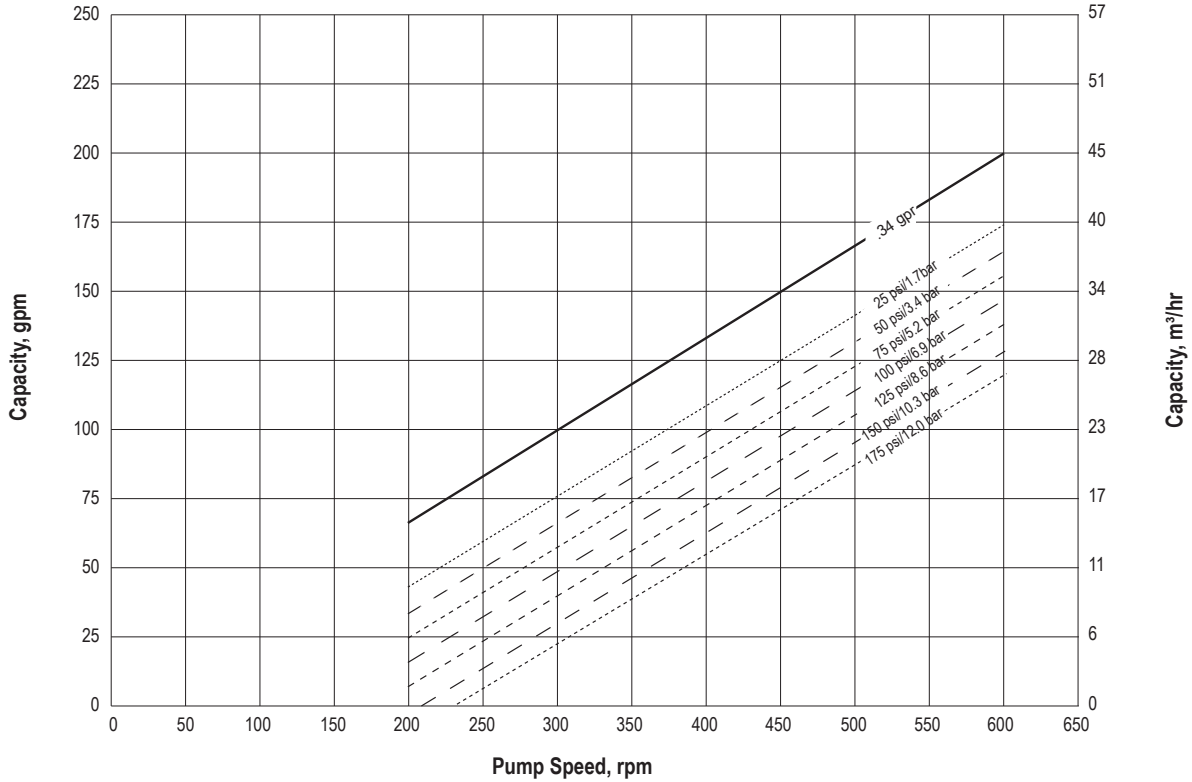
- Hydrostatic Test**
- Run Test**
- Performance Test**
- Sound Test**
- Documentation Included**

Operates without leaking at 150% of MACP when hydro tested  
 Tested to determine if the pump operates without excessive vibration or seal leaks throughout operating range.  
 Tested at duty point to confirm pump curve.  
 Shall be under 85 db's at a distance of 3 ft. (1 meter).  
 IOM section with material certifications, test data and results, record of heat treatments, results of quality control tests, and other data as agreed with Purchaser

**M34 CURVES**

**Performance Curve - NBR Lobes\***

Based on 70°F (21°C) fresh water (1 cp) at Sea Level.  
 Output will increase as viscosity of the fluid increases from 1.



\*Note: Output from lobes coated with elastomers other than NBR may be lower. Contact Engineering for further information.

**Horsepower Requirements**

