

**SUMMIT**™

VV40

VV40



Internal  
Gear Pump



**SUMMIT**™  
PUMP, Inc

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## FEATURES & BENEFITS

**Bracket** is one unit. This puts the pump packing or seal between the thrust bearing and bracket bushing, keeping movement to a minimum for longer seal life.

Multiple **Configuration** options conform to your system design with a simple change to casing orientation and/or shaft rotation.

**Bearing Housing** assembly is designed for ease of maintenance without lengthy downtime.

**Stuffing Box** is designed to easily accept alternate sealing methods.

**Ports** are either NPT or flange type.

**Bearing** is a double row ball bearing to handle thrust loads. (VV40Q and VV40QS sizes have two taper roller bearings.)

**Bushings** are either bronze or carbon graphite and reduce moving parts and maintenance.

**End Clearance** is externally set by rotating the bearing housing.

**Standard Gland** will accommodate packing or a component seal.

**Internal Pressure Relief Valve** is standard on all pumps. Pressure setting is calibrated at the factory.



**Internal gear pumps** offer a wide range of benefits. Although, they do not handle solids, they are a good option for abrasive applications.

**Shear sensitive fluids** can be pumped with this type of pump. Fluids are transferred in "chunks" as the gears rotate and very little pumped fluid is actually sheared. If needed, operating at slower speeds, selecting a larger pump or adjusting end clearances are ways to adapt to higher shear sensitive materials.

## CONFIGURABILITY

**Installation configurations** are obtainable since the VV40 pumps are designed for adaptability. There are 16 possible configurations by simply choosing a casing orientation and shaft rotation (*Notice relief valve positions*).

The images to the right are four main configurations. Standard configuration is right hand orientation and clockwise rotation, unless otherwise stated on the purchase order.

**Material** options are cast iron, ductile iron, steel and stainless steel. NPT or flanged ports are determined by pump size and material. Consult your local Summit Pump, Inc. Distributor for specific details.

**Shaft Rotation**  
(As viewed from motor)

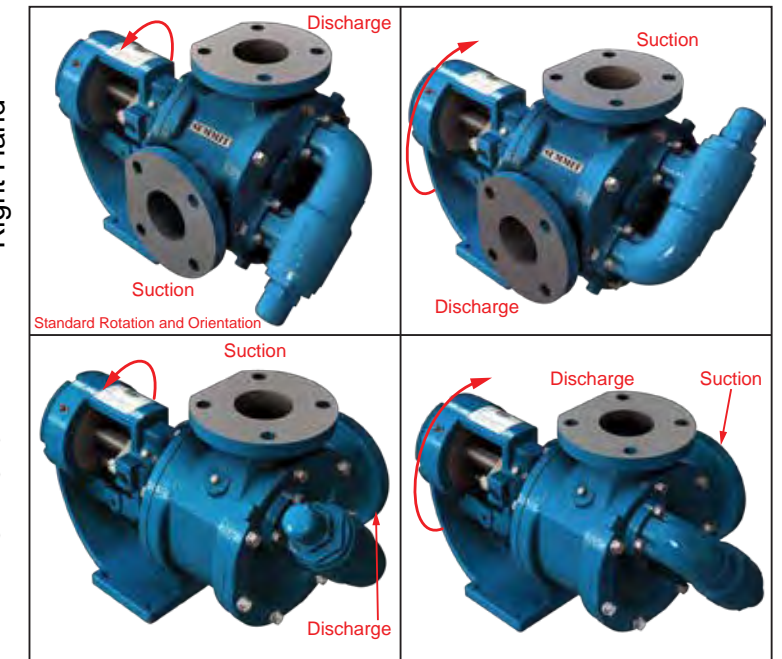
Clockwise

Counter Clockwise

Casing Orientation

Right Hand

Left Hand



## PERFORMANCE DATA

		Standard Material - Cast Iron Pumps											
Size		VV40H	VV40HL	VV40AK*	VV40AL*	VV40K	VV40KK	VV40L	VV40LQ	VV40LL	VV40LS	VV40Q	VV40QS
GPM	100SSU>	15	31	70	90	77	100	140	140	140	200	300	470
RPM	Viscosity	1750	1750	1450	1450	780	780	640	640	520	640	520	520
Max Discharge PSI	<750SSU	200	200	200	200	200	200	200	200	200	200	200	200
Appx. Shipping Weight		38	40	82	85	105	110	155	175	185	190	440	540

Contact your local Summit Pump Distributor for further performance data.  
Note: \*AK and AL sizes are interchangeable with Viking® Pump's 125 model.



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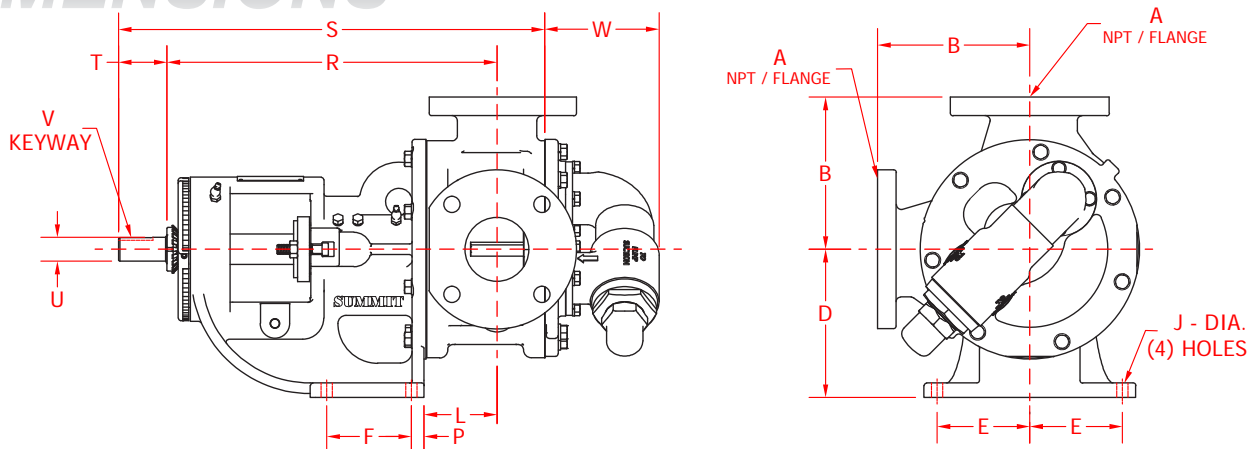
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## DESIGN PRINCIPAL

The VV40 series is a positive displacement internal gear type pump. The outer gear (rotor) is driven which turns the inner gear (idler) with its centerline offset from the rotor. This generates expanding volume near the suction port and contracting volume near the discharge expelling the pumped product.



## DIMENSIONS



Nomenclature Fields								Reference Dimensions (inches)													
1 & 2	3	4	5	6	7	8		A	B	D*	E	F	J	L	P	R	S	T	U	V	W
VV40H & VV40HL	PK, 1F, 1B, 9G	C,D	C,B	1,2	N	S		1.5" NPT	3.00	3.50	2.75	2.25	0.47	3.38	0.62	10.44	13.25	1.62	0.75	0.19 x 0.09	2.85
		W,S						1.5" 150# ANSI	4.00												
VV40AK & VV40AL**	PK, 1F, 1B, 9G	C	C,B	1,2	N	S		2" NPT	4.50	5.25	2.88	2.00	0.41	2.82	1.00	13.19	17.69	2.50	1.00	0.25 x 0.12	4.83
								2" 150# ANSI	5.25												
VV40K & VV40KK	PK, 1F, 1B, 9G	C,D	C,B	1,2	N	S		2" NPT	5.12	5.50	4.00	2.75	0.53	3.00	0.62	14.12	18.12	2.25	1.12	0.25 x 0.12	5.25
		W,S						2" 150# ANSI	5.25												
VV40L	PK, 1F, 1B, 9G	C,D	C,B	1,2	N	S, (E)		2" NPT	6.50	7.00	4.38	4.00	0.53	3.38	0.62	15.62	19.62	2.25 (2.35)	1.12 (1.44)	0.25 x 0.12 (0.38 x 0.19)	5.43
VV40LQ	PK, 1F, 1B, 9G	C	C,B	1,2	N	S, (E)		2.5" 125# ANSI													
		D,W,S					2.5" 150# ANSI														
VV40LL	PK, 1F, 1B, 9G	C	C,B	1,2	N	S, (E)		3" 125# ANSI													
		D,W,S					3" 150# ANSI														
VV40LS	PK, 1F, 1B, 9G	C	C,B	1,2	N	S		3" 125# ANSI													
		D,W,S					3" 150# ANSI	4.75	15.75	21.69	3.50	1.44	0.38 x 0.19								
VV40Q	PK, 1F, 1B, 9G	C	C,B	1,2	N	S		4" 125# ANSI	8.25												
		D,W,S					4" 150# ANSI														
VV40QS	PK, 1F, 1B, 9G	C	C	1,2	N	S		6" 125# ANSI	9.00												
		D,W,S				D,W,S		6" 150# ANSI													

\* DIMENSION IS TO PUMP CENTERLINE. VV40QS HAS SUCTION AND DISCHARGE PORTS 180 DEGREES APART AND 3.00" ABOVE CENTERLINE

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