

## ABOUT COMPANY

### KIRIT INDUSTRIES was founded by late CHHAGANLAL .L. PATEL in 1959.

KIRIT INDUSTRIES specialise in manufacturing rotary gear pump, Automatic-Oiling horizontal piston type pump and valves. Company's Accuracy in manufacturing, through testing, rigid inspection and astonishing performance has helped company to grow its reputation since 1959 and growing. KIRIT INDUSTRIES Is equipped with meticulously performing machinery imported from around the world.

KIRIT INDUSTRIES is a dynamic business expanding on a global scale. KIRIT pumps and valves is among the most widely recognized and respected brands in the global industrial and commercial market, serving customers in the oil and gas, refineries, mining, chemical, pulp and paper, agriculture and many more industrial and commercial markets.

# FEW IMPORTANT FACTS

# KIRIT INDUSTRIES is a dynamic business expanding on a global scale.

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This factor is responsible for the steady increase, year by year, in the use of "K.I" products. How satisfactory this service has been is evidenced by the fact that great a share of our business comes from repeat orders.

Many of these repeat orders come to us unsolicited, from users who have given our product a trial and have convinced themselves that they will do the work for which they are recommended.



## K.I SIGNATURE ROTARY GEAR PUMPS

#### **Applications**

The "K.I" rotary gear pumps are widely used for loading and unloading or transferring of bitumen, tar, Ido, furnance oils, castor oils, vegetable oils, chemicals, molasses, color and paints, soaps, silicate of soda, starch, glue, honey, glycerine and many more other viscous materials from and to the trucks, tankers, other mobile vehicles and plant manufacturing above materials. it is also used in bitumen sprayer machines, road paver machines, sugar mills, rolling mills, foundries, etc.



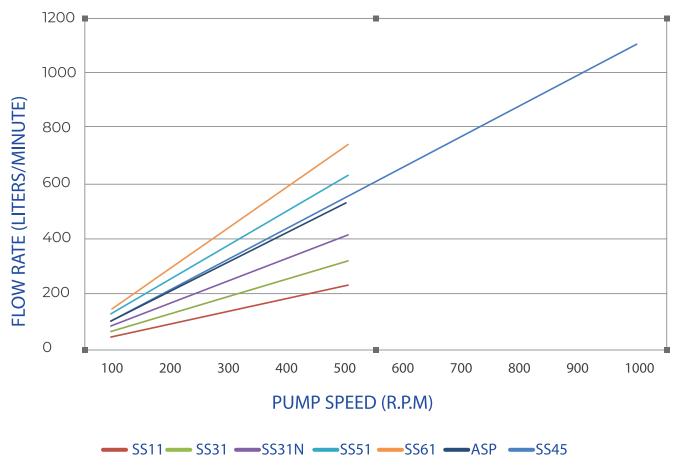
Pumps Series	Series 11, 21, 31N, 51, 61	Series 45
Pump Body	Cast Iron	Cast Iron
Front Cover	Cast Iron	Cast Iron
Back Cover	Cast Iron	Cast Iron
Gears	Cast Iron Spur Gears	Helical Steel Gears
Shaft	Steel	Steel
Shaft Seal	Nitrile / NBR Rubber Oil Seal / Silicon Rubber Oil Seal, PTFE Grand Packing	Nitrile/NBR Rubber Oil Seal / Silicon Rubber Oil Seal, PTFE Grand Packing
Max Operating temp	200℃	200°C
Base Plate	Cast iron(Not Available in 31J, 51,61)	N/A
Pedestal	Cast iron(Not Available in 31J, 51,61)	N/A
Pulley	Cast Iron	N/A
Key	En-8	En-8
Hex Bolts	Steel	Steel
Max Operating RPM	400	900

#### **Features**

- The "K.I" series Rotary Gear Pumps are specially design for all type of viscous liquids.
- K.I special design optimize characteristic for mounting pump on tanker, trucks or any mobile vehicles for loading /unloading.
- Design features easy installation & maintenance. Wide range of flow rate according to the application
- Different mounting options for suction and delivery options.
- Working pressure upto 10kg/cm<sup>2</sup>, upto 2,50,000 SSU.



## **The Oretical Flow Capacity**



SSV=Side Suction Pump with "V" Pulley, SSLF=Side Suction Pump with Loose & Fast Pulley, SS=Side Suction Pump without Pulley, BSV=Bottom Suction Pump with "V" Pulley, ASP=Aaphalt Sprayer Pump

PUMP	SUCTION &	CAPACITY @400 rpm			Pu	ılley	Recommended Motor H.P at Different Pressure / Head																								
TYPE	DELIVERY	LPM	US	M3/H			KG/cm2	1	2 3		4	5	6	7	8	9	10														
			GPM	R	Section	V	Height in Ft	10	20	30	40	50	60	70	80	90	100														
K.I-SSV11	1½" ½	182	48.7	10.92	А	15 X 2 3⁄4"	H.P.	I.P. 1.5		2.5				5.0																	
K.I-SSV15	2" X 2"	182	48.7	10.92			H.P.	1.5			2	2.5			5.0																
K.I-SSV31	2" X 2"	254	67.1	15.24	А	15 X 2	H.P.	2.5			2.5 5.0					7.5															
K.I-SSV31J	2" X 2"	254	67.1	15.24			H.P.	2.5				5	5.0			7.5															
K.I-SSV31N	2½" X 2" ½"	323.2	85.38	19.34	А	15 X 2 ½"	H.P.	5.0				7	'.5			10.0															
K.I-SSV45	2½" X 2" ½"	443.2	117.08	26.59	В	15 X 2	H.P	7.5		.P 7.5 10.0		7.5 10.0		10.0		10.0 12.5		12.5													
K.I-SSV51	2" X 2"	498	131.55	29.88	В	15 X 2	H.P		7.5 10.0		10.0		12.5																		
K.I-BTV51 / STV51	2" X 2"	498	131.55	29.88	В	15 X 2 ¾"	H.P		7.5		10.0		10.0			12.5															
K.I-SSV51 J	2½" X 2" ½"	498	131.55	29.88			H.P	7.5		H.P 7.5 10.0			12.5																		
K.I-SSV51 N	2½" X 2"	498	131.55	29.88			H.P		7.5			1	0.0		12.5																
K.I-SSV61	2½" X 2" ½"	588	155.33	35.28	В	15 X 2	H.P	10.0 12.5		.P 10.0 12.5		H.P 10.0 12.5		H.P 10.0		12.5		12.5		12.5		15									
K.I-BTV61 STV61	2½" X 2" ½"	588	155.33	35.28	В	20 X 2 3⁄4"	H.P	10.0		10.0		10.0		10.0		12.5		15		15											
K.I-SSV61	3" X 3"	588	155.33	35.28	В	15 X 2	H.P	10.0		10.0		10.0		10.0		10.0		10.0		1		12.5		15							
K.I-BTV61 STV61	3" X 3"	588	155.33	35.28	В	20 X 2	H.P	2 10.0		10.0		10.0		10.0		10.0		10.0		10.0		10.0		10.0		12.5			15		
ASP	DN 50	498	131.55	29.88			H.P																								

### Nomenclature - K.I Signature Gear Pumps

SS = Side suction and side delivery

V = Pump with pulley

ST = Side suction and top delivery (90° Pipe Line)

BT = Bottom suction and top delivery (180o straight Pipe Line)

#### Note

Model K.I-SS 11, 15, 31, 31N, 45, 51N comes with 3 port design (Except 51N) with 90° pipe line connection Model K.I-SS 51 & 61 comes with 180° side to side connection and bottom to top connection.

Model K.I-SS 15 and 45 are available in helical steel gears and upto max 900 RPM.

## **KI.H Series**

PART	MATERIAL GRADE
BODY	IS.210 FG 220 C.I Grade
BACK COVER	15.210 FG 220 C.I Grade
GLAND	IS.210 FG 220 C.I Grade
HELICAL GEARS	EN-8
SHAFT	EN-19
BEARING/BUSH	Bronze
SEAL	Neoprene oil seal/Teflon sea/ Mechanical seal
Internal thread	1/2" to 3"
Lit/min @1440 R.P.M.	20 to 500

#### **Applications**

Refineries, All kind of minerals oils, printing inks, Dyes and resins, Glycerin and resins, Bitumen, Fuel Oil, Diesel Oil, Furnance Oil, Power Plant, Steel Plant, Cement Plant, Oil Storage installation.

#### **Features**

- Simple and Efficient design.
- Single helical gear design
- Low noice
- Wide Capacity range.
- Easy to maintain.
- With relief valve design
- High efficiency
- Bi-direction position displacement pump.
- Work pressure 10kg/cm2, max 1,00,000 SSU



PUMP	SUCTION & DELIVERY	CAPA	Recommended Motor H.P at Different Pressure / Head												
TYPE		LPM	US M3/H GPM R		KG/cm2	1 10	2 20	3 30	4 40	5 50	6 60	7 70	8	9	100
KI.H-50	½"X½"	20	5.3	1.2	in Ft				0.	 50			0.75	5	
KI.H-75	3/4"X3/4"	30	7.92	1.8	H.P	0.50									
KI.H-100	1"x1"	50	13.2	3.0	H.P	0.75		0.75 1.0					1.5		
KI.H-125	1 1/4"x1 1/4"	75	19.8	4.5	H.P.		1.5			2.	0				
KI.H-150	1 ½"x1 ½"	110	29.0	6.6	H.P.		1.5 2.5				5.0				
KI.H-200	2"x2"	225	59.4	13.5	H.P.	2.5				5.	0	7.5			
KI.H-250	2 ½"x2 ½"	350	92.5	21.0	H.P.	5.0		5.0 10.0				12.5		5	
KI.H-300	3"x3"	500	131.6	30.0	H.P.	5.0				13	3		15		

Model	Α	В	Е	F	G	S	Т	Н	НА	НВ	HC	L	М	N	DO	DI	K	PQ
KI.H-050	172	46	51	40	70	90	70	63	50	90	6	22	4	13.5	12	8	20	1/2" B.S.P.
KI.H-075	215	54	63.5	45	85	110	80	80	66	115	8	25	5	16	14	10	90	3/4" B.S.P
KI.H-100	236	64	64.5	50	93	120	95	90	73	128	8	27.5	5	19	17	10	86	1" B.S.P
KI.H-125	266	70	65	60	105	140	110	100	79	140	10	32	6	22.5	20	12	100	11⁄4″ B.S.P
KI.H-150	290	75	80	70	115	150	130	110	88	155	12	35	6	24.6	22	12	108	1½" B.S.P
KI.H-200	360	98	92	100	140	180	160	132	105	192	15	40	8	28	25	15	142	2" B.S.P
KI.H-250	420	110	110	120	155	200	185	145	114	215	18	45	8	31	28	17	160	2½" B.S.P
KI.H-300	466	82	105	155	175	220	225	165	130.5	248	22	50	10	38.3	35	18	190	3" B.S.P

#### All the dimensions are in MM.

Note: Due to constant upgradation in our products there any be change in dimensions without any prior notice.

# K.I HS STAINLESS STEEL ROTARY GEAR PUMPS SS GEAR PUMP MANUFACTURER

KIRIT INDUSTRIES OFFER "K.I" brand gear pump pump model "K.I.HS" (SS Rotary Gear Pump, stainless steel Gear Pump) which is a self-priming pump, foot mounting type positive displacement rotary gear pump. Model "K.I-HS" having all stainless steel (SS-316) in three piece construction with investment cast. Due to three piece construction, it can be easily cleanable and maintainable that is why it is highly used in all kind of food industries. The shaft is supported on self-lubricating type Bronze Bushes and the sealing is done with PTFE gland or viton oil seal or mech. Seal which ensures zero leakage. The right angle mounting brackets facilitates foot mounting of the pump on base plate with Electric motor of appropriate ratings. These pumps have sturdy design and construction for long trouble free service.

The suction and delivery connection are available in ½" X ½" to ½½" X ½½" size. These pumps can be operated up to pressure of 10 KG/cm² with 5 LPM to 350 LPM flow capacity and has suction of 1m to 5m at rated speed of 1440 RPM. These pumps are designed up to maximum viscosity to 1,00,000 SSU and maximum temperature upto 200°C.

K.I-HS Rotary Gear Pump Materia	l of Construction
Pump Body	CF-8M (SS316)
Covers	CF-8M (SS316)
Gland Cover	CF-8M (SS316)
Gears	SS-316 Single Helical
Gasket	PTFE
Shaft	SS-316
Bush Bearings	Bronze
Shaft Seal	Viton Oil Seal OR mech. Seal OR PTFE gland.
Mounting Brackets	Cast Iron L-Type
Key for Coupling	SS-304



PUMP	SUCTION &	CAF	PACITY (	Recommended Motor H.P at Different Pressure / Head											
TYPE	DELIVERY	LPM	US	M3/H	KG/cm2	1	2	3	4	5	6	7	8	9	10
		LPIVI	GPM	R	Height in Ft	10	20	30	40	50	60	70	80	90	100
K.I-HS-50	½" X ½"	15	3.9	0.9	H.P	0.30				0.5	0		0.75		
K.I-HS-50 L	½" X ½"	25	6.5	1.5	H.P	0.50			0.75				1.0		
K.I-HS-100	1"X 1"	50	13	3	H.P	0.75		0.75 1.0					1.5		
K.I-HS-150	1½" X 1½"	80	20.8	4.8	H.P		2.0 2.5				5.0				
K.I-HS-150 L	1½" X 1½"	125	32.5	7.5	H.P		2.5		5.0				7.5		
K.I-HS-200	2" X 2"	150	39	9	H.P	5.0			7.5				10.0		
K.I-HS-200 L	2" X 2"	200	50	12	H.P	7.5		7.5 10.0				12.5			
K.I-HS-250 L	2½" X 2½"	350	92.4	21	H.P		10.0			12.	5			15.0	

#### SS ROTARY GEAR PUMP FEATURES

- Construction is in three piece so its easily cleanable and easy to maintain.
- Bronze bush bearing for smooth operation
- Self priming pump.
- Single helical gear design for low noise operation.
- Optionally available in double helical gear design.
- Bi-Direction positive displacement pump.
- Non-corrosive pump.

#### K.I-HS-ROTARY GEAR PUMP APPLICATION

- Food products like Ghee, Butter, Chocolate, Vegetable sauce, Meat, Fat, oil etc.
- Pharmaceutical Industries.
- Cosmetic Industries.
- Dyes and resins.
- Chemical Industries for corrosive semi-viscose chemical.
- Dyeing and printing house.
- Special chemical and acid industries.

## **K.I HD Series**

#### **PUMP CHARACTERISTIC**

Gear pump is a rotary positive displacement pump with positive pressure characteristic. The capacity of the pump varies directly with speed but remain constant against pressure, however due to running clearance between the casing & impeller some liquid always by passes to suction causingsleep, which depends upon the workman-ship. The pumps are capable of handling any viscosity, the sleep reduces with viscosity but the viscous power increases. The pump has a self priming capability however some net positive suction head (NPSH) is always required to avoid cavitations depending upon the viscosity of the liquid to be pumped & the pump speed.

#### **INTERNAL POWERLOSSES**

The power losses in rotary pumps are of two types. The mechanical losses is the power necessary to overcome frictional drag of all the moving part within the pump while viscous losses is power required to overcome fluid viscous drag & shearing action of the fluid, this can be computed from the graph on the opppsite side.

#### H.P. CALCULATION

The break horse power required to drive a rotaru pump is sum of the theoretical HP & internal power losses. The theoretical horse power is the actual work done in moving the fluid from intel port to out let pressure condition & is product of Constant C=0.037(capacity-LPM, Pressure kg/cm2) or C=2.3(capacity-GPM, pressure PSI)



#### **PUMP SELECTION & USES**

The bush bearing type of pump can be used for clean viscous liquid having sufficient lubricating value such as clean lube oil, Vegetable oil, Fish & Animal oil, Gear oil, Glycerine, Hudraulic oil, Honey, ASTM & SAE lubricating oil for intermitting duty. However for continues duty pump with needle roller bearing in "K.I-HD" seried should be selected. For liquid having low viscosity, poor lubricating values or Containing dirts or impurities such as Crude oil, Dirty lube oil, HSD, Kerosene, LDO, Paints, Suger solution, Tupentine, Varnish, Wood Plup, Pump with independently lubricated bearing should be selected. For liquid which tends to solidify at room temperature such as Ashphalt, Bituman, Furnace oil, Tar, Cellulose, Starch, LSHS, HPS, Molasses, Naptha, Phenol resin, RFO, Silicate, Soap solution, Viscous, Wax etc. jacketing construction should be selected to facility the heating or the pump by steam or thermic fluid.

#### **INSPECTION & TESTING**

All Pumps are individually tested for its performance as per JIS B-8312-1976.

Proven performance & operational economy are prime consideration while evaluating your your pumping requirement. When it comes to handling viscous or semi viscous liquids " K.I " rotary gear pump is an obvious choise for the very reasons.

"K.I" rotary gear, twin gear & screw-gear pumps are welknown, widely accepted "K.I" pumps in all the industries for it's efficient performance, operational reliability, compact design & noiseless operation. These pumps have outclassed convenation gear pump & has also broken myth about screw pumps offering better overall performance at considerable reduced cost. Many imported gear & screw pump offering better overall performance at considerable reduced cost. Many imported gear & screw pump offering better overall performance at considerable reduced cost. Many imported with "K.I" pumps in power stations, steel plants, refineries, oil installation on navy vessels & cargo ship, Popular range of "K.I-HD" series "K.I" rotary screw-gear pumps are redesigned & re-engineered to offer further simplicity with added reliability meeting international standard like API, JIS, DIN & above all, the growing expections of enlightened customers.

" K.I-HD " series twin gear pump now offer enlarged capacity range with option of self or independently lubricated jacketed or non-jacketed construction with all sizes designed to run at synchronous speed of 4- pole primeover to further reduce the overall cost of the pump set. It will be a wise decision to go for " K.I-HD " rotary twin gear pump even if it amounts to scrapping exisiting pump at your present installation.

#### **ADVANTAGES**

- Herrigbone rotors design eliminate side thrust.
- Modified tooth profile enhances the tooth life.
- Floating gear-design ensures uniform load distribution.
- Low-leakage path by design improve volumetric efficiency.
- Extra thick shaft reduces bending effectively.
- Sleeve on shalf make maintenance economical & easy.

	PARTS LIST W	ITH .	MATERIAL C	OF CC	NSTRUCTION		
SR.	ITEM	QT	MATERIAL	SR.	ITEM	QT	MATERIAL
01	PUMP CASING	1	CI/CS/SS	12	R.V. PISTON	1	EN-8/SS
02	FRONT COVER	1	CI/CS/SS	13	R.V. SPRING	1	SPR. ST
03	BACK COVER	1	CI/CS/SS	14	R.V.AD. SCREW	1	EN-8/SS
04	GLAND COVER	1	CI/CS/SS	15	BASE PLATE	1	M.S.
05	ROTARY SHAFT	1	EN-9/19/SS	16	COUP. GUARD	1	ALUMIN.
06	STATOR SHAFT	1	EN-9/19/SS	17	COUPLING	1	FLEXIBLE
07	IMPELLER GEAR	1	EN-24/SS	18	COUP. KEY	1	EN-8/SS
08	NEEDLE BRG.	4	INA/IKO	19	SEALING SYS.	2	OS/MS/GP
09	WEAR PLATE	4	Bronze	20	DOWEL PIN	4	SILV. ST
10	LIFTINGHOOK	4	Steel	21	COMP. FLANGE	2	MS/SS
11	R.V. HOUSING	1	MAL./RON	22	H/T HEX-BOLT	12	EN-8/CC



# K.I II PULP & KNIFE EDGE GATE VALVES

#### **Specification**

Size Range	2"-20"
Hydraulic Pressure	30 to 150PSI (2.0 to 10.3 Bar)
Leakage rate	Zero Allowable Leakage
Body	C.I, WCB,CF8,CF8M,SGI others on request
Gate	SS 304
Packing	Nitrile, Silicon other on request
Gland Follower	SGI, D.I, WCB, Gun metal
Yoke	M.S, SS304, SS316
Hand Operated Wheel	SGI, D.I, C.I, M.S, CF8
Pneumatic Operated	Pneumatic Cylinder
Flow Characteristic	Equal Percentage

- Excellent Design
- Light Weight
- Free From Flaws

We K.I are leading and trusted brand providing pulp valves and knife edge gate valves to our clients. Carefully designed by our experts, it is best suited for providing unrestricted smooth flow of viscous and non-viscous fluids. We are providing it at as per the specified demand and feedback among our patrons. Pulp valve and Knife edge gate offered by us is specified demand and feedback among our patrons. Pulp valve and Knife edge gate offered by us is specialized product made for our customers requirements. Tested by us on well defined quality parameters this products is packaged in best grade material for sale. We are providing pulp valve at convenient rates to our clients.

Ref No.	Description of Special Parts
101	Housing "A" inlet
102	Housing "B" outlet
103	Supports
104	Cross member
105	Hand Wheel
106	Yoke
107	Gate
108	Gland Follower
109	Clearing Door
110	Nuts & Bolts

#### **Features**

Stainless steel sliding Gates for long lifeSpan Optimized Characteristic for supply of paper Pulp, Petroleum, board mills and chemical industries.

Protected against corrosion
Reliable mounting options
Wide range of flow rates
Available in water and lugged type

### **Applications**

Kirit II Pulp Valve also known as Knife edge gate Valves are designed for isolation, on-off and throttling services in paper and pulp industries, power plants, Cement plants, sugar industries, Chemical and textile processing industries, minning water and sewage plants to handle slurries, slag, plug and fibrous materials, fly ash, powder, clean or corrosive materials.

Valve Size	А	В	D	Н	J	F
50	50	62	362	225	120	120
65	65	62	402	225	132	130
80	80	62	333	225	148	140
100	100	64	365	225	178	150
125	125	66	395	225	185	160
150	150	68	422	225	242	145
200	200	72	520	280	285	170

Valve Size	А	В	D	Н	J	F
250	250	76	900	320	390	200
300	300	80	1020	320	440	225
350	350	96	1160	375	440	225
400	400	100	1290	375	500	280
450	450	106	1480	520	600	310
500	500	110	1530	520	655	335

Note: All dimensions are approx in M.M



## **KIRIT INDUSTRIES**

An ISO 9001:2015 Company

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