

## บริษัท สยาม อินดัสเทรียล แมชชีนเนอรี่ จำกัด SIAM INDUSTRIAL MACHINERY CO., LTD.

5/15 หมู่ 6 ถนนบางนา-ตราด กม.15 ต.บางโฉลง อ.บางพลี จ.สมุทรปราการ 10540 โทร 02-312-5300 #215 โทรสาร 02-312-5410 5/15 Moo 6 , Km 15 Bangna-Trad Highway, Bangchalong , Bangplee, Samutprakam 10540 Tel 02-312-5300 #226 Mr.Kirachai (Sales)

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# **Pumps**

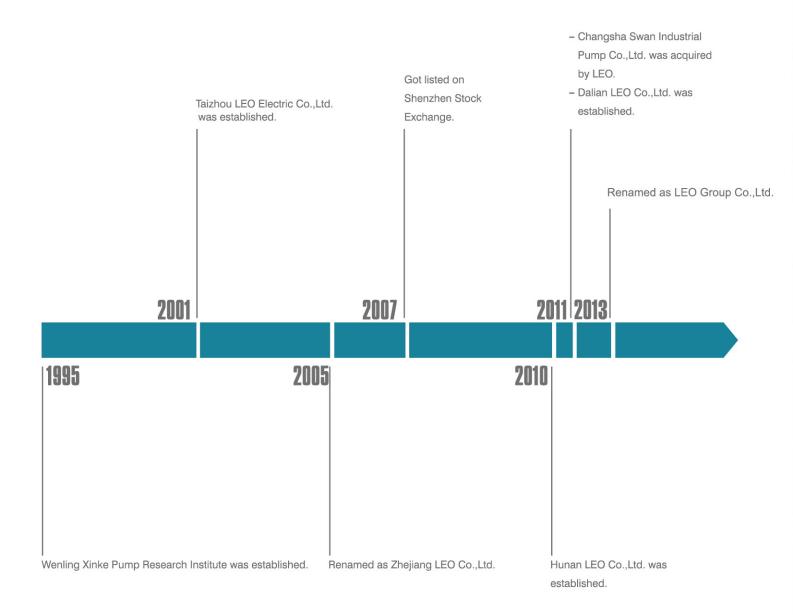
• End Suction Centrifugal Pump



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### **HISTORY**



#### **TO KNOW LEO**

LEO Group (got listed in Shenzhen Stock Exchange with stock code 002131) is a national high-tech enterprise engaged in R&D, design, manufacture, sales and service of all series pump. LEO is the first listed company in Chinese pump industry, one of the drafters of pump industry standard and the vice president of drainage and irrigation machinery branch of China Agricultural machinery industry association as well. It is mentionable that LEO has the only state-authorized technical center in this industry.

Our products have been sold to over 120 countries and regions, such as Europe, North America, Central &South America, Southeast Asia, Middle East, Africa, Oceania ,etc., which play a crucial role in water conservancy, water resources, electric power construction, petrochemical industry, mining, metallurgy, fire-fighting, HVAC(Heating, Ventilation and Air Conditioning), agricultural irrigation, civil water supply and drainage, etc.

LEO has currently two industrial groups respectively for industrial and civilian applications. With five manufacturing bases in Wenling of Zhejiang, Xiangtan of Hunan, Changsha of Hunan, Wuxi of Jiangsu and Dalian of Liaoning, LEO possesses a solid foundation to become a world-class pump and system solution provider rapidly.

With over 70 years' professional technology, LEO will continue her consistent creativity and development ability in each pump for human's health.



#### **NUMEROUS MEMBERS, ONE FAMILY**

Based on market segment, LEO's pump business is divided into 5 fields, namely water consewancy & water resources, power station, petrochemical industry, mining & metallurgical industry and civilian applications. For each field there's a professional manufacturing base with relevant professional sales teams. Four subsidiary companies – Wuxi LEO Xi Pump, Changsha LEO Swan Pump, Dalian LEO Huaneng Pump and Hunan LEO Pump are all well–known industrial pump manufacturers in their own fields. With over 70 years' industrial pump manufacturing experience and extraorclinary comprehensive strength, LEO becomes a leadinfl company among all industrial pump manufacturers in China.



# Pump Manufacturing Base for Domestic and Commercial Applications (Wenling City, Zhejiang Province)

It is the core base for R&D, manufacturing, sales and service of domestic and commercial pumps for family water supply, pipeline boosting, garden and field irrigation, HVAC, etc.

The leading products include peripheral pump, jet pump, centrifugal pump, garden submersible pump, fountain pump, pool pump, doestic lifting station, gasoline engine pump, diesel engine pump, submersible pump, submersible sewage pump, stainless steel vertical multistage pump, etc.

The product range covers 15 series with over 2,000 specifications, which are well sold in more than 120 countries and regions. The base has established steady cooperative relationships with world-class pump manufacturers, importers, dealers and hypermarkets.



## Pump Manufacturing Base for General Industrial Pumps (Xiangtan City, Hunan Province)

It is the most important base for industrial pumps.

The products are mainly used in mine, metallurgy, goal washing, FGD, municipal water, etc.

A world-class pump testing center with testing power up to 12,500 kW realizes high precision tests for real pumps which are used for power station, water conservancy and water resources, petrochemical industry, mining and metallurgical industry.



## Pump Manufacturing Base for Water Conservancy & Water Resources (Wuxi City, Jiangsu Province)

This base grew out of Wuxi Xi Pump Manufacturing Co.,Ltd, a well-known manufacturer for water conservancy.

The base is specialized in production of large and medium-sized pumps for urban water supply and drainage, field irrigation, water conservancy projects and large water diversion projects. The main products cover 8 series with 995 specifications.

With great honor, the model 300HW-8 mixed-flow pump won the first national quality award of Chinese pump industry. As a main supplier, the base provides large pumps for South-to-North Water Diversion Project, a national key project.



## Pump Manufacturing Base for Petrochemical Industry (Dalian City, Liaoning Province)

The predecessor of this base is Dalian Huaneng Corrosion–Resistant Pump Works, who's a well–known pump manufacturer in petrochemical industry.

The base is specialized in production of petrochemical pumps for the upstream industry of oil and gas (including exploration, exploitation and storage) and downstream industry of petrochemicals (including crude oil refinery, heavy chemical industry, fine chemistry and coal chemical industry).

The base focuses on design and manufacture of 30 series (OH, BB, VS, etc.) of petrochemical pumps with over 3,000 specifications, which are in accordance with API and ISO standard. The production of large crude oil long distance pipeline pump (BB1 and BB2) and HTHP overloaded pump (BB3 and BB4) is available. LNG cryo-pump is already in development.

The base is Class A supplier of CNPC and qualified sub supplier of Shenhua Group.

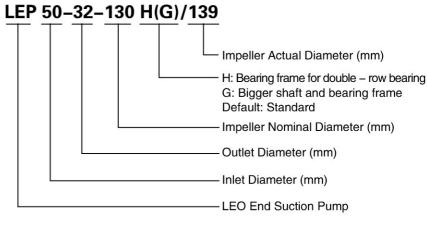




### **Applications**

- Water supply systems
- Pressure boosting
- Heating systems for commercial buildings and district heating
- Cooling plants for industrial processing and air-conditioning units
- General transport for industrial processes
- Fire fighting system

#### **Identification Codes**



No.	Part	Material
1	Pump casing	Cast Iron Ductile Iron 304/316
2	Impeller nut	
3	Wear ring	
4	Impeller	Brass/Bronze Cast Iron 304/316
5	Casing cover	
6	Shaft spacer	
7	Mechanical seal	
8	Seal cover	
9	Rubber slinger	
10	Bearing frame	
11	Shaft	304/316/1045

No.	Part	Material	No.	Part	Material
12	Bearing		23	Key	
13	Bearing cover		24	Key	
14	Support foot		25	Bolt	
15	Packing sleeve	Bronze	26	Oil nipple	
16	Packing seal cage		27	Oil seal	
17	Gland packing		28	Nut	
18	Gland cover		29	Washer	
19	Casing gasket		30	Washer	
20	Nut		31	Oil scale	
21	Nut		32	Oil cover	
22	Nut		33	Bearing Cover Gasket	



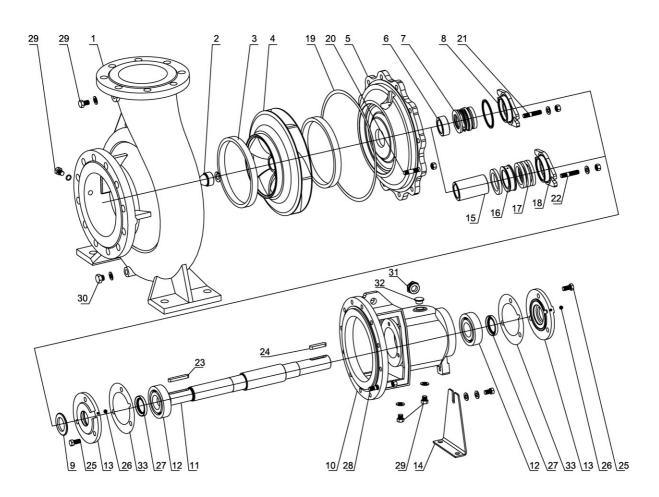
### **Working Conditions**

- Pump design complies to BS EN 733/DIN 24255 standard
- Conveying medium: Low viscosity, non-inflammable and non-explosive liquids not containing solid particles or fibers
- Speed: 1450/2900 rpm at 50 Hz, 1750/3500 rpm at 60 Hz
- Flow range: 0.5 440 l/s
- Head range: 2 152 m
- Max. liquid temperature: 105°C
- Liquid pH value: 4 10
- Max. operation pressure: 10 bar, 16 bar on request

### **Design & Structure**

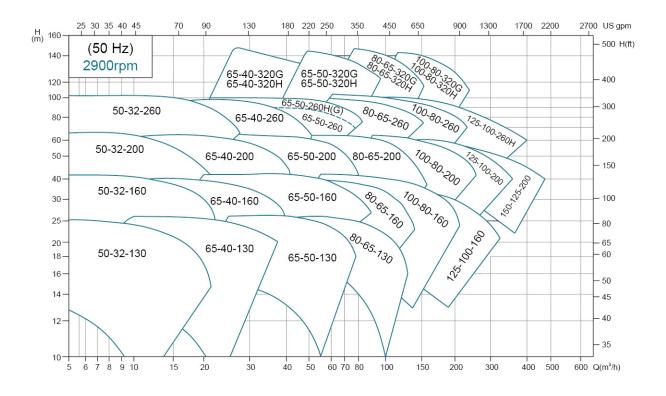
Design	Performance and dimensions referring to the European standard BS EN733/DIN24255
Structure	Horizontal, Axial End-Suction, Single-Stage, Single-Suction, Volute Casing, Back pull-out
DN(mm)	Inlet: 50-350 Outlet: 32-300
Flange	ISO7005.2 ; DIN2501 PN16 ; GB/T17241.6 PN1.6

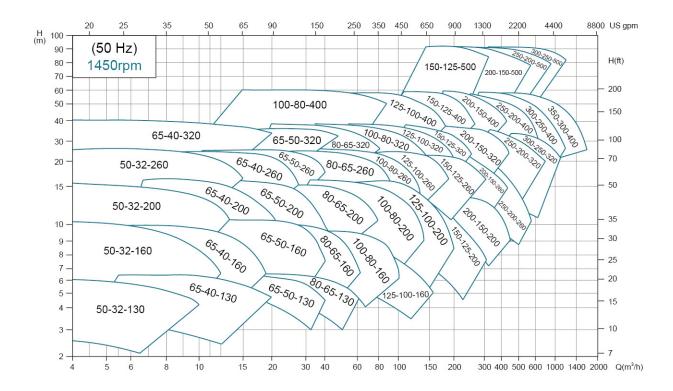
#### **Materials Table**





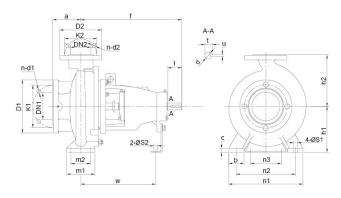
#### **Characteristic Curves**







### **Installation Dimensions**



Model	Bearing ID (mm)	DN2	DN1	а	f	h1	h2	b	С	n3	m1	m2	n1	n2	S1	<b>S</b> 2	w	d	1	t	u	Weigt (Kg)					
LEP50-32-130						112	140			400			190	140								29					
LEP50-32-160	25	32	50	80	360	132	160	50	14	100	100	100 70	240	190	14	14						35					
LEP50-32-200	20		00		000	160	180		14	110	2200		240	190	14	14						47					
LEP50-32-260				100		180	225	65		110	125	95	320	250			267	24	50	27	8	58					
LEP65-40-130				80		112	140			100			210	160			201	27	50	21	O	31					
LEP65-40-160	25			- 00	360	132	160	50		100	100	70	240	190								34					
LEP65-40-200				100	000	160	180						265	212								45					
LEP65-40-260(H)		40				180	225			110			320	250								61					
LEP65-40-320	35				470	200	250	65			125	95					342	32	80	35	10	94					
LEP65-40-320(H)	15		0.5	125	500	200	250		14		0.1.00.0010	0.000	345	280			0.07	40	440	45	40	107					
LEP65-40-320G	45		65		526	200	250		1990	400			0.40	400			367	42	110	45	12	105					
LEP65-50-130						132	160			100			240	190								35					
LEP65-50-160	25			400	360	160	180	50			100	70	265	212	14		267	24	50	27	8	39					
LEP65-50-200	1 000 1.07 1	50		100	300	160	200															49					
LEP65-50-260(H)						180	225	65			125	95	320	250			244					68					
LEP65-50-260G LEP65-50-320(H)	35			405	470	180 225	225 280	65	18		123	33					344 342	32	80	35	10	65 113					
LEP65-50-320(H)	45	50	65	125 125	526	225	280		18		125	95	345	280			367	42	110	45	12	105					
LEP80-65-130	40	50	03	123	320	160	180		10		123	93					307	42	110	45	12	41					
LEP80-65-160	25						360	160	200	65	2000		00/2004	1000000	280	212			267	24	50	27	8	47			
LEP80-65-200(H)	23			400	300	180	225	- 00	14		125	95					201	24	00			55					
LEP80-65-200G		65	65	80	100	465	180	225						320	250			339					60				
LEP80-65-260	35			05	0.5	0.0	00		403	200	250		15				360	280				32	80	35	10	87	
LEP80-65-320(H)	33									470	225	280	80	18		160	120	300	200	40		342	32	00	33	10	110
LEP80-65-320G	45	1		- 1	526	225	280	00	18			40	400	315	18		367	42	110	45	12	120					
LEP100-80-160	25				530	180 225		400000	14	9	0000000	2000	320	250	200,000		267	24	50	27	8	53					
LEP100-80-200	20				000	180	250	15		1	125	95	345	280	14	14	20.					76					
LEP100-80-260(H)	35				470	200	280		15		100	400				342	32	80	35	10	95						
LEP100-80-320(H)	85.5	80	100	125		250	315		16				400	400 315	18			100000	5.5.5		1.5	118					
LEP100-80-320G				1	526	250	315		16	110			355 (535)	(5.5.5.			367					130					
LEP100-80-400	45			1	530	280	355	83	18				440	340			370	42	110	45	12	160					
LEP125-100-160	35					200	250	80	15		160	120		000	18							87					
LEP125-100-200		1				200	280			1			360	360 280								84					
LEP125-100-260(H)	35	100	125		470	225	280	80	16				400 245	1		342	32	80	35	10	102						
LEP125-100-320						250	315						400	315								118					
LEP125-100-400	45			140	530	280	355	100	20		200	150	500	400	23		370	42	110	45	12	176					
LEP150-125-200	35			140	470	250	315	80	16		160	120	400	315	18		242	22	80	25	10	112					
LEP150-125-260	33				470	250	355	00	10		100	120	400	313	10		342	32	60	35	10	117					
LEP150-125-320	45	125	150		530	280	355		18				500	400			370	42	110	45	12	155					
LEP150-125-400						315	400															178					
LEP150-125-500	55				670	355	450		25				550	450			500	48	110	51	14	300					
LEP200-150-200	35			160	555	280	400						400	315	23		342	32	80	35	10	132					
LEP200-150-260		8230.5		100	500	250	355	100	18		200	150	450	350	20		222.00.00	12.00		570.0	14,754,65	163					
LEP200-150-320	45	150	200		530	280	400										370	42		45	12	170					
LEP200-150-400						315	450						550	450								207					
LEP200-150-500	55				670	375	500		22				1.7.7	10.5			500	48	110	51	14	330					
LEP250-200-260	45	000	050	180	555	315	450										392	42		45	12	219					
LEP250-200-320	55	200	250		670	315	480	120	20		220	170	600	480	28		505	48		51	14	286					
LEP250-200-400							335	480				250											328				
LEP250-200-500	65	200	250	200	720	425	560	100	22	140	200	150	660	560	23	19	515	60	140	64	18	450					
LEP300-250-320	55	250	300	220	691	355	520	150	26	110	250	200	660	510	28	14	525	48	110	51	14	366					
LEP300-250-400					682	400	560						755	050			516					396					
LEP300-250-500	65	250	300	200	720	450	670	120	32	140	240	190	750	650	23	19	515	60	140	64	18	550					
LEP350-300-400	65	300	350	300	720	425	670	120	30		250	190	760	660	30	19	515	60	140	64	18	550					

(ISO7005.2 DIN2501 PN16 GB/T17241.6 PN1.6)													
DN1/DN2	32	40	50	65	80	100	125	150	200	250	300	350	400
D1/D2	140	150	165	185	200	220	250	285	340	405	460	520	580
K1/K2	100	110	125	145	160	180	210	240	295	355	410	470	525
n-d1/n-d2	4– φ 18	4– φ 18	4- φ 18	4- φ 18	8– φ 18	8– φ 18	8– φ 18	8- φ 22	12- φ 22	12- φ 26	12- φ 26	16- φ 26	16- φ 30