Диффузионные вакуумные насосы и маслоусилители KN, Z, KT, SDB, JK
Технические характеристики

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KN Series Oil Diffusion Pump

Description: The pumps in the KN series are high-vacuum pumps. They are always operated in conjunction with forevacuum pumps.Acquiescent flange is CF standard with bolted type.

KN series are the equipment mainly used for getting the high vacuum condition (10^{-1} – 10^{-5}Pa); the pumping capacity is big, the pumping speed can be changed range from 3100L/s to 110000L/s, it adds observation windows, oil inlet and outlet, the protection device of controlling pump oil overheat, the alarm device of controlling cooling water overheat, and parallel combination of many heating rods insert into the pump, the rods can be replaced without shutting down the machine, so heat time is short, Oil vapor back-streaming volume is low, without external water cooling baffle,when using the common pump oil, the volume is $1*10^{-3}$mg/㎡min , when using 275 silicon oil it will be 1* 10-4mg/㎡ min, excellent ultimate vacuum, less than 10-6kpa.

The pumps adopt stretching process, reduces weld crack and out gassing and increases strength.

It is widely used in vacuum coating, vacuum furnace, electron, aviation, aerospace hi-tech field.

Technical Data

Item	unit	KN-250	KN-320	KN-400	KN-500	KN-630	KN-800	KN-900	KN-1000	KN-1200	KN-1400
Ultimate pressure	Pa	5×10-5									
Capacity	L/s	3100	4600	7500	11000	18000	26000	33000	40000	55000	80000

Fore pump pressure	Pa	40									
Back-flow rate	mg/(cm2·min)	≤3×10-2									
Heating time	min	≤20				≤30				≤50	
Heating power	kw	2.2-2.4	3.5-3.8	6	7.2-8	12	19.2	21.6	24	30-32	34-38
Voltage	V	220	380								
Oil Model	/	KS-3									
Oil volume	L	1.2-1.5	1.6-1.8	3-4	5-6	7-8	14-15	16-18	18-20	22-25	28-30
Cooling water consumption	L/h	350	420	500	600	850	1200	1350	1500	2600	3000
Inlet diam	mm	180	320	400	500	630	800	900	1000	1200	1400
Outlet diam	mm	63	63	63	100	100	160	160	160	200	200
Fore pump speed	L/s	8-15	15-30	30-70	70-150	70-600	150-600	300-1200	300-1200	300-1200	350-1200
Outline dimensions	L mm	475	590	760	900	1050	1290	1485	1650	2175	2235
	B mm	460	540	720	810	900	1150	1300	1360	1610	1750
	H mm	560	672	785	940	1130	1450	1630	1880	2130	2650
Net weight	kg	50	70	95	258	340	472	740	850	900	1150

Z Series Oil Ejector Booster Pump

Description: Oil booster ejector is also can be called oil booster pump,the working pressure is 10 ~ 10-2 Pa,the pump has big pumping speed.

Operation Principle

Oil booster pump is one kind of vapor stream pump, using the booster pump oil which under greenhouse saturated steam down under pressure in 5 x 10-3 pa , the large number of oil vapor produce when it is heated to working temperature scary by various nozzle respectively and get high-speed steam flow and as a medium.Medium is pumped into the oil vapor jet, the jet which containing the oil steam is cooled on the wall of the pump body, The pumped oil vapor condensate and return to the bottom, and gas is compressed step by step, and finally be pumped away by backing pump.

Application

The working pressure is 10 ~ 10-2Pa， it is a ideal getting equipment for middle vacuum.valve,pipe ,mechanical pump and oil booster pump are the component of a high efficiency system . It can be widely used for all kinds of vacuum furnace in metallurgy and all out gassing draft of vacuum coating and other vacuum equipment.

Performance

Our company has rich experience in the theory study, design calculation of oil vapor flow and pump production and testing .we also have our unique characteristics by learning characteristics of foreign oil steam vacuum .because of using widely in many fields, To use and convenient maintenance, the company keep the original in-structure and install dimension and improved the old Z series oil booster pump, besides have the characteristics of booster pump, it also has the following characteristics.

1.The pump core is designed by new structure,work stably,to ensure the ultimate vacuum, pumping

speed.The extraction ratio of original structure increase by about 5%.

2.Add oil window, oil inlet and outlet, the oil temperature measuring pinion,,etc;Multiple heater parallel combination form, can change the heater in operation.we also provide different oil temperature controlling overheating protection device.

Type Item		Z-300	Z-320	Z-400	Z-500	Z-600	Z-630	Z-800	Z-1000	Z-1200
Pumping SpeedL/s		2400	3500	6000	8500	11000	13000	16000	28000	36000
Ultimate Pressure Pa		5×10-3								
Critical Backing Pressure Pa		≥133								
Heating Powerkw		12	12	18	27	36	36	70.2	90	90
Voltage V		380								
Pump Oil		Oil Booster Pump Oil								
Oil Volume kg		20	25	35	42	75	75	105	160	200
Cooling water Volume L/h		360	550	800	1100	1300	1800	2500	3000	3500
Backing Pump Pumping SpeedL/s		70	70	150	150	600	600	600	1200	1200
Dimension size (mm)	H	1374	1483	1650	2100	2395	2515	3270	3400	3440
	B	702	725	776	1013	1200	1213	1432	1660	2146
	L	1123	1146	1436	1800	2234	2234	2942	3307	4516
NET kg		240	340	580	680	1360	1500	2000	3800	5900
Connection		3phase								

KT Series Oil Diffusion Pump

Description: EVP KT series oil diffusion pump is the main equipment for obtaining high vacuum(10-1-10-5Pa) with high pumping speed from 1750 L/s to 130000 L/s.

KT Series Oil Diffusion Pump Introduction:

EVP KT series oil diffusion pump is the main equipment for obtaining high vacuum(10-1-10-5Pa) with high pumping speed from 1750 L/s to 130000 L/s.

KT Series Oil Diffusion Pump Advantage:

1)The pump equipped with observation window, oil filling and discharge port, pump oil temperature control and over heated protection device, and cooling water high temperature alarming device.
2)The heater of diffusion pump is composed by several heating rods, parallelly connected, which allow the rod being changed with pump running and help to shorten the heating time and increase heating efficiency.
3)Low oil return. Without water cooling plate, the oil return is 1×10-3 mg/cm2·min for normal diffusion pump oil, and 1×10-4 mg/cm2·min for 275 silicone oil.
4)The manufacturing process takes stretching technology which helps to lessen weld joint, increase intensity, and lower the air leakage.

KT Series Oil Diffusion Pump Application:

The oil diffusion pump is widely used in vacuum coating, vacuum furnace, electronics, chemical industry, aviation, aerospace, metallurgy, material, biological medicine, atomic energy, space exploration and other high-tech fields, also it possesses high praise in titanium sponge field.

Item	unit	KT-160	KT-200	KT250	KT300	KT320	KT-400	KT-500	KT-600	KT-630	KT-800	KT-900	KT-1000	KT-1200	KT-1400	KT-1600
Ultimate pressure	Pa	5×10-5														
Capacity	L/s	1500	1750	2800	3500	5000	7500	9000	16000	20000	29000	40000	46000	50000	90000	130000
Fore pump pressure	Pa	40														
Fore pump speed	L/s	15	15	15	30	30	70	150	300	600	600	600	1200	1200	1200	2500
Back-flow rate	mg/(cm2·min)	≤3×10-2														
Heating time	min	≤35	≤40			≤45		≤50	≤60	≤65	≤70	≤80		≤90		
Heating power	kw	0.8-1	1.2-1.8	2	2-3	4~5	4~5	7.5	6-7	9~11	11-13	14-16	18-19	24	38-40	48-50
Voltage	V	220			220			380								
Oil Model	/	KS-3														
Oil volume	L	0.45	0.5-0.8	1.2	1.2-1.6	1.4-1.8	3~4	7	6~7	7~8	12~14	14-15	18-19	22	38	50
Cooling water consumption	L/h	250	300	350	400	420	500	600	800	850	1200	1350	1500	2600	3400	4300
Inlet diam	mm	160	200	250	300	320	400	500	600	630	800	900	1000	1200	1400	1600
Outlet diam	mm	50	65	65	80	80	100	100	150	160	200	200	300	300	320	320

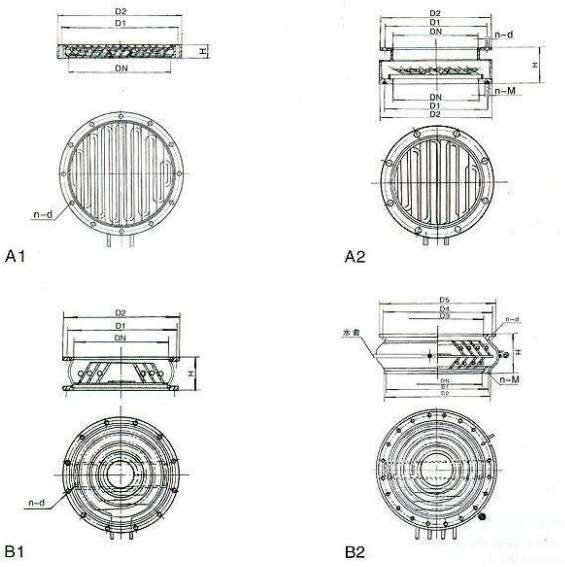
Water-Cooled Baffle

Description: SDB series of water-cooled baffle is installed in the oil diffusion vacuum pump between the entrance and high vacuum valve, used to block the oil diffusion in the vacuum pump oil.

SDB water cooling baffle is installed between the inlet of oil diffusion vacuum pump and the high vacuum valve, used for blocking the oil vapor and reducing the back-streaming rate, it can help clean the vacuum room.

The baffle in our company is adopted the form of venetian blind (type A1, A2) and cone (type B1, B2, cooling fluid: water or Freon), it has large catching area, compact structure and good cooling effect.

B1, B2 adopt stretching process, reduces weld crack and out gassing and increases strength.



项目 Item 型号 Type	DN	D1	D2	D3	D4	D5	n-d	n-M	H			
									A1	A2	B1	B2
SDB-100	100	145	170	100	145	170	4-Φ12	4-M10	50	100	100	150
SDB-160	160	200	225	160	200	225	8-Φ11	8-M10	50	120	120	180
SDB-200	200	250	275	200	250	275	8-Φ12	8-M10	50	135	135	200
SDB-250	250	310	335	250	310	335	12-Φ11	12-M10	50	135	135	200
SDB-300	300	350	380	300	350	380	8-Φ14	8-M12	50	145	145	220
SDB-320	320	395	425	320	395	425	12-Φ14	12-M12	50	145	145	220
SDB-400	400	465	500	400	465	500	8-Φ18	8-M16	50	160	160	250
SDB-500	500	565	600	500	565	600	12-Φ18	12-M16	50	160	160	250
SDB-600	600	670	710	600	670	710	12-Φ21	12-M18	50	180	180	275
SDB-630	630	720	750	630	720	750	20-Φ14	20-M12	50	180	180	275
SDB-800	800	880	920	800	880	920	20-Φ21	20-M18	50	200	200	300
SDB-900	900	978	1060	900	1060	1060	28-Φ22	28-M18	50	200	200	300
SDB-1000	1000	1090	1140	1000	1090	1140	24-Φ23	24-M20	50	200	200	300
SDB-1200	1200	1310	1360	1200	1310	1360	28-Φ25	28-M22	50	210	210	320
SDB-1400	1400	1550	1600	1400	1550	1600	44-Φ23	44-M20	50	260	260	320
SDB-1600	1600	1760	1800	1600	1760	1800	44-Φ23	44-M20	50	260	260	320

JK Oil Diffusion Pump System

Introduction:

JK Oil Diffusion Pump System consist of oil diffusion pump and rotary vane vacuum pump, oil diffusion pump is the main pump, rotary vane vacuum pump is the backing pump.

Advantage:

JK Oil Diffusion Pump System is for high vacuum pumping, which can reach around 10^{-2}--10^{-4} Pa. The whole system equipped with main oil diffusion pump, valves, water-cooling baffle, pipe, and rotary vane vacuum pump or roots pump. Since the improvement of the main pump and baffle, this system's pumping capacity in low vacuum has been highly increased.
The main advantage of this system is its high pumping speed (from 190L/s to 49,000L/s) and long-term continuous working stability.

Application:

JK series system is widely applied in high tech field, such as electric, chemistry, metallurgy, aviation, aerospace, material, bio-medicine, A-energy, universe exploration, etc. Besides, there are still many other normal industries are using this system as well, such as various vacuum furnace, vacuum coating machine, vacuum freezing or drying system.

Technical Specification:

Model	Max. Pressure	Suction speed	Max. suction pressure	Heating power	Main Pump	Baffle	valve	Backing pump	Connecting flange
	Pa	L/s	Pa	Kw					
JKT-160	1×10^{-4}	900	35	1.4-1.6	KT-160	SDB-160	GD-160	2X-8	CF-160
JKT-200		1400		1.6-1.8	KT-200	SDB-200	GD-200	2X-15	CF-200
JKT-250		1750		2.2-2.4	KT-250	SDB-250	GD-250	2X-15	CF-250
JKT-300		2300		2.4-3	KT-300	SDB-300	GDQ-300	2X-30	CF-300
JKT-320		2500		3.5-3.8	KT-320	SDB-320	GDQ-320	2X-30	CF-320
JKT-400		4250		4-5	KT-400	SDB-400	GDQ-400	2X-70	CF-400
JKT-500		6000		6-7	KT-500	SDB-500	GDQ-500	2X-150	CF-500
JKT-600		8750		8-9	KT-600	SDB-600	GDQ-600	2X-300	CF-600
JKT-630		10000		9-10	KT-630	SDB-630	GDQ-630	2X-600	CF-630
JKT-800		15000		13-13.5	KT-800	SDB-800	GDQ-800	ZJ-600	CF-800
JKT-900		20000		14-16	KT-900	SDB-900	GDQ-900	ZJ-1200	CF-900
JKT-1000		25000		17-20	KT-1000	SDB-1000	GDQ-1000	ZJ-1200	CF-1000
JKT-1200		30000		28-30	KT-1200	SDB-1200	GDQ-1200	ZJ-1200	CF-1200
JKT-1400		45000		38-40	KT-1400	SDB-1400	GDQ-1400	ZJ-1200	CF-1400
JKT-1600		60000		48-50	KT-1600	SDB-1600	GDQ-1600	ZJ-2500	CF-1600

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