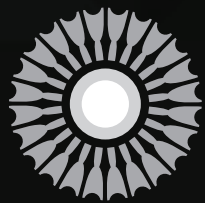


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CATALOG



TURBO VACUUM

H I G H V A C U U M P U M P S

Serving Clients Worldwide For Over A Decade
Currently in over 60 countries

www.turbovacuum.com

Turbo Vacuum, since 2005, has been the first leading company to address the increasing demands of the specific high to ultra-high vacuum industry with products and services. High Vacuum technology today is a niche sector in the industry of vacuum—producing ultimate pressures to 5×10^{-11} or two-billionth of atmospheric pressure. Until now high vacuum was classified as just another segment, grouped into the overall umbrella of the vacuum world.

Today Turbo Vacuum offers a complete range of cutting edge turbo pump products and services. We know the challenges of high/ultra-high vacuum technology and how to reach performance expectations to meet or surpass any application requirement. Our niche industry experience, driven by understanding the application, analyzing the constraints, and specifying the client's needs, has given us the unique ability to solve any problem.

Throughout the United States and World, where industry and research need high vacuum technology for their development or production, Turbo Vacuum will be present. Turbo Vacuum will be an essential tool in high vacuum system integration, replacement, service, research and development, drug discovery, mass spectrometry, semiconductor processes, and everyday high vacuum technology-driven demands. Our goal is to assist every client with their specific high vacuum need. We look forward to hearing from you.

In the following pages you will discover all the outstanding high vacuum products which offer multiple solutions & combinations.

Turbo Vacuum 2018/2019 Catalog: Effective January 1st 2018. Prices are subject to change without notice
Terms: net 30 days Payment Remittance Address: TurboVacuum FOB: Shipping Point Minimum Order: \$50
Master Card, Visa, and Wire Transfers accepted Shipping Terms: FOB factory OEM and Quantity Discounts:
are available to bonafide customers upon request.

Please contact the National Sales Center for questions at 407-563-3881 or Fax us at 407-563-3950.

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KYKY Turbo Pumps

KYKY Technology Development Ltd., founded in 1958, was previously called Beijing R&D center, Chinese Academy of Sciences (CAS). In the year 2000 the former Beijing R&D center of CAS transitioned into the new company called KYKY. Based on its past forty-eight-year knowledge accumulation, KYKY is positioned as a hightech corporation integrated with scientific instruments. A leading product of KYKY is the Turbo Molecular pump. The KYKY turbo pump is one of the most recognized in China and has also has been sold worldwide with a good reputation. The turbo pump series range from 100 – 3500 liters a second. These turbo pumps are ideal for economical standard applications requiring simple and reliable high vacuum.

Features

- Economical
- Ceramic bearings
- Corrosive semes available (N)
- Simplistic, reliable design
- Compact series allow for dry backing pumps
- Units Provided As Complete Set – Turbo, Controller, Cables, Cooling, Inlet Screen



Ordering Information

	F70E	F80E	F110E	FF620/N	FF700E	F1200E/N	F1300E/N	F1600E	F2000E	F3500E/N
Turbo Pump System ISO										
AC:	F70EACI	F80EACI	F110EACI	N/A	FF700ACI	N/A	N/A	N/A	N/A	N/A
WC:	F70EWCI	F80EWCI	F110EWCI	FF620EWCI	FF700EWCI	F1200EWCI	F1300EWCI	F1600EWCI	F2000EWCI	F3500EWCI
Turbo Pump System CF										
AC:	F70EACCF	F80EACCF	F110EACCF	N/A	F700ACCF	N/A	N/A	N/A	N/A	N/A
WC:	F70EWCCF	F80EWCCF	F110EWCCF	FF620EWCCF	F700EWCCF	F1200EWCCF	F1300EWCCF	F1600EWCCF	N/A	F3500EWCCF

*AC: Air Cooling / WC: Water Cooling



Technical Specifications

	F70E	F80E	F110E	FF620/N	FF700E	F1200E/N	F1300E/N	F1600E	F2000E	F3500E/N
Inlet Flange										
	ISO 63 CF 63	ISO 63 CF 63	ISO 100 CF 100	ISO 160 CF 160	ISO 160 CF 160	ISO 200 CF 200	ISO 200 CF 200	ISO 250 CF 250	ISO 250	ISO 400
Pumping Speed, L/S										
N:	70	62	110	600	700	1200	1300	1600	2000	3500
Compression Ratio										
N:	>10 ⁻⁶	>10 ⁻⁶	>10 ⁻⁸	10 ⁻⁹	>10 ⁻⁹	10 ⁻⁹	>10 ⁻⁹	10 ⁻⁸	>10 ⁻⁹	>10 ⁻⁸
H:	4 X 10 ⁻³	4 X 10 ⁻³	5 X 10 ⁻²	6 X 10 ⁻⁴	6 X 10 ⁻⁴	6 X 10 ⁻³	1 X 10 ⁻³	10 ⁻³	6 X 10 ⁻³	5 X 10 ⁻²
Ultimate Pressure (mbar)										
	10 - 8	10 - 8	10 - 8	10 - 9	10 - 10	10 - 9	10 - 9	10 - 9	10 - 7	10 - 7
Startup Time (min)										
	1.5	1.8	<2	<4.5	<4	<6	<6	<7	6	<20
Rotational Speed (rpm)										
	51,000	72,000	42,300	36,000	36,000	24,000	24,000	27,000	24,000	15,000
Orientation										
	Any	Any	Any	Vertical +/- 5%	Any	Vertical +/- 5%	Any	Vertical +/- 5%	Any	Vertical +/- 5%
Backing Pressure (mbar)										
	0.1	0.1	0.1	0.1	1.5	0.1	1.5	N/A	1.5	0.1
Outlet Flange										
	KF16	KF16	KF25	KF40	KF40	KF40	KF40	KF50	KF50	KF100
Weight (lb)										
	4	4	16	64	42	86	64	103	70	300
Controller										
	FD	TCP 100	TCPD-11	TCPD-11	TCFD-11	TCFD-11	TCFD-11	TCFD-11	TCFD-11	FD3500KW
Complete System Price										
	\$5,840.00	\$5,980.00	\$5,940.00	\$8,900.00	\$12,540.00	\$12,600.00	\$16,500.00	\$14,500.00	\$22,000.00	\$31,850.00



Osaka Turbo Pumps

Osaka Vacuum's leadership in the field of turbo molecular pumps began in 1970 with their production of the first turbo pump in Japan. Since then, Osaka has developed the world's first compound molecular pump. Today, Osaka Vacuum continues to bring you the same reliable products as always. Along with the proven performance of the Osaka pumps, their turbos are designed to handle even the toughest processes, providing you with pumps you can count on day-after-day and year-after-year. All units are provided as a complete set with controller and cables to make selection easy and economical.

Features

- Any orientation
- Durable structure for air inrush
- Common parts & controller
- Economical
- Advanced design & high reliability
- Units provided as complete set – Turbo, Controller, Cables, Cooling, Inlet Screen

Ordering Information

	TG70	TG220F	TG350F	TG450F	TG800F	TG1100F	TG2400F
Turbo Pump System ISO							
AC:	TG70FRAB	TG220FRAB	TG350FRAB	TG450FBAB	TG800FBAB	TG1100FBAB	TG2400FBAB
WC:	TG70FRWB	TG220FRWB	TG350FRWB	TG450FBWB	TG800FBWB	TG1100FBWB	TG2400FBWB
Turbo Pump System CF							
AC:	TG70FCAB	TG220FCAB	TG350FCAB	TG450FCAB	TG800FCAB	TG1100FCAB	TG2400FCAB
WC:	TG70FCWB	TG220FCWB	TG350FCWB	TG450FCWB	TG800FCWB	TG1100FCWB	TG2400FCWB

*AC: Air Cooling / WC: Water Cooling



Technical Specifications

	TG70	TG220F	TG350F	TG450F	TG800F	TG1100F	TG2400F
Inlet Flange							
	ISO 63 CF 63	ISO 100 CF 100	ISO 100 CF 100	ISO 160 CF 160	ISO 160 CF 160	ISO 200 CF 200	ISO 250 CF 250
Pumping Speed, L/S							
N:	70	200	330	450	850	1100	2400
He:	45	100	200	240	720	820	1100
H:	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ultimate Pressure (mbar)							
	10 - 10	10 - 8	10 - 9	10 - 9	10 - 9	10 - 9	10 - 9
Startup Time (min)							
	2	1	3	3	10	10	1.5
Rotational Speed (rpm)							
	80,000	48,000	46,000	45,000	33,600	33,600	33,600
Orientation							
	Any	Any	Any	Any	Any	Any	Any
Backing Pressure (mbar)							
	9	2	3	3	10	10	N/A
Outlet Flange							
	NW16	NW25	NW25	NW25	NW40	NW40	NW40
Weight (lb)							
	10	11	13	15.4	66	66	103
Controller							
	TC76	TC223	TC353	TC353	TC1104	TC1104	TC2403
Complete System Price							
	\$6,995.00	\$10,986.00	\$13,541.00	\$13,541.00	\$22,300.00	\$22,300.00	\$26,800.00

Osaka Magnetically Levitated Turbo Pumps

The Osaka magnetically suspended turbo pumps are designed for a wide range of applications, including heavy-duty processes. These units are completely oil-free. In case of an abnormality in the primary power supply, levitation is maintained by the controller, using a non-battery feature. The turbo has an automatic Speed 5 -Axis active electromagnetic control, free of contact surfaces, which provides virtually limitless service life and minimum vibration, thanks to the special controller functions.

Features

- Wide inlet pressure range opening
- Vibration free
- Mountable in any orientation
- Automatic live 5 -axis control
- Harsh environment reliable (C versions)
- Energy saving
- Durable structure for air inrush
- Units provided as complete set – Turbo, Controller, Cables, Cooling, Inlet Screen
- Units with integrated controller power supply

Ordering Information

	TG390M/C	TG420M/C	TG900M/C	TG1300M/C	TG2400M/C	TG1704M/C	TG2204M/C	TG3300M/C	TG3804M
Turbo Pump System ISO									
AC:	TG390MBAB	TG420MBAB	TG900MBAB	TG1300MBAB	TG2400MBAB	N/A	N/A	N/A	N/A
WC:	TG390MBWB	TG420MBWB	TG900MBWB	TG1300MBWB	TG2400MBWB	TG1704MBWC	TG2204MBWC	TG3300MBWC	TG3804MBWB
Turbo Pump System CF									
AC:	TG390MCAB	TG420MCAB	TG900MCAB	TG1300MCAB	TG2400MCAB	N/A	N/A	N/A	N/A
WC:	TG390MCWB	TG420MCWB	TG900MCWB	TG1300MCWB	TG2400MCWB	TG1704MCWC	N/A	N/A	N/A

*AC: Air Cooling / WC: Water Cooling



Technical Specifications

	TG390M/C	TG420M/C	TG900M/C	TG1300M/C	TG2400M/C	TG1704M/C	TG2204M/C	TG3300M/C	TG3804M
Inlet Flange									
	ISO 100 CF 100	ISO 160 CF 160	ISO 160 CF 160	ISO 200 CF 200	ISO 250 CF 250	ISO 250 CF 250	ISO 250 N/A	ISO 320 N/A	ISO 320 - F CF 320
Pumping Speed, L/S									
N:	340	400	900	1300	2400	1650	2200	3000	3800
He:	290	300	1050	1200	1100	1650	1800	2200	2500
H:	N/A	N/A	N/A	N/A	N/A	1550	N/A	N/A	N/A
Ultimate Pressure (mbar)									
	10 - 10	10 - 10	10 - 10	10 - 10	10 - 10	10 - 9	10 - 10	10 - 9	10 - 9
Startup Time (min)									
	2	3	4	5	5	10	7	7	12
Orientation									
	Any	Any	Any	Any	Any	Any	Any	Any	Any
Backing Pressure (mbar)									
	3	3	3	3	2	2	2	1.2	1.2
Outlet Flange									
	NW25	NW25	NW40	NW40	NW40	NW40	NW40	NW40	NW40
Weight (lb)									
	31	31	77	77	105	143	137	152	196
Controller									
	TC010MA	TC010MA	TC010MA	TC010MA	TC010MA	Integrated	Integrated	Integrated	Integrated
Complete System Price									
	\$24,000.00	\$26,000.00	\$38,000.00	\$43,000.00	\$61,000.00	\$36,500.00	\$36,500.00	\$38,500.00	\$38,500.00



Edwards Turbo Pumps

The new nEXT turbo pumps were designed to combine all the latest technological advances with two decades of experience based on the tried and trusted EXT/STP turbo pumps. The new nEXT units set the benchmark for performance, reliability, and end user serviceability for a scientific turbo. They are available in four sizes. New technologies employed in the nEXT turbos have enabled the pumps to be serviced by the end user in the field in less than 10 minutes. Choose from a complete line of accessories to make integration easy.

Features

- Multiple drag stage
- Field serviceable bearing
- Permanent magnetic upper bearing
- Built in Drive unit with cable
- Advanced design
- Exceptional pumping speeds and compression ratios
- LED indicator lights



Ordering Information

	nEXT85 H	nEXT240 T	nEXT300 T	nEXT400 T
Turbo Pump				
NW Inlet	B8G4-10-A01	B813-00-100	B823-00-100	B833-00-300
ISO Inlet	B8G4-10-B01	B813-00-200	B823-00-200	B833-00-400
CF Inlet	B8G4-10-C01			
Controller				
	D397-21-000	D397-21-000	D317-21-000	D397-21-000
Pump Cable (3m)				
	D397-00-836	N/A	N/A	N/A
Air Cooling				
	B8G2-00-820	B580-53-185	B580-53-185	B580-53-175
Vent Vale				
	B580-66-010	B580-66-010	B580-66-010	B580-66-010
Power Cord				
	D400-13-120	D400-13-120	D400-13-120	D400-13-120

TIC Controller

The TIC (turbo and instrument controller) has been developed with two key objectives in mind. To provide an alternative to the lower-end models in the AGC range, offering enhanced functionality, serial communications, and a powerful PC program as standard. The second is to provide a new end-user/small OEM turbo controller, able to support the new ranges of 24V DX and EXDC turbos and backing pumps. Taking advantage of the above developments enabled a new combined instruments and turbo controller to be developed which provides the customer with a "one-box" controller for the entire vacuum system.

Features

- Universal Turbo Controller
- Backing Pump Support
- Relay Options
- Simple System Configuration
- Compact Instrument
- Clear, Easy To Use Graphic User Interface
- Universal Power Supply
- Serial Communications
- Windows PC Program

Technical Specifications

	nEXT85 H	nEXT240 T	nEXT300 T	nEXT400 T
Inlet Flange	NW40 ISO63 CF63	ISO 100 CF 100	ISO 100 CF 100	ISO 160 CF 160
Pumping Speed, L/S				
N:	84	240	300	400
He:	61	230	340	390
H:	50	165	280	325
Compression Ratio				
N:	1 x 10 ¹¹	1 x 10 ¹¹	1 x 10 ¹¹	1 x 10 ¹¹
He:	4.6 x 10 ⁷	1 x 10 ⁵	1 x 10 ⁶	1 x 10 ⁸
H:	6.5 x 10 ⁵	1 x 10 ⁴	1 x 10 ⁵	5 x 10 ⁵
Ultimate Pressure (mbar)				
	10 - 10	10 - 10	10 - 10	10 - 10
Startup Time (min)				
	2	2	2	2
Rotational Speed (rpm)				
	90,000	60,000	60,000	60,000
Orientation				
	Vertical/Horizontal	Any	Any	Any
Backing Pressure (mbar)				
	< 11	20	20	20
Outlet Flange				
	NW16	NW25	NW25	NW25
Weight (lb)				
	6.6	13	14	15
Price				
	\$8,730.00	\$10,419.00	\$11,018.00	\$12,426.00
Controller				
	TIC	TIC	TIC	TIC
Price				
	\$2,483.00	\$2,483.00	\$2,483.00	\$2,483.00

Edwards Magnetically Levitated Turbo Pumps

The first STP magnetically levitated turbo pumps were sold in 1983 worldwide. Today the STP turbo pumps account for 85% of the semiconductor and process tool market with 166,000 units sold. They demonstrate exceptional levels of reliability, class leading performance, and low cost of ownership on the harshest applications. The STP pumps are the first choice for applications demanding high up-time, hydrocarbon-free pumping, minimal maintenance, and low vibration. The use of magnetically levitated bearings eliminates the risk of contamination, while ensuring the units resist rapid changes in gas throughput and mechanical shock. Newer styles are designed with integrated controller and power supply.

Features

- Proven reliability
- Clean, oil-free vacuum
- Complete range 300 L/S – 3000 L/S
- 5 axis auto tuning
- Installation in any orientation
- Full remote control interface
- Includes inlet screen and water cooling
- Low noise and vibration
- Virtually maintenance free
- Corrosive version available (C/CV models)
- Units with integrated controller power supply



Ordering Information

	STP301/C	STP451/C	STP603/C	STPA803C/CV	STP1003/C	STPA1303C/CV	STPA1603C/CV	STPA2203C/CV
Turbo Pump								
ISO	B748-30-020	B748-40-030	YT 39B0030	YT 36B0040	YT 39B2001	YT 36B0120	YT 46B0030	YT 46B0030
CF	B748-31-010	B748-41-010	YT 39O2005	YT 36B0010	YT 39B0010	YT 36B0030	YT 46B0010	YT 46B0010
ISO								
CF								
Controller								
	YT21ZE220	YT21ZE220	YT49Z2200	YT49Z2200	YT49Z2200	YT49Z2200	YT49Z2200	YT49Z2200

SCU Turbo Pump Controller

The SCU turbo pump control unit is a fully digital controller, and has perfect compatibility with the magnetically levitated turbo pumps. The new AVR (Auto Vibration Reduction) technology achieves a further reduction in vibration levels, and the advanced pre-maintenance call function provides advanced notice of precise maintenance time.



Features

- Universal Controller
- Rotor Imbalance Monitoring
- Back-Up Bearing Monitoring
- Highest Reliability
- Communication Ports

Technical Specifications

	STP301/C	STP451/C	STP603/C	STPA803C/CV	STP1003/C	STPA1303C/CV	STPA1603C/CV	STPA2203C/CV
Inlet Flange	ISO 100 CF 100	ISO 160 CF 160	ISO 160 CF 160	ISO 160 CF 160	ISO 200 CF 200	ISO 160 CF 200	ISO 200 CF 200	ISO 250 CF 250
Pumping Speed, L/S								
N	300	440	650	800	1000	1300	1600	2200
He		420	N/A	N/A	N/A	N/A	N/A	N/A
H	300	275	550	520	3100	800	1200	1700
Compression Ratio								
N	10 ⁸	10 ⁸	10 ⁸	10 ⁸	10 ⁸	10 ⁸	10 ⁸	10 ⁸
He	N/A	5 x 10 ⁵	N/A	N/A	N/A	N/A	N/A	N/A
H	2 x 10 ⁴	2 x 10 ⁴	10 ⁵	10 ³	10 ³	10 ³	10 ³	10 ⁴
Ultimate Pressure (mbar)	10 - 10	10 - 10	10 - 10	10 - 9	10 - 4	10 - 9	10 - 9	10 - 9
Startup Time (min)	3	6	3	7	6	7	7	7
Rotational Speed (rpm)	48,000	48,000	35,000	32,500	35,000	32,500	36,500	27,000
Orientation	Any	Any	Any	Any	Any	Any	Any	Any
Backing Pressure (mbar)	0.1	0.1	0.1	0.1	0.1	0.1	2	0.1
Outlet Flange	NW25	NW25	NW40	NW40	NW40	NW40	NW40	NW40
Weight (lb)	24	53	69	86	68	86	77	134
Price	\$14,565.00	\$16,640.00	\$17,680.00	\$23,920.00	\$21,848.00	\$28,090.00	\$31,620.00	\$35,893.00
Controller	SCU-350	SCU-350	SCU-800	SCU-800	SCU-800	SCU-800	SCU-800	SCU-1600
Price	\$8,011.00	\$8,011.00	\$9,259.00	\$9,259.00	\$9,259.00	\$9,259.00	\$9,259.00	\$12,848.00

Edwards Magnetically Levitated Turbo Pumps

The first STP magnetically levitated turbo pumps were sold in 1983 worldwide. Today the STP turbo pumps account for 85% of the semiconductor and process tool market with 166,000 units sold. They demonstrate exceptional levels of reliability, class leading performance, and low cost of ownership on the harshest applications. The STP pumps are the first choice for applications demanding high up-time, hydrocarbon-free pumping, minimal maintenance, and low vibration. The use of magnetically levitated bearings eliminates the risk of contamination, while ensuring the units resist rapid changes in gas throughput and mechanical shock. Newer styles are designed with integrated controller and power supply.

Features

- Proven reliability
- Clean, oil-free vacuum
- Complete range 300 L/S – 3000 L/S
- 5 axis auto tuning
- Installation in any orientation
- Full remote control interface
- Includes inlet screen and water cooling
- Low noise and vibration
- Virtually maintenance free
- Corrosive version available (C/CV models)
- Units with integrated controller power supply



Ordering Information

STPXA2703C	STPXA3203C	STPXA4503C/CV	STPIXR1606	STPIS2207	STPIXA2206C	STPIXA3306C	STPIXA4506C/CV
Turbo Pump							
ISOPT 6602140 CFYT 6610010 ISO CF	YT 6602050 PT 6602080	YT 6702040	YT 7902070 YT 7902010 YT 7902040	YT 8502000 YT 8502020	Y 18102010 Y 18102030	YT 8202020 YT 8202040	YT 7802010
Controller							
			Integrated	Integrated	Integrated	Integrated	Integrated

SCU Turbo Pump Controller

The SCU turbo pump control unit is a fully digital controller, and has perfect compatibility with the magnetically levitated turbo pumps. The new AVR (Auto Vibration Reduction) technology achieves a further reduction in vibration levels, and the advanced pre-maintenance call function provides advanced notice of precise maintenance time.



Features

- Universal Controller
- Rotor Imbalance Monitoring
- Back-Up Bearing Monitoring
- Highest Reliability
- Communication Ports

Technical Specifications

	STPXA2703C	STPXA3203C	STPXA4503C/CV	STPIXR1606	STPIS2207	STPIXA2206C	STPIXA3306C	STPIXA4506C/CV
Inlet Flange								
	ISO 250 CF 250	ISO 320 CF 320	ISO 320	ISO 160 ISO 200 CF 200	ISO 200 ISO 250 CF 200 CF 250	ISO 250 CF 250	ISO 250 CF 250 ISO 320 CF 320	ISO 320
Pumping Speed, L/S								
N	2650	3200	4300	1600	2200	2200	2650	4000
He	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
H	2050	2300	2500	1200	750	1900	2300	2700
Compression Ratio								
N	10 ⁸	10 ⁸	10 ⁸	10 ⁸	10 ⁸	10 ⁸	10 ⁸	10 ⁸
He	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
H	6 x 10 ³	6 x 10 ³	6 x 10 ³	10 ³	10 ²	10 ⁴	10 ³	10 ³
Ultimate Pressure (mbar)								
	10 - 7	10 - 7	10 - 9	10 - 7	10 - 9	10 - 9	10 - 9	10 - 9
Startup Time (min)								
	8	8	12	8	8	8	10	11
Rotational Speed (rpm)								
	27,500	27,500	24,000	36,500	36,500	27,000	27,700	24,240
Orientation								
	Any	Any	Any	Any	Any	Any	Any	Any
Backing Pressure (mbar)								
	2	2	2	2	1.5	2	2	2
Outlet Flange								
	NW40	NW40	NW40	NW40	NW40	NW40	NW40	NW40
Weight (lb)								
	165	176	184	106	100	136	176	244
Price								
	\$46,992.00	\$52,272.00	\$58,650.00	\$33,292.00	\$39,931.00	\$41,616.00	\$52,000.00	\$70,055.00
Controller								
	SCU-1600	SCU-1600	SCU-1600	Integrated	Integrated	Integrated	Integrated	Integrated
Price								
	\$12,848.00	\$12,848.00	\$12,848.00	N/A	N/A	N/A	N/A	N/A

Pfeiffer Turbo Pumps

For more than 100 years, Pfeiffer Vacuum has been one of the leading companies of high and ultra-high vacuum technology. Pfeiffer's goal is to provide innovative products featuring high reliability and optimum physical properties. The most important instrument for creating high vacuum is the turbo molecular pump, which was devised at the Pfeiffer factory in 1957 by W. Becker. The new HiPace line of turbo pumps are equipped with integrated controllers for modular design and maximum flexibility to assist in making installation easy. The HiPace line ranges from 10-2000 L/s.



Features

- Pump and drive form a single unit
- All components connect on the plug-and-play principle
- Minimal space requirements for entire system
- Integrated serial interface provides additional versatility
- Simple and economical system solutions
- On site bearing change
- Installation in any position
- Corrosive versions available



Ordering Information

	HP80	HP300	HP300 H	HP400	HP700	HP1200	HP1500	HP1800	HP2300
Turbo Pumps									
ISO	PMP03940	PMP03900	PMP05400	PMP04023	PMP03933	PMP03910	PMP04061	PMP04070	PMP03921
CF	PMP03941	PMP03901	PMP05401	PMP04024	PMP03934	PMP03911	PMP04062	PMP04071	PMP03922
DCU Controller									
	PMC01820	PMC01822	PMC01822	PMC01823	PMC01823				

DCU Turbo Pump Controller

The Display Control Unit (DCU) is a universal operating unit for the control and monitoring of the Pfeiffer turbo pumps. Using the touch pad digital display, the controller has multifunction capabilities which include standard features such as on/off, rotational speed, venting valve control, heating control, backing pump control, air cooling control, operating hours, vacuum gauge interface, remote control, and RS232 configuration. The DCU can be installed within standardized rack systems or used as a bench top instrument.



Technical Specifications

	HP80	HP300	HP300 H	HP400	HP700	HP1200	HP1500	HP1800	HP2300
Inlet Flange									
	ISO 63 CF 63	ISO 100 CF 100	ISO 100 CF 100	ISO 160 CF 160	ISO 160 CF 160	ISO 200 ISO 200	ISO 250 CF 250	ISO 200 CF 200	ISO 250 CF 250
Pumping Speed, L/S									
N:	71	250	255	350	630	1250	1450	1450	1900
He:	66	260	255	500	720	1300	1350	1650	2050
H:	55	220	220	460	580	1100	1150	1700	1850
Compression Ratio									
N:	>10 ¹¹	>10 ¹¹	10 ¹³	350	>10 ¹¹	>10 ⁸	1 x 10 ⁸	1x10 ⁸	>10 ⁸
He:	4 x 10 ⁶	>10 ⁸	10 ⁹	500	>10 ⁸	2 x 10 ⁵	2 x 10 ⁵	3 x 10 ⁵	3 x 10 ⁵
H:	1 x 10 ⁵	9 x 10 ⁶	10 ⁷	460	4 x 10 ⁶	6 x 10 ³	6 x 10 ³	2 x 10 ⁴	2 x 10 ⁴
Ultimate Pressure (mbar)									
	10 - 10	10 - 10	10 - 11	10 - 10	10 - 10	10 - 10	10 - 7	10 - 7	10 - 10
Startup Time (min)									
	2	5	3.5	2	2	5	2.5	4	8
Rotational Speed (rpm)									
	-	-	60,000	-	-	37,800	37,800	31,500	31,500
Orientation									
	Any	Any	Any	Any	Any	-	-	-	-
Backing Pressure (mbar)									
	20	15	20	20	20	2	2	1.8	1.8
Outlet Flange									
	NW16	NW16	NW25	NW25	NW25	NW40	NW40	NW40	NW40
Weight (kg)									
	6	13	14	24	24	70	64	72	90
Price									
	\$6,073.00	\$12,145.00	\$12,355.00	\$19,344.00	\$23,847.00	\$32,850.00	\$38,497.00	\$40,078.00	\$53,291.00
Controller									
	DCU110	DCU310	DCU310	DCU400	DCU400	Integrated	Integrated	Integrated	Integrated
Controller Price									
	\$1,594.00	\$2,320.00	\$2,320.00	\$2,487.00	\$2,487.00				

Pfeiffer ATH Magnetically Levitated Turbo Pumps

The ATH-M series are hybrid magnetically levitated turbo pumps. These very sophisticated, high performance, and extremely robust pumps are recognized as the new standard in the world of large turbo molecular pumps. The ATH-M magnetically levitated turbo pumps are clean and dry. The magnetic bearings are frictionless, do not require any grease or bearing maintenance, and can run for years without any interruption on a clean process. This relates to a significantly lower cost of ownership.

Features

- Automatic 5-Axis balancing
- No Bearing Maintenance
- Low cost of ownership
- Minimum Vibration
- Turbo accepts 5 power failure landings at full speed
- Optional Heated Pump Version (MT)



Ordering Information

HP300M	HP700M	HP800M	ATH1300M/MT	ATH1600M/MT	ATH2300M/MT	ATH2804M/MT	ATH3200M/MT	ATH3204M/MT
Turbo Pump ISO								
PMP03951	PMP04451	PMP04461	M6562103	P6562100	Q6562100	TMAAA664015A	U2C662100	TMAAA664015A
Turbo Pump CF								
PMP03952	PMP04452	PMP04462		P6522100	Q6622100			
Controller								
PMC01823	PMC01823	PMC01823		114679	120917	120917	120917	120917

Mag Power Controllers

The Mag Power turbo pump controllers are compact and have highly effective electronic monitoring. They are designed for the ATH-M turbo pumps. Standard features include convenient interface, handy keyboard, digital display for reading rotational speed, pump current consumption, pump and controller temperatures, and complete automatic balancing system. Remote interface available through input/output connections and each unit has RS232/RS485 configuration. Inputs include; pump start-stop, standby, and interlock. Any controller can be switched without a need for tuning or adjustment.



Technical Specifications

	HP300M	HP700M	HP800M	ATH1300M/MT	ATH1600M/MT	ATH2300M/MT	ATH2804M/MT	ATH3200M/MT	ATH3204M/MT
Inlet Flange									
ISO 100	ISO 160	ISO 200	ISO 200	ISO 200	ISO 200	ISO 200			
CF 100	CF 160	CF 200			CF 200	CF 200	ISO 250	ISO 320	ISO 320
					ISO 250	ISO 250	CF 250		CF 320
					CF 250	CF 250			
Pumping Speed, L/S									
N: 255	685	790	1250	1500	2100	2050	2700	2600	
He: 215	600	625	850	1150	2200	2150	2500	2400	
H: 170	480	500	550	750	1200	1750	1700	1800	
Compression Ratio									
N: 10 ¹¹	10 ¹¹	10 ¹¹	10 ⁷	10 ⁷	10 ⁹	10 ⁸	10 ⁸	10 ⁸	
He: 10 ⁸	10 ⁷	10 ⁷	10 ³	10 ³	10 ⁴	10 ³	10 ⁴	10 ³	
H: 10 ⁵	10 ⁵	10 ⁵	10 ²	10 ²	10 ³	10 ⁴	10 ³	10 ⁴	
Ultimate Pressure (mbar)									
10 - 10	10 - 10	10 - 10	10 - 9	10 - 9	10 - 9	10 - 8	10 - 9	10 - 8	
Startup Time (min)									
2	4	4	10	6	10	10	10	10	
Vibration Level									
-	-	-	-	0.01	0.01	0.01	-	0.01	
Orientation									
Any	Any	Any	Any	Any	Any	Any	Any	Any	
Backing Pressure (mbar)									
20	8	8	2	1.5	1.5	1.5	2	1.5	
Outlet Flange									
NW 16	NW 25	NW 25	NW 40	NW 40	NW 40	NW 40	NW 40	NW 40	
Weight (lb)									
29	37	40	N/A	78	102	176	187	176	
Price									
\$25,422.00	\$27,027.00	\$27,472.00	\$36,585.00	\$37,935.00	\$46,960.00	\$50,300.00	\$59,600.00	\$51,300.00	
Controller									
DCU400	DCU400	DCU400	MAG POWER	MAG POWER	MAG POWER	Integrated	MAG POWER	Integrated	
Price									
\$2,487.00	\$2,487.00	\$2,487.00	\$9,180.00	\$9,180.00	\$9,180.00		\$9,180.00		

Leybold Turbo Pumps

With TURBOVAC i/iX new hybrid line of turbo pumps the highest functionality meets outstanding performance. The new i/iX turbomolecular pumps with integrated vacuum system controllers, provide many features that have until now only been available in costly external pump control units; forevacuum pumps, gauges, coolers, and valves can now be easily controlled via the turbo pump. A wide selection of models are available from 90 l/s to 440 l/s with ISO or CF inlet flange selections. The unique maintenance free hybrid bearing system will increase your productivity and reduce cost of ownership.

Features

- Advanced rotor and drag stage design
- Economical price for high performance
- Flexible and Fast installation
- Superior reliability
- Innovative bearing design



Ordering Information

	TV90 iX/I	TV250 iX/I	TV350 iX/I	TV450 iX/I
Turbo Pump				
ISO	810031V1000	820051V3300	830051V1000	830071V1000
CF	810041V1000	820061V3300	830061V1000	830081V1000
Controller				
	Integrated / Optional	Integrated / Optional	Integrated / Optional	Integrated / Optional



Turbo Control 300

The Turbo Control 300 is a combination controller and power supply to operate the new TV line of turbo pumps for simple operations. Manual or Remote selection. The unit has push button controls, LED indicator lights, and remote interface connections.

Turbo Control i

New smart control display unit for the TV turbovac i(iX) line of turbo pumps. This unit is light weight, compact, and allows for full monitoring/parameter setting of the turbo pumps. Easily connects to the turbo pump via RS485/RS232 or USB cable. It also can accept up to two sensors for pressure measurement.



Technical Specifications

	TV90 iX/I	TV250 iX/I	TV350 iX/I	TV450 iX/I
Inlet Flange				
	ISO 63 CF 63	ISO-K 100 CF 100	ISO 100 CF 100	ISO 160 CF 160
Pumping Speed, L/S				
	90 90 78	225 250 210	290 360 350	430 440 400
Compression Ratio				
	10 ¹¹ N/A 10 ⁷	1 - 10 ¹¹ N/A 2 - 10 ⁷	10 ¹¹ 10 ⁸ 10 ⁶	10 ¹¹ 10 ⁸ 10 ⁶
Ultimate Pressure (mbar)				
	10 - 10	< 8 x 10 ⁸ - < 5 x 10 ¹⁰	10 - 10	10 - 10
Startup Time (min)				
	1.5	2	5.5	5.5
Rotational Speed (rpm)				
	72,000	-	-	-
Orientation				
	Any	Any	Any	Any
Backing Pressure (mbar)				
	14	14	10	10
Outlet Flange				
	NW 16	NW 16	NW 25	NW 25
Weight (lb)				
	7	15	18	18
Price				
	\$4,910.00	\$8,057.00	\$9,506.00	\$10,485.00

Leybold MAGiNTEGRA Magnetically Levitated Turbo Pumps

The new comprehensive TURBOVAC MAGiNTEGRA pumps are turbomolecular pumps with magnetic rotor suspension. Accuracy, precision and reliability are the features of these magnetically-levitated units. High pumping speed and gas throughput for faster pump down time improve equipment cycle times. The models with fully integrated converter (iP) and power supply eliminate the cost and complexities of conventional rack-mounted controller with interconnecting cable. Pumping speeds of 300 l/s to 2100 l/s to select from.

Features

- Mountable in any orientation
- High degree of reliability
- Extremely low vibration
- Virtually maintenance-free



Ordering Information

MAGW300iP/P	MAGW400iP/P	MAGW600iP/P	MAGW700iP/P	MAGW1300iP/L	MAGW1700iP/L	MAGW2200iP/L
ISO 100 410300V0505	ISO 160 410400V0505	ISO 160 410600V0505	ISO 160 410700V0505	ISO 200 411300V0514	ISO 250 411700V514	ISO 250 412200V0514
CF 100 410300V0506	CF 160 410400V0506	CF 160 410600V0506	CF 160 410700V0506	CF 200 411300V0516	CF 250 411700V516	CF 250 412200V0516



Mag Drive S Controller

For conventional operation of the MAGiNTEGRA 300-700 turbo pumps, (P) models, the use of the Mag Drive S controller allows for starting and stopping. The Display unit allows for parameter setting, Manual/Remote operations, and RS232/485 or I/O Parallel interface.

Technical Specifications

	MAGW300iP/P	MAGW400iP/P	MAGW600iP/P	MAGW700iP/P	MAGW1300iP/L	MAGW1700iP/L	MAGW2200iP/L
Inlet Flange	ISO 100 CF 100	ISO 160 CF 160	ISO 160 CF 160	ISO 200 CF 200	ISO 200 CF 200	ISO 250 CF 250	ISO 250 CF 250
Pumping Speed, L/S							
N	300	365	550	590	1100	1610	2100
He	260	200	570	600	1050	1660	2050
H	190	290	410	430	1220	1710	170
Compression Ratio							
N	2 x 10 ⁹	2 x 10 ⁹	1 x 10 ¹⁰	1 x 10 ¹⁰	> 10 ⁸	10 ⁸	10 ⁸
He	3.2 x 10 ³	3.2 x 10 ³	3.4 x 10 ⁴	10 ⁶	10 ⁵	10 ⁵	10 ⁵
H	9.2 x 10 ⁴	9.2 x 10 ⁴	1.7 x 10 ⁶	10 ⁴	10 ³	10 ³	10 ³
Ultimate Pressure (mbar)	10 - 10	10 - 10	10 - 8	10 - 10	10 - 10	10 - 10	10 - 10
Startup Time (min)	-	-	6	6	7	7	7
Rotational Speed (rpm)	-	-	-	-	37,800	33,000	30,600
Orientation	Any	Any	Any	Any	Any	Any	Any
Backing Pressure (mbar)	8	8	6	6	4	4	2.5
Outlet Flange	NW 16	NW 16	NW 25	NW 25	NW 25	NW 40	NW 40
Weight (lb)	26	26	37	37	88	99	110
Price	\$17,570.00	\$17,570.00	\$21,800.00	\$22,726.00	\$28,500.00	\$35,470.00	\$39,050.00
Controller	Integrated	Integrated	Integrated	Integrated	Integrated	Integrated	Integrated

TYH Turbo Pumps

TYH Turbo Pumps are considered an emerging new economical line, developed and manufactured in China. These compound design units range from 600 – 3600 liters per second. Each new turbo pump is sold as a complete system consisting of a turbo, controller, cables, inlet screen, and optional air cooling kit. The TYH turbo pump line is ideal for low cost, standard high vacuum applications. This line foregoes advanced features to provide an economical solution for high vacuum requirements.

Features

- Economical
- Ceramic ball bearings
- ISO/CF flange choice
- Air cooled or water cooled option
- Units provided as complete set – Turbo, Controller, Cables, Cooling, Inlet Screen



Ordering Information

	TYB260	TYB600	TYB1200	TYB1600	TYB3600
Turbo Pump Systems ISO					
AC:	B260AI	B600AI	B1200AI	B1600AI	
WC:	B260WI	B600WI	B1200WI	B1600WI	B3600WI
Turbo Pump Systems CF					
AC:	B260ACF	B600ACF	B1200ACF	B1600ACF	
WC:	B260WCF	B600WCF	B1200WCF	B1600WCF	B3600WCF

TC10 Turbo Pump Controller

The TYH turbo pump controller allows for basic Manual or Remote commands and parameter setting. This includes frequency reading, current, voltage, and error codes. The touch pad and LED screen allow for a easy user interface.



Technical Specifications

	TYB260	TYB600	TYB1200	TYB1600	TYB3600
Inlet Flange					
	ISO 100 CF 100	ISO 160 CF 160	ISO 200 CF 200	ISO 250 CF 250	ISO 400
Pumping Speed, L/S					
N:	260	600	1200	1600	3600
Compression Ratio					
N:	N/A	>10 ⁹	>10 ⁴	>10 ⁹	>10 ⁸
H:	N/A	8 x 10 ³	1 x 10 ⁴	1 x 10 ⁴	5 x 10 ³
Ultimate Pressure (mbar)					
	10 - 8	10 - 8	10 - 8	10 - 8	10 - 6
Startup Time (min)					
	<4.5	<4.5	<4.5	<6	<10
Rotational Speed (rpm)					
	33,000	24,000	24,000	24,000	12,600
Orientation					
	Any	Vertical +/- 5	Vertical +/- 5	Vertical +/- 5	Vertical +/- 5
Outlet Flange					
	KF25	KF40	KF40	KF50	ISO100
Weight (lb)					
	22	63	79	95	220
Controller					
	TC10	TC10	TC10	TC10	TC100
Complete System Price					
	\$8,900.00	\$9,800.00	\$11,200.00	\$11,600.00	\$24,500.00

Agilent Technologies Turbo Pumps

Agilent offers the TwisTorr range of turbomolecular pumps from 80 to 800 liters/second pumping speed. Agilent turbo pumps are optimized for high compression ratio for low base pressure, high pressure differential for high throughput. The turbo pumps are oil-free, and may be operated in any position without stress on materials. Applications for the turbo pumps include high energy physics and research, nanotechnologies, and mass spectrometry.

Features

- TwisTorr FS technology
- Designed for very high gas load operations
- 80 l/s to 800 l/s models
- Any orientation
- Maintenance-free ceramic ball bearings
- High speed, high compression



Ordering Information

	V84FS	V304FS	V704FS	V804FS	V551	V1001
Turbo Pumps Only						
NW Inlet	X3502-64001					
ISO Inlet	X3502-64000	X3500-1120	X3511-64000	X3511-64007	9698922	9698831
CF Inlet	X3502-64002	X3500-1121	X3511-64002	X3511-64011	9698923	9698832
ISO Inlet		X3500-1122			9698924	9698934
CF Inlet		X3500-1123			9698925	
Controller						
	X3508-64001	X3506-64002	X3501-64016	X3501-64016	9699544	9699554
Pump Cable (8m)						
						9699958
Cooling Kit						
Air	9699290	9699949	X3501-68001	X3501-68001	9699314	9699315
Water	X3502-168003	9699337	9699347	9699337	9699347	9699337
Inlet Screen						
NW	9699309					
ISO	X3502-68001	X3500-68000	9699304	9699304	9699299	9699350
ISO		9699302	9699304	9699304	9699304	

Turbo Navigator and Rack Controllers

The Turbo controllers are a microprocessor controlled unit with self diagnostic and protection features that ensure the highest degree of reliability. The compact rack system has multifunction alphanumeric displays for pump status and error code diagnostics. The front panel has a two line dot matrix LCD display with back lighting. It displays rotational speed, current, power, and bearing temperature. It also records vacuum cycles, cycle time, current cycle, and total operating hours. The controllers are microprocessor controlled frequency converters fully controllable through PC software.



Technical Specifications

	V84FS	V304FS	V704FS	V804FS	V551	V1001
Inlet Flange						
	NW 40 ISO 63 CF 63	ISO 100 CF 100 ISO 160 CF 160	ISO 160 CF 200	ISO 200 CF 200	ISO 100 CF 100 ISO 160 CF 160	ISO 200 CF 200 ISO 250
Pumping Speed, L/S						
N:	67	250	660	720	550	1050
He:	63	255	640	660	600	900
H:	53	220	480	485	510	920
Compression Ratio						
N:	1 x 10 ¹¹	10 ¹¹	1x10 ¹¹	1x10 ¹¹	1 x 10 ⁹	1 x 10 ⁹
He:	2 x 10 ⁶	10 ⁸	2x10 ⁸	2x10 ⁸	1 x 10 ⁷	5 x 10 ⁷
H:	5 x 10 ⁴	10 ⁶	3x10 ⁶	3x10 ⁶	1 x 10 ⁶	2 x 10 ⁶
Ultimate Pressure (mbar)						
	10 - 10	10 - 10	10 - 10	10 - 10	10 - 10	10 - 10
Startup Time (min)						
	2	3	5	5	5	4
Rotational Speed (rpm)						
	81,000	60,000	49,000	49,000	42,000	38,000
Orientation						
	Any	Any	Any	Any	Any	Any
Backing Pressure (mbar)						
	0.1	10	0.1	0.1	0.1	0.1
Outlet Flange						
	NW16	NW16	N25	NW25	NW25	NW40
Weight (lb)						
	5.5	13	45	45	43	54
Price						
	\$5,095.00	\$9,314.00	\$16,814.00	\$20,537.00	\$15,316.00	\$22,491.00
Controller						
	V84 AG	V304 AG	Rack Navigation	Rack Navigation	Rack Navigation	Rack Navigation

Turbo Packages

Turbo Vacuum provides economical solutions for simple-to-purchase, small, complete turbo pump systems, ready to use. These packages include turbo pump, integrated controller, power supply, air cooling kit, and connection cables.

Features

- Economical solutions
- Reliable
- Ready to use & simple
- Dual voltage 90-240v
- Units Provided as Complete Package



Technical Specifications

	TG 60	TG 240	TV 90i	TV 250i	TV 350i	TV 450i	NEXT 85H
Inlet Flange	KF 40, ISO 63 CF 63	ISO 100 CF 100	ISO 63 CF 63	ISO 100 CF 100	ISO 100 CF 100	ISO 160 CF 160	KF 40, ISO 63 CF 63
Pumping Speed, L/S							
N:	60	240	90	225	290	430	84
He:	55	160	90	250	360	440	79
H:	22	N/A	78	210	350	420	62
Ultimate Pressure (mbar)	10 - 9	10 - 10	10 - 10	10 - 10	10 - 10	10 - 10	10 - 10
Startup Time (min)	1.5	5	1.5	2	2	2	2
Rotational Speed (rpm)	80,000	48,000	72,000	72,000	60,000	60,000	90,000
Orientation	Any	Any	Any	Any	Any	Any	Vertical/Horizontal
Backing Pressure (mbar)	6	6	14	14	10	10	16
Outlet Flange	NW16	NW25	NW16	NW16	NW25	NW25	NW16
Weight (lb)	10	18	7	13	26	28	7
Controller	TC66	TC245	Integrated	Integrated	Integrated	Integrated	Integrated
Complete System Price	\$3,975.00	\$7,600.00	\$4,850.00	\$6,740.00	\$7,320.00	\$7,980.00	\$4,980.00

Ordering Information

TG 60	TG 240	TV 90i	TV 250i	TV 350i	TV 450i	NEXT 85H
TG60FKAB-OEM TG60FRAB-OEM TG60FCAB-OEM	TG240FRAB-OEM TG240FCAB-OEM	TV90I-SYS-ISO TV90I-SYS-CF	TV250I-SYS-ISO TV250I-SYS-CF	TV350I-SYS-ISO TV350I-SYS-CF 6	TV450I-SYS-ISO TV450I-SYS-CF 8	NEXT85H-SYS-KF40 NEXT85H-SYS-ISO NEXT85H-SYS-CF



Technical Specifications

	NEXT 240T	NEXT 300T	NEXT 400T	HP 10	HP 80	HP 300
Inlet Flange	ISO 100 CF 100	ISO 100 CF 100	ISO 160 CF 160	NW 25	ISO 63 CF 63	ISO 100 CF 100
Pumping Speed, L/S						
N:	240	300	400	10	71	250
He:	230	340	390	6	66	260
H:	165	280	325	3.7	55	220
Ultimate Pressure (mbar)	10 - 10	10 - 10	10 - 10	10 - 6	10 - 10	10 - 10
Startup Time (min)	2	2	2	1	2	5
Rotational Speed (rpm)	60,000	60,000	60,000	90,000	90,000	60,000
Orientation	Vertical/Horizontal	Vertical/Horizontal	Vertical/Horizontal	Any	Any	Any
Backing Pressure (mbar)	9.5	20	20	20	2	15
Outlet Flange	NW16	NW25	NW25	NW16	NW16	NW16
Weight (lb)	13	14	15	5	6	13
Controller	Integrated	Integrated	Integrated	TC110	TC110	TC110
Complete System Price	\$7,840.00	\$8,150.00	\$8,960.00	\$4,500.00	\$6,562.00	\$9,980.00

Ordering Information

NEXT 240T	NEXT 300T	NEXT 400T	HP 10	HP 80	HP 300
NEXT240D-SYS-ISO NEXT240D-SYS-CF	NEXT300-SYS-ISO NEXT300-SYS-CF	NEXT400-SYS-ISO NEXT400-SYS-CF	HP10-SYS-NW25	HP800BPS-ISO HP800BPS-CF	HP300BPS-ISO HP300BPS-CF

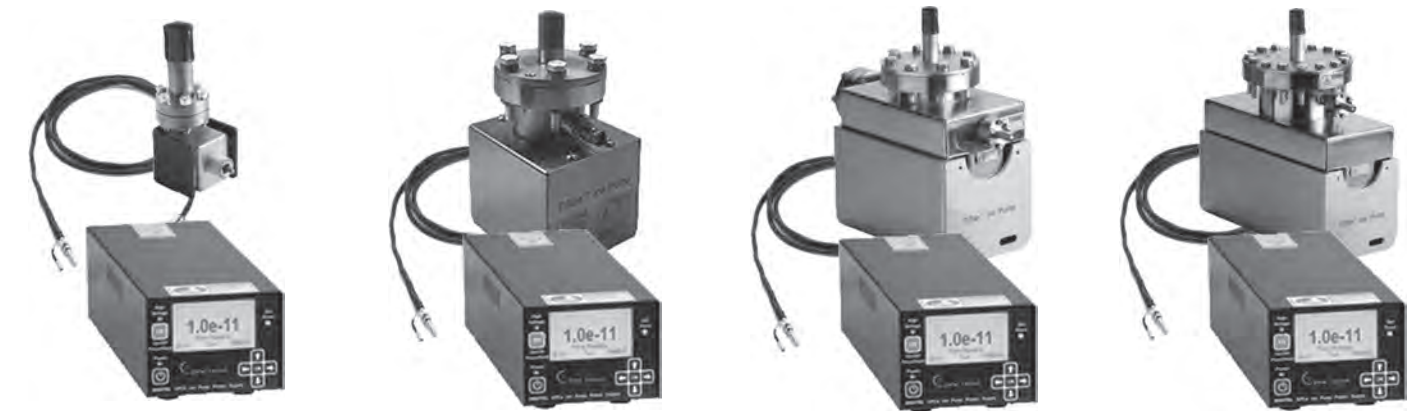
Ion Pump System Complete

Ion pumps create high vacuum /ultra-high vacuum (UHV) environments when used with existing high vacuum systems and turbo molecular pumps. They can be used in a variety of applications, ranging from portable mass spectrometers to large scale particle accelerators. Ion pumps can create the lowest possible vacuum at an economical cost. Turbo Vacuum has assembled a wide spectrum of high quality Diode configuration units ranging from 0.2 l/s to 60 l/s pumping speed.

Each system will be provided with an Ion pump of selection, full LCD display controller, and 3 meter cable. The controller will allow the end user to read pressure, current, voltage, and set programmable features

Features

- Vibration-Free Operation
- Low Operational Cost
- Bakeability Integrated Vacuum Gauge
- Low Maintenance
- Pressure Indication
- Permanent Gas Capture
- Radiation Tolerance
- Long Operational Life
- Non-Contaminating Technology
- Units Provided As Complete Set- Ion Pump, Controller, 3m HV Cable



Technical Specifications

	Mini	3s	5s	10s
Inlet Flange	DN 16, CF-1.33	DN 16, CF-1.33	DN 40, CF-2.75	DN 40, CF-2.75
Pumping Speed L/S (N):	0.2 L/S	3 L/S	5 L/S	8 L/S
Ultimate Pressure (mbar)	Less than 10-11 mbar	Less than 10-11 mbar	Less than 10-11 mbar	Less than 10-11 mbar
Startup Pressure (mbar)	1x10 ³	1x10 ³	1x10 ³	1x10 ³
Lifetime	50,000 hours @ e-6 mbar	50,000 hours @ e-6 mbar	50,000 hours @ e-6 mbar	50,000 hours @ e-6 mbar
Operating Bake Temp	100 Deg C	95 with magnets Deg C	200 Deg C	250 Deg C
Maximum Bake Temp	100 Deg C	450 without magnets Deg C	450 Deg C	450 without magnets Deg C
Weight (lb)	0.35 kg / 0.8 lbs	0.45 kg / 1.0 lbs	2.3 kg / 5 lbs	6 kg / 13 lbs
Ordering Info	ION-SYS-MINI	ION-SYS-3S	ION-SYS-5S	ION-SYS-10S
Price	\$2,950.00	\$2,980.00	\$3,850.00	\$3,890.00

Technical Specifications

	25s	45s	75s
Inlet Flange	DN 40, CF-2.75	DN 63, CF-4.5	DN 100, CF-6
Pumping Speed L/S (N):	20 L/S	35 L/S	60 L/S
Ultimate Pressure (mbar)	Less than 10-11 mbar	Less than 10-11 mbar	Less than 10-11 mbar
Startup Pressure	1x10 ³	1x10 ³	1x10 ³
Lifetime	50,000 hours @ e-6 mbar	50,000 hours @ e-6 mbar	50,000 hours @ e-6 mbar
Operating Bake Temp	250 Deg C	250 Deg C	250 Deg C
Maximum Bake Temp	450 without magnets Deg C	450 without magnets Deg C	450 without magnets Deg C
Weight (lb)	9 kg / 20 lbs	16 kg / 34 lbs	22 kg / 48 lbs
Ordering Info	ION-SYS-25S	ION-SYS-45S	ION-SYS-75N
Price	\$4,150.00	\$4,680.00	\$5,620.00

Instant Systems

Turbo Vacuum has assembled Instant Systems. A selection of high vacuum pumping stations that are proven, tested, oil-free, air cooled, multifunctional, and ready to use. Choose a complete plug-and-play system that can be integrated into any application where simple ultra clean high vacuum is needed. Applications include: backing larger turbo pumps, chamber evacuations, instrumentation, research and development.

Features

- Complete Integrated System
- Maximum Reliability
- Compact
- High Pumping Speeds & Gas throughputs
- Global World Voltage Acceptable
- Oil Free
- RS232 Analog Communication
- Vacuum Gauge LED Screen Compatible
- Economical



Ordering Information

	IS11	IS60	TL80	TL350	ISO80E	IS300E	TS85D	FJ-80
Instant Systems								
NW	V010113	V120816	TL80D40	TL350ISO	ISO80E40	IS300EISO	TS85D40	FJ-80-ISO
ISO		V120815	TL80DISO	TL350CF	ISO80E63ISO	IS300ECF	TS85DISO	FJ-80-CF
CF		V120814	TL80DCF		ISO80E63CF		TS85DCF	

Technical Specifications

	IS11	IS60	TL80	TL350	ISO80E	IS300E	TS85D	FJ-80
Inlet Flange	NW 25	NW 40 ISO 63 CF 63	NW 40 ISO 63 CF 63	ISO 100 CF 100	NW 40 ISO 63 CF 63	ISO 100 CF 100	NW 40 ISO 63 CF 63	ISO 63 CF 63
Pumping Speed, L/S								
N:	11	60	65	290	71	260	84	62
He:	6	55	55	360	66	255	57	
H:	3.7	22	49	350	55	220	53	
Compression Ratio								
N:	3 x 10 ⁶			10 ¹¹	10 ¹¹	1 x 10 ¹¹		2 x 10 ⁶
He:	3 x 10 ³			10 ⁸	4 x 10 ⁶	2 x 10 ⁸		
H:	3 x 10 ²			10 ⁶	1 x 10 ⁵	3 x 10 ⁵		4 x 10 ³
(mbar)								
	10 - 6	10 - 9	10 - 8	10 - 9	10 - 8	10 - 7	10 - 8	10 - 8
Backing Pump								
CFM	0.7 PTFE	0.7 PTFE	0.5	0.5	0.5	1	0.7	0.7
Price								
	\$6,900.00	\$6,900.00	\$8,950.00	\$11,190.00	\$8,620.00	\$9,850.00	\$7,850.00	\$6,900.00

Helium Leak Detector

Compactness and size have always been criteria in detriment to performance for helium leak and hydrogen detecting. Turbo Vacuum provides economical and user friendly units in a small package, great for detecting light traces of gas which are capable of infiltrating a micro opening the size of 5 x 10-12 mbar. They are portable, highly sensitive, upgradeable for use on large vacuum systems, and have analog/digital inputs and outputs for demanding industries such as: Semiconductor, Medical, Pharmaceutical, Electronics, Instrumentation, and Aeronautics. Other advantages include: Simple operation, ISO9001 compatible, Vacuum and sniffing operation, Removable operating unit, Leak rate as a numerical and bar graph display, Optimum suppression of background signal, Short recovery time, Rapid results due to high inlet pressure and high helium pumping speed, and color touchscreen displays.

Features

- Self Automated
- No contamination
- Start Stop operation
- Modular design with adaptable pumping capacity
- Easy integration into any vacuum system
- Color touchscreen display
- Battery operated



Technical Specifications

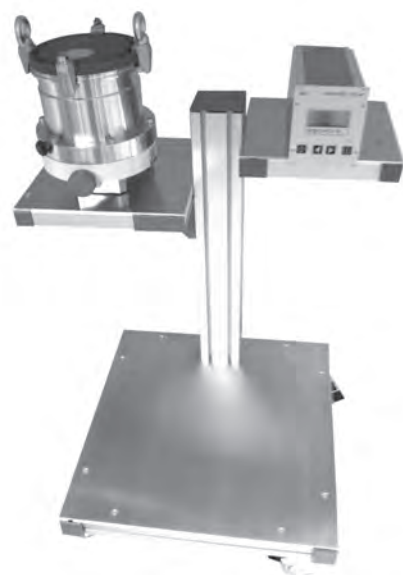
	ASM310	QUADRO	QUADRO DRY	VARIO	ASM340	ASM340D	VSPR021	VSPD031
Inlet Flange	NW25	NW25	NW25	NW25	NW25	NW25	NW25	NW25
Smallest Detectable Leak Rate (mbar)	5 x 10 ¹²	5 x 10 ¹²	5 x 10 ¹²	5 x 10 ¹²	5 x 10 ¹²	5 x 10 ¹²	5 x 10 ¹²	5 x 10 ¹²
Sniffen Probe, Detectable Leak Rate	1 x 10 ⁷	1 x 10 ⁷	1 x 10 ⁷	1 x 10 ⁷	1 x 10 ⁷	5 x 10 ³	5 x 10 ³	5 x 10 ³
Detectable Gases	⁴ HE ³ HE H ₂	⁴ HE ³ HE H ₂	⁴ HE ³ HE H ₂	⁴ HE ³ HE H ₂	⁴ HE ³ HE H ₂	⁴ HE ³ HE H ₂	⁴ HE ³ HE H ₂	⁴ HE ³ HE H ₂
Cold Start To Ready (minutes)	2	2	2	2	3	3	3	3
Response Time (seconds)	<1	<1	<1	<1	<1	0.5	0.5	0.5
Inlet Pressure Max (mbar)	15	15	15	15	10	18	13	13
Roughing Pump (Flow Rate CFM)	Dry / 1	Wet / 1.5	Dry / 1.8	None	Wet / 9	Dry / 2	Oil Seal / 5	Dry / 3
System Voltage	100-240V	100-240V	100-240V	110-240V	110-240V	110-240V	110-240V	110-240V
Price	\$26,860.00	\$23,490.00	\$23,692.00	\$22,680.00	\$23,800.00	\$25,100.00	\$22,186.00	\$24,431.00

vCart Stations

Turbo Vacuum will provide a client's personal selection turbo cart station with the specific components ideal for fulfilling a portable high vacuum applications. Start by selecting any manufacturer's turbo pump, oil-free backing pump and optional accessories to create the perfect system. Upon completing selections, Turbo Vacuum will assemble and test the new station with the chosen items prior to delivery.

Features

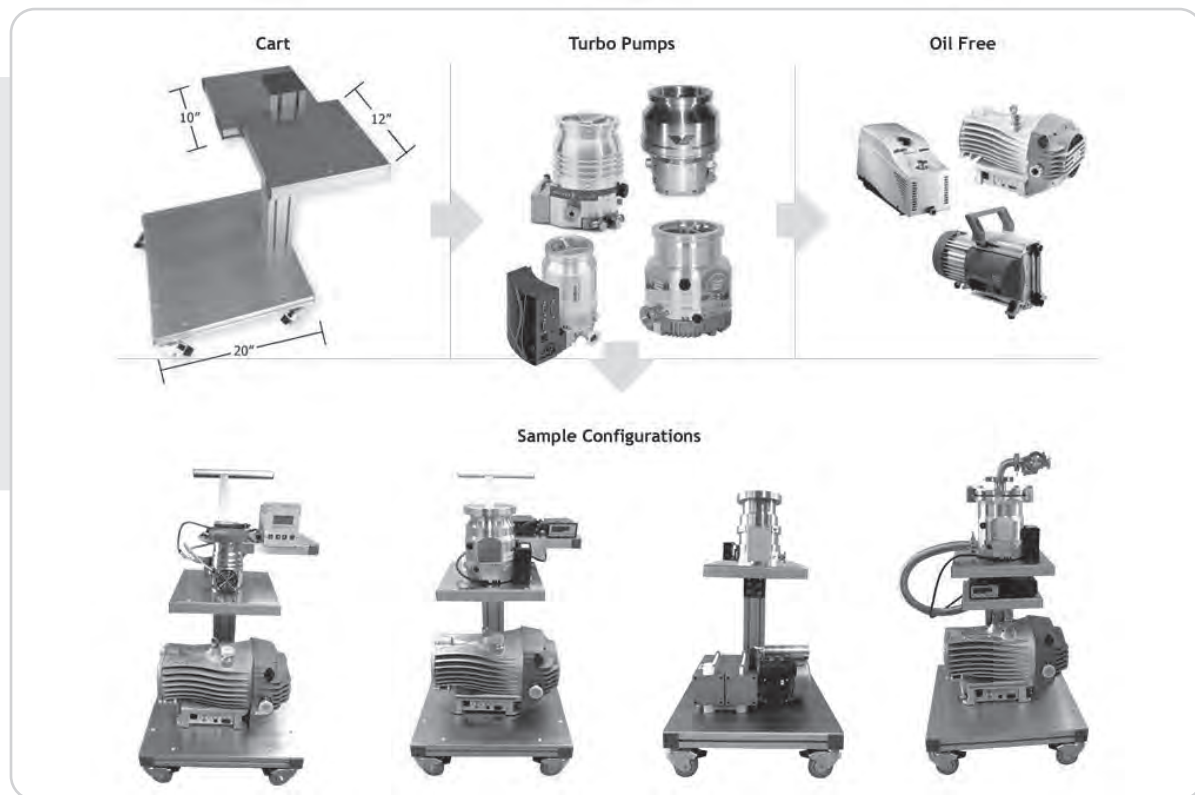
- Portable
- Flexibility For Operation
- Ready and Easy to Use
- Create Your Own System
- Maximum Options
- Open Component Design
- Economical



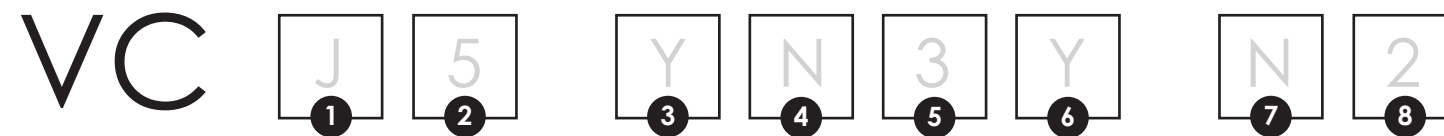
Ordering Information

	vCART	Push Handle	vCART Transportation Case Cover W/4 Latches
Model	TVCART1	TVCARTHDL	TVCARTC
Price	\$1,150.00	\$45.00	\$970.00

Sample Configuration



Ordering Matrix



1 Turbo Pump

- A. EXT85TX
- B. NEXT240T
- C. NEXT300T
- D. NEXT400T



- E. STP301C
- F. STP451C



- G. TG70
- H. TG220
- I. TG350
- J. TG450



- K. HP10
- L. HP80
- M. HP300



- N. TG60
- O. TG240



- P. TV90i
- Q. TV350i
- R. TV450i



2 Inlet Flange

- 1. NW25
- 2. DN40KF
- 3. DN40, 275' CF
- 4. DN63ISO
- 5. DN63, 4.5" CF
- 6. DN100ISO
- 7. DN100, 6" CF
- 8. DN160ISO
- 9. DN160, 8" CF

3 Turbo Vent Valve

- Y. YES
- N. NO

4 Turbo Air Cooling

- Y. YES
- N. NO

5 Backing Pump

- 1. NXDS6i
- 2. NXDS10i
- 3. NXDS15i
- 4. XDS351



- 5. MVP020
- 6. MVP201T
- 7. MVP601T

- 8. ACP15



- 9. 2070

6 Backing Pump Isolation Valve

- Y. YES
- N. NO

7 vCart Push Handle

- Y. YES
- N. NO

8 Electrical Supply

- 2. 100-240V
- 3. 200-240V

Gauging

Turbo Vacuum makes every effort to provide its clients with exceptional turbo systems, which include different types of pumps and peripherals, including gauging. The goal is to offer a complete, universal, and comprehensive line of vacuum measurement products. Vacuum measurement is essential to all vacuum applications. Gauging needs to be diverse, ranging from atmospheric pressure, 1000 mbar, to 5×10^{-10} mbar, to read your pump performance accurately. Each customer's needs are unique and Turbo Vacuum continuously focuses on understanding these needs in order to offer new and improved products, such as the new vacuum gauges listed below.

Features

Complete pressure measuring system with 3 meter cable, digital reader, and sensor tube.

Ordering Information

Atmosphere to 10⁻¹⁰ MBAR

Part Number	Connection	Price
PBR260 NW PBR260 CF	NW 25 CF 25	\$2,680.00 \$2,780.00
ITR90 NW ITR90 CF	NW25 CF40	\$2,480.00 \$2,580.00
BPG400D NW BPG400D CF	NW25, Display CF40, Display	\$1,780.00 \$1,780.00



Atmosphere to 10⁻⁹ MBAR

Part Number	Connection	Price
PKR251 NW PKR251 CF	NW 25 CF 25	\$2,550.00 \$2,650.00
WRGS NW WRGS CF	NW25 CF40	\$1,945.00 \$2,164.00
PTR90 NW PTR90 CF	NW25 CF40	\$1,945.00 \$2,164.00



Ordering Information

Atmosphere to 10⁻⁵ MBAR

Part Number	Connection	Price
PCR280 NW	NW 16	\$1,920.00



Atmosphere to 10⁻⁴ MBAR

Part Number	Connection	Price
APGX NW	NW 16	\$1,285.00
PSG550 NWD	NW 16, Display	\$675.00
VG200P	1/8" NPT	\$520.00



Atmosphere to 10⁻² MBAR

Part Number	Connection	Price
TV90-16	NW16	\$445.00



Gauge Filters

Part Number	Connection	Price
GF16	NW16	\$49.00
GF25	NW25	\$52.00
GF40	NW40	\$68.00

Mass Spectrometry

Turbo Vacuum realizes that Mass Spectrometric measuring methods have become an indispensable diagnostic aid in numerous branches of process engineering, technology and product development, medicine, and basic scientific research. A vacuum must be generated for operating mass spectrometers. Conversely, development of vacuum technologies has increasingly required the utilization of small, high-performance mass spectrometers. Mass Spectrometers require a working pressure of 1 x 5-5 mbar. Since many processes operate at higher pressures, the mass spec cannot be solely selected based on analyzer, ion source and detector. A coordinated system consists of mass spec, vacuum pump, and measurement tool.

Applications

- Leak testing of serial production components
- Quantitative determination of composition and purity of process gases
- Complex analysis of catalytic reactions on the surface of solid bodies
- Investigation of biochemical substance transformations

The **Prisma Series** for residual gas analysis, leak detections and process – monitoring in the high vacuum range.

Features

- Economical
- Easy System Integration
- Fast and Error-Free Data Transfer Via Fiber Optics
- User Friendly Software
- Selectable Partial Pressures
- High Up-Time Due To Dual Filmier Design



The **MS 100, MS 100E, MS 200E** and **OmniStar** gas analysis system is designed for quantitative gas analysis which includes non-polar molecules, inert gases, etc. Complete mass spectrometry system for turnkey operations with software.

Features

- Analysis Software
- Low Detection threshold (<1 ppm)
- Temperature controlled gas line
- Software controlled valve
- Certain identification of unknown gases
- Measurement of up to 64 gas components
- Low memory effects
- Short response time
- Online process control
- Mass Ranges 1-100 amu, 1-200 amu, 1-300 amu



Technical Specifications

PRISMA 100	PRISMA 200	PRISMA 300	RGA 100	RGA 200	RGA 300	MS 100	MS 100E	MS 200E	OMNISTAR 320
Mass Range (amu)									
1 - 100	1 - 200	1 - 300	1 - 100	1 - 100	1 - 100	1 - 100	1 - 100	1 - 200	1 - 200
System Diameter / Length (mm)			ECU Dimension			ECU Dimension			
6 / 100	6 / 100	6 / 100	9.1"x4.1"x3.1"	9.1"x4.1"x3.1"	9.1"x4.1"x3.1"	6 / 100	9.1"x4.1"x3.1"	9.1"x4.1"x3.1"	6 / 100
Detection Limit, MIN (mbar)									
1.10-12	2.10-12	4.10-12	5x10-11	5x10-11	5x10-11	1.10-12	5x10-11	5x10-11	1.10-12
Sensitivity For AR(a/mbar)									
1.10-3	6.10-4	3.10-4	2.10-4	2.10-4	2.10-4	1.10-3	2.10-4	2.10-4	1.10-3
Dectector									
Faraday	Faraday	Faraday	Faraday	Faraday	Faraday	N/A	Faraday	Faraday	Faraday
Operating Pressure Max (mbar)									
1.10-4	1.10-4	1.10-4	1.10-4	1.10-4	1.10-4	1.10-4	1.10-4	1.10-4	1.10-4
Contribution to Neighboring Mass (40/41) PPM			Resolution			Resolution			
<10	<20	<50	> 0.5 AMU @ 10% Peak	> 0.5 AMU @ 10% Peak	> 0.5 AMU @ 10% Peak	<10	> 0.5 AMU @ 10% Peak	> 0.5 AMU @ 10% Peak	<10
Operating Temperature/Analyzer (OC Max)									
150	150	150	70	70	70	N/A	70	70	N/A
Connecting Flange									
CF 40	CF 40	CF 40	CF 40	CF 40	CF 40	NW 25	CF 40	CF 40	55 Capillary
Weight (lbs)									
7	7	7	6	6	6	37	37	37	100
Price									
\$9,792.00	\$12,039.00	\$15,595.00	\$5,000.00	\$6,000.00	\$7,500.00	\$16,980.00	\$12,420.00	\$13,420.00	\$63,800.00

Ordering Information

PRISMA 100	PRISMA 200	PRISMA 300	RGA 100	RGA 200	RGA 300	MS 100	MS 100E	MS 200E	OMNISTAR 100
Part Number									
PTM0S111110	PTM0S211110	PTM0S311111	RGA100PM	RGA200PM	RGA300PM	V022313	V032815	V033815	PTM80117121
Adaptor									
DN40CF - F	DN40CF - F	DN40CF - F	DN40CF - F	DN40CF - F	DN40CF - F	N/A	N/A	N/A	N/A

* Each unit is complete with easy to use software, R5 - 232 - C cable and adaptor, SP 200 mains unit with cable, control plug, installation material.

Oil-Free Backing Pumps

A proactive way to ensure the lasting life of your high vacuum turbo pumps is to use an ultra clean oil-free backing pump. The advantages of oil-free pumps ensure that your turbo pumps last longer, and allow your system to be more user friendly. Oil-free backing pumps add extra safety by preventing oil contamination to your turbo pump through the foreline with unexpected power loss or system failure. These new style oil free pumps are reliable, economical, and easy to use.

Technical Specifications

	nXDS6i/C	nXDS10i/C	nXDS15i/C	nXDS35i
Inlet Flange	NW25	NW25	NW25	NW40
Pumping Speed (CFM)	4	7.5	10.1	25
Ultimate Pressure (TORR)	0.015	0.005	0.005	7 x 10 ⁻³
Voltage	100-240	100-240	100-240	100-240
Weight (LBS)	58	57	56	105



Ordering Information

Part Number	nXDS6i/C	nXDS10i/C	nXDS15i/C	nXDS35i
Price	\$5,731.00	\$7,164.00	\$8,598.00	\$12,171.00



Technical Specifications

	MP201T	MP601T	2070 C	2080 C
Inlet Flange	NW16	NW16	NW25	NW25
Pumping Speed (CFM)	1.2	2.86	4	10
Ultimate Pressure (TORR)	1.5	1.5	0.05	0.05
Voltage	115	115	115	115
Weight (LBS)	22	40	50	88

Ordering Information

Part Number	MP201T	MP601T	2070 C	2080 C
Price	\$2,101.00	\$3,150.00	\$6,980.00	\$7,690.00

Technical Specifications

	MVP 015	MVP 020	MVP 040	MVP 070
Inlet Flange	G 1/8"	G 1/8"	G 1/4"	G 1/4"
Pumping Speed (CFM)	0.7	0.8	1.5	2.5
Ultimate Pressure (TORR)	< 4	< 2	< 4	< 1.5
Voltage	100-230	100-230	110-230	110-230
Weight (LBS)	14	15	25	36

Ordering Information

Part Number	MVP 015	MVP 020	MVP 040	MVP 070
Price	\$1,553.00	\$2,228.00	\$2,457.00	\$4,118.00

Features

- No particulates generated
- No back streaming
- Quiet and less vibration
- Longer service intervals
- High reliability
- True dry pumping
- Contamination free
- Superior performance

Technical Specifications

	EVP75	EVP150	EVP300	EVP600	EVP1000
Inlet Flange	NW25	NW25	NW25	NW40	NW40
Pumping Speed (CFM)	2.5	5.1	10.9	47	42.5
Ultimate Pressure (TORR)	10-2	10-2	10-2	10-3	10-3
Voltage	100/115 - 230V	100/115 - 230V	100/115 - 230V	110/230V	110/230V
Weight (LBS)	33	40	70	79	115



Ordering Information

Part Number	EVP75	EVP150	EVP300	EVP600	EVP1000
Price	\$3,980.00	\$4,850.00	\$6,920.00	\$8,600.00	\$11,860.00



Technical Specifications

	IDP-3	IDP-7	TS300	IDP15	TS600
Inlet Flange	NW16	NW25	NW25	NW25	NW40
Pumping Speed (CFM)	1.8	5.3	8.8	9	17
Ultimate Pressure (TORR)	10-1	10-2	10-2	10-3	10-3
Voltage	115	100-240	115	100-240	100-240
Weight (LBS)	21	54	57	75	70

Ordering Information

Part Number	IDP-3	IDP-7	TS300	IDP15	TS600
Price	\$2,826.00	\$5,250.00	\$6,319.00	\$6,750.00	\$9,873.00

Technical Specifications

	ACP15	ACP28	ACP40	ECODRY 40	ECODRY 65	IGX100
Inlet Flange	NW25	NW25	NW40	NW25	NW40	ISO63
Pumping Speed (CFM)	8.2	16	23	23	32	62
Ultimate Pressure (TORR)	10-2	10-1	10-2	10-1	10-2	10-3
Voltage	115	115	115	220-240	220-240	220-240
Weight (LBS)	50	21	N/A	94	94	264

Ordering Information

Part Number	ACP15	ACP28	ACP40	ECODRY 40	ECODRY 65	IGX100
Price	\$7,817.00	\$11,664.00	\$13,513.00	\$11,652.00	\$12,822.00	\$16,800.00

Hardware

All vacuum systems require connections such as gauges, valves and pumps. Select hardware that makes connecting your high system or integration easy and clean. The simpler your connections are, the less chance there is for a vacuum leak. While these connections have to preserve vacuum integrity, they also have to be modular to allow flexibility and simplicity. All hardware is new and contamination free.



ELECTRONICALLY ACTIVATED SAFETY ISOLATION VALVE DN 16 - 25

Part #	Description	Price
SIV 16	NW16, 115V	\$427.00
SIV 25	NW25, 115V	\$427.00



DOUBLE CLAW CLAMP

Part #	Price
ISO63-1000DC	\$7.00
ISO160-250DC	\$9.00



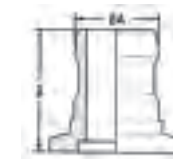
MANUAL VENT VALVE NW16

Part #	Price
NW16MV	\$185.00



CONICAL NW TO NW REDUCER

Part #	Price
NW25X16CR	\$45.00
NW40X16CR	\$58.00
NW40X25CR	\$58.00



HOSE ADAPTOR ALUMINUM

Part #	Hose Size	Price
NW1650H	.50	\$10.00
NW2550H	.50	\$16.00
NW2575H	.75	\$12.00
NW40150H	1.50	\$16.00



90° ELBOW

Part #	Price
NW16075E90	\$38.00
NW25100E90	\$43.00
NW40150E90	\$60.00



MISC. INLET FLANGE ADAPTORS / REDUCERS

Part #	Price
ISO63XISO100CR	\$200.00
ISO63XISO160CR	\$270.00
ISO100XISO160CR	\$360.00
NW40XISO63	\$125.00
NW40XISO100	\$175.00
ISO63XCF450	\$170.00
ISO63XCF600	\$250.00
ISO100XCF600	\$280.00
ISO100XCF450	\$250.00
ISO160XCF800	\$335.00
ISO200XCF1000	\$480.00
NW40XCF450	\$115.00
CF450XCF600	\$375.00
CF450XCF800	\$384.00
CF600XCF800	\$390.00
CF600XCF1000	\$625.00
CF800XCF1000	\$655.00



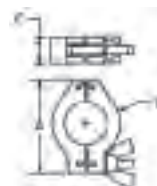
CENTERING RING ASSEMBLY SS-VITON & CENTERING RING ASSEMBLY W/ SPLINTER SHIELD

Part #	Price
NW16075SRV	\$5.50
NW25100SRV	\$7.00
NW40100SRV	\$9.25
NW63250SRV	\$45.00
NW100400SRV	\$58.00
NW160600SRV	\$74.00
NW200800SRV	\$100.00
NW2501000SRV	\$120.00
ISO63CRSS	\$250.00
ISO100CRSS	\$300.00
ISO160CRSS	\$380.00
ISO200CRSS	\$540.00
ISO250CRSS	\$650.00
ISO320CRSS	\$1600.00



NW TO PIPE ADAPTOR

Part #	Price
NW16X12NPT	\$43.00
NW16X25NPT	\$45.00
NW25X12NPT	\$43.00
NW25X25NPT	\$47.00
NW25X50NPT	\$50.00
NW25X75NPT	\$67.00
NW25X100NPT	\$83.00
NW40X12NPT	\$46.00
NW40X25NPT	\$49.00
NW40X50NPT	\$53.00
NW40X75NPT	\$70.00
NW40X100NPT	\$85.00
NW40X125NPT	\$95.00
NW40X150NPT	\$95.00



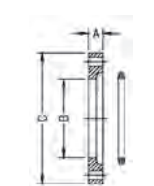
WING - NUT CLAMP

Part #	Price
NW16CW	\$5.25
NW25CW	\$7.00
NW40CW	\$8.25
NW63CW	\$25.00
NW100CW	\$35.00
NW160CW	\$40.00
NW200CW	\$45.00



BLANK FLANGE

Part #	Price
NW16SB	\$7.00
NW25SB	\$7.00
NW40SB	\$55.00
NW100SB	\$85.00
NW160SB	\$95.00
NW200SB	\$175.00



ROTATABLE ISO-K TO ISO-F ADAPTION

Part #	Price
ISO 63 BR	\$98.00
ISO 100 BR	\$175.00
ISO 160 BR	\$295.00
ISO 200 BR	\$345.00
ISO 250 BR	\$415.00



NW TO QUICK COUPLING

Part #	Price
NW16Q12	\$58.00
NW16Q25	\$58.00
NW16Q38	\$64.00
NW16Q50	\$64.00
NW25Q25	\$68.00
NW25Q38	\$68.00
NW25Q50	\$68.00
NW25Q100	\$84.00
NW40Q25	\$73.00
NW40Q50	\$73.00
NW40Q100	\$87.00
NW40Q150	\$159.00



BOLTS, NUTS AND COPPER GASKETS

Part #	Description	Price
450-CG	Copper Gasket, 4.5"/CF63	\$6.00
450-BK	(25) Bolt, Nut & Washer Kit	\$22.00
600-CG	Copper Gasket, 6"/CF100	\$9.00
600-BK	(25) Bolt, Nut & Washer Kit	\$22.00
800-CG	Copper Gasket, 8"/CF160	\$15.00
800-BK	(25) Bolt, Nut & Washer Kit	\$27.00
1000-CG	Copper Gasket, 10"/CF200	\$18.00
1000-BK	(25) Bolt, Nut & Washer Kit	\$29.00
1200-CG	Copper Gasket, 12"/CF250	\$45.00
1200-BK	(32) Bolt, Nut & Washer Kit	\$48.00



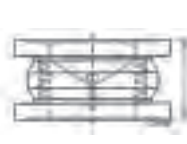
METAL FLEX HOSE

Part #	Length	Price
NW16075MH10	10"	\$95.00
NW25100MH10	10"	\$105.00
NW40150MH10	10"	\$132.00
NW16075MH20	20"	\$140.00
NW25100MH20	20"	\$165.00
NW40150MH20	20"	\$175.00
NW16075MN30	30"	\$185.00
NW25100MH30	30"	\$200.00
NW40150MH30	30"	\$270.00
NW16075MN40	40"	\$235.00
NW25100MH40	40"	\$265.00
NW40150MH40	40"	\$275.00
NW16075MN48	48"	\$249.00
NW25100MH48	48"	\$265.00
NW40150MH48	48"	\$345.00



NW TEES AND REDUCING TEES

Part #	Price
NW16X075T	\$60.00
NW25X100T	\$70.00
NW40X160T	\$85.00
NW25X16T	\$71.00
NW40X16T	\$80.00
NW40X25T	\$90.00



TURBO VIBRATION DAMPER

Part #	Price
VD63ISO	\$1,265.00
VD63CF	\$1,615.00
VD1000ISO	\$1,285.00
VD100CF	\$1,980.00



ISO TO MALE NPT 1/8 , 1/4 , 1/2 , 3/4

Part #	Price
NW16075AP12	\$11.50
NW25100AP12	\$12.50
NW40150AP12	\$14.00
NW16075AP25	\$11.50
NW25100AP25	\$12.50
NW40150AP25	\$14.00
NW25100SP50	\$24.00
NW40150SP50	\$31.00
NW40150SP75	\$33.00



RIGHT ANGLE MANUAL VALVES

Part #	Description	Price
NW160752NWB	NW16	\$306.00
NW251002NWB	NW25	\$325.00
NW401502NWB	NW40	\$350.00
ISO632502ISO	ISO63	\$650.00
CF4502502CF	CF4.5"/63	\$650.00



HIGH VACUUM BALL VALVE 10⁻¹⁰ TORR

Part #	Description	Price
NW161075	NW16	\$247.00
NW251100	NW25	\$362.00
NW401150	NW40	\$443.00
NW501200	NW40	\$450.00

Turbo Pump Repair Kits

Turbo Vacuum offers a wide range of Repair kits, Specialty tools, and Repair guides for many of the turbo pumps used today, obsolete and new. This includes Balzer/Pfeiffer, Leybold, Varian, Edwards, and many more not listed below. Our repair kits are engineered to meet or exceed the specifications of the OEM, giving you the same quality components needed to repair the pumps yourself. Some repair kits are only available exclusively through Turbo Vacuum.

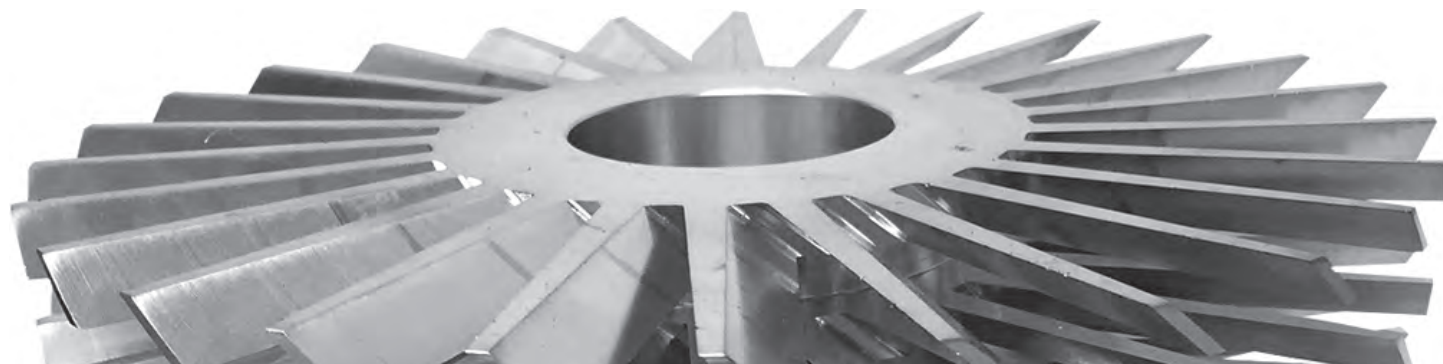
Tool Kits Includes specialty tools. **Repair Kits** Includes bearings and seals, and if needed oil wick/felt washer oil.

* Turbo Vacuum offers Many More Repair Kits that need to be correctly identified with pump. Call for your specific pump kit.

	Part Number	Model	Description	Price	
Alcatel	A80BK	ATP80	Bearing Kit	\$998.00	
	A100BK	ATP100	Bearing Kit	\$998.00	
	A150RK	ATP150	Repair Kit	\$985.00	
	A400RK	ATP400	Repair Kit	\$985.00	
	A5010RK	5010	Repair Kit	\$745.00	
	A5011RK	5011	Repair Kit	\$745.00	
	A5011TK	5011/5010	Tool Kit and Manual	\$1,970.00	
	A5080RK	5080/5081	Repair Kit	\$725.00	
	A5150RK	5150	Repair Kit	\$725.00	
	A5400BK	5400	Bearing Kit	\$685.00	
	A5400RK	5400 / 5401 / 5402	Repair Kit	\$695.00	
	200027	ATP80/100/5081/5011/5100	Grease Syringe	\$189.00	
	200028	5400/5150/5900	Grease Syringe	\$189.00	
	200029	ATP150/400/900	Grease Syringe	\$189.00	
	A1300MRK	ATH1300M	Repair Kit	\$1,840.00	
	A1600MRK	ATH1600M	Repair Kit	\$1,840.00	
	A2300MRK	ATH2300M	Repair Kit	\$1,890.00	
	Agilent	V60CDM	V60	CD Service Manual	\$200.00
		V60RK	V60	Repair Kit	\$745.00
		V70CDM	V70	CD Service Manual	\$250.00
V70RK		V70	Repair Kit	\$745.00	
V81RK		V81	Repair Kit	\$785.00	
V200ARK		V200	Repair Kit	\$810.00	
V250CDM		V250/V300	CD Service Manual	\$250.00	
V250RK		V250	Repair Kit	\$745.00	
V300RK		V300	Repair Kit	\$745.00	
V301RK		V301	Repair Kit	\$745.00	
V401RK		V401	Repair Kit	\$825.00	
V550RK		V550	Repair Kit	\$985.00	
V551RK		V551	Repair Kit	\$985.00	
V701RK		V701	Repair Kit	\$985.00	
VTS300RK		TS300	Major Repair Kit	\$785.00	
VTS600RK		TS600	Major Repair Kit	\$845.00	
VTS300TS		TS300	Tip Seal Kit	\$264.00	
VTS600TS		TS600	Tip Seal Kit	\$274.00	
SH110TS		SH110	Tip Seal Kit	\$289.00	
IDP2TS		IDP2TS	Tip Seal Kit	\$298.00	
IDP3TS	IDP3TS	Tip Seal Kit	\$298.00		
V1001RK	V1001	Repair Kit	\$998.00		
Leybold	L150CDM	TMP150/151	CD Service Manual	\$250.00	
	L150RK	TMP150/151	Repair Kit	\$850.00	
	L360CDM	TMP360/361	CD Service Manual	\$250.00	
	L360RK	TMP360/361	Repair Kit	\$850.00	
	L340MRK	TMP340M	Repair Kit	\$1985.00	
	L450CDM	TMP450	CD Service Manual	\$250.00	
	L450RK	TMP450	Repair Kit	\$850.00	
	L600RK	TMP600	Repair Kit	\$850.00	
	L1000RK	TMP1000	Repair Kit (Bearing not Greased)	\$925.00	
	TO5000	TMP	Turbo Oil 500 c.c.	\$260.00	
	L701RK	TW700/701	Repair Kit	\$1,185.00	
	L1000RK	TMP1000	Repair Kit (Bearing not Greased)	\$925.00	
	TW290SK	TW290	Seal Kit	\$185.00	
	Osaka	NTLG-1	TF160	Grease Syringe (10 PK)	\$245.00
		OSAK-OIL		1 Kilo	\$285.00
		NLTF-260	TG / TF	260 ML Turbo Oil	\$245.00
NL-GN		TG 50/55/56, TF 62	Grease Lubricator (10 pc)	\$285.00	

	Part Number	Model	Description	Price	
Pfeiffer	B022RK	TPD022	Repair Kit	\$575.00	
	B050RK	TPH/U 050	Repair Kit	\$785.00	
	B060RK	TPH/U 060	Repair Kit	\$785.00	
	B062RK	TPH/U 062	Repair Kit	\$785.00	
	B064RK	TMH/U 064/065	Repair Kit	\$785.00	
	B071RK	TMH/U 071	Repair Kit	\$785.00	
	B110RK	TPH/U 110	Repair Kit	\$785.00	
	B170CDM	TPH/U 170	CD Service Manual	\$250.00	
	B170RK	TPH/U 170	Repair Kit	\$785.00	
	B180RK	TPH/U 180	Repair Kit	\$785.00	
	B190RK	TPH/U 190	Repair Kit	\$785.00	
	B240RK	TPH/U 240	Repair Kit	\$825.00	
	B260RK	TMH/U 260/261/262	Repair Kit	\$825.00	
	B270RK	TPM/U 270	Repair Kit	\$825.00	
	B330CDM	TPH/U 330/270	CD Service Manual	\$250.00	
	B330RK	TPH/U 330	Repair Kit	\$825.00	
	B510CDM	TPH/U 510	CD Service Manual	\$250.00	
	B510RK	TPH/U 510	Repair Kit	\$825.00	
	B521RK	TMH/U 520/521	Repair Kit	\$825.00	
	HP80RK	HP80	Repair Kit	\$785.00	
	HP300RK	HP300	Repair Kit	\$895.00	
	N5709103	020-521	Button Cover Removal Tool	\$115.00	
	OC103593A	020-071	Replacement Oil Cartridge	\$98.00	
	OC33758	TOH/U 040 / 050	Felt Disk	\$23.00	
	OC63265	180-521	Replacement Oil Cartridge	\$98.00	
	OR143451	HP300	Oil Reservoir	\$123.00	
	OR143452	HP400/700	Oil Reservoir	\$123.00	
	OR143740	HP80	Oil Reservoir	\$145.00	
	OW0021	TPH/U	1 Meter Oil Wick 050-170/330	\$35.00	
	6033AT	TPH/U 050-330	1 Liter TL Oil	\$225.00	
	6034AT	TPH/U 050-330	250ml TL Oil	\$105.00	
	Edwards	E70RK	EXT70	Repair Kit	\$780.00
		E250BK	EXT250	Repair Kit	\$785.00
		E255BK	EXT255	Repair Kit	\$785.00
		EXDS5TS	XDS5	Tips Seal Kit	\$276.00
EXDS10TS		XDS10	Tips Seal Kit	\$276.00	
EXDS35TS		XDS35	Tips Seal Kit	\$510.00	
TPE008		EXT250/255	10PK Felt Disk	\$98.00	
TPE0007		EXT250/255	Lubricating Wick	\$48.00	
E500BK		EXT500	Bearing Kit	\$785.00	
STP300RK		STP300C/300H/400	Repair Kit	\$780.00	
STP301RK		STP301C/451	Repair Kit	\$780.00	
STPH301RK		STPH301/H451	Repair Kit	\$800.00	
STPH300RK		STPH300/H200	Repair Kit	\$1,140.00	
STP600RK		STP600/H600C/	Repair Kit	\$1,140.00	
STP1000RK		STP1000/H1000C	Repair Kit	\$1,140.00	
STPH2000RK		STPH2000C	Repair Kit	\$1,860.00	
STP603RK		STP603/C	Repair Kit	\$1,140.00	
STP1003RK		STP1003/C	Repair Kit	\$1,140.00	
STPH803RK		STPH803/H1303	Repair Kit	\$1,140.00	
STPA803RK		STPA803C	Repair Kit	\$1,140.00	
STPA1303RK		STPA1303C	Repair Kit	\$1,140.00	
STP1603RK		STPA1603C	Repair Kit	\$1,140.00	
STPH1301RK		STPH1301	Repair Kit	\$1,140.00	
STPH2001RK		STPH2001C	Repair Kit	\$1,860.00	
STPA2203RK		STPA2203C	Repair Kit	\$1,980.00	
STPA2503RK		STPA2503C	Repair Kit	\$1,980.00	
STPXA2703RK		STPXA2703	Repair Kit	\$1,980.00	
STPA2803RK		STPA2803C	Repair Kit	\$1,980.00	
STPA3003RK		STPA3003C	Repair Kit	\$1,980.00	
STPA3503RK		STPA3503C	Repair Kit	\$1,980.00	
SCU300BAT	SCU	Replacement Battery	\$124.00		
SCU1000BAT	SCU	Replacement Battery	\$241.00		
Ebara	ET 600 BK	ET 600 WS	Bearing Kit	\$1,450.00	
	ET 1600 BK	ET 1600 WS	Bearing Kit	\$1,450.00	
Kyky	KF620BK	F620	Bearing Kit	\$1,420.00	

Turbo Pump Services



Turbo Vacuum can properly service turbo pumps of all makes and models back to manufacturer's original specifications at a substantial savings compared to purchasing new. Turbo pumps are extremely delicate instruments that require precision-bearing installation with critical variables of load, tolerances, and lubrication. Certain rotor assemblies must be precisely balanced to eliminate noise and vibration to maximize bearing life. Turbo Vacuum guarantees that our procedures and components meet or exceed OEM specifications.

Only ultra-precision ceramic bearings are used. To balance rotor assemblies, we utilize a two-plane dynamic balancer which offers many advantages over a simple vibration analyzer. The imbalance in turbo pump rotors can only be eliminated by mass correction in at least two planes perpendicular to the shaft axis. Our two-plane dynamic balancer pinpoints the angle and mass of imbalance. Adjustments are carefully made until the balancer's microprocessor determines the assembly's residual imbalance is within tolerances.

Turbo Vacuum achieves a Balance Quality Grade of G-1 (ISO1940/1 & ANSI S2.19) which provides superior bearing life.

Features

- Complete Decontamination and Cleaning
- Analyzation and inspection
- All Seals, Bearing and wick/grease plugs replaced
- Reassembly with ceramic bearings
- Dual-Plane dynamic balancing
- 48-hour quality control test
- 12-month warranty on most units
- Balance specification reports
- Pump sealed and prepared for use or storage
- Expedite service and exchange available on most models

Turbo Pumps Serviced

- Agilent
- Edwards
- Pfeiffer
- Leybold
- Osaka
- KYKY
- Seiko Seiki
- Adixen
- Balzer
- Sciex Applied Bio
- TYH
- Varian
- Ebara

Turbo Vacuum has reconditioned "Turbo Pumps"

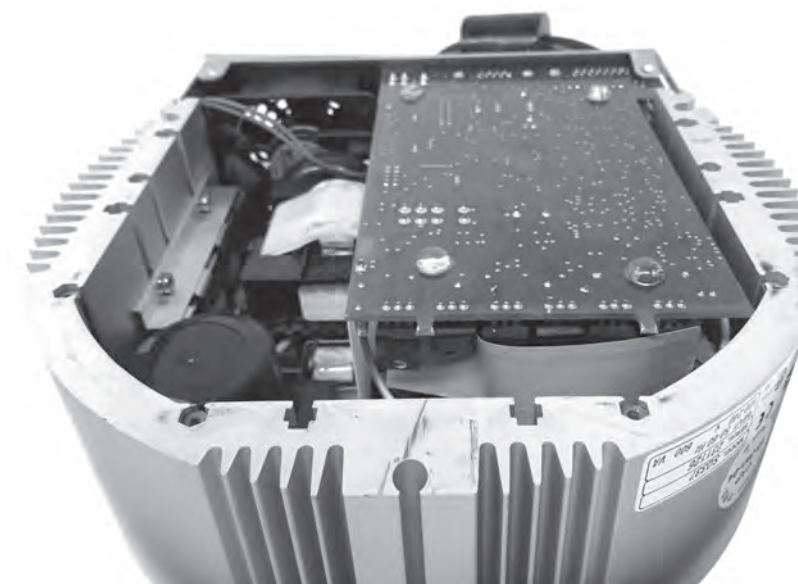
Turbo Pump Controller Services

Turbo Vacuum is one of the only companies which provides turbo pump controller services of every make and model. Many times, a turbo pump may not perform properly due to an electrical problem with a controller. It is always suggested that a controller is inspected and tested with your specific turbo pump if a failure has occurred.

Each controller is completely repaired and tested to meet all original manufacturer's specifications. Controllers are serviced and tested by trained electrical technicians using a documented test procedure. Final testing procedures include a comprehensive run-up with the appropriate turbo pump using your controller cables, if sent in. A detailed test report is provided and all defective parts are replaced.

Features

- 10 Day Service Time
- 1 Year Warranty
- Expedite Service Available
- Controller Services are Billed on a Not-to-Exceed Cost
- All Manufacturers and Models
- Detailed Report



Turbo Pumps Serviced

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- Leybold
- Osaka
- KYKY
- Seiko Seiki
- Adixen
- Balzer
- Sciex Applied Bio
- TYH
- Varian
- Ebara

Turbo Vacuum has Reconditioned Controllers of all makes and models available for purchase

