OIL-SEALED TWO-STAGE ROTARY PISTON VACUUM PUMPS

KTC-21, KTC-60, KTC-112

HIGHLIGHTS

- Triplex Piston Design for Quiet, Vibration-Free Operation
- High Pumping Speed at Pressure Below 10 Microns, Lower than Attainable with Single-Stage Pumps
- Ultimate Pressure: .2 Microns (McLeod Gauge)
- Can Operate at Any Pressure up to Atmosphere
- Adjustable Gas Ballast Permits Handling of Condensable Vapors
- No Metal-to-Metal Contact in Pumping Chambers
- Unequalled Durability, Even in Dirty Applications

(Explosion proof option shown)

Typical Applications: Brake Filling Systems, Low Pressure Chemical Vapor, Silicon Crystal Growing, Air Conditioning

The KTC series two-stage high vacuum pumps are of "triplex" design, a single shaft with three sets of cams and pistons, one set larger than the other. Pumps in this series maintain lower pressures than are attainable with single-stage pumps. In operation, one of the smaller pumping chambers is in series with (backing) the other two, which function in parallel. A unique internal balancing technique reduces the magnitude of pump movement (deflection) to 0.0002" while simultaneously reducing the dynamic forces transmitted through the flexible mounting pads furnished with each pump to less than one pound. These pumps are vibration-free, air-cooled, (except the KTC-12 which is water-cooled), and equipped with an adjustable gas ballast providing vapor handling capability while reducing oil changes by preventing condensable vapors from contaminating the oil.

Other superior quality features include a special umbrella type discharge baffle to reduce oil loss to levels not attainable in other pumps, solenoid valves to protect against oil flooding and the single gas ballast adjustment that assures balanced air flow and simple regulation.

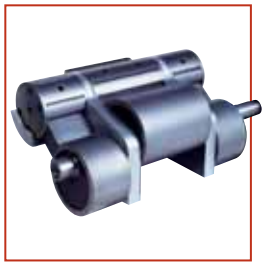
The pump operates within the rating of its standard TEFC motor throughout the complete operating pressure range.

SPECIFICATIONS

MODEL		KTC-21	KTC-60	KTC-112
Nominal Displacement at Rated RPM	cfm/m^3/hr	21/36	60/102	107/182
Motor HP	hp/kw	1.5/1.1	3/2.3	7.5/5.6
Normal Pump Rotation	rpm	1725	972	1055
Oil Capacity	gal/ltr	.5/1.9	2/7.5	4/15
Cooling Water (min) @ 60°F (16°C)	gpm/lpm	AC	AC	1.5/5.5
Weight (Complete Pump Assy) – Dry	lbs/kg	170/77	515/234	765/347
Maximum Gas Ballast Flow		10%	10%	10%
Typical Blank-off Pressure with 5% GB	Torr/mbar	0.020/0.027	0.020/0.027	0.020/0.027
Ultimate Pressure (McLeod Gauge)	microns/mbar	0.2/2.7x10-4	0.2/2.7x10-4	0.2/2.7x10-4
Typical Noise Level @ 10 Torr	dBA	72	70	70

All specifications and dimensions subject to change without notice.

PLUS FEATURES



TRIPLEX DESIGN MEANS VIRTUALLY VIBRATION-FREE OPERATION

Kinney Piston Pumps have three sets of cams and pistons driven by a common shaft. One cam and piston set is no longer than the other two and the cams are set 180° apart. The dynamic forces produced by the rotation of the long cam and piston are balanced by opposing forces produced by the short cams and pistons on either side. The resulting out-of-balance force is very small, making it possible to mount the pump on springs or vibramounts which substantially reduce the dynamic forces transmitted to the floor.

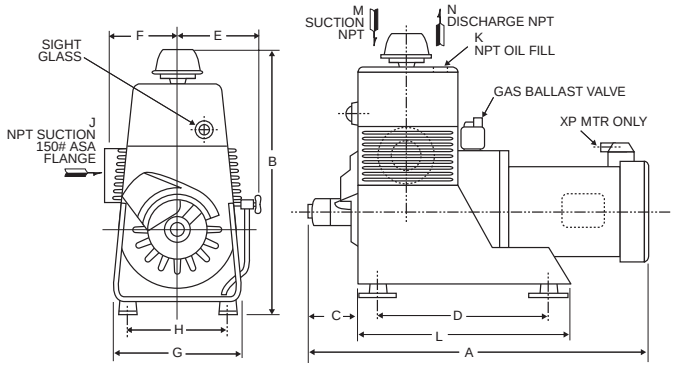
NO ANCHOR BOLTS

KT Pumps do not require lagging, anchor bolts or special foundations and may be located on any floor that will support their weight.

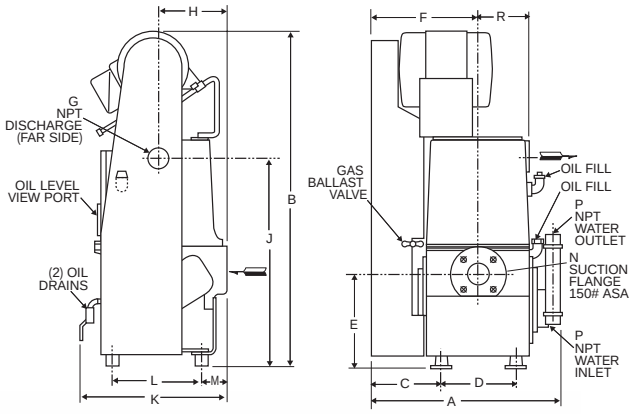
See back page flap for Options and Accessories

DIMENSIONS

KTC-21



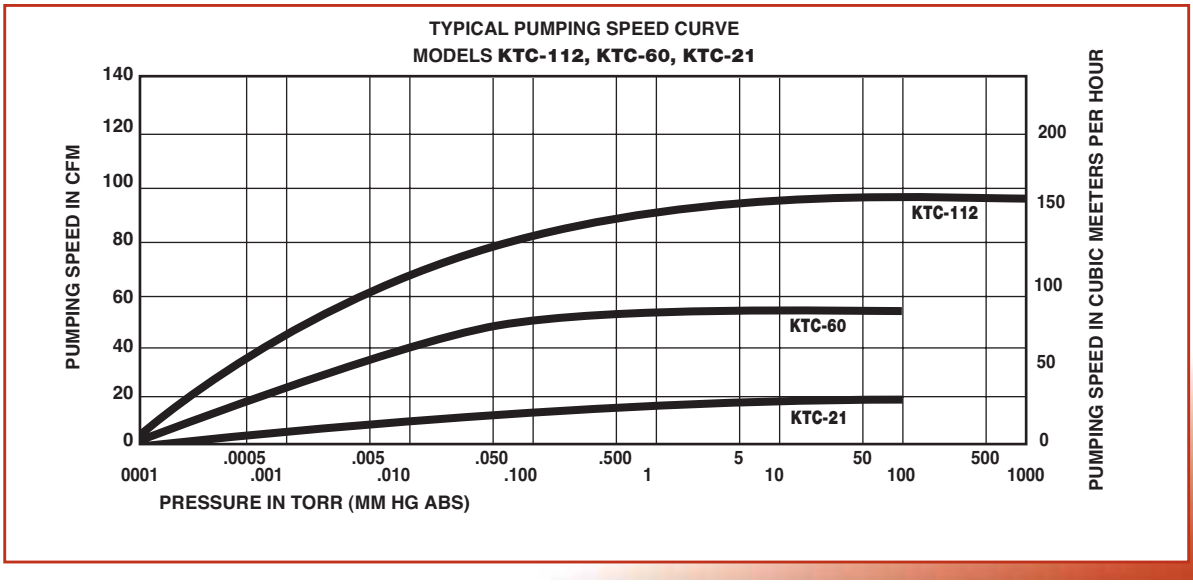
KTC-60, KTC -112



DIMENSIONS (Inches/Millimeters)

MODEL	A	B	C	D	E	F	G	H	J	K	L	M	N	P	R
KTC-21	25 1/8 638	20 1/8 511	2 1/2 64	12 3/8 314	6 1/4 159	5 127	9 9/16 243	7 178	2 -	3/4 -	15 5/8 397	- -	1 NPT	- -	- -
KTC-60	23 1/4 591	36 1/2 927	8 3/4 213	10 254	19 5/8 498	13 3/4 349	1 1/2 NPT	7 5/8 194	21 3/4 552	18 3/4 476	11 1/2 292	2 1/2 64	3 ANSI	- -	6 3/16 159
KTC-112	26 660	43 1092	9 1/2 241	10 254	12 5/8 321	14 1/2 368	2 FLG	9 1/2 241	27 3/8 695	20 3/4 527	12 1/4 311	3 1/8 79	3 ANSI	1/4 NPT	7 178

PERFORMANCE CURVES



HIGH VAPOR HANDLING

Kinney KT Pumps are equipped with three features to handle high vapor loads.

First, the adjustable gas ballast valve can introduce air to the pumping chamber, which helps prevent vapor from condensing in the pump oil.

Second, KT Pumps have a large oil capacity, which has a higher tolerance to contamination. The large reservoir can collect a significant volume of condensed liquid, which can be drained from the pump.

Third, KT Pumps can operate as part of a vapor handling system, in which the oil reservoir is maintained under vacuum. This is made possible by the oil pump and the design of the oil reservoir to operate under vacuum. Vapor handling systems, which keep the oil dry, can operate in corrosive applications.

STRONGER 4-PIECE CAGED SLIDE PINS

Slide pins in all Kinney Rotary Piston Pumps have 4-pieced caged construction, with end pieces that keep both segments in perfect alignment.