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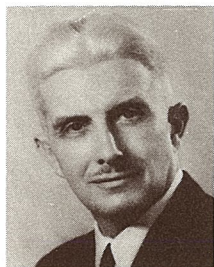
July 1983

No. 3

THE COST OF FREEDOM

FREDERICK KRAISSL, JR., Ph.D., P.E.
Chairman, The Kraissl Co., Inc.

Patrick Henry stated in no uncertain words "Give Me Liberty or Give Me Death." The country was new and after a terrible ordeal, had achieved Liberty. Bondage to a foreign country had been their experience and there



CONSULTING
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was no limit to the price to be paid for Liberty as Death was the highest price an individual could pay. Nathan Hale stated before he was executed that his only regret was that he had only

one life to give for his country. The ordeal at Valley Forge was an experience to try men's souls but they met the test and we, their descendants and successors have inherited the result of their sacrifices.

It is altogether fitting and proper that we eulogize, commemorate and honor these patriots but that is not enough. We have had additional war time experiences as a country and the people who served in our armed forces have been honored and I hope they will continue to be honored but again this is not enough.

We have a mandate to keep this country free. Only in a free country can people develop to full capability. This is the mandate we must carry out at all costs.

When we see that a country is embarking on a military program way beyond any defensive necessity, we must at all costs be prepared to meet any possible challenge to our freedom.

In our Bicentennial Issues of this publication in the July 1976 and October 1976 Issues we gave statistics showing the relative situation of our defensive capability. I cannot see that there is any great change for the better except in attitude. We now have an administration that is aware of the

danger and is determined to meet the issue before it is too late, but is being ham-strung by arguments over budget cuts. This of course is what potential opponents want.

If we would again teach History properly in our schools it can be shown that every so often some nation or leader of a nation wants to dominate all others. The appeal to the masses is they will enjoy the riches that have been built up by the peoples it is expected to conquer. Material gain is usually the motive. This is the same motive that prompts bank robbers and burglars. There is no argument that their activities should be curtailed. I see no basic change in human nature. The children of Israel have a tendency to still dance around the Golden Calf, metaphorically speaking.

We send our best young people to our service academies, West Point, Annapolis and Air Force to become our nation's military leaders. Why do we not trust them to tell us what we need to defend our liberty? This should be our basic military requirement. We have a back up of retired Admirals and Generals who do not hesitate to express their opinions. The combined Chiefs of Staff represent all services.

Why do we not give priority to their recommendations over so called social programs which would be negated in the event we succumb to a superior force?

We are probably the most insurance conscious of any nation. Why do we not regard and sell the public on Freedom Insurance which in reality is the proper name for our Defense Budget? We have a movement designated the "Coalition For Peace Through Strength." Individuals, Organizations and States can be and are members. Let's make Freedom Insurance our most important project. The beautiful part of this is if we do accomplish it, we probably will never have to use it as was demonstrated in World War II. I was an officer in the Chemical Warfare Service. It has always been my belief that Gas

Warfare was not used because the enemy believed we had Chemical Superiority and decided not to initiate its use.

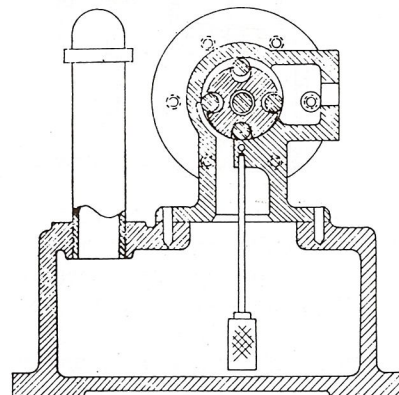
POSITIVE DISPLACEMENT PUMPS

Our Kraissl Quarterly is designed to bring you news concerning all products on which we have standardized or which we could supply if you need them. We have bulletins on most of the illustrated lines which go more into detail. Please request any that may be of interest, and bear in mind that our purpose is to make available the best design for each purpose and explains our diversification.

Two issues in the recent past have given information on our transfer valves and our separators, one issue devoted to each. This issue is devoted to displacement mechanisms or pumps for different services.

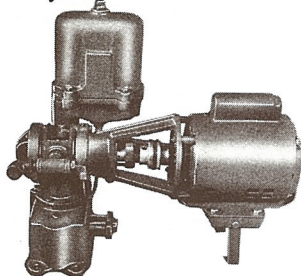
Air Pumps

Many people do not appreciate that a Rotary Air Pump can be a vacuum pump or a compressor depending on which is the working port. We have two basic designs, the roller displacement mechanism designated our Class 21 series and a blade mechanism designated our Class 25 series.



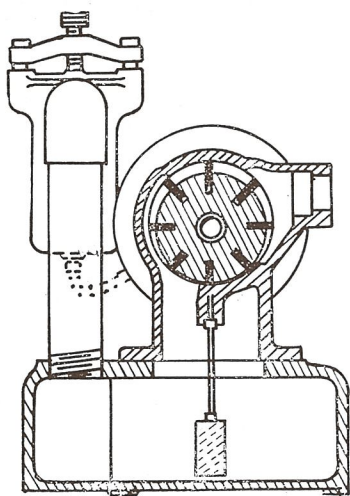
Class 21-Series - Is a mechanism that is hard to wear out. It is ideal for handling corrosive gases or vapors that clog up or gum up other mechanisms. It is and has been used to pull gases from recording apparatus, actuate

vacuum filling machines and all around suction applications. It's limitation is the one line seal of the roller which makes its upper limit approximately 25" of mercury vacuum and corresponding lower pressure. If you operate in a lower vacuum range this mechanism could be of interest as it has many desirable characteristics.



Class 25 Series - The blade mechanism produces a better seal than the roller design and has a more universal application. Both use our force feed system of lubrication from an underneath oil reservoir like an automobile but in combination the blade mechanism produces a higher vacuum and corresponding pressure. Standard units can be supplied for 28" of mercury vacuum and in the vicinity of 50 psig pressure depending upon service and cooling conditions. If there is a quantity application for higher vacuum or pressure, it may be in the area of our Class 17 or 19 Design.

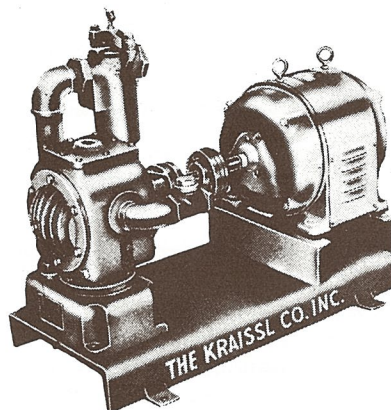
CLASS 25 MECHANISM



Just to let those interested individuals know that this is not all theory, we were privileged to supply our Kraissl air pumps to several systems installed by the Globe Automatic Sprinkler Company. We do not, nor should we have expected to have the addresses of where these air pumps were installed, but to the best of our memory these were before World War II, and we have every reason to believe that if our units had worn out or needed repair parts we would have been contacted. The longevity of Kraissl air pumps is due to our forced

feed system of sealing and lubrication from the built in oil reservoir which is an integral part of the pumps.

Automatic sprinkler companies may find it to their advantage to contact us.

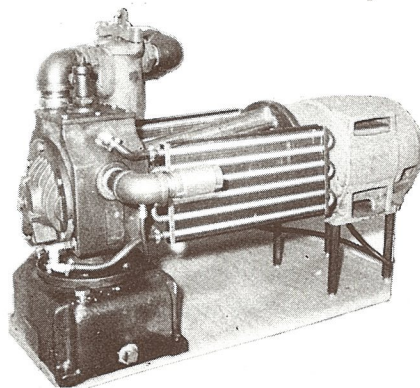


our latest developement is our Class 25WJAC assembly which was made available for ejector service where water cooling is not available.

The design illustrated, shows how this has been done. The pump is motor mounted and the heat exchangers are attached to the motor mount. The liquid coolant operates on thermo syphon action and a bird cage type fan keeps the air in circulation so the ambient temperature is the basis for heat exchange.

While we consider this an improvement over direct fan cooled pumps, it is emphasized that water cooling from a water circulation source is the most efficient as water circulation can continue over a period when the pump is idle but it does provide many of the advantages of liquid cooling including the addition of anti-freeze solutions where this is climatically necessary.

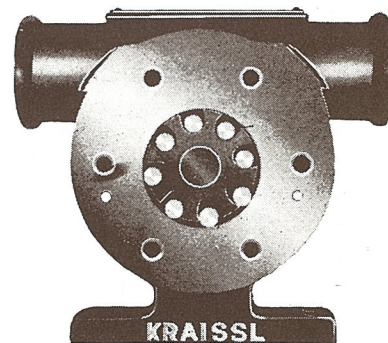
With the expense of new patterns skyrocketing, we only propose to be guided by customers who desire this equipment and have initiated this model in sizes most used in the past.



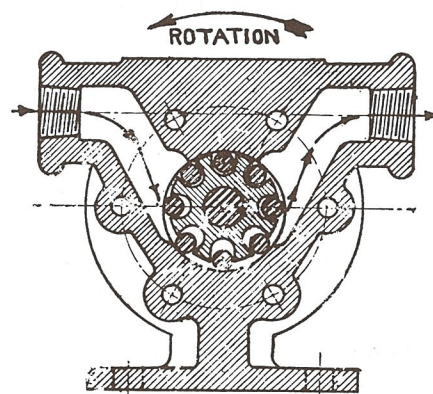
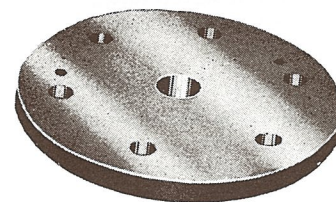
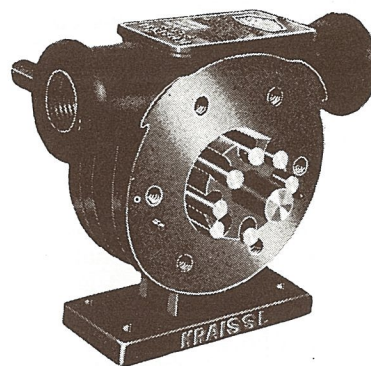
Liquid Pumps

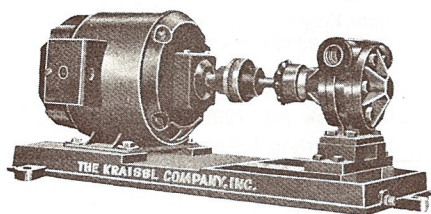
Because of the preponderance of centrifugal pumps on the market, we have limited our manufacture to positive displacement designs or special centrifugals for which there are few standardized units.

Class 50 Design - Is our roller pump converted to liquid service with appropriate design changes. it is an ideal dirty oil pump. The lack of close clearances combining both the characteristics of positive displacement and centrifugal designs make it desirable for many applications where iron and steel materials of construction are satisfactory. Ask for Bulletin Number A-1330.



It is not planned to offer the Class 50 design on a single lot basis. Where a quantity of pumps are needed to handle products with some lubricity, the Class 50 series should be considered. We have brochures telling their characteristics and will be glad to send one on request.

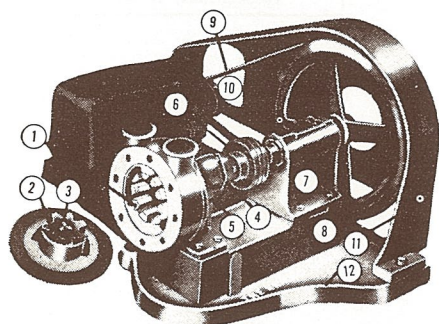
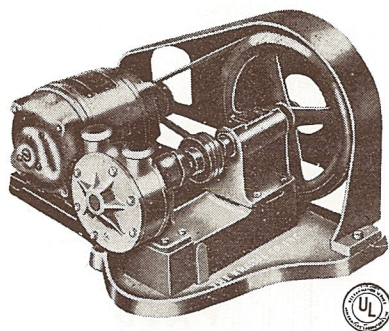




Best of all we believe it can still be manufactured at 10% less than the equivalent capacity of our Class 60 design where direct connected pumps can be used.

Does this not justify consideration?

Class 60 Design - This is the work horse of fuel oil burning systems. It has high suction characteristics. The V Belt is carried on separate ball bearing lubricated transmission support directly connected to pump by loose coupling precludes side pull on the pump shaft minimizing pump bearing and packing distortion. Return seal stuffing box minimizes leakage. By changing pulleys usually available at most hardware stores best speed for various viscosity oils can be obtained. Usually supplied with pulleys for 400 RPM use on heavy oils. Should be considered for coal slurries with minimum abrasion characteristics. Listed by Underwriters Laboratories and New York Board of Standards and Appeals. Ask for Bulletin No. A-1193.



FEATURES

1. Internal gear design provides high suction lift characteristics.
2. Hardened idler insures minimum wear.

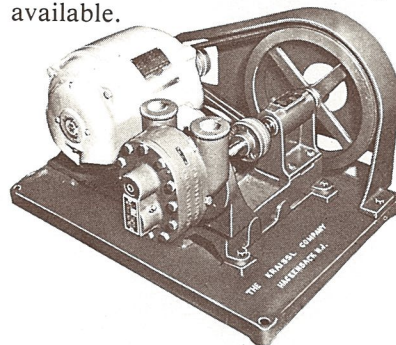
3. Integral bearing and idler assembly.

4. Adjustable stuffing box fitted with return seal and soft packing keeps shaft wear and chance of leakage to a minimum.
5. Interchangeable return seal design allows change of rotation in field.
6. Flexible coupling isolates pump bearings from pulley loads.
7. Rugged ball bearing unit insures bearing alignment and large grease reservoir with provision for re-lubrication minimizes maintenance.
8. Bearing unit support cast integral with bed plate reduces vulnerability to distortion.
9. Adjustable V belt drive absorbs shock loads and provides quiet operation with low replacement cost.
10. Varied pulley combinations for proper viscosity speed relationship.
11. Cast metal belt guard protects personnel from exposed moving parts and eliminates chance of bending, denting or sharp edges.
12. Cast metal bed plate with drip collecting bead around edge insures rigid support and minimum chance of bed plate bending or distortion.
13. Pumps are individually tested in accordance with Underwriters' requirements.
14. Approved by the Board of Standards and Appeals for use in New York City under Cal. No. 517-53-S.A.

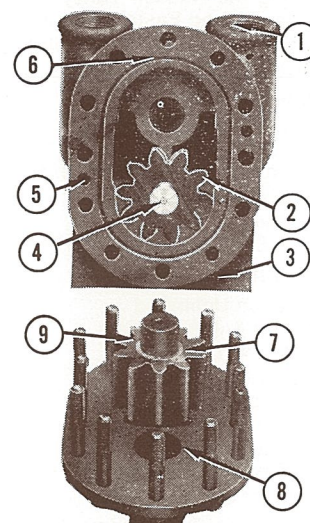
Class 60H Design - This is a look alike pump that usually cannot be identified except by name plate but internal bearing construction is different permitting operating pressures of fifty percent increase. It can replace many applications that formerly used our Class 66 design.

Class 66 Design - This is an external gear pump that is now limited to the smallest three sizes as the larger sizes are in most cases replaced by our 60H series. Ask for Bulletin A-1847

Originally designed for supplying oil to mechanical atomizing oil burners, these pumps are not limited to this application. In actual tests at our plant a Class 66 Pump outlasted four other pumps on the same application for which we had used a competitive design before the 66 Series was available.



MECHANISM

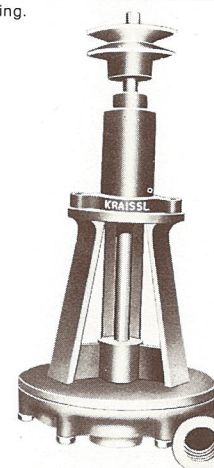


FEATURES

1. Ports in end plate provide easy access to pump interior and parts replacement without piping disassembly.
2. Pyramid tooth form provides maximum gear strength.
3. Interchangeable mounting with corresponding division or size Class 60 Series pump head.
4. Integrated Rotor and shaft provides strong assembly with no weakening due to internal keys or pins.
5. Dowel pin alignment facilitates accurate assembly with proper working clearances.
6. Grooves vented to pump suction eliminate gaskets and insure face and end plate sealing.
7. Bearings are assembled close to load to minimize shaft deflection. Provision is made for renewal of lubricant.
8. Bearing seals divert extraneous matter from main bearings.
9. Hardened idler increases pump life.
10. Interchangeable return seal vents stuffing box to pump suction to minimize chance of shaft leakage while also providing simple means for change of rotation in the field.

SPECIAL CENTRIFUGAL PUMPS

For original equipment applications where standard units cannot be used. Example vertical drive pump for sump mounting.



SALES REPRESENTATION HOME OFFICE

We have reserved the areas of Connecticut, Metropolitan New York, including the Hudson Valley, Long Island, New Jersey and Eastern Pennsylvania less Philadelphia District for coverage by Kraissl Company personnel.

Northeast Region

Boston-Cooper Corp.
Manor Parkway
Salem Ind. Pkwy, Salem, N. H. 03079
Capt. C. V. Watson
Maiden Cove Lane
Cape Elizabeth, Maine 04107

Eastern Region

Filtration Unlimited
Buffalo & John Streets
Akron, N. Y. 14001
Jobe & Co., Inc.
1815 Edison Hwy.
Baltimore, Md. 21213
Daily Associates
8 E. Mt. Vernon Ave.
Haddonfield, N. J. 08033
R. C. White, Div. Weldment Corp.
P.O. Box 267
Bethel Park, Pa. 15102

Southeast Region

Power Equipment Co.
1307 West Main St.
Richmond, Va. 23201
Dillon Supply Company—Main Office
Raleigh, N.C. 27602
Dillon Supply Company
Durham, No. Carolina 27702
Dillon Supply Company
Rocky Mt., No. Carolina 27801
Dillon Supply Company
Goldsboro, No. Carolina 27530
Dillon Supply Company
Charlotte, No. Carolina 28201
Boiler Supply Company
490 Craighead Street
Nashville, Tenn. 37204



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RETURN POSTAGE GUARANTEED

601 Van St., N.W.
Knoxville, Tenn. 37921
Applied Engineering Co., Inc.
P.O. Box 506, Orangeburg, S.C. 29115
W. T. Meyer Co.
5800 Coach Gate Wynde
Louisville, KY. 40207
Spotswood Parker & Co.
721 Miami Cir. NE, Atlanta, Ga. 30324
Proctor-Himic Co., Inc.
P. O. Box 36279
Birmingham, Alabama 35226
R. A. Litkenhaus & Assoc., Inc.
P. O. Box 16323
7825 Baymeadows Way, Suite 106E
Jacksonville, Florida 32216
Phone: (904) 373-3536
Florida Filters, Inc.
5570 N.E. 4th Ave.
Miami, Florida 33137
Florida Filters, Inc.
223 S. 13th St.
Tampa, Florida 33602

North Central Region

Comb & Groves, Inc.
336 W. Eight Mile Rd.
Ferndale, Mich. 48220
Hetler Equipment Co.
P. O. Box 1904
Grand Rapids, Mich. 49501

Central Region

M. Huffman Sales Co.
3404 Upton Ave.
Toledo, Ohio 43613
W. G. Taylor Co.
1900 Euclid Bldg., Cleveland, Ohio 44115
The Jordan Engineering Co.
P. O. Box 30071
Cincinnati, Ohio 45230
T. A. Heidenreich Co., Inc.
2525 E. 54th Street
Indianapolis, Ind. 46220
Tobra Engineering Co.
5438 Milwaukee Ave.
Chicago, Illinois 60630
A. K. Howell Co.
7603 Forsythe Ave.
St. Louis, Mo. 63105
Filtr Tech Systems
8535 Duluth St.
Golden Valley, MN 55427

South Central Region

Creole Engineering Co.
P.O. Box 23159, Harahan, La. 70183
Jack Tyler Engineering Co.
6112 Patterson Ave.
Little Rock, Ark. 72209
Albert Sterling & Assoc., Inc.
P.O. Box 66099, Houston, Texas 77006

Northwest Region

Baxter-Rutherford Inc.
P.O. Box 24324 Terminal Annex
Seattle, Washington 98134

Western Region

Jay Besore & Assoc.
1690 Plymouth St.
Mountain View, Cal. 94043
Power Engineering Co.
364 W. North 600th St.
Salt Lake City, Utah 84110
Killam Gas Burner Co.
1240 S. Bannock St.
Denver, Colorado 80223

Southwest Region

Wagner Hydraulic Equip. Co.
2089 Westwood Blvd.
Los Angeles, California 90025
Engineered Sales Co.
5150 N. 16th Suite A-126
Phoenix, Arizona 85016

Canada—Ontario and Quebec Provinces

Kirk Equipment Ltd.
7435 Chester Ave.
Montreal, Quebec, Canada H4V1M4
K. C. Hamilton Equip. Ltd.—Marine
P.O. Box 508
Knowlton, Quebec, Canada

Canada—British Columbia Province

Les Hall Filter Service Ltd.
346 E. Esplanade
North Vancouver, B.C. V7L 1A4

Canada—Alberta Province

H. F. Clarke Limited
5220-1A Street S. E.
Calgary, Alberta, Canada

Hawaii

Foster Equipment Co.
719 Ahua St.
Honolulu, Hawaii 96803

Mexico

Ingenieria Termo Industrial, S.A.
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Mexico 20, D. F., Mexico

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