

# KRAISSL QUARTERLY

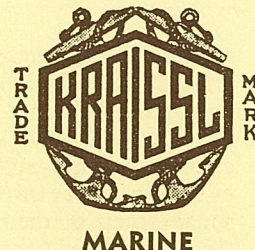
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## THE OPPORTUNITY TO MEET CHALLENGES

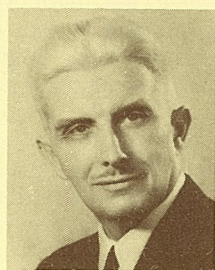
FREDERICK KRAISSL, JR., M. PHIL., P.E.

Chairman

The Kraissl Company, Inc.

No one, in my opinion, should aspire to be a principal in any business unless there is an eagerness for meeting challenges. The smaller the business the

greater will be the variety of challenges to be met. The smallest is, of course, a one person business. Under such circumstances the principal must embody the capabilities of executive, chief salesman, chief engineer, if engineering is involved,



CONSULTING  
ENGINEER

KRAISSL ASSOCIATES chief purchasing person, chief accountant, chief financier, as well as other responsibilities.

It has always been my contention that the operator of a small business must be more versatile than a similar job with a large corporation. As a business grows in size there is justification for possible departmentalization. The head of the Accounting Department must not feel that there is a deficiency if the functions of the head of the Department of Engineering cannot be performed.

However, there are supposedly more small businesses than giant corporations, and I like to liken them to teams. You cannot enter a baseball or football competition unless you can put a good team in the field and even in football you have a defensive team and an offensive team, who exchange places depending on whether your team has the ball or it belongs to the opponent.

This question of team play has more than one aspect. There is the question of back up, providing the opportunity for a teammate to advance the ball and the whole spirit of team play is a necessary part of the ability to achieve as a combined effort.

Unless this exists in intermediate business, it is my opinion, the continuance is doomed to failure. There can be no growing from the intermediate stage to that of corporate giants without this driving force of team play. Its evidence is seen in the come from behind effort of the New York Yankees, and in the exuberance of the teammates when they had culminated their winning streak.

It is my opinion that while the progress of such effort may be related to the leadership, the most important part of the function of the leader is to inspire the team with the will and drive to win. However, this inspiration must take root in every active member of the team to be effective.

This parallelism is evident in intermediate business. Without the one for all, all for one spirit, the winning steam roller cannot be gotten off dead center. Like the little locomotive that got nowhere, it huffs and it puffs, but does not pull the train.

Putting a winning team together and keeping it winning is no simple job. The other teams are just as anxious to win the championship. There can be no let down or even coasting. This is equally true in business. The challenge of competition must be the same type of motivation. The team must be selected and made up of members who feel the same way. It has got to be an attitude of our product is the best, our service is the best, and our customers are best treated and taken care of or the winning initiative is submerged.

The greatest discouragement of free enterprise comes from government. It is like throwing cold water on a winning team. On the one hand, government encourages loafers. Our unemployment lists carry people who should want to work to justify their existence. Captain John Smith's edict should be remembered as the only thing that saved the early colony in Virginia of "Who won't work can't eat." With the exception of congenital dieters, most people would like to eat and there should be no competition by government to provide an alternative by not working. The other governmental discouragement is inflation by printing money without tying it to our GNP or Gross National

Product. I would probably be considered ultra conservative, but I would prefer our money tied to a valuable metal but at least there should be some restraint on government controlled and exploited inflation. Pushing up the minimum hourly wage without tying this to productivity must result in inflation. This can easily be seen in a most elementary example. Suppose a business has by the exercise of all known capabilities found that it takes 100 hours to produce a product: if the hourly rate is \$3.00 per hour, the cost is \$300.00. If it is \$5.00 an hour the cost is \$500.00.

This is seen on every hand from the cost of houses to the cost of hardware and food.

Thomas Jefferson was probably our first and most astute Democrat. He is credited with the remark "That the best government is the least government." It is a pity that his successors have not followed this precept. But perhaps we worms have turned. Project 13 in California is one indication. There have been others. The challenge of limiting the governmental load we are carrying is probably the most important effort that must be made. Excessive taxation is not new. It reduces every tax payer to slavery. Most people have seen figures of how many months they must work before any of their income becomes their portion even at the currently inflated values.

The slogan of our forefathers "Eternal Vigilance is the Price of Liberty" should be our motivating effort, so that we know what we are paying for in the line of government and are determined to get our moneys worth.

And, finally, overriding all other considerations is our National Security. We have been very fortunate. It's been a long time dating back to the American Revolution since we have been under the heel of an oppressor. We should be introspective about what is happening to other nations. We should convince ourselves that people, or nations that have desirable possessions are the targets of have nots whether due to their own unwillingness to achieve or through misfortune. To use the biblical term, they are covetous. There has been no discernable change in human



nature over the years. The strong still attack the weak. It is futile to produce an environment that permits individuals to earn and save the fruits of their efforts and not safeguard it. Almost everyone carries insurance on their personal effects or their liability to others. An adequate defense is the insurance policy for National Security. Lets never be without it, and let not our politicians be our mentors. You would not go to a lawyer for an opinion on the condition of your health. People who have spent a lifetime in a profession are more likely to be correct in an opinion related to it. The officers of our Army, Navy, Airforce and Coast Guard are more likely to be correct in their appraisal of our National Security, as related to current events. If, as many of us believe, we are falling below a condition of safety lets "bite the bullet" and get back our military strength. This is the basis of our National Security.

### THANK YOU FOR YOUR TOLERANCE OF DEFERRED DELIVERIES

Possibly we are more exacting than others with our duplex separators and our transfer valves, but it is our determination to build the best equipment that can be economically produced for the purpose.

There are no specifications that we know of that cover what we term seepage from the high pressure side to the lower pressure between which our units operate. This is distinct from **leakage** from the interior to the outside of the valve through the side wall. Leakage can be from a number of causes, but we have initiated tests to preclude, to the best of our ability, a unit that leaks from getting into the field. The most likely candidates for leakage are steel units due to the much higher temperature of casting and we suspect that current foundry employees do not have the interest or the competency of their predecessors. Consequently, tiny air bubbles seem to be occasionally entrained in the molten steel and when present lead to porosity. To minimize leakers being sent to our customers, we have instituted tests far beyond the requirements of current standards. The normal test is working pressure plus fifty percent, but this is not sufficient for our purpose. We first apply the under water test, as we find that air bubbles will be evident where liquid does not appear during the interval of the hydraulic test. Those that pass this test are completed and given the hydraulic test. Even those that pass are not given clearance, as it is always possible that the hydraulic test may have caused something to move

internally. The final test is the soapy water test, and those that pass are considered as leak proof as possible.

But this does not cover the seepage test. It will be clear that this will be a function of the viscosity of the liquid being handled by the valve either separately or as a component in either integral or three piece construction duplex separators.

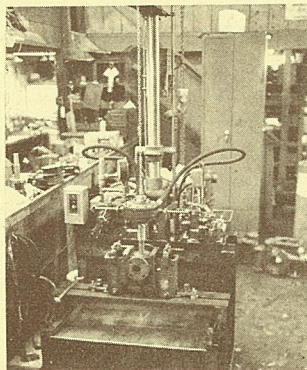
We have made a study of the viscosities of the liquids used by our customers with equipment where our valves are components and with their help have established seepage standards. These are not just available for spot checking, **but every valve is tested.** It is also a fact that different materials of construction provide different seepage rates, all other conditions being equal. It will also be clear that the seepage rate must be sufficiently low so that when one side of an assembly is serviced there will be no unacceptable interference.

The customary procedure is to lap a plug on its seat, but experience has shown that in many cases and with dissimilar materials, such as stainless steel plugs in steel housings that this is not sufficient by itself. We have developed techniques that meet the requirements but we are very determined that all of our separators or valves will meet our seepage standards.

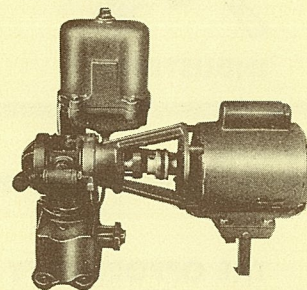
This all takes additional time, and when a number of units are required either nationally or by foreign customers, there is a possibility of back up. Possibly our seepage standards are too rigid, but unless and until we know that greater limits are permissible, we will not pass our units until they comply.

However, we are constantly working on standardizing procedures that will permit units to comply with these seepage tests with fewer reworks, and most of our customers who have visited our shop have seen a lapping machine that was built here toward this end.

So, if you have to wait a little longer for your valves or separators than you planned, please also bear in mind that we are doing everything possible to assure that when these units are received they have passed every test we have so far devised to make them acceptable.



### MORE ABOUT KRAISSL AIR PUMPS ON AUTOMATIC SPRINKLER SYSTEMS



In the April issue of 1978 we gave the impression that our Class 21 series air pumps would be an option for use with automatic sprinkler systems. As implied in this article, we were sufficiently convinced that automatic sprinkler systems are mandatory that we had one installed. This was due to the destruction of what was formerly termed a fire proof building at one of the foundries that does our work taking with it our patterns that were on these premises. The building was of concrete construction with steel girders. Apparently the fire was hot enough to plasticize the steel girders which then collapsed and dumped everything into this inferno. This convinced us that the best possible defense against such a tragedy is an automatic sprinkler system.

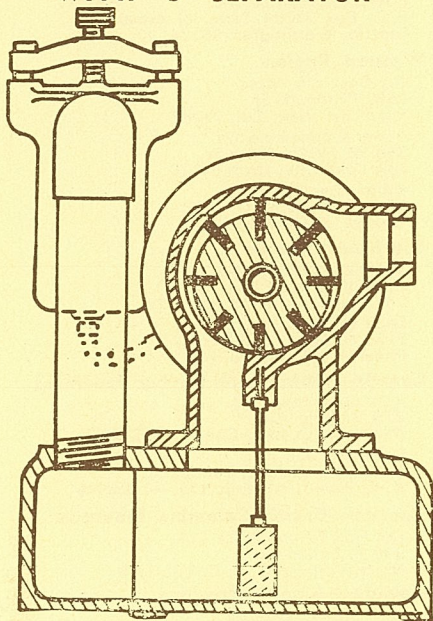
We knew that sprinkler systems are of two types, wet and dry systems, and because this may involve the use of our products we explained how they could be applied. The wet system is the more instantaneous. When the sprinkler head functions, the water immediately gushes out over the fire. However, where there is a possibility of freezing, a dry section is mandatory. Even in small plants, probably part of the plant will call for a dry section and the remainder will be a wet system.

It is with the dry system that Kraissl Air Pumps can be useful. The air under pressure holds the dry valve closed. This keeps air under pressure in the piping subject to possible freezing, but this should not be at the expense of too long an interval for water to gush from the sprinkler head to put out the fire. The advantage of Kraissl Air Pumps is that they require no air tank which is cost saving but where air tanks are employed or where the connection is with the plant compressed air supply, this must be exhausted to the point where the dry valve can function. Where no large air capacity must be exhausted, there is very little time lag before the water is available to extinguish the fire.



As the options of our available air pumps, we showed both our Class 21 and Class 25 series air pump design. We first installed a Class 21-6A pump, as we thought the roller design might have advantages. This did not prove to be the case. It was found that the lower displacement 25-5 pump with its greater efficiency produced the necessary pressure in the dry pipe line in the required length of time. This is a less expensive pump than the one we had selected, and is now installed as part of the system.

#### CLASS 25 MECHANISM WITH "S" SEPARATOR



This reconciles with the selection of the Globe Automatic Sprinkler Company many years ago. We do not, nor should we be expected, to have the addresses of where these pumps were installed but to the best of our knowledge these were supplied before World War II, and we have every reason to believe that if our units had been 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 oil reservoir on which the pump head is mounted and becomes an integral part of the assembly.

We are therefore revising our table of available sizes to only include the Class 25 series design. It seems quite probable that the smallest size of this design may meet the requirements of many installations.

It should be of interest to manufacturers and installers of automatic sprinkler systems that when a manufacturer of a potential component uses this product, that information for sizing and selecting can be more accurate and therefore more reliable.

#### SIZES AND CAPACITIES

Nominal Free Displacement  
Cubic Feet/Min—1800 RPM

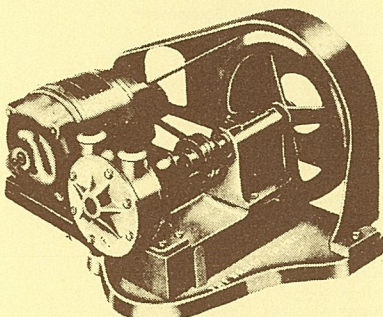
Pump Size	CFM 1800 RPM	Pump Size	1800 RPM CFM
25-5	3 1/2	25-6B	9
25-6	5	25-9	15 *
25-6A	6	25-11	35 *

\* Intermittent Service—Slower Speeds or water cooled for continuous duty.

For Data under operating conditions please request performance charts.

Larger sizes shown in other Bulletins or Circulars.

#### KRAISSL REDUCTION DRIVE PUMPS FOR LOW VISCOSITY DESULPHURIZED OIL



CLASS 60 REDUCTION DRIVE OIL PUMPS

One of the approaches to air pollution abatement is the desulphurization of fuel oils. This is not an inexpensive process but it carries with it the reduction of viscosity of what would otherwise be known as heavy oil.

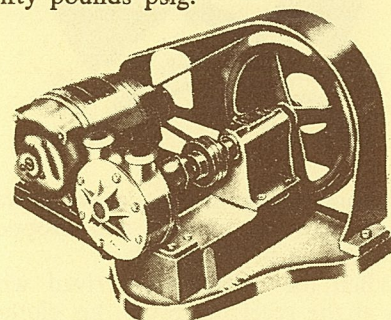
As most engineers know, viscosity determines the speed at which a pump can be run without cavitation, as it is a fundamental hydraulic principle that a tight displacement chamber cannot be cleared at a faster rate than the liquid will flow into it under the differential pressure created, without experiencing cavitation.

All sorts of devices have been applied to minimize this, such as back flow from the discharge side through increased clearances, by-passes to minimize these effects, but the right way to meet this problem is to retain the close clearances of the pump to maintain high suction lift but run the pumps at speeds consistent with the viscosity of the oil at preferably the lowest pumping temperature.

A new advantage has been added with low viscosity oils. The pumps can be run at higher speeds than formerly selected for regular Bunker C oil. The advantage of our reduction drive carried on independent ball bearing supports but direct connected to pump by means of loose coupling can be retained. This permits the pump to be run at the speed required by the viscosity of the oil to produce the capacity needed at the designated pressure.

We now have the Class 60 series for pressures up to one hundred pounds psig.

The next is the look alike pump with our standard unit, but so much different bearing construction inside to handle the heavier bearing loads for pump pressures up to one hundred and fifty pounds psig.

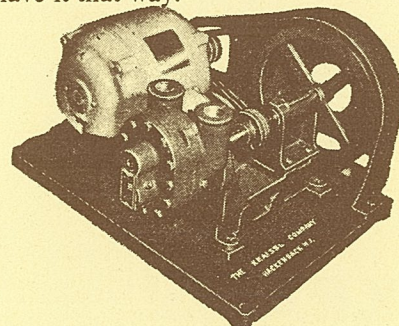


OUR NEW CLASS 60-H SERIES PUMPS

Finally there is the Class 66 series when pressures can go over one hundred and fifty pounds.

In all cases the reduction drive pumps are energy savers. Even when the use of light oil permits operation at direct motor speeds, pump selection must be made at a higher capacity with a reasonable overage. In watching sizing and selection we have noted that in most cases a pump is used much over capacity to reconcile with available motor speeds. This is a waste of electrical energy and motor cost. When our reduction drive units are used the pump can be slowed down or speeded up to reconcile with the needed capacity. After a time everything will wear. This with pumps produces a reduction in capacity. With our design all that is necessary, in many cases, is to speed up the pump to compensate for the reduction in capacity. In general our reduction drive pumps last much longer than the direct connected ones as a slower speed is conducive to longevity. Last but not least if a change to different grades of oil is involved this is easily accomplished.

The only comment that we heard from the field that was said with a smile of approbation was that the pumps last too long, but they would rather have it that way.



CLASS 66 HIGH PRESSURE OIL PUMPS

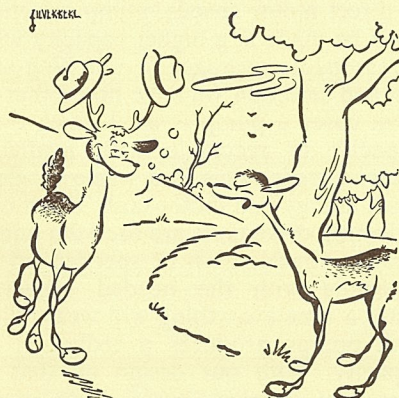




A man suffering from epilepsy was seized with his malady and dropped unconscious in the street.

When the ambulance arrived with him at the receiving room, his clothes were removed prior to examination and this note was found pinned to his undershirt.

"This will inform you that this is just a plain case of fits; not appendicitis. I have already had two operations for this purpose and a third would only complicate matters unnecessarily".



"Well where have you been?"

## 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  
R. C. White Co.  
3065 Enterprise Blvd.  
Bethel Park, Pa. 15102  
Gelman Industrial Equipment  
1327 Barton Drive  
Fort Washington, Pa. 19034  
Jobe & Co., Inc.  
2857 Greenmount Ave.  
Baltimore, Md. 21218

### 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, Inc.  
490 Craighead Street  
Nashville, Tenn. 37204  
601 Van St., N. W.  
Knoxville, Tenn. 37921  
Applied Engineering Co., Inc.  
P. O. Box 506, Orangeburg, S. C. 29115  
Spotswood Parker & Co.  
721 Miami Cir. NE, Atlanta, Ga. 30324  
Florida Filters, Inc.  
5570 N. E. 4th Ave., Miami, Fla. 33137  
Procter & Co.  
Box 26158  
Birmingham, Ala. 35226

### 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.  
2683 S. Big Bend Blvd.  
St. Louis, Mo. 63143

### 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

Jav 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 St., Suite A-126  
Phoenix, Arizona 85016

### Canada—Ontario and Quebec Provinces

Kirk Equipment Ltd.  
375 Victoria Ave.  
Montreal, Quebec, Canada H3Z 2N1  
P. O. Box 508  
Knowlton, Quebec, Canada  
K. C. Hamilton Equip. Ltd. — Marine

### 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.  
Apartado 20-360  
Mexico 20, D. F., Mexico

## THE KRAISSL COMPANY

INCORPORATED

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