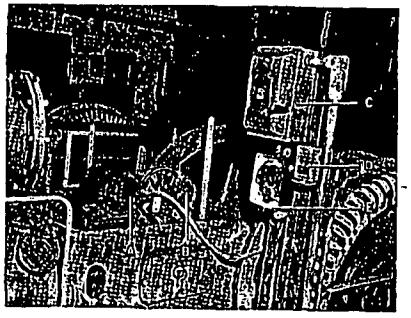


Excess Oil Given the Bum's Rush Now

SOME of our synchronous, motor-driven, 2-stage air compressors, operating continuously and equipped with pneumatic unloaders, delivered excess oil to the air system. Separators in discharge lines didn't often solve problem, even when blown down.

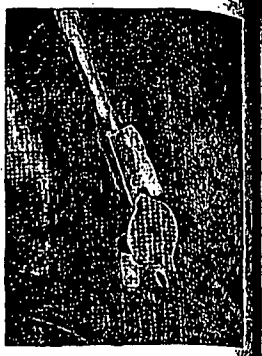
Cylinders were oiled by constant-speed force-feed lubricators. We reasoned that oil collected in lubricator during idling period. Then when machine loaded up again, oil was discharged into system in a slug. So we had to reduce cylinder lubrication during idling periods. Photo shows how we did this.

We changed belt drive of lubricator (B) from machine's shaft to a 2-speed motor (A). Motor is mounted on a bracket, bolted to compressor's frame. Pressure switch (D) is connected to small air line supplying the unloader. Switch contacts are wired to coil of a double-throw relay (E). Relay contacts are connected to high-speed and low-speed windings of small motor. (C) is a simple fused disconnecting switch for power supply to electrical devices.

When air-system pressure rises to unloading point, it actuates pressure switch. That operates to energize coil of relay, causing its contacts to move to position connecting the motor's power supply to its low-speed winding. This causes the lubricator to be driven at *half speed during the idling period*, delivering half the normal quantity of oil to cylinder. And that's enough lubrication while idling. As system pressure drops and machine loads up, contacts of pressure switch open. That de-energizes relay coil, and switches motor back to its high-speed winding. Thus lubricator delivers full capacity.

Several month's operation has proved that hookup is sound. Besides, excess oil to air system is now greatly reduced.

P N PITTENGER *Southport, N. C.*

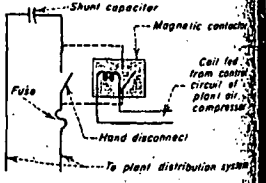


Oil-Cup Cap Lifter

WHEN MAKING ROUNDS with an oil can, spring-closed oil-cup caps prove very awkward, especially in a tight place. Often there's no room for fingers to hold cap open while oiling with the other hand. Lifting cap with can spout won't work as cap edge slips off rounded spout end.

Simple solution is to solder a strip of brass to oil-can spout. First, bend it a slight V-shape. Long spout can easily be inserted into confined spaces. V-piece holds oil-cup lid open, while oil is squirted into cup.

C T BOWER *London, England*

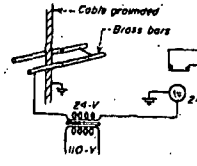


Magnetic Contactor Switches Capacitors

CORRECTING power factor by use of capacitors is pretty well-known in most plants.

In smaller plants, usual practice is to pull capacitor disconnects at end of day's run. This is a chore that's easily forgotten. It can be done automatically by *connecting the capacitors through* a magnetic switch to load side of starting compensators of air compressors, or other machines that make up a major part of plant's load, sketch.

H T BAILEY *Brillion, Wis.*



Positive-Acting Slack-Cable Switch

THERE ARE MANY TYPES of slack cable switches on the market. As a rule they work well. But in some applications these switches don't perform well as they are either too bulky or need too much cable pressure for proper operation.

After several unsuccessful attempts, we constructed the slack cable switch shown in sketch. Results have been excellent.

Cable switch contacts are two ½-in. brass bars, mounted at right angles to hoist cable. One bar on each side of cable has just enough clearance to avoid *accidental contact in normal operation*. If cable becomes slack, hoist cable touches one brass bar, energizing the 24-v relay. That, in turn, breaks circuit to holding coils of electrical system.

H T BAILEY *Brillion, Wis.*

NEW!

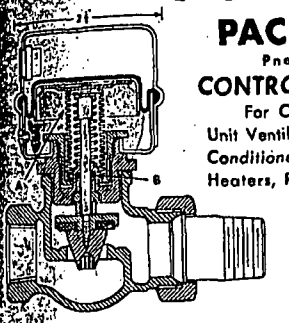
Look what Powers has done to **Modernize** Control Valves

Powers **PACKLESS** Valves Banish Packing Maintenance
Prevent leakage of water or steam or loss of vacuum

POWERS
PACKLESS
Pneumatic
CONTROL VALVES
For Convectors, Unit Ventilators, Unit Air Conditioners, Baseboard Heaters, Radiators, etc.

Various Types and Sizes for all requirements





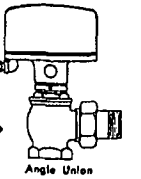
Another POWERS Contribution to Better Heating and Air Conditioning Control

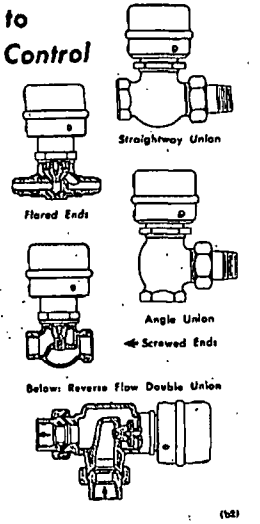
PACKLESS Valves with their many advantages are now standard with Powers temperature control systems. Their superior performance is due to duo-seal construction.

Bronze Packless Bellows (A) in sectional view above, is the primary seal which eliminates packing maintenance — packing friction — steam and water leakage or loss of vacuum. It is designed to withstand pressure up to 150 psi. Maximum valve stroke is only two-thirds of the normal bellows stroke.

A spring loaded secondary seal (B) permits servicing of valve top without draining the water system or shutting down the steam heating system. Seal is made of highly elastic neoprene and is ready to act at any time. Small contact between seal and the highly polished stainless steel stem makes friction a negligible factor.

For utmost dependability and lowest cost maintenance specify control by Powers **PACKLESS** Valves.





(52)

Established in 1891 • THE POWERS REGULATOR COMPANY • SKOKIE, ILL. • Offices In Over 50 Cities