



PUMPS & SYSTEMS

# BARNES®

# SH Series

## TECH NOTES

## #5

## Retrofit SH Pumps Into Existing Flygt Lift Stations

Crane Pumps and Systems provides two important tools to allow you to easily retrofit SH Solids Handling Pumps into existing Flygt lift stations:

- A Slide Rail Adapter to allow use on the existing Flygt slide rail system.
- A Flygt Retrofit Relay that allows the use of the existing Flygt control panel including their MiniCAS II supervision relay.

Both of these are listed in the Barnes Catalog in Section B, Page 27.

### Flygt Slide Rail Adapters

Flygt pump casings utilize a “claw” to hold their pump to the base elbow. Since the SH (and SE) pumps use flanges to accommodate a wide variety of movable systems, we offer a slide rail adapter that, when bolted to the pump, fits directly to the Flygt rail system. The slide rail adapters, part numbers 076686 (4 inch) and 078233A (6 inch) include the “claw” feature for direct connection to the Flygt slide rail system and include a gasket plus cap screws and washers. A 4” x 6” adapter is also available, 078233C, to allow replacement of a 6” Flygt pump with a 4SH.



*Flygt Slide Rail Adapter*

### Flygt Retrofit Relay

Flygt uses a different approach to the wiring of their temperature and moisture sensors, especially with explosion proof pumps, compared to the traditional Barnes approach. The usual Flygt wiring standard ties the three normally closed over-temperature switches in series with the normally closed float switch located in the motor for shut-down, and only supply seal chamber water sensors in their non-explosion proof motors. When they utilize seal chamber sensors on non-XP units, their probe provides varying resistance (and thus varying amps) to provide alarm capability.

The Barnes SH pumps use three over temperature switches, connected in series, imbedded in each of the three motor phase windings that are wired to the motor starter. The dual insulated probe, connected by a high ohmage resistor, provides moisture protection in both standard and X-Pruf® units, connected to a relay in the control panel. The role of the probes is to provide warning of impending seal failure by energizing an alarm light. This contrasts with the Flygt Ex-Proof where the pump is shut down after leaks, of both the lower and upper seals, have allowed water into the motor chamber.

Because of these differences, CP&S has developed a Flygt Retrofit Relay. The base mounts on the DIN rail adjacent to their MiniCAS II. Simply connect the SH sensor, MiniCAS and control voltage leads to the relay as shown in the IOM, and plug in the relay.



*Flygt Retrofit Relay installed in a Flygt panel next to the MiniCAS permits use of SH Pump with their Panel.*

### Flygt Retrofit Kits

To simplify ordering components when replacing Flygt units with SH pumps, and in addition to discrete part numbers, there are now Barnes Kits combining the Slide Rail Adapters and Retrofit Relays; please see the chart below.

Slide Adapter		Relay	Kit
Size	Part #	Part #	Part #
4"	076686A	131318	131315
6"	078233A	131318	131316
4" x 6"	078233C	131318	131317