

Beck Actuators are ideal for regulating fluid couplings and hydrodynamic transmissions.

Fluid couplings are often used with fans, pumps, conveyors and other motor-driven equipment to provide continuous speed, torque and acceleration control. Beck actuators are ideally suited to modulation of the coupling's oil scoop tube. Beck drives are designed for continuous modulating duty and provide the consistently precise performance necessary for good fluid coupling performance. In addition, Beck actuators require virtually no maintenance and are unaffected by changes in load; this ensures that the actuator performance does not degrade over time or with changing conditions.

Beck Group 11 rotary actuators, as pictured in Figures 1 and 2, provide a great deal of mounting flexibility, which makes it easy to adapt the actuator to any coupling design or orientation. Stroke travels and force are easily adjusted using the crank arm radius adjustment. The Group 11 actuator also comes in a variety of sizes and can be matched to the requirements of a specific application. See the graphs on the reverse side of this page to help select the Beck actuator that meets the thrust and stroke travel requirements of your application.

Beck Sales and Application Engineers are available to provide exact sizing and a computer generated analysis of any application. Contact Beck for more information and assistance.

CONTROL OPTIONS

Modulating Beck actuators are available for a variety of different control strategies:

- Analog control. Actuators can be modulated in response to a 4-20 mA analog demand signal. A 4-20 mA position feedback signal for remote position monitoring of the actuator is included. Other standard signal ranges are also available.

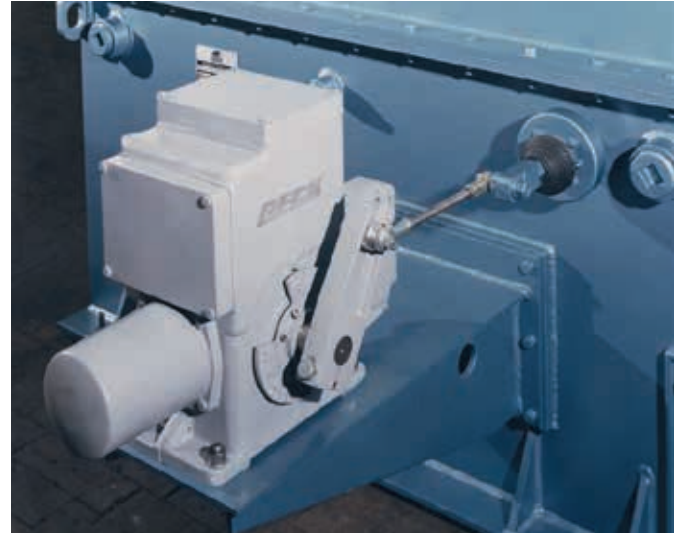


Figure 1

- Analog control with HART communications capabilities. Like simple analog control, the actuator can be modulated in response to a standard 4-20 mA demand signal. A 4-20 mA position feedback signal is also provided. In addition, the digital HART communications capabilities allow for a variety of added features and functions, such as simplified setup and diagnostic information.
- Digital fieldbus control. Major fieldbus protocols are supported for complete digital control network interfaces.
- Direct AC pulse control. Actuators can be modulated by external relays that apply power directly to the actuator motor windings.

ACTUATOR MOUNTING

Beck Group 11 actuators can be mounted in any orientation without concern of oil leaks or maintenance problems. Whether mounting directly to the coupling housing as shown in Figure 1, or on a free-standing pedestal as shown in Figure 2, Beck can provide the expertise and support to assist in a good installation. Beck can provide custom mounting pedestals, adaptor plates and designs to ensure a simple and trouble-free installation. Contact a Beck Sales or Application Engineer with your needs.



Figure 2

LINKAGE KITS

Beck Hex Linkages can be adjusted in length without disconnection. Together with an adjustable radius variation of the output crank arm, the actuators are easily installed and adjusted. The kits contain all connecting hardware and rod ends.

BECK ACTUATOR SELECTION

To match your thrust and travel requirements with a Beck actuator, locate the thrust on the vertical axis and the travel on the horizontal axis of one of the graphs at right.

Each curve plots the thrust available vs. the distance the actuator moves the scoop tube lever. Each curve represents a different output torque, which is a function of the motor and timing gears in the actuator.

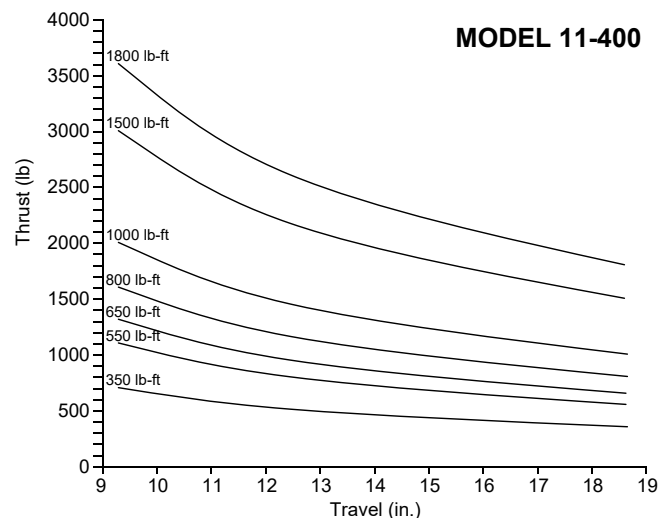
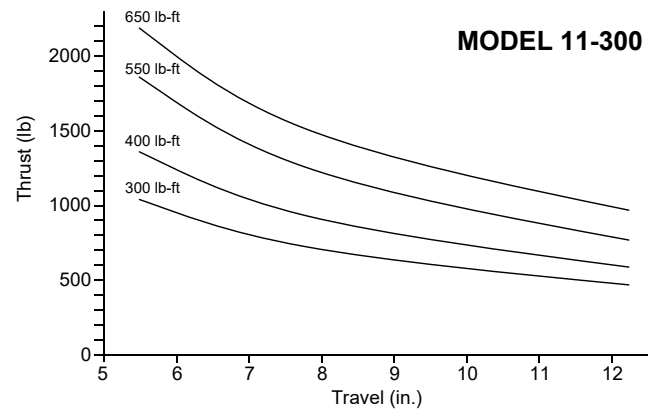
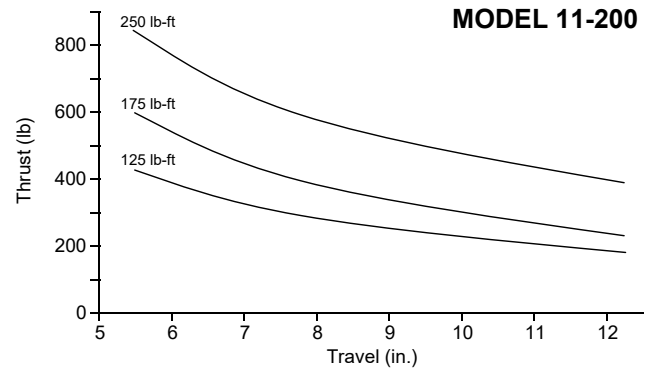
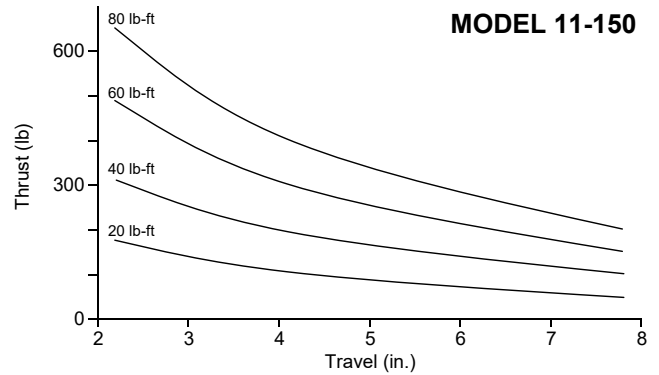
Example: Find the smallest actuator that will control a fluid coupling that requires 250 pounds thrust over a travel of 7 inches.

Locate the graph where the intersection of a 250 pound horizontal line and a 7 inch vertical line is below one of the curves.

The curves for the 11-150 actuator show more than 250 pounds of thrust, but they fall below 250 for a 7 inch travel line.

An 11-200 actuator will be needed. The curve for the unit with 125 lb-ft torque is well above 250 pounds at the 7 inch travel line.

If the application had required 350 pounds thrust over 7 inches of travel, the 11-200 actuator rated at 175 lb-ft torque would be needed.



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